ATTACHMENT F

PASADENA FIRE & POLICE RETIREMENT SYSTEM
A PENSION TRUST FUND OF THE CITY OF PASADENA, CALIFORNIA

INDEPENDENT AUDITOR'S REPORT AND BASIC FINANCIAL STATEMENTS WITH REQUIRED SUPPLEMENTARY INFORMATION AND OTHER SUPPLEMENTARY INFORMATION

FOR THE YEAR ENDED JUNE 30, 2022
(WITH COMPARATIVE TOTALS FOR THE YEAR ENDED JUNE 30, 2021)

PASADENA
FIRE &
POLICE
RETIREMENT
SYSTEM

PASADENA FIRE & POLICE RETIREMENT SYSTEM
FOR THE YEAR ENDED JUNE 30, 2022
(WITH COMPARATIVE TOTALS FOR THE YEAR ENDED JUNE 30, 2021)

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MGO Certified Public Accountants

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To the Board of Retirement
Pasadena Fire & Police Retirement System
Pasadena, California

Report on the Audit of the Financial Statements

Opinion

We have audited the financial statements of the Pasadena Fire & Police Retirement System (System), a pension trust fund of the City of Pasadena, California, as of and for the year ended June 30, 2022, and the related notes to the financial statements, which collectively comprise the System's basic financial statements as listed in the table of contents.

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the fiduciary net position of the System as of June 30, 2022, and the changes in fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the System 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 opinion.

Other Matter

Prior-Year Comparative Information

The financial statements include partial prior-year comparative information. Such information does include all of the information required to constitute a presentation in conformity with accounting principles generally accepted in the United States of America. Accordingly, such information should be read in conjunction with the System's financial statements for the year ended June 30, 2021, from which such partial information was derived.

We have previously audited the System's 2021 financial statements, and we expressed an unmodified audit opinion on the financial statements in our report dated October 28, 2021. In our opinion, the partial comparative information presented herein as of and for the year ended June 30, 2021, is consistent, in all material respects, with the audited financial statements from which it was derived.

Responsibilities of Management for the Financial Statements

The System's 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 System'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 opinion. 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 GAAS 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 GAAS and *Government 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 System'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 System'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, schedule of changes in employer's net pension liability/(asset), schedule of employer's net pension liability/(asset) and related ratios, schedule of employer contributions, schedule of investment returns, and notes to required supplementary information 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 an opinion on the financial statements that collectively comprise the System's basic financial statements. The schedule of additions by source and deductions by type is presented for purposes of additional analysis and is 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. Such 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 schedule of additions by source and deductions by type is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Other Information

Management is responsible for the other information included in the annual report. The other information comprises the comparative information from prior fiscal years: interest rate risk but does not include the basic financial statements and our auditor's report thereon. Our opinion on the basic financial statements does not cover the other information, and we do not express an opinion or any form of assurance thereon.

In connection with our audit of the basic financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the basic financial statements, or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated October 17, 2022 on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the System's internal control over financial reporting and compliance.

Macias Gini & O'Connell LLP

Los Angeles, California
October 17, 2022

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The Pasadena Fire & Police Retirement System ("System" or "Plan") is a closed, single-employer defined benefit pension plan governed by a Board of Retirement ("Board") under the provisions of the City of Pasadena ("City") Charter that provides retirement, disability, and survivor benefits for eligible sworn safety employees of the City. Its operations are reported as a Pension Trust Fund in the City's basic financial statements. The System was established on July 1, 1935 by a vote of the people to formalize retirement benefits for the City's Fire and Police members, and is governed by the authority in Article XV of the City Charter, and by Chapter 2.250 of the City's Municipal Code.

The System serves the City's sworn employees hired prior to July 1, 1977, except those who elected to transfer to the California Public Employees' Retirement System ("CalPERS") either when the System was closed to new members, or in June 2004. The System is governed by a Board of five members; one member of the City Council, two Pasadena residents appointed by the City Council, and two members of the System elected under the supervision of the System. Board members are elected to terms of four years with no restriction on reappointment. Board members receive no compensation.

The discussion and analysis of the System's financial performance provides an overview of the financial activities for the fiscal year ended June 30, 2022. This discussion and analysis should be read in conjunction with and is qualified in its entirety by the accompanying audited financial statements and notes, which begin following this Management's Discussion and Analysis. The financial statements, notes, and this discussion and analysis were prepared by management and are the responsibility of management.

Financial and Valuation Highlights

The Plan ended fiscal year 2022 with $111,661,738 in fiduciary net position compared to $134,732,586 in fiduciary net position as of June 30, 2021. The decrease in net position by $23,070,848 from the prior period was attributed to investment losses and benefits paid to participants. Earnings in the portfolio were -8.6% net of fees, calculated on a money-weighted rate of return basis, (compared to 19.0% net of fees for the prior fiscal year), and resulted in $10,655,776 in net investment losses. Investment losses were accompanied by $12,415,072 in deductions from the portfolio for benefits and administrative expenses. Investment losses of -8.6% (net of fees) were higher than overall market conditions and the portfolio's benchmark earnings rate of -8.3%.

A cash reserve within pooled cash at the City was maintained to meet the required monthly cost of benefits and administration. Rebalancing of investments serves as an ongoing process to maintain balance with the Board's asset allocation goals, and when necessary, to fund the Plan's benefit and administrative costs. During fiscal year 2022, a total of $13,525,000 was withdrawn from the portfolio with the custodian and transferred to the City's pooled cash account for payment of pension benefits and administration.

The June 30, 2022 actuarial valuation determined that the Actuarial Value of Assets ("AVA") decreased to $115 million, and the Actuarial Accrued Liability ("AAL") decreased to $131 million. Accordingly, the AVA Funded Percentage (which is the actuarially determined funding level used to calculate the City's required minimum contribution) decreased to 87.8% at June 30, 2022. The minimum required AVA Funded Percentage on June 30, 2022 is 80.0%. Thus, there is no required contribution from the City for fiscal year 2023 (due January 1, 2023) based on the June 30, 2022 actuarial valuation and Amended and Restated Contribution Agreement No. 20,823 ("Agreement No. 20,823").

The City's Net Pension Liability/(Asset) ("NPL") for the Plan increased from ($7,881,000) on June 30, 2021 to $14,629,000 on June 30, 2022 primarily due to decreases in the Plan's Fiduciary Net Position ("FNP"). The FNP decreased by more than $23 million primarily due to increased investment losses. As a result, the Plan's FNP as a percentage of the Total Pension Liability ("TPL") decreased from 106.2% at June 30, 2021 to 88.4% at June 30, 2022.

Investment Performance

The Board reviews the asset allocation in the Investment Policy Statement ("IPS") on an annual basis, including a 10-year return forecast (both geometric and arithmetic) analysis by asset class. The forecasts per asset class are discussed within the context of their individual standard deviation forecasts, the amount of risk each asset assumes for the forecasted returns, and the relationship of that asset/risk within the overall portfolio. Portfolio mix options are discussed given the expected returns in comparison to the current allocations, and the investment advisor provides recommendations to the Board regarding potential changes in the asset allocation mix and for prospective new managers. In addition, fund and asset benchmarks are added and/or changed in the IPS to more accurately evaluate the portfolio and each asset's performance or when a new asset is acquired.

The System's IPS has evolved since the hiring of investment advisor, Verus Investments, in 2011. The June 2011 policy revision adjusted the strategic allocation ranges for equities and fixed income, added allocations to Treasury Inflation Protected Securities ("TIPS") and Real Estate, and deleted the allocation to Real Estate Investment Trust ("REIT"). In June 2013, the policy was revised to add an allocation for Liquid Alternative Investments through adjusting the strategic allocation ranges in equities. The IPS was revised in May 2014 to create a new fixed income asset class for Senior Bank Loans towards the goal of reducing risk. The IPS was revised in February 2015 to eliminate the allocation to Cash, and to move the assets held in Small/Mid Cap Domestic Equities to Small Cap Domestic Equities. Following the 10-year performance assessment in March 2016, the Board reallocated 2.0% from Domestic Core Equities (decreasing the allocation from 22.0% to 20.0%) to Domestic Core Fixed Income (increasing the allocation from 33.0% to 35.0%) through adoption of the revised IPS on April 20, 2016. During the fiscal year ended June 30, 2017, the IPS was further revised to add a new asset class for Index-Linked Investment-Grade Government Bonds to further prepare for and protect the portfolio from expected inflation.

Fiduciary Net Position and Total Pension Liability

Funds are accumulated to meet future obligations in the net position restricted for members' pension benefits in the Statement of Fiduciary Net Position. TPL is not reported in the basic financial statements, but is disclosed in Note 5 to the basic financial statements and in the required supplementary information. The TPL is determined by the actuary and is a measure of the present value of actuarial accrued liabilities estimated to be payable in the future to current retirees and beneficiaries. The NPL is measured as the TPL less the amount of the pension plan's FNP. The System has engaged Bartel Associates, LLC since July 2010 to serve as its independent actuary and to prepare the annual actuarial valuation. On July 1, 2022, Bartel Associates, LLC was acquired by Foster & Foster Consulting Actuaries, Inc. The most recent actuarial valuation was prepared as of June 30, 2022, and incorporated the requirements to comply with Governmental Accounting Standards Board ("GASB") Statement No. 67.

Actuarial Valuation and City Contributions

The System's funding objective is to meet long-term benefit promises by maintaining a well-funded plan and obtaining optimum returns consistent with the assumptions of prudent risk.

Funding Valuation Summary
(In Thousands)

	Fiscal Year Ended 6/30/2022	Fiscal Year Ended 6/30/2021
Funding Discount Rate	4.75%	5.25%
Actuarial Accrued Liability (AAL)	$ 131,139	$ 131,926
Actuarial Value of Assets (AVA)	115,181	121,488
AVA Unfunded Actuarial Accrued Liability	15,958	10,438
AVA Funded Percentage	87.8%	92.1%
Minimum Funding Percentage*	80.0%	80.0%
Contribution Due from the City at 1/1	$ -	$ -

Source is the June 30, 2022 actuarial valuation prepared by System Actuary, Foster & Foster and June 30, 2021 actuarial valuation prepared by System Actuary, Bartel Associates.

** Minimum Funding Percentage is calculated in accordance with Agreements No. 20,823 and No. 16,900 between the City and System.*

The June 30, 2022 funding actuarial valuation determined the AVA Funded Percentage, calculated in accordance with Agreement No. 20,823 and Contribution Agreement No. 16,900, to be 87.8% as compared to 92.1% in the prior year. The AVA Funded Percentage decreased by 6.02% under what was originally projected for 2022 in the June 30, 2021 valuation (93.85%), and was primarily attributed to the following actuarial changes: 2.3% investment loss of $3,472,000 (investment return was lower than expected), COLA loss of $1,579,000 (COLA was higher than anticipated), demographic gains of $1,283,000 (more deaths than actuarially estimated), and benefit payments gain of $86,000 (higher than anticipated). As required by Contribution Agreement No. 16,900, if the AVA Funded Percentage was below the minimum funding percentage of 80% for fiscal year 2022, the City would have been required to reimburse the System in the following fiscal year subject to certain reimbursement limits. Based on the June 30, 2022 funding actuarial valuation, the funding deficiency was $0, or 0.0%, below the funding requirement of 80%. A required supplemental contribution is not owed to the System for the fiscal year ending June 30, 2023.

For funding purposes, the Plan had an approximate market value asset rate of return of -8.5% net of investment and administrative expenses for the year ended June 30, 2022, compared to 18.5% in the previous year. The assumed rate of return for actuarial purposes is 4.75%. The rate of return as estimated by the actuary is net of investment and administrative expenses, and is different than the long-term expected rate of return used to determine the discount rate in accordance with GASB Statement No. 67.

Financial Statement Overview

This discussion and analysis serves as an introduction to the System's basic financial statements. These include the following three components:

- Statement of Fiduciary Net Position
- Statement of Changes in Fiduciary Net Position
- Notes to Basic Financial Statements

In addition to the financial statements, this report also contains required supplementary information and other supplementary information that offers comparative data on prior years.

The *Statement of Fiduciary Net Position* provides a snapshot of account balances at year-end. It also indicates the assets available for future benefit payments and administration of the Plan as well as current liabilities outstanding at year-end. The assets less liabilities give the reader a clear picture of what funds are available for future payments.

The *Statement of Changes in Fiduciary Net Position,* in contrast, provides a summary view of the additions to and the deductions from the plan net position that occurred over the course of the year.

Together these two statements report the System's plan net position – the difference between assets and liabilities – as one way to measure the System's financial situation. Over time, increases and decreases in plan net position are one indicator of whether the System's financial situation is improving or deteriorating. Additional factors, such as market conditions, also need to be considered in assessing the System's overall financial situation.

The financial statements and required disclosures are in compliance with the accounting principles and reporting guidelines as set forth by the GASB, using the accrual basis of accounting. Investments are reported at fair value. Both realized and unrealized investment gains and losses are recognized using trade date accounting.

The *Notes to Basic Financial Statements* (Notes) provide additional information and explanations that are essential to a full understanding of the data provided in the financial statements.

The *Required Supplementary Information* (RSI) that follows the Notes shows the City's net pension liability/(asset), as well as information reflecting how much the City has contributed in relation to its annual required contributions and other information to comply with GASB Statement No. 67.

The *Other Supplementary Information* (OSI) that follows the RSI provides additional comparative information from prior years.

GASB Statement No. 67

The System's basic financial statements, notes to the basic financial statements, required supplementary information, and notes to the required supplementary information were prepared in accordance with the reporting requirements of GASB Statement No. 67. The most recent actuarial valuation as of June 30, 2022, was used to determine the total pension liability.

Schedule of Net Pension Liability/(Asset)
(In Thousands)

Net Pension Liability/(Asset)	Fiscal Year Ended 6/30/2022	Fiscal Year Ended 6/30/2021
Total Pension Liability	$ 126,291	$ 126,852
Plan Fiduciary Net Position	111,662	134,733
Net Pension Liability/(Asset)	$ 14,629	$ (7,881)
FNP as a % of TPL	88.4%	106.2%

Source for pension liability is the June 30, 2022 GASB 67 plan actuarial information prepared by System Actuary, Foster & Foster and June 30, 2021 GASBS 67 plan actuarial information prepared by System Actuary, Bartel Associates.

TPL for the Plan decreased from $126.9 million at June 30, 2021, to $126.3 million at June 30, 2022. The FNP at June 30, 2021 decreased from $134.7 million to $111.7 million at June 30, 2022. The changes in both TPL and FNP resulted in a significant net increase of NPL from -$7.9 million at June 30, 2021 to $14.6 million at June 30, 2022.

The Notes to Basic Financial Statements provide additional disclosures to comply with GASB Statement No. 67 Implementation, as follows:

- Plan Membership,
- Investments (allocation by asset class, expected long-term rate of return by asset class, and the annual money-weighted rate of return),
- Investments greater than 5% of the Plan's Fiduciary Net Position,
- Net Pension Liability/(Asset) (and the components of Net Pension Liability/(Asset)), and
- Significant actuarial assumptions used to measure Total Pension Liability.

The information reported in the Required Supplementary Information (RSI) section is required to be reported for 10 years; additional years will be reported as they become available:

- Schedule of Changes in Employer's Net Pension Liability/(Asset),
- Schedule of Employer's Net Pension Liability/(Asset) and Related Ratios,
- Schedule of Employer Contributions,
- Schedule of Investment Returns, and
- Notes to the Required Supplementary Information, which includes additional information regarding total pension liability.

The Other Supplementary Information section includes the following two schedules:

- Additions by Source and Deductions by Type, and
- Comparative Information from Prior Fiscal Years for Interest Rate Risk.

Condensed Statement of Fiduciary Net Position

Condensed Statement of Fiduciary Net Position

	June 30, 2022	June 30, 2021	$ Change	% Change
	(In Thousands)			
Current Assets	$ 6,296	$ 13,260	$ (6,964)	-52.5%
Investments	113,657	135,540	(21,883)	-16.1%
Total Assets	119,953	148,800	(28,847)	-19.4%
Total Liabilities	8,291	14,067	(5,776)	-41.1%
Net Position Restricted for Pensions	$ 111,662	$ 134,733	$ (23,071)	-17.1%

As of June 30, 2022 and 2021, the System had $111,661,738 and $134,732,586, respectively, in net position. The net position represents funds restricted for members' pension benefits. The net pension liability is not reported in the basic financial statements, but is disclosed in the Notes and in the RSI.

Condensed Statement of Changes in Fiduciary Net Position

During the year ended June 30, 2022, the Plan's net position decreased by $23,070,848. Earnings for the year in the portfolio were -8.6% net of fees, compared to 19.0% net of fees in the prior year.

Condensed Statement of Changes in Fiduciary Net Position

	Year Ended June 30, 2022	Year Ended June 30, 2021	$ Change	% Change
	(In Thousands)			
Employer Contributions	$ -	$ -	$ -	n/a
Net Investment Earnings (Losses)	(10,656)	22,354	(33,010)	-147.7%
Total Additions (Losses)	(10,656)	22,354	(33,010)	-147.7%
Benefit Payments	12,072	12,506	(434)	-3.5%
Administrative Expenses	343	327	16	4.9%
Total Deductions	12,415	12,833	(418)	-3.3%
Net Increase (Decrease)	(23,071)	9,521	(32,592)	342.3%
Net Position Restricted for Pensions				
Beginning of Year	134,733	125,212	9,521	-7.6%
End of Year	$ 111,662	$ 134,733	(23,071)	17.1%

Earnings for the year by asset class were as follows: International Equity (-19.4% net of fees), Domestic Equity (-13.0% net of fees), Real Estate (25.9% net of fees) Alternatives (-15.7% net of fees), and Domestic Fixed Income (-8.2% net of fees on 44.1% of the total portfolio). There was a decrease of $33,111,125 in investment earnings from 2021. This is reflective of the dramatic decline in equity performance this year compared to the prior year with -19.4% in 2022 vs. 40.5% in 2021 for International Equities and -13.1% in 2022 vs. 44.8% in 2021 for Domestic Equities. Real estate improved from 6.7% in 2021 to 25.9% in 2022.

Deductions from plan net position consisted of benefits payments to beneficiaries and the plan's administration costs. Total deductions were $12,415,072 and $12,832,514 in fiscal year 2022 and 2021, respectively. Total deductions for the year ended June 30, 2022, reflect a decrease of $417,442 compared to the prior year due to decreasing membership.

Fiduciary Responsibilities

The System is a fiduciary for the public safety pension plan of the City of Pasadena. Accordingly, the System is responsible for ensuring that the assets reported in the statements are used for the intended purpose of paying expenses and providing retirement benefits to retirees and beneficiaries of the System.

Currently Known Facts, Conditions, or Decisions

In accordance with the amended Agreement No. 20,823, the City will make additional contributions to the System related to the sale of the Concord Senior Housing property at 275 E. Cordova, Pasadena, (Concord Property). The City is committed to transferring $12,560,017 representing the System's 93% beneficial interest in additional proceeds from the Concord Property sale as additional contributions to the System approximately 18 months after receiving the proceeds from outstanding notes receivable due to the City related to the sale. These contributions are expected to occur in the spring of 2023.

Requests for Information

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

Pasadena Fire & Police Retirement System
100 N. Garfield Avenue, S201
Pasadena, CA 91101

Respectfully submitted,

Bernadette K Carpio

Bernadette Kastner Carpio
Retirement Administrator

PASADENA FIRE & POLICE RETIREMENT SYSTEM
STATEMENT OF FIDUCIARY NET POSITION

JUNE 30, 2022
(WITH COMPARATIVE TOTALS FOR JUNE 30, 2021)

	2022	2021
Assets		
Cash and cash equivalents	$ 2,769,310	$ 2,178,627
Short-term investments	608,561	4,124,710
Receivables:		
Pending trade sales	2,634,599	6,786,349
Interest	283,993	169,918
Total receivables	2,918,592	6,956,267
Investments, at fair value:		
Government and agencies	19,255,353	24,232,920
Fixed income mutual funds	15,676,777	20,169,940
Domestic corporate obligations	21,541,729	23,274,707
International corporate obligations	1,428,993	1,587,182
Real estate	15,029,667	11,931,126
Equity - Domestic	20,377,674	27,382,351
Equity - International	20,346,394	26,962,063
Total investments	113,656,587	135,540,289
Total assets	119,953,050	148,799,893
Liabilities		
Accounts payable and accrued liabilities	60,343	61,286
Pending trade purchases	8,230,969	14,006,021
Total liabilities	8,291,312	14,067,307
Net position restricted for pensions	$ 111,661,738	$ 134,732,586

The notes to the basic financial statements are an integral part of this statement.

PASADENA FIRE & POLICE RETIREMENT SYSTEM
STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

FOR THE YEAR ENDED JUNE 30, 2022
(WITH COMPARATIVE TOTALS FOR THE YEAR ENDED JUNE 30, 2021)

	2022	2021
Additions:		
Contributions:		
Employer	$ -	$ -
Net investment earnings (loss):		
Interest	654,560	603,309
Dividends	1,786,426	1,363,394
Net increase (decrease) in fair value of investments	(12,759,021)	20,826,387
Total investment earnings (loss)	(10,318,035)	22,793,090
Less investment expenses	(337,741)	(439,243)
Net investment earnings (loss)	(10,655,776)	22,353,847
Total additions	(10,655,776)	22,353,847
Deductions:		
Benefits paid to participants	12,072,173	12,505,972
Administrative expenses	342,899	326,542
Total deductions	12,415,072	12,832,514
Net increase (decrease) in net position	(23,070,848)	9,521,333
Net position restricted for pensions:		
Beginning of year	134,732,586	125,211,253
End of year	$ 111,661,738	$ 134,732,586

The notes to the basic financial statements are an integral part of this statement.

NOTE 1 – PENSION PLAN DESCRIPTION

General

The Pasadena Fire & Police Retirement System ("System") is a single-employer defined benefit pension plan governed by a Board of Retirement ("Board") under provisions of the City of Pasadena ("City") Charter. The Board has sole and exclusive responsibility over the assets of the System and the responsibility to administer the System to assure prompt delivery of benefits and related services as provided in Article XV of the City Charter.

The System is governed by a Board of five members; one member of the City Council, two Pasadena residents appointed by the City Council, and two members of the System elected under the supervision of the System. Board members are elected to terms of four years with no restriction on reappointment. Board members receive no compensation. The Board consists of five members, whom on June 30, 2022, were as follows:

Keith Jones, Chair
Peter Boyle, Vice Chair
John H. Brinsley, Board Member
Gene Masuda, Board Member
Joe Milligan, Board Member

The System covers all sworn fire and police personnel who were employed by the City prior to July 1, 1977, except for those who elected to transfer to the California Public Employees' Retirement System ("CalPERS") when the System closed to new members. In June 2004, active members were provided a one-time opportunity to transfer from the System to CalPERS as provided by an agreement with the City. CalPERS administers the retirement benefits for all fire and police members that elected to be transferred to CalPERS.

The System is included as a pension trust fund in the financial statements of the City of Pasadena, California. The System provides basic lifetime retirement, disability, and death benefits to members who meet the minimum age and length-of-service requirements.

As of June 30, 2022, System membership consisted of 193 retirees and beneficiaries who receive benefits including Domestic Relations Order (DRO) agreements. The average age was 80.4 years and the average monthly benefit was $5,306. Since June 30, 2021, the plan experienced 15 deaths: 9 deaths without a beneficiary for a net reduction of 9 participants. On June 30, 2022, total membership in the plan consisted of:

- 61 Service Retirees (average age 80.4, average monthly benefit $7,325)
- 57 Disability Retirees (average age 79.8, average monthly benefit $5,447)
- 75 Beneficiaries and DROs (average age 80.9, average monthly benefit $3,557)

There are no longer any active employees participating in the System, and the System is closed to new entrants. Benefit provisions are established and, subject to any constitutional limitations, may be amended by the City Charter.

Pension Plan Benefits

Members are entitled to annual pension benefits beginning at normal retirement age (50) equal to 1/50 of final compensation, times the member's number of years of service, times an actuarial equivalent based on the actual retirement age. The System permits service retirement at age 50, provided at least 15 years of service have been rendered, or retirement after 25 years of service, regardless of age.

NOTE 1 – PENSION PLAN DESCRIPTION (Continued)

Disability Benefits

Generally, active members who become totally disabled receive annual disability benefits that are equal to 50% of final compensation. Members who receive a service disability retirement receive a portion of their benefit tax-free (as determined by the percent disabled at retirement), and 100% lifetime continuance of all benefits to their surviving spouse. In contrast, members who receive a non-service disability retirement receive a 60% lifetime continuance of the benefits payable to their surviving spouse, and the member does not receive tax-free benefits.

Death Benefits

In the case of a death before a member is eligible to retire, there is a refund of the employee contributions, with interest, plus six months' salary. If the member is eligible to retire, 60% of the earned benefit is payable to the eligible surviving spouse for their lifetime.

Survivor Benefits

Upon the death of a retiree, the qualified surviving spouse is entitled to receive retirement benefits equal to 60% continuance for a service retirement and 100% continuance for a service-connected disability retirement.

Cost of Living Adjustment ("COLA")

Monthly pension benefits are eligible for an annual cost of living adjustment based on the increase/decrease of the annual average in the Consumer Price Index ("CPI") for the Los Angeles-Riverside-Orange County, California area for the previous year, January to December, and the change is rounded to the nearest whole percentage. The adjustments are calculated by the actuary, adopted by the Board, and become effective on July 1 of each year. The COLA for fiscal year 2021 was an increase of 2%.

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The System follows the accounting principles and reporting guidelines as set forth in Governmental Accounting Standards Board ("GASB") Statement No. 67, *Financial Reporting for Pension Plans - an amendment of GASB Statement No. 25*. The financial statements are prepared and presented using the accrual basis of accounting. Employer contributions are recognized in the period in which the contributions are due pursuant to legal requirements. Benefits are recognized when currently due and payable, in accordance with the terms of the System.

Estimates

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

Cash and Investments

The System's cash and short-term investments are managed by the City Treasurer and U.S. Bank (master custodian for investment securities).

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Cash and Investments (Continued)

Cash necessary for the System's daily operations is pooled with other City funds for short-term investment by the City Treasurer in the City's Investment Pool ("Pool"). The City is responsible for the control and safekeeping of all instruments of title and for all investments in the Pool. The Pool is an internal investment pool and is not registered with the Securities and Exchange Commission. At June 30, 2022, the Pool had a weighted average maturity of 2.15 years. The Pool is not rated. For further information regarding the Pool, refer to the City's Annual Comprehensive Financial Report which can be found on the following website: https://www.cityofpasadena.net/finance/financial-statements/#annual-comprehensive- financial-report.

Investment transactions are accounted for on the date the securities are purchased or sold (trade date). Unsettled investment trades as of fiscal year-end are reported in the financial statements on an accrual basis. The corresponding proceeds due from sales are reported on the Statement of Fiduciary Net Position under receivables and labeled as pending trade sales, and amounts payable for purchases are reported under liabilities and labeled as pending trade purchases. Dividend income is recorded on ex-dividend date, and interest income is accrued as earned. The calculation of realized gains and losses is independent of the calculation of the net change in the fair value of System's investments. Changes in fair value include both realized and unrealized gains and losses on investments.

The System has designated $1,250,000 in cash reserves to be invested by the City Treasurer in the Pool. The funds equal one month of benefits and administrative expenses and are reserved for use in the event of a major emergency or disaster.

Income Taxes

The Internal Revenue Service ("IRS") has ruled that plans such as the System qualify under Section 414(d) of the Internal Revenue Code ("IRC") and are not subject to tax under present income tax laws. On May 11, 2012, the IRS issued a favorable Tax Determination Letter to the System. Working in conjunction with the City Attorney to fulfill the conditions of the favorable determination letter, the System revised the Pasadena Municipal Code and the changes became effective December 6, 2012. Accordingly, no provision for income taxes has been made in the accompanying basic financial statements, as the System is exempt from federal income and state franchise taxes under provisions of the IRC, Section 414(d), and the California Revenue and Taxation Code, Section 23701, respectively. As allowed, the System filed to renew its tax determination status on October 23, 2015. Upon completing an analysis of the plan document relative to the current IRC, the IRS found that the plan is in compliance with the provisions of the IRC (no plan document failures exist). The System received a favorable determination letter on September 30, 2016.

Method Used to Value Investments

Investments are reported at fair value. Fair value for investments of publicly traded stocks and bonds and issues of the U.S. Government and its agencies is based on the last reported sale price as of the fiscal year-end. Fair value of securities denominated in a foreign currency reflects exchange rates in effect at fiscal year-end. Fair value of investments in commingled funds in real estate is based on the fund share price provided by the fund manager, which is based on the net asset value "NAV").

Fair value of investments in commingled funds in bank loans is the fund share price provided by the fund manager, which is based on the market value of the fund. Valuation for PanAgora's Risk Parity Multi Asset Group Trust is the fund itself, which is reported at NAV and provided by Mellon Global Securities Services under contract to provide these valuation services twice monthly and more frequently, if requested. The real property asset manager (Invesco) has 100% of the properties appraised on a quarterly basis by independent third-party appraisers.

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Method Used to Value Investments (Continued)

Use of discounted cash flow models and comparable sales analysis are the primary means of valuing real estate assets with the preponderance of weight given to the discounted cash flow method. Additionally, all valuations are consistent with Uniform Standards of Professional Appraisal Practice (USPAP), the Appraisal Standards Board and the Appraisal Foundation.

Comparative Data

The basic financial statements, including the notes thereto, include certain prior year summarized comparative information in total but not at the level of detail required for a presentation in conformity with accounting principles generally accepted in the United States. Accordingly, such information should be read in conjunction with the System's basic financial statements for the year ended June 30, 2021, from which the summarized information was derived.

NOTE 3 – CASH AND INVESTMENTS

Cash and Investments

Cash and investments on June 30, 2022, were held as follows:

Cash and Investments		
		June 30, 2022
Unrestricted Pooled Cash	$	971,372
Designated Pooled Cash		1,250,000
Money Market Funds		547,938
Cash and Cash Equivalents		2,769,310
Short-term Investments		608,561
Investments		113,656,587
Total Investments		116,760,068
Total Cash and Investments	**$**	**119,529,378**

Authorized Investments

The City Charter, Article XV Section 1502, confers the authority and fiduciary responsibility for investing the System's funds on the Board. As set forth below, Board members are subject to carry out their duties in the manner of a prudent person familiar with such retirement and investment matters acting under similar circumstances. Investments shall be subject to the same terms, limitations, and restrictions as are imposed by the Constitution and laws of the State upon the investment of the CalPERS funds, as now enacted or hereafter amended.

The Board is required by statute to use care, skill, prudence and diligence to diversify the investments of the System so as to minimize the risk of loss and to maximize the rate of return, unless under the circumstances it is clearly not prudent to do so. The Board also has the authority to establish an investment policy based on professional advice and counsel, and allows for the delegation of investment authority to professional investment managers.

NOTE 3 – CASH AND INVESTMENTS (Continued)

Authorized Investments (Continued)

The System's investment policy outlines the responsibility for the investment of the funds and the degree of risk deemed appropriate for the System's investments. Investment managers are contractually required to carry out their responsibilities in accordance with the Board's investment policy and to follow specific contractual guidelines.

The Board oversees and guides the System subject to the following basic fiduciary responsibilities:

- Solely in the interest of, and for the exclusive purpose of, providing economic benefits to participants and their beneficiaries.
- With the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with these matters would use in the conduct of an enterprise of a like character with like objectives.
- Diversify the investments of the System so as to minimize the risk of loss and to maximize the rate of return, unless under the circumstances, it is clearly prudent not to do so. Diversification is applicable to the deployment of the assets as a whole.

Pursuant to this authority, the Board has authorized investment in the following securities:

- Securities of the U.S. Government or its agencies
- Certificates of Deposit, or Time Deposits, placed with commercial banks and savings and loan associations
- Negotiable Certificates of Deposit
- Bankers' Acceptances
- Commercial Paper (rated A-1/P-1 or better)
- Medium-Term Corporate Notes
- Corporate and Municipal Bonds
- Preferred Stock
- Common Stock
- Fixed-Income Funds
- Senior Bank Loans
- Foreign Stock and Corporate Bonds
- Mutual Funds
- Liquid Alternative Investments
- Real Estate Investment Trust ("REIT")
- Real Estate
- Treasury Inflation Protected Securities
- Short-Term Investment-Grade Bonds

The Board established an Investment Policy Statement ("IPS") in accordance with applicable local, state, and federal laws. The Board exercises authority and control over the management of the System's assets by setting policy which the Board executes through the use of external prudent experts. During the fiscal year ended June 30, 2021, the alternative investment was changed from PIMCO All Asset Institutional to PanAgora Risk Parity Fund in November 2020. The IPS was revised to reflect the latest changes to the asset allocation which were approved by the Board.

NOTE 3 – CASH AND INVESTMENTS (Continued)

Authorized Investments (Continued)

The IPS encompasses the following asset classes and asset allocation targets:

Investment Performance Statement
Asset Classes and Targets
As of June 30, 2022

Asset Class	Target Asset Allocation
Domestic Equity	
Large Cap Value	4%
Large Cap Growth	4%
Large Cap Core	8%
Small Cap Core	4%
Total Domestic Equity	20%
Foreign Equity	20%
Real Estate	10%
Fixed Income	
Domestic Core Fixed Income	25%
Short-Term Investment-Grade Bonds	10%
Senior Bank Loans	5%
Treasury Inflation Protected Securities (TIPS)	5%
Total Fixed Income	45%
Risk Parity	5%
Total Portfolio	100%

The System requires approximately $1,250,000 per month to cover benefit payments and administrative costs. On a quarterly basis, the Board and the investment consultant evaluate the assets against their allocation targets and determine the appropriate asset class/classes from which to withdraw for payment of benefits and administration. This process also serves as a regular rebalance process to ensure that the portfolio stays within the Board's adopted allocation goals.

Fair Value and Fair Value Hierarchy of Investments

Investments are reported in the Statement of Fiduciary Net Position at fair value. The System categorizes its fair value measurements within the fair value hierarchy established by GAAP. The hierarchy is based on the valuation inputs used to measure fair value of the assets. Level 1 inputs are quoted prices in an active market for identical assets. Level 2 inputs are quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-derived from valuation techniques in which all significant inputs are observable. Level 3 inputs are significant unobservable inputs.

NOTE 3 – CASH AND INVESTMENTS (Continued)

Fair Value and Fair Value Hierarchy of Investments (Continued)

The following table presents a summary of the fair value hierarchy of the recurring fair value measurements of the System as of June 30, 2022:

		Fair Value Measurement Using			
		Quoted Prices in Active Markets for Identical Assets	Significant Other Observable Inputs	Significant Unobservable Inputs	Net Asset Value
Investments by fair value level	**June 30, 2022**	**(Level 1)**	**(Level 2)**	**(Level 3)**	**(NAV)**
Debt Securities					
U.S. Treasury Securities (Government Bonds)	$ 9,368,917	$ -	$ 9,368,917	$ -	$ -
U.S. Treasury Securities (Short-Term Investments)	608,561	-	608,561	-	-
Government Mortgage-Backed Securities	9,349,625	-	9,349,625	-	-
Commercial Mortgage-Backed Securities	1,473,008	-	1,473,008	-	-
Government Issued Commercial Mortgage-Backed Securities	269,799	-	269,799	-	-
Asset Backed Securities	1,360,598	-	1,360,598	-	-
Non-Government Backed CMOs	1,015,099	-	1,015,099	-	-
Corporate Bonds	7,994,259	-	7,994,259	-	-
Municipal Bonds	267,012	-	267,012	-	-
Mutual Funds Fixed Income	15,676,777	15,676,777	-	-	-
Total Debt Securities	47,383,655	15,676,777	31,706,878	-	-
Equity Securities					
Consumer Discretionary	443,921	443,921	-	-	-
Consumer Staples	378,479	378,479	-	-	-
Financial Services	771,399	771,399	-	-	-
Health Care Services	294,935	294,935	-	-	-
Industrial Services	1,190,010	1,190,010	-	-	-
Information Technology Services	1,044,136	1,044,136	-	-	-
Materials	211,696	211,696	-	-	-
Mutual Funds Equity	36,389,492	36,389,492	-	-	-
Total Equity Securities	40,724,068	40,724,068	-	-	-
Investments Measured at NAV					
Senior Secured Bank Loans	5,974,412	-	-	-	5,974,412
Risk Parity Group Trust	5,153,346	-	-	-	5,153,346
Real Estate Funds	15,029,667	-	-	-	15,029,667
Total Measured at NAV	26,157,425	-	-	-	26,157,425
Total Investments Measured at Fair Value	$ 114,265,148	$ 56,400,845	$ 31,706,878	$ -	$ 26,157,425

Debt and equity securities classified in Level 1 of the fair value hierarchy 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 or based on quoted prices that are not in active markets. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices.

NOTE 3 – CASH AND INVESTMENTS (Continued)

Fair Value and Fair Value Hierarchy of Investments (Continued)

Real estate funds include investment in the Invesco Core Real Estate – U.S.A Limited Partnership ("Fund"). The fair value of the investment in this type have been determined using the NAV per share (or its equivalent) of the System's ownership interest in partners' capital. The System may request redemption of some or all of its interest by delivering a redemption notice at least 45 days in advance to the Fund.

Redemption requests are honored pro rata based on the ratio of the ownership interest held by each individual investor making a redemption request to the total ownership of interest held by all investors requesting redemptions.

The Fund will use best efforts to honor redemption requests as quickly as possible; however, capital availability will dictate the ultimate redemption date and amount. The Fund's portfolio manager is not required to liquidate, encumber assets, or defer investments in order to pay any redemption.

The System's investment in the Senior Bank Loans Secured Subscription Agreement ("Trust Fund") is valued using the NAV per share (or its equivalent) of the System's ownership interest in the Trust Fund. The Trust Fund has imposed restrictions on the amount and timing of withdrawals. Withdrawals of participation shall be permitted only on a withdrawal date, which is 15th of each month. A written notice of withdrawal request is required to be provided to the Trust Fund no later than the 15th of the month preceding the requested withdrawal date. If withdrawal requests for any given withdrawal date exceed limitations set forth in the Trust Fund's agreement, all such withdrawal requests shall be processed pro rata. Withdrawal amounts requested but not paid on any given withdrawal date will not be carried over to the following withdrawal date and a new withdrawal request must be timely submitted.

The System's investment in the PanAgora Risk Parity Group Trust is also valued using the NAV per share (or its equivalent) of the System's ownership interest in the Risk Parity Group Trust. PanAgora Risk Parity Group Trust redemptions are beginning and mid-month with a two-day notice.

NOTE 3 – CASH AND INVESTMENTS (Continued)

Asset Allocation Policy and Expected Long-term Rate of Return by Asset Class

The investments of the System are allocated by the IPS as approved by the Board and noted in the following table. The long-term geometric expected real rates of return are reported by asset class, and are based on CalPERS' Capital Markets Assumptions studies.

Expected Long-Term Rates of Return

	6/30/2022	
Asset Class	**Target Asset Allocation**	**Expected Geometric Real Return***
Domestic Equity - Large Cap	16%	3.77%
Domestic Equity - Small Cap	4%	4.45%
Foreign Equity	20%	4.41%
Domestic Core Fixed Income	25%	0.53%
TIPS	5%	-0.24%
Short-Term Investment-Grade Bonds	10%	0.05%
Senior Bank Loans	5%	1.64%
Alternative (Risk Parity)	5%	3.38%
Real Estate	10%	3.81%
	100%	
Inflation		2.50%

Source is the June 30, 2022 GASB 67 actuarial information prepared by System Actuary, Foster & Foster, Inc. The rate for Alternative (Risk Parity) is used for Liquid Alternative Investments.

** 10-year geometric expected real rates of return from Bartel Associates 2021 Capital Market Assumptions study.*

NOTE 3 – CASH AND INVESTMENTS (Continued)

Rate of Return

For the year ended June 30, 2022, the annual money-weighted rate of return on the System's investments, net of investment expenses, was -8.6%. The money-weighted rate of return expresses investment performance, net of investment expenses, adjusted for the changing amounts actually invested.

Deposit and Investment Risks

The System follows GASB Statement No. 40, *Deposit and Investment Risk Disclosures – an amendment to GASB Statement No. 3* ("GASB Statement No. 40"). GASB Statement No. 40 is designed to inform financial statement users about deposit and investment risks that could affect the ability to provide services and meet obligations as they become due. The disclosures required by this statement provide information to assess common risks inherent in deposit and investment transactions.

Deposit and investment resources represent considerable assets of the System, and these resources are necessary to carry out fiduciary responsibilities. GASB Statement No. 40 requires the disclosure of the following specific risks that apply to the System's investments:

- Credit Risk and Fair Value of Investments
- Custodial Credit Risk – Deposits and Investments
- Concentration of Credit Risk
- Interest Rate Risk
- Highly Sensitive Investments
- Foreign Currency Risk

GASB Statement No. 40 also requires the disclosure of deposit or investment policies (or the lack thereof) that relate to the investment and custodial risks that are required to be disclosed. The Board has chosen to manage the investment risks described by GASB Statement No. 40 by contractually requiring each portfolio investment manager to abide by the IPS, specifically tailored to that individual manager, rather than adopting across-the-board investment policies with respect to these investment risks. The fixed income policy stipulates the strategy and investments, investment process, quality constraints, duration constraints, diversification, cash reserves, derivatives, and rate of return expectation. At June 30, 2022, the System had nine (9) external investment managers.

Credit Risk

Credit risk is the risk that the issuer of a debt security or other counterparty to an investment will not fulfill its obligations. The individual investment guidelines for the fixed income investment manager describe applicable restrictions on credit risk. The System seeks to maintain a diversified portfolio of fixed income instruments in order to obtain the highest total return for the fund at an acceptable level of risk within this asset class. The credit quality ratings of investments in fixed income securities by a nationally recognized statistical rating organization, S&P Global Ratings ("S&P"), as of June 30, 2022, are as follows:

NOTE 3 – CASH AND INVESTMENTS (Continued)

Credit Risk (Continued)

Credit Quality Ratings of Investments in Fixed Income Securities

Quality Ratings - S & P	Fair Value	Percentage
AAA	$ 611,776	1.04%
AA	803,235	1.37%
A	2,373,043	4.06%
BBB	5,661,510	9.68%
BB	192,623	0.33%
B	116,793	0.20%
CCC	494,064	0.84%
Total Securities with S&P Ratings	$ 10,253,044	17.52%
Not Rated/Quality Rating N/A*	$ 28,661,467	48.98%
Not Rated/U.S. Government Guaranteed Securities**	9,101,194	15.55%
Not Rated/U.S. Government Bonds***	10,495,708	17.94%
Total Securities Not Rated/Quality Rating N/A	$ 48,258,369	82.48%
Total Fixed Income Securities	**$ 58,511,413**	**100.00%**

** Includes Corporate MBSs rated "N/A" totaling $1,345,993. This category also includes securities held in the TIPS, Risk Parity, Senior Bank Loans, and Short-Term Investment-Grade Bonds asset classes.*

*** U.S. Government Guaranteed Securities are Government Mortgage-Backed Securities and Government-issued Commercial Mortgage-Backed Securities. These U.S. Government Guaranteed Securities issued by Government Sponsored Enterprises (GSEs) are not rated by the rating agencies, but they are implicitly guaranteed by the U.S. Government.*

**** U.S. Government Bonds, more commonly disclosed as U.S. Treasury Bonds and Notes, are assets held in Treasury Bonds and Index Linked Government Bonds. These U.S. Government Guaranteed Securities issued are not rated by the rating agencies, but they are explicitly guaranteed by the U.S. Government.*

Custodial Credit Risk – Deposits

Custodial credit risk for deposits is the risk that, in the event of a financial institution's failure, the System will not be able to recover the value of deposits nor be able to recover collateral securities that are in the possession of an outside party. Deposits are exposed to custodial credit risk if they are not insured or not collateralized. As of June 30, 2022, the System was not exposed to such risk. The System does not have a formal policy for custodial credit risk.

NOTE 3 – CASH AND INVESTMENTS (Continued)

Custodial Credit Risk – Investments

Custodial credit risk for investments is the risk that, in the event of the failure of the counterparty to a transaction, the System will not be able to recover the value of the investment or collateral securities that are in the possession of an outside party. The individual investment guidelines for each investment manager require that managed investments be held and maintained with the master custodian in the name of the System. Investment securities are exposed to custodial credit risk if the securities are uninsured, or are not registered in the System's name, and held by the counterparty. The System's investments are not exposed to custodial credit risk if they are insured or registered in the System's name. The System's investments are not exposed to custodial credit risk because all securities are held by the System's custodial bank in the System's name.

Concentration of Credit Risk – Investments

Concentration of credit risk is the risk of potential loss attributed to the magnitude of the System's investment in a single issuer of securities. The Board's investment policies and guidelines permit investments in numerous specified asset classes to take advantage of professional investment management advice and a well-diversified portfolio. The active core fixed income asset manager develops and applies diversification standards as deemed prudent, and is expected to maintain diversification by sector and issue. Allocations to any one issuer in fixed income (excluding issues issued by or explicitly guaranteed by the U.S. government) should not exceed 5% of the total portfolio fair value.

As of June 30, 2022, there were no organizations or issuers that represent 5% or more of the total investments or the fiduciary net position.

Interest Rate Risk

Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. Duration is a measure of the price sensitivity of a fixed income portfolio to changes in interest rates. It uses the present values of cash flows, weighted for those cash flows as a percentage of the investment's full price. The longer the duration of a portfolio, the greater its price sensitivity is to changes in interest rates.

While no specific ranges are required, one of the ways the System manages its exposure to interest rate risk is by requiring the fixed income investment manager to maintain its portfolio effective duration within +/- 20% of the benchmark, the Barclays Capital U.S. Aggregate Bond Index. See Other Information, page 46 for the Core Fixed Income asset manager's historic effective duration. The effective duration is a measure, in years, of interest-rate sensitivity in debt investments. The longer the effective duration, the greater the sensitivity to interest rate changes.

NOTE 3 – CASH AND INVESTMENTS (Continued)

Interest Rate Risk (Continued)

Information about the sensitivity of the fair values of the System's investments to market interest rate fluctuations is provided in the table below that reports the average effective duration of the System's fixed income investments by asset type as of June 30, 2022:

Fixed Income
Effective Duration by Asset Type
As of June 30, 2022

Asset Type		Fair Value	Effective Weighted Duration (years)
Government Bonds	$	9,977,478	5.51
Municipal Bonds		267,012	10.52
Corporate Bonds		7,994,259	11.33
Government Mortgage-Backed Securities		9,349,625	8.09
Government Issued Commercial Mortgage-Backed		269,799	10.94
Commercial Mortgage-Backed		1,473,008	3.86
Asset Backed Securities		1,360,598	0.14
Non-Government Backed CMOs		1,015,099	0.20
No Effective Duration:			
Mutual Funds Fixed Income		15,676,777	N/A
Risk Parity Group Trust		5,153,346	N/A
Senior Bank Loans		5,974,412	N/A
Total Fixed Income	**$**	**58,511,413**	

Highly Sensitive Investments

Highly sensitive investments are certain debt investments whose terms may cause their fair value to be highly sensitive to market interest rate changes. Terms include such information as embedded options, coupon multipliers, benchmark indexes, and reset dates. The System's asset backed investments have embedded prepayment options that will typically cause prepayments by the obligees of the underlying investments when interest rates fall. Prepayments eliminate the stream of future interest payments and, therefore, diminish the fair value of the asset-backed investment. The table on the following page reports the fair value of the System's investments that are highly sensitive to changes in interest rates:

NOTE 3 – CASH AND INVESTMENTS (Continued)

Highly Sensitive Investments (Continued)

Highly Sensitive Investments
As of June 30, 2022

Investment Type	Fair Value
Government Mortgage-Backed Securities	$ 9,349,625
Government Issued Commercial Mortgage-Backed Securities	269,799
Asset Backed Securities	1,360,598
Commercial Mortgage-Backed Securities	1,473,008
Non-Government Backed Commercial Mortgage Obligations	1,015,099
Total Highly Sensitive Investments	**$ 13,468,129**

Foreign Currency Risk

Foreign currency risk is the risk that changes in foreign exchange rates will adversely affect the fair value of an investment or deposit. The System's authorized investment managers are permitted to invest in approved countries or regions, as stated in their respective investment guidelines. Currency hedging will be permitted as part of a defensive strategy to protect the portfolio's underlying assets.

The System's foreign investment holdings on June 30, 2022 has no foreign currency risk as the securities trade and settle in US Dollars as domestic trades.

NOTE 4 – CONTRIBUTION INFORMATION

Contribution requirements are established by the City Charter and by contract, and, subject to any constitutional limitations, may be amended by the City Charter or further agreement between the City and the System.

General

Historically, the City has made monthly contributions to the System based on actuarially determined employer contribution rates which, together with employee contributions, were expected to provide sufficient assets to pay funded basic benefits when due. However, the City Charter did not require actuarially determined funding for unfunded basic, 1919 benefits, and COLA benefits, which are funded under Contribution Agreement No. 16,900, dated March 18, 1999, between the City and the System. Per the terms negotiated through their respective recognized Associations, employee contributions of 9% for both Fire and Police Department personnel base earnings were made by the City on behalf of the employees and credited to their individual accounts.

Member Contributions

As a condition of participation, members were required to contribute a percentage of their annual salary to the System. Currently there are no active members in the System, and hence no further member contributions are due to the System.

The City Charter required members' contributions to be credited to the individual account of the member from whose compensation the contribution was deducted. Such contributions accrued interest at a rate determined by the Board and were either to be refunded to members or their beneficiaries upon separation from City service for reasons other than retirement, or applied towards providing members' retirement or death allowances. Amendments to the City Charter cannot prevent the refund of such contributions plus accrued interest. Because there were no active members, accumulated contributions for 2022 were $0 with no interest credited.

City Contributions

The System's funding mechanism was updated on March 18, 1999, when the System entered into Contribution Agreement No. 16,900 ("Agreement No. 16,900") with the City. As a result of this agreement, the City made a contribution of $100,000,000 to the System on August 5, 1999, and agreed to make supplemental contributions to the System when needed. Per Agreement No. 16,900, the System was considered to meet minimum funding requirements for the year ended June 30, 2001, if the funded percentage exceeded 70%. As per the agreement, the required minimum funded percentage increases by 1/2% each year until it reaches 80% in the year ended June 30, 2021. Thereafter it may, but need not, be changed by the System.

NOTE 4 – CONTRIBUTION INFORMATION (Continued)

City Contributions (Continued)

On October 20, 2011, the Board approved Amended and Restated Agreement No. 20,823 ("Agreement No. 20,823"). Under this new agreement, the City's minimum funding percentage schedule and reimbursement cap in Agreement No. 16,900 carried forward, and the City agreed to provide a contribution of $46,600,000 to the System through the issuance of pension obligation bonds. Agreement No. 20,823 provided that the annual required supplemental contribution would be actuarially calculated using an interest assumption of 6% and an inflation rate of 3% beginning with the June 30, 2012 valuation. Pursuant to this agreement, future annual valuations after June 30, 2012, shall adopt an assumed interest rate and inflation assumption based on analysis performed by the System's actuary and after seeking input from the City and System's professional consultant. Agreements No. 16,900 and No. 20,823 state that if the minimum funding deficit is greater than $3,000,000 in a year, the City will pay $3,000,000 to the System. Any remaining amount necessary to reach the minimum funding percentage will be phased in over a five-year period; however, no annual supplemental payment may exceed a reimbursement cap measured by the prior year's payments for benefits other than the funded basic benefits.

As of June 30, 2022, the funded percentage of the System, calculated in accordance with Agreement No. 20,823 and Agreement No. 16,900, was 87.8%. As provided by Agreement No. 16,900, if the funded percentage is below the minimum funding percentage of 80% for fiscal year 2022, the City will reimburse the System in the following fiscal year subject to certain reimbursement limits. Based on the June 30, 2022 actuarial valuation, the funding deficiency was $0, or 0%, below the funding requirement of 80% as of June 30, 2022. Thus, no required supplemental contribution is owed to the System by the City for the fiscal year ended June 30, 2022.

NOTE 5 – NET PENSION LIABILITY

Net Pension Liability

The City's Net Pension Liability ("NPL") at June 30, 2022, was $14,629,000. Fiduciary Net Position ("FNP") as a percentage of total pension liability is 88.4%. At June 30, 2022, the components of the NPL were as follows:

Net Pension Liability
(In Thousands)

Net Pension Liability		**6/30/2022**
Discount Rate		5.25%
Total Pension Liability (TPL)*	$	126,291
Fiduciary Net Position (FNP)		111,662
Net Pension Liability (NPL)	$	14,629
FNP as a Percentage of TPL		88.4%

**Source for the TPL is the June 30, 2022 GASBS 67 plan actuarial information report prepared by System Actuary, Foster & Foster, Inc.*

Key Methods and Assumptions Used in Valuation of Total Pension Liability

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about mortality and cost trends. Actuarially determined amounts are subject to continual review or modification as actual results are compared with past expectations and new estimates are made about the future.

Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employers and plan members) and include the types of benefits provided at the time of each valuation. Following the recommendation provided by the System's Actuary on May 26, 2022, the Board later accepted the recommended assumptions for use in the preparation of the actuarial valuation for the year ended June 30, 2022.

NOTE 5 – NET PENSION LIABILITY (Continued)

Key Methods and Assumptions Used in Valuation of Total Pension Liability (Continued)

The Total Pension Liability ("TPL") was determined by the actuarial valuation performed as of June 30, 2022, using the following actuarial assumptions:

Key Methods and Assumptions Used in Valuation of Total Pension Liability

Valuation Date/Measurement Date	June 30, 2022	
Expected Geometric Real Rate of Return		
	Domestic Equity - Large Cap	3.77%
	Domestic Equity - Small Cap	4.45%
	Foreign Equity	4.41%
	Domestic Core Fixed Income	0.53%
	Senior Bank Loans	1.64%
	Short-Term Investment Grade Bonds	0.05%
	TIPS	-0.24%
	Risk Parity	3.38%
	Real Estate	3.81%
Number of Participants	Retirees & Beneficiaries*	193
	Vested Terminations	-
	Actives	-
	Total Participants	193
Actuarial Assumptions	**Discount Rate: 5.25%	
	Salary Scale: No active employees	
	Inflation Rate: 2.50%	
Mortality	CalPERS 2000-2019 Experience Study,	
	Mortality Improvement Scale 80% Scale MP-2020	

Source is the June 30, 2022 GASBS 67 plan actuarial information prepared by System Actuary, Foster & Foster, Inc.

**Alternative payee data for 23 Domestic Relations Order agreements provided separately from employee-retiree for first time in 6/30/22 valuation. Benefits for these alternative payees previously included in the corresponding retiree's benefits. All DRO agreements provide benefits to the alternative payees for the lifetime of the System's retiree.*

***Discount Rate reflects assumed investment expenses of 15 basis points.*

NOTE 5 – NET PENSION LIABILITY (Continued)

Discount Rate

The discount rate of 5.25% was selected by the System actuary and approved by the Board to measure the June 30, 2022 TPL for accounting purposes. The discount rate is the expected real long-term rate of return, plus the inflation assumption of 2.50%, less assumed investment expenses of 15 basis points. The expected long-term real rate of return is compared at the 50% and 55% confidence levels of capital market assumptions. Based on the assumptions, the System's Fiduciary Net Position was projected to be available to make all projected future benefit payments. The discount rate used as of June 30, 2022 is lower than the discount rate of 5.75% used as of June 30, 2021.

Sensitivity of the NPL to Changes in the Discount Rate

Examining the sensitivity of the NPL to changes in the discount rate by a 1% decrease, from 5.25% to 4.25%, revealed an increase in the NPL by $10,041,000 to a total NPL of $24,670,000. Conversely, increasing the discount rate by 1%, from 5.25% to 6.25%, revealed a corresponding decrease in the NPL of $8,782,000 to total NPL of $5,847,000 as of June 30, 2022.

Sensitivity of Net Pension Liability (NPL) to Changes in the Discount Rate
(In Thousands)

	6/30/2022
Discount Rate	5.25%
Net Pension Liability	$ 14,629
Discount Rate (-1%)	4.25%
Net Pension Liability	24,670
Net Increase in NPL	***10,041***
Discount Rate (+1%)	6.25%
Net Pension Liability	5,847
Net Decrease in NPL	***(8,782)***

NOTE 6 – ADMINISTRATIVE COSTS

The costs to administer the System are paid by the System. Administrative expenses were $342,899 for the year ended June 30, 2022. Administrative expenses increased by a net amount of $16,357 in fiscal year 2022 over the fiscal year 2021 amount of $326,542.

NOTE 7 – CONCORD SENIOR HOUSING PROPERTY AGREEMENT

The City Council adopted Resolution No. 6179 at its July 18, 1989, meeting assigning a 93% beneficial interest in the Concord Senior Housing property at 275 E. Cordova, Pasadena (Concord Property), to the System, and 100% of the cash flow received by the City from the property for ground lease rent payments through 2031. The property was previously used for federally subsidized housing and was subject to federal restrictions on its use through August 2016. Resolution No. 6179 also declared the City's formal intent to continue to utilize the property for federally subsidized housing through 2031.

The System's Board reviewed and approved an amendment to Agreement No. 20,823 (Amended Agreement) at its meeting on February 20, 2019, which was later approved by City Council at its meeting on March 11, 2019. The amendment memorializes the accrued rent and interest owed to the City as of July 31, 2018, in the amount of $6,435,116. Further, the amendment assigns the System 100% of the past due amount and all future rents and income from operations through the term of the ground lease agreement, which expires on August 1, 2031, or until the City sells the Concord Property, whichever occurs first.

The sale of the Concord Property closed on May 28, 2020. The total proceeds received by the System was $23,137,382 as of June 30, 2020, which are comprised of the ground lease due through May 27, 2020, of $3,180,180, accrued interest on ground lease rent of $3,950,613, and the System's 93% beneficial interest of $16,006,589. The total proceeds transferred to the System were reduced by the amount of the City's mandatory contribution of $3,478,000 for a total remittance of $19,659,382., which was reported in fiscal year 2020.

At June 30, 2022, the City has an outstanding note receivable related to the sale in the amount of $18,350,000 of which $17,065,500 is expected to be contributed to the System upon receipt based on the System's 93% beneficial interest in accordance with the Amended Agreement. Approximately $13,505,395 of the outstanding note receivable balance is to be paid upon completion of construction. The System's portion of the second installment of Sale Proceeds will be due upon the Permanent Financing Closing date of the Concord Property, which entitles the System to receive from the City its 93% beneficial interest of approximately $12,560,017. According to the Disposition, Development and Loan Agreement (DDLA), the Permanent Financing Closing date is scheduled to occur no later than March 31, 2022, but due to delays in obtaining an electrical permit the closing date has been extended to spring of 2023. The remaining note receivable balance of $4,844,605 will be due 55 years after the project completion date and bears interest at a fixed rate of 2.5% per year. If and when there are payments received by the City, 93% of the payment will be remitted to the System as additional contributions for a total of $4,505,483.

REQUIRED SUPPLEMENTARY INFORMATION

PASADENA
FIRE &
POLICE
RETIREMENT
SYSTEM

PASADENA FIRE & POLICE RETIREMENT SYSTEM
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

SCHEDULE OF CHANGES IN EMPLOYER'S NET PENSION LIABILITY/(ASSET)

Changes in Total Pension Liability
(In Thousands)

	Fiscal Year Ended								
	2022	**2021**	**2020**	**2019**	**2018**	**2017**	**2016**	**2015**	**2014**
Discount Rate	**5.25%**	**5.75%**	**5.75%**	**5.75%**	**5.75%**	**6.50%**	**6.50%**	**6.50%**	**6.00%**
Total Pension Libility (TPL):									
Service Cost	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Interest	6,947	7,335	7,600	7,781	8,832	9,272	9,644	9,162	10,185
Benefit Payments	(12,072)	(12,506)	(12,773)	(12,824)	(12,815)	(13,118)	(13,448)	(13,645)	(14,140)
Experience Losses (Gains)	164	(1,799)	438	1,862	1,261	(3,081)	(2,098)	(3,075)	(5,310)
Assumption Changes*	4,400	-	-	-	2,189	-	-	3,141	-
Benefit Changes	-	-	-	-	-	-	-	-	-
Net Change	(560)	(6,969)	(4,735)	(3,181)	(533)	(6,927)	(5,902)	(4,417)	(9,265)
Total Pension Liability at Beginning of Year	126,852	133,821	138,556	141,737	142,270	149,197	155,099	159,516	168,781
Total Pension Liability at End of Year (a)	$ 126,291	$ 126,852	$ 133,821	$ 138,556	$ 141,737	$ 142,270	$ 149,197	$ 155,099	$ 159,516

Changes in Fiduciary Net Position
(In Thousands)

	Fiscal Year Ended								
	2022	**2021**	**2020**	**2019**	**2018**	**2017**	**2016**	**2015**	**2014**
Fiduciary Net Position:									
Employer contributions	$ -	$ -	$ 23,137	$ -	$ -	$ -	$ -	$ -	$ 1,164
Member Contributions	-	-	-	-	-	-	-	-	-
Net Investment Income	(10,656)	22,354	3,394	5,923	6,656	12,514	49	5,683	21,303
Benefit Payments	(12,072)	(12,506)	(12,773)	(12,824)	(12,815)	(13,118)	(13,448)	(13,645)	(14,140)
Administrative Expenses	(343)	(327)	(321)	(257)	(274)	(300)	(301)	(273)	(296)
Net Change	(23,071)	9,521	13,437	(7,158)	(6,433)	(904)	(13,700)	(8,235)	8,031
Fiduciary Net Position at Beginning of Year	134,733	125,211	111,774	118,932	125,365	126,269	139,969	148,204	140,173
Fiduciary Net Position at End of Year (b)	$ 111,662	$ 134,733	$ 125,211	$ 111,774	$ 118,932	$ 125,365	$ 126,269	$ 139,969	$ 148,204
Net Pension Liability/(Asset) (a) - (b)	$ 14,629	$ (7,881)	$ 8,610	$ 26,782	$ 22,805	$ 16,905	$ 22,928	$ 15,130	$ 11,312

Source for pension liability is the June 30, 2022 GASBS 67 plan actuarial information prepared by System Actuary, Foster & Foster, Inc. GASB Statement No. 67 requires this information be reported for 10 years, or as many years as are available upon implementation.

** Assumption Changes for June 30, 2015, June 30, 2018 and June 30, 2022.*

SCHEDULE OF EMPLOYER'S NET PENSION LIABILITY/(ASSET) AND RELATED RATIOS

Net Pension Liability/(Asset)
(In Thousands)

Date	Discount Rate	Total Pension Liability (TPL)	Fiduciary Net Position (FNP)	Net Pension Liability (NPL)	FNP as a Percentage of TPL (FNP/TPL)	Covered Payroll	NPL %Pay
6/30/2022	5.25%	$ 126,291	$ 111,662	$ 14,629	88.4%	n/a	n/a
6/30/2021	5.75%	$ 126,852	$ 134,733	$ (7,881)	106.2%	n/a	n/a
6/30/2020	5.75%	$ 133,821	$ 125,211	$ 8,610	93.6%	n/a	n/a
6/30/2019	5.75%	$ 138,556	$ 111,774	$ 26,782	80.7%	n/a	n/a
6/30/2018	5.75%	$ 141,737	$ 118,932	$ 22,805	83.9%	n/a	n/a
6/30/2017	6.50%	$ 142,270	$ 125,365	$ 16,905	88.1%	n/a	n/a
6/30/2016	6.50%	$ 149,197	$ 126,269	$ 22,928	84.6%	n/a	n/a
6/30/2015	6.50%	$ 155,099	$ 139,969	$ 15,130	90.2%	n/a	n/a
6/30/2014	6.00%	$ 159,516	$ 148,204	$ 11,312	92.9%	n/a	n/a
6/30/2013	6.00%	$ 168,781	$ 140,173	$ 28,608	83.1%	n/a	n/a

Source for pension liability is the June 30, 2022 GASBS 67 plan actuarial information prepared by System Actuary, Foster & Foster, Inc.

SCHEDULE OF EMPLOYER CONTRIBUTIONS

Employer Contributions
(In Thousands)

Fiscal Year Ended	Contractually Required Contribution*	Actual Fiscal Year Contribution	Deficiency (Excess)	Covered Payroll	Contribution as % of Payroll
6/30/2022	$ -	$ -	$ -	n/a	n/a
6/30/2021	$ -	$ -	$ -	n/a	n/a
6/30/2020	$ 3,478	$ 23,137	$ (19,659)	n/a	n/a
6/30/2019	$ -	$ -	$ -	n/a	n/a
6/30/2018	$ -	$ -	$ -	n/a	n/a
6/30/2017	$ -	$ -	$ -	n/a	n/a
6/30/2016	$ -	$ -	$ -	n/a	n/a
6/30/2015	$ -	$ -	$ -	n/a	n/a
6/30/2014	$ 1,164	$ 1,164	$ -	n/a	n/a
6/30/2013	$ -	$ -	$ -	n/a	n/a

Source is the June 30, 2022 GASBS 67 plan actuarial information prepared by System Actuary, Foster & Foster, Inc. GASB Statement No. 67 requires this information be reported
**Contractually required contributions are based on Board-adopted assumptions for use in preparing the valuation, and as required by applicable Contribution Agreements with the City.*

SCHEDULE OF INVESTMENT RETURNS

Money-Weighted Rate of Return

	2022	2021	2020	2019	2018	2017	2016	2015	2014
Annual money-weighted rate of return, net of investment expense	-8.60%	19.00%	2.80%	5.50%	5.60%	10.70%	0.40%	3.70%	15.40%

Source is the June 30, 2022 Investment Performance Review provided by System investment advisor, Verus Investments.

GASB Statement No. 67 requires this information be reported for 10 years. Additional years will be displayed as information becomes available.

NOTE 1 – SCHEDULE OF CHANGES IN THE EMPLOYER NET PENSION LIABILITY/(ASSET)

The total pension liability contained in this section was provided by the System's actuary, Foster & Foster, Inc. (Bartel Associates, LLC prior to 2022). The Net Pension Liability/(Asset) is measured as the Total Pension Liability less the amount of the Fiduciary Net Position of the System.

NOTE 2 – SCHEDULE OF EMPLOYER CONTRIBUTIONS

The required employer contribution and percent of those contributions actually made are presented in this section.

The System's funding mechanism was updated on March 18, 1999, when the System entered into Contribution Agreement No. 16,900 ("Agreement No. 16,900") with the City. As a result of this agreement, the City made a contribution of $100,000,000 to the System on August 5, 1999 and agreed to make supplemental contributions to the System when needed. Per Agreement No. 16,900, the System was considered to meet minimum funding requirements for the year ended June 30, 2001, if the funded percentage exceeded 70%. As per the agreement, the required minimum funded percentage increases by 1/2% each year until it reaches 80% in the year ended June 30, 2021. Thereafter it may, but need not, be changed by the System.

On October 20, 2011, the Board approved Amended and Restated Agreement No. 20,823 ("Agreement No. 20,823"). Under this new agreement, the City's minimum funding percentage schedule and reimbursement cap in Agreement No. 16,900 carried forward, and the City agreed to provide a contribution of $46,600,000 to the System through the issuance of pension obligation bonds. Agreement No. 20,823 provided that the annual required supplemental contribution would be actuarially calculated using an interest assumption of 6% and an inflation rate of 3% beginning with the June 30, 2012 valuation. Pursuant to this agreement, future annual valuations after June 30, 2012, shall adopt an assumed interest rate and inflation assumption based on analysis performed by the System's actuary and after seeking input from the City and System's professional consultant. Agreements No. 16,900 and No. 20,823 state that if the minimum funding deficit is greater than $3,000,000 in a year, the City will pay $3,000,000 to the System. Any remaining amount necessary to reach the minimum funding percentage will be phased in over a five-year period; however, no annual supplemental payment may exceed a reimbursement cap measured by the prior year's payments for benefits other than the funded basic benefits.

The June 30, 2013 actuarial valuation determined there was a funding deficiency of $1,164,000 or 0.67% to meet the minimum funding requirement of 76.5%. The June 30, 2019 actuarial valuation determined there was a funding deficiency of $3,478,000 or 3.4% to meet the minimum funding requirement of 79.5%.

NOTE 2 – SCHEDULE OF EMPLOYER CONTRIBUTIONS (Continued)

The June 30, 2022 funding actuarial valuation determined the AVA Funded Percentage, calculated in accordance with Agreement No. 20,823 and Contribution Agreement No. 16,900, to be 87.8% as compared to 92.1% in the prior year. The AVA Funded Percentage decreased by 6.02% over what was originally projected for 2022 in the June 30, 2021 valuation (93.85%), and was primarily attributed to the following actuarial changes: 2.3% investment loss of $3,472,000 (investment return was lower than expected), COLA loss of $1,579,000 (COLA was higher than anticipated), demographic gains of $1,283,000 (more deaths than actuarially estimated), and benefit payments gain of $86,000 (higher than anticipated). As required by Contribution Agreement No. 16,900, if the AVA Funded Percentage was below the minimum funding percentage of 80% for fiscal year 2022, the City would have been required to reimburse the System in the following fiscal year subject to certain reimbursement limits. Based on the June 30, 2022 funding actuarial valuation, the funding deficiency was $0, or 0.0%, below the funding requirement of 80%. A required supplemental contribution is not owed to the System for the fiscal year ending June 30, 2023.

NOTE 3 – ACTUARIAL ASSUMPTIONS

The information presented in the required supplementary schedules was used in the June 30, 2022 actuarial valuation for purposes of determining the Actuarially Determined Contribution ("ADC"). The assumptions and methods used for the June 30, 2022, and all prior actuarial valuations were recommended by the System's actuary and adopted by the Board. Consistent with the requirements of GASB Statement No. 67, the factors impacting the ADC and any changes to the factors that significantly affect trends in the reported schedules must be disclosed for 10 years.

Actuarial Demographic Assumptions

Schedule of Changes to Actuarial Demographic Assumptions
For the Years Ended June 30, 2013 - 2022

Year Ended June 30	Mortality	Mortality Improvement
2022	CalPERS 2000-2019 Experience Study	Mortality Improvement Scale 80% Scale MP-2020
2018-2021	CalPERS 1997-2015 Experience Study	Mortality Improvement Scale MP-2017
2015-2017	CalPERS 1997-2011 Experience Study	Modified MP-2014, to converge to ultimate mortality improvement rates in 2022
2013-2014	CalPERS 1997-2007 Experience Study	Scale AA

NOTE 3 – ACTUARIAL ASSUMPTIONS (Continued)

Actuarial Demographic Assumptions (Continued)

Schedule of Changes to Actuarial Demographic Assumptions
For the Years Ended June 30, 2013 - 2022

Year Ended June 30	Retirees & Beneficiaries: Service	Disability	Beneficiaries*	Subtotal Retirees & Beneficiaries	Active Members	Total Members
2022	61	57	75	193	-	193
2021	67	63	49	179	-	179
2020	72	67	55	194	-	194
2019	74	71	59	204	-	204
2018	79	75	58	212	-	212
2017	82	79	56	217	-	217
2016	90	84	59	233	-	233
2015	96	86	55	237	-	237
2014	98	90	59	247	-	247
2013	106	92	59	257	-	257

**Alternative payee data for 23 Domestic Relations Order agreements provided separately from employee-retiree for first time in 6/30/22 valuation. Benefits for these alternative payees previously included in the corresponding retiree's benefits. All DRO agreements provide benefits to the alternative payees for the lifetime of the System's retiree.*

Actuarial Methods

Schedule of Actuarial Cost and Amortization Methods
For the Years Ended June 30, 2013 - 2022

Year Ended June 30	Actuarial Cost Method	Amortization Method	Remaining Amortization Period	Asset Valuation Method
2013-2022	Entry Age Normal Cost	Level Dollar Open Period	5-year	Investment gains and losses smoothed over 5-year fixed period

NOTE 3 – ACTUARIAL ASSUMPTIONS (Continued)

Actuarial Economic Assumptions

Schedule of Changes to Actuarial Economic Assumptions
For the Years Ended June 30, 2013 - 2022

Year Ended June 30	Discount Rate	Invest. Expenses	Admin. Expenses	Inflation	Cost of Living	Salary Increase	Employee Contrib. Rate	Notes
2022	4.75%	15 bp	50 bp	2.50%	4.00%	N/A	N/A	The funding discount rate was decreased to 4.75%, investment expenses to 15 bp, inflation to 2.50%, expected rate of return to 5.25% and 2% increase in the cost of living adjustment.
2021	5.25%	40 bp	50 bp	2.75%	2.00%	N/A	N/A	No changes made from 6-30-20 assumptions, with the exception of the 1% decrease in the cost of living adjustment.
2020	5.25%	40 bp	50 bp	2.75%	3.00%	N/A	N/A	No changes made from 6-30-19 assumptions, with the exception of the 1% decrease in the cost of living adjustment.
2019	5.25%	40 bp	50 bp	2.75%	4.00%	N/A	N/A	No changes made from 6-30-18 assumptions, with the exception of the 1% increase in the cost of living adjustment.
2018	5.25%	40 bp	50 bp	2.75%	3.00%	N/A	N/A	The funding discount rate was decreased to 5.25%, inflation to 2.75%, expected rate of return to 5.75% and 1% increase in the cost of living adjustment. The expected return changed due to change in Capital Market Assumptions. The model predicts that the Expected Long-Term Nominal Net Rate of Return (Rate of Return before factoring in inflation but after subtracting investment fees) is only estimated to be between 5.61% and 5.83%.
2017	6.00%	40 bp	50 bp	3.00%	2.00%	N/A	N/A	No changes made from 6-30-15 assumptions, with the exception of the 1% increase in the cost of living adjustment.
2016	6.00%	40 bp	50 bp	3.00%	1.00%	N/A	N/A	No changes made from 6-30-15 assumptions
2015	6.00%	40 bp	50 bp	3.00%	1.00%	N/A	N/A	Discount rate assumes no cash reserve and is net of Investment Expenses; Administrative Expenses are included in the City's contribution
2014	6.00%	40 bp	60 bp	3.00%	1.00%	N/A	N/A	The Discount Rate of 6.0% was evaluated and recommended by the actuary using the 6-30-14 target asset allocation, future asset allocation rebalanced to maintain cash reserve equal to expected benefits plus Admin Expenses less City Contribution, CalPERS investment advisors' 2013 capital market assumptions, and Investment Expenses of 40 bps (Admin Expenses are excluded from the Discount Rate)
2013	6.00%	40 bp	60 bp	3.00%	2.00%	N/A	N/A	The discount rate assumed the Trust would maintain a cash reserve equal to one year's benefit payments; Investment and Administrative Expenses are included in the Discount Rate

Sources are the Board-approved valuations, as prepared by Bartel Associates, LLC (June 30, 2013-2021) and Foster & Foster, Inc (June 30, 2022).

NOTE 3 – ACTUARIAL ASSUMPTIONS (Continued)

Actuarial Economic Assumptions

Schedule of Changes to Actuarial Economic Assumptions
Target Asset Allocation & Expected Long-Term Geometric Real Rates of Return
For the Years Ended June 30, 2013 - 2022

	Target Asset Allocation, Year Ended June 30									
Asset Class	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Domestic Equity - Large Cap	N/A	N/A	N/A	N/A	16%	16%	16%	16%	16%	16%
Domestic Equity - Small Cap	N/A	N/A	N/A	N/A	4%	4%	4%	4%	4%	4%
Total Domestic Equity	27%	22%	22%	20%	20%	20%	20%	20%	20%	20%
Foreign Equity	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
Fixed Income	30%	30%	33%	35%	20%	20%	25%	25%	25%	25%
TIPS	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Short-Term Investment-Grade Bonds	N/A	N/A	N/A	N/A	10%	10%	10%	10%	10%	10%
Bank Loans	N/A	5%	5%	5%	10%	10%	5%	5%	5%	5%
Alternative (Hedge Fund)	0.05	5%	5%	5%	5%	5%	5%	5%	N/A	N/A
Alternative (Risk Parity)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5%	5%
Real Estate	0.1	10%	10%	10%	10%	10%	10%	10%	10%	10%
Cash Equivalents	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%
Total Portfolio	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

	Expected Long-Term Geometric Real Rates of Return									
Asset Class	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Domestic Equity - Large Cap	N/A	N/A	N/A	N/A	N/A	4%	4.36%	4.36%	4.36%	3.77%
Domestic Equity - Small Cap	N/A	N/A	N/A	N/A	N/A	5%	5.18%	5.18%	5.18%	4.45%
Total Domestic Equity	5.35%	5.00%	5.00%	5.00%	5.00%	N/A	N/A	N/A	N/A	N/A
Foreign Equity	5.35%	5.00%	5.00%	5.00%	5.00%	4.60%	4.60%	4.60%	4.60%	4.41%
Fixed Income	1.55%	0.74%	0.74%	0.74%	0.74%	1.47%	1.47%	1.47%	1.47%	0.53%
TIPS	1.53%	0.20%	0.20%	0.20%	0.20%	1.29%	1.29%	1.29%	1.29%	-0.24%
Short-Term Investment-Grade Bonds	N/A	N/A	N/A	N/A	0.74%	1.26%	1.26%	1.26%	1.26%	0.05%
Bank Loans	N/A	0.74%	0.74%	0.74%	0.74%	3.10%	3.10%	3.10%	3.10%	1.64%
Alternative (Hedge Fund)	5.35%	3.14%	3.14%	3.14%	3.14%	2.79%	2.79%	2.79%	N/A	N/A
Alternative (Risk Parity)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.79%	3.38%
Real Estate	0.0383	4.25%	4.25%	4.25%	4.25%	3.04%	3.04%	3.04%	3.04%	3.81%
Cash Equivalents	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Inflation	3.00%	3.00%	3.00%	3.00%	3.00%	2.75%	2.75%	2.75%	2.75%	2.50%
Discount Rate	6.00%	6.00%	6.50%	6.50%	6.50%	5.75%	5.75%	5.75%	5.75%	5.25%

Sources are the Board-approved actuarial valuations, as prepared by Bartel Associates, LLC (June 30, 2013-2021) & Foster & Foster, Inc. (June 30, 2022).

For the June 30, 2013 valuation, Expected Rates of Return are adjusted capital market assumptions from CalPERS investment advisors' 2010 capital market assumptions study.

expenses; the expected rates of return are based on CalPERS investment advisors' 2013 capital market assumptions.

For the June 30, 2018-2021 valuations, the expected rates of return are based on CalPERS investment advisors' 2017 capital market assumptions.

For Domestic Equity, Bartel Associates, LLC started breaking out large and small cap for the target asset allocation in 2017 and for the expected long-term geometric real rates of return in 2018.

OTHER SUPPLEMENTARY INFORMATION

PASADENA
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ADDITIONS BY SOURCE AND DEDUCTIONS BY TYPE

ADDITIONS BY SOURCE
(In Thousands)

Fiscal Year	Employer Contributions	Net Investment Income (Loss)	Total
2022	$ -	$ (10,656)	$ (10,656)
2021	-	22,354	22,354
2020	23,137	3,394	26,531
2019	-	5,923	5,923
2018	-	6,656	6,656
2017	-	12,514	12,514
2016	-	49	49
2015	-	5,683	5,683
2014	1,164	21,303	22,467
2013	-	15,630	15,630

DEDUCTIONS BY TYPE
(In Thousands)

Fiscal Year	Benefits	Administrative Expenses	Total
2022	$ 12,072	$ 343	$ 12,415
2021	12,506	327	12,833
2020	12,773	321	13,094
2019	12,824	257	13,081
2018	12,815	274	13,089
2017	13,118	300	13,418
2016	13,448	301	13,749
2015	13,645	273	13,918
2014	14,140	296	14,436
2013	14,322	271	14,593

OTHER INFORMATION

PASADENA
FIRE &
POLICE
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SYSTEM

PASADENA FIRE & POLICE RETIREMENT SYSTEM
OTHER INFORMATION

COMPARATIVE INFORMATION FROM PRIOR FISCAL YEARS
INTEREST RATE RISK EFFECTIVE DURATION BY ASSET MANAGER (UNAUDITED)

MetWest Fixed Income Asset Manager
Effective Duration

June 30, 2022

Market Value	Duration	Benchmark	% Under/Over
$26,646,579	6.52 Years	6.44 Years	1.2%

June 30, 2021

Market Value	Duration	Benchmark	% Under/Over
$33,325,246	6.06 Years	6.58 Years	-7.9%

June 30, 2020

Market Value	Duration	Benchmark	% Under/Over
$28,338,102	5.41 Years	6.04 Years	-10.4%

June 30, 2019

Market Value	Duration	Benchmark	% Under/Over
$27,496,065	5.72 Years	5.73 Years	-0.2%

June 30, 2018

Market Value	Duration	Benchmark	% Under/Over
$23,701,251	6.12 Years	6.01 Years	2%

June 30, 2017

Market Value	Duration	Benchmark	% Under/Over
$24,131,769	5.62 Years	6.01 Years	-6%

June 30, 2016

Market Value	Duration	Benchmark	% Under/Over
$43,100,920	4.82 Years	5.47 Years	-12%

June 30, 2015

Market Value	Duration	Benchmark	% Under/Over
$45,285,057	4.99 Years	5.63 Years	-11%

June 30, 2014

Market Value	Duration	Benchmark	% Under/Over
$45,858,083	4.63 Years	5.60 Years	-17%

June 30, 2013

Market Value	Duration	Benchmark	% Under/Over
$43,690,404	4.57 Years	5.49 Years	-17%

Source is the June 30, 2013-2022 Investment Performance Reviews by asset manager MetWest.