

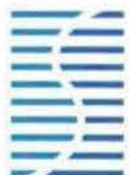
CITY OF ATLANTA
FIREFIGHTERS' PENSION FUND

ACTUARIAL VALUATION
AS OF JULY 1, 2016

DETERMINES THE CONTRIBUTION
FOR THE 2017/18 FISCAL YEAR



	<u>Page</u>
Discussion	1
<u>Funding Results</u>	
Table I-A	Minimum Required Contribution I-1
Table I-B	Sensitivity Analysis I-2
Table I-C	Gain and Loss Analysis I-3
Table I-D	Present Value of Future Benefits I-4
Table I-E	Present Value of Accrued Benefits I-5
Table I-F	Present Value of Vested Benefits I-6
Table I-G	Entry Age Normal Accrued Liability I-7
Table I-H	Entry Age Normal Cost I-8
<u>Accounting Results</u>	
GASB 67/68 Supplement as of June 30, 2016	
<u>Assets</u>	
Table II-A	Actuarial Value of Assets II-1
Table II-B	Market Value of Assets II-2
Table II-C	Investment Return II-3
Table II-D	Asset Reconciliation II-4
Table II-E	Historical Trust Fund Detail II-5
<u>Data</u>	
Table III-A	Summary of Participant Data III-1
Table III-B	Active Participant Data III-2
Table III-C	Active Age-Service Distribution III-3
Table III-D	Active Age-Service-Salary Table III-4
Table III-E	Inactive Participant Data III-5
Table III-F	Projected Benefit Payments III-6
<u>Methods & Assumptions</u>	
Table IV-A	Summary of Actuarial Methods and Assumptions IV-1
Table IV-B	Changes in Actuarial Methods and Assumptions IV-3
<u>Plan Provisions</u>	
Table V-A	Summary of Plan Provisions V-1
Table V-B	Summary of Plan Amendments V-8



September 21, 2016

Introduction

This report presents the results of the July 1, 2016 actuarial valuation of the City of Atlanta Firefighters' Pension Fund. This valuation is based upon the participant data provided as of July 1, 2016 by the plan administrator and asset information provided as of June 30, 2016 by the City. Except for a cursory review for reasonableness, we have not attempted to verify the accuracy of this information.

The primary purpose of this report is to provide a summary of the funded status of the plan as of July 1, 2016 and to determine the minimum required contribution under Georgia Code Section 47-20-10 for the City's 2017/18 fiscal year. In addition, this report provides a projection of the long-term funding requirements of the plan, statistical information concerning the assets held in the trust, statistical information concerning the participant population, and a summary of any recent plan changes.

The liabilities and cost presented in this report are based on numerous assumptions concerning the cost of benefits to be provided in the future, long-term investment returns, and the future demographic experience of the current participants. Anyone referring to this report should remember that the cost developed herein is only an *estimate* of the true cost of providing post-employment pension benefits. No one can predict with certainty whether the true cost will be higher or lower than the cost presented in this report. The calculated cost is entirely dependent upon the assumptions that are described in Table IV-A. If any of the assumptions is changed, then the cost shown in this report will change accordingly. Likewise, if any of the assumptions is not completely realized, then the cost shown in this report will change in the future.

Certain assumptions play a bigger role than others in determining the cost of the post-employment pension benefits. In some cases, relatively small changes in a particular assumption can have a dramatic impact on the anticipated cost of benefits. Although a thorough analysis of the impact of such changes is beyond the scope of this report, Table I-B illustrates the impact that alternative long-term investment returns would have on the minimum required contribution rate.

Minimum Required Contribution

Table I-A shows the development of the minimum required contribution for the City's 2017/18 fiscal year. The minimum required contribution rate is 46.95% of covered payroll, which represents an increase of 10.26% of payroll from the prior valuation.

Table I-C provides a breakdown of the sources of change in the contribution rate. Significantly, the rate increased by 8.41% of payroll due to investment losses and increased by another 1.85% of payroll due to demographic experience. The market value of assets lost 1.54% during the 2015/16 plan year, whereas a 7.50% annual investment return was required to maintain a stable contribution rate.



Georgia Code Section 47-20-10 sets forth many of the rules concerning the minimum required contribution for public pension plans within the state. In addition, Georgia Code Section 47-20-13 exempts public plan sponsors from the minimum funding requirements if the plan's actuarial value of assets exceeds 150% of the present value of accumulated retirement system benefits.

Based on the current assets, participant data, and actuarial assumptions and methods that are used to value the plan, the present-day value of the total long-term funding requirement is \$930,211,501. As illustrated in Table I-A, current assets are sufficient to cover \$612,637,000 of this amount, the employer's expected contribution for the 2016/17 plan year will cover \$16,443,605 of this amount, the employer's expected contribution for the 2017/18 plan year will cover \$21,882,070 of this amount, and future employee contributions will cover \$39,715,922 of this amount, leaving \$239,532,904 to be covered by future employer funding. Again, demographic and investment experience that differs from that assumed will either increase or decrease the future employer funding requirement.

Contents of the Report

Tables I-D through I-G provide a detailed breakdown of various liability amounts by type of benefit and by participant group. Tables II-A through II-F provide information concerning the assets of the trust fund. Specifically, Table II-A shows the development of the actuarial value of assets, which is based on the market value. Tables III-A through III-F provide statistical information concerning the plan's participant population. In particular, Table III-F gives a 10-year projection of the cash that is expected to be required from the trust fund in order to pay benefits to the current group of participants. Finally, Tables IV-A through V-B provide a summary of the actuarial assumptions and methods that are used to value the plan's benefits and of the relevant plan provisions as of July 1, 2016, as well as a summary of the changes that have occurred since the previous valuation report was prepared.

Certification

This actuarial valuation was prepared by me or under my direct supervision and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate and, in my opinion, the techniques and assumptions used are reasonable and meet the requirements and intent of Georgia Code Section 47-20-10. There is no benefit or expense to be provided by the plan and/or paid from the plan's assets for which liabilities or current costs have not been established or otherwise taken into account in the valuation. All known events or trends which may require a material change in plan costs or required contribution rates have been taken into account in the valuation.



For the firm,



Charles T. Carr
Consulting Actuary
Southern Actuarial Services Company, Inc.

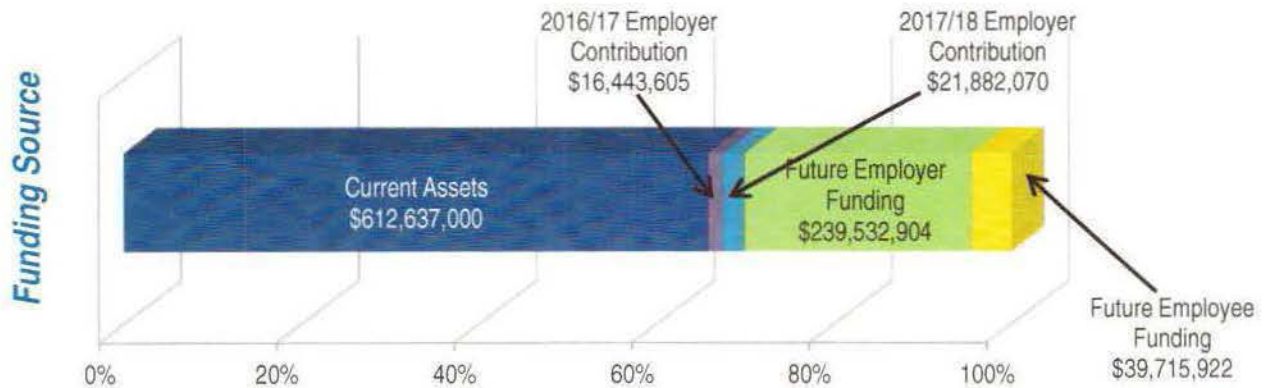
Enrolled Actuary No. 14-04927

The individual above 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 contained herein.



Minimum Required Contribution

Table I-A



For the 2017/18 Fiscal Year

Entry Age Normal Cost for the 2016/17 Plan Year	\$11,413,920
Unfunded Liability Amortization Payment for the 2016/17 Plan Year	\$13,865,272
Expense Allowance for the 2016/17 Plan Year	\$448,177
Expected Employee Contribution for the 2016/17 Plan Year	(\$5,015,098)
Adjustment to Reflect Semi-Monthly Employer Contributions	\$790,371
	\$21,502,642
Expected Employer Contribution for the 2016/17 Plan Year	(\$16,443,605)
Remaining Contribution Due/(Credit) for the 2016/17 Plan Year	\$5,059,037
	x 0.075
One Year's Interest Charge/(Credit) on the Remaining Contribution	\$379,428
Preliminary Employer Contribution for the 2017/18 Fiscal Year	\$21,882,070
Expected Payroll for the 2017/18 Fiscal Year	÷ \$46,610,382

Minimum Required Contribution Rate **46.95%**

(The actual contribution should be based on the minimum required contribution rate multiplied by the actual payroll for the fiscal year.)

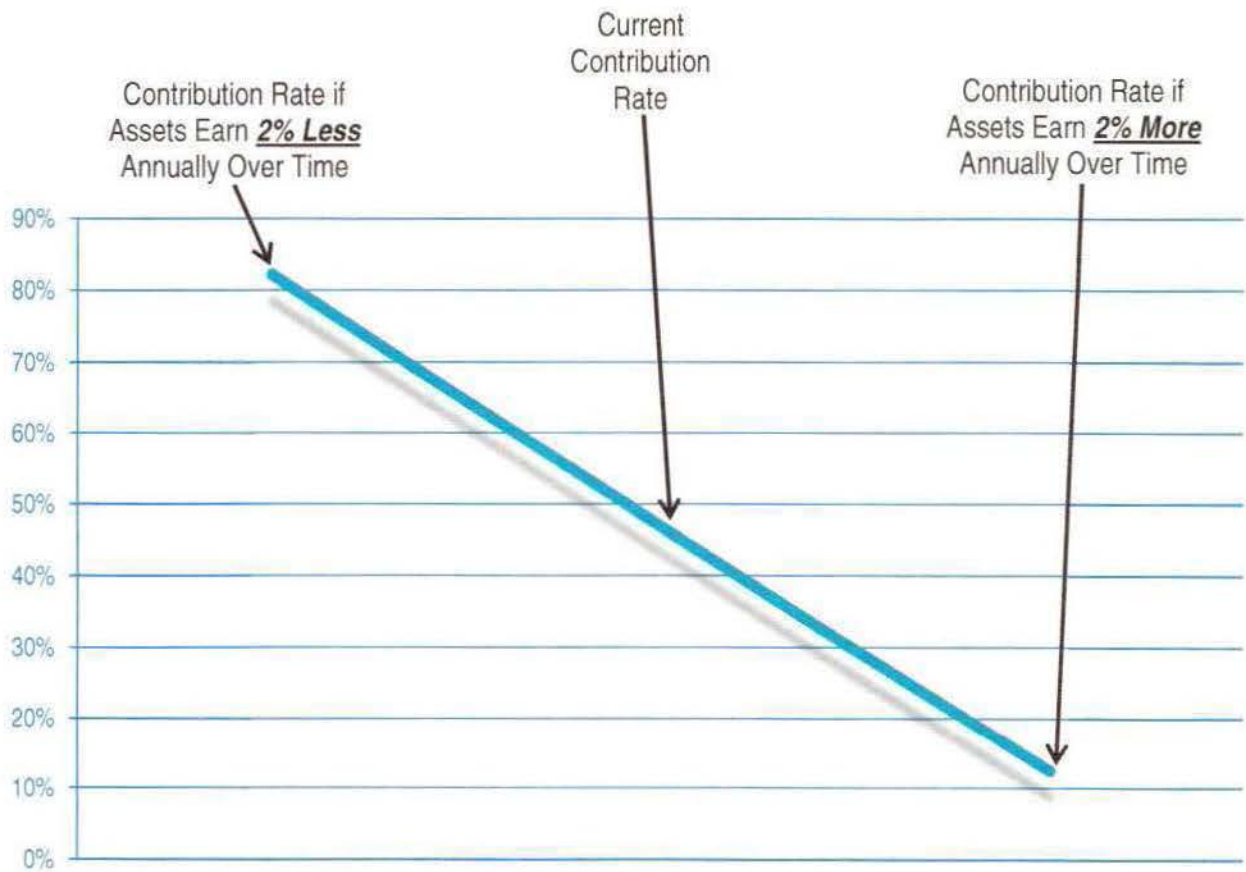
Additional Disclosures

Present Value of Future Compensation	\$354,938,824
Present Value of Future Employer Contributions	\$277,858,579
Present Value of Future Employee Contributions	\$39,715,922



Sensitivity Analysis

Table I-B



The line above illustrates the sensitivity of the contribution rate to changes in the long-term investment return.



Gain and Loss Analysis

Table I-C

Source of Change in the Contribution Rate

Previous minimum required contribution rate	36.69%
Increase (decrease) due to investment gains and losses	8.41%
Increase (decrease) due to demographic experience	1.85%
Increase (decrease) due to plan amendments	0.00%
Increase (decrease) due to actuarial assumption changes	0.00%
Increase (decrease) due to actuarial method changes	0.00%
Current minimum required contribution rate	<u>46.95%</u>

Source of Change in the Unfunded Liability

Previous unfunded liability	\$178,273,544
Increase due to interest	\$13,370,516
Decrease due to amortization payments	(\$10,057,778)
Increase (decrease) due to plan experience	\$58,113,790
Increase (decrease) due to plan amendments	\$0
Increase (decrease) due to actuarial assumption changes	\$0
Increase (decrease) due to actuarial method changes	\$0
Current unfunded liability	<u>\$239,700,072</u>



Present Value of Future Benefits

Table I-D

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
<i>Actively Employed Participants</i>			
Retirement benefits	\$292,871,171	\$292,871,171	\$292,871,171
Termination benefits	\$12,356,299	\$12,356,299	\$12,356,299
Disability benefits	\$12,691,142	\$12,691,142	\$12,691,142
Death benefits	\$4,580,623	\$4,580,623	\$4,580,623
Refund of employee contributions	\$256,641	\$256,641	\$256,641
Sub-total	\$322,755,876	\$322,755,876	\$322,755,876
<i>Deferred Vested Participants</i>			
Retirement benefits	\$2,401,565	\$2,401,565	\$2,401,565
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$2,401,565	\$2,401,565	\$2,401,565
<i>Due a Refund of Contributions</i>	\$0	\$0	\$0
<i>Deferred Beneficiaries</i>	\$613,515	\$613,515	\$613,515
<i>Retired Participants</i>			
Service retirements	\$484,199,283	\$484,199,283	\$484,199,283
Disability retirements	\$72,881,924	\$72,881,924	\$72,881,924
Beneficiaries receiving	\$43,809,950	\$43,809,950	\$43,809,950
DROP participants	\$0	\$0	\$0
Sub-total	\$600,891,157	\$600,891,157	\$600,891,157
<i>Grand Total</i>	<u>\$926,662,113</u>	<u>\$926,662,113</u>	<u>\$926,662,113</u>



Present Value of Accrued Benefits

Table I-E

	<u>Old Assumptions w/o Amendment</u>	<u>Old Assumptions w/ Amendment</u>	<u>New Assumptions w/ Amendment</u>
<i><u>Actively Employed Participants</u></i>			
Retirement benefits	\$182,165,943	\$182,165,943	\$182,165,943
Termination benefits	\$7,101,978	\$7,101,978	\$7,101,978
Disability benefits	\$9,747,169	\$9,747,169	\$9,747,169
Death benefits	\$3,042,254	\$3,042,254	\$3,042,254
Refund of employee contributions	\$178,357	\$178,357	\$178,357
Sub-total	\$202,235,701	\$202,235,701	\$202,235,701
<i><u>Deferred Vested Participants</u></i>			
Retirement benefits	\$2,401,565	\$2,401,565	\$2,401,565
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$2,401,565	\$2,401,565	\$2,401,565
<i><u>Due a Refund of Contributions</u></i>	\$0	\$0	\$0
<i><u>Deferred Beneficiaries</u></i>	\$613,515	\$613,515	\$613,515
<i><u>Retired Participants</u></i>			
Service retirements	\$484,199,283	\$484,199,283	\$484,199,283
Disability retirements	\$72,881,924	\$72,881,924	\$72,881,924
Beneficiaries receiving	\$43,809,950	\$43,809,950	\$43,809,950
DROP participants	\$0	\$0	\$0
Sub-total	\$600,891,157	\$600,891,157	\$600,891,157
<i><u>Grand Total</u></i>	<u>\$806,141,938</u>	<u>\$806,141,938</u>	<u>\$806,141,938</u>
<i><u>Funded Percentage</u></i>	76.00%	76.00%	76.00%



Present Value of Vested Benefits

Table I-F

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
<i>Actively Employed Participants</i>			
Retirement benefits	\$167,601,862	\$167,601,862	\$167,601,862
Termination benefits	\$6,259,275	\$6,259,275	\$6,259,275
Disability benefits	\$9,747,169	\$9,747,169	\$9,747,169
Death benefits	\$2,975,746	\$2,975,746	\$2,975,746
Refund of employee contributions	\$806,989	\$806,989	\$806,989
Sub-total	\$187,391,041	\$187,391,041	\$187,391,041
<i>Deferred Vested Participants</i>			
Retirement benefits	\$2,401,565	\$2,401,565	\$2,401,565
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$2,401,565	\$2,401,565	\$2,401,565
<i>Due a Refund of Contributions</i>	\$0	\$0	\$0
<i>Deferred Beneficiaries</i>	\$613,515	\$613,515	\$613,515
<i>Retired Participants</i>			
Service retirements	\$484,199,283	\$484,199,283	\$484,199,283
Disability retirements	\$72,881,924	\$72,881,924	\$72,881,924
Beneficiaries receiving	\$43,809,950	\$43,809,950	\$43,809,950
DROP participants	\$0	\$0	\$0
Sub-total	\$600,891,157	\$600,891,157	\$600,891,157
<i>Grand Total</i>	<u>\$791,297,278</u>	<u>\$791,297,278</u>	<u>\$791,297,278</u>



Entry Age Normal Accrued Liability

Table I-G

	<u>Old Assumptions w/o Amendment</u>	<u>Old Assumptions w/ Amendment</u>	<u>New Assumptions w/ Amendment</u>
<i><u>Actively Employed Participants</u></i>			
Retirement benefits	\$227,499,830	\$227,499,830	\$227,499,830
Termination benefits	\$8,813,394	\$8,813,394	\$8,813,394
Disability benefits	\$8,556,497	\$8,556,497	\$8,556,497
Death benefits	\$3,381,497	\$3,381,497	\$3,381,497
Refund of employee contributions	\$179,617	\$179,617	\$179,617
Sub-total	\$248,430,835	\$248,430,835	\$248,430,835
<i><u>Deferred Vested Participants</u></i>			
Retirement benefits	\$2,401,565	\$2,401,565	\$2,401,565
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$2,401,565	\$2,401,565	\$2,401,565
<i><u>Due a Refund of Contributions</u></i>	\$0	\$0	\$0
<i><u>Deferred Beneficiaries</u></i>	\$613,515	\$613,515	\$613,515
<i><u>Retired Participants</u></i>			
Service retirements	\$484,199,283	\$484,199,283	\$484,199,283
Disability retirements	\$72,881,924	\$72,881,924	\$72,881,924
Beneficiaries receiving	\$43,809,950	\$43,809,950	\$43,809,950
DROP participants	\$0	\$0	\$0
Sub-total	\$600,891,157	\$600,891,157	\$600,891,157
<i><u>Grand Total</u></i>	<u>\$852,337,072</u>	<u>\$852,337,072</u>	<u>\$852,337,072</u>
<i>less Actuarial Value of Assets</i>	<i>(\$612,637,000)</i>	<i>(\$612,637,000)</i>	<i>(\$612,637,000)</i>
<i><u>Unfunded Accrued Liability</u></i>	<u>\$239,700,072</u>	<u>\$239,700,072</u>	<u>\$239,700,072</u>



Entry Age Normal Cost

Table I-H

	<u>Old Assumptions w/o Amendment</u>	<u>Old Assumptions w/ Amendment</u>	<u>New Assumptions w/ Amendment</u>
<i><u>Actively Employed Participants</u></i>			
Retirement benefits	\$9,723,979	\$9,723,979	\$9,723,979
Termination benefits	\$631,588	\$631,588	\$631,588
Disability benefits	\$815,735	\$815,735	\$815,735
Death benefits	\$198,907	\$198,907	\$198,907
Refund of employee contributions	\$43,711	\$43,711	\$43,711
Sub-total	\$11,413,920	\$11,413,920	\$11,413,920
<i><u>Deferred Vested Participants</u></i>			
Retirement benefits	\$0	\$0	\$0
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$0	\$0	\$0
<i><u>Due a Refund of Contributions</u></i>	\$0	\$0	\$0
<i><u>Deferred Beneficiaries</u></i>	\$0	\$0	\$0
<i><u>Retired Participants</u></i>			
Service retirements	\$0	\$0	\$0
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$0	\$0	\$0
DROP participants	\$0	\$0	\$0
Sub-total	\$0	\$0	\$0
<i><u>Grand Total</u></i>	<u>\$11,413,920</u>	<u>\$11,413,920</u>	<u>\$11,413,920</u>



CITY OF ATLANTA
FIREFIGHTERS' PENSION FUND

ACTUARIAL VALUATION
AS OF JULY 1, 2015

GASB 67/68 SUPPLEMENT
AS OF JUNE 30, 2016



DISCLOSURES RELATED TO THE FIREFIGHTERS' PENSION PLAN

NET PENSION LIABILITY AS OF JUNE 30, 2016

Total pension liability	\$861,492,594 *
Less fiduciary net position	<u>(612,637,000)</u>
Net pension liability	<u>\$248,855,594 **</u>

* This amount has been rolled forward from July 1, 2015.

** This amount is recognized on the employer's balance sheet.

PENSION EXPENSE FOR THE 2015/16 FISCAL YEAR

Service cost	\$12,013,175
Other recognized changes in net pension liability:	
Expected interest growth	15,626,187
Investment gain/loss	6,182,979
Demographic gain/loss	(2,977,689)
Employee contributions	(5,667,000)
Administrative expenses	388,000
Changes in benefit terms	0
Assumption changes	<u>1,321,281</u>
Pension expense	<u>\$26,886,933 *</u>

* This amount is recognized on the employer's income statement, along with the employer contribution for the 2015/16 fiscal year.

DEFERRED INFLOW AND OUTFLOW OF RESOURCES

	Deferred Outflows Of Resources	Deferred Inflows Of Resources
Balance as of June 30, 2015	\$58,491,703	\$63,757,875
Change due to:		
Amortization payments	\$(22,590,309)	\$(18,063,738)
Investment gain/loss	\$56,703,240	\$0
Demographic gain/loss	\$0	\$22,795,209
Assumption changes	\$0	\$0
Total change	<u>\$34,112,931</u>	<u>\$4,731,471</u>
Balance as of June 30, 2016	\$92,604,634 *	\$68,489,346 *

* These amounts are recognized on the employer's balance sheet.

BALANCE EQUATION

Net pension liability as of June 30, 2015	\$209,041,201
Plus pension expense for the 2015/16 fiscal year	\$26,886,933
Minus employer contribution for the 2015/16 fiscal year	\$(16,454,000)
Plus change in balance of deferred outflows of resources	\$34,112,931
Minus change in balance of deferred inflows of resources	\$(4,731,471)
Net pension liability as of June 30, 2016	\$248,855,594

DISCLOSURES RELATED TO THE FIREFIGHTERS' PENSION PLAN (continued)

DEFERRED INFLOW AND OUTFLOW OF RESOURCES (continued)

Amortization schedule for deferred outflows and inflows of resources:

	Deferred Outflows Of Resources	Deferred Inflows Of Resources
Balance as of June 30, 2016	\$92,604,634	\$68,489,346
Amount recognized in the 2016/17 pension expense:		
<i>Investment gain/loss</i>	\$20,448,554	\$14,265,575
<i>Demographic gain/loss</i>	\$820,474	\$3,798,163
<i>Assumption changes</i>	<u>\$1,321,281</u>	<u>\$0</u>
<i>Total</i>	\$22,590,309	\$18,063,738
Balance as of June 30, 2017	\$70,014,325	\$50,425,608
Amount recognized in the 2017/18 pension expense:		
<i>Investment gain/loss</i>	\$20,448,554	\$14,265,573
<i>Demographic gain/loss</i>	\$820,474	\$3,798,163
<i>Assumption changes</i>	<u>\$1,321,281</u>	<u>\$0</u>
<i>Total</i>	\$22,590,309	\$18,063,738
Balance as of June 30, 2018	\$47,424,016	\$32,361,870
Amount recognized in the 2018/19 pension expense:		
<i>Investment gain/loss</i>	\$20,448,556	\$0
<i>Demographic gain/loss</i>	\$820,474	\$3,798,163
<i>Assumption changes</i>	<u>\$1,321,281</u>	<u>\$0</u>
<i>Total</i>	\$22,590,311	\$3,798,163
Balance as of June 30, 2019	\$24,833,705	\$28,563,707
Amount recognized in the 2019/20 pension expense:		
<i>Investment gain/loss</i>	\$11,340,648	\$0
<i>Demographic gain/loss</i>	\$820,474	\$3,798,163
<i>Assumption changes</i>	<u>\$1,321,281</u>	<u>\$0</u>
<i>Total</i>	\$13,482,403	\$3,798,163
Balance as of June 30, 2020	\$11,351,302	\$24,765,544
Amount recognized in the 2020/21 pension expense:		
<i>Investment gain/loss</i>	\$0	\$0
<i>Demographic gain/loss</i>	\$820,474	\$3,798,163
<i>Assumption changes</i>	<u>\$1,321,281</u>	<u>\$0</u>
<i>Total</i>	\$2,141,755	\$3,798,163
Balance as of June 30, 2021	\$9,209,547	\$20,967,381

DISCLOSURES RELATED TO THE FIREFIGHTERS' PENSION PLAN (continued)

CHANGES IN THE NET PENSION LIABILITY

	Total Pension Liability	Fiduciary Net Position	Net Pension Liability
Balance as of June 30, 2015	\$853,690,201	\$(644,649,000)	\$209,041,201
Change due to:			
<i>Service cost</i>	\$12,013,175	\$0	\$12,013,175
<i>Expected interest growth</i>	\$62,584,427	\$(46,958,240)	\$15,626,187
<i>Unexpected investment income</i>	\$0	\$56,703,240	\$56,703,240
<i>Demographic experience</i>	\$(22,795,209)	\$0	\$(22,795,209)
<i>Employer contributions</i>	\$0	\$(16,454,000)	\$(16,454,000)
<i>Employee contributions</i>	\$0	\$(5,667,000)	\$(5,667,000)
<i>Benefit payments & refunds</i>	\$(44,000,000)	\$44,000,000	\$0
<i>Administrative expenses</i>	\$0	\$388,000	\$388,000
<i>Changes in benefit terms</i>	\$0	\$0	\$0
<i>Assumption changes</i>	\$0	\$0	\$0
Balance as of June 30, 2016	\$861,492,594	\$(612,637,000)	\$248,855,594

COMPARISON OF NET PENSION LIABILITY USING ALTERNATIVE DISCOUNT RATES

	Discount Rate Minus 1.00%	7.41% Discount Rate	Discount Rate Plus 1.00%
Total pension liability	\$970,048,171	\$861,492,594	\$771,685,369
Less fiduciary net position	<u>(612,637,000)</u>	<u>(612,637,000)</u>	<u>(612,637,000)</u>
Net pension liability	\$357,411,171	\$248,855,594	\$159,048,369

HISTORICAL TREND INFORMATION

Measurement Date	Total Pension Liability	Fiduciary Net Position	Net Pension Liability	Funded Percentage	Covered Payroll	Net Pension Liability as a % of Covered Payroll
June 30, 2016	\$861,492,594	\$612,637,000	\$248,855,594	71.11%	\$46,918,048	530.40%
June 30, 2015	\$853,690,201	\$644,649,000	\$209,041,201	75.51%	\$47,180,988	443.06%
June 30, 2014	\$846,325,069	\$658,508,000	\$187,817,069	77.81%	\$44,885,672	418.43%
June 30, 2013	\$788,354,527	\$561,450,000	\$226,904,527	71.22%	\$42,797,394	530.18%
July 1, 2012	\$727,803,073	\$505,692,000	\$222,111,073	69.48%	\$42,797,394	518.98%
July 1, 2011	\$730,535,169	\$509,590,000	\$220,945,169	69.76%	\$39,482,064	559.61%
January 1, 2011	\$732,356,772	\$481,640,221	\$250,716,551	65.77%	\$42,963,376	583.56%
January 1, 2010	\$699,174,482	\$422,791,314	\$276,383,168	60.47%	\$43,910,390	629.43%
January 1, 2009	\$708,347,000	\$408,090,000	\$300,257,000	57.61%	\$43,275,000	693.83%
January 1, 2008	\$652,816,000	\$419,163,000	\$233,653,000	64.21%	\$45,561,000	512.84%
January 1, 2007	\$577,271,000	\$371,456,000	\$205,815,000	64.35%	\$45,686,000	450.50%

DISCLOSURES RELATED TO THE PENSION PLAN (continued)

HISTORICAL TREND INFORMATION (continued)

Changes in the net pension liability by source

Fiscal Year	Service Cost	Expected Interest Growth	Unexpected Investment Income	Demographic Experience	Employer Contributions	Employee Contributions	Benefit Payments & Refunds	Administrative Expenses	Changes In Benefit Terms	Assumption Changes
2015/16	\$12,013,175	\$15,626,187	\$56,703,240	\$(22,795,209)	\$(16,454,000)	\$(5,667,000)	\$0	\$388,000	\$0	\$0
2014/15	\$12,612,131	\$12,201,423	\$45,539,532	\$(22,875,413)	\$(20,866,000)	\$(5,637,000)	\$(177,541)	\$427,000	\$0	\$0
2013/14	\$13,783,084	\$18,426,932	\$(71,327,873)	\$10,091,834	\$(20,656,000)	\$(5,670,000)	\$(361,188)	\$374,000	\$0	\$16,251,753

NOTE: The amortization period for demographic experience and assumption changes was 12.30 years for the 2013/14 fiscal year, 11.95 years for the 2014/15 fiscal year, and 12.10 years for the 2015/16 fiscal year.

DISCLOSURES RELATED TO THE FIREFIGHTERS' PENSION PLAN (continued)

HISTORICAL TREND INFORMATION (continued)

Fiscal Year End	(1) Actuarially Determined Contribution	(2) Contributions Recognized By the Plan	(3) Difference Between (1) and (2)	Covered Payroll	Column (3) as a % of Covered Payroll
June 30, 2016	\$16,454,000	\$16,454,000	\$0	\$46,918,048	0.00%
June 30, 2015	\$20,866,000	\$20,866,000	\$0	\$47,180,988	0.00%
June 30, 2014	\$20,656,000	\$20,656,000	\$0	\$44,885,672	0.00%
June 30, 2013	\$17,491,000	\$17,491,000	\$0	\$42,797,394	0.00%
June 30, 2012	\$21,092,000	\$21,092,000	\$0	\$39,482,064	0.00%
June 30, 2011	\$24,912,000	\$24,912,000	\$0	\$42,963,376	0.00%
June 30, 2010	\$25,865,000	\$25,865,000	\$0	\$43,910,390	0.00%
June 30, 2009	\$28,752,000	\$28,752,000	\$0	\$43,275,000	0.00%
June 30, 2008	\$26,373,000	\$26,373,000	\$0	\$45,561,000	0.00%
June 30, 2007	\$25,727,000	\$25,727,000	\$0	\$45,686,000	0.00%

INFORMATION USED TO DETERMINE THE NET PENSION LIABILITY

Employer's reporting date: June 30, 2017
 Measurement date: June 30, 2016
 Actuarial valuation date: July 1, 2015

Actuarial assumptions

Discount rate: 7.41% per annum (2.25% per annum is attributable to long-term inflation); this rate was used to discount all future benefit payments.

Salary increases: 4.00% per annum

Cost-of-living increases: 1.00% per annum (employees hired after August 31, 2011) or 3.00% per annum (employees hired before September 1, 2011)

Mortality basis: Sex-distinct rates set forth in the RP-2000 Mortality Table for annuitants, projected to 2015 by Scale AA, as published by the Internal Revenue Service (IRS) for purposes of Internal Revenue Code (IRC) section 430; future generational improvements in mortality have not been reflected.

Retirement: Retirement is assumed to occur at normal retirement age.

Other decrements: Employment termination is assumed based on an experience study covering the period 1982 through 1986; disability is assumed in accordance with the Wyatt 1985 Disability Study (Class 4).

Non-investment expenses: 1.00% of future payroll

Future contributions: Contributions from the employer and employees are assumed to be made as legally required; employer contributions are assumed to equal 36.69% of pensionable earnings.

Changes: No assumptions were changed since the previous measurement date.

DETERMINATION OF THE LONG-TERM EXPECTED RATE OF RETURN ON PLAN ASSETS

Investment Category	Target Allocation	Expected Long-Term Real Return
Broad equity market	7.00%	6.01% per annum
Domestic large-cap equity	30.00%	6.91% per annum
Domestic mid-cap equity	15.00%	8.91% per annum
Domestic small-cap equity	9.00%	5.01% per annum
International equity	9.00%	3.31% per annum
Domestic fixed income	25.00%	0.81% per annum
Alternative investments	5.00%	7.51% per annum
Total or weighted arithmetic average	100.00%	5.16% per annum

DISCLOSURES RELATED TO THE FIREFIGHTERS' PENSION PLAN (continued)

PENSION PLAN DESCRIPTION

Name of the pension plan: *City of Atlanta Firefighters' Pension Fund*
Legal plan administrator: *Board of Trustees of the City of Atlanta Firefighters' Pension Fund*
Plan type: *Single-employer defined benefit pension plan*
Number of covered individuals: *2,055 (992 inactive employees and beneficiaries currently receiving benefits; 21 inactive employees entitled to but not yet receiving benefits; 1,042 active employees)*
Contribution requirement: *Employer contributions are actuarially determined; employees must contribute either 8% of base pay (hired after August 31, 2011), 12% of base pay (hired before September 1, 2011 without an eligible beneficiary) or 13% of base pay (hired before September 1, 2011 with an eligible beneficiary); contribution requirements may be amended by City ordinance, but employer contribution requirement is subject to State minimums.*
Pension plan reporting: *The plan issues a stand-alone financial report each year, which contains information about the plan's fiduciary net position. The plan's fiduciary net position has been determined on the same basis used by the pension plan and is equal to the market value of assets calculated under the accrual basis of accounting. This report is available to the public at the plan's administrative office: Zenith American Solutions, 100 Crescent Centre Parkway, Suite 400, Tucker, GA 30084-7042, (770) 934-3953.*

Description of the benefit terms

Employees covered: *Full-time firefighters employed by the City of Atlanta*
Types of benefits offered: *Retirement, disability, and pre-retirement death benefits*
Basic pension formula: *1% of average earnings x up to 80 years of service (for employees hired after August 31, 2011)*
2% of average earnings x up to 50 years of service (for employees hired during the period July 1, 2010 through August 31, 2011)
2% of average earnings x service through February 28, 2001 + 3% of average earnings x service earned after February 28, 2001 (for employees hired before July 1, 2010 who are not covered by the 2005 amendment)
3% of average earnings x up to 26.667 years of service (for employees hired before July 1, 2010 who are covered by the 2005 amendment)
Early retirement adjustment: *Retirement benefit is reduced by ½% for each month by which the participant's early retirement age precedes his normal retirement age (for employees hired after August 31, 2011)*
Retirement benefit is reduced by ½% for each of the first 60 months and by ¼% for each additional month by which the participant's early retirement age precedes his normal retirement age (for employees hired before September 1, 2011)
Disability pension: *Basic pension formula * (for a non-service-connected disability with at least five years of service)*
*Larger of 70% of top salary for the employee's grade and position or basic pension formula * (for a service-connected disability if the employee is not covered by the 1986 amendment)*
*Larger of 50% of average earnings or basic pension formula ** (payable until normal retirement age for a service-connected disability if the employee is covered by the 1986 amendment)*
Basic pension formula including service credit for the period of disability (payable after normal retirement age for a service-connected disability if the employee is covered by the 1986 amendment)
100% of top salary for the employee's grade and position (for a catastrophic injury incurred in the line-of-duty)
** Benefit is offset by worker's comp payments to the extent both payments exceed 100% of salary*
*** Benefit is offset by worker's comp payments to the extent both payments exceed 75% of salary*
Pre-retirement death benefit: *75% of the basic pension formula (payable to the eligible beneficiary upon death not in the line-of-duty)*
100% of base pay offset by worker's comp or other payments (payable to the eligible beneficiary for first two years after death in the line-of-duty)
75% of the larger of the basic pension formula or 70% of top salary for the employee's grade (payable to the eligible beneficiary beginning two years after death in the line-of-duty)
75% of the basic pension formula (payable to the eligible beneficiary beginning two years after death in the line-of-duty if the employee was covered by the 1986 amendment)
Normal retirement age: *Age 65 with at least five years of service*
Age 57 with at least 15 years of service
Age 55 with at least 15 years of service (for employees hired before September 1, 2011)
Age 55 with at least 10 years of service (for employees hired before July 1, 2010)
Any age with at least 30 years of service (for employees covered by the 2005 amendment)

DISCLOSURES RELATED TO THE FIREFIGHTERS' PENSION PLAN (continued)

PENSION PLAN DESCRIPTION (continued)

Description of the benefit terms (continued)

Early retirement age:	<i>Age 47 with at least 15 years of service (for employees hired after August 31, 2011) Any age with at least 15 years of service (for employees hired during the period July 1, 2010 through August 31, 2011)</i>
Vesting requirement:	<i>Any age with at least 10 years of service (for employees hired before July 1, 2010) 25% vesting with five years of service, graded up to 100% vesting with 15 years of service (for employees hired after June 30, 2010) 25% vesting with five years of service, graded up to 100% vesting with 10 years of service (for employees hired before July 1, 2010)</i>
Form of payment:	<i>Single life annuity (for employees without an eligible beneficiary) 75% joint and contingent annuity (for employees with an eligible beneficiary; survivor annuity is only payable for life if the beneficiary is a spouse or domestic partner and, in the case of employees who are not covered by the 1986 amendment, the spouse or domestic partner does not re-marry; survivor annuity is actuarially adjusted if the employee was hired after August 31, 2011)</i>
Average earnings:	<i>Average of the highest 120 consecutive months of base pay plus a credit for unused vacation (for employees hired after August 31, 2011) Average of the highest 36 consecutive months of base pay plus a credit for unused sick leave and vacation (for employees hired before September 1, 2011)</i>
Cost-of-living adjustment:	<i>Based on the CPI limited to 1% per year (for employees hired after August 31, 2011) Based on the CPI limited to 3% per year (for employees hired before September 1, 2011)</i>
Legal authority:	<i>Plan was initially established under State law and has been amended numerous times by City ordinance.</i>
Changes:	<i>The benefit terms did not change from the prior measurement date.</i>

DISCLOSURES RELATED TO THE FIREFIGHTERS' PENSION PLAN (continued)

PROJECTION OF THE FIDUCIARY NET POSITION

Date	BOY Balance	Contributions	Benefit Payments	Administrative Expenses	Investment Earnings	EOY Balance
July 1, 2015	\$644,649,000	\$22,121,000	\$44,000,000	\$388,000	-\$9,745,000	\$612,637,000
July 1, 2016	\$612,637,000	\$23,293,043	\$44,378,470	\$391,337	\$44,614,906	\$635,775,142
July 1, 2017	\$635,775,142	\$24,224,765	\$46,886,702	\$413,455	\$46,271,272	\$658,971,022
July 1, 2018	\$658,971,022	\$25,193,756	\$49,716,385	\$438,408	\$47,921,472	\$681,931,457
July 1, 2019	\$681,931,457	\$26,201,506	\$52,078,052	\$459,234	\$49,572,816	\$705,168,493
July 1, 2020	\$705,168,493	\$27,249,566	\$53,824,411	\$474,633	\$51,268,710	\$729,387,725
July 1, 2021	\$729,387,725	\$28,339,549	\$55,810,829	\$492,150	\$53,030,098	\$754,454,393
July 1, 2022	\$754,454,393	\$29,473,131	\$57,859,447	\$510,215	\$54,853,585	\$780,411,447
July 1, 2023	\$780,411,447	\$30,652,056	\$60,126,085	\$530,203	\$56,736,695	\$807,143,910
July 1, 2024	\$807,143,910	\$31,878,138	\$61,796,324	\$544,931	\$58,700,873	\$835,381,666
July 1, 2025	\$835,381,666	\$33,153,264	\$63,325,555	\$558,416	\$60,783,554	\$865,434,513
July 1, 2026	\$865,434,513	\$34,479,395	\$65,051,220	\$573,633	\$62,995,378	\$897,284,433
July 1, 2027	\$897,284,433	\$28,479,594	\$66,567,578	\$587,005	\$65,081,473	\$923,690,917
July 1, 2028	\$923,690,917	\$0	\$68,047,527	\$600,055	\$65,947,552	\$920,990,887
July 1, 2029	\$920,990,887	\$0	\$69,678,441	\$614,437	\$65,687,610	\$916,385,619
July 1, 2030	\$916,385,619	\$0	\$71,276,015	\$628,525	\$65,287,715	\$909,768,794
July 1, 2031	\$909,768,794	\$0	\$72,330,219	\$637,821	\$64,758,710	\$901,559,464
July 1, 2032	\$901,559,464	\$0	\$73,343,071	\$646,753	\$64,113,218	\$891,682,858
July 1, 2033	\$891,682,858	\$0	\$74,131,226	\$653,703	\$63,352,429	\$880,250,358
July 1, 2034	\$880,250,358	\$0	\$74,979,124	\$661,180	\$62,474,155	\$867,084,209
July 1, 2035	\$867,084,209	\$0	\$75,929,554	\$669,561	\$61,463,654	\$851,948,748
July 1, 2036	\$851,948,748	\$0	\$76,055,845	\$670,674	\$60,337,481	\$835,559,710
July 1, 2037	\$835,559,710	\$0	\$76,447,647	\$674,129	\$59,108,671	\$817,546,605
July 1, 2038	\$817,546,605	\$0	\$76,290,306	\$672,742	\$57,779,675	\$798,363,232
July 1, 2039	\$798,363,232	\$0	\$76,003,179	\$670,210	\$56,368,727	\$778,058,570
July 1, 2040	\$778,058,570	\$0	\$76,566,215	\$675,175	\$54,843,484	\$755,660,664
July 1, 2041	\$755,660,664	\$0	\$75,912,000	\$669,406	\$53,207,814	\$732,287,072
July 1, 2042	\$732,287,072	\$0	\$75,085,789	\$662,120	\$51,506,160	\$708,045,323
July 1, 2043	\$708,045,323	\$0	\$73,915,601	\$651,801	\$49,752,803	\$683,230,724
July 1, 2044	\$683,230,724	\$0	\$72,551,922	\$639,776	\$47,964,100	\$658,003,126
July 1, 2045	\$658,003,126	\$0	\$71,193,401	\$627,796	\$46,144,605	\$632,326,534
July 1, 2046	\$632,326,534	\$0	\$69,838,298	\$615,847	\$44,291,714	\$606,164,103
July 1, 2047	\$606,164,103	\$0	\$68,264,538	\$601,969	\$42,410,848	\$579,708,444
July 1, 2048	\$579,708,444	\$0	\$66,490,643	\$586,327	\$40,515,602	\$553,147,076
July 1, 2049	\$553,147,076	\$0	\$64,701,293	\$570,548	\$38,613,089	\$526,488,324
July 1, 2050	\$526,488,324	\$0	\$62,799,274	\$553,775	\$36,707,497	\$499,842,772
July 1, 2051	\$499,842,772	\$0	\$60,780,493	\$535,973	\$34,807,168	\$473,333,474
July 1, 2052	\$473,333,474	\$0	\$58,699,507	\$517,623	\$32,919,220	\$447,035,564
July 1, 2053	\$447,035,564	\$0	\$56,567,232	\$498,820	\$31,048,818	\$421,018,330
July 1, 2054	\$421,018,330	\$0	\$54,386,529	\$479,590	\$29,200,992	\$395,353,203
July 1, 2055	\$395,353,203	\$0	\$52,169,451	\$460,040	\$27,380,593	\$370,104,305
July 1, 2056	\$370,104,305	\$0	\$49,919,887	\$440,203	\$25,592,228	\$345,336,443
July 1, 2057	\$345,336,443	\$0	\$47,638,855	\$420,088	\$23,840,664	\$321,118,164
July 1, 2058	\$321,118,164	\$0	\$45,333,581	\$399,760	\$22,130,713	\$297,515,536
July 1, 2059	\$297,515,536	\$0	\$43,008,253	\$379,255	\$20,467,118	\$274,595,146
July 1, 2060	\$274,595,146	\$0	\$40,672,815	\$358,660	\$18,854,449	\$252,418,120
July 1, 2061	\$252,418,120	\$0	\$38,331,397	\$338,013	\$17,297,082	\$231,045,792
July 1, 2062	\$231,045,792	\$0	\$35,995,996	\$317,419	\$15,799,122	\$210,531,499
July 1, 2063	\$210,531,499	\$0	\$33,672,468	\$296,930	\$14,364,307	\$190,926,408
July 1, 2064	\$190,926,408	\$0	\$31,371,184	\$276,637	\$12,996,047	\$172,274,634
July 1, 2065	\$172,274,634	\$0	\$29,101,452	\$256,622	\$11,697,270	\$154,613,830
July 1, 2066	\$154,613,830	\$0	\$26,868,389	\$236,930	\$10,470,578	\$137,979,089
July 1, 2067	\$137,979,089	\$0	\$24,681,144	\$217,643	\$9,318,234	\$122,398,536

DISCLOSURES RELATED TO THE FIREFIGHTERS' PENSION PLAN (continued)

PROJECTION OF THE FIDUCIARY NET POSITION (continued)

Date	BOY Balance	Contributions	Benefit Payments	Administrative Expenses	Investment Earnings	EOY Balance
July 1, 2068	\$122,398,536	\$0	\$22,549,456	\$198,845	\$8,241,967	\$107,892,202
July 1, 2069	\$107,892,202	\$0	\$20,481,659	\$180,611	\$7,242,954	\$94,472,886
July 1, 2070	\$94,472,886	\$0	\$18,486,394	\$163,016	\$6,321,827	\$82,145,303
July 1, 2071	\$82,145,303	\$0	\$16,576,515	\$146,175	\$5,478,462	\$70,901,075
July 1, 2072	\$70,901,075	\$0	\$14,754,017	\$130,104	\$4,712,167	\$60,729,121
July 1, 2073	\$60,729,121	\$0	\$13,029,147	\$114,893	\$4,021,743	\$51,606,824
July 1, 2074	\$51,606,824	\$0	\$11,417,561	\$100,682	\$3,404,940	\$43,493,521
July 1, 2075	\$43,493,521	\$0	\$9,917,661	\$87,456	\$2,858,804	\$36,347,208
July 1, 2076	\$36,347,208	\$0	\$8,539,023	\$75,299	\$2,379,871	\$30,112,757
July 1, 2077	\$30,112,757	\$0	\$7,281,264	\$64,208	\$1,964,069	\$24,731,354
July 1, 2078	\$24,731,354	\$0	\$6,153,013	\$54,258	\$1,606,723	\$20,130,806
July 1, 2079	\$20,130,806	\$0	\$5,146,139	\$45,380	\$1,302,784	\$16,242,071
July 1, 2080	\$16,242,071	\$0	\$4,262,638	\$37,589	\$1,047,061	\$12,988,905
July 1, 2081	\$12,988,905	\$0	\$3,494,515	\$30,815	\$834,198	\$10,297,773
July 1, 2082	\$10,297,773	\$0	\$2,837,086	\$25,018	\$658,919	\$8,094,588
July 1, 2083	\$8,094,588	\$0	\$2,281,485	\$20,119	\$516,058	\$6,309,042
July 1, 2084	\$6,309,042	\$0	\$1,816,652	\$16,020	\$400,813	\$4,877,183
July 1, 2085	\$4,877,183	\$0	\$1,433,729	\$12,643	\$308,769	\$3,739,580
July 1, 2086	\$3,739,580	\$0	\$1,122,107	\$9,895	\$235,912	\$2,843,490
July 1, 2087	\$2,843,490	\$0	\$870,383	\$7,675	\$178,752	\$2,144,184
July 1, 2088	\$2,144,184	\$0	\$670,651	\$5,914	\$134,265	\$1,601,884
July 1, 2089	\$1,601,884	\$0	\$511,613	\$4,511	\$99,919	\$1,185,679
July 1, 2090	\$1,185,679	\$0	\$386,648	\$3,410	\$73,665	\$869,286
July 1, 2091	\$869,286	\$0	\$288,479	\$2,544	\$53,824	\$632,087
July 1, 2092	\$632,087	\$0	\$214,499	\$1,891	\$38,964	\$454,661
July 1, 2093	\$454,661	\$0	\$157,647	\$1,390	\$27,903	\$323,527
July 1, 2094	\$323,527	\$0	\$116,397	\$1,026	\$19,701	\$225,805
July 1, 2095	\$225,805	\$0	\$81,692	\$720	\$13,733	\$157,126
July 1, 2096	\$157,126	\$0	\$58,734	\$518	\$9,487	\$107,361
July 1, 2097	\$107,361	\$0	\$41,761	\$368	\$6,422	\$71,654
July 1, 2098	\$71,654	\$0	\$29,498	\$260	\$4,227	\$46,123
July 1, 2099	\$46,123	\$0	\$19,796	\$175	\$2,691	\$28,843
July 1, 2100	\$28,843	\$0	\$12,578	\$111	\$1,676	\$17,830
July 1, 2101	\$17,830	\$0	\$8,314	\$73	\$1,016	\$10,459
July 1, 2102	\$10,459	\$0	\$4,565	\$40	\$607	\$6,461
July 1, 2103	\$6,461	\$0	\$2,547	\$22	\$385	\$4,277
July 1, 2104	\$4,277	\$0	\$1,645	\$15	\$257	\$2,874
July 1, 2105	\$2,874	\$0	\$1,160	\$10	\$170	\$1,874
July 1, 2106	\$1,874	\$0	\$799	\$7	\$110	\$1,178
July 1, 2107	\$1,178	\$0	\$539	\$5	\$67	\$701
July 1, 2108	\$701	\$0	\$350	\$3	\$39	\$387
July 1, 2109	\$387	\$0	\$68	\$1	\$26	\$344
July 1, 2110	\$344	\$0	\$43	\$0	\$24	\$325
July 1, 2111	\$325	\$0	\$26	\$0	\$23	\$322
July 1, 2112	\$322	\$0	\$16	\$0	\$23	\$329
July 1, 2113	\$329	\$0	\$10	\$0	\$24	\$343
July 1, 2114	\$343	\$0	\$6	\$0	\$25	\$362

NOTES: The fiduciary net position is projected to be sufficient to cover all future benefit payments when due. The plan requires only a 7.41% average investment return per year to avoid a crossover date. The projection shown above does not reflect future new entrants into the pension plan.

Actuarial Value of Assets

Table II-A

Market Value of Assets as of July 1, 2016	\$612,637,000
Minus advance employer contributions	\$0
Actuarial Value of Assets as of July 1, 2016	<u>\$612,637,000</u>

Historical Actuarial Value of Assets	
January 1, 2008	\$340,075,000
January 1, 2009	\$408,090,000
January 1, 2010	\$422,791,314
January 1, 2011	\$481,640,221
July 1, 2011	\$509,590,000
July 1, 2012	\$505,692,000
July 1, 2013	\$561,450,000
July 1, 2014	\$658,508,000
July 1, 2015	\$644,649,000
July 1, 2016	\$612,637,000

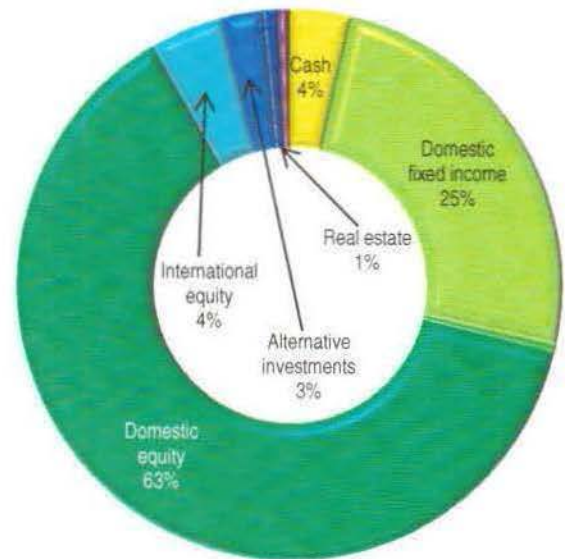


Market Value of Assets

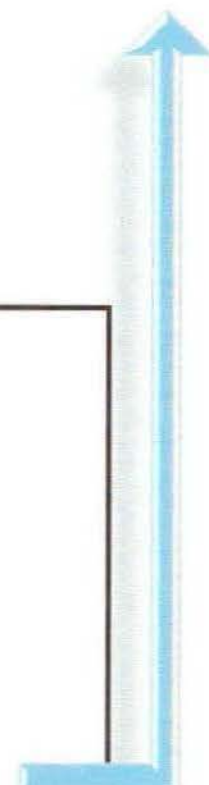
Table II-B

As of July 1, 2016

Market Value of Assets	<u>\$612,637,000</u>
Cash	\$22,307,000
Domestic fixed income	\$153,756,000
International fixed income	\$2,477,000
Domestic equity	\$387,848,000
International equity	\$26,856,000
Alternative investments	\$15,560,000
Real estate	\$4,646,000
Income receivable	\$825,000
Employer contribution receivable	\$1,005,000
Employee contribution receivable	\$174,000
Net due to brokers	(\$2,284,000)
Net accounts payable	(\$533,000)

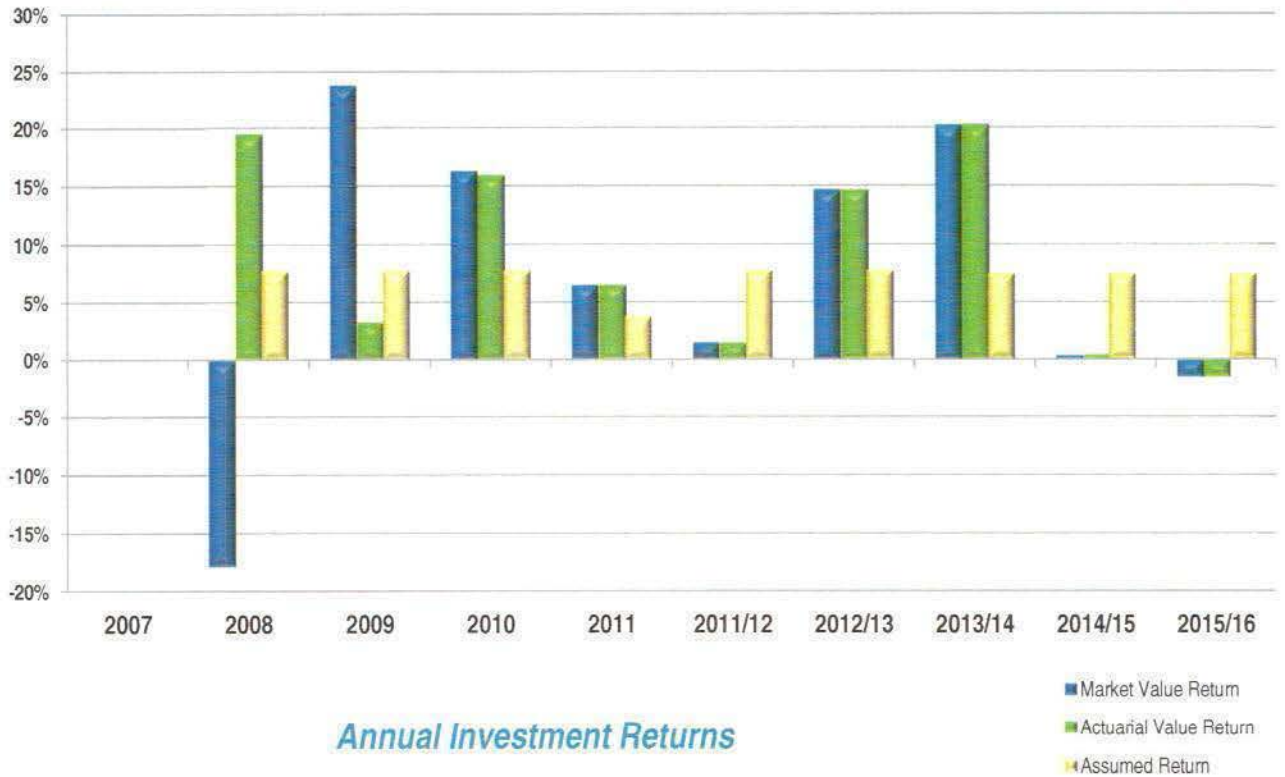


Historical Market Value of Assets	
January 1, 2008	\$411,686,841
January 1, 2009	\$339,458,639
January 1, 2010	\$421,599,215
January 1, 2011	\$481,640,221
July 1, 2011	\$509,590,000
July 1, 2012	\$505,692,000
July 1, 2013	\$561,450,000
July 1, 2014	\$658,508,000
July 1, 2015	\$644,649,000
July 1, 2016	\$612,637,000



Investment Return

Table II-C



Plan Year	Market Value Return	Actuarial Value Return	Assumed Return
2007	N/A	N/A	N/A
2008	-17.86%	19.54%	7.75%
2009	23.77%	3.28%	7.75%
2010	16.33%	16.00%	7.75%
2011	6.52%	6.52%	3.80%
2011/12	1.49%	1.49%	7.75%
2012/13	14.70%	14.70%	7.75%
2013/14	20.29%	20.29%	7.50%
2014/15	0.41%	0.41%	7.50%
2015/16	-1.54%	-1.54%	7.50%
8.5yr. Avg.	6.76%	9.19%	7.66%



Asset Reconciliation

Table II-D

	<u>Market Value</u>	<u>Actuarial Value</u>
As of July 1, 2015	\$644,649,000	\$644,649,000
<i>Increases Due To:</i>		
Employer Contributions	\$16,454,000	\$16,454,000
Employee Contributions	\$5,667,000	\$5,667,000
Total Contributions	\$22,121,000	\$22,121,000
Interest and Dividends	\$11,401,000	
Gains (Losses)	(\$18,709,000)	
Total Investment Income	(\$7,308,000)	(\$9,745,000)
Other Income	\$150,000	
Total Income	\$14,963,000	\$12,376,000
<i>Decreases Due To:</i>		
Benefit Payments	(\$44,000,000)	(\$44,000,000)
Total Benefit Payments	(\$44,000,000)	(\$44,000,000)
Investment Expenses	(\$2,587,000)	
Administrative Expenses	(\$388,000)	(\$388,000)
Advance Employer Contribution		\$0
Total Expenses	(\$46,975,000)	(\$44,388,000)
As of July 1, 2016	\$612,637,000	\$612,637,000



Historical Trust Fund Detail

Table II-E

Income

<u>Plan Year</u>	<u>Employer Contribs.</u>	<u>Employee Contribs.</u>	<u>Interest / Dividends</u>	<u>Gains / Losses</u>	<u>Other Income</u>
2007	N/A	N/A	N/A	N/A	N/A
2008	\$28,752,000	\$2,920,034	\$11,864,299	-\$82,726,401	\$476,858
2009	\$22,826,650	\$3,566,186	\$11,622,333	\$70,709,177	\$469,298
2010	\$23,803,695	\$3,496,705	\$10,227,517	\$60,161,207	\$152,680
2011	\$12,456,000	\$1,785,000	\$4,531,000	\$27,924,279	\$0
2011/12	\$21,092,000	\$4,891,000	\$10,283,000	-\$324,000	\$75,000
2012/13	\$17,491,000	\$5,676,000	\$11,134,000	-\$64,208,000	\$17,000
2013/14	\$20,656,000	\$5,670,000	\$11,661,000	\$103,894,000	\$3,000
2014/15	\$20,866,000	\$5,637,000	\$11,197,000	-\$5,768,000	\$4,000
2015/16	\$16,454,000	\$5,667,000	\$11,401,000	-\$18,709,000	\$150,000

Expenses

<u>Plan Year</u>	<u>Benefit Payments</u>	<u>Admin. Expenses</u>	<u>Invest. Expenses</u>
2007	N/A	N/A	N/A
2008	\$29,504,175	\$735,779	\$3,275,038
2009	\$24,722,331	\$379,592	\$1,951,145
2010	\$35,226,102	\$230,473	\$2,344,223
2011	\$17,573,000	\$24,500	\$1,149,000
2011/12	\$37,333,000	\$60,000	\$2,522,000
2012/13	\$40,180,000	\$301,000	\$2,287,000
2013/14	\$41,268,000	\$374,000	\$3,184,000
2014/15	\$42,590,000	\$427,000	\$2,778,000
2015/16	\$44,000,000	\$388,000	\$2,587,000

Other Actuarial Adjustments

<u>Advance Employer Contribs.</u>
N/A
\$0
\$0
\$0
\$0
\$0
\$0
\$0
\$0
\$0
\$0

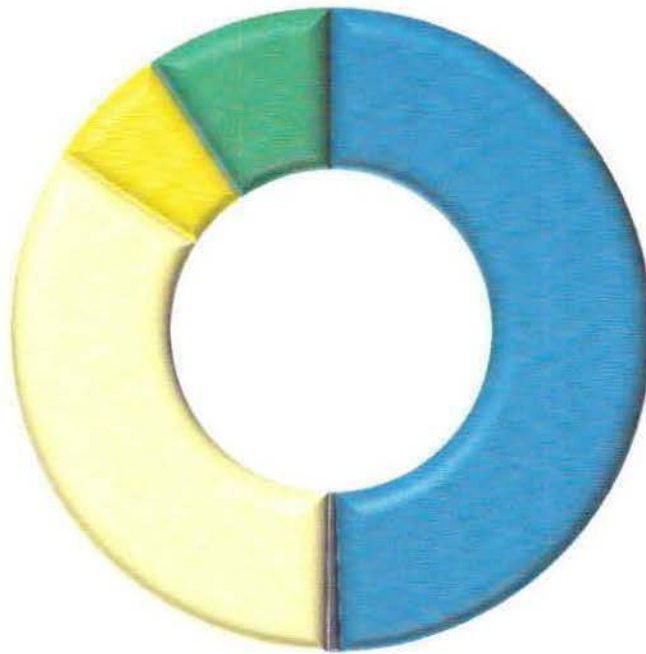
Note: Amounts shown for the 2011 short plan year are estimated.



Summary of Participant Data

Table III-A

As of July 1, 2016



Participant Distribution by Status

<u>Actively Employed Participants</u>		
◆	Active Participants	1,003
◆	DROP Participants	0
<u>Inactive Participants</u>		
◆	Deferred Vested Participants	12
◆	Due a Refund of Contributions	0
◆	Deferred Beneficiaries	3
<u>Participants Receiving a Benefit</u>		
◆	Service Retirements	688
◆	Disability Retirements	129
◆	Beneficiaries Receiving	190
Total Participants		2,025

Number of Participants Included in Prior Valuations

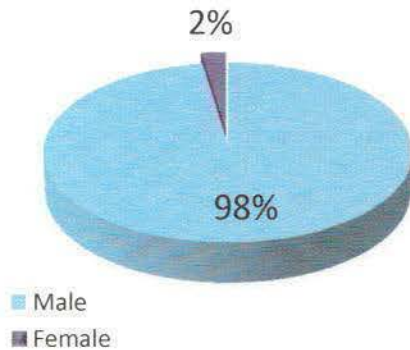
	<i>Active</i>	<i>DROP</i>	<i>Inactive</i>	<i>Retired</i>	<i>Total</i>
January 1, 2008	991	0	0	918	1,909
January 1, 2009	896	0	0	1,002	1,898
January 1, 2010	864	0	0	924	1,788
January 1, 2011	830	0	3	966	1,799
July 1, 2011	884	0	3	1,001	1,888
July 1, 2012	849	0	3	992	1,844
July 1, 2013	1,045	0	9	994	2,048
July 1, 2014	1,043	0	12	1,004	2,059
July 1, 2015	1,042	0	21	992	2,055
July 1, 2016	1,003	0	15	1,007	2,025



Active Participant Data

Table III-B

Gender Mix



As of July 1, 2016

<i>Average Age</i>	39.4 years
<i>Average Service</i>	10.8 years
<i>Total Annualized Compensation for the Prior Year</i>	\$45,522,871
<i>Total Expected Compensation for the Current Year</i>	\$44,817,675
<i>Average Increase in Compensation for the Prior Year</i>	N/A
<i>Expected Increase in Compensation for the Current Year</i>	4.00%
<i>Accumulated Contributions for Active Employees</i>	\$51,333,162

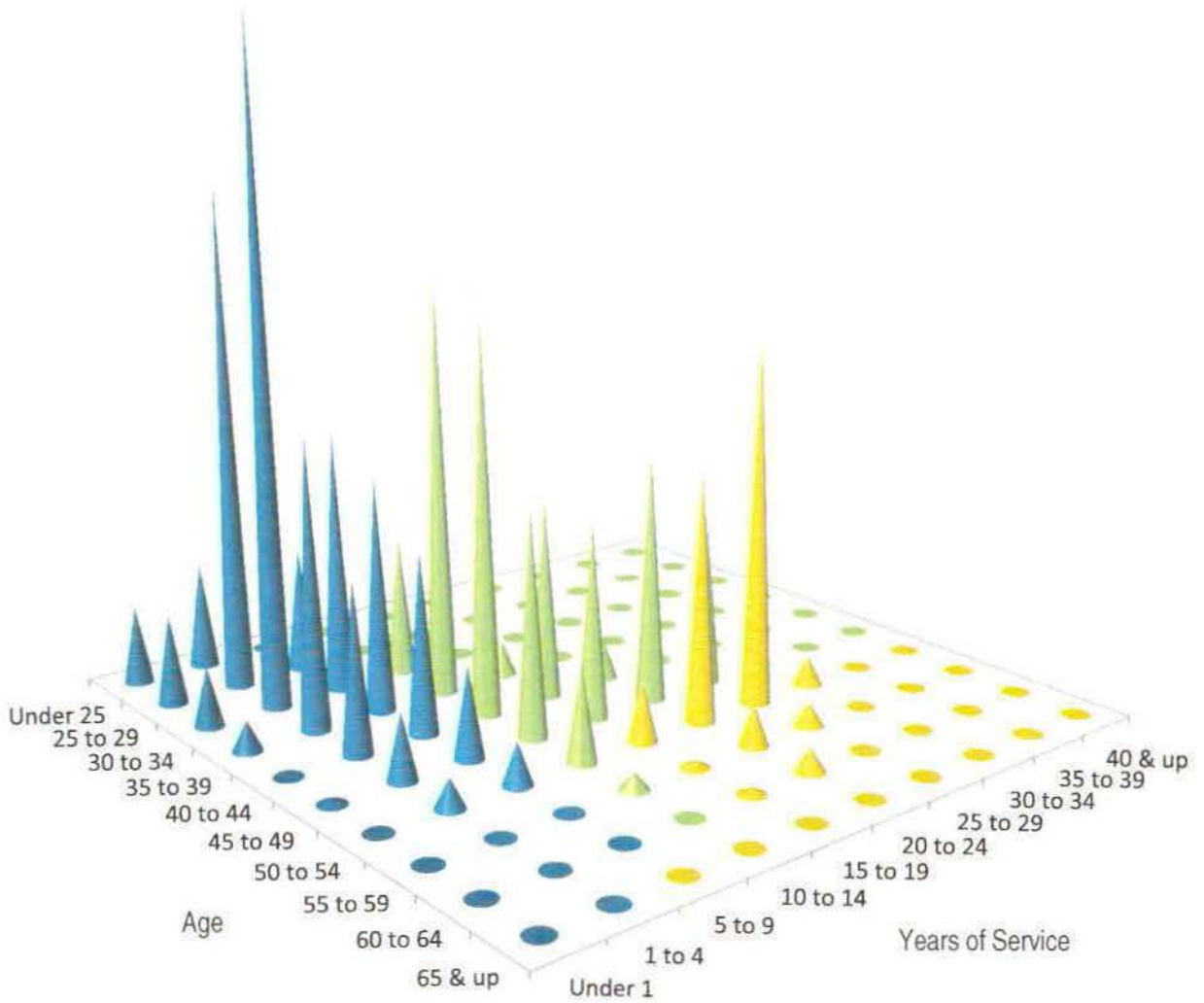
Active Participant Statistics From Prior Valuations

	<i>Average Age</i>	<i>Average Service</i>	<i>Average Salary</i>	<i>Average Expected Salary Increase</i>	<i>Average Actual Salary Increase</i>
January 1, 2008	40.2	13.2	\$52,130	4.00%	1.60%
January 1, 2009	40.4	13.4	\$51,624	4.00%	1.81%
January 1, 2010	40.8	12.8	\$50,638	4.00%	7.92%
January 1, 2011	40.5	12.2	\$52,793	4.00%	7.42%
July 1, 2011	39.2	11.1	\$43,527	1.98%	N/A
July 1, 2012	39.8	11.9	\$52,217	4.00%	N/A
July 1, 2013	38.1	9.6	\$41,912	4.00%	N/A
July 1, 2014	38.5	9.9	\$44,731	4.00%	N/A
July 1, 2015	39.0	10.3	\$44,406	4.00%	N/A
July 1, 2016	39.4	10.8	\$45,387	4.00%	N/A



Active Age-Service Distribution

Table III-C



- ▲ Eligible to retire
- ▲ May be eligible to retire
- ▲ Not eligible to retire



Active Age-Service-Salary Table

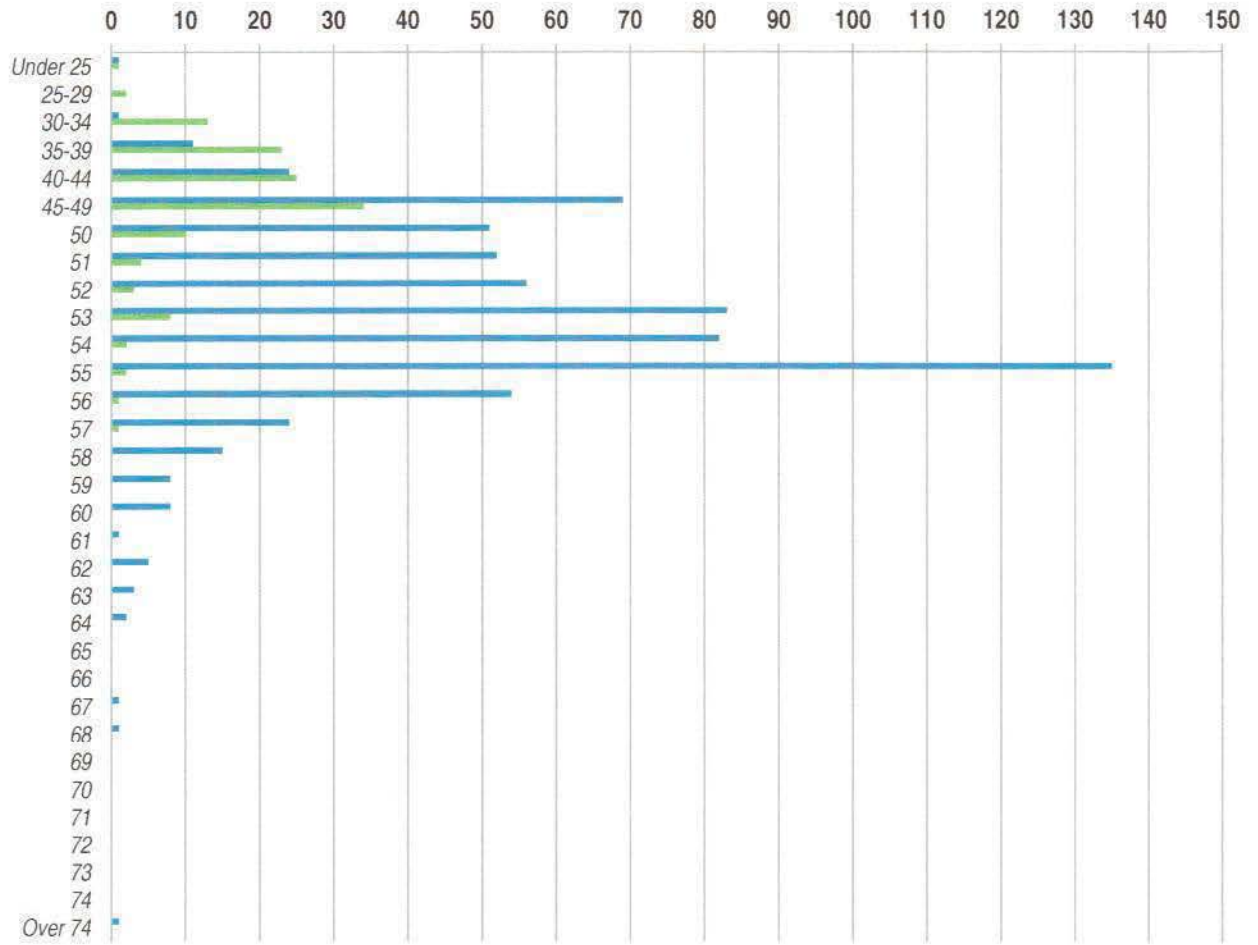
Table III-D

Attained Age	Completed Years of Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	
Under 25	13	18	0	0	0	0	0	0	0	0	31
Avg.Pay	18,443	33,626	0	0	0	0	0	0	0	0	27,259
25 to 29	15	83	21	0	0	0	0	0	0	0	119
Avg.Pay	20,219	34,262	34,342	0	0	0	0	0	0	0	32,506
30 to 34	10	111	44	24	0	0	0	0	0	0	189
Avg.Pay	18,056	34,748	38,170	38,408	0	0	0	0	0	0	35,127
35 to 39	5	48	39	69	6	0	0	0	0	0	167
Avg.Pay	19,376	35,854	37,200	44,821	53,876	0	0	0	0	0	40,027
40 to 44	0	28	30	65	34	7	0	0	0	0	164
Avg.Pay	0	35,683	43,873	48,196	55,409	57,794	0	0	0	0	47,174
45 to 49	1	11	15	38	33	42	29	0	0	0	169
Avg.Pay	21,010	34,038	44,968	47,951	53,931	68,023	66,659	0	0	0	55,987
50 to 54	0	5	7	16	10	41	60	5	0	0	144
Avg.Pay	0	37,921	46,070	43,085	59,388	63,847	70,935	72,273	0	0	62,712
55 to 59	0	0	0	3	1	7	4	0	0	0	15
Avg.Pay	0	0	0	47,877	43,290	66,150	74,813	0	0	0	63,282
60 to 64	0	0	0	0	1	4	0	0	0	0	5
Avg.Pay	0	0	0	0	82,237	56,455	0	0	0	0	61,611
65 & up	0	0	0	0	0	0	0	0	0	0	0
Avg.Pay	0	0	0	0	0	0	0	0	0	0	0
Total	44	304	156	215	85	101	93	5	0	0	1,003
Avg.Pay	19,125	34,836	39,517	45,592	55,368	65,031	69,768	72,273	0	0	45,387



Inactive Participant Data

Table III-E



Age at Retirement

- Service Retirements
- Disability Retirements
- DROP Participants

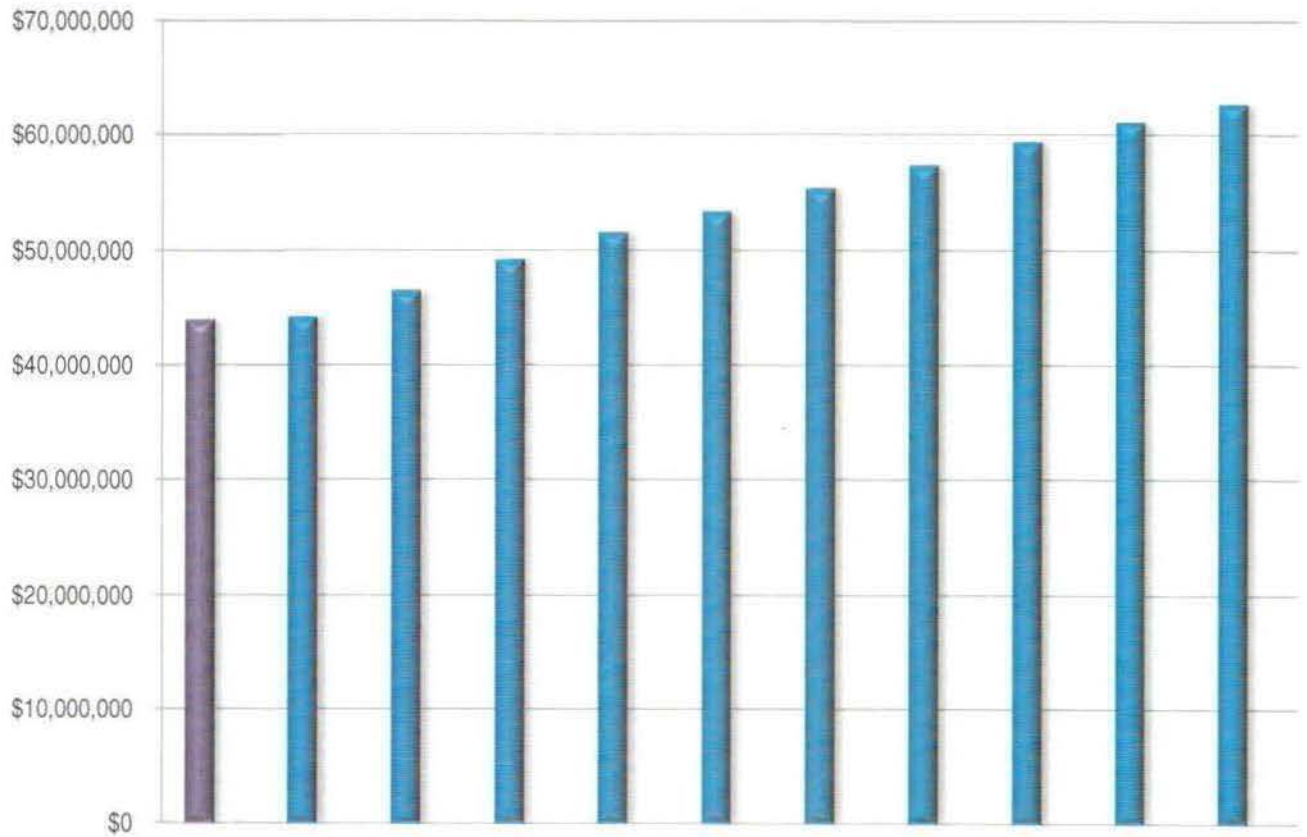
Average Monthly Benefit

Service Retirements	\$4,130.89
Disability Retirements	\$3,385.77
Beneficiaries Receiving	\$1,919.75
DROP Participants	Not applicable
Deferred Vested Participants	\$1,476.37
Deferred Beneficiaries	\$1,944.76



Projected Benefit Payments

Table III-F



Actual

For the period July 1, 2015 through June 30, 2016

\$44,000,000

Projected

For the period July 1, 2016 through June 30, 2017

\$44,301,236

For the period July 1, 2017 through June 30, 2018

\$46,563,096

For the period July 1, 2018 through June 30, 2019

\$49,273,331

For the period July 1, 2019 through June 30, 2020

\$51,581,640

For the period July 1, 2020 through June 30, 2021

\$53,373,516

For the period July 1, 2021 through June 30, 2022

\$55,391,001

For the period July 1, 2022 through June 30, 2023

\$57,373,991

For the period July 1, 2023 through June 30, 2024

\$59,420,098

For the period July 1, 2024 through June 30, 2025

\$61,143,399

For the period July 1, 2025 through June 30, 2026

\$62,687,880



Summary of Actuarial Methods and Assumptions

Table IV-A

NOTE: The following assumptions and methods have been selected and approved by the Board of Trustees based in part on the advice of the plan's enrolled actuary in accordance with the authority granted to the Board under the pension ordinances and State law.

1. **Actuarial Cost Method**

Individual entry age normal cost method. Under this actuarial cost method, a level funding cost is developed with respect to each benefit for each participant. The level funding cost for each benefit applies to the period beginning when the participant's service commences and ending when the participant is assumed to cease active participation due to each respective decrement. The actuarial accrued liability is equal to the accumulated level funding cost to the valuation date for all participants. The normal cost is equal to the level funding cost for the year immediately following the valuation date for all active participants.

2. **Asset Method**

The actuarial value of assets is equal to the market value of assets

3. **Interest (or Discount) Rate**

7.50% per annum

4. **Salary Increases**

Plan compensation is assumed to increase at the rate of 4.00% per annum, unless actual plan compensation is known for a prior plan year.

5. **Decrements**

- Pre-retirement mortality: Sex-distinct rates set forth in the RP-2000 Mortality Table for annuitants, projected to 2015 by Scale AA, as published by the Internal Revenue Service (IRS) for purposes of Internal Revenue Code (IRC) section 430; deaths prior to retirement are assumed not to be service-connected; future generational improvements in mortality have not been reflected.
- Post-retirement mortality: Sex-distinct rates set forth in the RP-2000 Mortality Table for annuitants, projected to 2015 by Scale AA, as published by the Internal Revenue Service (IRS) for purposes of Internal Revenue Code (IRC) section 430; future generational improvements in mortality have not been reflected.



Summary of Actuarial Methods and Assumptions

Table IV-A

(continued)

- Disability: Sex-distinct rates set forth in the Wyatt 1985 Disability Study (Class 4); 67% of disabilities are assumed to be service-connected.
- Termination: Withdrawal rates were derived from a study of actual plan experience covering the period 1982 through 1986. A sample of the withdrawal rates is set forth in the following table:

Age	Rate	Age	Rate	Age	Rate	Age	Rate
20	5.454%	30	3.615%	40	1.804%	50	1.210%
25	4.218%	35	2.866%	45	1.313%	55	0.000%

- Retirement: Retirement is assumed to occur at normal retirement age.

6. **Unused Vacation**

All participants are assumed to have accumulated 30 days of unused vacation upon termination of employment, retirement, or death.

7. **Payroll Increase and Amortization Period**

Total payroll has been assumed to grow at the rate of 4.00% per year for purposes of amortizing the unfunded actuarial accrued liability as a level percentage of payroll; the amortization period is established by City ordinance as a closed 30-year period beginning July 1, 2011.

8. **Expenses**

Administrative expenses are assumed to be 1.00% of future payroll. In addition, the interest rate set forth in item 3. above is assumed to be net of investment expenses and commissions.

9. **Cost-of-Living Adjustment**

We have assumed that all eligible retirees will receive an automatic cost-of-living adjustment equal to 3.00% per annum.

10. **Surviving Beneficiaries**

Those active participants who are making the additional 1% employee contribution to provide a survivor benefit to their eligible beneficiaries are assumed to have only one surviving beneficiary of the opposite gender of the employee. Males are assumed to be three years older than females for this purpose.



Changes in Actuarial Methods and Assumptions

Table IV-B

No assumptions or methods have been changed since the previous valuation was completed.



Summary of Plan Provisions

Table V-A

1. **Monthly Accrued Benefit**

For participants who are hired after August 31, 2011:

1% of Average Monthly Earnings multiplied by up to 80 years of Creditable Service

For participants who are hired during the period July 1, 2010 through August 31, 2011:

2% of Average Monthly Earnings multiplied by up to 50 years of Creditable Service

For all other participants who are covered by the '05 Amendment:

3% of Average Monthly Earnings multiplied by up to 26.667 years of Creditable Service

For all other participants who are not covered by the '05 Amendment:

2% of Average Monthly Earnings multiplied by Creditable Service earned through February 28, 2001 plus 3% of Average Monthly Earnings multiplied by Creditable Service earned thereafter

2. **Normal Retirement Age and Benefit**

• **Age**

Any age with at least 30 years of Creditable Service (*only for participants who are covered by the '05 Amendment*); or

Age 55 with at least 10 years of Creditable Service (*only for participants who are hired prior to July 1, 2010*); or

Age 55 with at least 15 years of Creditable Service (*only for participants who are hired prior to September 1, 2011*); or

Age 57 with at least 15 years of Creditable Service; or

Age 65 with at least 5 years of Creditable Service

• **Amount**

Monthly Accrued Benefit

• **Form of Payment**

Life annuity (*for those participants without an eligible beneficiary*); or

75% joint and contingent annuity (*for those participants with an eligible beneficiary; benefits continue in equal shares to the participant's dependent children upon the death of the participant's spouse or domestic partner or, for participants not covered by the '86 Amendment, upon the remarriage of the participant's spouse or domestic partner; survivor benefits are actuarially adjusted with respect to participants who are hired after August 31, 2011*)

Note: All annuity forms of payment include an automatic cost-of-living adjustment effective each January 1 based on the increase in the Consumer Price Index as of the preceding November 1 and limited to 3% (*limited to 1% with respect to participants who are hired after August 31, 2011*). All annuity forms of payment also provide a minimum payout equal to the employee's accumulated contributions, with interest credited after 1985 at the rate of 5% per year (or less than 5% with respect to any year during which the trust fund earns less than 5% on its investments).



Summary of Plan Provisions

Table V-A

(continued)

3. **Early Retirement Age and Benefit**

- **Age**
Any age with at least 10 years of Creditable Service Service (*15 years of Creditable Service for participants who are hired after June 30, 2010; minimum age of 47 for participants who are hired after August 31, 2011*)
- **Amount**
Monthly Accrued Benefit (*payable at Normal Retirement Age*); or
Monthly Accrued Benefit reduced by ½% for each of the first 60 months and by ¼% for each additional month by which the participant's Early Retirement Age precedes Normal Retirement Age (*payable at Early Retirement Age and applicable only to those participants who are hired prior to September 1, 2011*); or
Monthly Accrued Benefit reduced by ½% for each month by which the participant's Early Retirement Age precedes Normal Retirement Age (*payable at Early Retirement Age and applicable only to those participants who are hired after August 31, 2011*); or
Monthly Accrued Benefit reduced by ¼% for each month by which the participant's Early Retirement Age precedes age 55 (*payable at Early Retirement Age and only applicable if the participant was hired prior to April 1, 1978 and has earned at least 25 years of Creditable Service*)
- **Form of Payment**
Same as for Normal Retirement

4. **Delayed Retirement Age and Benefit**

- **Age**
After Normal Retirement Age
- **Amount**
Monthly Accrued Benefit
- **Form of Payment**
Same as for Normal Retirement



Summary of Plan Provisions

Table V-A

(continued)

5. Disability Retirement Eligibility and Benefit

- **Eligibility**

All active participants are eligible if the disability is service-connected;
At least five years of Creditable Service is required otherwise.

- **Condition**

The participant must become “totally and permanently disabled” and must remain so disabled until Normal Retirement Age. “Totally and permanently disabled” means the participant is in a continuous state of incapacity due to illness or injury, is prevented from performing his regular assigned or comparable duties during the first 12 months of his disability, and is thereafter prevented from engaging in any occupation for which he is or becomes reasonably qualified by education, training, or experience. With respect to participants who are not covered by the '86 Amendment, the participant must only be prevented from performing his regular assigned or comparable duties during the entire period of his disability.

- **Amount**

For participants who incur a catastrophic injury in the line of duty:

100% of the top salary for the grade and position occupied by the participant at the time of disability

For participants who are covered by the '86 Amendment:

Greater of 50% of Average Monthly Earnings at the time of disability or Monthly Accrued Benefit, offset by worker’s compensation payments such that the combination of payments does not exceed 75% of the participant’s salary at the time of disability (*payable until the earlier of recovery from disability or Normal Retirement Age*); and

Monthly Accrued Benefit based on Average Monthly Earnings at the time of disability and Creditable Service including the period during which the participant was disabled, but excluding any cost-of-living adjustments that were previously applied to the participant’s disability payments (*payable at Normal Retirement Age*)

For all other participants with a service-connected disability:

Greater of 70% of the top salary for the grade and position occupied by the participant at the time of disability or Monthly Accrued Benefit, offset by worker’s compensation payments such that the combination of payments does not exceed 100% of the participant’s salary at the time of disability

For all other participants:

Monthly Accrued Benefit, offset by worker’s compensation payments such that the combination of payments does not exceed 100% of the participant’s salary at the time of disability

- **Form of Payment**

Same as for Normal Retirement



Summary of Plan Provisions

Table V-A

(continued)

6. **Deferred Vested Benefit**

- **Age**
Any age with at least five years of Creditable Service
- **Amount**
Monthly Accrued Benefit multiplied by the participant's Vested Percentage and payable at age 60
- **Form of Payment**
Same as for Normal Retirement

7. **Pre-Retirement Death Benefit**

For participants who die in the line of duty and who are covered by the '86 Amendment:

- 100% of the participant's base salary at the time of his death, offset by worker's compensation or other payments received for line of duty injuries prior to the participant's death (*payable for the first two years after the participant's death*); and
- 75% of the Monthly Accrued Benefit (*payable thereafter*)

For all other participants who die in the line of duty:

- 100% of the participant's base salary at the time of his death, offset by worker's compensation or other payments received for line of duty injuries prior to the participant's death (*payable for the first two years after the participant's death*); and
- 75% of the greater of: (a) the Monthly Accrued Benefit, or (b) 70% of the top salary for the grade and position occupied by the participant at his death (*payable thereafter*)

For all other participants:

- 75% of the Monthly Accrued Benefit



Summary of Plan Provisions

Table V-A

(continued)

8. **Vested Percentage**

Retirement benefits with respect to those participants who are hired prior to July 1, 2010 become vested in accordance with the following schedule:

Years of Creditable Service	Vested Percentage
Less than five	0%
At least five, but less than six	25%
At least six, but less than seven	30%
At least seven, but less than eight	35%
At least eight, but less than nine	40%
At least nine, but less than 10	45%
At least 10	100%

Retirement benefits with respect to those participants who are hired after June 30, 2010 become vested in accordance with the following schedule:

Years of Creditable Service	Vested Percentage
Less than five	0%
At least five, but less than six	25%
At least six, but less than seven	30%
At least seven, but less than eight	35%
At least eight, but less than nine	40%
At least nine, but less than 10	45%
At least 10, but less than 11	50%
At least 11, but less than 12	55%
At least 12, but less than 13	60%
At least 13, but less than 14	65%
At least 14, but less than 15	70%
At least 15	100%



Summary of Plan Provisions

Table V-A

(continued)

9. Average Monthly Earnings

The participant's Average Monthly Earnings is equal to: (a) the average of the participant's Base Salary for the highest 36 consecutive months during his period of Creditable Service; plus (b) the difference between the highest and lowest daily rate of pay during such 36-month period multiplied by the days of unused sick leave and divided by 36; plus (c) a credit based on accumulated unused vacation. *(The averaging period is 120 months with respect to participants who are hired after August 31, 2011 and average monthly earnings does not include unused sick leave for these participants.)*

10. Base Salary

The employee's basic salary excluding overtime pay and other special compensation; pursuant to Internal Revenue Code (IRC) section 401(a)(17), total annual plan compensation is limited to \$200,000 as indexed.

11. Employee Contribution

All participating employees must make the required pre-tax contribution to the plan. The required contribution for participants who were hired prior to 1984 is 8% of basic salary for those participants who have an eligible beneficiary and 7% of basic salary for those participants who do not have an eligible beneficiary. The required contribution for participants who were hired during the period 1984 through August 31, 2011 is 13% of basic salary (8% prior to November 1, 2011) for those participants who have an eligible beneficiary and 12% of basic salary (7% prior to November 1, 2011) for those participants who do not have an eligible beneficiary. The required contribution for participants who are hired after August 31, 2011 is 8% of basic salary. An eligible beneficiary is the participant's legal spouse, registered domestic partner, or unmarried child under the age of 18. The participant must have been married or registered to his legal spouse or domestic partner for at least one year prior to his death in order for such individual to be an eligible beneficiary. *(During the period March, 1994 through June, 2009, the required contribution was 1% lower for all participants; prior to March, 1994, the contribution was made on an after-tax basis.)*



Summary of Plan Provisions

Table V-A

(continued)

12. Creditable Service

Creditable Service includes “base creditable service” (plus an “unused sick leave service credit” for those participants who were hired prior to September 1, 2011) plus military service as required by federal law. Base creditable service is granted for all periods of full-time employment as a firefighter with the City of Atlanta provided that the employee has made the required contribution for such period of service. With respect to eligible participants, an unused sick leave service credit is granted by dividing the participant’s days of unused sick leave by the number of work days set forth in the following chart:

Years of Base Creditable Service	Work Days
Less than five	239
At least five, but less than 10	236
At least 10, but less than 15	233
At least 15, but less than 20	230
At least 20	226

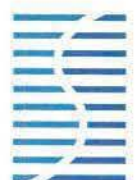
Creditable Service also includes other service with the City of Atlanta if the relevant contributions are transferred into this plan and may include prior service with the State of Georgia, Fulton County, DeKalb County, or as a teacher in a public school system or private college or university within the State of Georgia if the required contribution is made to the plan.

13. Participation Requirement

All full-time firefighters employed by the City of Atlanta are eligible to participate in the plan.

14. Plan Effective Date

April 1, 1978



Summary of Plan Amendments

Table V-B

No plan changes have been adopted since the previous valuation was completed.

