

City of Atlanta General Employees' Pension Fund

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
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 (such as the end of an amortization period); 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.

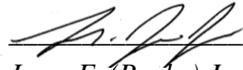
We hereby certify that the City of Atlanta General Employees' Pension Fund for the General Employees of the City has been funded in conformity with the minimum funding standards specified in Code Section 47-20-10 of the Official Code of Georgia Annotated known as the Public Pension Funds Standards Law. 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.

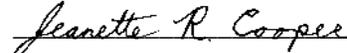
Sincerely,

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

Purpose

This report has been prepared by Segal Consulting to present a valuation of the City of Atlanta General Employees' Pension Fund 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 year period July 1, 2017 to June 30, 2018 (FY 2018). The recommended contribution is adjusted for interest to the middle of the fiscal period and satisfies the minimum funding standards under Georgia law Code Section 47-20-10.
2. The plan receives employee contributions of 12% or 13% of base salary (8% for employees hired after October 31, 2011). The City contributes the recommended contribution amount which is net of employee contributions. The recommended contribution amount is composed of the employers normal cost and a payment to amortize the Unfunded Actuarial Liability (UAAI) over 24 years. The recommended contribution is actuarially determined as a level percentage of payroll and will increase 3.5% annually if all assumptions are met.

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3. The City's recommended contribution for FY '18 is \$51.9 million, or 30.3% of projected payroll. This amount is a decrease of about \$1.9 million from the prior valuation's cost and is attributable to both a gain on the actuarial value of assets and cost of living adjustments. This was partially offset by the scheduled increase in the amortization payment of the unfunded liability and salary increases greater than expected. See Section 2, Charts 10, 13 and 15 for additional details.
4. The plan's Unfunded Actuarial Accrued Liability (UAAL) decreased by about \$38.6 million from approximately \$790.7 million to about \$752.1 million (see Section 3, Exhibit G for details). Total plan contributions during the fiscal period July 1, 2015 to June 30, 2016 were not sufficient to cover the normal cost plus interest on the UAAL. Therefore, the UAAL increased by about \$3.4 million due to the normal cost and interest being greater than the contributions. The UAAL decreased about \$22.5 million due to favorable demographic experience and by about \$19.4 million due to investment performance on the actuarial value of assets greater than assumed.
5. The market value of assets earned 0.49% over the period July 1, 2015 through June 30, 2016. To minimize the impact of market fluctuations on the City'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 9.32% on an annualized basis, compared with the valuation assumption of 7.50%, generating an investment gain of about \$19.4 million.
6. The funded ratio for this plan, based on the actuarial value of assets, increased from 57.8% as of July 1, 2015 to 60.4% as of July 1, 2016. On a market value basis, the funded percentage decreased from 61.5% to 59.1% over the same period. The funded ratio on a market value basis decreased due to the investment return of 0.49% for the 2015-2016 year. The last ten years of funding progress are shown in Exhibit III of Section 4.
7. 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% change in the current year's actuarial value of assets would produce about a \$7.7 million change in the recommended contribution level.
8. As indicated in Section 2, Subsection B of this report, the total unrecognized investment loss as of June 30, 2016 is \$24.1 million. This investment loss will be recognized in the determination of the actuarial value of assets for funding purposes in the next few years, to the extent it is not offset by recognition of investment gains derived from future experience. This implies that earning the assumed rate of investment return of 7.50% per year (net of expenses) on a

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

market value basis will result in investment losses on the actuarial value of assets in the next few years. Therefore, if the actual market return is equal to the assumed 7.50% rate and all other actuarial assumptions are met, the contribution requirements would increase in each of the next few years.

9. 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 City's Finance Department 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 City's Finance Department on March 29, 2017.
10. 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

Summary of Key Valuation Results

Fiscal Year	2017/2018	2016/2017
Contributions for fiscal year beginning July 1:		
1. Normal cost	\$19,756,319	\$18,818,323
2. Expected employee contributions	18,228,401	16,705,512
3. Payment to amortize unfunded liability	<u>46,838,935</u>	<u>48,036,689</u>
4. Total City recommended annual contribution, adjusted for timing (1-2+3)¹	\$51,902,994	\$53,815,973
5. Projected payroll ²	171,106,545	151,624,955
6. City contribution as a percentage of projected payroll (4/5)	30.3%	35.5%
Plan Year	2016	2015
Funding elements for plan year beginning July 1:		
7. Actuarial value of assets	\$1,146,863,597	\$1,084,009,929
8. Market value of assets	1,122,786,000	1,153,715,000
9. Actuarial accrued liability	1,898,995,163	1,874,709,577
10. Unfunded actuarial accrued liability (9 – 7)	752,131,566	790,699,648
11. Funded ratio - actuarial basis (7/9)	60.4%	57.8%
12. Funded ratio - market basis (8/9)	59.1%	61.5%
Demographic data for plan year beginning July 1:		
13. Number of retired participants and beneficiaries	3,874	3,834
14. Number of terminated vested participants ³	275	241
15. Number of active participants	3,452	3,307
16. Covered payroll	\$165,320,333	\$146,497,541
17. Average payroll	47,891	44,299

¹As of valuation date; adjusted for timing

²Projected payroll for FY '18 based on covered payroll as of July 1, 2016 increased by 3.5% to approximate budgeted payroll.

³Includes 204 and 124 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

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

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

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

Period Ended	Active Participants	Vested Terminated Participants ¹	Retired Participants and Beneficiaries	Ratio of Non-Actives to Actives
<u>December 31:</u>				
2006	3,511	201	3,235	0.98
2007 ²	4,261	92	3,308	0.80
2008	3,414	116	3,504	1.06
<u>June 30:</u>				
2010	3,261	129	3,605	1.15
2011	3,093	124	3,765	1.26
2012	3,159	85	3,826	1.24
2013	3,171	129	3,790	1.24
2014	3,243	182	3,805	1.23
2015	3,307	241	3,834	1.23
2016	3,452	275	3,874	1.20

¹ Excludes participants receiving Workers' Compensation benefits and includes terminated participants due a refund of employee contributions.

² Excludes 511 new active participants who transferred from the defined contribution plan.

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

Active Participants

Plan costs are affected by the age, years of service and payroll of active participants. In this year's valuation, there were 3,452 active participants with an average age of 46.8, average years of service of 11.2 years and average payroll of \$47,891. The 3,307 active participants in the prior valuation had an average age of 47.3, average service of 12.0 years and average payroll of \$44,299.

Inactive Participants

In this year's valuation, there were 71 participants with a vested right to a deferred or immediate vested benefit.

In addition, there were 204 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

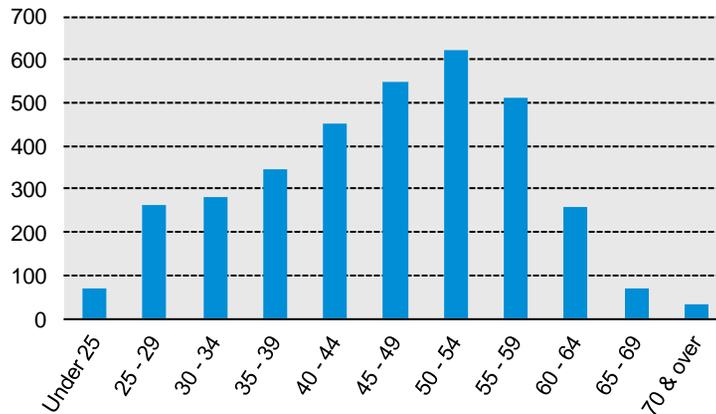
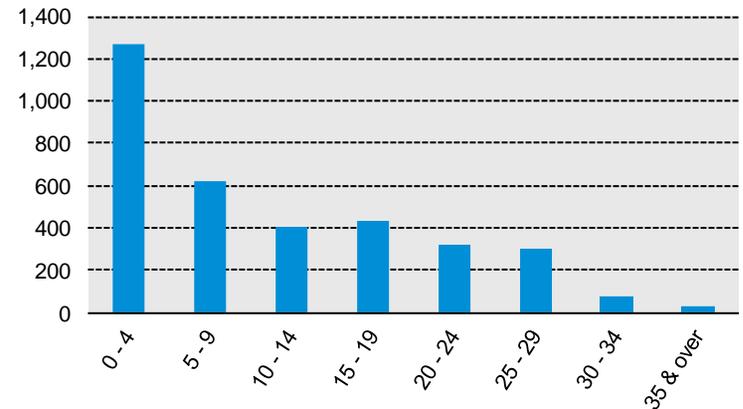


CHART 3
Distribution of Active Participants by Years of Service as of June 30, 2016



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

Retired Participants and Beneficiaries

As of June 30, 2016, 3,103 retired participants and 771 beneficiaries were receiving total monthly benefits of \$9,362,949. For comparison, in the previous valuation, there were 3,065 retired participants and 769 beneficiaries receiving monthly benefits of \$9,150,039. There were eight retired participants in suspended status this year and nine in the prior valuation.

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

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

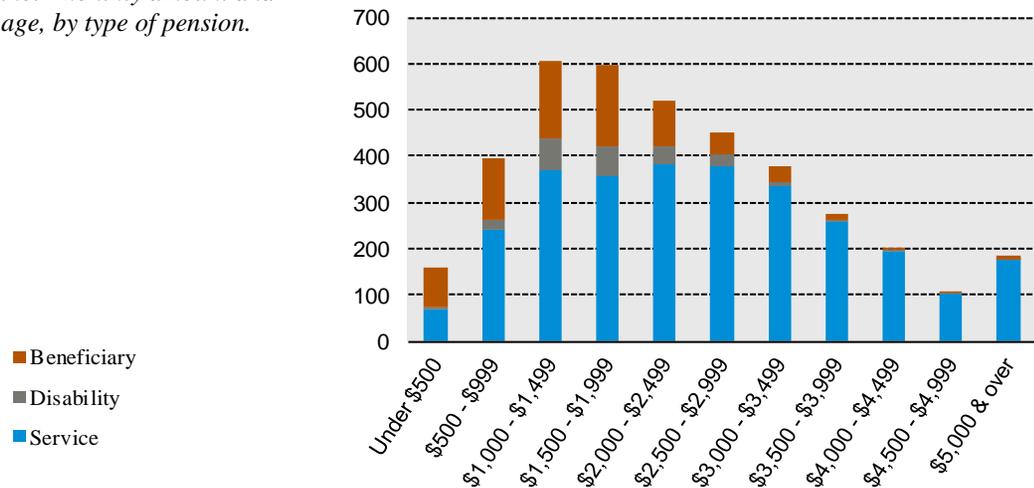
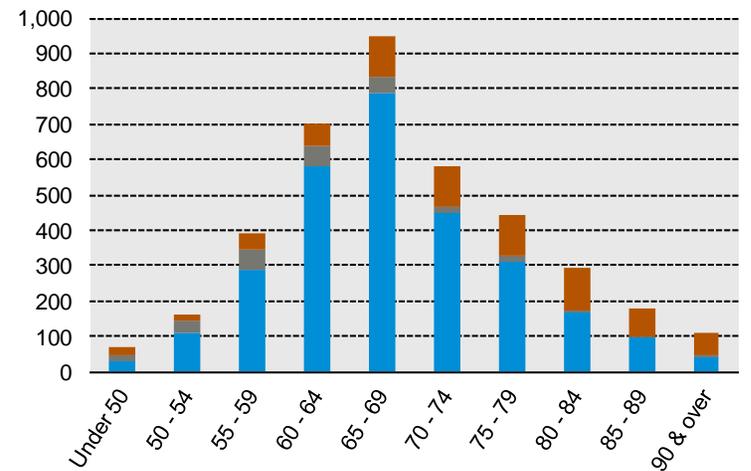


CHART 5
Distribution of Retired Participants and Beneficiaries by Type and by Age as of June 30, 2016



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

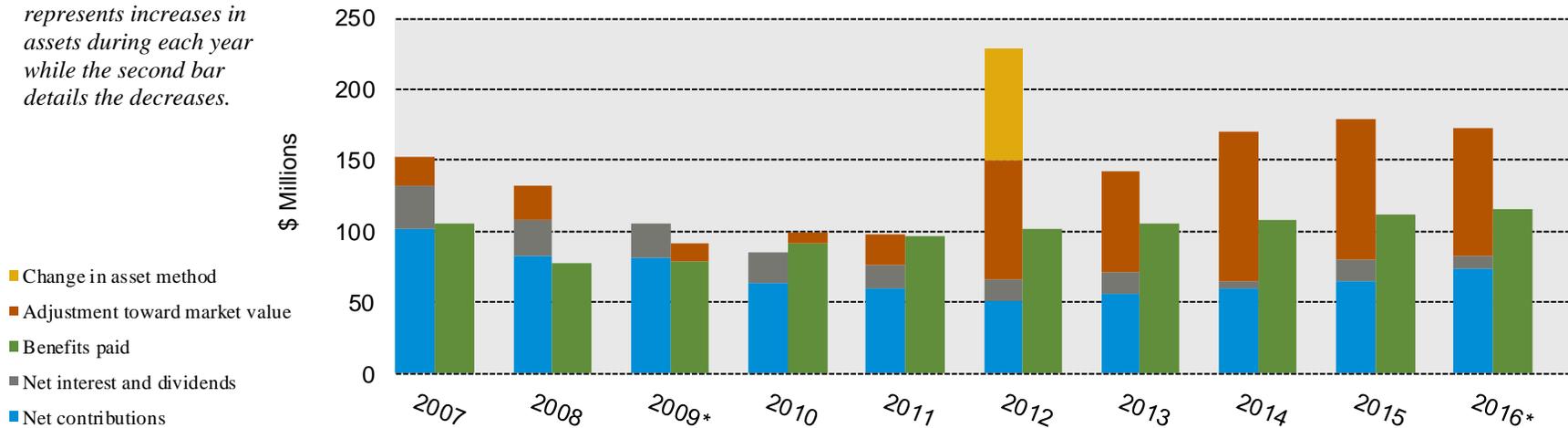
B. FINANCIAL INFORMATION

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

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 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 actuarial value of assets was reset to equal the market value of assets as of July 1, 2012 with future gains and losses after that date amortized on a straight-line basis over five years.

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			\$1,122,786,000
2. Calculation of unrecognized return	<u>Original Amount*</u>	<u>Unrecognized Return**</u>	
(a) Year ended June 30, 2016	-\$79,572,275	-\$63,657,820	
(b) Year ended June 30, 2015	-29,016,925	-17,410,155	
(c) Year ended June 30, 2014	105,310,725	42,124,290	
(d) Year ended June 30, 2013	74,330,440	<u>14,866,088</u>	
(e) Total unrecognized return			-24,077,597
3. Preliminary actuarial value: (1) - (2e)			1,146,863,597
4. Adjustment to be within 20% corridor			0
5. Final actuarial value of assets as of June 30, 2016: (3) + (4)			<u>\$1,146,863,597</u>
6. Actuarial value as a percentage of market value: (5) ÷ (1)			102.1%
7. Amount deferred for future recognition: (1) - (5)***			-\$24,077,597

*Total return minus expected return on a market value basis

**Recognition at 20% per year over five years

***Deferred return as of June 30, 2016 recognized in each of the next four years:

(a) Amount recognized on June 30, 2017	\$14,210,393	(c) Amount recognized on June 30, 2019	-21,717,840
(b) Amount recognized on June 30, 2018	-655,695	(d) Amount recognized on June 30, 2020	-15,914,455

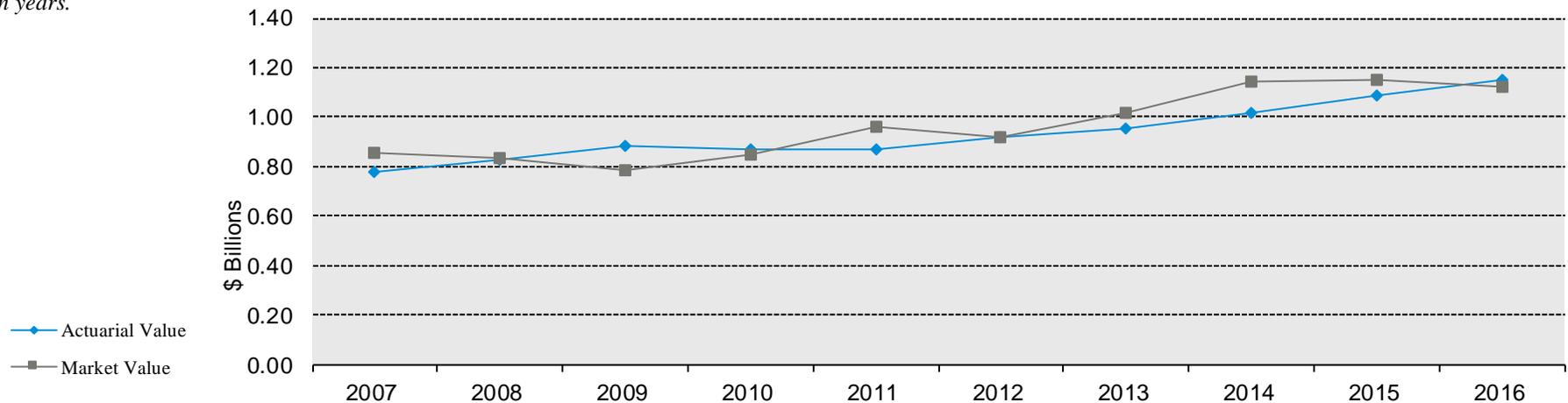
SECTION 2: Valuation Results for the City of Atlanta General Employees' Pension Fund

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

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 \$41,938,415, comprised of a gain of \$19,438,273 from investments and a gain of \$22,500,142 from all other sources. The net experience variation from individual sources other than investments was 1.2% 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.

CHART 9
Actuarial Experience for Year Ended June 30, 2016

1. Net gain from investments*	\$19,438,273
2. Net gain from other experience**	<u>22,500,142</u>
3. Net experience gain: (1) + (2)	\$41,938,415

* Details in Chart 10

** Details in Chart 13

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

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 9.32%.

Since the actual return for the year was greater than the assumed return, the 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.

CHART 10
Actuarial Value Investment Experience for Year Ended June 30, 2016

1. Actual return	\$99,369,668
2. Average value of assets	1,065,751,929
3. Actual rate of return: (1) ÷ (2)	9.32%
4. Assumed rate of return	7.50%
5. Expected return: (2) x (4)	\$79,931,395
6. Actuarial gain: (1) – (5)	<u>\$19,438,273</u>

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

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.

As justified in the last completed experience study, 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 ¹	\$29,605,185	2.82%	\$21,244,208	2.02%	--	--	\$50,849,393	4.78%	\$101,463,275	9.06%
2008 ²	25,652,519	3.30	24,473,398	3.15	--	--	50,125,917	6.45	-27,014,531	-3.15
2009 ³	24,709,202	2.85	-12,896,345	-1.49	--	--	11,812,857	1.36	-90,617,329	-10.39
2010	21,704,665	2.50	-7,858,669	-0.90	--	--	13,845,996	1.60	96,241,481	12.53
2011	16,335,000	1.93	22,344,811	2.63	--	--	38,679,811	4.56	149,657,731	17.98
2012 ⁴	15,091,000	1.79	5,948,393	0.70	\$78,643,853	9.33%	21,039,393	2.49	4,967,000	0.53
2013	14,901,000	1.67	71,410,648	7.99	--	--	86,311,648	9.66	145,776,000	16.32
2014	4,964,000	0.53	105,221,508	11.31	--	--	110,185,508	11.84	179,568,000	18.14
2015	14,471,000	1.46	99,800,773	10.05	--	--	114,271,773	11.51	55,130,000	4.91
2016 ⁵	<u>9,378,000</u>	0.88	<u>89,991,668</u>	8.44	<u>--</u>	<u>--</u>	<u>99,369,668</u>	9.32	<u>5,587,000</u>	0.49
Total	\$176,811,571		\$419,680,393		\$78,643,853		\$596,491,964		\$620,758,627	
							Five-year average return	9.12%		7.70%
							Ten-year average return	6.53%		6.53%

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

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

²There was a \$25,350,000 correction to the market value at July 1, 2007, per Auditors.

³There was a \$37,444,215 correction to the market value at July 1, 2008, per Auditors.

⁴Actuarial value investment return does not include impact of asset method change.

⁵There was a \$5,706,000 adjustment to the market value reflected at July 1, 2016 per Auditors.

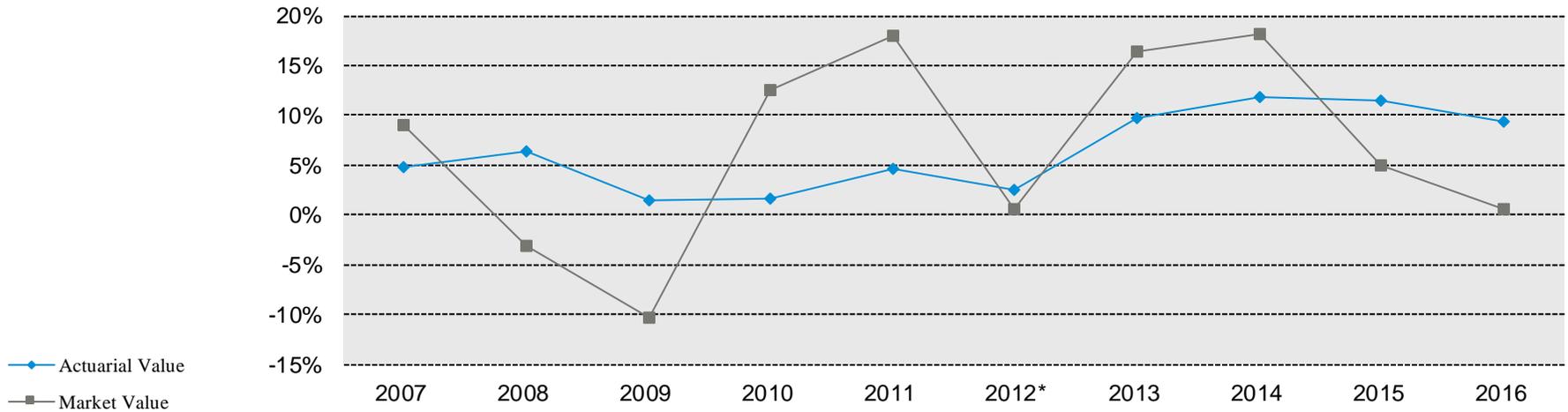
SECTION 2: Valuation Results for the City of Atlanta General Employees' Pension Fund

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 before method change.*

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

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 \$22,500,142, which is 1.2% 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.

CHART 13

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

1. Gain due to cost-of-living increases smaller than expected	\$36,125,014
2. Loss due to salary increases for continuing actives greater than expected	-41,256,194
3. Net miscellaneous gain including mortality, new entrants, turnover and other demographic experience	<u>27,631,322</u>
4. Total	\$22,500,142

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

D. RECOMMENDED CONTRIBUTION

The amount of annual contribution required to fund the Plan is comprised of an employer normal cost payment and a payment on the unfunded actuarial accrued liability. This total amount is then divided by the projected payroll for active members to determine the funding rate of 30.3% of payroll.

The recommended contribution is based on a closed level percentage of payroll 30-year amortization of the unfunded actuarial accrued liability as adopted by the City beginning with the July 1, 2010 valuation. As of July 1, 2016, there are 24 years remaining on this schedule.

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**

	Fiscal Year Ending June 30	
	2018	2017
1. Total normal cost	\$19,756,319	\$18,818,323
2. Expected employee contributions	<u>-18,228,401</u>	<u>-16,705,512</u>
3. Employer normal cost: (1) + (2)	\$1,527,918	\$2,112,811
4. Actuarial accrued liability	1,898,995,163	1,874,709,577
5. Actuarial value of assets	1,146,863,597	1,084,009,929
6. Unfunded actuarial accrued liability: (4) - (5)	\$752,131,566	\$790,699,648
7. Payment on projected unfunded actuarial accrued liability	46,838,935	48,036,689
8. Total recommended contribution: (3) + (7), adjusted for timing*	<u>\$51,902,994</u>	<u>\$53,815,973</u>
9. Projected payroll	\$171,106,545	\$151,624,955
10. Total recommended contribution as a percentage of projected payroll: (8)/(9)	30.3%	35.5%

**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

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.

CHART 15

Reconciliation of Recommended Contribution for Fiscal Year 2017 to 2018

Recommended Contribution for Fiscal Year 2017	\$53,815,973
Effect of expected change in amortization payment due to payroll growth	1,804,204
Effect of contributions more than recommended contribution	-286,872
Effect of investment gain	-1,299,019
Effect of other gains and losses on accrued liability	-1,503,637
Effect of change in normal cost	<u>-627,655</u>
Total change	<u>-\$1,912,979</u>
Recommended Contribution for Fiscal Year 2018	\$51,902,994

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

E. STATE MINIMUM REQUIREMENTS

Under Georgia minimum funding requirements, the 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.

Prior to the 2005 valuation, the Plan had adopted the policy of amortizing the unfunded actuarial liability as a level percentage of payroll over a closed 40-year period from January 1, 1979. At January 1, 2005, the amortization was reset to a closed 20-year period. Effective July 1, 2008, the amortization period was changed to an open 30-year period and effective July 1, 2010, the amortization period was changed to a closed 30-year period. 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

EXHIBIT A

Table of Plan Coverage

Category	Year Ended June 30		Change From Prior Year
	2016	2015	
Active participants in valuation:			
Number	3,452	3,307	4.4%
Average age	46.8	47.3	N/A
Average years of service	11.2	12.0	N/A
Total payroll	\$165,320,333	\$146,497,541	12.8%
Average payroll	47,891	44,299	8.1%
Account balances	125,158,991	121,370,179	3.1%
Total active vested participants	2,011	2,201	-8.6%
Vested terminated participants	71	117	-39.3%
Retired participants:			
Number in pay status	2,864	2,821	1.5%
Average age	68.4	68.2	N/A
Average monthly benefit	\$2,689	\$2,660	1.1%
Number in suspended status	8	9	-11.1%
Disabled participants:			
Number in pay status	239	244	-2.0%
Average age	62.2	61.5	N/A
Average monthly benefit	\$1,841	\$1,833	0.4%
Beneficiaries in pay status:			
Number in pay status	771	769	0.3%
Average age	73.8	74.5	N/A
Average monthly benefit	\$1,585	\$1,561	1.5%
Terminated participants with contributions remaining in the Plan	204	124	64.5%

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

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	69	69	--	--	--	--	--	--	--	--
	\$37,388	\$37,388	--	--	--	--	--	--	--	--
25 - 29	263	242	19	2	--	--	--	--	--	--
	41,603	41,531	\$42,993	\$37,130	--	--	--	--	--	--
30 - 34	283	184	68	29	2	--	--	--	--	--
	43,683	42,130	47,941	43,791	\$40,222	--	--	--	--	--
35 - 39	345	170	105	54	16	--	--	--	--	--
	45,127	43,156	47,185	45,590	51,006	--	--	--	--	--
40 - 44	452	173	100	63	87	28	1	--	--	--
	46,421	41,197	47,180	48,879	50,909	\$56,467	\$47,795	--	--	--
45 - 49	546	156	110	74	80	83	41	2	--	--
	48,938	42,542	48,781	47,576	51,466	56,573	55,991	\$44,371	--	--
50 - 54	622	141	90	61	98	93	117	22	--	--
	49,854	41,489	47,232	46,476	50,116	56,776	56,703	56,695	--	--
55 - 59	511	87	75	74	83	65	96	29	2	--
	51,962	47,042	45,681	44,952	55,919	57,149	58,829	53,142	\$81,416	--
60 - 64	259	42	35	34	50	35	39	12	8	4
	51,643	43,642	50,577	45,237	48,182	53,611	60,769	63,145	72,868	\$59,535
65 - 69	71	7	16	11	14	8	2	6	4	3
	53,417	46,065	44,528	48,179	63,034	63,490	46,088	61,665	58,369	47,223
70 & over	31	--	1	6	5	7	4	4	1	3
	46,302	--	37,435	39,412	39,739	50,134	49,387	53,511	49,126	50,367
Total	3,452	1,271	619	408	435	319	300	75	15	10
	\$47,891	\$42,156	\$47,354	\$46,255	\$51,692	\$56,448	\$57,617	\$56,252	\$68,558	\$53,091

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

EXHIBIT C

Reconciliation of Participant Data

	Active Participants	Vested Former Participants¹	Disabled	Retired Participants	Beneficiaries	Total
Number as of July 1, 2015	3,307	117	244	2,821	769	7,258
New participants ²	484	N/A	N/A	N/A	N/A	484
Terminations – with vested rights	-31	31	0	0	0	0
Terminations – without vested rights	-98	N/A	N/A	N/A	N/A	-98
Retirements	-123	-3	N/A	126	N/A	0
New disabilities	-3	0	3	N/A	N/A	0
Return to work	6	-6	0	0	N/A	0
Died	-5	0	-8	-88	-39	-140
New beneficiaries	0	0	0	0	42	42
Lump sum payoffs	-91	-66	0	0	0	-157
Rehire	6	0	N/A	0	N/A	6
Certain period expired	N/A	N/A	0	0	0	0
Data adjustments ³	<u>0</u>	<u>-2</u>	<u>0</u>	<u>5</u>	<u>-1</u>	<u>2</u>
Number as of July 1, 2016	3,452	71	239	2,864	771	7,397

¹Excludes terminated participants with contributions remaining in the plan.

²167 of the 484 new active participants included in the data for the first time this year have over one year of service.

³The following data adjustments were made per the TPA:

Five healthy retirees were included for the first time with this valuation.

One beneficiary was verified as non-participant and therefore removed from the data this year.

Two terminated vested participants were verified as refunded after the valuation date and therefore removed from the data this year.

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

EXHIBIT D

Summary Statement of Income and Expenses on an Actuarial Value Basis

	Year Ended June 30, 2016	Year Ended June 30, 2015
Net assets at actuarial value at the beginning of the year	\$1,084,009,929	\$1,016,486,156
Contribution income:		
Employer contributions	\$54,236,000	\$48,015,000
Employee contributions	<u>19,173,000</u>	<u>16,975,000</u>
Net contribution income	73,409,000	64,990,000
Adjustment	5,706,000	0
Investment income:		
Interest, dividends and other income	\$13,466,000	\$19,461,000
Recognition of capital appreciation	89,991,668	99,800,773
Less investment and administrative fees	<u>-4,088,000</u>	<u>-4,990,000</u>
Net investment income	<u>99,369,668</u>	<u>114,271,773</u>
Total income available for benefits	\$178,484,668	\$179,261,773
Less benefit payments	-\$115,631,000	-\$111,738,000
Change in actuarial value of assets	\$62,853,668	\$67,523,773
Net assets at actuarial value at the end of the year	\$1,146,863,597	\$1,084,009,929

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

EXHIBIT E

Summary Statement of Income and Expenses on a Market Value Basis

	Year Ended June 30, 2016	Year Ended June 30, 2015
Net assets at market value at the beginning of the year	\$1,153,715,000	\$1,145,333,000
Contribution income:		
Employer contributions	\$54,236,000	\$48,015,000
Employee contributions	<u>19,173,000</u>	<u>16,975,000</u>
Net contribution income	73,409,000	64,990,000
Adjustment	5,706,000	0
Investment income:		
Interest, dividends and other income	\$13,466,000	\$19,461,000
Asset appreciation	-3,791,000	40,659,000
Less investment and administrative fees	<u>-4,088,000</u>	<u>-4,990,000</u>
Net investment income	<u>5,587,000</u>	<u>55,130,000</u>
Total income available for benefits	\$84,702,000	\$120,120,000
Less benefit payments	-\$115,631,000	-\$111,738,000
Change in market value of assets	-\$30,929,000	\$8,382,000
Net assets at market value at the end of the year	\$1,122,786,000	\$1,153,715,000

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

EXHIBIT F

Development of the Fund Through June 30, 2016

Year Ended June 30	Employer Contributions	Employee Contributions	Net Investment Return¹	Benefit Payments	Actuarial Value of Assets at End of Year
2007 ²	\$84,672,851	\$17,284,877	\$50,849,394	\$105,632,578	\$749,352,366 ³
2008	70,334,827	12,003,484	50,125,917	77,432,362	829,734,232 ⁴
2009	69,990,896	10,745,574	11,812,857	78,718,820	881,008,954
2010	51,761,766	11,616,599	13,845,996	91,327,372	866,905,943
2011	46,078,000	13,230,000	38,679,811	96,095,000	868,798,754
2012	35,237,000	15,142,000	99,683,246 ⁵	101,375,000	917,486,000
2013	38,694,000	17,322,000	86,311,648	104,849,000	954,964,648
2014	42,145,000	17,366,000	110,185,508	108,175,000	1,016,486,156
2015	48,015,000	16,975,000	114,271,773	111,738,000	1,084,009,929
2016	54,236,000	19,173,000	105,075,668 ⁶	115,631,000	1,146,863,597

¹Net of investment fees and administrative expenses

²The 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.

³Before Auditor correction of \$25,350,000

⁴Before Auditor correction of \$37,444,215

⁵Includes effect of asset method change of \$78,643,853

⁶Includes \$5,706,000 asset adjustment

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

EXHIBIT G

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

1. Unfunded actuarial accrued liability at beginning of year		\$790,699,648
2. Normal cost at beginning of year		18,818,323
3. Total contributions		-73,409,000
4. Interest		
(a) For whole year on (1) + (2)	\$60,713,848	
(b) For half year on (3)	<u>-2,752,838</u>	
(c) Total interest		<u>57,961,010</u>
5. Expected unfunded actuarial accrued liability		\$794,069,981
6. Change due to experience gain		<u>-41,938,415</u>
7. Unfunded actuarial accrued liability at end of year [(5) + (6)]		<u>\$752,131,566</u>

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

EXHIBIT H

Supplemental 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.

	Benefit Information Date	
	July 1, 2016	July 1, 2015
Actuarial present value of vested accumulated plan benefits:		
Participants currently receiving payments	\$1,325,373,642	\$1,311,140,331
Other vested benefits	<u>357,197,143</u>	<u>299,645,441</u>
Total vested benefits (PVVB)	1,682,570,785	1,610,785,772
Actuarial present value of non-vested accumulated plan benefits	<u>67,635,199</u>	<u>56,965,594</u>
Total actuarial present value of accumulated plan benefits (PVAB)	<u>1,750,205,984</u>	<u>1,667,751,366</u>
Actuarial Value of Assets (AVA)	\$1,146,863,597	\$1,084,009,929
Market Value of Assets (MVA)	\$1,122,786,000	\$1,153,715,000
Funded Ratios (PVVB):		
AVA as a percentage of present value of vested accumulated benefits	68.2%	67.3%
MVA as a percentage of present value of vested accumulated benefits	66.7%	71.6%
Funded Ratios (PVAB):		
AVA as a percentage of present value of accumulated benefits	65.5%	65.0%
MVA as a percentage of present value of accumulated benefits	64.2%	69.2%

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

EXHIBIT H (continued)

Supplemental Information – Actuarial Present Value of Accumulated Plan Benefits

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:

Factors	Change in Actuarial Present Value of Accumulated Plan Benefits
Benefits accumulated, net experience gain or loss, changes in data	\$77,340,428
Benefits paid	-115,631,000
Interest	<u>120,745,190</u>
Total	<u>\$82,454,618</u>

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

EXHIBIT H (continued)

Supplemental Information – Balance Sheet as of July 1, 2016

Present Value of Benefits

1) Present value of retired employees' benefits*	\$1,325,373,642
2) Present value of active employees' benefits	700,434,971
3) Present value of terminated vested benefits**	<u>8,342,150</u>
Total Present Value of Benefits	\$2,034,150,763

Assets (Current and Future)

1) Assets on hand (actuarial value)	\$1,146,863,597
2) Present value of future employee contributions	130,938,550
3) Present value of future city contributions	<u>756,348,616</u>
Total Assets	\$2,034,150,763

**3,874 retired members (including 771 beneficiaries in pay status) with an average monthly benefit of \$2,417*

***Includes balances for terminated participants with employee contributions remaining in the Plan.*

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

EXHIBIT I

Asset Allocation as of June 30, 2016

	General Employees	School Board	Total
1. Market value of assets as of July 1, 2015	\$1,153,715,000	\$131,133,000	\$1,284,848,000
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
11. Market value of assets as of July 1, 2016: (1) + (2) + (9) + (10)	\$1,122,786,000	\$123,876,000	\$1,246,662,000

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

EXHIBIT J

Definitions of Pension Terms

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

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

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 771 beneficiaries in pay status)		3,874
2. Participants inactive during year ended June 30, 2016 with vested rights		71
3. Participants active during the year ended June 30, 2016		3,452
Fully vested	1,534	
Partially vested	477	
Not vested	1,441	
4. Terminated participants with contributions remaining in the Fund		204

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

1. Total normal cost		\$19,756,319
2. Actuarial accrued liability		1,898,995,163
Retired participants and beneficiaries	\$1,325,373,642	
Inactive participants with vested rights*	8,342,150	
Active participants	565,279,371	
3. Actuarial value of assets (\$1,122,786,000 at market value)		1,146,863,597
4. Unfunded actuarial accrued liability		\$752,131,566

**Includes terminated participants with contributions remaining in the Fund.*

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

EXHIBIT I (continued)

Summary of Actuarial Valuation Results

The determination of the recommended contribution is as follows:

1. Total normal cost	\$19,756,319
2. Expected employee contributions	<u>-18,228,401</u>
3. Employer normal cost: (1) + (2)	\$1,527,918
4. Payment on projected unfunded actuarial accrued liability	46,838,935
5. Total recommended contribution: (3) + (4), adjusted for timing	<u>\$51,902,994</u>
6. Projected payroll	\$171,106,545
7. Total City contribution as a percentage of projected payroll: (5) ÷ (6)	30.3%

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

EXHIBIT II

History of City Contributions

Plan Year Ended June 30	Actuarially Determined Employer Contributions (ADEC)*	Actual Contributions	Percentage Contributed
2009	\$69,990,896	\$69,990,896	100.0%
2010	51,699,072	51,761,766	100.0%
2011	46,067,793	46,078,000	100.0%
2012	35,237,651	35,237,000	100.0%
2013	38,688,054	38,694,000	100.0%
2014	42,145,284	42,145,000	100.0%
2015	47,969,283	48,015,000	100.0%
2016	54,235,740	54,236,000	100.0%

**Prior to GASB 67/68, this amount was the Annual Required Contribution (ARC).*

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

EXHIBIT III

Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Liability (AAL) (b)	Unfunded AAL (UAAL) (b) - (a)	Funded Ratio (a) / (b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll¹ [(b) - (a)] / (c)
07/01/2007	\$749,352,366	\$1,436,277,829	\$686,925,463	52.17%	\$155,184,963	442.65%
07/01/2008	829,734,232	1,483,733,265	653,999,033	55.92%	179,981,706	363.37%
07/01/2009	881,008,954	1,481,562,790	600,553,836	59.46%	150,312,278	399.54%
07/01/2010 ²	866,905,943	1,614,267,020	747,361,077	53.70%	142,596,506	524.11%
07/01/2011	868,798,754	1,697,082,722	828,283,968	51.19%	135,636,375	610.67%
07/01/2012	917,486,000 ³	1,798,404,471	880,918,471	51.02%	139,107,388	633.27%
07/01/2013	954,964,648	1,863,532,248	908,567,600	51.24%	133,068,588	682.78%
07/01/2014	1,016,486,156	1,831,581,285	815,095,129	55.50%	142,493,626	572.02%
07/01/2015	1,084,009,929	1,874,709,577	790,699,648	57.82%	146,497,541	539.74%
07/01/2016	1,146,863,597	1,898,995,163	752,131,566	60.39%	165,320,333	454.95%

¹Not less than zero

²Includes new plan provisions

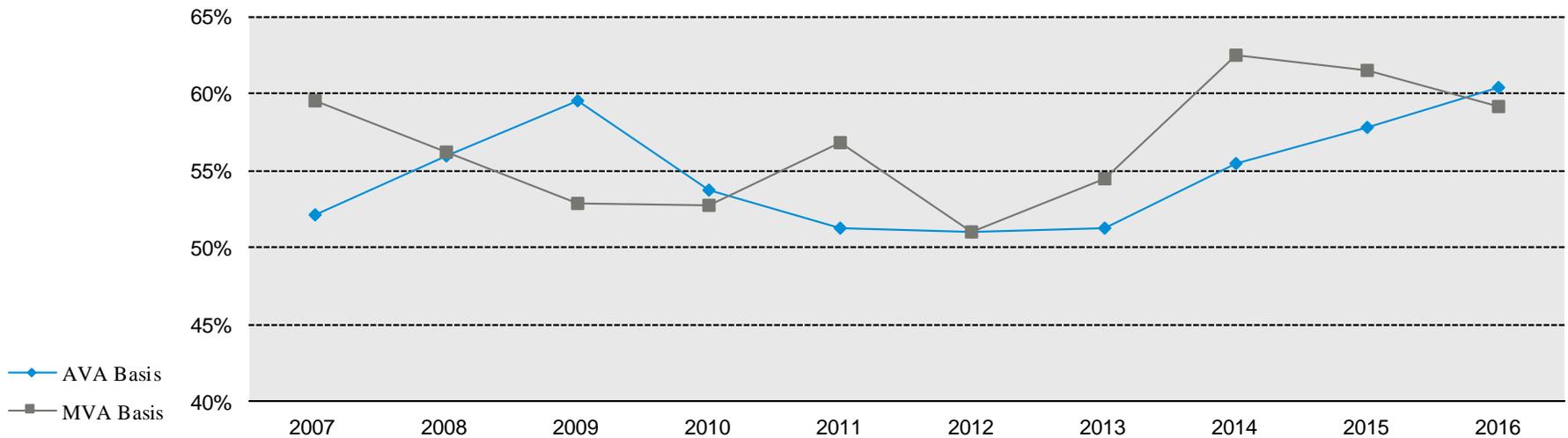
³Includes asset method change

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

**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.



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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 annuitants:

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

Disabled annuitants:

RP-2000 Disabled Retiree Mortality Table with sex-distinct rates

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 (%)			
	Mortality		Ordinary Disability	
	Male	Female	Male	Female
20	0.03	0.02	0.00	0.00
25	0.04	0.02	0.00	0.00
30	0.04	0.03	0.00	0.00
35	0.08	0.05	0.12	0.11
40	0.11	0.07	0.17	0.17
45	0.15	0.11	0.27	0.25
50	0.21	0.17	0.46	0.40
55	0.36	0.27	0.80	0.67
60	0.67	0.51	1.19	0.82

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

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Termination Rates before Retirement:

Years of Service	Rate (%)*
Less than 1	25.00
1	22.00
2	12.00
3	11.00
4	10.00
5	9.00
6	7.00
7	7.00
8	6.50
9	5.50
10	5.00
11	4.50
12	4.00
13	3.50
14	3.00
15 or more	2.50

* Withdrawal rates do not apply at or beyond the later of eligibility for early retirement or age 55.

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Retirement Rates:		Less than 30 Years of Service		30 or More Years of Service	
Age	Rate	Age	Rate	Age	Rate
50-52	2.0%	50-52	30.0%		
53-54	3.0	53-54	35.0		
55	5.0	55	35.0		
56	6.0	56	35.0		
57	6.0	57	40.0		
58-59	7.0	58-59	40.0		
60	20.0	60	40.0		
61-64	15.0	61-64	27.0		
65-66	25.0	65-66	25.0		
67-68	15.0	67-68	25.0		
69	25.0	69	25.0		
70	100.0	70	100.0		

Retirement Age for Vested Inactive Participants: Age 60

Unknown Data for Participants: There were no records that were missing both service amounts and dates of hire.

Percent Married: 75%

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

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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.

Salary Increases:

Age	Rate (%)
Under 30	7.25
30 - 39	5.25
40 - 49	4.25
50 - 59	3.75
60 & over	3.50

Above rates include 2.75% inflation and 0.75% productivity.

Vacation Pay Adjustment: Retirement benefits are increased by 4% to reflect vacation pay.

Cost of Living Adjustment: 3.00%, compounded annually for hires before November 1, 2011
1.00%, compounded annually for hires after October 31, 2011

Refunds of Employee Contributions for Terminated Vested Participants:

50% of employee contribution balances for hires before November 1, 2011
100% of employee contribution balances for hires after October 31, 2011

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.

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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

EXHIBIT VI

Summary of Plan Provisions

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

Plan Year: July 1 through June 30

Normal Pension:

Eligibility

Hired before July 1, 2010 Age 60 after completing 10 years of service.

*Hired between July 1, 2010
and October 31, 2011* Age 60 after completing 15 years of service.

Hired after October 31, 2011 Age 62 after completing 15 years of service

Monthly Amount

Hired before July 1, 2010 2.5% of average monthly salary for each year of service.

*Hired between July 1, 2010
and October 31, 2011* 2.0% of average monthly salary for each year of service.

Hired after October 31, 2011 1.0% of average monthly salary for each year of service.

This amount cannot be less than \$12 per month for each year of service, capped at 80% of average monthly salary.

Average Monthly Salary

Hired before November 1, 2011 Average of the highest consecutive 36 months of salary

Hired after October 31, 2011 Average of the highest consecutive 120 months of salary

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

Normal Pension (continued)

Normal Form of Payment

<i>Hired prior to November 1, 2011</i>	75% Joint-and-Survivor (no reduction in benefit for providing survivor coverage)
<i>Hired after October 31, 2011</i>	Single life annuity

Early Pension:

Service Requirement

<i>Hired before July 1, 2010</i>	10 years of service
<i>Hired between July 1, 2010 and October 31, 2011</i>	15 years of service
<i>Hired after October 31, 2011</i>	Age 52 and 15 years of service

Monthly Amount

<i>Hired before November 1, 2011</i>	Normal pension monthly amount reduced by ½ of 1% per month for the first 60 months and by ¼ 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 service.
<i>Hired after October 31, 2011</i>	Normal pension monthly amount reduced by ½ of 1% per month before age 62.

Disability:

<i>Service Requirement</i>	5 years of service for non-job-related disability. None for job related disability.
<i>Monthly Amount</i>	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 include years while disabled as years of service.

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Vesting Schedule:

An employee who terminates employment may receive a percentage of the accrued benefit payable at normal retirement as determined below:

Completed Years of Service (hired before July 1, 2010)	Completed Years of Service (hired after June 30, 2010)	Percentage Vested*
Less than 5	Less than 10	0%
5	10	25
6	11	30
7	12	35
8	13	40
9	14	45
10 or more	15 or more	100

*A participant is always 100% vested in their contributions to the Plan.

Termination:

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

Death Benefits:

If a participant dies prior to attainment of eligibility for retirement, a lump sum of contributions with interest is payable to a 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.

Credited Service:

Service is credited for employment as a general employee of the City of Atlanta. Additional credit is granted for accumulated sick leave if hired prior to November 1, 2011 and for other prior service as specified in the plan.

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

Participation: All employees of the City of Atlanta, excluding temporary employees, firefighters, police officers, and employees hired after 2001 in job grades 19 and above.

Employee Contributions:

Employee	% of Base Salary	
	Hired before November 1, 2011*	Hired after October 31, 2011*
Unmarried employees without beneficiaries	12%	8%
Unmarried employees with beneficiaries	13%	8%
Married employees	13%	8%

**Excludes employees hired prior to January 1, 1984.*

Interest on Employee Contributions: Employee contributions earn 5% interest each year.

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.

Hired before November 1, 2011 Such annual adjustment cannot exceed 3%.

Hired after October 31, 2011 Such annual adjustment cannot exceed 1%.

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