

CITY OF JERSEY CITY
EMPLOYEES' RETIREMENT SYSTEM
FINANCIAL STATEMENTS
DECEMBER 31, 2018 AND 2017

**CITY OF JERSEY CITY
EMPLOYEES' RETIREMENT SYSTEM**

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FINANCIAL SECTION

**CITY OF JERSEY CITY EMPLOYEES' RETIREMENT SYSTEM
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
DECEMBER 31, 2018 AND 2017**

This narrative and analysis of the City of Jersey City's Employees' Retirement System's ("The Plan") financial performance provides an overview of the Plan's financial activities for the years ended December 31, 2018 and 2017. This discussion and analysis are intended to be read in conjunction with the Plan's financial statements, which follow this discussion.

FINANCIAL HIGHLIGHTS

The Plan's net position restricted for pensions (decreased)/increased by \$(7,442,595) or (6.3%) and \$14,664,021 or 14.1% as of December 31, 2018 and 2017, respectively. The decrease was due to a lower return on the plan's investments and the increase was primarily due to a higher return on the Plan's investments.

Statement of Fiduciary Net Position

	December 31, 2018	December 31, 2017	December 31, 2016
Cash and Short-term Investments	\$ 2,233,745	\$ 7,025,195	\$ 8,209,941
Receivables	5,215	30,314	141,146
Investments	106,963,968	109,296,316	93,078,059
Participant Loans	2,445,009	2,741,826	2,954,879
Liabilities	<u>(222,784)</u>	<u>(225,903)</u>	<u>(180,298)</u>
Net position restricted for pensions	<u>\$ 111,425,153</u>	<u>\$ 118,867,748</u>	<u>\$ 104,203,727</u>

Year ended 12-31-2018 compared to year ended 12-31-2017 Net Assets held in Trust have decreased significantly, from December 31, 2017, by \$(7,442,595) or (6.3%). This was due to investment losses by the Plan's various investment managers.

Year ended 12-31-2017 compared to year ended 12-31-2016 Net Assets held in Trust have increased dramatically, from December 31, 2016, by \$14,664,021 or 14.1%. This was due to large investment gains of the Plan's various investment managers.

**CITY OF JERSEY CITY EMPLOYEES' RETIREMENT SYSTEM
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
DECEMBER 31, 2018 AND 2017**

Statement of Changes in Fiduciary Net Position

	Year Ended December 31, 2018	Year Ended December 31, 2017	Year Ended December 31, 2016
Contributions	\$ 11,868,605	\$ 11,766,150	\$ 11,318,117
Net Investment Income (Loss)	(6,302,021)	15,039,503	4,586,545
Total Additions (Reductions)	<u>5,566,584</u>	<u>26,805,653</u>	<u>15,904,662</u>
Benefit Payments	12,511,107	11,693,899	10,999,774
Other Deductions	498,072	447,733	644,950
Total Deductions	<u>13,009,179</u>	<u>12,141,632</u>	<u>11,644,724</u>
Net Increase (Decrease)	<u>\$ (7,442,595)</u>	<u>\$ 14,664,021</u>	<u>\$ 4,259,938</u>

Fiscal year 12-31-2018 compared to 12-31-2017 Total additions to net assets decreased by (\$21,239,069) from the prior year primarily from weak investment returns in contract to the past few years' strong investment returns. Benefit payments have continued to slowly grow over time as retirees have larger pensions at retirement and beneficiaries generally are living longer.

Fiscal year 12-31-2017 compared to 12-31-2016 Total additions to net assets increased by \$10,900,991 from the prior year primarily from continued strong investment returns, which accelerated during 2017, but also increased contributions from the City as well. Benefit payments have continued to slowly grow over time as retirees have larger pensions at retirement and beneficiaries generally are living longer.

**CITY OF JERSEY CITY EMPLOYEES' RETIREMENT SYSTEM
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
DECEMBER 31, 2018 AND 2017**

Investment Allocation

The table below summarizes the Plan's cash and investment allocations:

	December 31,		December 31,		December 31,	
	2018	%	2017	%	2016	%
Cash and Short-term Investments	\$ 2,233,745	2.0%	\$ 7,025,195	6.0%	\$ 8,209,941	8.1%
U.S. Government Obligations	-	0.0%	-	0.0%	1,821,220	1.8%
Corporate Obligations	14,685	0.0%	34,350	0.0%	23,200	0.0%
Fixed Income Mutual Funds	32,398,713	29.7%	32,526,906	28.0%	23,994,155	23.7%
Equities, Equity Mutual Funds and Equity ETF's	58,333,695	53.4%	63,281,705	54.4%	54,849,072	54.2%
Variable Share Price Money Market Fund	2,934,784	2.7%	-	0.0%	-	0.0%
Real Estate and Hedge Fund	13,282,091	12.2%	13,453,355	11.6%	12,390,412	12.2%
Total Cash and Investments	<u>\$ 109,197,713</u>	<u>100%</u>	<u>\$ 116,321,511</u>	<u>100%</u>	<u>\$ 101,288,000</u>	<u>100%</u>

The plan's percentage of investments held in fixed income increased from 28.0 to 29.7 percent, additionally equities decreased slightly from 54.4% to 53.4% percent. The allocation percentages reflected the Plan's investment manager recognizing that yields on fixed income are increasing, thus cash on hand gets invested. The plan had weak performance, especially from its equity managers, due to difficult market conditions.

CONTACTING RETIREMENT SYSTEM FINANCIAL MANAGEMENT

This financial report is designed to provide our members, beneficiaries, investors and other interested parties with a general overview of the Plan's finances. If you have questions about this report or need additional financial information, contact Lori Disbrow, Chief Investment Officer at the Jersey City Employees' Retirement System, One Journal Square Plaza, Jersey City, New Jersey 07306 or by phone at (201) 547-5135.

DONOHUE, GIRONDA, DORIA & TOMKINS, LLC

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INDEPENDENT AUDITOR'S REPORT

The Honorable Mayor and
Members of the Pension Commission
City of Jersey City
Jersey City, New Jersey

We have audited the accompanying financial statements of the City of Jersey City Employees' Retirement System (the "Plan"), which comprise the statements of fiduciary net position as of December 31, 2018 and 2017, and the related statements of changes in fiduciary net position for the years ended December 31, 2018 and 2017 and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; 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.

Auditor's 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. 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 auditor's 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 Plan'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 Plan'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 financial status of the Plan as of December 31, 2018 and 2017, and the changes in its financial status for the years then ended in conformity with accounting principles generally accepted in the United States of America.

Management's Discussion and Analysis is not a required part of the financial statements but supplementary information required by the Governmental Accounting Standards Board. This information is the responsibility of Plan's management. We have applied certain limited procedures, which consisted principally of inquiries of management regarding the methods of measurements and presentation of this information. However, we did not audit the information and express no opinion on it.

Our audits were conducted for the purpose of forming an opinion on the basic financial statements taken as a whole. The required supplementary schedules of changes in net pension liability and related ratios, schedule of employer contributions and schedule of investment returns as well as the supplemental schedules of investments and participants' loans receivable, have been subjected to the auditing procedures applied in the audit of the basic financial statements and, in our opinion, are fairly stated in all material respects in relation to the basic financial statements taken as a whole.

Emphasis of a Matter

The Jersey City Employees' Retirement System Governmental Accounting Standards Board No. 67 as of December 31, 2018, indicated that the assumptions used for financial accounting purposes were selected by the Pension Commission with the actuary's advice. With one exception, the actuaries believe the assumptions and methods used in the report for purposes of developing the disclosures under GASB 67 are reasonable. The Expected Return on Assets assumption of 7.95% (net of investment and administrative expenses) is specified by the Pension Commission and is considered a prescribed assumption as defined by Actuarial Standard of Practice No. 27 (ASOP 27). Based on the information provided by the Plan's investment consultant, the actuary believes consideration should be given to reducing the investment rate of return assumption as it conflicts with the actuary's professional judgement regarding what constitutes a reasonable assumption for the purpose of the measurement as discussed in ASOP 27. The actuary's opinion was modified for the above reason. The affect on the financial statements cannot be determined but can be material.



DONOHUE, GIRONDA, DORIA & TOMKINS LLC
Certified Public Accountants

Bayonne, New Jersey
June 18, 2019

**CITY OF JERSEY CITY
EMPLOYEES' RETIREMENT SYSTEM
STATEMENT OF FIDUCIARY NET POSITION
DECEMBER 31, 2018 AND 2017**

	<u>12/31/2018</u>	<u>12/31/2017</u>
Assets		
Cash and Short-term investments	\$ 2,233,745	\$ 7,025,195
Receivables		
Accrued Interest and Dividends Receivable	5,215	30,314
Total Receivables	<u>5,215</u>	<u>30,314</u>
Investments at Fair Value		
Corporate Obligations	14,685	34,350
Fixed Income Mutual Funds	32,398,713	32,526,906
Equity Mutual Funds	45,932,724	9,831,508
Equities	12,400,971	34,838,825
Equity ETF's	-	18,611,372
Real Estate Mutual Funds	3,404,053	3,523,403
Variable Share Price Money Market Fund	2,934,784	-
Hedge Fund	9,878,038	9,929,952
Total Investments	<u>106,963,968</u>	<u>109,296,316</u>
Participants' Loans	<u>2,445,009</u>	<u>2,741,826</u>
Total Assets	<u>111,647,937</u>	<u>119,093,651</u>
Liabilities		
Accounts Payable	100,233	98,235
Benefits Payable	122,551	127,668
Total Liabilities	<u>222,784</u>	<u>225,903</u>
Net Position Restricted for Pensions	<u>\$111,425,153</u>	<u>\$118,867,748</u>

See Accompanying Notes to Financial Statements.

**CITY OF JERSEY CITY
EMPLOYEES' RETIREMENT SYSTEM
STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FISCAL YEARS ENDED DECEMBER 31, 2018 AND 2017**

	Fiscal Year Ended <u>12/31/2018</u>	Fiscal Year Ended <u>12/31/2017</u>
Additions		
Contributions		
Employer	\$ 9,123,059	\$ 9,054,000
Employees	2,745,546	2,712,150
Total Contributions	<u>11,868,605</u>	<u>11,766,150</u>
Investment Income (Loss)		
Net appreciation (depreciation) in fair value of investments	(8,267,435)	13,242,770
Interest	2,506,803	2,048,956
Dividends	330,157	661,981
Insurance from employee loans	13,988	14,550
	<u>(5,416,487)</u>	<u>15,968,257</u>
Less: investment expense	885,534	928,754
Net investment Income (loss)	<u>(6,302,021)</u>	<u>15,039,503</u>
Total Additions (Reductions)	<u>5,566,584</u>	<u>26,805,653</u>
Deductions		
Benefits	12,511,107	11,693,899
Refunds of contributions	290,745	245,864
Administrative expense	207,327	201,869
	<u>13,009,179</u>	<u>12,141,632</u>
Net Increase (Decrease)	(7,442,595)	14,664,021
Net Position Restricted For Pensions		
Beginning of year	<u>118,867,748</u>	<u>104,203,727</u>
End of year	<u><u>\$ 111,425,153</u></u>	<u><u>\$ 118,867,748</u></u>

See Accompanying Notes to Financial Statements.

**CITY OF JERSEY CITY
EMPLOYEES' RETIREMENT SYSTEM
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2018 AND 2017**

NOTE 1: PLAN DESCRIPTION

The following brief description of the City of Jersey City Employees' Retirement System ("the Plan"), is provided for the purpose of general information only. Participants should refer to the Plan agreement for more complete information.

General

The City of Jersey City Employees' Retirement System became effective February 22, 1965, under N.J.S.A. 43:13-22.50, et.seq. Legislation was approved amending the Employees' Retirement System on May 9, 1990. The Plan was also amended on August 19, 1996 to increase pension benefits. Chapter 128, P.L. 2003 allowed 39 employees to retire with enhanced benefits. Chapter 167, P.L. 2003 increased retirement allowances by 100% of the calculated increase in the CPI instead of the previous 60%. Chapter 247, P.L. 2005 decreased the early retirement factor from 2/12 of 1% to 1/12 of 1% per month for retirees prior to age 60. Chapter 282, P.L. 2013 ("ch 282"), which was not approved until January 17, 2014, made numerous changes to the requirements for retirement and the benefits eligible to retiree's, and all of them were savings to the plans. See Plan Benefits section where each of these changes is discussed.

The Plan is supported by joint contributions of the members and the City of Jersey City ("the City"). The Plan's activities are administered by a Pension Commission, which consists of the Mayor, Chief Financial Officer, two elected employee representatives, and one appointed citizen member. UBS and Trust Company of the West are designated custodians of the Plan's investments. The most recent completed actuarial evaluation was as of January 1, 2018. Under Governmental Accounting Standards Board (GASB) Statement # 67, the Plan is required to have an actuarial valuation performed at least biennially.

The Plan is a single-employer defined benefit pension plan covering certain employees of the City. Employees who were members of the former pension systems prior to the effective date of the Plan automatically became members. All permanent employees (except police, fire and board of education employees) hired after February 22, 1965, and under the age of 40 at the date of employment must become members of the Plan. In addition, temporary employees hired after October 7, 1984, with one year's temporary service, under the age of 40 at the date of employment, must also become members of the Plan. Employees of the City who are not eligible to become members of the Plan are covered under the Public Employees' Retirement System which is managed by the State of NJ. Under the existing statute, the Plan is intended to comply with Internal Revenue Code Section 414 (h) and as such is exempt from both federal and state taxes. The Plan has made amendments to the Plan and has received a favorable IRS Determination Letter ruling dating April 15, 2013. The Plan is **NOT** subject to the provisions of the Employee Retirement Income Security Act of 1974.

**CITY OF JERSEY CITY
EMPLOYEES' RETIREMENT SYSTEM
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2018 AND 2017**

NOTE 1: PLAN DESCRIPTION (Continued)

Plan Membership

	1/1/2018	1/1/2016
Retired members and eligible survivors	364	349
Inactive members entitled to but not yet receiving benefits	22	19
Active members	780	745
	1,166	1,113

Pension Benefits

For the purpose of this section "final salary" for benefit purposes is to be defined as the average annual salary during the member's final 3 years of service or for any 3 fiscal years of membership providing the largest possible benefit to the member or beneficiary. Final Salary for employees hired after January 17, 2014 is changed to be the average annual compensation for any five fiscal years of membership providing the largest benefit.

On August 19, 1996, the Plan was amended. Participants are eligible to receive normal retirement benefits upon completion of 20 years (25 years for employees hired after January 17, 2014) of service and attainment of age 60 (age 65 for employees hired after January 17, 2014). Benefits under the Plan are calculated on the basis of 55% of final salary, plus 1% of the final salary for each year in excess of 20 (25 years for employees hired after January 17, 2014) years. The minimum annual pension is \$3,600.

Participants are eligible for retirement benefits upon attaining age 60 (65 for employees hired after January 17, 2014) with less than 20 (25 years for employees hired after January 17, 2014) years of service. Benefits under the Plan are calculated on the basis of 2% of the retirant's final salary for each year of creditable service. The minimum annual pension is \$3,600.

For members electing early retirement, prior to age 60 (65 for employees hired after January 17, 2014), with 25 (30 years for employees hired after January 17, 2014) years of credited service, benefits under the Plan equal 55% of final salary reduced by 1/12 of 1% for each month that the member is less than age 60 (3/12 of 1% for each month that the member is less than age 65 for employees hired after January 17, 2014). The minimum annual pension is \$3,600.

**CITY OF JERSEY CITY
EMPLOYEES' RETIREMENT SYSTEM
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2018 AND 2017**

NOTE 1: PLAN DESCRIPTION (Continued)

Pension Benefits (Continued)

Pension benefits partially vest after 10 years of credited service. If a member has completed 10 years of credited service, and is separated from service either voluntarily or involuntarily, prior to age 60 (65 for employees hired after January 17, 2014), the member may elect to receive a lump-sum distribution of their own contributions, or to receive a deferred pension commencing at age 60 (65 for employees hired after January 17, 2014). The deferred pension is equal to 50% of the member's final salary multiplied by the ratio of years of credited service to years of credited service which would have been attained had the member continued to age 60 (65 for employees hired after January 17, 2014). The minimum annual pension is \$3,600.

Disability and Death Benefits

Any member who has 5 or more years of creditable service and has become permanently disabled may retire on a disability pension computed on the basis of 50% of their final salary plus 1% for each year of creditable service in excess of 20 years. The minimum annual pension is \$3,600.

Any member who becomes permanently disabled as a result of the performance of their regular duties during employment may retire on a disability pension. The pension is equal to two-thirds of final salary. The minimum annual pension is \$3,600.

In the event of the member's death, there is a survivorship benefit to the member's surviving spouse of 50% of the member's final salary provided the member was employed by the City for a period of five years. In the case of no surviving spouse, other dependents receive a benefit to a lesser extent.

Death of a retirant will result in the surviving spouse, minor children or dependent parents, receiving a survivorship benefit equal to 50% of the retirant's pension at retirement, not less than \$3,600.

Cost of Living Adjustment

Beginning in the year 1990, the Plan instituted a cost of living adjustment on all benefits equal to 60% of the U.S. Labor Department Consumer Price Index ("CPI") beginning on the 25th month following retirement and receipt of a pension or survivorship benefit. On June 12, 2003 the New Jersey State Senate passed a bill S357 which increased the rate of pension adjustment from "3/5 of the percentum of change in the CPI for each year from the retirement year index." The bill changes the rate of the pension adjustment to equal the percent change of the CPI using 1988 as the index for all retirees prior to 1989. The cost of living adjustment effective February 1, 2004 was various amounts depending on the year of retirement. It ranged from a cumulative amount of 52.735 % for pensioners retiring in 1988 and prior to 1.592% for pensioners retiring in 2002. The effective rate as of February 1, 2018 and 2017, respectively was .9580% and .2083%. Effective January 17, 2014 the cost of living adjustment was decreased to 50% of the change in the CPI, which is assumed to increase at 3% per year.

**CITY OF JERSEY CITY
EMPLOYEES' RETIREMENT SYSTEM
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2018 AND 2017**

NOTE 2: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Accounting

The accompanying financial statements are prepared on the accrual basis of accounting. The plan has adopted Governmental Accounting Standards Board (GASB) Statement No. 34.

The preparation of financial statements, in conformity with accounting principles generally accepted in the United States of America, requires management to make estimates and assumptions that affect the reported amount of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

The Plan adopted Government Accounting Standards Board ("GASB") Statement No. 72, Fair Value Measurement and Application. GASB 72 requires the Plan to use valuation techniques which are appropriate under the circumstances and are either a market approach, a cost approach or income approach. GASB 72 establishes a hierarchy of inputs used to measure fair value consisting of three levels. Level 1 inputs are quoted prices in active markets for identical assets or liabilities. Level 2 inputs are inputs, other than quoted prices included within Level 1, which are observable for the asset or liability, either directly or indirectly. Level 3 inputs are unobservable inputs, and typically reflect management's estimates of assumptions that market participants would use in pricing the asset or liability. GASB 72 also contains note disclosure requirements regarding the hierarchy of valuation inputs and valuation techniques that was used for the fair value measurements.

NOTE 3: Fair Value Measurements

The Plan's investments are accounted for at fair market value at December 31, 2018 and 2017, in accordance with generally accepted accounting principles, and the provisions of GASB Statements No. 67 and 72. Equity securities as well as debt and equity mutual funds are classified in Level 1 of the fair value hierarchy and are valued using prices quoted in active markets for those securities. Debt securities classified in Level 2 of the fair value hierarchy are valued using a matrix pricing technique. Level 2 debt securities consist of governmental obligations. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices. Hedge funds and variable rate money market fund are measured at net asset value (NAV).

**CITY OF JERSEY CITY
EMPLOYEES' RETIREMENT SYSTEM
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2018 AND 2017**

NOTE 3: FAIR VALUE MEASUREMENTS (Continued)

The following tables illustrate the recurring fair value measurements as of December 31, 2018:

	12/31/2018	Fair Value Measurement Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments by fair value level				
Corporate Obligations	\$ 14,685	\$ -	\$ 14,685	\$ -
Fixed Income Mutual Funds	32,398,713	32,398,713		-
Equity Mutual Funds	45,932,724	45,932,724		-
Equities	12,400,971	12,400,971		-
Real Estate Mutual Funds	3,404,053	3,404,053		-
Total Investments by Fair Value Level	94,151,146	94,136,461	14,685	-
Investments measured at the net asset value (NAV)				
Variable Rate Money Market Fund ^{1,2}	2,934,784			
Equity long/short hedge fund ^{1,2}	9,878,038			
Total investments measured at Fair Value	106,963,968			

¹ The ERS of Jersey City has assets measured at NAV, an investment in Prisma Spectrum Fund Ltd. Advisory Class E which does not have any unfunded commitments and can be redeemed *on a quarterly basis* with **60 days notice**. The Schwab Variable Rate does not have any unfunded commitments and can be redeemed with 2 days notice.

² The Prisma Hedge fund implements a long/short strategy in which it holds a combination of long and short positions, primarily in publicly traded equity securities.

² The Schwab Variable Rate Money Market Fund implements a high quality short-term money market investments issued by U.S. and foreign issuers including commercial paper, promissory notes, certificate and time deposits, variable and floating rate debt securities and mortgage backed securities.

**CITY OF JERSEY CITY
EMPLOYEES' RETIREMENT SYSTEM
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2018 AND 2017**

NOTE 3: FAIR VALUE MEASUREMENTS (Continued)

The following tables illustrates the recurring fair value measurements as of December 31, 2017:

	12/31/2017	Fair Value Measurement Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments by fair value level				
Corporate Obligations	\$ 34,350	\$ -	\$ 34,350	\$ -
Fixed Income Mutual Funds	32,526,906	32,526,906	-	-
Equity Mutual Funds	9,831,508	9,831,508	-	-
Equities	34,838,825	34,838,825	-	-
Equity ETF's	18,611,372	18,611,372	-	-
Real Estate Mutual Funds	3,523,403	3,523,403	-	-
Total Investments by Fair Value Level	<u>99,366,364</u>	<u>99,332,014</u>	<u>34,350</u>	<u>-</u>
Investments measured at the net asset value (NAV)				
Equity long/short hedge fund ^{1,2}	<u>9,929,952</u>			
Total investments measured at Fair Value	<u>\$ 109,296,316</u>			

¹ The ERS of Jersey City has one asset measured at NAV, an investment in Prisma Spectrum Fund Ltd. Advisory Class E which does not have any unfunded commitments and can be redeemed *on a quarterly basis* with *60 days notice*.

² The Prisma Hedge fund implements a long/short strategy in which it holds a combination of long and short positions, primarily in publicly traded equity securities.

**CITY OF JERSEY CITY
EMPLOYEES' RETIREMENT SYSTEM
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2018 AND 2017**

NOTE 4: INVESTMENTS

The value of investments at December 31, 2018 and 2017, consist of the following:

	Year Ended December 31, 2018		Year Ended December 31, 2017	
	Market	Cost	Market	Cost
Investments determined by quoted market price:				
Corporate Obligations	\$ 14,685	\$ 14,685	\$ 34,350	\$ 34,350
Equities, Equity Mutual Funds and Equity ETF's	58,333,695	60,350,173	63,281,705	44,162,895
Fixed Income Mutual Funds	32,398,713	33,791,946	32,526,906	33,296,408
R.E. Mutual Funds and Hedge Fund	3,404,053	12,892,524	3,523,404	12,764,008
Total	94,151,146	107,049,328	99,366,365	90,257,661
Investments valued at the NAV:				
Variable Rate Money Market Fund	2,934,784	-	-	-
Equity Long/Short Hedge Fund	9,878,038	-	9,929,952	-
Total Investments	\$ 106,963,968	\$ 107,049,328	\$ 109,296,317	\$ 90,257,661

During the year ended December 31, 2018 and 2017, the Plan's investments (decreased)/increased in value by \$(8,267,435) and \$13,242,770 decreased, respectively, due to the changes in unrealized gains and (losses) and realized gains and (losses) as follows:

	December 31, 2018	December 31, 2017
Investments determined by quoted market price:		
U.S. and Corporate Obligations	\$ -	\$ 792,985
Equities, Equity Mutual Funds and Equity ETF's	(21,135,288)	8,134,464
Fixed Income Mutual Funds and ETF's	(623,731)	631,195
Commodity and R.E. Mutual Funds and Hedge Fund	(299,780)	921,328
Unrealized gains (losses) on investments	(22,058,799)	10,479,972
Realized gains (losses) on investments	13,791,364	2,762,798
Net appreciation (depreciation) on investments	\$ (8,267,435)	\$ 13,242,770

**CITY OF JERSEY CITY
EMPLOYEES' RETIREMENT SYSTEM
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2018 AND 2017**

NOTE 5. CASH AND CASH EQUIVALENTS

DEPOSITS

The Plan's deposits of cash and cash equivalents at December 31, 2018 and 2017 are summarized in the following table.

	12/31/2018	12/31/2017
Insured - FDIC	\$ 250,000	250,000
Insured - GUDPA	1,983,745	2,127,507
	\$2,233,745	\$2,377,507

All cash and cash equivalents on deposit as of the years ended December 31, 2018 and 2017 are totally insured by the FDIC up to \$250,000 for each depository. There are no deposits in excess of FDIC limits, as noted below are entirely insured or collateralized by a collateral pool maintained by public depositories as required by the GUDPA. Under GUDPA, financial institutions are not required to pledge collateral amounts covered by FDIC insurance.

Custodial Credit Risk - Custodial credit risk is the risk that, in the event of a bank failure, the Plan will not be able to recover deposits or collateral securities that are in the possession of an outside party. The Plan does not have a deposit policy for custodial credit risk. Deposits are exposed to custodial credit risk if they are not covered by depository insurance and the deposits are:

- a. Uncollateralized.
- b. Collateralized with securities held by the pledging financial institution.
- c. Collateralized with securities held by the pledging financial institution's trust department or agent but not in the Plan's name.

Concentration of Credit Risk – The Plan places no formal limit on the amount the Plan may invest in any one financial institution. All the Plan's deposits are with one financial institution.

Foreign Currency Risk - Foreign currency risk is the risk that changes in exchange rates will adversely affect deposits. None of the Plan's deposits as of December 31, 2018 and 2017 are held in foreign currency.

**CITY OF JERSEY CITY
EMPLOYEES' RETIREMENT SYSTEM
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2018 AND 2017**

NOTE 6: PENSION LOANS

Effective September 1, 1987, a pension loan program was made available to qualified participants. The loans are secured by the participants' vested contributions. On June 12, 2003 the New Jersey State Senate passed a bill S357 which amended the rate at which pension participants paid back loans taken against their pension accounts. Prior to this legislation the rate was the greater of the current U.S. Treasury Bills or 10%. The bill would require the rate "to be fixed annually, as of January 1 of each calendar year, equal to the average of the daily rates of interest based on daily trades paid on 30-year U.S. Treasury bonds for the preceding November, or 10%, whichever is less." Additionally, an insurance fee, which is charged to each member granted a loan under the program, is recognized as income when the loan originates. If the borrower dies while there is an outstanding loan balance, the loan is forgiven and is charged against current deductions. As of December 31, 2018, the Plan has collected \$328,613 of premiums on loans issued and exonerated \$338,968 of loans. The Plan increased the insurance premium rate it charges on loans from 1% of the loan to 1.1% at the June 20, 2007 meeting effective July 1, 2007. The net of premiums collected, and loans exonerated are reviewed periodically to determine if insurance premiums should be increased to absorb the deficit.

NOTE 7: PENSION BENEFITS PAYABLE

Pension benefits payable at December 31, 2018 and 2017, are due to payments which are made on the first of each month representing the benefits payment for the preceding month. Accordingly, these amounts have been accrued at December 31, 2018 and 2017.

NOTE 8: FUNDING POLICY

Each member, from the period prior to the effective date of the Plan, is required to contribute 6% to 8.5% of gross payroll. The contribution percentage varies with the member's age at the time of appointment.

Each active member, who became a member after the effective date of the Plan, is required to contribute from 6.2% to 10.15% of their salary. The contribution percentage varies with the member's age on the date of entry to the Plan.

During the years ended December 31, 2018 and 2017, the City contributed \$9,123,059 and \$9,054,000, respectively to the Plan. Although it has not expressed any intention to do so, the City has the right under the Plan to discontinue its contributions at any time and to terminate the Plan subject to legislation.

The City's funding practice is to fund current costs, annually. The service costs for the years ended December 31, 2018 and 2017, respectively, were provided by the City through budget appropriations.

**CITY OF JERSEY CITY
EMPLOYEES' RETIREMENT SYSTEM
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2018 AND 2017**

NOTE 9: NET PENSION LIABILITY AND ACTUARIAL ASSUMPTIONS

Net Pension Liability

The components of the net pension liability as of December 31, 2018 and 2017, were as follows:

	<u>December 31, 2017</u>	<u>December 31, 2016</u>
Total Pension Liability	\$ 220,191,604	\$ 212,425,996
Plan Fiduciary Net Position	(118,867,748)	(104,203,727)
City's Net Pension Liability	<u>\$ 101,323,856</u>	<u>\$ 108,222,269</u>
Plan's Fiduciary Net Position as a percentage of the Total Pension Liability	54.0%	49.1%

Actuarial Assumptions

The total pension liability as of December 31, 2018 were determined by use of update procedures to roll forward the plan's total pension liability as of December 31, 2017 to December 31, 2018 using the following actuarial assumptions, applied to all periods included in the measurement:

Actuarial cost method:	Entry Age Normal, Level Percentage of Pay
Inflation:	3.00% per annum
Salary increases:	Salaries are assumed to increase as noted in the notes to RSI at page 20
Investment rate of return:	8.10%, net of pension plan investment expenses. This is based on an average inflation rate of 3.00%, a real rate of return of 4.95% and .15% for administrative expenses. The Commission (Pension), during its December 19, 2018 meeting adopted a change in the long-term rate of investment return assumptions from 8.25% per annum to 7.95% per annum, effective with the fiscal year beginning January 1, 2019. The 7.95% rate is net of both investment and administrative expenses. The 8.10% noted above is net of investment expenses only.

**CITY OF JERSEY CITY
EMPLOYEES' RETIREMENT SYSTEM
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2018 AND 2017**

**NOTE 9: NET PENSION LIABILITY AND ACTUARIAL ASSUMPTIONS
(Continued)**

Mortality rates among healthy annuitants were based on the RP-2000 Combined Healthy Male and Female Mortality Tables (setback 1 year for males and females) with a one year static projection based on mortality improvement scale AA and further projected from the base year of 2013 using a generational approach based on the Conduent Modified 2015 projection scale. Mortality rates among disabled annuitants were based he RP- 2000 Disabled Mortality Tables (set back 3 years for males and set forward 1 year for females) and further projected from the base year of 2013 using a generational approach based on the Conduent Modified 2015 projection scale.

Deaths before retirement:

<u>Age</u>	<u>Ordinary Death*</u>		<u>Accidental Death</u>	<u>Ordinary Disability</u>	<u>Accidental Disability</u>
	<u>Male</u>	<u>Female</u>			
20	0.03%	0.02%	0.001%	0.010%	0.001%
25	0.04%	0.02%	0.001%	0.010%	0.001%
30	0.04%	0.02%	0.001%	0.020%	0.001%
35	0.06%	0.02%	0.001%	0.030%	0.002%
40	0.10%	0.04%	0.001%	0.080%	0.007%
45	0.13%	0.06%	0.001%	0.090%	0.007%
50	0.19%	0.09%	0.001%	0.150%	0.007%
55	0.26%	0.14%	0.001%	0.350%	0.007%
60	0.40%	0.21%	0.001%		0.008%
62	0.49%	0.25%	0.001%		0.009%
65	0.65%	0.33%	0.001%		0.009%
69	0.86%	0.47%	0.001%		0.010%

* Based on the RP2000 Employee Preretirement Mortality Table for male and female active participants set back 2 years for males and 7 years for females. In addition, the tables provide for future improvements in mortality from the base year of 2013 using a generational approach based on Conduent Modified MP2015. Rates shown above are unadjusted for Conduent Modified MP2015.

The above table was based on the Based on the RP2000 Employee Preretirement Mortality Table for male and female active participants set back 2 years for males and 7 years for females. In addition, the tables provide for future improvements in mortality from the base year of 2013 using a generational approach based on Conduent Modified MP2015. Rates shown above are unadjusted for Conduent Modified MP2015.

**CITY OF JERSEY CITY
EMPLOYEES' RETIREMENT SYSTEM
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2018 AND 2017**

NOTE 9: NET PENSION LIABILITY AND ACTUARIAL ASSUMPTIONS (Continued)

Deaths after retirement:

<u>Age</u>	<u>Service Retirements and Beneficiaries</u>		<u>Age</u>	<u>Disability Retirements</u>	
	<u>Male</u>	<u>Female</u>		<u>Male</u>	<u>Female</u>
55	0.31%	0.24%	35	2.26%	0.75%
60	0.59%	0.44%	40	2.26%	0.75%
65	1.11%	0.86%	45	2.26%	0.82%
70	1.95%	1.48%	50	2.51%	1.25%
75	3.34%	2.53%	55	3.16%	1.76%
80	5.73%	4.12%	60	3.80%	2.29%
85	9.91%	6.90%	65	4.50%	2.96%

The above table was prepared used the following actuarial tables and assumptions.

SERVICE: The RP-2000 Combined Healthy Male and Female Mortality Tables (setback 1 year for males and females) for service retirement and beneficiaries of former members and a one year static projection based on mortality improvement scale AA. In addition, the tables for service retirement provide for future improvements in mortality from the base year of 2013 using a generational approach based on the Conduent Modified 2015 projection scale.

BENEFICIARIES: The RP-2000 Combined Healthy Male and Female Mortality Tables (setback 1 year for males and females) for service retirement and beneficiaries of former members and a one year static projection based on mortality improvement scale AA. In addition, the tables for beneficiaries of former members provide for future improvements in mortality from the base year of 2013 using a generational approach based on the Conduent Modified 2015 projection scale.

DISABILITY: The RP-2000 Disabled Mortality Tables (set back 3 years for males and set forward 1 year for females) are used to value disabled retirees. In addition, the tables for disability retirement provide for future improvements in mortality from the base year of 2013 using a generational approach based on the Conduent Modified 2015 projection scale.

**CITY OF JERSEY CITY
EMPLOYEES' RETIREMENT SYSTEM
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2018 AND 2017**

NOTE 9: NET PENSION LIABILITY AND ACTUARIAL ASSUMPTIONS (Continued)

<u>Age</u>	<u>Service Retirements and Beneficiaries</u>		<u>Age</u>	<u>Disability Retirements</u>	
	<u>Male</u>	<u>Female</u>		<u>Male</u>	<u>Female</u>
55	0.31%	0.24%	35	2.26%	0.75%
60	0.59%	0.44%	40	2.26%	0.75%
65	1.11%	0.86%	45	2.26%	0.82%
70	1.95%	1.48%	50	2.51%	1.25%
75	3.34%	2.53%	55	3.16%	1.76%
80	5.73%	4.12%	60	3.80%	2.29%
85	9.91%	6.90%	65	4.50%	2.96%

Discount rate. The discount rate used to measure the total pension liability was 8.25% as of December 31, 2017 and 8.10% as of December 31, 2018. The projection of cash flows used to determine the discount rate assumed that Jersey City contributions will continue to follow the current funding policy. 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. In the event for benefit payments that are not covered by the pension plan's fiduciary net position, a municipal bond rate of 3.16% and 3.64% as of December 31, 2017 and 2018, respectively, are to be used to discount the benefit payments not covered by the pension plan's fiduciary net position. The rates are based on the S&P Municipal Bond 20 Year High Grade Rate Index. However, since the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members, 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. The assumed discount rates have been determined in accordance with the method prescribed by GASB Statement No. 67.

The Jersey City Employees' Retirement System Governmental Accounting Standards Board No. 67 as of December 31, 2018, indicated that the assumptions used for financial accounting purposes were selected by the Pension Commission with the actuary's advice. With one exception, the actuaries believe the assumptions and methods used in the report for purposes of developing the disclosures under GASB 67 are reasonable. The Expected Return on Assets assumption of 7.95% (net of investment and administrative expenses) is specified by the Pension Commission and is considered a prescribed assumption as defined by Actuarial Standard of Practice No. 27 (ASOP 27).

**CITY OF JERSEY CITY
EMPLOYEES' RETIREMENT SYSTEM
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2018 AND 2017**

NOTE 9: NET PENSION LIABILITY AND ACTUARIAL ASSUMPTIONS (Continued)

Based on the information provided by the Plan's investment consultant, the actuary believes consideration should be given to reducing the investment rate of return assumption as it conflicts with the actuary's professional judgement regarding what constitutes a reasonable assumption for the purpose of the measurement as discussed in ASOP 27. The actuary's opinion was modified for the above reason. The affect on the financial statements cannot be determined but can be material.

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. Best estimates of arithmetic rates of return for each major asset class included in the pension plan's target asset allocation are summarized in the following table (note that the rates shown below include the inflation component):

<u>Asset Class</u>	<u>Long-Term Expected Rate of Return</u>	
	<u>12/31/2018</u>	<u>12/31/2017</u>
Domestic Equity	7.15%	8.30%
International Equity	7.00%	8.45%
Fixed Income		3.05%
Domestic Fixed Income	3.75%	
High Yield	5.35%	
Real Estate	6.25%	6.90%
Hedge Funds	5.50%	
Cash	2.50%	2.25%

Sensitivity of the net pension liability to changes in the discount rate. The following presents the net pension liability, calculated using the discount rate of 8.10%, as well as what the City's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (7.10%) or 1- percentage-point higher (9.10%) than the current rate:

	1% Decrease to <u>7.10%</u>	Current Discount Rate <u>8.10%</u>	1% Increase to <u>9.10%</u>
Net Pension Liability	\$ 151,602,716	\$ 123,603,318	\$ 100,129,116

**CITY OF JERSEY CITY
EMPLOYEES' RETIREMENT SYSTEM
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2018 AND 2017**

NOTE 10: PLAN TERMINATION

In the event the Plan terminates, the net assets of the Plan will be allocated to provide benefits in the following order:

1. Benefits attributable to employee contributions.
2. Benefits the retirees or their beneficiaries have been receiving.
3. Benefits vested.
4. All other non-vested benefits.

NOTE 11: SUBSEQUENT EVENTS/PENDING LITIGATION

Subsequent events have been evaluated through June 18, 2019; the date of this report was available to be issued.

REQUIRED SUPPLEMENTARY INFORMATION

**CITY OF JERSEY CITY EMPLOYEES' RETIREMENT SYSTEM
REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF CHANGES IN CITY'S NET PENSION LIABILITY AND RELATED RATIOS
DECEMBER 31, 2018, 2017, 2016, 2015, 2014 AND 2013**

	December 31, 2018	December 31, 2017	December 31, 2016	December 31, 2015	December 31, 2014	December 31, 2013
Total Pension Liability						
Service cost	2,788,066	2,460,030	2,459,701	2,241,217	2,323,134	1,369,200
Interest	18,121,274	17,245,341	17,039,064	16,068,540	17,510,364	8,421,970
Changes of benefit terms ¹	-	-	-	-	(24,863,782)	-
Effect of economic/demographic (gains) or losses	2,946,218	-	(4,568,317)	-	(2,082,266)	-
Differences between expected and actual experience	-	-	-	-	-	-
Changes of assumptions ^{2,4,5,2}	3,783,161	-	(760,257) ⁴	4,391,896 ³	747,983 ²	-
Benefit payments	(12,801,852)	(11,939,763)	(11,411,089)	(10,911,238)	(11,144,477)	(5,351,277)
Net change in total pension liability	14,836,867	7,765,608	2,759,102	11,790,415	(17,509,044)	4,439,893
Total pension liability-beginning--**	220,191,604	212,425,996	209,666,894	197,876,479	215,385,523	210,945,630
Total pension liability-ending (a)	235,028,471	220,191,604	212,425,996	209,666,894	197,876,479	215,385,523
Plan fiduciary net position						
Contributions-employer	9,123,059	9,054,000	8,841,332	7,782,323	7,483,003	4,252,190
Contributions-employee	2,745,546	2,712,150	2,476,785	2,327,155	2,243,945	1,105,853
Net investment income	(6,302,021)	15,039,503	4,586,545	(1,437,878)	3,757,248	9,289,546
Benefit payments, including refunds of employee contributions	(12,801,852)	(11,939,763)	(11,411,089)	(10,911,238)	(11,144,477)	(5,351,277)
Administrative expense	(207,327)	(201,869)	(233,635)	(151,631)	(235,049)	(116,739)
Other	-	-	-	282	-	-
Net change in plan fiduciary net position	(7,442,595)	14,664,021	4,259,938	(2,390,987)	2,104,670	9,179,573
Plan fiduciary net position-beginning - **	118,867,748	104,203,727	99,943,789	102,334,776	100,230,106	91,050,533
Plan fiduciary net position-ending (b)	111,425,153	118,867,748	104,203,727	99,943,789	102,334,776	100,230,106
Plan's net pension liability-ending (a)-(b)	123,603,318	101,323,856	108,222,269	109,723,105	95,541,703	115,155,417
Plan fiduciary net position as a percentage of the total pension liability	47.41%	53.98%	49.05%	47.67%	51.72%	46.54%
Covered-employee payroll as of 1-1-2018 actuarial valuation	37,488,883	37,488,883	33,421,968	33,421,968	30,901,289	30,895,626
Net pension liability as a percentage of covered-employee payroll	329.71%	270.28%	323.81%	328.30%	309.18%	372.72%

* Additionally, in accordance with GASB 67, paragraph 50, such information was not readily available for periods prior to December 31, 2013.

** 12-31-2013 beginning balance is as of July 1, 2013, due to the Plan's change of fiscal year during the year ended June 30, 2013 to December 31st.

¹ Chapter 282 P.L. 213, which was approved January 17, 2014, decreased the percentage of adjustment in the retirement allowances, pensions and survivorship benefits to 50% of the calculated increases in the CPI instead of the previous 100%

² The mortality tables used to calculate benefit obligations where changed from the IRS 2012 Static Mortality Table to the IRS 2014 Static Mortality Table

³ The mortality tables used to calculate benefit obligations where changed from the IRS 2014 Static Mortality Table to the mortality assumptions used by the PERS of NJ-Local Employers and is outlined in Footnote 2 Notes to Required Supplementary Schedules.

⁴ The Total Pension Liability as of December 31, 2016 was prepared using demographic assumptions recommended on the basis of the January 1, 2011 - December 31, 2015 Experience Study and adopted by the Pension Commission on December 21, 2016. Please see Section III of the report for a summary of the revised demographic and economic assumptions.

⁵ The Plans total pension liability reflects the change to the discount rate from 8.25% as of December 31, 2017 to 8.10% as of December 31, 2018

**CITY OF JERSEY CITY
EMPLOYEES' RETIREMENT SYSTEM
REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF EMPLOYER CONTRIBUTIONS-10 Years
DECEMBER 31, 2018 AND 2017**

Year Ended	Actuarially Determined Contribution	Contributions in relation to the Actuarially Determined Contribution	Contribution Excess/ (Deficiency)	Covered Payroll	Contributions as a Percentage of Covered Payroll
June 30, 2010	7,838,082	5,655,937	(2,182,145)	34,444,082	16.4%
June 30, 2011	7,309,283	7,307,923	(1,360)	34,444,082	21.2%
June 30, 2012	7,280,689	7,699,153	418,464	30,895,626	24.9%
June 30, 2013	8,416,177	8,206,999	(209,178)	30,895,626	26.6%
December 31, 2013	4,043,704	4,043,704	-	30,895,626	26.2%
December 31, 2014	7,483,083	7,483,083	-	30,901,000	24.2%
December 31, 2015	7,782,323	7,782,323	-	30,901,000	25.2%
December 31, 2016	8,841,332	8,841,332	-	33,422,000	26.5%
December 31, 2017	9,054,000	9,054,000	-	33,422,000	27.1%
December 31, 2018	9,123,059	9,123,059	-	37,488,883	24.3%

**CITY OF JERSEY CITY
EMPLOYEES' RETIREMENT SYSTEM
REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF INVESTMENT RETURNS
DECEMBER 31, 2018 AND 2017**

	Annual Money-Weighted Rate of Return, Net of Investment Expense Return, Net of Investment Expense
July 1, 2012 thru June 30, 2013	10.4%
January 1, 2013 thru December 31, 2013	14.7%
January 1, 2014 thru December 31, 2014	3.7%
January 1, 2015 thru December 31, 2015	-1.4%
January 1, 2016 thru December 31, 2016	4.4%
January 1, 2017 thru December 31, 2017	14.2%
January 1, 2018 thru December 31, 2018	-5.5%

**CITY OF JERSEY CITY
EMPLOYEES' RETIREMENT SYSTEM
NOTES TO REQUIRED SUPPLEMENTARY SCHEDULES
DECEMBER 31, 2018 AND 2017**

NOTE 1: NOTES TO SCHEDULE OF CHANGES IN NET PENSION LIABILITY

Changes of assumptions	The Plans total pension liability reflects the change to the discount rate from 8.25% as of December 31, 2017 to 8.10% as of December 31, 2018.
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NOTE 2: METHODS AND ASSUMPTIONS USED IN CALCULATIONS OF ACTUARIALLY DETERMINED CONTRIBUTIONS

Actuarially determined contributions are calculated as of the most recent January 1 actuarial valuation which precedes the fiscal year in which contributions are made. Section 15 of City Ordinance G-145 governing the operation of the Employees' Retirement System of Jersey City provides that an actuarial valuation of the system be performed every two years. The contribution calculated to be payable during the fiscal years ended December 31, 2018 and December 31, 2017 were determined by the January 1, 2018 and January 1, 2016 actuarial valuation, respectively. In accordance with Chapter 282, P.L. 2013 and the Commission's administrative procedure, the contributions calculated by each valuation assume that 100% of CPI COLA provision of the Plan in effect prior to January 17, 2014 is still in effect for future valuations. The additional contributions will be used to accelerate the funding of the System's unfunded accrued liability.

Methods and assumptions used to determine contributions:

Actuarial cost method: Projected Unit Credit

Asset valuation method: The market value of assets.

Inflation: 3.00%

Interest rate for funding calculations:

7.95% and 8.25%, respectively, per annum, net of investment and administrative expenses (compounded annually) as of December 31, 2018 and 2017.

Interest rate for accounting calculations:

8.10% (7.95% plus .15% for admin. Expenses) and 8.40% (8.25% plus .15% for admin. Expenses), respectively, per annum, compounded annually as of December 31, 2018 and 2017.

**CITY OF JERSEY CITY
EMPLOYEES' RETIREMENT SYSTEM
NOTES TO REQUIRED SUPPLEMENTARY SCHEDULES
DECEMBER 31, 2017 AND 2016**

NOTE 2: METHODS AND ASSUMPTIONS USED IN CALCULATIONS OF ACTUARIALLY DETERMINED CONTRIBUTIONS (Continued)

Salary increases: Representative values of the assumed annual rates of future salary increases are as follows:

Age	Annual Rate of Salary Increase	Age	Annual Rate of Salary Increase	Age	Annual Rate of Salary Increase
20	4.91%	40	4.23	60	2.74
25	5	45	3.85	62	2.57
30	4.86	50	3.57	65	2.3
35	4.5	55	3.09	69	1.86

Investment rate of return: 8.10%, net of pension plan investment expenses. This is based on an average inflation rate of 3.00%, a real rate of return of 4.95% and .15% for administrative expenses.

The Commission (Pension), during its December 19, 2018 meeting adopted a change in the long-term rate of investment return assumptions from 8.25% per annum to 7.95% per annum, effective with the fiscal year beginning January 1, 2019. The 7.95% rate is net of both investment and administrative expenses. The 8.10% noted above is net of investment expenses only.

Service Retirement: Assumed to occur between the age first eligible and 70.

Mortality: Pre-Retirement is based on the RP2000 Employee Preretirement Mortality Table for male and female active participants set back 2 years for males and 7 years for females. In addition, the tables provide for future improvements in mortality from the base year of 2013 using a generational approach based on Conduent Modified MP2015. Post-Retirement is based on RP2000 Combined Healthy Male and Female Mortality Tables set back 1 years for males and females. In addition, the tables provide for future improvements in mortality from the base year of 2013 using a generational approach based on Conduent Modified MP2015. Mortality based on the disability retirements use the RP2000 Disabled Mortality Tables set back 3 years for males and set forward 1 year for females. In addition, the tables provide for future improvements in mortality from the base year of 2013 using a generational approach based on Conduent Modified MP2015.

SUPPLEMENTARY INFORMATION

**CITY OF JERSEY CITY
EMPLOYEES' RETIREMENT SYSTEM
SCHEDULE OF INVESTMENTS
EQUITIES**

December 31, 2018

Description	# of Shares	Investment at Cost	Market Value
Acuity Brands Inc	1,461	\$ 88,473	\$ 167,942
Affiliated Managers Group	1,161	114,327	113,128
Ansys Inc	2,130	164,509	304,462
Aptargroup Inc	3,627	203,103	341,192
Aramark Holdings Corp	13,376	475,753	387,503
Bio Rad Laboratories Inc Cl A	762	63,213	176,952
Bio Techne Corp Com	1,168	124,400	169,033
Blackbaud Inc	3,666	76,748	230,591
Broadridge Financial Solutions Inc	1,833	111,830	176,426
Carlisle Cos Inc	2,969	150,936	298,443
CDW Corp	5,359	203,772	434,347
Choice Hotels Intl	2,608	195,586	186,681
Church and Dwight Corp	4,595	123,158	302,167
Columbia Sportswear Co	3,386	139,837	284,729
Copart Inc	4,772	51,386	228,006
Dentsply Intl Inc	3,964	141,157	147,500
Donaldson Inc	3,226	119,901	139,976
Factset Research Systems Inc	840	76,540	168,109
Fair Isaac Corp	1,293	29,182	241,791
Flir Systems Inc	3,886	107,285	169,196
Frontdoor Inc.	3,569	103,213	94,971
Gartner Inc	1,641	102,078	209,785
Graco Inc	4,026	41,793	168,488
Henry Jack & Assoc Inc	1,414	33,513	178,899
IDEX Corp	1,578	47,271	199,238
JB Hunt Transport	3,639	259,300	338,573
Jones Lang Lasalle Inc	1,466	186,803	185,596
Kirby Corporation	3,827	228,746	257,787
Landstar Systems	1,934	121,155	185,026
Lennox International Inc	1,657	292,334	362,651
Manhattan Associates Inc	6,133	286,976	259,855
Markel Corp	252	88,192	261,589
Morningstar Inc	1,482	86,780	162,783
Nordson Corp	1,799	213,522	214,711
Pool Corp	787	125,305	116,988
Prosperity Bancshare	2,954	200,818	184,034
RPM International Inc	3,412	180,405	200,557
Sally Beauty Holding	11,455	210,799	195,308
Schein Henry Inc	5,880	411,709	461,698
SEI Investments Co	6,481	258,123	299,422
Sensient Technologie	2,153	143,570	120,245
Service Corp Intl	2,428	100,922	97,751

**CITY OF JERSEY CITY
EMPLOYEES' RETIREMENT SYSTEM
SCHEDULE OF INVESTMENTS
EQUITIES**

December 31, 2018

Description	# of Shares	Investment at Cost	Market Value
Servicemaster Gbl	11,859	416,566	435,700
Teleflex Inc	2,280	303,597	589,334
Transunion	9,433	373,850	535,794
Trimble Inc	4,463	127,167	146,877
Umpqua Holdings Corp Or	8,925	111,811	141,908
Varian Medical Systems Inc	1,168	66,365	132,346
WR Berkeley Corp	8,295	556,168	613,083
Westamerica Bancorp	1,889	81,717	105,180
Wex Inc	1,975	142,409	276,620
Total Equities	598,344	\$ 8,664,073	\$ 12,400,971

**CITY OF JERSEY CITY
EMPLOYEES' RETIREMENT SYSTEM
SCHEDULE OF INVESTMENTS
MUTUAL FUNDS, CORPORATE OBLIGATIONS AND ALTERNATIVE INVESTMENTS
December 31, 2018**

DESCRIPTION	MATURITY	RATE/ YIELD (%)	UNITS	INVESTMENT AT COST	INVESTMENT AT MARKET
Jhancock Disciplined			704,892	\$ 8,347,586	\$ 7,838,398
Oppenheimer Intl			507,360	9,506,177	7,945,258
Vanguard Russell 100 - Growth			58,152	16,832,857	15,013,613
Vanguard Russell 100 - Value			79,816	16,999,486	15,135,455
Total Equity Mutual Funds				<u>\$ 51,686,106</u>	<u>\$ 45,932,724</u>
Principal Global Real			384,204	\$ 3,562,524	\$ 3,404,053
Total Real Estate Mutual Funds				<u>\$ 3,562,524</u>	<u>\$ 3,404,053</u>
Dreyfus Standish Global			283,034	6,039,913	5,773,889
Janus Henderson Flexible			1,100,304	11,615,227	10,937,020
Pimco Commodity Real			1,042,479	12,560,183	12,311,677
Vanguard Inflation			137,914	3,576,623	3,376,127
Total Commodity Mutual Funds				<u>\$ 33,791,946</u>	<u>\$ 32,398,713</u>
Corporate Obligations:					
Lehman Brothers Holdings, Inc. (Defaulted)	4/22/2053	6.00	250,000	\$ 250,000	\$ 810
Lehman Brothers Holdings, Inc. (Defaulted)	2/11/2015	5.25	250,000	200,159	4,625
Lehman Brothers Holdings, Inc. (Defaulted)	2/22/2023	6.25	250,000	197,678	4,625
Lehman Brothers Holdings, Inc. (Defaulted)	2/11/2013	5.00	250,000	200,170	4,625
Total Corporate Obligations				<u>\$ 848,007</u>	<u>\$ 14,685</u>
Alternative Investments:					
Schwab Variable Share Price Money Fund	N/A	N/A	2,934,784	N/A	2,934,784
Prisma Spectrum Fund LTD Adv Class E 2010 - Hedge Fund	N/A	N/A	7,477.00	N/A	9,878,038
Total Alternative Investments (Valued at NAV)				<u>N/A</u>	<u>\$ 12,812,822</u>