



Cavanaugh Macdonald
CONSULTING, LLC

The experience and dedication you deserve



Retirement Systems
of Alabama

**Alabama Clerks and Registers Supernumerary
Fund Report of the Actuary on the Annual
Valuation Prepared as of
September 30, 2012**





Cavanaugh Macdonald

CONSULTING, LLC

The experience and dedication you deserve

August 7, 2013

Retirement Systems of Alabama
Alabama Clerks and Registers Supernumerary Fund
Montgomery, AL

Dear Sir or Madam:

In this report are submitted the results of the annual valuation of the assets and liabilities of the Alabama Clerks and Registers Supernumerary Fund, prepared as of September 30, 2012. The purpose of this report is to provide a summary of the funded status of the Fund as of September 30, 2012, to recommend rates of contribution and to provide accounting information under Governmental Accounting Standards Board Statements No. 25 and 27 (GASB 25 and 27). While not verifying the data at source, the actuary performed tests for consistency and reasonability. Since the previous valuation the Board has adopted a valuation interest smoothing methodology.

It was determined in 1998 that the definition of a defined benefit pension plan under GASB 25 and 27 includes programs such as the supernumerary program that the State of Alabama operates for Clerks and Registers. The State program consists of the following: (1) pay as you go payments directly from the Administrative Office of Courts to clerks and registers upon election of supernumerary status (retirement), and (2) the Clerks and Registers Supernumerary Fund (CRSF) into which each active clerk and register must contribute six percent (6%) of salary and from which payments are made to surviving spouses of those who meet minimum service requirements.

This valuation, prepared as of September 30, 2012 based on the interest smoothing methodology adopted by the Board, shows that the State would need to contribute employer contributions of 96.31% of payroll to the CRSF for the year ending September 30, 2015. In conjunction with the required funding, benefits for those clerks and registers in supernumerary status should be paid from the CRSF rather than the Administrative Office of Courts. In order to accomplish this, State law would need to be amended to allow the State to make actuarially determined contributions to the CRSF and the payment of benefits to members in supernumerary status from the Fund rather from the Administrative Office of the Courts. It is our understanding that it is the intent of RSA to begin this process. The System should be prefunded on an actuarial basis, and since it is a mature plan with immediate benefit payments required, we recommend funding the Unfunded Actuarial Accrued Liability over a closed 20 year period.

GASB has recently released statements 67 and 68 that would require liabilities to be discounted using a 20 year high-quality tax exempt municipal bond index rate for funds such as this one that do not have sufficient assets in trust to pay actuarially determined benefits. We have also prepared valuation results using the General Obligation Bond Yield with 20 year maturity, rated AA2 by Moody's Arithmetic Average of 20 bonds' yield to maturity as of September 30, 2012 (3.65%) to discount liabilities of the Fund. On this basis the State would need to contribute 141.83% of payroll to the CSRF for the year ending September 30, 2015.

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August 7, 2013
Retirement Systems of Alabama
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The promised benefits of the Fund are included in the actuarially calculated contribution rates which are developed using the entry age normal cost method. Five-year smoothed market value of assets is used for actuarial valuation purposes. However, the actuarial value of assets was set equal to the market value of assets as of September 30, 2012; five-year smoothing will commence again in future years. Gains and losses are reflected in the unfunded accrued liability that is being amortized by regular annual contributions as a level percentage of payroll within a 20-year period, on the assumption that payroll will increase by 3.25% annually. The assumptions recommended by the actuary are in the aggregate reasonably related to the experience under the Fund and to reasonable expectations of anticipated experience under the Fund and meet the parameters for the disclosures under GASB 25 and 27. Because less than the annual required contributions were made under the program, there is a net pension obligation under GASB 25 and 27.

We have prepared the Schedule of Active Member Valuation Data, Schedule of Funding Progress, Trend Information and the Solvency Test for the financial section of the Annual Report.

This is to certify that the independent consulting actuary is a member of the American Academy of Actuaries and has 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 Fund and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the Fund.

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; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); 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.

Since the program is funded primarily on a pay-as-you-go basis, the Fund is not operating in an actuarially prefunded manner. Assuming that contributions to the Fund are made by the employer from year to year in the future at the rates recommended on the basis of the successive actuarial valuations, the sufficiency of the retirement fund to provide the benefits called for under the Fund may be safely anticipated.

The Table of Contents, which immediately follows, outlines the material contained in the report.

Respectfully Submitted,

A handwritten signature in blue ink, appearing to read 'Edward Macdonald', written in a cursive style.

Edward A. Macdonald, ASA, FCA, MAAA
President

A handwritten signature in blue ink, appearing to read 'John J. Garrett', written in a cursive style.

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

EAM/JJG:jcj



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**ALABAMA CLERKS AND REGISTERS SUPERNUMERARY FUND
REPORT OF THE ACTUARY ON THE
ANNUAL VALUATION
PREPARED AS OF SEPTEMBER 30, 2012**

SECTION I - SUMMARY OF PRINCIPAL RESULTS

1. For convenience of reference, the principal results of the valuation are summarized below:

VALUATION DATE	September 30, 2012		September 30, 2011	
Interest Rate	8.00%*	3.65%	8.00%	4.00%
Active clerks and registers:				
Number	66	66	66	66
Annual compensation	\$5,830,688	\$5,830,688	\$5,745,012	\$5,745,012
Supernumerary officials:				
Number	66	66	67	67
Annual allowances	\$4,103,424	\$4,103,424	\$4,159,308	\$4,159,308
Spouses receiving benefits:				
Number	13	13	12	12
Annual allowances	\$399,534	\$399,534	\$379,453	\$379,453
Former clerks and registers eligible for future benefits				
Number	4	4	4	4
Annual allowances	259,824	259,824	259,824	259,824
Assets:				
Actuarial Value	\$11,444,847	\$11,444,847	\$10,919,479	\$10,919,479
Market Value	11,444,847	11,444,847	10,852,713	10,852,713
Unfunded accrued liability	\$58,304,201	\$101,254,438	\$60,454,263	\$97,619,521
Funded Ratio	16.4%	10.2%	15.3%	10.1%
CONTRIBUTIONS FOR FISCAL YEAR ENDING	9/30/2015	9/30/2015	9/30/2014	9/30/2014
Employer Annual Required Contribution Rate (ARC):				
Normal	18.36%	52.97%	19.09%	48.76%
Accrued Liability	<u>77.95%</u>	<u>88.86%</u>	<u>64.25%</u>	<u>62.16%</u>
Total	96.31%	141.83%	83.34%	110.92%
Employer Contribution Rate	96.31%	141.83%	83.34%	110.92%
Employee Contribution Rate	6.00%	6.00%	6.00%	6.00%
Total	102.31%	147.83%	89.34%	116.92%
Liquidation Period	20 years	20 years	30 years	30 years

*Ultimate investment rate of return is 8.00%. See Schedules D and E for a description of the interest smoothing methodology used.



2. Comments on the valuation results as of September 30, 2012 are given in Section IV and further discussion of the contribution levels is set out in Section V.
3. The System should be prefunded on an actuarial basis, and since it is a mature plan with immediate benefit payments required, we recommend funding the Unfunded Actuarial Accrued Liability over a closed 20 year period.
4. Since the previous valuation, the Board has adopted a valuation interest rate smoothing methodology. Schedule D of this report shows the development of the smoothed interest rate. In addition, the actuarial value of assets was set equal to the market value of assets on September 30, 2012. Five-year smoothing of assets will commence again in future years. Schedule E of this report outlines the full set of actuarial assumptions and methods used in the current valuation.
5. GASB has recently released statements 67 and 68 that would require liabilities to be discounted using a 20 year high-quality tax exempt municipal bond index rate for funds such as this one that do not have sufficient assets in trust to pay actuarially determined benefits. We have also prepared valuation results using the General Obligation Bond Yield with 20 year maturity, rated AA2 by Moody's Arithmetic Average of 20 bonds' yield to maturity as of September 30, 2012 (3.65%) to discount liabilities of the Fund.
6. The valuation takes into account the effect of amendments to the Fund through the valuation date. Provisions of the Fund, as summarized in Schedule G, were taken into account in the current valuation. There have been no changes since the previous valuation.

SECTION II – MEMBERSHIP

1. The following table shows the number of active clerks and registers and their annual compensation as of September 30, 2012 on the basis of which the valuation was prepared.



TABLE 1

**THE NUMBER AND ANNUAL COMPENSATION OF
ACTIVE CLERKS AND REGISTERS AS OF SEPTEMBER 30, 2012**

GROUP	NUMBER	COMPENSATION
Males	35	\$3,263,828
Females	<u>31</u>	<u>2,566,860</u>
Total	66	\$5,830,688

2. The following table shows a history of active member valuation data.

TABLE 2

SCHEDULE OF ACTIVE MEMBER VALUATION DATA

Valuation Date	Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay
9/30/2007	73	\$ 5,619,524	\$ 76,980	-7.5%
9/30/2008	68	5,749,755	84,555	9.8%
9/30/2009	68	5,987,980	88,059	4.1%
9/30/2010	68	5,979,811	87,938	-0.1%
9/30/2011	66	5,745,012	87,046	-1.0%
9/30/2012	66	5,830,688	88,344	1.5%

3. The following table shows the number and annual retirement allowances payable to members in supernumerary status and their beneficiaries on the roll of the Retirement Fund as of the valuation date.



TABLE 3

**THE NUMBER AND ANNUAL ALLOWANCES OF CLERKS AND REGISTERS
IN SUPERNUMERARY STATUS AND SPOUSES IN RECEIPT
AS OF SEPTEMBER 30, 2012**

GROUP	NUMBER	ANNUAL RETIREMENT ALLOWANCES
Supernumerary Officials	66	\$4,103,424
Spouses Receiving Benefits	<u>13</u>	<u>399,534</u>
Total	79	\$4,502,958

In addition, there are four former clerks and registers eligible for future benefits totaling \$259,824 annually.

4. Table 1 of Schedule H gives the distribution by age and by years of service of the active clerks and registers included in the valuation, while Table 2 gives the number and annual retirement allowances of supernumerary officials and spouses receiving benefits included in the valuation, distributed by age.

SECTION III – ASSETS

1. As of September 30, 2012 the total market value of assets reported amounted to \$11,444,847.
2. The five-year market related actuarial value of assets as of September 30, 2012 was \$11,637,754. However, the final actuarial value of the assets was set equal to the market value of assets as of September 30, 2012 with smoothing to commence in future years. Schedule B shows the development of the actuarial value of assets.
3. Schedule C shows the receipts and disbursements of the Fund for the two years preceding the valuation date and a reconciliation of the fund balances at market value.



SECTION IV - COMMENTS ON VALUATION

1. Schedule A of this report contains the valuation balance sheet which shows the present and prospective assets and liabilities of the Fund as of September 30, 2012.
2. The valuation balance sheet shows that the Fund has total prospective liabilities of \$78,732,668. Of this amount, \$46,849,713 is for the prospective benefits payable on account of present supernumerary officials, spouses receiving benefits and former clerks and registers eligible for future benefits and \$31,882,955 is for the prospective benefits payable on account of present active clerks and registers. Against these liabilities, the Fund has total present actuarial value of assets of \$11,444,847 as of September 30, 2012. The difference of \$67,287,821 between the total liabilities and the total present actuarial value of assets represents the present value of contributions to be made in the future. Of this amount, \$2,214,114 is the present value of future contributions expected to be made by active clerks and registers, and the balance of \$65,073,707 represents the present value of future contributions payable by the employer.
3. The employer's regular contributions to the Fund consist of normal contributions and accrued liability contributions. The valuation indicates that employer normal contributions at the rate of 18.36% of payroll are required to provide the benefits of the Fund.
4. Prospective normal contributions at the rate of 18.36% have a present value of \$6,769,506. When this amount is subtracted from \$65,073,707, which is the present value of the total future contributions to be made by the employer, there remains \$58,304,201 as the amount of future accrued liability contributions. Annual accrued liability contributions at the rate of 77.95% of payroll will liquidate the unfunded accrued liability within 20 years from the valuation date on the assumption that the aggregate amount of accrued liability contribution will increase by 3.25% each year.



SECTION V - CONTRIBUTIONS PAYABLE BY EMPLOYER

1. On the basis of the actuarial valuation prepared as of September 30, 2012 it is recommended that the employer make contributions at the following rates:

TABLE 4
RECOMMENDED CONTRIBUTION RATES

	PERCENTAGE OF ACTIVE CLERKS' AND REGISTERS' COMPENSATION	
Interest Rate	8.00%*	3.65%
CONTRIBUTION		
Normal	18.36%	52.97%
Accrued Liability	<u>77.95</u>	<u>88.86%</u>
Total	96.31%	141.83%

*Ultimate investment rate of return is 8.00%. See Schedules D and E for a description of the interest rate used.

SECTION VI – ANALYSIS OF FINANCIAL EXPERIENCE

The following table shows the estimated gain or loss from various factors that resulted in a decrease of \$2,150,062 in the unfunded accrued liability from \$60,454,263 to \$58,304,201 during the year ending September 30, 2012, based on a valuation interest smoothing methodology. The most significant item contributing to the decrease of \$2.2 million in the unfunded accrued liability was a gain of \$1.8 million due to the adoption of a valuation interest rate smoothing methodology and a gain of \$1.4 million due to cost-of-living adjustments less than anticipated.



ANALYSIS OF FINANCIAL EXPERIENCE

(in thousands of dollars)

ITEM	AMOUNT OF INCREASE/ (DECREASE)
Interest (8.00%) added to previous unfunded accrued liability	\$ 4,836.3
Accrued liability contribution*	(3,173.9)
Experience:	
Valuation asset growth	95.3
Pensioners' mortality	(35.6)
Turnover and retirements	(548.6)
New entrants	21.5
Salary increases	(348.0)
Method changes	192.9
Amendments/COLA	(1,428.3)
Interest Smoothing	(1,750.2)
Miscellaneous changes	<u>(11.5)</u>
Total	\$ (2,150.1)

*Equal to the estimated total contributions during the fiscal year (benefit payments from the general fund) less the estimated portion of contributions attributed to normal cost for the year, adjusted for interest to September 30 , 2012 (($\$4,178,000 - 1,126,128$) x 1.04).

SECTION VII - ACCOUNTING INFORMATION

- Governmental Accounting Standards Board Statements 25 and 27 set forth certain items of required supplementary information to be disclosed in the financial statements of the Fund and the employer. One such item is a distribution of the number of employees by type of membership, as follows:

**NUMBER OF ACTIVE AND RETIRED MEMBERS
AS OF SEPTEMBER 30, 2012**

GROUP	NUMBER
Retirees and beneficiaries currently receiving benefits	79
Terminated employees entitled to benefits but not yet receiving benefits	4
Active Members	<u>66</u>
Total	149



2. Another such item is the schedule of funding progress as shown below.

SCHEDULE OF FUNDING PROGRESS

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
9/30/2007	\$ 8,775,487	\$ 64,714,032	\$ 55,938,545	13.6%	\$ 5,619,524	995.4%
9/30/2008	8,999,210	72,008,375	63,009,165	12.5%	5,749,755	1095.9%
9/30/2009	9,534,673	73,044,060	63,509,387	13.1%	5,987,980	1060.6%
9/30/2010	10,247,955	73,618,029	63,370,074	13.9%	5,979,811	1059.7%
9/30/2011	10,919,479	71,373,742	60,454,263	15.3%	5,745,012	1052.3%
9/30/2012 *	11,444,847	69,749,048	58,304,201	16.4%	5,830,688	1000.0%

*Reflects the adoption of a valuation interest smoothing methodology.

3. Following is the calculation of the annual pension cost and net pension obligation for the fiscal year ending September 30, 2012.

Annual Pension Cost and Net Pension Obligation for Fiscal Year Ending 9/30/2012

(a) Employer annual required contribution	\$ 4,860,400
(b) Interest on net pension obligation	562,000
(c) Adjustment to annual required contribution	(398,700)
(d) Annual pension cost: (a) + (b) + (c) as of 9/30/2012	\$ 5,023,700
(e) Employer contributions made for fiscal year ending 9/30/2012	4,178,000*
(f) Increase (decrease) in net pension obligation: (d) - (e)	\$ 845,700
(g) Net pension obligation 9/30/2011	7,024,900
(h) Net pension obligation 9/30/2012: (f) + (g)	\$ 7,870,600

*No employer contributions are made to the Fund. This represents benefit payments made to Supernumerary officials on a pay-as-you-go basis from the Administrative Office of Courts.

TREND INFORMATION

Year Ending	Annual Pension Cost (APC)	Percentage APC Contributed	Net Pension Obligation
September 30, 2010	\$ 4,851,900	75.4%	\$6,059,500
September 30, 2011	5,034,400	80.8	7,024,900
September 30, 2012	5,023,700	83.2	7,870,600



4. The annual required contribution (ARC) of the employer as a percentage of payroll, determined in accordance with the parameters of GASB 25/27, is shown below. The accrued liability rate is based on amortization of the unfunded actuarial accrued liability over a 20-year period from the valuation date.

ANNUAL REQUIRED CONTRIBUTION (ARC)	RATE
Normal	18.36%
Accrued liability	<u>77.95</u>
Total	96.31%

5. The information presented in the required supplementary schedules was determined as part of the actuarial valuation at September 30, 2012. Additional information as of the latest actuarial valuation follows.

Valuation date	9/30/2012
Actuarial cost method	Entry Age
Amortization method	Level percent open
Remaining amortization period	20 years
Asset valuation method	Five-year market related value*
Actuarial assumptions:	
Ultimate investment rate of return (discount rate)**	8.00%
Projected salary increases**	3.50%
Cost-of-living adjustments	3.25%
**Includes inflation at	3.00%

* Actuarial value of assets was set equal to the market value of assets on September 30, 2012. Smoothing will commence again in future years.



SCHEDULE A

**VALUATION BALANCE SHEET
SHOWING THE PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES OF
THE ALABAMA CLERKS AND REGISTERS SUPERNUMERARY FUND
AS OF SEPTEMBER 30, 2012**

<u>ASSETS</u>	
Actuarial Value of Present Assets	\$ 11,444,847
Present value of future clerks' and registers' contributions	2,214,114
Present value of future employer contributions	
Normal contributions	\$ 6,769,506
Unfunded accrued liability contributions	<u>58,304,201</u>
Total prospective employer contributions	<u>65,073,707</u>
Total Assets	<u>\$ 78,732,668</u>
<u>LIABILITIES</u>	
Present value of benefits payable on account of Supernumerary officials, spouses receiving benefits, and former clerks and registers eligible for future benefits	\$ 46,849,713
Present value of prospective benefits payable on account of present active clerks and registers	<u>31,882,955</u>
Total Liabilities	<u>\$ 78,732,668</u>



SCHEDULE A (continued)

SOLVENCY TEST

Valuation Date	Aggregate Accrued Liabilities For			Reported Assets	Portion of Accrued Liabilities Covered by Reported Assets		
	(1)	(2)	(3)		(1)	(2)	(3)
	Active Member Contributions	Retirants and Beneficiaries	Active Members (Employer Financed Portion)				
9/30/2007	\$3,242,432	\$47,025,078	\$14,446,522	\$8,775,487	100%	12%	0%
9/30/2008	3,292,261	52,200,126	16,515,988	8,999,210	100%	11%	0%
9/30/2009	3,782,813	50,524,210	18,737,037	9,534,673	100%	11%	0%
9/30/2010	4,173,961	49,595,307	19,848,761	10,247,955	100%	12%	0%
9/30/2011	3,934,726	49,021,744	18,417,272	10,919,479	100%	14%	0%
9/30/2012 *	4,292,931	46,849,713	18,606,404	11,444,847	100%	15%	0%

*Reflects the adoption of a valuation interest smoothing methodology.



SCHEDULE B

DEVELOPMENT OF SEPTEMBER 30, 2012 ACTUARIAL VALUE OF ASSETS

(1) Actuarial Value of Assets on September 30, 2011	\$10,919,479
(2) Market Value of Assets on September 30, 2012	11,444,847
(3) Market Value of Assets on September 30, 2011	10,852,713
(4) Net Cash Flow During the Fiscal Year	
a. Contributions	344,842
b. Disbursements	<u>(402,536)</u>
c. Net Cash Flow (4)a + (4)b	(57,694)
(5) Actual Investment Return (2) - (3) - (4)c	649,828
(6) Assumed Rate of Return on Assets	8.00%
(7) Amount for Immediate Recognition [(3) * (6)] + [(4)c * .5 * (6)]	865,909
(8) Amount for Phased in Recognition (5) - (7)	(216,081)
(9) Phased-In Recognition of Investment Gain/(Loss)	
a. Current Fiscal Year 0.2 * (8)	(43,216)
b. Prior Fiscal Year	(60,607)
c. Second Prior Fiscal Year	37,204
d. Third Prior Fiscal Year	87,378
e. Fourth Prior Fiscal Year	<u>(110,699)</u>
f. Total Recognized Investment Gain/(Loss) for Fiscal Year	(89,940)
(10) Actuarial Value of Assets on September 30, 2012 (1) + (4)c + (7) + (9)f	\$11,637,754
(11) Final Actuarial Value End of Year*:	\$11,444,847

<u>Date</u>	<u>Investment Gain/(Loss)</u>	<u>Amount Recognized</u>	<u>Remaining Balance as of September 30, 2012*</u>
9/30/2012	(\$216,081)	(\$43,216)	\$0
9/30/2011	(303,034)	(60,607)	0
9/30/2010	186,019	37,204	0
9/30/2009	436,889	87,378	0
9/30/2008	(553,495)	(110,699)	0



* Actuarial value of assets was set equal to the market value of assets on September 30, 2012. Smoothing will commence again in future years.

SCHEDULE C

SUMMARY OF RECEIPTS AND DISBURSEMENTS

	YEAR ENDING	
	<u>September 30, 2012</u>	<u>September 30, 2011</u>
<u>Receipts for the Year</u>		
Contributions:		
Members	\$344,842	\$349,090
Employer*	0	0
Subtotal	\$344,842	\$349,090
Investment Income	474,744	593,425
Unrealized Gain (Loss)	175,084	(67,473)
TOTAL	\$994,670	\$875,042
<u>Disbursements for the Year</u>		
Benefit Payments**	\$402,536	\$420,226
Refunds to Members	0	0
TOTAL	\$402,536	\$420,226
<u>Excess of Receipts over Disbursements</u>	\$592,134	\$454,816
<u>Reconciliation of Asset Balances</u>		
Market Value of Assets as of Beginning of Year	\$10,852,713	\$10,397,897
Excess of Receipts over Disbursements	592,134	454,816
Market Value of Assets as of End of Year	<u>\$11,444,847</u>	<u>\$10,852,713</u>

*No employer contributions are made to the Fund. Active members contribute 6% of salary for surviving spouse's benefits.

**Represents benefit payments from the fund for surviving spouse's benefits. Benefit payments to Supernumerary officials are made on a pay-as-you-go basis from the Administrative Office of Courts.



SCHEDULE D

SMOOTHED INTEREST RATE

Actual Rate of Return for 5 Year Look Back Period

Fiscal Year Ending 9/30	Actual Rate of Return for Fiscal Year
2008	1.08 %
2009	12.71
2010	9.79
2011	4.38
2012	5.83

SMOOTHED INTEREST RATE: The assumed rate of return during the 25 year look forward period beginning on the valuation date. This is the investment rate of return expected to be earned during this period based on the actual rates earned during the five year look back period shown above such that the average rate of return over the combined 30 year period is equivalent to the ultimate investment rate of return (currently 8.00%). On this basis, for the September 30, 2012 valuation, the smoothed interest rate during the 25 year look forward period has been determined to be 8.27%.

ULTIMATE INVESTMENT RATE OF RETURN: The assumed investment rate of return used in determining the smoothed interest rate described above. This is also the assumed investment rate of return after the 25 year look forward period and is currently 8.00%.

CORRIDOR AROUND LONG-TERM INVESTMENT RATE OF RETURN: A corridor of 0.50% around the ultimate investment rate of return is applied in determining the smoothed interest rate.

LIMITED SMOOTHED INTEREST RATE: The assumed rate of return during the 25 year look forward period as limited based on the application of the corridor above and used for valuation purposes. Since the smoothed interest rate above is 8.27%, the assumed rate for the first 25 years after the valuation date is not limited.



SCHEDULE E

OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS

The assumptions and methods used in the valuation were selected based on the actuarial experience study prepared as of September 30, 2010, submitted to and adopted by the Board on January 27, 2012.

ULTIMATE INVESTMENT RATE OF RETURN: 8.00% per annum, compounded annually, including inflation at 3.00%.

SALARY INCREASES: 3.50% per annum, at all ages, including wage inflation at 3.25%.

SEPARATIONS BEFORE ELIGIBILITY FOR SUPERNUMERARY STATUS: Representative values of the assumed annual rates of death, withdrawal and disability are as follows:

<u>Age</u>	<u>Annual Rate</u>			
	<u>Death*</u>		<u>Withdrawal</u>	<u>Disability</u>
	<u>Male</u>	<u>Female</u>		
20	0.03%	0.01%	0.00%	0.06%
25	0.03	0.01	0.00	0.07
30	0.05	0.02	0.00	0.09
35	0.08	0.03	0.00	0.11
40	0.10	0.04	0.00	0.17
45	0.14	0.07	5.50	0.30
50	0.20	0.10	2.50	0.50
55	0.36	0.19	2.50	0.88
60	0.71	0.38	2.50	1.56
65	1.30	0.71	2.50	5.00
69	1.99	1.09	2.50	9.00

* Rates of pre-retirement mortality are according to the sex distinct RP-2000 Table Projected with Scale AA to 2015 set forward three years for males and set forward one year for females, with an adjustment of factor of 0.90% for males and 0.70% for females.

RATES OF ATTAINING SUPERNUMERARY STATUS: The assumed annual rates of becoming a Supernumerary official are as follows:

<u>Age</u>	<u>Annual Rate*</u>
54 & Under	25.0%
55- 59	22.0
60-64	20.0
65-69	12.0
70-74	15.0
70+	100.0

* Rates are increased by 25% in year when member first becomes eligible for unreduced service retirement.



DEATHS AFTER BECOMING A SUPERNUMERARY OFFICIAL: Rates of mortality for the period after becoming a supernumerary official are according to the sex distinct RP-2000 Combined Mortality Table Projected with Scale AA to 2015 set forward three years for males and one year for females. Rates of mortality for the period after disability retirement are according to the sex distinct RP-2000 Disabled Mortality Table. Representative values of the assumed annual rates of death after retirement are as follows:

Age	Annual Rate			
	<u>After Becoming a Supernumerary Official</u>		<u>After Disability Retirement</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
35	0.09%	0.04%	2.26%	0.75%
40	0.12	0.06	2.26	0.75
45	0.15	0.10	2.26	0.75
50	0.22	0.14	2.90	1.15
55	0.40	0.27	3.54	1.65
60	0.79	0.54	4.20	2.18
65	1.45	1.02	5.02	2.80
70	2.42	1.72	6.26	3.76
75	4.22	2.75	8.21	5.22
80	7.72	4.57	10.94	7.23
85	13.55	7.89	14.16	10.02
90	22.00	13.82	18.34	14.00
95	30.60	19.93	26.75	19.45

ASSETS: Actuarial value, as developed in Schedule B. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected actuarial value of assets, based on the assumed valuation rate of return. The amount recognized each year is 20% of the difference between market value and expected actuarial value. The actuarial value of assets was set equal to the market value on September 30, 2012. Smoothing will commence in future years.

PERCENT MARRIED: 100% of active members are assumed to be married with the male three years older than his spouse.

VALUATION COST METHOD: Individual entry age actuarial cost method. Actuarial gains and losses are reflected in the unfunded actuarial accrued liability.

COST OF LIVING: Increases of 3.25% annually.

EXPENSE LOAD: None.

VALUATION INTEREST RATE SMOOTHING: The valuation liabilities are calculated using a smoothed interest rate method. The interest rate assumed during the look forward period (currently 25 years from the valuation date) is the investment rate of return expected to be earned during the look forward period based on the actual rate of return earned during the look back period (currently 5 years) such that the average assumed rate of return over the combined 30 year period is equivalent to the assumed ultimate investment rate of return (currently 8.00%). The interest rate after the 25 year look forward period is the ultimate investment rate of return of 8.00%.

CORRIDOR LIMIT ON INTEREST SMOOTHING: The smoothed interest rate used during the 25 year look forward period is limited to a corridor of 0.50% around the ultimate investment rate of return.



SCHEDULE F

ACTUARIAL COST METHOD

1. The valuation is prepared on the projected benefit basis, under which the present value, at the interest rate assumed to be earned in the future (See Schedules D and E for a description of the interest rate used), of each member's expected benefit payable at retirement or death is determined based on his age, service, sex and compensation. The calculations take into account the probability of a member's death or termination of employment prior to becoming eligible for a benefit, as well as the probability of his terminating with a service, disability or survivor's benefit. Future salary increases are also anticipated. The present value of the expected benefits payable on account of the active members is added to the present value of the expected future payments to retired members and beneficiaries to obtain the present value of all expected benefits payable from the Fund on account of the present group of members and beneficiaries.
2. The employer contributions required to support the benefits of the Fund are determined following a level funding approach, and consist of a normal contribution and an accrued liability contribution.
3. The normal contribution is determined using the "individual entry age normal" method. Under this method, a calculation is made to determine the uniform and constant percentage rate of employer contribution which, if applied to the compensation of each new member during the entire period of his anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on his behalf.
4. The unfunded accrued liability contributions are determined by subtracting the present value of prospective employer normal contributions and member contributions together with the current assets held from the present value of expected benefits to be paid from the Fund.



SCHEDULE G

**SUMMARY OF MAIN PLAN PROVISIONS
AS INTERPRETED FOR VALUATION PURPOSES**

The following summary describes the main benefit and contribution provisions of The Alabama Clerks and Registers Supernumerary Fund as interpreted for the valuation.

1 - DEFINITIONS

A “Supernumerary Official” is a former clerk or register who has met the age and service requirements who takes the oath of office as a Supernumerary Clerk or Register. “Service” is the service, prior service, and any other previous service established as creditable in accordance with the provisions of the retirement law.

2 - BENEFITS

Supernumerary Official Status

Condition for Allowance

A clerk or register may become a supernumerary official after he or she has completed 23 years of service at any age, or according to the following table:

<u>Age</u>	<u>Years of Service</u>
55 to 59	18
60	17
61	16
62 to 64	15
65 to 69	12
70	10

Amount of Allowance

A supernumerary official is paid 75% of the State salary payable to the clerk or register on the date he or she attains a supernumerary status. Increases in allowances are granted when active State Employees receive a cost-of-living salary increase.



Disability Allowance

Condition for Allowance

A disability supernumerary allowance may be granted to a member who becomes totally and permanently disabled while in office and who has 5 years or more of service.

Amount of Allowance

75% of the State salary payable to the clerk or register on the date he or she attains supernumerary status.

Benefits Payable on Separation from Service with 12 or more Years of Service

Condition for Allowance

Any clerk or register who ceases to be in service who has met the service eligibility for supernumerary status (12 or more years) is entitled to be commissioned a supernumerary clerk or register upon attaining the specified age.

Amount of Allowance

75% of the State salary payable to the clerk or register on the date he or she attains supernumerary status.

Benefits Payable on Separation From Service with less than 12 Years of Service

Refund employee contributions plus accrued interest.

Benefits Payable upon Death in Active Service

Condition for Allowance

In case of the death of a clerk or register in active service who is eligible for supernumerary status, a spousal benefit is payable to the surviving spouse.

Amount of Allowance

3% at the salary payable from the State treasury for the position of circuit clerk for each year of service, not to exceed 30%.

Benefits Payable upon Death in Supernumerary Status

Condition for Allowance

Surviving spouses of clerks and registers who assume supernumerary status on or after January 16, 1989, are eligible for spousal benefits upon the death of the clerk or register.

Amount of Allowance

3% at the salary payable from the State treasury for the position of circuit clerk for each year of service, not to exceed 30%.



Form of Payment

Modified cash refund.

3 - CONTRIBUTIONS

Member Contributions

Each active clerk and register contributes 6% of his salary.



SCHEDULE H

**NUMBER OF ACTIVE CLERKS AND REGISTERS
BY AGE AND SERVICE AS OF SEPTEMBER 30, 2012**

Age	Years of Service									Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Up	
Under 30										
30 to 34										
35 to 39	1	1	1							3
40 to 44			4							4
45 to 49		1	4	1	1					7
50 to 54	1	2	6	1		1				11
55 to 59		2	8	8	5	2				25
60 to 64			2	1	6	1				10
65 to 69				2	1					3
70 & Up							2		1	3
Total	2	6	25	13	13	4	2		1	66

Average Age: 55.42

Average Service: 10.61



TABLE 2
NUMBER AND ANNUAL RETIREMENT ALLOWANCES
OF SUPERNUMERARY OFFICIALS AND SPOUSES
RECEIVING BENEFITS AS OF SEPTEMBER 30, 2012

Age	Number of Members	Total Annual Benefits
Under 50	0	\$ 0
50 – 54	1	79,052
55 – 59	4	268,778
60 – 64	10	771,650
65 – 69	11	738,336
70 – 74	19	1,167,933
75 – 79	12	571,033
80 – 84	10	480,417
85 – 89	8	299,073
90 – 94	4	126,687
95 & Over	0	0
Total	79	\$ 4,502,958

Average Age: 73.76