CITY OF JERSEY CITY

EMPLOYEES' RETIREMENT SYSTEM

FINANCIAL STATEMENTS DECEMBER 31, 2022 AND 2021

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FINANCIAL SECTION

CITY OF JERSEY CITY EMPLOYEES' RETIREMENT SYSTEM MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) DECEMBER 31, 2022 AND 2021

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, 2022 and 2021. This discussion and analysis is 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 (\$19,805,578) or 12% and \$17,812,662 or 12.1% as of December 31, 2022, and 2021, respectively. The decrease and increase in net positions was primarily due to a lower and higher returns on the Plan's investments in 2022 and 2021 respectively.

	D	,		ecember 31, 2021	December 31, 2020		
Cash	\$	3,150,443	\$	4,123,480	\$	3,262,302	
Receivables		5,626		5,492		5,740	
Investments		140,129,812		158,784,567		141,712,528	
Participant Loans		2,299,345		2,296,460		2,420,134	
Liabilities		(388,637)		(207,832)		(211,199)	
Net position restricted for pensions	\$	145,196,589	\$	165,002,167	\$	147,189,505	

Year ended 12-31-2022 compared to year ended 12-31-2021 Net Assets held in Trust have decrease dramatically, from December 31, 2021, by \$18,654,755 or 11.7%. This was due to large increase in investments unrealized losses of the Plan's various investment managers.

Year ended 12-31-2021 compared to year ended 12-31-2020 Net Assets held in Trust have increased dramatically, from December 31, 2020, by \$17,072.039 or 12.05%. 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, 2022 AND 2021

	Year Ended ember 31, 2022	-	/ear Ended mber 31, 2021	Year Ended December 31, 202		
Contributions	\$ 15,490,809	\$	15,200,628	\$	14,840,751	
Net Investment Income (Loss)	 (19,392,630)		18,541,850		17,997,441	
Total Additions (Reductions)	 (3,901,821)		33,742,478		32,838,192	
Benefit Payments	15,276,167		15,198,013		14,947,790	
Other Deductions	 627,590		731,803		503,330	
Total Deductions	 15,903,757		15,929,816		15,451,120	
Net Increase (Decrease)	\$ (19,805,578)	\$	17,812,662	\$	17,387,072	

Fiscal year 12-31-2022 compared to 12-31-2021 Total deductions to net assets decreased dramatically by \$37,618,240 from the prior year primarily from a very poor year for investment returns, as compared to a very good one in 2021. Benefit payments have continued to grow over time as retirees have larger pensions at retirement and beneficiaries generally are living longer; however that growth has slowed significantly in the last couple of years as people are working longer.

Fiscal year 12-31-2021 compared to 12-31-2020 Total additions to net position increase by \$425,588 from the prior year primarily from continued strong investment returns, which accelerated during 2021, but also increased contributions from the city as well. Benefit payments have continued to grow over time as retirees have larger pensions at retirement and beneficiaries generally are living longer; however that growth has slowed significantly in the last year.

Investment Allocation

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

	De	ecember 31, 2022	%	De	ecember 31, 2021	º⁄0	De	cember 31, 2020	%
Cash	\$	3,150,443	2.2%	\$	4,123,480	2.5%	\$	3,262,302	2.3%
Variable Share Price Money Market Fund		627,963	0.4%		1,350,995	0.8%		601,240	0.6%
Equities, Equity Mutual Funds and Equity ETF's		65,851,111	46.0%		80,517,863	49.4%		77,817,172	53.7%
Fixed Income Mutual Funds		44,993,638	31.4%		50,470,087	31.0%		44,519,433	30.7%
Real Estate and Hedge Fund		23,594,811	16.5%		22,610,448	13.9%		17,340,019	12.0%
International Private Equity		5,060,253	3.5%		3,830,599	3.3%		1,427,539	1.4%
Corporate Obligations		2,035	0.00%		4,575	0.00%		7,125	0.00%
Total Cash and Investments	\$	143,280,255	100%	\$	162,908,047	101%	\$	144,974,830	101%

Investment Allocation

The Plans' percentage of investments held in cash and fixed income held steady, while the fund decrease its position in equities and continued its increase focus on alternative investments such as real estate, hedge and private equity funds. The plan had very strong overall performance in the last two years.

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, 280 Grove Street, Room 106, Jersey City, New Jersey 07302 or by email to ldisbrow@jcnj.org.

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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

Opinions

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, 2022 and 2021 and the related statements of changes in fiduciary net position for the years then ended, and the notes to the financial statements, which collectively comprise the City of Jersey City Employees' Retirement System financial statements as listed in the table of contents.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Plan as of December 30, 2022, and 2021, and the changes in financial position for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinions

We conducted our audit in accordance with auditing standards generally accepted in the United States of America Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section below of this report. We are required to be independent of the Plan, and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Responsibilities of Management for the Financial Statements

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

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Plan's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with generally accepted auditing standards will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with generally accepted auditing standards, we:

• Exercise professional judgment and maintain professional skepticism throughout the audit.

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit 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, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Plan's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Supplementary Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the Plan's basic financial statements. The financial statements are presented for purposes of additional analysis and are not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the financial statements are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

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DONOHUE, GIRONDA, DORIA & TOMKINS LLC Certified Public Accountants

Secaucus, New Jersey June 30, 2022

CITY OF JERSEY CITY EMPLOYEES' RETIREMENT SYSTEM STATEMENT OF FIDUCIARY NET POSITION DECEMBER 31, 2022 AND 2021

		2022		2021
Assets				
Cash	\$	3,150,443	\$	4,123,480
Receivables				
Accrued Interest and Dividends Receivable		5,626		5,492
Investments at Fair Value				
Variable Rate Money Market Fund		627,963		1,350,995
Equities		14,993,544		16,618,278
Equity Mutual Funds		50,857,568		63,899,585
Fixed Income Mutual Funds		44,993,638		50,470,087
Real Estate Investment Trust and Mutual Funds		10,468,555		10,689,746
Hedge Funds		13,126,256		11,920,702
International Private Equity Fund		5,060,253		3,830,599
Corporate Obligations		2,035		4,575
Total Investments		140,129,812		158,784,567
Participants' Loans		2,299,345		2,296,460
Total Assets		145,585,226		165,209,999
Liabilities				
Accounts Payable		240,165		56,790
Benefits Payable	_	148,472	_	151,042
Total Liabilities		388,637		207,832
Net Position Restricted for Pensions	\$	145,196,589	\$	165,002,167

See Accompanying Notes to Financial Statements.

CITY OF JERSEY CITY EMPLOYEES' RETIREMENT SYSTEM STATEMENT OF CHANGES IN FIDUCIARY NET POSITION YEARS ENDED DECEMBER 31, 2022 AND 2021

	2022	2021
Additions		
Contributions		
Employer	\$ 12,640,609	\$ 12,491,051
Employees	 2,850,200	 2,709,577
Total Contributions	 15,490,809	 15,200,628
Investment Income		
Net (depreciation) appreciation		
in fair value of investments	(22,824,067)	17,586,410
Interest	1,755,454	2,051,429
Dividends	2,864,993	118,808
Insurance from employee loans	 12,076	 10,668
	(18,191,544)	19,767,315
Less: investment expense	 1,201,086	 1,225,465
Net investment Income	 (19,392,630)	 18,541,850
Total Additions	 (3,901,821)	 33,742,478
Deductions		
Benefits	15,276,167	15,198,013
Refunds of contributions	456,998	550,744
Administrative expense	 170,592	 181,059
Total Deductions	 15,903,757	 15,929,816
Net (decrease) Increase	(19,805,578)	17,812,662
Net Position Restricted For Pensions		
Beginning of year	 165,002,167	 147,189,505
End of year	\$ 145,196,589	\$ 165,002,167

See Accompanying Notes to Financial Statements.

CITY OF JERSEY CITY EMPLOYEES' RETIREMENT SYSTEM NOTES TO FINANCIAL STATEMENTS DECEMBER 31, 2022 AND 2021

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.

<u>General</u>

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 retirees, 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. Charles Schwab and Wilmington Trust are designated custodians of the Plan's investments. The most recent completed actuarial evaluation was as of January 1, 2022. 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.

Plan Membership

	1/1/2022	1/1/2020
Retired members and eligible survivors	418	418
Inactive members entitled to but not yet receiving benefits	22	19
Former members with account balances still payable		
by the plan	228	190
Active members	722	758
	1,390	1,385

NOTE 1: PLAN DESCRIPTION (Continued)

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.

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 the 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.

NOTE 1: <u>PLAN DESCRIPTION</u> (Continued)

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 percent 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, 2022, and 2021, was 2.0% and 1.0% respectively. 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.

NOTE 2: <u>SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES</u>

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.

Reclassifications

Certain amounts have been reclassified to conform to current year presentation.

NOTE 3: <u>Fair Value Measurements</u>

The Plan's investments are accounted for at fair market value at December 31, 2022 and 2021, 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 funds are measured at net asset value (NAV).

NOTE 3: FAIR VALUE MEASUREMENTS (Continued)

The following tables illustrate the recurring fair value measurements as of December 31, 2022:

		Fair Value Measurement Using						
			Qu	oted Prices in	Sign	ificant Other	Sign	ificant
			Active Markets		0	bservable	Unob	servable
			for Id	lentical Assets		Inputs	In	puts
		12/31/2022		(Level 1)		(Level 2)	(Le	evel 3)
Investments by fair value level								
Equities	\$	14,993,543.63	\$	14,993,544	\$	-	\$	-
Equities Mutual Funds		50,857,568		50,857,568		-		-
Fixed Income Mutual Funds		44,993,638		44,993,638		-		-
Real Estate Investment Trust and Mutual Funds		10,468,555		10,468,555		-		-
International Private Equity Fund		5,060,253		-		5,060,253		-
Corporate Obligations		2,035		-		2,035		_
Total Investments by Fair Value Level	\$	126,375,593	\$	121,313,305	\$	5,062,288	\$	-
Investments measured at the net								
asset value (NAV) Variable Rate Money Market Fund ^{1,2}	\$	627,963						
Equity long/short hedge fund ^{1,2}	ۍ 	13,126,256						
Total investments measured at Fair Value	\$	140,129,812						

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.

NOTE 3: FAIR VALUE MEASUREMENTS (Continued)

The following tables illustrates the recurring fair value measurements as of December 31, 2021:

5	0		Fair Value Measurement Using					
			Qu	oted Prices in	Significant Other		Sign	ificant
			Ac	tive Markets	0	bservable	Unob	servable
			for Id	entical Assets		Inputs	In	puts
		12/31/2021		(Level 1)	((Level 2)	(Le	vel 3)
Investments by fair value level								
Equities	\$	16,618,278	\$	16,618,278	\$	-	\$	-
Equities Mutual Funds		63,899,585		63,899,585		-		-
Fixed Income Mutual Funds		50,470,087		50,470,087		-		-
Real Estate Investment Trust and Mutual Funds		10,689,746		10,689,746		-		-
Internatioanl Private Equity Fund		3,830,599		-		3,830,599		-
Corporate Obligations		4,575		-		4,575		-
Total Investments by Fair Value Level	\$	145,512,870	\$	141,677,696	\$	3,835,174	\$	-
Investments measured at the net asset value (NAV)								
Variable Rate Money Market Fund ^{1,2}	\$	1,350,995						
Equity long/short hedge fund ^{1,2}		11,920,702						
Total investments measured at Fair Value	\$	158,784,567						

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.

NOTE 4: <u>INVESTMENTS</u>

The value of investments at December 31, 2022 and 2021, consist of the following:

	Year Ended			Year Ended			
		Decembe	er 31,	2022	Decembe	r 31, 2	2021
		Market		Cost	Market		Cost
Investments determined by quoted market price:							
Equities and Equity Mutual Funds	\$	65,851,111	\$	42,914,626	\$ 80,517,863	\$	52,274,643
Fixed Income Mutual Funds		44,993,638		49,038,868	50,470,087		47,492,813
Real Estate Investment Trust and Mutual Funds		10,468,555		10,428,315	10,689,746		9,248,082
International Private Equity Fund		5,060,253		3,374,235	3,830,599		3,304,772
Corporate Obligations		2,035		8,166	4,575		8,166
Total		126,375,593		105,764,210	145,512,870		112,328,476
Investments valued at the NAV:							
Variable Rate Money Market Fund		627,963		627,963	1,350,995		1,350,995
Equity Long/Short Hedge Fund		13,126,256		4,868,801	11,920,702		4,949,767
Total Investments	\$	140,129,812	\$	111,260,974	\$ 158,784,567	\$	118,629,238

During the years ended December 31, 2022 and 2021, the Plan's investments (decrease)/increased in value by (\$22,824,067) and \$17,586,409 respectively, due to the changes in unrealized gains and (losses) and realized gains and (losses) as follows:

	2022 202		2021	
Investments determined by quoted market price:				
Equities and Equity Mutual Funds	\$	(18,914,878)	\$	5,823,948
Fixed Income Mutual Funds		(2,834,395)		(182,341)
Hedge Funds, Real Estate Investment Trust and Mutual Funds		(1,591,889)		3,001,432
Unrealized (losses) gains on investments		(23,341,162)		8,643,039
Realized (losses) gains on investments		517,095		8,943,370
Net (depreciation) appreciation on investments	\$	(22,824,067)	\$	17,586,409

The plan currently is the holder of various Lehman Brothers senior notes with a total cost basis of \$848,007 for the years ended December 31, 2022 and 2021, each year. The Plan has received a total of \$352 and \$2,121 for the years ended December 31, 2022 and 2021, respectively from the bankruptcy administrator related to the Lehman Brothers bankruptcy settlement. The Plan has received total cumulative payments in the amounts of \$304,401 and \$304,049 for the years ended December 31, 2022 and 2021, respectively. Yearly settlement distributions are classified as interest income in the statement of changes in fiduciary net position for the years ended December 31, 2022 and 2021.

NOTE 5. CASH AND CASH EQUIVALENTS

DEPOSITS

The Plan's deposits of cash and cash equivalents at December 31, 2022 and 2021 are summarized in the following table.

	 2022	 2021
Insured - FDIC	\$ 250,000	\$ 250,000
Insured - GUDPA	 2,900,443	 3,873,480
	\$ 3,150,443	\$ 4,123,480

All cash and cash equivalents on deposit as of the years ended December 31, 2022 and 2020 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, 2022 and 2021 are held in foreign currency.

NOTE 6: <u>PENSION LOANS</u>

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. 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. However, if said interest rate is less than is commercially reasonable the Pension Commission shall determine the interest rate on pension loans for 2022 in the amount of 4.75% based on the November 2021 prime rate of 3.25%, plus 1.5%, effective as of January 1, 2022. 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, 2022, the Plan has collected \$377,979 of premiums on loans issued and exonerated \$354,071 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: <u>PENSION BENEFITS PAYABLE</u>

Pension benefits payable at December 31, 2022 and 2021, 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 each year.

NOTE 8: <u>FUNDING POLICY</u>

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, 2022 and 2021, the City contributed \$12,640,609 and \$12,491,051, 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, 2022, and 2021, respectively, were provided by the City through budget appropriations.

NOTE 9: <u>NET PENSION LIABILITY AND ACTUARIAL ASSUMPTIONS</u>

Net Pension Liability

The components of the net pension liability as of December 31, 2022 and 2021, were as follows:

	Dece	ember 31, 2022	Dec	ember 31, 2021	
Total Pension Liability	\$	289,300,197	\$	278,757,343	
Plan Fiduciary Net Position		(145,196,589)		(165,002,167)	
City's Net Pension Liability	\$	144,103,608	\$	113,755,176	
Plan's Fiduciary Net Position as a percentage of the Total					
Pension Liability		50.2%	59.2%		

Actuarial Assumptions

The total pension liability as of December 31, 2022 were determined by use of update procedures to roll forward the plan's total pension liability as of January 1, 2021 to December 31, 2022 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:

7.40%, net of pension plan investment expenses. This is based on an average inflation rate of 3.00%, a real rate of return of 4.25% and .15% for administrative expenses. The Commission (Pension), during its December 18, 2019 meeting adopted a change in the long-term rate of investment return assumptions from 7.95% per annum to 7.25% per annum, effective with the fiscal year beginning January 1, 2021. The 7.25% rate is net of both investment and administrative expenses. The 7.40% noted above is net of investment expenses only.

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:

	Ordinar	y Death*	Accidental	Ordinary	Accidental
Age	Male	Female	Death	Disability	<u>Disability</u>
20	0.04%	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%	0.08%	0.001%	0.150%	0.007%
55	0.26%	0.12%	0.001%	0.350%	0.007%
60	0.40%	0.19%	0.001%		0.008%
62	0.49%	0.22%	0.001%		0.009%
65	0.65%	0.30%	0.001%		0.009%
69	0.86%	0.44%	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.

Deaths after retirement:

	Service R	etirements			
	and Ben	eficiaries		Disability Retirem	ents
Age	Male	Female	Age	Male	Female
55	0.39%	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 using 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.

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

	Annual Rate of		Annual Rate of		Annual Rate of
Age	Salary	Age	Salary	Age	Salary
	Increase		Increase		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

Discount rate. The discount rate used to measure the total pension liability was 7.40% as of December 31, 2022 and 2021 respectively. 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 the pension Plan's fiduciary net position was projected to be not sufficient to pay benefit payments a municipal bond rate as of December 31, 2022, would have been used to discount the benefit payments not covered by the Plan's fiduciary net position. The rate is 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 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 weighing 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):

Long-Term Expected Rate of Return				
12/31/2022	12/31/2021			
6.74%	5.70%			
6.90%	5.93%			
7.09%	6.17%			
7.59%	6.64%			
4.05%	2.10%			
3.68%	2.01%			
N/A	5.70%			
5.93%	5.93%			
1.75%	1.75%			
5.82%	3.51%			
6.80%	6.40%			
9.90%	9.19%			
5.62%	4.08%			
3.78%	0.00%			
	12/31/2022 6.74% 6.90% 7.09% 7.59% 4.05% 3.68% N/A 5.93% 1.75% 5.82% 6.80% 9.90% 5.62%			

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 7.40%, 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 (6.40%) or 1- percentage-point higher (8.40%) than the current rate:

		Current					
	1%	1% Decrease to		Discount Rate		6 Increase to	
		6.40%	7.40%		8.40%		
Net Pension Liability	\$	179,491,180	\$	144,103,608	\$	114,676,203	

NOTE 10: <u>PLAN TERMINATION</u>

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: <u>SUBSEQUENT EVENTS</u>

Subsequent events have been evaluated through June 30, 2022; the date 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, 2022, 2021, 2020, 2019, 2018, 2017, 2016, 2015, 2014, AND 2013

	December 31, 2022	December 31, 2021	December 31, 2020	December 31, 2019	December 31, 2018	December 31, 2017	December 31, 2016	December 31, 2015	December 31, 2014	December 31, 2013
Total Pension Liability										
Service cost	3,605,646	3,526,990	3,407,720	2,985,498	2,788,066	2,460,030	2,459,701	2,241,217	2,323,134	1,369,200
Interest	20,323,122	19,543,328	19,023,699	18,726,376	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	2,347,251	-	(1,041,633)	-	2,946,218	-	(4,568,317)	-	(2,082,266)	-
Differences between expected and actual experience	-	-	-	-	-	-	-	-	-	-
Changes of assumptions ^{7,6,5,4,3,2}	-	3,129,886	-	19,411,353	3,783,161	-	(760,257) 4	4,391,896 3	747,983 2	-
Benefit payments	(15,733,165)	(15,748,755)	(15,316,321)	(13,919,269)	(12,801,852)	(11,939,763)	(11,411,089)	(10,911,238)	(11,144,477)	(5,351,277)
Net change in total pension liability	10,542,854	10,451,449	6,073,465	27,203,958	14,836,867	7,765,608	2,759,102	11,790,415	(17,509,044)	4,439,893
Total pension liability-beginning-**	278,757,343	268,305,894	262,232,429	235,028,471	220,191,604	212,425,996	209,666,894	197,876,479	215,385,523	210,945,630
Total pension liability-ending (a)	289,300,197	278,757,343	268,305,894	262,232,429	235,028,471	220,191,604	212,425,996	209,666,894	197,876,479	215,385,523
Plan fiduciary net position										
Contributions-employer	12,640,609	12,491,051	12,127,234	10,396,753	9,123,059	9,054,000	8,841,332	7,782,323	7,483,003	4,252,190
Contributions-employee	2,850,200	2,709,577	2,713,517	2,621,485	2,745,546	2,712,150	2,476,785	2,327,155	2,243,945	1,105,853
Net investment income	(19,392,630)	18,558,878	17,980,414	19,455,098	(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	(15,733,165)	(15,748,755)	(15,316,321)	(13,919,269)	(12,801,852)	(11,939,763)	(11,411,089)	(10,911,238)	(11,144,477)	(5,351,277)
Administrative expense	(170,592)	(181,062)	(134,801)	(176,787)	(207,327)	(201,869)	(233,635)	(151,631)	(235,049)	(116,739)
Other	(10.005.570)	17.020 (00	17.070.042	10 255 200	-	-	1 250 020	282	-	
Net change in plan fiduciary net position	(19,805,578)	17,829,689	17,370,043	18,377,280	(7,442,595)	14,664,021	4,259,938	(2,390,987)	2,104,670	9,179,573
Plan fiduciary net position-beginning – **	165,002,165	147,172,476	129,802,433	111,425,153	118,867,748	104,203,727	99,943,789	102,334,776	100,230,106	91,050,533
Plan fiduciary net position-ending (b)	145,196,587	165,002,165	147,172,476	129,802,433	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)	144,103,610	113,755,178	121,133,418	132,429,996	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	50.19%	59.19%	54.85%	49.50%	47.41%	53.98%	49.05%	47.67%	51.72%	46.54%
Covered-employee payroll as of 1-1-2022 actuarial valuation	40,051,342	40,051,342	36,917,718	36,917,718	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	359.80%	284.02%	328.12%	358.72%	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

⁶ The Plans total pension liability reflects the change to the discount rate from 8.10% as of December 31,2018 to 7.4% as of December 31,2019

⁷ The Total Pension Liability as of December 31, 2021 w as prepared using demographic assumptions recommended on the basis of the January 1, 2016 – December 31, 2020 Experience Study and adopted by the Pension Commission on October 11, 2021.

CITY OF JERSEY CITY EMPLOYEES' RETIREMENT SYSTEM REQUIRED SUPPLEMENTARY INFORMATION SCHEDULE OF EMPLOYER CONTRIBUTIONS-10 Years DECEMBER 31, 2022 AND 2021

	Actuarially Determined	Contributions in relation to the Actuarially Determined	Contribution Excess/		Contributions as a Percentage of
Year Ended	Contribution	Contribution	(Deficiency)	Covered Payroll	Covered Payroll
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%
December 31, 2019	10,396,753	10,396,753	-	37,488,883	27.7%
December 31, 2020	12,127,234	12,127,234	-	36,917,718	32.8%
December 31, 2021	12,491,051	12,491,051	-	36,917,718	33.8%
December 31, 2022	12,640,609	12,640,609	-	40,051,342	31.6%

CITY OF JERSEY CITY EMPLOYEES' RETIREMENT SYSTEM REQUIRED SUPPLEMENTARY INFORMATION SCHEDULE OF INVESTMENT RETURNS DECEMBER 31, 2022 AND 2021

	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%
January 1, 2019 thru December 31, 2019	17.4%
January 1, 2020 thru December 31, 2020	13.8%
January 1, 2021 thru December 31, 2021	12.6%
January 1, 2022 thru December 31, 2022	-11.8%

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

There were no changes in benefits or in assumptions used to calculate the Net Pension Liability for the year ended December 31, 2022

NOTE 2: <u>METHODS AND ASSUMPTIONS USED IN CALCULATIONS OF ACTUARIALLY</u> <u>DETERMINED CONTRIBUTIONS</u>

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, 2021 and December 31, 2020 were determined by the January 1, 2022 actuarial valuation. 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:	Five year moving market average of value of assets.
Inflation:	3.00%

Interest rate for funding calculations:

7.25%, respectively, per annum, net of investment and administrative expenses (compounded annually) as of December 31, 2021 and 2020.

Interest rate for accounting calculations:

7.40% (7.25% plus .15% for admin. Expenses), per annum, compounded annually as of December 31, 2021 and 2020.

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

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

	Annual Rate of		Annual Rate of		Annual Rate of
Age	Salary	Age	Salary	Age	Salary
	Increase		Increase		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:

7.40%, net of pension plan investment expenses. This is based on an average inflation rate of 3.00%, a real rate of return of 4.25% and .15% for administrative expenses.

The Commission (Pension), during its December 18, 2019 meeting adopted a change in the long-term rate of investment return assumptions from 7.95% per annum to 7.25% per annum, effective with the fiscal year beginning January 1, 2020. The 7.25% rate is net of both investment and administrative expenses. The 7.40% 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 Buck 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 Buck Modified MP2015.

SUPPLEMENTARY INFORMATION

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

December 31, 2022

December 31, 2022									
Description	# of Shares	Investment at Cost	Market Value						
Acuity Brands Inc	1,121	49,898	185,649						
Advance Drainage	809	89,556	66,314						
Affiliated Managers	3,094	338,604	490,182						
Aptargroup Inc	3,057	149,211	336,209						
Aramark	14,263	273,161	589,632						
Bio-Techne Corp	2,344	62,296	194,271						
Black Night Inc	3,375	241,801	208,406						
Blackbaud Inc	3,393	96,731	199,712						
Booz Allen Hamilton	3,912	311,940	408,882						
Broadridge Finl Solu	1,235	87,683	165,651						
Brown & Brown Inc	6,848	324,029	390,131						
Burlington Stores	1,060	175,030	214,926						
CACIINC	1,315	337,198	395,276						
Carlisle Co	2,267	138,037	534,219						
Caseys Gen Stores	1,033	204,977	231,754						
Choice Hotels Intl	2,772	181,003	312,238						
Columbia Sportswear	2,789	111,982	244,260						
Deckers Outdoor Corp	467	137,529	186,408						
Dolby Laboratories	4,229	353,965	298,314						
Envista Holdings Corp	11,713	243,509	394,377						
FTI Consulting, Inc.	1,207	208,728	191,672						
Factset Research SYS	409	31,234	164,095						
Gartner Inc	462	25,735	155,297						
Graco Inc		23,735	177,096						
Go Daddy Group, Inc	2,633								
Henry Jack & Assoc	4,420 822	320,662 19,482	330,704						
-			144,310						
Hexcel Corp	4,607	214,332	271,122						
IAA Inc Iday Com	5,695	270,733	227,800						
Idex Corp	1,211	36,277	276,508						
J B Hunt Transport	1,784	100,825	311,058						
Jones Lang Lasalle	1,466	186,803	233,636						
Kirby Corp	4,239	237,455	272,780						
Landstar Sys Inc	2,312	211,650	376,625						
Lennox Interntnl	1,157	191,574	276,789						
LKQ Corp	6,942	285,143	370,772						
Manhattan Associates	1,525	55,909	185,135						
Markel Corp	405	290,421	533,583						
Morningstar Inc	1,132	83,907	245,180						
Nordson Corp	1,323	180,790	314,503						
Pool Corp	459	92,406	138,769						
Prosperity Bancshare	2,153	143,272	156,480						
RPM Interntnl	4,507	279,258	439,207						
S E I Investments	6,161	255,622	359,185						
Schein Henry Inc	1,698	92,825	135,619						
Service Corp Intl	2,248	93,205	155,427						
Teleflex Incorporate	1,297	364,448	323,770						
Trimble Inc	4,022	189,468	203,352						
Ulta Beauty Inc	408	70,998	191,381						
UMPQUA Holdings Corp	8,743	96,527	156,063						
W R Berkley Corp	15,124	452,300	1,097,549						
Wex Inc	2,620	253,557	428,764						
Woodward Inc	1,061	123,244	102,502						
Total Equities		\$ 9,391,606	\$ 14,993,544						

CITY OF JERSEY CITY EMPLOYEES' RETIREMENT SYSTEM SCHEDULE OF INVESTMENTS MUTUAL FUNDS, CORPORATE OBLIGATIONS AND ALTERNATIVE INVESTMENTS December 31, 2022

DESCRIPTION	MATURITY	RATE/ YIELD (%)	UNITS		ESTMENT		VESTMENT F MARKET
Equity Funds: Invesco Intl DVRS			1,116,920	\$	16,602,978	\$	16,005,466
Vanguard Russell 100 - Growth Vanguard Russell 100 - Value			34,572 77,734		10,077,111 16,234,537		14,655,116 20,196,986
Total Equity Mutual Funds				\$	42,914,626	\$	50,857,568
Real Estate Trust and Mutual Funds:			2.004	¢	4 7 (0 000	¢	5 956 164
Clarion Lion Properties Fund Principal Global Real Estate			2,994 536,324	\$	4,769,289 5,659,026	\$	5,856,164 4,612,391
Total Real Estate Trust and Mutual Funds				\$	10,428,315	\$	10,468,555
Fixed Income Mutual Funds:							
Pimco Income Institutional Income Fund			1,546,751	\$	18,463,348	\$	16,008,879
Pimco Internatioanl Bond Pioneer Bond Fund CIT			604,905 1,834,819		6,441,257 19,340,567		5,625,623 19,118,807
Vanguard Inflation - Prote			183,167		4,793,696		4,240,329
Total Fixed Income Mutual Funds				\$	49,038,868	\$	44,993,638
Corporate Obligations:							
Lehman Brothers Holdings, Inc. (Defaulted)	2/11/2015	5.25	250,000		200,159		675
Lehman Brothers Holdings, Inc. (Defaulted)	2/22/2023	6.25	250,000		197,678		675
Lehman Brothers Holdings, Inc. (Defaulted)	4/22/2053	6.00	10,000		250,000		10
Lehman Brothers Holdings, Inc. (Defaulted)	2/11/2013	5.00	250,000		200,170		675
Total Corporate Obligations				\$	848,007	\$	2,035
International Private Equity Fund:				<u>_</u>		ŕ	
Icapital Vintage III Icapital Vintage IV			1,970,313 3,089,929	\$	1,443,634 1,930,601	\$	1,970,324 3,089,929
icapitar v intage i v			5,089,929		1,930,001		5,089,929
Total International Private Equity				\$	3,374,235	\$	5,060,253
Alternative Investments:	3.7.1	T T 1 1 1	(0	ć		<i>•</i>	
Schwab Variable Share Price Money Fund	N/A	Variable	627,775	\$	627,963	\$	627,963
Millenium International Hedge Fund Prisma Spectrum Fund LTD Adv Class E 2010 -	N/A	N/A	11,290,869		4,868,801		13,068,222
Hedge Fund	N/A	N/A	80.00		N/A		58,034
Total Alternative Investments (Valued at NAV)				\$	5,496,764	\$	13,754,219