Certified
Public
Accountants

Board of Administration
Oakland Police and Fire Retirement System
Oakland, California

We have audited the financial statements of the Oakland Police and Fire Retirement System (System), a pension trust fund of the City of Oakland, California, as of and for the year ended June 30, 2020, and have issued our report thereon dated November 23, 2020. Professional standards require that we advise you of the following matters relating to our audit.

1. Our Responsibility in Relation to the Financial Statement Audit

As communicated in our engagement letter dated June 15, 2020, our responsibility, as described by professional standards, is to form and express an opinion about whether the financial statements that have been prepared by management with your oversight are presented fairly, in all material respects, in accordance with accounting principles generally accepted in the United States of America. Our audit of the financial statements does not relieve you or management of your respective responsibilities.

Our responsibility, as prescribed by professional standards, is to plan and perform our audit to obtain reasonable, rather than absolute, assurance about whether the financial statements are free of material misstatement. An audit of financial statements includes consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control over financial reporting. Accordingly, as part of our audit, we considered the internal control of the System solely for the purpose of determining our audit procedures and not to provide any assurance concerning such internal control.

We are also responsible for communicating significant matters related to the audit that are, in our professional judgment, relevant to your responsibilities in overseeing the financial reporting process. However, we are not required to design procedures for the purpose of identifying other matters to communicate to you.

2. Planned Scope and Timing of the Audit

We conducted our audit consistent with the planned scope and timing we previously communicated to you.

3. Compliance with All Ethics Requirements Regarding Independence

The engagement team, others in our firm, as appropriate, our firm, and our network firms have complied with all relevant ethical requirements regarding independence.

4. Qualitative Aspects of the Entity's Significant Accounting Practices

Significant Accounting Policies

Management has the responsibility to select and use appropriate accounting policies. A summary of the significant accounting policies adopted by the System is included in Note 2 to the financial statements. There have been no initial selection of accounting policies and no changes in significant accounting policies or their application during the year ended June 30, 2020. No matters have come to our attention that would require us, under professional standards, to inform you about (1) the methods used to account for significant unusual transactions and (2) the effect of significant accounting policies in controversial or emerging areas for which there is a lack of authoritative guidance or consensus.

Significant Accounting Estimates

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's current judgments. Those judgments are normally based on knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ markedly from management's current judgments.

The most sensitive estimates affecting the System's financial statements were:

- Fair value of investments, including derivative instruments, and related net appreciation in the fair value of investments; and
- Actuarial data of the pension plan.

Management's estimates were based on the following:

- The methodologies for determining the fair value of investments and derivative instruments are discussed in Notes 2.c) and 4.l) to the financial statements, respectively.
- The actuarial data for the pension plan is based on actuarial calculations performed in accordance with the parameters set forth in Governmental Accounting Standards Board (GASB) Statement No. 67, *Financial Reporting for Pension Plans – an Amendment of GASB Statement No. 25*, which incorporate actuarial methods and assumptions adopted by the System's Board of Administration.

We evaluated the key factors and assumptions used to develop these accounting estimates and determined that it is reasonable in relation to the financial statements taken as a whole.

5. Significant Difficulties Encountered during the Audit

We encountered no significant difficulties in dealing with management relating to the performance of the audit.

Oakland Police and Fire Retirement System
Report to the Board of Administration
For the Year Ended June 30, 2020

6. Uncorrected and Corrected Misstatements

For purposes of this communication, professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that we believe are trivial, and communicate them to the appropriate level of management. Further, professional standards require us to also communicate the effect of uncorrected misstatements related to prior periods on the relevant classes of transactions, account balances or disclosures, and the financial statements as a whole and each applicable opinion unit. Management has corrected all identified misstatements.

7. Disagreements with Management

For purposes of this letter, professional standards define a disagreement with management as a matter, whether or not resolved to our satisfaction, concerning a financial accounting, reporting, or auditing matter, which could be significant to the System's financial statements or the auditor's report. No such disagreements arose during the course of the audit.

8. Representations Requested from Management

We have requested certain written representations from management, that are included in the management representation letter dated November 23, 2020.

9. Management's Consultations with Other Accountants

In some cases, management may decide to consult with other accountants about auditing and accounting matters. Management informed us that, and to our knowledge, there were no consultations with other accountants regarding auditing and accounting matters.

10. Other Significant Matters, Findings, or Issues

In the normal course of our professional association with the System, we generally discuss a variety of matters, including the application of accounting principles and auditing standards, operating and regulatory conditions affecting the entity, and operational plans and strategies that may affect the risks of material misstatement. None of the matters discussed resulted in a condition to our retention as the System's auditors.

This information is intended solely for the information and use of the System Board of Administration, management of the System, and is not intended to be, and should not be, used by anyone other than these specified parties.

Macias Gini & O'Connell LLP

Walnut Creek, California
November 23, 2020

OAKLAND POLICE AND FIRE RETIREMENT SYSTEM
(A Pension Trust Fund of the City of Oakland)

Financial Statements and
Required Supplementary Information

Years Ended June 30, 2020 and 2019

MGO Certified Public Accountants

OAKLAND POLICE AND FIRE RETIREMENT SYSTEM

Table of Contents

Page

Independent Auditor's Report 1

Management's Discussion and Analysis (Unaudited) 3

Financial Statements

Statements of Fiduciary Net Position 9

Statements of Changes in Fiduciary Net Position 10

Notes to the Basic Financial Statements 11

Required Supplementary Information (Unaudited)

Schedule of Changes in the Employer's Net Pension Liability and Related Ratios 26

Schedule of Employer Contributions 28

Schedule of Investment Returns 28

Certified
Public
Accountants

Independent Auditor's Report

Board of Administration
Oakland Police and Fire Retirement System
Oakland, California

We have audited the accompanying financial statements of the Oakland Police and Fire Retirement System (System), a pension trust fund of the City of Oakland, California (City), as of and for the years ended June 30, 2020 and 2019, and the related notes to the financial statements, which collectively comprise the System's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with 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 audits 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 entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the System as of June 30, 2020 and 2019, and the changes in financial position thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, the schedule of changes in the employer's net pension liability and related ratios, the schedule of employer contributions, and the schedule of investment returns as listed in the table of contents be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our 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.

Macias Gini & O'Connell LLP

Walnut Creek, California
November 23, 2020

Oakland Police and Fire Retirement System
Management's Discussion and Analysis – Unaudited
June 30, 2020 and 2019

As management of the Oakland Police and Fire Retirement System (System), we offer readers of the System's financial statements this narrative overview and analysis of the financial activities of the System for the fiscal years ended June 30, 2020 and 2019. We encourage readers to consider the information presented here in conjunction with the System's financial statements that follow this section. These discussions and analyses are presented in the following sections:

- Organizational Overview and Highlights
- Financial Statement Overview
- Financial Analysis: 2020 vs. 2019
- Financial Analysis: 2019 vs. 2018
- Requests for Additional Information

ORGANIZATIONAL OVERVIEW AND HIGHLIGHTS

The City of Oakland City Charter established the System and provides for its funding. Accordingly, the System is an integral part of the City of Oakland (City) and its operations have been reported as a Pension Trust Fund in the City's basic financial statements. The System is a closed, single employer, defined benefit pension plan that provides retirement, disability and survivor benefits for eligible sworn safety employees of the City. The System serves the City's sworn employees hired prior to July 1, 1976 who have not transferred to the California Public Employees' Retirement System (CalPERS). The System is governed by a board of seven trustees: the Mayor or his/her designate, three Mayoral appointees approved by the City Council, an elected active or retired member of the Police Department, an elected active or retired member from the Fire Department, and an elected member position which alternates between the Police Department and Fire Department membership. Trustees receive no compensation.

The System has been funded by periodic employee and City contributions at actuarially determined amounts sufficient to accumulate the necessary assets to pay benefits when due as specified by the City Charter, unless the Board and the City have agreed to other funding options. In accordance with the City Charter, active members hired after July 1, 1951, and prior to July 1, 1976, contribute a percentage of their earned salaries based upon entry age as determined by consulting actuaries. During the years ended June 30, 2020 and 2019, the employee contribution rates was 0% for both years. There are no active participants in the Plan as of June 30, 2020 and 2019.

As of June 30, 2020, the total pension liability of $604.0 million less the fiduciary net position of $379.0 million results in a net pension liability of approximately $225.0 million. The fiduciary net position as a percentage of the total pension liability is 62.7%.

As of June 30, 2019, the total pension liability of $628.2 million less the fiduciary net position of $384.7 million results in a net pension liability of approximately $243.5 million. The fiduciary net position as a percentage of the total pension liability is 61.2%.

The System membership at June 30, 2020 is 768, which includes 519 retirees and 249 beneficiaries. The System membership at June 30, 2019 is 798, which includes 547 retirees and 251 beneficiaries. The following are the significant assumptions used to compute contribution requirements in the July 1, 2019 Actuarial Valuation Report:

- Select and ultimate rates, equal to 5.37% single equivalent investment rate of return
- 2.75% inflation rate, US

- 2.85% inflation rate, Bay Area
- 3.25% long-term post-retirement benefit increases

City contributions are based on spreading costs as a level percentage of the City's total uniform payroll to July 1, 2026. The System uses the entry age normal cost method for its disclosure and reporting. During fiscal years 2020 and 2019, the City of Oakland contributed $43.4 million and $44.82 million to the System. The next required City contribution is projected to be approximately $43.65 million in FY 2020-2021.

FINANCIAL STATEMENT OVERVIEW

This annual financial report consists of three parts – management's discussion and analysis (this section), the basic financial statements and required supplementary information. The basic financial statements include *Statements of Fiduciary Net Position; Statements of Changes in Fiduciary Net Position*; and the *Notes to the Basic Financial Statements.*

The *Statements of Fiduciary Net Position* and the *Statements of Changes in Fiduciary Net Position* report information to assist readers in determining whether the System's finances as a whole have improved or deteriorated as a result of the year's activities. These statements report the net position of the System and the activities that caused the changes in the net position during the year, respectively.

The *Statements of Fiduciary Net Position* present information on all System assets and liabilities, with the difference between the two reported as net position restricted for pensions. Over time, increases or decreases in net position restricted for pensions may serve as a useful indicator of whether the financial condition of the System is improving or deteriorating.

While the *Statements of Fiduciary Net Position* provide information about the nature and amount of resources and obligations at year-end, the *Statements of Changes in Fiduciary Net Position* present the results of the System's activities during the fiscal year and information on the change in the net position restricted for pensions during the fiscal year. The *Statements of Changes in Fiduciary Net Position* measure the results of the System's investment performance as well as its additions from contributions and investment income and deductions for payment of benefits and administrative expenses. The *Statements of Changes in Fiduciary Net Position* can be viewed as indicators of the System's progress on the set goals of fully funding all current and past service costs and possessing sufficient additional resources to pay for current refunds of contributions and administrative and investment expenses.

The *Notes to the Basic Financial Statements* and *Required Supplementary Information* provide explanations and other information that is helpful to a full understanding of the data provided in the financial statements. The *Notes to the Financial Statements* and *Required Supplementary Information* are found starting on page 11 and page 26, respectively.

FINANCIAL ANALYSIS: 2020 VS. 2019

Table 1 summarizes net position restricted for pensions as of June 30, 2020 and 2019:

Table 1
Statements of Fiduciary Net Position
As of June 30, 2020 and 2019

	June 30		Change	
	2020	**2019**	**Amount**	**Percentage**
Assets:				
Cash and deposits	$ 6,345,777	$ 6,484,343	$ (138,566)	-2.1%
Receivables	8,099,428	4,427,785	3,671,643	82.9%
Investments	404,700,887	420,244,755	(15,543,868)	-3.7%
Total Assets	419,146,092	431,156,883	(12,010,791)	-2.8%
Liabilities:				
Accounts payable	8,161	15,871	(7,710)	-48.6%
Benefits payable	4,431,728	4,596,563	(164,835)	-3.6%
Investments payable	13,548,872	7,464,071	6,084,801	81.5%
Accrued investment management fees	278,835	351,847	(73,012)	-20.8%
Securities lending liabilities	21,903,806	34,017,817	(12,114,011)	-35.6%
Total liabilities	40,171,402	46,446,169	(6,274,767)	-13.5%
Net position:				
Restricted for pensions	$ 378,974,690	$ 384,710,714	$ (5,736,024)	-1.5%

Net position restricted for pensions decreased $5,736,024 from June 30, 2019 to June 30, 2020. The main sources of this decrease was from benefit payments of $54.6 million offset by contributions of $43.4 million and net investment income of $7.0 million. The remaining fluctuations in receivables and investments payable are primarily due to investment trading at year-end, where the outstanding balances represent investments either sold or purchased, but not yet settled.

Table 2 summarizes changes in net position restricted for pensions for the years ended June 30, 2020 and 2019:

Table 2
Statements of Changes in Fiduciary Net Position
For the Years Ended June 30, 2020 and 2019

	June 30		Change	
	2020	**2019**	**Amount**	**Percentage**
Additions:				
Contributions	$ 43,409,000	$ 44,821,000	$ (1,412,000)	-3.2%
Net investment income	6,996,833	21,551,868	(14,555,035)	-67.5%
Other additions	132	19,949	(19,817)	-99.3%
Total additions	50,405,965	66,392,817	(15,986,852)	-24.1%
Deductions:				
Benefits to members and beneficiaries	54,619,079	56,212,013	(1,592,934)	-2.8%
Administrative expenses	1,522,910	1,446,361	76,549	5.3%
Total deductions	56,141,989	57,658,374	(1,516,385)	-2.6%
Changes in net position	(5,736,024)	8,734,443	(14,470,467)	-165.7%
Net position restricted for pensions:				
Beginning of year	384,710,714	375,976,271	8,734,443	2.3%
End of year	$ 378,974,690	$ 384,710,714	$ (5,736,024)	-1.5%

During fiscal year 2020, the City of Oakland contributed $43.4 million to the System. In addition, the System's net investment income for the year ended June 30, 2020 was $6,996,833, mainly due to net appreciation in fair value of the investment portfolio as a result of returns on investments. The time-weighted annual returns for the year ended June 30, 2020 was 2.3%, compared to a benchmark return of 4.6% and an actuarial expected rate of return of 5.37%.

FINANCIAL ANALYSIS: 2019 VS. 2018

Table 3 summarizes net position restricted for pensions as of June 30, 2019 and 2018:

Table 3
Statements of Fiduciary Net Position
As of June 30, 2019 and 2018

	June 30		Change	
	2019	**2018**	**Amount**	**Percentage**
Assets:				
Cash and deposits	$ 6,484,343	$ 7,821,078	$ (1,336,735)	-17.1%
Receivables	4,427,785	6,288,527	(1,860,742)	-29.6%
Investments	420,244,755	415,917,756	4,326,999	1.0%
Total Assets	431,156,883	430,027,361	1,129,522	0.3%
Liabilities:				
Accounts payable	15,871	94,654	(78,783)	-83.2%
Benefits payable	4,596,563	4,608,511	(11,948)	-0.3%
Investments payable	7,464,071	5,188,668	2,275,403	43.9%
Accrued investment management fees	351,847	343,919	7,928	2.3%
Securities lending liabilities	34,017,817	43,815,338	(9,797,521)	-22.4%
Total liabilities	46,446,169	54,051,090	(7,604,921)	-14.1%
Net position:				
Restricted for pensions	$ 384,710,714	$ 375,976,271	$ 8,734,443	2.3%

Net position restricted for pensions increased $8,734,443 from June 30, 2018 to June 30, 2019. The main sources of this increase were from pension contribution payments from the City of Oakland of $44.82 million. The remaining fluctuations in receivables and investments payable are primarily due to investment trading at year-end, where the outstanding balances represent investments either sold or purchased, but not yet settled.

Table 4 summarizes changes in net position restricted for pensions for the years ended June 30, 2019 and 2018:

Table 4
Statements of Changes in Fiduciary Net Position
For the Years Ended June 30, 2019 and 2018

	June 30		Change	
	2019	**2018**	**Amount**	**Percentage**
Additions:				
Contributions	$ 44,821,000	$ 44,860,000	$ (39,000)	-0.1%
Net investment income/(loss)	21,551,868	35,435,113	(13,883,245)	-39.2%
Other additions	19,949	20,307	(358)	-1.8%
Total additions	66,392,817	80,315,420	(13,922,603)	-17.3%
Deductions:				
Benefits to members and beneficiaries	56,212,013	55,998,595	213,418	0.4%
Administrative expenses	1,446,361	1,490,486	(44,125)	-3.0%
Other expenses	-	52,926	(52,926)	-100.0%
Total deductions	57,658,374	57,542,007	116,367	0.2%
Changes in net position	8,734,443	22,773,413	(14,038,970)	-61.6%
Net position restricted for pensions:				
Beginning of year	375,976,271	353,202,858	22,773,413	6.4%
End of year	$ 384,710,714	$ 375,976,271	$ 8,734,443	2.3%

During fiscal year 2019, the City of Oakland contributed $44.82 million to the System. In addition, the System's net investment income for the year ended June 30, 2019 was $21,551,868, mainly due to net appreciation in fair value of the investment portfolio as a result of robust returns on investments. The time-weighted annual returns for the year ended June 30, 2019 was 6.2%, compared to a benchmark return of 5.5% and an actuarial expected rate of return of 5.44%.

REQUESTS FOR ADDITIONAL INFORMATION

This financial report is designed to provide a general overview of the System's finances and to account for the money that the System receives. Questions concerning any of the information provided in this report or requests for additional information should be addressed to:

Retirement System
City of Oakland
150 Frank H Ogawa Plaza, Suite 3349
Oakland, CA 94612

Oakland Police and Fire Retirement System
Statements of Fiduciary Net Position
June 30, 2020 and 2019

	2020	2019
Assets		
Cash and Cash Equivalents	$ 6,345,777	$ 6,484,343
Receivables:		
Interest Receivable	720,730	756,150
Dividends Receivable	122,028	128,434
Investments Receivable	7,005,167	2,542,199
Retired Members and Beneficiaries	137,530	867,195
Miscellaneous	113,973	133,807
Total Receivables	8,099,428	4,427,785
Investments, at Fair Value:		
Short-Term Investments	14,097,351	12,579,526
Bonds	123,135,071	120,250,504
Domestic Equities and Mutual Funds	157,386,763	151,450,528
International Equities and Mutual Funds	44,599,350	46,731,155
Alternative Investments	43,589,826	55,212,879
Foreign Currency Contracts, Net	(20,041)	-
Securities Lending Collateral	21,912,567	34,020,163
Total Investments	404,700,887	420,244,755
Total Assets	419,146,092	431,156,883
Liabilities		
Accounts Payable	8,161	15,871
Benefits Payable	4,431,728	4,596,563
Investments Payable	13,548,872	7,464,071
Investment Management Fees Payable	278,835	351,847
Securities Lending Liabilities	21,903,806	34,017,817
Total Liabilities	40,171,402	46,446,169
Net Position Restricted for Pensions	$ 378,974,690	$ 384,710,714

See accompanying notes to the basic financial statements.

Oakland Police and Fire Retirement System
Statements of Changes in Fiduciary Net Position
Years Ended June 30, 2020 and 2019

	2020	2019
Additions		
Contributions from the City	$ 43,409,000	$ 44,821,000
Investment Income:		
Net Appreciation in Fair Value of Investments	677,414	16,624,371
Interest	4,598,569	3,736,667
Dividends	2,775,312	2,431,327
Less: Investment Expenses	(1,173,450)	(1,333,048)
Net Appreciation in Fair Value of Investments	6,877,845	21,459,317
Securities Lending Income:		
Securities Lending Earnings	521,009	937,736
Securities Lending Expenses	(402,021)	(845,185)
Net Securities Lending Income	118,988	92,551
Net Investment Income	6,996,833	21,551,868
Claims and Settlements	132	13,856
Other Income	-	6,093
Total Additions	50,405,965	66,392,817
Deductions		
Benefits to Members and Beneficiaries:		
Retirement	33,125,069	34,238,470
Disability	19,696,369	20,160,033
Death	1,797,641	1,813,510
Total Benefits to Members and Beneficiaries	54,619,079	56,212,013
Administrative Expenses	1,522,910	1,446,361
Total Deductions	56,141,989	57,658,374
Change in Net Position	(5,736,024)	8,734,443
Net Position Restricted for Pensions		
Beginning of Year	384,710,714	375,976,271
End of Year	$ 378,974,690	$ 384,710,714

See accompanying notes to the basic financial statements.

1. Description of the Oakland Police and Fire Retirement System

The Oakland Police and Fire Retirement System (System) is a closed, single-employer defined benefit pension plan (Plan) established by the City of Oakland (City) Charter. The System is governed by a board of seven trustees (Board); the City Mayor or his/her designate, three Mayoral appointees approved by the City Council, an elected active or retired member of the Police Department, an elected active or retired member from the Fire Department, and an elected member position which alternates between the Police Department and Fire Department membership. Trustees receive no compensation. As a result of a City Charter amendment, known as Measure R approved by the electorate on June 8, 1976, membership in the Plan is limited to uniformed employees hired prior to July 1, 1976.

The System is exempt from the regulations of the Employee Retirement Income Security Act of 1974. The System is also exempt from federal and California income taxes.

The System is considered to be a part of the City's financial reporting entity and is included in the City's basic financial statements as a pension trust fund. The financial statements of the System are intended to present only the plan net position and changes in plan net position of the System. They do not purport to, and do not, present fairly the financial position of the City as of June 30, 2020 and 2019, and the changes in its financial position for the years then ended in conformity with accounting principles generally accepted in the United States of America. The City's basic financial statements can be obtained from Finance Department, Controller's Bureau, City of Oakland, 150 Frank H. Ogawa Plaza, Suite 6353; Oakland, California 94612.

a) System Membership

At June 30, 2020 and 2019, the System membership consisted of only retirees and beneficiaries. The System's membership is as follows:

	2020	2019
Retirees and beneficiaries currently receiving benefits:		
Police	460	475
Fire	308	323
Total	768	798

b) Basic Benefit Provisions

The City Charter establishes plan membership, contribution, and benefit provisions. The System provides that any member who completes at least 25 years of service, regardless of age, or completes 20 years of service and attains age 55, or has attained age 65, is eligible for retirement benefits. The basic retirement allowance equals 50% of the compensation attached to the average rank held during the three years immediately preceding retirement, plus an additional allowance of 1 and 2/3% of such compensation for each year of service (up to ten) subsequent to (a) qualifying for retirement and (b) July 1, 1951. However, any member retiring at age 65 with less than 20 years of service shall receive a reduced retirement allowance based upon the number of years of service. A member is eligible for early retirement benefits after 20 to 24 years of service with a retirement allowance based upon 40% to 48% of the compensation attached to the average rank held during the three years preceding retirement. Additionally, a member with 10 to 19 years of service may retire and, on or after the 25th anniversary of his/her date of employment may receive a retirement allowance based upon 20% to 38% of the compensation attached to the average rank held during the three years preceding retirement.

The System also provides for various death, disability, and survivors' benefits. Death and disability benefits are paid to eligible members who became disabled or passed away prior to retirement. If the member's death or disability is duty related, then the surviving spouse or member is paid a pension equivalent to an immediate service retirement. The duty related death or disability pension is paid at a level no less than 50% of the pay attached to the rank. If a death occurs after retirement, then a one-time payment of $1,000 is paid to the member's designated beneficiary.

After retirement, members receive benefits based on a fixed monthly dollar amount. Pension amounts change based on changes to the compensation attached to the average rank. Upon a retiree's death, benefits are continued to an eligible surviving spouse at a two-thirds level for service and non-duty disabled retirees and at a 100% level for retirements for duty disability.

2. Summary of Significant Accounting Policies

a) Basis of Presentation

The financial statements are prepared in accordance with U.S. generally accepted accounting principles as applicable to governmental organizations. The System adheres to the reporting requirements established by the Governmental Accounting Standards Board (GASB).

b) Measurement Focus and Basis of Accounting

The financial statements are prepared on a flow of economic resources measurement focus using the accrual basis of accounting. Contributions are recognized in the period in which the contributions are due pursuant to formal commitments as well as statutory or contractual requirements, and benefits and refunds are recognized when payable under plan provisions.

c) Methods Used to Value Investments

Investments are reported at fair value. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates. Investments that do not have an established market are reported at estimated fair values based on the net asset value as determined by the fund manager based on quoted market prices of fund holdings or values provided by the custodian or the applicable money manager. Purchases and sales of investments are recorded on a trade date basis.

d) Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles in the United States of America requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates.

3. Contributions

In accordance with the City Charter, active members hired after July 1, 1951, and prior to July 1, 1976, contribute a percentage of their earned salaries based upon entry age as determined by consulting actuaries. During the years ended June 30, 2020 and 2019, there were no employee contributions as there are no active employees in the Plan.

In March 1997, the City issued pension obligation bonds and deposited $417 million into the System to pay the City's contributions through June 2011. In accordance with an agreement entered into at the time the pension obligation bonds were issued in 1997, the City was not expected to contribute until July 2011. In the year ended June 30, 2005, the City transferred excess proceeds of $17.7 million from

the Oakland Joint Powers Financing Authority Refunding Revenue 2005 Series B Bond to fund a portion of the City's future obligation to the System.

Effective July 1, 2011, the City resumed contributing to the System. The City contributed $45.5 million in the year ended June 30, 2012. Using the current actuarial cost method, these contributions are based on spreading costs as a level percentage of all uniformed employees' compensation through June 30, 2026. Budgeted administrative expenses are included in the City contribution rates. The City must contribute, at a minimum, such amounts as are necessary, on an actuarial basis, to provide assets sufficient to meet benefits to be paid to plan members.

On July 30, 2012, the City contributed $210 million to the System. As a result of a funding agreement entered into between the System's Board and the City no additional contributions were required until July 1, 2017. The City resumed contributions to the System on July 1, 2017. The City contributed $43.41 million and $44.82 million in the years ended June 30, 2020 and 2019, respectively. The next required contribution for fiscal year 2021 is $43.65 million.

4. Cash, Deposits and Investments

a) Investment Policy

The System's investment policy authorizes investment in U.S. equities, international equities, U.S. fixed income instruments including U.S. Treasury notes and bonds, government agency mortgage backed securities, U.S. corporate notes and bonds, collateralized mortgage obligations, Yankee bonds and non-U.S.-issued fixed income securities denominated in foreign currencies. The System's investment portfolio is managed by external investment managers, except for the bond iShares which are managed internally. During the years ended June 30, 2020 and 2019, the number of external investment managers was twelve and twelve, respectively.

The System investments are also restricted by the City Charter. In November 2006, City voters passed Measure M to amend the City Charter to allow the System's Board to invest in non-dividend paying stocks and to change the asset allocation structure from 50% equities and 50% fixed income to the Prudent Person Standard as defined by the California Constitution.

The System's Investment Policy limits fixed income investments to a maximum average duration of 10 years and a maximum remaining term to maturity (single issue) at purchase of 30 years, with targeted portfolio duration of between 3 to 8 years and targeted portfolio maturity of 15 years. The System's investment policy allows the fixed income managers to invest in fixed income instruments and some exposure to investments below an investment grade rating of B- or higher, as long as the portfolio maintains an average credit quality of BBB (investment grade using Standard & Poor's, Moody's or Fitch ratings).

The System's investment policy states that investments in securities known as collateralized mortgage obligations (CMOs) shall be limited to a maximum of 20% of a broker account's fair value with no more than 5% in any one issue. CMOs are mortgage-backed securities that create separate pools of pass-through rates for different classes of bondholders with varying maturities. The fair values of CMOs are considered sensitive to interest rate changes because they have embedded options.

The Investment Policy allows for each fixed income asset manager to have a maximum of 10% of any single security investment in their individual portfolios with the exception of U.S. government securities, which is allowed to have a maximum of 25% in each manager's portfolio.

The following was the Board's adopted asset allocation policy as of June 30, 2020 and 2019:

	Target Allocation	
Asset Class	**June 30, 2020**	**June 30, 2019**
Fixed Income	21%	21%
Credit	2	2
Covered Calls	5	5
Domestic Equity	40	40
International Equity	12	12
Crisis Risk Offset	20	20
Total	100%	100%

The Board's target allocation does not include cash and cash equivalents, which are designated for approved administrative budget purposes.

b) Concentrations

GASB Statement No. 67 requires the disclosure of investments in any one organization that represent 5 percent or more of the System's fiduciary net position. As of June 30, 2020, the System's investments in securities issued by the Northern Trust Russell 100 Growth Index Fund and by Vanguard represented 24.0% and 8.9% of its fiduciary net position, respectively. As of June 30, 2019, the System's investments in the Northern Trust Russell 1000 Growth Index Fund and the Parametric Research Affiliates Systematic U.S. Fund represented 22.5% and 6.3%, respectively, of its fiduciary net position.

c) Rate of Return

The money-weighted rate of return is a measure of the rate of return for an asset or portfolio of assets that incorporates the size and timing of cash flows. For the years ended June 30, 2020 and 2019, the annual money-weighted rates of return on pension plan investments, net of pension plan investment expenses, were 2.04% and 6.10%, respectively.

d) Cash and Cash Equivalents

As of June 30, 2020 and 2019, cash and cash equivalents consisted of cash in treasury held in the City's cash and investment pool as well as cash deposits held in bank and with a custodian. Funds in the City Treasury are invested according to the investment policy adopted by the City Council. Interest earned in the City Treasury is allocated monthly to all participants based on the average daily cash balance maintained by the respective funds. Information regarding the characteristics of the entire investment pool can be found in the City's June 30, 2020 and 2019 basic financial statements. As of June 30, 2020 and 2019, the System's share of the City's investment pool totaled $6,340,768 and $6,471,696, respectively. The System also had cash not included in the City's investment pool. As of June 30, 2020 and 2019, the System's cash and cash deposits not held in the City's investment pool totaled $5,009 and $12,647, respectively.

e) Hierarchy of Inputs

The System categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; and Level 3 inputs are significant unobservable inputs.

The System has the following recurring fair value measurements as of June 30, 2020:

	2020		
	Level One	Level Two	Total
Investments by fair value level:			
Short-Term Investments	$ -	$ 6,023,223	$ 6,023,223
Bonds	14,422,008	100,740,951	115,162,959
Domestic Equities and Mutual Funds	66,325,124	-	66,325,124
International Equities and Mutual Funds	44,599,350	-	44,599,350
Alternative Investments	27,764,888	-	27,764,888
Total investments by fair value level	$ 153,111,370	$ 106,764,174	259,875,544
Investments measured at net asset value (NAV):			
Short-Term Investment Funds			8,074,128
Fixed Income Funds			7,972,112
Domestic Equities and Mutual Funds			91,061,639
Hedge Fund			15,824,938
Foreign Currency Contracts, Net			(20,041)
Securities Lending Collateral - Short-Term Investment Fund			21,912,567
Total investments measured at NAV			144,825,343
Total investments measured at fair value			**$404,700,887**

The System has the following recurring fair value measurements as of June 30, 2019:

	2019			
	Level One	Level Two	Level Three	Total
Investments by fair value level:				
Short-Term Investment Funds	$ -	$ 2,485,991	$ -	$ 2,485,991
Bonds	13,419,178	98,870,991	-	112,290,169
Domestic Equities and Mutual Funds	64,821,686	-	-	64,821,686
International Equities and Mutual Funds	33,045,062	-	1,656	33,046,718
Alternative Investments	30,912,896	-	-	30,912,896
Total investments by fair value level	$ 142,198,822	$ 101,356,982	$ 1,656	243,557,460
Investments measured at net asset value (NAV):				
Short-Term Investments				10,093,535
Fixed Income Funds				7,960,335
Domestic Equities and Mutual Funds				86,628,842
International Equities and Mutual Funds				13,684,437
Hedge Fund				24,299,983
Securities Lending Collateral - Short-Term Investment Fund				34,020,163
Total investments measured at NAV				176,687,295
Total investments measured at fair value				**$420,244,755**

Investments measured at NAV represent commingled funds where fair value is measured based on the System's pro rata share of the total NAV. As of June 30, 2020, the System's hedge fund investment has monthly liquidity with a notice period of 5 days. As of June 30, 2019, the System's hedge fund investment has monthly liquidity with a notice period of 5 days.

f) Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. As described previously, the System's Investment Policy limits fixed income investments to a maximum average duration of 10 years and a maximum remaining term to maturity (single issue) at purchase of 30 years, with targeted portfolio duration of between 3 to 8 years and targeted portfolio maturity of 15 years. The weighted average duration for the System's fixed income investment portfolio excluding fixed income short-term investments, foreign currency contracts, and securities lending investments was 7.69 years as of June 30, 2020, and 6.92 years as of June 30, 2019.

The following summarizes the System's fixed income investments by category as of June 30, 2020 and 2019:

Short-Term Investment Duration

	2020		2019	
Investment Type	**Fair Value**	**Modified Duration (Years)**	**Fair Value**	**Modified Duration (Years)**
Short-Term Investment Funds	$ 8,074,128	n/a	$ 12,579,526	n/a
U.S. Treasury Bills	6,023,223	0.21	None	n/a
Foreign Currency Exchange Contracts, Net	(20,041)	n/a	None	n/a

Long-Term Investment Duration

	2020		2019	
Investment Type	**Fair Value**	**Modified Duration (Years)**	**Fair Value**	**Modified Duration (Years)**
Fixed Income Investments				
U.S. Government Bonds				
U.S. Treasuries	$ 8,153,603	8.03	$ 18,478,407	6.42
Government Agencies	39,171,830	7.23	34,766,352	7.45
Total U.S. Government Bonds	47,550,982		53,244,759	
Corporate and Other Bonds				
Corporate Bonds	75,809,638	7.89	67,005,745	6.79
Total Fixed Income Investments	$123,135,071	7.69	$ 120,250,504	6.92
Securities Lending	$ 21,912,567		$ 34,020,163	

g) Fair Value Highly Sensitive to Change in Interest Rates

The terms of a debt investment may cause its fair value to be highly sensitive to interest rate changes. The System has invested in CMOs, which are mortgage-backed bonds that pay pass-through rates with varying maturities. The fair values of CMOs are considered sensitive to interest rate changes because they have embedded options, which are triggers related to quantities of delinquencies or defaults in the loans backing the mortgage pool. If a balance of delinquent loans reaches a certain threshold, interest and principal that would be used to pay junior bondholders is instead directed to pay off the principal balance of senior bondholders, shortening the life of the senior bonds.

The following are the System's investments in CMOs at June 30, 2020:

Investment Type	Weighted Average Coupon Rate	Weighted Average Maturity (Years)	Fair Value	Percent of Total Investments Fair Value
Mortgage-backed securities	3.07%	23.76	$27,010,178	6.67%

The following are the System's investments in CMOs at June 30, 2019:

Investment Type	Weighted Average Coupon Rate	Weighted Average Maturity (Years)	Fair Value	Percent of Total Investments Fair Value
Mortgage-backed securities	3.88%	25.76	$26,460,818	6.30%

h) Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligation.

The following provides information concerning the credit risk of fixed income securities as of June 30, 2020 and 2019:

Short-Term Investment Ratings

	2020		2019	
Investment Type	**S&P Moody's/ Fitch Rating**	**Fair Value**	**S&P Moody's/ Fitch Rating**	**Fair Value**
Short-Term Investment Funds	Not Rated	$8,074,128	Not Rated	$12,579,526
U.S. Treasury Bills	AAA	6,023,223	N/A	None
Foreign Currency Exchange Contracts, Net	Not Rated	(20,041)	N/A	None

Long-Term Investment Ratings

	2020		2019	
S&P / Moody's Rating	**Fair Value**	**Percentage of Total Fair Value**	**Fair Value**	**Percentage of Total Fair Value**
AAA/Aaa	$ 48,352,450	39.3%	$ 41,409,989	34.44%
AA/Aa	26,839,048	21.8%	28,801,312	23.95%
A/A	16,270,507	13.2%	13,190,791	10.97%
BBB/Baa	22,504,035	18.3%	14,583,850	12.13%
BB/Ba	1,388,389	1.1%	885,050	0.74%
B/B	313,940	0.3%	-	0%
CCC/CCC	7,466,702	6.0%	-	0%
Unrated	-	-	21,379,513	17.77%
	$ 123,146,717	100.00%	$ 120,250,504	100.00%

Securities Lending Ratings

S&P / Moody's Rating	**2020 Fair Value**	**2019 Fair Value**
Not Rated	$ 21,912,567	$ 34,020,163

i) Custodial Credit Risk

Custodial credit risk is the risk that, in the event of a failure of a depository financial institution or counterparty to a transaction, there will be an inability to recover the value of deposits, investments, or collateral securities in the possession of an outside party.

The California Government Code requires that governmental securities or first trust deed mortgage notes be used as collateral for demand deposits and certificates of deposit at 110 percent and 150 percent, respectively, of all deposits not covered by federal deposit insurance. As the City holds cash and certificates of deposit on behalf of the System, the collateral must be held by the pledging financial institution's trust department and is considered held in the City's name. For all other System deposits, the collateral must be held by the pledging financial institution's trust department and is considered held in the System's name.

The City, on behalf of the System, does not have any funds or deposits that are not covered by depository insurance, which are either uncollateralized, collateralized with securities held by the pledging financial institution, or collateralized with securities held by the pledging financial institution's trust department or agent, but not in the City's name. The System does not have any investments that are not registered in the name of the System and are either held by the counterparty or the counterparty's trust department or agent but not in the System's name.

j) Foreign Currency Risk

Foreign currency risk is the risk that changes in foreign exchanges rates will adversely affect the fair values of an investment or deposit. Currency hedging is allowed under the System's investment policy for defensive purposes only. The investment policy limits currency hedging to a maximum of 25% of the portfolio value.

The following summarizes the System's investments denominated in foreign currencies as of June 30, 2020 and 2019:

	Fair Value	
Foreign Currency	**June 30, 2020**	**June 30, 2019**
Australian Dollar	$ 1,165,827	$ 726,669
Brazilian real	684,785	-
British Pound	2,900,002	3,881,313
Canadian Dollar	2,916,358	190,691
Danish Krone	108,321	1,046,692
Euro	5,257,480	9,930,129
Hong Kong Dollar	2,540,943	2,806,718
Indonesian Rupiah	179,056	336,856
Japanese Yen	5,606,895	4,060,244
Mexican Peso	652,060	620,720
New Israeli shekel	270,619	-
Norwegian Krone	158,176	173,665
Singapore Dollar	506,973	330,028
South African rand	254,493	-
Swedish Krona	837,087	448,360
Swiss Franc	2,093,668	1,512,860
Turkish lira	612,927	-
Total	$ 26,745,670	$ 26,064,945

k) Securities Lending Transactions

The System's investment policy authorizes participation in securities lending transactions, which are short-term collateralized loans of the System's securities to broker-dealers with a simultaneous agreement allowing the System to invest and receive earnings on the collateral received. All securities loans can be terminated on demand by either the System or the borrower, although the average term of loans is one week.

The administrator of the System's securities lending activities is responsible for maintaining an adequate level of collateral in an amount equal to at least 102% of market value of loaned U.S. government securities, common stock and other equity securities, bonds, debentures, corporate debt securities, notes, and mortgages or other obligations. Collateral received may include cash, letters of credit, or securities. The term to maturity of the loaned securities is generally not matched with the term to maturity of the investment of the said collateral. If securities collateral is received, the System cannot pledge or sell the collateral securities unless the borrower defaults.

As of June 30, 2020 and 2019, management believes the System has minimized its credit risk exposure to borrowers because the amounts held by the System as collateral exceeded the securities loaned by the System. The System's contract with the administrator requires it to indemnify the System if the borrowers fail to return the securities (and if the collateral is inadequate to replace the securities borrowed) or fails to pay the System for income distributions by the securities' issuers while the securities are on loan.

The following summarizes investments in securities lending transactions and collateral received at June 30, 2020 and 2019:

Securities Lending as of June 30, 2020

	Fair Value of Loaned Securities		
Investment Type	**For Cash Collateral**	**For Non-Cash Collateral**	**Total**
Securities on Loan for Cash Collateral			
U.S. Government and agencies	$ 4,674,146	$ 5,349,244	$ 10,023,390
U.S. Corporate bonds	7,480,228	-	7,480,228
U.S. Equities	9,388,017	470,835	9,858,852
Total investments in securities lending transactions	$ 21,542,391	$ 5,820,079	$ 27,362,470
Collateral Received	$ 21,903,806	$ 5,913,897	$ 27,817,703

Securities Lending as of June 30, 2019

	Fair Value of Loaned Securities		
Investment Type	**For Cash Collateral**	**For Non-Cash Collateral**	**Total**
Securities on Loan for Cash Collateral			
U.S. Government and agencies	$ 10,531,762	$ 4,119,916	$ 14,651,678
U.S. Corporate bonds	5,350,565	-	5,350,565
U.S. Equities	17,536,838	635,146	18,171,984
Non-U.S. equities	-	967,891	967,891
Total investments in securities lending transactions	$ 33,419,165	$ 5,722,953	$ 39,142,118
Collateral Received	$ 34,017,817	$ 5,913,897	$ 39,931,714

l) Derivative Instruments

The Retirement System reports its derivative instruments under the provisions of GASB Statement No. 53, *Accounting and Financial Reporting for Derivatives Instruments*. Pursuant to the requirements of this statement, the Retirement System has provided a summary of derivative instrument activities during the reporting periods presented and the related risks.

As of June 30, 2020 and 2019, the derivative instruments held by the Retirement System are considered investments and not hedges for accounting purposes. All investment derivatives are reported as investments at fair value in the statements of fiduciary net position. The gains and losses arising from this activity are recognized as incurred in the statement of changes in fiduciary net position. All investment derivatives discussed below are included within the investment risk schedules, which precede this subsection. Investment derivative instruments are disclosed separately to provide a comprehensive and distinct view of this activity and its impact on the overall investment portfolio.

Valuation methods used by the System are described in more detail in Note 2.c). The fair value of the exchange traded derivative instruments, such as futures, options, rights, and warrants are based on quoted market prices. The fair values of forward foreign currency contracts are determined using a pricing service, which uses published foreign exchange rates as the primary source. The fair values of swaps are determined by the System's investment managers based on quoted market prices of the underlying investment instruments.

The tables below present the notional amounts, the fair values, and the related net appreciation (depreciation) in the fair value of derivative instruments that were outstanding at June 30, 2020 and 2019:

As of and for the Year Ended June 30, 2020

Derivative Type / Contract	Notional Amount	Fair Value	Net Appreciation (Depreciation) in Fair Value
Forwards			
Foreign Currency Exchange Contracts	$ -	$ (20,041)	$ -
Options			
Equity Contracts	69	(378,167)	108,759
Rights/Warrants			
Rights/Warrants	5,630	-	-
Swaps			
Credit Contracts	1,920,000	(11,645)	32,754
Total	$ 1,925,699	$ (409,853)	$ 141,513

As of and for the Year Ended June 30, 2019

Derivative Type / Contract	Notional Amount	Fair Value	Net Appreciation (Depreciation) in Fair Value
Options			
Equity Contracts	82	(588,704)	(264,482)
Swaps			
Credit Contracts	1,660,000	74,601	9,478
Total	$ 1,660,082	$ (514,103)	$ (255,004)

Counterparty Credit Risk

The System is not exposed to credit risk on non-exchange traded derivative instruments that are in asset positions. As of June 30, 2020, the System held forward currency contracts on the amount of $20,041. The System's counterparties to these contract held credit ratings of A or better, as assigned by one or more of the major credit rating organizations (S&P, Moody's and/or Fitch). As of June 30, 2019, the System did not hold any forward currency contracts.

Custodial Credit Risk

The custodial credit risk disclosure for exchange traded derivative instruments is made in accordance with the custodial credit risk disclosure requirements of GASB Statement No. 40. At June 30, 2020 and 2019, all of the System's investments in derivative instruments are held in the System's name and are not exposed to custodial credit risk.

Interest Rate Risk

The tables below describe the maturity periods of the derivative instruments exposed to interest rate risk at June 30, 2020 and 2019.

Derivative Interest Rate Risk as of June 30, 2020

		Maturities	
Derivative Type / Contract	**Fair Value**	**Less than 1 Year**	**1-5 years**
Forwards			
Forward Foreign Currency Exchange Contracts	$ (20,041)	$ (20,041)	$ -
Options			
Equity Contracts	(378,167)	(378,167)	-
Swaps			
Credit Contracts	(11,645)	-	74,601
Total	$ (389,812)	$ (378,167)	$ 74,601

Derivative Interest Rate Risk as of June 30, 2019

		Maturities	
Derivative Type / Contract	**Fair Value**	**Less than 1 Year**	**1-5 years**
Options			
Equity Contracts	$ (588,704)	$ (588,704)	$ -
Swaps			
Credit Contracts	74,601	-	74,601
Total	$ (514,103)	$ (588,704)	$ 74,601

Foreign Currency Risk

At June 30, 2020, the System is exposed to foreign currency risk on $20,041 of its investments in forwards denominated in the Mexican peso. At June 30, 2019, the System is not exposed to foreign currency risk for its derivative instruments.

Contingent Features

At June 30, 2020 and 2019, the Retirement System held no positions in derivatives containing contingent features.

5. Net Pension Liability

The components of the net pension liability of the City at June 30, 2020 and 2019, are as follows:

	June 30, 2020	June 30, 2019
Total pension liability	$ 603,971,861	$ 628,212,362
Less: Plan fiduciary net position	(378,974,690)	(384,710,714)
City's net pension liability	$ 224,997,171	$ 243,501,648
Plan fiduciary net position as a percentage of the total pension liability	62.7%	61.2%

a) Actuarial Method and Assumptions

The total pension liability as of June 30, 2020 was determined based on an actuarial valuation as of June 30, 2019, using the entry age normal actuarial cost method and the following actuarial assumptions, applied to all periods included in the measurement.

Investment Rate of Return	5.37%
Inflation Rate, U.S.	2.75%
Inflation Rate, Bay Area	2.85%
Long-term Post-Retirement Benefit Increases	3.25%

Measurements as of the June 30, 2020 are based on the fair value of assets as of June 30, 2020 and the total pension liability as of the valuation date, June 30, 2019, updated to June 30, 2020. There were no significant events between the valuation date and the measurement date. The update only included the addition of interest cost, offset by actual benefit payments. There are no active members of the plan, and thus no service cost.

Mortality rates for healthy lives were based on the CalPERS Healthy Table from the 2012-2015 Experience Study, excluding the 15-year projection using 90% of Scale MP-2016. Mortality rates for disabled lives were based on the CalPERS Industrial Disability Mortality Table from the 2012-2015 Experience Study, excluding the 15-year projection using 90% of Scale MP-2016. The mortality tables are projected to improve with MP-2017 generational mortality improvement tables, with improvements projected from a base year of 2014 (the mid-point of the CalPERS base tables).

The total pension liability as of June 30, 2019 was determined based on an actuarial valuation as of June 30, 2018, updated to June 30, 2019, using the entry age normal actuarial cost method and the actuarial assumptions as described above for the June 30, 2019 valuation, except for the assumed investment rate of return was 5.44%. New Memorandums of Understanding (MOUs) went into effect for both Police and Fire members between the valuation date and the measurement date, changing both Police and Fire retirees' cost of living adjustments (COLAs). The update procedures included the changes in liability due to the new Police and Fire MOUs, and the addition of interest cost, offset by actual benefit payments. There are no active members of the Plan, and thus no service cost.

The actuarial assumptions used in the June 30, 2019 and 2018 valuations were based on the results of actuarial experience studies for the period July 1, 2014 through June 30, 2017, respectively.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimates 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 allocation percentage and by adding expected inflation.

Best estimates of geometric real rates of return for each major class included in the pension plan's target asset allocation as of June 30, 2020 and 2019 are summarized in the following table:

	Long-Term Expected Real Rate of Return	
Asset Class	**June 30, 2020**	**June 30, 2019**
Fixed Income	2.29%	3.10%
Domestic Equity	5.55	6.00
International Equity	7.69	6.80
Covered Calls	4.64	6.10
Crisis Risk Offset	3.78	4.80
Cash	1.92	2.50

b) Discount Rate

The discount rates used to measure the total pension liability were 5.37% and 5.44% as of June 30, 2020 and 2019, respectively. The projection of cash flows used to determine the discount rate assumed that the City would contribute to the Plan based on its July 1, 2012 funding agreement with the System. This agreement suspends City contributions until the fiscal year beginning July 1, 2017, after which they will resume, based upon the recommendation of the actuary, with a City Charter requirement that the Plan's liabilities be fully funded by July 1, 2026. A cash flow projection showed that the projected fiduciary net position would be greater than or equal to the benefit payments projected for each future period. Therefore, the long-term expected rate of return on Plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

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

The following presents the net pension liability of the City, calculated using the discount rate, as well as what the Plan's net pension liability would be if it were calculated using a discount rate of 1-percentage-point lower or 1-percentage-point higher than the discount rate.

	June 30, 2020		
	1% Decrease (4.37%)	Current Discount Rate (5.37%)	1% increase (6.37%)
City's net pension liability	$279,560,331	$224,997,171	$178,053,408

	June 30, 2019		
	1% Decrease (4.44%)	Current Discount Rate (5.44%)	1% increase (6.44%)
City's net pension liability	$301,403,454	$243,504,648	$193,837,313

6. Reserves

Retired Member Contribution Reserve represents the total accumulated transfers from active member contributions and investments, less payments to retired members and beneficiaries.

Employer Reserve represents the total accumulated employer contributions for retirement payments. Additions include contributions from the employer, investment earnings and other income; deductions include payments to retired members and beneficiaries and administrative expenses.

The aggregate total of the System's major reserves as of June 30, 2020 and 2019 equals net position restricted for pensions and comprises the following:

	2020	2019
Retired member contribution reserve	$ 29,205,764	$ 31,655,922
Employer reserve	249,768,926	353,054,722
Total	$ 378,974,690	$ 384,710,714

7. Administrative Expenses

The City provides the System with accounting and other administrative services. Staff salaries included in administrative expenses for the years ended June 30, 2020 and 2019 were $1,257,550 and $1,073,971, respectively. Other administrative expenses including accounting and audit services, legal fees, annual report and miscellaneous expense for the years ended June 30, 2020 and 2019 were $265,360 and $372,390, respectively.

8. Receivable from Retired Members and Beneficiaries

The City filed a lawsuit (City of Oakland v. Oakland Police and Fire Retirement System, et al., Alameda County Superior Court case number RG 11580626) in June 2011, and sought to stop the System from paying retirement benefits based on certain holidays and shift differential premium pay (7.25%) to many police retirees. The City also sought an order requiring the System to collect overpayments. The trial court ruled in favor of the City and the decision was partially upheld upon appeal. The Court of Appeal agrees that those elements were overpayments, but limited the extent to which shift differential overpayments could be recovered back from retirees.

The writ and judgment entered by the trial court after the appeals process directed the System's board to cease paying excessive holidays and the shift differential premium. In September and October 2014, the System's Board passed Resolutions No. 6819 and No. 6824 to seek 100% recovery of the combined overpayments, which totals approximately $3.9 million. On October 28, 2015, the System's Board approved a collection methodology to recover the overpayments from police members over a 48-month period. The System began deducting these repayments from benefit disbursement commencing in June 2016. Eleven payees were granted a delayed repayment date, which commenced on May 1, 2017. Nine payees received a discharge of their debt totaling $51,886. These actions increased fund assets by approximately $3.3 million. As of June 30, 2020 and 2019, the receivable totaled $0.1 million and $0.9 million, respectively.

Oakland Police and Fire Retirement System
Required Supplementary Information
Years Ended June 30, 2020 and 2019

Schedule of Changes in the Employer's Net Pension Liability and Related Ratios (Unaudited)

	2020	2019	2018	2017
Total Pension Liability				
Interest (includes interest on service cost)	$ 36,078,037	$ 37,621,301	$ 44,320,094	$ 44,931,829
Differences between expected and actual experience	(5,699,459)	(7,915,210)	(10,656,139)	3,027,944
Changes of assumptions	-	(1,475,030)	17,858,013	-
Benefit payments, including refunds of member contributions	(54,619,079)	(56,212,013)	(55,998,595)	(57,375,815)
Net change in total pension liability	(24,240,501)	(27,980,952)	(4,476,627)	(9,416,042)
Total pension liability – beginning	628,212,362	656,193,314	660,669,941	670,085,983
Total pension liability – ending (a)	$ 603,971,861	$ 628,212,362	$ 656,193,314	$ 660,669,941
Plan fiduciary net position				
Contributions - member	$ 43,409,000	$ 44,821,000	$ 44,860,000	$ -
Net investment income	6,996,833	21,557,961	35,446,275	50,158,795
Benefit payments, including refunds of member contributions	(54,619,079)	(56,212,013)	(55,998,595)	(57,375,815)
Administrative expense	(1,522,910)	(1,446,361)	(1,543,412)	(1,261,641)
Claims and settlements	132	13,856	9,145	70,282
Net change in plan fiduciary net position	(5,736,024)	8,734,443	22,773,413	(8,408,379)
Plan fiduciary net position – beginning	384,710,714	375,976,271	353,202,858	361,611,237
Plan fiduciary net position – ending (b)	$ 378,974,690	$ 384,710,714	$ 375,976,271	$ 353,202,858
City's net pension liability – ending (a) – (b)	$ 224,997,171	$ 243,501,648	$ 280,217,043	$ 307,467,083
Plan fiduciary net position as a percentage of the total pension liability	63%	61%	57%	53%
Covered payroll	$ -	$ -	$ -	$ -
Net pension liability as a percentage of covered payroll	N/A	N/A	N/A	N/A

Note: This is a 10-year schedule. Information for additional years will be presented when available.

Oakland Police and Fire Retirement System
Required Supplementary Information
Years Ended June 30, 2020 and 2019

Schedule of Changes in the Employer's Net Pension Liability and Related Ratios (Unaudited) (Continued)

	2016	2015	2014
Total Pension Liability			
Interest (includes interest on service cost)	$ 42,480,394	$ 41,262,826	$ 42,333,496
Differences between expected and actual experience	6,977,470	(21,208,627)	-
Changes of assumptions	43,480,232	34,219,433	-
Benefit payments, including refunds of member contributions	(58,441,353)	(59,007,536)	(57,409,113)
Net change in total pension liability	34,496,743	(4,733,904)	(15,075,617)
Total pension liability – beginning	635,589,240	640,323,144	655,398,761
Total pension liability – ending (a)	$ 670,085,983	$ 635,589,240	$ 640,323,144
Plan fiduciary net position			
Contributions - member	$ -	$ -	$ 4,441
Net investment income	(1,418,645)	15,438,586	66,392,409
Benefit payments, including refunds of member contributions	(58,441,353)	(59,007,536)	(57,409,113)
Administrative expense	(1,375,749)	(985,227)	(776,112)
Claims and settlements	3,593,096	-	-
Net change in plan fiduciary net position	(57,642,651)	(44,554,177)	8,211,625
Plan fiduciary net position – beginning	419,253,888	463,808,065	455,596,440
Plan fiduciary net position – ending (b)	$ 361,611,237	$ 419,253,888	$ 463,808,065
City's net pension liability – ending (a) – (b)	$ 308,474,746	$ 216,335,352	$ 176,515,079
Plan fiduciary net position as a percentage of the total pension liability	54%	66%	72%
Covered payroll	$ -	$ -	$ -
Net pension liability as a percentage of covered payroll	N/A	N/A	N/A

Oakland Police and Fire Retirement System
Required Supplementary Information
Years Ended June 30, 2020 and 2019

Schedule of Employer Contributions (Unaudited)
(dollars in millions)

	2020	2019	2018	2017*	2016*	2015*	2014*	2013**	2012	2011
Actuarially determined contribution	$ 43.4	$ 44.8	$ 44.9	N/A	N/A	N/A	$ 20.3	$ 34.2	$ 45.1	$ 41.4
Contributions in relation to the actuarially determined contribution	$ 43.4	$ 44.8	$ 44.9	$ -	$ -	$ -	$ -	$ 210.0	$ 45.5	$ -
Contribution deficiency/(excess)	$ -	$ -	$ -	N/A	N/A	N/A	$ 20.3	$ (175.8)	$ (0.4)	$ 41.4
Covered payroll	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 0.1	$ 0.1	$ 0.1
Contributions as a percentage of covered payroll	N/A	N/A	N/A	N/A	N/A	N/A	N/A	210000%	45500%	0%

* Actuarially determined contributions are calculated based on the actuarial valuation one year prior to the beginning of the fiscal year. Although actuarial valuations were performed as of June 30, 2014, June 30, 2015, and June 30, 2016, the System did not determine an actuarially determined contribution for FY 2015-2017, based on the City's funding policy.

** In July 2012, the City of Oakland contributed $210 million in Pension Obligation Bond (POB) proceeds to the Plan.

Schedule of Investment Returns (Unaudited)

	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Annual money-weighted rate of return net of investment	2.04%	6.10%	10.57%	15.57%	-0.75%	3.90%	16.40%	9.70%	1.40%	24.50%