



**Retirement System for
Judges and Solicitors of the
State of South Carolina
(JSRS)
Annual Actuarial Valuation
as of July 1, 2010**



Cavanaugh Macdonald

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February 24, 2011

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

Members of the Board:

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

A funding objective of the System is that contribution rates as a percentage of payroll will remain relatively level over time. As these contribution rates are set by the Board, the valuation is used to determine the sufficiency of the contributions to maintain or improve the measures of the System's funding progress (i.e. *funded ratio, funding period*) and provide for the complete funding of all actuarial liabilities within a period not to exceed 30 years.

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

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

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An unfunded accrued liability exists in the amount equal to the excess of accrued liability over valuation assets. The amortization period of the System is the number of years required to fully amortize the unfunded accrued liability with the expected amount of employer contributions in excess of the employers' portion of the normal cost. The System's current assets together with the scheduled contributions are expected to fully fund the System's liabilities within 16 years. In our opinion, JSRS continues to operate on an actuarially sound basis.

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

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

Respectfully submitted,

A handwritten signature in blue ink, appearing to read 'John J. Garrett'.

John J. Garrett, ASA, FCA, MAAA
Principal and Consulting Actuary

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

Edward A. Macdonald, ASA, FCA, MAAA
President



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Section I: Board Summary

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

| Table I-1: Comparative Summary of Principal Results | | |
|--|---------------------|---------------------|
| | July 1, 2010 | July 1, 2009 |
| Membership | | |
| Number of: | | |
| Active Members ¹ | 144 | 144 |
| Retirees and Beneficiaries | 180 | 170 |
| DROP and Retired in Place Members | 14 | 14 |
| Inactive Members | <u>4</u> | <u>4</u> |
| Total | 328 | 318 |
| Payroll | \$18,661 | \$18,661 |
| Statutory Contribution Rates (Including Incidental Death) | | |
| Member | 10.00% | 10.00% |
| Employer | <u>45.09%</u> | <u>45.09%</u> |
| Total | 55.09% | 55.09% |
| Assets | | |
| Market Value | \$111,226 | \$99,989 |
| Actuarial Value | \$142,871 | \$141,797 |
| Return on Market Value | 14.8% | (21.0%) |
| Return on Actuarial Value | 2.9% | 4.2% |
| Ratio of Actuarial to Market Value | 128.5% | 141.8% |
| Actuarial Information | | |
| Employer Normal Cost % | 12.16% | 12.02% |
| Unfunded Actuarial Liability (UAL) | \$72,952 | \$72,566 |
| Funded Ratio | 66.2% | 66.1% |
| Amortization Period | 16 Years | 16 Years |
| Change in Unfunded Actuarial Liability | | |
| Beginning of Year Unfunded Actuarial Liability | \$72,566 | 75,083 |
| Interest on Unfunded Actuarial Liability | 5,805 | 6,007 |
| Amortization Payment with Interest | (6,821) | (6,614) |
| COLA | (4,623) | (4,183) |
| Salary Experience | (1,942) | (2,132) |
| Other Liability Experience | 816 | (528) |
| Benefit Changes | 0 | 0 |
| Assumption Changes | 0 | 0 |
| Asset Experience | 7,151 | 4,933 |
| Total Increase / (Decrease) | 386 | (2,517) |
| End of Year Unfunded Actuarial Liability | \$72,952 | \$72,566 |

¹ Active member counts include unfilled positions. Also includes 14 members as of July 1, 2010 and 14 members as of July 1, 2009 who were in DROP or retired in place.



Section I: Board Summary

Summary of Key Findings

The current employer contribution rate for the System is 45.09%. The contribution is used to pay the employer's portion of the normal cost and to amortize the unfunded actuarial liability (UAL) and includes 0.45% for funding the incidental death benefits.

The actuarially determined employer normal cost contribution rate increased from 12.02% to 12.16% of covered payroll. Therefore, the net contribution towards the UAL decreased from 33.07% to 32.93% of covered payroll. The unfunded actuarial liability increased from \$72.6 million to \$73.0 million. The resulting amortization period remained at approximately 16 years. We note the following key findings:

- The UAL grew by \$5.8 million due to interest and decreased by \$6.8 million due to the amortization payment. This results in a 1 year decrease to the amortization period.
- The System experienced an actuarial loss on plan assets of \$7.2 million as a result of investment return on the actuarial value of assets being less than the assumed rate. The loss increased the amortization period by 2.2 years. Table III-3 provides the calculation of the investment loss for this year.
- The System experienced a net actuarial gain \$5.7 million on plan liabilities due to non-investment related experience. Table IV-4 provides the reconciliation of the UAL which is summarized as follows:
 1. The System experienced a \$1.9 million gain due to salary experience which reduced the funding period by 0.6 years, and a \$4.6 million gain on cost of living increases to retired members which reduced the funding period by 1.3 years.
 2. In addition, there was a small liability loss primarily attributable to the System turnover experience. The loss increased plan liabilities by \$0.8 million and increased the funding period by 0.2 years.
 3. Other factors, such as the anticipated payroll growth, resulted in a 0.7 year increase in the amortization period. These factors had a minor direct impact on the UAAL.



Section I: Board Summary

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



Section II: Membership Data

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

| Table II-1: Summary of Membership Data | | |
|---|---------------------|---------------------|
| | July 1, 2010 | July 1, 2009 |
| Active Members | | |
| Total Number of Active Members ¹ | 144 | 144 |
| Total Annual Compensation ² | \$18,661 | \$18,661 |
| | | |
| Number of DROP & Retired-in-Place Members | 14 | 14 |
| Total Annual Compensation | \$1,760 | \$1,762 |
| | | |
| Retirees and Beneficiaries | | |
| Number of Service Retirements ³ | 134 | 128 |
| Total Annual Benefit Payments | \$12,592 | \$12,039 |
| | | |
| Number of Disability Retirements | 1 | 1 |
| Total Annual Benefit Payments | \$93 | \$93 |
| | | |
| Number of Beneficiaries | 59 | 55 |
| Total Annual Benefit Payments | \$1,676 | \$1,613 |
| | | |
| Inactive Members | | |
| Number of Non-vested Inactive Members | 3 | 3 |
| Number of Vested Inactive Members | 1 | 1 |

All dollar amounts are in thousands.

¹ Represents the number of scheduled positions and includes 14 members as of July 1, 2010 and 14 members as of July 1, 2009 who are either in the DROP or have retired in place.

² Compensation includes the expected compensation of scheduled positions and participants who are either in DROP or have retired in place.

³ Includes the participants who are either in DROP or have retired in place.

Section III: System Assets



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

| Table III-1: Market Value Reconciliation and Cash Flow | | |
|---|---------------------|---------------------|
| | July 1, 2010 | July 1, 2009 |
| 1. Beginning of Year Market Value of Assets | \$99,989 | \$129,431 |
| Income | | |
| 2. Employer Contributions | \$8,414 | \$8,414 |
| 3. Member Contributions | <u>\$2,343</u> | <u>\$2,524</u> |
| Total Contributions | \$10,757 | \$10,938 |
| 4. Investment Income (net of expenses) | \$14,545 | (\$26,845) |
| Disbursements | | |
| 5. Benefit Payments | \$14,179 | \$13,618 |
| 6. Transfers | (\$114) | (\$83) |
| 7. Net Change in Market Value of Assets (2 + 3 + 4 - 5 - 6) | \$11,237 | (\$29,442) |
| 8. End of Year Market Value of Assets (1 + 7) | \$111,226 | \$99,989 |
| Approximate Rate of Return on Market Value of Assets | 14.8% | (21.0%) |
| Net Cash Flow (Contributions less Disbursements) | (\$3,308) | (\$2,597) |
| Cash Flow as a % of Average Market Value | (3.1%) | (2.3%) |
| <i>All dollar amounts are in thousands.</i> | | |

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



Section III: System Assets

Development of Actuarial Value of Assets

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

Table III-2: Development of Actuarial Value of Assets

| Calculation of Current Year Excess Investment Income | | | | |
|---|---|---------------------------------|-------------------------|------------------------|
| 1. Market Value of Assets at Beginning of Year | | | \$99,989 | |
| 2. Value of DROP Accounts at Beginning of Year | | | 698 | |
| 3. DROP Net Cash Flow During the Year | | | 45 | |
| 4. Total Net Cash Flow During the Year (3 + Table III-1 Net Cash Flow) | | | (3,263) | |
| 5. Market Value of Assets at End of Year | | | \$111,226 | |
| 6. Value of DROP Accounts at End of Year | | | 743 | |
| 7. Actual Investment Income During the Year Based on Market Value | | | \$14,545 | |
| 8. Expected Earnings for the Year | | | | |
| a. Market Value of Assets, Beginning of Year [(1 + 2) x 8.00%] | | | 8,055 | |
| b. Net Cash Flow (4 x 8.00% x .5) | | | (120) | |
| c. Total (a + b) | | | 7,935 | |
| 9. Current Year Excess Investment Income (7 – 8c) | | | 6,610 | |
| Calculation of Total Amount of Deferred Excess Investment Income | | | | |
| 10. Amounts of Excess Investment Income from Current and Prior Years | | | | |
| | <u>Valuation Year</u> | <u>Excess Investment Income</u> | <u>Percent Deferred</u> | <u>Amount Deferred</u> |
| | 2010 | \$6,610 | 90% | 5,949 |
| | 2009 | (37,137) | 80% | (29,710) |
| | 2008 | (13,277) | 70% | (9,294) |
| | 2007 | 7,052 | 20% | 1,410 |
| | | | | (\$31,645) |
| | Total Amount of Deferred Excess Investment Income | | | |
| 11. Actuarial Value of Assets as of July 1, 2010 (5 - 10) | | | | \$142,871 |
| Approximate Rate of Return on Actuarial Value of Assets | | | | 2.9% |

All dollar amounts are in thousands.



Section III: System Assets

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

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

| | |
|---|-----------|
| 1. Actuarial Value of Assets at Beginning of Year | \$141,797 |
| 2. Value of DROP Accounts Beginning of Year | 698 |
| 3. Total Net Cash Flow (Table III-2(4)) | (3,263) |
| 4. Expected Return on Actuarial Value of Assets $[(1 + 2) \times 8.00\% + 3 \times 8.00\% \times .5]$ | 11,234 |
| 5. Value of DROP Accounts End of Year | 743 |
| 6. Expected Actuarial Value of Assets at End of Year $(1 + 2 + 3 + 4 - 5)$ | 150,022 |
| 7. Actual Actuarial Value of Assets at End of Year (Table III-2(11)) | \$142,871 |
| 8. Actuarial Gain/(Loss) Due to Investment Experience $(7 - 6)$ | (\$7,151) |

All dollar amounts are in thousands.

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



Section IV: System Liabilities

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

| Table IV-1: Present Value of Benefits | |
|--|------------------|
| Active Members | |
| Service Retirement | \$85,219 |
| Disability Retirement | 5,283 |
| Survivors' Benefits | <u>3,459</u> |
| Total for Active Members | \$93,961 |
| Inactive Members | |
| Non-Vested (Refund only) | \$86 |
| Vested | <u>484</u> |
| Total for Inactive Members | \$570 |
| Retirees and Beneficiaries | |
| Service Retirements | \$134,143 |
| Disability Retirements | 635 |
| Beneficiaries | <u>15,918</u> |
| Total for Retirees and Beneficiaries | \$150,696 |
| Total Present Value of Benefits | \$245,227 |

All dollar amounts are in thousands.

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

Section IV: System Liabilities



| Table IV-2: Actuarial Accrued Liability | |
|---|---------------|
| Active Members | |
| Service Retirement | \$62,314 |
| Disability Retirement | 1,258 |
| Survivors' Benefits | <u>985</u> |
| Total for Active Members | \$64,557 |
| Total for Inactive Members (Table IV-1) | \$570 |
| Total for Retirees and Beneficiaries (Table IV-1) | \$150,696 |
| Total Actuarial Accrued Liability | \$215,823 |
| <i>All dollar amounts are in thousands.</i> | |

The funded ratio of the System is the ratio of the actuarial value of assets (Table III-2) divided by the actuarial accrued liability (Table IV-2) as of the valuation date. As of July 1, 2010, the funded ratio of the System is 66.2% as compared to the ratio in prior valuation of 66.1%. The ratio is a commonly used measure of the funding progress of a System and can be useful in reviewing the historical trend of a System's funding progress. Such a review should also consider the impact to this measure over the historical period due to changes to plan benefits, changes to the actuarial assumptions and methods, and significant impact that investment experience can have on the ratio over short-term periods. We caution that no single "point in time" measure can provide a universal basis for comparing one System to another.

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

| Table IV-3: Unfunded Actuarial Accrued Liability (UAAL) | |
|---|------------------|
| 1. Total Actuarial Accrued Liability (Table IV-2) | \$215,823 |
| 2. Actuarial Value of Assets (Table III-2(11)) | <u>\$142,871</u> |
| Unfunded Actuarial Accrued Liability (UAAL) (1 – 2) | \$72,952 |
| <i>All dollar amounts are in thousands.</i> | |

Although the terminology used to describe the excess of the System's actuarial accrued liability over the System's actuarial value of assets is call the "unfunded" actuarial accrued liability, there is a dedicated



Section IV: System Liabilities

source of funding for this liability. The scheduled contributions are expected to completely fund the System's liabilities (pay off the UAAL) within 16 years.

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

| Table IV-4: Reconciliation of the UAAL | |
|---|--------------|
| 1. Beginning of Year UAAL | \$72,566 |
| 2. Expected Amortization Payment | (6,559) |
| 3. Expected Interest (1 x 8.00% + 2 x 8.00% x .5) | <u>5,543</u> |
| 4. Expected End of Year UAAL (1 + 2 + 3) | \$71,550 |
| 5. Actuarial Experience (Gain)/Loss | |
| COLA | (4,623) |
| Salary Experience | (1,942) |
| Other Liability Experience | 816 |
| Asset Experience | <u>7,151</u> |
| Total Actuarial (Gain)/Loss | \$1,402 |
| 6. End of Year UAAL (4 + 5) | \$72,952 |

All dollar amounts are in thousands.



Section V: Actuarial Valuation Results

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

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

| Table V-1: Normal Cost Rate | |
|---|---------------|
| Normal Cost Rate of Active Members by Expected Benefit Type | |
| Service Retirement | 17.48% |
| Disability Retirement | 2.86% |
| Survivors' Benefits | <u>1.82%</u> |
| Total Normal Cost Rate for Active Members | 22.16% |
| Less: Active Member Contribution Rate | <u>10.00%</u> |
| Employer's Normal Cost Rate | 12.16% |

The established employer contribution rate, currently 45.09% of active member payroll, is available to fund the annual normal cost and amortize the UAAL as a level percent of payroll. In addition, there are other, less significant sources of UAAL amortization funding based upon the payroll of DROP and retired in place participants in the System. The contribution rates of these groups, along with the rate of active member payroll which is available to amortize the UAAL, is shown in Table V-2.

Section V: Actuarial Valuation Results



| Table V-2: UAAL Amortization Rate | |
|--|---------------------|
| Calculation of Amortization Rate on Active Member Payroll | |
| | % of Payroll |
| Statutory Employer Contribution Rate | 45.09% |
| Less: Employer Normal Cost Rate (Table V-1) | <u>12.16%</u> |
| Employer Contribution Rate Available to Amortize UAAL | 32.93% |
| Additional Sources of Amortization Funding | |
| | % of Payroll |
| DROP participants | 55.09% |
| Retired in Place participants | 55.09% |

The System's amortization period or funding period is the calculated number of years necessary to fully amortize the UAAL with the available contribution amounts from all sources. The calculation assumes that the payroll of all sources, active members, DROP participants and retired in place participants, will increase at an annual rate of 3.25% each future year. The assumed rate of payroll growth reflects the System's assumption for long-term wage inflation and does not anticipate future increases in number of participants. Based upon this method, as of July 1, 2010 the calculated amortization period required to fully amortize UAAL (Table IV-3) with the expected amortization funding from all sources is 16 years.



Section V: Actuarial Valuation Results

If all actuarial assumptions were met exactly, the amortization period would be expected to have decreased by 1 year from the period calculated in the prior valuation. The actual experience of the latest valuation has decreased the amortization period by 0.2 years. The sources and magnitude of changes to the calculated amortization period due to the actual experience over the plan year are provided in Table V-3.

| Table V-3: Reconciliation of Calculated Amortization Period | |
|--|--------------|
| | <u>Years</u> |
| 1. Amortization Period Calculated as of July 1, 2009 | 15.7 |
| 2. Change in years due to: | |
| Expected Decrease | (1.0) |
| COLA Experience | (1.3) |
| Salary Experience | (0.6) |
| Other Liability Experience | 0.9 |
| Asset Experience | <u>2.2</u> |
| Total | 0.2 |
| 3. Amortization Period Calculated as of July 1, 2010 (1 + 2) | 15.9 |



Section VI: Accounting Statement Information

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

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

| Actuarial Valuation as of July 1 | Actuarial Value of Assets | Actuarial Accrued Liability (AAL) | Actuarial Assets as a % of Actuarial Liabilities | Unfunded AAL (UAAL) | Annual Active Member Payroll | UAAL as a % of Active Member Payroll |
|----------------------------------|---------------------------|-----------------------------------|--|---------------------|------------------------------|--------------------------------------|
| 2010 | \$142,871 | \$215,823 | 66.2% | \$72,952 | \$18,661 | 390.9% |
| 2009 | 141,797 | 214,363 | 66.1% | 72,566 | 18,661 | 388.9% |
| 2008 | 138,323 | 213,406 | 64.8% | 75,083 | 18,661 | 402.4% |
| 2007 | 132,990 | 229,388 | 58.0% | 96,398 | 16,407 | 587.5% |
| 2006 | 124,837 | 211,384 | 59.1% | 86,547 | 15,929 | 543.3% |
| 2005 | 118,888 | 204,847 | 58.0% | 85,959 | 15,465 | 555.8% |
| 2004 | 112,016 | 185,052 | 60.5% | 73,036 | 14,870 | 491.2% |
| 2003 | 106,114 | 166,655 | 63.7% | 60,541 | 14,437 | 419.3% |
| 2002 | 100,074 | 166,440 | 60.1% | 66,366 | 14,211 | 467.0% |
| 2001 | 94,795 | 159,246 | 59.5% | 64,451 | 14,109 | 456.8% |

All dollar amounts are in thousands.

Table VI-2: Solvency Test

| Actuarial Valuation as of July 1 | Actuarial Accrued Liability for: | | | Valuation Assets | Portion of Aggregate Accrued Liabilities Covered by Assets | | |
|----------------------------------|----------------------------------|---------------------------|---|------------------|--|-------|------|
| | Active Member Contributions | Retirants & Beneficiaries | Employer Funded Portion of Active Members | | (1) | (2) | (3) |
| | (1) | (2) | (3) | | (1) | (2) | (3) |
| 2010 | \$17,816 | \$150,696 | \$47,311 | \$142,871 | 100% | 83.0% | 0.0% |
| 2009 | 18,431 | 144,464 | 51,468 | 141,797 | 100% | 85.4% | 0.0% |
| 2008 | 17,367 | 141,510 | 54,529 | 138,323 | 100% | 85.5% | 0.0% |
| 2007 | 18,999 | 149,435 | 60,954 | 132,990 | 100% | 76.3% | 0.0% |
| 2006 | 21,857 | 112,823 | 76,704 | 124,837 | 100% | 91.3% | 0.0% |
| 2005 | 20,005 | 110,876 | 73,966 | 118,888 | 100% | 89.2% | 0.0% |
| 2004 | 17,640 | 106,159 | 61,253 | 112,016 | 100% | 88.9% | 0.0% |
| 2003 | 16,545 | 96,409 | 53,701 | 106,114 | 100% | 92.9% | 0.0% |
| 2002 | 16,162 | 101,716 | 48,562 | 100,074 | 100% | 82.5% | 0.0% |
| 2001 | 15,254 | 97,512 | 46,480 | 94,795 | 100% | 81.6% | 0.0% |

All dollar amounts are in thousands.

Section VI: Accounting Statement Information



Table VI-3: Active Member and Payroll Information

| Actuarial Valuation as of July 1 | Number of Employers | Number of Active Members | Annual Payroll (\$000's) | Annual Average Pay | Percentage Increase in Average Pay |
|----------------------------------|---------------------|--------------------------|--------------------------|--------------------|------------------------------------|
| 2010 | 3 | 144 | \$18,661 | 129,590 | 0.00% |
| 2009 | 3 | 144 | 18,661 | 129,590 | 0.00% |
| 2008 | 3 | 144 | 18,661 | 129,590 | 1.10% |
| 2007 | 2 | 128 | 16,407 | 128,176 | 3.00% |
| 2006 | 2 | 128 | 15,929 | 124,445 | 3.00% |
| 2005 | 2 | 128 | 15,465 | 120,820 | 4.00% |
| 2004 | 2 | 128 | 14,870 | 116,172 | 3.00% |
| 2003 | 2 | 128 | 14,437 | 112,789 | 1.59% |
| 2002 | 2 | 128 | 14,211 | 111,026 | 0.73% |
| 2001 | 2 | 128 | 14,109 | 110,223 | 4.26% |

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

| Year Ended July 1 | Added to Rolls | | Removed from Rolls | | Roll End of Year | | % Increase in Annual Allowances | Average Annual Allowances |
|-------------------|----------------|-----------------------------|--------------------|-----------------------------|------------------|-----------------------------|---------------------------------|---------------------------|
| | Number | Annual Allowances (\$000's) | Number | Annual Allowances (\$000's) | Number | Annual Allowances (\$000's) | | |
| 2010 | 18 | \$1,210 | 8 | \$593 | 194 | \$14,361 | 4.5% | \$74,025 |
| 2009 | 10 | 903 | 4 | 259 | 184 | 13,744 | 4.9% | 74,696 |
| 2008 | 6 | 545 | 3 | 156 | 178 | 13,100 | 3.1% | 73,596 |
| 2007 | 32 | 2,690 | 1 | 30 | 175 | 12,711 | 26.5% | 72,634 |
| 2006 | 4 | 464 | 1 | 28 | 144 | 10,051 | 4.5% | 69,799 |
| 2005 | 3 | 581 | 1 | 27 | 141 | 9,615 | 6.1% | 68,191 |
| 2004 | 11 | 925 | 2 | 139 | 139 | 9,061 | 9.5% | 65,190 |
| 2003 | 11 | 716 | 7 | 493 | 130 | 8,275 | 2.8% | 63,654 |
| 2002 | 13 | 706 | 5 | 248 | 126 | 8,052 | 6.0% | 63,905 |
| 2001 | 9 | 685 | 6 | 442 | 118 | 7,594 | 3.3% | 64,356 |

Section VI: Accounting Statement Information



| Table VI-5: Retired Members and Beneficiaries as of July 1, 2010 | | |
|---|-------------------|-------------------------------------|
| Group | Number | Annual Retirement Allowances |
| Service Retirements* | | |
| Employees: | | |
| Male | 120 | \$11,663,428 |
| Female | <u>14</u> | <u>928,855</u> |
| Total | 134 | \$12,592,283 |
| Disability Retirements | | |
| Employees: | | |
| Male | 1 | \$92,914 |
| Female | <u>0</u> | <u>0</u> |
| Total | 1 | \$92,914 |
| Beneficiaries of Deceased Retired and Active Members | | |
| Male | 6 | \$51,098 |
| Female | <u>53</u> | <u>1,624,612</u> |
| Total | 59 | \$1,675,710 |
| Grand Total | <u>194</u> | <u>\$14,360,907</u> |

*Includes DROP and retired in place members.

Section VI: Accounting Statement Information



Table VI-6: Valuation Balance Sheet

As of July 1, 2010

(Amounts expressed in thousands)

| Table VI-6: Valuation Balance Sheet | |
|---|-------------------------|
| As of July 1, 2010 | |
| (Amounts expressed in thousands) | |
| <u>Assets</u> | |
| Current Assets (Actuarial Value) | |
| Employee Annuity Savings Fund | \$17,816 |
| Employer Annuity Accumulation Fund | <u>125,055</u> |
| Total Current Assets | \$142,871 |
| Present Value of Future Member Contributions | \$13,313 |
| Present Value of Future Employer Contributions | |
| Normal Contributions | \$16,091 |
| Accrued Liability Contributions | <u>72,952</u> |
| Total Future Employer Contributions | \$89,043 |
| Total Assets | <u><u>\$245,227</u></u> |
| <u>Liabilities</u> | |
| Employee Annuity Savings Fund | |
| Past Member Contributions | \$17,816 |
| Present Value of Future Member Contributions | <u>13,313</u> |
| Total Contributions to Employee Annuity Savings Fund | \$31,129 |
| Employer Annuity Accumulation Fund | |
| Benefits Currently in Payment | \$150,696 |
| Benefits to be Paid to Current Active Members (includes vested terminated members) | <u>63,402</u> |
| Total Benefits Payable from Employer Annuity Accumulation Fund | \$214,098 |
| Total Liabilities | <u><u>\$245,227</u></u> |



| Table VI-7: Results of the Valuation As of July 1, 2010 (Amounts expressed in thousands) | |
|---|---------------|
| <u>Actuarial Present Value of Future Benefits</u> | |
| Present Retired Members and Beneficiaries | \$150,696 |
| Present Active and Inactive Members | <u>94,531</u> |
| Total Actuarial Present Value | \$245,227 |
| <u>Present Value of Future Normal Contributions</u> | |
| Employee | \$13,313 |
| Employer | <u>16,091</u> |
| Total Future Normal Contributions | \$29,404 |
| <u>Actuarial Liability</u> | \$215,823 |
| <u>Current Actuarial Value of Assets</u> | \$142,871 |
| <u>Unfunded Actuarial Liability</u> | \$72,952 |
| <u>Unfunded Actuarial Liability Rates</u> | |
| Active Members | 32.93% |
| DROP and Retired-in-Place Members (including employee contributions) | 55.09% |
| <u>Unfunded Actuarial Liability Liquidation Period</u> | 16 years |



Appendix A: Additional Membership Data

| Table A-1: Schedule of Active Participant Data as of July 1, 2010 | | | | | | | | | |
|--|------------------|---------|----------|----------|----------|----------|----------|------|---------|
| AGE | Years of Service | | | | | | | | Total |
| | Under 5 | 5 to 9 | 10 to 14 | 15 to 19 | 20 to 24 | 25 to 29 | 30 to 34 | ≥ 35 | |
| Under 35 | | | | | | | | | |
| Avg. Pay | | | | | | | | | |
| 35 to 39 | 1 | | | | | | | | 1 |
| Avg. Pay | 130,312 | | | | | | | | 130,312 |
| 40 to 44 | 12 | 1 | | 3 | | | | | 16 |
| Avg. Pay | 123,932 | 130,312 | | 129,169 | | | | | 125,313 |
| 45 to 49 | 8 | 3 | 5 | 1 | 4 | | | | 21 |
| Avg. Pay | 121,520 | 129,772 | 128,940 | 130,312 | 130,312 | | | | 126,559 |
| 50 to 54 | 6 | 2 | 3 | 7 | 7 | 3 | | | 28 |
| Avg. Pay | 128,663 | 128,597 | 130,312 | 128,317 | 130,802 | 129,169 | | | 129,337 |
| 55 to 59 | 7 | 1 | 7 | 6 | 3 | 4 | 4 | | 32 |
| Avg. Pay | 128,842 | 126,883 | 127,863 | 128,597 | 129,169 | 131,169 | 126,107 | | 128,500 |
| 60 to 64 | 9 | | | 1 | 2 | 5 | 7 | | 24 |
| Avg. Pay | 129,550 | | | 126,883 | 128,597 | 132,895 | 127,356 | | 129,416 |
| 65 & up | 3 | 1 | 1 | 3 | 1 | 1 | 9 | | 19 |
| Avg. Pay | 129,169 | 130,312 | 130,312 | 129,169 | 130,312 | 130,312 | 125,770 | | 127,799 |
| Total | 46 | 8 | 16 | 21 | 17 | 13 | 20 | | 141 |
| Avg. Pay | 126,456 | 129,252 | 128,812 | 128,667 | 130,110 | 131,306 | 126,392 | | 128,090 |

| Table A-2: Comparative Summary of Active Data | | |
|--|-------------------|---------------------|
| | Prior Year | Current Year |
| Average Age | 55.01 years | 54.93 years |
| Average Service | 15.36 years | 14.95 years |
| Average Pay | \$ 127,933 | \$128,090 |
| Percent Female | 18.8% | 19.1% |

Note: Tables A-1 and A-2 are based upon filled positions and includes DROP and retired in place members.



Table A-3: Distribution of Participants Receiving Benefits as of July 1, 2010

NUMBER OF RETIRED MEMBERS AND THEIR BENEFITS BY AGE

| Age | Number of Members | Total Annual Benefits | Average Annual Benefits |
|-----------|-------------------|-----------------------|-------------------------|
| Under 50 | 1 | \$ 93,319 | \$ 93,319 |
| 50 – 54 | 1 | 90,938 | 90,938 |
| 55 – 59 | 12 | 1,003,146 | 83,596 |
| 60 – 64 | 26 | 2,306,224 | 88,701 |
| 65 – 69 | 40 | 3,906,831 | 97,671 |
| 70 – 74 | 21 | 2,053,945 | 97,807 |
| 75 – 79 | 16 | 1,538,905 | 96,182 |
| 80 & Over | <u>17</u> | <u>1,598,975</u> | <u>94,057</u> |
| Total | 134 | \$ 12,592,283 | \$ 93,972 |

NUMBER OF DISABLED RETIREES AND THEIR BENEFITS BY AGE

| Age | Number of Members | Total Annual Benefits | Average Annual Benefits |
|-----------|-------------------|-----------------------|-------------------------|
| Under 50 | 0 | \$ 0 | \$ 0 |
| 50 – 54 | 0 | 0 | 0 |
| 55 – 59 | 0 | 0 | 0 |
| 60 – 64 | 0 | 0 | 0 |
| 65 – 69 | 0 | 0 | 0 |
| 70 – 74 | 0 | 0 | 0 |
| 75 – 79 | 1 | 92,914 | 92,914 |
| 80 & Over | <u>0</u> | <u>0</u> | <u>0</u> |
| Total | 1 | \$ 92,914 | \$ 92,914 |

NUMBER OF BENEFICIARIES AND THEIR BENEFITS BY AGE

| Age | Number of Members | Total Annual Benefits | Average Annual Benefits |
|-----------|-------------------|-----------------------|-------------------------|
| Under 50 | 6 | \$ 64,066 | \$ 10,678 |
| 50 – 54 | 4 | 90,747 | 22,687 |
| 55 – 59 | 4 | 114,348 | 28,587 |
| 60 – 64 | 6 | 183,363 | 30,561 |
| 65 – 69 | 4 | 123,872 | 30,968 |
| 70 – 74 | 5 | 135,092 | 27,018 |
| 75 – 79 | 7 | 226,679 | 32,383 |
| 80 & Over | <u>23</u> | <u>737,543</u> | <u>32,067</u> |
| Total | 59 | \$ 1,675,710 | \$ 28,402 |



Appendix B: Actuarial Assumptions and Methods

Investment Rate of Return

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

Rates of Annual Salary Increase

Rates of salary are assumed to increase at an annual rate of 3.25%

Active Member Decrement Rates

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

| Annual Rates of Decrements | | | | |
|----------------------------|--------------------------|--------|------------|--------|
| Age | Pre-Retirement Mortality | | Disability | |
| | Male | Female | Male | Female |
| 25 | 0.06% | 0.03% | 0.04% | 0.05% |
| 30 | 0.07% | 0.04% | 0.06% | 0.07% |
| 35 | 0.07% | 0.04% | 0.08% | 0.07% |
| 40 | 0.10% | 0.05% | 0.15% | 0.12% |
| 45 | 0.18% | 0.08% | 0.25% | 0.25% |
| 50 | 0.30% | 0.13% | 0.40% | 0.40% |
| 55 | 0.46% | 0.21% | 0.65% | 0.65% |
| 60 | 0.65% | 0.33% | 1.00% | 1.00% |
| 65 | 0.99% | 0.54% | 1.25% | 1.25% |



Appendix B: Actuarial Assumptions and Methods

- b. Normal Retirement Rates differ based upon the member being eligible to Retire in Place (RIP) prior to reaching age 72. 100% of participants are assumed to retire upon reaching the mandatory retirement age of 72. Upon meeting the retirement eligibility requirement, participants are assumed to retire at the following rates:

| 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 19 | 12% | 12% | 70 to 72 | 15 to 19 | 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* | 12%* | 35% | Any | 32* | 12%* | 35% |
| Any | 32+ | 12% | 12% | Any | 33+ | 12% | 15% |

* Additionally, the remaining 88% of eligible members are assumed to retire in Place.

Post-Retirement Mortality

Assumed rate of mortality for healthy retirees and beneficiaries is the 1983 Group Annuity Mortality Table rates. A separate table of mortality rates is used for disabled retirees. The following are sample rates for retirees and beneficiaries:

| Post-Retirement Mortality Assumption | | | | |
|--------------------------------------|---------|--------|----------|--------|
| Age | Healthy | | Disabled | |
| | Male | Female | Male | Female |
| 60 | 0.92% | 0.42% | 4.88% | 2.88% |
| 65 | 1.56% | 0.71% | 5.95% | 3.66% |
| 70 | 2.75% | 1.24% | 7.63% | 4.88% |
| 75 | 4.46% | 2.40% | 10.22% | 6.77% |
| 80 | 7.41% | 4.29% | 14.17% | 9.71% |
| 85 | 11.48% | 6.99% | 20.09% | 14.16% |

Marriage Assumption

95% of all active members are assumed to be married, with female spouses being 4 years younger than males.

Asset Valuation Method

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



Appendix B: Actuarial Assumptions and Methods

Actuarial Cost Method

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

An unfunded accrued liability exists in the amount equal to the excess of accrued liability over valuation assets. The amortization period of the System is the 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.

Future Cost-of-living Increases

Benefits are assumed to increase 3.25% annually.

Administrative and Investment Expenses

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

Payroll Growth Rate

The total annual payroll of active members (also applies to rehired retiree participants) is assumed to increase at an annual rate of 3.25%. This rate does not anticipate increases in the number of members.

Changes from Prior Valuation

None.

Appendix C: Summary of Plan Provisions



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

Effective Date

July 1, 1979

Eligibility Requirements

All solicitors, public defenders, judges of circuit or family courts or the Court of Appeals, and the justices of the Supreme Court in the State of South Carolina are required to participate upon taking office.

Creditable Service

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

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

Service Requirement

Eligibility - Attainment of age 70 with 15 years of creditable service, or age 65 with 20 years of creditable service, or 25 years for judges and 24 years for solicitors and public defenders regardless of age. In addition, age 65 with 4 years in JSRS plus 25 years in another system. The mandatory retirement age is 72.

Benefit - 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 but not to exceed 90% of active salary of respective position.

Disability Retirement

Eligibility - Disability prior to normal retirement age with at least 5 years of creditable service.

Benefit - The disability benefit is computed in the same manner as the service retirement benefit.

Death Benefits

Single Member

An annuity equal to the amount that would have been payable had the member retired the day of death, calculated under the optional form of payment and payable to the designated beneficiary, plus the Incidental Death Benefit.

Married Member

An annuity equal to one-third of the amount that would have been payable had the member retired the day of death, payable to the surviving spouse until her death, plus the Incidental Death Benefit.



Incidental Death Benefit

A lump-sum payment equal to one year's salary payable to the beneficiary upon the death of an active member with at least one year of creditable service. The service requirement will be waived for deaths resulting from actual performance of duties. Post-retirement (non-contributing) benefit is based upon creditable years of service as follows: \$1,000 for members with at least 10 years but less than 20 years, \$2,000 for members with at least 20 years but less than 30 years, and \$3,000 for members with 30 or more years.

Employee Contributions

The member contribution rate is 10%. Accumulated member contributions are credited with interest at the rate of 4% per year.

Vested Benefit Upon Termination

Eligibility - 100% vesting upon completion of 10 years of creditable service for judges and 8 years for solicitors.

Benefit - Service retirement benefit computed as if the member has 24 years of creditable service, prorated by actual years of creditable service at date of separation. The benefit will commence at age 65. For members who began service before July 1, 2004, the benefit commences at age 55.

Termination Benefit

Eligibility - Elect return of accumulated employee contributions.

Benefit - Return of employee contributions plus interest.

Normal Form of Retirement Income

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

Married Member - A joint and 33 1/3% joint and survivor annuity to spouse unless a contingent non-spousal beneficiary is named.

Optional Forms of Retirement Income

Beneficiary other than spouse - Calculate the maximum payment to the member, then apply JSRS calculated option factor by using the SCRS Option C factor for current age of member and beneficiary. Beneficiary(ies) receives 1/3 of the benefit payable to the retired member. The JSRS option factor is calculated as follows:

$$\text{JSRS Option Factor} = (3 \times \text{SCRS Opt. C Factor}) / (1 + 2 \times \text{SCRS Opt. C. Factor})$$

Future Cost of Living Adjustment

For a retired member and his/her spouse, the adjustment reflects the increase in the current salary of the position from which the member retired.

For a contingent beneficiary other than the spouse, the adjustment is an increase of 4% in each year that the rate of increase in the CPI equal or exceeds 3%.

Appendix C: Summary of Plan Provisions



Retire in Place

Members who have accrued 90% percent of salary (32 years for Judges and 31 year for Solicitors and Public Defenders) may elect to “retire in place”. Those eligible members electing to retire in place will begin to receive their accrued retirement benefits while remaining employed, not accrue additional benefits, and continue to contribute 10% of their compensation from active employment. For the purpose of incidental death benefits, these members are treated as active employees.

A member who has not yet reached the age of 60 years, but who is eligible to retire in place will have his or her retirement benefit paid into a deferred retirement option program (DROP). Upon reaching the age of 60 years (or retirement if earlier), the balance of the member's deferred retirement benefit is distributed to the member and the member begins receiving their retirement benefit directly.

Changes from Prior Valuation

None