

The experience and dedication you deserve

April 21, 2022

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

Dear Mr. Potvin:

Enclosed is a copy of the "Georgia Public School Employees Retirement System Report of the Actuary on the Valuation Prepared as of June 30, 2021".

Based on a monthly benefit accrual rate of \$15.75, which became effective July 1, 2021, the valuation indicates that employer contributions for the fiscal year ending June 30, 2024 of \$29,531,000 or \$918.35 per active member 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, EA, FCA, MAAA

Edward J. Wochel

Chief Executive Officer

Cathy Turcot

Principal and Managing Director

athy Turcot

Ben Mobley, ASA, FCA, MAAA

Ben Moble

Consulting Actuary

Enclosure



The experience and dedication you deserve



GEORGIA PUBLIC SCHOOL EMPLOYEES RETIREMENT SYSTEM

REPORT OF THE ACTUARY ON THE VALUATION PREPARED AS OF JUNE 30, 2021





The experience and dedication you deserve

April 21, 2022

Board of Trustees Georgia Public School Employees Retirement System Two Northside 75, Suite 300 Atlanta, GA 30318

Attention: Mr. James Potvin, Executive Director

Members of the Board:

Section 47-4-60 of the law governing the operation of the Georgia Public School Employees Retirement System (PSERS) provides that the employer contribution shall be actuarially determined and approved 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, 2021. Based on a monthly benefit accrual rate of \$15.75, which became effective July 1, 2021, the valuation indicates that annual employer contributions of \$29,531,000 or \$918.35 per active member for the fiscal year ending June 30, 2024 are sufficient to support the benefits of the System.

Since the previous valuation, the monthly benefit accrual rate has been increased from \$15.50 to \$15.75 per year of creditable service for members retiring on or after August 1, 2012, with an effective date of July 1, 2021.

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 2021 session of the General Assembly.

The valuation reflects that the Board granted 1.5% cost-of-living adjustments (COLAs) to certain retired members on July 1, 2021 and on January 1, 2022.

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 June 30, 2021 was greater than 7.30%, the assumed rate of return used in this valuation was decreased from 7.30% to 7.20%.



April 21, 2022 Board of Trustees Page 2

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 dollar per active member. The valuation method used is the entry age normal cost method. The normal contribution rate to cover current cost has been determined as a dollar per active member. Gains and losses are reflected in the total unfunded accrued liability which is being amortized as a level dollar per active member 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.

We have provided the following information and supporting schedules for the Actuarial Section of the Annual Comprehensive 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 currently 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 currently 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 System and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System.

We note that as we are preparing this report, the world is in the midst of a pandemic. We have considered available information, but do not believe that there is yet sufficient data to warrant the modification of any of our assumptions prior to the next experience study.



April 21, 2022 Board of Trustees Page 3

In order to prepare the results in this report we have utilized appropriate actuarial models that were developed for this purpose. These models use assumptions about future contingent events along with recognized actuarial approaches to develop the needed results.

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, EA, FCA, MAAA

Edward J. Worbel

Chief Executive Officer

Ben Mobley, ASA, FCA, MAAA

Ben Mobles

Consulting Actuary

Cathy Turcot

Principal and Managing Director



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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:

Valuation Date	June 30, 2021	June 30, 2020
Number of active members	32,157	34,736
Retired members and beneficiaries: Number Annual allowances	19,442 \$ 66,046,555*	19,161 \$ 66,056,908
Deferred Vested Members: Number Annual allowances	5,574 \$ 15,109,460	5,421 \$ 14,720,151
Assets:		
Fair Value	\$1,199,970,000	\$ 958,248,000
Actuarial Value	1,042,196,000	961,431,000
Valuation Interest Rate	7.20%	7.30%
Unfunded actuarial accrued liability	\$ 165,758,958	\$ 195,565,762
Blended Amortization period (years)	17.5	19.1
Funded Ratio based on Actuarial Value of Assets	86.3%	83.1%
Contributions for Fiscal Year Ending	June 30, 2024	June 30, 2023
Actuarially Determined Employer Contribution (ADEC):		
Per active member: Normal** Unfunded Actuarial Accrued Liability	\$ 389.84 <u>528.51</u>	\$ 370.50 555.59
Total	\$ 918.35	\$ 926.09
Annual Amount: Normal** Unfunded Actuarial Accrued Liability	\$ 12,536,000 16,995,000	\$ 12,870,000 19,299,000
Total	\$ 29,531,000	\$ 32,169,000

^{*} Does not reflect the COLAs granted by the Board on July 1, 2021 and January 1, 2022 or increases in benefit accrual rates after June 30, 2021.



^{**} The normal contribution includes administrative expenses.



Section I – Summary of Principal Results

- 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 2021 session of the General Assembly. Since the previous valuation, the monthly benefit accrual rate has been increased from \$15.50 to \$15.75 per year of creditable service for members retiring on or after August 1, 2012, with an effective date of July 1, 2021.
- 3. Schedule D of this report outlines the full set of actuarial assumptions 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 June 30, 2021 was greater than 7.30%, the assumed rate of return used in this valuation was decreased from 7.30% to 7.20%.
- 4. The Board Funding Policy adopted by the Board on December 17, 2020 is shown in Schedule F.
- 5. The entry age actuarial cost method was used to prepare the valuation. Schedule E contains a brief description of this method.
- 6. The valuation reflects that the Board granted 1.5% cost-of-living adjustments (COLAs) to certain retired members on July 1, 2021 and on January 1, 2022.
- 7. Comments on the valuation results as of June 30, 2021 are given in Section IV, and further discussion of the contributions is set out in Section V.
- 8. We have prepared the Solvency Test and Schedule of Retirants Added to and Removed from Rolls for the System's Annual Comprehensive Financial Report. These tables are shown in Schedule J.





Section I – Summary of Principal Results

9. 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. Since the ratio is less than 100%, there is a need for additional contributions toward 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 regarding the membership of the System for use as a basis of the valuation were furnished by the Retirement System office. The valuation included 32,157 active members, which is a decrease of 2,579 from last year's valuation.
- 2. Data was provided by the Retirement System for inactive members who are eligible for deferred vested benefits. The valuation included 5,574 deferred vested members with annual allowances totaling \$15,109,460. In addition, there are 45,797 inactive non-vested members included in the valuation entitled to a refund of member contributions.
- The following table shows the number of retired members and beneficiaries on the roll as of June 30, 2021, 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 ON THE ROLL AS OF JUNE 30, 2021

GROUP	NUMBER	ANNUAL RETIREMENT ALLOWANCES*
Service Retirements	17,191	\$ 58,516,794
Disability Retirements	973	4,759,689
Beneficiaries of Deceased Members	<u>1,278</u>	2,770,072
Total	19,442	\$ 66,046,555

^{*} Does not reflect the COLAs granted by the Board on July 1, 2021 and January 1, 2022 or increases in benefit accrual rates after the valuation date.





Section III - Assets

 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 portion of the allowance which these contributions provide is then paid from the Pension Accumulation Fund. On June 30, 2021, the value of assets credited to the Annuity Savings Fund amounted to \$32,037,000.

(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 member-contributed portion of the allowance. On June 30, 2021, the fair value of assets credited to the Pension Accumulation Fund amounted to \$1,167,933,000.

- As of June 30, 2021, the total fair value of assets amounted to \$1,199,970,000 as reported by the Auditor of the System.
- 3. The actuarial value of assets used for the current valuation was determined to be \$1,042,196,000 based on a 5-year smoothing of investment gains and losses. Schedule B shows the development of the actuarial value of assets as of June 30, 2021.
- 4. 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

- 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, 2021.
- 2. The valuation balance sheet shows that the System has total prospective liabilities of \$1,270,804,700, of which \$763,614,536 is for the prospective benefits payable on account of present retired members, beneficiaries of deceased members, and members entitled to deferred vested benefits, and \$507,190,164 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 \$1,042,196,000 as of June 30, 2021. The difference of \$228,608,700 between the total liabilities and the total present assets represents the present value of contributions to be made in the future. Of this amount, \$10,879,686 is the present value of future contributions expected to be made by or on behalf of members, and the balance of \$217,729,014 represents the present value of future contributions payable by the employers to the Pension Accumulation Fund.
- 3. The employer's contributions to the System consist of normal contributions and unfunded actuarial accrued liability (UAAL) contributions. The valuation indicates that annual employer normal contributions at the rate of \$346.30 per active member are required to provide the currently accruing benefits of the System. An additional \$43.54 per active member is required to fund the administrative expenses of the System.
- 4. Prospective normal contributions (net of expenses) have a present value of \$51,970,056. When this amount is subtracted from \$217,729,014, 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 \$165,758,958.





Section IV – Comments on Valuation

- 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 as a level dollar amount over a closed 25-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 as a level dollar amount over a closed 25-year period from the date it is established
- 6. The total accrued liability contribution rate is \$528.51 per active member, determined in accordance with the Board's funding policy.
- 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 <u>UAAL</u>	Remaining Amortization Period (years)	Amortization Payment
Transitional	\$154,576,279	17	\$16,052,513
New Incremental 6/30/2014	(18,583,080)	18	(1,874,145)
New Incremental 6/30/2015	5,168,858	19	507,628
New Incremental 6/30/2016	(4,514,457)	20	(432,779)
New Incremental 6/30/2017	17,552,082	21	1,645,991
New Incremental 6/30/2018	9,067,096	22	833,360
New Incremental 6/30/2019	5,307,971	23	478,962
New Incremental 6/30/2020	21,968,129	24	1,949,127
New Incremental 6/30/2021	(24,783,920)	25	(2,165,178)
Total UAAL	\$165,758,958		\$16,995,479
Blended Amortization Period (years)		17.5	
UAAL Contribution Rate per active me	mber		\$528.51





Section V – Contributions Payable by Employers

- The contributions of employers consist of a normal contribution and an unfunded actuarial accrued liability contribution (UAAL) as determined by actuarial valuation.
- The normal contribution rate is calculated as the level dollar 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. On the basis of the valuation, the normal contribution rate was determined to be \$346.30 per active member, or \$11,136,000 based on 32,157 active members as of June 30, 2021.
- 3. An additional \$1,400,000, or \$43.54 per active member, is required to fund the administrative expenses of the System.
- 4. The total normal contribution including administrative expenses is, therefore, \$12,536,000, or \$389.84 per active member.
- 5. The UAAL contribution is the level annual amount which will be sufficient to amortize the UAAL in accordance with the Board's funding policy. The annual UAAL contribution determined on this basis by the June 30, 2021 valuation is \$16,995,000, or \$528.51 per active member.
- 6. The following table summarizes the employer contribution rates which were determined by the June 30, 2021 valuation and are recommended for use.

ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTION (ADEC) FOR FISCAL YEAR ENDING JUNE 30, 2024

CONTRIBUTION	PER ACTIVE MEMBER	ANNUAL AMOUNT
Normal Unfunded Actuarial Accrued Liability Total	\$ 389.84 <u>528.51</u> \$ 918.35	\$ 12,536,000 <u>16,995,000</u> \$ 29,531,000

7. Schedule K shows the allocation of the actuarially determined employer contribution for fiscal year ending June 30, 2024 by school system.





Section VI – Accounting Information

The information required under 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, 2021

GROUP	NUMBER
Retirees and beneficiaries currently receiving benefits	19,442
Terminated employees entitled to benefits but not yet receiving benefits	51,371
Active plan members	<u>32,157</u>
Total	102,970

2. The schedule of funding progress is shown below.

SCHEDULE OF FUNDING PROGRESS

(Dollar amounts in thousands)

Actuarial Valuation <u>Date</u>	Actuarial Value of Assets <u>(a)</u>	Actuarial Accrued Liability (AAL) - Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (<u>a/b)</u>	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
6/30/2016	\$ 834,554	\$ 988,883	\$ 154,329	84.4%	N/A	N/A
6/30/2017*	865,786	1,035,935	170,149	83.6	N/A	N/A
6/30/2018*	905,046	1,081,184	176,138	83.7	N/A	N/A
6/30/2019	931,032	1,108,658	177,626	84.0	N/A	N/A
6/30/2020#	961,431	1,156,997	195,566	83.1	N/A	N/A
6/30/2021*	1,042,196	1,207,955	165,759	86.3	N/A	N/A

^{*} Reflects change in assumed rate of return #Reflects changes in assumptions.





Section VI – Accounting Information

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

Fiscal Year <u>Ending</u>	ly Determined ntribution (ADEC)	Percentage Contributed
6/30/2016	\$ 28,580	100%
6/30/2017	26,277	100
6/30/2018	29,276	100
6/30/2019	30,263	100
6/30/2020	32,496	100
6/30/2021	30,264	100

4. The information presented in the required supplementary schedules was determined as part of the actuarial valuation at June 30, 2021. Additional information as of the latest actuarial valuation follows.

Valuation date	6/30/2021
Actuarial cost method	Entry age
Amortization method	Level dollar, closed
Remaining amortization period	17.5 years
Asset valuation method	5-year smoothed fair
Actuarial assumptions:	
Investment rate of return*	7.20%
Projected salary increases	N/A
Cost-of-living adjustments	1.50% semi-annually

^{*}Includes inflation at 2.50%





Section VII – Experience

- 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 at least once in each five-year period. The last experience investigation was prepared for the five-year period ending June 30, 2019 and based on the results of the investigation various assumptions and methods were revised and adopted by the Board on December 17, 2020. The next experience investigation will be prepared for the period July 1, 2019 through June 30, 2024.
- 2. The following table shows the estimated gain or loss from various factors that resulted in a decrease of \$29,806,804 in the unfunded actuarial accrued liability (UAAL) from \$195,565,762 to \$165,758,958 during the fiscal year ending June 30, 2021.
- 3. The breakdown of the major reasons for the 29,806.8 thousand decrease in the UAAL are as follows:
 - The return on the actuarial value of assets was greater than the assumed rate of 7.30%
 resulting in a gain of \$47,877.0 thousand due to valuation asset growth.
 - There was a decrease in the UAAL of \$3,656.7 thousand because the accrued liability
 contribution was greater than the interest on the prior year UAAL. This occurred due to the
 level dollar funding method used to amortize the UAAL (more payment applied to principal
 balance).
 - There was a gain for pensioner mortality of \$5,890.6 thousand, meaning that there were more deaths during the past fiscal year than expected.
 - There was also a gain of \$1,604.1 thousand for the net impact of actual COLAs provided to members versus what was expected for the year.
 - These gains were partially offset by a \$12,742.1 thousand increase in the UAAL due to the change in the assumed rate of return from 7.30% to 7.20%, and also by a \$14,281.2 thousand increase in the UAAL due to the change in the monthly benefit accrual rate from \$15.50 to \$15.75.
 - There was a small loss of \$337.8 thousand due to the actual experience of turnover and retirements versus what was expected for the year.





Section VII - Experience

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	\$ 14,276.3
Accrued liability contribution	(17,933.0)
Experience: Valuation asset growth Pensioners' mortality Turnover and retirements New entrants Assumption changes (Change in Assumed Rate of Return) Increase in benefit accrual rate Net impact on the Actual COLAs provided vs. Expected Data Changes	(47,877.0) (5,890.6) 337.8 2,305.0 12,742.1 14,281.2 (1,604.1) (444.5)
Total	\$ (29,806.8)





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.





Section VIII - Risk Assessment

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, if the market value return is 10% below assumed, or negative 2.80% (7.20% minus 10.00%) for the System, there would be an increase in the expected Required Contribution amount of approximately \$1,640,000 above the amount required based on a 7.20% return.

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 7.20%, along with the results if the assumption were 6.20% or 8.20%. 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. In addition, simply because the valuation results under alternative assumptions are shown here, it should not be implied that Cavanaugh Macdonald Consulting (CMC) believes that either assumption (6.20% or 8.20%) would comply with actuarial standards of practice.

As of June 30, 2021	Current Discount	-1% Discount	+1% Discount
	Rate (7.20%)	Rate (6.20%)	Rate (8.20%)
Accrued Liability* Unfunded Liability* Funded Ratio (AVA) ADEC Rate**	\$1,207,955	\$1,349,134	\$1,090,150
	\$165,759	\$306,938	\$47,954
	86.3%	77.2%	95.6%
	\$918.35	\$1,324.54	\$535.21

^{* \$} in thousands



^{**} 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 last experience investigation was prepared for the five-year period ending June 30, 2019, and based on the results of the investigation, a new mortality table with generational approach to future improvements in mortality was adopted. The next experience investigation will be prepared for the period July 1, 2019 through June 30, 2024.

Contribution Risk

The System is primarily funded by 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.





Schedule A - Valuation Balance Sheet

THE PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES OF THE GEORGIA PUBLIC SCHOOL EMPLOYEES RETIREMENT SYSTEM AS OF JUNE 30, 2021

	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	\$	605,222,026	
	- Death and survivor benefits		28,078,790	
	- Deferred vested benefits	_	130,313,720	
	Total			\$ 763,614,536
(2)	Dracent value of presentative benefits novelle on account			
(2)	Present value of prospective benefits payable on account of present active members			507,190,164
(3)	TOTAL ACTUARIAL LIABILITIES			<u>\$1,270,804,700</u>
	PRESENT AND PROSPECTIVE A	ASSI	<u>ETS</u>	
(4)				
(.)	Actuarial value of assets			\$1,042,196,000
(5)	Actuarial value of assets Present value of total future contributions = (3)-(4)	\$	228,608,700	\$1,042,196,000
		\$	228,608,700	\$1,042,196,000 10,879,686
(5)	Present value of total future contributions = (3)-(4)	\$	228,608,700	
(5)	Present value of total future contributions = (3)-(4) Present value of future member contributions	·		
(5) (6) (7)	Present value of total future contributions = (3)-(4) Present value of future member contributions Present value of future employer contributions = (5)-(6)	·		10,879,686





Schedule B – Development of Actuarial Value of Assets

—				1
(1)	Actua	rial Value Beginning of Year	\$	961,431,000
(2)	Fair \	/alue End of Year	\$	1,199,970,000
(3)	Fair \	/alue Beginning of Year	\$	958,248,000
(4)	Cash	Flow		
	(a)	Contributions	\$	32,486,000
	(b)	Benefit Payments		(67,048,000)
	(c)	Administrative Expenses		(1,421,000)
	(d)	Investment Expenses	_	(419,000)
	(e)	Net: (4)(a) + (4)(b) + 4(c) + 4(d)	\$	(36,402,000)
(5)	Inves	tment Income		
	(a)	Fair Total: (2) – (3) – (4)(e)	\$	278,124,000
	(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)	\$	69,058,000
	(d)	Amount for Phased-In Recognition: (5)(a) - (5)(c)		209,066,000
(6)	Phase	ed-In Recognition of Investment Income		
	(a)	Current Year: (5)(d) / 5	\$	41,813,000
	(b)	First Prior Year		(3,522,000)
	(c)	Second Prior Year		(994,000)
	(d)	Third Prior Year		3,075,000
	(e)	Fourth Prior Year	_	7,737,000
	(f)	Total Recognized Investment Gain	\$	48,109,000
(7)	Actua	rial Value End of Year: (1) + (4)(e) + (5)(c) + (6)(f)	\$	1,042,196,000
(8)	Differ	ence Between Fair & Actuarial Values: (2) - (7)	\$	157,774,000
(9)	Rate	of Return on Actuarial Value*		12.37%

^{*} Calculated assuming cash flow occurs in the middle of the year.





Schedule C – Summary of Receipts and Disbursements

FAIR VALUE OF ASSETS

	YEAR ENDING				
Receipts for the Year	June 30, 2021			<u>June 30, 2020</u>	
		(\$1,000's)	()	1,000's)	
Contributions: Members Employer	\$	2,222 30,264	\$	2,338 32,49 <u>6</u>	
Subtotal	\$	32,486	\$	34,834	
Investment Earnings (Net of Investment Expenses)		277,705		49,913	
TOTAL	\$	310,191	\$	84,747	
Disbursements for the Year					
Benefit Payments	\$	66,415	\$	66,090	
Refunds to Members		633		572	
Administrative Expenses		1,421		1,424	
TOTAL	\$	68,469	\$	68,086	
Excess of Receipts over Disbursements	\$	241,722	\$	16,661	
Reconciliation of Asset Balances					
Asset Balance as of the Beginning of Year	\$	958,248	\$	941,587	
Excess of Receipts over Disbursements		241,722		16,661	
Asset Balance as of the End of Year	\$	1,199,970	<u>\$</u>	958,248	
Rate of Return*		29.54%		5.40%	

^{*} 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 on December 17, 2020. Valuation interest rate adopted by the Board March 15, 2018.

VALUATION INTEREST RATE: 7.20% per annum, compounded annually, net of investment expenses, composed of a 2.50% inflation assumption and a 4.70% real rate of investment return assumption.

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

	Annual	Rates of With	drawal		
	Years of Service				
Age	<u>0-4</u>	<u>5-9</u>	10 & Over		
		<u>Males</u>		<u>Males</u>	
20 25 30 35 40 45 50 55 60	34.00% 31.00 27.50 24.50 22.00 21.00 18.50 15.25 13.50	19.00% 17.00 15.50 13.50 12.50 11.00 9.00 9.00	12.50% 9.00 8.25 7.00 7.00 6.00	0.0000% 0.0000 0.0000 0.0018 0.0110 0.0330 0.0770 0.2250 0.2500	
		<u>Females</u>		<u>Females</u>	
20 25 30 35 40 45 50 55 60	35.00% 31.00 25.00 22.00 20.00 18.00 16.25 13.50 13.00	20.00% 16.50 15.00 14.00 12.00 10.00 9.00 9.00	10.00% 10.00 9.00 8.00 7.00 6.00	0.0000% 0.0000 0.0000 0.0018 0.0110 0.0330 0.0770 0.2250 0.2500	





Schedule D – Outline of Actuarial Assumptions and Methods

RETIREMENT:

Age	Annual Rate	Age	Annual Rate
60	12.0%	71	25.0%
61	12.0	72	25.0
62	21.0	73	25.0
63	17.0	74	25.0
64	15.0		25.0
65	26.0	75	25.0
66	26.0	76	25.0
67	22.0	77	25.0
68	22.0	78	25.0
69	23.5	79	25.0
70	25.0	80 & Over	100.0

RATES OF DEATH BEFORE RETIREMENT: The Pub-2010 Below-Median General Employee Table, with no adjustments, projected generationally with the MP-2019 scale is used for both males and females while in active service. Representative values of the assumed annual rates of mortality while in active service are as follows:

Annual Rates of Death*					
Age	Males	Females	Age	Males	Females
20	0.0410%	0.0130%	45	0.1430%	0.0720%
25	0.0410	0.0120	50	0.2180	0.1070
30	0.0520	0.0190	55	0.3200	0.1570
35	0.0680	0.0300	60	0.4660	0.2380
40	0.0960	0.0470	65	0.6820	0.3800

^{*} Base mortality rates as of 2010 before application of the improvement scale

RATES OF DEATHS AFTER RETIREMENT: The Pub-2010 Family of Tables projected generationally with MP-2019 Scale and with further adjustments are used for post-retirement mortality assumptions as follows:

Participant Type	Membership Table	Set Forward (+)/ Setback (-)	Adjustment to Rates
Service Retirees	General Healthy Below-Median Annuitant	Male: +2; Female: +2	Male: 101%; Female: 103%
Disability Retirees	General Disabled	Male: -3; Female: 0	Male: 103%; Female: 106%
Beneficiaries	General Below-Median Contingent Survivors	Male: +2; Female: +2	Male: 104%; Female: 99%





Schedule D – Outline of Actuarial Assumptions and Methods

Representative values of the assumed annual rates of mortality after retirement are as follows:

Annual Rates of Death*						
	Service Retirement Disability Retirement Beneficiaries					
Age	Males	Females	Males	Females	Males	Females
50	0.7989%	0.4532%	1.2576%	1.5720%	0.9984%	0.5930%
55	0.9837	0.5037	1.8725	1.8465	1.1523	0.7742
60	1.1726	0.6015	2.3484	2.0734	1.4258	1.0237
65	1.5736	0.8827	2.7573	2.3914	1.9978	1.4147
70	2.5785	1.5296	3.4536	3.0337	3.0680	2.0731
75	4.3329	2.6770	4.4743	4.2432	4.7414	3.1878
80	7.4043	4.7679	6.0986	6.3674	7.3944	5.1450
85	12.4301	8.7849	8.8220	9.8909	11.8154	8.7684
90	19.3173	15.3594	12.9831	14.4849	19.0320	14.3778

^{*} Base mortality rates as of 2010 before application of the improvement scale

ADMINISTRATIVE EXPENSES: Administrative expenses equal to \$1,400,000 are added to the normal cost contribution.

AMORTIZATION METHOD: Level dollar amortization.

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 fair value of assets, based on the assumed valuation rate of return. The amount recognized each year is 20% of the difference between fair value and expected fair value.

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

COST-OF-LIVING ADJUSTMENT (COLA): 1.50% semi-annually.

TERMINATING VESTED MEMBERS: 25% of active vested members who terminate are assumed to elect a refund in lieu of a benefit. Benefits are assumed to begin at age 65.





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 7.20%), 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. 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 PSERS Board of Trustees

The purpose of this Funding Policy is to state the overall objectives for the Public School Employees 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 PSERS 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 contributions expressed as both a total dollar amount and as a dollar amount per active member and measured by valuations prepared in accordance with applicable State laws and the principles of practice prescribed by the Actuarial Standards Board.
- To maintain an increasing funded ratio (ratio of actuarial value of assets to actuarial accrued liabilities) that reflects a trend of improved actuarial condition. The long-term objective is 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 increase over time, before adjustments for changes in benefits, actuarial methods, and/or actuarial adjustments. The target funded ratio will be 100 percent within 25 years of the valuation date for the first valuation conducted following the adoption of this Policy (i.e. the June 30, 2013 valuation date).
- 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.





Schedule F – Board Funding Policy

UAAL Amortization Period

- The transitional UAAL will be amortized over a closed 25-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 25-year period beginning with the year it is incurred.
- Effective with the June 30, 2020 valuation date, any New Incremental UAAL which is attributable to the granting of any post-retirement benefit adjustment (PRBA), including COLAs and one-time (non-compounded) payments, shall be amortized over a closed 15-year period. The amortization period shall begin with the year such PRBA is granted by the Board.

• Employer Contributions

- Employer Normal Contributions the contribution determined as of the valuation date each year to fund the employer portion of the annual normal cost of the System based on the assumptions and methods adopted by the Board.
- In each valuation subsequent to the adoption of this funding policy the required employer contributions will be determined as the summation of the employer Normal Contribution, a contribution for administrative expenses, the amortization cost for the Transitional UAAL and the individual amortization cost for each of the New Incremental UAAL bases.
- Employer Contributions will be expressed as both a total dollar amount and as a dollar amount per active member. In no event shall the employer contributions be less than \$0.
- The valuation methodology, including the amortization of the Unfunded Actuarial Accrued Liability (UAAL), would be expected to maintain reasonably stable contributions as a dollar per active member.

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.





Schedule F – Board Funding Policy

- 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 contributions determined in an annual actuarial valuation will be at least sufficient to satisfy the annual normal cost of the System and amortize the UAAL as a level dollar amount over a period not to exceed 25 years (for the UAAL as of the June 30, 2013 valuation date, and for each successive year of gains and losses incurred in years following the June 30, 2013 valuation date). However, in no event shall the employer contributions 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: December 17, 2020





AMORTIZATION OF TRANSITIONAL UAAL

-			
			Annual
	Amortization	Balance of	Amortization
Valuation Date	<u>Period</u>	Transitional UAAL	<u>Payment</u>
6/30/2013	25	\$182,988,036	\$16,415,980
6/30/2014	24	180,296,159	16,415,980
6/30/2015	23	177,402,391	16,415,980
6/30/2016	22	174,291,591	16,415,980
6/30/2017	21	170,947,481	16,287,231
6/30/2018	20	167,310,363	16,163,032
6/30/2019	19	163,360,988	16,163,032
6/30/2020	18	159,123,309	16,163,032
6/30/2021	17	154,576,279	16,052,513
6/30/2022	16	149,653,258	16,052,513
6/30/2023	15	144,375,779	16,052,513
6/30/2024	14	138,718,322	16,052,513
6/30/2025	13	132,653,529	16,052,513
6/30/2026	12	126,152,070	16,052,513
6/30/2027	11	119,182,506	16,052,513
6/30/2028	10	111,711,133	16,052,513
6/30/2029	9	103,701,822	16,052,513
6/30/2030	8	95,115,840	16,052,513
6/30/2031	7	85,911,668	16,052,513
6/30/2032	6	76,044,795	16,052,513
6/30/2033	5	65,467,508	16,052,513
6/30/2034	4	54,128,655	16,052,513
6/30/2035	3	41,973,405	16,052,513
6/30/2036	2	28,942,978	16,052,513
6/30/2037	1	14,974,359	16,052,513
6/30/2038	0	0	0





AMORTIZATION OF 2014 INCREMENTAL UAAL

		Balance of	Annual
	Amortization	New Incremental	Amortization
Valuation Date	Period	UAAL 6/30/2014	Payment
6/30/2014	<u>r ened</u> 25	(\$21,380,749)	(\$1,918,081)
6/30/2015	24	(21,066,224)	(1,918,081)
6/30/2016	23	(20,728,109)	(1,918,081)
6/30/2017	22	(20,364,636)	(1,902,575)
6/30/2018	21	(19,969,044)	(1,887,586)
6/30/2019	20	(19,539,198)	(1,887,586)
6/30/2020	19	(19,077,974)	(1,887,586)
6/30/2021	18	(18,583,080)	(1,874,145)
6/30/2022	17	(18,046,917)	(1,874,145)
6/30/2023	16	(17,472,150)	(1,874,145)
6/30/2024	15	(16,856,000)	(1,874,145)
6/30/2025	14	(16,195,486)	(1,874,145)
6/30/2026	13	(15,487,416)	(1,874,145)
6/30/2027	12	(14,728,365)	(1,874,145)
6/30/2028	11	(13,914,663)	(1,874,145)
6/30/2029	10	(13,042,373)	(1,874,145)
6/30/2030	9	(12,107,279)	(1,874,145)
6/30/2031	8	(11,104,858)	(1,874,145)
6/30/2032	7	(10,030,263)	(1,874,145)
6/30/2033	6	(8,878,297)	(1,874,145)
6/30/2034	5	(7,643,389)	(1,874,145)
6/30/2035	4	(6,319,568)	(1,874,145)
6/30/2036	3	(4,900,432)	(1,874,145)
6/30/2037	2	(3,379,118)	(1,874,145)
6/30/2038	1	(1,748,270)	(1,874,145)
6/30/2039	0	0	0





AMORTIZATION OF 2015 INCREMENTAL UAAL

		Balance of	Annual
	Amortization	New Incremental	Amortization
Valuation Date	Period	UAAL 6/30/2015	<u>Payment</u>
6/30/2015	25	\$5,795,541	\$519,922
6/30/2016	24	5,710,285	519,922
6/30/2017	23	5,618,634	515,598
6/30/2018	22	5,518,815	511,410
6/30/2019	21	5,410,279	511,410
6/30/2020	20	5,293,819	511,410
6/30/2021	19	5,168,858	507,628
6/30/2022	18	5,033,388	507,628
6/30/2023	17	4,888,163	507,628
6/30/2024	16	4,732,483	507,628
6/30/2025	15	4,565,593	507,628
6/30/2026	14	4,386,687	507,628
6/30/2027	13	4,194,901	507,628
6/30/2028	12	3,989,305	507,628
6/30/2029	11	3,768,907	507,628
6/30/2030	10	3,532,640	507,628
6/30/2031	9	3,279,361	507,628
6/30/2032	8	3,007,847	507,628
6/30/2033	7	2,716,783	507,628
6/30/2034	6	2,404,763	507,628
6/30/2035	5	2,070,278	507,628
6/30/2036	4	1,711,710	507,628
6/30/2037	3	1,327,324	507,628
6/30/2038	2	915,263	507,628
6/30/2039	1	473,534	507,628
6/30/2040	0	0	0





AMORTIZATION OF 2016 INCREMENTAL UAAL

		Balance of	Annual
	Amortization	New Incremental	Annual
Valuation Date	Period	UAAL 6/30/2016	Payment Payment
6/30/2016	<u>- 31.64</u> 25	(\$4,944,605)	(\$443,584)
6/30/2017	24	(4,871,867)	(439,795)
6/30/2018	23	(4,792,589)	(436,120)
6/30/2019	22	(4,706,329)	(436,120)
6/30/2020	<u></u> 21	(4,613,771)	(436,120)
6/30/2021	20	(4,514,457)	(432,779)
6/30/2022	19	(4,406,719)	(432,779)
6/30/2023	18	(4,291,223)	(432,779)
6/30/2024	17	(4,167,412)	(432,779)
6/30/2025	16	(4,034,686)	(432,779)
6/30/2026	15	(3,892,404)	(432,779)
6/30/2027	14	(3,739,878)	(432,779)
6/30/2028	13	(3,576,369)	(432,779)
6/30/2029	12	(3,401,089)	(432,779)
6/30/2030	11	(3,213,188)	(432,779)
6/30/2031	10	(3,011,758)	(432,779)
6/30/2032	9	(2,795,825)	(432,779)
6/30/2033	8	(2,564,345)	(432,779)
6/30/2034	7	(2,316,198)	(432,779)
6/30/2035	6	(2,050,185)	(432,779)
6/30/2036	5	(1,765,019)	(432,779)
6/30/2037	4	(1,459,321)	(432,779)
6/30/2038	3	(1,131,613)	(432,779)
6/30/2039	2	(780,309)	(432,779)
6/30/2040	1	(403,712)	(432,779)
6/30/2041	0	0	0





AMORTIZATION OF 2017 INCREMENTAL UAAL

T-			
	Amortization	Balance of New Incremental	Annual Amortization
Valuation Date	<u>Period</u>	UAAL 6/30/2017	<u>Payment</u>
6/30/2017	25	\$18,819,066	\$1,673,487
6/30/2018	24	18,538,189	1,659,121
6/30/2019	23	18,232,356	1,659,121
6/30/2020	22	17,904,197	1,659,121
6/30/2021	21	17,552,082	1,645,991
6/30/2022	20	17,169,842	1,645,991
6/30/2023	19	16,760,080	1,645,991
6/30/2024	18	16,320,815	1,645,991
6/30/2025	17	15,849,923	1,645,991
6/30/2026	16	15,345,127	1,645,991
6/30/2027	15	14,803,986	1,645,991
6/30/2028	14	14,223,882	1,645,991
6/30/2029	13	13,602,011	1,645,991
6/30/2030	12	12,935,365	1,645,991
6/30/2031	11	12,220,721	1,645,991
6/30/2032	10	11,454,622	1,645,991
6/30/2033	9	10,633,364	1,645,991
6/30/2034	8	9,752,976	1,645,991
6/30/2035	7	8,809,200	1,645,991
6/30/2036	6	7,797,472	1,645,991
6/30/2037	5	6,712,899	1,645,991
6/30/2038	4	5,550,237	1,645,991
6/30/2039	3	4,303,864	1,645,991
6/30/2040	2	2,967,751	1,645,991
6/30/2041	1	1,535,439	1,645,991
6/30/2042	0	0	0





AMORTIZATION OF 2018 INCREMENTAL UAAL

T-			
	Amortization	Balance of New Incremental	Annual Amortization
Valuation Date	<u>Period</u>	UAAL 6/30/2018	<u>Payment</u>
6/30/2018	25	\$9,532,508	\$840,217
6/30/2019	24	9,388,164	840,217
6/30/2020	23	9,233,283	840,217
6/30/2021	22	9,067,096	833,360
6/30/2022	21	8,886,567	833,360
6/30/2023	20	8,693,039	833,360
6/30/2024	19	8,485,578	833,360
6/30/2025	18	8,263,180	833,360
6/30/2026	17	8,024,768	833,360
6/30/2027	16	7,769,192	833,360
6/30/2028	15	7,495,213	833,360
6/30/2029	14	7,201,509	833,360
6/30/2030	13	6,886,657	833,360
6/30/2031	12	6,549,137	833,360
6/30/2032	11	6,187,314	833,360
6/30/2033	10	5,799,441	833,360
6/30/2034	9	5,383,641	833,360
6/30/2035	8	4,937,903	833,360
6/30/2036	7	4,460,071	833,360
6/30/2037	6	3,947,837	833,360
6/30/2038	5	3,398,721	833,360
6/30/2039	4	2,810,068	833,360
6/30/2040	3	2,179,033	833,360
6/30/2041	2	1,502,564	833,360
6/30/2042	1	777,388	833,360
6/30/2043	0	0	0





AMORTIZATION OF 2019 INCREMENTAL UAAL

r 			
		Balance of	Annual
	Amortization	New Incremental	Amortization
Valuation Date	<u>Period</u>	UAAL 6/30/2019	<u>Payment</u>
6/30/2019	25	\$5,479,988	\$483,019
6/30/2020	24	5,397,008	483,019
6/30/2021	23	5,307,971	478,962
6/30/2022	22	5,211,184	478,962
6/30/2023	21	5,107,427	478,962
6/30/2024	20	4,996,200	478,962
6/30/2025	19	4,876,965	478,962
6/30/2026	18	4,749,144	478,962
6/30/2027	17	4,612,121	478,962
6/30/2028	16	4,465,232	478,962
6/30/2029	15	4,307,767	478,962
6/30/2030	14	4,138,964	478,962
6/30/2031	13	3,958,008	478,962
6/30/2032	12	3,764,023	478,962
6/30/2033	11	3,556,070	478,962
6/30/2034	10	3,333,146	478,962
6/30/2035	9	3,094,170	478,962
6/30/2036	8	2,837,989	478,962
6/30/2037	7	2,563,362	478,962
6/30/2038	6	2,268,963	478,962
6/30/2039	5	1,953,366	478,962
6/30/2040	4	1,615,047	478,962
6/30/2041	3	1,252,368	478,962
6/30/2042	2	863,577	478,962
6/30/2043	1	446,793	478,962
6/30/2044	0	0	0





AMORTIZATION OF 2020 INCREMENTAL UAAL

ie .			
		Balance of	Annual
	Amortization	New Incremental	Annual
Valuation Date	Period	UAAL 6/30/2020	Payment
6/30/2020	<u>1 61100</u> 25	\$22,305,891	\$1,966,092
6/30/2020	24	21,968,129	1,949,127
6/30/2021	23	21,600,707	1,949,127
6/30/2023	22	21,206,830	1,949,127
6/30/2023	21		
0,00,00		20,784,594	1,949,127
6/30/2025	20	20,331,958	1,949,127
6/30/2026	19	19,846,731	1,949,127
6/30/2027	18	19,326,568	1,949,127
6/30/2028	17	18,768,954	1,949,127
6/30/2029	16	18,171,191	1,949,127
6/30/2030	15	17,530,389	1,949,127
6/30/2031	14	16,843,450	1,949,127
6/30/2032	13	16,107,051	1,949,127
6/30/2033	12	15,317,631	1,949,127
6/30/2034	11	14,471,373	1,949,127
6/30/2035	10	13,564,184	1,949,127
6/30/2036	9	12,591,678	1,949,127
6/30/2037	8	11,549,151	1,949,127
6/30/2038	7	10,431,563	1,949,127
6/30/2039	6	9,233,508	1,949,127
6/30/2040	5	7,949,193	1,949,127
6/30/2041	4	6,572,407	1,949,127
6/30/2042	3	5,096,493	1,949,127
6/30/2043	2	3,514,313	1,949,127
6/30/2044	1	1,818,216	1,949,127
6/30/2045	0	0	0





AMORTIZATION OF 2021 INCREMENTAL UAAL

		Balance of	Annual
	Amortization	New Incremental	Amortization
Valuation Date	<u>Period</u>	UAAL 6/30/2021	<u>Payment</u>
6/30/2021	25	(\$24,783,920)	(\$2,165,178)
6/30/2022	24	(24,403,184)	(2,165,178)
6/30/2023	23	(23,995,035)	(2,165,178)
6/30/2024	22	(23,557,499)	(2,165,178)
6/30/2025	21	(23,088,461)	(2,165,178)
6/30/2026	20	(22,585,651)	(2,165,178)
6/30/2027	19	(22,046,640)	(2,165,178)
6/30/2028	18	(21,468,820)	(2,165,178)
6/30/2029	17	(20,849,397)	(2,165,178)
6/30/2030	16	(20,185,375)	(2,165,178)
6/30/2031	15	(19,473,543)	(2,165,178)
6/30/2032	14	(18,710,460)	(2,165,178)
6/30/2033	13	(17,892,435)	(2,165,178)
6/30/2034	12	(17,015,512)	(2,165,178)
6/30/2035	11	(16,075,451)	(2,165,178)
6/30/2036	10	(15,067,705)	(2,165,178)
6/30/2037	9	(13,987,401)	(2,165,178)
6/30/2038	8	(12,829,316)	(2,165,178)
6/30/2039	7	(11,587,848)	(2,165,178)
6/30/2040	6	(10,256,995)	(2,165,178)
6/30/2041	5	(8,830,320)	(2,165,178)
6/30/2042	4	(7,300,925)	(2,165,178)
6/30/2043	3	(5,661,413)	(2,165,178)
6/30/2044	2	(3,903,857)	(2,165,178)
6/30/2045	1	(2,019,756)	(2,165,178)
6/30/2046	0	0	0





Schedule H – Summary of Main System Provisions

AS INTERPRETED FOR VALUATION PURPOSES

The Public School Employees' Retirement System (PSERS) is a cost-sharing multiple employer defined benefit pension plan established by the Georgia General Assembly in 1969 for the purpose of providing retirement allowances and other benefits for public school employees who are not eligible for membership in the Teachers Retirement System of Georgia.

Normal Retirement Benefit

Eligibility Age 65 and 10 years of creditable service.

Benefit Monthly benefit is \$15.00 multiplied by years of creditable

service for members retiring before August 1, 2012 and \$15.75 multiplied by years of creditable service for members retiring on or after August 1, 2012. For members with retirement dates prior to July 1, 2013, a one-time 1.75%

increase was made at time of retirement.

Early Retirement Benefit

Eligibility Age 60 and 10 years of creditable service.

Benefit Accrued benefit reduced by 6% for each year member is under

age 65.

Disability Retirement Benefit

Eligibility 15 years of creditable service.

Benefit Accrued benefit payable immediately.

Deferred Vested Retirement Benefit

Eligibility 10 years of creditable service. Member contributions not

withdrawn.

Benefit Accrued benefit deferred to age 65 or reduced benefit payable

at age 60.

Death Benefit

Eligibility Death in service and the member is at least age 60 and has at

least 10 years of creditable service.

Benefit Benefit payable to beneficiary under the joint and survivor

annuity payment option.

If the member dies in service under age 60 or with less than 10 years of creditable service, his beneficiary receives a

refund of the member's accumulated contributions.





Schedule H - Summary of Main System Provisions

Termination Benefit

Eligibility Less than 10 years of creditable service.

Benefit Return of the member's accumulated contributions.

Payment Options (1) Life annuity. Guaranteed payment of accumulated

member contributions.

(2) Joint and survivorship annuity.

(3) Certain and life annuity.

Post-Retirement Adjustments The Board may from time to time grant a Cost-of-Living

Adjustment.

Contributions

By Members who joined the System prior to July 1, 2012

contribute \$4 per month. Members joining the System on or

after July 1, 2012 contribute \$10 per month.

By Employers Employer contributions are actuarially determined and

approved and certified by the Board.





Schedule I – Tables of Membership Data

NUMBER OF ACTIVE MEMBERS BY AGE AND SERVICE AS OF JUNE 30, 2021

		Years of Service								
Attained 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
Under 25	109	261	8	0	0	0	0	0	0	378
25 to 29	116	585	114	0	0	0	0	0	0	815
30 to 34	156	888	368	55	3	0	0	0	0	1,470
35 to 39	166	1,164	504	165	55	3	0	0	0	2,057
40 to 44	159	1,193	719	242	151	43	0	0	0	2,507
45 to 49	169	1,227	870	515	351	144	44	2	0	3,322
50 to 54	195	1,432	1,094	723	627	384	115	43	4	4,617
55 to 59	195	1,596	1,291	934	898	643	310	145	57	6,069
60 to 64	158	1,290	1,288	866	743	541	362	187	125	5,560
65 to 69	78	782	793	538	335	230	138	99	100	3,093
70 & Over	28	445	627	468	317	152	78	69	85	2,269
Total	1,529	10,863	7,676	4,506	3,480	2,140	1,047	545	371	32,157

Average Age: 54.0 Average Service: 9.6





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	1,015	2,674,006	2,634
65 – 69	3,319	10,102,641	3,044
70 – 74	4,187	13,562,476	3,239
75 – 79	3,696	12,344,165	3,340
80 – 84	2,709	9,931,397	3,666
85 – 89	1,491	6,171,161	4,139
90 – 94	597	2,800,165	4,690
95 & Over	177	930,783	5,259
Total	17,191	\$ 58,516,794	\$ 3,404

NUMBER OF BENEFICIARIES AND THEIR BENEFITS BY AGE

Age	Number of Members	Total Annual Benefits	Average Annual Benefits
Under 50	174	\$ 226,759	\$ 1,303
50 – 54	95	155,972	1,642
55 – 59	113	200,464	1,774
60 – 64	122	246,260	2,019
65 – 69	175	391,465	2,237
70 – 74	166	366,387	2,207
75 – 79	161	406,946	2,528
80 – 84	128	345,483	2,699
85 – 89	79	230,878	2,923
90 – 94	46	148,398	3,226
95 & Over	19	51,060	2,687
Total	1,278	\$ 2,770,072	\$ 2,168





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	5	\$ 16,543	\$ 3,309		
50 – 54	23	89,697	3,900		
55 – 59	89	371,703	4,176		
60 – 64	186	794,300	4,270		
65 – 69	198	893,756	4,514		
70 – 74	169	819,335	4,848		
75 – 79	150	844,580	5,631		
80 – 84	98	599,091	6,113		
85 – 89	45	267,261	5,939		
90 – 94	9	56,757	6,306		
95 & Over	1	6,666	6,666		
Total	973	\$ 4,759,689	\$ 4,892		

NUMBER OF DEFERRED VESTED MEMBERS AND THEIR BENEFITS BY AGE

Age	Number of Members	Total Annual Benefits	Average Annual Benefits	
Under 35	8	\$ 17,155	\$ 2,144	
35 – 39	72	155,183	2,155	
40 – 44	207	494,011	2,387	
45 – 64	466	1,170,645	2,512	
50 – 54	953	2,496,075	2,619	
55 – 59	1,678	4,680,066	2,789	
60 – 64	1,417	3,957,889	2,793	
65 – 69	498	1,375,067	2,761	
70 – 74	182	500,333	2,749	
75 & Over	93	263,036	2,828	
Total	5,574	\$ 15,109,460	\$ 2,711	





Schedule J – Annual Comprehensive Financial Report Schedules

ANNUAL COMPREHENSIVE FINANCIAL REPORT SCHEDULES

		GA P	SERS: Solven	cy Test			
	Actua	rial Accrued Liabi	lity for:				
Actuarial			Active Members				
Valuation	Active Member	Retirants &	(Employer	Valuation	Portion of	of Aggregate	Accrued
as of 6/30	Contributions	Beneficiaries	Funded Portion)	Assets	Liabilitie	s Covered b	y Assets
	(1)	(2)	(3)		(1)	(2)	(3)
2021	\$20,188	\$763,615	\$424,152	\$1,042,196	100%	100.0%	60.9%
2020	19,898	721,554	415,545	961,431	100%	100.0%	52.9%
2019	19,109	695,624	393,925	931,032	100%	100.0%	54.9%
2018	18,570	674,222	388,392	905,046	100%	100.0%	54.6%
2017	18,077	640,197	377,661	865,786	100%	100.0%	54.9%
2016	17,413	609,807	361,663	834,554	100%	100.0%	57.3%
2015	17,196	585,471	364,742	805,277	100%	100.0%	55.5%
2014	16,995	566,344	341,026	765,450	100%	100.0%	53.4%
2013	17,016	549,796	343,444	727,268	100%	100.0%	46.7%
2012	16,917	537,284	341,123	710,915	100%	100.0%	45.9%
All dollar a	mounts are in thous	sands.					

GA PSERS: Schedule of Retirants Added to and Removed from Rolls								
	Ad	ded to Rolls	Rem	noved from Rolls	Rol	I End of Year		
							% Increase	Average
		Annual Allowances		Annual Allowances		Annual Allowances	in Annual	Annual
Year Ended	Number	(in thousands)	Number	(in thousands)	Number	(in thousands)	Allowances	Allowances
June 30, 2021	1,368	\$4,185	1,087	\$4,195	19,442	\$66,047	0.0%	\$3,397
June 30, 2020	1,165	5,679	932	3,484	19,161	66,057	3.4%	3,447
June 30, 2019	1,301	5,319	795	3,101	18,928	63,862	3.6%	3,374
June 30, 2018	1,258	5,436	885	3,354	18,422	61,644	3.5%	3,346
June 30, 2017	1,253	4,322	756	2,927	18,049	59,562	2.4%	3,300
June 30, 2016	1,363	3,927	763	2,890	17,552	58,167	1.8%	3,314
June 30, 2015	1,247	3,482	690	2,679	16,952	57,130	1.4%	3,370
June 30, 2014	1,345	3,749	647	2,604	16,395	56,327	2.1%	3,436
June 30, 2013	1,298	3,803	650	2,738	15,697	55,182	2.0%	3,515
June 30, 2012	1,133	3,192	684	2,834	15,049	54,117	0.7%	3,596





System	Ocertain Name	O a so to the south a so
Number	System Name	Contribution
1	Appling	\$ 55,100
2	Atkinson	34,897
3	Bacon	36,734
4	Baker	6,428
5	Baldwin	90,915
6	Banks	60,610
7	Barrow	247,951
8	Bartow	272,746
9	Ben Hill	62,447
10	Berrien	52,345
11	Bibb	518,861
12	Bleckley	74,385
13	Brantley	89,997
14	Brooks	45,917
15	Bryan	179,994
16	Bulloch	236,931
17	Burke	119,384
18	Butts	78,059
19	Calhoun	19,285
20	Camden	175,403
21	Candler	33,060
22	Carroll	217,646
23	Catoosa	275,501
24	Charlton	30,305
25	Chatham	784,261
26	Chattahoochee	13,775
27	Chattooga	45,917
28	Cherokee	593,246
29	Clarke	371,009
30	Clay	9,183
31	Clayton	1,018,437
32	Clinch	24,795
33	Cobb	1,884,431
34	Coffee	122,139
35	Colquitt	168,974
36	Columbia	558,350
37	Cook	61,529
38	Coweta	528,044
39	Crawford	41,325





System		
Number	System Name	Contribution
40	Crisp	\$ 91,834
41	Dade	43,162
42	Dawson	78,059
43	Decatur	134,996
44	Dekalb	1,822,901
45	Dodge	58,774
46	Dooly	38,570
47	Dougherty	339,785
48	Douglas	379,274
49	Early	43,162
50	Echols	11,938
51	Effingham	203,871
52	Elbert	61,529
53	Emanuel	93,670
54	Evans	37,652
55	Fannin	75,304
56	Fayette	326,010
57	Floyd	134,996
58	Forsyth	836,606
59	Franklin	77,140
61	Gilmer	89,079
62	Glascock	17,448
63	Glynn	308,562
64	Gordon	88,160
65	Grady	78,977
66	Greene	44,080
67	Gwinnett	3,013,988
68	Habersham	167,138
69	Hall	412,334
70	Hancock	38,570
71	Haralson	47,754
72	Harris	112,956
73	Hart	92,752
74	Heard	41,325
75	Henry	425,191
76	Houston	698,855
77	Irwin	21,122
78	Jackson	182,749





System Number	System Name	Contribution
	•	
79 80	Jasper Jeff Davis	\$ 62,447
81		63,365
82	Jefferson Jenkins	64,284
		25,713
83	Johnson	28,468
84	Jones	110,201
85	Lamar	53,264
86	Lanier	27,550
87	Laurens	149,689
88	Lee	134,996
89	Liberty	234,176
90	Lincoln	41,325
91	Long	78,977
92	Lowndes	226,830
93	Lumpkin	89,997
94	Macon	36,734
95	Madison	97,344
96	Marion	32,142
97	McDuffie	94,589
98	McIntosh	29,387
99	Meriwether	79,895
100	Miller	25,713
101	Mitchell	40,407
102	Monroe	135,914
103	Montgomery	22,040
104	Morgan	61,529
105	Murray	92,752
106	Muscogee	598,756
107	Newton	363,662
108	Oconee	152,444
109	Oglethorpe	61,529
110	Paulding	478,454
111	Peach	44,080
112	Pickens	86,324
113	Pierce	64,284
114	Pike	39,489
115	Polk	98,262
116	Pulaski	34,897
117	Putnam	82,650





System	Contain Name	O a material and in an
Number	System Name	Contribution
118	Quitman	\$ 9,183
119	Rabun	67,039
120	Randolph	22,040
121	Richmond	633,653
122	Rockdale	337,030
123	Schley	16,530
124	Screven	47,754
125	Seminole	37,652
126	Spalding	243,360
127	Stephens	89,997
128	Stewart	11,938
129	Sumter	112,956
130	Talbot	16,530
131	Taliaferro	6,428
132	Tattnall	78,977
133	Taylor	36,734
134	Telfair	38,570
135	Terrell	43,162
136	Thomas	121,221
137	Tift	85,405
138	Toombs	45,917
139	Towns	33,979
140	Treutlen	16,530
141	Troup	349,887
142	Turner	24,795
143	Twiggs	16,530
144	Union	67,957
145	Upson	129,486
146	Walker	226,830
147	Walton	292,032
148	Ware	140,506
149	Warren	14,693
150	Washington	50,509
151	Wayne	119,384
152	Webster	918
153	Wheeler	22,958
154	White	66,120
155	Whitfield	165,301
156	Wilcox	30,305





System Number	System Name	Contribution
157	Wilkes	\$ 45,917
158	Wilkinson	35,815
159	Worth	57,855
205	Bremen	14,693
206	Buford	88,160
207	Calhoun	30,305
209	Carrollton	80,814
210	Cartersville	48,672
212	Chickamauga	21,122
214	Commerce	22,040
216	Dalton	66,120
217	Decatur	107,446
219	Dublin	38,570
221	Gainesville	109,282
224	Jefferson	34,897
226	Marietta	93,670
230	Pelham	21,122
232	Rome	108,364
247	Social Circle	22,958
236	Thomasville	24,795
239	Trion	18,367
240	Valdosta	168,974
241	Vidalia	36,734
	Furlow Charter School	3,673
	Georgia Magnet Charter School	1,837
	Georgia Military College	60,610
	Kipp Metro Atlanta Collaborative Inc	36,734
	School for Arts Infused Learning	2,755
	Scintilla Charter Academy	1,837
	The Globe Academy	918

