KPMG LLP
Suite 2000
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CITY OF ATLANTA, GEORGIA
FIREFIGHTERS' PENSION PLAN

Financial Statements and Supplemental Schedules

June 30, 2018 and 2017

(With Independent Auditors' Report Thereon)

CITY OF ATLANTA, GEORGIA
FIREFIGHTERS' PENSION PLAN

Table of Contents

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Independent Auditors' Report

The Board of Trustees
City of Atlanta, Georgia
Firefighters' Pension Plan:

Report on the Financial Statements

We have audited the accompanying financial statements of the City of Atlanta, Georgia Firefighters' Pension Plan (the Plan), a component unit of the City of Atlanta, Georgia, as of and for the years ended June 30, 2018 and 2017, and the related notes to the financial statements, which collectively comprise the Plan's basic financial statements for the years then ended as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the City of Atlanta, Georgia Firefighters' Pension Plan as of June 30, 2018 and

2017, and the changes in its fiduciary net position for the years then ended, in accordance with U.S. generally accepted accounting principles.

Other Matters

Required Supplementary Information

U.S. generally accepted accounting principles require that the Management's Discussion and Analysis on pages 3 to 8 and the Schedule of Changes in Net Pension Liability, Schedule of Net Pension Liability and Related Ratios, Schedule of Employer Contributions and Schedule of Investment Returns on pages 32 to 36 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audits of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated December 26, 2018 on our consideration of the Plan's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Plan's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Plan's internal control over financial reporting and compliance.

KPMG LLP

Atlanta, Georgia
December 26, 2018

As management, we offer readers of the Firefighters' Pension Plan (the Plan) financial statements this narrative overview and analysis of the financial activities of the Plan for the years ended June 30, 2018 and 2017. This overview compares the years ended June 30, 2018 and 2017 and the years ended June 30, 2017 and 2016. Readers are encouraged to read the notes to the financial statements in conjunction with the financial statements presented following this narrative.

In December 2017, the City of Atlanta (the City) adopted legislation to combine the management of its three separate pension plans and create one board of trustees to be known as the City of Atlanta Defined Benefit Pension Plan Investment Board (The Board) in order to improve administrative efficiency, governance and investment returns. The City consolidated and set minimum requirements for the Investment Board of Trustees of the three Pension Plans in order to optimize investment returns, establish national leadership in pension management best practices, and increase the City revenues available for compensation of active employees.

The Plan is administered as a single-employer, defined-benefit plan by the Board, which includes the Chair who is an appointee of the Mayor, the Mayor or a designee serving as Vice Chair of the Investment Board, three city council members appointed by the Mayor, two city council members appointed by the President of the Atlanta City Council, one member appointed by the Atlanta Board of Education (School System), one member appointed by the Mayor who is a participant in any of the three Plans, the City's Chief Financial Officer, the Human Resources Commissioner, and four members elected by active and retired participants as follows: one from the City of Atlanta General Employees' Pension Fund, one from the Atlanta Public Schools General Employees Pension Fund, one from the Firefighters' Pension Fund, and one from the Police Officers' Pension Fund. Each pension law modification must be adopted by at least two-thirds vote of the City Council and be approved by the Mayor.

Financial Highlights

- At June 30, 2018, the assets of the Plan exceeded its liabilities by $718.1 million. At June 30, 2017, the assets of the Plan exceeded its liabilities by $669.5 million. This amount represents the Plan's net position for each year.
- The Plan's total net position increased in 2018 by $48.6 million or 7.3% as compared with net position at June 30, 2017. The Plan's total net position increased in 2017 by $56.9 million or 9.3% as compared with net position at June 30, 2016.
- Net investment income in fiscal year 2018 was $68.4 million. This is a $9.9 million decrease compared to fiscal year 2017 net investment income gain of $78.2 million. Net investment income increased in 2017 by $88.1 million compared to fiscal year 2016.
- Contributions received from employer and employees totaled $27.8 million in 2018 as compared to $23.6 million in fiscal year 2017.
- Benefit payments in 2018 totaled $46.9 million, an increase of $2.4 million or 5.4% when compared with fiscal year 2017. Benefits payments in 2017 totaled $44.5 million, an increase of $0.5 million or 1.2% when compared with fiscal year 2016.

Fiduciary funds. The Plan is considered a fiduciary fund of the City of Atlanta, Georgia (the City) and its financial statements are included in the City's Comprehensive Annual Financial Report (CAFR) as part of the Pension Trust Fund. The City's CAFR for the years ended June 30, 2018 and 2017 should be read in conjunction with these financial statements.

(Continued)

Fiduciary funds are used to account for resources held for the benefit of parties outside the government, but over which the government maintains a meaningful degree of ongoing responsibility. The financial statements of fiduciary funds are presented using the economic resources measurement focus, or full accrual basis of accounting, similar to private sector businesses.

Directly following this discussion are the *basic financial statements*. The basic financial statements and required disclosures are prepared in accordance with accounting principles and reporting guidelines as set forth by the Governmental Accounting Standards Board (GASB).

Basic financial statements comprise the following:

The *Statement of Fiduciary Net Position* presents information on the assets and liabilities of the Plan, with the difference between the two reported as *net position*. The investments of the Plan in this statement are presented at fair value.

The *Statement of Changes in Fiduciary Net Position* presents information showing how the Plan's net position changed during the fiscal year. All changes in net position are reported as soon as the underlying events giving rise to the changes occur, *regardless of the timing of the related cash flows*. Changes would include investment income, employee and employer contributions to the Plan, benefit payments to members, and administrative expenses.

The *Notes to the Financial Statements* provide additional information that is essential to a full understanding of the data provided in the Plan's financial statements. The notes can be found following the financial statements in this report.

Required Supplementary Information. In addition to the basic financial statements, this report also presents certain *required supplementary information* concerning the changes in net pension liability, net pension liability, employer contributions, and the Plan's money-weighted investment rate of return. Required supplementary information can be found following the notes to the financial statements in this report.

Financial Analysis

The net position may serve over time as an indicator of financial stability. In the case of the Plan, assets exceeded liabilities by $718.1 million and $669.5 million at the close of the years ended June 30, 2018 and 2017, respectively. Table 1 summarizes the major categories of assets, liabilities, and net position. Table 2 summarizes the changes in the Plan's net position for the years ended June 30, 2018, 2017 and 2016.

Table 1. Firefighters' Pension Plan Net Position, as of June 30, 2018 and June 30, 2017 and June 30, 2017 and June 30, 2016 (dollars in thousands):

	June 30 2018	June 30 2017	Amount change	Percentage change
Assets:				
Cash and deposits	$ 14,662	11,748	2,914	24.8%
Receivables	3,536	2,970	566	19.1
Investments	702,077	660,015	42,062	6.4
Total assets	720,275	674,733	45,542	6.7
Liabilities:				
Due to brokers for securities purchased	1,575	4,473	(2,898)	(64.8)
Other	567	752	(185)	(24.6)
Total liabilities	2,142	5,225	(3,083)	(59.0)
Net position restricted for pensions	$ 718,133	669,508	48,625	7.3%

	June 30 2017	June 30 2016	Amount change	Percentage change
Assets:				
Cash and cash equivalents	$ 11,748	5,433	6,315	116.2%
Receivables	2,970	3,711	(741)	(20.0)
Investments	660,015	608,017	51,998	8.6
Total assets	674,733	617,161	57,572	9.3
Liabilities:				
Due to brokers for securities purchased	4,473	3,906	567	14.5
Other	752	618	134	21.7
Total liabilities	5,225	4,524	701	15.5
Net position restricted for pensions	$ 669,508	612,637	56,871	9.3%

The net position of the Plan increased by $48.6 million or 7.3% during 2018 when compared to fiscal 2017. This is primarily attributable to a increase in investments when compared to fiscal year 2017. Total assets for the Plan increased by $45.5 million or 6.7% compared to fiscal year 2017. Total cash and deposits increased by $2.9 million compared to fiscal year 2017. Cash and investments represent 99.5% of total assets as of June 30, 2018, as compared to 99.6% as of June 30, 2017. The plan liabilities do not include future benefits payable to plan participants, but an actuarially determined estimate of this amount is included in the Required Supplementary Information section of this report.

(Continued)

Table 2. Firefighters' Pension Plan Changes in Net Position, years ended June 30, 2018, June 30, 2017, and June 30, 2016 (dollars in thousands):

	June 30 2018	June 30 2017	Amount change	Percentage change
Additions to plan net position:				
Investment income:				
Net appreciation in fair value of investments	$ 63,308	72,220	(8,912)	(12.3)%
Interest and dividends	7,098	8,592	(1,494)	(17.4)
Less investment expenses	(2,027)	(2,565)	538	21.0
Net investment income	68,379	78,247	(9,868)	(12.6)
Employee contributions	5,945	5,711	234	4.1
Employer contributions	21,882	17,901	3,981	22.2
Other income	—	1	(1)	(100.0)
Total additions	96,206	101,860	(5,654)	(5.6)
Deductions from plan net position:				
Benefit payments	46,898	44,510	2,388	5.4
Administrative expense	683	479	204	42.6
Total deductions	47,581	44,989	2,592	5.8
Increase in net position restricted for pensions	$ 48,625	56,871	(8,246)	(14.5)%
Net position restricted for pensions:				
Beginning of year	$ 669,508	612,637		
Increase	48,625	56,871		
End of year	$ 718,133	669,508		

(Continued)

	June 30 2017	June 30 2016	Amount change	Percentage change
Additions to plan net position:				
Investment (loss) income:				
Net (depreciation) appreciation in fair value of investments	$ 72,220	(18,709)	90,929	(486.0)%
Interest and dividends	8,592	11,401	(2,809)	(24.6)
Less investment expenses	(2,565)	(2,587)	22	(0.9)
Net investment (loss) income	78,247	(9,895)	88,142	(890.8)
Employee contributions	5,711	5,667	44	0.8
Employer contributions	17,901	16,454	1,447	8.8
Other income	1	150	(149)	(99.3)
Total additions	101,860	12,376	89,484	723.0
Deductions from plan net position:				
Benefit payments	44,510	44,000	510	1.2
Administrative expense	479	388	91	23.5
Total deductions	44,989	44,388	601	1.4
Increase (decrease) in net position restricted for pensions	$ 56,871	(32,012)	88,883	(277.7)%
Net position restricted for pensions:				
Beginning of year	$ 612,637	644,649		
Increase (decrease)	56,871	(32,012)		
End of year	$ 669,508	612,637		

Financial Analysis of June 30, 2018 to June 30, 2017

Total additions to the Plan net position decreased by $5.7 million or 5.6% compared to fiscal year 2017. This decrease is primarily attributed to the decrease in the unrealized gains of investments held at year end. Net investment income decreased to $68.4 million for 2018, an decrease of $9.9 million compared to fiscal year 2017. The investment portfolio comprises 69.5% equities, 26.5% fixed income, 3.4% alternative investments including real estate, and 0.5% short term investments of cash and cash equivalents as of June 30, 2018, compared to 71.5% equities, 23.5% fixed income, 3.3% alternative investments including real estate, and 1.7% of short term investments of cash and cash equivalents in 2017. The overall portfolio returned 2.0% for the 12 months ended June 30, 2018, compared with 13.2% for the same time period in 2017. The S&P 500 index rose 14.37% and 17.92% for the years ended June 30, 2018 and 2017, respectively.

Employee contributions to the Plan remained relatively flat at $5.9 million in fiscal year 2018. Employer contributions increased by $4.0 million or 22.2% to $21.9 million due to an increased actuarially determined contribution (ADC) for fiscal 2018. Benefit payments increased by $2.4 million or 5.4% to $46.9 million.

Financial Analysis of June 30, 2017 to June 30, 2016

Net position may serve over time as a useful indicator of financial stability. In the case of the Plan, assets exceeded liabilities by $669.5 million and $612.6 million at the close of the years ended June 30, 2017 and 2016, respectively. Table 1 summarizes the major categories of assets, liabilities, and net position. Table 2 summarizes the changes in the Plan's net position for the years ended June 30, 2017 and 2016.

The net position of the Plan increased by $56.9 million or 9.3% when compared to 2016. This is mainly attributable to the increase in net investment income, which was related to investment market performance during fiscal year 2017. Total assets for the Plan increased by $57.6 million or 9.3% compared to 2016. Total cash and deposits increased by $6.3 million compared to fiscal 2016. Cash and investments represent 99.6% of total assets as of June 30, 2017, as compared to 99.4% as of June 30, 2016. The plan liabilities do not include future benefits payable to plan participants, but an actuarially determined estimate of this amount is included in the Required Supplementary Information of this report.

Total additions to the Plan net position increased by $89.5 million or 723.0% compared to 2016. As mentioned earlier, this is primarily attributed to the increase in the fair value of investments. Net investment income was $78.2 million for 2017, an increase of $88.1 million compared to 2016. The investment portfolio comprises 71.5% equities, 23.5% fixed income, 3.3% alternative investments including real estate, and 1.7% of short term investments of cash and cash equivalents as of June 30, 2017, compared to 68.2% equities, 25.7% fixed income, 3.3% alternative investments and 2.8% short term investments of cash and cash equivalents in 2016. The overall portfolio returned (13.2%) for the 12 months ended June 30, 2017, compared with 0.45% for the same time period in 2016. The S&P 500 index rose 17.92% and 3.99% for the years ended June 30, 2017 and 2016, respectively.

Employee contributions to the Plan remained relatively flat at 5.7 million in fiscal year 2017 and 2016. Employer contributions increased by $1.4 million or 8.8% to $17.9 million due to a slightly higher actuarially determined contribution (ADC) for fiscal year 2017. Benefit payments increased by $0.5 million or 1.2% to $44.5 million. The increase in benefit payments is primarily the result of increased payments to members.

Requests for Information

This financial report is designed to provide a general overview of the Plan's finances for all those with an interest. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to the City's Chief Financial Officer, 68 Mitchell St. SW, Suite 11100, Atlanta, Georgia 30303.

CITY OF ATLANTA, GEORGIA
FIREFIGHTERS' PENSION PLAN

Statements of Fiduciary Net Position

June 30, 2018 and 2017

(Dollars in thousands)

	2018	2017
Assets		
Cash and deposits	$ 14,662	11,748
Receivables:		
Contributions receivable from employer	1,315	673
Contributions receivable from employees	188	190
Due from brokers for investments sold	1,202	1,230
Investment income	765	817
Other	66	60
Total receivables	3,536	2,970
Investments:		
Short term investments	3,366	11,270
Domestic fixed income securities	185,698	115,959
Domestic equities	457,937	406,384
International fixed income securities	587	39,144
International equities	30,351	65,265
Alternative investments		
Real estate	5,357	5,012
Limited partnerships	18,781	16,981
Total investments	702,077	660,015
Total assets	720,275	674,733
Liabilities		
Due to brokers for investments purchased	1,575	4,473
Other	567	752
Total liabilities	2,142	5,225
Net position restricted for pensions	$ 718,133	669,508

See accompanying notes to financial statements.

CITY OF ATLANTA, GEORGIA
FIREFIGHTERS' PENSION PLAN

Statements of Changes in Fiduciary Net Position

June 30, 2018 and 2017

(Dollars in thousands)

	2018	2017
Additions:		
Contributions:		
Employer	$ 21,882	17,901
Employee	5,945	5,711
Total contributions	27,827	23,612
Investment income:		
Net appreciation in fair value of investments	63,308	72,220
Interest and dividends	7,098	8,592
Less investment expenses	(2,027)	(2,565)
Net investment income	68,379	78,247
Other	—	1
Total additions	96,206	101,860
Deductions:		
Benefit payments, including refunds of member contributions	46,898	44,510
Administrative expense	683	479
Total deductions	47,581	44,989
Net increase in net position	48,625	56,871
Net position restricted for pensions:		
Beginning of year	669,508	612,637
End of year	$ 718,133	669,508

See accompanying notes to financial statements.

(1) Plan Description

City of Atlanta, Georgia Firefighters' Pension Plan (the Plan) was established by a 1924 Act of the State of Georgia Legislature to provide retirement benefits for full-time sworn firefighters of the City of Atlanta Fire Rescue Department. Until 1983, the Georgia Legislature established all requirements and policies of the Plan. By a constitutional amendment, effective July 1983, control over all aspects of the Plan transferred to the City of Atlanta (the City) under the principle of Home Rule. The types of benefits offered by the Plan are; retirement, disability, and pre-retirement death benefits. The Plan is a single employer defined benefit pension plan. Participants should refer to the Atlanta, Georgia, Code of Ordinances, Section 6 (Plan agreement) for more complete information. Under the principle of Home Rule and the Atlanta Code of Ordinances, Section 6, the Board has the authority to establish and amend benefit terms and contributions.

The Plan is considered a fiduciary fund of the City and its financial statements are included in the City of Atlanta's Comprehensive Annual Financial Report (CAFR) as part of the Pension Trust Funds. The City's CAFR for the years ended June 30, 2018 and 2017 should be read in conjunction with these financial statements.

(a) Administration of the Plan

In December 2017, the City of Atlanta (the City) adopted legislation to combine the management of its three separate pension plans and create one board of trustees to be known as the City of Atlanta Defined Benefit Pension Plan Investment Board (The Board) in order to improve administrative efficiency, governance and investment returns. The City consolidated and set minimum requirements for the Investment Board of Trustees of the three Pension Plans in order to optimize investment returns, establish national leadership in pension management best practices, and increase the City revenues available for compensation of active employees.

The Plan is administered as a single-employer, defined-benefit plan by the Board, which includes the Chair who is an appointee of the Mayor, the Mayor or a designee serving as Vice Chair of the Investment Board, three city council members appointed by the Mayor, two city council members appointed by the President of the Atlanta City Council, one member appointed by the Atlanta Board of Education (School System), one member appointed by the Mayor who is a participant in any of the three Plans, the City's Chief Financial Officer, the Human Resources Commissioner, and four members elected by active and retired participants as follows: one from the City of Atlanta General Employees' Pension Fund, one from the Atlanta Public Schools General Employees' Pension Fund, one from the Firefighters' Pension Fund, and one from the Police Officers' Pension Fund. Each pension law modification must be adopted by at least two-thirds vote of the City Council and be approved by the Mayor.

(b) Contribution Requirements

Under the Georgia Legislature principle of Home Rule and the Atlanta Code of Ordinances, Section 6, the Board has the authority to administer the Plan including establishing and amending contribution requirements. The funding methods and determination of benefits payable were established by the Atlanta Code of Ordinances, Section 6 legislative acts creating the Plan, as amended, and in general, provide that funds are to be accumulated from employee contributions for defined benefits, City contributions, and income from the investment of accumulated funds.

Sworn personnel employed by the Atlanta Fire Rescue Department are required to contribute to the Plan. Employees must contribute either 8% of base pay, if hired after August 31, 2011, 12% of base pay if hired before September 1, 2011 without an eligible beneficiary, or 13% of base pay if hired before September 1, 2011 with an eligible beneficiary. Contribution requirements may be amended by the Board under the authority of the City ordinance, but the employer contribution requirement is subject to State minimums.

On November 1, 2011, the sworn personnel of the Fire Rescue Department participating in the Plan and hired before September 1, 2011, or after January 1, 1984, had an increase of 5% in their mandatory contributions into the Plan. The contribution is such that the new contribution is 12% of salary (without a designated beneficiary) or 13% of salary (with a designated beneficiary). Where an Actuarial Valuation anticipates that the City's actuarially determined contribution for the next fiscal year will exceed 35% of the total payroll, contributions may be increased, by no more than 5% of compensation, in order to fund the overage.

Employees hired on or after September 1, 2011 who are sworn members of the fire department are required to participate in a hybrid defined benefit plan with a mandatory defined contribution component (see discussion below regarding Amendments to the Defined Contribution Plan). The defined benefit portion of this plan included a mandatory 8% employee contribution, and a 1% multiplier. The retirement age increased to age 57 for participants in the Plan. Early Retirement Age is changed from any age (as long as vested) with penalty to age 47 for hires after September 1, 2011. Upon retirement, these participants will receive an annually calculated cost of living increase to their pension benefit that may not exceed 1% and is based upon the Consumer Price Index. Sick and vacation leave are no longer applied to retirement benefits for hires after September 1, 2011.

(c) Description of the Benefit Terms

In June 2011, the City Council approved changes for the City's three defined benefit plans, effective on September 1, 2011 for new hires, and November 1, 2011 for existing employees. Currently sworn personnel employed by the Atlanta Fire Rescue Department are required to contribute to the Plan.

Prior to the change approved in June 2011, the Plan provided monthly retirement benefits that initially represent 3% for each year of credited service times the participants' final average three-year earnings (limited to 80% of the average). Retirement benefits were adjusted annually based on the change in the consumer price index, limited to 3% per year. Upon the death of a vested participant who has beneficiary coverage, his or her eligible beneficiary(ies) would be entitled to three fourths of the amount the deceased participant was receiving or would have been entitled to receive. Below are the terms the Plan has established to receive benefits:

Normal retirement age:	Any age with at least 30 years of creditable service (participants who are covered by the 2005 Amendment); or
	Age 55 with at least 10 years of creditable service (hired prior to July 1, 2010); or
	Age 55 with at least 15 years of creditable service, (hired before prior to September 1, 2011); or
	Age 57 with at least 15 years of creditable service; or
	Age 65 with at least five years of creditable service

For early retirement, there is a reduction of the retirement benefit of 0.5% for each month by which the participant's early retirement age precedes normal retirement age (for employees hired after August 31, 2011). The retirement benefit is reduced by 0.5% for each of the first 60 months and by 0.25% for each additional month by which the participant's early retirement age precedes the normal retirement age (for employees hired before September 1, 2011).

Early retirement age:	Any age with at least 10 years of creditable service (15 years of creditable service for participants who are hired after June 30, 2010);
	Minimum age 47 for participants hired after August 31, 2011

For participants who incur a catastrophic injury in the line of duty, the basic pension formula is 100 % of the top salary for the grade and position occupied by the participant at the time of disability.

For a service-connected disability for participants hired before 1986, the basic pension formula is the greater of 70% of the top salary for the employee's grade and position occupied by the participant at the time of disability or basic pension formula, 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 participants hired on or after January 1, 1986, the basic pension formula is the greater of 50% of average monthly earnings at the time of disability or basic pension formula, 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).

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 compensation or other payments (payable to the eligible beneficiary beginning two years after the 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).

Amendments to Defined Contribution Plan

Employees hired on or after September 1, 2011 who are either sworn members of the police department or fire department are required to participate in the mandatory defined contribution component. The defined contribution element is governed and accounted for separately, and includes a mandatory employee contribution of 3.75% of salary, which is matched 100% by the City. Additionally, these employees may voluntarily contribute up to an additional 4.25% of salary, which is also matched 100% by the City. Employees vest in the amount of the City's contributions at a rate of 20% per year and become fully vested in the City's contribution after 5 years of participation.

(d) Plan Membership

As of the beginning of the fiscal years ended June 30, 2018 and 2017, participation in the Plan was as follows:

	2018	2017
Inactive plan members or beneficiaries currently receiving benefits	1,026	1,007
Inactive plan members entitled to, but not yet receiving benefits	14	15
Active plan members	981	1,003
	2,021	2,025

(2) Summary of Significant Accounting Policies

(a) Basis of Accounting

The financial statements are prepared on the accrual basis of accounting. Employee and employer contributions are recognized as additions to plan net position in the period in which withheld from the employees' salary and paid by the employer. Benefits and refunds are recognized as deductions from fiduciary net position when due and payable.

(b) Cash and Cash Equivalents

Cash represents cash deposits held at financial institutions. The Plan considers all highly liquid debt securities with an original maturity of three months or less when purchased to be cash equivalents.

(c) Investments

The Plan's investments are stated at fair value. Quoted market prices are used to value all investments in equities based on closing prices on the U.S. national securities exchange. Securities traded on the open market for which no sale was reported on that date are valued at the most recent quoted bid price.

Estimated fair values provided by third-party vendors are used to value U.S. government notes, corporate bonds, mutual funds, and U.S. government and agency guaranteed bonds, if not traded in an active market. Partnership investments and certain commingled vehicles are valued based on the Net Asset Value (NAV) of the partnership, as reported by the investment managers. Because of the lag time in reporting, partnership investments are reported as of the end of the third fiscal quarter and with actual investment activity in the fourth fiscal quarter. Net asset value is based upon the fair value of the underlying investments. Information provided by partnerships regarding the methods they use to value the underlying investments of the partnership and any restrictions on or illiquidity of the interests of partnerships are considered in determining fair value.

The net appreciation (depreciation) in the fair value of investments held by the Plan is recorded as an increase (decrease) to investment income based on the valuation of investments as of the statement of fiduciary net position date. Investment income is recognized on the accrual basis as earned by the Plan.

(d) Use of Estimates

Management of the Plan has made a number of estimates and assumptions relating to the reporting of assets and liabilities and the disclosures of contingent assets and liabilities and the additions to and deductions from net position to prepare these financial statements in conformity with accounting principles generally accepted in the United States of America. Actual results could differ from those estimates.

(3) Pension Plan Investments

The Plan investments are made within the Public Retirement Systems Investment Authority Law of the Georgia Code (O.C.G.A. 47-20-80). The Board has been granted the authority by City Ordinance to establish and amend the Plan investment policy. The Board is responsible for making all decisions with regard to the administration of the Plan, including the management of Plan assets, establishing the investment policy, and carrying out the policy on behalf of the Plan.

The Plan's investments are managed under contracts with the Board by various investment managers who have discretionary authority over the assets managed by them and within the Plan's investment guidelines as established by the Board. The investments are held in trust by the Plan's custodian in the Plan's name. These assets are held exclusively for the purpose of providing benefits to members of the Plan and their beneficiaries.

State of Georgia Code and City statutes authorize the Plan to invest in U.S. government obligations, U.S. government agency obligations, State of Georgia obligations, obligations of a corporation of the U.S. government, the Georgia Fund 1 (a government investment pool maintained by the State of Georgia), and alternative investments. The Plan invests in repurchase agreements only when they are collateralized by U.S. government or agency obligations. The Plan is also authorized to invest in collateralized mortgage obligations (CMOs) to maximize yields. These securities are based on cash flows from interest payments on underlying mortgages. CMOs are sensitive to prepayment by mortgagees, which may result from a decline in interest rates. For example, if interest rates decline and mortgagees refinance their mortgages, thereby prepaying the mortgages underlying these securities, the cash flows from interest payments are reduced and the value of these securities declines. Likewise, if mortgagees pay on mortgages longer than anticipated, the cash flows are greater and the return on the initial investment would be higher than anticipated.

In the development of a current asset allocation plan, the Board reviews the long-term performance and risk characteristics of various asset classes, balancing the risks and rewards of market behavior, and reviewing state legislation regarding investment options. The below asset classes were selected to achieve the plan objectives: Domestic Equities, International Equities, Domestic Fixed Income, International Fixed Income, Alternative Investments, and cash equivalents.

The Firefighters' Pension Plan's Investment Policy did not change during the fiscal year. The policy may be amended by the Board by a majority vote of its members. The below asset allocation target asset mix in effect for fiscal year 2017 remained in effect during fiscal year 2018:

	Fiscal years 2018 and 2017		
	Minimum	**Target**	**Maximum**
Domestic equity:			
All/Flex Cap	5%	7%	10%
Large Cap	25	30	35
Mid Cap	10	15	20
Small Cap	4	9	14
International equity	4	9	14
Total equity	48%	70%	93%
Alternative investments	—	5%	5%
Fixed income:			
Core	10%	14%	19%
Intermediate	5%	10%	15%
Cash equivalents	—	1%	2%
Total fixed income and cash equivalents	15%	25%	36%

The Plan, by policy, is to invest the Plan funds in domestic equities, domestic fixed income securities, international equities, international fixed income, alternative investments, and cash equivalents. These instruments consist of common and preferred stock, obligations of the U.S. government and agencies (GNMA, FHLMC, and FNMA securities and CMO's), corporate bonds, and certificates of deposit. The Plan has strict limitations on the amounts managers are allowed to invest in any one issuer in all classes of securities. The Plan also invests in repurchase agreements, which must be fully collateralized by U.S. government or agency guaranteed securities. The Plan is in compliance with the policy.

The Plan maintains cash to meet its immediate liquidity needs. Cash not immediately needed is invested in either short-term or long-term investment securities as directed by management.

For the years ended June 30, 2018 and 2017, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense was 9.85% and 13.15%, respectively. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

(a) Investment Risk Disclosures

Interest Rate Risk. Interest rate risk is the risk that changes in market rates will adversely affect the fair value of an investment. Generally, the longer the maturity of an investment, the greater the sensitivity of its fair value to changes in market interest rates. Additionally, the fair values of the investments may be highly sensitive to interest rate fluctuations. The Plan has no specific policy to address interest rate risk.

Credit Risk. Credit risk is the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment. This risk is measured by the assignment of a rating to each investment by a nationally recognized statistical rating organization. The Plan has no specific policy to address credit risk.

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As of June 30, 2018 and 2017, the Plan had the following fixed income investments (dollars in thousands), with the corresponding credit ratings and maturities:

		June 30, 2018					
		Maturity					
Type of investments	Credit rating	Under 1 year	1–3 years	3–5 years	5–10 years	Over 10 years	Fair value
U.S. treasury securities	NR	$ 2,455	4,109	11,670	13,331	12,900	44,465
U.S. government agencies	AAA/AA+	2,286	3,643	—	—	—	5,929
U.S. government agencies	AGY	3	1	57	1,676	10,964	12,701
Corporate bonds	AA/A-	1,110	8,286	9,570	9,726	3,709	32,401
Corporate bonds	B+/BBB	474	1,543	2,106	4,698	1,396	10,217
Asset-backed securities	AAA	—	701	464	1,908	—	3,073
Asset-backed securities	NR	—	—	304	—	—	304
CMOs	AAA/A	—	—	—	—	1,656	1,656
CMOs	NR	—	—	—	—	3,680	3,680
State and local obligations	AAA/A-	—	—	168	421	1,114	1,703
Commingled bond Fund	NR	70,156	—	—	—	—	70,156
		$ 76,484	18,283	24,339	31,760	35,419	186,285

		June 30, 2017					
		Maturity					
Type of investments	Credit rating	Under 1 year	1–3 years	3–5 years	5–10 years	Over 10 years	Fair value
U.S. treasury securities	NR	$ 3,996	3,453	5,540	6,258	15,558	34,805
U.S. government agencies	AA+	11,019	6,525	—	—	—	17,544
U.S. government agencies	AGY	—	44	1,102	4,124	10,441	15,711
U.S. government agencies	NR	1,190	—	—	—	179	1,369
Corporate bonds	AAA/A-	390	5,956	5,086	13,318	3,697	28,447
Corporate bonds	B+/BBB	422	803	1,608	4,151	1,775	8,759
Asset-backed securities	AAA	—	735	2,924	—	—	3,659
Asset-backed securities	NR	—	312	—	—	—	312
CMOs	AAA	—	—	—	—	2,015	2,015
CMOs	BBB/B+	—	—	—	—	2,407	2,407
State and local obligations	AAA/A-	—	—	—	637	911	1,548
Commingled bond fund	NR	38,527	—	—	—	—	38,527
		$ 55,544	17,828	16,260	28,488	36,983	155,103

Custodial Credit Risk. Custodial credit risk for deposits is the risk that, in the event of the failure of a depository financial institution, the Plan will not be able to recover its deposits or will not be able to recover collateral securities that are in the possession of an outside party. Custodial credit risks for investments, is the risk that in the event of the failure of the counter-party, the Plan will not be able to recover the value of its investments or collateral securities that are in the possession of an outside party.

The City requires that uninsured collected balances held in trust by the City for the Plan plus accrued interest in depository accounts be collateralized and that the market value of collateralized pledged securities must be at least 110% of the deposit balances, and 102% of collateral value for repurchase agreements.

All investments of the Plan are either held by the Plan or by the counterparty in the Plan's name; therefore, the Plan's investments had no custodial risk as of June 30, 2018 and 2017.

Concentration of Credit Risk. The Plan does not have a policy regarding the concentration of credit risk. Investments in any one issuer, excluding U.S. treasuries and government Agencies, representing 5% or more of the net position restricted for pensions at June 30, 2018 and 2017 are as follows (dollars in thousands):

Issuer	Type	2018	2017
BlackRock Growth Index Fund	Commingled Equity Fund	$283,034	188,412
Colchester	Commingled Bond Fund	38,916	38,526
Johnston International Equity Group	Commingled Equity Fund	44,051	38,318
NT Collective Commingled Equity Fund	Commingled Equity Fund	105,784	52,226

Foreign Currency Risk.

Foreign currency risk is the risk that changes in currency exchange rates could adversely affect an investment's or deposit's fair value. The Plan does not have a policy regarding foreign currency risk.

Although all of the foreign equity securities are American Depository Receipts (ADR's), this does not eliminate the foreign currency risk involved in purchasing foreign securities.

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The following tables provides the value in U.S. dollars by foreign currency denominations and investment type for the Plan investments denominated in foreign currencies at June 30, 2018 and 2017 (dollars in thousands):

		June 30, 2018		
		Fixed income	**Equities**	**Total**
Currency:	Country:			
Euro	Belgium	$ 587	—	587
Euro	Germany	—	2,995	2,995
Euro	Ireland	—	983	983
Euro	United Kingdom	—	3,677	3,677
Euro	Netherlands	—	1,819	1,819
Euro	Italy	—	751	751
Euro	France	—	1,776	1,776
Euro	Spain	—	431	431
Total Euro		587	12,432	13,019
Canadian Dollar	Canada	—	3,337	3,337
Chilean Peso	Chile	—	335	335
Chinese Yuan Renminbi	China	—	3,944	3,944
Hong Kong Dollar	Hong Kong	—	2,621	2,621
Indian Rupee	India	—	522	522
Israeli New Shekel	Israel	—	412	412
Japanese Yen	Japan	—	4,266	4,266
South Korean Won	Korea	—	396	396
Swedish Krona	Sweden	—	836	836
Swiss Franc	Switzerland	—	862	862
New Taiwan Dollar	Taiwan	—	388	388
Total securities subject to foreign currency risk		$ 587	30,351	30,938

		June 30, 2017		
		Fixed income	**Equities**	**Total**
Currency:	Country:			
Euro	Belgium	$ 618	—	618
Euro	Germany	—	3,709	3,709
Euro	Ireland	—	1,317	1,317
Euro	United Kingdom	—	4,367	4,367
Euro	Netherlands	—	599	599
Australian Dollar	Australia	—	606	606
Brazilian Real	Brazil	—	1,316	1,316
Canadian Dollar	Canada	—	3,347	3,347
Chinese Yuan Renminbi	China	—	1,909	1,909
Hong Kong Dollar	Hong Kong	—	1,371	1,371
Israeli New Shekel	Israel	—	700	700
Japanese Yen	Japan	—	3,202	3,202
Singapore Dollar	Singapore	—	687	687
Swedish Krona	Sweden	—	658	658
Swiss Franc	Switzerland	—	2,467	2,467
New Taiwan Dollar	Taiwan	—	692	692
Various foreign currencies	International Region	38,526	38,318	76,844
Total securities subject to foreign currency risk		$ 39,144	65,265	104,409

(b) Fair Value Measurement

GASB Statement No. 72, *Fair Value Measurement and Application*, enhances comparability of governmental financial statements by requiring fair value measurement for certain assets and liabilities using a consistent definition and accepted valuation techniques. The standard establishes a hierarchy of inputs used to measure fair value that prioritizes the inputs into three categories – Level 1, Level 2 and Level 3 inputs – considering the relative reliability of the inputs. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to measurements involving significant unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are as follows:

- Level 1 inputs are quoted (unadjusted) prices in active markets for identical financial assets or liabilities that are accessible at the measurement date;
- Level 2 inputs are inputs other than quoted prices included within level 1 that are observable for the financial asset or liability, either directly or indirectly; and
- Level 3 inputs are unobservable inputs for the financial asset or liability.

The level in the fair value hierarchy within which a fair value measurement falls is based on the lowest level input that is significant to the fair value measurement in its entirety.

The Plan also has investments held through limited partnerships and commingled vehicles for which fair value is estimated using the NAV reported by the investment manager as a practical expedient to fair value. Such investments have not been categorized within the fair value hierarchy. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the amounts presented in the statements of fiduciary net position.

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The following tables present the valuation hierarchy as of June 30, 2018 and 2017 (in thousands)

	2018			
	Level 1	**Level 2**	**Level 3**	**Total**
Short term investments:				
Cash and cash equivalents	$ 3,366	—	—	3,366
Debt securities:				
Asset backed securities	$ —	8,713	—	8,713
Corporate and municipal bonds	—	44,321	—	44,321
U. S. Agency securities	—	18,630	—	18,630
U. S. Treasury securities	44,465	—	—	44,465
Total debt securities	$ 44,465	71,664	—	116,129
Equity securities:				
Commingled equity fund	$ —	388,818	—	388,818
Common stock	55,419	—	—	55,419
Total equity securities	55,419	388,818	—	444,237
Total investments at fair value	$ 103,250	460,482	—	563,732
Investments measured at NAV:				
Commingled bond funds				70,156
Commingled equity funds				44,051
Private equity funds				18,781
Real estate fund				5,357
Total investments measured at NAV				138,345
Total investments				$ 702,077

	2017			
	Level 1	Level 2	Level 3	Total
Short term investments:				
Cash and cash equivalents	$ 11,270	—	—	11,270
Debt securities:				
Asset backed securities	$ —	8,393	—	8,393
Corporate and municipal bonds	—	38,754	—	38,754
U. S. Agency securities	—	34,624	—	34,624
U. S. Treasury securities	34,805	—	—	34,805
Total debt securities	$ 34,805	81,771	—	116,576
Equity securities:				
Commingled equity fund	—	240,638	—	240,638
Common stock	149,298	—	—	149,298
Exchange traded funds	43,398	—	—	43,398
Total equity securities	192,696	240,638	—	433,334
Total investments at fair value	$ 238,771	322,409	—	561,180
Investments measured at NAV:				
Commingled bond funds				38,527
Commingled equity funds				38,315
Private equity funds				16,981
Real estate fund				5,012
Total investments measured at NAV				98,835
Total investments				$ 660,015

Equity securities classified in Level 1 are valued using prices quoted in active markets for those securities.

Debt securities classified in Level 1 are valued using pricing quoted in active markets. Debt securities classified in Level 2 are valued using either a bid evaluation or a matrix pricing technique. Bid evaluations may include market quotations, yields, maturities, call features and ratings. Matrix pricing is used to value securities based on the securities relationship to benchmark quoted prices. These securities have non-proprietary information that was readily available to market participants, from multiple independent sources, which are known to be actively involved in the market.

Commingled equity funds classified in Level 2 are valued using prices quoted in active markets for those investment types and the readily determinable fair value per share (unit) which is determined based on the publication of the price or on the basis of current transactions.

Investments in privately held limited partnerships and commingled vehicles which do not have a readily determined fair value are valued using the NAV provided by the general partner/investment manager as of June 30, 2018. The monthly or quarterly values of the partnership investments provided from the general partner are reviewed by the Plan to determine if any adjustments are necessary. The Plan currently has no plans to sell any of the investments resulting in these assets being carried at the NAV estimated by the general partner/investment manager.

(c) Securities Lending

State statutes and Board policies permit the Plan to lend its securities to broker dealers and other entities with a simultaneous agreement to return the collateral for the same securities in the future. As of June 30, 2018 and 2017, the Plan has no credit risk exposure to securities lending.

(d) Alternative Investments

The Board has authorized the Plan to invest in alternative investments. As of June 30, 2018 and 2017, the Plan had an alternative investment in one limited partnership totaling approximately $18.8 million and approximately $17.0 million, respectively. As part of the partnership agreement, the Plan may not voluntarily withdraw from the partnership prior to its dissolution, and no limited partnership interest is redeemable or repurchasable by the partnership at the option of the Plan.

As of June 30, 2018, the related unfunded commitments of the Plan's alternative investments and limitations and restrictions on the Plan's ability to redeem or sell are summarized as follows (in thousands):

	Unfunded commitments	Redemptions frequency (if currently eligible)	Redemptions notice period
Private equity fund	$ 2,698	Not eligible	Not eligible

Although the Plan is obligated to fund these commitments, many of these agreements allow resale.

(e) Real Estate Investments

Real estate investments are included under alternative investments which also includes joint ventures, partnerships and other participation interests with real estate owners, developers and others for the purpose of owning and operating any particular investment. As of June 30, 2018 and 2017, approximately $5,357,000 and $5,012,000, respectively, are considered to be real estate alternative investments.

	Unfunded commitments	Redemptions frequency (if currently eligible)	Redemptions notice period
Real Estate Fund	$ —	Quarterly	90 days

(4) Contributions Required and Contributions Made

The required contribution percentages developed in the most recent actuarial valuation (July 1, 2017) for the Plan for the years ended June 30, 2018 and 2017 and the actual contribution made are as follows (dollars in thousands):

	2018
Service cost	25.39%
Amortization of the unfunded actuarial accrued liability	24.49%
Total required contributions as a percentage of covered payroll	49.88%
Actual employee contributions:	
Dollar amount	$ 5,945
Percent of covered payroll	12.66%
Actual employer contributions:	.
Dollar amount	$ 21,882
Percent of covered payroll	46.60%

	2017
Service cost	25.60%
Amortization of the unfunded actuarial accrued liability	24.49%
Total required contributions as a percentage of covered payroll	50.09%
Actual employee contributions:	
Dollar amount	$ 5,711
Percent of covered payroll	12.03%
Actual employer contributions:	
Dollar amount	$ 17,901
Percent of covered payroll	37.70%

The annual covered payroll for City Firefighters' was approximately $46,962,000 and $47,479,000 for the years ended June 30, 2018 and 2017, respectively. The actual employer contributions shown above include amounts used to fund retiree supplemental cost of living increases and other minimum benefits. These amounts are components of the City's contributions for purposes of meeting actuarially determined funding requirements.

(5) Contributions Receivable

(a) Employer

Employer contributions receivable represent Annual Required Contributions owed but not yet remitted to the Plan by the City. There was $1,315,000 of contributions receivable from the employer at June 30, 2018 and approximately $673,000 of contributions receivable at June 30, 2017.

(b) Employees

Employees may receive credit for years of service from employment with certain state and local governmental agencies as well as prior employment with the City, upon payment to the Plan of an amount, as defined in the 1927 Act, as amended, representing contributions applicable to such service period. These contributions may be paid over a future period, even after retirement. In addition, 1962 and 1978 amendments to the Plan increased pension benefits and the related employee contribution rates. Active employees may retroactively increase their contribution rates from the date of employment in order to receive the maximum increased benefits available under the 1962 and 1978 amendments. These "back contributions" may also be paid over a future period. Contributions from employees include amounts withheld from employees' pay but not yet remitted to the Plan. Total contributions receivable from employees were $188,000 and $190,000 as of June 30, 2018 and 2017, respectively.

(6) Tax Status

The Plan and its trust are intended to be qualified under Sections 401(a) and 501(c) of the Internal Revenue Code (IRC) such that they are not subject to tax under federal income tax laws. The Internal Revenue Service (IRS) issued a favorable determination letter on May 11, 2017 with respect to the Plan, in which the IRS stated that the Plan, as then designed, was in compliance with the applicable requirements of the IRC.

(7) Net Pension Liability of the Plan

The components of the net pension liability at June 30, 2018 and 2017 were as follows (in thousands):

	2018	2017
Total pension liability	$ 937,070	897,096
Fiduciary net position	718,133	669,508
Net pension liability	$ 218,937	227,588
Fiduciary net position as a percentage of total pension liability	76.64%	74.63%

(a) Actuarial Assumptions

The total pension liability was determined by the actuarial valuation as of July 1, 2017 for 2018 and as of July 1, 2016 for 2017, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.25%
Salary increases	4.0%
Investment rate of return	7.41%, net of pension plan investment expense, including inflation

In 2018, mortality rates were based on the sex-distinct rates set forth in the RP-2000 Blue Collar Mortality Table with full generational improvements in mortality using scale AA; deaths prior to retirement are assumed not to be service-connected.

In 2017 mortality rates were based on the sex-distinct rates set forth in the RP-2000 Mortality Table 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.

The Plan provides for an annual cost-of-living adjustment based on the CPI limited to 1% per year for employees hired after August 31, 2011, or 3% per year for employees hired before September 1, 2011.

The latest experience study was through June 30, 2011. In preparing the latest actuarial valuation, the results of the experience study are reviewed against the actuarial valuation results.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

Estimates of real rates of return for each major asset class included in the Plan's target asset allocation as of June 30, 2018 and 2017 are summarized in the following table:

	2018	
Asset class	**Target allocation**	**Expected long-term real rate of return**
Domestic equity	7.00%	6.01%
Domestic large-cap equity	30.00	6.91
Domestic mid-cap equity	15.00	8.91
Domestic small-cap equity	9.00	5.01
International equity	9.00	3.31
Fixed income and cash equivalents	25.00	0.81
Alternative investments	5.00	7.51
	100.00%	

	2017	
Asset class	**Target allocation**	**Expected long-term real rate of return**
Domestic equity	7.00%	6.01%
Domestic large-cap equity	30.00	6.91
Domestic mid-cap equity	15.00	8.91
Domestic small-cap equity	9.00	5.01
International equity	9.00	3.31
Fixed income and cash equivalents	25.00	0.81
Alternative investments	5.00	7.51
	100.00%	

(Continued)

(b) Discount Rate

A discount rate of 7.41% was applied in the measurement of the total pension liability as of June 30, 2018 and 2017. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and the employer contributions will be made at the rates equal to the difference between actuarially determined contribution rates and the member rate. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

(c) Sensitivity of the Net Pension Liability to Changes in the Discount Rate

The following presents the net pension liability as of June 30, 2018 and 2017, calculated using the discount rate of 7.41%, as well as what the plan net pension liability would be if it were calculated using a discount rate that is one-percentage point lower (6.41%) or one-percentage point higher (8.41%) than the current rate (dollars in thousands):

	2018		
	1% Decrease 6.41%	Current discount rate 7.41%	1% Increase 8.41%
Total pension liability	$ 1,058,426	937,070	837,345
Less fiduciary net position	718,133	718,133	718,133
Net pension liability	$ 340,293	218,937	119,212

	2017		
	1% Decrease 6.41%	Current discount rate 7.41%	1% Increase 8.41%
Total pension liability	$ 1,011,763	897,096	802,597
Less fiduciary net position	669,508	669,508	669,508
Net pension liability	$ 342,255	227,588	133,089

(d) Actual Valuation Date

The total pension liability at June 30, 2018 is based on the July 1, 2017 actuarial valuation and the pension liability at June 30, 2017 is based on the July 1, 2016 actuarial valuation. The expected total pension liabilities were determined as of June 30, 2018 and 2017 using standard roll-forward techniques. The roll-forward calculation adds the annual normal cost (also called service cost), subtracts the actual benefit payments and refunds for the plan year, and then applies the expected investment rate of return for the year.

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

(See Accompanying Independent Auditors' Report)

CITY OF ATLANTA, GEORGIA
FIREFIGHTERS' PENSION PLAN

Required Supplementary Information

Schedule of Changes in Net Pension Liability

Year ended June 30, 2018

(Dollars in thousands)

(Unaudited)

	2018	2017	2016	2015
Total pension liability:				
Service cost	$ 11,925	12,155	12,013	12,612
Interest	65,668	63,123	62,584	60,396
Differences between expected and actual experiences	(10,855)	4,835	(22,794)	(23,053)
Changes of assumptions	20,135	—	—	—
Benefit payments, including refunds of member contributions	(46,898)	(44,510)	(44,000)	(42,590)
Net change in total pension liability	39,975	35,603	7,803	7,365
Total pension liability – beginning	897,095	861,493	853,690	846,325
Total pension liability – ending	937,070	897,096	861,493	853,690
Plan fiduciary net position:				
Contributions – employer	21,882	17,901	16,454	20,866
Contributions – employee	5,945	5,711	5,667	5,637
Net investment income (loss)	68,379	78,247	(9,895)	2,651
Other income	—	1	150	4
Benefit payments, including member refunds	(46,898)	(44,510)	(44,000)	(42,590)
Administrative expenses	(683)	(479)	(388)	(427)
Net change in plan fiduciary net position	48,625	56,871	(32,012)	(13,859)
Plan fiduciary net position – beginning	669,508	612,637	644,649	658,508
Plan fiduciary net position – ending	718,133	669,508	612,637	644,649
Plan net pension liability – ending	$218,937	227,588	248,856	209,041

Note: Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

See accompanying notes to required supplementary information and accompanying independent auditors' report.

CITY OF ATLANTA, GEORGIA
FIREFIGHTERS' PENSION PLAN

Required Supplementary Information

Schedule of Net Pension Liability and Related Ratios

Year ended June 30, 2018

(Dollars in thousands)

(Unaudited)

	2018	2017	2016	2015
Total pension liability	$ 937,070	897,096	861,493	853,690
Plan fiduciary net position	718,133	669,508	612,637	644,649
Net pension liability	$ 218,937	227,588	248,856	209,041
Plan fiduciary net position as a percentage of the total pension liability	76.64%	74.63%	71.11%	75.51%
Covered-employee payroll	$ 46,962	47,479	46,918	47,181
Net pension liability as a percentage of covered-employee payroll	466.20%	479.34%	530.41%	443.06%

Note: Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

See accompanying notes to required supplementary information and accompanying independent auditors' report.

(Continued)

CITY OF ATLANTA, GEORGIA
FIREFIGHTERS' PENSION PLAN

Required Supplementary Information

Schedule of Employer Contributions

Year ended June 30, 2018

(Dollars in thousands)

(Unaudited)

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Actuarially determined contribution	$ 21,882	17,901	16,454	20,866	20,656	17,491	21,092	24,912	25,865	28,752
Contributions in relation to the actuarially determined contribution	21,882	17,901	16,454	20,866	20,656	17,491	21,092	24,912	25,865	28,752
Contribution deficiency (excess)	$ —	—	—	—	—	—	—	—	—	—
Covered-employee payroll	$ 46,962	47,479	46,918	47,181	44,508	42,797	39,482	42,963	43,910	43,275
Contributions as a percentage of covered-employee payroll	46.60%	37.70%	35.07%	44.23%	46.41%	40.87%	53.42%	57.98%	58.90%	66.44%

See accompanying notes to required supplementary information and accompanying independent auditors' report.

(Continued)

CITY OF ATLANTA, GEORGIA
FIREFIGHTERS' PENSION PLAN

Required Supplementary Information

Schedule of Investment Returns

Year ended June 30, 2018

(Dollars in thousands)

(Unaudited)

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Annual money-weighted rate of return, net of investment expense	9.85%	13.15%	(1.13)%	0.79%	21.01%	15.34%	1.68%	25.58%	14.40%	(13.86)%

See accompanying notes to required supplementary information and accompanying independent auditors' report.

(Continued)

(1) Schedule of Changes in Net Pension Liability

The total pension liability contained in this schedule was provided by the Plan's actuary, Southern Actuarial Services. The net pension liability is measured as the total pension liability less the amount of the fiduciary net position of the Plan.

(2) Schedule of Employer Contributions

The actuarially determined contributions and comparison to those contributions actually made are presented in the schedule.

(3) Actuarial Methods and Assumptions

Changes of assumptions: There was a $20.1 million impact since the last measurement date. Mortality basis changed from 2015 projection of the RP-2000 Mortality Table to the RP-2000 Blue Collar Mortality Table with full generational improvements in mortality using scale AA.

Method and assumptions used in calculations of actuarially determined contributions: The actuarially determined contribution rates in the schedule of employer contributions are calculated as of June 30, one year prior to the end of the fiscal year in which contributions are reported. The following actuarial methods and assumptions were used to determine the most recent contribution rate reported in that schedule:

Valuation date	July 1, 2016
Actuarial-cost method	Entry age normal
Amortization method	Level percentage, closed
Remaining amortization period	24 years
Asset-valuation method	Market value
Inflation rate	2.25%
Salary increases	4.0%
Investment rate of return	7.41%