CITY OF ATLANTA, GEORGIA
POLICE OFFICERS' PENSION PLAN

Financial Statements and Supplemental Schedules

June 30, 2018 and 2017

(With Independent Auditors' Report Thereon)

CITY OF ATLANTA, GEORGIA
POLICE OFFICERS' PENSION PLAN

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Independent Auditors' Report

As management we offer readers of the Police Officers' Pension Plan (the Plan) financial statements, this narrative overview and analysis of the financial activities of the Plan for the year ended June 30, 2018. This overview compares the year ended June 30, 2018 with the year ended June 30, 2017 and the year ended June 30, 2017 with the year ended June 30, 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 it's 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 $1.13 billion. At June 30, 2017, the assets of the Plan exceeded its liabilities by $1.05 billion. This amount represents the Plan's net position.
- The Plan's total net position increased in fiscal year 2018 by approximately $78.7 million or 7.5% as compared with net position at June 30, 2017. The Plan's total net position increased in fiscal year 2017 by approximately $101.3 million or 10.7% over the net position at June 30, 2016.
- Net investment income decreased by $25.4 million compared to fiscal year 2017. Net investment income increased in 2017 by $136.1 million compared to fiscal year 2016.
- Contributions received from employer and employees totaled $44.7 million in fiscal year 2018 compared to $38.3 million in fiscal year 2017.
- Benefit payments in fiscal year 2018 totaled $65.8 million, an increase of $3.3 million or 5.3% when compared with fiscal year 2017. Benefit payments in fiscal year 2017 totaled $62.5 million, an increase of $2.7 million or 4.4% when compared with fiscal year 2016.

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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 Funds. The City's CAFR for the years ended June 30, 2018 and 2017 should be read in conjunction with these financial statements.

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 Bard (GASB).

Basic financial statements comprise:

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 event giving rise to the change occurs, 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 rate of return. Required supplementary information can be found following the notes to the financial statements in this report.

Financial Analysis

Net position may serve over time as a useful indicator of financial stability. In the case of the Plan, assets exceeded liabilities by $1,130.4 million and $1,051.7 million, respectively, at the close of the years ended June 30, 2018 and 2017. 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. Police Officers' Pension Plan Net Position, as of June 30, 2018, 2017, and 2016 (dollars in thousands):

	June 30		Amount	Percentage
	2018	**2017**	**change**	**change**
Assets:				
Cash and deposits	$ 3,383	12,226	(8,843)	(72.3)%
Receivables	7,436	6,002	1,434	23.9
Investments	1,124,233	1,042,611	81,622	7.8
Total assets	1,135,052	1,060,839	74,213	7.0
Liabilities:				
Due to brokers for investments purchased	3,584	8,378	(4,794)	(57.2)
Other	1,079	790	289	36.6
Total liabilities	4,663	9,168	(4,505)	(49.1)
Net position restricted for pensions	$ 1,130,389	1,051,671	78,718	7.5 %

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	June 30		Amount	Percentage
	2017	**2016**	**change**	**change**
Assets:				
Cash and deposits	$ 12,226	7,852	4,374	55.7%
Receivables	6,002	5,595	407	7.3
Investments	1,042,611	943,779	98,832	10.5
Total assets	1,060,839	957,226	103,613	10.8
Liabilities:				
Due to brokers for investments purchased	8,378	6,368	2,010	31.6
Other	790	443	347	78.3
Total liabilities	9,168	6,811	2,357	34.6
Net position restricted for pensions	$ 1,051,671	950,415	101,256	10.7%

The net position of the Plan increased by approximately $78.7 million or 7.5% when compared to 2017. This is mainly attributable to the increase in investments during fiscal year 2018. Total assets for the Plan increased by $74.2 million or 7.0% compared to 2017. Total cash and investments increased by $72.8 million in addition to a $4.8 million decrease in amounts due to brokers for investments purchased. Investments represent 99.0% of total assets as of June 30, 2018 compared to 98.3% as of June 30, 2017. The Plan's 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.

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

	June 30		Amount	Percentage
	2018	2017	change	change
Additions to plan net position:				
Investment income (loss):				
Net appreciation				
in fair value of investments	$ 90,135	116,211	(26,076)	22.4%
Interest and dividends	13,952	13,378	574	4.3
Less investment expenses	(3,555)	(3,651)	96	(2.6)
Net investment income	100,532	125,938	(25,406)	20.2
Employee contributions	10,555	10,830	(275)	(2.5)
Employer contributions	34,176	27,493	6,683	24.3
Other income	76	—	76	100.0
Total additions	145,339	164,261	(18,922)	(11.5)
Deductions from plan net position:				
Benefit payments	65,785	62,484	3,301	5.3
Administrative expense	836	521	315	60.5
Total deductions	66,621	63,005	3,616	5.7
Increase in net position restricted for pensions	$ 78,718	101,256	(22,538)	22.3%
Net position restricted for pensions:				
Beginning of year	$1,051,671	950,415		
Increase	78,718	101,256		
End of year	$1,130,389	1,051,671		

	June 30		Amount	Percentage
	2017	2016	change	change
Additions to plan net position:				
Investment (loss) income:				
Net (depreciation) appreciation in fair value of investments	$ 116,211	(24,251)	140,462	(579.2)%
Interest and dividends	13,378	17,196	(3,818)	(22.2)
Less investment expenses	(3,651)	(3,122)	(529)	16.9
Net investment (loss) income	125,938	(10,177)	136,115	(1,337.5)
Employee contributions	10,830	11,825	(995)	(8.4)
Employer contributions	27,493	25,441	2,052	8.1
Other income	—	193	(193)	(100.0)
Total additions	164,261	27,282	136,979	502.1
Deductions from plan net position:				
Benefit payments	62,484	59,823	2,661	4.4
Administrative expense	521	429	92	21.4
Total deductions	63,005	60,252	2,753	4.6
Increase (decrease) in net position restricted for pensions	$ 101,256	(32,970)	134,226	(407.1)%
Net position restricted for pensions:				
Beginning of year	$ 950,415	983,385		
Increase (decrease)	101,256	(32,970)		
End of year	$ 1,051,671	950,415		

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

Total additions to the Plan's net position decreased by $18.9 million, or 11.5%, compared to fiscal 2017. This decrease is primarily attributed to the decrease in net investment income. Net investment income was $100.5 million for 2018, a decrease of $25.4 million compared to fiscal 2017. Employer contributions were $34.2 million for 2018, an increase of $6.7 million compared to fiscal 2017. The investment portfolio comprises 74.4% equities, 21.8% fixed income, 2.6% alternative investments including real estate, and 1.2% short term investments in cash and cash equivalents as of June 30, 2018, compared to 72.6% equities, 23.4% fixed income, 2.5% alternative investments including real estate and 1.5% short term investments in cash and cash equivalents as of June 30, 2017. The overall portfolio return was 9.58% net of fees, for the fiscal year ended June 30, 2018, compared with 13.52%, net of fees, for the fiscal year ended June 30, 2017. The S&P 50 index rose 14.37% and 17.92%, respectively, during the same time periods.

Employee contributions to the Plan decreased by 2.5% and 8.4%, respectively, during 2018 and 2017. Employer contributions increased by $6.7 million, or 24.3%, to $34.2 million due to a higher actuarially determined contribution (ADC) for fiscal 2018. Benefit payments increased by $3.3 million, or 5.3%, to 65.8 million in 2018.

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, net assets increased at the close of the year ended June 30, 2017. 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 $101.3 million or 10.7% 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 $103.6 million or 10.8% compared to 2016. Total cash and investments increased by $103.2 million compared to fiscal 2016. Investments represent 98.3% of total assets as June 30, 2017, compared to 98.6% as of June 30, 2016. The Plan's 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.

Total additions to the Plan's net position increased by $137.0 million or 502.1% compared to fiscal 2016. As mentioned earlier this increase is primarily attributed to the increase in net investment income. Net investment income was $125.9 million for 2017, an increase of $136.1 million compared to fiscal 2016. The investment portfolio comprised of 72.6% equities, 23.4% fixed income, 2.5% alternative investments including real estate and 1.5% short term investments in cash and cash equivalents as of June 30, 2017, compared to 68.8% equities, 26.4% fixed income, 2.6% alternative investments including real estate and 2.2% short term investments in cash and cash equivalents as of June 30, 2016. The overall portfolio return was 13.52% net of fees, for the fiscal year ended June 30, 2017, compared with (0.18%), net of fees, for the fiscal year ended June 30, 2016. The S&P 500 index rose 17.92% and 3.99%, respectively during the same time periods.

Employee contributions to the Plan decreased by $1.0 million or 8.4% in 2017 . Employer contributions increased by $2.1 million or 8.1% to $27.5 million due to a higher actuarially determined required contribution (ADC) for fiscal 2017. Benefit payments increased by $2.7 million, or 4.4% to $62.5 million. The increase in benefit payments is primarily the result of increased cost-of-living payments to members.

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.

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, 11100 City Hall Tower, 68 Mitchell St. SW, Atlanta, Georgia 30303.

CITY OF ATLANTA, GEORGIA
POLICE OFFICERS' PENSION PLAN

Statements of Fiduciary Net Position

June 30, 2018 and 2017

(Dollars in thousands)

	2018	2017
Assets		
Cash and deposits	$ 3,383	12,226
Receivables:		
Contributions receivable from employer	3,383	1,425
Contributions receivable from employees	392	411
Due from brokers for investments sold	1,690	2,748
Investment income	1,593	1,042
Other	378	376
Total receivables	7,436	6,002
Investments:		
Short term investments	13,730	15,588
Domestic fixed income securities	240,199	181,501
Domestic equities	753,513	647,769
International fixed income securities	4,877	62,194
International equities	82,335	108,841
Alternative investments:		
Real estate	5,358	5,011
Limited partnerships	24,221	21,707
Total investments	1,124,233	1,042,611
Total assets	1,135,052	1,060,839
Liabilities		
Due to brokers for investments purchased	3,584	8,378
Other	1,079	790
Total liabilities	4,663	9,168
Net position restricted for pensions	$ 1,130,389	1,051,671

See accompanying notes to financial statements.

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CITY OF ATLANTA, GEORGIA
POLICE OFFICERS' PENSION PLAN

Statements of Changes in Fiduciary Net Position

June 30, 2017 and 2016

(Dollars in thousands)

	2018	2017
Additions:		
Contributions:		
Employer	$ 34,176	27,493
Employee	10,555	10,830
Total contributions	44,731	38,323
Investment income :		
Net appreciation in fair value of investments	90,135	116,211
Interest and dividends	13,952	13,378
Less investment expenses	(3,555)	(3,651)
Net investment income	100,532	125,938
Other	76	—
Total additions	145,339	164,261
Deductions:		
Benefit payments, including refunds of member contributions	65,785	62,484
Administrative expense	836	521
Total deductions	66,621	63,005
Net increase in net position	78,718	101,256
Net position restricted for pensions:		
Beginning of year	1,051,671	950,415
End of year	$ 1,130,389	1,051,671

See accompanying notes to financial statements.

(1) Plan Description

City of Atlanta, Georgia Police Officers' Pension Plan (the Plan) was established by a 1924 Act of the State of Georgia Legislature to provide retirement benefits for full-time sworn police officers of the City of Atlanta (the City) Police 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 under the principle of Home Rule. The types of benefits offered by the Plan are retirement, disability, and preretirement 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, Georgia'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 it's 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 contributions, City contributions, and income from the investment of accumulated funds.

Sworn personnel employed by the Atlanta Police 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 City ordinance, but the employer contribution requirement is subject to State minimums.

On November 1, 2011, the sworn personnel of the Police 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 (ADC) 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 Police Department are required to participate in a hybrid defined benefit plan with a mandatory defined contribution component (see discussion below regarding Amendments to Defined Contribution Plan). The defined benefit portions of this plan include a mandatory 8% employee contribution and a 1% multiplier. The retirement age is 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 52 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 Police 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 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 by 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 of 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 January 1, 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 workers' 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 workers' 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).

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Preretirement 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 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).

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	1,568	1,510
Inactive plan members entitled to, but not yet receiving benefits	20	13
Active plan members	1,847	1,962
	3,435	3,485

(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.

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(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, and for carrying out the investment policy on behalf of the Plan.

The Plan's investments are managed under contracts by various investment managers who have discretionary authority over the assets managed by them and within the Plan's investment guidelines 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 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 and 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, Alternative Investments, and cash equivalents.

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The Police Officers' Pension Fund 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 year 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's 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 10.00% and 14.19%, 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.

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	5,092	7,800	22,622	23,052	7,028	65,594
U.S. government agencies	AA+	2,090	5,971	5,731	6,869	480	21,141
U.S. government agencies	AGY	—	2	23	1,275	17,588	18,888
U.S. government agencies	BBB	—	—	—	223	—	223
Corporate bonds	AAA/A-	1,916	9,993	14,220	12,586	5,975	44,690
Corporate bonds	BBB+/BBB-	768	5,007	4,938	6,192	2,315	19,220
Corporate bonds	NR		1,013	514			1,527
Asset-backed securities	AAA	—	1,002	636	2,852	—	4,490
Asset-backed securities	NR	—	—	402	—	—	402
CMOs	AAA/A	—	—	—	—	971	971
CMOs	NR	—	—	—	—	6,660	6,660
State and local obligations	AAA/AA+	—	—	237	631	428	1,296
State and local obligations	A+/A	—	146	143	—	1,311	1,600
Commingled Fixed Income	NR	58,374	—	—	—	—	58,374
		68,240	30,934	49,466	53,680	42,756	245,076

		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	$ 5,486	9,057	12,077	28,108	6,149	60,877
U.S. government agencies	AA+	9,482	6,844	3,874	5,281	355	25,836
U.S. government agencies	AGY		10	238	3,326	17,172	20,746
U.S. government agencies	NR	—	2,785	—	—	—	2,785
Corporate bonds	AAA/A-	2,223	10,058	7,672	16,096	6,265	42,314
Corporate bonds	BBB+/B-	1,934	2,641	4,256	4,415	2,481	15,727
Corporate bonds	NR	240	—	1,564	1,575	180	3,559
Asset-backed securities	AAA	—	2,048	4,026	—	—	6,074
Asset-backed securities	NR	—	441	—	—	—	441
CMOs	AAA/A	—	—	—	—	1,464	1,464
CMOs	NR	—	—	—	—	3,782	3,782
State and local obligations	AAA/A	—	—	—	660	—	660
State and local obligations	AA/AA+	—	—	147	278	1,215	1,640
Commingled bond fund	NR	57,790	—	—	—	—	57,790
		$ 77,155	33,884	33,854	59,739	39,063	243,695

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 risk for investments is the risk that in the event of the failure of the counterparty, 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 credit risk as of June 30, 2018 and 2017.

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Concentration Credit Risk

The Plan does not have a policy regarding the concentration of credit risk. Investments in any one issuer, other than U.S. treasury 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	Investment type	Fair value 2018	Fair value 2017
Colchester	Commingled Bond Fund	$ 58,374	57,790
BlackRock Value Index Fund	Commingled Equity Fund	111,049	289,160
Johnston International Equity	Commingled Equity Fund	78.918	—
Ishares Russell Value ETF	Domestic Equity Fund	—	82,825
BlackRock Growth Index Fund	Commingled Equity Fund	172,463	—
Artisan FDs INC International	Commingled Equity Fund	69,082	—

Foreign Currency Risk

Foreign currency risk is the risk that changes in 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 provide the value in U.S. dollars by foreign currency denominations and investment type for the Plan investments denominated in foreign currencies as of June 30, 2018 and 2017 (dollars in thousands):

		June 30, 2018		
Currency:	Country:	Fixed Income	Equities	Total
Euro	Belgium	$ 1,292	—	1,292
Euro	Germany	464	—	464
Euro	Ireland	—	1,423	1,423
Euro	Netherlands	—	718	718
Total Euro		1,756	2,141	3,897
Australian Dollar	Australia	95		95
Pound Sterling	United Kingdom	877	—	877
Canadian Dollar	Canada	779	—	779
Chinese Yuan Renminbi	China	204	1,192	1,396
Mexican Peso	Mexico	223	—	223
Rupee	India	—	1,204	1,204
Various foreign currencies	International Region	—	77,798	77,798
New Zealand Dollar	New Zealand	195	—	195
Norwegian Krone	Norway	174	—	174
Saudi Arabian Riyal	Saudi Arabia	378	—	378
Swedish Krona	Sweden	196	—	196
		$ 4,877	82,335	87,212

		June 30, 2017		
Currency:	Country:	Fixed Income	Equities	Total
Euro	Belgium	$ 1,325	—	1,325
Euro	Germany	600	—	600
Euro	Ireland	—	1,074	1,074
Euro	Netherlands	156	296	452
Pound Sterling	United Kingdom	534	—	534
Canadian Dollar	Canada	1,009	369	1,378
Chinese Yuan Renminbi	China	—	910	910
Various foreign currencies	International Region	57,789	106,192	163,981
New Zealand Dollar	New Zealand	202	—	202
Norwegian Krone	Norway	178	—	178
Saudi Arabian Riyal	Saudi Arabia	198	—	198
Swedish Krona	Sweden	203	—	203
		$ 62,194	108,841	171,035

(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 Net Asset Value (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 financial assets carried at fair value by level within 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	$ 13,730	—	—	13,730
Debt securities:				
Asset backed securities	—	12,523	—	12,523
Corporate and municipal bonds	—	68,333	—	68,333
U. S. Agency securities	—	40,252	—	40,252
U. S. Treasury securities	65,594	—	—	65,594
Total debt securities	65,594	121,108	—	186,702
Equity securities:				
Commingled equity fund	—	352,594	—	352,594
Common stock	288,828	—	—	288,828
Exchange traded funds	115,508	—	—	115,508
Total equity securities	404,336	352,594	—	756,930
Total investments at fair value	$ 483,660	473,702	—	957,362
Investments measured at NAV:				
Commingled bond funds				58,374
Commingled equity funds				78,918
Private equity funds				24,221
Real estate fund				5,358
Total investments measured at NAV				166,871
Total investments				$1,124,233

	2017			
	Level 1	Level 2	Level 3	Total
Short term investments:				
Cash and cash equivalents	$ 15,588	—	—	15,588
Debt securities:				
Asset backed securities	—	11,761	—	11,761
Corporate and municipal bonds	—	63,900	—	63,900
U. S. agency Securities	—	49,367	—	49,367
U. S. treasury Securities	60,877	—	—	60,877
Total debt securities	60,877	125,028	—	185,905
Equity securities:				
Commingled equity fund	—	336,801		336,801
Common stock	172,084	—	—	172,084
Exchange traded funds	198,072	—	—	198,072
Total equity securities	370,156	336,801	—	706,957
Total investments at fair value	$ 446,621	461,829	—	908,450
Investments measured at NAV:				
Commingled bond funds				57,790
Commingled equity funds				49,653
Private equity funds				21,707
Real estate fund				5,011
Total investments measured at NAV				134,161
Total investments				$1,042,611

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 prices 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 determinable fair value are valued using the NAV provided by the general partner/investment manager as of the end of the fiscal year. 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 of Trustees 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 related to securities lending.

(d) Alternative Investments

The Board has authorized the Plan to invest in alternative investments. As of June 30, 2018 and 2017, a total of $24,221,000 and $21,707,000 respectively, are included in alternative investments as part of the limited partnership agreement. The Plan may not voluntarily withdraw from the limited 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	$ 3,995	not eligible	not eligible

As of June 30, 2018, GrayCo Alternative Partners II, LP have total Capital Commitments of $21,000,000 of which $2,715,486 is unfunded and Pharos Capital Partners III LP have total Capital Commitments of $4,000,000 of which $1,280,000 is unfunded. 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, a total of $5,358,000 and $5,011,000, respectively, are considered to be real estate 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 for the Plan for the years ended June 30, 2018 and 2017 and the actual contributions made are as follows (dollars in thousands):

	2018
Service cost	23.34%
Amortization of the unfunded actuarial accrued liability	21.52
Total required contributions as a percentage of covered payroll	44.86%
Actual employee contributions:	
Dollar amount	$ 10,555
Percent of covered payroll	11.61%
Actual employer contributions:	
Dollar amount	$ 34,176
Percent of covered payroll	37.58%

	2017
Service cost	23.75%
Amortization of the unfunded actuarial accrued liability	20.96
Total required contributions as a percentage of covered payroll	44.71%
Actual employee contributions:	
Dollar amount	$ 10,830
Percent of covered payroll	10.34%
Actual employer contributions:	
Dollar amount	$ 27,493
Percent of covered payroll	26.24%

The annual covered payroll for the City Police was approximately $90,948,000 and $104,788,000, respectively, for the years ended June 30, 2018 and 2017. 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 represents Actual Determined Contributions owed, but not yet remitted to the Plan by the City. Total contributions receivable from the employer was $3,383,000 and $1,425,000, respectively, as of June 30, 2018 and 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 $392,000 and $411,000, respectively, as of June 30, 2018 and 2017.

(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:

	2018	2017
Total pension liability	$ 1,439,664	1,394,135
Fiduciary net position	1,130,389	1,051,671
Net pension liability	$ 309,275	342,464
Fiduciary net position as a percentage of total pension liability	78.52%	75.44%

(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%
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 related.

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 tables:

	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%	

(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 rate reflects current economic conditions. 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 of the Plan as of June 30, 2018 and 2017, calculated using the discount rate of 7.41%, as well as what the Plan's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.41%) or 1-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	$ 1,638,700	1,439,664	1,277,854
Less fiduciary net position	1,130,389	1,130,389	1,130,389
Net pension liability	$ 508,311	309,275	147,465

	2017		
	1% Decrease 6.41%	**Current discount rate 7.41%**	**1% Increase 8.41%**
Total pension liability	$ 1,582,440	1,394,135	1,240,176
Less fiduciary net position	1,051,671	1,051,671	1,051,671
Net pension liability	$ 530,769	342,464	188,505

(d) Actual Valuation Date

The total pension liability at June 30, 2018 is based on 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.

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REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
(See Accompanying Independent Auditors' Report)

CITY OF ATLANTA, GEORGIA
POLICE OFFICERS' 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	$ 21,230	24,887	21,573	22,387
Interest	102,549	97,265	95,436	91,326
Changes of benefit terms	—	—	—	
Differences between expected and actual experiences	—	—	—	—
Demographic experience	(42,971)	16,627	(34,253)	(33,047)
Changes of assumptions	30,506	—	—	—
Benefit payments, including refunds of member contributions	(65,785)	(62,484)	(59,823)	(56,253)
Net change in total pension liability	45,529	76,295	22,933	24,413
Total pension liability – beginning	1,394,135	1,317,840	1,294,907	1,270,494
Total pension liability – ending	1,439,664	1,394,135	1,317,840	1,294,907
Plan fiduciary net position:				
Contributions – employer	34,176	27,493	25,441	32,693
Contributions – employee	10,555	10,830	11,825	11,224
Net investment income	100,608	125,938	(10,177)	8,734
Other income			193	4
Benefit payments, including member refunds	(65,785)	(62,484)	(59,823)	(56,253)
Administrative expenses	(836)	(521)	(429)	(524)
Net change in plan fiduciary net position	78,718	101,256	(32,970)	(4,122)
Plan fiduciary net position – beginning	1,051,671	950,415	983,385	987,507
Plan fiduciary net position – ending	1,130,389	1,051,671	950,415	983,385
Plan net pension liability – ending	$ 309,275	342,464	367,425	311,522

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

See accompanying independent auditors' report.

(Continued)

CITY OF ATLANTA, GEORGIA
POLICE OFFICERS' 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	$ 1,439,664	1,394,135	1,317,840	1,294,907
Plan fiduciary net position	1,130,389	1,051,671	950,415	983,385
Net pension liability	$ 309,275	342,464	367,425	311,522
Plan fiduciary net position as a percentage of the total pension liability	78.52%	75.44%	72.12%	75.94%
Covered-employee payroll	$ 90,948	104,788	92,965	93,836
Net pension liability as a percentage of covered-employee payroll	340.06%	326.82%	395.23%	331.99%

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

See accompanying independent auditors' report.

CITY OF ATLANTA, GEORGIA
POLICE OFFICERS' 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	$ 34,176	27,493	25,441	32,693	30,197	26,525	33,748	19,568	40,422	41,213
Contributions in relation to the actuarially determined contribution	34,176	27,493	25,441	32,693	30,197	26,525	33,748	19,568	40,422	41,213
Contribution deficiency (excess)	$ —	—	—	—	—	—	—	—	—	—
Covered-employee payroll	$ 90,948	104,788	92,965	93,836	91,840	88,297	73,688	83,551	78,519	82,030
Contributions as a percentage of covered-employee payroll	37.58%	26.24%	27.37%	34.84%	32.88%	30.04%	45.80%	23.42%	51.48%	50.24%

See accompanying independent auditors' report

(Continued)

CITY OF ATLANTA, GEORGIA
POLICE OFFICERS' 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	10.00%	14.19%	(0.71)%	1.22%	21.37%	15.73%	0.99%	21.30%	12.07%	(13.15)%

See accompanying independent auditors' report

(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 $30.5 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, 2017
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	4.00%
Investment rate of return	7.41%