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Retirement Systems
of Alabama

**Alabama Judicial Retirement Fund
Report of the Actuary on the Annual Valuation
Prepared as of September 30, 2017**





Cavanaugh Macdonald

CONSULTING, LLC

The experience and dedication you deserve

June 4, 2018

Board of Control
Alabama Judicial Retirement Fund
Montgomery, Alabama

Members of the Board:

In this report are submitted the results of the annual valuation of the assets and liabilities of the Alabama Judicial Retirement Fund (Fund), prepared as of September 30, 2017 in accordance with Sections 12-18-2(a) and 36-27-23(p) of the act governing the operation of the Fund.

The purpose of this report is to provide a summary of the funded status of the Fund as of September 30, 2017 and to recommend rates of employer contribution. While not verifying the data at source, the actuary performed tests for consistency and reasonability.

Act 2015-498 amended the provisions of the Fund to create two plans within the Fund for new members elected or appointed on or after November 8, 2016. The Judges' and Clerks' plan covers justices, judges and circuit clerks who are not members of the Judicial Retirement Fund or The Clerks' and Registers' Supernumerary Fund. The District Attorneys' Plan covers any District Attorney first elected or appointed on or after November 8, 2016.

On the basis of the valuation, we have determined an employer contribution rate of 40.40% of payroll for the fiscal year ending September 30, 2020 for members of the Fund other than members of the two new plans (Tier I) and 35.05% for members of the Judges' and Clerks' plan (Tier II). For the District Attorneys' plan we have determined an employee contribution rate of 19.77% for the fiscal year ending September 30, 2020.

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. Gains and losses are reflected in the unfunded actuarial accrued liability that is being amortized by regular annual contributions as a level percentage of payroll, on the assumption that payroll will increase by 3.00% annually. The assumptions recommended by the actuary and adopted by the Board are in the aggregate reasonably related to the experience under the Fund and to reasonable expectations of anticipated experience under the Fund. The assumptions and methods used for funding purposes meet the parameters outlined in the Board's funding policy.

In this report we provide the following information and supporting schedules in the Actuarial and Statistical Sections of the Comprehensive Annual Financial Report (CAFR):

- Summary of Actuarial Assumptions and Methods
- Actuarial Cost Method
- Summary of Plan Provisions as Interpreted for Valuation Purposes
- Schedule of Funding Progress
- Solvency Test
- Schedule of Active Member Valuation Data



June 4, 2018
Board of Control
Page 2

We also provide the following schedules for the CAFR in a separate supplemental report:

- Analysis of Actuarial Gains and Losses
- Schedule of Retirants and Beneficiaries Added and Removed from Rolls
- Retired Members by Type of Benefit as of September 30, 2017
- Ten-Year History of Average Monthly Benefit Payments as of September

The necessary GASB Statement Nos. 67 and 68 disclosure information is provided in separate supplemental reports.

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 Retirement 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.

The actuarial computations presented in this report are for purposes of determining the recommended funding amount for the Fund. Use of these computations for purposes other than meeting these requirements may not be appropriate.

In our opinion the Fund is operating on an actuarially sound basis. 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 continued 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,

Handwritten signature of Edward A. Macdonald in blue ink.

Edward A. Macdonald, ASA, FCA, MAAA
President

Handwritten signature of Cathy Turcot in blue ink.

Cathy Turcot
Principal and Managing Director

Handwritten signature of Larry Langer in blue ink.

Larry Langer, ASA, EA, FCA, MAAA
Principal and Consulting Actuary



TABLE OF CONTENTS

<u>Section</u>	<u>Item</u>	<u>Page No.</u>
I	Summary of Principal Results	1
II	Membership Data	4
III	Assets	6
IV	Comments on Valuation	7
V	Contributions Payable by Employer	10
VI	Analysis of Financial Experience	11
VII	Accounting Information	14
 <u>Schedule</u>		
A	Valuation Balance Sheet and Solvency Test	16
B	Development of the Actuarial Value of Assets	19
C	Summary of Receipts and Disbursements	22
D	Outline of Actuarial Assumptions and Methods	23
E	Actuarial Cost Method	26
F	Board Funding Policy	27
G	Amortization of UAAL	29
H	Summary of Main Fund Provisions as Interpreted for Valuation Purposes	36
I	Schedule of Membership Data	43



**REPORT OF THE ACTUARY ON THE ANNUAL VALUATION OF THE
ALABAMA JUDICIAL RETIREMENT FUND
PREPARED AS OF SEPTEMBER 30, 2017**

SECTION I - SUMMARY OF PRINCIPAL RESULTS

1. For convenience of reference, the principal results of the valuation and a comparison with the preceding year's results are summarized below:

Summary of Principal Results for Judicial Retirement Fund (Other than District Attorneys' Plan)

VALUATION DATE	September 30, 2017	September 30, 2016
Active members		
Number	342	336
Annual compensation	\$ 42,935,994	\$ 43,022,891
Retired members and beneficiaries		
Number	403	384
Annual allowances	\$ 33,060,879	\$ 31,068,446
Deferred vested members		
Number	15	22
Estimated deferred annual allowances	\$ 1,125,000	1,932,062
Assets		
Actuarial value	\$ 292,840,475	\$ 279,807,201
Market value	300,023,990	279,971,331
Unfunded actuarial accrued liability	\$ 154,756,088	\$ 167,113,432
Funded ratio based on actuarial value of assets	65.4%	62.6%
CONTRIBUTIONS FOR FISCAL YEAR ENDING	September 30, 2020	September 30, 2019
Tier I (Groups 1 and 2)		
Employer contribution rate		
Normal	13.71%	13.72%
Accrued liability	25.46	26.45
Administration	<u>1.23</u>	<u>1.23</u>
Total	40.40%	41.40%
Tier II		
Judges' and Clerks' Plan (Group 3)		
Employer contribution rate		
Normal	8.21%	7.35%
Accrued liability	25.46	25.59
Administration	1.23	1.23
Death Benefit	<u>0.15</u>	<u>0.15</u>
Total	35.05%	34.32
Blended Amortization period	21.8 years	23.3 years



Summary of Principal Results for District Attorneys' Plan

VALUATION DATE	September 30, 2017	September 30, 2016
Active members		
Number	9	N/A
Annual compensation	\$ 1,355,920	N/A
Retired members and beneficiaries		
Number	0	N/A
Annual allowances	\$ 0	N/A
Deferred vested members		
Number	0	N/A
Estimated deferred annual allowances	\$ 0	N/A
Assets		
Actuarial value	\$ 249,384	N/A
Market value	241,886	N/A
Unfunded actuarial accrued liability	\$ 600,377	N/A
Funded ratio based on actuarial value of assets	29.3%	N/A
CONTRIBUTIONS FOR FISCAL YEAR ENDING	September 30, 2020	September 30, 2019
Employer contribution rate		
Normal	5.28%	6.00
Accrued liability	12.26	11.54
Administration	1.23	1.23
Death Benefit	<u>1.00</u>	<u>1.00</u>
Total	19.77%	19.77
Blended Amortization period	3.7 years	N/A



Summary of Principal Results - Total

VALUATION DATE	September 30, 2017	September 30, 2016
Active members		
Number	351	336
Annual compensation	\$ 44,291,914	\$ 43,022,891
Retired members and beneficiaries		
Number	403	384
Annual allowances	\$ 33,060,879	\$ 31,068,446
Deferred vested members		
Number	15	22
Estimated deferred annual allowances	\$ 1,125,000	1,932,062
Assets		
Actuarial value	\$ 293,089,859	\$ 279,807,201
Market value	300,265,876	279,971,331
Unfunded actuarial accrued liability	\$ 155,356,465	\$ 167,113,432
Funded ratio based on actuarial value of assets	65.4%	62.6%

2. Comments on the valuation results as of September 30, 2017 are given in Section IV and further discussion of the contribution levels is set out in Section V.
3. Schedule B of this report shows the development of the actuarial value of assets. Schedule D outlines the full set of actuarial assumptions and methods employed in the current valuation. Since the previous valuation, retirement rate assumptions have been modified to reflect the impact of Act 2015-498.
4. The Board funding policy is shown in Schedule F.
5. Provisions of the Fund, as summarized in Schedule H, were taken into account in the current valuation. Act 2015-498 amended the provision of the fund to create two plans within Alabama Judicial Retirement Fund for new members elected or appointed on or after November 8, 2016. The Judges' and Clerks' plan covers justices, judges and circuit clerks who are not members of the Judges Retirement Fund or The Clerks' and Registers' Supernumerary Fund. The District Attorneys' Plan covers any District Attorney first elected or appointed on or after November 8, 2016.



6. The funded ratio shown in the Summary of Principal Results is the ratio of the actuarial value of assets to the actuarial accrued liability. The funded status would be different based on market value of assets. The funded ratio is an indication of progress in funding the promised benefits. Since the ratio is less than 100%, there is a need for additional contributions towards payment of the unfunded actuarial accrued liability. In addition, this funded ratio does not have any relationship to measuring sufficiency if the plan had to settle its liabilities.

SECTION II – MEMBERSHIP DATA

1. The following table shows the number of active members and their annual compensation as of September 30, 2017 on the basis of which the valuation was prepared.

TABLE 1

THE NUMBER AND ANNUAL COMPENSATION OF ACTIVE MEMBERS AS OF SEPTEMBER 30, 2017

GROUP	NUMBER	COMPENSATION
Tier I (Groups 1 and 2)		
District Court Judges	100	\$ 12,927,104
Probate Court Judges	68	6,591,638
Non District, Non Probate Judges	<u>147</u>	<u>20,025,958</u>
Total	<u>315</u>	\$ <u>39,544,700</u>
Tier II (Group 3)		
District Court Judges	12	\$ 1,472,401
Probate Judges	0	0
Non District, Non Probate Judges	15	1,918,893
Clerks	<u>0</u>	<u>0</u>
Total	<u>27</u>	\$ <u>3,391,294</u>
District Attorneys' Plan	<u>9</u>	\$ <u>1,355,920</u>
Total	<u>351</u>	\$ <u>44,291,914</u>

The table reflects the active membership for whom complete valuation data were submitted. The results of the valuation include contribution balances for an additional 25 non-vested inactive members.

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



TABLE 2

SCHEDULE OF ACTIVE MEMBER VALUATION DATA

<u>Valuation Date</u>	<u>Number</u>	<u>Annual Payroll*</u>	<u>% Increase in Annual Payroll</u>	<u>Annual Average Pay</u>	<u>% Increase in Average Pay</u>
9/30/2017	351	\$ 44,291,914	2.95%	\$ 126,188	(1.45)%
9/30/2016	336	43,022,891	0.49	128,044	1.08
9/30/2015	338	42,814,343	0.27	126,670	0.27
9/30/2014	338	42,698,909	1.94	126,328	1.94
9/30/2013	338	41,887,006	(1.34)	123,926	(1.61)
9/30/2012	337	42,446,426	1.48	125,954	0.58

* 0.9% increase for total pay since 2012

** 0.0% increase for average pay since 2012

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

TABLE 3

THE NUMBER AND ANNUAL RETIREMENT ALLOWANCES OF RETIRED MEMBERS AND BENEFICIARIES ON THE ROLL AS OF SEPTEMBER 30, 2017

GROUP	NUMBER*	ANNUAL RETIREMENT ALLOWANCES
Service Retirements	284	\$ 28,663,029
Disability Retirements	6	475,902
Beneficiaries of Deceased Members	113	3,921,948
Total	403	\$ 33,060,879

*In addition, there were 15 vested inactive members with estimated deferred annual allowances totaling \$1,125,000 included in the valuation.

4. Schedule I shows the distribution by age and service of the number and average annual compensation of active members included in the valuation and a distribution by age of the number and benefits of retired members and beneficiaries included in the valuation.



SECTION III - ASSETS

1. The Judicial Retirement Fund assets are currently allocated to four funds for the purpose of recording the fiscal transactions of the Fund, namely, the Annuity Savings Fund, the Pension Accumulation Fund, the Expense Fund, and the Pre-Retirement Death Benefit Fund.

(a) Annuity Savings Fund

The Annuity Savings Fund is the fund to which are credited all contributions made by members together with regular interest thereon. When a member retires or when a survivor allowance becomes payable the amount of the member's accumulated contributions are transferred from the Annuity Savings Fund to the Pension Accumulation Fund. The market value of assets credited to the Annuity Savings Fund on September 30, 2017, which represent the accumulated contributions of active members to that date, including interest, amounted to \$44,791,603 for members other than District Attorneys and \$79,749 for the District Attorneys' Plan members.

(b) Pension Accumulation Fund

The Pension Accumulation Fund is the fund to which are credited all contributions made by the employer, except those contributions made to the Expense Fund. When a member retires or when a survivor allowance becomes payable, the pension is paid from this fund. In addition, the amount of the member's accumulated contributions is transferred from the Annuity Savings Fund to the Pension Accumulation Fund and the annuity is paid from this fund. On September 30, 2017 the market value of assets credited to this fund amounted to \$255,232,387 for members other than the District Attorneys and \$162,137 for the District Attorneys' Plan members.

(c) Expense Fund

The Expense Fund is the fund from which the expenses of the administration of the retirement fund are paid. Any amounts credited to the accounts of members withdrawing before retirement and not returnable under the provisions of Sections 12-18-54 and 12-18-83 are credited to the Expense Fund. Additional contributions required to meet the expenses of the retirement fund made by the employer are also credited to this fund. On September 30, 2017, the market value of assets credited to this fund amounted to \$2,299,910. These assets are not included in the valuation.

(d) Pre- Retirement Death Benefit Fund

The Pre-Retirement Death Benefit Fund is the fund to which are credited contributions made by the employer for the special pre-retirement death benefit for members of the Judges and Clerks Plan and the District Attorneys' Plan. On September 30, 2017 the market value of assets credited to this fund amounted to \$3,100 for members of the Judges and Clerks Plan and \$9,246 for members of the District Attorneys' Plan. These assets are not included in the valuation and the liabilities associated with these death benefits are not included in the valuation.



2. The amount of assets taken into account in this valuation is based on information reported by the Retirement Fund.
3. As of September 30, 2017, the total market value of assets exclusive of the Expense Fund and the Pre-retirement Death Benefit Funds amounted to \$300,265,876, of which \$300,023,990 is for members other than District Attorneys and \$241,886 is for the District Attorneys' Plan. The market related actuarial value of assets was \$293,089,859, of which \$292,840,475 is for members other than the District Attorneys and \$249,384 is for the District Attorneys' Plan. Schedule B shows the development of the actuarial value of assets as of September 30, 2017
4. Schedule C shows the receipts and disbursements of the Fund for the year 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, 2017.
2. The valuation balance sheet shows that the Fund has total accrued liabilities of \$448,446,324. Of this amount, \$296,231,268 is for the benefits payable on account of present retired members and beneficiaries of deceased members, \$8,689,755 is for the benefits payable on account of present inactive members and \$143,525,301 is for the benefits payable on account of present active members. Against these liabilities, the Fund has total present actuarial value of assets of \$293,089,859 as of September 30, 2017. The difference of \$155,356,465 between the total accrued liabilities and the total present actuarial value of assets represents the present value of future unfunded actuarial accrued liability (UAAL) contributions to be made by the State.
3. The employer's regular contributions to the Fund consist of normal contributions, UAAL contributions and contributions for administrative expenses. The valuation indicates that employer normal contributions at a rate of 13.71% of payroll for Tier I members, 8.21% for Tier II members and 5.28% for District Attorneys' Plan members are required to provide the benefits of the Fund.
4. The funding policy adopted by the Board, as shown in Schedule F, provides that the unfunded actuarial liability as of September 30, 2012 (Transitional UAAL) be amortized as a level percentage



of payroll over a closed period. The closed period shall be the amortization period for the September 30, 2012 valuation, not to exceed 30 years. In each subsequent valuation all benefit changes, assumption and method changes and experience gains and/or losses that have occurred since the previous valuation will determine a New Incremental UAAL. Each New Incremental UAAL will be amortized as a level percent of payroll over a closed 30-year period from the date it is established.

5. The total UAAL contribution rate for members other than District Attorneys is 25.46% of payroll, determined in accordance with the Board's funding policy. The UAAL contribution rate for the District Attorneys' Plan had been determined to be 12.26% of payroll, based on a total contribution rate of 19.77% of payroll, which is the rate determined during the legislative process and is the rate currently in effect. Since the District Attorneys' Plan is funded with segregated assets and members of the Plan may transfer in prior service, it is necessary to insure that funds are available to pay all promised benefits, therefore, a total contribution rate of 19.77% will be used as long as the amortization period remains at ten years or less. The UAAL contribution rates have been calculated on the assumption that the aggregate amount of accrued liability contribution will increase by 3.00% each year. Schedule G of this report shows the amortization schedules for the Transitional UAAL and the New Incremental UAAL bases as of September 30, 2017.



6. The following table shows the components of the total UAAL and the derivation of the accrued liability contribution rate in accordance with the funding policy:

TABLE 4
TOTAL UAAL AND UAAL CONTRIBUTION RATE-
Members other than District Attorney Plan Members

	<u>UAAL</u>	<u>Amortization Period</u>	<u>Amortization Payment</u>
Transitional	\$152,888,399	22	\$11,543,509
New Incremental 9/30/2013	24,165,523	26	1,662,807
New Incremental 9/30/2014	(7,797,342)	27	(526,123)
New Incremental 9/30/2015	(7,100,613)	28	(470,391)
New Incremental 9/30/2016	5,694,585	29	370,796
New Incremental 9/30/2017	<u>(13,094,464)</u>	30	<u>(838,915)</u>
Total	\$154,756,088		\$11,741,681
Total Amortization Payment Adjusted for Timing			\$11,303,664
Total Estimated Payroll*			\$44,400,242
UAAL Contribution Rate			25.46%

*Estimated payroll based on applying the assumed salary scale to current salaries.

7. An additional contribution of 1.23% of payroll is required to cover expenses of administering the Fund.
8. Act 2015- 498 requires members of the Judges' and Clerks' Plan and the District Attorneys' Plan to participate in the Pre-Retirement Death Benefit Program. The liabilities and assets associated with the pre-retirement death benefit are not included in the annual actuarial valuation of the System; however, the sufficiency of the Fund to provide the promised benefits is reviewed annually. The contribution requirements will be determined every five years during our experience investigation. For the Judges and Clerks' Plan an additional contribution of 0.15% of payroll will be required to meet the cost of the pre-retirement death benefit program this year. For the District Attorneys' Plan 1.00% of payroll will be required to meet the cost of the pre-retirement death benefit program this year.



SECTION V - CONTRIBUTIONS PAYABLE BY EMPLOYER

1. Section 12-18-3 of the Retirement Fund Law provides that sufficient monies shall be appropriated to carry out the provisions of the Law.
2. On the basis of the actuarial valuation prepared as of September 30, 2017 it is recommended that the employer make contributions at the following rates beginning October 1, 2019:

TABLE 5

**EMPLOYER REQUIRED CONTRIBUTION RATES
AS A PERCENTAGE OF MEMBERS' COMPENSATION**

EMPLOYER CONTRIBUTION	FISCAL YEAR ENDING SEPTEMBER 30, 2020
Tier I (Groups 1 and 2)	
Normal	13.71%
Accrued Liability	25.46
Administration	<u>1.23</u>
Total	40.40%
Tier II (Group 3)	
Normal	8.21%
Accrued Liability	25.46
Administration	1.23
Death Benefit	<u>0.15</u>
Total	35.05%
District Attorneys' Plan	
Normal	5.28%
Accrued Liability	12.26
Administration	1.23
Death Benefit	<u>1.00</u>
Total	19.77%



SECTION VI – ANALYSIS OF FINANCIAL EXPERIENCE

The calculation of the Fund's liabilities and actuarial value of assets requires the use of several assumptions concerning the future experience of the Fund and its members. In each annual actuarial valuation, the experience of the Fund is compared with what was expected based on the actuarial assumptions. The differences between the actual and expected experience are called actuarial gains or losses depending on whether the difference increases or decreases the UAAL. The UAAL decreased from \$167,113,432 on September 30, 2016 to \$155,356,465 on September 30, 2017. The most significant item contributing to the decrease in the UAAL were salary increases less than anticipated and investment earnings in excess of expected. This decrease was offset by losses due to more retirements than expected, and by new members joining the system. Other sources of gains and losses were relatively small and there appear to be no trends developing that would be of concern to the Fund.

The following tables show the reconciliation of the UAAL of the Fund and a breakdown by source of the actuarial gains and losses. These sources include the expected return on assets, salary increases, retirement, withdrawal, disability and mortality.



**RECONCILIATION OF THE UNFUNDED ACTUARIAL ACCRUED LIABILITY
FOR THE YEAR ENDING SEPTEMBER 30, 2017**

(Dollar amounts in thousands)

(1) UAAL at beginning of year	\$	167,113
(2) Total normal cost at beginning of the year		9,110
(3) Actual contributions		20,798
(4) Interest accrual: $[(1) + (2)] - \frac{1}{2} [(3)] \times 0.0775$		12,851
(5) Expected UAAL before changes: $(1) + (2) - (3) + (4)$		168,276
(6) Increase from benefit changes		0
(7) Changes from revised actuarial assumptions and methods		0
(8) Expected UAAL after changes: $(5) + (6) + (7)$		168,276
(9) Actual UAAL at end of year		155,356
(10) (Gain)/Loss: $(9) - (8)$	\$	(12,920)

**DEVELOPMENT OF (GAIN)/LOSS
FROM INVESTMENT RETURN
FOR THE YEAR ENDING SEPTEMBER 30, 2017**

(Dollar amounts in thousands)

(1) Actuarial Value of Assets (BOY)	\$	279,807
(2) Net Cash Flow		(12,391)
(3) Expected Return $[(1) + \frac{1}{2} [(2)]] \times 0.0775$		21,206
(4) Expected Actuarial Value of Assets $[(1) + (2) + (3)]$		288,622
(5) Actual Actuarial Value of Assets (EOY)		293,090
(6) (Gain)/Loss: $(4) - (5)$	\$	(4,468)



(GAINS)/ LOSSES BY SOURCE
FOR THE YEAR ENDING SEPTEMBER 30, 2017
(Dollar amounts in thousands)

SOURCE	Total	% of Actuarial Accrued Liability
Age and Service Retirements. Generally, earlier retirements cause losses and later retirements cause gains.	\$ 407	0.09%
Withdrawal. More withdrawals than expected usually cause gains and less withdrawals than expected cause losses.	(229)	(0.05)%
Disability Retirements. More disabilities than expected generally cause losses and less disabilities than expected cause gains.	(176)	(0.04)%
Death-In-Service Benefits. If survivor claims are less than assumed, there is a gain. If claims are more than assumed, there is a loss.	257	0.06%
Salary Increases. If salaries increase more than expected, there is a loss. If salaries increase less than expected, there is a gain.	(9,532)	(2.13)%
New Members/Rehires. Any past service causes losses.	1,875	0.42%
Retiree Mortality. More deaths than expected cause gains, less than expected cause losses.	(1,951)	(0.44)%
Investment Return. Investment income greater than expected causes gains while investment income less than expected cause losses.	(4,468)	(1.00)%
Other. Miscellaneous gains and losses resulting from data corrections, timing of financial transactions, unit transfers, changes in valuation software, etc.	898	0.20%
Total (Gain)/Loss	\$ (12,919)	(2.89)%



SECTION VII - ACCOUNTING INFORMATION

The information required under Governmental Accounting Standards Board (GASB) Statement Nos. 67 and 68 is issued in separate reports. The following information is provided for informational purposes only.

- The following is a distribution of the number of employees by type of membership.

**NUMBER OF ACTIVE AND RETIRED MEMBERS
AS OF SEPTEMBER 30, 2017**

GROUP	NUMBER
Retirees and beneficiaries currently receiving benefits	403
Terminated employees entitled to benefits but not yet receiving benefits	15
Non-vested inactive members	25
Active members	<u>351</u>
Total	794

- The schedule of funding progress as shown below.

SCHEDULE OF FUNDING PROGRESS

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
9/30/2012 ¹	\$234,299,529	\$380,469,804	\$146,170,275	61.6%	\$42,446,426	344.4%
9/30/2013	243,315,496	414,199,859	170,884,363	58.7	41,887,006	408.0
9/30/2014	257,451,651	422,863,202	165,411,551	60.9	42,698,909	387.4
9/30/2015	267,414,404	427,591,122	160,176,718	62.5	42,814,343	374.1
9/30/2016 ²	279,807,201	446,920,633	167,113,432	62.6	43,022,891	388.4
9/30/2017 ³	293,089,859	448,446,324	155,356,465	65.4	44,291,914	350.8

¹Reflects changes in methods.

²Reflects changes in actuarial assumptions and methods.

³Reflects changes in benefit structure beginning November 8, 2016



3. The information presented above was determined as part of the actuarial valuation at September 30, 2017. Additional information as of the latest actuarial valuation follows.

Valuation date	9/30/2017
Actuarial cost method	Entry Age Normal
Amortization method	Level percent closed
Single equivalent remaining amortization period	21.4 years
Asset valuation method	Five-year market related value
Actuarial assumptions:	
Investment Rate of return*	7.75%
Projected salary Increases*	3.25 to 3.50%
Cost-of-living adjustments	3.00% per year for certain members hired prior to July 30, 1979 and for spouses benefits subject to increase.
*Includes inflation at	2.75%



SCHEDULE A

**VALUATION BALANCE SHEET
SHOWING THE PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES OF
THE ALABAMA JUDICIAL RETIREMENT FUND**

Judicial Retirement Fund (Other than District Attorneys' Plan)

	September 30, 2017
1. Actuarial Accrued Liabilities	
(a) Present active members	
- Service pensions	\$ 135,432,891
- Disability pensions	1,014,742
- Death benefits*	2,116,295
- Termination benefits	<u>4,111,612</u>
- Total	\$ 142,675,540
(b) Present inactive members	
- Non-vested	\$ 1,252,899
- Deferred vested	<u>7,436,856</u>
- Total	\$ 8,689,755
(c) Present retired members and beneficiaries	
- Service retirements	\$ 259,933,791
- Disability retirements	4,672,085
- Beneficiaries of deceased members	<u>31,625,392</u>
- Total	296,231,268
(d) Total actuarial accrued liabilities ((a) + (b) + (c))	\$ 447,596,563
2. Actuarial Value of Assets	\$ 292,840,475
3. Unfunded Actuarial Accrued Liability (1(d) - 2)	\$ 154,756,088

*Liability for death benefits payable after retirement is included with liability for service and disability pensions.



**VALUATION BALANCE SHEET
SHOWING THE PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES OF
THE ALABAMA JUDICIAL RETIREMENT FUND**

District Attorneys' Plan

	September 30, 2017
1. Actuarial Accrued Liabilities	
(a) Present active members	
- Service pensions	\$ 824,994
- Disability pensions	1,741
- Death benefits	19,730
- Termination benefits	3,296
- Total	<u>\$ 849,761</u>
(b) Present inactive members	
- Non-vested	\$ 0
- Deferred vested	0
- Total	<u>\$ 0</u>
(c) Present retired members and beneficiaries	
- Service retirements	\$ 0
- Disability retirements	0
- Beneficiaries of deceased members	0
- Total	<u>0</u>
(d) Total actuarial accrued liabilities ((a) + (b) + (c))	\$ 849,761
2. Actuarial Value of Assets	\$ 249,384
3. Unfunded Actuarial Accrued Liability (1(d) - 2)	\$ 600,377



**VALUATION BALANCE SHEET
SHOWING THE PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES OF
THE ALABAMA JUDICIAL RETIREMENT FUND**

Total – All Groups

	September 30, 2017
1. Actuarial Accrued Liabilities	
(a) Present active members	
- Service pensions	\$ 136,257,885
- Disability pensions	1,016,483
- Death benefits*	2,136,025
- Termination benefits	<u>4,114,908</u>
- Total	\$ 143,525,301
(b) Present inactive members	
- Non-vested	\$ 1,252,899
- Deferred vested	<u>7,436,856</u>
- Total	\$ 8,689,755
(c) Present retired members and beneficiaries	
- Service retirements	\$ 259,933,791
- Disability retirements	4,672,085
- Beneficiaries of deceased members	<u>31,625,392</u>
- Total	296,231,268
(d) Total actuarial accrued liabilities ((a) + (b) + (c))	\$ 448,446,324
2. Actuarial Value of Assets	\$ 293,089,859
3. Unfunded Actuarial Accrued Liability (1(d) - 2)	\$ 155,356,465

**SOLVENCY TEST
(\$1000's)**

Valuation Date	Aggregate Accrued Liabilities For			Reported Assets	Portion of Accrued Liabilities Covered by Reported Asset		
	(1) Active Member Contributions	(2) Retirants and Beneficiaries	(3) Active Members (Employer Financed Portion)		(1)	(2)	(3)
9/30/2017	\$44,792	\$296,231	\$107,422	\$293,090	100%	84%	0%
9/30/2016 ¹	45,900	280,836	120,184	279,807	100	83	0
9/30/2015	42,745	272,624	112,222	267,414	100	82	0
9/30/2014	40,981	268,439	113,443	257,452	100	81	0
9/30/2013	37,366	270,430	106,404	243,315	100	76	0
9/30/2012 ²	38,341	237,197	104,932	234,300	100	83	0

¹Reflects changes in actuarial assumptions and methods.

²Reflects changes in methods.



SCHEDULE B

DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS

Judicial Retirement Fund (Other than District Attorneys' Plan)

(1)	Actuarial Value of Assets on September 30, 2016	\$	279,807,201
(2)	Market Value of Assets on September 30, 2017		300,023,990
(3)	Market Value of Assets on September 30, 2016		279,971,331
(4)	Cash Flow		
	a. Contributions		20,556,125
	b. Benefit Payments		(32,806,695)
	c. Refund to Members		(353,255)
	d. Transfer to Expense Fund – Interest Forfeitures		(28,613)
	e. Investment Expenses		0
	f. Net Cash Flow: (a + b + c + d + e)	\$	(12,632,438)
(5)	Actual Investment Return ((2) - (3) - (4)f)		32,685,097
(6)	Assumed Rate of Return on Assets		7.75%
(7)	Amount for Immediate Recognition [(3) * (6)] + [((4)a + (4)b + (4)c + (4)d) * 0.5 * (6)] + (4)e		21,208,271
(8)	Investment Gain/(Loss) for the Fiscal Year ((5) - (7))		11,476,826
(9)	Phased-In Recognition of Investment Gain/(Loss)		
	a. Current Year: 0.2 * (8)		2,295,366
	b. First Prior Year		1,555,410
	c. Second Prior Year		(4,473,538)
	d. Third Prior Year		2,283,473
	e. Fourth Prior Year		2,796,730
	f. Total Recognized Investment Gain/(Loss)	\$	4,457,441
(10)	Actuarial Value of Assets on September 30, 2017 (1) + (4)f + (7) + (9)f	\$	292,840,475



DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS

District Attorneys' Plan

(1)	Actuarial Value of Assets on September 30, 2016	\$	0
(2)	Market Value of Assets on September 30, 2017		241,886
(3)	Market Value of Assets on September 30, 2016		0
(4)	Cash Flow		
	a. Contributions		241,886
	b. Benefit Payments		0
	c. Refund to Members		0
	d. Transfer to Expense Fund – Interest Forfeitures		0
	e. Investment Expenses		0
	f. Net Cash Flow: (a + b + c + d + e)	\$	241,886
(5)	Actual Investment Return ((2) - (3) - (4)f)		0
(6)	Assumed Rate of Return on Assets		7.75%
(7)	Amount for Immediate Recognition [(3) * (6)] + [((4)a + (4)b + (4)c + (4)d) * 0.5 * (6)] + (4)e		9,373
(8)	Investment Gain/(Loss) for the Fiscal Year ((5) - (7))		(9,373)
(9)	Phased-In Recognition of Investment Gain/(Loss)		
	a. Current Year: 0.2 * (8)		(1,875)
	b. First Prior Year		0
	c. Second Prior Year		0
	d. Third Prior Year		0
	e. Fourth Prior Year		0
	f. Total Recognized Investment Gain/(Loss)	\$	(1,875)
(10)	Actuarial Value of Assets on September 30, 2017 (1) + (4)f + (7) + (9)f	\$	249,384



DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS

Total - All Plans

(1)	Actuarial Value of Assets on September 30, 2016	\$	279,807,201
(2)	Market Value of Assets on September 30, 2017		300,265,876
(3)	Market Value of Assets on September 30, 2016		279,971,331
(4)	Cash Flow		
	a. Contributions		20,798,011
	b. Benefit Payments		(32,806,695)
	c. Refund to Members		(353,255)
	d. Transfer to Expense Fund – Interest Forfeitures		(28,613)
	e. Investment Expenses		<u>0</u>
	f. Net Cash Flow: (a + b + c + d + e)	\$	(12,390,552)
(5)	Actual Investment Return ((2) - (3) - (4)f)		32,685,097
(6)	Assumed Rate of Return on Assets		7.75%
(7)	Amount for Immediate Recognition [(3) * (6)] + [((4)a + (4)b + (4)c + (4)d) * 0.5 * (6)] + (4)e		21,217,644
(8)	Investment Gain/(Loss) for the Fiscal Year ((5) - (7))		11,467,453
(9)	Phased-In Recognition of Investment Gain/(Loss)		
	a. Current Year: 0.2 * (8)		2,293,491
	b. First Prior Year		1,555,410
	c. Second Prior Year		(4,473,538)
	d. Third Prior Year		2,283,473
	e. Fourth Prior Year		<u>2,796,730</u>
	f. Total Recognized Investment Gain/(Loss)	\$	4,455,566
(10)	Actuarial Value of Assets on September 30, 2017 (1) + (4)f + (7) + (9)f	\$	293,089,859



SCHEDULE C

**SUMMARY OF RECEIPTS AND DISBURSEMENTS
FOR THE PERIOD ENDING SEPTEMBER 30, 2017**

<u>Receipts for the Period</u>	
Contributions:	
Members	\$ 3,972,336
Employer	<u>16,825,675</u>
Total	\$ 20,798,011
Investment Income	<u>32,685,097</u>
TOTAL	\$ 53,483,108
<u>Disbursements for the Period</u>	
Benefit Payments	\$ 32,806,695
Refunds to Members	353,255
Transfer to Expense Fund	<u>28,613</u>
TOTAL	<u>\$ 33,188,563</u>
<u>Excess of Receipts over Disbursements</u>	\$ 20,294,545
<u>Reconciliation of Asset Balances</u>	
Market Value of Assets as of September 30, 2016	\$ 279,971,331
Excess of Receipts over Disbursements	<u>20,294,545</u>
Market Value of Assets as of September 30, 2017	<u>\$ 300,265,876</u>



SCHEDULE D

OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS

The assumptions and methods used in the valuation are based on the actuarial experience study prepared as of September 30, 2015 and adopted by the Board on September 29, 2016.

Investment Rate of Return: 7.75% per annum, compounded annually, including inflation at 2.75%.

Salary Increases: 3.50% per annum for all ages with service less than 14 years, and 3.25% per annum for all ages with service of 14 years or more, compounded annually, including wage inflation at 3.00%.

Separations Before Retirement: Representative values of the assumed annual rates of withdrawal, death and disability are as follows:

<u>Age</u>	<u>Annual Rate of</u>			
	<u>Withdrawal</u>	<u>Death*</u>		<u>Disability**</u>
		<u>Male</u>	<u>Female</u>	
30	2.50%	0.0376%	0.0149%	0.020%
35	2.50	0.0655	0.0268	0.040
40	2.50	0.0914	0.0399	0.068
45	2.50	0.1278	0.0635	0.108
50	2.50	0.1812	0.0947	0.163
55	2.50	0.2567	0.1371	0.250
60	2.50	0.3815	0.1929	0.395
64	2.50	0.5070	0.2558	0.570

* Rates of pre-retirement mortality are according to the sex distinct RP-2000 Employee Mortality Table (with the sex distinct RP-2000 Combined Mortality Table for ages over 70) projected with Scale BB to 2020 with an adjustment factor of 90% for males and 60% for females.

**Disability rates turn off at retirement eligibility.



Rates of Retirement:

Tier I (Groups 1 and 2): Between the ages of 55 and 59, 25% of members are assumed to retire in the year when first eligible and 10% in each year thereafter. Between the ages of 60 and 69, 30% of members are assumed to retire in the year when first eligible and 15% in each year thereafter. 30% of the remaining members are assumed to retire each year between age 70 and 74, and all remaining members are assumed to retire at age 75.

Tier II (Group 3) and District Attorneys' Plan:

<u>Age</u>	<u>Judges</u>		<u>Clerks and District Attorneys</u>
	<u><18 years</u>	<u>≥18 years</u>	
62-69	10%	15%*	10%**
70-74	30%	30%	30%
75	100%	100%	100%

*An additional 15% are assumed to retire at 18 years of service

**An additional 20% are assumed to retire when first eligible for retirement and at 27 years of service.

Deaths After Retirement: Rates of mortality for the period after service retirement are according to the sex distinct RP-2000 White Collar Mortality Table projected to 2020 using scale BB and adjusted 115% for males and 112% for females older than age 78. The sex distinct RP-2000 Disabled Mortality Table projected to 2020 using scale BB and adjusted 105% for males and 120% for females. Representative values of assumed mortality are as follows:

<u>Age</u>	<u>Service Retirement</u>		<u>Disability Retirement</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
55	0.3575%	0.2339%	3.5044%	1.7959%
60	0.5579	0.3825	3.8359	2.1434
65	0.9991	0.6795	4.1382	2.6417
70	1.6384	1.1928	4.8570	3.5474
75	2.8589	2.0200	6.3692	4.9231
80	5.0501	3.7900	8.4883	6.8160
85	8.8966	6.5271	10.9897	9.4450
90	16.4327	11.3249	15.4359	13.4706

Percent Married: 85% of active members are assumed to be married with the husband 4 years older than the wife.

Actuarial Method: Individual Entry age normal. Gains and losses are reflected in the unfunded accrued liability.



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 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 market value. In order to reduce short-term volatility in valuation results and because the market value and actuarial value of assets were close in value, the actuarial value of assets was set equal to the market value on September 30, 2012. 5-year smoothing commenced again beginning September 30, 2013.

Liability for Current Inactive Non-Vested Members: Member Contribution Balance is multiplied by a factor of 1.0.

Post Retirement Increases: Allowances of retired members and spouses who receive benefits based on the salaries prescribed by law for the position are assumed to increase by 3.00% per year. The members' actual salaries at retirement are assumed to be equal to the salary prescribed by law for their position.

Benefits Payable upon Separation from Service: Active members who terminated from service prior to becoming eligible for a benefit are assumed to receive a refund of contributions with interest assumed to be 4% per year.



SCHEDULE E

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 F

FUNDING POLICY OF THE ERS BOARD OF CONTROL FOR THE ADMINISTRATION OF THE JUDICIAL RETIREMENT FUND

The purpose of the funding policy is to state the overall funding objectives for the Judicial Retirement Fund (Fund), the benchmarks that will be used to measure progress in achieving those goals, and the methods and assumptions that will be employed to develop the benchmarks.

The funding policy reflects the Board's long-term strategy for stability in funding of the plan. For that reason, it is critical that this funding policy remain unchanged until its objectives are met.

I. Funding Objectives

The goal in requiring employer and member contributions to the Fund is to accumulate sufficient assets during a member's employment to fully finance the benefits the member is expected to receive throughout retirement. In meeting this objective, the Fund will strive to meet the following funding objectives:

- To maintain an increasing funded ratio (ratio of fund actuarial value of assets to actuarial accrued liabilities) that reflects a trend of improved actuarial condition. The long-term objective is to attain a funded ratio which is consistent with the fiscal health and long-term stability of the Fund.
- To maintain adequate asset levels to finance the benefits promised to members and monitor the future demands for liquidity.
- To develop a pattern of contribution rates expressed as a percentage of member payroll as measured by valuations prepared in accordance with applicable State laws and the principles of practice prescribed by the Actuarial Standards Board. In no event will the employer contribution rate be negative.
- To provide intergenerational equity for taxpayers with respect to Fund costs.

II. Benchmarks

To track progress in achieving the previously outlined funding objectives, the following benchmarks will be measured annually as of the valuation date. The valuation date is the date that the annual actuarial valuation of the Fund's assets and liabilities is prepared. This date is currently September 30th each year with due recognition that a single year's results may not be indicative of long-term trends:

- **Funded ratio** – The funded ratio, defined as the actuarial value of assets divided by the actuarial accrued liability, should increase over time, before adjustments for changes in benefits, actuarial methods, and/or actuarial assumptions. An open amortization period is one for which the amortization period is recalculated on a yearly basis and the ending date of the amortization period is a variable with each recalculation. A closed amortization period is one which is calculated over a fixed period and at the end of that period, the amount is fully amortized.



- **Unfunded Actuarial Accrued Liability (UAAL)**
 - **Transitional UAAL** - The UAAL established as of the initial valuation date for which this funding policy is adopted shall be known as the Transitional UAAL.
 - **New Incremental UAAL** - Each subsequent valuation will produce a New Incremental UAAL consisting of all benefit changes, assumption and method changes and experience gains and/or losses that have occurred since the previous valuation.
- **UAAL Amortization Period and Contribution Rates**
 - The Transitional UAAL will be amortized over a closed period. The closed period shall be the amortization period for the valuation preceding the adoption of the funding policy not to exceed 30 years.
 - Each New Incremental UAAL shall be amortized over a closed 30 year period.
 - Employer Normal Contribution Rate – the contribution rate determined as of the valuation date each year based on the provisions of Alabama Code Sections 36-27-24 and 12-18-2.
 - In each valuation subsequent to the adoption of this funding policy the required employer contribution rate will be determined by the summation of the employer Normal Contribution Rate, a contribution rate for administrative expenses, the individual amortization rate for each of the New Incremental UAAL bases, the amortization rate for the Transitional UAAL.

III. Methods and Assumptions

The actuarial funding method used to develop the benchmarks will be the Entry Age Normal (EAN) actuarial cost method. The actuarial methods and assumptions used will be those last adopted by the Board based upon the advice and recommendation of the actuary. The actuary shall conduct an investigation into the Fund's experience at least every five years and utilize the results of the investigation to form the basis for those recommendations.

IV. Funding Policy Progress

The Board will periodically have projections of funded status performed to assess the current and expected future progress towards the overall funding goals of the Fund.



SCHEDULE G

AMORTIZATION OF UAAL

**AMORTIZATION SCHEDULE FOR BASES CLOSED
ON SEPTEMBER 30, 2012**

<u>Valuation Date</u>	Balance of Transitional <u>UAAL</u>	Annual Amortization <u>Payment</u>
9/30/2012	\$146,170,275	\$9,874,774
9/30/2013	147,989,123	10,195,704
9/30/2014	149,632,550	10,527,064
9/30/2015	151,076,090	10,869,194
9/30/2016	152,292,983	11,207,290
9/30/2017	152,888,399	11,543,509
9/30/2018	153,193,742	11,889,814
9/30/2019	153,176,443	12,246,508
9/30/2020	152,801,109	12,613,904
9/30/2021	152,029,291	12,992,321
9/30/2022	150,819,241	13,382,090
9/30/2023	149,125,641	13,783,553
9/30/2024	146,899,326	14,197,060
9/30/2025	144,086,964	14,622,971
9/30/2026	140,630,732	15,061,661
9/30/2027	136,467,953	15,513,510
9/30/2028	131,530,709	15,978,916
9/30/2029	125,745,424	16,458,283
9/30/2030	119,032,411	16,952,032
9/30/2031	111,305,391	17,460,593
9/30/2032	102,470,966	17,984,410
9/30/2033	92,428,056	18,523,943
9/30/2034	81,067,288	19,079,661
9/30/2035	68,270,342	19,652,051
9/30/2036	53,909,242	20,241,612
9/30/2037	37,845,596	20,848,861
9/30/2038	19,929,769	21,474,326
9/30/2039	0	0



SCHEDULE G
(Continued)

**AMORTIZATION SCHEDULE FOR BASES CLOSED
ON SEPTEMBER 30, 2013**

<u>Valuation Date</u>	<u>Balance of New Incremental UAAL 9/30/2013</u>	<u>Annual Amortization Payment</u>
9/30/2013	\$22,895,240	\$1,468,459
9/30/2014	23,258,400	1,516,184
9/30/2015	23,602,888	1,565,460
9/30/2016	23,925,660	1,614,376
9/30/2017	24,165,523	1,662,807
9/30/2018	24,375,544	1,712,691
9/30/2019	24,551,958	1,764,072
9/30/2020	24,690,663	1,816,994
9/30/2021	24,787,195	1,871,504
9/30/2022	24,836,699	1,927,649
9/30/2023	24,833,894	1,985,478
9/30/2024	24,773,043	2,045,043
9/30/2025	24,647,911	2,106,394
9/30/2026	24,451,730	2,169,586
9/30/2027	24,177,154	2,234,673
9/30/2028	23,816,210	2,301,713
9/30/2029	23,360,253	2,370,765
9/30/2030	22,799,908	2,441,888
9/30/2031	22,125,013	2,515,144
9/30/2032	21,324,557	2,590,599
9/30/2033	20,386,611	2,668,317
9/30/2034	19,298,257	2,748,366
9/30/2035	18,045,505	2,830,817
9/30/2036	16,613,215	2,915,742
9/30/2037	14,984,997	3,003,214
9/30/2038	13,143,121	3,093,310
9/30/2039	11,068,402	3,186,110
9/30/2040	8,740,093	3,281,693
9/30/2041	6,135,758	3,380,144
9/30/2042	3,231,135	3,481,548
9/30/2043	0	0



SCHEDULE G

(Continued)

**AMORTIZATION SCHEDULE FOR BASES CLOSED
ON SEPTEMBER 30, 2014**

<u>Valuation Date</u>	<u>Balance of New Incremental UAAL 9/30/2014</u>	<u>Annual Amortization Payment</u>
9/30/2014	(\$7,479,398)	(\$479,715)
9/30/2015	(7,598,035)	(495,306)
9/30/2016	(7,710,572)	(510,799)
9/30/2017	(7,797,342)	(526,123)
9/30/2018	(7,875,513)	(541,907)
9/30/2019	(7,943,959)	(558,164)
9/30/2020	(8,001,452)	(574,909)
9/30/2021	(8,046,656)	(592,156)
9/30/2022	(8,078,116)	(609,921)
9/30/2023	(8,094,249)	(628,218)
9/30/2024	(8,093,335)	(647,065)
9/30/2025	(8,073,504)	(666,477)
9/30/2026	(8,032,723)	(686,471)
9/30/2027	(7,968,788)	(707,065)
9/30/2028	(7,879,304)	(728,277)
9/30/2029	(7,761,673)	(750,126)
9/30/2030	(7,613,077)	(772,629)
9/30/2031	(7,430,461)	(795,808)
9/30/2032	(7,210,514)	(819,682)
9/30/2033	(6,949,646)	(844,273)
9/30/2034	(6,643,971)	(869,601)
9/30/2035	(6,289,278)	(895,689)
9/30/2036	(5,881,008)	(922,560)
9/30/2037	(5,414,226)	(950,237)
9/30/2038	(4,883,592)	(978,744)
9/30/2039	(4,283,326)	(1,008,106)
9/30/2040	(3,607,178)	(1,038,349)
9/30/2041	(2,848,385)	(1,069,500)
9/30/2042	(1,999,636)	(1,101,585)
9/30/2043	(1,053,023)	(1,134,632)
9/30/2044	0	0



SCHEDULE G

(Continued)

**AMORTIZATION SCHEDULE FOR BASES CLOSED
ON SEPTEMBER 30, 2015**

<u>Valuation Date</u>	<u>Balance of New Incremental UAAL 9/30/2015</u>	<u>Annual Amortization Payment</u>
9/30/2015	(\$6,904,225)	(\$442,824)
9/30/2016	(7,013,739)	(456,691)
9/30/2017	(7,100,613)	(470,391)
9/30/2018	(7,180,519)	(484,503)
9/30/2019	(7,252,506)	(499,038)
9/30/2020	(7,315,537)	(514,009)
9/30/2021	(7,368,482)	(529,430)
9/30/2022	(7,410,110)	(545,312)
9/30/2023	(7,439,081)	(561,672)
9/30/2024	(7,453,938)	(578,522)
9/30/2025	(7,453,097)	(595,878)
9/30/2026	(7,434,834)	(613,754)
9/30/2027	(7,397,280)	(632,167)
9/30/2028	(7,338,402)	(651,132)
9/30/2029	(7,255,997)	(670,665)
9/30/2030	(7,147,671)	(690,785)
9/30/2031	(7,010,830)	(711,509)
9/30/2032	(6,842,661)	(732,854)
9/30/2033	(6,640,113)	(754,840)
9/30/2034	(6,399,881)	(777,485)
9/30/2035	(6,118,387)	(800,810)
9/30/2036	(5,791,753)	(824,834)
9/30/2037	(5,415,779)	(849,579)
9/30/2038	(4,985,923)	(875,066)
9/30/2039	(4,497,266)	(901,318)
9/30/2040	(3,944,486)	(928,358)
9/30/2041	(3,321,826)	(956,209)
9/30/2042	(2,623,059)	(984,895)
9/30/2043	(1,841,451)	(1,014,442)
9/30/2044	(969,722)	(1,044,875)
9/30/2045	0	0



SCHEDULE G

(Continued)

**AMORTIZATION SCHEDULE FOR BASES CLOSED
ON SEPTEMBER 30, 2016**

<u>Valuation Date</u>	<u>Balance of New Incremental UAAL 9/30/2016</u>	<u>Annual Amortization Payment</u>
9/30/2016	\$5,619,100	\$359,996
9/30/2017	5,694,585	370,796
9/30/2018	5,765,119	381,919
9/30/2019	5,829,997	393,377
9/30/2020	5,888,444	405,178
9/30/2021	5,939,621	417,334
9/30/2022	5,982,608	429,854
9/30/2023	6,016,406	442,749
9/30/2024	6,039,928	456,032
9/30/2025	6,051,991	469,713
9/30/2026	6,051,307	483,804
9/30/2027	6,036,480	498,318
9/30/2028	6,005,989	513,268
9/30/2029	5,958,185	528,666
9/30/2030	5,891,279	544,526
9/30/2031	5,803,327	560,862
9/30/2032	5,692,223	577,687
9/30/2033	5,555,683	595,018
9/30/2034	5,391,231	612,869
9/30/2035	5,196,183	631,255
9/30/2036	4,967,632	650,192
9/30/2037	4,702,431	669,698
9/30/2038	4,397,172	689,789
9/30/2039	4,048,164	710,483
9/30/2040	3,651,414	731,797
9/30/2041	3,202,601	753,751
9/30/2042	2,697,052	776,364
9/30/2043	2,129,710	799,654
9/30/2044	1,495,108	823,644
9/30/2045	787,335	848,353
9/30/2046	0	0



SCHEDULE G

(Continued)

**AMORTIZATION SCHEDULE FOR BASES CLOSED
ON SEPTEMBER 30, 2017**

<u>Valuation Date</u>	Balance of New Incremental <u>UAAL 9/30/2017</u>	Annual Amortization <u>Payment</u>
9/30/2017	(\$13,094,463)	(\$838,915)
9/30/2018	(\$13,270,368)	(\$864,083)
9/30/2019	(\$13,434,739)	(\$890,005)
9/30/2020	(\$13,585,926)	(\$916,706)
9/30/2021	(\$13,722,130)	(\$944,207)
9/30/2022	(\$13,841,388)	(\$972,533)
9/30/2023	(\$13,941,562)	(\$1,001,709)
9/30/2024	(\$14,020,325)	(\$1,031,760)
9/30/2025	(\$14,075,139)	(\$1,062,713)
9/30/2026	(\$14,103,250)	(\$1,094,594)
9/30/2027	(\$14,101,657)	(\$1,127,432)
9/30/2028	(\$14,067,103)	(\$1,161,255)
9/30/2029	(\$13,996,049)	(\$1,196,093)
9/30/2030	(\$13,884,650)	(\$1,231,976)
9/30/2031	(\$13,728,734)	(\$1,268,935)
9/30/2032	(\$13,523,776)	(\$1,307,003)
9/30/2033	(\$13,264,866)	(\$1,346,213)
9/30/2034	(\$12,946,680)	(\$1,386,599)
9/30/2035	(\$12,563,448)	(\$1,428,197)
9/30/2036	(\$12,108,918)	(\$1,471,043)
9/30/2037	(\$11,576,316)	(\$1,515,175)
9/30/2038	(\$10,958,305)	(\$1,560,630)
9/30/2039	(\$10,246,944)	(\$1,607,449)
9/30/2040	(\$9,433,634)	(\$1,655,672)
9/30/2041	(\$8,509,068)	(\$1,705,342)
9/30/2042	(\$7,463,178)	(\$1,756,503)
9/30/2043	(\$6,285,072)	(\$1,809,198)
9/30/2044	(\$4,962,967)	(\$1,863,474)
9/30/2045	(\$3,484,123)	(\$1,919,378)
9/30/2046	(\$1,834,765)	(\$1,976,959)
9/30/2047	\$0	\$0



SCHEDULE G

(Continued)

**AMORTIZATION SCHEDULE FOR ALL BASES
ON SEPTEMBER 30, 2017**

<u>Valuation Date</u>	<u>Projected UAAL</u>	<u>Payment for Year</u>
9/30/2017	\$154,756,089	\$11,741,681
9/30/2018	\$155,008,004	\$12,093,932
9/30/2019	\$154,927,193	\$12,456,750
9/30/2020	\$154,477,301	\$12,830,452
9/30/2021	\$153,618,839	\$13,215,366
9/30/2022	\$152,308,934	\$13,611,827
9/30/2023	\$150,501,049	\$14,020,181
9/30/2024	\$148,144,699	\$14,440,787
9/30/2025	\$145,185,126	\$14,874,011
9/30/2026	\$141,562,963	\$15,320,231
9/30/2027	\$137,213,862	\$15,779,838
9/30/2028	\$132,068,098	\$16,253,233
9/30/2029	\$126,050,143	\$16,740,830
9/30/2030	\$119,078,199	\$17,243,055
9/30/2031	\$111,063,705	\$17,760,346
9/30/2032	\$101,910,796	\$18,293,157
9/30/2033	\$91,515,726	\$18,841,952
9/30/2034	\$79,766,243	\$19,407,210
9/30/2035	\$66,540,917	\$19,989,426
9/30/2036	\$51,708,411	\$20,589,109
9/30/2037	\$35,126,704	\$21,206,782
9/30/2038	\$16,642,241	\$21,842,986
9/30/2039	(\$3,910,971)	\$379,719
9/30/2040	(\$4,593,790)	\$391,111
9/30/2041	(\$5,340,920)	\$402,844
9/30/2042	(\$6,157,685)	\$414,929
9/30/2043	(\$7,049,836)	(\$3,158,617)
9/30/2044	(\$4,437,581)	(\$2,084,705)
9/30/2045	(\$2,696,788)	(\$1,071,025)
9/30/2046	(\$1,834,765)	(\$1,976,959)
9/30/2047	\$0	\$0



SCHEDULE H

SUMMARY OF MAIN FUND PROVISIONS AS INTERPRETED FOR VALUATION PURPOSES

The Judicial Retirement Fund was established September 18, 1973. This valuation included amendments to the Fund effective through the valuation date. There is a new tier of benefits (Tier II) for all justices, judges and circuit clerks elected or appointed on or after November 8, 2016. In addition, there is a new tier of benefits (District Attorneys' Plan) for all District Attorneys elected or appointed on or after November 8, 2016. The following summary describes the main benefit and contribution provisions of the Fund as interpreted for the valuation.

Membership

Any justice of the Supreme Court, judge of the Court of Civil Appeals, judge of the Court of Criminal Appeals, judge of the Circuit Court or officeholder of any newly created judicial office receiving compensation from the State treasury became a member of the fund if he was holding office on the effective date of the Act and elected to come under its provisions. Any such justice or judge elected or appointed to office after the effective date of the Act or any district or probate judge elected or appointed to office after October 10, 1975 or October 1, 1976, respectively, automatically becomes a member. Any circuit clerk or district attorney elected or appointed on or after November 8, 2016 automatically becomes a member. Certain other district and probate judges as well as certain former county court judges, district attorneys or assistant district attorneys serving as circuit judges and certain supernumerary judges and justices could also elect to become members.

Average Final Compensation

The average compensation of a member for the 5 highest years in the last 10 years of credited service.

Credited Service

Credited service is service as a member plus certain periods of previous service credited in accordance with the provisions of the Act.



Benefits

Service Retirement Benefit

Condition for Benefit

Tier I (Groups 1 and 2):

A retirement benefit is payable upon the request of any member who has:

- Completed 12 years of credited service and attained age 65, or
- Completed 15 years of credited service and whose age plus service equals or exceeds 77, or
- Completed at least 18 years of credited service or three full terms as a judge or justice, or
- Completed 10 years of credited service and attained age 70

However, a judge who became a member on or after July 30, 1979 or who is a district or probate judge must meet the following age and service requirement combinations in order to be eligible to retire:

- Completed 12 years of credited service and attained age 65, or
- Completed at least 15 years of credited service and attained age 60, and whose age plus service equals or exceeds 77, or
- Completed 10 years of credited service and attained age 70, or
- Completed 25 years of credited service (or completed 24 years of credited service provided the member purchases one year of service prior to retirement) regardless of age

Tier II (Group 3) and District Attorneys:

Completed 10 years of service and attained age 62.

Amount of Benefit

Tier I (Groups 1 and 2):

The service retirement benefit for a member is equal to:

- (a) For a circuit or appellate judge, who was a member prior to July 30, 1979, 75% of the salary prescribed by law for the position from which the member retires.
- (b) For a circuit or appellate judge who became a member on or after July 30, 1979, 75% of the member's salary at the time of separation from service.
- (c) For a district judge, 75% of the position's salary immediately prior to retirement.
- (d) For a probate judge, 75% of the member's salary at the time of separation from service.

Tier II (Group 3) and District Attorneys:



The service retirement benefit for a member is equal to:

- (a) For a member who is a judge with years of service less than 18 years, 4% of average final compensation multiplied by years of credited service; for a member who is a judge with 18 or more years of service, 75% of average final compensation, not to exceed 75% of average final compensation.
- (b) For a member who is a clerk or district attorney, 3% of average final compensation multiplied by years of credited service, not to exceed 80% of average final compensation.

Disability Retirement Benefit

Condition for Benefit A disability retirement benefit is payable to any member who becomes permanently, physically or mentally, unable to carry out his duties on a full-time basis, provided the member has completed five or more years of credited service. (ten years for new tier members)

Amount of Benefit

Tier I (Groups 1 and 2):

- (a) The disability retirement benefit for a member other than a district or probate judge who was a member prior to July 30, 1979 is equal to 25% of the salary prescribed by law for the position from which the member retires on disability plus 10% of such salary for each year of credited service in excess of five years. The disability retirement benefit is subject to a minimum of 30% and a maximum of 75% of such salary.
- (b) The disability retirement benefit for a judge who became a member on or after July 30, 1979 or who is a district or probate judge is equal to 25% of his salary immediately prior to retirement plus 10% of such salary for each year of credited service in excess of five years. The disability retirement benefit is subject to a minimum of 30% and a maximum of 75% of such salary.

Tier II (Group 3) and District Attorneys:

- (a) For a member who is a judge with years of service less than 18 years, 4% of average final compensation multiplied by years of credited service; for a member who is a judge with 18 or more years of service, 75% of average final compensation, not to exceed 75% of average final compensation. .
- (b) For a member who is a clerk or district attorney, 3% of average final compensation multiplied by years of credited service, not to exceed 80% of average final compensation.



Spouse's Benefit

Tier I (Groups 1 and 2):

Condition for Benefit Upon the death of an active, inactive or retired member with at least 5 years of credited service, a death benefit is payable to the member's spouse.

Amount of Benefit

- (a) The death benefit payable to the spouse of a judge other than a district or probate judge consists of a yearly benefit equal to 3% of the salary prescribed by law for the position of the former member for each year of service, not to exceed 30% of such salary.
- (b) The death benefit payable to the spouse of a district judge consists of a yearly benefit equal to 3% of the position's salary prescribed by law at the time of death for each year of service not to exceed 30% of such salary.
- (c) The death benefit payable to the spouse of a probate judge is a yearly benefit equal to the greater of \$480 for each year of credited service to a maximum of 10 years, or 3% of the member's salary at the time of separation from service for each year of credited service not to exceed 30% of such salary.

The benefit is payable for the spouse's life or until his or her remarriage.

Death in Active Service Benefit

Tier II (Group 3) and District Attorneys:

Amount of Benefit

- (a) In the event of the death of a member who is eligible for service retirement, the designated beneficiary may elect: (1) to exercise option 3 as defined below under "Special Privileges at Retirement – All Employees" or (2) to receive a return of member contributions and total interest earned plus a death benefit payable from the pre-retirement death benefit fund equal to the salary on which the member made retirement contributions for the previous fiscal year (October 1 – September 30).
- (b) In the event of the death of a member who is not eligible for retirement, the designated beneficiary shall receive the accumulated contributions not to exceed \$5,000 or the accumulated contributions of the member plus an additional death benefit payable from the pre-retirement death benefit payable from the pre- retirement death benefit fund equal to the salary on which their retirement contributions were made for the previous fiscal year. (October 1-September 30)



Benefit Payable on Separation from Service

If a member terminates service and elects not to withdraw his contributions and accrued interest from the Fund, he is eligible to receive any of the benefits for which he has sufficient credited service upon reaching an eligible retirement age.

A member terminating service before reaching eligibility for retirement benefits may elect to receive a return of contributions and accrued interest. "Regular Interest" is 4% which is the rate adopted by the Board and applied to the balance in each member's account every year; however, if a member receives a refund of contributions, the interest rate applied to the refund is lower than the 4% regular rate (Based on Section 36-27-16.3(c)(1))



Contributions

By Members

Tier I (Groups 1 and 2):

Prior to October 1, 2011, each member contributed 6.0% of salary.

Beginning October 1, 2011, each member contributed 8.25% of salary.

Beginning October 1, 2012, each member contributes 8.50% of salary.

Tier II (Group 3) and District Attorneys:

Each Tier II member and District Attorney member contributes 8.50% of salary.

If positive investment performance results in a decrease in the total contribution rate paid by employers and employees participating in the Fund, the Retirement Systems of Alabama shall first reduce the employee contribution rate.

By State

The State makes contributions which, in addition to the members' contributions, are sufficient to carry out the provisions of the Act.



Special Privileges at Retirement

Tier II (Group 3) and District Attorneys:

In lieu of the full retirement allowance, any member may, at retirement, elect to receive a reduced retirement allowance equal in value to the full allowance, with the provision that:

Option 1. If the member dies before the annuity payments equal or exceed the present value of the member's annuity at the date of retirement, the balance is paid to a designated beneficiary or to the estate, or

Option 2. After the member's death, the member's allowance is continued throughout the life of the designated beneficiary, or

Option 3. After the member's death, one half of the member's allowance is continued throughout the life of the designated beneficiary, or

Option 4. Some other benefit is paid either to the member or to the designated beneficiary provided such benefit, together with the reduced retirement allowance, is of equivalent actuarial value to his retirement allowance and is approved by the Board of Control.



SCHEDULE I

**SCHEDULE OF MEMBERSHIP DATA
AS OF SEPTEMBER 30, 2017**

**NUMBER OF ACTIVE MEMBERS AND THEIR AVERAGE COMPENSATION
BY AGE AND YEARS OF SERVICE**

Attained Age	Completed 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 to 39	≥ 40		
Under 25 Avg. Pay												
25 to 29 Avg. Pay	1 125,919											1 125,919
30 to 34 Avg. Pay	1 125,919		1 120,435									2 123,177
35 to 39 Avg. Pay	5 132,519	9 117,370	4 125,905	2 128,401								20 123,968
40 to 44 Avg. Pay	6 137,394	8 115,065	8 122,548	3 122,431	2 97,365							27 121,751
45 to 49 Avg. Pay	9 126,727	13 102,510	9 122,669	11 125,325	1 127,446	3 131,235						46 119,063
50 to 54 Avg. Pay	3 147,081	14 105,097	10 116,357	17 132,161	6 127,912	3 155,168	1 127,446					54 123,766
55 to 59 Avg. Pay	4 142,866	8 106,406	11 127,720	21 136,205	9 132,949	7 148,846	1 147,199	2 115,893	1 75,342			64 130,949
60 to 64 Avg. Pay	5 122,257	11 112,934	9 118,013	10 122,653	17 140,070	8 145,369	5 139,115	4 154,000	1 149,935			70 130,684
65 to 69 Avg. Pay	2 126,448	5 121,131	5 127,751	9 126,804	8 132,546	3 100,600	5 144,488	2 149,935	1 198,754	1 148,684		41 130,987
70 & up Avg. Pay		4 88,339	3 130,077	4 107,614	6 121,816	1 149,935	4 110,865	1 149,935		3 148,479		26 118,989
Total Avg. Pay	36 132,117	72 108,797	60 122,801	77 128,674	49 131,809	25 140,633	16 133,507	9 144,177	3 141,344	4 148,530		351 126,188

The top number in each box is the count of actives for that age and service combination. The bottom amount is the average compensation for the group.

Average Age: 55.7

Average Years of Service: 11.8



SCHEDULE I
(Continued)

**NUMBER OF SERVICE RETIREMENTS
AND THEIR BENEFITS BY AGE**

Age	Number of Members	Total Annual Benefits	Average Annual Benefits
Under 50	0	\$ 0	\$ 0
50-54	2	106,556	53,278
55-59	0	0	0
60-64	34	3,785,766	111,346
65-69	61	6,175,861	101,244
70-74	83	8,634,212	104,027
75-79	56	5,561,923	99,320
80-84	23	2,134,313	92,796
85-89	16	1,568,389	98,024
90-94	6	492,710	82,118
95 & Over	3	203,299	67,766
Total	284	\$ 28,663,029	\$ 100,926

Average Age: 72.8

**NUMBER OF BENEFICIARIES
AND THEIR BENEFITS BY AGE**

Age	Number of Members	Total Annual Benefits	Average Annual Benefits
Under 50	0	\$ 0	\$ 0
50-54	3	126,703	42,234
55-59	3	90,550	30,183
60-64	6	232,386	38,731
65-69	9	386,278	42,920
70-74	15	565,794	37,720
75-79	14	454,943	32,496
80-84	24	796,729	33,197
85-89	24	741,060	30,878
90-94	11	380,555	34,596
95 & Over	4	146,950	36,738
Total	113	\$ 3,921,948	\$ 34,708

Average Age: 79.0



SCHEDULE I
(Continued)

**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	1	105,704	105,704
55-59	1	110,203	110,203
60-64	1	94,674	94,674
65-69	0	0	0
70-74	2	130,082	65,041
75-79	1	35,239	35,239
80-84	0	0	0
85-89	0	0	0
90-94	0	0	0
95 & Over	0	0	0
Total	6	\$ 475,902	\$ 79,317

Average Age: 65.6