

**City of Atlanta General  
Employees' Pension Fund  
Employees of the Atlanta  
Board of Education**

Actuarial Valuation and Review as of  
July 1, 2016





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*April 20, 2017*

*Board Members*

*City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education  
Atlanta, Georgia*

*Dear Board Members:*

*We are pleased to submit this Actuarial Valuation and Review as of July 1, 2016. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal 2018 and analyzes the preceding year's experience.*

*This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist in administering the Pension Fund. The census information on which our calculations were based was prepared by the GemGroup and the financial information was provided by the City of Atlanta Department of Finance. That assistance is gratefully acknowledged.*

*The measurements shown in this actuarial valuation may not be applicable for other purposes. Future actuarial measurements may differ significantly from the current measurements 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; and changes in plan provisions or applicable law.*

*The actuarial calculations were directed under the supervision of Jeanette R. Cooper, FSA, FCA, MAAA, Enrolled Actuary. Ms. Cooper is a member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of her knowledge, the information supplied in the actuarial valuation is complete and accurate. Further, in her opinion, the assumptions as approved by the Board are reasonably related to the experience of and the expectations for the Plan.*

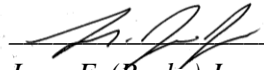
***We hereby certify that the City of Atlanta General Employees' Pension Fund for the Employees of the Atlanta Board of Education has been funded in conformity with the minimum funding standards specified in Code Section 47-20-10 of the Official Code of Georgia Annotated known as the Public Retirement Systems Standards Law. This certification covers the 2016 fiscal year of the Plan.***

*We look forward to reviewing this report at your next meeting and to answering any questions.*

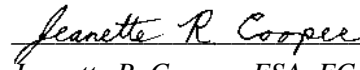
*Sincerely,*

*Segal Consulting, a Member of The Segal Group, Inc.*

By:



*Leon F. (Rocky) Joyner, Jr., ASA, FCA, MAAA, EA  
Vice President and Consulting Actuary*



*Jeanette R. Cooper, FSA, FCA, MAAA, EA  
Vice President and Consulting Actuary*

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## **SECTION 1: Valuation Summary for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

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### **Purpose**

This report has been prepared by Segal Consulting to present a valuation of the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education as of July 1, 2016. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The contribution requirements presented in this report are based on:

- The benefit provisions of the Pension Fund, as administered by the Board;
- The characteristics of covered active participants, inactive vested participants, and retired participants and beneficiaries as of July 1, 2016, provided by the GEMGroup;
- The assets of the Plan as of June 30, 2016, provided by the City of Atlanta Department of Finance;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

The assumptions and methods used to value the Plan were approved by the Board of Trustees based on a 7½ -year experience study for the period ended June 30, 2011.

### **Significant Issues in Valuation Year**

The following key findings were the result of this actuarial valuation:

1. The July 1, 2016 valuation is used to determine the recommended contribution for the fiscal period July 1, 2017 to June 30, 2018 (FY '18). The recommended contribution is adjusted for interest to the middle of the fiscal year and satisfies the minimum funding standards under Georgia law Code Section 47-20-10.
2. The Plan receives employee contributions of 7% or 8% of base salary. The employer contributes the recommended contribution amount which is net of employee contributions. The recommended contribution amount is composed of the employer's Normal Cost and a payment to amortize the Unfunded Actuarial Accrued Liability (UAAL).
3. On June 2, 2014, the Atlanta Board of Education adopted a resolution (Report 13/14-0117) to change the funding policy. The revised policy increases the FY '14 contribution 3.0% annually until the Plan is fully funded.

## SECTION 1: Valuation Summary for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education

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4. If the Plan earns the assumed 7.50% annual investment return and increases the contribution 3.0% annually, then the unfunded liability would be fully amortized in about 12.5 years. If the Plan earns the assumed 7.50% annual investment return and does not increase the contribution annually, then the UAAL would be fully amortized in about 16 years.
5. The School Board's recommended contribution for FY '18 is \$53.5 million. This amount is an increase of \$1.6 million over the prior valuation's contribution due to the mandated overall 3% increase (*see Section 2, Chart 15 for details*).
6. The plan's Unfunded Actuarial Accrued Liability (UAAL) decreased by about \$28.0 million from approximately \$496.8 million to about \$468.8 million (*see Section 3, Exhibit G for details*). Total plan contributions during the fiscal period July 1, 2015 to June 30, 2016 were sufficient to cover the normal cost plus interest on the UAAL. Therefore, the UAAL decreased by about \$12.1 million due to the contributions being greater than the normal cost and interest on the UAAL. The remaining \$15.9 million decrease was due to an experience gain mainly attributable to lower cost-of-living adjustments granted to retirees and beneficiaries than assumed.
7. The market value of assets earned 0.44% over the period July 1, 2015 through June 30, 2016. To minimize the impact of market fluctuations on the School Board's required contributions, the Plan uses an asset valuation method that recognizes each year's net market value gain or loss over five years. Based on this methodology, the Plan's actuarial value of assets earned 7.72% on an annualized basis, compared with the valuation assumption of 7.50%, generating an investment gain of about \$0.3 million.
8. The funded ratio for this plan, based on the actuarial value of assets, increased about 1.2% from 20.3% as of July 1, 2015 to 21.5% as of July 1, 2016. On a market value basis, the funded percentage has decreased from 21.0% to 20.7% over the same period. The funded ratio on a market value basis decreased due to the investment return of 0.44% for the 2015-2016 year. The last ten years of funding progress are shown in *Exhibit III of Section 4*.
9. Plan assets are currently less than three years of projected benefit payments. The imbalance between the benefit levels in the Fund and the resources available to pay for them must continue to be addressed. We are available to prepare solvency projections upon request.
10. The actuarial valuation report as of July 1, 2016 is based on financial information as of that date. Changes in the value of assets subsequent to that date, to the extent that they exist, are not reflected. Declines in asset values will increase the actuarial cost of the Plan, while increases will decrease the actuarial cost of the Plan. For example, a 10% decrease in the current year's actuarial value of assets would produce the same recommended contribution level but the effective amortization period would have been about 0.5 years longer.

**SECTION 1: Valuation Summary for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

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11. The disclosure information required for compliance with GASB Statement No. 67, *Financial Reporting for Pension Plans* for the fiscal year ended June 30, 2016, was released to the School Board's and City's Finance Departments on September 28, 2016. Information required for compliance with GASB Statement No. 68, *Accounting and Financial Reporting for Pensions*, for the fiscal year ended June 30, 2017, based on a June 30, 2016 measurement date was released to the Finance Departments on March 29, 2017.
12. There have been no changes in actuarial assumptions, methods or plan provisions since the last valuation. The Fund is scheduled for a five-year experience study for the period ending June 30, 2016. The most recent study covered the 7-½ year period ending June 30, 2011.

**SECTION 1: Valuation Summary for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

**Summary of Key Valuation Results**

<b>Fiscal Year</b>	<b>2017/2018</b>	<b>2016/2017</b>
<b>Contributions for fiscal year beginning July 1:</b>		
1. Total normal cost	\$4,425,332	\$4,295,481
2. Expected employee contributions	1,655,343	1,672,880
3. Payment to amortize unfunded liability	<u>47,327,081</u>	<u>45,976,239</u>
4. Total required School Board annual contributions for the fiscal year: (1) - (2) + (3) <sup>1</sup>	<b>\$53,500,000</b>	<b>\$51,900,000</b>
<b>Plan Year</b>	<b>2016</b>	<b>2015</b>
<b>Funding elements for plan year beginning July 1:</b>		
5. Actuarial value of assets	\$128,256,838	\$126,601,083
6. Market value of assets	123,876,000	131,133,000
7. Actuarial accrued liability	597,088,697	623,424,181
8. Unfunded actuarial accrued liability: (7) - (5)	468,831,859	496,823,098
9. Funded ratio - actuarial basis: (5) / (7)	21.5%	20.3%
10. Funded ratio - market basis: (6) / (7)	20.7%	21.0%
11. Effective amortization period (based on 3.0% above prior year's cost)	12.5 years	14.1 years
<b>Demographic data for plan year beginning July 1:</b>		
12. Number of retired participants and beneficiaries	2,028	2,094
13. Number of terminated vested participants <sup>2</sup>	134	81
14. Number of active participants	738	799
15. Total payroll	\$21,359,262	\$21,585,554
16. Average payroll	28,942	27,016

<sup>1</sup>Adjusted for timing.

<sup>2</sup>Includes 101 and 46 terminated participants with contributions remaining in the Plan as of July 1, 2016 and July 1, 2015, respectively.



## SECTION 1: Valuation Summary for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education

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### Important Information About Actuarial Valuations

An actuarial valuation is a budgeting tool with respect to the financing of future projected obligations of a pension plan. It is an estimated forecast – the actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.

In order to prepare a valuation, Segal Consulting (“Segal”) relies on a number of input items. These include:

- **Plan of benefits** Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. Even where they appear precise, outside factors may change how they operate. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan summary included in our report to confirm that Segal has correctly interpreted the plan of benefits.
- **Participant data** An actuarial valuation for a plan is based on data provided to the actuary by the GEMGroup. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
- **Assets** The valuation is based on the market value of assets as of the valuation date, as provided by the City of Atlanta Department of Finance which uses an “actuarial value of assets” that differs from market value to gradually reflect year-to-year changes in the market value of assets in determining the contribution requirements.
- **Actuarial assumptions** In preparing an actuarial valuation, Segal projects the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This projection requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of each participant for each year. In addition, the benefits projected to be paid for each of those events in each future year reflect actuarial assumptions as to salary increases and cost-of-living adjustments. The projected benefits are then discounted to a present value, based on the assumed rate of return that is expected to be achieved on the plan’s assets. There is a reasonable range for each assumption used in the projection and the results may vary materially based on which assumptions are selected. It is important for any user of an actuarial valuation to understand this concept. Actuarial assumptions are periodically reviewed to ensure that future valuations reflect emerging plan experience. While future changes in actuarial assumptions may have a significant impact on the reported results, that does not mean that the previous assumptions were unreasonable.

## **SECTION 1: Valuation Summary for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

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The user of Segal's actuarial valuation (or other actuarial calculations) should keep the following in mind:

- The actuarial valuation is prepared at the request of the Board. Segal is not responsible for the use or misuse of its report, particularly by any other party.
- An actuarial valuation is a measurement of the plan's assets and liabilities at a specific date. Accordingly, except where otherwise noted, Segal did not perform an analysis of the potential range of future financial measures. The actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.
- If the Board is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.
- Segal does not provide investment, legal, accounting, or tax advice. Segal's valuation is based on our understanding of applicable guidance in these areas and of the plan's provisions, but they may be subject to alternative interpretations. The Board should look to their other advisors for expertise in these areas.

As Segal Consulting has no discretionary authority with respect to the management or assets of the Plan, it is not a fiduciary in its capacity as actuaries and consultants with respect to the Plan.

**SECTION 2: Valuation Results for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

**A. PARTICIPANT DATA**

The Actuarial Valuation and Review considers the number and demographic characteristics of covered participants, including active participants, vested terminated participants, retired participants and beneficiaries.

This section presents a summary of significant statistical data on these participant groups.

More detailed information for this valuation year and the preceding valuation can be found in Section 3, Exhibits A, B, and C.

*A historical perspective of how the participant population has changed over the past ten valuations can be seen in this chart.*

**CHART 1**  
**Participant Population: 2006 – 2016**

<b>Period Ended</b>	<b>Active Participants<sup>1</sup></b>	<b>Vested Terminated Participants<sup>2</sup></b>	<b>Retired Participants and Beneficiaries</b>	<b>Ratio of Non-Actives to Actives</b>
<u>December 31:</u>				
2006	1,026	148	2,485	2.57
2007	972	51	2,458	2.58
2008	974	43	2,362	2.47
<u>June 30:</u>				
2010	871	38	2,467	2.88
2011	803	28	2,312	2.91
2012	763	26	2,253	2.99
2013	737	27	2,165	2.97
2014	698	33	2,141	3.11
2015	799	35	2,094	2.66
2016	738	33	2,028	2.79

<sup>1</sup>Excludes participants receiving Workers' Compensation benefits.

<sup>2</sup>Excludes terminated participants due a refund of employee contributions.

**SECTION 2: Valuation Results for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

**Active Participants**

Plan costs are affected by the age, years of service and payroll of active participants. In this year's valuation, there were 738 active participants with an average age of 49.9, average years of service of 12.2 years and average payroll of \$28,942. The 799 active participants in the prior valuation had an average age of 49.4, average service of 11.8 years and average payroll of \$27,016.

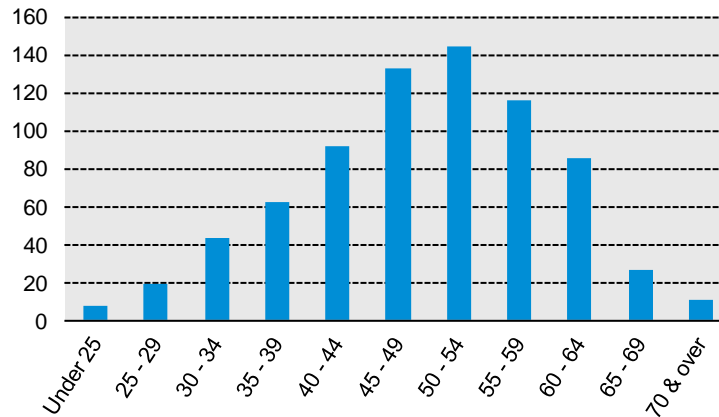
**Inactive Participants**

In this year's valuation, there were 33 participants with a vested right to a deferred or immediate vested benefit.

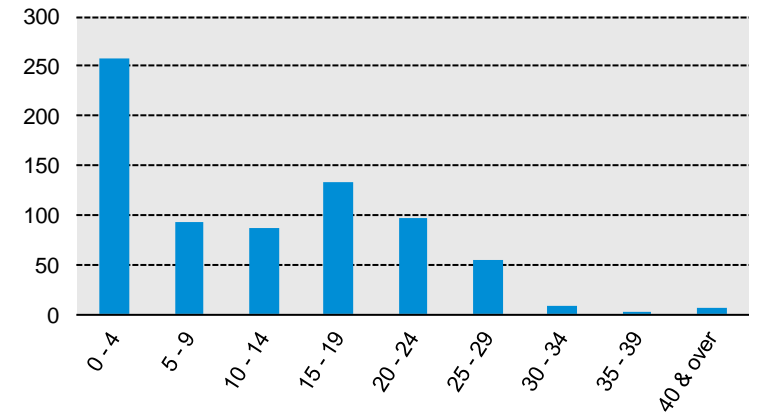
In addition, there were 101 participants entitled to a return of their employee contributions.

*These graphs show a distribution of active participants by age and by years of service.*

**CHART 2**  
**Distribution of Active Participants by Age as of June 30, 2016**



**CHART 3**  
**Distribution of Active Participants by Years of Service as of June 30, 2016**



**SECTION 2: Valuation Results for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

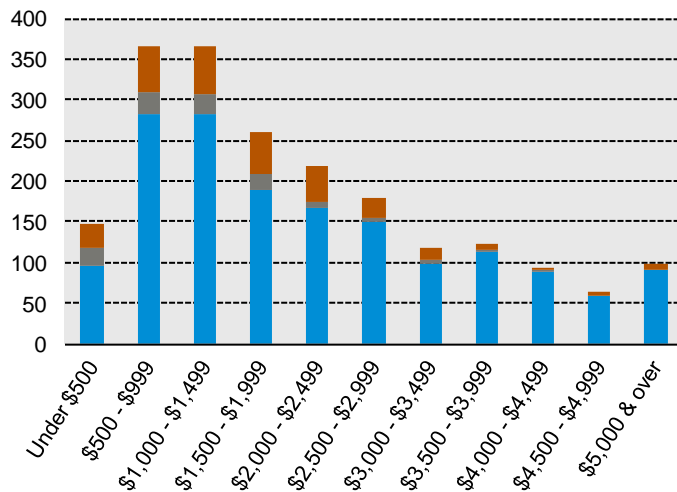
**Retired Participants and Beneficiaries**

As of June 30, 2016, 1,729 retired participants and 299 beneficiaries were receiving total monthly benefits of \$4,357,710. For comparison, in the previous valuation, there were 1,791 retired participants and 303 beneficiaries receiving monthly benefits of \$4,499,386.

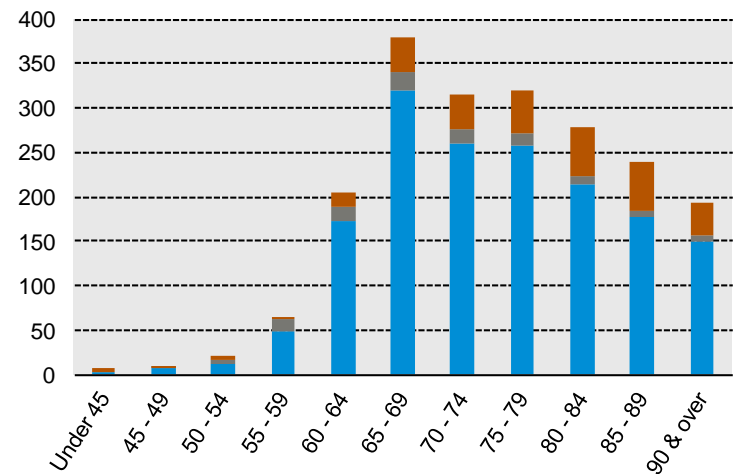
*These graphs show a distribution of the current retired participants and beneficiaries based on their monthly amount and age, by type of pension.*

- Beneficiary
- Disability
- Service

**CHART 4**  
**Distribution of Retired Participants and Beneficiaries by Type and by Monthly Amount as of June 30, 2016**



**CHART 5**  
**Distribution of Retired Participants and Beneficiaries by Type and by Age as of June 30, 2016**



**SECTION 2: Valuation Results for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

**B. FINANCIAL INFORMATION**

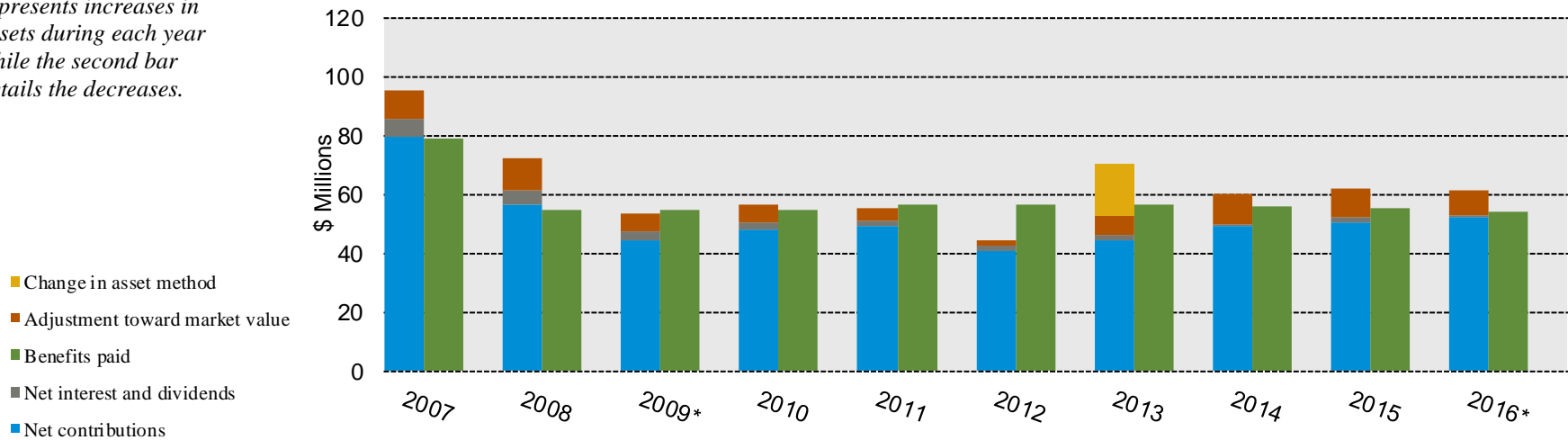
Retirement plan funding anticipates that, over the long term, both contributions and net investment earnings (less investment fees and administrative expenses) will be needed to cover benefit payments.

Retirement plan assets change as a result of the net impact of these income and expense components. Additional financial information, including a summary of these transactions for the valuation year, is presented in Section 3, Exhibits D, E and F.

*The chart depicts the components of changes in the actuarial value of assets over the last ten years. Note: The first bar represents increases in assets during each year while the second bar details the decreases.*

**CHART 6**

**Comparison of Increases and Decreases in the Actuarial Value of Assets for Years Ended June 30, 2007 – 2016**



\*Adjustment toward market value excludes asset corrections and adjustments provided by the auditor.

**SECTION 2: Valuation Results for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board has approved an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable.

The actuarial value of assets was reset to equal the market value of assets as of July 1, 2013 with future gains and losses to be amortized on a straight-line basis over five years.

The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

*The chart shows the determination of the actuarial value of assets as of the valuation date.*

**CHART 7**

**Determination of Actuarial Value of Assets for Year Ended June 30, 2016**

1. Market value of assets, June 30, 2016			\$123,876,000
2. Calculation of unrecognized return	Original <u>Amount*</u>	Unrecognized <u>Return**</u>	
(a) Year ended June 30, 2016	-\$8,978,725	-\$7,182,980	
(b) Year ended June 30, 2015	-3,287,038	-1,972,223	
(c) Year ended June 30, 2014	11,935,912	<u>4,774,365</u>	
(d) Total unrecognized return			-4,380,838
3. Preliminary actuarial value: (1) - (2d)			128,256,838
4. Adjustment to be within 20% corridor			0
5. Final actuarial value of assets as of June 30, 2016: (3) + (4)			<u>\$128,256,838</u>
6. Actuarial value as a percentage of market value: (5) ÷ (1)			103.5%
7. Amount deferred for future recognition: (1) - (5)			-\$4,380,838

*\*Total return minus expected return on a market value basis*

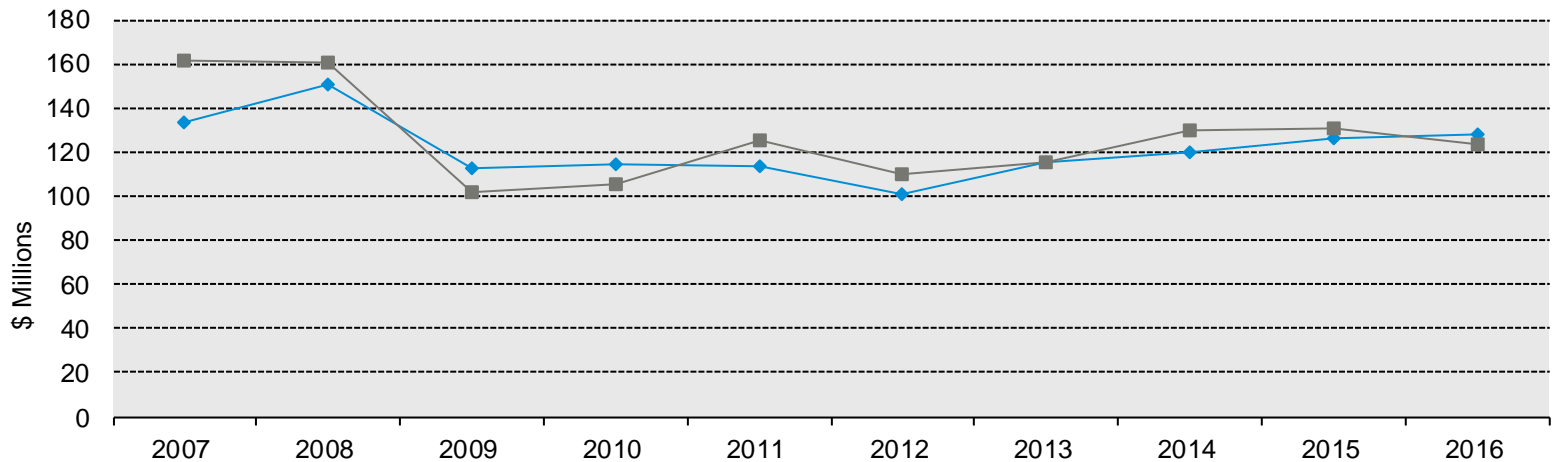
*\*\*Recognition at 20% per year over five years*

**SECTION 2: Valuation Results for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

Both the actuarial value and market value of assets are representations of the Pension Fund's financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets. The actuarial asset value is significant because the Pension Fund's liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the unfunded actuarial accrued liability is an important element in determining the contribution requirement.

*This chart shows the change in the actuarial value of assets versus the market value over the past ten years.*

**CHART 8**  
**Actuarial Value of Assets vs. Market Value of Assets as of June 30, 2007 – 2016**





**SECTION 2: Valuation Results for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

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**C. ACTUARIAL EXPERIENCE**

To calculate the required contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), the contribution requirement will decrease from the previous year. On the other hand, the contribution requirement will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

The total gain is \$15,855,250, comprised of a gain of \$273,924 from investments and a gain of \$15,581,326 from all other sources. The net experience variation from individual sources other than investments was 2.6% of the actuarial accrued liability. A discussion of the major components of the actuarial experience is on the following pages.

*This chart provides a summary of the actuarial experience during the past year.*

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**CHART 9**

**Actuarial Experience for Year Ended June 30, 2016**

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1. Net gain from investments*	\$273,924
2. Net gain from other experience**	<u>15,581,326</u>
3. Net experience gain: (1) + (2)	\$15,855,250

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\*Details in Chart 10

\*\*Details in Chart 13

**SECTION 2: Valuation Results for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

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**Investment Rate of Return**

A major component of projected asset growth is the assumed rate of return. The assumed return should represent the expected long-term rate of return, based on the Pension Fund's investment policy. For valuation purposes, the assumed rate of return on the actuarial value of assets is 7.50%. The actual rate of return on an actuarial basis for the 2015-2016 plan year was 7.72%.

Since the actual return for the year was greater than the assumed return, the Pension Fund experienced an actuarial gain during the year ended June 30, 2016 with regard to its investments.

*This chart shows the gain due to investment experience.*

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**CHART 10**

**Actuarial Value Investment Experience for Year Ended June 30, 2016**

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1. Actual return	\$9,475,755
2. Average value of assets	122,691,083
3. Actual rate of return: (1) ÷ (2)	7.72%
4. Assumed rate of return	7.50%
5. Expected return: (2) x (4)	\$9,201,831
6. Actuarial gain: (1) – (5)	<u>\$273,924</u>

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**SECTION 2: Valuation Results for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

Because actuarial planning is long term, it is useful to see how the assumed investment rate of return has followed actual experience over time. The chart below shows the rate of return on an actuarial basis compared to the market value investment return for the last ten years, including five-year and ten-year averages.

Based upon this experience and future expectations, the Board has maintained the assumed rate of return of 7.50%.

**CHART 11**

**Investment Return – Actuarial Value vs. Market Value: 2007 - 2016**

Year Ended June 30	Net Interest and Dividend Income		Recognition of Capital Appreciation		Change in Asset Method		Actuarial Value Investment Return		Market Value Investment Return	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
2007 <sup>1</sup>	\$5,750,531	3.21%	\$9,754,458	5.43%	--	--	\$15,504,989	8.64%	\$15,046,591	6.74%
2008	4,469,000	3.33	11,036,186	8.22	--	--	15,505,186	11.55	-3,625,064	-2.22
2009	3,160,284	2.92	5,857,245	5.40	--	--	9,017,529	8.32	-11,589,873	-9.82
2010	2,706,286	2.48	6,166,042	5.66	--	--	8,872,328	8.14	10,809,475	11.03
2011	1,988,000	1.79	3,921,548	3.53	--	--	5,909,548	5.32	27,040,710	26.49
2012	1,894,000	1.80	1,808,336	1.71	--	--	3,702,336	3.51	624,000	0.53
2013 <sup>2</sup>	1,739,000	1.82	6,486,349	6.80	\$17,820,091	18.69%	8,225,349	8.62	17,035,000	16.32
2014	559,000	0.50	10,247,270	9.13	--	--	10,806,270	9.63	20,355,000	18.13
2015	1,640,000	1.39	9,623,813	8.19	--	--	11,263,813	9.58	6,247,000	4.91
2016 <sup>3</sup>	984,000	0.80	8,491,755	6.92	--	--	9,475,755	7.72	563,000	0.44
Total	\$24,890,101		\$73,393,002		\$17,820,091		\$98,283,103		\$82,505,839	
							Five-year average return	7.86%		7.62%
							Ten-year average return	8.22%		6.38%

Note: Each year's yield is weighted by the average asset value in that year.

<sup>1</sup>The amounts for the year ended June 30, 2007 are for the 18-month period from January 1, 2006 through June 30, 2007. The percentages have been annualized.

<sup>2</sup>Actuarial value investment return does not include impact of asset method change

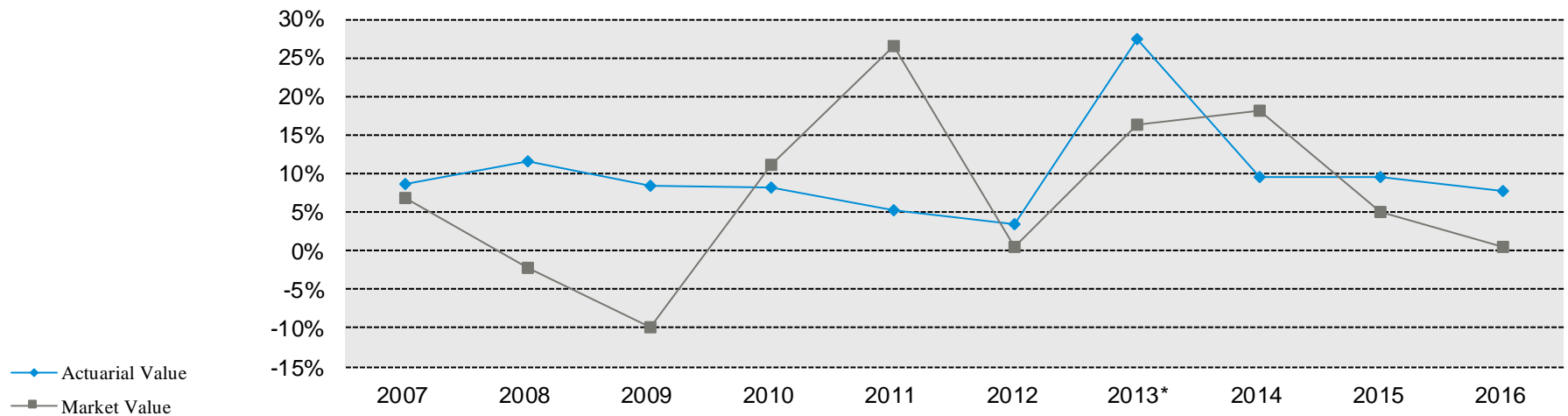
<sup>3</sup>There was a -\$5,706,000 adjustment to the market value reflected at July 1, 2016 per Auditors.

**SECTION 2: Valuation Results for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

Subsection B described the actuarial asset valuation method that gradually takes into account fluctuations in the market value rate of return. The effect of this is to stabilize the actuarial rate of return, which contributes to leveling pension plan costs.

*This chart illustrates how this leveling effect has actually worked over the years 2007 - 2016.*

**CHART 12**  
**Market and Actuarial Rates of Return for Years Ended June 30, 2007 - 2016**



\*Actuarial value rate of return includes method change.

**SECTION 2: Valuation Results for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

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**Other Experience**

There are other differences between the expected and the actual experience that appear when the new valuation is compared with the projections from the previous valuation. These include:

- the extent of turnover among the participants,
- retirement experience (earlier or later than expected),
- mortality (more or fewer deaths than expected),
- the number of disability retirements, and
- salary increases different than assumed.

The net gain from this other experience for the year ended June 30, 2016 amounted to \$15,581,326, which is 2.6% of the actuarial accrued liability.

A brief summary of the demographic gain experience for the year ended June 30, 2016 is shown in the chart below.

**Actuarial Assumptions**

The Fund undergoes an in-depth study periodically to compare the actuarial assumptions to actual experience. The assumptions are then updated as appropriate. The last experience review was completed for the 7-1/2 year period ending June 30, 2011. An updated study is scheduled for the five-year period ended June 30, 2016.

*The chart shows elements of the experience gain for the most recent year.*

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**CHART 13**

**Experience Due to Changes in Demographics for Year Ended June 30, 2016**

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1. Gain due to cost-of-living increases smaller than expected	\$13,685,440
2. Mortality gain among retirees and beneficiaries	3,058,630
3. Loss due to salary increases for continuing actives greater than expected	-2,305,380
4. Net miscellaneous loss including new entrants, turnover and other demographic experience	<u>1,142,636</u>
5. Total	\$15,581,326

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**SECTION 2: Valuation Results for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

**D. RECOMMENDED CONTRIBUTION**

The recommended contribution as of July 1, 2016 (for FY 2018) is based on a funding policy that increases the FY 2014 contribution 3.0% annually until the Plan is fully funded. If the plan earns the assumed rate of return (7.50%), then it will be fully funded by about FY 2031.

The contribution requirements for FY 2018 are based on all of the data described in the previous sections, the actuarial assumptions described in Section 4, and the Plan provisions adopted at the time of preparation of the Actuarial Valuation. They include all changes affecting future costs, adopted benefit changes, actuarial gains and losses and changes in the actuarial assumptions.

*The chart compares this valuation's recommended contribution with the prior valuation.*

**CHART 14**  
**Recommended Contribution**

	<b>Fiscal Year Ending June 30</b>	
	<b>2018</b>	<b>2017</b>
1. Total normal cost	\$4,425,332	\$4,295,481
2. Expected employee contributions	<u>-1,655,343</u>	<u>-1,672,880</u>
3. Employer normal cost: (1) + (2)	\$2,769,989	\$2,622,601
4. Actuarial accrued liability	597,088,697	623,424,181
5. Actuarial value of assets	<u>128,256,838</u>	<u>126,601,083</u>
6. Unfunded actuarial accrued liability: (4) - (5)	\$468,831,859	\$496,823,098
7. Payment on projected unfunded actuarial accrued liability	47,327,081	45,976,239
8. Total recommended contribution: (3) + (7), adjusted for timing*	<u>\$51,941,748</u>	<u>\$50,388,350</u>
9. <b>Projected School Board contribution for next fiscal year</b>	<b>\$53,500,000</b>	<b>\$51,900,000</b>

*\*Recommended contributions are assumed to be paid at the middle of every year.*

**SECTION 2: Valuation Results for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

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**Reconciliation of Recommended Contribution**

The chart below details the changes in the recommended contribution from the prior valuation to the current year's valuation.

*The chart reconciles the contribution from the prior valuation to the amount determined in this valuation.*

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**CHART 15**

**Reconciliation of Recommended Contribution from Fiscal Year 2017 to 2018**

<b>Recommended Contribution for Fiscal Year 2017</b>	\$51,900,000
Effect of expected change in amortization payment due to 3% growth assumption	1,472,977
Effect of change in amortization period	1,621,260
Effect of investment gain	-28,583
Effect of other gains and losses on accrued liability	-1,625,845
Net effect of other changes	<u>160,191</u>
<b>Total change</b>	<u>\$1,600,000</u>
<b>Recommended Contribution for Fiscal Year 2018</b>	\$53,500,000

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## **SECTION 2: Valuation Results for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

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### **E. STATE MINIMUM REQUIREMENTS**

Under Georgia minimum funding requirements, liability may be amortized as a percent of payroll, rather than a fixed dollar amount. In general, with fixed dollar amortization, actual experience close to the assumptions will result in a total contribution requirement (the normal cost plus the payment on the unfunded actuarial liability) that decreases over time as a percentage of payroll. With percentage of payroll amortization, given expected experience, the total contribution requirement should remain level as a percentage of payroll if the aggregate payroll increases as assumed.

The Board has adopted a policy for amortizing the unfunded actuarial liability, and the amortization period is 12.5 years for FY 2018. The contributions determined under this method continue to meet the Georgia minimum funding requirements by virtue of Georgia Code Section 47-20-10(b).



**SECTION 3: Supplemental Information for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

**EXHIBIT A**

**Table of Plan Coverage**

<b>Category</b>	<b>Year Ended June 30</b>		<b>Change From Prior Year</b>
	<b>2016</b>	<b>2015</b>	
<b>Active participants in valuation:</b>			
Number	738	799	-7.6%
Average age	49.9	49.4	N/A
Average years of service	12.2	11.8	N/A
Projected total payroll	\$21,359,262	\$21,585,554	-1.0%
Projected average payroll	28,942	27,016	7.1%
Account balances	16,712,517	17,379,098	-3.8%
Total active vested participants	514	543	-5.3%
<b>Vested terminated participants</b>	33	35	-5.7%
<b>Retired participants:</b>			
Number in pay status	1,616	1,676	-3.6%
Average age	75.5	75.2	N/A
Average monthly benefit	\$2,277	\$2,269	0.4%
<b>Disabled participants:</b>			
Number in pay status	113	115	-1.7%
Average age	70.8	70.3	N/A
Average monthly benefit	\$1,329	\$1,348	-1.4%
<b>Beneficiaries in pay status:</b>			
Number in pay status	299	303	-1.3%
Average age	78.5	78.4	N/A
Average monthly benefit	\$1,767	\$1,785	-1.0%
<b>Terminated participants with contributions remaining in the Plan</b>	101	46	119.6%

**SECTION 3: Supplemental Information for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

**EXHIBIT B**

**Participants in Active Service as of June 30, 2016  
By Age, Years of Service, and Average Payroll**

Age	Years of Service									
	Total	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 & over
Under 25	7	7	--	--	--	--	--	--	--	--
	\$22,344	\$22,344	--	--	--	--	--	--	--	--
25 - 29	19	18	1	--	--	--	--	--	--	--
	18,947	19,088	\$16,409	--	--	--	--	--	--	--
30 - 34	43	31	8	4	--	--	--	--	--	--
	20,182	20,281	23,183	\$13,421	--	--	--	--	--	--
35 - 39	62	39	11	9	3	--	--	--	--	--
	25,989	23,330	33,700	22,922	\$41,498	--	--	--	--	--
40 - 44	92	43	12	12	20	5	--	--	--	--
	27,527	23,677	35,665	24,307	31,988	\$30,985	--	--	--	--
45 - 49	133	34	18	21	23	25	11	1	--	--
	31,573	28,865	39,851	24,627	24,371	31,927	\$49,705	\$77,900	--	--
50 - 54	144	36	13	20	33	26	16	--	--	--
	29,457	24,932	38,363	23,156	25,988	28,348	49,232	--	--	--
55 - 59	116	21	13	9	31	20	19	3	--	--
	31,684	25,813	33,300	19,393	27,819	34,442	43,370	50,206	--	--
60 - 64	85	21	10	9	15	15	7	4	1	3
	28,489	18,717	39,526	19,260	26,932	35,215	34,221	32,857	\$51,623	\$35,027
65 - 69	26	5	5	2	4	4	2	1	1	2
	34,593	15,758	37,920	14,198	25,789	41,022	41,985	21,102	36,166	97,078
70 & over	11	2	1	1	3	2	--	--	--	2
	35,803	31,075	15,553	12,359	16,612	20,169	--	--	--	106,802
Total	738	257	92	87	132	97	55	9	2	7
	\$28,942	\$23,392	\$35,325	\$22,076	\$27,286	\$32,079	\$45,128	\$42,339	\$43,895	\$73,263

**SECTION 3: Supplemental Information for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

**EXHIBIT C**

**Reconciliation of Participant Data**

	<b>Active Participants</b>	<b>Vested Former Participants<sup>1</sup></b>	<b>Disableds</b>	<b>Retired Participants</b>	<b>Beneficiaries</b>	<b>Total</b>
Number as of July 1, 2015	799	35	115	1,676	303	2,928
New participants <sup>2</sup>	62	N/A	N/A	N/A	N/A	62
Terminations – with vested rights	-5	5	0	0	0	0
Terminations – without vested rights	-37	N/A	N/A	N/A	N/A	-37
Retirements	-26	-2	N/A	28	N/A	0
New disabilities	0	-2	2	N/A	N/A	0
Return to work	0	0	0	0	N/A	0
Died	-4	0	-4	-89	-20	-117
New beneficiaries	0	0	0	0	17	17
Lump sum payoffs	-52	-1	0	0	0	-53
Rehire	1	0	N/A	0	N/A	1
Certain period expired	N/A	N/A	0	0	0	0
Data adjustments <sup>3</sup>	<u>0</u>	<u>-2</u>	<u>0</u>	<u>1</u>	<u>-1</u>	<u>-2</u>
Number as of July 1, 2016	738	33	113	1,616	299	2,799

<sup>1</sup>Excludes terminated participants with contributions remaining in the Plan.

<sup>2</sup>21 of the 62 new active participants included in the data for the first time this year have over one year of credited service.

<sup>3</sup>The following data adjustments were made per the TPA:

One healthy retiree was included for the first time with this valuation.

Two terminated vested participants were verified as having been previously refunded and therefore removed from the data this year.

One duplicate beneficiary record was removed from the data this year.

**SECTION 3: Supplemental Information for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

**EXHIBIT D**

**Summary Statement of Income and Expenses on an Actuarial Value Basis**

	Year Ended June 30, 2016	Year Ended June 30, 2015
<b>Net assets at actuarial value at the beginning of the year</b>	\$126,601,083	\$119,806,270
<b>Contribution income:</b>		
Employer contributions	\$50,400,000	\$48,905,000
Employee contributions	<u>1,663,000</u>	<u>1,684,000</u>
Net contribution income	52,063,000	50,589,000
<b>Adjustment</b>	-5,706,000	0
<b>Investment income:</b>		
Interest, dividends and other income	\$1,494,000	\$2,205,000
Recognition of capital appreciation	8,491,755	9,623,813
Less investment and administrative fees	<u>-510,000</u>	<u>-565,000</u>
Net investment income	<u>9,475,755</u>	<u>11,263,813</u>
<b>Total income available for benefits</b>	\$55,832,755	\$61,852,813
<b>Less benefit payments</b>	-\$54,177,000	-\$55,058,000
<b>Change in actuarial value of assets</b>	\$1,655,755	\$6,794,813
<b>Net assets at actuarial value at the end of the year</b>	\$128,256,838	\$126,601,083

**SECTION 3: Supplemental Information for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

**EXHIBIT E**

**Summary Statement of Income and Expenses on a Market Value Basis**

	Year Ended June 30, 2016	Year Ended June 30, 2015
<b>Net assets at market value at the beginning of the year</b>	\$131,133,000	\$129,355,000
<b>Contribution income:</b>		
Employer contributions	\$50,400,000	\$48,905,000
Employee contributions	<u>1,663,000</u>	<u>1,684,000</u>
Net contribution income	52,063,000	50,589,000
<b>Adjustment</b>	-5,706,000	0
<b>Investment income:</b>		
Interest, dividends and other income	\$1,494,000	\$2,205,000
Asset appreciation	-421,000	4,607,000
Less investment and administrative fees	<u>-510,000</u>	<u>-565,000</u>
Net investment income	<u>563,000</u>	<u>6,247,000</u>
<b>Total income available for benefits</b>	\$46,920,000	\$56,836,000
<b>Less benefit payments</b>	-\$54,177,000	-\$55,058,000
<b>Change in market value of assets</b>	-\$7,257,000	\$1,778,000
<b>Net assets at market value at the end of the year</b>	\$123,876,000	\$131,133,000

**SECTION 3: Supplemental Information for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

**EXHIBIT F**

**Development of the Fund Through June 30, 2016**

<b>Year Ended June 30</b>	<b>Employer Contributions</b>	<b>Employee Contributions</b>	<b>Asset Method Change</b>	<b>Net Investment Return<sup>1</sup></b>	<b>Benefit Payments</b>	<b>Actuarial Value of Assets at End of Year</b>
2007 <sup>2</sup>	\$72,590,781	\$7,363,073	--	\$15,504,989	\$79,266,669	\$133,058,241
2008	54,575,423	2,214,902	--	15,505,186	54,477,647	150,876,105 <sup>3</sup>
2009	42,005,043	2,544,188	--	-28,389,790	54,740,338	112,295,208
2010	45,500,000	2,478,458	--	8,872,328	54,530,318	114,615,676
2011	39,000,000 <sup>4</sup>	1,971,000	--	14,242,548 <sup>5</sup>	56,276,000	113,553,224
2012	39,000,000	1,841,000	--	3,702,336	56,824,000	101,272,560
2013	43,013,000	1,689,000	\$17,820,091	8,225,349	56,511,000	115,509,000
2014	48,000,000	1,554,000	--	10,806,270	56,063,000	119,806,270
2015	48,905,000	1,684,000	--	11,263,813	55,058,000	126,601,083
2016	50,400,000	1,663,000	--	3,769,755	54,177,000	128,256,838

<sup>1</sup>Net of investment fees and administrative expenses and includes -\$37,407,319 asset correction in 2009 and -\$5,706,000 asset adjustment in 2016.

<sup>2</sup>The Plan Year was changed from January 1 to July 1, effective July 1, 2007. Therefore, the amounts as of June 30, 2007 represent the 18-month period from January 1, 2006 through June 30, 2007.

<sup>3</sup>Before Banks, Finley, White & Co. correction of \$37,407,319.

<sup>4</sup>Changed from \$47,333,000 per School Board

<sup>5</sup>Adjusted due to contribution change

**SECTION 3: Supplemental Information for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

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**EXHIBIT G**

**Development of Unfunded Actuarial Accrued Liability for Year Ended June 30, 2016**

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1. Unfunded actuarial accrued liability at beginning of year		\$496,823,098
2. Normal cost at beginning of year		4,295,481
3. Total contributions		-52,063,000
4. Interest		
(a) For whole year on (1) + (2)	\$37,583,893	
(b) For half year on (3)	<u>-1,952,363</u>	
(c) Total interest		<u>35,631,530</u>
5. Expected unfunded actuarial accrued liability		\$484,687,109
6. Changes due to experience gain		<u>-15,855,250</u>
7. Unfunded actuarial accrued liability at end of year		<u>\$468,831,859</u>

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**SECTION 3: Supplemental Information for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

**EXHIBIT H**

**Supplementary Information - Actuarial Present Value of Accumulated Plan Benefits**

The actuarial present value of accumulated plan benefits is shown below as of July 1, 2016 and as of July 1, 2015.

	<b>Benefit Information Date</b>	
	<b>July 1, 2016</b>	<b>July 1, 2015</b>
Actuarial present value of vested accumulated plan benefits:		
Participants currently receiving payments	\$509,200,726	\$530,832,226
Other vested benefits	<u>57,258,712</u>	<u>59,589,693</u>
Total vested benefits (PVVB)	566,459,438	\$590,421,919
Actuarial present value of non-vested accumulated plan benefits	<u>4,228,168</u>	<u>4,008,458</u>
Total actuarial present value of accumulated plan benefits (PVAB)	<u>\$570,687,606</u>	<u>\$594,430,377</u>
Actuarial Value of Assets (AVA)	\$128,256,838	\$126,601,083
Market Value of Assets (MVA)	123,876,000	131,133,000
Funded Ratios (PVVB):		
AVA as a percentage of present value of vested accumulated benefits	22.6%	21.4%
MVA as a percentage of present value of vested accumulated benefits	21.9%	22.2%
Funded Ratios (PVAB):		
AVA as a percentage of present value of accumulated benefits	22.5%	21.3%
MVA as a percentage of present value of accumulated benefits	21.7%	22.1%

*Note: The amounts stated as vested benefits include employee contribution accounts, which are considered 100% vested.*



**SECTION 3: Supplemental Information for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

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**EXHIBIT H (continued)**

**Supplementary Information - Actuarial Present Value of Accumulated Plan Benefits**

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The factors that affected the change in the actuarial present value of accumulated plan benefits from the preceding to the current benefit information date are as follows:

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<b>Factors</b>	<b>Change in Actuarial Present Value of Accumulated Plan Benefits</b>
Benefits accumulated, net experience gain or loss, changes in data	-\$12,116,412
Benefits paid	-54,177,000
Interest	<u>42,550,641</u>
Total	<u>-\$23,742,771</u>

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**SECTION 3: Supplemental Information for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

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**EXHIBIT H (continued)**

**Supplementary Information – Balance Sheet as of July 1, 2016**

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Present Value of Benefits

1) Present value of retired employees' benefits*	\$509,200,726
2) Present value of terminated vested benefits	1,851,944
3) Present value of active employees' benefits	<u>117,334,780</u>
Total Present Value of Benefits	\$628,387,450

Assets (current and future)

1) Assets on hand (Actuarial Value)	\$128,256,838
2) Present value of future employee contributions	12,064,017
3) Present value of future employer contributions	<u>488,066,595</u>
Total Assets	\$628,387,450

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*\*Includes 1,729 retired members with an average monthly benefit of \$2,215 and 299 beneficiaries of deceased members with an average monthly benefit of \$1,767.*

**SECTION 3: Supplemental Information for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

**EXHIBIT I**

**Asset Allocation as of June 30, 2016**

	<b>General Employees</b>	<b>School Board</b>	<b>Total</b>
<b>1. Market value of assets as of July 1, 2015</b>	<b>\$1,153,715,000</b>	<b>\$131,133,000</b>	<b>\$1,284,848,000</b>
2. Asset adjustment	\$5,706,000	-\$5,706,000	\$0
3. Employer contributions	\$54,236,000	\$50,400,000	\$104,636,000
4. Employee contributions	<u>19,173,000</u>	<u>1,663,000</u>	<u>20,836,000</u>
5. Total contributions: (3) + (4)	\$73,409,000	\$52,063,000	\$125,472,000
6. Benefit payments and refunds	-\$115,631,000	-\$54,177,000	-\$169,808,000
7. Administrative expenses	<u>-964,000</u>	<u>-202,000</u>	<u>-1,166,000</u>
8. Total benefit payments and expenses: (6) + (7)	-\$116,595,000	-\$54,379,000	-\$170,974,000
9. Net cash flow: (5) + (8)	-\$43,186,000	-\$2,316,000	-\$45,502,000
10. Net investment return	6,551,000	765,000	7,316,000
<b>11. Market value of assets as of July 1, 2016: (1) + (2) + (9) + (10)</b>	<b>\$1,122,786,000</b>	<b>\$123,876,000</b>	<b>\$1,246,662,000</b>

**SECTION 3: Supplemental Information for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

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**EXHIBIT J**

**Definitions of Pension Terms**

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The following list defines certain technical terms for the convenience of the reader:

**Assumptions or Actuarial**

**Assumptions:**

The estimates on which the cost of the Plan is calculated including:

- (a) Investment return — the rate of investment yield that the Plan will earn over the long-term future;
- (b) Mortality rates — the death rates of employees and pensioners; life expectancy is based on these rates;
- (c) Retirement rates — the rate or probability of retirement at a given age;
- (d) Withdrawal rates — the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement.

**Normal Cost:**

The amount of contributions required to fund the benefit allocated to the current year of service.

**Actuarial Accrued Liability**

**For Actives:**

The value of all projected benefit payments for current members less the portion that will be paid by future normal costs.

**Actuarial Accrued Liability**

**For Pensioners:**

The single-sum value of lifetime benefits to existing pensioners. This sum takes account of life expectancies appropriate to the ages of the pensioners and the interest that the sum is expected to earn before it is entirely paid out in benefits.

**Unfunded Actuarial Accrued**

**Liability:**

The extent to which the actuarial accrued liability of the Plan exceeds the assets of the Plan. There is a wide range of approaches to paying off the unfunded actuarial accrued liability, from meeting the interest accrual only to amortizing it over a specific period of time.

**SECTION 3: Supplemental Information for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

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**Amortization of the Unfunded**

**Actuarial Accrued Liability:** Payments made over a period of years equal in value to the Plan's unfunded actuarial accrued liability.

**Investment Return:**

The rate of earnings of the Plan from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next.

**SECTION 4: Reporting Information for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

**EXHIBIT I**

**Summary of Actuarial Valuation Results**

The valuation was made with respect to the following data supplied to us:

1. Retired participants as of the valuation date (including 299 beneficiaries in pay status)		2,028
2. Participants inactive during year ended June 30, 2016 with vested rights		33
3. Participants active during the year ended June 30, 2016		738
Fully vested	413	
Partially vested	101	
Not vested	224	
4. Terminated participants with contributions remaining in the Plan		101

The actuarial factors as of the valuation date are as follows:

1. Total normal cost		\$4,425,332
2. Actuarial accrued liability		597,088,697
Retired participants and beneficiaries	\$509,200,726	
Inactive participants with vested rights*	1,851,944	
Active participants	86,036,027	
3. Actuarial value of assets (\$123,876,000 at market value)		128,256,838
4. Unfunded actuarial accrued liability		\$468,831,859

*\*Includes terminated participants with contributions remaining in the Plan.*

**SECTION 4: Reporting Information for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

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**EXHIBIT I (continued)**

**Summary of Actuarial Valuation Results**

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The determination of the recommended contribution is as follows:

1. Total normal cost	\$4,425,332
2. Expected employee contributions	<u>-1,655,343</u>
3. Employer normal cost: (1) + (2)	\$2,769,989
4. Payment on projected unfunded actuarial accrued liability	47,327,081
5. Total recommended contribution: (3) + (4), adjusted for timing	<u>\$51,941,748</u>
6. Projected employer contribution for FY 2018	\$53,500,000

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**SECTION 4: Reporting Information for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

**EXHIBIT II**

**History of City Contributions**

<b>Plan Year Ended June 30</b>	<b>Actuarially Determined Employer Contributions (ADEC)<sup>1</sup></b>	<b>Actual Contributions</b>	<b>Percentage Contributed</b>
2010	\$43,584,939	\$45,500,000	100.0%
2011	37,216,555	39,000,000 <sup>2</sup>	100.0%
2012	38,830,014	39,000,000	100.0%
2013	42,169,235	43,013,000	100.0%
2014	47,435,217	48,000,000	100.0%
2015	48,900,000	48,905,000	100.0%
2016	50,400,000	50,400,000	100.0%

<sup>1</sup>Prior to GASB 67/68, this amount was the Annual Required Contribution (ARC).

<sup>2</sup>Changed from \$47,333,000 per School Board.



**SECTION 4: Reporting Information for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

**EXHIBIT III**

**Schedule of Funding Progress**

<b>Actuarial Valuation Date</b>	<b>Actuarial Value of Assets (a)</b>	<b>Actuarial Accrued Liability (AAL) (b)</b>	<b>Unfunded AAL (UAAL) (b) - (a)</b>	<b>Funded Ratio (a) / (b)</b>	<b>Covered Payroll (c)</b>	<b>UAAL as a Percentage of Covered Payroll* [(b) - (a)] / (c)</b>
07/01/2007	\$133,058,241	\$643,301,615	\$510,243,374	20.68%	\$29,105,414	1,753.09%
07/01/2008	150,876,105	655,110,071	504,233,966	23.03%	28,272,933	1,783.45%
07/01/2009	112,295,208	644,788,188	532,492,980	17.42%	29,404,892	1,810.90%
07/01/2010	114,615,676	669,032,859	554,417,183	17.13%	26,304,364	2,107.70%
07/01/2011	113,553,224	646,444,083	532,890,859	17.57%	24,562,775	2,169.51%
07/01/2012	101,272,560	633,671,785	532,399,225	15.98%	22,914,238	2,323.44%
07/01/2013	115,509,000	648,514,030	533,005,030	17.81%	21,786,097	2,446.54%
07/01/2014	119,806,270	636,774,641	516,968,371	18.81%	20,072,615	2,575.49%
07/01/2015	126,601,083	623,424,181	496,823,098	20.31%	21,585,554	2,301.65%
07/01/2016	128,256,838	597,088,697	468,831,859	21.48%	21,359,262	2,194.98%

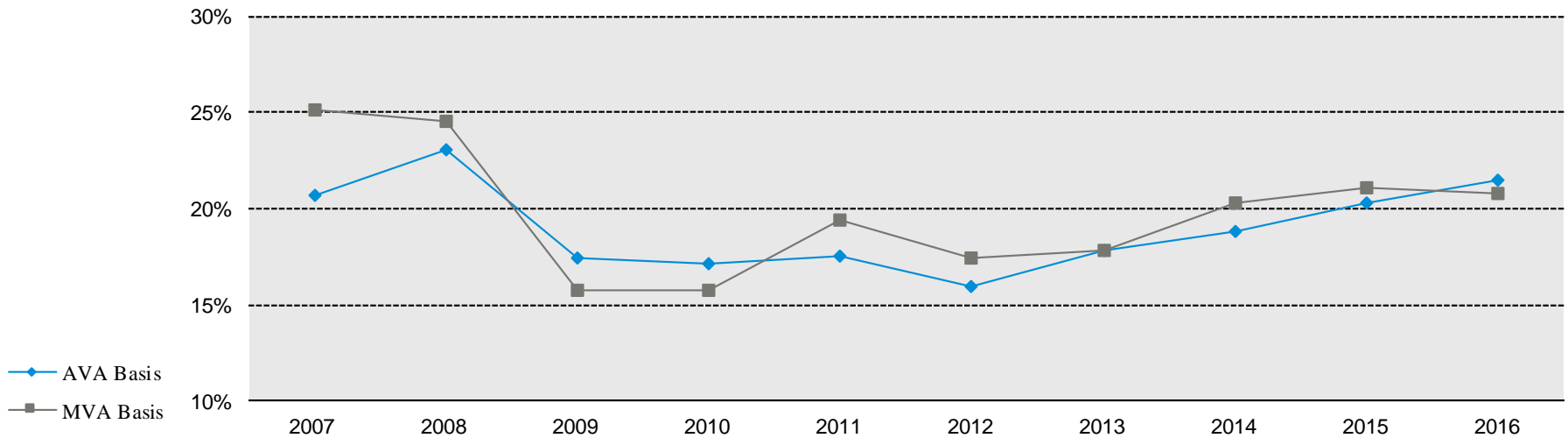
*\*Not less than zero*

**SECTION 4: Reporting Information for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

**EXHIBIT IV  
Funded Ratio**

A critical piece of information regarding the Plan's financial status is the funded ratio. This ratio compares the actuarial value of assets to the actuarial accrued liabilities of the Plan as calculated. High ratios indicate a well-funded plan with assets sufficient to cover the plan's actuarial accrued liabilities. Lower ratios may indicate recent changes to benefit structures, funding of the plan below actuarial requirements, poor asset performance, or a variety of other factors.

The chart below depicts a history of the funded ratios for this plan, on both an actuarial value (AVA) and a market value (MVA) basis.



**SECTION 4: Reporting Information for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

**EXHIBIT V**

**Actuarial Assumptions and Actuarial Cost Method**

**Rationale for Assumptions:** The information and analysis used in selecting each assumption that has a significant effect on this actuarial valuation is shown in the Experience Study Report for the 7½ year period ended June 30, 2011.

**Mortality Rates:**

*Healthy:* RP-2000 Combined Healthy Mortality Table with sex-distinct rates

*Disabled:* RP-2000 Disabled Retiree Mortality Table with sex-distinct rates, set back one year for males only

These mortality tables were determined to contain provision appropriate to reasonably reflect future mortality improvement, based on a 7½ year review of mortality experience for the 2003-2011 period. The mortality assumption will be assessed again at the time of the next review, and further adjustment or expected improvements in life expectancy will be made if warranted.

**Mortality and Disability Rates before Retirement:**

Age	Rate (%)					
	Healthy Mortality		Ordinary Disability*		Withdrawal**	
	Male	Female	Male	Female		
20	0.03	0.02	0.02	0.03	18.00	
25	0.04	0.02	0.03	0.04	18.00	
30	0.04	0.03	0.04	0.07	12.00	
35	0.08	0.05	0.05	0.12	10.00	
40	0.11	0.07	0.07	0.17	8.50	
45	0.15	0.11	0.12	0.26	8.00	
50	0.21	0.17	0.20	0.41	0.00	
55	0.36	0.27	0.34	0.69	0.00	
60	0.67	0.51	0.51	0.84	0.00	

\* Occupational disability rates are 10% of the ordinary disability rates.

\*\* Withdrawal rates do not apply beyond age 50.

**SECTION 4: Reporting Information for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

**Retirement Rates:**

<b>Less than 30 Years of Service</b>		<b>30 or more Years of Service</b>	
<b>Age</b>	<b>Rate</b>	<b>Age</b>	<b>Rate</b>
50-52	2.0%	50-51	15.0%
53-54	3.0	52-53	20.0
55-59	5.0	54	25.0
60	20.0	55-59	30.0
61-64	13.0	60	50.0
65-67	20.0	61-64	23.0
68-69	10.0	65	50.0
70	100.0	66-69	30.0
		70	100.0

**Retirement Age for Inactive Vested Participants:** 65

**Unknown Data for Participants:** Participants that terminate with less than five years of service are assumed non-vested unless told otherwise.

**Percent Married:** 75%

**Age of Spouse:** Females are assumed to be three years younger than their spouses.

**Net Investment Return:** 7.50%; the investment return rate is assumed to be net of investment and administrative expenses.

The net investment return assumption was chosen by the Pension Fund's Board of Trustees, with input from the actuary. This assumption is a long-term estimate derived from historical data, current and recent market expectations, and professional judgment. As part of the analysis, a building block approach was used that reflects inflation expectations and anticipated risk premiums for each of the portfolio's asset classes, as well as the Plan's target asset allocation.

**SECTION 4: Reporting Information for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

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<b>Salary Increases:</b>	<b>Age</b>	<b>Rate (%)</b>
	Under 30	9.75
	30-43	7.75
	44	8.00
	45	6.50
	46-59	6.25
	60 & over	4.00

*Above rates include 2.75% inflation and 0.75% productivity.*

**Vacation Pay Adjustment:** Retirement benefits are increased by 4.00% to reflect vacation pay.

**Cost-of-Living Adjustment:** 3.00%, compounded annually.

**Refunds of Employee Contributions for Terminated Vested Participants:** 50% of employee contribution balances.

**Actuarial Value of Assets:** Market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized over a five-year period, further adjusted, if necessary, to be within 20% of the market value.  
The actuarial value of assets was reset to the market value of assets as of July 1, 2013.

**Actuarial Cost Method:** Entry Age Normal Actuarial Cost Method. Entry Age is the age at the time the participant commenced employment. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are allocated by salary.

**Changes in Assumptions:** There have been no changes in actuarial assumptions or methods since the last valuation.

**SECTION 4: Reporting Information for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

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**EXHIBIT VI**

**Summary of Plan Provisions**

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This exhibit summarizes the major provisions of the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

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**Plan Year:** July 1 through June 30

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**Normal Pension:**

<i>Eligibility</i>	A participant may retire at age 60 after completing 10 years of service.
<i>Monthly Amount</i>	2.5% of average monthly salary for each year of credited service. This amount cannot be less than \$17 per month for each year of service, and is capped at 80% of average monthly salary.  Average monthly salary is defined as the highest average monthly base compensation over any 36-month period.
<i>Normal Form of Payment</i>	75% joint and survivor annuity (no reduction in benefit for providing survivor coverage)

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**Early Pension:**

<i>Service Requirement</i>	10 years credited service
<i>Monthly Amount</i>	Normal pension monthly amount reduced by 1/2 of 1% per month for the first 60 months and by 1/4 of 1% per month for the remaining months by which age at retirement is less than 60. More favorable early retirement adjustments may apply to participants in prior plans.  Unreduced early retirement is available with 30 years of credited service.

**SECTION 4: Reporting Information for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

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**Disability:**

*Service Requirement*

5 years credited service for non-job-related disability. None for job-related disability.

*Monthly Amount*

Normal pension based on service accrued and final average salary at disability, payable immediately; cannot be less than 50% of average monthly salary. This amount is payable until attainment of normal retirement age at which time the benefit is recalculated to value years while disabled as years of service.

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**Vesting Schedule:**

An employee who terminates employment may receive a percentage of his accrued benefit payable at age 60 as determined below:

<u>Completed Years of Service</u>	<u>Percentage Vested*</u>
Less than 5	0%
5	25
6	30
7	35
8	40
9	45
10 or more	100

\* A participant is always 100% vested in his/her contributions to the Plan.

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**Termination:**

A participant terminating employment may elect a refund of his own contributions with interest. A refund will cause the forfeiture of any other vested accrued benefit from the Plan.

**SECTION 4: Reporting Information for the City of Atlanta General Employees' Pension Fund Employees of the Atlanta Board of Education**

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**Death Benefits:** If a participant dies prior to his attainment of eligibility for retirement, a lump sum of his own contributions with interest is payable to his beneficiary or estate.

If an active participant who is eligible to retire, or a retired participant, dies, 75% of the accrued pension benefit is payable to the beneficiary. Eligible beneficiaries are the spouse or unmarried children under 23. If the spouse is more than five years younger than the participant, the amount payable is reduced by 2% per year by which the spouse is younger.

**Credited Service:** Service is credited for employment as an employee of the Atlanta Board of Education or as a general employee of the City of Atlanta. Additional credit is granted for accumulated sick leave and for other prior service as specified in the plan.

**Participation:** All employees of the Atlanta Board of Education who are not covered by the Georgia Teachers' Retirement System.

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<b>Employee Contributions:</b>	<u>Employee</u>	<u>% of Base Salary</u>
	Unmarried employees without dependents	7%
	Unmarried employees with dependent minor children	8%
	Married employees	8%

*Employee contributions earn 5% interest each year.*

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**Cost-of-Living Provision:** Benefits are adjusted annually on January 1 of each year based on the change in the Consumer Price Index from November 1 through October 31 of the preceding year. Such annual adjustment cannot exceed 3%.

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**Changes in Plan Provisions:** There have been no changes in plan provisions since the last valuation.