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April 16, 2020

Mr. James A. Potvin
Executive Director
Georgia Judicial Retirement System
Two Northside 75, Suite 300
Atlanta, GA 30318-7701

Dear Mr. Potvin:

Enclosed is the "Georgia Judicial Retirement System Report of the Actuary on the Valuation Prepared as of June 30, 2019".

The valuation indicates that employer contributions at the rate of 8.81% of compensation are sufficient to support the benefits of the System.

Please let us know if there are any questions concerning the report.

Sincerely yours,

Edward J. Koebel

Edward J. Koebel, EA, FCA, MAAA
Chief Executive Officer

Cathy Turcot

Cathy Turcot
Principal and Managing Director

Ben Mobley

Ben Mobley, ASA, FCA, MAAA
Senior Actuary

Enclosure

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Cavanaugh Macdonald
CONSULTING, LLC

EMPLOYEES'
RETIREMENT SYSTEM
OF GEORGIA

GEORGIA JUDICIAL RETIREMENT SYSTEM

REPORT OF THE ACTUARY ON THE VALUATION PREPARED AS OF JUNE 30, 2019

Cavanaugh Macdonald
CONSULTING, LLC
The experience and dedication you deserve

April 16, 2020

Board of Trustees
Georgia Judicial Retirement System
Two Northside 75, Suite 300
Atlanta, GA 30318-7701

Attention: Mr. James Potvin, Executive Director

Members of the Board:

Section 47-23-21 of the law governing the operation of the Georgia Judicial Retirement System provides that the actuary shall make annual valuations of the contingent assets and liabilities of the Retirement System on the basis of regular interest and the tables last adopted by the Board of Trustees. We have submitted the report giving the results of the actuarial valuation of the System prepared as of June 30, 2019. The report indicates that annual employer contributions at the rate of 8.81% of compensation for the fiscal year ending June 30, 2022 are sufficient to support the benefits of the System.

The results of the valuation reflect the two one-time payments to certain retirees and beneficiaries effective July 2019 and January 2020.

In preparing the valuation, the actuary relied on data provided by the System. While not verifying data at the source, the actuary performed tests for consistency and reasonableness. Our firm, as actuary, is responsible for all of the actuarial trend data in the financial section of the annual report and the supporting schedules in the actuarial section of the annual report.

In our opinion, the valuation is complete and accurate, and the methodology and assumptions are reasonable as a basis for the valuation. The valuation takes into account the effect of all amendments to the System enacted through the 2019 session of the General Assembly. Effective with the June 30, 2017 valuation, the assumed rate of return will be reduced by 0.10% (10 basis points) from the immediate prior actuarial valuation, as long as the actual rate of return for the fiscal year ending with the current valuation date exceeds the assumed rate of return from the immediate prior actuarial valuation. The assumed rate of return may not decrease below 7.00% net of investment expenses. Since the actual rate of return for the year ending in June 30, 2019 was less than 7.30%, the assumed rate of return used in the current valuation remained at 7.30%.

The System is funded on an actuarial reserve basis. The actuarial assumptions recommended by the actuary and adopted by the Board are in the aggregate reasonably related to the experience under the System and to reasonable expectations of anticipated experience under the System. The assumptions and methods used for financial reporting purposes meet the parameters set by Actuarial Standards of Practice (ASOPs). The funding objective of the plan is that contribution rates over time will remain level as a percent of payroll. The valuation method used is the entry age normal cost method. The normal contribution rate to cover current cost has been determined as a level percent of payroll. Gains and losses are reflected in the total unfunded accrued liability which is negative and being amortized as a level percent of payroll in accordance with the funding policy adopted by the Board.

The Plan and the employers are required to comply with the financial reporting requirements of GASB Statements No. 67 and 68. The necessary disclosure information is provided in separate supplemental reports.

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We have provided the following information and supporting schedules for the Actuarial Section of the Comprehensive Annual Financial Report:

- Summary of Actuarial Assumptions
- Schedule of Active Members
- Schedule of Funding Progress
- Schedule of Retirees Added to and Removed from Rolls
- Analysis of Change in Unfunded Accrued Liability
- Solvency Test Results

The System is being funded in conformity with the minimum funding standard set forth in Code Section 47-20-10 of the Public Retirement Systems Standards Law and the funding policy adopted by the Board. In our opinion the System is operating on an actuarially sound basis. Assuming that contributions to the System 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 System may be safely anticipated.

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 system and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System.

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 amounts for the System. Use of these computations for purposes other than meeting these requirements may not be appropriate.

Sincerely yours,

Edward J. Koebel

Edward J. Koebel, EA, FCA, MAAA
Chief Executive Officer

Cathy Turcot

Cathy Turcot
Principal and Managing Director

Ben Mobley

Ben Mobley, ASA, FCA, MAAA
Senior Actuary

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Section I – Summary of Principal Results

1. For convenience of reference, the principal results of the current and preceding valuations are summarized below:

Valuation Date	June 30, 2019	June 30, 2018
Active Members:		
Number	521	527
Annual compensation	$ 60,531,960	$ 60,571,786
Retired Members and Beneficiaries:		
Number	398	358
Annual allowances	$ 28,113,182	$ 25,240,472
Deferred Vested Members:		
Number	28	27
Annual allowances	$ 1,181,529	$ 1,192,010
Assets:		
Fair Value	$ 479,372,000	$ 466,657,000
Actuarial Value	474,003,000	461,787,000
Valuation Interest Rate	7.30%	7.30%
Unfunded actuarial accrued liability	$ (33,338,935)	$ (37,063,164)
Blended Amortization period (years)	14.3	15.6
Funded Ratio based on Actuarial Value of Assets	107.6%	108.7%
For Fiscal Year Ending	**June 30, 2022**	**June 30, 2021**
Actuarially Determined Employer Contribution Rates (ADEC):		
Normal*	13.93%	13.70%
Accrued liability	(5.12)	(5.32)
Total	8.81%	8.38%

* The normal contribution rate includes administrative expenses.

2. The major benefit and contribution provisions of the System as reflected in the valuation are summarized in Schedule H. The valuation takes into account the effect of amendments of the System enacted through the 2019 session of the General Assembly. The results of the valuation reflect two one-time 3% payments to certain retirees and beneficiaries effective July 2019 and January 2020.

Section I – Summary of Principal Results

3. Schedule D of this report outlines the full set of actuarial assumptions and methods used to prepare the current valuation. Effective with the June 30, 2017 valuation, the assumed rate of return will be reduced by 0.10% (10 basis points) from the immediate prior actuarial valuation, as long as the actual rate of return for the fiscal year ending with the current valuation date exceeds the assumed rate of return from the immediate prior actuarial valuation. The assumed rate of return may not decrease below 7.00% net of investment expenses. Since the actual rate of return for the year ending in June 30, 2019 was less than 7.30%, the assumed rate of return used in the current valuation remained at 7.30%. The Board Funding Policy is shown in Schedule F.
4. The entry age actuarial cost method was used to prepare the valuation. Schedule E contains a brief description of this method.
5. Comments on the valuation results as of June 30, 2019 are given in Section IV and further discussion of the contributions is set out in Section V.
6. We have prepared the Solvency Test and the Schedule of Retirants Added to and Removed from Rolls for the System's Comprehensive Annual Financial Report. These tables are shown in Schedule J.
7. The funded ratio shown in the Summary of Principal Results is the ratio of the actuarial value of assets to the accrued liability and would be different if based on fair value of assets. The funded ratio is an indication of progress in funding the promised benefits. This funded ratio does not have any relationship to measuring sufficiency if the plan had to settle its liabilities.

Section II – Membership

1. Data regarding the membership of the System for use as a basis of the valuation were furnished by the Retirement System office. The valuation included 521 active members, with annual compensation of $60,531,960.

2. Data was provided by the Retirement System for inactive members who are eligible for deferred vested benefits. The valuation included 28 deferred vested members with estimated annual allowances totaling $1,181,529. In addition, there are 35 inactive non-vested members included in the valuation entitled to a refund of member contributions.

3. The following table shows the number of retired members and beneficiaries receiving a benefit as of June 30, 2019, together with the amount of their annual allowances payable under the System as of that date.

THE NUMBER AND ANNUAL RETIREMENT ALLOWANCES OF RETIRED MEMBERS AND BENEFICIARIES RECEIVING BENEFITS AS OF JUNE 30, 2019

GROUP	NUMBER	ANNUAL RETIREMENT ALLOWANCES
Service Retirements	313	$ 25,364,178
Disability Retirements	2	116,535
Beneficiaries of Deceased Members	83	2,632,469
Total	398	$ 28,113,182

Section III – Assets

1. The retirement law provides for the maintenance of two funds for the purpose of recording the financial transactions of the System; namely, the Annuity Savings Fund and the Pension Accumulation 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 if a death benefit allowance becomes payable to his beneficiary, his accumulated contributions are transferred from the Annuity Savings Fund to the Pension Accumulation Fund. The annuity which these contributions provide is then paid from the Pension Accumulation Fund. On June 30, 2019, the value of assets credited to the Annuity Savings Fund amounted to $94,292,000.

   (b) Pension Accumulation Fund

   The Pension Accumulation Fund is the fund to which all income from investments and all contributions made by employers of members of the System and by the State for members of local retirement funds are credited. All retirement allowance and death benefit allowance payments are disbursed from this fund. Upon the retirement of a member, or upon his death if a death benefit allowance is payable, his accumulated contributions are transferred from the Annuity Savings Fund to this fund to provide the annuity portion of the allowance. On June 30, 2019, the fair value of assets credited to the Pension Accumulation Fund amounted to $385,080,000.

2. As of June 30, 2019, the total fair value of assets amounted to $479,372,000 as reported by the Auditor of the System. The actuarial value of assets as of June 30, 2019 was determined to be $474,003,000 based on a five year smoothing of investment gains and losses. Schedule B shows the development of the actuarial value of assets as of June 30, 2019.

3. Schedule C shows receipts and disbursements of the System for the two years preceding the valuation date and a reconciliation of the fund balances at fair 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 System as of June 30, 2019. The valuation was prepared in accordance with the actuarial assumptions and methods set forth in Schedule D and the actuarial cost method which is described in Schedule E.

2. The valuation balance sheet shows that the System has total prospective liabilities of $537,111,906, of which $256,060,382 is for the prospective benefits payable on account of present retired members, beneficiaries of deceased members, and members entitled to deferred vested benefits, and $281,051,524 is for the prospective benefits payable on account of present active members. Against these liabilities, the System has total present assets for valuation purposes of $474,003,000 as of June 30, 2019. The difference of $63,108,906 between the total liabilities and the total present assets represents the present value of contributions to be made in the future. Of this amount, $37,713,757 is the present value of future contributions expected to be made by or on behalf of members, and the balance of $25,395,149 represents the present value of future contributions payable by the employers.

3. The employer's contributions to the System consist of normal contributions and accrued liability contributions. The valuation indicates that annual employer normal contributions at the rate of 12.09% of active members' compensation are required to provide the currently accruing benefits of the System.

4. Prospective normal contributions at the rate of 12.09% of active members' compensation have a present value of $58,734,084. When this amount is subtracted from $25,395,149, which is the present value of the total future contributions to be made by the employers, the result is a prospective unfunded actuarial accrued liability of ($33,338,935).

5. The funding policy adopted by the Board, as shown in Schedule F, provides that the unfunded actuarial accrued liability as of June 30, 2013 (Transitional UAAL) will be amortized over a closed 20-year period. 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 over a closed 20-year period from the date it is established. The UAAL will be amortized as a level dollar amount if the Funded Ratio is less than 100% or as a level percentage of payroll if the Funded Ratio is greater than 100%, over a period not to exceed 20 years.

6. The total UAAL contribution rate is (5.12)% of payroll, determined in accordance with the Board's funding policy. The UAAL contribution rate has been calculated on the assumption that the aggregate amount of the accrued liability contribution will increase by 3.25% each year.

7. Schedule G of this report shows the amortization schedules for the Transitional UAAL and New Incremental UAALs.

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

TOTAL UAAL AND UAAL CONTRIBUTION RATE

	Remaining Balance UAAL	Remaining Amortization Period (years)	Amortization Payment
Transitional	$(15,271,608)	14	$(1,485,109)
New Incremental 6/30/2014	(13,509,103)	15	(1,247,725)
New Incremental 6/30/2015	(15,574,691)	16	(1,372,184)
New Incremental 6/30/2016	4,159,478	17	350,897
New Incremental 6/30/2017	9,051,253	18	733,584
New Incremental 6/30/2018	(5,297,919)	19	(413,749)
New Incremental 6/30/2019	3,103,655	20	234,180
Total UAAL	$(33,338,935)		$(3,200,106)
Blended Amortization Period (years)			14.3
Estimated payroll			$62,499,249
UAAL Contribution Rate			(5.12)%

Section V – Contributions Payable by Employers

1. The contributions of employers consist of a normal contribution and an accrued liability contribution as determined by actuarial valuation.
2. The normal contribution rate is calculated as the level percentage rate which, if applied to the compensation of the average 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. On the basis of the valuation, the normal contribution rate was determined to be 12.09% of active members' compensation.
3. An additional contribution of 1.84% of active members' compensation is required for administrative expenses for the fiscal year ending June 30, 2022.
4. The total normal contribution rate including administrative expenses is, therefore, 13.93% of active members' compensation.
5. The accrued liability contribution on the basis of the Board's funding policy is (5.12)% of active members' compensation and was determined assuming that the total payroll of active members will increase by 3.25% each year.
6. The following table summarizes the employer contribution rates, which were determined by the June 30, 2019 valuation and are recommended for use.

ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTION RATES (ADEC)
FOR FISCAL YEAR ENDING JUNE 30, 2022

CONTRIBUTION	PERCENTAGE OF ACTIVE MEMBERS' COMPENSATION
Normal	13.93%
Accrued Liability	(5.12)
Total	8.81%

Section VI – Accounting Information

The information required under the Governmental Accounting Standards Board (GASB) Statements No. 67 and 68 will be issued in separate reports. The following information is provided for informational purposes only.

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

NUMBER OF ACTIVE AND RETIRED MEMBERS
AS OF JUNE 30, 2019

GROUP	NUMBER
Retirees and beneficiaries currently receiving benefits	398
Terminated employees entitled to benefits but not yet receiving benefits	63
Active plan members	521
Total	982

2. The schedule of funding progress is shown below.

SCHEDULE OF FUNDING PROGRESS
(Dollar amounts in thousands)

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)
6/30/2014	$ 373,560	$ 343,428	$ (30,132)	108.8%	$ 53,628	(56.2)%
6/30/2015	396,399	350,298	(46,101)	113.2	54,272	(84.9)
6/30/2016	418,412	376,740	(41,672)	111.1	57,401	(72.6)
6/30/2017*	439,828	407,607	(32,221)	107.9	59,695	(54.0)
6/30/2018*	461,787	424,724	(37,063)	108.7	60,572	(61.2)
6/30/2019	474,003	440,664	(33,339)	107.6	60,532	(55.1)

* Reflects change in assumed rate of return

3. The following shows the schedule of employer and non-employer contributions (all dollar amounts are in thousands).

Year Ending	Actuarially Determined Employer Contribution	Percentage Contributed
6/30/2014	$ 2,375	100%
6/30/2015	4,260	100
6/30/2016	7,623	100
6/30/2017	6,684	100
6/30/2018	6,566	100
6/30/2019	5,254	100

4. The information presented in the required supplementary schedules was determined as part of the actuarial valuation at June 30, 2019. Additional information as of the latest actuarial valuation follows.

Valuation date	6/30/2019
Actuarial cost method	Entry age
Amortization method	Level percent of pay, closed
Remaining amortization period	14.3 years
Asset valuation method	5-year smoothed fair
Actuarial assumptions:	
Investment rate of return*	7.30%
Projected salary increases*	4.50%
Cost-of-living adjustments	None

* Includes inflation at 2.75%

Section VII – Experience

1. Section 47-2-26 of the act governing the operation of the System provides that as an aid to the Board in adopting service and mortality tables, the actuary will prepare an experience investigation as least once in each five-year period. The last experience investigation was prepared for the five-year period ending June 30, 2014, and based on the results of the investigation, various assumptions and methods were adopted by the Board on December 17, 2015. The next experience investigation will be prepared for the period July 1, 2014 through June 30, 2019.
2. The following table shows the estimated gain or loss from various factors that resulted in an increase of $3,724,229 in the unfunded actuarial accrued liability (UAAL) from ($37,063,164) to ($33,338,935) during the fiscal year ending June 30, 2019.
3. The most significant items contributing to the $3.7 million increase in the UAAL was a $2.7 million loss due to valuation asset growth less than expected. There also losses for mortality, retirement and data changes that totaled $4.0 million. In addition, the two one-time payments to certain retirees and beneficiaries effective July 2019 and January 2020 increased the UAAL approximately $0.6 million. These losses were partially offset by salary increases less than expected of $5.8 million.

ANALYSIS OF THE CHANGE IN UNFUNDED ACTUARIAL ACCRUED LIABILITY
(in thousands of dollars)

ITEM	AMOUNT OF INCREASE/ (DECREASE)
Interest (7.30%) added to previous UAAL	$ (2,705.6)
Accrued liability contribution	3,085.8
Experience:	
Valuation asset growth	2,721.4
Pensioners' mortality	1,456.8
Turnover and retirements	1,100.3
New entrants	1,774.9
Salary increases	(5,839.7)
Method changes	0.0
Amendments	645.9
Assumption changes	0.0
Miscellaneous changes	0.0
Data changes	1,484.4
Total	$ 3,724.2

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Section VIII – Risk Assessment

Overview

Actuarial Standards of Practice (ASOP) No. 51, issued by the Actuarial Standards Board, provides guidance on assessing and disclosing risks related to pension plan funding. This guidance is binding on all credentialed actuaries practicing in the United States. This standard was issued as final in September 2017 with application to measurement dates on or after November 1, 2018.

The term “risk” frequently has a negative connotation, but from an actuarial perspective, it may be thought of as simply the fact that what actually happens in the real world will not always match what was expected, based on actuarial assumptions. Of course, when actual experience is better than expected, the favorable risk is easily absorbed. The risk of unfavorable experience will likely be unpleasant, and so there is an understandable focus on aspects of risk that are negative.

Risk usually can be reduced or eliminated at some cost. Consumers, for example, buy auto and home insurance to reduce the risk of accidents or catastrophes. Another way to express this concept, however, is that there is generally some reward for assuming risk. Thus, retirement plans invest not just in US Treasury bonds which have almost no risk, but also in equities which are considerably riskier – because they have an expected reward of a higher return that justifies the risk.

Under ASOP 51, the actuary is called on to identify the significant risks to the pension plan and provide information to help those sponsoring and administering the plan understand the implications of these risks. In this section, we identify some of the key risks for the System and provide information to help interested parties better understand these risks.

Investment Risk

The investment return on assets is the most obvious risk – and usually the largest risk – to funding a pension plan. To illustrate the magnitude of this risk, please review the following chart showing the Asset Volatility Ratio (AVR), defined as the fair value of assets divided by covered payroll.

($ in thousands)

Valuation	Fair Value of Assets	Covered Payroll	Asset Volatility Ratio
2014	$400,790	$53,628	7.47
2015	$404,852	$54,272	7.46
2016	$403,011	$57,401	7.02
2017	$441,182	$59,695	7.39
2018	$466,657	$60,572	7.70
2019	$479,372	$60,532	7.92

The asset volatility ratio is especially useful to compare across plans or through time. It is also frequently useful to consider how the AVR translates into changes in the Required Contribution Rate (actuarially determined employer contribution rate). For example, the following table demonstrates that with an AVR of 7.00, if the market value return is 10% below assumed, or -2.70% for the System, there will be an increase in the Required Contribution Rate of 1.02% of payroll in the first year. Without asset smoothing or without returns above the expected return in the next four years, the impact on the Required Contribution Rate would be 5.10%. A higher AVR would produce more volatility in the Required Contribution Rate.

AVR	Unsmoothed Amortization	Smoothed Amortization
6.0	4.37%	0.87%
7.0	5.10%	1.02%
8.0	5.83%	1.17%

Sensitivity Measures

Valuations are generally performed with a single set of assumptions that reflects the best estimate of future conditions, in the opinion of the actuary and typically the governing board. Note that under actuarial standards of practice, the set of economic assumptions used for funding must be consistent. To enhance the understanding of the importance of an assumption, a sensitivity test can be performed where the valuation results are recalculated using a different assumption or set of assumptions.

The following tables contains the key measures for the System using the valuation assumption for investment return of 7.30%, along with the results if the assumption were 6.30% or 8.30%. In this analysis, only the investment return assumption is changed. Consequently, there may be inconsistencies between the investment return and other economic assumptions such as inflation or payroll increases. In addition, simply because the valuation results under alternative assumptions are shown here, it should not be implied that CMC believes that either assumption (6.30% or 8.30%) would comply with actuarial standards of practice.

($ in thousands)

As of June 30, 2019	Current Discount Rate (7.3%)	-1% Discount Rate (6.3%)	+1% Discount Rate (8.3%)
Accrued Liability	$440,664	$481,582	$405,060
Unfunded Liability	($33,339)	$7,579	($68,943)
Funded Ratio (AVA)	107.6%	98.4%	117.0%
ADEC Rate*	8.81%	17.49%	0.71%

* Contribution rates are determined based on the Board’s current Funding Policy

Section VIII – Risk Assessment

Mortality Risk

The mortality assumption is a significant assumption for valuation results, second only to the investment assumption in most situations. The System's mortality assumption utilizes a mortality table (with separate rates for males and females, as well as different rates by status) and a projection scale for how the mortality table is expected to improve through time.

The future, however, is not known, and actual mortality improvements may occur at a faster rate than expected, or at a slower rate than expected (or even decline). Although changes in mortality will affect the benefits paid, this assumption is carefully studied during the regular experience studies that the System conducts so that incremental changes can be made to smoothly reflect unfolding experience. The next experience study will be completed for the period July 1, 2014 – June 30, 2019.

Contribution Risk

The System is primarily funded by member and employer contributions to the trust fund, together with the earnings on those accumulated contributions. Each year in the valuation, the Required Contribution Rate is determined, based on the System's funding policy. This rate is the sum of the rates for the normal cost for the plan, the amortization of the UAAL, and the administrative expenses. Since the Required Contribution Rate has always been made and that procedure is expected to continue, there is no Contribution Risk at this time.

VALUATION BALANCE SHEET
SHOWING THE PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES OF
THE GEORGIA JUDICIAL RETIREMENT SYSTEM
AS OF JUNE 30, 2019

	ACTUARIAL LIABILITIES		
(1)	Present value of prospective benefits payable on account of present retired members, beneficiaries of deceased members, and members entitled to deferred vested benefits		
	- Service and disability benefits	$ 225,530,148	
	- Death and survivor benefits	18,045,336	
	- Deferred vested benefits	12,484,898	
	Total		$ 256,060,382
(2)	Present value of prospective benefits payable on account of present active members		281,051,524
(3)	TOTAL ACTUARIAL LIABILITIES		$ 537,111,906
	PRESENT AND PROSPECTIVE ASSETS		
(4)	Actuarial value of assets		$ 474,003,000
(5)	Present value of total future contributions = (3)-(4)	$ 63,108,906	
(6)	Present value of future member contributions		37,713,757
(7)	Present value of future employer contributions = (5)-(6)	$ 25,395,149	
(8)	Employer normal contribution rate (net of expenses)	12.09%	
(9)	Present value of future payroll	$ 485,807,147	
(10)	Prospective normal contributions = (8) x (9)		58,734,084
(11)	Prospective unfunded accrued liability contributions = (7)-(10)		(33,338,935)
(12)	TOTAL PRESENT AND PROSPECTIVE ASSETS		$ 537,111,906

Schedule B – Development of Actuarial Value of Assets

DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS

(1)	Actuarial Value Beginning of Year		$	461,787,000
(2)	Fair Value End of Year		$	479,372,000
(3)	Fair Value Beginning of Year		$	466,657,000
(4)	Cash Flow			
	(a)	Contributions	$	10,723,000
	(b)	Benefit Payments		(28,015,000)
	(c)	Administrative Expenses		(820,000)
	(d)	Investment Expenses		(189,000)
	(e)	Net: (4)(a) + (4)(b) + (4)(c) + (4)(d)	$	(18,301,000)
(5)	Investment Income			
	(a)	Fair Total: (2) – (3) – (4)(e)	$	31,016,000
	(b)	Assumed Rate of Return for Current Year		7.30%
	(c)	Amount for Immediate Recognition: [(3) x (5)(b)] + [{(4)(a) + (4)(b) + (4)(c)} x (5)(b) x 0.5] – (4)(d)	$	33,594,000
	(d)	Amount for Phased-In Recognition: (5)(a) – (5)(c)		(2,578,000)
(6)	Phased-In Recognition of Investment Income			
	(a)	Current Year: (5)(d) / 5	$	(516,000)
	(b)	First Prior Year		1,552,000
	(c)	Second Prior Year		3,890,000
	(d)	Third Prior Year		(5,010,000)
	(e)	Fourth Prior Year		(2,993,000)
	(f)	Total Recognized Investment Gain	$	(3,077,000)
(7)	Actuarial Value End of Year: (1) + (4)(e) + (5)(c) + (6)(f)		$	474,003,000
(8)	Difference Between Fair & Actuarial Values: (2) – (7)		$	5,369,000
(9)	Rate of Return on Actuarial Value*			6.70%

* Calculated assuming cash flow occurs in the middle of the year

Schedule C – Summary of Receipts and Disbursements

SUMMARY OF RECEIPTS AND DISBURSEMENTS
(Fair Value)

	YEAR ENDING	
Receipts for the Year	June 30, 2019 ($1,000's)	June 30, 2018 ($1,000's)
Contributions:		
Members	$ 5,469	$ 4,910
Non-employer	2,137	1,841
Employer	3,117	4,725
Subtotal	$ 10,723	$ 11,476
Investment Earnings	30,827	39,877
TOTAL	$ 41,550	$ 51,353
Disbursements for the Year		
Benefit Payments	$ 27,462	$ 24,934
Refunds to Members	553	150
Administrative Expenses	820	794
TOTAL	$ 28,835	$ 25,878
Excess of Receipts over Disbursements	$ 12,715	$ 25,475
Reconciliation of Asset Balances		
Asset Balance as of the Beginning of Year	$ 466,657	$ 441,182
Excess of Receipts over Disbursements	12,715	25,475
Asset Balance as of the End of Year	$ 479,372	$ 466,657
Rate of Return*	6.74%	9.19%

* Calculated assuming cash flow occurs in the middle of the year

Schedule D – Outline of Actuarial Assumptions and Methods

Actuarial assumptions and methods adopted by the Board December 17, 2015. Valuation interest rate adopted by the Board March 15, 2018.

VALUATION INTEREST RATE: 7.30% per annum, compounded annually, net of investment expenses, composed of a 2.75% inflation assumption and a 4.55% real rate of investment return assumption.

SALARY INCREASES: 4.50% annually

SEPARATIONS BEFORE SERVICE RETIREMENT: Representative values of the assumed annual rates of separation before service retirement are as follows:

	Annual Rates of			
Age	Withdrawal	Death		Disability
		Men	Women	
20	4.0%	.032%	.018%	.03%
25	4.0	.035	.019	.03
30	4.0	.041	.025	.05
35	4.0	.072	.044	.08
40	6.0	.100	.066	.10
45	4.0	.140	.104	.18
50	3.0	.198	.156	.25
55	2.5	.281	.223	.45
60	2.5	.409	.306	.73
65	2.5	.560	.430	1.18

RETIREMENT: The assumed annual rates of retirement are shown below.

Age	Annual Rates of Retirement
60	15%
61	10
62	12
63 – 64	10
65 – 69	15
70 – 74	25
75	100

Schedule D – Outline of Actuarial Assumptions and Methods

DEATHS AFTER RETIREMENT: Since the System has minimal post-retirement mortality experience, the System uses the same mortality tables used for the Employees' Retirement System of Georgia. The RP-2000 Combined Mortality Table projected to 2025 with projection scale BB and set forward 2 years for both males and females is used for the period after retirement and for dependent beneficiaries. For the period after disability retirement, the RP-2000 Disabled Mortality Table projected to 2025 with projection scale BB and set back 7 years for males and set forward 3 years for females is used. There is a margin for future mortality improvement in the tables used by the System. Based on the results of the most recent experience study adopted by the Board on December 17, 2015, the numbers of expected future deaths are 9-12% less than the actual number of deaths that occurred during the study period for healthy retirees and disabled retirees. Representative values of the assumed annual rates of mortality for service retirements and beneficiaries are as follows:

Age	Men	Women	Age	Men	Women
40	0.113%	0.079%	65	1.130%	0.899%
45	0.161	0.123	70	1.870	1.528
50	0.247	0.187	75	3.215	2.522
55	0.425	0.292	80	5.516	4.163
60	0.699	0.492	85	9.563	7.124

ADMINISTRATIVE EXPENSES: Budgeted expenses for the fiscal year are added to the normal cost contribution.

AMORTIZATION METHOD AND PAYROLL GROWTH ASSUMPTION: Level percentage of payroll, assuming payroll will increase 3.25% per year.

ASSET METHOD: Actuarial Value, as developed in Schedule B. The actuarial value of assets recognizes a portion of the difference between the fair value of assets and the expected value of assets, based on the assumed valuation rate of return. The actuarial value was set equal to the fair value as of June 30, 2013. The amount recognized each year beginning June 30, 2014 is 20% of the difference between fair value and expected actuarial value.

PERCENT MARRIED: For members hired on and after July 1, 2012, 100% are assumed to be married. For these members and for members who have elected spouse coverage, husbands are assumed to be three years older than their wives.

VALUATION METHOD: Entry age actuarial cost method. See Schedule E for a brief description of this method.

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 (currently 7.30%), of each member's expected benefits at retirement or death is determined, based on age, service and sex. 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 possibility 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, beneficiaries and members entitled to deferred vested benefits to obtain the present value of all expected benefits payable from the System on account of the present group of members and beneficiaries.
2. The employer contributions required to support the benefits of the System are determined following a level funding approach, and consist of a normal contribution and an unfunded actuarial accrued liability contribution.
3. The normal contribution is determined using the entry age actuarial cost method. Under this method, a calculation is made to determine the level amount which, if applied for the average 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 actuarial accrued liability contributions are determined by subtracting the present value of prospective employer normal contributions and member contributions, together with the current actuarial value of assets, from the present value of expected benefits to be paid from the System.

Schedule F – Board Funding Policy

FUNDING POLICY OF THE JRS BOARD OF TRUSTEES

The purpose of this Funding Policy is to state the overall objectives for the Georgia Judicial Retirement System (System), 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. It is the intent of the JRS Board of Trustees that the Funding Policy outlined herein will remain unchanged until the objectives below are met.

I. Funding Objectives

The goal in requiring employer and member contributions to the System 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 System will strive to meet the following funding objectives:

- To develop a pattern of contribution rates expressed as a percentage of employer payroll and measured by valuations prepared in accordance with applicable State laws and the principles of practice prescribed by the Actuarial Standards Board.
- To maintain a stable funded ratio (ratio of actuarial value of assets to actuarial accrued liabilities) that reflects a trend of strong actuarial condition. The long-term objective is to maintain a 100% funded ratio; in the event that the funded ratio falls below 100%, the objective will be to obtain a 100% funded ratio over a reasonable period of future years.
- To maintain adequate asset levels to finance the benefits promised to members and monitor the future demand for liquidity.
- To promote intergenerational equity for taxpayers with respect to contributions required for the benefits provided by the System.

II. Measures of Funding Progress

To track progress in achieving the System's funding objectives, the following measures will be determined annually as of the actuarial valuation date (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 remain reasonably stable over time, before adjustments for changes in benefits, actuarial methods, and/or actuarial adjustments. The target funded ratio will be 100 percent. In the event that the funded ratio falls below 100%, the targeted funded ratio will be 100% within 20 years of the date the funded ratio first falls below 100%.
- **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 valuations.
- **UAAL Amortization Period**
  - The transitional UAAL will be amortized over a closed 20 year period beginning on the initial valuation date for which this funding policy is adopted.
  - Each New Incremental UAAL shall be amortized over a closed 20 year period beginning with the year it is incurred.

- **Employer Contribution Rates**
    - **Employer Normal Contribution Rate** – the contribution rate determined as of the valuation date each year to fund the employer portion of the annual normal cost based on the assumptions and methods approved by the Board.
    - In each valuation subsequent to the adoption of this funding policy the required employer contribution rate will be determined as the summation of the employer Normal Contribution Rate, a contribution rate for administrative expenses, the amortization rate for the Transitional UAAL and the individual amortization rate for each of the New Incremental UAAL bases.
    - In no event shall the employer contribution rate be less than 0%.
    - The valuation methodology, including the amortization of the Unfunded Actuarial Accrued Liability (UAAL), would be expected to maintain reasonably stable contribution rates.

III. Methods and Assumptions

The annual actuarial valuations providing the measures to assess funding progress will utilize the actuarial methods and assumptions last adopted by the Board based upon the advice and recommendations of the actuary. These include the following primary methods and assumptions:

- The actuarial cost method used to develop the benchmarks will be the Entry Age Normal (EAN) actuarial cost method.
- The long-term annual investment rate of return assumption will be:
    - Effective with the June 30, 2013 valuation date, 7.50% net of investment expenses.
    - Effective with the June 30, 2017 valuation date, reduced by 0.10% (10 basis points) from the immediate prior actuarial valuation, as long as the following conditions are met:
        - The actual rate of return for the fiscal year ending with the current valuation date exceeds the assumed rate of return from the immediate prior actuarial valuation, and
        - The assumed rate of return does not decrease below 7.00% net of investment expenses.
- The actuarial value of assets will be determined by recognizing the annual differences between actual and expected market value of assets over a five-year period, beginning with the June 30, 2013 actuarial valuation.
    - Prior to the June 30, 2013 valuation, the differences between actual and expected market value of assets were recognized over a seven-year period. For the June 30, 2013 valuation, all then-current deferred gains and losses will be recognized immediately, and the initial new five-year period will begin immediately thereafter.

The employer contribution rates determined in an annual actuarial valuation will be at least sufficient to satisfy the annual normal cost of the System and amortize any UAAL as a level dollar amount over a period not to exceed 20 years. However in no event shall the employer contribution rate be less than 0%.

The actuary shall conduct an investigation into the System's experience at least every five years and utilize the results of the investigation to form the basis for recommended assumptions and methods. Any changes to the recommended assumptions and methods that are approved by the Board will be reflected in this Policy.

IV. Funding Policy Progress

The Board will periodically have actuarial projections of the valuation results performed to assess the current and expected future progress towards the overall funding goals of the System. These periodic projections will provide the expected valuation results over at least a 30-year period. The projected measures of funding progress and the recent historical trend provided in valuations will provide important information for the Board's assessment of the System's funding progress.

Adopted: March 15, 2018

Schedule G – Amortization of UAAL

AMORTIZATION OF TRANSITIONAL UAAL

Valuation Date	Amortization Period	Balance of Transitional UAAL	Expected UAAL Contribution
6/30/2013	20	$ (16,097,023)	$ (1,187,279)
6/30/2014	19	(16,117,020)	(1,231,802)
6/30/2015	18	(16,093,994)	(1,325,066)
6/30/2016	17	(15,975,978)	(1,368,130)
6/30/2017	16	(15,806,046)	(1,402,562)
6/30/2018	15	(15,573,131)	(1,438,362)
6/30/2019	**14**	**(15,271,608)**	**(1,485,109)**
6/30/2020	13	(14,901,326)	(1,533,375)
6/30/2021	12	(14,455,749)	(1,583,209)
6/30/2022	11	(13,927,809)	(1,634,664)
6/30/2023	10	(13,309,875)	(1,687,790)
6/30/2024	9	(12,593,706)	(1,742,643)
6/30/2025	8	(11,770,403)	(1,799,279)
6/30/2026	7	(10,830,363)	(1,857,756)
6/30/2027	6	(9,763,224)	(1,918,133)
6/30/2028	5	(8,557,806)	(1,980,472)
6/30/2029	4	(7,202,054)	(2,044,838)
6/30/2030	3	(5,682,966)	(2,111,295)
6/30/2031	2	(3,986,527)	(2,179,912)
6/30/2032	1	(2,097,632)	(2,250,759)
6/30/2033	0	0	0

Schedule G – Amortization of UAAL

AMORTIZATION OF 2014 INCREMENTAL UAAL

Valuation Date	Amortization Period	Balance of New Incremental UAAL 6/30/2014	Expected UAAL Contribution
6/30/2014	20	$ (14,015,447)	$ (1,033,747)
6/30/2015	19	(14,032,859)	(1,114,085)
6/30/2016	18	(13,971,238)	(1,150,293)
6/30/2017	17	(13,868,788)	(1,178,813)
6/30/2018	16	(13,716,265)	(1,208,450)
6/30/2019	**15**	**(13,509,103)**	**(1,247,725)**
6/30/2020	14	(13,247,543)	(1,288,276)
6/30/2021	13	(12,926,338)	(1,330,145)
6/30/2022	12	(12,539,816)	(1,373,374)
6/30/2023	11	(12,081,848)	(1,418,009)
6/30/2024	10	(11,545,814)	(1,464,094)
6/30/2025	9	(10,924,564)	(1,511,677)
6/30/2026	8	(10,210,380)	(1,560,807)
6/30/2027	7	(9,394,931)	(1,611,533)
6/30/2028	6	(8,469,228)	(1,663,908)
6/30/2029	5	(7,423,573)	(1,717,985)
6/30/2030	4	(6,247,509)	(1,773,819)
6/30/2031	3	(4,929,758)	(1,831,469)
6/30/2032	2	(3,458,162)	(1,890,991)
6/30/2033	1	(1,819,616)	(1,952,448)
6/30/2034	0	0	0

Schedule G – Amortization of UAAL

AMORTIZATION OF 2015 INCREMENTAL UAAL

Valuation Date	Amortization Period	Balance of New Incremental UAAL 6/30/2015	Expected UAAL Contribution
6/30/2015	20	$ (15,973,823)	$ (1,226,104)
6/30/2016	19	(15,945,755)	(1,265,952)
6/30/2017	18	(15,875,735)	(1,296,874)
6/30/2018	17	(15,753,665)	(1,328,991)
6/30/2019	**16**	**(15,574,691)**	**(1,372,184)**
6/30/2020	15	(15,339,460)	(1,416,780)
6/30/2021	14	(15,042,461)	(1,462,825)
6/30/2022	13	(14,677,736)	(1,510,367)
6/30/2023	12	(14,238,843)	(1,559,454)
6/30/2024	11	(13,718,825)	(1,610,136)
6/30/2025	10	(13,110,164)	(1,662,465)
6/30/2026	9	(12,404,740)	(1,716,495)
6/30/2027	8	(11,593,791)	(1,772,282)
6/30/2028	7	(10,667,856)	(1,829,881)
6/30/2029	6	(9,616,729)	(1,889,352)
6/30/2030	5	(8,429,398)	(1,950,756)
6/30/2031	4	(7,093,988)	(2,014,155)
6/30/2032	3	(5,597,694)	(2,079,615)
6/30/2033	2	(3,926,711)	(2,147,203)
6/30/2034	1	(2,066,157)	(2,216,987)
6/30/2035	0	0	0

Schedule G – Amortization of UAAL

AMORTIZATION OF 2016 INCREMENTAL UAAL

Valuation Date	Amortization Period	Balance of New Incremental UAAL 6/30/2016	Expected UAAL Contribution
6/30/2016	20	$ 4,220,621	$ 323,963
6/30/2017	19	4,213,205	331,758
6/30/2018	18	4,193,224	339,852
6/30/2019	**17**	**4,159,478**	**350,897**
6/30/2020	16	4,112,223	362,301
6/30/2021	15	4,050,114	374,076
6/30/2022	14	3,971,697	386,233
6/30/2023	13	3,875,398	398,786
6/30/2024	12	3,759,516	411,746
6/30/2025	11	3,622,214	425,128
6/30/2026	10	3,461,508	438,945
6/30/2027	9	3,275,253	453,210
6/30/2028	8	3,061,136	467,940
6/30/2029	7	2,816,660	483,148
6/30/2030	6	2,539,128	498,850
6/30/2031	5	2,225,634	515,063
6/30/2032	4	1,873,043	531,802
6/30/2033	3	1,477,973	549,086
6/30/2034	2	1,036,779	566,931
6/30/2035	1	545,533	585,356
6/30/2036	0	0	0

Schedule G – Amortization of UAAL

AMORTIZATION OF 2017 INCREMENTAL UAAL

Valuation Date	Amortization Period	Balance of New Incremental UAAL 6/30/2017	Expected UAAL Contribution
6/30/2017	20	$ 9,116,797	$ 693,820
6/30/2018	19	9,097,618	710,493
6/30/2019	**18**	**9,051,253**	**733,584**
6/30/2020	17	8,978,410	757,426
6/30/2021	16	8,876,408	782,042
6/30/2022	15	8,742,344	807,458
6/30/2023	14	8,573,077	833,701
6/30/2024	13	8,365,211	860,796
6/30/2025	12	8,115,075	888,772
6/30/2026	11	7,818,704	917,657
6/30/2027	10	7,471,812	947,481
6/30/2028	9	7,069,774	978,274
6/30/2029	8	6,607,593	1,010,068
6/30/2030	7	6,079,879	1,042,895
6/30/2031	6	5,480,816	1,076,789
6/30/2032	5	4,804,126	1,111,785
6/30/2033	4	4,043,042	1,147,918
6/30/2034	3	3,190,267	1,185,225
6/30/2035	2	2,237,931	1,223,745
6/30/2036	1	1,177,555	1,263,517
6/30/2037	0	0	0

Schedule G – Amortization of UAAL

AMORTIZATION OF 2018 INCREMENTAL UAAL

Valuation Date	Amortization Period	Balance of New Incremental UAAL 6/30/2018	Expected UAAL Contribution
6/30/2018	20	$ (5,310,945)	$ (400,726)
6/30/2019	**19**	**(5,297,919)**	**(413,749)**
6/30/2020	18	(5,270,918)	(427,196)
6/30/2021	17	(5,228,498)	(441,080)
6/30/2022	16	(5,169,098)	(455,415)
6/30/2023	15	(5,091,027)	(470,216)
6/30/2024	14	(4,992,456)	(485,498)
6/30/2025	13	(4,871,407)	(501,277)
6/30/2026	12	(4,725,743)	(517,569)
6/30/2027	11	(4,553,154)	(534,389)
6/30/2028	10	(4,351,144)	(551,757)
6/30/2029	9	(4,117,021)	(569,689)
6/30/2030	8	(3,847,874)	(588,204)
6/30/2031	7	(3,540,565)	(607,321)
6/30/2032	6	(3,191,705)	(627,059)
6/30/2033	5	(2,797,641)	(647,438)
6/30/2034	4	(2,354,430)	(668,480)
6/30/2035	3	(1,857,824)	(690,205)
6/30/2036	2	(1,303,240)	(712,637)
6/30/2037	1	(685,739)	(735,798)
6/30/2038	0	0	0

Schedule G – Amortization of UAAL

AMORTIZATION OF 2019 INCREMENTAL UAAL

Valuation Date	Amortization Period	Balance of New Incremental UAAL 6/30/2019	Expected UAAL Contribution
6/30/2019	**20**	**3,103,655**	**234,180**
6/30/2020	19	3,096,042	241,790
6/30/2021	18	3,080,263	249,649
6/30/2022	17	3,055,473	257,762
6/30/2023	16	3,020,761	266,139
6/30/2024	15	2,975,137	274,789
6/30/2025	14	2,917,533	283,720
6/30/2026	13	2,846,793	292,940
6/30/2027	12	2,761,669	302,461
6/30/2028	11	2,660,810	312,291
6/30/2029	10	2,542,758	322,440
6/30/2030	9	2,405,939	332,920
6/30/2031	8	2,248,653	343,740
6/30/2032	7	2,069,065	354,911
6/30/2033	6	1,865,195	366,446
6/30/2034	5	1,634,909	378,355
6/30/2035	4	1,375,902	390,652
6/30/2036	3	1,085,691	403,348
6/30/2037	2	761,598	416,457
6/30/2038	1	400,738	429,992
6/30/2039	0	0	0

Schedule H – Summary of Main System Provisions

SUMMARY OF MAIN SYSTEM PROVISIONS
AS INTERPRETED FOR VALUATION PURPOSES

The Georgia Judicial Retirement System (JRS) is a cost-sharing multiple employer defined benefit pension plan established by the Georgia General Assembly for the purpose of providing retirement allowances and other benefits for trial judges and solicitors of certain courts in Georgia, and their survivors and other beneficiaries, superior court judges of the state of Georgia, and district attorneys of the state of Georgia.

Normal Retirement Benefit	
Eligibility	Age 60 and 16 years of creditable service.
Benefit	Annual benefit is 66-2/3% of the annual salary plus 1% for each year of credited service over 16 years, not to exceed 24 years.
Early Retirement Benefit	
Eligibility	Age 60 and 10 years of creditable service.
Benefit	A pro-rata portion of the normal retirement benefit, based on service not to exceed 16 years.
Disability Retirement Benefit	
Eligibility	4 years of creditable service.
Benefit	For members with less than 10 years of creditable service: 1/2 of projected normal retirement benefit. For members with 10 or more years of creditable service: 2/3 of projected normal retirement benefit.
Involuntary Retirement Benefit	N/A
Deferred Vested Retirement Benefit	
Eligibility	10 years of creditable service.
Benefit	Accrued benefit deferred to age 60.
Death Benefit	
Eligibility	
Members prior to July 1, 2012	10 years of creditable service during which the member has contributed for spouse coverage.
Members on and after July 1, 2012	10 years of creditable service.

Schedule H – Summary of Main System Provisions

Benefit

Members prior to July 1, 2012	50% of benefit which member was receiving if retired, or would have received had he retired on the date of his death. If under age 60, and the member was a member of a Predecessor Retirement System, an immediate benefit equal to 50% of the benefit which member would have received had he remained employed and retired at age 60. If under age 60 and not a member of a Predecessor Retirement System, an immediate benefit equal to 50% of the benefit which the member would have received if the member were age 60 on the date of death.
Members on and after July 1, 2012	Spouse receives a benefit as if member retired on his or her date of death and elected option three. If less than 10 years of service or member rejects spouse coverage or dies before contributing for spouse's coverage for at least 10 years, death benefit is return of member's contributions with interest.

Termination Benefit

Eligibility	Termination with less than 10 years of creditable service.
Benefit	Return of the member's accumulated contributions with interest.

Payment Options

Members prior to July 1, 2012	Monthly Life Annuity with Death Benefit payable as described above with guaranteed payment of accumulated contributions.
Members on and after July 1, 2012	Monthly Life Annuity with guaranteed payment of accumulated contributions. Option 1 – 100% Joint & Survivor Option 2 – 66-2/3% Joint & Survivor Option 3 – 50% Joint & Survivor Pop-Up Option – Election of Options 1, 2, or 3 with added provision that if survivor predeceases the member the benefit reverts to the amount the member would have received had no option been chosen.

Schedule H – Summary of Main System Provisions

Post-Retirement Adjustments	The Board may from time to time grant a Cost of Living Adjustment.
	For members with retirement dates prior to July 1, 2013, a one-time 1.75% increase on the first $37,500 was made at the time of retirement.
Contributions	
By Members	Members prior to July 1, 2012 contribute 7-1/2% of salary, plus 2-1/2% of salary for up to 16 years if spouse benefit is not rejected.
	Members on and after July 1, 2012 contribute 7-1/2% of salary.
By Employers	Employer contributions are actuarially determined and approved and certified by the Board.

Schedule I – Tables of Membership Data

The Number and Average Annual Compensation of Active Members by Age and Service as of June 30, 2019

Age	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	Total
	Years of Service									
Under 25	0	0	0	0	0	0	0	0	0	0
Avg. Pay										0
25 to 29	0	0	0	0	0	0	0	0	0	0
Avg. Pay										0
30 to 34	2	0	2	0	0	0	0	0	0	4
Avg. Pay										95,920
35 to 39	3	8	4	1	0	0	0	0	0	16
Avg. Pay										95,440
40 to 44	6	26	12	4	1	0	0	0	0	49
Avg. Pay										108,434
45 to 49	9	24	20	22	3	2	0	0	0	80
Avg. Pay										113,254
50 to 54	10	10	15	22	11	4	0	0	0	72
Avg. Pay										123,629
55 to 59	4	10	19	23	21	8	1	1	0	87
Avg. Pay										119,997
60 to 64	3	14	7	15	17	16	4	6	3	85
Avg. Pay										119,702
65 to 69	1	6	16	13	15	19	7	5	6	88
Avg. Pay										119,198
70 & Up	0	3	7	12	4	6	1	3	4	40
Avg. Pay										106,062
Total	38	101	102	112	72	55	13	15	13	521
Avg. Pay	118,344	109,629	113,384	117,167	119,573	121,968	118,516	121,080	123,083	116,184

Average Age: 56.3
Average Service: 12.2

Schedule I – Tables of Membership Data

NUMBER OF RETIRED MEMBERS AND THEIR BENEFITS BY AGE

Age	Number of Members	Total Annual Benefits	Average Annual Benefits
Under 50	0	$ 0	$ 0
50 - 54	0	0	0
55 - 59	0	0	0
60 - 64	38	3,252,150	85,583
65 - 69	69	5,450,976	79,000
70 - 74	94	7,530,053	80,107
75 - 79	65	5,432,933	83,584
80 - 84	26	2,047,963	78,768
85 - 89	16	1,199,324	74,958
90 - 94	4	371,292	92,823
95 & Over	1	79,488	79,488
Total	313	$ 25,364,178	$ 81,036

NUMBER OF BENEFICIARIES AND THEIR BENEFITS BY AGE

Age	Number of Members	Total Annual Benefits	Average Annual Benefits
Under 50	2	$ 23,236	$ 11,618
50 - 54	1	41,116	41,116
55 - 59	5	53,415	10,683
60 - 64	7	118,950	16,993
65 - 69	10	277,868	27,787
70 - 74	11	332,029	30,184
75 - 79	9	375,910	41,768
80 - 84	16	635,849	39,741
85 - 89	9	275,492	30,610
90 & Over	13	498,603	38,354
Total	83	$ 2,632,468	$ 31,716

Schedule I – Tables of Membership Data

NUMBER OF DISABLED RETIREES AND THEIR BENEFITS BY AGE

Age	Number of Members	Total Annual Benefits	Average Annual Benefits
Under 50	0	$ 0	$ 0
50 - 54	0	0	0
55 - 59	0	0	0
60 - 64	1	58,631	58,631
65 - 69	0	0	0
70 - 74	0	0	0
75 - 79	1	57,904	57,904
80 - 84	0	0	0
85 - 89	0	0	0
90 - 94	0	0	0
95 & Over	0	0	0
Total	2	$ 116,535	$ 58,268

NUMBER OF DEFERRED VESTED MEMBERS AND THEIR BENEFITS BY AGE

Age	Number of Members	Total Annual Benefits	Average Annual Benefits
Under 45	0	$ 0	$ 0
45-49	7	292,479	41,783
50-54	4	194,122	48,531
55-59	12	516,645	43,054
60-64	4	84,215	21,054
65 & Over	1	94,068	94,068
Total	28	$ 1,181,529	$ 42,197

Schedule J – CAFR Schedules

GA JRS: Solvency Test

Actuarial Valuation as of 6/30	Actuarial Accrued Liability for: Active Member Contributions (1)	Retirants & Beneficiaries (2)	Active Members (Employer Funded Portion) (3)	Valuation Assets	Portion of Aggregate Accrued Liabilities Covered by Assets (1)	(2)	(3)
2019	$85,722	$256,060	$98,882	$474,003	100%	100.0%	100.0%
2018	88,890	231,811	104,023	461,787	100%	100.0%	100.0%
2017	84,841	220,738	102,028	439,828	100%	100.0%	100.0%
2016	91,991	180,107	104,642	418,412	100%	100.0%	100.0%
2015	84,170	174,147	91,981	396,399	100%	100.0%	100.0%
2014	80,007	162,527	100,894	373,560	100%	100.0%	100.0%
2013	73,949	162,364	99,479	351,889	100%	100.0%	100.0%
2012	73,998	141,880	92,984	335,225	100%	100.0%	100.0%
2011	71,047	128,991	90,440	327,483	100%	100.0%	100.0%
2010	67,293	117,730	96,473	320,050	100%	100.0%	100.0%

All dollar amounts are in thousands.

GA JRS: Schedule of Retirants Added to and Removed from Rolls

Year Ended	Added to Rolls: Number	Added to Rolls: Annual Allowances (in thousands)	Removed from Rolls: Number	Removed from Rolls: Annual Allowances (in thousands)	Roll End of Year: Number	Roll End of Year: Annual Allowances (in thousands)	% Increase in Annual Allowances	Average Annual Allowances
June 30, 2019	52	$3,435	12	$562	398	$28,113	11.4%	$70,636
June 30, 2018	23	1,950	12	558	358	25,240	5.8%	70,503
June 30, 2017	62	5,304	10	771	347	23,848	23.5%	68,726
June 30, 2016	13	919	5	269	295	19,315	3.5%	65,475
June 30, 2015	21	1,416	11	561	287	18,665	4.8%	65,035
June 30, 2014	23	1,175	9	326	277	17,810	5.0%	64,296
June 30, 2013	42	2,763	13	629	263	16,961	14.4%	64,490
June 30, 2012	22	1,732	8	405	234	14,827	9.8%	63,363
June 30, 2011	15	1,168	2	105	220	13,500	8.5%	61,364
June 30, 2010	16	933	10	508	207	12,437	3.5%	60,082