

City of Savannah Employees' Retirement Plan

Actuarial Valuation and Review as of
January 1, 2017





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October 5, 2017

*Retirement Board
City of Savannah Employees' Retirement Plan
Savannah, Georgia*

Dear Board Members:

We are pleased to submit this Actuarial Valuation and Review as of January 1, 2017. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal 2018 and analyzes the preceding year's experience.

The census information on which our calculations were based was prepared by the City's Human Resources department. The financial information was prepared by the City's Finance Director. That assistance is gratefully acknowledged. The actuarial calculations were completed under the supervision of Jeffrey S. Williams, FCA, ASA, MAAA, Enrolled Actuary. Mr. Williams 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.

I hereby certify that the City of Savannah Employees' Retirement Plan 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 2017 fiscal year of the Plan.

This actuarial valuation has been completed in accordance with generally accepted actuarial principles and practices. To the best of my knowledge, the information supplied in this actuarial valuation is complete and accurate. Further, in my opinion, the assumptions as approved by the Board are reasonably related to the experience of and the expectations for the Plan.

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 full recognition of a prior year's asset gain or loss); and changes in plan provisions or applicable law.

I 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:  _____
Jeffrey S. Williams, FCA, ASA, MAAA, EA
Vice President & Consulting Actuary
Enrolled Actuary No. 17-07009

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SECTION 1: Valuation Summary for the City of Savannah Employees' Retirement Plan

Purpose

This report has been prepared by Segal Consulting to present a valuation of the City of Savannah Employees' Retirement Plan as of January 1, 2017. 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 Plan, as administered by the Board;
- The characteristics of covered active participants, inactive vested participants, and retired participants and beneficiaries as of December 31, 2016, provided by the Board;
- The assets of the Plan as of December 31, 2016, provided by the City's Finance Department;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

Significant Issues in Valuation Year

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

1. The total projected recommended contribution for the fiscal year beginning January 1, 2018 is \$10,331,820 (8.69% of projected payroll), representing an increase of \$98,689 from \$10,233,131 (9.13% of projected payroll) the prior year. Chart 15 on page 13 in Section 2 of this report shows a reconciliation of recommended contribution amounts.
2. The funded ratio for this Plan, based on the actuarial value of assets, increased from 80.13% as of January 1, 2016 to 81.56% as of January 1, 2017. The last ten years of funding progress on an actuarial basis are shown in Exhibit III of Section 4. On a market value of assets basis, the funded ratio increased from 79.21% as of January 1, 2016 to 80.21% as of January 1, 2017.
3. The investment rate of return on an actuarial basis for the year ended December 31, 2016 was 8.59%. Since the rate of return was greater than the assumed rate of return of 7.50% for the year ending December 31, 2016, there was an actuarial investment gain of \$3,573,936. The return on a market value basis was 8.07%. The smoothed actuarial value of assets is \$351,631,909, or 101.68% of the market value of assets of \$345,837,143. The Plan has met its rate of return assumption five times in the past ten years on a market value basis and five times in the past ten years on an actuarial value basis, based on the return assumptions in effect during those years. Chart 11 on page 9 details the Plan's actuarial value and market value returns over the prior ten years.

SECTION 1: Valuation Summary for the City of Savannah Employees' Retirement Plan

4. As indicated in Section 2, Subsection B of this report, the total unrecognized investment loss as of December 31, 2016 is \$5,794,766. 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.
5. The Youth Futures Authority (YFA) concluded operations in 2017. In the cost breakdown by employer in Section 4, Exhibit I, any costs remaining for participants who were members of YFA are included in the costs for General & Uniform Employees.
6. GASB Statements 67 and 68 disclosures for the fiscal year ended December 31, 2016 were provided to the City on March 10, 2017. GASB Statements 67 and 68 disclosures for fiscal 2017 will be provided in the first quarter of 2018.
7. The actuarial valuation report as of January 1, 2017 is based on financial information as of December 31, 2016. 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.

SECTION 1: Valuation Summary for the City of Savannah Employees' Retirement Plan

Summary of Key Valuation Results

	2018	2017	2016
Contributions for fiscal year beginning January 1:			
Recommended contribution ¹	\$10,331,820	\$10,233,131	\$10,588,767
As a percentage of projected payroll	8.69%	9.13%	10.21%
Actual employer contribution	--	--	10,588,773
Funding elements for plan year beginning January 1:			
Total normal cost, including administrative expenses		\$12,747,062	\$12,149,147
Expected employee contributions		7,676,571	7,240,075
Market value of assets		345,837,143	327,785,507
Actuarial value of assets		351,631,909	331,572,942
Actuarial accrued liability		431,148,721	413,794,797
Unfunded/(overfunded) actuarial accrued liability		79,516,812	82,221,855
Funded ratio – actuarial value of assets		81.56%	80.13%
Funded ratio – market value of assets		80.21%	79.21%
Demographic data for plan year beginning January 1:			
Number of retired participants and beneficiaries		1,387	1,358
Number of vested former participants ²		136	111
Number of active participants		2,642	2,541
Total payroll		\$115,437,152	\$108,873,305
Average payroll		43,693	42,847
Projected payroll (from prior year's valuation)	\$118,900,267	\$112,139,504	\$103,710,913

¹See Chart 14 in Section 2 for details. Contributions to be paid at beginning of year.

²Includes beneficiaries entitled to deferred payments

SECTION 1: Valuation Summary for the City of Savannah Employees' Retirement Plan

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 City. 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. The City 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 Savannah Employees' Retirement Plan

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 or City are aware of any events or trends that were not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate them.
- 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 and City 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 Savannah Employees' Retirement Plan

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: 2007 – 2016

Year Ended December 31	Active Participants	Vested Terminated Participants*	Retired Participants and Beneficiaries	Ratio of Non-Actives to Actives
2007	2,515	85	983	0.42
2008	2,646	85	1,006	0.41
2009	2,627	78	1,058	0.43
2010	2,549	82	1,110	0.47
2011	2,488	79	1,254	0.54
2012	2,562	93	1,244	0.52
2013	2,465	94	1,277	0.56
2014	2,440	115	1,317	0.59
2015	2,541	111	1,358	0.58
2016	2,642	136	1,387	0.58

**Includes beneficiaries entitled to deferred payments.*

SECTION 2: Valuation Results for the City of Savannah Employees' Retirement Plan

Active Participants

Plan costs are affected by the age, years of service and payroll of active participants. In this year's valuation, there were 2,642 active participants with an average age of 43.3, average years of service of 9.2 years and average payroll of \$43,693. The 2,541 active participants in the prior valuation had an average age of 43.5, average service of 9.4 years and average payroll of \$42,847.

Inactive Participants

In this year's valuation, there were 136 participants, including eight beneficiaries, with a vested right to a deferred or immediate vested benefit.

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 December 31, 2016

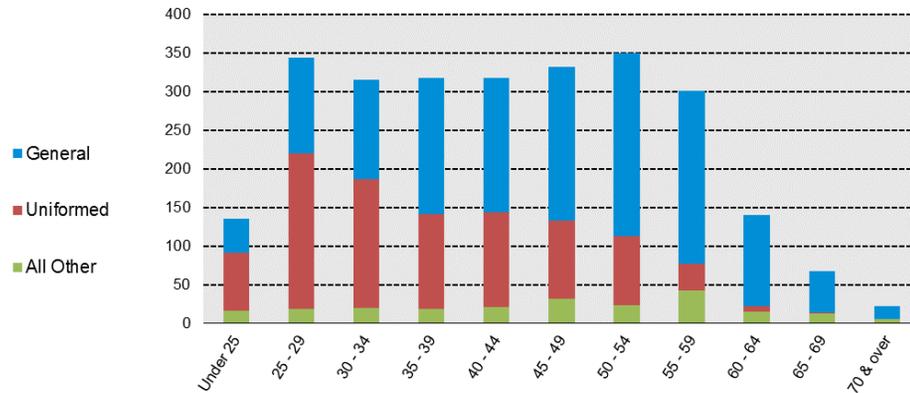
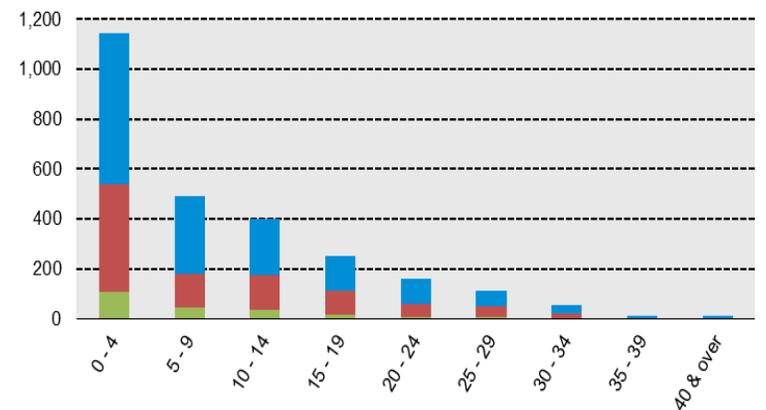


CHART 3
Distribution of Active Participants by Years of Service as of December 31, 2016



SECTION 2: Valuation Results for the City of Savannah Employees' Retirement Plan

Retired Participants and Beneficiaries

As of December 31, 2016, 1,199 retired participants and 188 beneficiaries were receiving total monthly benefits of \$2,019,707. For comparison, in the previous valuation, there were 1,165 retired participants and 193 beneficiaries receiving monthly benefits of \$1,951,661.

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

CHART 4
Distribution of Retired Participants by Type and by Monthly Amount as of December 31, 2016

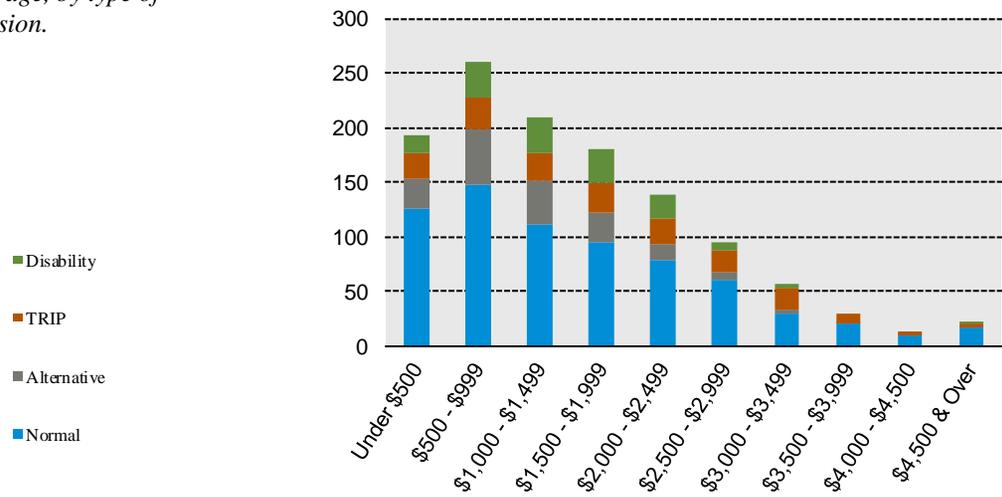
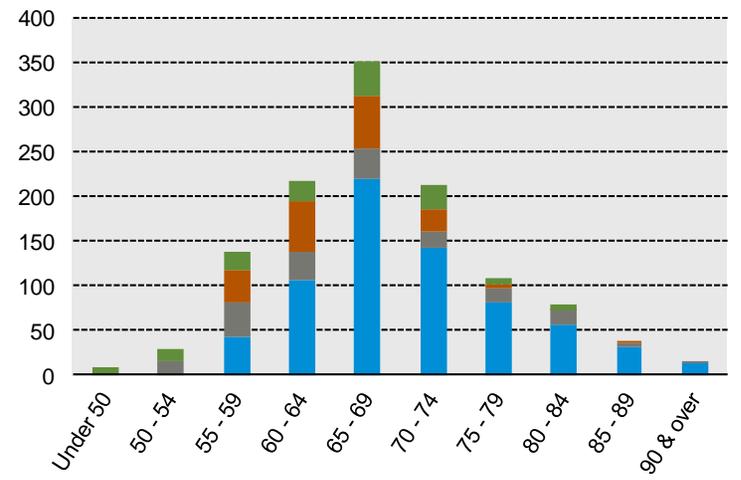


CHART 5
Distribution of Retired Participants by Type and by Age as of December 31, 2016



SECTION 2: Valuation Results for the City of Savannah Employees' Retirement Plan

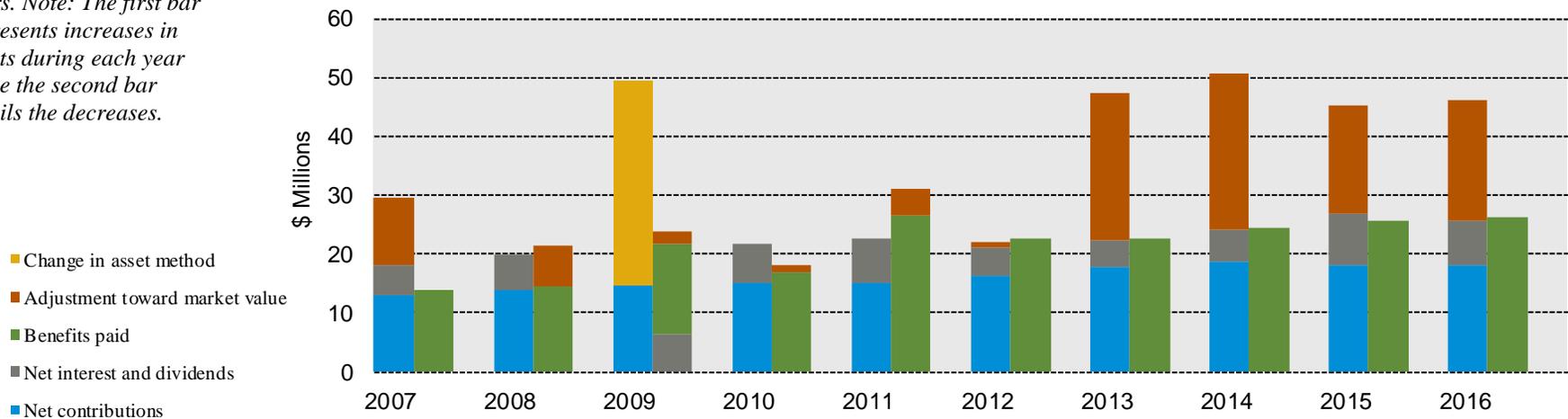
B. FINANCIAL INFORMATION

Retirement plan funding anticipates that, over the long term, both contributions (less administrative expenses) and net investment earnings (less investment fees) 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 December 31, 2007 – 2016



SECTION 2: Valuation Results for the City of Savannah Employees' Retirement Plan

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 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 December 31, 2016

1. Market value of assets, December 31, 2016			\$345,837,143
	Original	Unrecognized	
2. Calculation of unrecognized return	Amount ¹	Return ²	
(a) Year ended December 31, 2016	\$1,850,663	\$1,480,530	
(b) Year ended December 31, 2015	-21,805,124	-13,083,074	
(c) Year ended December 31, 2014	-728,394	-291,358	
(d) Year ended December 31, 2013	30,495,681	6,099,136	
(e) Year ended December 31, 2012	9,477,140	0	
(f) Total unrecognized return			-5,794,766
3. Preliminary actuarial value: (1) - (2f)			351,631,909
4. Adjustment to be within 20% corridor			0
5. Final actuarial value of assets as of December 31, 2016: (3) + (4)			<u>\$351,631,909</u>
6. Actuarial value as a percentage of market value: (5) ÷ (1)			101.7%
7. Amount deferred for future recognition ³ : (1) - (5)			-\$5,794,766

¹Total return minus expected return on a market value

²Recognition at 20.00% per year over five years

³Deferred return as of December 31, 2016 recognized in each of the next five years

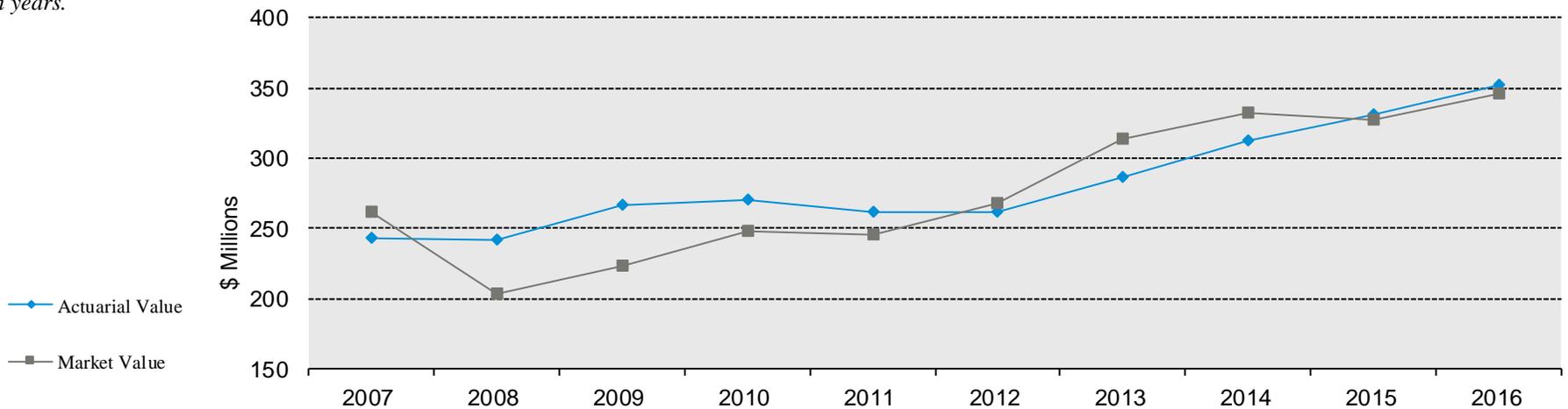
(a) Amount recognized on December 31, 2017	\$1,962,565
(b) Amount recognized on December 31, 2018	-4,136,571
(c) Amount recognized on December 31, 2019	-3,990,892
(d) Amount recognized on December 31, 2020	370,132
(e) Amount recognized on December 31, 2021	0

SECTION 2: Valuation Results for the City of Savannah Employees' Retirement Plan

Both the actuarial value and market value of assets are representations of the Plan'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 Plan'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 December 31, 2007 – 2016



SECTION 2: Valuation Results for the City of Savannah Employees' Retirement Plan

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 \$2,766,003, including \$3,573,936 from investment gains and \$38,332 in gains on administrative expenses, offset by \$846,265 in losses from all other sources. The net experience variation from individual sources other than investments was 0.2% 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 December 31, 2016

1. Net gain/(loss) from investments ¹	\$3,573,936
2. Net gain/(loss) from administrative expenses	38,332
3. Net gain/(loss) from other experience ²	<u>-846,265</u>
4. Net experience gain/(loss): (1) + (2) + (3)	\$2,766,003

¹ Details in Chart 10

² Details in Chart 13

SECTION 2: Valuation Results for the City of Savannah Employees' Retirement Plan

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 Plan'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 2016 plan year was 8.59%.

Since the actual return for the year was greater than the assumed return, the Plan experienced an actuarial gain during the year ended December 31, 2016 with regard to its investments.

This chart shows the gain/(loss) due to investment experience.

CHART 10
Actuarial Value Investment Experience for Year Ended December 31, 2016

1. Actual return	\$28,138,909
2. Average value of assets	327,532,971
3. Actual rate of return: (1) ÷ (2)	8.59%
4. Assumed rate of return	7.50%
5. Expected return: (2) x (4)	\$24,564,973
6. Actuarial gain/(loss): (1) – (5)	<u>\$3,573,936</u>

SECTION 2: Valuation Results for the City of Savannah Employees' Retirement Plan

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 Retirement Board has maintained the assumed rate of return of 7.50%.

CHART 11

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

Year Ended December 31	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	\$5,147,639	2.27%	\$11,628,875	5.13%	--	--	\$16,776,514	7.41%	\$15,907,888	6.45%
2008	5,996,070	2.47	-6,841,472	-2.82	--	--	-845,402	-0.35	-57,517,481	-22.00
2009	-6,443,238	-2.67	-1,877,392	-0.78	\$34,659,063	14.39%	26,338,433	10.93	20,083,571	9.88
2010	6,451,822	2.42	-1,269,265	-0.48	--	--	5,182,557	1.95	26,925,891	12.11
2011	7,530,158	2.85	-4,418,980	-1.67	--	--	3,111,178	1.18	9,110,800	3.76
2012	4,729,541	1.83	1,051,810	0.41	--	--	5,781,351	2.23	28,284,051	11.66
2013	4,561,645	1.76	24,771,627	9.56	--	--	29,333,272	11.32	51,067,866	19.24
2014	5,655,322	1.99	26,318,454	9.30	--	--	31,973,776	11.29	23,393,123	7.52
2015	8,770,184	2.84	18,198,254	5.90	--	--	26,968,438	8.74	3,612,074	1.10
2016	<u>7,515,244</u>	2.29	<u>20,623,665</u>	6.30	--	--	<u>28,138,909</u>	8.59	<u>26,131,578</u>	8.07
Total	\$49,914,387		\$88,185,576		\$34,659,063		\$172,759,026		\$146,999,361	
							Five-year average return	8.50%		9.01%
							Ten-year average return	6.45%		5.55%

Note: Each year's yield is weighted by the average asset value in that year. Totals may not add due to rounding.

The 2009 actuarial value investment return shown includes a change in asset method. This is also reflected in the five-year and ten-year averages.

SECTION 2: Valuation Results for the City of Savannah Employees' Retirement Plan

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.

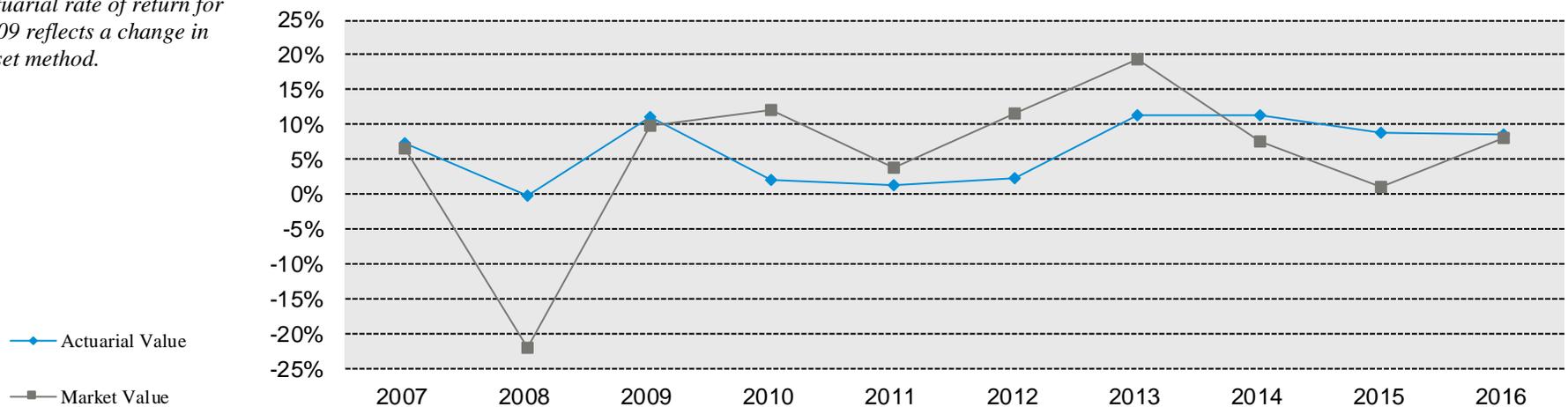
Administrative Expenses

Administrative expenses for the year ended December 31, 2016 totaled \$60,679 compared to the assumption of \$100,000. This resulted in a gain of \$38,332 for the year when adjusted for timing. We will continue to monitor the administrative expenses, but have maintained the assumption of \$100,000 for the current year.

This chart illustrates how this leveling effect has actually worked over the years 2007 - 2016. The actuarial rate of return for 2009 reflects a change in asset method.

CHART 12

Market and Actuarial Rates of Return for Years Ended December 31, 2007 - 2016



SECTION 2: Valuation Results for the City of Savannah Employees' Retirement Plan

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 loss from this other experience for the year ended December 31, 2016 amounted to \$846,265, which is 0.2% of the actuarial accrued liability.

A brief summary of the demographic gain/(loss) experience of the Plan for the year ended December 31, 2016 is shown in the chart below.

The chart shows elements of the experience gain/(loss) for the most recent year.

CHART 13
Experience Due to Changes in Demographics for Year Ended December 31, 2016

1. Retirement	-\$567,549
2. Pre-retirement Mortality	479,315
3. Disablement	251,653
4. Turnover	1,585,276
5. Service	-167,057
6. Pay status experience	722,709
7. New actives	-842,102
8. Miscellaneous	<u>-2,308,510</u>
9. Total	<u>-\$846,265</u>

SECTION 2: Valuation Results for the City of Savannah Employees' Retirement Plan

D. RECOMMENDED CONTRIBUTION

Chart 14 below shows the development of the minimum contribution required by the Public Retirement Systems Standards Law (Georgia Code Title 47, Chapter 20), which sets forth minimum funding requirements for public plans in the state. The City has chosen to use the cost calculations permitted by this law as the basis for their schedule for funding the retirement plan.

The Georgia law's standards permit 30-year level percent of pay amortization for any increases or decreases in the Unfunded Actuarial Accrued Liability.

The City has closed the amortization period effective with the January 1, 2014 valuation and is using a 26-year period to amortize unfunded actuarial accrued liability in this valuation. This period will continue to decline by one year in each future valuation.

The City's policy is to appropriate funds for the employer's contribution each year based on the most recent actuarial valuation available at the time the budget is adopted. Thus, the amount developed in this valuation will be used to set the appropriation for the contribution to be made in 2018.

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

CHART 14
Recommended Contribution

	Year Beginning January 1			
	2017		2016	
	Amount	% of Payroll	Amount	% of Payroll
1. Total normal cost	\$12,650,613	10.96%	\$12,052,810	11.07%
2. Administrative expenses	96,449	0.08%	96,337	0.09%
3. Expected employee contributions	<u>-7,676,571</u>	<u>-6.65%</u>	<u>-7,240,075</u>	<u>-6.65%</u>
4. Employer normal cost: (1) + (2) + (3)	\$5,070,491	4.39%	\$4,909,072	4.51%
5. Actuarial accrued liability	431,148,721		413,794,797	
6. Actuarial value of assets	<u>351,631,909</u>		<u>331,572,942</u>	
7. Unfunded actuarial accrued liability: (5) - (6)	\$79,516,812		\$82,221,855	
8. Payment on unfunded actuarial accrued liability ¹	4,960,402	4.30%	5,026,007	4.62%
9. Recommended contribution adjusted for timing (4) + (8)	10,030,893	8.69%	9,935,079	9.13%
10. Total payroll	115,437,152		108,873,305	
11. Total recommended contribution, projected one year ²	<u>\$10,331,820</u>	<u>8.69%</u>	<u>\$10,233,131</u>	<u>9.13%</u>
12. Total projected payroll	<u>\$118,900,267</u>		<u>\$112,139,504</u>	

¹ Amortized as a level percent of pay over 26 years from the valuation date.

² Recommended contributions are assumed to be paid at the beginning of every year; percentage based on projected payroll.

SECTION 2: Valuation Results for the City of Savannah Employees' Retirement Plan

At the City’s direction the actual contribution will be made in a single payment at the beginning of the year, in the year following the date of the actuarial valuation. Thus, the required contribution calculated in the January 1, 2017 valuation, based on a payment date of January 1, 2018, is \$10,331,820.

We understand that the City and other agencies are making contributions in 2017 in amounts as recommended by the January 1, 2016 valuation plus interest. Therefore, it is our opinion that this Plan continues to exceed its contribution requirement as specified in Code Section 47-20-10 of the Official Code of Georgia Annotated and the continued sufficiency of the retirement fund to provide for the benefits under the Plan may be safely anticipated.

The contribution rate projected to January 1, 2018 is 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.

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 from January 1, 2017 to January 1, 2018

Recommended Contribution as of January 1, 2017	\$10,233,131
Effect of expected change in amortization payment due to payroll growth	\$155,303
Effect of change in amortization period	102,740
Effect of contributions (more)/less than recommended contribution	-16,862
Effect of investment (gain)/loss	-229,637
Effect of other gains and losses on accrued liability	51,912
Effect of net other changes	<u>35,233</u>
Total change	<u>\$98,689</u>
Recommended Contribution as of January 1, 2018	\$10,331,820

SECTION 3: Supplemental Information for the City of Savannah Employees' Retirement Plan

EXHIBIT A

Table of Plan Coverage

Category	Year Ended December 31		Change From Prior Year
	2016	2015	
Active participants in valuation:			
Number	2,642	2,541	4.0%
Average age	43.3	43.5	N/A
Average years of service	9.2	9.4	N/A
Projected total payroll	\$115,437,152	\$108,873,305	6.0%
Projected average payroll	43,693	42,847	2.0%
Account balances	57,026,342	54,114,853	5.4%
Total active vested participants	1,499	1,472	1.8%
Vested terminated participants			
Number	128	104	23.1%
Average age	48.2	48.8	-1.2%
Average monthly benefit	\$1,039	\$1,040	-0.1%
Beneficiaries with rights to a deferred benefit	8	7	14.3%
Retired participants:			
Number in pay status	1,053	1,017	3.5%
Average age	69.2	68.8	N/A
Average monthly benefit	\$1,571	\$1,560	0.7%
Disabled participants:			
Number in pay status	146	148	-1.4%
Average age	64.6	63.9	N/A
Average monthly benefit	\$1,406	\$1,377	2.1%
Beneficiaries in pay status:			
Number in pay status	188	193	-2.6%
Average age	73.9	73.3	N/A
Average monthly benefit	\$851	\$838	1.6%

SECTION 3: Supplemental Information for the City of Savannah Employees' Retirement Plan

EXHIBIT B

Participants in Active Service as of December 31, 2016

By Age, Years of Service, and Average Payroll

B-1: All Employees

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	135	133	2	--	--	--	--	--	--	--
	\$34,690	\$34,694	\$34,443	--	--	--	--	--	--	--
25 - 29	344	310	34	--	--	--	--	--	--	--
	37,008	36,577	40,939	--	--	--	--	--	--	--
30 - 34	315	180	95	40	--	--	--	--	--	--
	40,156	37,611	42,675	\$45,622	--	--	--	--	--	--
35 - 39	318	146	83	76	13	--	--	--	--	--
	41,663	38,196	41,265	46,897	\$52,544	--	--	--	--	--
40 - 44	318	96	64	86	62	10	--	--	--	--
	46,373	37,334	43,119	52,239	53,254	\$60,850	--	--	--	--
45 - 49	332	97	54	58	61	49	13	--	--	--
	45,514	36,438	41,267	48,108	52,025	55,423	\$51,415	--	--	--
50 - 54	350	67	61	58	46	42	57	19	--	--
	47,715	36,438	39,907	45,084	50,699	55,958	59,396	\$60,100	--	--
55 - 59	301	62	62	42	44	31	27	23	9	1
	47,183	33,526	41,981	46,627	48,364	58,142	68,609	55,965	\$50,062	\$41,612
60 - 64	140	36	26	19	17	14	13	8	4	3
	48,042	35,941	44,713	51,033	56,145	53,785	58,718	62,694	43,478	51,208
65 - 69	67	11	10	13	7	11	4	4	--	7
	51,963	37,618	33,336	64,406	55,031	56,321	52,437	60,679	--	62,842
70 & over	22	5	1	7	2	3	1	1	--	2
	52,650	34,547	42,943	62,621	35,887	71,656	57,928	44,684	--	57,460
Total	2,642	1,143	492	399	252	160	115	55	13	13
	\$43,693	\$36,587	\$41,675	\$48,848	\$51,706	\$56,652	\$60,326	\$58,510	\$48,037	\$57,696

SECTION 3: Supplemental Information for the City of Savannah Employees' Retirement Plan

EXHIBIT B

**Participants in Active Service as of December 31, 2016
By Age, Years of Service, and Average Payroll
B-2: General**

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	44	43	1	--	--	--	--	--	--	--
	\$30,078	\$30,111	\$28,670	--	--	--	--	--	--	--
25 - 29	124	111	13	--	--	--	--	--	--	--
	31,777	31,333	35,569	--	--	--	--	--	--	--
30 - 34	129	78	39	12	--	--	--	--	--	--
	35,958	34,100	38,757	\$38,940	--	--	--	--	--	--
35 - 39	177	87	50	33	7	--	--	--	--	--
	37,493	36,025	36,773	40,580	\$46,336	--	--	--	--	--
40 - 44	174	66	43	41	20	4	--	--	--	--
	41,983	36,287	40,367	52,709	41,290	\$46,858	--	--	--	--
45 - 49	199	68	42	37	27	19	6	--	--	--
	40,117	36,077	39,007	43,593	42,735	45,206	\$44,317	--	--	--
50 - 54	237	60	50	37	29	31	23	7	--	--
	41,263	36,769	36,037	39,967	42,617	53,255	48,836	\$40,376	--	--
55 - 59	224	49	46	35	33	21	19	13	7	1
	43,648	34,579	37,630	47,970	44,614	52,573	60,916	48,496	\$38,156	\$41,612
60 - 64	118	29	20	16	13	14	13	8	3	2
	46,237	35,345	43,298	45,365	47,813	53,785	58,718	62,694	35,867	46,058
65 - 69	53	10	8	7	6	10	1	4	--	7
	42,920	27,030	30,112	41,387	37,683	52,743	37,731	60,679	--	62,842
70 & over	17	2	1	6	2	2	1	1	--	2
	53,973	27,972	42,943	66,107	35,887	66,353	57,928	44,684	--	57,460
Total	1,496	603	313	224	137	101	63	33	10	12
	\$40,128	\$34,273	\$38,013	\$45,314	\$43,296	\$51,628	\$54,056	\$51,577	\$37,470	\$57,378

SECTION 3: Supplemental Information for the City of Savannah Employees' Retirement Plan

EXHIBIT B

**Participants in Active Service as of December 31, 2016
By Age, Years of Service, and Average Payroll
B-3: Uniformed**

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	75	74	1	--	--	--	--	--	--	--
	\$38,679	\$38,659	\$40,215	--	--	--	--	--	--	--
25 - 29	201	180	21	--	--	--	--	--	--	--
	40,465	40,022	44,263	--	--	--	--	--	--	--
30 - 34	166	87	52	27	--	--	--	--	--	--
	42,957	40,433	45,108	\$46,948	--	--	--	--	--	--
35 - 39	123	48	29	40	6	--	--	--	--	--
	46,452	40,567	46,653	51,369	\$59,786	--	--	--	--	--
40 - 44	123	20	15	42	40	6	--	--	--	--
	51,629	41,025	44,903	51,116	57,210	\$70,179	--	--	--	--
45 - 49	101	14	7	15	29	30	6	--	--	--
	54,541	38,036	48,098	51,808	56,979	61,893	\$58,859	--	--	--
50 - 54	90	3	4	16	15	10	32	10	--	--
	60,590	42,030	45,134	52,218	57,640	65,006	66,592	\$66,537	--	--
55 - 59	35	2	2	--	7	6	6	10	2	--
	61,438	19,615	45,671	--	59,075	63,379	64,291	65,674	\$91,735	--
60 - 64	7	1	1	1	2	--	--	--	1	1
	66,180	19,615	47,512	156,091	56,111	--	--	--	66,310	\$61,508
65 - 69	2	1	--	--	--	--	1	--	--	--
	100,350	143,500	--	--	--	--	57,200	--	--	--
70 & over	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
Total	923	430	132	141	99	52	45	20	3	1
	\$47,676	\$40,025	\$45,439	\$51,333	\$57,473	\$63,619	\$65,045	\$66,105	\$83,260	\$61,508

SECTION 3: Supplemental Information for the City of Savannah Employees' Retirement Plan

EXHIBIT B

**Participants in Active Service as of December 31, 2016
By Age, Years of Service, and Average Payroll
B-4: All Other Agencies**

Age	Years of Service							
	Total	0-4	5-9	10-14	15 - 19	20 - 24	25 - 29	30 - 34
Under 25	16	16	--	--	--	--	--	--
	\$28,671	\$28,671	--	--	--	--	--	--
25 - 29	19	19	--	--	--	--	--	--
	34,581	34,581	--	--	--	--	--	--
30 - 34	20	15	4	1	--	--	--	--
	43,979	39,508	\$49,241	\$90,000	--	--	--	--
35 - 39	18	11	4	3	--	--	--	--
	49,940	45,020	58,350	56,767	--	--	--	--
40 - 44	21	10	6	3	2	--	--	--
	51,957	36,860	58,386	61,540	\$93,780	--	--	--
45 - 49	32	15	5	6	5	--	1	--
	50,591	36,581	50,681	66,695	73,455	--	\$49,338	--
50 - 54	23	4	7	5	2	1	2	2
	63,820	27,285	64,560	60,121	115,820	\$49,244	65,707	\$96,948
55 - 59	42	11	14	7	4	4	2	--
	54,154	31,362	55,750	39,908	60,558	79,525	154,653	--
60 - 64	15	6	5	2	2	--	--	--
	53,778	41,542	49,812	43,847	110,335	--	--	--
65 - 69	12	--	2	6	1	1	2	--
	83,839	--	46,230	91,262	159,120	92,101	57,408	--
70 & over	5	3	--	1	--	1	--	--
	48,152	38,931	--	41,704	--	82,264	--	--
Total	223	110	47	34	16	7	7	2
	\$51,122	\$35,828	\$55,490	\$61,824	\$88,031	\$77,387	\$86,410	\$96,948

SECTION 3: Supplemental Information for the City of Savannah Employees' Retirement Plan

EXHIBIT C

Reconciliation of Participant Data

	Active Participants	Vested Former Participants	Deferred Beneficiaries	Disabled	Retired Participants	Beneficiaries	Total
Number as of January 1, 2016	2,541	104	7	148	1,017	193	4,010
New participants	396	N/A	0	N/A	N/A	N/A	396
Terminations – with vested rights	-28	28	0	0	0	0	0
Terminations – without vested rights	-20	N/A	0	N/A	N/A	N/A	-20
Retirements	-56	-6	0	N/A	62	N/A	0
New disabilities	0	0	0	0	N/A	N/A	0
Return to work	2	0	0	0	-2	N/A	0
Deceased	-6	0	0	-3	-30	-11	-50
New beneficiary	0	0	1	0	0	14	15
Lump sum payoffs	-187	0	0	0	0	0	-187
Rehire	0	0	0	N/A	0	N/A	0
Certain period expired	N/A	N/A	0	0	0	-8	-8
Data adjustments	<u>0</u>	<u>2</u>	<u>0</u>	<u>1</u>	<u>6</u>	<u>0</u>	<u>9</u>
Number as of January 1, 2017	2,642	128	8	146	1,053	188	4,165

SECTION 3: Supplemental Information for the City of Savannah Employees' Retirement Plan

EXHIBIT D

Summary Statement of Income and Expenses on an Actuarial Value Basis

	Year Ended December 31, 2016	Year Ended December 31, 2015
Net assets at actuarial value at the beginning of the year	\$331,572,942	\$312,185,321
Contribution income:		
Employer contributions	\$10,588,773	\$11,378,991
Employee contributions	7,522,500	6,948,068
Less administrative expenses	<u>-60,679</u>	<u>-157,329</u>
Net contribution income	18,050,594	18,169,730
Investment income:		
Interest, dividends and other income	\$8,834,933	\$10,065,686
Recognition of capital appreciation	20,623,665	18,198,254
Less investment fees	<u>-1,319,689</u>	<u>-1,295,502</u>
Net investment income	<u>28,138,909</u>	<u>26,968,438</u>
Total income available for benefits	\$46,189,503	\$45,138,168
Less benefit payments:		
Pension payments	-\$24,100,543	-\$23,221,782
Refunds of contributions	-1,772,447	-2,245,953
Interest on refunds	<u>-257,546</u>	<u>-282,812</u>
Net benefit payments	-\$26,130,536	-\$25,750,547
Change in actuarial value of assets	\$20,058,967	\$19,387,621
Net assets at actuarial value at the end of the year	\$351,631,909	\$331,572,942

SECTION 3: Supplemental Information for the City of Savannah Employees' Retirement Plan

EXHIBIT E

Summary Statement of Income and Expenses on a Market Value Basis

	Year Ended December 31, 2016	Year Ended December 31, 2015
Net assets at market value at the beginning of the year	\$327,785,507	\$331,754,250
Contribution income:		
Employer contributions	\$10,588,773	\$11,378,991
Employee contributions	7,522,500	6,948,068
Less administrative expenses	<u>-60,679</u>	<u>-157,329</u>
Net contribution income	18,050,594	18,169,730
Investment income:		
Interest, dividends and other income	\$8,834,933	\$10,065,686
Recognition of capital appreciation	18,616,334	-5,158,110
Less investment fees	<u>-1,319,689</u>	<u>-1,295,502</u>
Net investment income	<u>26,131,578</u>	<u>3,612,074</u>
Total income available for benefits	\$44,182,172	\$21,781,804
Less benefit payments:		
Pension payments	-\$24,100,543	-\$23,221,782
Refunds of contributions	-1,772,447	-2,245,953
Interest on refunds	<u>-257,546</u>	<u>-282,812</u>
Net benefit payments	-\$26,130,536	-\$25,750,547
Change in market value of assets	\$18,051,636	-\$3,968,743
Net assets at market value at the end of the year	\$345,837,143	\$327,785,507

SECTION 3: Supplemental Information for the City of Savannah Employees' Retirement Plan

EXHIBIT F

Summary Statement of Plan Assets

	Year Ended December 31, 2016	Year Ended December 31, 2015
Cash equivalents	\$1,747,655	\$468,634
Accounts receivable	\$84,155	\$78,617
Investments:		
Equities	\$207,006,441	\$190,291,563
Bonds	91,639,258	99,442,815
Real estate fund	40,915,399	36,371,248
Short term investments	<u>4,736,093</u>	<u>1,496,708</u>
Total investments at market value	<u>344,297,191</u>	<u>327,602,334</u>
Total assets	\$346,129,001	\$328,149,585
Less accounts payable	-\$291,858	-\$364,078
Net assets at market value	<u>\$345,837,143</u>	<u>\$327,785,507</u>
Net assets at actuarial value	<u>\$351,631,909</u>	<u>\$331,572,942</u>

SECTION 3: Supplemental Information for the City of Savannah Employees' Retirement Plan

EXHIBIT G

Development of the Fund Through December 31, 2016

Year Ended December 31	Employer Contributions	Employee Contributions	Net Investment Return¹	Administrative Expenses	Benefit Payments	Actuarial Value of Assets at End of Year
2007	\$6,751,174	\$6,103,825	\$16,776,514	\$0	\$13,891,991	\$242,750,326
2008	6,950,018	6,819,028	-845,403	0	14,460,312	241,213,658
2009	7,622,583	7,162,288	26,338,433 ²	0	15,364,971	266,971,991
2010	8,552,370	6,791,553	5,182,557	157,464	16,929,273	270,411,733
2011	8,697,179	6,391,357	3,111,178	101,107	26,632,263	261,878,077
2012	9,729,071	6,676,022	5,781,351	114,822	22,531,361	261,418,338
2013	11,311,347	6,687,095	29,333,272	132,370	22,637,632	285,980,050
2014	11,989,213	6,656,241	31,973,776	99,358	24,314,601	312,185,321
2015	11,378,991	6,948,068	26,968,438	157,329	25,750,547	331,572,942
2016	10,588,773	7,522,500	28,138,909	60,679	26,130,536	351,631,909

Note: Some rows may not add due to rounding.

¹*Net of investment fees. Net of administrative expenses through the 2009 plan year.*

²*Includes change in asset method of \$34,659,063.*

SECTION 3: Supplemental Information for the City of Savannah Employees' Retirement Plan

EXHIBIT H

**Development of Unfunded Actuarial Accrued Liability
for Year Ended December 31, 2016**

1. Unfunded actuarial accrued liability at beginning of year		\$82,221,855
2. Employer normal cost at beginning of year		4,909,072
3. Total employer contributions		-10,588,773
4. Interest		
(a) For whole year on (1) + (2)	\$6,534,820	
(b) For whole year on (3)	<u>-794,158</u>	
(c) Total interest		<u>5,740,662</u>
5. Expected unfunded actuarial accrued liability		\$82,282,816
6. Changes due to:		
(a) (Gain)/loss	-\$2,766,003	
(b) Assumptions	0	
(c) Funding method	0	
(d) Plan provisions	<u>0</u>	
(e) Total changes		<u>-2,766,003</u>
7. Unfunded actuarial accrued liability at end of year		<u>\$79,516,812</u>

SECTION 3: Supplemental Information for the City of Savannah Employees' Retirement Plan

EXHIBIT I

Emerging Cash Flow

Benefit Cash Flow Requirements

We have determined the anticipated benefits to be paid from the Plan over the next ten years. This projection is provided to help the Retirement Board assess the future liquidity needs of the Fund, and to help determine whether the Plan should plan to sell assets to pay participants' benefits or to restructure the debt and equity allocations.

This is a mature fund, and thus it is expected that the contributions paid into the Plan each year will not be sufficient to pay all of the annual benefit requirements and expenses. Investment income is required to make up the

difference. The Board needs to ensure that interest and dividend income, along with maturing fixed income investments and the sale of equity investments, are at a sufficient level to provide existing and emerging benefit payments to participants and beneficiaries. This matter should be considered by the investment managers in designing their strategies.

The projection is shown below. The assumptions for retirement and mortality are the same rates shown in Section 4 of the report.

Projected Benefit Payments, 2017-2026

Year Ended December 31	Number of Benefit Recipients	Benefits to Active Participants	Benefits to Non-active Participants	Total Benefits Projected
2017	1,474	\$2,516,779	24,014,252	\$26,531,031
2018	1,511	4,023,338	23,662,784	27,686,122
2019	1,552	5,641,059	23,228,531	28,869,590
2020	1,593	7,340,858	22,721,524	30,062,382
2021	1,637	9,026,287	22,236,207	31,262,494
2022	1,683	10,810,017	21,742,274	32,552,291
2023	1,727	12,998,719	21,226,587	34,225,306
2024	1,773	15,282,371	20,691,453	35,973,824
2025	1,809	17,517,042	20,135,042	37,652,084
2026	1,843	19,775,296	19,535,235	39,310,531

Note: The projected benefits to active participants include expected lump sums for refunds of contributions. The status of active and non-active participants is as of January 1, 2017.

SECTION 3: Supplemental Information for the City of Savannah Employees' Retirement Plan

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 Savannah Employees' Retirement Plan

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 Savannah Employees' Retirement Plan

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 188 beneficiaries in pay status)		1,387
2. Participants inactive during year ended December 31, 2016 with vested rights (including 8 beneficiaries with rights to deferred pensions)		136
3. Participants active during the year ended December 31, 2016		2,642
Fully vested	1,499	
Not vested	1,143	

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

1. Normal cost, including administrative expenses		\$12,747,062
2. Expected employee contributions		7,676,571
3. Employer normal cost: (1) – (2)		5,070,491
4. Actuarial accrued liability		431,148,721
Retired participants and beneficiaries	\$230,865,691	
Inactive participants with vested rights	14,713,978	
Active participants	185,569,052	
5. Actuarial value of assets (\$345,837,143 at market value)		351,631,909
6. Unfunded actuarial accrued liability		\$79,516,812

SECTION 4: Reporting Information for the City of Savannah Employees' Retirement Plan

EXHIBIT I (continued)

Summary of Actuarial Valuation Results

	General & Uniform Employees	Airport Authority	Metropolitan Planning Commission	Total
1. Employer Normal Cost:	\$4,533,904	\$428,194	\$108,393	\$5,070,491
2. Actuarial Accrued Liability – total:	400,656,672	22,974,638	7,517,411	431,148,721
a. Active employees	169,003,127	13,316,917	3,249,008	185,569,052
b. Inactive vested employees	13,327,884	204,364	216,691	13,748,939
c. Deferred beneficiaries	965,039	0	0	965,039
d. Retirees	200,976,004	8,903,636	4,051,712	213,931,352
e. Beneficiaries	16,384,618	549,721	0	16,934,339
3. Actuarial Value of Assets (allocation estimated by actuary):	329,747,548	15,204,602	6,679,759	351,631,909
4. Unfunded Actuarial Accrued Liability:	70,909,124	7,770,036	837,652	79,516,812
5. Payment required to amortize Unfunded Actuarial Liability over 26 years from January 1, 2017 as a level of percentage of salary:	4,423,439	484,709	52,254	4,960,402
6. Total minimum cost payable as of January 1, 2018 (includes interest adjustment): (1) + (5)	\$9,226,064	\$940,290	\$165,466	\$10,331,820
7. Covered compensation:	104,200,270	9,238,292	1,998,590	115,437,152

SECTION 4: Reporting Information for the City of Savannah Employees' Retirement Plan

EXHIBIT II

History of Employer Contributions

Plan Year Ended December 31	Actuarially Determined Employer Contributions (ADEC)*	Actual Contributions	Percentage Contributed
2009	\$7,622,577	\$7,622,583	100.0%
2010	8,552,348	8,552,370	100.0%
2011	8,697,179	8,697,179	100.0%
2012	9,729,071	9,729,071	100.0%
2013	11,311,352	11,311,347	100.0%
2014	11,989,208	11,989,213	100.0%
2015	11,378,988	11,378,991	100.0%
2016	10,588,767	10,588,773	100.0%
2017	10,233,131	--	--
2018	10,331,820	--	--

**Prior to 2012, this amount was the Annual Required Contribution (ARC)*

SECTION 4: Reporting Information for the City of Savannah Employees' Retirement Plan

EXHIBIT III

Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded/ (Overfunded) AAL (UAAL) (b) - (a)	Funded Ratio (a) / (b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll* [(b) - (a)] / (c)
01/01/2008	\$242,750,326	\$283,174,301	\$40,423,975	85.72%	\$96,071,023	42.08%
01/01/2009	241,213,658	300,886,228	59,672,570	80.17%	103,128,935	57.86%
01/01/2010	266,971,991	320,881,955	53,909,964	83.20%	102,212,443	52.74%
01/01/2011	270,411,733	337,964,954	67,553,221	80.01%	101,231,939	66.73%
01/01/2012	261,878,077	359,657,383	97,779,306	72.81%	98,576,795	99.19%
01/01/2013	261,418,338	368,261,194	106,842,856	70.99%	101,065,407	105.72%
01/01/2014	285,980,050	385,992,708	100,012,658	74.09%	100,296,655	99.72%
01/01/2015	312,185,321	396,645,912	84,460,591	78.71%	99,962,326	84.49%
01/01/2016	331,572,942	413,794,797	82,221,855	80.13%	108,873,305	75.52%
01/01/2017	351,631,909	431,148,721	79,516,812	81.56%	115,437,152	68.88%

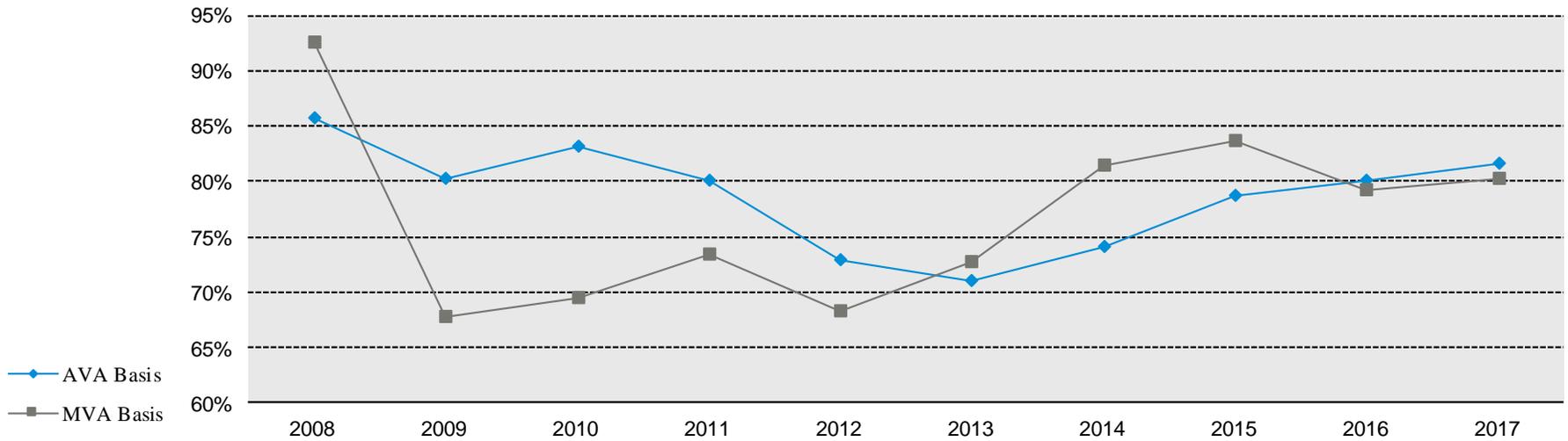
* Not less than zero

SECTION 4: Reporting Information for the City of Savannah Employees' Retirement Plan

**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.



SECTION 4: Reporting Information for the City of Savannah Employees' Retirement Plan

EXHIBIT V

Supplementary Information Required by the GASB

Valuation date	January 1, 2017
Actuarial cost method	Projected Unit Credit Cost Method
Amortization method	Level percent of payroll
Remaining amortization period	Closed period; 26 years remaining as of January 1, 2017
Asset valuation method	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.
Actuarial assumptions:	
Investment rate of return	7.50%
Inflation rate	3.00%
Projected salary increases	Varies by age
Cost of living adjustments	5.00% at participant's adjustment date, 1.00% annually thereafter
Plan membership:	
Retired participants and beneficiaries receiving benefits	1,387
Terminated participants entitled to, but not yet receiving benefits	136
Active participants	<u>2,642</u>
Total	4,165

SECTION 4: Reporting Information for the City of Savannah Employees' Retirement Plan

EXHIBIT VI

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 five-year period ended December 31, 2014.

Mortality Rates:

- Pre-retirement:* RP-2014 Employee Mortality Table, projected generationally using a modified version of the MP-2014 improvement scale
- Healthy annuitants:* RP-2014 Healthy Annuitant Mortality Table, set forward six years for males and three years for females, projected generationally using a modified version of the MP-2014 improvement scale.
- Disabled annuitants:* RP-2014 Disabled Retiree Mortality Table, set back three years for males and females, projected generationally using a modified version of the MP-2014 improvement scale.

The tables above, with adjustments as shown, reasonably reflect the mortality experience of the System as of the measurement date. The mortality tables were then generationally projected using a modified version of the MP-2014 improvement scale to reflect future mortality improvement.

SECTION 4: Reporting Information for the City of Savannah Employees' Retirement Plan

Termination Rates before Retirement:			Rate (%) for General Employees ²	
			Mortality ¹	
Age	Male	Female		
20	0.04	0.02	0.03	8.94
25	0.05	0.02	0.04	8.71
30	0.05	0.02	0.05	8.37
35	0.05	0.03	0.07	7.84
40	0.06	0.04	0.10	6.98
45	0.10	0.07	0.16	5.72
50	0.17	0.11	0.27	--
55	0.28	0.17	--	--
60	0.47	0.24	--	--

¹Tabular rates do not include generational projection

²Includes Airport Authority (except for full-time law enforcement officers), General, and Metropolitan Planning Commission (MPC)

³Disability rates cut off at age 57; 85% of disabilities are assumed to be non-occupational

⁴Withdrawal rates cut off at age 50

SECTION 4: Reporting Information for the City of Savannah Employees' Retirement Plan

Age	Mortality ¹		Rate (%) for Uniformed Employees	
	Male	Female	Disability ²	Withdrawal ³
	20	0.04	0.02	0.03
25	0.05	0.02	0.03	11.44
30	0.05	0.02	0.03	8.85
35	0.05	0.03	0.04	6.67
40	0.06	0.04	0.06	4.88
45	0.10	0.07	0.12	3.25
50	0.17	0.11	0.27	--
55	0.28	0.17	--	--
60	0.47	0.24	--	--

¹Tabular rates do not include generational projection

²Disability rates cut off at age 55; 90% of disabilities are assumed to be non-occupational

³Withdrawal rates cut off at age 48

Additional rate of withdrawal for active members at any age with less than five years of service:

Years of Service	General Rate	Uniform
0	20%	19%
1	16	19
2	16	17
3	14	11
4	9	11

Retirement Rates:

General Employees		Uniformed Employees	
Age	Rate%	Age	Rate%
52-56	3	50-51	1
57-60	7	52-53	3
61-64	15	54-56	12
65-74	20	57-61	20
75	100	62-64	25
		65	100

SECTION 4: Reporting Information for the City of Savannah Employees' Retirement Plan

Retirement Age for Inactive Vested Participants:	Normal Retirement Age
Percent Married:	70%
Age of Spouse:	Females 3 years younger than males
Net Investment Return:	7.50%, net of investment expenses
Administrative Expenses:	\$96,449 payable monthly, equivalent to \$100,000 at the beginning of the year
Accumulated Sick Leave:	3 months added to credited service for each active employee

Salary Increases:	Age	Rate* (%)
	20	4.84
	25	4.75
	30	4.59
	35	4.39
	40	4.08
	45	3.72
	50	3.45
	55	3.33
	60	3.16

**Includes allowance for inflation of 3.00% per year*

Actuarial Value of Assets:	Market value of assets less unrecognized returns in each of the last five years. Unrecognized return is the expected asset gain or loss on a market value basis, and is recognized over a five-year period. An additional adjustment (if necessary) is made so that the final actuarial value of assets is within a 20% corridor of market value.
Actuarial Cost Method:	Projected Unit Credit Actuarial Cost Method. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are allocated by service.
Changes in Assumptions and Methods:	There have been no changes in actuarial assumptions or methods since the last valuation.

SECTION 4: Reporting Information for the City of Savannah Employees' Retirement Plan

**EXHIBIT VII
Summary of Plan Provisions**

This exhibit summarizes the major provisions of the Plan 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: January 1 through December 31

Normal Retirement:	<u>General Employees*</u>	<u>Uniformed Employees</u>
<i>Age Requirement</i>	57	55
<i>Credited Service Requirement</i>	5 years	5 years
<i>Amount</i>	The amount is based on years of credited service and on Final Average Earnings, as follows: 2.1% of Final Average Earnings x years of service earned prior to January 1, 2000, plus 2.3% of Final Average Earnings x years of service earned after January 1, 2000 (maximum of combined total 30 years), plus 1% of Final Average Earnings x service in excess of 30 years.	
	Final Average Earnings means the average of the five consecutive years of highest Basic Annual Earnings in the 10 years preceding retirement.	
Alternative Retirement:	General Employees*	Uniformed Employees
<i>Age Requirement</i>	52	50
<i>Credited Service Requirement</i>	10 years	10 years
<i>Amount</i>	Normal pension accrued reduced by 1/2 of 1% for each month by which the benefit commencement date precedes the normal retirement date.	

* Includes Airport Authority (except for full-time law enforcement officers), General, Metropolitan Planning Commission (MPC) and former Youth Futures Authority employees

SECTION 4: Reporting Information for the City of Savannah Employees' Retirement Plan

Vesting:

<i>Age Requirement</i>	None
<i>Credited Service Requirement</i>	5 years
<i>Amount</i>	Normal pension accrued based on credited service and Final Average Earnings at time of termination, deferred to Normal or Alternative Retirement age, reduced for early retirement.

Occupational Disability Benefit: A monthly amount payable to employees who become totally and permanently disabled, without regard to age or service. The amount is the same as for Normal Retirement based on 25 years of service and is payable for at least 60 months. (Should the employee have less than 25 years at disability, the benefit is calculated at 2.3% of Final Average Earnings for the intervening years.)

Occupational Survivors Benefit: A monthly amount payable to the survivor of an employee who dies while in the performance of his or her job or while receiving Occupational Disability Benefits. Amount is the same as for Occupational Disability, payable for lifetime of survivor.

Non-Occupational Disability Benefit: A monthly amount (as if retired under Normal Retirement) payable to an employee with at least 5 years of credited service, payable for at least 60 months. Upon the retiree's death before Normal Retirement Age, the surviving spouse may choose, in lieu of the remainder of 60 monthly payments, continuation of 100% of the monthly benefit amount for which the participant would have been eligible had he or she lived to first eligibility for a benefit, reduced for the 100% form of payment, and deferred to the age of earliest eligibility.

Benefit Adjustment: Monthly benefits are increased 5% as of the Participant or Surviving Beneficiary's Adjustment date as defined in Article VI, subsection C-11(a) of the plan document. Thereafter, the monthly benefit will be increased by 1% for each additional year of retirement attained.

SECTION 4: Reporting Information for the City of Savannah Employees' Retirement Plan

Pre-retirement Death Benefits:

Lump Sum Benefit (if not eligible for spouse's benefit or if spouse's benefit is rejected):

Amount Lump sum return of employee's contributions with interest.

Spouse's Benefit

Requirement Eligible for Normal, Alternative or Deferred Vested pension.

Amount 100% of the monthly benefit the employee would have received had he or she separated from service on the date of death and lived to retire on a 100% qualified joint and survivor annuity, payable when the employee would have first been eligible for Normal or Alternative Retirement.

Sixty Month Benefit (if elected): If vested, 60 payments in the amount that would be payable at the date of first eligibility for immediate benefits, deferred to that date.

Post-retirement Death Benefits:

If married, benefits are paid in the form of a 50% joint and survivor annuity unless this form is rejected by employee and spouse. If not rejected, the benefit amount otherwise payable is reduced to reflect the joint and survivor form. If rejected, or if not married, benefits are payable for the life of the employee with 60 payments guaranteed. Should the spouse predecease the participant, the monthly benefit reverts to the amount it would have been without the joint and survivor form.

Options:

The following options may be elected in lieu of normal benefits:

1. Life income - increased amount without the 60-payment guarantee;
2. Ten years certain and life - reduced amount with 120-payment guarantee;
3. Social Security - a greater amount payable until commencement of Social Security benefits with a lesser amount thereafter;
4. Lump sum - an amount payable at beginning of retirement, in lieu of up to 10% of retirement benefits.
5. Joint and survivor - reduced amount with continuation to spouse of 100%, 66-2/3% or 50% of the retiree's benefit after death of the retiree.

SECTION 4: Reporting Information for the City of Savannah Employees' Retirement Plan

Sick Leave Accumulated sick leave may be credited as pensionable service for benefit purposes, or added to age for eligibility purposes.

Contributions Each active participant contributes 6.65% of salary; employer pays remaining costs.

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

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