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 SUPPLEMENTAL INFORMATION

FOR THE YEAR ENDED JUNE 30, 2016
(WITH COMPARATIVE TOTALS FOR THE YEAR ENDED JUNE 30, 2015)

PASADENA
FIRE &
POLICE
RETIREMENT
SYSTEM

PASADENA FIRE & POLICE RETIREMENT SYSTEM
FOR THE YEAR ENDED JUNE 30, 2016
(WITH COMPARATIVE TOTALS FOR THE YEAR ENDED JUNE 30, 2015)

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Pasadena Fire and Police Retirement System
Pasadena, California

Report on the Financial Statements

We have audited the accompanying statements of fiduciary net position of the Pasadena Fire and Police Retirement System (System) as of June 30, 2016, and the related statement of changes in fiduciary net position for the year then ended, and the related notes to the financial statements, which collectively comprise the System's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issues by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the System, as of June 30, 2016, and the changes in its fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Macias Gini & O'Connell LLP
777 S. Figueroa Street, Suite 2500
Los Angeles, CA 90017

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Emphasis of Matter

As discussed in Note 2 to the basic financial statements, effective July 1, 2015, the System adopted the provisions of Governmental Accounting Standards Board (GASB) Statement No. 72, *Fair Value Measurement and Application*. Our opinion is not modified with respect to this matter.

Other Matters

Prior-Year Comparative Information

The financial statements include partial prior-year comparative information. Such information does not 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 fiscal year ended June 30, 2015, from which such partial information was derived.

Required Supplementary Information

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

Other 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 and comparative information from prior fiscal years: interest rate risk, as listed in the table of contents, are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The accompanying schedule of additions by source and deductions by type 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 accompanying 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.

The comparative information from prior fiscal years: interest rate risk has not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on it.

Other Reporting Required by *Government Auditing Standards*

In accordance with Government Auditing Standards, we have also issued our report dated November 10, 2016 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 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 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
November 10, 2016

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The Pasadena Fire and Police Retirement System ("System" or "Plan") is a single-employer defined benefit pension plan governed by a Board of Retirement ("Board") under the provisions of the City of Pasadena ("City") Charter. Its operations have been reported as a Pension Trust Fund in the City's financial statements. The System is a closed, single employer, defined benefit pension plan that provides retirement, disability, and survivor benefits for eligible sworn safety employees of the City. The System serves the City's sworn employees hired prior to July 1, 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 ending June 30, 2016. This discussion and analysis should be read in conjunction with and is qualified in its entirety by the accompanying audited financial statements and footnotes which begin following this Management Discussion and Analysis. The financial statements, footnotes, and this discussion and analysis were prepared by management and are the responsibility of management.

Financial Highlights

The Plan ended fiscal year 2016 with $126,268,560 in fiduciary net position as of June 30, 2016, compared to $139,969,040 in fiduciary net position as of June 30, 2015. The decrease in net position by $13,700,480 from the prior period was attributed to expenses for benefits and administration outpacing net portfolio earnings. Earnings in the portfolio were 0.4% net of fees, and resulted in $48,819 in net investment income. Investment earnings were offset by $13,749,299 in withdrawals from the portfolio for benefits and administrative expenses. Although investment earnings of 0.4% were consistent with overall market conditions, performance was outpaced by the portfolio's benchmark earnings rate of 1.8%.

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 2016, a total of $13,850,000 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 City's net pension liability for the Plan increased from $15,130,000 on June 30, 2015 to $22,928,000 on June 30, 2016 due to decreases in Plan's Fiduciary Net Position caused by negative investment returns during 2016. As a result, the Plan's fiduciary net position as a percentage of the total pension liability decreased from 90.2% on June 30, 2015 to 84.6% on June 30, 2016.

Schedule of Net Pension Liability
(In Thousands)

Net Pension Liability	**Fiscal Year Ending** 6/30/2016	6/30/2015
Total Pension Liability	$ 149,197	$ 155,099
Plan Fiduciary Net Position	126,269	139,969
Net Pension Liability	22,928	15,130
Net Pension Liability Funded %	84.6%	90.2%

Source is the June 30, 2016 actuarial valuation prepared by System Actuary, Bartel Associates.

The June 30, 2016 actuarial valuation determined that the Actuarial Value of Assets ("AVA") decreased to $125.5 million, and the Actuarial Accrued Liability ("AAL") decreased to $155.8 million. Accordingly, the AVA Funded Percentage (which is the actuarially determined funding level used to calculate the City's required minimum contribution) increased slightly to 80.5% on June 30, 2016. The minimum required AVA Funded Percentage on June 30, 2016 is 78.0%. Thus, the required contribution from the City for fiscal year 2017 (due January 1, 2017) is $0 based on the June 30, 2016 actuarial valuation and Amended and Restated Contribution Agreement No. 20,823 ("Agreement No. 20,823").

Investment Performance Statement

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 Private 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.

Portfolio Changes as of June 30, 2016

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.

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. Funds are accumulated to meet these future obligations in the net position restricted for members' pension benefits in the Statement of Fiduciary Net Position. The total pension liability 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 total pension liability 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 net pension liability is measured as the total pension liability less the amount of the pension plan's fiduciary net position. The System has engaged Bartel Associates since July 2010 to serve as its independent actuary and to prepare the annual actuarial valuation. The most recent actuarial valuation was prepared as of June 30, 2016, and incorporated the requirements to comply with Governmental Accounting Standards Board ("GASB") Statement No. 67.

The June 30, 2016 actuarial valuation determined the AVA Funded Percentage, calculated in accordance with Agreement No. 20,823 and Contribution Agreement No. 16,900, to be 80.5% as compared to 80.2% in the prior year. The AVA Funded Percentage increased slightly (by 0.08%) in 2016 over what was originally projected for the year (originally 80.45%), and was attributed to the following actuarial changes: 1.6% COLA actuarial losses were offset by actuarial gains in the base mortality assumption of 0.5%, smoothed investment earnings of 1.0%, and benefit payments of 0.1%. As required by Contribution Agreement No. 16,900, if the AVA Funded Percentage is below the minimum funding percentage of 78.0% for fiscal year 2016, the City will reimburse the System in the following fiscal year subject to certain reimbursement limits. Based on the June 30, 2016 actuarial valuation, the funding deficiency was $0, or 0.0%, below the funding requirement of 78.0%. A required supplemental contribution is not owed to the System for the fiscal year ended June 30, 2016.

For funding purposes, the Plan had an approximate market value asset rate of return of -0.2% net of expenses on June 30, 2016, compared to 3.8% in the previous year, which was below the assumed rate of return of 6.0%. The rate of return as estimated by the actuary is net of investment and administrative expenses, and is different than the money-weighted return provided by the System's investment advisor.

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 supplemental 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 position. 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 Plan's net pension liability, 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 Supplemental Information* (OSI) that follows the RSI provides additional comparative information from prior years.

GASB Statement No. 67 Implementation

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, 2016 was used to determine the total pension liability.

Total Pension Liability ("TPL") for the Plan decreased from $155.1 million at June 30, 2015 to $149.2 million at June 30, 2016. Similarly, the Fiduciary Net Position ("FNP") at June 30, 2015 decreased from $140 million to $126 million on June 30, 2016. Thus, at June 30, 2015, the NPL for the Plan was $15.1 million, and its Funded Status was 90.2%. However, at June 30, 2016, the Net Pension Liability ("NPL") for the Plan was $22.9 million, and its Funded Status was 84.6%.

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

The Other Supplemental Information section includes the following two schedules:

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

GASB Statement No. 72 Implementation

In Fiscal Year 2016, the System adopted GASB Statement No. 72, entitled, Fair Value Measurement and Application ("GASB Statement No. 72"). GASB Statement No. 72 requires the System to use valuation techniques which are appropriate under the circumstances and are either a market approach, a cost approach or an income approach. GASB Statement No. 72 contains note disclosure requirements regarding the hierarchy of valuation inputs and valuation techniques that was used for the fair value measurements. All required disclosures were added to Note 3 in the notes to the basic financial statements.

Condensed Statement of Fiduciary Net Position

Condensed Statement of Fiduciary Net Position

	June 30, 2016	June 30, 2015	$ Change 2016/2015	% Change
	(In Thousands)			
Current Assets	$ 5,341	$ 7,089	$ (1,748)	-24.66%
Investments	125,536	138,206	(12,670)	-9.17%
Total Assets	130,877	145,295	(14,418)	-9.92%
Total Liabilities	4,608	5,326	(718)	-13.48%
Total Fiduciary Net Position	$ 126,269	$ 139,969	$ (13,700)	-9.79%

As of June 30, 2016 and 2015, the System had $126,268,560 and $139,969,040, respectively, in net position. The net position represents funds restricted for members' pension benefits. The total pension liability is not reported in the basic financial statements, but is disclosed in the Notes and in the RSI. Only current liabilities are reported on the Statement of Fiduciary Net Position.

Condensed Statement of Changes in Fiduciary Net Position

Condensed Statement of Changes in Fiduciary Net Position

	June 30, 2016 (In Thousands)	June 30, 2015 (In Thousands)	$ Change 2016/2015	% Change
Employer Contributions	$ -	$ -	$ -	0.00%
Net Investment Income	49	5,683	(5,634)	-99.14%
Total Additions	49	5,683	(5,634)	-99.14%
Benefit Payments	13,448	13,645	(197)	-1.44%
Administrative Expenses	302	273	29	10.62%
Total Deductions	13,750	13,918	(168)	-1.21%
Net Increase (Decrease)	$ (13,701)	$ (8,235)	$ (5,466)	66.38%

During the year ended June 30, 2016, the Plan's net position decreased by $13,700,480 due to the almost flat rate of return in the portfolio. Earnings for the year in the portfolio were 0.4% net of fees, compared to 3.7% net of fees in the prior year. Earnings for the year in Fixed Income (4.4% net of fees) and Core Real Estate (9.8% net of fees) were muted by the negative earnings in Domestic Equity (-0.4% net of fees) and International Equity (-14.2% net of fees). Equities were greatly impacted by the market volatility and general market instability related to Brexit. During the previous fiscal year, the Plan's net position decreased by $8,235,350 which resulted from total deductions outpacing portfolio earnings.

Deductions from plan net position consisted of benefits payments to beneficiaries and the plan's administration costs. Total deductions were $13,749,299 and $13,917,794 in fiscal year 2016 and 2015, respectively. Total deductions at June 30, 2016 reflect a net decrease of $168,495 compared to the prior year, which was primarily due to deaths of plan beneficiaries.

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.

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, N204
Pasadena, CA 91101

Respectfully submitted,

Jill Fosselman
Retirement Administrator

PASADENA FIRE & POLICE RETIREMENT SYSTEM
STATEMENT OF FIDUCIARY NET POSITION

JUNE 30, 2016
(WITH COMPARATIVE TOTALS FOR JUNE 30, 2015)

	2016	2015
Assets		
Cash and cash equivalents	$ 3,943,631	$ 6,469,469
Receivables:		
Pending trade sales	1,218,352	426,624
Interest	178,985	193,141
Total receivables	1,397,337	619,765
Investments, at fair value:		
Government and agencies	26,771,024	26,181,257
Fixed income mutual funds	4,548,518	4,342,250
Domestic corporate obligations	30,269,162	31,272,118
International corporate obligations	649,151	1,639,029
Real estate	17,843,493	19,145,181
Real estate investment trust (REIT)	145,174	207,577
Equity - Domestic	23,499,314	28,980,965
Equity - International	21,809,720	26,437,551
Total investments	125,535,556	138,205,928
Total assets	130,876,524	145,295,162
Liabilities and Net Position		
Accounts payable and accrued liabilities	67,281	92,597
Pending trades purchases	4,540,683	5,233,525
Total liabilities	4,607,964	5,326,122
Net position restricted for pensions	$ 126,268,560	$ 139,969,040

The accompanying notes are an integral part of these financial statements.

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

FOR THE YEAR ENDED JUNE 30, 2016
(WITH COMPARATIVE TOTALS FOR THE YEAR ENDED JUNE 30, 2015)

	2016	2015
Additions:		
Contributions:		
Employer	$ -	$ -
Net investment income:		
Net change in fair value of investments	(2,484,088)	3,085,142
Interest	1,385,469	2,059,075
Dividends	1,701,112	1,101,967
Gross investment income	602,493	6,246,184
Less investment expenses	(553,674)	(563,740)
Net investment income	48,819	5,682,444
Total additions	48,819	5,682,444
Deductions:		
Benefits paid to participants	13,447,666	13,644,833
Administrative expenses	301,633	272,961
Total deductions	13,749,299	13,917,794
Net decrease in net position	(13,700,480)	(8,235,350)
Net position restricted for pensions:		
Beginning of year	139,969,040	148,204,390
End of year	$ 126,268,560	$ 139,969,040

The accompanying notes are an integral part of these financial statements.

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 Board consists of five members, whom on June 30, 2016, were as follows:

Keith Jones, Chair
Peter Boyle, Vice Chair
John H. Brinsley, Board Member
Joe Milligan, Board Member
Terry Tornek, 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. 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. Once transferred to CalPERS, retirement benefits for all fire and police personnel employed thereafter are administered by CalPERS.

The System is a single-employer public employees' retirement system which 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, 2016, System membership consisted of 233 retirees and beneficiaries who receive benefits. The average age was 78.5 years and the average monthly benefit was $4,799. Since June 30, 2015, the plan experienced four deaths without a beneficiary, four deaths with a beneficiary, and four new beneficiaries for a net reduction of four participants. On June 30, 2016, total membership in the plan consisted of:

- 90 Service Retirees (average age 77.5, average monthly benefit $5,889)
- 84 Disability Retirees (average age 76.1, average monthly benefit $4,595)
- 59 Beneficiaries (average age 83.2, average monthly benefit $3,425)

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 as 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 2016 was an increase of 1%.

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. Member and employer contributions are recognized in the period in which the contributions are due pursuant to legal requirements and when the City has made a formal commitment to provide the contributions. 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 Cash Equivalents

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 Cash Equivalents (Continued)

Investments with City Treasury

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 investment in the Pool. The Pool is an external investment pool and is not registered with the Securities and Exchange Commission. At June 30, 2016, the Pool had a weighted average maturity of 2.01 years. The Pool is not rated. For further information regarding the Pool, refer to the City's Comprehensive Annual Financial Report.

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 restricted for use in the event of a major emergency or disaster.

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 net asset value. 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. The real property asset manager (Invesco) has 100% of the properties appraised on a quarterly basis by independent third-party appraisers. 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 USPAP, the Appraisal Standards Board and the Appraisal Foundation.

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 (Current) 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.

Effects of New Pronouncement

During the year ended June 30, 2016, the System adopted Government Accounting Standards Board Statement No. 72 ("GASB Statement No. 72"), Fair Value Measurement and Application.

GASB Statement No. 72 requires the System to use valuation techniques which are appropriate under the circumstances and are either a market approach, a cost approach or an income approach. GASB Statement No. 72 establishes a hierarchy of inputs used to measure fair value consisting of three levels. Level 1 inputs are quoted prices in active markets for identical assets or liabilities. Level 2 inputs are inputs, other than quoted prices included within Level 1, which are observable for the asset or liability, either directly or indirectly. Level 3 inputs are unobservable inputs for the asset or liabilities, which are typically based on an entity's own assumptions, as there is little, if any, related market activity. Investment in external government investment pools are not subject to reporting within the level hierarchy.

GASB Statement No. 72 also contains note disclosure requirements regarding the hierarchy of valuation inputs and valuation techniques that was used for the fair value measurements. Please refer to Note 3 for the details.

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Income Taxes

The Internal Revenue Service has ruled that plans such as the System qualify under Section 414(d) of the Internal Revenue Code and are not subject to tax under present income tax laws. On May 11, 2012, the Internal Revenue Service issued a favorable Tax Determination Letter to the System. Working in conjunction with the City Attorney to fulfil 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 and state income taxes under provisions of the Internal Revenue Code, Section 414, and the California Revenue and Taxation Code, Section 23701, respectively. The System's letter is valid through January 31, 2016.

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 Internal Revenue Code, the IRS found that the Plan is in compliance with the provisions of the Internal Revenue Code (no Plan document failures exist). The System received a favorable determination letter on September 30, 2016.

Reclassifications

Certain accounts presented in the 2015 financial statements have been reclassified to be consistent with the current years' presentation. Such reclassifications have no effect on the net position restricted for pensions and the end of the year or in fiduciary net position as previously reported.

Comparative Data

The financial statements 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 financial statements for the year ended June 30, 2015, from which the summarized information was derived.

NOTE 3 – CASH AND INVESTMENTS

Cash and Investments

Cash and investments on June 30, 2016 were held as follows:

Cash and Investments

	June 30, 2016
Unrestricted Pooled Cash	$ 5,425
Restricted Pooled Cash	1,250,000
Cash with Fiscal Agent	2,688,206
Investments - Held by Trustee	125,535,556
	$ 129,479,187

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. This prudent expert rule permits the Board to make investment allocation decisions and diversify investment holdings to reduce overall risk and increase returns. The prudent expert rule also permits the Board to establish an investment policy based on professional advice and counsel, and allows for the delegation of investment authority to professional investment managers.

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 bound 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")
- Private Real Estate
- Treasury Inflation Protected Securities

The Board established an Investment Performance Statement ("IPS") effective May 21, 2009, with adopted revisions on September 17, 2009, May 20, 2010, June 16, 2011, June 20, 2013, May 15, 2014, October 16, 2014, February 18, 2015, and April 20, 2016 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. The IPS encompasses the following asset classes and the asset allocation targets:

NOTE 3 – CASH AND INVESTMENTS (Continued)

Authorized Investments (Continued)

Investment Performance Statement
Asset Classes and Targets
As of June 30, 2016

Asset Class	Target Asset Allocation
Domestic Equity	
Large Cap Value	8%
Large Cap Growth	8%
Small Cap Core	4%
Total Domestic Equity	20%
Foreign Equity	20%
Private Real Estate	10%
Fixed Income	
Domestic Core Fixed Income	35%
Senior Bank Loans	5%
Liquid Alternative Investments	5%
Total Fixed Income	45%
Treasury Inflation Protected Securities (TIPS)	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 significant other observable inputs; and Level 3 inputs are significant unobservable inputs.

The following table presents a summary of the fair value hierarchy of the recurring fair value measurements of the System as of June 30, 2016:

NOTE 3 – CASH AND INVESTMENTS (Continued)

Fair Value and Fair Value Hierarchy of Investments (Continued)

		Fair Value Measurement Using			
Investments by fair value level	June 30, 2016	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Net Asset Value (NAV)
Debt Securities					
U.S. Treasury Securities (Government Bonds)	$ 12,597,679	$ 12,597,679	$ -	$ -	$ -
Government Mortgage Backed Securities	11,793,430	-	11,793,430	-	-
Commercial Mortgage-Backed securities	2,535,429	-	2,535,429	-	-
Gov't Issued Commercial Mortgage-Backed securities	520,559	-	520,559	-	-
Asset Backed securities	3,779,658	-	3,779,658	-	-
Non-Government Backed CMOs	2,856,095	-	2,856,095	-	-
Index Linked Government Bonds	1,732,145	-	1,732,145	-	-
Corporate Bonds	7,724,603	-	7,724,603	-	-
Corporate Bonds - REITS	145,174	-	145,174	-	-
Municipal Bonds	127,212	-	127,212	-	-
Mutual Funds Balanced	6,391,246	-	6,391,246	-	-
Mutual Funds Fixed Income	4,548,518	-	4,548,518	-	-
Total Debt Securities	54,751,748	12,597,679	42,154,069	-	-
Equity Securities					
"Consumer Discretionary" industry	913,164	913,164	-	-	-
"Consumer Staples" industry	407,656	407,656	-	-	-
"Energy" industry	68,129	68,129	-	-	-
"Financial" services industry	649,729	649,729	-	-	-
"Health Care" services industry	307,129	307,129	-	-	-
"Industrial" services industry	1,169,118	1,169,118	-	-	-
"Information Technology" services industry	994,029	994,029	-	-	-
"Materials" industry	213,081	213,081	-	-	-
Mutual Funds Equity	40,586,999	40,586,999	-	-	-
Total Equity Securities	45,309,034	45,309,034	-	-	-
Investments Measured at NAV					
Senior Bank Loans Secured Subscription Agreement	7,631,281	-	-	-	7,631,281
Real Estate Funds	17,843,493	-	-	-	17,843,493
Total Measured at NAV	25,474,774	-	-	-	25,474,774
Total Investments Measured at Fair Value	$ 125,535,556	$ 57,906,713	$ 42,154,069	$ -	$ 25,474,774

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. 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 of 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 total number of interest held by each individual investor making a redemption request to the total number 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.

NOTE 3 – CASH AND INVESTMENTS (Continued)

Fair Value and Fair Value Hierarchy of Investments (Continued)

The System's investment in the Senior Bank Loans Secured Subscription Agreement ("Trust Fund") is also 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 participations shall be permitted only on a withdrawal date, which is 15th of each month. A written notice of withdrawal request will need 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.

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. In comparison to June 30, 2015, the 2016 allocation reflects an increased allocation of 2% to Domestic Core Fixed Income, which was achieved through reducing the allocation to Large Cap Domestic Equity. 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

	6/30/2016	
Asset Class	**Target Asset Allocation**	**Expected Geometric Real Return***
Domestic Equity	20%	5.00%
Foreign Equity	20%	5.00%
Domestic Core Fixed Income	35%	0.74%
TIPS	5%	0.20%
Senior Bank Loans	5%	0.74%
Liquid Alternative Investments	5%	3.14%
Private Real Estate	10%	4.25%
	100%	
Inflation		3.00%

Source is the June 30, 2016 GASB 67 actuarial information prepared by System Actuary, Bartel Associates.

** 10-year geometric expected real rates of return from CalPERS' 2013 Capital Market Assumptions study.*

Rate of Return

For the year ended June 30, 2016, the annual money-weighted rate of return on the System's investments, net of investment expenses, was 0.4%. The money-weighted rate of return expresses investment performance, net of investment fees, 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, 2016, the System had nine (9) external investment managers and eleven (11) assets.

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, Standard and Poor's Rating Services ("S&P"), as of June 30, 2016, 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	Notes
AAA	$ 2,142,579	3.44%	AAA
AA	2,767,560	4.45%	AA,AA-,AA+
A	3,725,825	5.99%	A-, A, A+
BBB	4,402,253	7.07%	BBB,BBB-,BBB+
BB	129,487	0.21%	BB
B	310,623	0.50%	B,B+
CCC	526,448	0.85%	CCC
Total Securities with S&P Ratings	$ 14,004,775	22.50%	
Not Rated/Quality Rating N/A*	$ 21,589,268	34.69%	S&P rating not available
Not Rated/U.S. Government Guaranteed Securities**	12,313,988	19.79%	
Not Rated/U.S. Government Bonds***	14,329,824	23.02%	
Total Securities Not Rated/Quality Rating N/A	$ 48,233,080	77.50%	
TOTAL Fixed Income Securities	**$ 62,237,855**	**100.00%**	

** Not included are "cash holdings" for Short Term Investment Funds in the amount of $1,464,015, and Short Term Bills and Notes in the amount of $1,224,167. This category includes securities held in the TIPS, Liquid Alternatives, and Senior Bank Loans 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, 2016, the System was not exposed to such risk. The System does not have a formal policy for custodial credit risk.

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.

NOTE 3 – CASH AND INVESTMENTS (Continued)

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 fixed income 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 the fixed income account (excepting issues issued by or explicitly guaranteed by the U.S. government) should not exceed 5% of the total account fair market value.

Fiduciary Net Position ("FNP") on June 30, 2016 was $126,268,560. The System did not have any fixed income investment holdings that represent 5% or more of FNP, or more than 5% of total investments as of June 30, 2016.

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 their portfolio effective duration within +/- 20% of the benchmark, the Barclays Capital U.S. Aggregate Bond Index. See Other Supplemental Information, page 38, 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.

Information about the sensitivity of the fair values of the System's investments to market interest rate fluctuations is provided in the table on the following page that reports the average effective duration of the System's fixed income investments by investment type as of June 30, 2016:

Fixed Income
Effective Duration by Asset Type
As of June 30, 2016

Asset Type	Fair Value	Effective Duration (years)
Government Bonds	$ 12,597,679	5.89
Municipal Bonds	127,212	8.50
Corporate Bonds	7,724,603	8.70
Government Mortgage-Backed Securities	11,793,430	3.22
Government Issued Commercial Mortgage Backed	520,559	3.44
Commercial Mortgage Backed	2,535,429	3.76
Asset Backed Securities	3,779,658	0.60
Non-Government Backed CMOs	2,856,095	0.72
Index Linked Government Bonds	1,732,145	10.43
Inflation Protected Securities	4,548,518	8.40
Alternative Investments	7,631,281	2.55
Other Fixed Income*	6,391,246	N/A
Total Fixed Income	**$ 62,237,855**	

** Other Fixed Income includes assets held in Senior Bank Loans for which effective duration is unavailable.*

NOTE 3 – CASH AND INVESTMENTS (Continued)

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 following table reports the fair value of the System's investments that are highly sensitive to changes in interest rates:

Highly Sensitive Investments
As of June 30, 2016

Investment Type	Fair Value
Government Mortgage-Backed Securities	$ 11,793,430
Government Issued Commercial-Mortgage-Backed Securities	520,559
Asset-Backed Securities	3,779,658
Commercial Mortgage-Backed Securities	2,535,429
Non-Government-Backed Commercial Mortgage Obligations	2,856,095
Total Highly Sensitive Investments	**$ 21,485,171**

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, 2016, are as follows (note that all foreign assets are held in US Dollars):

NOTE 3 – CASH AND INVESTMENTS (Continued)

Foreign Currency Risk (Continued)

Foreign Currency Risk
As of June 30, 2016

Foreign Currency Type - Corporate Obligations	Fair Value in USD	% of Total Fair Value
Luxembourg	$ 146,598	0.12%
Australia	79,836	0.06%
United Kingdom	346,723	0.28%
Netherlands	75,994	0.06%
Total Foreign Currency (US Dollars)	$ 649,151	0.53%
Foreign Currency Type - Int'l Equities		
International Region	$ 21,809,720	17.46%
Total Foreign Currency (US Dollars)	$ 21,809,720	17.46%
Total (US Dollars)	**$ 22,458,871**	**17.98%**

As of June 30, 2016, the total amount in the portfolio held in the International Equity asset allocation space per the IPS totaled $21,809,720 (Dodge & Cox International Fund $10,365,070 and EuroPacific Growth Fund $11,444,649). This amount reflects 17.46% of the portfolio (the allocation target in the IPS is 20%), and is within the range identified in the IPS for the International Equity space.

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.

NOTE 4 – CONTRIBUTION INFORMATION (Continued)

Member Contributions (Continued)

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 2016 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 ending June 30, 2020. 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.

As of June 30, 2016, the funded percentage of the System, calculated in accordance with Agreement No. 20,823 and Agreement No. 16,900, was 80.5%. As provided by Contribution Agreement No. 16,900, if the funded percentage is below the minimum funding percentage of 78.0% for fiscal year 2016, the City will reimburse the System in the following fiscal year subject to certain reimbursement limits. Based on the June 30, 2016 actuarial valuation, the funding deficiency was $0, or 0%, below the funding requirement of 78.0% as of June 30, 2016. Thus, no required supplemental contribution is owed to the System by the City for the fiscal year ended June 30, 2016, on January 1, 2017.

NOTE 5 – NET PENSION LIABILITY

Net Pension Liability

The City's Net Pension Liability ("NPL") at June 30, 2016 was $22,928,000 which reflects Fiduciary Net Position ("FNP") as a percentage of total pension liability of 84.6%. At June 30, 2016, the components of the NPL were as follows:

Net Pension Liability
(In Thousands)

Net Pension Liability		**6/30/2016**
Discount Rate		6.50%
Total Pension Liability (TPL)	$	149,197
Fiduciary Net Position (FNP)		126,269
Net Pension Liability (NPL)	$	22,928
FNP as a Percentage of TPL		84.6%

Source is the June 30, 2016 plan actuarial information prepared by System Actuary, Bartel Associates.

The accounting discount rate of 6.5% was used to calculate NPL, which assumes no cash reserve is maintained for payment of pension benefits.

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 future employment, 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 18, 2016, the Board accepted the recommended assumptions (that were concurred with by City Treasury and the System's Investment Advisor) for use in the preparation of the actuarial valuation for the fiscal year ending June 30, 2016. The Total Pension Liability ("TPL") was determined by the actuarial valuation performed as of June 30, 2016, using the following actuarial assumptions:

NOTE 5 – NET PENSION LIABILITY (Continued)

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

Key Methods and Assumptions Used in Valuation of Total Pension Liability

Valuation Date/Measurement Date	June 30, 2016	
Geometric Real Rates of Return	Based on the CalPERS 2013 10-year Expected Geometric Returns	
	Domestic Equity	5.00%
	Global Equity	5.00%
	Fixed Income	0.74%
	Bank Loans	0.74%
	TIPS	0.20%
	Hedge Funds	3.14%
	Real Estate	4.25%
Number of Participants	Retirees & Beneficiaries	233
	Vested Terminations	0
	Actives	0
	Total Participants	233
Actuarial Assumptions	*Discount Rate: 6.50%	
	Salary Scale: No active employees	
	Cost of Living: 3.00%	
Mortality	CalPERS 1997-2011 Experience Study, Modified MP-2014	

Source is the June 30, 2016 GASB 67 actuarial information prepared by System Actuary, Bartel Associates.

**Discount Rate reflects assumed investment expenses of 40bp.*

Discount Rate

The discount rate of 6.5% was selected by the System actuary and approved by the Board to measure the June 30, 2016 Total Pension Liability for accounting purposes. The discount rate is the expected real long-term rate of return, plus the inflation assumption of 3%, less assumed investment expenses of 40 basis points. Based on the assumptions, the Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments. Therefore, as of June 30, 2016, the long-term expected rate of return on Plan investments of 6.5% was applied to all periods of projected benefit payments to determine the total pension liability.

NOTE 5 – NET PENSION LIABILITY (Continued)

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 6.5% to 5.5%, revealed an increase in the NPL by $13,801,000 to a total NPL of $36,729,000. Conversely, increasing the discount rate by 1%, from 6.5% to 7.5% revealed a corresponding decrease in the NPL of $11,822,000 to total NPL of $11,106,000 on June 30, 2016.

Sensitivity of Net Pension Libility (NPL) to Changes in the Discount Rate

		6/30/2016
Discount Rate		6.5%
Net Pension Liability (NPL)	$	22,928
Discount Rate (-1%)		5.5%
Net Pension Liability (NPL)		36,729
Net Increase in NPL		***13,801***
Discount Rate (+1%)		7.5%
Net Pension Liability (NPL)		11,106
Net Decrease in NPL		***(11,822)***

Source is the June 30, 2016 GASB 67 actuarial information prepared by System Actuary, Bartel Associates.

NOTE 6 – ADMINISTRATIVE COSTS

The costs to administer the System are paid by the System. Administrative expenses were $301,633 for 2016. Administrative expenses increased by a net amount of $28,672 in 2016 over the 2015 amount of $272,961. The overall net increase was due to an unplanned cost of $5,000 for the investment advisor to review custodial bank proposals, increase in admin personnel of $16,600 (due to COLA, benefits, and CalPERS increases), and $24,000 in higher costs associated with the financial audit than in the prior fiscal years. These increases were offset by approximately $20,000 in savings in custodial fees that were realized by changing custodial banks.

NOTE 7 – CONCORD SENIOR HOUSING

The City Board of Directors adopted Resolution No. 6179 at its July 18, 1989 meeting assigning a 93% beneficial interest in the Concord property at 275 E. Cordova, Pasadena, 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 is currently used for federally subsidized housing and is 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.

Given the significant uncertainties surrounding the property, including the value of the assignment of "beneficial interest," the ability of the City to collect ground lease rent from residual receipts, and permitted future use of the property by the City, the System's interest in this asset has historically been carried at a zero value.

In August 2012, the System was notified by the City that three payments of ground lease rent had been received by the City in the total amount of $520,000 for fiscal years 2009-2012 from Retirement Housing Foundation (RHF), which is the operator of the Concord property. The System worked with HUD and the City's Housing Department to obtain HUD's approval of the historical rent payments made by RHF. In January 2014, HUD provided its approval of these rents and the $520,000 received by the City was transferred to the System. The proceeds were recorded in the June 30, 2014 financial statements in other income in the Statement of Changes in Fiduciary Net Position.

Going forward, based on the regulatory agreement between HUD and RHF, as well as the ground lease agreement between the City and RHF, the System is entitled to receive up to $130,000 annually from the operator of the Concord property for ground lease rent, payable only through residual receipts, through 2031. In addition, unpaid rent is to accrue as a liability, and interest on the unpaid rent is to accrue as a liability at 8.5% as defined in the lease agreement between the City and RHF.

Discussions are currently ongoing between the City and a prospective buyer regarding the potential sale of the property, which may impact the System's beneficial interest in the property and financial interest in ground lease rent. As of the July 31, 2016 audited financial statements for the Concord property, a total of $2,553,336 was booked as a liability for past due rent, and $2,998,769 was booked as a liability for interest on the past due rent. However, given the uncertainties surrounding this property, potential proceeds will be treated as a gain contingency and recorded as revenue when received.

REQUIRED SUPPLEMENTARY INFORMATION

PASADENA
FIRE & POLICE
RETIREMENT
SYSTEM

SCHEDULE OF CHANGES IN EMPLOYER'S NET PENSION LIABILITY

Changes in Total Pension Liability
(In Thousands)

	2015/2016	2014/2015	2013/2014
Discount Rate	6.50%	6.50%	6.00%
Total Pension Libility (TPL):			
Service Cost	$ -	$ -	$ -
Interest	9,644	9,162	10,185
Benefit Payments	(13,448)	(13,645)	(14,140)
Experience Losses (Gains)	(2,098)	(3,075)	(5,310)
Assumption Changes*	-	3,141	-
Benefit Changes	-	-	-
Net Change	(5,902)	(4,417)	(9,265)
Total Pension Liability at Beginning of Year	155,099	159,516	168,781
Total Pension Liability at End of Year (a)	$ 149,197	$ 155,099	$ 159,516

Changes in Fiduciary Net Position
(In Thousands)

	2015/2016	2014/2015	2013/2014
Fiduciary Net Position:			
Employer contributions	$ -	$ -	$ 1,164
Member Contributions	-	-	-
Net Investment Income	49	5,683	21,303
Benefit Payments	(13,448)	(13,645)	(14,140)
Administrative Expenses	(301)	(273)	(296)
Net Change	(13,700)	(8,235)	8,031
Fiduciary Net Position at Beginning of Year	139,969	148,204	140,173
Fiduciary Net Position at End of Year (b)	$ 126,269	$ 139,969	$ 148,204
Net Pension Liability (a) - (b)	$ 22,928	$ 15,130	$ 11,312

Source is the June 30, 2016 GASB 67 actuarial information prepared by System Actuary, Bartel Associates. GASB Statements No. 67 & 68 require this information be reported for 10 years, or as many years as are available upon implementation.

** June 30, 2015 Assumption Changes of $1,895,000 for change in base mortality rates, $8,301,000 for change in mortality improvement scale, and ($7,055,000) for change in the discount rate.*

SCHEDULE OF EMPLOYER'S NET PENSION LIABILITY AND RELATED RATIOS

Net Pension Liability
(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
6/30/2016	6.5%	$ 149,197	$ 126,269	$ 22,928	84.6%	n/a	n/a
6/30/2015	6.5%	155,099	139,969	15,130	90.2%	n/a	n/a
6/30/2014	6.0%	159,516	148,204	11,312	92.9%	n/a	n/a
6/30/2013	6.0%	168,781	140,173	28,608	83.1%	n/a	n/a

Source is the June 30, 2016 GASB 67 actuarial information prepared by System Actuary, Bartel Associates.
GASB Statements No. 67 & 68 require this information be reported for 10 years or as many years as are available upon implementation.

SCHEDULE OF EMPLOYER CONTRIBUTIONS

Employeer Contributions
(In Thousands)

Fiscal Year Ending	Actuarially Determined Contribution*	Actual Fiscal Year Contribution	Deficiency (Excess)	Covered Payroll	Contribution as % of Payroll
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
6/30/2012	9,079	46,600	(37,521)	n/a	n/a
6/30/2011	8,036	8,036	-	n/a	n/a
6/30/2010	4,982	4,982	-	n/a	n/a
6/30/2009	956	956	-	n/a	n/a
6/30/2008	3,194	3,194	-	n/a	n/a
6/30/2007	3,839	3,839	-	n/a	n/a

Source is the June 30, 2016 actuarial valuation prepared by System Actuary, Bartel Associates.
GASB Statement No. 67 requires this information be reported for 10 years.
** Actuarially determined contribution based on Board-adopted assumptions for use in the preparing the valuation, and as required by applicable Contribution Agreements with the City.*

SCHEDULE OF INVESTMENT RETURNS

Money-Weighted Rate of Return

	2016	2015	2014
Annual money-weighted rate of return, net of investment expense	0.4%	3.7%	15.4%

Source is the June 30, 2016 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 they become available.

NOTE 1 – SCHEDULE OF CHANGES IN THE EMPLOYER NET PENSION LIABILITY

The total liability contained in this section was provided by the System's actuary, Bartel Associates. The Net Pension Liability 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.

NOTE 3 – ACTUARIAL ASSUMPTIONS

The information presented in the required supplementary schedules was used in the June 30, 2016 actuarial valuation for purposes of determining the Actuarially Determined Contribution ("ADC"). The assumptions and methods used for the June 30, 2016 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, 2007 - 2016

Year Ended June 30	Mortality	Mortality Improvement
2015-2016	CalPERS 1997-2011 Experience Study	Modified MP-2014, to converge to ultimate mortality improvement rates in 2022
2012-2014	CalPERS 1997-2007 Experience Study	Scale AA
2007-2011	Service Retirement & Spouses 1983 GAM set back 2 years; Disability Retirement 1981 Safety Disability set back 6 years	N/A

NOTE 3 – ACTUARIAL ASSUMPTIONS (Continued)

Actuarial Demographic Assumptions (Continued)

Schedule of Changes to Actuarial Demographic Assumptions
For the Years Ended June 30, 2007 - 2016

	Retirees & Beneficiaries					
Year Ended June 30	Service	Disability	Beneficiaries	Subtotal Retirees & Beneficiaries	Active Members	Total Members
2016	90	84	59	233	0	233
2015	96	86	55	*237*	0	237
2014	98	90	59	*247*	0	247
2013	106	92	59	*257*	0	257
2012	109	98	55	*262*	0	262
2011	116	101	52	*269*	0	269
2010	118	105	52	*275*	0	275
2009	123	111	56	*290*	0	290
2008	128	114	56	*298*	1	299
2007	133	116	58	*307*	1	308

The last active member retired during the year ended June 30, 2008.
2007-2009 included one beneficiary with "1919" COLA benefits, which was 33.3% of the salary increase given to active members at employment level at which the member retired.

Actuarial Methods

Schedule of Actuarial Cost and Amoritzation Methods
For the Years Ended June 30, 2007 - 2016

Year Ended June 30	Actuarial Cost Method	Amoritization Method	Amoritization Period	Asset Valuation Method
2007-2016	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, 2007 - 2016

Year Ended June 30	Discount Rate	Invest. Expenses	Admin. Expenses	Inflation	Cost of Living	Salary Increase	Employee Contrib. Rate	Notes
2016	6.0%	40 bp	50 bp	3.0%	1%	N/A	N/A	No changes made from 6-30-15 assumptions
2015	6.0%	40 bp	50 bp	3.0%	1%	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	6.0%	40 bp	60 bp	3.0%	1%	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 (no offset for Admin Expenses)
2013	6.0%	40 bp	60 bp	3.0%	2%	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
2012	6.0%	40 bp	60 bp	3.0%	3%	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
2011	6.0%	40 bp	60 bp	3.0%	1%	N/A	N/A	Contribution Agreement No. 20,823 Established the Discount Rate of 6.0% and Inflation of 3.0% for the 6-30-11 valuation; Discount Rate was developed using the 6-30-11 target asset allocation, CalPERS investment advisors' 2010 capital market assumptions, investment expenses of 40 bp, and average long-term admin expenses of 60 bps
2010	8.0%			3.8%	-1%	N/A	N/A	
2009	8.0%			3.8%	4%	N/A	N/A	
2008	8.0%			3.8%	3%	5.5%	8.0%	
2007	8.0%			3.9%	4%	5.4%	8.0%	

Sources are the Board-approved actuarial valuations, as prepared by Public Pension Professionals (June 30, 2007-2009) and by Bartel Associates (June 30, 2010-2016).
June 30, 2007-2009 the Discount and Inflation Rates were the averages of the '37 Act Counties.
Beginning with the June 30, 2009 valuation, all members were retired; salary increase rates and employee contribution rates were N/A.

NOTE 3 – ACTUARIAL ASSUMPTIONS (Continued)

Actuarial Economic Assumptions (Continued)

Schedule of Changes to Actuarial Economic Assumptions
Target Asset Allocation & Expected Long-Term Geometric Real Rates of Return
For the Years Ended June 30, 2007 - 2016

	Target Asset Allocation, Year Ended June 30									
Asset Class	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
US Stocks	50%	50%	40%	40%	32%	32%	27%	22%	22%	20%
Foreign Stocks	10%	10%	12%	12%	20%	20%	20%	20%	20%	20%
Fixed Income	30%	30%	30%	30%	30%	30%	30%	30%	33%	35%
TIPS	N/A	N/A	5%	5%	5%	5%	5%	5%	5%	5%
Bank Loans	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5%	5%	5%
Hedge Funds (Liquid Alternatives)	N/A	N/A	N/A	N/A	N/A	N/A	5%	5%	5%	5%
Real Estate	10%	10%	8%	8%	10%	10%	10%	10%	10%	10%
Cash Equivalents	N/A	N/A	5%	5%	3%	3%	3%	3%	0%	0%
Total Portfolio	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

	Expected Long-Term Geometric Real Rates of Return									
Asset Class	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
US Stocks				7.30%	5.50%	5.50%	5.35%	5.00%	5.00%	5.00%
Foreign Stocks				7.80%	5.50%	5.50%	5.35%	5.00%	5.00%	5.00%
Fixed Income				2.00%	1.60%	1.60%	1.55%	0.74%	0.74%	0.74%
TIPS				2.00%	1.60%	1.60%	1.53%	0.20%	0.20%	0.20%
Bank Loans				N/A	N/A	N/A	N/A	0.74%	0.74%	0.74%
Hedge Funds (Liquid Alternatives)				9.40%	5.50%	5.50%	5.35%	3.14%	3.14%	3.14%
Real Estate				5.90%	4.10%	4.10%	3.83%	4.25%	4.25%	4.25%
Cash Equivalents				0.70%	0.50%	0.50%	0.45%	0.00%	0.00%	0.00%
Inflation	3.90%	3.80%	3.80%	3.80%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Discount Rate	8.0%	8.0%	8.0%	8.0%	6.00%	6.00%	6.00%	6.00%	6.50%	6.50%

Sources are the Board-approved actuarial valuations, as prepared by Public Pension Professionals (June 30, 2007-2009) and by Bartel Associates (June 30, 2010-2016).

June 30, 2007-2009 the Discount and Inflation Rates were the averages of the '37 Act Counties.

June 30, 2010 Expected Real Rates of Return are nominal rates less an inflation assumption of 2.6% (as provided by FPRS' investment consultant).

June 30, 2011 Consistent with Agreement No. 20,823, the Discount and Inflation Rates were set at 6.0% and 3.0%, respectively; in future valuations, these rates could be changed annually upon the recommendation of the actuary, and after consultation with the investment advisor and City.

June 30, 2013 expected rates of return are adjusted capital market assumptions from CalPERS investment advisors' 2010 capital market assumptions study.

June 30, 2015-2016 Discount Rate assumes no cash reserve and is net of investment expenses; the expected rates of return are based on CalPERS investment advisors' 2013 capital market assumptions.

OTHER SUPPLEMENTAL INFORMATION

PASADENA
FIRE &
POLICE
RETIREMENT
SYSTEM

ADDITIONS BY SOURCE AND DEDUCTIONS BY TYPE

ADDITIONS BY SOURCE
(In Thousands)

Fiscal Year	Employee Contributions	Employer Contributions	Net Investment Income (Loss)	Total
2016	$ -	$ -	$ 49	$ 49
2015	-	-	5,682	5,682
2014	-	1,164	21,304	22,468
2013	-	-	15,630	15,630
2012	-	46,600	2,036	48,636
2011	-	8,036	19,605	27,641
2010	-	4,982	14,946	19,928
2009	24	956	(23,626)	(22,646)
2008	24	3,194	(10,399)	(7,181)
2007	20	3,839	21,851	25,710

DEDUCTIONS BY TYPE
(In Thousands)

Fiscal Year	Benefits	Administrative Expenses	Total
2016	$ 13,448	$ 301	$ 13,749
2015	13,645	273	13,918
2014	14,140	296	14,436
2013	14,322	271	14,593
2012	14,148	287	14,435
2011	14,382	242	14,624
2010	14,975	246	15,221
2009	14,898	211	15,109
2008	14,864	301	15,165
2007	14,572	257	14,829

PASADENA FIRE & POLICE RETIREMENT SYSTEM
OTHER SUPPLEMENTAL 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, 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%

June 30, 2012

Market Value	Duration	Benchmark	% Under/Over
$47,991,530	4.16 Years	5.07 Years	-18%

Source is the June 30, 2012, 2013, 2014, 2015, and 2016 Investment Performance Reviews by asset manager MetWest.