



2018-19

Comprehensive Annual Financial Report

Fiscal Year Ended June 30, 2019

Working for You

California Public Employees' Retirement System
A Component Unit of the State of California



This page intentionally left blank.

COMPREHENSIVE ANNUAL FINANCIAL REPORT

Fiscal Year Ended June 30, 2019

Prepared through the joint efforts of CalPERS team members.

Available online at www.calpers.ca.gov



California Public Employees' Retirement System
A Component Unit of the State of California

This page intentionally left blank.

2018-19 IN NUMBERS

Where We Stand



\$373 billion

Net position (PERF)



6.7%

Net rate of return (PERF)



2 million+

members



2,890

Contracted employers



1.5 million

Total covered lives (health)



70.2%

Funded (as of June 30, 2018) (PERF)



712,000+

Retirees & beneficiaries



\$33.9 billion

Invested in California based companies & projects



\$24.2 billion

Annual pension benefit payments (PERF)



\$23.5 billion

Economic activity generated by California pension payments (FY 2017-18)

This page intentionally left blank.

Table of Contents

Introductory Section	1	Actuarial Section	115
Professional Awards	2	Actuarial Certifications	116
Chief Executive Officer's Letter of Transmittal	3	Actuarial Methods & Assumptions	118
About CalPERS	7	Summary of Funding Progress	121
Board of Administration	10	Exhibit A: Funding Progress – Unfunded Liability & Funded Ratios ...	122
Organizational Chart – Executive Team	12	Exhibit B: Funding Progress – Solvency Test	123
Consultant & Professional Services	13	Exhibit C: Sample Pay Increase Assumptions for Individual Members	125
		Exhibit D: Sample Non-Economic Assumptions	126
		Exhibit E: Single Life Retirement Values	135
Financial Section	15	Exhibit F: Schedule of Active Member Valuation Data	135
Independent Auditor's Report	16	Exhibit G: Members in Valuation	136
Management's Discussion & Analysis (MD&A)	19	Exhibit H: Schedule of Retirees & Beneficiaries Added to and Removed from Rolls	139
		Exhibit I: Analysis of Financial Experience	140
Financial Section: Basic Financial Statements	39	Statistical Section	145
Statement of Fiduciary Net Position – Fiduciary Funds	40	Introduction	146
Statement of Changes in Fiduciary Net Position – Fiduciary Funds ...	42	Changes in Fiduciary Net Position – Retirement Programs	146
Statement of Net Position – Proprietary Funds	44	Changes in Fiduciary Net Position – OPEB Plan	149
Statement of Revenues, Expenses, and Changes in Net Position – Proprietary Funds	45	Changes in Fiduciary Net Position – Custodial Funds	150
Statement of Cash Flows – Proprietary Funds	46	Public Employees' Retirement System Membership & Retirement Data	151
Notes to the Basic Financial Statements	47	Public Employees' Retirement Fund Program Data	153
		Public Agency Employers	162
Financial Section: Required Supplementary Information	75	Legislators' Retirement System Membership & Retirement Data	180
Schedules of Changes in Net Pension Liability/(Asset) and Related Ratios	76	Legislators' Retirement System Program Data	181
Schedules of Plan Contributions	82	Judges' Retirement System Membership & Retirement Data	184
Schedule of Investment Returns	84	Judges' Retirement System Program Data	185
Schedule of Claims Development Information	85	Judges' Retirement System II Membership & Retirement Data	188
		Judges' Retirement System II Program Data	189
Financial Section: Other Supplementary Information	87	Statistical Section: Other Programs	193
Administrative Expenses – All Funds	88	Health Care Fund	194
Investment Expenses – Investment Management Fees	89	Contingency Reserve Fund	195
Investment Expenses – Performance Fees	92	Long-Term Care Fund	196
Investment Expenses – Other Investment Expenses	93	Health Benefits Program Data	197
Consultant and Professional Services Expenses – All Funds	96	Defined Contribution Plans	205
		Long-Term Care Program Data	206
Investment Section	99	Index of Tables, Charts & Lists	207
Chief Investment Officer's Letter	100	Glossary of Acronyms	214
Summary of Investments – PERF	101		
Portfolio Comparisons – PERF	101		
Asset Allocation – PERF	102		
Portfolio of California Investments at Fair Value – PERF	102		
Largest Stock & Bond Holdings at Fair Value – PERF	103		
Schedule of Commissions & Fees	104		
Private Equity Management Fees & Profit Sharing – PERF	106		
Investment Performance – LRF	111		
Investment Performance – JRF II	111		
Investment Performance – CERBTF	112		
Investment Performance – HCF	113		
Investment Performance – LTCF	113		

This page intentionally left blank.

INTRODUCTORY SECTION

- 2 Professional Awards
- 3 Chief Executive Officer's Letter of Transmittal
- 7 About CalPERS
- 10 Board of Administration
- 12 Organizational Chart – Executive Team
- 13 Consultant & Professional Services



\$373 Billion
Net position (PERF)

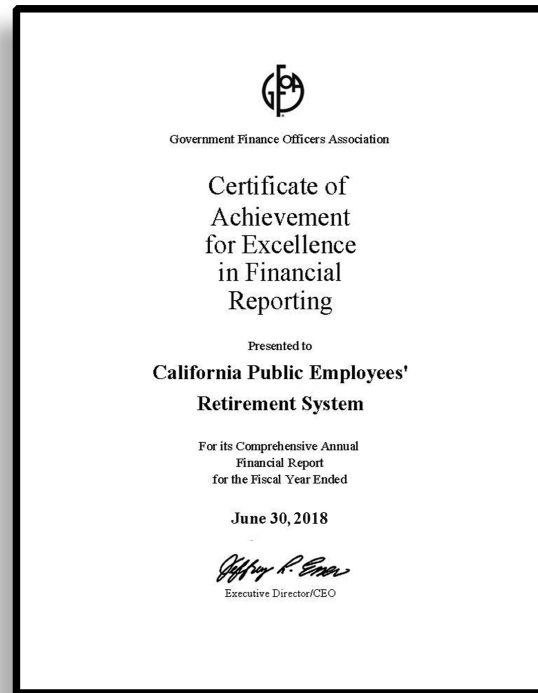
We are on a **prudent and sustainable course to strengthen the fund and achieve our goals for the next decade.**

Introductory Section

PROFESSIONAL AWARDS

CERTIFICATE OF ACHIEVEMENT FOR EXCELLENCE IN FINANCIAL REPORTING

The Government Finance Officers Association of the United States and Canada awarded a Certificate of Achievement for Excellence in Financial Reporting to CalPERS for our Comprehensive Annual Financial Report for the fiscal year ended June 30, 2018. This was the 23rd year that CalPERS has achieved this prestigious award. To be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized comprehensive annual financial report that satisfies both generally accepted accounting principles and applicable legal requirements. We believe our current Comprehensive Annual Financial Report continues to meet the Certificate of Achievement Program's requirements.



PUBLIC PENSION STANDARDS AWARD

The Public Pension Coordinating Council awarded a Public Pension Standards Award for Funding and Administration to CalPERS for the fiscal year ended June 30, 2019. This is the 17th consecutive year that CalPERS has achieved this prestigious award. In order to be awarded a Public Pension Standards Award, a public pension program must meet professional standards for plan design and administration as set forth in the Public Pension Standards. A Public Pension Standards Award is valid for a period of one year.



CHIEF EXECUTIVE OFFICER'S LETTER OF TRANSMITTAL



Marcie Frost
Chief Executive Officer

November 21, 2019

Members of the CalPERS Board of Administration:

I am pleased to present the California Public Employees' Retirement System (CalPERS or the System) Comprehensive Annual Financial Report (CAFR) for the fiscal year ended June 30, 2019.

This past year we saw signs of solid progress for the Public Employees' Retirement Fund (PERF) as we continue on a path to improve our funded status. Recent decisions by the CalPERS Board of Administration (the Board) have put us on a prudent and sustainable course to strengthen the fund and achieve our goals for years to come.

While the financial markets were volatile over the fiscal year, market growth boosted the net position of the PERF. It increased by more than \$18 billion and stood at nearly \$373 billion as of June 30, 2019.

Despite challenges, our 2018-19 fiscal year investment return was 6.7 percent, just below our 7.0 percent target rate of return. Strong performance from our fixed income program generated a 9.6 percent net return, while private equity and public equity also performed well, with net returns of 7.7 percent and 6.1 percent, respectively.

We also experienced two additional payments from the State, which puts us in a better position to manage liquidity and moves the needle on our funded status. In Fiscal Year 2017-18, a \$6 billion payment went to pay state employer contributions. For Fiscal Year 2019-20, another \$2.5 billion payment will be made, with another \$500 million over the next three fiscal years. Additionally, a \$904 million payment will go towards school employer contributions. In total, that's nearly an additional \$10 billion that will pay down the unfunded liabilities in advance for both the state and school plans and improve the fund's liquidity.

During the fiscal year, we named a globally respected investor as our new Chief Investment Officer. Yu (Ben) Meng

joined us in January 2019 and has taken significant steps to improve the fund in his first year. He is carefully reviewing every aspect of our investment portfolio and making the necessary adjustments to get as much as possible from the markets and reduce costs. He continues to work on innovative solutions to help the fund become more nimble to capitalize on market opportunities, while also carefully managing risk. New approaches in private equity and liquidity management are being evaluated to increase returns and add long-term value.

Decisions made during our Asset Liability Management process are providing the fund with increased cash flows as they are implemented. The new four-year asset allocation alignment became effective on July 1, 2018, and we continued to phase in lowering of the discount rate to 7.0 percent. In addition, the action to shorten the amortization period will become effective for new Unfunded Accrued Liability bases established June 30, 2019, and later. These foundational changes provide new opportunities that increase the health of the fund and financial integrity.

We are also operating in the most cost-efficient manner possible, as our retirement benefits continued to increase over the previous fiscal year. As of June 30, 2019, PERF paid out nearly \$24.2 billion in benefits to more than 712,000 retirees and beneficiaries, a \$1.6 billion increase from the previous fiscal year. This increase was primarily due to the rise in the number of retirees and beneficiaries.

Retirement benefits play a vital role in the state's economy. The most recent *Economic Impacts of CalPERS Pensions in California* report shows that the \$18.9 billion paid in retirement benefits during Fiscal Year 2017-18 to California retirees and beneficiaries generated \$23.5 billion in economic activity that supported jobs and increased business and tax revenue. The

CHIEF EXECUTIVE OFFICER'S LETTER OF TRANSMITTAL (CONTINUED)

economic impacts are significant throughout the state, and especially in smaller communities.

Our investments also fuel the California economy. In Fiscal Year 2017-18 investments in the Golden State rose to approximately \$33.5 billion. The *CalPERS for California* report showed that more than 246,000 jobs were supported as a result of CalPERS' private asset class investments in our state. Investments in California represent 9.5 percent of the total fund.

In health care, the average Medicare and Basic (non-Medicare) premium increase was 4.65 percent overall. The increase reflects the current state of the health care market that has costs rising as hospital admissions, outpatient surgical procedures, and pharmacy costs increase. These changes approved by the Board in June 2019 will be effective on January 1, 2020.

To continue to improve the quality of health care, the PERS Select value-based plan was implemented effective January 1, 2019. The new benefit design is expected to reduce costs by approximately \$10.0 million annually. The Board agreed to use \$44.0 million of surplus funds in Preferred Provider Organization (PPO) plan reserves to buy-down the 2020 PERSCare Basic PPO plan premium. While the buy-down reduced a higher premium rate increase for this plan, its members will experience a 6.5 percent increase in premiums in 2020. We will continue to work to contain costs without compromising quality health care to our 1.5 million members in our health care program.

Additionally, to help employers prefund their future pension costs, we launched a new program known as the California Employers' Pension Prefunding Trust on July 1, 2019. This new trust will allow employers to voluntarily make additional contributions to mitigate future rate increases and temper contribution rate volatility.

Our other optional program that prefunds retiree health, dental, and other non-pension post-employment benefit obligations, known as the California Employers' Retiree Benefit Trust Fund, grew by \$1.5 billion or 18.3 percent along with the number of contracted employers, from 542 to 562 since the last fiscal year.

While we had many accomplishments this past fiscal year, we will continue to focus on our goals outlined in the *2017-22 Strategic Plan*: strengthening fund sustainability, improving health care affordability, reducing complexity and risk, and promoting a high-performing and diverse workforce.

Funding

The funded status of the PERF is 70.2 percent as of June 30, 2018. The PERF is the main trust fund from which

nearly all CalPERS retirement benefits are paid. The Actuarial Section contains a summary of CalPERS' unfunded actuarial accrued liabilities.

Looking Forward

As we move into the third year of the *2017-22 Strategic Plan*, we remain committed to ensuring the sustainability of the System, reducing cost, and delivering innovation.

The changes we've made are taking shape, but we remain focused on our priorities for the next decade.

We are making important changes and looking at how we do business, so that we can be even more efficient, effective, and successful for more than 2 million public service workers and their families that we serve.

Management Responsibility for Financial Reporting

CalPERS management prepared the financial statements in this CAFR for Fiscal Year 2018-19. Management is responsible for the integrity and fairness of the information presented, including data that, out of necessity, is based on estimates and judgments. The accounting policies used to prepare these financial statements conform to accounting principles generally accepted in the United States. Financial information presented throughout this annual report is consistent with these accounting principles.

CalPERS maintains a system of internal controls designed to provide reasonable assurance that assets are properly safeguarded, transactions are properly executed, and financial statements are reliable. Because the cost of internal control should not exceed anticipated benefits, the objective is to provide reasonable, rather than absolute, assurance that the financial statements are free of any material misstatements. In addition, our audit personnel provide a continuing review of CalPERS internal controls and operations, and the Chief of the Office of Audit Services regularly reports to the CalPERS Board of Administration's Risk & Audit Committee (Committee). The Committee reviews the audit findings and recommendations for improvements in internal control and operational efficiency, and it reviews the actions of management to implement such recommendations.

Our independent external auditors, BDO USA, LLP, have conducted an audit of the Basic Financial Statements in accordance with auditing standards generally accepted in the United States and *Government Auditing Standards*, performing such tests and other procedures as they deem necessary to express opinions on the Basic Financial Statements in their report to the Board. The external auditors also have full and unrestricted access to the Board to discuss their audit and related findings as to the integrity of the

CHIEF EXECUTIVE OFFICER'S LETTER OF TRANSMITTAL (CONTINUED)

financial reporting and the adequacy of internal control systems.

Accounting System and Reports

Management is responsible for establishing and maintaining an internal control structure designed to ensure that CalPERS' assets are protected from loss, theft or misuse, and that income is appropriately distributed. CalPERS is responsible to ensure the Basic Financial Statements have been prepared in accordance with accounting principles generally accepted in the United States. The Basic Financial Statements are presented in accordance with the applicable requirements of the Governmental Accounting Standards Board (GASB).

GASB Statement No. 34, *Basic Financial Statements- and Management's Discussion and Analysis—for State and Local Governments* (GASB 34) requires that management provide a narrative introduction, overview, and analysis to accompany the basic financial statements in the form of a Management's Discussion and Analysis (MD&A).

This Letter of Transmittal is designed to complement the MD&A and should be read in conjunction with it. The CalPERS MD&A can be found immediately following the report of the independent auditors.

Marcie Frost
Chief Executive Officer

This page intentionally left blank.

ABOUT CalPERS

The California Public Employees' Retirement System (CalPERS or the System) is the nation's largest defined benefit public pension fund with a total fiduciary net position in the Public Employees' Retirement Fund (PERF) of nearly \$373 billion as of June 30, 2019.

Headquartered in Sacramento, CalPERS provides retirement benefit services to more than 2.0 million members and health benefit services to nearly 1.5 million covered lives for state, school, and public employers. The System also operates eight Regional Offices located in Fresno, Glendale, Orange, Sacramento, San Diego, San Bernardino, San Jose, and Walnut Creek.

Led by a 13-member Board of Administration consisting of member-elected, appointed, and ex officio members, CalPERS membership consists of 1,296,053 active and inactive members and 714,504 retirees, beneficiaries, and survivors.

Established by legislation in 1931, the System became operational in 1932 to provide a secure retirement to state employees. In 1939, new legislation allowed public agency and classified school employees to join CalPERS for retirement benefits. CalPERS began administering health benefits for state employees in 1962, and five years later, public agencies were able to join the health program on a contract basis.

Today CalPERS offers additional programs, including long-term care coverage and deferred compensation retirement savings plans.

VISION

A respected partner, providing a sustainable retirement system and health care program for those who serve California.

MISSION

Deliver retirement and health care benefits to members and their beneficiaries.

2017-22 STRATEGIC PLAN GOALS AND OBJECTIVES

Fund Sustainability – Strengthen the Long-Term Sustainability of the Pension Fund

- Fund the System through an integrated view of pension assets and liabilities.
- Mitigate the risk of significant investment loss.
- Deliver target risk-adjusted investment returns.
- Educate employers, members, and stakeholders on system risks and mitigation strategies.
- Integrate environmental, social, and governance (ESG) considerations into investment decision making.

Health Care Affordability – Transform Health Care Purchasing and Delivery to Achieve Affordability

- Restructure benefit design to promote high-value health care.
- Improve the health status of our employees, members, and their families, and the communities where they live.
- Reduce the overuse of ineffective or unnecessary medical care.

Reduce Complexity – Reduce Complexity Across the Enterprise

- Simplify programs to improve service and/or reduce cost.
- Streamline operations to gain efficiencies, improve productivity, and reduce costs.

Risk Management – Cultivate a Risk-Intelligent Organization

- Enhance compliance and risk functions throughout the enterprise.
- Continue to evolve cybersecurity program.

Talent Management – Promote a High-Performing and Diverse Workforce

- Recruit and empower a broad range of talents to meet organizational priorities.
- Cultivate leadership competencies and develop succession plans throughout the enterprise.

ABOUT CalPERS (CONTINUED)

PENSION BELIEFS

In May 2014, the CalPERS Board of Administration adopted a set of 11 Pension Beliefs that articulate the pension fund's views on public pension design, funding, and administration.

Pension Belief 1

A retirement system must meet the needs of members and employers to be successful.

Pension Belief 2

Plan design should ensure that lifetime retirement benefits reflect each employee's years of service, age, and earnings and are adequate for full-career employees.

Pension Belief 3

Inadequate financial preparation for retirement is a growing national concern; therefore, all employees should have effective means to pursue retirement security.

Pension Belief 4

A retirement plan should include a defined benefit component, have professionally managed funds with a long-term horizon, and incorporate pooled investments and pooled risks.

Pension Belief 5

Funding policies should be applied in a fair, consistent manner, accommodate investment return fluctuations, and support rate stability.

Pension Belief 6

Pension benefits are deferred compensation and the responsibility for appropriate funding should be shared between employers and employees.

Pension Belief 7

Retirement system decisions must give precedence to the fiduciary duty owed to members, but should also consider the interests of other stakeholders.

Pension Belief 8

Trustees, administrators and all other fiduciaries are accountable for their actions, and must transparently perform their duties to the highest ethical standards.

Pension Belief 9

Sound understanding and deployment of enterprise-wide risk management is essential to the ongoing success of a retirement system.

Pension Belief 10

A retirement system should offer innovative and flexible financial education that meets the needs of members and employers.

Pension Belief 11

As a leader, CalPERS should advocate for retirement security for America's workers and for the value of defined benefit plans.

ABOUT CalPERS (CONTINUED)

INVESTMENT BELIEFS

In September 2013, the CalPERS Board of Administration adopted a set of 10 Investment Beliefs intended to provide a basis for strategic management of the investment portfolio, and to inform organizational priorities.

Investment Belief 1

Liabilities must influence the asset structure.

Investment Belief 2

A long time investment horizon is a responsibility and an advantage.

Investment Belief 3

CalPERS investment decisions may reflect wider stakeholder views, provided they are consistent with its fiduciary duty to members and beneficiaries.

Investment Belief 4

Long-term value creation requires effective management of three forms of capital: financial, physical, and human.

Investment Belief 5

CalPERS must articulate its investment goals and performance measures and ensure clear accountability for their execution.

Investment Belief 6

Strategic asset allocation is the dominant determinant of portfolio risk and return.

Investment Belief 7

CalPERS will take risk only where we have a strong belief we will be rewarded for it.

Investment Belief 8

Costs matter and need to be effectively managed.

Investment Belief 9

Risk to CalPERS is multi-faceted and not fully captured through measures such as volatility or tracking error.

Investment Belief 10

Strong processes and teamwork and deep resources are needed to achieve CalPERS goals and objectives.

HEALTH BELIEFS

In April 2018, the CalPERS Board of Administration adopted a set of six Health Themes and Beliefs that provide a basis for strategic management of the health benefits program to achieve long-term objectives.

Health Program Sustainability

The sustainability of the Health Program is the foremost consideration when reviewing proposed changes to benefits, coverage areas, and costs.

High Quality Care

Health benefit plan designs should improve member health outcomes, maximize quality, and reduce unwarranted care.

Affordability

Health premiums and out-of-pocket costs must be affordable and sustainable for members and employers.

Comprehensive Care

Health plans shall encourage healthy life choices and provide access to essential health care and evidence-based health services.

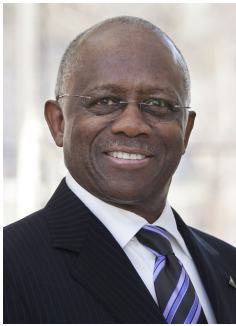
Competitive Plan Choice

CalPERS shall manage competition among health plans to help drive cost containment and give members access to options among health plans, benefits, and providers.

Quality Program Administration

CalPERS shall meet the needs of its many stakeholders with responsiveness, accuracy, and respectful service.

BOARD OF ADMINISTRATION



Henry Jones, President
Retired Member Representative
Retired, Chief Financial Officer
Los Angeles Unified School District
Term Ends: January 15, 2020



Dana Hollinger
Governor Appointee
Insurance Industry Representative
Principal, Dana Hollinger Group



Theresa Taylor, Vice President
State Member Representative
Principal Compliance Representative
Franchise Tax Board
Term Ends: January 15, 2023



Fiona Ma
Ex Officio Member
California State Treasurer



Margaret Brown
All Member Representative
Retired Director of Facilities
Garden Grove Unified School District
Term Ends: January 15, 2022



Lisa Middleton
Governor Appointee
Local Government Elected Official
Elected Member
Palm Springs City Council



Rob Feckner
School Member Representative
Glazing Specialist
Napa Valley Unified School District
Term Ends: January 15, 2023

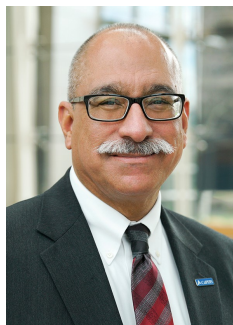


David Miller
All Member Representative
Senior Environmental Scientist
California Department of Toxic Substances
Control
Term Ends: January 15, 2022

BOARD OF ADMINISTRATION (CONTINUED)



Eraina Ortega
Ex Officio Member
Director
California Department of Human
Resources



Ramón Rubalcava
Public Representative
Appointed Jointly by the Senate Rules
Committee and the Speaker of the
Assembly



Jason Perez
Public Agency Member Representative
Sergeant
Corona Police Department
Term Ends: January 15, 2023



Betty Yee
Ex Officio Member
California State Controller



Mona Pasquil Rogers
Ex Officio Member
State Personnel Board Representative

ORGANIZATIONAL CHART – EXECUTIVE TEAM



Marcie Frost
Chief Executive Officer



Liana Bailey-Crimmins
Chief Health Director
Health Policy & Benefits



Michael Cohen
Chief Financial Officer
Financial Office



Christian Farland
Chief Information Officer
Information Technology



Douglas Hoffner
Deputy Executive Officer
Operations & Technology



Matthew G. Jacobs
General Counsel
General Counsel Office



Donna Lum
Deputy Executive Officer
Customer Services & Support



Yu (Ben) Meng, Ph.D.
Chief Investment Officer
Investment Office



Brad W. Pacheco
Deputy Executive Officer
Communications & Stakeholder Relations



Scott Terando
Chief Actuary
Actuarial Office



Marlene Timberlake D'Adamo
Chief Compliance Officer
Enterprise Compliance Branch

CONSULTANT & PROFESSIONAL SERVICES

Individual or Firm ¹	Individual or Firm ¹
AgreeYa Solutions, Inc.	Michael Scales Consulting, LLC
Anthem Blue Cross	Milliman, Inc.
ATV Video Center, Inc.	NetCentric Technologies Inc.
Belmonte Enterprises, LLC	Northeast Retirement Services
Berman Tabacco	Nossaman, LLP
Blue Shield of California	OnCore Consulting, LLC
Buck Global, LLC	OptumRx
Capio Group	Orrick Herrington & Sutcliffe, LLP
Claims Eval, Inc.	Pasanna Consulting Group, LLC
Cook Brown, LLP	Princeton Solutions Group, Inc.
Cooperative Personnel Services	Providence Technology Group, Inc.
Cornerstone Fitness, Inc.	Qualapps, Inc.
Delegata Corporation	Randle Communications
Department of Human Resources	Recon Distribution, Inc.
Department of Industrial Relations	Reed Smith, LLP
Department of Justice	Ridgeway Partners, LLC
Domain Experts Corporation	Runyon Saltzman, Inc.
Drinker Biddle & Reath, LLP	RVK, Inc.
DSS Research	Saba Software, Inc.
Durie Tangri, LLP	Shah & Associates, A Professional Law Company
Eaton Interpreting Services, Inc.	Sharp Health Plan
Elynview Corporation	Softsol Technologies, Inc.
Enterprise Networking Solutions, Inc.	Sophus Consulting
Enterprise Services, LLC	State Controller's Office
Equanim Technologies	State Personnel Board
Ernst & Young, LLP	Steptoe & Johnson, LLP
Eterasys Consulting, Inc.	T5 Consulting
Fair Political Practices Commission	Take 1 Productions
First Data Merchant Services Corporation	The RAND Corporation
Funston Advisory Services, LLC	The Regents of the University of California
Gartner, Inc.	The Taylor Feldman Group, LLC
Government Operations Agency	Toppan Merrill, LLC
H&B Joint Venture	Trinity Technology Group, Inc.
Health Net of California	Truven Health Analytics, LLC
Heidrick & Struggles	United Health Actuarial Services, Inc.
Innovative Software Technologies, Inc.	United Healthcare
Integrity Voting Systems (IVS)	Unleashing Leaders, Inc.
IVS/Everyone Counts, Inc.	Van Dermyden Maddux Law Corporation
J & K Court Reporting, LLC.	Vantage Consulting Group, Inc.
JLynn Consulting, Inc.	Viaspire
K&L Gates, LLP	Voya
KearnFord Application Systems Design	Western Health Advantage
King & Spalding, LLP	Worktank Enterprises, LLC
Knowledge Structures, Inc.	(1) Additional information regarding investment professionals who provide services to the System can be found in the Financial Section: Other Supplementary Information. The Schedule of Commissions & Fees listed by broker, and Private Equity Management Fees – PERF listed by fund, can be found in the Investment Section on pages 106-110.
Kong Consulting, Inc.	
Korn Ferry (US)	
KPMG, LLP	
Kronick, Moskowitz, Tiedemann & Girard	
Long Term Care Group, Inc.	
Mara Consulting, Inc.	
Matrix Software Services	
Mellon Bank	
Mercer	

This page intentionally left blank.

FINANCIAL SECTION

Independent Auditor's Report/MD&A

16	Independent Auditor's Report
19	Management's Discussion & Analysis (MD&A)
19	Introduction
19	Management Discussion
20	Overview of the Financial Statements and Accompanying Information
22	Financial Analysis
24	Other Defined Benefit Plans
27	Asset Liability Management – Defined Benefit Plans
29	Defined Contribution Plans
31	Other Post-Employment Benefit Trust Fund
33	Custodial Funds
35	Enterprise Funds
38	Requests for Information



\$18 Billion

Increase in net assets (PERF)

Growth in assets continued to boost the fund's position from the prior fiscal year despite financial market volatility.

Independent Auditor's Report



Tel: 415-490-3037
Fax: 415-397-2161
www.bdo.com

One Bush Street, Suite 1800
San Francisco, CA 94104

Independent Auditor's Report

To the Board of Administration
California Public Employees' Retirement System
Sacramento, CA

Report on the Financial Statements

We have audited the accompanying financial statements of the fiduciary activities and the proprietary activities of the California Public Employees' Retirement System (the System), a component unit of the State of California, as of and for the year ended June 30, 2019, and the related notes to the financial statements, which collectively comprise the System's basic financial statements as listed in the accompanying 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 opinions 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*, issued 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 opinions.

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the fiduciary activities and the proprietary activities of the California Public Employees' Retirement System as of June 30, 2019, and the respective changes in financial position and, where applicable, cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

BDO USA, LLP, a Delaware limited liability partnership, is the U.S. member of BDO International Limited, a UK company limited by guarantee, and forms part of the international BDO network of independent member firms.

BDO is the brand name for the BDO network and for each of the BDO Member Firms.



Other Matters

Prior-Year Comparative Information

The financial statements include summarized prior-year comparative information. Such information does not include all of the information required to constitute a presentation in accordance 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, 2018, from which such summarized information was derived.

The System's 2018 basic financial statements were audited by other auditors whose report thereon, dated November 16, 2018, expressed unmodified opinions on those financial statements.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and the required supplementary information, as listed in the accompanying table of contents (collectively referred to as RSI) 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.

Supplementary and Other Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the System's basic financial statements. The other supplementary information and the introductory, investment, actuarial, statistical, and compliance sections as listed in the accompanying table of contents are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The other supplementary 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 other supplementary information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

The introductory, investment, actuarial, statistical and compliance sections have 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 them.



Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated November 21, 2019 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 the System's 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.

BDO USA, LLP

San Francisco, CA
November 21, 2019

Management's Discussion & Analysis (Unaudited)

INTRODUCTION

This section presents Management's Discussion & Analysis of the California Public Employees' Retirement System's (CalPERS or the System) financial performance during the fiscal year ended June 30, 2019. It is a narrative overview and analysis that is presented in conjunction with the Chief Executive Officer's Letter of Transmittal included in the Introductory Section of this Comprehensive Annual Financial Report (CAFR). It should also be read in conjunction with the Basic Financial Statements as presented in this report.

In addition to historical information, the Management's Discussion & Analysis includes certain forward-looking statements, which involve currently known facts and certain risks and uncertainties. CalPERS actual results, performance, and achievements may differ from the results, performance, and achievements expressed or implied in such forward-looking statements due to a wide range of factors, including changes in interest rates, changes in the securities markets, general economic conditions, legislative changes, and other factors.

CalPERS is primarily responsible for administering retirement and health benefits. CalPERS also administers long-term care benefits, a post-employment benefit fund for retiree health, and supplemental retirement savings plans.

MANAGEMENT DISCUSSION

Strategic Planning

CalPERS is in the second year of its *2017-22 Strategic Plan*. This plan is a blueprint that guides the enterprise to meet the investment, retirement, and health benefit needs of our members and their families.

The *2017-22 Strategic Plan* was developed over the course of a year-long effort by CalPERS Board of Administration (the Board) members, senior leaders, and team members, with contributions from multiple stakeholders including employer associations, labor groups, retiree associations, federal representatives, health and investment business partners, and state government officials.

The current strategic plan took effect on July 1, 2017, and has five overarching goals:

- Strengthen long-term sustainability of the pension fund
- Transform health care purchasing and delivery to achieve affordability
- Reduce complexity across the enterprise
- Cultivate a risk-intelligent organization
- Promote a high-performing and diverse workforce

The *2017-22 Strategic Plan* includes the annual Business Plan Initiatives. The 2018-19 Business Plan Initiatives allowed

the organization to set priorities and assisted in the allocation of resources. It aligned to the 2018-19 budget cycle to accomplish the goals and objectives of the strategic plan. CalPERS identified 34 initiatives to begin the work needed to support the overall strategic direction of the organization.

Key Initiatives

CalPERS continued to enhance its operations as follows:

- CalPERS continues the Asset Liability Management (ALM) process to expand its review of assets and liabilities to ensure financial risks to the System are better understood, communicated, and mitigated. To establish appropriate levels of risk, ALM is focused on investment and actuarial policies. These policies include key decision factors and are intended to drive optimum asset allocations, while stabilizing employer contribution rates and the volatility of those rates from year to year. Additionally, to better manage risks arising from terminating agencies, CalPERS has enhanced its oversight of contracting public agencies' financial health through its development of a standardized review criteria. These improvements include streamlining the collection and termination process to reduce the time frame, accelerating notifications to the Board and members, and adopting a risk oversight process to improve early detection of financial hardship issues. In Fiscal Year 2018-19, CalPERS continued the four-year asset allocation of the Fund's investment portfolio to align with a phased lowering of the discount rate to 7.0 percent. CalPERS also adopted new actuarial assumptions and modifications to the amortization policy last fiscal year, shortening the period over which actuarial gains and losses are amortized from 30 to 20 years, that will become effective for new Unfunded Accrued Liability (UAL) bases established June 30, 2019 and later.

- CalPERS 5-year sustainable investment strategy (2017-22) takes an enterprise-wide view on improving the sustainability of long-term pension benefits and actively managing business risks. CalPERS has associated key performance indicators (KPIs) with this strategy, and includes a strategic focus on:
 - Data and Corporate Reporting Standards
 - Climate Action 100+ Engagement
 - Diversity and Inclusion
 - Manager Expectations
 - Research
 - Private Equity Fee and Profit Sharing Transparency

Core work areas include integration of environmental, social, and governance (ESG) factors into the investment

Management's Discussion & Analysis (Unaudited) (continued)

process, Financial Markets Advocacy, Shareowner Campaigns, Corporate & Manager Engagement, Proxy Voting, Responsible Contractor Program, Carbon Footprinting, and Ad Hoc Media & Stakeholder Requests.

OVERVIEW OF THE FINANCIAL STATEMENTS AND ACCOMPANYING INFORMATION

Management's Discussion & Analysis provides an overview of the financial position, which is comprised of the following components: Basic Financial Statements, Notes to the Basic Financial Statements, Required Supplementary Information, and Other Supplementary Information. Collectively, this information presents the combined net position restricted for pension benefits, other post-employment benefits (OPEB), deferred compensation, replacement benefits, and the unrestricted net position of the proprietary funds administered by CalPERS as of June 30, 2019. It also summarizes the combined changes in fiduciary net position restricted for pension, other post-employment, and replacement benefits; the changes in unrestricted net position; and the cash flows of the proprietary funds for the year then-ended, along with disclosures about the net pension liabilities of the single-employer and cost-sharing multiple-employer defined benefit pension plans.

FINANCIAL HIGHLIGHTS

Major events and initiatives impacting the current fiscal year's financial statements include:

- The Public Employees' Retirement Fund (PERF) realized a money-weighted rate of return (MWRR) of 6.5 percent and a realized time-weighted rate of return of 6.7 percent in Fiscal Year 2018-19 resulting from positive performance across most globally diversified asset classes. Drivers of the PERF's investment return include strong performances from fixed income and private equity. Additionally, investment allocation changes made during the period in response to financial market volatility contributed positively to fund performance.
- During the second of a three-year plan to lower the discount rate for the PERF, the rate was lowered from 7.375 percent to 7.275 percent. Lowering the discount rate is one step in ensuring the long-term stability of the Fund. An incremental approach over three years allows employers more time to prepare for the changes in contribution costs. A lowered financial reporting discount rate for the Judges' Retirement Fund (JRF) is also in effect.

- In September 2018, the Board approved CalPERS Health Care Fund (HCF) Reserve Policy, which identifies goals and strategies to manage the HCF, and establishes a strategy for developing, reviewing, updating, and handling any HCF surpluses or deficits related to the CalPERS Preferred Provider Organization (PPO) and Flex-Funded Health Maintenance Organization (HMO) health benefit plans. The Policy lowered the Risk-Based Capital (RBC) reserve level for CalPERS PPO plans from 300 percent to 250 percent, which is approximately one-and-a-half months of a PPO plan's medical and pharmacy claims.
- CalPERS implemented the PERS Select value-based plan effective January 1, 2019. It aims to improve the quality of health care, outcomes, and lower cost by empowering choice. Members are encouraged to engage in their health care decisions by selecting a personal doctor and to participate in preventive care activities. The 2019 PERS Select benefit design is expected to reduce costs by approximately \$10.0 million annually.
- In June 2019, the Board agreed to use \$44.0 million of surplus funds in PPO plan reserves to buy-down the 2020 PERSCare Basic PPO plan premium. While the buy-down reduced a higher premium rate increase for this plan, its members will experience a 6.5 percent premium increase in 2020.
- The Old Age and Survivors' Insurance Revolving Fund (OASI) is considered a separate entity and will be reported separately. Due to the origination and the current purpose of the fund balance, CalPERS will report the OASI revolving fund as a custodial fund under the fiduciary statements.
- The California Employers' Pension Prefunding Trust Fund was created on September 21, 2018 pursuant to SB 1413, Chapter 665, Statutes of 2018. Funding is effective Fiscal Year 2019-20.

BASIC FINANCIAL STATEMENTS

The June 30, 2019, financial statements separate the funds administered by CalPERS into two categories: fiduciary funds and proprietary funds. With the exception of OASI, CalPERS role as a trustee and monitoring of financial position occur in both categories, a primary focus of fiduciary funds is CalPERS duty with respect to the payment of benefits, whereas a core function for proprietary funds is the payment of services.

Fiduciary Funds – include the PERF (split into PERF A, PERF B, and PERF C), Legislators' Retirement Fund (LRF), JRF, Judges' Retirement Fund II (JRF II), Public Employees'

Management's Discussion & Analysis (Unaudited) (continued)

Deferred Compensation Fund (DCF), Supplemental Contributions Program Fund (SCPF), Annuitants' Health Care Coverage Fund, also known as California Employers' Retiree Benefit Trust Fund (CERBTF), OASI, and Replacement Benefit Fund (RBF). Generally, fiduciary funds are used to account for resources held for the benefit of CalPERS participants.

A Statement of Fiduciary Net Position and a Statement of Changes in Fiduciary Net Position are presented for the fiduciary funds as of, and for, the fiscal year ended June 30, 2019, along with comparative total information as of, and for, fiscal year ended June 30, 2018. These financial statements reflect the resources available to pay benefits to retirees and other beneficiaries as of year-end, and the changes in those resources during the year.

Proprietary Funds – include HCF, Contingency Reserve Fund (CRF), and the Public Employees' Long-Term Care Fund (LTCF). A Statement of Net Position, a Statement of Revenues, Expenses, and Changes in Net Position, and a Statement of Cash Flows are presented for the proprietary funds as of, and for, fiscal year ended June 30, 2019, along with comparative total information as of, and for, fiscal year ended June 30, 2018. These financial statements reflect the net position, changes in net position, and cash flows resulting from CalPERS business-type activities.

NOTES TO THE BASIC FINANCIAL STATEMENTS

The Notes to the Basic Financial Statements provide additional information that is essential to a full understanding of the information provided in the fund financial statements. Information available in the Notes to the Basic Financial Statements is described below:

Note 1 – provides general information on CalPERS, each of the funds administered, employer and member participation in the pension plans, and other post-employment benefit plans administered by CalPERS.

Note 2 – provides a summary of significant accounting policies, including the basis of accounting for each of the fund types, target asset allocation, management's use of estimates, and other significant accounting policies.

Note 3 – provides information on cash and cash equivalents.

Note 4 – provides detail on the fair value of investments, and information on MWRR.

Note 5 – provides information about investment risk categorizations.

Note 6 – provides information about securities lending.

Note 7 – provides information about derivatives.

Note 8 – provides information about the net pension liabilities/(asset) and actuarial assumptions for cost-sharing and single-employer plans.

Note 9 – provides information about the CERBTF, including plan members, participating employers, and contributions.

Note 10 – provides information about the RBF, as well as applicable internal revenue and government codes.

Note 11 – provides detailed information about the OASI.

Note 12 – provides detailed information about the HCF and the estimated claims liability of the HCF.

Note 13 – provides additional information about participating agencies and insurance premiums paid by the CRF.

Note 14 – provides information about the LTCF actuarial valuation and the estimated liability for future policy benefits.

Note 15 – provides information on potential contingencies of CalPERS.

Note 16 – provides information about future accounting pronouncements.

REQUIRED SUPPLEMENTARY INFORMATION

The Required Supplementary Information schedules include information about the changes in the net pension liability, employer contributions, actuarial assumptions used to calculate the actuarially determined contributions, historical trends, and other required supplementary information related to the System's cost-sharing multiple-employer and single-employer defined benefit pension plans as required by GASB Statement No. 67, *Financial Reporting for Pension Plans—an amendment of GASB Statement No. 25* (GASB 67).

The MWRR expresses investment performance, net of investment expense, and is disclosed per the requirements of GASB 67 and GASB Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans* (GASB 74).

The Schedule of Claims Development Information for the HCF provides earned revenues and expenses over the past 10 years.

OTHER SUPPLEMENTARY INFORMATION

Other schedules include detailed information on administrative expenses incurred by CalPERS-administered funds, investment expenses, and other professional services expenses incurred.

FINANCIAL ANALYSIS

PUBLIC EMPLOYEES' RETIREMENT FUND (PERF)

The PERF is a trust fund established under section 20170 of the Public Employees' Retirement Law (PERL). The PERF provides retirement benefits to State of California, school, and other California public agency employees. The PERF benefits are funded by member and employer contributions and by earnings on investments.

For financial reporting purposes only, the PERF is comprised of, and reported as three separate entities. PERF A is comprised of agent multiple-employer plans, which includes the State of California and most public agency rate plans with more than 100 active members. PERF B is a cost-sharing multiple-employer plan of school employers consisting of non-teaching and non-certified employees. PERF C is a cost-sharing multiple-employer plan of public agencies with generally fewer than 100 active members. Under applicable law, the Board may terminate or a public agency may terminate that agency's plan under either PERF A or PERF C. The terminated agency is liable to the System for all costs to fund all benefits under the agency's contract. An unpaid deficit in funding will result in a commensurate reduction in benefits provided under that agency's contract.

Movements of member account asset balances occur between PERF A, PERF B, and PERF C when employer rate plans have fewer than 100 members, or when there are other member accounting adjustments. These plan-to-plan resource movements are reported as a separate line item within the additions and deductions sections, respectively, of each plan's Statement of Changes in Fiduciary Net Position.

The PERF net position increased by \$18.6 billion or 5.3 percent from \$354.0 billion as of June 30, 2018, to \$372.6 billion as of June 30, 2019, primarily due to continued market growth. Receivables decreased \$8.9 billion or 67.1 percent due to lower investment balances for unitized investments. Investment balances increased by \$18.3 billion from \$358.0 billion as of June 30, 2018, to \$376.3 billion as of June 30, 2019, due to favorable market experience. Securities lending collateral decreased \$1.7 billion or 27.8 percent and securities lending obligations decreased \$1.7 billion or 27.8 percent as a result of an overall decrease in demand to borrow securities at year-end.

Similar to receivables, retirement benefits, investment settlement, and other liabilities decreased \$9.8 billion or 54.3 percent due to lower outstanding investment trades. Total net pension and OPEB liabilities decreased by \$0.2 billion or 15.3 percent. Net pension liability decreased primarily as a result of changes in actuarial assumptions. Net OPEB liability also decreased due to changes in actuarial assumptions,

mostly impacted by the favorable health care claims experience and plan design changes.

Additions to the PERF net position include member contributions, employer contributions, and investment income. Member contributions increased \$0.2 billion or 5.7 percent. Employer contribution rates increased between 0.9 percent and 2.8 percent for state, 2.5 percent for schools, and between 2.0 percent and 3.1 percent on average for public agency miscellaneous and safety plans. However, a decrease in additional unfunded liability payments, and a large state supplemental payment received in Fiscal Year 2017-18, resulted in overall decreased employer contributions of \$4.3 billion or 21.6 percent.

Net investment income is comprised of interest income, dividend income, and net appreciation or depreciation in fair value of investments, and is net of investment expenses.

Net investment income was \$23.0 billion in Fiscal Year 2018-19, compared to \$27.4 billion in Fiscal Year 2017-18 due to lower investment return experience in Fiscal Year 2018-19. The current year returns were helped by strong performance in CalPERS private equity and fixed income markets. Additionally, the PERF recognized a MWRR of 6.5 percent for Fiscal Year 2018-19 compared with 8.4 percent for Fiscal Year 2017-18.

Deductions from the PERF are comprised of benefit payments, refunds of contributions to members and beneficiaries, and costs of administering the PERF. Benefit payments are the primary expense of a retirement system. For Fiscal Year 2018-19, retirement, death, and survivor benefits payments increased \$1.6 billion or 6.9 percent, primarily due to cost-of-living increases in benefits payment, and to an increase in the number of retirees and beneficiaries from 694,570 as of June 30, 2018, to 712,115 as of June 30, 2019. Administrative expenses for CalPERS personnel decreased \$253.0 million or 50.0 percent, primarily due to a decrease in the state's pension and OPEB expenses as a result of decreased net pension and OPEB liabilities.

Management's Discussion & Analysis (Unaudited) (continued)

Fiduciary Net Position – PERF (Dollars in Thousands)

	PERF A	PERF B	PERF C			
	Agent	Cost-Sharing Schools	Cost-Sharing Public Agencies	2019 PERF Total	2018 PERF Total ¹	Increase/ (Decrease)
ASSETS AND DEFERRED OUTFLOWS OF RESOURCES						
Cash & Cash Equivalents	\$487,509	\$121,586	\$55,618	\$664,713	\$1,312,389	(\$647,676)
Receivables	3,209,567	844,687	292,589	4,346,843	13,226,628	(8,879,785)
Investments	276,000,021	68,758,610	31,543,254	376,301,885	357,989,611	18,312,274
Securities Lending Collateral	3,178,981	792,849	362,677	4,334,507	6,003,421	(1,668,914)
Capital Assets, Net & Other Assets	309,677	77,235	35,330	422,242	502,283	(80,041)
Total Assets	\$283,185,755	\$70,594,967	\$32,289,468	\$386,070,190	\$379,034,332	\$7,035,858
Deferred Outflows of Resources	\$79,270	\$19,770	\$9,044	\$108,084	\$130,411	(\$22,327)
Total Assets and Deferred Outflows of Resources	\$283,265,025	\$70,614,737	\$32,298,512	\$386,178,274	\$379,164,743	\$7,013,531
LIABILITIES AND DEFERRED INFLOWS OF RESOURCES						
Retirement Benefits, Investment Settlement & Other	\$6,068,189	\$1,479,945	\$671,703	\$8,219,837	\$17,985,433	(\$9,765,596)
Net Pension & OPEB Liabilities	736,826	183,767	84,062	1,004,655	1,185,827	(181,172)
Securities Lending Obligations	3,171,346	790,945	361,806	4,324,097	5,992,919	(1,668,822)
Total Liabilities	\$9,976,361	\$2,454,657	\$1,117,571	\$13,548,589	\$25,164,179	(\$11,615,590)
Deferred Inflows of Resources	\$13,386	\$3,339	\$1,527	\$18,252	\$5,063	\$13,189
Total Liabilities and Deferred Inflows of Resources	\$9,989,747	\$2,457,996	\$1,119,098	\$13,566,841	\$25,169,242	(\$11,602,401)
TOTAL NET POSITION RESTRICTED FOR PENSION BENEFITS	\$273,275,278	\$68,156,741	\$31,179,414	\$372,611,433	\$353,995,501	\$18,615,932

(1) Individual amounts may differ from prior year due to the restatement of OASI, which is now reported separately.

Changes in Fiduciary Net Position – PERF (Dollars in Thousands)

	PERF A	PERF B	PERF C			
	Agent	Cost-Sharing Schools	Cost-Sharing Public Agencies	2019 PERF Total	2018 PERF Total	Increase/ (Decrease)
ADDITIONS						
Member Contributions	\$3,293,389	\$1,014,070	\$357,159	\$4,664,618	\$4,415,129	\$249,489
Employer Contributions	11,751,393	2,527,726	1,333,559	15,612,678	19,917,796	(4,305,118)
Net Investment Income	16,851,181	4,191,809	1,926,674	22,969,664	27,448,098	(4,478,434)
Securities Lending & Other Income	81,533	20,281	9,265	111,079	121,573	(10,494)
Plan to Plan Resource Movement	—	304	167,308	167,612	116,552	51,060
Total Additions	\$31,977,496	\$7,754,190	\$3,793,965	\$43,525,651	\$52,019,148	(\$8,493,497)
DEDUCTIONS						
Retirement, Death & Survivor Benefits	\$18,083,062	\$4,245,515	\$1,880,706	\$24,209,283	\$22,654,444	\$1,554,839
Refund of Contributions	157,036	101,911	21,319	280,266	286,979	(6,713)
Administrative Expenses	185,284	46,159	21,115	252,558	505,513	(252,955)
Plan to Plan Resource Movement	167,612	—	—	167,612	116,552	51,060
Total Deductions	\$18,592,994	\$4,393,585	\$1,923,140	\$24,909,719	\$23,563,488	\$1,346,231
INCREASE (DECREASE) IN NET POSITION	\$13,384,502	\$3,360,605	\$1,870,825	\$18,615,932	\$28,455,660	(\$9,839,728)
NET POSITION						
Beginning of Year	\$259,890,776	\$64,796,136	\$29,308,589	\$353,995,501	\$326,498,998	\$27,496,503
Adjustments	—	—	—	—	(959,157) ¹	959,157
Beginning of Year (as adjusted)	\$259,890,776	\$64,796,136	\$29,308,589	\$353,995,501	\$325,539,841	\$28,455,660
End of Year	\$273,275,278	\$68,156,741	\$31,179,414	\$372,611,433	\$353,995,501	\$18,615,932

(1) The Fiscal Year 2017-18 beginning of year net position balance was restated due to the implementation of Governmental Accounting Standards Board Statement No. 68, *Accounting and Financial Reporting for Pensions—an amendment of GASB Statement No. 27*, and *GASB Statement No. 75, Accounting and Financial Reporting for Post-employment Benefits Other Than Pensions*.

OTHER DEFINED BENEFIT PLANS

LEGISLATORS' RETIREMENT FUND (LRF)

The LRF provides retirement benefits to California Legislators elected to office before November 7, 1990, and to constitutional, legislative, and statutory officers elected or appointed prior to January 1, 2013. The number of LRF members has been declining as eligible incumbent Legislators leave office and are replaced by others who are ineligible to participate in the LRF. Actuarially determined contributions will continue to be made by the State of California to supplement the existing assets until all benefit obligations have been fulfilled.

Because the LRF is closed to new members and income is primarily limited to investment returns and contributions based on a declining number of active members, CalPERS expects the net position of the fund to decrease over time.

The LRF's net position in Fiscal Year 2018-19 increased by \$0.5 million or 0.5 percent from the beginning balance of \$113.9 million to \$114.4 million due to positive market experience in investments. Receivables decreased by \$0.1 million or 59.5 percent due to reduced outstanding contribution receivables as of year-end. Investments at fair value increased \$1.0 million or 0.9 percent, due to the investment of net inflows from contributions and investment income which exceeded benefit payment outflows this year. LRF investments changed from internally to externally managed as of June 30, 2018, resulting in zero balances in securities lending collateral and obligations as of June 30, 2019. Retirement benefits, investment settlement, and other liabilities increased \$0.6 million or 844.3 percent primarily due to an increase in outstanding claims at the end of Fiscal Year 2018-19. This was partially offset by eliminating securities lending obligations and decreased net pension and OPEB liabilities in Fiscal Year 2018-19. The net pension liability decreased primarily as a result of changes in actuarial assumptions. Net OPEB liability also decreased due to changes in actuarial assumptions, mostly impacted by the favorable health care claims experience and plan design changes.

Additions to the LRF's net position primarily came from net investment income of \$7.9 million in Fiscal Year 2018-19. This was an increase of \$2.4 million or 44.0 percent and was primarily due to improved performance in investment markets. The LRF recognized a MWRR of 7.0 percent for Fiscal Year 2018-19 compared with 4.8 percent for Fiscal Year 2017-18. Partially offsetting this increase was a decrease in employer contributions.

Deductions from the LRF are primarily comprised of benefit payments, refunds, and administrative expenses. Total deductions increased by \$0.1 million or 1.1 percent due to an increase of \$0.4 million or 6.2 percent in benefit payments and refunds of contributions, offset by a decrease of \$0.3 million or 51.9 percent in administrative expenses for CalPERS personnel due to lower state's pension and OPEB expenses.

JUDGES' RETIREMENT FUND (JRF)

The JRF provides retirement benefits to California Supreme and Appellate Court justices and Superior Court judges appointed or elected before November 9, 1994. The State of California does not pre-fund the benefits for this fund and the benefits are funded on a pay-as-you-go basis.

The net position of the JRF decreased \$29.5 million or 74.3 percent, primarily due to higher benefit payments. Investments decreased by \$23.7 million or 56.4 percent as the fund continues to liquidate its short term investments to cover any benefits in excess of the monthly General Fund transfer. Liabilities increased \$5.2 million or 92.2 percent, primarily due to higher outstanding unclaimed benefits resulting from the Robert Mallano judgment which awarded back wages to plan members in Fiscal Year 2018-19, and was partially offset by decrease in total net pension and OPEB liabilities. Net pension liability decreased primarily as a result of changes in actuarial assumptions. Net OPEB liability also decreased due to changes in actuarial assumptions, mostly impacted by the favorable health care claims experience and plan design changes.

Additions to the JRF come from employer, member, and state balancing contributions from the General Fund. Additions decreased \$3.7 million or 1.8 percent, primarily due to a reduction in the State General Fund contributions resulting from a surplus cash balance.

Deductions from the JRF include benefit payments, which increased \$14.1 million or 6.8 percent due to an increase in the number of benefit recipients from 1,862 as of June 30, 2018, to 1,880 as of June 30, 2019, and benefit adjustment payments awarded in the Robert Mallano case.

Administrative expenses for CalPERS personnel increased \$7.9 million or 376.4 percent, due to costs associated with the benefit adjustment, which includes 10.0 percent interest, awarded by the court as a result of the Robert Mallano judgment, partially offset by lower state's pension and OPEB expenses due to decreased net pension and OPEB liabilities.

Management's Discussion & Analysis (Unaudited) (continued)

JUDGES' RETIREMENT FUND II (JRF II)

The JRF II provides retirement benefits to California Supreme and Appellate Court Justices and Superior Court Judges first appointed or elected on or after November 9, 1994.

The net position of JRF II in Fiscal Year 2018-19 increased by \$184.6 million or 12.1 percent from the beginning net position of \$1.5 billion to \$1.7 billion. Receivables increased by \$3.1 million or 40.5 percent, primarily due to increased outstanding employers' contribution receivables as of year-end. JRF II investments increased by \$181.0 million or 11.9 percent primarily due to positive net cash inflows from contributions less benefit payments, combined with a positive market return in Fiscal Year 2018-19. Total liabilities decreased by \$9.4 million or 61.6 percent primarily due to a decrease in securities lending obligations. JRF II investments changed from internally to externally managed as of June 30, 2018, resulting in zero balances in securities lending collateral and obligations as of June 30, 2019.

Additions to the JRF II net position include member contributions, employer contributions, and investment income. Member and employer contributions increased due to an increase in the number of active members from 1,543 as of June 30, 2018, to 1,645 as of June 30, 2019. Member contributions increased by \$3.9 million or 14.0 percent, while employer contributions increased by \$4.4 million or 5.5 percent. Net investment income increased by \$5.5 million or 5.5 percent from \$101.2 million in Fiscal Year 2017-18 to \$106.8 million in Fiscal Year 2018-19. This increase resulted from a higher investment balance which was partially offset by a slightly lower investment return in Fiscal Year 2018-19. The JRF II recognized a MWRR of 6.9 percent for Fiscal Year 2018-19 compared with 7.4 percent for Fiscal Year 2017-18.

Deductions from the JRF II are comprised of benefit payments, refund of contributions to members and beneficiaries, and costs of administering the JRF II. Benefit payments increased by \$4.3 million or 13.5 percent due to an increase in benefit recipients from 231 in Fiscal Year 2017-18 to 281 in Fiscal Year 2018-19. Administrative expenses for CalPERS personnel decreased by \$0.9 million or 37.7 percent primarily due to a decrease in the state's pension and OPEB expenses as a result of decreased net pension and OPEB liabilities.

Management's Discussion & Analysis (Unaudited) (continued)

Fiduciary Net Position – Other Defined Benefit Plan Funds (Dollars in Thousands)

	LRF			JRF			JRF II		
	2019	2018	Increase/ (Decrease)	2019	2018	Increase/ (Decrease)	2019	2018	Increase/ (Decrease)
ASSETS AND DEFERRED OUTFLOWS OF RESOURCES									
Cash & Cash Equivalents	\$1,200	\$1,207	(\$7)	\$1	\$6	(\$5)	\$1	\$80	(\$79)
Receivables	49	121	(72)	2,267	2,629	(362)	10,601	7,543	3,058
Investments	115,207	114,225	982	18,342	42,033	(23,691)	1,704,904	1,523,927	180,977
Securities Lending Collateral	—	444	(444)	—	—	—	—	8,555	(8,555)
Total Assets	\$116,456	\$115,997	\$459	\$20,610	\$44,668	(\$24,058)	\$1,715,506	\$1,540,105	\$175,401
Deferred Outflows of Resources	\$165	\$198	(\$33)	\$452	\$598	(\$146)	\$579	\$741	(\$162)
Total Assets and Deferred Outflows of Resources	\$116,621	\$116,195	\$426	\$21,062	\$45,266	(\$24,204)	\$1,716,085	\$1,540,846	\$175,239
LIABILITIES AND DEFERRED INFLOWS OF RESOURCES									
Retirement Benefits, Investment Settlement & Other	\$661	\$70	\$591	\$6,529	\$177	\$6,352	\$450	\$23	\$427
Net Pension & OPEB Liabilities	1,529	1,798	(269)	4,255	5,435	(1,180)	5,421	6,740	(1,319)
Securities Lending Obligations	—	443	(443)	—	—	—	—	8,540	(8,540)
Total Liabilities	\$2,190	\$2,311	(\$121)	\$10,784	\$5,612	\$5,172	\$5,871	\$15,303	(\$9,432)
Deferred Inflows of Resources	\$27	\$8	\$19	\$109	\$23	\$86	\$125	\$29	\$96
Total Liabilities and Deferred Inflows of Resources	\$2,217	\$2,319	(\$102)	\$10,893	\$5,635	\$5,258	\$5,996	\$15,332	(\$9,336)
TOTAL NET POSITION RESTRICTED FOR PENSION BENEFITS	\$114,404	\$113,876	\$528	\$10,169	\$39,631	(\$29,462)	\$1,710,089	\$1,525,514	\$184,575

Changes in Fiduciary Net Position – Other Defined Benefit Plan Funds (Dollars in Thousands)

	LRF			JRF			JRF II		
	2019	2018	Increase/ (Decrease)	2019	2018	Increase/ (Decrease)	2019	2018	Increase/ (Decrease)
ADDITIONS									
Member Contributions	\$91	\$82	\$9	\$2,679	\$3,062	(\$383)	\$31,376	\$27,513	\$3,863
Employer Contributions	250	467	(217)	195,903	199,241	(3,338)	84,099	79,699	4,400
Net Investment Income	7,860	5,458	2,402	1,166	845	321	106,781	101,244	5,537
Securities Lending & Other Income	—	28	(28)	2,776	2,533	243	—	576	(576)
Total Additions	\$8,201	\$6,035	\$2,166	\$202,524	\$205,681	(\$3,157)	\$222,256	\$209,032	\$13,224
DEDUCTIONS									
Retirement, Death & Survivor Benefits	\$7,005	\$6,918	\$87	\$221,954	\$207,815	\$14,139	\$36,045	\$31,745	\$4,300
Refund of Contributions	344	—	344	—	8	(8)	159	50	109
Administrative Expenses	324	671	(347)	10,032	2,106	7,926	1,477	2,370	(893)
Total Deductions	\$7,673	\$7,589	\$84	\$231,986	\$209,929	\$22,057	\$37,681	\$34,165	\$3,516
INCREASE (DECREASE) IN NET POSITION	\$528	(\$1,554)	\$2,082	(\$29,462)	(\$4,248)	(\$25,214)	\$184,575	\$174,867	\$9,708
NET POSITION									
Beginning of Year	\$113,876	\$116,884	(\$3,008)	\$39,631	\$48,275	(\$8,644)	\$1,525,514	\$1,356,099	\$169,415
Adjustments	—	(1,454) ¹	1,454	—	(4,396) ¹	4,396	—	(5,452) ¹	5,452
Beginning of Year (as adjusted)	\$113,876	\$115,430	(\$1,554)	\$39,631	\$43,879	(\$4,248)	\$1,525,514	\$1,350,647	\$174,867
End of Year	\$114,404	\$113,876	\$528	\$10,169	\$39,631	(\$29,462)	\$1,710,089	\$1,525,514	\$184,575

(1) The Fiscal Year 2017-18 beginning of year net position balance was restated due to the implementation of Governmental Accounting Standards Board Statement No. 68, *Accounting and Financial Reporting for Pensions—an amendment of GASB Statement No. 27*, and GASB Statement No. 75, *Accounting and Financial Reporting for Post-employment Benefits Other Than Pensions*.

ASSET LIABILITY MANAGEMENT – DEFINED BENEFIT PLANS

The Asset Liability Management (ALM) process is an integrated review of pension assets and liabilities to inform decisions designed to achieve a sound and sustainable fund. CalPERS continues to expand its review of assets and liabilities so that financial risks to the System can be better understood, communicated, and managed.

To establish appropriate levels of risk, ALM is focused on investment and actuarial policies and key decision factors that are intended to drive an optimum asset allocation while stabilizing employer rates and the volatility of those rates from year to year. ALM is designed to improve the sustainability and soundness of the PERF, and the goal is to achieve 100 percent funding at an acceptable level of risk. Reducing the risk in the funding of the System will involve tradeoffs between short-term and long-term priorities.

In December 2017, the Board voted on the asset allocation of the PERF's investment portfolio for the next four years. The Board examined four potential portfolios and their impact on the PERF. Each portfolio represented different distributions of assets based on varying rates of expected return and risk of volatility. The Board selected the portfolio with expected volatility of 11.4 percent and a return of 7.0 percent, which aligns with the December 2016 decision to lower the discount rate to 7.0 percent over three years.

In February 2018, the Board approved modifications to the amortization policy to shorten the period over which actuarial gains and losses are amortized from 30 to 20 years. The effective date of the policy change was June 30, 2019, and will apply to the unfunded accrued liability bases created after this date.

In order to better manage risks arising from terminating agencies, CalPERS has enhanced its oversight of contracting public agencies' financial health through its development of a standardized review criteria. These improvements include streamlining the collection and termination process to reduce the time frame, accelerating notifications to the Board and members, and adopting a risk oversight process to improve early detection of financial hardship issues. These process and monitoring improvements support Fund Sustainability and Risk Management Goals of the CalPERS 2017-22 *Strategic Plan*, which aims to strengthen the long-term sustainability of the pension funds.

FUNDING ANALYSIS – DEFINED BENEFIT PLANS

The Board has made several important decisions in the recent past which impact the current funding of pension benefits at CalPERS. In December 2016, the Board voted to lower the discount rate from 7.5 percent to 7.0 percent. In

December 2017, the Board adopted a new asset allocation which supports the 7.0 percent discount rate and adopted new actuarial assumptions. Also in February 2018, the Board voted to shorten the period over which actuarial gains and losses are amortized from 30 to 20 years. Over time, these policies are designed to improve funding levels and help reduce overall funding level risk.

The JRF is funded on a pay-as-you-go basis, where short-term investments, contributions received during the year, and a State General Fund augmentation are used to provide funding for benefit payments. This funding method is generally more expensive in the long term, as the plan does not have investment returns generated by a funded plan. Without the State General Fund augmentation, the JRF will not be able to pay the accumulated benefit payments due in Fiscal Year 2019-20.

As of June 30, 2018, the funded status of the PERF was 70.2 percent. This percentage was determined by dividing the total assets in the PERF by the sum of liabilities for all plans reported under the PERF. As of June 30, 2018, the funded status of the JRF II was 98.5 percent. CalPERS calculated JRF II funded status value using a 6.5 percent discount rate. As of June 30, 2018, the funded status of the LRF was 116.7 percent. CalPERS calculated LRF funded status value using a 5.0 percent discount rate. All these funded statuses were calculated based on the market value of assets used in actuarial valuations that set funding requirements for employers.

Over the course of a three-year phase-in, beginning with the June 30, 2016 valuation (June 30, 2017 valuation for the schools plan), the funding discount rates for PERF employers decreased from 7.5 percent to 7.00 percent. The final scheduled decrease to 7.0 percent has occurred with the June 30, 2018 valuation (June 30, 2019 valuation for the schools plan).

Under GASB 67, there is a difference between the assumptions and components used to determine the net pension liabilities that must be reported in financial statements and the actuarial accrued liabilities and actuarial value of assets used to determine pension contributions established as part of funding valuations. The Actuarial Section included in this report provides actuarial information that was derived for purposes of establishing the funding requirements of employers for which CalPERS administers retirement benefits.

The GASB 67 financial reporting discount rate for the PERF remained at 7.15 percent. Assets used for GASB 67 financial reporting purposes are slightly greater than assets used for funding requirements, as the former include amounts for deficiency reserves and fiduciary self-insurance, which creates differences in plan assets reported in the funding actuarial valuation report. CalPERS is required to report Plan Fiduciary

Management's Discussion & Analysis (Unaudited) (continued)

Net Position as a percentage of Total Pension Liability for the cost-sharing multiple employer plans (PERF B and PERF C) and for the single-employer pension plans (LRF, JRF, and JRF II). The discount rates used for financial reporting for the PERF B, PERF C, LRF, and JRF II are set equal to the unadjusted long-term expected return assumption for each plan. The discount rates used for funding are net of administrative expenses. The funding discount rate in the JRF differs from the financial reporting discount rate which is based on 20-year tax-exempt General Obligation Municipal Bonds.

In April 2017, the Board voted to also lower the funding discount rates for the LRF, JRF, and JRF II, which impacted employer rates beginning in Fiscal Year 2018-19. These funding rates were used in the June 30, 2017 and June 30, 2018, actuarial valuation reports for the LRF, JRF, and JRF II. The LRF funding discount rate was 5.00 percent, JRF was 3.00 percent, and JRF II was 6.50 percent. The financial reporting discount rate used in the JRF was not impacted as its benefit obligations are funded by the State using the pay-as-you-go method.

The following table displays the discount rates for the LRF, JRF, and JRF II for funding and financial reporting purposes as of June 30, 2019:

Fund	Funding Discount Rate	Financial Reporting Discount Rate
LRF	5.00%	5.25%
JRF	3.00%	3.13%
JRF II	6.50%	6.65%

DEFINED CONTRIBUTION PLANS

PUBLIC EMPLOYEES' DEFERRED COMPENSATION FUND (DCF)

The DCF is a fund into which CalPERS deposits contributions by employees of public agencies and school districts within the State of California that have elected to contract for a deferred compensation plan. To administer the program, CalPERS contracts with a third-party service provider (TPA). In May 2018, the Board approved an 18-month contract term extension through January 2020 with Voya Financial, LLC (Voya). As the TPA, Voya provides full recordkeeping, plan administration services, and new business development in support of the DCF.

The net position of the DCF increased by \$189.2 million or 12.7 percent from the beginning balance of \$1.5 billion to \$1.7 billion. Investment balances increased by \$186.1 million from Fiscal Year 2017-18 to Fiscal Year 2018-19, due to the investment of net inflows from contributions and investment income which exceeded participant withdrawal outflows this year. Total net pension & OPEB liabilities decreased by \$0.9 million or 16.8 percent. Net pension liability decreased primarily as a result of changes in actuarial assumptions. Net OPEB liability also decreased due to changes in actuarial assumptions, mostly impacted by the favorable health care claims experience and plan design changes. Member contributions in the fund increased \$138.5 million or 123.0 percent compared with the prior year primarily due to a new public agency transferring into the fund with a \$130.1 million balance in July 2018.

Total additions increased \$121.5 million primarily due to the \$130.1 million transfer, partially offset by slightly less favorable investment returns in Fiscal Year 2018-19 compared with Fiscal Year 2017-18.

Total deductions in the DCF decreased by \$12.4 million or 7.1 percent. This was primarily due to a decrease in participant withdrawals from the plan of \$11.3 million from \$168.1 million in Fiscal Year 2017-18 to \$156.8 million in Fiscal Year 2018-19. Administrative expenses for CalPERS personnel also decreased \$1.1 million or 20.7 percent, primarily due to a decrease in the state's pension and OPEB expenses resulting from decreased net pension and OPEB liabilities.

SUPPLEMENTAL CONTRIBUTIONS PROGRAM FUND (SCPF)

Established in January 1, 2000, the SCPF is a member-funded program that provides supplemental retirement benefits to State of California employees who are CalPERS members. To help administer the program, CalPERS contracts with a third-party service provider (TPA). In May 2018, the Board approved an 18-month contract term extension through January 2020 with Voya. As the TPA, Voya provides full recordkeeping, plan administration services, and new business development in support of the SCPF.

The net position of the SCPF decreased \$2.1 million or 1.8 percent from the beginning balance of \$116.1 million to \$114.1 million, primarily due to participant withdrawals exceeding contributions and investment income by \$1.8 million.

While positive returns were achieved in both current and prior years, Fiscal Year 2018-19 was slightly more favorable. Net investment income increased by \$1.0 million, from \$4.4 million in Fiscal Year 2017-18 to \$5.4 million in Fiscal Year 2018-19.

Total additions increased \$0.7 million primarily due to more favorable investment returns in Fiscal Year 2018-19 compared with Fiscal Year 2017-18 primarily due to increased investment income.

The primary deductions in the SCPF reflect withdrawals made by participants. Participant withdrawals decreased \$1.3 million, from \$9.0 million as of Fiscal Year 2017-18 to \$7.7 million as of Fiscal Year 2018-19. Administrative expenses for CalPERS personnel also decreased \$0.1 million or 28.9 percent, primarily due to a decrease in the state's pension and OPEB expenses as a result of decreased net pension and OPEB liabilities. Net pension liability decreased primarily as a result of changes in actuarial assumptions. Net OPEB liability also decreased due to changes in actuarial assumptions, mostly impacted by the favorable health care claims experience and plan design changes.

Management's Discussion & Analysis (Unaudited) (continued)

Fiduciary Net Position – Defined Contribution Plan Funds (Dollars in Thousands)

	DCF			SCPF		
	2019	2018	Increase/ (Decrease)	2019	2018	Increase/ (Decrease)
ASSETS AND DEFERRED OUTFLOWS OF RESOURCES						
Cash & Cash Equivalents	\$398	\$0	\$398	\$67	\$1	\$66
Receivables	19,113	17,369	1,744	732	714	18
Investments	1,671,915	1,485,771	186,144	114,503	116,679	(2,176)
Total Assets	\$1,691,426	\$1,503,140	\$188,286	\$115,302	\$117,394	(\$2,092)
Deferred Outflows of Resources	\$462	\$569	(\$107)	\$41	\$48	(\$7)
Total Assets and Deferred Outflows of Resources	\$1,691,888	\$1,503,709	\$188,179	\$115,343	\$117,442	(\$2,099)
LIABILITIES AND DEFERRED INFLOWS OF RESOURCES						
Retirement Benefits, Investment Settlement & Other	\$2,508	\$2,761	(\$253)	\$908	\$863	\$45
Net Pension & OPEB Liabilities	4,309	5,180	(871)	377	442	(65)
Total Liabilities	\$6,817	\$7,941	(\$1,124)	\$1,285	\$1,305	(\$20)
Deferred Inflows of Resources	\$85	\$22	\$63	\$7	\$2	\$5
Total Liabilities and Deferred Inflows of Resources	\$6,902	\$7,963	(\$1,061)	\$1,292	\$1,307	(\$15)
TOTAL NET POSITION RESTRICTED FOR PENSION BENEFITS	\$1,684,986	\$1,495,746	\$189,240	\$114,051	\$116,135	(\$2,084)

Changes in Fiduciary Net Position – Defined Contribution Plan Funds (Dollars in Thousands)

	DCF			SCPF		
	2019	2018	Increase/ (Decrease)	2019	2018	Increase/ (Decrease)
ADDITIONS						
Member Contributions	\$251,102	\$112,586	\$138,516	\$251	\$252	(\$1)
Employer Contributions	—	977	(977)	—	—	—
Net Investment Income	92,546	108,821	(16,275)	5,360	4,362	998
Other Income	6,590	6,306	284	337	619	(282)
Total Additions	\$350,238	\$228,690	\$121,548	\$5,948	\$5,233	\$715
DEDUCTIONS						
Administrative Expenses	\$4,202	\$5,296	(\$1,094)	\$283	\$398	(\$115)
Participant Withdrawals	156,796	168,064	(11,268)	7,749	9,046	(1,297)
Total Deductions	\$160,998	\$173,360	(\$12,362)	\$8,032	\$9,444	(\$1,412)
INCREASE (DECREASE) IN NET POSITION	\$189,240	\$55,330	\$133,910	(\$2,084)	(\$4,211)	\$2,127
NET POSITION						
Beginning of Year	\$1,495,746	\$1,444,606	\$51,140	\$116,135	\$120,704	(\$4,569)
Adjustments	—	(4,190) ¹	4,190	—	(358) ¹	358
Beginning of Year (as adjusted)	\$1,495,746	\$1,440,416	\$55,330	\$116,135	\$120,346	(\$4,211)
End of Year	\$1,684,986	\$1,495,746	\$189,240	\$114,051	\$116,135	(\$2,084)

(1) The Fiscal Year 2017-18 beginning of year net position balance was restated due to the implementation of Governmental Accounting Standards Board Statement No. 68, *Accounting and Financial Reporting for Pensions*, an amendment of GASB Statement No. 27, and GASB Statement No. 75, *Accounting and Financial Reporting for Post-employment Benefits Other Than Pensions*.

OTHER POST-EMPLOYMENT BENEFIT TRUST FUND

CALIFORNIA EMPLOYERS' RETIREE BENEFIT TRUST FUND (CERBTf)

The CERBTf is a trust for employers to pre-fund health, dental, and other non-pension post-employment benefits. CalPERS contracts with a third-party service provider, Northeast Retirement Services (NRS), to perform record keeping for individual CERBTf employer accounts.

Net position restricted for OPEB benefits on June 30, 2019, increased \$1.5 billion or 18.3 percent from the prior year, primarily due to continued employer contributions in Fiscal Year 2018-19, combined with continued positive investment returns. Receivables increased \$4.8 million or 12.6 percent, primarily due to higher outstanding employer contributions pending at year-end. Investments at fair value increased \$1.5 billion or 18.2 percent due to continued favorable market conditions and the growth of assets under management from employer contributions. CERBTf investments changed from partially to fully externally managed as of June 30, 2018, resulting in zero balances in securities lending collateral and obligations as of June 30, 2019.

Total liabilities decreased \$13.8 million or 16.3 percent, primarily due to the elimination of securities lending in the CERBTf this year. Additionally, total net pension & OPEB liabilities decreased by \$2.2 million or 19.4 percent. Net pension liability decreased primarily as a result of changes in actuarial assumptions. Net OPEB liability also decreased due to changes in actuarial assumptions, mostly impacted by the favorable health care claims experience and plan design changes.

Additions to the CERBTf net position restricted for OPEB benefits are primarily made up of employer contributions (directly to the trust and outside the trust) and net investment income. Employer contributions increased \$92.0 million or 2.3 percent, primarily due to higher contributions from existing participating employers. During Fiscal Year 2018-19, the fund experienced net investment income of \$568.8 million, an increase of \$38.6 million from a net investment return of \$530.2 million in Fiscal Year 2017-18. The continuing high volume of contributions flowing into the fund resulted in more earnings in dollar terms than the prior year, even though the rate of return was lower this year. Additionally, the CERBTf recognized a MWRR of 6.5 percent in Fiscal Year 2018-19, compared with 7.3 percent in Fiscal Year 2017-18.

Deductions from the CERBTf net position restricted for OPEB benefits were primarily made up of OPEB reimbursements to employers (directly from the trust and outside the trust), which increased \$78.0 million or 2.7 percent, due to increased volume of reimbursement requests among existing participating employers. The amounts reported for contributions and reimbursements made directly by employers to health care providers outside the trust amounted to \$3.0 billion for Fiscal Year 2018-19 compared with \$2.9 billion in Fiscal Year 2017-18. Administrative expenses for CalPERS personnel decreased \$2.0 million or 51.3 percent primarily due to a decrease in the state's pension and OPEB expenses as a result of decreased net pension and OPEB liabilities.

Management's Discussion & Analysis (Unaudited) (continued)

Fiduciary Net Position – Other Post-Employment Benefit Trust Fund (Dollars in Thousands)

	CERBTF		
	2019	2018	Increase/ (Decrease)
ASSETS AND DEFERRED OUTFLOWS OF RESOURCES			
Cash & Cash Equivalents	\$669	\$1	\$668
Receivables	43,211	38,364	4,847
Investments	9,841,991	8,327,899	1,514,092
Securities Lending Collateral	—	11,891	(11,891)
Total Assets	\$9,885,871	\$8,378,155	\$1,507,716
Deferred Outflows of Resources	\$956	\$1,222	(\$266)
Total Assets and Deferred Outflows of Resources	\$9,886,827	\$8,379,377	\$1,507,450
LIABILITIES AND DEFERRED INFLOWS OF RESOURCES			
Other Post-Employment Benefits, Investment Settlement & Other	\$62,367	\$62,179	\$188
Net Pension & OPEB Liabilities	8,950	11,109	(2,159)
Securities Lending Obligations	—	11,870	(11,870)
Total Liabilities	\$71,317	\$85,158	(\$13,841)
Deferred Inflows of Resources	\$205	\$47	\$158
Total Liabilities and Deferred Inflows of Resources	\$71,522	\$85,205	(\$13,683)
TOTAL NET POSITION RESTRICTED FOR OPEB	\$9,815,305	\$8,294,172	\$1,521,133

Changes in Fiduciary Net Position – Other Post-Employment Benefit Trust Fund (Dollars in Thousands)

	CERBTF		
	2019	2018	Increase/ (Decrease)
ADDITIONS			
Employer Contributions	\$4,007,941	\$3,915,969	\$91,972
Net Investment Income	568,801	530,189	38,612
Securities Lending & Other Income	7,490	6,985	505
Total Additions	\$4,584,232	\$4,453,143	\$131,089
DEDUCTIONS			
Administrative Expenses	\$1,882	\$3,862	(\$1,980)
Employer Withdrawals	75,991	30,193	45,798
OPEB Reimbursements	2,985,226	2,907,220	78,006
Total Deductions	\$3,063,099	\$2,941,275	\$121,824
INCREASE IN NET POSITION	\$1,521,133	\$1,511,868	\$9,265
NET POSITION			
Beginning of Year	\$8,294,172	\$6,791,289	\$1,502,883
Adjustments	—	(8,985) ¹	8,985
Beginning of Year (as adjusted)	\$8,294,172	\$6,782,304	\$1,511,868
End of Year	\$9,815,305	\$8,294,172	\$1,521,133

(1) The Fiscal Year 2017-18 beginning of year net position balance was restated due to the implementation of Governmental Accounting Standards Board Statement No. 68, *Accounting and Financial Reporting for Pensions—an amendment of GASB Statement No. 27*, and GASB Statement No. 75, *Accounting and Financial Reporting for Post-employment Benefits Other Than Pensions*.

CUSTODIAL FUNDS

REPLACEMENT BENEFIT FUND (RBF)

The RBF is a qualified excess benefit arrangement pursuant to IRC section 415(m) and provides for the replacement of the portion of retirement allowance that exceeds Internal Revenue Code (IRC) section 415(b) dollar limits. Employers are invoiced by CalPERS for amounts payable to their former employees, and CalPERS subsequently pays the replacement benefit to retirees. Participants of the RBF cover the administrative costs to maintain the fund.

The net position of the RBF increased by \$0.3 million or 102.5 percent, primarily due to an increase in the number of retirees receiving benefits. As a result, employer contributions increased \$3.3 million or 14.5 percent and unearned replacement benefits liability increased by \$2.4 million or 18.4 percent.

Deductions from the RBF include benefit payments, which increased \$3.3 million or 14.5 percent due to an increase in the number of retirees receiving benefits from 1,167 as of June 30, 2018, to 1,383 as of June 30, 2019.

OLD AGE AND SURVIVORS' INSURANCE REVOLVING FUND (OASI)

The OASI was established to consolidate the collection and payment of employee and employer contributions for California public agencies under the provisions of the Federal Social Security regulations.

The Board serves as the State Social Security Administrator (SSSA). Between 1955 and 1986, the SSSA was responsible for collecting Social Security and Medicare taxes from public employers. Effective January 1, 1987, with the enactment of the Omnibus Budget Reconciliation Act of 1986, the responsibility of collecting taxes moved from CalPERS to the Internal Revenue Service and the OASI has been operating since 1987 using the interest that was earned on the OASI. The OASI funds have diminished, requiring additional funding to pay for the costs of administering the SSSA program. CalPERS will be charging participating agencies a specified fee to pay for these costs.

The OASI reports a Statement of Changes in Fiduciary Net Position in addition to a Statement of Fiduciary Net Position effective in Fiscal Year 2018-19. Furthermore, the beginning of the year net position for Fiscal Year 2018-19 was restated to more accurately depict the nature of the fund.

Management's Discussion & Analysis (Unaudited) (continued)

Fiduciary Net Position – Custodial Funds (Dollars in Thousands)

	RBF			OASI		
	2019	2018	Increase/ (Decrease)	2019	2018	Increase/ (Decrease)
ASSETS						
Cash & Cash Equivalents	\$0	\$1	(\$1)	\$0	\$2,850	(\$2,850)
Receivables	309	224	85	1	—	1
Investments	16,005	13,329	2,676	1,703	—	1,703
Total Assets	\$16,314	\$13,554	\$2,760	\$1,704	\$2,850	(\$1,146)
LIABILITIES						
Due to Members & Employers	\$0	\$0	\$0	\$0	\$1,703	(\$1,703)
Due to Other Funds	37	37	—	667	1,147	(480)
Unearned Replacement Benefits	15,619	13,192	2,427	—	—	—
Total Liabilities	\$15,656	\$13,229	\$2,427	\$667	\$2,850	(\$2,183)
TOTAL NET POSITION RESTRICTED FOR REPLACEMENT BENEFITS/PROGRAM ADMINISTRATION	\$658	\$325	\$333	\$1,037	\$0	\$1,037

Changes in Fiduciary Net Position – Custodial Funds (Dollars in Thousands)

	RBF			OASI
	2019	2018	Increase/ (Decrease)	2019
ADDITIONS				
Replacement Benefits	\$25,756	\$22,487	\$3,269	\$0
Investment Income	301	163	138	1
Other Income	482	444	38	—
Total Additions	\$26,539	\$23,094	\$3,445	\$1
DEDUCTIONS				
Replacement Benefit Payments	\$25,756	\$22,487	\$3,269	\$0
Administrative Expenses	450	450	—	667
Total Deductions	\$26,206	\$22,937	\$3,269	\$667
INCREASE (DECREASE) IN NET POSITION	\$333	\$157	\$176	(\$666)
NET POSITION				
Beginning of Year	\$325	\$168	\$157	\$0
Adjustments	—	—	—	1,703 ¹
End of Year	\$658	\$325	\$333	\$1,037

(1) In anticipation of future income and expense reporting, the beginning balance was restated to more accurately depict the nature of the fund.

ENTERPRISE FUNDS

PUBLIC EMPLOYEES' HEALTH CARE FUND (HCF)

The HCF accounts for the activities of the CalPERS self-funded health plans, PERS Choice, PERSCare, and PERS Select, and flex-funded health plans, Anthem Blue Cross, Blue Shield of California, Health Net, Sharp, UnitedHealthcare, and Western Health Advantage.

In June 2019, the Board agreed to use \$44.0 million of surplus funds in PPO plan reserves to buy-down the 2020 PERSCare Basic PPO plan premium. While the buy-down reduced a higher premium rate increase for this plan, its members will experience a 6.5 percent increase premium in 2020.

In September 2018, the Board approved a Health Care Fund Reserve Policy to review the appropriate reserve level to adequately account for worst-case scenarios, including plan termination, a sudden drop in enrollment, natural disaster, or an unexpected health pandemic. The policy also established criteria for reducing or increasing PPO plan reserves when certain predetermined thresholds are met. Lastly, it adopted a methodology for handling any surpluses or deficits attributable to PPO and Flex-Funded Health Maintenance Organization (HMO) plans.

CalPERS implemented a value-based insurance design (VBID) for the PERS Select Basic PPO plan starting in the 2019 plan year. The VBID approach encourages members to choose a personal care physician to coordinate their health care to ensure they are obtaining needed care. In addition, it provides incentives to members to become more involved in their health decisions and earn credits to reduce their annual deductible costs.

The net position of the HCF in Fiscal Year 2018-19 decreased by \$110.3 million or 22.7 percent from the beginning net position of \$485.6 million to \$375.4 million.

Total assets decreased by \$149.7 million or 10.0 percent as the fund continues to liquidate its short term investments to cover claims expenses in excess of the premiums revenue. Total liabilities decreased \$43.3 million or 4.2 percent primarily due to a decrease in net pension and OPEB liabilities. The net pension liability decreased primarily as a result of the changes in actuarial assumptions. Net OPEB liability also decreased due to changes in actuarial assumptions, mostly impacted by the favorable health care claims experience and plan design changes.

Revenues include premiums collected from members and employers, federal subsidies, and investment income (non-operating revenues). Premiums collected decreased by \$264.7 million or 6.7 percent, primarily due to discontinuation of the risk adjustment program as of December 31, 2018, as

well as the use of plan reserves for various premium spend downs. Investment income increased by \$34.7 million or 206.0 percent due to improved performance in the fixed income market.

Expenses are comprised of claims, investment fees, and costs incurred to oversee the plans. Claim expenses increased slightly by \$4.3 million, or 0.1 percent because the increase in medical and pharmacy claim expenses was offset by the increase in pharmacy rebates. Administrative expenses for CalPERS personnel decreased by \$5.4 million or 1.8 percent, primarily due to a decrease in the state's pension and OPEB expenses resulting from decreased net pension and OPEB liabilities.

PUBLIC EMPLOYEES' CONTINGENCY RESERVE FUND (CRF)

The CRF was established to fund administrative costs related to the CalPERS health care programs and to provide a contingency reserve for potential increases in future health care premium rates and health care benefit costs.

The net position of the CRF in Fiscal Year 2018-19 was negative \$48.3 million, an increase of \$9.5 million or 16.4 percent from the beginning net position of negative \$57.8 million.

Cash and cash equivalents decreased by \$14.2 million or 2.2 percent primarily due to a reduction in outstanding payables to employers in Fiscal Year 2018-19. Net pension and OPEB liabilities decreased by \$13.8 million or 16.2 percent. The net pension liability decreased primarily as a result of the changes in actuarial assumptions. Net OPEB liability also decreased due to changes in actuarial assumptions, mostly impacted by the favorable health care claims experience and plan design changes.

Revenues include administrative fees collected and investment income. Administrative fees are determined as a percentage of total active and retired health premiums. These fees decreased by \$7.8 million or 25.8 percent primarily due to a decrease in the administrative fee rate from 0.33 percent in Fiscal Year 2017-18 to 0.23 percent in Fiscal Year 2018-19. Investment income increased by \$2.7 million or 86.3 percent due to an increase in the short-term interest rate.

Expenses are comprised of investment fees and costs incurred to administer the CRF. Administrative expenses for CalPERS personnel decreased by \$16.0 million or 45.9 percent, primarily due to a decrease in the state's pension and OPEB expenses resulting from decreased net pension and OPEB liabilities.

PUBLIC EMPLOYEES' LONG-TERM CARE FUND (LTCF)

The LTCF provides financial protection to participants from the high cost of eligible covered services caused by chronic illness, injury, or old age. Long-term care products reimburse the cost for covered personal care services (activities of daily living) such as bathing, dressing, toileting, transferring, continence, and eating, which are not typically covered by traditional health insurance or Medicare.

Long-term care participation is voluntary, and benefits are funded by member premiums and the LTCF investment income. The LTCF is continuously appropriated under the exclusive control of the Board for the exclusive benefit of participants in the program.

The long-term care program launched an integrated marketing campaign to promote and grow application activity. Long-Term Care Group (LTCG) is the third-party administrator (TPA) for CalPERS Long-Term Care program. The TPA has continued to grow its Preferred Provider Network of contracted providers that provide discounts from five to twenty percent on services. The TPA has continued its efforts to enroll more providers and educate participants on the benefits of utilizing a preferred provider.

Unrestricted net position of the LTCF increased by \$172.5 million or 224.8 percent, primarily due to higher investment returns. Receivables decreased \$13.8 million or 97.1 percent primarily due to a change in the investment strategy and asset allocation in Fiscal Year 2018-19. However, investments increased by \$255.6 million or 5.7 percent.

Total liabilities increased primarily due to estimated liabilities for future policy benefits increase of \$80.9 million or 1.8 percent.

The LTCF revenues include premiums collected from participants and investment income. Participation in the plan decreased by 3.1 percent mainly due to participant deaths, coverage cancellations, nonpayment of premiums, and exhaustion of benefits. This resulted in the decrease of premium revenue of \$12.9 million or 4.3 percent. Non-operating revenues are comprised of net appreciation or depreciation in fair value of investments and interest, dividend, and other investment income. The investment income for Fiscal Year 2018-19 was \$321.7 million, an increase of \$144.1 million or 81.2 percent from the prior year due to higher investment returns and more favorable market conditions for fixed income investments.

Total expenses are comprised of claims, changes in estimated liabilities for future policy benefits, administrative costs to the program, and investment expenses. The overall decrease in total expenses is primarily attributable to a lower increase in the estimated future policy liabilities compared to FY 2017-18. Refer to Note 14 for additional information regarding the calculation of the estimated liabilities for future policy benefits. Administrative expenses for CalPERS personnel decreased \$2.2 million or 8.5 percent, primarily due to a decrease in the state's pension and OPEB expenses as a result of decreased net pension and OPEB liabilities. Net pension liability decreased primarily as a result of changes in actuarial assumptions. Net OPEB liability also decreased due to changes in actuarial assumptions, mostly impacted by the favorable health care claims experience and plan design changes.

Management's Discussion & Analysis (Unaudited) (continued)

Net Position – Enterprise Funds (Dollars in Thousands)

	HCF			CRF			LTCF		
	2019	2018	Increase/ (Decrease)	2019	2018	Increase/ (Decrease)	2019	2018	Increase/ (Decrease)
ASSETS AND DEFERRED OUTFLOWS OF RESOURCES									
Cash & Cash Equivalents	\$371,537	\$583,293	(\$211,756)	\$644,041	\$658,268	(\$14,227)	\$11,250	\$10,059	\$1,191
Receivables	497,015	469,770	27,245	27,117	24,702	2,415	414	14,195	(13,781)
Investments	478,102	443,242	34,860	—	—	—	4,769,798	4,514,213	255,585
Total Assets	\$1,346,654	\$1,496,305	(\$149,651)	\$671,158	\$682,970	(\$11,812)	\$4,781,462	\$4,538,467	\$242,995
Deferred Outflows of Resources	\$11,344	\$13,828	(\$2,484)	\$7,637	\$9,333	(\$1,696)	\$1,046	\$1,341	(\$295)
Total Assets and Deferred Outflows of Resources	\$1,357,998	\$1,510,133	(\$152,135)	\$678,795	\$692,303	(\$13,508)	\$4,782,508	\$4,539,808	\$242,700
LIABILITIES AND DEFERRED INFLOWS OF RESOURCES									
Claims Payable, Unearned Premiums, Estimated Insurance Claims Due & Due to Carriers	\$839,094	\$857,259	(\$18,165)	\$345,063	\$347,897	(\$2,834)	\$38,993	\$35,226	\$3,767
Due to Employers	—	—	—	642	13,488	(12,846)	—	—	—
Other Liabilities	35,958	40,962	(5,004)	308,941	303,483	5,458	8,725	20,990	(12,265)
Estimated Liability for Future Policy Benefits	—	—	—	—	—	—	4,628,993	4,548,100	80,893
Net Pension & OPEB Liabilities	105,579	125,739	(20,160)	71,100	84,860	(13,760)	9,799	12,195	(2,396)
Total Liabilities	\$980,631	\$1,023,960	(\$43,329)	\$725,746	\$749,728	(\$23,982)	\$4,686,510	\$4,616,511	\$69,999
Deferred Inflows of Resources	\$2,005	\$537	\$1,468	\$1,364	\$362	\$1,002	\$226	\$52	\$174
Total Liabilities and Deferred Inflows of Resources	\$982,636	\$1,024,497	(\$41,861)	\$727,110	\$750,090	(\$22,980)	\$4,686,736	\$4,616,563	\$70,173
TOTAL UNRESTRICTED NET POSITION (DEFICIT)	\$375,362	\$485,636	(\$110,274)	(\$48,315)	(\$57,787)	\$9,472	\$95,772	(\$76,755)	\$172,527

Changes in Net Position – Enterprise Funds (Dollars in Thousands)

	HCF			CRF			LTCF		
	2019	2018	Increase/ (Decrease)	2019	2018	Increase/ (Decrease)	2019	2018	Increase/ (Decrease)
REVENUES									
Premiums	\$3,681,106	\$3,945,826	(\$264,720)	\$0	\$0	\$0	\$283,445	\$296,323	(\$12,878)
Federal Government Subsidies	18,753	22,720	(3,967)	—	—	—	—	—	—
Non-Operating Revenues	51,547	16,847	34,700	5,896	3,165	2,731	321,711	177,562	144,149
Administrative Fees & Other	—	—	—	22,375	30,152	(7,777)	—	—	—
Total Revenues	\$3,751,406	\$3,985,393	(\$233,987)	\$28,271	\$33,317	(\$5,046)	\$605,156	\$473,885	\$131,271
EXPENSES									
Claims Expense	\$3,548,295	\$3,543,962	\$4,333	\$0	\$0	\$0	\$324,841	\$306,879	\$17,962
Increase (Decrease) in Estimated Liabilities	14,332	36,609	(22,277)	—	—	—	80,892	295,142	(214,250)
Non-Operating Expenses	166	89	77	—	—	—	2,596	1,853	743
Administrative Expenses	298,887	304,319	(5,432)	18,799	34,763	(15,964)	24,300	26,545	(2,245)
Total Expenses	\$3,861,680	\$3,884,979	(\$23,299)	\$18,799	\$34,763	(\$15,964)	\$432,629	\$630,419	(\$197,790)
INCREASE (DECREASE) IN UNRESTRICTED NET POSITION	(\$110,274)	\$100,414	(\$210,688)	\$9,472	(\$1,446)	\$10,918	\$172,527	(\$156,534)	\$329,061
UNRESTRICTED NET POSITION (DEFICIT)									
Beginning of Year	\$485,636	\$486,927	(\$1,291)	(\$57,787)	\$12,298	(\$70,085)	(\$76,755)	\$89,643	(\$166,398)
Adjustments	—	(101,705) ¹	101,705	—	(68,639) ¹	68,639	—	(9,864) ¹	9,864
Beginning of Year (as adjusted)	\$485,636	\$385,222	\$100,414	(\$57,787)	(\$56,341)	(\$1,446)	(\$76,755)	\$79,779	(\$156,534)
End of Year	\$375,362	\$485,636	(\$110,274)	(\$48,315)	(\$57,787)	\$9,472	\$95,772	(\$76,755)	\$172,527

(1) The Fiscal Year 2017-18 beginning of year net position balance was restated due to the implementation of Governmental Accounting Standards Board Statement No. 68, *Accounting and Financial Reporting for Pensions—an amendment of GASB Statement No. 27*, and *GASB Statement No. 75, Accounting and Financial Reporting for Post-employment Benefits Other Than Pensions*.

REQUESTS FOR INFORMATION

This financial report is designed to provide a general overview of CalPERS finances. Address questions concerning any of the information provided in this report or requests for additional financial information to the CalPERS Financial Office, P.O. Box 942703, Sacramento, CA, 94229-2703, or call 888 CalPERS (or 888-225-7377).

FINANCIAL SECTION

Basic Financial Statements

- 40 Statement of Fiduciary Net Position – Fiduciary Funds
- 42 Statement of Changes in Fiduciary Net Position – Fiduciary Funds
- 44 Statement of Net Position – Proprietary Funds
- 45 Statement of Revenues, Expenses, and Changes in Net Position – Proprietary Funds
- 46 Statement of Cash Flows – Proprietary Funds
- 47 Notes to the Basic Financial Statements

Basic Financial Statements

STATEMENT OF FIDUCIARY NET POSITION – FIDUCIARY FUNDS

As of June 30, 2019, with Comparative Totals as of June 30, 2018 (Dollars in Thousands)

	Pension Trust Funds					
	PERF A	PERF B	PERF C			
	Agent	Schools Cost-Sharing	Public Agency Cost-Sharing	LRF	JRF	JRF II
ASSETS AND DEFERRED OUTFLOWS OF RESOURCES						
Cash & Cash Equivalents	\$487,509	\$121,586	\$55,618	\$1,200	\$1	\$1
Receivables						
Members	\$503,855	\$117,835	\$47,142	\$34	\$1,014	\$843
Employers	968,054	293,473	47,205	4	1,058	9,693
Investment Sales & Other	1,065,104	265,641	121,513	—	—	4
Interest & Dividends	602,846	150,352	68,776	2	151	57
Due from Other Funds	2,268	566	259	—	—	—
Other Program	67,440	16,820	7,694	9	44	4
Total Receivables	\$3,209,567	\$844,687	\$292,589	\$49	\$2,267	\$10,601
Investments, at Fair Value						
Short-Term Investments	\$7,241,206	\$1,803,968	\$827,577	\$769	\$18,342	\$9,429
Global Equity Securities	135,704,274	33,807,379	15,509,254	39,992	—	1,067,523
Global Debt Securities	83,737,190	20,861,059	9,570,084	74,446	—	627,952
Real Assets	29,901,859	7,449,312	3,417,398	—	—	—
Private Equity	19,415,492	4,836,892	2,218,941	—	—	—
Total Investments	\$276,000,021	\$68,758,610	\$31,543,254	\$115,207	\$18,342	\$1,704,904
Securities Lending Collateral	\$3,178,981	\$792,849	\$362,677	\$0	\$0	\$0
Capital Assets, Net & Other Assets	309,677	77,235	35,330	—	—	—
TOTAL ASSETS	\$283,185,755	\$70,594,967	\$32,289,468	\$116,456	\$20,610	\$1,715,506
Deferred Outflows of Resources	\$79,270	\$19,770	\$9,044	\$165	\$452	\$579
TOTAL ASSETS AND DEFERRED OUTFLOWS OF RESOURCES	\$283,265,025	\$70,614,737	\$32,298,512	\$116,621	\$21,062	\$1,716,085
LIABILITIES AND DEFERRED INFLOWS OF RESOURCES						
Retirement & Other Benefits	\$1,534,555	\$361,035	\$159,934	\$605	\$0	\$0
Investment Purchases & Other	4,452,271	1,110,413	507,942	—	—	—
Due to Members & Employers	6,941	—	—	12	20	2
Net Pension & OPEB Liabilities	736,826	183,767	84,062	1,529	4,255	5,421
Securities Lending Obligations	3,171,346	790,945	361,806	—	—	—
Due to Other Funds	1,465	366	167	13	59	61
Management & Third-Party Administrator Fees	1,124	280	128	20	—	297
Unearned Replacement Benefits	—	—	—	—	—	—
Other Program	71,833	7,851	3,532	11	6,450	90
TOTAL LIABILITIES	\$9,976,361	\$2,454,657	\$1,117,571	\$2,190	\$10,784	\$5,871
Deferred Inflows of Resources	\$13,386	\$3,339	\$1,527	\$27	\$109	\$125
TOTAL LIABILITIES AND DEFERRED INFLOWS OF RESOURCES	\$9,989,747	\$2,457,996	\$1,119,098	\$2,217	\$10,893	\$5,996
NET POSITION – RESTRICTED FOR PENSION, OTHER POST-EMPLOYMENT, REPLACEMENT BENEFITS, AND PROGRAM ADMINISTRATION	\$273,275,278	\$68,156,741	\$31,179,414	\$114,404	\$10,169	\$1,710,089

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

Basic Financial Statements (continued)

Pension Trust Funds		Other Post-Employment Benefit Trust Fund	Custodial Funds		Totals	
DCF	SCPF	CERBTF	RBF	OASI	2019	2018
\$398	\$67	\$669	\$0	\$0	\$667,049	\$1,316,535
\$5,352	\$718	\$0	\$115	\$0	\$676,908	\$715,106
—	—	43,068	84	—	1,362,639	1,225,846
—	—	—	—	—	1,452,262	10,990,505
13	14	122	110	1	822,444	267,508
—	—	21	—	—	3,114	2,812
13,748	—	—	—	—	105,759	91,815
\$19,113	\$732	\$43,211	\$309	\$1	\$4,423,126	\$13,293,592
\$126,554	\$10,833	\$64,084	\$16,005	\$1,703	\$10,120,470	\$21,812,683
1,210,204	64,551	6,389,552	—	—	193,792,729	170,222,341
335,157	39,119	3,388,355	—	—	118,633,362	112,377,461
—	—	—	—	—	40,768,569	38,008,043
—	—	—	—	—	26,471,325	27,192,946
\$1,671,915	\$114,503	\$9,841,991	\$16,005	\$1,703	\$389,786,455	\$369,613,474
\$0	\$0	\$0	\$0	\$0	\$4,334,507	\$6,024,311
—	—	—	—	—	422,242	502,283
\$1,691,426	\$115,302	\$9,885,871	\$16,314	\$1,704	\$399,633,379	\$390,750,195
\$462	\$41	\$956	\$0	\$0	\$110,739	\$133,787
\$1,691,888	\$115,343	\$9,886,827	\$16,314	\$1,704	\$399,744,118	\$390,883,982
\$0	\$786	\$61,073	\$0	\$0	\$2,117,988	\$167,459
—	—	—	—	—	6,070,626	17,787,664
751	—	—	—	—	7,726	9,437
4,309	377	8,950	—	—	1,029,496	1,216,531
—	—	—	—	—	4,324,097	6,013,772
664	49	—	37	667	3,548	6,201
1,093	73	1,294	—	—	4,309	3,600
—	—	—	15,619	—	15,619	13,192
—	—	—	—	—	89,767	80,032
\$6,817	\$1,285	\$71,317	\$15,656	\$667	\$13,663,176	\$25,297,888
\$85	\$7	\$205	\$0	\$0	\$18,810	\$5,194
\$6,902	\$1,292	\$71,522	\$15,656	\$667	\$13,681,986	\$25,303,082
\$1,684,986	\$114,051	\$9,815,305	\$658	\$1,037	\$386,062,132	\$365,580,900

Basic Financial Statements (continued)

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION – FIDUCIARY FUNDS

For the Fiscal Year Ended June 30, 2019, with Comparative Totals for the Fiscal Year Ended June 30, 2018 (Dollars in Thousands)

	Pension Trust Funds					
	PERF A	PERF B	PERF C	LRF	JRF	JRF II
	Agent	Schools Cost-Sharing	Public Agency Cost-Sharing			
ADDITIONS						
Retirement and OPEB Contributions						
Members	\$3,293,389	\$1,014,070	\$357,159	\$91	\$2,679	\$31,376
Employers	11,751,393	2,527,726	1,333,559	250	4,188	84,099
Replacement Benefits	—	—	—	—	—	—
State of California General Fund	—	—	—	—	191,715	—
Employer Contributions Direct – OPEB	—	—	—	—	—	—
Employer Contributions Outside of Trust – OPEB	—	—	—	—	—	—
Total Retirement and OPEB Contribution	\$15,044,782	\$3,541,796	\$1,690,718	\$341	\$198,582	\$115,475
Investment Income						
Net Appreciation in Fair Value of Investments	\$13,625,301	\$3,387,263	\$1,558,647	\$7,911	\$0	\$107,358
Interest & Amortization	2,031,763	506,729	231,796	8	1,174	217
Dividends	1,826,749	455,598	208,406	—	—	—
Other Investment Income	99,076	24,710	11,303	11	—	171
Less Investment Expenses:						
Management & Performance Fees	(537,957)	(134,169)	(61,373)	(43)	—	(614)
Other	(193,751)	(48,322)	(22,105)	(27)	(8)	(351)
Net Investment Income	\$16,851,181	\$4,191,809	\$1,926,674	\$7,860	\$1,166	\$106,781
Securities Lending Income	\$192,525	\$48,017	\$21,965	\$0	\$0	\$0
Securities Lending Expense	(115,999)	(28,931)	(13,234)	—	—	—
Net Securities Lending	\$76,526	\$19,086	\$8,731	\$0	\$0	\$0
Other Income	\$5,007	\$1,195	\$534	\$0	\$2,776	\$0
Plan to Plan Resource Movement	—	304	167,308	—	—	—
TOTAL ADDITIONS	\$31,977,496	\$7,754,190	\$3,793,965	\$8,201	\$202,524	\$222,256
DEDUCTIONS						
Retirement, Death & Survivor Benefits	\$18,083,062	\$4,245,515	\$1,880,706	\$7,005	\$221,954	\$36,045
Replacement Benefit Payments	—	—	—	—	—	—
Refund of Contributions	157,036	101,911	21,319	344	—	159
Administrative Expenses	185,284	46,159	21,115	324	10,032	1,477
Plan to Plan Resource Movement	167,612	—	—	—	—	—
Participant & Employer Withdrawals	—	—	—	—	—	—
OPEB Reimbursements Direct	—	—	—	—	—	—
OPEB Reimbursements – Outside Trust	—	—	—	—	—	—
TOTAL DEDUCTIONS	\$18,592,994	\$4,393,585	\$1,923,140	\$7,673	\$231,986	\$37,681
INCREASE (DECREASE) IN NET POSITION	\$13,384,502	\$3,360,605	\$1,870,825	\$528	(\$29,462)	\$184,575
NET POSITION						
Beginning of Year	\$259,890,776	\$64,796,136	\$29,308,589	\$113,876	\$39,631	\$1,525,514
Adjustments	\$0	\$0	\$0	\$0	\$0	\$0
Beginning of Year (as adjusted)	\$259,890,776	\$64,796,136	\$29,308,589	\$113,876	\$39,631	\$1,525,514
End of year	\$273,275,278	\$68,156,741	\$31,179,414	\$114,404	\$10,169	\$1,710,089

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

Basic Financial Statements (continued)

Pension Trust Funds		Other Post-Employment Benefit Trust Fund	Custodial Funds		Totals	
DCF	SCPF	CERBTf	RBF	OASI	2019	2018
\$251,102	\$251	\$0	\$0	\$0	\$4,950,117	\$4,558,624
—	—	—	—	—	15,701,215	20,003,978
—	—	—	25,756	—	25,756	22,487
—	—	—	—	—	191,715	194,202
—	—	1,148,521	—	—	1,148,521	1,112,934
—	—	2,859,420	—	—	2,859,420	2,803,035
\$251,102	\$251	\$4,007,941	\$25,756	\$0	\$24,876,744	\$28,695,260
\$84,018	\$5,217	\$572,416	\$0	\$0	\$19,348,131	\$25,657,197
3,253	193	805	301	1	2,776,240	1,861,305
—	—	—	—	—	2,490,753	1,622,399
6,071	9	32	—	—	141,383	4,698
(444)	(34)	(2,534)	—	—	(737,168)	(711,826)
(352)	(25)	(1,918)	—	—	(266,859)	(234,593)
\$92,546	\$5,360	\$568,801	\$301	\$1	\$23,752,480	\$28,199,180
\$0	\$0	\$0	\$0	\$0	\$262,507	\$239,079
—	—	—	—	—	(158,164)	(124,469)
\$0	\$0	\$0	\$0	\$0	\$104,343	\$114,610
\$6,590	\$337	\$7,490	\$482	\$0	\$24,411	\$24,454
—	—	—	—	—	167,612	116,552
\$350,238	\$5,948	\$4,584,232	\$26,539	\$1	\$48,925,590	\$57,150,056
\$0	\$0	\$0	\$0	\$0	\$24,474,287	\$22,900,922
—	—	—	25,756	—	25,756	22,487
—	—	—	—	—	280,769	287,037
4,202	283	1,882	450	667	271,875	520,666
—	—	—	—	—	167,612	116,552
156,796	7,749	75,991	—	—	240,536	207,303
—	—	125,806	—	—	125,806	104,185
—	—	2,859,420	—	—	2,859,420	2,803,035
\$160,998	\$8,032	\$3,063,099	\$26,206	\$667	\$28,446,061	\$26,962,187
\$189,240	(\$2,084)	\$1,521,133	\$333	(\$666)	\$20,479,529	\$30,187,869
\$1,495,746	\$116,135	\$8,294,172	\$325	\$0	\$365,580,900	\$336,377,023
\$0	\$0	\$0	\$0	\$1,703	\$1,703	(\$983,992)
\$1,495,746	\$116,135	\$8,294,172	\$325	\$1,703	\$365,582,603	\$335,393,031
\$1,684,986	\$114,051	\$9,815,305	\$658	\$1,037	\$386,062,132	\$365,580,900

Basic Financial Statements (continued)

STATEMENT OF NET POSITION – PROPRIETARY FUNDS

As of June 30, 2019, with Comparative Totals as of June 30, 2018 (Dollars in Thousands)

	Proprietary Funds			Totals	
	HCF	CRF	LTCF	2019	2018
ASSETS AND DEFERRED OUTFLOWS OF RESOURCES					
Current Assets					
Cash & Cash Equivalents	\$1	\$0	\$11,232	\$11,233	\$9,611
Short-Term Investments	371,536	644,041	18	1,015,595	1,242,009
Receivables					
Members & Employers	\$0	\$17,140	\$414	\$17,554	\$16,577
Health Carriers & Pharmacy Benefit Managers	187,700	4,495	—	192,195	168,281
Interest & Dividends	2,042	3,978	—	6,020	5,399
Due from Other Funds	307,262	1,504	—	308,766	304,684
Investment Sales and Other	—	—	—	—	13,715
Other Receivables	11	—	—	11	11
Total Receivables	\$497,015	\$27,117	\$414	\$524,546	\$508,667
Subtotal Current Assets	\$868,552	\$671,158	\$11,664	\$1,551,374	\$1,760,287
Noncurrent Assets					
Investments, at Fair Value					
Global Equity Securities	\$0	\$0	\$1,628,790	\$1,628,790	\$1,605,144
Global Debt Securities	478,102	—	3,141,008	3,619,110	3,352,311
Total Investments	\$478,102	\$0	\$4,769,798	\$5,247,900	\$4,957,455
Subtotal Noncurrent Assets	\$478,102	\$0	\$4,769,798	\$5,247,900	\$4,957,455
TOTAL ASSETS	\$1,346,654	\$671,158	\$4,781,462	\$6,799,274	\$6,717,742
Deferred Outflows of Resources	\$11,344	\$7,637	\$1,046	\$20,027	\$24,502
Total Assets and Deferred Outflows of Resources	\$1,357,998	\$678,795	\$4,782,508	\$6,819,301	\$6,742,244
LIABILITIES AND DEFERRED INFLOWS OF RESOURCES					
Current Liabilities					
Claims Payable	\$280,776	\$0	\$27,383	\$308,159	\$341,643
Unearned Premiums	98,657	—	11,610	110,267	105,513
Due to Employers	—	642	—	642	13,488
Estimated Insurance Claims Due	459,661	—	—	459,661	445,329
Estimated Future Policy Liability Short-Term	—	—	73,497	73,497	82,018
Due to Carriers	—	345,063	—	345,063	347,897
Due to Other Funds	1,042	305,747	1,543	308,332	301,295
Investment Purchases & Other	—	—	—	—	13,699
Management & Third-Party Administrator Fees	34,916	—	2,497	37,413	43,099
Other	—	3,194	4,685	7,879	7,342
Total Current Liabilities	\$875,052	\$654,646	\$121,215	\$1,650,913	\$1,701,323
Long-Term Liabilities					
Estimated Liability for Future Policy Benefits	\$0	\$0	\$4,555,496	\$4,555,496	\$4,466,082
Net Pension & OPEB Liabilities	105,579	71,100	9,799	186,478	222,794
Total Long-Term Liabilities	\$105,579	\$71,100	\$4,565,295	\$4,741,974	\$4,688,876
TOTAL LIABILITIES	\$980,631	\$725,746	\$4,686,510	\$6,392,887	\$6,390,199
Deferred Inflows of Resources	\$2,005	\$1,364	\$226	\$3,595	\$951
Total Liabilities and Deferred Inflows of Resources	\$982,636	\$727,110	\$4,686,736	\$6,396,482	\$6,391,150
TOTAL UNRESTRICTED NET POSITION (DEFICIT)	\$375,362	(\$48,315)	\$95,772	\$422,819	\$351,094

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

Basic Financial Statements (continued)

STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION – PROPRIETARY FUNDS

For the Fiscal Year Ended June 30, 2019, with Comparative Totals for the Fiscal Year Ended June 30, 2018 (Dollars in Thousands)

	Proprietary Funds			Totals	
	HCF	CRF	LTCF	2019	2018
Operating Revenues					
Premiums	\$3,681,106	\$0	\$283,445	\$3,964,551	\$4,242,149
Federal Government Subsidies	18,753	—	—	18,753	22,720
Administrative Fees Earned	—	22,339	—	22,339	30,093
Other	—	36	—	36	59
Total Operating Revenues	\$3,699,859	\$22,375	\$283,445	\$4,005,679	\$4,295,021
Operating Expenses					
Claims Expense	\$3,548,295	\$0	\$324,841	\$3,873,136	\$3,850,841
Increase in Estimated Liabilities	14,332	—	80,892	95,224	331,751
Administrative Expenses	298,887	18,799	24,300	341,986	365,627
Total Operating Expenses	\$3,861,514	\$18,799	\$430,033	\$4,310,346	\$4,548,219
OPERATING INCOME (LOSS)	(\$161,655)	\$3,576	(\$146,588)	(\$304,667)	(\$253,198)
Non-Operating Revenues					
Net Appreciation in Fair Value of Investments	\$35,011	\$0	\$320,613	\$355,624	\$174,487
Interest, Dividends & Other Investment Income	16,536	5,896	1,098	23,530	23,087
Total Non-Operating Revenues	\$51,547	\$5,896	\$321,711	\$379,154	\$197,574
Non-Operating Expenses					
Management Fees	\$64	\$0	\$1,560	\$1,624	\$1,649
Other Investment Expenses	102	—	1,036	1,138	293
Total Non-Operating Expenses	\$166	\$0	\$2,596	\$2,762	\$1,942
NON-OPERATING INCOME	\$51,381	\$5,896	\$319,115	\$376,392	\$195,632
CHANGE IN UNRESTRICTED NET POSITION	(\$110,274)	\$9,472	\$172,527	\$71,725	(\$57,566)
TOTAL UNRESTRICTED NET POSITION (DEFICIT)					
Beginning of Year	\$485,636	(\$57,787)	(\$76,755)	\$351,094	\$588,868
Adjustments	\$0	\$0	\$0	\$0	(\$180,208)
Beginning of Year (as adjusted)	\$485,636	(\$57,787)	(\$76,755)	\$351,094	\$408,660
End of Year	\$375,362	(\$48,315)	\$95,772	\$422,819	\$351,094

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

Basic Financial Statements (continued)

STATEMENT OF CASH FLOWS – PROPRIETARY FUNDS

For the Fiscal Year Ended June 30, 2019, with Comparative Totals for the Fiscal Year Ended June 30, 2018 (Dollars in Thousands)

	Proprietary Funds			Totals	
	HCF	CRF	LTCF	2019	2018
Cash Flows From Operating Activities					
Premiums Collected	\$3,663,662	\$0	\$282,801	\$3,946,463	\$4,303,846
Federal Government Subsidies	18,753	—	—	18,753	22,720
Claims Paid	(3,586,256)	—	(320,364)	(3,906,620)	(3,759,513)
Other (Payments) Receipts, Net	(325,114)	(18,826)	(24,785)	(368,725)	(201,712)
Net Cash Provided by (Used for) Operating Activities	(\$228,955)	(\$18,826)	(\$62,348)	(\$310,129)	\$365,341
Cash Flows From Investing Activities					
Net Sales of Investments	\$151	\$0	\$65,044	\$65,195	\$37,185
Net Change in Short-Term Investments	211,757	14,227	431	226,415	(418,573)
Interest & Dividends Received	17,199	4,599	663	22,461	10,412
Other Investment (Payments) Receipts, Net	(151)	—	(2,169)	(2,320)	7,801
Net Cash Provided by (Used for) Investing Activities	\$228,956	\$18,826	\$63,969	\$311,751	(\$363,175)
NET INCREASE IN CASH AND CASH EQUIVALENTS	\$1	\$0	\$1,621	\$1,622	\$2,166
Cash & Cash Equivalents, Beginning of Year	\$0	\$0	\$9,611	\$9,611	\$7,445
Cash & Cash Equivalents, End of Year	\$1	\$0	\$11,232	\$11,233	\$9,611
Reconciliation of Operating Income (Loss) to Net Cash Provided by (Used for) Operating Activities					
Operating Income (Loss)	(\$161,655)	\$3,576	(\$146,588)	(\$304,667)	(\$253,198)
Changes in Assets and Liabilities:					
Receivables:					
Members & Employers	—	(1,043)	65	(978)	3,552
Health Carriers & Pharmacy Benefit Managers	(22,908)	(1,006)	—	(23,914)	58,398
Due from Other Funds	(5,013)	931	—	(4,082)	85,985
Claims Payable	(37,961)	—	4,477	(33,484)	91,328
Unearned Premiums	5,464	—	(710)	4,754	(6,069)
Due to Employers	—	(12,846)	—	(12,846)	(4,944)
Estimated Insurance Claims Due	14,332	—	—	14,332	36,609
Net Pension & OPEB Liabilities	(16,208)	(11,062)	(1,927)	(29,197)	19,035
Estimated Liability for Future Policy Benefits Short-Term	—	—	(8,521)	(8,521)	(244,710)
Estimated Liability for Future Policy Benefits Long-Term	—	—	89,414	89,414	539,852
Due to Carriers	—	(2,834)	—	(2,834)	127,361
Due to Other Funds	620	5,464	953	7,037	(89,694)
Management & Third-Party Administrator Fees Payable	(5,626)	—	(54)	(5,680)	12,673
Other	—	(6)	543	537	(10,837)
Net Cash Provided by (Used for) Operating Activities	(\$228,955)	(\$18,826)	(\$62,348)	(\$310,129)	\$365,341
Noncash Investing, Capital & Financing Activities					
Noncash Increase in Fair Value of Investments	\$34,990	\$0	\$46,478	\$81,468	\$142,604

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

Notes to the Basic Financial Statements

1. DESCRIPTION OF CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

ORGANIZATION

The California Public Employees' Retirement System (CalPERS or the System) was established by legislation in 1931 for the purpose of providing a secure retirement to employees of the State of California (State). In 1939, new legislation allowed public agency and classified school employees to join CalPERS for retirement benefits. CalPERS began administering health benefits for state employees in 1962, and five years later, offered health benefits to public agencies on a contract basis.

CalPERS is governed by the Board of Administration (the Board), which consists of 13 members: two elected by all active and retired members, one elected by active state members, one elected by active CalPERS school members, one elected by active CalPERS public agency members, one elected by retired members of CalPERS, two appointed by the Governor, one public representative appointed jointly by the Senate Rules Committee, and the Speaker of the Assembly, and four ex officio members: State Treasurer, State Controller, Director of California Department of Human Resources, and Designee of the State Personnel Board. The Board is responsible for the management and control of CalPERS, including the exclusive control of the administration and investment of the System.

CalPERS acts as the common investment and administrative agency for the following plans:

CalPERS Plans

Plan Name	Type of Plan
Defined Benefit Pension Plans:	
Public Employees' Retirement Fund A	Agent multiple-employer
Public Employees' Retirement Fund B	Cost-sharing multiple-employer
Public Employees' Retirement Fund C	Cost-sharing multiple-employer
Legislators' Retirement Fund	Single-employer
Judges' Retirement Fund	Single-employer
Judges' Retirement Fund II	Single-employer
Defined Contribution Plans:	
Public Employees' Deferred Compensation Fund	Multiple-employer (457 & 401K plans)
Supplemental Contributions Program Fund	Single-employer
Defined Benefit Other	
Post-Employment Benefit Plan:	
California Employers' Retiree Benefit Trust Fund	Agent multiple-employer

DEFINED BENEFIT PENSION PLANS

Below are summary descriptions of each defined benefit pension plan administered by CalPERS:

Public Employees' Retirement Fund (PERF) – The PERF was established by Chapter 700 of the 1931 Statutes and provides retirement, death, and disability benefits to members of participating employers, which include the State of California, non-teaching, non-certified employees in schools, and various other public agencies. The benefit provisions for the state and school employees are established by statute. The benefits options for the public agencies are established by statute and voluntarily selected by contract with the System in accordance with the provisions of the Public Employees' Retirement Law.

For financial reporting purposes only, the PERF is comprised of and reported as three separate entities. PERF A is an agent multiple-employer plan, which includes the State of California and most public agencies' rate plans with more than 100 active members. PERF B is a cost-sharing multiple-employer plan of school employers consisting of non-teaching and non-certified employees. PERF C is a cost-sharing multiple-employer plan of public agencies with generally fewer than 100 active members. Under applicable law, the Board may terminate or a public agency may terminate that agency's plan under either PERF A or PERF C. The terminated agency is liable to the System for all costs to fund all benefits under the agency's contract. An unpaid deficit in funding will result in a commensurate reduction in benefits provided under that agency's contract.

As of June 30, 2019, the PERF had the following participating employers:

Employers for PERF

PERF Employers	2019
PERF A	
State	1
Public Agencies ¹	308
Total	309
PERF B	
School Districts and Charter Schools	1,319
PERF C	
Public Agencies ¹	1,304
Total Employers	2,932

¹) Each public agency employer may be counted in both PERF A and PERF C due to active contracts under both plans.

Legislators' Retirement Fund (LRF) – The LRF was established by Chapter 879 of the 1947 Statutes and provides retirement, death, and disability benefits to State Legislators, Constitutional Officers, and Legislative Statutory Officers. The benefits for the LRF are established in accordance with the

Notes to the Basic Financial Statements (continued)

provisions of the Legislators' Retirement Law. In November 1990, Article IV, Section 4.5 was added to the State Constitution, pursuant to the adoption of Proposition 140. This section effectively prohibited future legislators from earning state retirement benefits for service in the Legislature on or after November 7, 1990, though it recognized vested pension benefits that had accrued before that date. The only active members in the fund are Constitutional Officers and Legislative Statutory Officers. The Public Employees' Pension Reform Act of 2013 (PEPRA) closed the Legislators' Retirement System to new participants effective January 1, 2013.

Judges' Retirement Fund (JRF) – The JRF was established by Chapter 206 of the 1953 Statutes and provides retirement, death, and disability benefits to judges working in the California Supreme Court, the Courts of Appeal, and the Superior Courts, who were appointed or elected before November 9, 1994. Benefits for the JRF are established in accordance with the provisions of the Judges' Retirement Law.

The JRF is funded on a pay-as-you-go basis, where short-term investments, contributions received during the year, and a State General Fund augmentation are used to provide funding for benefit payments. This funding method is generally more expensive in the long term, as the plan does not have investment returns generated by a funded plan. Without the State General Fund augmentation, the JRF will not be able to pay the accumulated benefit payments due in Fiscal Year 2019-20.

Judges' Retirement Fund II (JRF II) – The JRF II was established by Chapter 879 of the 1994 Statutes and provides retirement, death, and disability benefits to judges working in the California Supreme Court, the Courts of Appeal, and the Superior Courts, who were appointed or elected on or after November 9, 1994. Benefits for the JRF II are established in accordance with the provisions of the Judges' Retirement System II Law.

Plan Membership

All employees in a covered class of employment who work on a half-time basis or more are eligible to participate in the retirement plans. The underlying data included in the following table reflects current categorizations of members and beneficiaries in the defined benefit pension plans.

As of June 30, 2019, membership in the defined benefit pension plans consisted of the following:

Benefit Recipients and Members in the PERF A, PERF B, PERF C, LRF, JRF, and JRF II

Plan	Retirees	Survivors & Beneficiaries	Members		Total
			Active	Inactive or Deferred	
PERF A Agent	381,939	61,601	486,327	201,313	1,131,180
PERF B Schools Cost-Sharing	196,212	30,023	340,102	192,427	758,764
PERF C Public Agency Cost- Sharing	37,251	5,089	48,972	25,113	116,425
Total PERF	615,402	96,713	875,401	418,853	2,006,369
LRF	117	111	2	5	235
JRF	1,282	598	146	1	2,027
JRF II	233	48	1,645	—	1,926
Total	617,034	97,470	877,194	418,859	2,010,557

Plan Benefits

The benefits for the defined benefit plans are based on members' years of service, age, final compensation, and benefit formula. Benefits are provided for disability, death, and survivors of eligible members or beneficiaries. Members become vested in their retirement benefits earned to date, to the extent funded, after five years (10 years for state Second Tier members) of credited service. All non-state Second Tier members are eligible to receive cost-of-living adjustments (COLA) up to a maximum of 2 percent compounded annually (up to 5 percent maximum as a contract option for retired members of local agencies). State Second Tier members are eligible for a COLA of 3 percent fixed compounded annually.

Notes to the Basic Financial Statements (continued)

Contributions

The benefits for the defined benefit pension plans are funded by contributions from members and employers, and earnings from investments. Member and employer contributions are a percentage of applicable member compensation. Member contribution rates are defined by law and depend on the respective employer's benefit formulas. In some circumstances, contributions are made by the employer to satisfy member contribution requirements. Member and employer contribution rates are determined by periodic actuarial valuations or by state statute. Actuarial valuations are based on the benefit formulas and employee groups of each employer.

The required contribution rates of most active plan members are based on a percentage of salary in excess of a base compensation amount ranging from zero dollars to \$863 monthly.

PEPRA, which took effect in January 2013, changed the way CalPERS retirement benefits are applied, and places compensation limits on members with the most impact felt by new CalPERS members. Under PEPRA, new members include:

- (1) Members first joining on or after January 1, 2013, with no prior membership in another California public retirement system.
- (2) Members first joining before January 1, 2013, who are hired by a different CalPERS employer after January 1, 2013, and have a break in service greater than six months.
- (3) Members first joining on or after January 1, 2013, who are ineligible for reciprocity with another California public retirement system.

All members that do not fall into the definitions above will generally be considered classic members.

Required contribution rates for active plan members and employers as a percentage of payroll for the fiscal year ended June 30, 2019, were as follows:

Required Contribution Rates

	Employee Contribution Rates		Employer - Required Contribution Rates
	Classic	PEPRA	
PERF A – Agent			
State:			
Miscellaneous – First Tier	5% to 11%	6% to 11%	29.30%
Miscellaneous – Second Tier	3.75%	3.75%	29.30%
Industrial - First Tier	5% to 11%	6% to 11%	19.55%
Industrial - Second Tier	3.75%	3.75%	19.55%
Safety	11.00%	11.00%	20.35%
Peace Officers and Firefighters	8% to 13%	11% to 13%	43.72%
California Highway Patrol	11.50%	11.50%	53.81%
Public Agency:			
Miscellaneous	5% to 8%	5.25% to 8.25%	varies ¹
Safety	7% to 9%	9.25% to 13.75%	varies ¹
PERF B – Schools Cost-Sharing			
Classified School	7.00%	7.00%	18.06%
PERF C – Public Agency Cost-Sharing			
Public Agency:			
Miscellaneous	2% to 8%	4% to 7.25%	varies ¹
Safety	7% to 10.10%	9.5% to 15.25%	varies ¹
LRF	4% or 8%	N/A	38.15% ²
JRF	8.00%	N/A	8.00% ³
JRF II	8.00%	16.00%	24.66% ²

(1) Required contributions for individual public agencies plans are the sum of the normal cost (expressed as a percentage of pay) and a payment toward any unfunded liability. Individual plan results vary.

(2) This is the minimum PEPRA employer contribution rate, which is the greater of the actuarially determined employer contribution or the employer normal cost.

(3) The employee and employer contribution rates for the JRF are set by state statute and are equal to 8% of payroll. The JRF is currently funded using a pay-as-you-go approach as contributions made by both the State and members are not adequate to meet current benefit payouts.

Notes to the Basic Financial Statements (continued)

DEFINED CONTRIBUTION PLANS

CalPERS currently administers a defined contribution plan and a deferred compensation plan to certain members. These funds are further described below:

Public Employees' Deferred Compensation Fund (DCF) – The DCF was established by Chapter 1659 of the 1990 Statutes, granting the maximum tax-preferred retirement saving opportunities. The DCF is available to public agencies and school districts in the State of California on a voluntary basis. Participants may contribute up to the limit established under the Internal Revenue Code (IRC), and may access their funds upon retirement, separation from employment, or other distributable events as allowed under the IRC.

Supplemental Contributions Program Fund (SCPF) – The SCPF was established by Chapter 307 of the 1999 Statutes. The SCPF is qualified under section 401(a) of Title 26 of the United States Code. The SCPF is currently available to State of California employees who are members of CalPERS, and participation is voluntary. Participant contributions are made on an after-tax basis and are made voluntarily in addition to defined benefit contributions. Participants may contribute to a deferred compensation plan in conjunction with the SCPF, subject to IRC section 415(c) limits. Distributions are allowed only at retirement or permanent separation from employment.

As of June 30, 2019, membership in the defined contribution plans consisted of the following:

Members in DCF and SCPF

Plan	Employers	Members
DCF	819	30,733
SCPF	1	6,897

OTHER ADMINISTRATIVE ACTIVITIES

CalPERS administers other activities as follows:

The California Employers' Retiree Benefit Trust Fund (CERBTF) – The Annuitants' Health Care Coverage Fund, also known as CERBTF, was established by Chapter 331 of the 1988 Statutes, and employers elect to participate in the CERBTF to save funds to pay future retiree and survivors health care and other post-employment benefits (OPEB). Currently, the CERBTF has 562 participating employers. Of the 562 participating employers, 548 employers have contributed assets in the CERBTF as of June 30, 2019. The CERBTF is more fully described in Note 9 to the financial statements.

Replacement Benefit Fund (RBF) – The RBF was established by Chapter 798 of the 1990 Statutes, providing replacement benefits to members of the defined benefit pension plans. The RBF is more fully described in Note 10 to the financial statements.

Old Age and Survivors' Insurance Revolving Fund (OASI) – The OASI was established pursuant to Government Code section 22600 in order to carry out all of the provisions of the Old Age and Survivors' Insurance Program in accordance with Section 218 of Title II of the Social Security Act. The OASI Fund is more fully described in Note 11 to the financial statements.

Public Employees' Health Care Fund (HCF) – The HCF was created by Chapter 1129 of the 1987 Statutes under the Public Employees' Medical and Hospital Care Act (PEMHCA), providing health insurance coverage to CalPERS members through a pooled risk plan. The HCF is more fully described in Note 12 to the financial statements.

Public Employees' Contingency Reserve Fund (CRF) – The CRF was created by Chapter 1236 of the 1961 Statutes with the passage of PEMHCA, and provides a contingency reserve for items such as future rates or future benefits. The CRF is more fully described in Note 13 to the financial statements.

Public Employees' Long-Term Care Fund (LTCF) – The LTCF was established by Chapter 1154 of the 1992 Statutes as part of the Public Employees Long-Term Care Act to administer the long-term care insurance plans available to eligible participants. The LTCF is described in more depth in Note 14 to the financial statements.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

REPORTING ENTITY

The accompanying financial statements include all activities and funds administered by CalPERS. CalPERS is a component unit of the State of California for financial reporting purposes. CalPERS financial statements are included in fiduciary and proprietary funds in the State of California Comprehensive Annual Financial Report (CAFR).

MEASUREMENT FOCUS, BASIS OF ACCOUNTING & BASIS OF PRESENTATION

The accompanying financial statements were prepared in accordance with U.S. generally accepted accounting principles as applicable to governmental organizations. In doing so, CalPERS adheres to the reporting requirements established by the Governmental Accounting Standards Board (GASB).

The accounts of CalPERS are organized and operated on the basis of funds. The Board has a fiduciary responsibility for the investments within both the fiduciary and proprietary funds. CalPERS has the following fund types as of June 30, 2019:

Fiduciary Funds – include pension trusts (PERF A, PERF B, PERF C, LRF, JRF, JRF II, DCF, SCPF), an other post-employment trust (CERBTF), and custodial funds RBF and OASI, which account for assets held by the government in

Notes to the Basic Financial Statements (continued)

a trustee capacity or as a custodian on behalf of others. The pension trust funds include defined benefit plans and defined contribution plans, which are accounted for on the flow of economic resources measurement focus and the accrual basis of accounting. Contributions to the defined benefit pension plans are recognized in the period in which the contributions are due pursuant to legal requirements. Contributions to the defined contribution plans and the other post-employment benefit plan are recognized when received. Benefits and refunds are recognized when due and payable in accordance with the terms of each plan. The RBF and OASI are custodial funds and are fiduciary in nature, accounted for on the flow of economic resources measurement focus and the accrual basis of accounting.

Proprietary Funds – include the HCF, CRF, and the LTCF. These funds are accounted for on the flow of economic resources measurement focus and use the accrual basis of accounting. Operating revenues and expenses are distinguished from non-operating items and generally result from providing services in connection with ongoing operations. The principal operating revenues of the HCF and CRF are derived from premiums, Federal Employer Group Waiver Plan (EGWP) subsidies, and administrative service fees. The principal operating revenue for the LTCF is premiums. Operating expenses include the cost of claims and related administrative expenses. All revenues and expenses not meeting these definitions are reported as non-operating.

TARGET ASSET ALLOCATION

State statutes and Board policies allow investments in government, domestic and international debt, domestic and international equities, mutual funds, private equity, real assets, and other investments. During the fiscal year ended June 30, 2019, CalPERS implemented a new strategic asset allocation for the PERF, LRF, and JRF II.

The following table shows the Board-adopted target asset allocation policy for the defined benefit pension plans, which was in effect as of June 30, 2019:

Target Asset Allocation

Asset Class	PERF A	PERF B	PERF C	LRF	JRF	JRF II
Global Equity	50%	50%	50%	22%	—%	52%
Private Equity	8%	8%	8%	—	—	—
Global Debt Securities	28%	28%	28%	49%	—	32%
Real Assets	13%	13%	13%	—	—	—
Liquidity	1%	1%	1%	—	100%	—
Inflation	—	—	—	16%	—	5%
REITs	—	—	—	8%	—	8%
Commodities	—	—	—	5%	—	3%
Total	100%	100%	100%	100%	100%	100%

The California Employers' Retiree Benefit Trust Fund (CERBTF) enables employers to pre-fund liabilities for other post-employment benefits (OPEB). Three diversified policy portfolios (Strategy 1, 2, and 3) are available for employers to select depending on employer preferences for return and risk (volatility) expectations. By comparison, Strategy 1 has the highest long-term expected rate of return and return volatility, Strategy 2 has a moderate long-term expected rate of return and return volatility, and Strategy 3 has the lowest long-term expected rate of return and return volatility. During the fiscal year ended June 30, 2019, CalPERS implemented a new strategic asset allocation for each of the three CERBTF strategies. The following table shows the Board-adopted target asset allocation policy for the three CERBTF strategies:

CERBTF Target Asset Allocation

Asset Class	CERBTF Strategy 1	CERBTF Strategy 2	CERBTF Strategy 3
Global Equity	59%	40%	22%
Global Debt Securities	25%	43%	49%
Inflation Assets	5%	5%	16%
REITs	8%	8%	8%
Commodities	3%	4%	5%
Total	100%	100%	100%

CAPITAL ASSETS

Capital assets are defined as assets with an initial individual cost of \$5,000 or more, or \$1 million or more for intangible assets, and an estimated useful life in excess of one year. Capital assets consist of buildings, furniture, equipment, and intangible assets recorded at cost or, if donated, at their acquisition value. Capital assets are depreciated over their estimated useful lives, ranging from 3 to 5 years for furniture and equipment, and 40 years for buildings, and determined on

Notes to the Basic Financial Statements (continued)

an asset-by-asset basis for intangible assets, using the straight-line method of depreciation.

INVESTMENT EXPENSES

Investment expenses presented within the accompanying financial statements consist of management and performance fees and other investment-related fees. Management and performance fees include all fees paid to external managers for public and private markets. Other investment-related fees include expenses for fund administration, internal investment staff salaries, dividend tax withholding, certain trading fees, consultants, data, analytics, certain other taxes, custody, appraisals, legal services, technology, trading and portfolio management systems, audits, and tax advisory services. These other investment-related fees are reported in the Other Investment Expenses within the Statement of Changes in Fiduciary Net Position and detailed in the Investment Expenses Schedule in the Other Supplementary Information section.

The investment expenses do not include the commissions and fees paid to transact public securities and private equity profit sharing realized by the PERF. These are reported in the Net Appreciation in Fair Value of Investments line in the Statement of Changes in Fiduciary Net Position. For additional detail, refer to the Schedule of Commissions & Fees table and the Private Equity Management Fees & Profit Sharing table within the Investment Section.

USE OF ESTIMATES IN THE PREPARATION OF FINANCIAL STATEMENTS

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make significant estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements, as well as the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

RISKS AND UNCERTAINTIES

CalPERS invests in securities that are exposed to a variety of risks, including interest rate, market, credit, and foreign currency risks. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the value of investment securities will occur in the near term and such changes could materially affect the amounts reported in the accompanying financial statements.

The total pension liabilities and net pension liabilities disclosed in Note 8 to the Basic Financial Statements for the cost-sharing multiple-employer and single-employer defined benefit pension plans are measured based on certain

assumptions, including the long-term rate of return on pension investments, inflation rates, and employee demographics, all of which are subject to change.

The estimated liability for future policy benefits in the Long-Term Care Fund is based on the present value of future benefits and expenses less the present value of future premiums. This liability is reported in the Statement of Net Position and is measured based on certain assumptions including a discount rate of 5.25 percent, morbidity lapse rates, voluntary termination, mortality, and plan expenses.

Due to uncertainties inherent in the estimations and assumptions described in this section, it is at least reasonably possible that changes in these estimates and assumptions in the near term may be material to the financial statements.

RECLASSIFICATIONS

Certain reclassifications have been made to the comparative totals as of and for the fiscal year ended June 30, 2018, to conform to the presentation as of and for the fiscal year ended June 30, 2019.

COMPARATIVE TOTALS

The Basic 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 U.S. generally accepted accounting principles. Accordingly, such information should be read in conjunction with CalPERS financial statements for the fiscal year ended June 30, 2018, from which the summarized information was derived.

The Fiscal Year 2017-18 beginning of year net position balance was restated for all fiduciary and proprietary funds due to the implementation of Governmental Accounting Standards Board Statement No. 68, *Accounting and Financial Reporting for Pensions—an amendment of GASB Statement No. 27*, and *GASB Statement No. 75, Accounting and Financial Reporting for Post-employment Benefits Other Than Pensions*.

TERMINATION OF PENSION PLANS

Public agency participation in the System may be terminated either due to a transfer of a public agency's plan to another qualified system as permitted by law, a public agency terminating its plan, or an involuntary termination by the Board. In the event that a public agency elects to transfer its plan, the assets of the plan and the related liability for benefits accrued are transferred to the other system. In the event that a public agency elects to terminate its plan or there is an involuntary termination of a plan by the Board, sufficient assets to cover the related liability for benefits accrued are retained by the PERF. Excess assets above those required, if

Notes to the Basic Financial Statements (continued)

any, are returned to the employer, while the employer is billed for any deficiency in required assets.

EMPLOYER SHARE OF POST-EMPLOYMENT BENEFITS

As of June 30, 2019, CalPERS has adjusted its proportionate share of the state's net pension and OPEB liabilities totaling approximately \$558 million and \$658 million, respectively. CalPERS recorded these post-employment liabilities along with the corresponding amount of deferred inflows and outflows of resources and related post-employment benefit expense for all affected funds. CalPERS is not providing additional disclosures as it has concluded that presenting such employer related pension and post-employment obligations disclosures would be misleading to the users of CalPERS financial statements where the focus is on plans, not individual employer pension and post-employment obligations. Refer to the State of California CAFR for additional information on CalPERS pension and OPEB liabilities.

INTERFUND BALANCES

The Basic Financial Statements include amounts Due from Other Funds and Due to Other Funds. The principal purposes for these interfund balances include administration expense reimbursements due from other CalPERS funds to the PERF; incoming health premiums in transit and due from the CRF and due to the HCF; and member transfers in transit and due to and due from one pension plan to another. All interfund balances are expected to be repaid within one year from the date of these financial statements. This interfund activity occurs on a routine basis and is consistent with the activities of the fund making the transfer.

3. CASH AND CASH EQUIVALENTS

Cash and cash equivalents of approximately \$0.7 billion at June 30, 2019, represent amounts held in the CalPERS general operating accounts with the State Treasury and the master custodian, State Street Bank and Trust. The underlying investments at the State Treasurer's Office are not individually identifiable by fund, as CalPERS monies are pooled with the monies of other state agencies and invested.

4. INVESTMENTS

SHORT-TERM INVESTMENTS

Short-term investments consist of U.S. Treasury and government-sponsored securities, money market funds, commercial paper, certificates of deposit, repurchase agreements, asset-backed securities, notes, bonds issued by U.S. corporations, and other allowable instruments that meet short-term maturity or average life, diversification, and credit quality restrictions.

INVESTMENTS AT FAIR VALUE

GASB Statement No. 72, *Fair Value Measurement and Application* (GASB 72) requires investments measured at fair value to be categorized under a fair value hierarchy. CalPERS determines fair value of its investments based upon both observable and unobservable inputs. The System categorizes its fair value measurements within the fair value hierarchy as follows:

- Level 1 – quoted prices (unadjusted) for identical assets or liabilities in active markets that a government can access at the measurement date.
- Level 2 – inputs (other than quoted prices included within Level 1) that are observable for an asset or liability, either directly or indirectly. These inputs can include quoted prices for similar assets or liabilities in active or inactive markets, or market-corroborated inputs.
- Level 3 – unobservable inputs for an asset or liability, which generally results in a government using the best information available and may include the government's own data.

The remaining investments not categorized under the fair value hierarchy are shown at net asset value (NAV). NAV is used as a practical expedient to estimate the fair value of CalPERS interest therein, unless it is probable that all or a portion of the investment will be sold for an amount different from NAV. As of June 30, 2019, CalPERS had no specific plans or intentions to sell investments at amounts different from NAV.

Notes to the Basic Financial Statements (continued)

The following table presents a summary of CalPERS investments by type as of June 30, 2019, at fair value:

CalPERS – Investments at Fair Value¹ (Dollars in Thousands)

	Fair Value June 30, 2019	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments by Fair Value Level				
Global Equity				
Domestic Equity	\$96,639,240	\$96,639,240	\$0	\$0
International Equity	75,620,118	75,620,118	—	—
Total Global Equity	\$172,259,358	\$172,259,358	\$0	\$0
Global Debt				
Asset-Backed	\$22,240,123	\$0	\$21,444,294	\$795,829
Bank Loans	153,614	—	153,614	—
International Debt	2,850,334	—	2,850,334	—
Municipal/Public Bonds	6,851	—	6,851	—
Sovereign Debt	11,939,262	—	11,939,262	—
U.S. Corporate	22,754,678	—	22,754,678	—
U.S. Treasuries, STRIPS and TIPS	36,382,529	—	36,382,529	—
Total Global Debt	\$96,327,391	\$0	\$95,531,562	\$795,829
Derivatives				
Futures	\$30,942	\$30,942	\$0	\$0
Options	(13,967)	—	(13,967)	—
Rights & Warrants	4,933	—	4,933	—
Forward Contract Assets	191,656	—	191,656	—
Forward Contract (Liabilities)	(133,535)	—	(133,535)	—
Swap Assets	57,345	—	57,345	—
Swap (Liabilities)	(34,118)	—	(34,118)	—
Total Derivatives	\$103,256	\$30,942	\$72,314	\$0
Other				
Rule 144(a) Securities	\$23,012,639	\$0	\$23,012,639	\$0
Securitized Assets	508,111	—	—	508,111
Private Equity ²	64,681	—	—	64,681
Total Other	\$23,585,431	\$0	\$23,012,639	\$572,792
Total Investments by Fair Value Level	\$292,275,436	\$172,290,300	\$118,616,515	\$1,368,621
Investments Measured at NAV				
Commingled/Pooled Funds	\$18,619,336			
Real Assets	40,768,569			
Private Equity ²	26,417,469			
Other Investments	7,042,198			
Total Investments Measured at NAV	\$92,847,572			
Total Investments Measured at Fair Value	\$385,123,008			

(1) Certain securities and derivatives disclosed in this table may be classified as short-term investments, global equity or debt securities, investment sales and other receivables, and investment purchases and other payables on the combined Statement of Fiduciary Net Position – Fiduciary Funds and the Statement of Net Position – Proprietary Funds. Accordingly, the totals presented in this table will not agree to the combined totals of investments presented in those statements.

(2) Private Equity is shown at NAV on the Statement of Fiduciary Net Position – Fiduciary Funds, while the direct holdings categorized in level 3 represent the fair value of the assets for each private equity investment for GASB 72 purposes. Remaining real assets are valued at NAV.

Notes to the Basic Financial Statements (continued)

Global equity securities include both domestic and international securities, and are classified in Level 1. Fair value is obtained using a quoted price from active markets. The security price is generated by market transactions involving identical or similar assets, which is the market approach to measuring fair value. Inputs are observable in exchange markets, dealer markets, brokered markets, and principal-to-principal markets, for which prices are based on trades of identical securities.

Global debt securities consist primarily of asset-backed securities (securitized offerings backed by residential and commercial mortgages, credit cards, auto and student loans), bank loans, international debt securities, municipal/public bonds, sovereign debt, U.S. treasuries, and U.S. corporate securities. Debt securities classified in Level 2 of the fair value hierarchy are valued using matrix pricing. This method uses quoted prices for securities with the same maturities and ratings rather than a fixed price for a designated security. Many debt securities are traded on a dealer market and much less frequently, which is consistent with a Level 2 classification that values these investments using observable inputs. Asset-backed securities not classified as Level 2 include collateralized mortgage obligations (CMO), which are mortgage-backed securities that contain a pool of mortgages bundled together and sold as an investment. These are classified in Level 3 of the fair value hierarchy, as assumptions are made by CalPERS to determine prepayment rates, probability of defaults, and loss severity, all of which are unobservable inputs.

Futures are actively traded on major exchanges with quoted prices, and are classified in Level 1 of the fair value hierarchy. Index, commodity, and fixed income futures are publicly traded on active markets, which is the market approach to valuing securities. All other derivatives are classified in Level 2 of the fair value hierarchy. For swaps, observable inputs may include yield curves or interest rates. Options, rights, warrants, and forward contracts are priced using the cost approach and/or are on a dealer market traded on lower frequencies. When these derivative securities are valued, they may not have similar or observable pricing inputs compared to securities that are valued using the market approach. Refer to Note 7 in the Notes to the Basic Financial Statements for further detail regarding other derivatives.

Other investments at fair value include securities subject to Rule 144(a) of the Securities Act of 1933, which modifies a two-year holding period requirement on privately placed securities to permit qualified institutional buyers to trade these positions among themselves. These securities are typically acquired through unregistered, private sales, or constitute a control stake in an issuing company. Due to pricing inputs that are observable either directly or indirectly, which include

quoted prices for similar securities in active or inactive markets, or market-corroborated inputs, these securities are classified as Level 2. Additionally, other investments include securitized investments, which contain pooled debt instruments, limited partnership investments, and various other investment structures. Many securitized assets are created by combining similar financial assets into a security, and are marketed to investors as a single investment. Typically, these assumptions are internally generated and cannot be observed in an active market. Due to the fact that these assumptions are unobservable for holdings categorized as other investments, these are also classified as Level 3. Private Equity holdings, in which CalPERS invests directly, are valued at level 3 of the fair market value hierarchy. Private equity holdings are valued at the income, cost, or market approach depending on the type of holdings. All direct holdings are valued using unobservable inputs and are classified in Level 3 of the fair value hierarchy.

Investments Measured at NAV (Dollars in Thousands)

Asset class	Fair Value	Unfunded Commitments
Commingled/Pooled Funds	\$18,619,336	\$0
Real Assets	40,768,569	2,275,962
Private Equity	26,417,469	19,287,916
Other Investments	7,042,198	207,489
Total	\$92,847,572	\$21,771,367

A commingled fund/pooled investment vehicle is a fund with capital pooled from multiple investors that is deployed to a mutually agreed upon strategy. Commingled funds/pooled investment vehicles fair value is measured at NAV, where fair value is measured by multiplying the pool's share price by the number of shares held. Typically, there are no redemption constraints for the commingled funds

Real asset investments (real estate, infrastructure, and forestland) are held either in separate accounts, as a limited partner, or in a joint venture or commingled fund. These investments are illiquid and resold at varying rates, with distributions received over the life of the investments. They are typically not redeemed, nor do they have set redemption schedules.

Private equity holdings include fund and co-investments with existing CalPERS general partners, direct secondary investments, and fund of funds. By their very nature, these investments are illiquid and typically not resold or redeemed. Distributions from each fund will be received as the underlying investments of the funds are liquidated. It is expected that the underlying assets of the funds will be liquidated over an average of 10 years.

Notes to the Basic Financial Statements (continued)

Other investments include funds that hold securities for varying investment strategies which include:

- Emerging Managers Program – objectives include:
 - Generating appropriate risk-adjusted returns by identifying early stage funds and managers with strong potential for success.
 - Accessing unique investment opportunities that may be otherwise overlooked.
 - Cultivating the next generation of external investment manager talent.
- Absolute Return Strategies – investments that focus on management of total risk, and on generation of returns independent of broad market movements.
- Multi-Asset Class Program – management of portfolios which attempt to outperform the CalPERS assumed rate of return with less risk than the PERF.
- Activist Funds – investments in public companies with the goal of influencing management to increase overall shareholder value.
- Venture Capital Funds – investments made to finance small, early-stage, emerging firms that are believed to have long-term growth potential.
- Opportunistic Strategies - objectives include:
 - The Low Liquidity Enhanced Return Policy goal is to earn a premium versus traditional limited duration assets by purchasing a broader universe of limited duration securities than those typically available to traditional money market portfolios. Trade finance extends duration, invests down the credit spectrum and is less liquid.

The other investment strategies are reported at NAV as they are externally managed fund-structure investments in nongovernmental entities that do not have readily determinable fair values. The redemption terms for these investments range from at will up to 90 days.

CalPERS invests in privately-held assets with vehicles such as separate accounts, direct investments, and commingled funds. Separate accounts, with co-invested external managers, are the predominant vehicle and operate through an annual investment process where commitments are generally revocable and excluded from the unfunded commitment disclosure. Direct vehicles generally entail a contractual commitment to an operating company, not controlled by a general partner. With commingled funds, CalPERS commits to funding amounts at the partners' request and these are included in the unfunded commitment disclosure.

Certain real asset investments are leveraged in that partnerships have been established to purchase properties through a combination of contributions from CalPERS and

other investors and through the acquisition of debt. Real asset investments of approximately \$40.8 billion are reported at NAV. CalPERS no longer holds recourse debt in real asset investment partnerships.

RATE OF RETURN

The money-weighted rate of return (MWRR) expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested. Following is the annual MWRR, net of investment expense, for the fiscal year ended June 30, 2019:

Money-Weighted Rate of Return

Plan	Rate of Return
PERF A	
Agent	6.5%
PERF B	
Schools Cost-Sharing	6.5%
PERF C	
Public Agency Cost-Sharing	6.5%
LRF	7.0%
JRF	3.2%
JRF II	6.9%
CERBTF	6.5%

5. INVESTMENT RISK DISCLOSURES

DEPOSIT AND INVESTMENT RISK DISCLOSURES

In accordance with GASB Statement No. 40, *Deposit and Investment Risk Disclosures—an amendment of GASB Statement No. 3* (GASB 40), CalPERS discloses investments of all CalPERS-managed funds that are subject to certain risks: custodial credit risk, concentration of credit risk, interest rate risk, credit risk, and foreign currency risk.

Custodial Credit Risk

Custodial credit risk is the risk that, in the event a depository institution or counterparty fails, the System would not be able to recover the value of its deposits, investments, or collateral securities. As of June 30, 2019, a portion of the System's investments, other than posted collateral for futures and over-the-counter instruments, is held in the System's name and is not exposed to custodial credit risk. Where CalPERS trusts invest in commingled funds, the assets within the fund are held in the name of the trustee of the fund and not in CalPERS name. There are no general policies relating to custodial credit risk.

Concentration of Credit Risk

Other than U.S. Government Securities, which are not subject to the GASB 40 disclosure requirements, CalPERS does not have investments in any single issuer that represent 5 percent or more of fiduciary net position or total investments.

Notes to the Basic Financial Statements (continued)

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. This risk is managed within the portfolios using the effective duration or option-adjusted methodology. Generally, CalPERS investment policies require the option-adjusted duration of the total fixed income portfolio to stay within negative 50 percent to positive 10 percent of the relevant benchmark. All individual portfolios are required to maintain a specified level of risk relative to their benchmark.

CalPERS invests in securities with contractual cash flows, such as asset-backed securities, collateralized mortgage obligations, and commercial mortgage-backed securities, including securities backed by residential and commercial mortgage loans. The value, liquidity, and related income of these securities are sensitive to changes in economic conditions, including real estate value, delinquencies or defaults, or both, and may be adversely affected by shifts in the market's perception of the issuers and changes in interest rates.

The following table presents the weighted average effective duration for CalPERS investments subject to interest rate risk as of June 30, 2019:

CalPERS – Debt Securities Subject to Interest Rate Risk (Dollars in Thousands)

Debt Security Type	Portfolio Weighted Average Effective Duration	Fair Value June 30, 2019	Percent of Debt Securities
U.S. Treasuries and Agencies:			
U.S. Treasury Bonds	17.70	\$22,775,504	19.95%
U.S. Treasury Notes	7.81	12,938,727	11.33%
U.S. Treasury Strips	12.09	50,609	0.04%
Corporate	8.16	33,821,337	29.62%
Mortgages	2.92	21,763,198	19.06%
Asset-Backed	0.36	13,712,468	12.01%
Foreign Government	7.19	12,508,387	10.96%
U.S. Agencies	10.11	952,442	0.83%
Municipals	9.75	6,851	0.01%
No Effective Duration:			
Foreign Government	N/A	\$613,411	0.54%
Commingled Fund	N/A	408,009	0.36%
Asset-Backed	N/A	34,897	0.04%
Corporate	N/A	13,113	0.01%
Mortgages	N/A	10,009	0.01%
Swaps	N/A	(5,440,619)	(4.77%)
Total		\$114,168,343	100.00%

CalPERS invests in the State Treasury pool, State Street Bank Global Advisors' (SSGA) short-term investment fund (STIF), and other short-term investment funds. These investments are included as part of the short-term investments in the financial statements. As of June 30, 2019, the pooled money investment account with the State Treasury totaled approximately \$3.2 billion, and the SSGA STIF totaled approximately \$7.0 billion. This value represents SSGA STIF investments in all portfolios. The short-term securities reported in the Statement of Fiduciary Net Position and the Statement of Proprietary Net Position are reported at fair value. As of June 30, 2019, the weighted average maturity was 73 days for the State Treasury pool and 42 days for the SSGA short-term investment fund. The SSGA short-term investment fund is rated as P1. The State Treasury pool is not rated.

The LRF, JRF II, CERBTf, SCPF, DCF, HCF, and LTCF invest in various SSGA funds, with weighted average maturities and credit ratings as of June 30, 2019:

CalPERS – SSGA Fund Weighted Average Maturity and Credit Risk (Dollars in Thousands)

SSGA Fund	Fair Value June 30, 2019	Credit Rating ¹	Weighted Average Maturity ²
Bloomberg Barclays Long Liability Index	\$6,289,666	Aa3	13.80
U.S. Aggregate Bond Index	478,102	Aa2	7.81
U.S. Bond Index	338,851	Aa2	7.63
U.S. Inflation Protected Bond Index	10,702	Aaa	8.08
U.S. Short-Term Govt/Credit Bond Index	35,253	Aa2	1.93
U.S. TIPS Index	930,752	Aaa	8.14
Total	\$8,083,326		

(1) Credit rating reflects fair value weight of all the rated securities held by the portfolio (excludes unrated securities) using the middle rating provided by either S&P, Moody's, and Fitch or lower if only two agency ratings are available.

(2) The weighted average maturity disclosed in this table is in years.

Notes to the Basic Financial Statements (continued)

The following table presents the weighted average duration for securities lending collateral subject to interest rate risk as of June 30, 2019:

CalPERS – Securities Lending Collateral Subject to Interest Rate Risk (Dollars in Thousands)

Security Type	Fair Value June 30, 2019	Percent of Securities Lending Collateral
No Effective Duration:		
Money Market Fund ¹	\$141,924	3.7%
Short-Term Investment Fund ²	3,742,583	96.3%
Total³	\$3,884,507	100.0%

(1) Money Market Fund is invested in U.S. Treasury securities with a weighted average maturity (to final maturity) of one day.

(2) Short-Term Investment Fund has a weighted average maturity (to final maturity) of one day.

(3) This figure does not include \$450,000 in repurchase agreements since those investments are not subject to GASB 40 disclosure. The fair value of the investments in the securities lending collateral portfolio is \$4,334,507 for fiduciary funds.

As of June 30, 2019, CalPERS investments included securities highly sensitive to interest rate fluctuations in that they are subject to early payment in a period of declining interest rates (i.e., collateralized and mortgage pass-through, etc.). The resulting reduction in expected total cash flows affects the fair value of these securities.

For the fiscal year ended June 30, 2019, the collateral invested in CalPERS Internal Securities Lending had an aggregate weighted average maturity (to final maturity) of one day. eSecLending (eSec) has a weighted average maturity (to final maturity) of one day.

Credit Risk

Credit risk is defined as the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The System's investment policies establish both general and specific risk measures for the fixed income portfolio. Of the total fixed income portfolio of the rated securities, 91 percent are investment-grade securities.

Investment-grade securities have low default probabilities and are rated at a minimum of Baa3 by independent agencies (Moody's, Standard & Poor's, or Fitch). Each portfolio is required to maintain a specified risk level.

The following table is a summary of the ratings of CalPERS fixed income securities as of June 30, 2019:

CalPERS – Debt Security Investments Subject to Credit Risk (Dollars in Thousands)

Moody's Quality Rating	Fair Value June 30, 2019	Fair Value as a Percent of Debt Security Investments
Aaa	\$46,996,324	41.16%
Aa1	863,190	0.76%
Aa2	2,551,301	2.23%
Aa3	1,103,446	0.97%
A1	2,396,229	2.10%
A2	2,225,160	1.95%
A3	3,549,957	3.11%
B1	1,933,807	1.69%
B2	1,956,985	1.71%
B3	2,234,561	1.96%
Baa1	4,143,156	3.63%
Baa2	5,053,053	4.43%
Baa3	3,888,842	3.41%
Ba1	1,761,489	1.54%
Ba2	1,767,230	1.55%
Ba3	3,066,166	2.69%
Caa1	951,990	0.83%
Caa2	359,938	0.31%
Caa3	18,915	0.02%
Ca	45,871	0.04%
C	4,413	—%
NA ¹	1,474,684	1.29%
NR ²	25,821,636	22.62%
Total	\$114,168,343	100.00%

(1) NA represents U.S. government securities that are not applicable to the GASB 40 disclosure requirements.

(2) NR represents those securities that are not rated.

The following table is a summary of the ratings of the securities lending collateral subject to credit risk:

CalPERS – Securities Lending Collateral Subject to Credit Risk (Dollars in Thousands)

Moody's Quality Rating	Fair Value	Fair Value as a Percent of Securities Lending Collateral
NR ^{1,2}	\$3,884,507	100%
Total³	\$3,884,507	100.0%

(1) NR represents those securities that are not rated.

(2) This figure includes \$141,924 invested in a money market fund and \$3,742,583 invested in short-term investments.

(3) This figure does not include \$450,000 in repurchase agreements since they are not subject to GASB 40 disclosure. The fair value of the investments in the securities lending collateral portfolio is \$4,334,507 for fiduciary funds.

Notes to the Basic Financial Statements (continued)

Foreign Currency Risk

Foreign currency risk is defined as any deposits or investments that are denominated in foreign currencies, which bear a potential risk of loss arising from changes in currency exchange rates. The System's asset allocation and investment policies allow for active and passive investments in international securities. The proportion of international stocks within the global equity portfolio is roughly equal to their market capitalization weight in the global equity benchmark. For the global debt securities, investing includes exposure to non-dollar denominated issues. Real assets and private equity do not have a target allocation for international investments. Foreign currency risk disclosures are shown in the CalPERS – International Investment Securities table below.

CalPERS – International Investment Securities¹ – Fair Value at June 30, 2019 (U.S. Dollars in Thousands)

Currency	Cash	Equity	Debt Securities	Real Assets	Private Equity	Forward Contracts	Total
Argentine Peso	\$0	\$0	\$0	\$0	\$0	\$2,556	\$2,556
Australian Dollar	16,971	2,915,941	369,401	846,443	—	(2,208)	4,146,548
Brazilian Real	2,082	1,000,545	106,096	671,980	—	(3,850)	1,776,853
British Pound	3,199	7,091,875	1,219,222	1,199,911	102,128	40,911	9,657,246
Canadian Dollar	17,498	4,785,874	871,343	388,957	144,910	3,485	6,212,067
Chilean Peso	200	216,966	29,903	75	—	(1,316)	245,828
Chinese Yuan Renminbi	(70)	58,840	113	989,453	—	1,800	1,050,136
Colombian Peso	4,010	63,644	89,556	—	—	305	157,515
Czech Koruna	310	57,023	35,313	—	—	109	92,755
Danish Krone	273	944,534	90,294	—	—	(1,449)	1,033,652
Egyptian Pound	1,521	19,340	—	—	—	(81)	20,780
Euro Currency	22,986	15,552,713	3,866,792	914,560	3,464,728	27,395	23,849,174
Guatemala Quetzal	—	—	—	109,110	—	—	109,110
Hong Kong Dollar	10,653	5,987,355	—	—	—	(642)	5,997,366
Hungarian Forint	2,405	125,272	147,884	—	—	(184)	275,377
Indian Rupee	41,128	2,708,651	—	731	—	2,932	2,753,442
Indonesian Rupiah	11,244	643,936	55,235	—	—	863	711,278
Israeli Shekel	6,464	374,061	119,627	—	—	(251)	499,901
Japanese Yen	26,007	14,851,264	1,577,521	73,989	2,893	(7,477)	16,524,197
Kazakhstani Tenge	—	—	—	—	—	36	36
Kuwaiti Dinar	79	60,476	—	—	—	—	60,555
Malaysian Ringgit	5,033	583,684	92,237	4	—	111	681,069
Mexican Peso	3,162	297,740	326,082	22,307	—	1,281	650,572
New Taiwan Dollar	35,447	3,297,817	—	—	—	355	3,333,619
New Zealand Dollar	271	248,919	79,866	—	—	2,961	332,017
Norwegian Krone	647	458,547	84,759	—	—	1,255	545,208
Pakistan Rupee	168	19,053	—	—	—	—	19,221
Peruvian Nuevo Sol	939	—	179,872	—	—	(1,665)	179,146
Philippine Peso	95	322,699	—	—	—	98	322,892
Polish Zloty	385	142,380	183,041	—	—	(629)	325,177
Qatari Riyal	6,196	254,864	—	—	—	—	261,060
Romanian New Leu	141	—	68,790	—	—	240	69,171
Russian Ruble	398	—	435,196	349,536	—	3,680	788,810
Saudi Riyal	204	104,454	—	—	—	(4)	104,654
Singapore Dollar	(1,052)	1,169,611	91,333	10,644	—	281	1,270,817
South African Rand	375	711,077	88,650	—	—	(225)	799,877
South Korean Won	7,571	2,162,268	—	15,240	—	(2,777)	2,182,302
Swedish Krona	454	1,228,023	93,604	—	—	(908)	1,321,173
Swiss Franc	239	5,978,775	92,786	—	—	(2,267)	6,069,533
Thailand Baht	10,102	868,765	122,108	—	—	848	1,001,823
Turkish Lira	2,976	133,767	153	—	—	18	136,914
Uae Dirham	4,976	209,425	—	—	—	(56)	214,345
Total	\$245,687	\$75,650,178	\$10,516,777	\$5,592,940	\$3,714,659	\$65,531	\$95,785,772

(1) This table presents investment securities of all CalPERS managed funds, including derivative instruments that are subject to foreign currency risk; investment securities includes partnership level information for private assets.

6. SECURITIES LENDING

The State Constitution and Board policy permits CalPERS to enter into securities lending transactions, which are collateralized loans of securities to broker-dealers and other entities with a simultaneous agreement to return collateral for the same securities in the future.

CalPERS has contracted with eSecLending, LLC (eSec) and State Street Bank & Trust (SSB) as securities lending agents to loan domestic and international equity and debt securities. CalPERS receives both cash and noncash (i.e., securities) collateral. Domestic and international securities are collateralized at a minimum of 102 percent and 105 percent, respectively, of the loaned securities' fair value. CalPERS cannot seize the collateral without borrower default; the collateral is therefore not reported in CalPERS financial statements in accordance with GASB Statement No. 28, *Accounting and Financial Reporting for Securities Lending Transactions* (GASB 28). Management believes CalPERS has minimized credit risk exposure to borrowers by requiring the borrower to provide collateralization greater than 100 percent of the fair value of the securities loaned. The securities loaned are priced daily by third-party sources, and margins are delivered/received daily to maintain over-collateralized levels. Securities on loan can be recalled or returned by CalPERS or the borrower at any time. Since loans are terminable at will, loan durations do not generally match the duration of the investments made with the cash collateral. CalPERS may enter into term loan agreements, which are evaluated on an individual basis. On June 30, 2019, the fair value of the securities on loan was approximately \$28.0 billion. The securities on loan remain on CalPERS Statement of Fiduciary Net Position in their respective investment categories. At June 30, 2019, cash collateral received totaling \$4.3 billion is reported as securities lending obligation, and the fair value of reinvested cash collateral totaling \$4.3 billion is reported as securities lending collateral on the Statement of Fiduciary Net Position. The changes in fair value of the reinvested cash collateral are reported as net appreciation/depreciation in fair value of investments on the Statement of Changes in Fiduciary Net Position.

Because the domestic and international debt and equity securities in the internally managed investment pools are also used in the securities lending program, in accordance with GASB 28, the securities lending collateral, obligation, and the related income and costs are allocated to the pool owners (respective reporting funds) based on the funds' pro rata share of the pools' investments.

CalPERS securities lending reinvestment collateral guidelines prescribe that cash collateral received needs to be invested in short-term, high-credit-quality securities. Currently, SSB, eSecLending, and CalPERS manage the collateral.

7. DERIVATIVES

CalPERS holds investments in swaps, options, futures, rights, and warrants and enters into forward foreign currency exchange contracts. The fair value of futures is determined using the market approach based upon quoted market prices. The fair value of options, rights, warrants, and swaps is determined using the cost approach, because these are traded with lower frequencies. The fair value of derivative investments that are exchange-traded, such as options, rights, and warrants, are priced using the exchange they are traded on. Non-exchange-traded investments, such as swaps, are determined by an external pricing service using various proprietary methods. The fair value of international currency forwards represents the unrealized gain or loss on the related contracts, which is calculated as the difference between the contract exchange rate and the exchange rate at the end of the reporting period.

Futures contracts are marked to market at the end of each trading day, and the settlement of gains or losses occurs on the following business day through the movement of variation margins. Over-the-counter derivatives, such as swaps, generally reset monthly and the settlement of gains or losses occurs the following business day. Currency forward contracts roll quarterly, updating the contract exchange rate.

With all over-the-counter derivatives, such as swaps and currency forwards, CalPERS is exposed to counterparty risk. CalPERS investment managers seek to control this risk through counterparty credit evaluations and approvals, counterparty credit limits, posting collateral exposure, and monitoring procedures, in addition to adherence to the standard International Swaps and Derivatives Association and Credit Support Annex agreements with all counterparties.

At June 30, 2019, the aggregate fair value of investment derivatives in an asset position subject to counterparty credit risk was approximately \$250.6 million. The aggregate amount of cash collateral held by CalPERS on behalf of over-the-counter derivatives was approximately \$45.0 million.

Notes to the Basic Financial Statements (continued)

CalPERS – Derivative Instruments Summary¹ (Dollars in Thousands)

Investment	Net Appreciation/ (Depreciation) in Fair Value for the Fiscal Year Ended June 30, 2019	Fair value at June 30, 2019		
		Classification	Amount	Notional (Dollars)
Derivatives (by Type)	Amount			
Commodity Futures Short	\$23,133	Equity Securities	\$0	\$0
Credit Default Swaps Bought	(3,747)	Debt Securities	(11,045)	513,700
Credit Default Swaps Written	1,094	Debt Securities	(1,338)	49,550
Currency Swaps	(5,965)	Debt Securities	—	—
Equity Options Bought	(36,676)	Equity Securities	—	—
Equity Options Written	3,792	Equity Securities	—	—
Fixed Income Futures Long	126,051	Equity Securities	485	299,566,702
Fixed Income Futures Short	(13,274)	Equity Securities	(34)	(12,557,004)
Fixed Income Options Written	(12,452)	Equity Securities	(13,313)	(2,006,486)
Foreign Currency Options Bought	(36,307)	Equity Securities	931	187,627
Foreign Currency Options Written	27,893	Equity Securities	(206)	(186,407)
Futures Options Written	292	Equity Securities	(172)	(460)
FX Forwards	61,348	Investment Sales/ Purchases	58,121	22,345,260
Index Futures Long	510,278	Equity Securities	35,637	8,266,861
Index Futures Short	15,507	Equity Securities	(5,146)	(950,546)
Index Options Written	(1,812)	Debt Securities	(1,207)	(62)
Pay Fixed Interest Rate Swaps	(4,830)	Debt Securities	(1,619)	251,631
Receive Fixed Interest Rate Swaps	35,201	Debt Securities	15,543	466,910
Rights ²	(1,689)	Equity Securities	4,765	89,716
Total Return Swaps Bond	(233,462)	Debt Securities	13,582	569,977
Total Return Swaps Equity	127,814	Debt Securities	8,104	(5,979,138)
Warrants ²	(177)	Equity Securities	168	3,562
Total	\$582,012		\$103,256	

(1) The information presented in this table is derived from CalPERS June 30, 2019, accounting records and in some instances may reflect trades on a one-day lag basis.

(2) Rights and Warrants are Notional units.

CalPERS – Derivative Instruments Subject to Interest Rate Risk (Dollars in Thousands)

Investment Type	Fair Value June 30, 2019	Investment Maturities (in years)			
		Under 1	1–5	6–10	10+
Credit Default Swaps Bought	(\$11,045)	\$0	(\$11,045)	\$0	\$0
Credit Default Swaps Written	(1,338)	—	(1,315)	(23)	—
Fixed Income Options Written	(13,313)	(13,313)	—	—	—
Pay Fixed Interest Rate Swaps	(1,619)	(182)	(343)	(569)	(525)
Receive Fixed Interest Rate Swaps	15,543	—	201	2,737	12,605
Total Return Swaps Bond	13,582	13,582	—	—	—
Total Return Swaps Equity	8,104	10,655	(2,551)	—	—
Total	\$9,914	\$10,742	(\$15,053)	\$2,145	\$12,080

Notes to the Basic Financial Statements (continued)

CalPERS – Derivative Instruments Highly Sensitive to Interest Rate Changes (Dollars in Thousands)

Investment Type	Reference Rate	Fair Value at June 30, 2019	Notional
Interest Rate Swaps	Receive Fixed .022%, Pay Variable - 3 month STIBO	\$26	\$13,602
Interest Rate Swaps	Receive Fixed .200%, Pay Variable - 6 month EURIB	423	19,781
Interest Rate Swaps	Receive Fixed .500%, Pay Variable - 3 month STIBO	209	10,444
Interest Rate Swaps	Receive Fixed .500%, Pay Variable - 6 month EURIB	1,688	62,976
Interest Rate Swaps	Receive Fixed .500%, Pay Variable - 6 month LIBOR	354	10,674
Interest Rate Swaps	Receive Fixed .750%, Pay Variable - 6 month EURIB	5,772	104,200
Interest Rate Swaps	Receive Fixed 1.000%, Pay Variable - 3 month STIBO	67	1,477
Interest Rate Swaps	Receive Fixed 1.000%, Pay Variable - 6 month EURIB	1,668	22,605
Interest Rate Swaps	Receive Fixed 1.000%, Pay Variable - 6 month LIBOR	19	4,836
Interest Rate Swaps	Receive Fixed 1.250%, Pay Variable - 6 month EURIB	1,569	10,648
Interest Rate Swaps	Receive Fixed 1.500%, Pay Variable - 6 month BUBOR	88	5,157
Interest Rate Swaps	Receive Fixed 1.500%, Pay Variable - 6 month LIBOR	102	1,527
Interest Rate Swaps	Receive Fixed 1.750%, Pay Variable - 3 month CDOR	(569)	7,500
Interest Rate Swaps	Receive Fixed 1.850%, Pay Variable - 3 month TELBO	632	17,804
Interest Rate Swaps	Receive Fixed 1.912%, Pay Variable - 6 month PRIBO	52	1,826
Interest Rate Swaps	Receive Fixed 1.930%, Pay Variable - 3 month LIBOR	—	1,000
Interest Rate Swaps	Receive Fixed 1.980%, Pay Variable - 3 month CDOR	202	16,139
Interest Rate Swaps	Receive Fixed 2.201%, Pay Variable - 3 month LIBOR	—	500
Interest Rate Swaps	Receive Fixed 2.405%, Pay Variable - 6 month WIBOR	33	1,260
Interest Rate Swaps	Receive Fixed 2.408%, Pay Variable - 6 month THBSR	174	3,349
Interest Rate Swaps	Receive Fixed 2.500%, Pay Variable - 3 month CDOR	1,899	30,457
Interest Rate Swaps	Receive Fixed 2.550%, Pay Variable - 6 month THBSR	813	14,416
Interest Rate Swaps	Receive Fixed 2.810%, Pay Variable - 6 month THBSR	123	1,017
Interest Rate Swaps	Receive Fixed 2.925%, Pay Variable - 3 month CNRR	13	13,337
Interest Rate Swaps	Receive Fixed 3.025%, Pay Variable - 3 month CNRR	100	18,287
Interest Rate Swaps	Receive Fixed 3.795%, Pay Variable - 3 month BKBM	193	2,149
Interest Rate Swaps	Receive Fixed 5.570%, Pay Variable - 1 month TIIE	(405)	7,339
Interest Rate Swaps	Receive Fixed 6.000%, Pay Variable - 1 month TIIE	(764)	20,821
Interest Rate Swaps	Receive Fixed 7.250%, Pay Variable - 3 month JIBAR	45	3,617
Interest Rate Swaps	Receive Fixed 7.740%, Pay Variable - 1 month TIIE	400	21,138
Interest Rate Swaps	Receive Fixed 7.750%, Pay Variable - 3 month JIBAR	118	9,680
Interest Rate Swaps	Receive Fixed 8.250%, Pay Variable - 3 month JIBAR	25	674
Interest Rate Swaps	Receive Fixed 8.500%, Pay Variable - 3 month JIBAR	152	2,418
Interest Rate Swaps	Receive Fixed 8.750%, Pay Variable - 3 month JIBAR	322	4,255
Interest Rate Swaps	Receive Variable 3-month COOVI, Pay Fixed 5.960%	(61)	1,088
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 1.694%	19	16,940
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.157%	(109)	5,230
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.199%	(167)	7,940
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.287%	(170)	19,370
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 3.000%	(525)	3,000
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Variable .005%	—	13,601
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Variable .013%	—	37,862
Interest Rate Swaps	Receive Variable 6-month EURIB, Pay Fixed .273%	(25)	13,366
Interest Rate Swaps	Receive Variable 6-month LIBOR, Pay Fixed .200%	(399)	21,812
Interest Rate Swaps	Receive Variable 6-month LIBOR, Pay Variable .236%	—	19,781
Interest Rate Swaps	Receive Variable 6-month LIBOR, Pay Variable 1.000%	—	13,366
Interest Rate Swaps	Receive Variable Daily BRCDI, Pay Fixed 6.450%	(182)	78,275
Subtotal – Interest Rate Swaps		\$13,924	\$718,541
Total Return Bond Swaps	Receive Fixed 10.000%, Pay Fixed 0%	\$0	\$1,378
Total Return Bond Swaps	Receive Fixed 10.500%, Pay Fixed 0%	—	1,037
Total Return Bond Swaps	Receive Fixed 4.000%, Pay Fixed 0%	—	1,642
Total Return Bond Swaps	Receive Fixed 4.500%, Pay Fixed 0%	—	3,550
Total Return Bond Swaps	Receive Fixed 5.000%, Pay Fixed 0%	—	794

Notes to the Basic Financial Statements (continued)

CalPERS – Derivative Instruments Highly Sensitive to Interest Rate Changes (Dollars in Thousands) (continued)

Investment Type	Reference Rate	Fair Value at June 30, 2019	Notional
Total Return Bond Swaps	Receive Fixed 6.100%, Pay Fixed 0%	\$0	\$24,600
Total Return Bond Swaps	Receive Variable 3 -month LIBOR, Pay Equity 2.595%	13,582	536,976
Subtotal – Total Return Bond Swaps		\$13,582	\$569,977
TOTAL		\$27,506	\$1,288,518

CalPERS – Derivative Instruments Subject to Counterparty Credit Risk

Counterparty	Percentage of Net Exposure	Moody's Ratings
Goldman Sachs International	18.82%	A1
HSBC Bank USA	10.05%	Aa3
Citibank N.A.	9.53%	Aa3
UBS AG	8.44%	Aa3
Morgan Stanley Capital Services, Inc.	8.17%	A3
Bank of America	6.69%	A2
Standard Chartered Bank	6.57%	A1
Goldman Sachs Ldn Lch Uk	4.34%	A3
Societe Generale	3.70%	A1
State Street Bank and Trust Company	3.31%	Aa3
Bank of New York	3.00%	A1
Barclays Bank Plc	2.58%	A2
JP Morgan Chase Bank, N.A.	2.47%	Aa2
BNP Paribas, S.A.	2.43%	Aa3
Natwest Markets PLC	2.28%	Baa2
Bank Of America, N.A.	1.54%	Aa2
Goldman Sachs CME	1.42%	A3
Morgan Stanley and Co. International Plc	1.01%	A3
Toronto Dominion Bank	1.00%	Aa3
Deutsche Bank Ag	0.84%	A3
Australia and New Zealand Banking Group	0.71%	Aa3
Goldman Sachs Bank USA	0.29%	A3
JP Morgan Chase Bank N.A., London	0.21%	Aa2
Citigroup	0.17%	A3
HSBC Bank Plc	0.09%	A2
Citigroup Global Markets Lch	0.08%	A3
State Street Bank London	0.08%	A1
UBS AG London	0.08%	Aa3
Royal Bank Of Scotland Plc	0.05%	Baa2
Credit Suisse International	0.03%	A1
Morgan Stanley	0.01%	A3
Royal Bank of Canada	0.01%	A2
TOTAL	100.00%	

Notes to the Basic Financial Statements (continued)

8. EMPLOYERS' NET PENSION LIABILITY/(ASSET)

The components of the net pension liability of the PERF B, PERF C, LRF, JRF, and JRF II as of June 30, 2019, are reported below. PERF A is an agent multiple-employer plan and therefore not disclosed in the following tables, consistent with GASB Statement No. 67, *Financial Reporting for Pension Plans—an amendment of GASB Statement No. 25* (GASB 67) reporting requirements.

Net Pension Liability/(Asset) (Dollars in Thousands)

	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability/(Asset)	Plan Fiduciary Net Position as a Percentage of Total Pension Liability
PERF B				
Schools Cost-Sharing	\$97,300,992	\$68,156,741	\$29,144,251	70.0%
PERF C				
Public Agencies Cost-Sharing	41,426,453	31,179,414	10,247,039	75.3%
LRF				
State of California	94,144	114,404	(20,260)	121.5%
JRF				
State of California	3,175,070	10,169	3,164,901	0.3%
JRF II				
State of California	1,699,922	1,710,089	(10,167)	100.6%

The total pension liability for each defined benefit plan was determined by actuarial valuations as of June 30, 2018, which were rolled forward to June 30, 2019, using the following actuarial assumptions:

Actuarial Assumptions Used to Measure the Total Pension Liability

	PERF B Schools Cost-Sharing	PERF C Public Agency Cost-Sharing	LRF	JRF	JRF II
Inflation Rate	2.50%	2.50%	2.50%	2.50%	2.50%
Salary Increases	Varies by Entry Age and Service	Varies by Entry Age and Service	2.75%	2.75%	2.75%
Mortality Rate Table ¹	Derived using CalPERS membership data for all funds				
The above actuarial assumptions were based upon the following experience study periods:	1997-2015	1997-2015	1997-2015	1997-2015	1997-2015
Post-Retirement Benefit Increase	2.00% until PPPA floor on purchasing power applies, 2.5% thereafter	Contract COLA up to 2.5% until PPPA floor on purchasing power applies, 2.5% thereafter	2.50%	2.75%	2.50%
Long-term rate of return assumption on plan investments used in discounting liabilities	7.15%	7.15%	5.25%	3.13%	6.65%

(1) The mortality table was developed based on CalPERS specific data. The table includes 15 years of mortality improvement using the Society of Actuaries 90 percent of scale MP 2016. For more details on this table, please refer to the December 2017 experience study report (based on CalPERS demographic data from 1997 to 2015) that can be found on the CalPERS website.

Notes to the Basic Financial Statements (continued)

The long-term expected rate of return on pension plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class.

In determining the long-term expected rate of return, CalPERS took into account both short-term and long-term market return expectations as well as the expected pension fund cash flows. Using historical and forecasted information for all the funds' asset classes, expected compound (geometric) returns were calculated over the short term (first 10 years) and the long term (11+ years) using a building-block approach. Using the expected nominal returns for both short term and long term, the present value of benefits was calculated for each fund. The expected rate of return was set by calculating the rounded single equivalent expected return that arrived at the same present value of benefits for cash flows as the one calculated using both short-term and long-term returns. The expected rate of return was then set equal to the single equivalent rate calculated above and adjusted to account for assumed administrative expenses.

The tables to the right reflect long-term expected real rates of return by asset class. The rates of return were calculated using the capital market assumptions applied to determine the discount rate.

PERF B & PERF C – Long-Term Expected Real Rates of Return by Asset Class

Asset Class ¹	Assumed Asset Allocation	Real Return Years 1 - 10 ²	Real Return Years 11+ ³
Global Equity	50.00%	4.80%	5.98%
Fixed Income	28.00%	1.00%	2.62%
Inflation Assets	0.00%	0.77%	1.81%
Private Equity	8.00%	6.30%	7.23%
Real Assets	13.00%	3.75%	4.93%
Liquidity	1.00%	0.00%	(0.92%)

(1) In the Basic Financial Statements, Fixed Income is included in Global Debt Securities; Liquidity is included in Short-Term Investments; Inflation Assets are included in both Global Equity Securities and Global Debt Securities.

(2) An expected inflation of 2.00% used for this period.

(3) An expected inflation of 2.92% used for this period.

LRF – Long-Term Expected Real Rates of Return by Asset Class

Asset Class ¹	Assumed Asset Allocation	Real Return Years 1 - 10 ²	Real Return Years 11+ ³
Global Equity	22.00%	4.80%	5.98%
Fixed Income	49.00%	1.10%	2.62%
TIPS	16.00%	0.25%	1.46%
Commodities	5.00%	1.50%	2.87%
REITs	8.00%	3.50%	5.00%

(1) In the Basic Financial Statements, Commodities and REITs are included in Global Equity Securities; Fixed Income and TIPS are included in Global Debt Securities.

(2) An expected inflation of 2.00% used for this period.

(3) An expected inflation of 2.92% used for this period.

JRF II – Long-Term Expected Real Rates of Return by Asset Class

Asset Class ¹	Assumed Asset Allocation	Real Return Years 1 - 10 ²	Real Return Years 11+ ³
Global Equity	52.00%	4.80%	5.98%
Fixed Income	32.00%	1.10%	2.62%
TIPS	5.00%	0.25%	1.46%
Commodities	3.00%	1.50%	2.87%
REITs	8.00%	3.50%	5.00%

(1) In the Basic Financial Statements, Commodities and REITs are included in Global Equity Securities; Fixed Income and TIPS are included in Global Debt Securities.

(2) An expected inflation of 2.00% used for this period.

(3) An expected inflation of 2.92% used for this period.

DISCOUNT RATE

PERF B, PERF C, LRF, and JRF II

The discount rates used to measure the total pension liability as of June 30, 2019, for the PERF B, PERF C, LRF, and JRF II were 7.15 percent, 7.15 percent, 5.25 percent, and 6.65 percent, respectively. These discount rates are not adjusted for administrative expenses.

PERF B, PERF C, LRF and JRF II fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return for those pension plans' investments were applied to all periods of projected benefit payments to determine the total pension liability.

JRF

The discount rate used to measure the total pension liability as of June 30, 2019, was 3.13 percent, which differs from the discount rate used as of June 30, 2018, of 3.62 percent. The State funds the JRF benefit obligations using the pay-as-you-go method. Under the pay-as-you-go method, the pension plan's fiduciary net position was not projected to be sufficient to make projected future benefit payments of current active and inactive employees. The discount rate is based on a 20-year tax-exempt General Obligation Municipal Bond with an average rating of AA (as reported in Fidelity Index's "20-Year Municipal GO AA Index") and was applied to all periods of projected benefit payments to measure the total pension liability.

Notes to the Basic Financial Statements (continued)

SENSITIVITY OF THE NET PENSION LIABILITY/(ASSET) TO CHANGES IN THE DISCOUNT RATE

The following presents the net pension liability/(asset) of the PERF B, PERF C, LRF, JRF, and JRF II calculated using the current discount rate, as well as what the net pension liability would be if it were calculated using a discount rate that is one percentage point lower (-100 basis points) or one percentage point higher (+100 basis points) than the current rate:

Sensitivity Analysis (Dollars in Thousands)

Discount Rate (assumed)

Plan	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability/(Asset)	Plan Fiduciary Net Position as a Percentage of Total Pension Liability
PERF B				
Schools Cost-Sharing	\$97,300,992	\$68,156,741	\$29,144,251	70.0%
PERF C				
Public Agencies Cost-Sharing	41,426,453	31,179,414	10,247,039	75.3%
LRF				
State of California	94,144	114,404	(20,260)	121.5%
JRF				
State of California	3,175,070	10,169	3,164,901	0.3%
JRF II				
State of California	1,699,922	1,710,089	(10,167)	100.6%

Sensitivity Analysis (Dollars in Thousands)

Discount Rate -1%

Plan	Total Pension Liability (-1%)	Plan Fiduciary Net Position	Net Pension Liability/(Asset) (-1%)	Plan Fiduciary Net Position as a Percentage of Total Pension Liability
PERF B				
Schools Cost-Sharing	\$110,166,263	\$68,156,741	\$42,009,522	61.9%
PERF C				
Public Agencies Cost-Sharing	47,057,989	31,179,414	15,878,575	66.3%
LRF				
State of California	105,036	114,404	(9,368)	108.9%
JRF				
State of California	3,519,095	10,169	3,508,926	0.3%
JRF II				
State of California	1,909,119	1,710,089	199,030	89.6%

Sensitivity Analysis (Dollars in Thousands)

Discount Rate +1%

Plan	Total Pension Liability (+1%)	Plan Fiduciary Net Position	Net Pension Liability/(Asset) (+1%)	Plan Fiduciary Net Position as a Percentage of Total Pension Liability
PERF B				
Schools Cost-Sharing	\$86,628,361	\$68,156,741	\$18,471,620	78.7%
PERF C				
Public Agencies Cost-Sharing	36,795,964	31,179,414	5,616,550	84.7%
LRF				
State of California	85,230	114,404	(29,174)	134.2%
JRF				
State of California	2,883,231	10,169	2,873,062	0.4%
JRF II				
State of California	1,531,367	1,710,089	(178,722)	111.7%

9. OTHER POST-EMPLOYMENT BENEFIT TRUST FUND

The CERBTF (also known as Annuitants' Health Care Coverage Fund) was established by Chapter 331 of the 1988 Statutes and initially funded in 2007. At June 30, 2019, 562 employers had elected to participate in the fund. Of the 562 participating employers, 548 employers have contributed assets in the CERBTF as of June 30, 2019. The purpose of the fund is to receive contributions from participating employers and establish separate employer prefunding accounts to pay for health care or other post-employment benefits in accordance with the terms of the participating employers' plans. Contributions are voluntarily determined by the employer's own funding schedule, and there are no long-term contracts for contributions to the plan. As such, contributions to the CERBTF are elective and not required. The CERBTF is an agent multiple-employer plan as defined in GASB Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans* (GASB 74), with pooled administrative and investment functions.

Participating employers may receive disbursements from the fund not to exceed the annual premium and other costs of eligible post-employment benefits. If the employer's participation in the fund terminates, all assets in the employer's prefunding account shall remain in the fund except as otherwise provided. Allowable termination disbursements are to a trustee or as a trustee transfer of assets upon satisfactorily demonstrating to the Board one of the following: 1) the transfer will satisfy applicable requirements of the IRC, other law and accounting standards, and the Board's fiduciary duties, or 2) the employer substantiates to the Board that in conformance with applicable requirements of the IRC, other laws and accounting standards, and the Board's fiduciary duties that all of the employer's obligations for the payment of post-employment benefits have been satisfied.

As of June 30, 2019, there were 491,583 active plan members, 297,554 inactive plan members currently receiving benefit payments, and 10,635 inactive plan members entitled to but not yet receiving benefit payments.

The CERBTF costs include direct administrative and investment costs as well as indirect costs that are allocated through the Board approved annual budget and cost-allocation process. CalPERS contracts with a third-party service provider, Northeast Retirement Services (NRS), to perform record keeping for individual CERBTF employer accounts.

The total Fiscal Year 2018-19 actual OPEB employer contributions from 562 participating employers representing 579 OPEB plans was \$4.0 billion. In compliance with GASB 74, this amount includes the \$1.1 billion in contributions

made to the CERBTF, plus an additional \$2.9 billion in retiree health care premiums paid by employers directly to health care providers.

The CERBTF mirrors the investment policies of the System as a whole. These policies are adopted by the CalPERS Investment Committee, which sets forth the System's overarching investment beliefs, purposes, and objectives with respect to all investment programs. Additionally, the CERBTF has separate, Board-approved asset allocation policies in place for the three investment options offered by the fund. Each strategy seeks to offer employers investment alternatives dependent upon expected levels of return and volatility. Overall, the CERBTF recognized an annual money-weighted rate of return of 6.5 percent for Fiscal Year 2018-19.

10. REPLACEMENT BENEFIT FUND (RBF)

The RBF was established as a custodial fund by Chapter 798 of the 1990 Statutes. Initially established in 1998, it provides benefits to retirees of the PERF whose retirement allowance exceeds the IRC section 415(b) limits. IRC section 415(b) imposes a dollar limit on the annual retirement benefits an individual may receive from a qualified defined benefit pension plan.

The RBF is funded on a pay-as-you-go basis. That is, the employer is invoiced for amounts payable to its former employees on a calendar year basis and upon receipt of payment by the employers, CalPERS remits the replacement benefits to the retirees on a monthly basis. Employer contributions must be in amounts equivalent to the benefits not paid from the PERF as a result of the limitations of IRC section 415(b) and if applicable, employer Federal Insurance Contributions Act taxes. CalPERS is responsible for calculating the applicable dollar limit under IRC section 415(b) and notifying the employer. At June 30, 2019, there were 1,383 retirees receiving replacement benefits.

Government Code section 7522.43 provides that a public retirement system may only continue to administer a plan of replacement benefits for employees first hired prior to January 1, 2013. Section 7522.43 prohibits any employer from offering a plan of replacement benefits for employees hired on or after January 1, 2013.

11. OLD AGE AND SURVIVORS' INSURANCE REVOLVING FUND (OASI)

The Old Age and Survivors' Insurance Revolving Fund (OASI) was established to consolidate the collection and payment of employee and employer contributions for California public agencies under the provisions of the Federal Social Security regulations.

Notes to the Basic Financial Statements (continued)

The Board of Administration serves as the State Social Security Administrator (SSSA). Between 1955 and 1986 the SSSA was responsible for collecting Social Security and Medicare taxes from public employers. Effective January 1, 1987, with the enactment of the Omnibus Budget Reconciliation Act of 1986, the responsibility of collecting taxes moved from CalPERS to the Internal Revenue Service and the OASI has been operating since 1987 using the interest that was earned on the OASI. The OASI funds have diminished requiring additional funding to pay for the costs of administering the SSSA program. CalPERS will be charging participating agencies a specified fee to pay for these costs. The residual balances were previously reported in the PERF A for accounting and financial reporting purposes, and are now being reported separately. In Fiscal Year 2019-20, due to the dwindling balance, CalPERS will begin assessing fees to cover costs, and continue administering the program. In anticipation of future income and expense reporting, the beginning balance was restated to more accurately depict the nature of the fund.

12. PUBLIC EMPLOYEES' HEALTH CARE FUND (HCF)

The HCF was established under the PEMHCA as of July 1, 1988. Health plan offerings include self-funded plans, PERS Choice, PERSCare, and PERS Select. Effective January 1, 2014, flex-funded plans, Anthem Blue Cross, Blue Shield of California, Health Net, Sharp, UnitedHealthcare and effective January 1, 2018, Western Health Advantage were added. Health plans are available to entities that contract for health insurance coverage under PEMHCA based on ZIP codes, as prescribed by state law. Having members in large risk pools spreads the catastrophic claims over a larger base and minimizes administrative expenses. The self-funded plans retain all risk of loss of allowable health claims while the flex-funded plans retain no risk of loss effective January 1, 2019. Members are not subject to a supplemental assessment in the event of deficiencies. Health insurance premium rates are set by the Board based on a trend analysis of the historic cost, utilization, demographics, and administrative expenses of the HCF to provide for the claims incurred and the actuarially determined required level of reserves. The health plans rely on operating cash flows and investment income to fund health benefit payments. During Fiscal Year 2018-19, the Board approved aggregate increases in member premiums to continue to provide for benefits of the health plans.

Public agencies participating in the health plans are required to make monthly premium payments based on rates established annually by CalPERS. Employers' shares of

premiums are determined by the public agency through benefit negotiations, subject to minimum share of premium levels established through PEMHCA. Public agency employee members pay the difference between the premium rate and the employers' share of premium.

The HCF establishes claim liabilities based on estimates of the ultimate costs of claims (including future claim adjustment expenses) that have been reported but not settled, and of claims that have been "Incurred But Not Reported" (IBNR). The estimated claims liability was calculated by health plan partners as of June 30, 2019, using a variety of actuarial and statistical techniques, and adjusted for actual experience to produce current estimates that reflect recent settlements, claim frequency, and other economic and social factors. Adjustments to claims liabilities are charged or credited to expense in the periods in which they are made. The estimated claims liability of \$459.7 million is carried at its face amount, and no interest discount is assumed. The IBNR portion of \$395.8 million represents an estimate for claims that have been incurred prior to June 30, 2019, but have not been reported to the HCF. The total of the estimated claims liabilities at the end of the Fiscal Year 2018-19 is \$740.4 million. The year-end amount also includes \$280.8 million of known claims, which is reported as claims payable liability in the Statement of Net Position.

ANTICIPATED INVESTMENT INCOME AND REINSURANCE

Anticipated investment income is included in the annual premium requirement for HCF members. Also, the HCF has not entered into any reinsurance or excess insurance agreements. CalPERS has entered into agreements with flex-funded health plan partners that limit the HCF's risk to a maximum aggregate monthly cost per member.

The following schedule represents changes in the aggregate estimated claims liabilities for the fiscal years ended June 30, 2019, and June 30, 2018.

Changes in the Aggregate Estimated Claims Liabilities of the HCF (Dollars in Thousands)

Year Ended June 30	2019	2018
Total Estimated Claims at Beginning of Fiscal Year	\$764,066	\$635,994
Total Incurred Claims and Claim Adjustment Expenses	3,562,627	3,580,571
Total Payments	(3,586,256)	(3,452,499)
Total Estimated Claims at End of Fiscal Year	<u>\$740,437</u>	<u>\$764,066</u>

13. PUBLIC EMPLOYEES' CONTINGENCY RESERVE FUND (CRF)

The CRF was established in 1962, with the passage of PEMHCA, to fund administrative expenses related to the

Notes to the Basic Financial Statements (continued)

PEMHCA program, and as a contingency reserve for such items as increases in future rates or in future benefits. PEMHCA was expanded to include local public agency employees on a contract basis in 1967. The CRF is reimbursed by the State and contracting public agencies for expenses incurred for administering the program.

PEMHCA establishes eligibility rules for the following:

- Retirees and beneficiaries receiving health care benefits,
- Terminated plan members entitled to but not yet receiving benefits, and
- Active plan members.

The employer's contribution toward the CRF administrative expenses is determined as a percentage of gross health insurance premiums paid by the employer and employees. The percentage of the insurance premiums paid for the fiscal year ended June 30, 2019, was 0.23 percent. Administrative rates are reviewed annually and are adjusted, if needed, to cover budgeted administrative expenses.

Health insurance premiums are initially received in the CRF and then remitted to health insurance carriers, apart from premium dollars designated for self-funded and flex-funded health plans, which are transferred to the HCF. As of June 30, 2019, there were 1,160 public agencies and schools participating in health insurance coverage under PEMHCA.

14. PUBLIC EMPLOYEES' LONG-TERM CARE FUND (LTCF)

The LTCF began offering self-insured Long-Term Care (LTC) plans in 1995 through the LTC program. The LTC program provides LTC coverage to enrolled participants under the Public Employees' Retirement Law (PERL), Chapter 15. Administered by Long-Term Care Group, Inc., the LTC program is a voluntary member-paid program and is not funded or subsidized by the employers.

There are four LTC policy series:

- LTC 1: policies purchased from the program inception in 1995 through 2002.
- LTC 2: policies purchased from 2003 through 2004.
- LTC 3: policies purchased from 2005 through 2008.
- LTC 4: policies purchased effective December 2013 and forward through open application.

As of June 30, 2019, there are 120,632 active participants in the LTC 1, LTC 2, LTC 3, and LTC 4 policy series, of which 6,959 are receiving benefits.

The LTCF estimate of the funding level, to provide for the payment of future claim benefits, is projected based on actual enrolled participant levels.

The LTCF establishes the liability for future policy benefits based on the present value of future benefits and expenses less the present value of future premiums. The actuarial valuations are very sensitive to the underlying actuarial assumptions, including a discount rate of 5.25 percent, morbidity, lapse rates, voluntary termination, mortality, and plan expenses. In Fiscal Year 2018-19, the actual investment returns were approximately \$88 million higher than expected due to increased investment income. Economic assumptions are evaluated periodically in accordance with Board policy. An evaluation of assumptions used in the long-term care actuarial valuation is currently in progress. Any changes resulting from the experience study will be applied prospectively. The estimated liability for future policy benefits at June 30, 2019, has been rolled forward from the June 30, 2018, actuarial valuation using standard actuarial techniques, and all assumptions remained the same as the previous year.

Total LTCF investments as of June 30, 2019, were approximately \$4.8 billion. For Fiscal Year 2018-19, the annual premium was \$283.4 million and the total benefits paid out were \$324.8 million. Since the program's inception in 1995 through June 30, 2019, the total benefits paid were approximately \$2.9 billion.

15. CONTINGENCIES

CalPERS is a Defendant in litigation involving investments, individual pension, health benefit payments and participant eligibility issues arising from its normal activities. Generally, in the event of an adverse decision, any payments awarded by the courts would be recovered by CalPERS through prospective adjustments to the affected employer's contribution rate or rates and, where applicable, member premiums. During the fiscal year, specific pending cases were litigated and new ones arose that could potentially impact the future financial health of funds administered by CalPERS.

In the case of *Robert M. Mallano, et al. v. John Chiang*, the Controller of the State of California (SCO), the Judges' Retirement System (JRS), and the Judges' Retirement System II (JRS II) were sued as part of a class action by all active and retired jurists (and their beneficiaries) in the State of California. The judges' primary contention was that they were not paid salary required by applicable statutes over the prior five years, and that JRS and JRS II must in the future independently raise pension benefits to these retirees and beneficiaries based on the statutory salary mandates. JRS and JRS II in turn contended that they did not have statutory authority to increase benefits until the active judges have received an actual pay increase and JRS and JRS II have received a copy of an official Pay Letter from California Department of Human Resources to SCO authorizing an

Notes to the Basic Financial Statements (continued)

increase. JRS has been included in this suit because retired JRS judges receive increases to their retirement benefits when active judges receive salary increases. For JRS II, salary increases impact final compensation at retirement.

A Statement of Decision was issued on December 16, 2015, entering declaratory judgment in favor of the Plaintiff class and against JRS, JRS II, and SCO. The court found that, since Fiscal Year 2008-09, SCO, JRS, and JRS II had failed to pay constitutionally and statutorily mandated salary increases to active judges, as well as increased benefits to judicial retirees, as required by statute. The judges and their beneficiaries were awarded the unpaid salary increases and benefits payable to judicial retirees and their beneficiaries together with 10% per annum interest, owing from the dates on which such sums vested until such increases and benefits are paid. Final Judgment was issued on March 10, 2016.

JRS, JRS II, and SCO filed an appeal on May 5, 2016. On April 5, 2017, the Court of Appeal issued its unpublished Decision affirming the judgment of the Superior Court and the attorney fee award. Plaintiffs filed a Motion to Enforce Judgment in the Superior Court, which was heard on July 27, 2017. At that hearing, the Superior Court granted the motion and ordered that retroactive damages be paid by the Defendants in amounts consistent with the court's interpretation of the salary provisions in Government Code section 68203.

Defendants implemented the court's Order on a prospective basis shortly after the July 28, 2017 Order was issued. Then, on September 19, 2017, Defendants filed a Notice of Appeal from Post-Remittitur Order Entered July 28, 2017. The appeal was taken from paragraph 1 of the Order, directing "Defendants pay to Plaintiff and the class members the difference between what Defendants actually paid Plaintiff and class members and the amounts that should have been paid, as specified in the judgment, together with the pre and post judgment interest at the rate of 10% per annum from the date on which the additional payment should have been paid to the actual date of payment." The grounds for this appeal were that the Order directs retroactive monetary relief to the Plaintiff class for past alleged wrongs, by ordering Defendants to pay prior salary increases. In so doing, Defendants argue that the trial court has disregarded the ruling of the Court of Appeal, which expressly held that, "the judgment includes no monetary damages award."

On June 26, 2018, an unpublished Decision was issued, denying the appeal: "The order enforcing the judgment, including the provision for 'pre and post judgment interest thereon at the rate of 10% per annum from the date on which the additional payment should have been paid to the actual date of payment' is affirmed." On August 3, 2018, the Controller, JRS and JRS II (State Defendants) filed a Petition

for Review in the California Supreme Court. On October 26, 2018, the court denied the State's Petition for Review. Since then, JRS and JRS II have been working with SCO and the Department of Finance (DOF) to administer payment of the damages that were awarded in the case. In June 2019, JRS paid damages equaling \$18,532,530 to the retired members of that program. On August 6, 2019, CalPERS' Financial Reporting and Accounting Services Division (FRAS) requested a general fund transfer of this amount pursuant to Chapter 23 of the budget bill, which has earmarked \$41 million to cover the *Mallano* damages payable by JRS and JRS II. Because JRS II needs revised payroll information from the SCO before it can determine payments to the members of JRS II, those payments have not yet been completed.

Sanchez, Elma, et al. v. CalPERS is a class action lawsuit originally brought by members of the CalPERS Long-Term Care Plan against CalPERS and eight individual CalPERS Board members. Plaintiffs claim that CalPERS breached its contract with the long-term care purchasers by allegedly promising that long-term care premiums would never increase during the lifetime of the purchaser, but then increased the premiums, and failed to continue the Inflation Prevention Benefit without an increase in premiums. Plaintiffs seek to recover all money paid for the long-term care coverage and rescission of the policies sold to the class members, as well as interest and attorneys' fees.

The operative Complaint alleges a cause of action for breach of fiduciary duty against both CalPERS and the Board Defendants and four causes of action against CalPERS for breach of contract, breach of the implied covenant of good faith and fair dealing, rescission, and declaratory relief. Plaintiffs sought to certify a class consisting of California citizens who purchased LTC 1 and LTC 2 policies issued from 1995 to 2004 with lifetime coverage and built-in inflation protection, lifetime policies without inflation protection, as well as three-year and six-year policies with inflation protection from CalPERS.

CalPERS and the Board Defendants deny that CalPERS breached the contract by imposing the premium increase and that the policies were intentionally or negligently underpriced and assert that the long-term care coverage was a new product with little actuarial data when the program started in 1995, making it difficult to accurately price. Premium increases were imposed across the entire long-term care industry as actuarial and claims data became available. CalPERS asserts that it timely informed policyholders about the need to impose premium increases and has managed the program and the Long-Term Care Trust Fund prudently and properly. CalPERS has also asserted other legal defenses.

Notes to the Basic Financial Statements (continued)

On January 18, 2016, the court granted Plaintiffs' Motion for Class Certification. Two claims were certified for class treatment against CalPERS: (1) the breach of contract claim; and (2) Plaintiffs' breach of fiduciary duty claim, on the "duty of care" theory only. None of Plaintiffs' claims against the individual Board members were certified for class treatment. The CalPERS Defendants filed a Motion for Summary Judgment/Adjudication that was argued on June 8, 2017. The court granted summary judgment as to the claims against the individual Board Defendants. The court also granted summary judgment for CalPERS as to the certified breach of fiduciary duty and rescission claims but denied summary judgment as to the certified breach of contract claim and the uncertified declaratory relief claim.

After a two-day court trial in early June 2019 on contract interpretation issues, the court issued a "Draft Proposed Statement of Decision." In this ruling, the court held in favor of Plaintiffs on the interpretation of the "Inflation-Protection" clause in the policy contract, finding that CalPERS could not increase premiums as a result of rising liabilities from the Inflation Protection benefit's automatic five percent annual increase in the maximum allowable monthly benefit. In other words, the court tentatively ruled that CalPERS cannot increase premiums on policies with the inflation protection benefit unless such an increase is driven by cost factors other than the cost of the escalation of daily/monthly limits on Inflation-Protection benefits over time. The court's ruling also urged the parties to attempt to settle the case by petitioning other branches of State government for a monetary infusion. The court said, "[T]his case can only settle if CalPERS and the State find a way to make peace with the class and its counsel. While the Long-Term Care plan was indisputably authorized by the Legislature in 1995 on the theory that it would be self-sustaining and not a drag on the General Fund or public employers, there is a very serious risk that a money judgment for a rather large amount of money will be issued in due course in this case. The [CalPERS long-term care] plan currently has some substantial reserves (needed in the actuaries' view to pay foreseeable future claims) which could pay a money judgment in the near term, but doing so would then set the plan up for insolvency some time in the near future." "An inability of this CalPERS plan to pay just claims will create an obvious default by an arm of the State in the fulfillment of its contract obligations. This, in turn, could seriously impair the credit rating of the State. If this case is not settled in the near term, a very large money judgment against CalPERS appears to be the most likely outcome. For this reason, the best path forward, in this experienced jurist's view, is for the parties to try to strike a deal which requires a one-time appropriation by the Legislature to resolve the pending suit while also providing a judicially-approved road map so that

the plan is self-sustaining thereafter." To provide time for this discussion to occur, the court initially continued the jury trial date to the end of October 2019, and recently continued it again until April 2020. The parties have engaged in two mediation sessions so far.

Heinz, et al. v. CalPERS, Anthem et al. is a putative class action lawsuit filed against CalPERS in June 2017. The Complaint alleges breach of contract, breach of fiduciary duties, misrepresentation, and a variety of other claims. The class is described as "people who were enrolled in Preferred Provider Organization health insurance offered and/or administered by CalPERS and Anthem Blue Cross." The primary allegation is that CalPERS and Anthem engaged in a common policy of improperly and artificially reducing the "allowable amount" for "out-of-network" non-emergency medical services.

On May 7, 2018, the court issued a ruling that Plaintiff must proceed with his Petition for Writ of Administrative Mandamus, and that all other causes of action were stayed in their entirety pending the outcome of the writ. On January 25, 2019, the court denied Plaintiff's Petition for Writ of Administrative Mandamus finding that there was no evidence that CalPERS and Anthem improperly reduced the "allowable amount" for "out-of-network" non-emergency medical services. As a result of this ruling, CalPERS demurred to the remaining causes of action. The court sustained CalPERS' demurrer and entered judgment in favor of CalPERS, ending Plaintiff's lawsuit. On August 19, 2019, Plaintiff filed a Notice of Appeal indicating his intention to appeal the Superior Court's decision.

A second lawsuit related to CalPERS' administration of health benefits is *County of Monterey dba Natividad Medical Center v. CalPERS, Anthem et al.* CalPERS was served with this Complaint on August 10, 2017. The dispute in this case arises out of a "Facility Agreement" between Natividad Medical Center ("NMC") and Anthem effective August 1, 2012, pursuant to which NMC agreed to provide certain healthcare services to Anthem members for certain agreed-upon reimbursements. The Facility Agreement governs not only claims for Anthem insureds, but also services for and claims by members of "Other Payors" for whom Anthem provides claim processing services for its Managed Care Network, such as CalPERS. No reimbursement rates for "trauma services" were established in the 2012 Agreement because NMC was not yet providing such services and these rates were to be negotiated at a later date, when NMC had set up its trauma care services. However, the parties have been unable to agree upon trauma rates since 2012. As a result, the Complaint alleges that Anthem has been instructing its Other Payors, including CalPERS, to pay NMC's trauma services claims at the "emergency services" rate. With regard to CalPERS' plan members' treatment for trauma, NMC alleges it has been

Notes to the Basic Financial Statements (continued)

underpaid by \$2.8 million. CalPERS filed a demurrer to Natividad's Second Amended Complaint, which was sustained without leave to amend, essentially dismissing the action against CalPERS. On or about June 26, 2018, Natividad filed a Notice of Appeal. The appeal has been fully briefed but not yet scheduled for oral argument.

The amount of potential loss or range of loss on these cases is not estimable at this time due to the many unknowns and complexities of litigation.

16. FUTURE ACCOUNTING PRONOUNCEMENT

The objective of GASB Statement No. 87, *Leases* (GASB 87), is to improve accounting and financial reporting for leases by governments. GASB 87 requires recognition of certain lease assets and liabilities for leases that were previously classified as operating leases and recognized as inflows or outflows of resources based on the payment provisions of the contract. It establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. The requirements of GASB 87 are effective for fiscal years beginning after December 15, 2019. CalPERS plans to implement GASB 87 at the start of Fiscal Year 2019-20.

FINANCIAL SECTION

Required Supplementary Information

- 76 Schedules of Changes in Net Pension Liability/(Asset) and Related Ratios
- 82 Schedules of Plan Contributions
- 84 Schedule of Investment Returns
- 85 Schedule of Claims Development Information

Required Supplementary Information

SCHEDULES OF CHANGES IN NET PENSION LIABILITY/(ASSET) AND RELATED RATIOS

PERF B – Six-Year Review¹ (Dollars in Thousands)

	2019	2018	2017	2016	2015	2014
Discount Rate Assumption	7.15 %	7.15%	7.15%	7.65%	7.65%	7.50%
Total Pension Liability:						
Service Cost	\$2,226,797	\$2,172,696	\$2,031,914	\$1,716,677	\$1,624,993	\$1,576,667
Interest	6,563,541	6,165,715	5,719,835	5,441,918	5,152,519	4,820,116
Changes of Assumptions	—	450,064	4,649,299	—	(1,217,974)	—
Differences Between Expected and Actual Experience	1,398,796	1,852,902	531,862	400,103	1,119,011	—
Benefit Payments, Including Refunds of Member Contributions	(4,347,426)	(4,053,119)	(3,724,910)	(3,546,836)	(3,334,081)	(3,139,923)
Net Change in Total Pension Liability	\$5,841,708	\$6,588,258	\$9,208,000	\$4,011,862	\$3,344,468	\$3,256,860
Total Pension Liability – Beginning	\$91,459,284	\$84,871,026	\$75,663,026	\$71,651,164	\$68,306,696	\$65,049,836
Total Pension Liability – Ending (a)	\$97,300,992	\$91,459,284	\$84,871,026	\$75,663,026	\$71,651,164	\$68,306,696
Plan Fiduciary Net Position:						
Contributions – Employer	\$2,527,726	\$2,070,832	\$1,783,736	\$1,434,632	\$1,323,090	\$1,203,071
Contributions – Member	1,014,070	952,979	897,438	851,133	773,580	744,437
Total Net Investment Income	4,212,090	5,095,064	6,211,781	297,514	1,272,365	8,625,601
Benefit Payments, Including Refunds of Member Contributions	(4,347,426)	(4,053,119)	(3,724,910)	(3,546,836)	(3,334,081)	(3,139,923)
Net Plan to Plan Resource Movement	304	2	(134)	10	(71,460)	—
Administrative Expenses	(46,159)	(92,448)	(82,489)	(34,554)	(64,124)	(72,167)
Net Change in Plan Fiduciary Net Position	\$3,360,605	\$3,973,310	\$5,085,422	(\$998,101)	(\$100,630)	\$7,361,019
Plan Fiduciary Net Position – Beginning	\$64,796,136	\$60,998,387	\$55,912,965	\$56,911,066	\$57,011,696	\$49,650,677
Adjustments ²	—	(175,561)	—	—	—	—
Total Adjusted Plan Fiduciary Net Position – Beginning	64,796,136	60,822,826	55,912,965	56,911,066	57,011,696	49,650,677
Plan Fiduciary Net Position – Ending (b)	68,156,741	64,796,136	60,998,387	55,912,965	56,911,066	57,011,696
Net Pension Liability (a) - (b)	\$29,144,251	\$26,663,148	\$23,872,639	\$19,750,061	\$14,740,098	\$11,295,000
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	70.0%	70.8%	71.9%	73.9%	79.4%	83.5%
Covered Payroll	\$13,819,881	\$13,252,995	\$12,643,354	\$11,747,602	\$10,964,872	\$10,120,248
Net Pension Liability as a Percentage of Covered Payroll	210.9%	201.2%	188.8%	168.1%	134.4%	111.6%

(1) Information in this schedule is not available prior to 2014. Additional years will be added to this schedule in future fiscal years until 10 years of data is presented.

(2) Cumulative effect of CalPERS employer proportionate share of postemployment benefit obligations.

NOTES TO SCHEDULE

Changes in Benefit Terms

A summary of the plan provisions used for a specific plan can be found in the plan's annual valuation report.

Change of Assumptions and Methods

CalPERS has implemented a new actuarial valuation software system for the June 30, 2018, valuation. This new system has refined and improved calculation methodology.

In December 2017, the CalPERS Board of Administration (the Board) adopted new mortality assumptions for plans participating in the Public Employees' Retirement Fund (PERF). The new mortality table was developed from the December 2017 experience study and includes 15 years of projected ongoing mortality improvement using 90 percent of scale MP 2016 published by the Society of Actuaries. The inflation assumption was reduced from 2.75 percent to 2.50 percent. The assumptions for individual salary increases and overall payroll growth were reduced from 3.00 percent to 2.75 percent. These changes are being implemented in two steps commencing in the June 30, 2018

funding valuation. For financial reporting purposes, these assumption changes are fully reflected in the results for Fiscal Year 2017-18.

In Fiscal Year 2016-17, the financial reporting discount rate for the PERF B was lowered from 7.65 percent to 7.15 percent. In December 2016, the Board approved lowering the funding discount rate used in the PERF B from 7.50 percent to 7.00 percent, which is to be phased in over a three-year period (7.50 percent to 7.375 percent, 7.375 percent to 7.25 percent, and 7.25 percent to 7.00 percent) beginning with the June 30, 2017 valuation reports. The funding discount rate includes a 15 basis-point reduction for administrative expenses, and the remaining decrease is consistent with the change in the financial reporting discount rate.

In Fiscal Year 2014-15, the financial reporting discount rate was increased from 7.50 percent to 7.65 percent resulting from eliminating the 15 basis-point reduction for administrative expenses. The funding discount rate remained at 7.50 percent during this period, and remained adjusted for administrative expenses.

Required Supplementary Information (continued)

SCHEDULES OF CHANGES IN NET PENSION LIABILITY/(ASSET) AND RELATED RATIOS (CONTINUED)

PERF C – Six-Year Review¹ (Dollars in Thousands)

	2019	2018	2017	2016	2015	2014
Discount Rate Assumption	7.15 %	7.15%	7.15%	7.65%	7.65%	7.50%
Total Pension Liability:						
Service Cost	\$878,707	\$844,273	\$820,583	\$712,307	\$698,416	\$713,731
Interest	2,798,484	2,629,157	2,506,761	2,399,259	2,285,565	2,169,786
Changes of Benefit Terms	1,283	668	2,119	1,478	—	—
Changes of Assumptions	—	(248,318)	2,122,413	—	(543,686)	—
Differences Between Expected and Actual Experience	705,149	313,467	(18,554)	(6,333)	(5,678)	—
Benefit Payments, Including Refunds of Member Contributions	(1,902,025)	(1,755,740)	(1,630,602)	(1,519,301)	(1,423,756)	(1,335,871)
Net Change in Total Pension Liability	\$2,481,598	\$1,783,507	\$3,802,720	\$1,587,410	\$1,010,861	\$1,547,646
Total Pension Liability – Beginning	\$38,944,855	\$37,161,348	\$33,358,628	\$31,800,055	\$30,789,194	\$29,241,548
Adjustment to Beginning Amount	—	—	—	(28,837)	—	—
Total Adjusted Pension Liability – Beginning	\$38,944,855	\$37,161,348	\$33,358,628	\$31,771,218	\$30,789,194	\$29,241,548
Total Pension Liability – Ending (a)	\$41,426,453	\$38,944,855	\$37,161,348	\$33,358,628	\$31,800,055	\$30,789,194
Plan Fiduciary Net Position:						
Contributions – Employer	\$1,333,559	\$1,182,686	\$980,359	\$882,991	\$859,456	\$747,694
Contributions – Member	357,159	334,140	317,024	300,135	278,529	291,772
Total Net Investment Income	1,935,939	2,308,558	2,774,321	127,043	548,097	3,770,935
Benefit Payments, Including Refunds of Member Contributions	(1,902,025)	(1,755,740)	(1,630,602)	(1,519,301)	(1,423,756)	(1,335,871)
Net Plan to Plan Resource Movement	167,308	116,550	134,513	22,621	(267,581)	—
Administrative Expenses	(21,115)	(41,980)	(37,052)	(15,263)	(27,967)	(31,550)
Net Change in Plan Fiduciary Net Position	\$1,870,825	\$2,144,214	\$2,538,563	(\$201,774)	(\$33,222)	\$3,442,980
Plan Fiduciary Net Position – Beginning	\$29,308,589	\$27,244,095	\$24,705,532	\$24,907,306	\$24,940,528	\$21,497,548
Adjustments ²	—	(79,720)	—	—	—	—
Total Adjusted Plan Fiduciary Net Position – Beginning	29,308,589	27,164,375	24,705,532	24,907,306	24,940,528	21,497,548
Plan Fiduciary Net Position – Ending (b)	31,179,414	29,308,589	27,244,095	24,705,532	24,907,306	24,940,528
Net Pension Liability (a) - (b)	\$10,247,039	\$9,636,266	\$9,917,253	\$8,653,096	\$6,892,749	\$5,848,666
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	75.3%	75.3%	73.3%	74.1%	78.3%	81.0%
Covered Payroll	\$3,949,226	\$3,793,609	\$3,631,919	\$3,472,950	\$3,356,312	\$3,248,018
Net Pension Liability as a Percentage of Covered Payroll	259.5%	254.0%	273.1%	249.2%	205.4%	180.1%

(1) Information in this schedule is not available prior to 2014. Additional years will be added to this schedule in future fiscal years until 10 years of data is presented.

(2) Cumulative effect of CalPERS employer proportionate share of postemployment benefit obligations.

NOTES TO SCHEDULE

Changes in Benefit Terms

Public agencies can make changes to their plan provisions, and such changes occur on an ongoing basis. A summary of the plan provisions that were used for a specific plan can be found in the plan's annual valuation report.

Change of Assumptions and Methods

CalPERS has implemented a new actuarial valuation software system for the June 30, 2018 valuation. This new system has refined and improved calculation methodology.

In December 2017, the Board adopted new mortality assumptions for plans participating in the PERF. The new mortality table was developed from the December 2017 experience study and includes 15 years of projected ongoing mortality improvement using 90 percent of scale MP 2016 published by the Society of Actuaries. The inflation assumption was reduced from 2.75 percent to 2.50 percent. The assumptions for individual salary increases and overall payroll growth were reduced from 3.00 percent to 2.75 percent. These changes will be implemented in two steps commencing in the June 30, 2017

funding valuation. For financial reporting purposes, these assumption changes are fully reflected in the results for Fiscal Year 2017-18.

In Fiscal Year 2016-17, the financial reporting discount rate for the PERF C was lowered from 7.65 percent to 7.15 percent. In December 2016, the Board approved lowering the funding discount rate used in the PERF C from 7.50 percent to 7.00 percent, which is to be phased in over a three-year period (7.50 percent to 7.375 percent, 7.375 percent to 7.25 percent, and 7.25 percent to 7.00 percent) beginning with the June 30, 2016 valuation reports. The funding discount rate includes a 15 basis-point reduction for administrative expenses, and the remaining decrease is consistent with the change in the financial reporting discount rate.

In Fiscal Year 2014-15, the financial reporting discount rate was increased from 7.50 percent to 7.65 percent resulting from eliminating the 15 basis-point reduction for administrative expenses. The funding discount rate remained at 7.50 percent during this period, and remained adjusted for administrative expenses.

Required Supplementary Information (continued)

SCHEDULES OF CHANGES IN NET PENSION LIABILITY/(ASSET) AND RELATED RATIOS (CONTINUED)

LRF – Six-Year Review¹ (Dollars in Thousands)

	2019	2018	2017	2016	2015	2014
Discount Rate Assumption	5.25 %	5.25%	5.25%	6.00%	6.00%	5.75%
Total Pension Liability:						
Service Cost	\$268	\$542	\$639	\$608	\$769	\$732
Interest	4,871	4,987	5,291	5,978	6,427	6,465
Changes of Assumptions	—	(2,529)	7,857	—	(2,655)	—
Differences Between Expected and Actual Experience	(427)	(2,061)	(5,998)	(3,530)	(4,246)	—
Benefit Payments, Including Refunds of Member Contributions	(7,349)	(6,918)	(7,249)	(7,407)	(9,086)	(7,482)
Net Change in Total Pension Liability	(\$2,637)	(\$5,979)	\$540	(\$4,351)	(\$8,791)	(\$285)
Total Pension Liability – Beginning	\$96,781	\$102,760	\$102,220	\$106,730	\$115,521	\$115,806
Adjustment to Beginning Amount	—	—	—	(159)	—	—
Total Adjusted Pension Liability – Beginning	\$96,781	\$102,760	\$102,220	\$106,571	\$115,521	\$115,806
Total Pension Liability – Ending (a)	\$94,144	\$96,781	\$102,760	\$102,220	\$106,730	\$115,521
Plan Fiduciary Net Position:						
Contributions – Employer	\$250	\$467	\$516	\$549	\$590	\$565
Contributions – Member	91	82	94	97	105	113
Total Net Investment Income	7,860	5,486	5,048	4,545	(94)	15,372
Benefit Payments, Including Refunds of Member Contributions	(7,349)	(6,918)	(7,249)	(7,407)	(9,086)	(7,482)
Administrative Expenses	(324)	(671)	(575)	(203)	(400)	(362)
Net Change in Plan Fiduciary Net Position	\$528	(\$1,554)	(\$2,166)	(\$2,419)	(\$8,885)	\$8,206
Plan Fiduciary Net Position – Beginning	\$113,876	\$116,884	\$119,050	\$121,469	\$130,354	\$122,148
Adjustments ²	—	(1,454)	—	—	—	—
Total Adjusted Plan Fiduciary Net Position – Beginning	113,876	115,430	119,050	121,469	130,354	122,148
Plan Fiduciary Net Position – Ending (b)	114,404	113,876	116,884	119,050	121,469	130,354
Net Pension Asset (a) - (b)	(\$20,260)	(\$17,095)	(\$14,124)	(\$16,830)	(\$14,739)	(\$14,833)
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	121.5%	117.7%	113.7%	116.5%	113.8%	112.8%
Covered Payroll	\$655	\$1,242	\$1,360	\$1,313	\$1,545	\$1,470
Net Pension Asset as a Percentage of Covered Payroll	(3,093.1%)	(1,376.4%)	(1,038.5%)	(1,281.8%)	(954.0%)	(1,009.0%)

(1) Information in this schedule is not available prior to 2014. Additional years will be added to this schedule in future fiscal years until 10 years of data is presented.

(2) Cumulative effect of CalPERS employer proportionate share of postemployment benefit obligations.

NOTES TO SCHEDULE

Changes in Benefit Terms

A summary of the plan provisions used for a specific plan can be found in the plan's annual valuation report.

Change of Assumptions and Methods

CalPERS has implemented a new actuarial valuation software system for the June 30, 2018 valuation. This new system has refined and improved calculation methodology. Due to the closed nature of the Legislators' Retirement System and term limits met by a majority of the June 30, 2018, active members during Fiscal Year 2018-19, the projected payroll for Fiscal Year 2019-20 has been adjusted to reflect expected active members. The assumed payroll growth rate assumption of 2.75 percent was used to project Fiscal Year 2019-20 payroll for expected remaining actives.

In December 2017, the Board adopted new mortality assumptions. The new mortality table was developed from the December 2017 experience study and includes 15 years of projected ongoing mortality improvement using 90 percent of

scale MP 2016 published by the Society of Actuaries. The inflation assumption was reduced from 2.75 percent to 2.50 percent. The assumptions for individual salary increases and overall payroll growth were reduced from 3.00 percent to 2.75 percent.

In Fiscal Year 2016-17, the financial reporting discount rate for the Legislators' Retirement Fund (LRF) was lowered from 6.00 percent to 5.25 percent. In April 2017, the Board approved lowering the funding discount rate used in the LRF from 5.75 percent to 5.00 percent beginning with the June 30, 2016 valuation reports. The funding discount rate includes a 25 basis-point reduction for administrative expenses, and the remaining decrease is consistent with the change in the financial reporting discount rate.

In Fiscal Year 2014-15, the financial reporting discount rate was increased from 5.75 percent to 6.00 percent resulting from eliminating the 25 basis-point reduction for administrative expenses. The funding discount rate remained at 5.75 percent during this period, and remained adjusted for administrative expenses.

Required Supplementary Information (continued)

SCHEDULES OF CHANGES IN NET PENSION LIABILITY/(ASSET) AND RELATED RATIOS (CONTINUED)

JRF – Six-Year Review¹ (Dollars in Thousands)

	2019	2018	2017	2016	2015	2014
Discount Rate Assumption	3.13 %	3.62%	3.56%	2.85%	3.82%	4.25%
Total Pension Liability:						
Service Cost	\$20,073	\$19,131	\$22,733	\$29,314	\$25,372	\$27,581
Interest	99,428	109,395	115,067	107,515	127,074	140,256
Changes of Assumptions	153,651	(20,879)	(107,670)	384,306	167,036	—
Differences Between Expected and Actual Experience	86,873	(121,259)	(366,200)	(59,421)	57,568	—
Benefit Payments, Including Refunds of Member Contributions	(221,954)	(207,823)	(200,440)	(199,349)	(201,868)	(193,935)
Net Change in Total Pension Liability	\$138,071	(\$221,435)	(\$536,510)	\$262,365	\$175,182	(\$26,098)
Total Pension Liability – Beginning	\$3,036,999	\$3,258,434	\$3,794,944	\$3,532,394	\$3,357,212	\$3,383,310
Adjustment to Beginning Amount	—	—	—	185	—	—
Total Adjusted Pension Liability – Beginning	\$3,036,999	\$3,258,434	\$3,794,944	\$3,532,579	\$3,357,212	\$3,383,310
Total Pension Liability – Ending (a)	\$3,175,070	\$3,036,999	\$3,258,434	\$3,794,944	\$3,532,394	\$3,357,212
Plan Fiduciary Net Position:						
Contributions – Employer	\$195,903	\$199,241	\$204,475	\$192,287	\$180,910	\$191,148
Contributions – Member	2,679	3,062	3,398	3,559	3,877	4,724
Total Net Investment Income	3,942	3,378	2,819	2,762	2,286	2,583
Benefit Payments, Including Refunds of Member Contributions	(221,954)	(207,823)	(200,440)	(199,349)	(201,868)	(193,935)
Administrative Expenses	(10,032)	(2,106)	(1,771)	(642)	(1,227)	(1,141)
Net Change in Plan Fiduciary Net Position	(\$29,462)	(\$4,248)	\$8,481	(\$1,383)	(\$16,022)	\$3,379
Plan Fiduciary Net Position – Beginning	\$39,631	\$48,275	\$39,794	\$41,177	\$57,199	\$53,820
Adjustments ²	—	(4,396)	—	—	—	—
Total Adjusted Plan Fiduciary Net Position – Beginning	39,631	43,879	39,794	41,177	57,199	53,820
Plan Fiduciary Net Position – Ending (b)	10,169	39,631	48,275	39,794	41,177	57,199
Net Pension Liability (a) - (b)	\$3,164,901	\$2,997,368	\$3,210,159	\$3,755,150	\$3,491,217	\$3,300,013
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	0.3%	1.3%	1.5%	1.0%	1.2%	1.7%
Covered Payroll	\$31,945	\$35,507	\$39,413	\$34,301	\$41,378	\$54,649
Net Pension Liability as a Percentage of Covered Payroll	9,907.3%	8,441.6%	8,144.9%	10,947.6%	8,437.4%	6,038.6%

(1) Information in this schedule is not available prior to 2014. Additional years will be added to this schedule in future fiscal years until 10 years of data is presented.

(2) Cumulative effect of CalPERS employer proportionate share of postemployment benefit obligations.

NOTES TO SCHEDULE

Changes in Benefit Terms

A summary of the plan provisions used for a specific plan can be found in the plan's annual valuation report.

Change of Assumptions and Methods

In Fiscal Year 2018-19, the discount rate used to measure the total pension liability was 3.13 percent. The State funds the Judges' Retirement Fund (JRF) benefit obligations using the pay-as-you-go method. Member contributions plus state contributions are designed to cover only benefit payments and expenses each year. Under the pay-as-you-go method, the pension plan's fiduciary net position was not projected to be sufficient to make projected future benefit payments of current active and inactive employees. Therefore, a discount rate of 3.13 percent, which falls within a reasonable range of yields on 20-year tax-exempt General Obligation Municipal Bonds with an average rating of AA (as reported in Fidelity Index's "20-Year Municipal GO AA Index") as of June 30, 2019, was applied to all periods of projected benefit payments to measure the total pension liability. CalPERS has implemented a new actuarial valuation software system for the

June 30, 2018 valuation. This new system has refined and improved calculation methodology.

In Fiscal Year 2017-18, the discount rate used to measure the total pension liability was 3.62 percent. In December 2017, the Board adopted new mortality assumptions. The new mortality table was developed from the December 2017 experience study and includes 15 years of projected ongoing mortality improvement using 90 percent of scale MP 2016 published by the Society of Actuaries. The inflation assumption was reduced from 2.75 percent to 2.50 percent. The assumptions for individual salary increases and overall payroll growth were reduced from 3.00 percent to 2.75 percent.

In Fiscal Year 2016-17, the discount rate used to measure the total pension liability was 3.56 percent. Assumption changes were made in the JRF June 30, 2016 valuation including a lowering of the rates of retirement to reflect that fewer actual retirements over the past six years than were assumed. In addition, pre-retirement termination and disability rates were removed due to low expected future terminations and disability retirements for this group.

Required Supplementary Information (continued)

In Fiscal Year 2015-16, the discount rate used to measure the total pension liability was 2.85 percent.

In Fiscal Year 2014-15, the discount rate used to measure the total pension liability was 3.82 percent. Changes to actuarial methods were made in the June 30, 2014 valuation including an increase in maximum benefit allowable for active members to 75 percent of pay from 65 percent of pay; the benefit payable for a termination changed from being equal to a retirement benefit to one equal to a percent (generally 3.75 percent) times years of service; and the allocated service for the nonmember spouse for Qualified Domestic Relations Order changed to full service for the member in order to determine both eligibility and the benefit multiplier.

In Fiscal Year 2013-14, the discount rate used to measure the total pension liability was 4.25 percent. Changes to actuarial assumptions were made in the June 30, 2013 valuation. In February 2014, the Board adopted new mortality assumptions. The new mortality table was developed from the February 2014 Experience Study and includes 20 years of projected ongoing mortality improvement using the Scale BB table published by the Society of Actuaries.

Required Supplementary Information (continued)

SCHEDULES OF CHANGES IN NET PENSION LIABILITY/(ASSET) AND RELATED RATIOS (CONTINUED)

JRF II – Six-Year Review¹ (Dollars in Thousands)

	2019	2018	2017	2016	2015	2014
Discount Rate Assumption	6.65 %	6.65%	6.65%	7.15%	7.15%	7.00%
Total Pension Liability:						
Service Cost	\$103,791	\$95,843	\$97,678	\$86,635	\$81,679	\$78,670
Interest	103,889	91,419	85,654	78,412	70,389	61,044
Changes of Assumptions	—	(41,763)	69,233	—	(14,883)	—
Differences Between Expected and Actual Experience	30,291	(26,876)	(26,382)	(4,546)	(17,319)	—
Benefit Payments, Including Refunds of Member Contributions	(36,204)	(31,795)	(22,406)	(21,704)	(14,040)	(8,950)
Net Change in Total Pension Liability	\$201,767	\$86,828	\$203,777	\$138,797	\$105,826	\$130,764
Total Pension Liability – Beginning	\$1,498,155	\$1,411,327	\$1,207,550	\$1,073,788	\$967,962	\$837,198
Adjustment to Beginning Amount	—	—	—	(5,035)	—	—
Total Adjusted Pension Liability – Beginning	\$1,498,155	\$1,411,327	\$1,207,550	\$1,068,753	\$967,962	\$837,198
Total Pension Liability – Ending (a)	\$1,699,922	\$1,498,155	\$1,411,327	\$1,207,550	\$1,073,788	\$967,962
Plan Fiduciary Net Position:						
Contributions – Employer	\$84,099	\$79,699	\$67,102	\$65,839	\$65,629	\$57,027
Contributions – Member	31,376	27,513	25,076	24,598	22,242	20,413
Total Net Investment Income	106,781	101,820	115,057	20,810	(2,401)	150,168
Benefit Payments, Including Refunds of Member Contributions	(36,204)	(31,795)	(22,406)	(21,704)	(14,040)	(8,950)
Administrative Expenses	(1,477)	(2,370)	(1,683)	(732)	(1,127)	(785)
Net Change in Plan Fiduciary Net Position	\$184,575	\$174,867	\$183,146	\$88,811	\$70,303	\$217,873
Plan Fiduciary Net Position – Beginning	\$1,525,514	\$1,356,099	\$1,172,953	\$1,084,142	\$1,013,839	\$795,966
Adjustments ²	—	(5,452)	—	—	—	—
Total Adjusted Plan Fiduciary Net Position – Beginning	1,525,514	1,350,647	1,172,953	1,084,142	1,013,839	795,966
Plan Fiduciary Net Position – Ending (b)	1,710,089	1,525,514	1,356,099	1,172,953	1,084,142	1,013,839
Net Pension Liability/(Asset) (a) - (b)	(\$10,167)	(\$27,359)	\$55,228	\$34,597	(\$10,354)	(\$45,877)
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	100.6 %	101.8 %	96.1%	97.1%	101.0 %	104.7 %
Covered Payroll	\$318,827	\$299,396	\$291,097	\$280,879	\$259,133	\$249,248
Net Pension Liability/(Asset) as a Percentage of Covered Payroll	(3.2)%	(9.1)%	19.0%	12.3%	(4.0)%	(18.4)%

(1) Information in this schedule is not available prior to 2014. Additional years will be added to this schedule in future fiscal years until 10 years of data is presented.

(2) Cumulative effect of CalPERS employer proportionate share of postemployment benefit obligations.

NOTES TO SCHEDULE

Changes in Benefit Terms

A summary of the plan provisions used for a specific plan can be found in the plan's annual valuation report.

Change of Assumptions and Methods

CalPERS has implemented a new actuarial valuation software system for the June 30, 2018 valuation. This new system has refined and improved calculation methodology.

In December 2017, the Board adopted new mortality assumptions. The new mortality table was developed from the December 2017 experience study and includes 15 years of projected ongoing mortality improvement using 90 percent of scale MP 2016 published by the Society of Actuaries. The inflation assumption was reduced from 2.75 percent to 2.50 percent. The assumptions for individual salary increases and overall payroll growth were reduced from 3.00 percent to 2.75 percent.

In Fiscal Year 2016-17, the financial reporting discount rate for the Judges' Retirement Fund II (JRF II) was lowered from

7.15 percent to 6.65 percent. In April 2017, the Board approved lowering the funding discount rate used in the JRF II from 7.00 percent to 6.50 percent beginning with the June 30, 2016 valuation reports. The funding discount rate includes a 15 basis-point reduction for administrative expenses, and the remaining decrease is consistent with the change in the financial reporting discount rate.

In Fiscal Year 2014-15, the financial reporting discount rate was increased from 7.00 percent to 7.15 percent resulting from eliminating the 15 basis-point reduction for administrative expenses. The funding discount rate remained at 7.00 percent during this period, and remained adjusted for administrative expenses.

Required Supplementary Information (continued)

SCHEDULES OF PLAN CONTRIBUTIONS

Six-Year Review¹ (Dollars in Thousands)

	2019	2018	2017	2016	2015	2014
PERF B:						
Actuarially Determined Contribution	\$2,501,770	\$2,048,531	\$1,767,813	\$1,421,289	\$1,303,162	\$1,201,125
Contributions in Relation to the Actuarially Determined Contribution	2,501,770	2,048,531	1,767,813	1,421,289	1,303,162	1,201,125
Contribution Excess	\$0	\$0	\$0	\$0	\$0	\$0
Covered Payroll	\$13,819,881	\$13,252,995	\$12,643,354	\$11,747,602	\$10,964,872	\$10,120,248
Contributions as a Percentage of Covered Payroll	18.1%	15.5%	14.0%	12.1%	11.9%	11.8%
PERF C:						
Actuarially Determined Contribution	\$1,333,559	\$1,182,686	\$858,954	\$789,103	\$691,602	\$732,142
Contributions in Relation to the Actuarially Determined Contribution	1,333,559	1,182,686	858,954	789,103	691,602	732,142
Contribution Excess	\$0	\$0	\$0	\$0	\$0	\$0
Covered Payroll	\$3,949,226	\$3,793,609	\$3,631,919	\$3,472,950	\$3,356,312	\$3,248,018
Contributions as a Percentage of Covered Payroll	33.8%	31.2%	23.7%	22.7%	20.6%	22.5%
LRF:						
Actuarially Determined Contribution	\$250	\$20	\$0	\$141	\$260	\$33
Contributions in Relation to the Actuarially Determined Contribution ²	250	467	516	549	590	565
Contribution Excess	\$0	(\$447)	(\$516)	(\$408)	(\$330)	(\$532)
Covered Payroll	\$655	\$1,242	\$1,360	\$1,313	\$1,545	\$1,470
Contributions as a Percentage of Covered Payroll	38.2%	37.6%	37.9%	41.8%	38.2%	38.4%
JRF:						
Actuarially Determined Contribution ³	\$415,110	\$438,156	\$448,636	\$463,073	\$1,884,555	\$1,569,630
Contributions in Relation to the Actuarially Determined Contribution ⁴	195,903	199,241	204,475	192,287	180,910	191,148
Contribution Deficiency	\$219,207	\$238,915	\$244,161	\$270,786	\$1,703,645	\$1,378,482
Covered Payroll	\$31,945	\$35,507	\$39,413	\$34,301	\$41,378	\$54,649
Contributions as a Percentage of Covered Payroll	613.3%	561.1%	518.8%	560.6%	437.2%	349.8%
JRF II:						
Actuarially Determined Contribution	\$84,099	\$79,699	\$67,102	\$65,839	\$63,193	\$55,538
Contributions in Relation to the Actuarially Determined Contribution	84,099	79,699	67,102	65,839	63,193	55,538
Contribution Excess	\$0	\$0	\$0	\$0	\$0	\$0
Covered Payroll	\$318,827	\$299,396	\$291,097	\$280,879	\$259,133	\$249,248
Contributions as a Percentage of Covered Payroll	26.4%	26.6%	23.1%	23.4%	24.4%	22.3%

(1) This is a 10-year schedule. Information in this schedule is not available prior to 2014. Additional years will be added to this schedule in future fiscal years until 10 years of data is presented.

(2) Because of the provisions of the Public Employees' Pension Reform Act of 2013 (PEPRA), the required employer contribution is the greater of the actuarially determined employer contribution or the employer normal cost.

(3) The 2016 and 2017 actuarially determined contributions are based on a 10-year amortization period, while the 2015 and 2014 actuarially determined contributions are based on a two-year amortization period.

(4) Contributions to the JRF are made on the pay-as-you-go basis.

Required Supplementary Information (continued)

Actuarial Assumptions and Methods Used to Set the Actuarially Determined Contributions – Six-Year Review

	2018-19	2017-18	2016-17	2015-16	2014-15	2013-14
PERF B						
Actuarial Cost Method	Individual Entry Age Normal	Individual Entry Age Normal	Individual Entry Age Normal	Individual Entry Age Normal	Individual Entry Age Normal	Individual Entry Age Normal
Amortization Method	Level Percentage of Payroll and Direct Rate Smoothing	Level Percentage of Payroll and Direct Rate Smoothing	Level Percentage of Payroll and Direct Rate Smoothing	Level Percentage of Payroll and Direct Rate Smoothing	Level Percentage of Payroll	Level Percentage of Payroll
Remaining Amortization Periods ¹	12-30 years	13-30 years	14-30 years	15-30 years	16-30 years	17-30 years
Asset Valuation Method	Fair Value	Fair Value	Fair Value	Fair Value	Smoothing of Fair Value	Smoothing of Fair Value
Inflation	2.75%	2.75%	2.75%	2.75%	2.75%	2.75%
Salary Increases	Varies, Based on Entry Age and Service	Varies, Based on Entry Age and Service	Varies, Based on Entry Age and Service	Varies, Based on Entry Age and Service	Varies, Based on Entry Age and Service	Varies, Based on Entry Age and Service
Investment Rate of Return	7.38%	7.50%	7.50%	7.50%	7.50%	7.50%

PERF C						
Actuarial Cost Method	Individual Entry Age Normal	Individual Entry Age Normal	Individual Entry Age Normal	Individual Entry Age Normal	Individual Entry Age Normal	Individual Entry Age Normal
Amortization Method	Level Percentage of Payroll and Direct Rate Smoothing	Level Percentage of Payroll and Direct Rate Smoothing	Level Percentage of Payroll and Direct Rate Smoothing	Level Percentage of Payroll and Direct Rate Smoothing	Level Percentage of Payroll	Level Percentage of Payroll
Remaining Amortization Periods ¹	Differs by employer rate plan but no more than 30 years	Differs by employer rate plan but no more than 30 years	Differs by employer rate plan but no more than 30 years	Differs by employer rate plan but no more than 30 years	Differs by employer rate plan but no more than 30 years	Differs by employer rate plan but no more than 30 years
Asset Valuation Method	Fair Value	Fair Value	Fair Value	Fair Value	Smoothing of Fair Value	Smoothing of Fair Value
Inflation	2.75%	2.75%	2.75%	2.75%	2.75%	2.75%
Salary Increases	Varies, Based on Entry Age and Service	Varies, Based on Entry Age and Service	Varies, Based on Entry Age and Service	Varies, Based on Entry Age and Service	Varies, Based on Entry Age and Service	Varies, Based on Entry Age and Service
Investment Rate of Return	7.38%	7.50%	7.50%	7.50%	7.50%	7.50%

LRF						
Actuarial Cost Method	Individual Entry Age Normal	Individual Entry Age Normal	Individual Entry Age Normal	Individual Entry Age Normal	Individual Entry Age Normal	Individual Entry Age Normal
Amortization Method	Level Percentage of Payroll and Direct Rate Smoothing	Level Percentage of Payroll and Direct Rate Smoothing	Level Percentage of Payroll and Direct Rate Smoothing	Level Percentage of Payroll and Direct Rate Smoothing	Level Percentage of Payroll	Level Percentage of Payroll
Remaining Amortization Periods ¹	30 years	30 years	63 years	29-30 years	30 years	30 years
Asset Valuation Method	Fair Value	Fair Value	Fair Value	Fair Value	Smoothing of Fair Value	Smoothing of Fair Value
Inflation	2.50%	2.75%	2.75%	2.75%	2.75%	2.75%
Salary Increases	2.75%	3.00%	3.00%	3.00%	3.00%	3.00%
Investment Rate of Return	5.00%	5.00%	5.75%	5.75%	5.75%	5.75%

JRF						
Actuarial Cost Method	Individual Entry Age Normal	Individual Entry Age Normal	Individual Entry Age Normal	Individual Entry Age Normal	Individual Entry Age Normal	Individual Entry Age Normal
Amortization Method	Level Dollar	Level Dollar	Level Dollar	Level Dollar	Level Dollar	Level Dollar
Remaining Amortization Periods	10 years	10 years	10 years	10 years	2 years	2 years
Asset Valuation Method	Fair Value	Fair Value	Fair Value	Fair Value	Fair Value	Fair Value
Inflation	2.50%	2.75%	2.75%	2.75%	2.75%	2.75%
Salary Increases	2.75%	3.00%	3.00%	3.00%	3.00%	3.00%
Investment Rate of Return	3.00%	3.25%	4.25%	4.25%	4.25%	4.25%

Required Supplementary Information (continued)

Actuarial Assumptions and Methods Used to Set the Actuarially Determined Contributions – Six-Year Review (CONTINUED)

	2018-19	2017-18	2016-17	2015-16	2014-15	2013-14
JRF II						
Actuarial Cost Method	Individual Entry Age Normal	Individual Entry Age Normal	Individual Entry Age Normal	Individual Entry Age Normal	Individual Entry Age Normal	Individual Entry Age Normal
Amortization Method	Level Percentage of Payroll and Direct Rate Smoothing	Level Percentage of Payroll and Direct Rate Smoothing	Level Percentage of Payroll and Direct Rate Smoothing	Level Percentage of Payroll and Direct Rate Smoothing	Level Percentage of Payroll	Level Percentage of Payroll
Remaining Amortization Periods ¹	2-30 years	20-30 years	30 years	30 years	16-30 years	17-30 years
Asset Valuation Method	Fair Value	Fair Value	Fair Value	Fair Value	Smoothing of Fair Value	Smoothing of Fair Value
Inflation	2.50%	2.75%	2.75%	2.75%	2.75%	2.75%
Salary Increases	2.75%	3.00%	3.00%	3.00%	3.00%	3.00%
Investment Rate of Return	6.50%	6.50%	7.00%	7.00%	7.00%	7.00%

(1) Remaining periods vary by portion of unfunded liability balance being amortized.

SCHEDULE OF INVESTMENT RETURNS

Annual Money-Weighted Rate of Return, Net of Investment Expense – Six-Year Review¹

Plan	2019 Rate of Return	2018 Rate of Return	2017 Rate of Return	2016 Rate of Return	2015 Rate of Return	2014 Rate of Return
PERF A						
Agent	6.5%	8.4%	11.2%	0.5%	2.2%	17.7%
PERF B						
Schools Cost-Sharing	6.5%	8.4%	11.2%	0.5%	2.2%	17.7%
PERF C						
Public Agency Cost-Sharing	6.5%	8.4%	11.2%	0.5%	2.2%	17.7%
LRF	7.0%	4.8%	4.3%	3.8%	(0.1%)	12.9%
JRF	3.2%	1.9%	1.0%	0.5%	0.2%	0.1%
JRF II	6.9%	7.4%	9.6%	1.9%	(0.2%)	18.3%
CERBTF ²	6.5%	7.3%	10.0%	1.6%	—	—

(1) This is a 10-year schedule. Information in this schedule is not available prior to 2014. Additional years will be added to this schedule in future years until 10 years of data is presented.

(2) Information in this schedule is not available prior to 2016.

Required Supplementary Information (continued)

PUBLIC EMPLOYEES' HEALTH CARE FUND

Schedule of Claims Development Information (Dollars in Thousands)

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
1) Net Earned Required Premium and Investment Revenues	\$3,751,406	\$3,985,393	\$3,829,095	\$3,801,266	\$3,642,206	\$2,808,384	\$1,948,531	\$1,912,355	\$1,775,005	\$1,409,621
2) Unallocated Expenses	\$299,053	\$304,408	\$312,924	\$355,779	\$371,916	\$192,987	\$105,154	\$96,043	\$88,392	\$90,292
3) Estimated Incurred Claims and Expenses, End of Policy Year	\$3,666,596	\$3,576,081	\$3,391,183	\$3,424,147	\$3,432,102	\$2,748,821	\$1,921,957	\$1,816,245	\$1,792,599	\$1,654,214
4) Paid (Cumulative) as of:										
End of Policy Year	\$3,244,896	\$3,039,289	\$3,061,085	\$3,000,726	\$3,378,857	\$2,122,865	\$1,640,709	\$1,635,839	\$1,550,306	\$1,444,509
One Year Later	—	3,380,649	3,395,673	3,406,016	3,802,277	2,678,906	1,796,587	1,788,135	1,698,615	1,589,771
Two Years Later	—	—	3,395,673	3,406,016	3,802,277	2,678,906	1,796,587	1,788,135	1,698,615	1,589,771
Three Years Later	—	—	—	3,406,016	3,802,277	2,678,906	1,796,587	1,788,135	1,698,615	1,589,771
Four Years Later	—	—	—	—	3,802,277	2,678,906	1,796,587	1,788,135	1,698,615	1,589,771
Five Years Later	—	—	—	—	—	2,678,906	1,796,587	1,788,135	1,698,615	1,589,771
Six Years Later	—	—	—	—	—	—	1,796,587	1,788,135	1,698,615	1,589,771
Seven Years Later	—	—	—	—	—	—	—	1,788,135	1,698,615	1,589,771
Eight Years Later	—	—	—	—	—	—	—	—	1,698,615	1,589,771
Nine Years Later	—	—	—	—	—	—	—	—	—	1,589,771
5) Re-Estimated Incurred Claims Expenses:										
End of Policy Year	\$3,666,596	\$3,576,081	\$3,391,183	\$3,424,147	\$3,432,102	\$2,748,821	\$1,921,957	\$1,816,245	\$1,792,599	\$1,654,214
One Year Later	—	3,380,649	3,395,673	3,406,016	3,802,277	2,678,906	1,796,587	1,788,135	1,698,615	1,589,771
Two Years Later	—	—	3,395,673	3,406,016	3,802,277	2,678,906	1,796,587	1,788,135	1,698,615	1,589,771
Three Years Later	—	—	—	3,406,016	3,802,277	2,678,906	1,796,587	1,788,135	1,698,615	1,589,771
Four Years Later	—	—	—	—	3,802,277	2,678,906	1,796,587	1,788,135	1,698,615	1,589,771
Five Years Later	—	—	—	—	—	2,678,906	1,796,587	1,788,135	1,698,615	1,589,771
Six Years Later	—	—	—	—	—	—	1,796,587	1,788,135	1,698,615	1,589,771
Seven Years Later	—	—	—	—	—	—	—	1,788,135	1,698,615	1,589,771
Eight Years Later	—	—	—	—	—	—	—	—	1,698,615	1,589,771
Nine Years Later	—	—	—	—	—	—	—	—	—	1,589,771
6) Increase (Decrease) in Estimated Incurred Claims and Expenses From End of Policy Year	\$0	(\$195,432)	\$4,490	(\$18,131)	\$370,175	(\$69,915)	(\$125,370)	(\$28,110)	(\$93,984)	(\$64,443)

Rows 1 through 6 contain the following information:

- (1) This line shows the total earned premium revenues and investment revenues for each fiscal year.
- (2) This line shows other HCF operating costs, including overhead and claims expense not allocable to individual claims, for each fiscal year.
- (3) This line shows the HCF incurred claims and allocated claim adjustment expenses (both paid and accrued) as reported at the end of the policy year. The policy year is the first year in which the triggering event under the contract occurred.
- (4) This section shows the cumulative amounts paid as of the end of each policy year and years succeeding the policy year.
- (5) This section shows re-estimated incurred claims as of the end of each policy year and years succeeding the policy year. Re-estimates are based on new information on new claims not previously reported.
- (6) This line compares the amount of the re-estimated incurred claims to the amount initially established (line 3), and shows whether the re-estimate is greater or less than projected. As data mature for individual policy years, the correlation between initial estimates and re-estimates is used to evaluate the accuracy of incurred claims currently recognized.

This page intentionally left blank.

FINANCIAL SECTION

Other Supplementary Information

- 88 Administrative Expenses – All Funds
- 89 Investment Expenses – Investment Management Fees
- 92 Investment Expenses – Performance Fees
- 93 Investment Expenses – Other Investment Expenses
- 96 Consultant and Professional Services Expenses – All Funds

Other Supplementary Information

ADMINISTRATIVE EXPENSES – ALL FUNDS (DOLLARS IN THOUSANDS)

	2019
PERSONAL SERVICES	
Salaries & Wages	\$191,950
Employee Benefits	98,455
Accrued Pension & OPEB Expense	(179,564)
Total Personal Services	\$110,841
CONSULTANT & PROFESSIONAL SERVICES	
State of California Agencies	\$4,722
External Consultants	32,498
Retiree Benefit Trust Management Fees	91
Deferred Compensation Management/Custody Fees	3,494
Health Plan Administrator Fees	269,382
Long-Term Care Administrator Fees	21,385
Total Consultant & Professional Services	\$331,572
OPERATING EXPENSES & EQUIPMENT	
General Expense	\$7,490
Software	1,491
Printing	1,286
Building	22,333
Postage	2,807
Communications	1,729
Data Processing Services	14,489
Travel	1,681
Training	860
Medical Examiners	1,490
Facilities Operation	4,501
Central Administrative Services	20,703
Administrative Hearings	1,237
Consolidated Data Center	99
CSUS Foundation - Students	103
Equipment	2,717
Total Operating Expenses & Equipment	\$85,016
OTHER EXPENSES & ADJUSTMENTS	
Depreciation Expense	\$18,249
Increase in Paid Absence Obligation	443
Amortization	69,413
Miscellaneous	(1,673)
Total Other Expenses & Adjustments	\$86,432
TOTAL ADMINISTRATIVE EXPENSES — ALL FUNDS	\$613,861

Other Supplementary Information (continued)

INVESTMENT EXPENSES – ALL FUNDS

Investment Management Fees^{1,2} (Dollars in Thousands)

	Fees		Fees
Equity Managers		Apollo Special Opportunities Managed Account, LP	\$2,710
Allianz Global Investors U.S., LLC	\$6,065	ArcLight Energy Partners Fund IV, LP	(5)
Arrowstreet Capital, LP	23,505	Ares Corporate Opportunities Fund III, LP	1,211
Baillie Gifford Overseas, Ltd.	1,748	Ares Corporate Opportunities Fund V, LP	5,911
Cartica Corporate Governance Fund, LP	5,854	Asia Alternatives Capital Partners II, LP	105
Epoch Investment Partners, Inc.	5,703	Asia Alternatives Capital Partners, LP	30
Fidelity Institutional Asset Management	709	Baring Vostok Private Equity Fund IV, LP	385
First Quadrant, LP	346	BDC III C, LP	1,934
FIS Group, Inc.	1,755	Birch Hill Equity Partners (US) IV, LP	967
Hamilton Lane Advisors, LLC	484	Blackstone / GSO Capital Solutions Fund, LP	58
Hermes European Equities Limited	2,714	Blackstone Capital Partners VI, LP	3,959
J.P. Morgan Investment Management, Inc.	1,193	Blackstone Capital Partners VII, LP	6,250
Lazard Asset Management, LLC	4,362	Blackstone Tactical Opportunities Fund - C, LP	4,141
Leading Edge Investment Advisors, LLC	3,105	Blackstone Tactical Opportunities Fund (KG Co-Invest), LP	453
Legato Capital Management Investments, LLC	5,333	Blackstone Tactical Opportunities Fund (T4U Co-Invest), LP	203
Progress Investment Management Company	3,700	Blackstone Tactical Opportunities Fund II - C, LP	2,026
Pyramis Global Advisors Trust Company	632	Blackstone Tactical Opportunities Fund III - C, LP	20
Pzena Investment Management, LLC	1,201	Bridgepoint Europe IV 'B', LP	388
State Street Global Advisors	5,293	Bridgepoint Europe IV 'D', LP	1,473
Strategic Investment Management, LP	3,491	Bridgepoint Europe V	3,435
The Boston Company Asset Management, LLC	257	Bridgepoint Europe VI 'H', LP	4,177
Wellington Management Company, LLP	7,851	California Asia Investors, LP	251
Total Equity Managers	<u>\$85,301</u>	California Emerging Ventures III, LLC	93
Fixed Income Managers		California Emerging Ventures IV, LLC	481
Alliance Bernstein, LP	\$336	California Mezzanine Investment Fund, LP	229
Baring International Investment Limited	189	CalPERS Clean Energy & Technology Fund, LLC	300
Bluebay Asset Management, LLP	(13)	Capital Link Fund I, LLC	286
Investec Asset Management North America	395	Capital Link Fund II, LLC	380
Neuberger Berman Investment Advisers, LLC	520	Carlyle Asia Growth Partners IV, LP	503
Pacific Investment Management Co. LLC	900	Carlyle Asia Partners III, LP	557
Total Fixed Income Managers	<u>\$2,327</u>	Carlyle Asia Partners V, LP	2,640
Private Equity Funds³		Carlyle Europe Partners III, LP	53
57 Stars Global Opportunities Fund 2 (CalPERS), LLC	\$794	Carlyle Europe Partners V, S.C.Sp	2,048
57 Stars Global Opportunities Fund, LLC	600	Carlyle Europe Technology Partners II, LP	212
Aberdare Ventures IV, LP	178	Carlyle Global Financial Services Partners, LP	251
Advent International GPE V-D, LP	78	Carlyle Japan Partners II, LP	139
Advent International GPE VI-A, LP	1,621	Carlyle Partners IV LP	(3)
Advent International GPE VII-C, LP	4,278	Carlyle Partners V, LP	2
Advent International GPE VIII-B Limited Partnership	7,459	Carlyle Partners VI, LP	2,376
Advent Latin America Private Equity Fund IV-D, LP	507	Carlyle Partners VII, LP	5,858
Advent Latin America Private Equity Fund V-H, LP	901	Carlyle Strategic Partners II, LP	(2)
Advent Latin American Private Equity Fund III-D, LP	122	Carlyle Strategic Partners IV, LP	1,917
Affinity Asia Pacific Fund III, LP	684	Carlyle U.S. Equity Opportunities II, LP	2,414
Aisling Capital III, LP	180	Carlyle U.S. Growth Fund III, LP	28
Apollo Investment Fund IX, LP	5,969	Carlyle/Riverstone Global Energy and Power Fund III, LP	476
Apollo Investment Fund VI, LP	(5)	CDH Fund V, LP	2,389
Apollo Investment Fund VII, LP	1,074	Centerbridge Capital Partners III, LP	2,027
Apollo Investment Fund VIII, LP	550	Cerberus CAL II Partners, LP	1,001
		Cerberus CP Partners, LP	788
		Cerberus Institutional Partners V, LP	701
		Clarus Lifesciences II, LP	318
		Clayton, Dubilier & Rice Fund X, LP	1,255

Other Supplementary Information (continued)

INVESTMENT EXPENSES – ALL FUNDS (CONTINUED)

Investment Management Fees^{1,2} (Dollars in Thousands) (continued)

	Fees		Fees
Clearlake Capital Partners III, LP	\$274	Oak Hill Capital Partners III, LP	\$962
Clearlake Capital Partners IV, LP	550	Oaktree Opportunities Fund VIIIb, LP	1,637
Clearlake Capital Partners V, LP	348	Onex Partners IV, LP	4,091
Clearlake Opportunities Partners (P), LP	791	Onex Partners V (B), LP	2,988
Coller International Partners V-A, LP	65	PAG Asia I, LP	613
Craton Equity Investors I, LP	53	PAG Asia III, LP	2,501
CVC Capital Partners Strategic Opportunities Compounding Capital, LP	7,131	Palladium Equity Partners IV, LP	2,615
CVC Capital Partners VI, LP	5,158	Patria Brazilian Private Equity Fund V, LP	2,968
CVC Capital Partners VII (A), LP	8,657	Permira Growth Opportunities I, LP 1	2,142
CVC Credit Strategic Investment A, LP	1,181	Permira IV, LP 2	(12)
CVC European Equity Partners Tandem Fund (B), LP	(3)	Permira V, LP	2,573
CVC European Equity Partners V (B), LP	90	Permira VI, LP 1	6,801
EMAlternatives Investments, LP	200	RFG Private Equity Limited Partnership No. 1A, 1B and 1C	27
Essex Woodlands Health Ventures Fund VIII, LP	649	Richardson Capital Private Equity Limited Partnership No.2A, 2B and 2C	4
First Reserve Fund XII, LP	587	Riverstone Global Energy and Power Fund V, LP	2,321
First Reserve Fund XIII, LP	5,418	Riverstone Global Energy and Power Fund VI, LP	7,365
Francisco Partners III, LP	530	Riverstone/Carlyle Global Energy and Power Fund IV, LP	896
GCM Grosvenor DEM II, LP	1,201	Riverstone/Carlyle Renewable & Alternative Energy Fund II, LP	1,094
GCM Grosvenor DEM, LP	224	Riverwood Capital Partners (Parallel - A), LP	296
Golden State Investment Fund, LLC	185	Sacramento Private Equity Partners, LP	1,000
Green Equity Investors IV, LP	(9)	SAIF Partners III, LP	945
Green Equity Investors V, LP	79	SAIF Partners IV, LP	1,288
GSO Capital Opportunities Fund II, LP	750	Sankaty Managed Account (CalPERS), LP	2,408
GSO Capital Opportunities Fund, LP	16	Silver Lake Partners III, LP	832
GSO Capital Solutions Fund II, LP	2,201	Silver Lake Partners IV, LP	2,047
GSO Energy Partners-C II, LP	1,532	Silver Lake Partners V, LP	4,313
GSO Energy Partners-C, LP	2,221	Siris Partners III, LP	1,022
Hellman & Friedman Capital Partners VII	693	Siris Partners IV, LP	494
Hellman & Friedman Capital Partners VIII, LP	5,884	SL SPV-1, LP	381
Insight Venture Partners Growth-Buyout Coinvestment Fund (B), LP	3,021	Tailwind Capital Partners (PP), LP	238
Insight Venture Partners IX, LP	1,633	Tailwind Capital Partners II, LP	719
Insight Venture Partners X, LP	4,375	Tailwind Capital Partners III, LP	2,750
Ithaca, LP	—	TCV X, LP	262
Khosla Ventures III, LP	1,911	The Central Valley Fund II SBIC, LP	133
Khosla Ventures Seed, LP	756	The Resolute Fund II, LP	315
KKR 2006 Fund, LP	348	The Rise Fund (A), LP	1,181
KKR Asian Fund II, LP	1,819	Thomas H. Lee Equity Fund VI, LP	263
KKR Asian Fund, LP	100	TowerBrook Investors III, LP	546
KKR European Fund II, LP	217	TowerBrook Investors IV (Onshore), LP	6,056
KKR European Fund III, LP	(2)	Towerbrook Structured Opportunities Fund (Onshore), LP	2,199
KKR Millennium Fund, LP	25	TPG Asia V, LP	110
KM Corporate Partners Fund II, LP	607	TPG Asia VII (A), LP	6,417
KPS Special Situations Fund III, LP	31	TPG Biotechnology Partners III, LP	49
Lime Rock Partners IV, LP	29	TPG Growth IV, LP	1,307
Lime Rock Partners V, LP	325	TPG Partners VI, LP	678
Lindsay Goldberg IV, LP	2,813	Trident VI	1,918
Lion Capital Fund II, LP	422	Trident VII, LP	3,378
MHR Institutional Partners III, LP	1,364	Triton Fund IV, LP	1,351
Newbridge Asia IV, LP	132	Triton Fund V, LP	1,097
Oak Hill Capital Partners II, LP	38	T-VI Co-Invest-A LP	(204)

Other Supplementary Information (continued)

INVESTMENT EXPENSES – ALL FUNDS (CONTINUED)

Investment Management Fees^{1,2} (Dollars in Thousands) (continued)

	Fees		Fees
Valor Equity Partners IV, LP	\$1,247	HCR LTH, LLC	\$4,015
VantagePoint Venture Partners 2006 (Q), LP	639	IHP Investment Fund I, LP	386
Vicente Capital Partners Growth Equity Fund, LP	245	IHP Investment Fund III, LP	3,454
Vista Equity Partners Fund VII-Z, LP	514	IMI - Base	24,538
W Capital Partners II, LP	210	IMP - Base	23,002
WCAS XIII, LP	1,026	IMP - DT 2012 and Beyond	1,143
Welsh, Carson, Anderson & Stowe XI, LP	308	IMP - ICMI	2,645
Welsh, Carson, Anderson & Stowe XII, LP	4,856	IMP Abaca	393
Wigmore Street (BDC III), LP	1	Institutional Core Multifamily Investors	920
Wigmore Street Co-investment No.1, LP	1	Institutional Logistics Partners, LLC	4,104
WLR Recovery Fund III, LP	(1)	KC 2011, LLC	2,367
WLR Recovery Fund IV, LP	30	KSC Affordable Housing Investment Fund, LLC	348
Yucaipa American Alliance Fund II, LP	2,695	Land Management Company, LLC	3,512
Yucaipa Corporate Initiatives Fund II, LP	299	Lincoln Timber, LP	2,956
Total Private Equity Funds	\$260,854	North Haven Infrastructure Partners II, LP	2,052
Real Asset Funds		ORA Multifamily Investments I, LLC	687
AGI Resmark Housing Fund, LLC	\$139	ORA Residential Investments I, LP	1,547
Alinda Infrastructure Fund I, LP	6	Pacific Multifamily Investors, LLC	5,251
Alinda Infrastructure Fund II, LP	961	Sacramento Venture - Base	361
ARA Asia Dragon Fund II	393	Sacramento Venture - DT	409
ARA China Long Term Hold	6,429	SF Mission Street Partners, LLC	20
Archmore International Infrastructure Fund II (B), LP	446	Stockbridge Hollywood Park Co-Investors, LP	312
Archmore International Infrastructure Fund II (C), LP	947	Stockbridge Real Estate Fund II -B, LP	90
CalEast Canada Limited Partnership	11	Strategic Property Fund Asia SCSP	2,038
CalEast Industrial Investors, LLC	67	Sylvanus, LLC	1,938
CalEast Solstice - Base	7,414	TechCore, LLC	8,716
CalEast Solstice - DT Land	1,584	Whitney Ranch Venture, LLC	984
CalEast Solstice - DT Other	2,002	Xander Co-Investment	55
CalWest - CalPERS	10	Total Real Asset Funds	\$188,102
CalWest CalPERS GIP	20	Other Investment Management Fees	
Canyon Catalyst Fund II, LLC	1,949	AQR	\$3,773
Carlyle Infrastructure Partners, LP	39	Brookside Capital Partners Fund, LP	15
CIM Fund III, LP	3,990	Fidelity Investments	4,721
CIM Infrastructure Fund, LP	2,212	LongTail Alpha, LLC	3,233
CIM Urban Real Estate Fund, LP	4,333	OZ Domestic Partners II, L.P.	—
FSP - Base	24,525	OZ Eureka Fund, LP	277
FSP - DT 2012 and Beyond	1,679	Perella Weinberg Partners	3,625
Global Infrastructure Partners II, LP (GIP II)	2,798	Standard Life	1,946
Golden Reef Infrastructure Trust	2,131	Universa Investments, LP	22,542
GRI - Base	15,381	Total Other Investment Management Fees	\$40,132
GRI - DT 2012 and Beyond	115	Total Management Fees	\$576,716
Harbert Gulf Pacific Power, LLC (HGPP)	4,393		
Harbert Power Fund V, LP (HPF V)	1,068		
HC Green Development Fund, LP	511		
HC NOP Holdings, LP	118		
HCB Interests II, LP	374		
HCB LTH	3,639		
HCC Interests, LP	175		

Other Supplementary Information (continued)

INVESTMENT EXPENSES – ALL FUNDS (CONTINUED)

Performance Fees⁴ (Dollars in Thousands)

	Fees		Fees
Equity Managers		Other Investment Managers	
Arrowstreet Capital, LP	\$13,216	Brookside Capital Partners Fund, LP	\$103
Baillie Gifford Overseas, Ltd.	16,864	OZ Domestic Partners II, LP	8
The Boston Company Asset Management, LLC	3,763	OZ Eureka Fund, LP	189
Total Equity Managers	<u>\$33,843</u>	Total Other Investment Managers	<u>\$300</u>
Fixed Income Managers		Total Performance Fees	
Alliance Bernstein, LP	\$210		\$162,076
Baring International Investment Limited	81	Total Management and Performance Fees	
Pacific Investment Management Co. LLC	2,065		<u>\$738,792</u>
Total Fixed Income Managers	<u>\$2,356</u>		
Real Asset Funds			
AGI Resmark Housing Fund, LLC	(\$1,413)		
Blackstone Property Partners Europe, LP	7,819		
CalEast Canada Limited Partnership	(15)		
Canyon Catalyst Fund II, LLC	1,945		
Canyon Johnson Urban Fund, III	(2)		
CIM Fund III, LP	(10,209)		
CIM Infrastructure Fund, LP	2,302		
FSP - Base	24,525		
FSP - DT 2012 and Beyond	986		
Global Infrastructure Partners II, LP (GIP II)	12,110		
Golden Reef Infrastructure Trust	1,389		
GRI - Base	14,023		
Harbert Gulf Pacific Power, LLC (HGPP)	4,410		
Harbert Power Fund V, LP (HPF V)	816		
HCB Interests II, LP	(1,279)		
Hearthstone Housing Partners, LP	(21)		
IHP Investment Fund I, LP	11		
IHP Investment Fund II, LP	(1,705)		
IMI - Base	8,136		
IMP - Base	7,115		
IMP - DT 2012 and Beyond	5,852		
Institutional Logistics Partners, LLC	3,921		
Ivy Investment Vehicle LDC (SWPM)	30,556		
ORA Multifamily Investments I, LLC	7,361		
ORA Residential Investments I, LP	(1,105)		
Pacific Multifamily Investors, LLC	2,220		
Sacramento Venture - Base	238		
Sacramento Venture - DT	(91)		
SF Mission Street Partners, LLC	(107)		
TechCore, LLC	5,789		
Total Real Asset Funds	<u>\$125,577</u>		

Other Supplementary Information (continued)

INVESTMENT EXPENSES – ALL FUNDS (CONTINUED)

Other Investment Expenses^{1,5} (Dollars in Thousands)

	Fees		Fees
Advisory Fees		Meketa Investment Group, Inc.	\$78
Alliance Bernstein, LP	\$2,600	Mercer Alternatives Limited	340
AXA Rosenberg Investment Management, LLC	627	Mercer Investment Consulting, LLC	130
FIS Group, Inc.	1,000	Mosaic Investment Advisors, Inc.	200
Goldman Sachs Asset Management, LP	510	MSys International, Inc.	191
Lazard Asset Management, LLC	2,590	Northfield Information Services, Inc.	38
Legato Capital Management, LLC	1,750	Pacific Community Ventures, Inc.	194
LEIA GEM Investment, LLC	1,000	Propoint Technology, Inc.	2,378
Principal Life Insurance Company	933	Pyramid Technical Consultants, Inc.	274
Progress Investment Management Company	1,000	RCLCO	197
QS Investors, LLC	839	Ryedale, Inc.	204
Quantitative Management Associates, LLC	2,008	SRI Infotech, Inc.	208
Research Affiliates, LLC	740	Steer Davies Gleave Limited	255
Strategic Investment Management, LP	1,000	Stout Risius Ross, LLC	85
TOBAM SAS	861	Technology Crest Corporation	195
Total Advisory Fees	\$17,458	The Boston Consulting Group, Inc.	400
		The Spaulding Group	84
Appraisal Fees		Trinity Technology Group, Inc.	23
RERC, LLC	\$4,614	Wilcox Miller & Nelson	40
Total Appraisal Fees	\$4,614	Total Investment Consultant Fees	\$8,966
Auditor Fees		Legal Fees	
Conrad, LLP	\$59	Berman Tabacco	\$590
KPM & Associates, LLP	55	Cox, Castle & Nicholson, LLP	1
RSM US, LLP	11	DLA Piper, LLP	173
Total Auditor Fees	\$125	Foster Pepper, PLLC	58
Company Expense		Hogan Lovells, US, LLP	230
FIS Group, Inc.	\$107	K & L Gates, LLP	285
Leading Edge Investment Advisors, LLC	129	Katten Muchin Rosenman, LLP	(5)
Legato Capital Management, LLC	247	Morgan Lewis & Bockius, LLP	661
LongTail Alpha, LLC	231	Orrick Herrington & Sutcliffe, LLP	22
Progress Investments, LLC	172	Pillsbury Winthrop Shaw Pittman, LLP	993
Strategic Investment Group, LLC	111	Reed Smith, LLP	64
Universa Investments, LP	142	Stoel Rives, LLP	5
Total Company Expense	\$1,139	Vasquez Benisek & Lindgren, LLP	2
		Wilson Sonsini Goodrich & Rosati	577
Fund Administration Fees		Total Legal Fees	\$3,656
State Street Bank and Trust Company	\$4,169	Master Custodian Fees	
Total Fund Administration Fees	\$4,169	State Street Bank and Trust Company	\$10,107
		Total Master Custodian Fees	\$10,107
Investment Consultant Fees		Tax Advisory Fees	
Bard Consulting, LLC	\$1,381	Ernst & Young, LLP	\$821
Callan, LLC	105	Total Tax Advisory Fees	\$821
Crosswater Realty Advisors, LLC	243	Technology Expenses	
Cutter Associates, LLC	271	13D Research, Inc	\$70
Demeter International Investments, Ltd	1,063	Abel Noser Solutions, LLC	48
Ernst & Young, LLP	90	Acadiasoft, Inc.	10
Garland Associates, Inc.	(29)	Alef Advisory	9
Hamilton Lane Advisors, LLC	75	Axioma, Inc.	237
JLynn Consulting, Inc.	153		
Lenox Park Solutions, Inc.	100		

Other Supplementary Information (continued)

INVESTMENT EXPENSES – ALL FUNDS (CONTINUED)

Other Investment Expenses^{1,5} (Dollars in Thousands) (continued)

	Fees		Fees
Babelfish Analytics, Inc.	\$35	Moody's Analytics, Inc.	\$417
Barclays Capital	129	Mountainview Analytics, LLC	10
Barra, LLC	2,289	MRB Partners, Inc.	50
BCA Research	259	MRI Software, LLC	310
BDO USA, LLP	28	MSCI, Inc.	1,695
Blackrock Financial Management, Inc.	9,279	MUFG Capital Analytics, LLC	5,259
Bloomberg, LP	3,048	Noel L Scherf	6
Broadridge Investor Communications	5	NWN Corporation	1
Cambridge Associates, LLC	20	NYSE Market, Inc.	12
Candeal, Inc.	—	Option Research & Technology Services, LLC	56
Carahsoft Technology Corp.	247	Options Price Reporting Authority	2
CEM Benchmarking, Inc.	70	Preqin Limited	47
Charles River Systems, Inc.	2,923	Proxy Insight Limited	5
Clarity Solutions Group, LLC	50	Quantal International, Inc.	45
Convergence, Inc.	35	Radianz Americas, Inc.	171
Cornerstone Macro, LP	132	Real Capital Analytics, Inc.	91
Costar Investment Analysis	173	Refinitiv US, LLC	261
Covenant Review, LLC	48	RiskVal Financial Solutions, LLC	120
Credit Market Analysis Limited	21	Ryedale Europe Limited	770
Creditsights	135	S&P Global Market Intelligence, LLC	1,546
Dow Jones & Company, Inc.	2	S&P Dow Jones Indices, LLC	69
DTCC ITP, LLC	149	SASB Foundation	6
eFront Financial Solutions, Inc.	2,039	Solutions Simplified	2
eMBS, Inc.	9	SpiderRock EXS, LLC	14
Empirical Research Partners, LLC	400	StepStone Group, LP	205
Equilar, Inc.	45	Stone & Kanto, LLC	8
Etrali North America, LLC	323	STOXX Limited	16
Eurasia Group	138	Summit Financial Printing, LLC	(1)
Euromoney Trading Limited	19	Sustainalytics U.S., Inc.	30
eVestment Alliance	29	The Burgiss Group, LLC	159
Factset Research Systems, Inc.	2,431	The Depository Trust & Clearing Corp.	20
Fitch Ratings, Inc.	(55)	The Mathworks, Inc.	99
Fitch, Inc.	236	The Statestore, Inc.	2
Four Twenty Seven, Inc.	30	The Yield Book, Inc.	193
Frank Russell Company	34	Tradeweb	181
FTSE	752	Trend Macrolytics, LLC	27
Gartner, Inc.	139	TRGRP, Inc.	161
GaveKal Capital Management Limited	45	TriOptima AB	42
Glass Lewis & Co., LLC	498	TSX, Inc.	26
Global Investor Collaboration Svcs., LLC	5	Viola Risk Advisors, LLC	7
Green Street Advisors	135	William O'Neil & Company	30
Haver Analytics, Inc.	134	Wood Mackenzie, Inc.	120
IHS Global, Inc.	98	Yardeni Research, Inc.	19
Institutional Shareholder Services, Inc.	180	Total Technology Expenses	<u>\$39,963</u>
Intex Solutions, Inc.	245	Internal Investment Personal and Administrative Expenses	
Investment Property Databank	73	Internal Investment Personal and Administrative Expenses	\$78,826
Kyriba Corporation	26	Total Internal Investment Personal and Administrative Expenses	<u>\$78,826</u>
London School of Economics and Political Science	20		
London Stock Exchange PLC	37		
Markit Indices Limited	28		
Markit North America, Inc.	88		
Microsoft Services	22		

Other Supplementary Information (continued)

INVESTMENT EXPENSES – ALL FUNDS (CONTINUED)

Other Investment Expenses^{1,5} (Dollars in Thousands) (continued)

	Fees
Miscellaneous Investment Expense Fees	
Miscellaneous Investment Expense Fees	\$37
Transaction Fees	98,116
Total Miscellaneous Investment Expense Fees	<u>98,153</u>
Total Other Investment Fees and Expenses	<u>267,997</u>
Total Investment Expenses - All Funds	<u>1,006,789</u>

(1) Expenses and fees less than a thousand dollars are indicated by a dash.

(2) Negative management fees are due to adjusting entries.

(3) CalPERS makes a good faith attempt to account for fees that are not readily separable. These management fees are net of management fee offsets. For more detail, see the Private Equity Management Fees & Profit Sharing table in the Investment Section.

(4) Negative performance fees are due to the reversal of accruals caused by the fluctuation in fair values.

(5) Negative expenses are due to market fluctuations, adjusting entries, and reimbursements.

Other Supplementary Information (continued)

CONSULTANT AND PROFESSIONAL SERVICES EXPENSES¹ – ALL FUNDS (DOLLARS IN THOUSANDS)

Individual or Firm	Fees	Nature of Services
AgreeYa Solutions, Inc.	\$148	Information Technology Consulting and Support Services
Anthem Blue Cross	114,125	Medical Claims Administration, Account Management, Behavioral, Provider Network, Audit, Innovation and Development, Wellness, Prevention and Disease Management Services
ATV Video Center, Inc.	111	Video and Multimedia Production Services
Belmonte Enterprises, LLC	780	Application Development, Information Services
Berman Tabacco	732	Succession and Workforce Planning
Blue Shield of California	66,867	Medical Claims Administration, Account Management, Behavioral, Provider Network, Audit, Innovation and Development, Wellness, Prevention and Disease Management Services
Buck Global, LLC	626	Actuarial Services
Capio Group	1,028	Application Development
Claims Eval, Inc.	29	Health Appeals Review Services
Cook Brown, LLP	92	Legal Services
Cooperative Personnel Services	70	Organizational and Leadership Development
Cornerstone Fitness, Inc.	158	Employee Training and Development
Delegata Corporation	302	Application Development, Project Management Services
Department of Human Resources	116	Election Forms for the Alternate Retirement Program (ARP) Processing Services
Department of Industrial Relations	24	Legal Services
Department of Justice	86	Conduct & Provide External Investigative Services
Domain Experts Corporation	62	Recruiting and Placement
Drinker Biddle & Reath, LLP	590	Legal Services
DSS Research	220	Medical Consulting Services
Durie Tangri, LLP	750	Legal Services
Eaton Interpreting Services, Inc.	142	Interpreting Services
Elynview Corporation	360	Data Base Administration, Systems Analysis, Design, Implementation, Maintenance and Support
Enterprise Networking Solutions, Inc.	347	IT Architecture, Systems Analysis, Design, Implementation, Maintenance and Support
Enterprise Services, LLC	223	Data Base Administration, Systems Analysis, Design, Implementation, Maintenance and Support
Equanim Technologies	501	Business Process Re-engineering, Project Management Services, Technical Writing, Health Care Consulting
Ernst & Young, LLP	116	Consulting Services for Enterprise Business Continuity
Eterasys Consulting, Inc.	54	Application Development, Data Base Administration
Fair Political Practices Commission	57	Assessment Services
First Data Merchant Services Corporation	86	Banking Services
Funston Advisory Services, LLC	939	Board Governance Services
Gartner, Inc.	110	Management Support Services
Government Operations Agency	354	Operations and Strategic Business Planning
H&B Joint Venture	406	Business Transformation/Transition, Release Management/Quality Assurance/Configuration Management
Health Net of California	15,242	Medical Claims Administration, Account Management, Behavioral, Provider Network, Audit, Innovation and Development, Wellness, Prevention and Disease Management Services
Heidrick & Struggles	31	Recruiting and Placement
Innovative Software Technologies, Inc.	469	Specialized IT Support Services for Actuarial Systems/Business
Integrity Voting Systems (IVS)	114	Board Election Services
IVS/Everyone Counts, Inc.	378	Board Election Services
J & K Court Reporting, LLC.	35	Legal Services
JLynn Consulting, Inc.	938	Application Development, Information Services
K&L Gates, LLP	437	Legal Services

Other Supplementary Information (continued)

CONSULTANT AND PROFESSIONAL SERVICES EXPENSES¹ – ALL FUNDS (DOLLARS IN THOUSANDS) (CONTINUED)

Individual or Firm	Fees	Nature of Services
KearnFord Application Systems Design	\$716	Business Transformation/Transition, Release Management/Quality Assurance/Configuration Management, Project Management Services
King & Spalding, LLP	256	Legal Services
Knowledge Structures, Inc.	52	Employee Training and Development
Kong Consulting, Inc.	583	Systems Analysis, Design, Implementation, Maintenance and Support
Korn Ferry (US)	445	Search Firm Services
KPMG, LLP	4,000	Audit Services
Kronick, Moskowitz, Tiedemann & Girard	53	Legal Services
Long Term Care Group, Inc.	20,954	Third-Party Member Record Keeper, Medical Claims Administration, Eligibility, Retail & Other Reporting Services, IT Services, Marketing Consultant
Mara Consulting, Inc.	215	Data Analysis and Data Correction Services for the My CalPERS Retirement Application
Matrix Software Services	181	Data Base Administration, Systems Analysis, Design, Implementation, Maintenance and Support
Mellon Bank	332	Banking Services
Mercer	446	Health Care and Actuarial Consulting
Michael Scales Consulting, LLC	219	Application Development
Milliman, Inc.	3,083	Project Management Services
NetCentric Technologies Inc.	70	PDF Accessibility Remediation, Subscription to CommonLook Global Access
Northeast Retirement Services	91	Third-Party Member Record Keeper
Nossaman, LLP	132	Legal Services
OnCore Consulting, LLC	589	Application Development, IT Architecture, Systems Analysis, Design, Implementation, Maintenance and Support
OptumRx	22,011	Pharmacy Claims Administration, Account Management, Eligibility, Retail and Other Reporting Services
Orrick Herrington & Sutcliffe, LLP	482	Legal Services
Pasanna Consulting Group, LLC	1,234	Application Development, Data Base Administration, IT Architecture, Systems Analysis, Design, Implementation, Maintenance and Support
Princeton Solutions Group, Inc.	184	Business Transformation/Transition, Project Management Services, Release Management/Quality Assurance/Configuration Management
Providence Technology Group, Inc.	123	Consulting Services for Security Governance Program
Qualapps, Inc.	1,471	Information Technology Consulting and Support Services
Randle Communications	233	Media Training, Writing, Editorial, Marketing, and Crisis Communication Services
Recon Distribution, Inc.	241	Exhibition Management
Reed Smith, LLP	772	Legal Services
Ridgeway Partners, LLC	135	Search Firms Services
Runyon Saltzman, Inc.	249	Writing, Editorial and Marketing Services
RVK, Inc.	25	Market Analysis
Saba Software, Inc.	88	Employee Training and Development
Shah & Associates, A Professional Law Company	188	Legal Services
Sharp Health Plan	6,445	Medical Claims Administration, Account Management, Behavioral, Provider Network, Audit, Innovation and Development, Wellness, Prevention and Disease Management Services
Softsol Technologies, Inc.	70	Business Intelligence and Reporting, Business Transformation/Transition, Release Management/Quality Assurance/Configuration Management
Sophus Consulting	127	Legal Services
State Controller's Office	5,878	Account Management, Performance Management and Program Evaluation, Information technology, Other Post Employment Benefits, General Administrative Services, and Premium Remittance Services
State Personnel Board	86	Compliance Review, Audit, and Processing of Appeals and Complaints
Steptoe & Johnson, LLP	(25)	Legal Services

Other Supplementary Information (continued)

CONSULTANT AND PROFESSIONAL SERVICES EXPENSES¹ – ALL FUNDS (DOLLARS IN THOUSANDS) (CONTINUED)

Individual or Firm	Fees	Nature of Services
T5 Consulting	\$1,013	Application Development, Information Services
Take 1 Productions	90	Video and Multimedia Production Services
The RAND Corporation	25	Reference Based Pricing Drug Program
The Regents of the University of California	603	Organizational and Leadership Development
The Taylor Feldman Group, LLC	66	Management Support Services
Toppan Merrill, LLC	93	Printing of Open Enrollment Materials and Dissemination
Trinity Technology Group, Inc.	1,223	Business Intelligence and Reporting, Information Services
Truven Health Analytics, LLC	172	Health Care Data Warehouse Services
United Health Actuarial Services, Inc.	995	Medical Consulting Services
United Healthcare	38,255	Medical Claims Administration, Account Management, Behavioral, Provider Network, Audit, Innovation and Development, Wellness, Prevention and Disease Management Services
Unleashing Leaders, Inc.	110	Organizational and Leadership Development
Van Dermyden Maddux Law Corporation	94	Legal Services
Vantage Consulting Group, Inc.	581	Business Process Re-engineering, IT Architecture, Technical Writing
Viaspire	70	Marketing Services
Voya	3,494	Third-Party Member Record Keeper
Western Health Advantage	3,636	Medical Claims Administration, Account Management, Behavioral, Provider Network, Audit, Innovation and Development, Wellness, Prevention and Disease Management Services
Worktank Enterprises, LLC	45	Video and Multimedia Production Services, Web Event Services
Various	318	
Total Consultant and Professional Services Expenses	<u>\$331,572</u>	

(1) Negative Consultant and Professional Expenses are due to adjusting entries.

INVESTMENT SECTION

100	Chief Investment Officer's Letter
101	Summary of Investments – PERF
101	Portfolio Comparisons – PERF
102	Asset Allocation – PERF
102	Portfolio of California Investments at Fair Value – PERF
103	Largest Stock & Bond Holdings at Fair Value – PERF
104	Schedule of Commissions & Fees
106	Private Equity Management Fees & Profit Sharing – PERF
111	Investment Performance – LRF
111	Investment Performance – JRF II
112	Investment Performance – CERBTF
113	Investment Performance – HCF
113	Investment Performance – LTCF



6.7%

Net investment return (PERF)

Our focus is always on the **long-term sustainability of the fund with an investment horizon that stretches across generations.**

Investment Section

CHIEF INVESTMENT OFFICER'S LETTER

November 21, 2019

On behalf of the CalPERS Investment Office, I am pleased to report on CalPERS' investment performance, operations, and initiatives for the one-year period ending on June 30, 2019. The CalPERS Public Employees' Retirement Fund (PERF) earned a time-weighted rate of return of 6.7 percent this fiscal year, with the ending fair value of investments at \$376 billion.

Drivers of the returns included the fixed income program, which generated a 9.6 percent net return, followed by private equity and public equity net returns of 7.7 percent and 6.1 percent, respectively.

While we did not reach the desired 7.0 percent return, our results are promising when considering the market volatility this year. Our focus is always on the long-term sustainability of the Fund. Our investment horizon stretches across generations.

As the new Chief Investment Officer of CalPERS, I am committed to meeting our expected rate of return. We have been improving our investment capabilities, reviewing our investment activities, and capitalizing on our advantages.

We are working through our current asset allocation to maximize our return potential. We are improving what we can accomplish in less efficient markets, like private equity, using CalPERS' respected reputation and the scale at which we can invest. We are also identifying areas that offer higher growth potential.

By maintaining a Total Fund approach and staying focused on investment activities, we are putting the full force and talents of our investment team behind all of our asset classes. This strategy has allowed us to prioritize our resources based on their potential to benefit the entirety of our fund.

The number one priority of every member of the CalPERS Investment Office is to protect the pensions being earned by our members. Our plan is to continue to innovate and explore new business models to achieve our investment goals and support our pension payments.

CalPERS is committed to the success and sustainability of our system. Our mission remains the same—manage the CalPERS investment portfolio in an efficient and risk-aware manner to generate returns to sustainably pay benefits. We continue to identify ways to reduce the cost, risk, and complexity in the Fund's portfolio and operations, while also maximizing investment returns.

Our Investment Office team, the Board's pension consultant Wilshire Associates, and State Street Bank & Trust, our master custodian, compiled the investment data presented on the following pages.

Yu (Ben) Meng, Ph.D.
Chief Investment Officer

Investment Section (continued)

INVESTMENT PERFORMANCE – PUBLIC EMPLOYEES’ RETIREMENT FUND (PERF)

Summary of Investments – PERF – As of June 30, 2019 (Dollars in Thousands)

Category	Book Value	Fair Value	% of Investments at Fair Value
Short-Term Investments	\$9,875,794	\$9,872,751	3%
Global Equity Securities	154,749,799	185,020,907	49%
Global Debt Securities	108,920,294	114,168,333	30%
Real Assets	27,803,023	40,768,569	11%
Private Equity	28,299,350	26,471,325	7%
TOTAL INVESTMENT VALUE	\$329,648,260	\$376,301,885	100%

Portfolio Comparisons – PERF (Time-Weighted Rates of Return)

Category	1-Year Return	3-Year Return	5-Year Return	10-Year Return	Index ⁴	1-Year Return	3-Year Return	5-Year Return	10-Year Return
Total Fund	6.7%	8.8%	5.8%	9.1%	Weighted Policy Benchmark ¹	7.1%	9.0%	6.1%	9.5%
					Trust Universe Comparison Service (TUCS) Public Fund Median	6.5%	8.5%	5.8%	9.1%
					Wilshire Large Fund Universe Median	6.7%	9.4%	6.7%	9.9%
Public Equity	6.1%	12.3%	6.7%	11.1%	CalPERS Custom Public Equity Composite ²	6.2%	12.5%	6.7%	10.9%
Private Equity	7.7%	12.5%	9.6%	14.0%	Custom FTSE All World, All Cap Equity +150bps, Quarter Lag	4.0%	14.1%	10.3%	16.6%
Income	9.6%	3.3%	4.1%	6.6%	CalPERS Custom Global Fixed Income Composite ³	9.3%	2.7%	3.5%	5.2%
Real Assets	3.7%	6.4%	7.5%	4.1%	MSCI/PREA U.S. ACOE Quarterly Property Fund Index (Unfrozen)	6.5%	6.8%	8.6%	8.4%
Liquidity	2.6%	1.7%	1.3%	1.1%	30-Day Treasury Bill	2.2%	1.3%	1.2%	1.2%

(1) The Asset Allocation Policy Index return equals the return for each asset class benchmark, weighted at the historical target asset allocations.

(2) The current benchmark is 72% Custom FTSE All World, All Cap Equity and 28% MSCI ACWI Select Factor Weighted Index.

(3) The current benchmark is 36% Custom Bloomberg Barclays Long Government, 53% Custom Bloomberg Barclays Long Spread and 11% Custom Bloomberg Barclays High Yield.

(4) Index benchmarks are as of June 30, 2019, and are subject to be updated based on changes within the fund portfolios.

Investment Section (continued)

PUBLIC EMPLOYEES' RETIREMENT FUND (CONTINUED)

Asset Allocation – PERF

Asset Class	Current Allocation	Current Target Allocation (as of 6/30/2019)	Prior Target Allocation (as of 6/30/2018)
Public Equity	50.2%	50.0%	49.0%
Private Equity	7.1%	8.0%	8.0%
Income	28.7%	28.0%	22.0%
Real Assets	11.0%	13.0%	12.0%
Liquidity	1.0%	1.0%	3.0%
Inflation Assets	—	—	6.0%
Trust Level ¹	2.0%	—	—
TOTAL FUND	100.0%	100.0%	100.0%

(1) Trust Level includes Multi-Asset Class, Completion Overlay, Risk Mitigation, Absolute Return Strategies, Plan Level Transition and other Total Fund level portfolios. These assets do not have targets because they are not components of the Total Fund Policy benchmark.

Portfolio of California Investments at Fair Value – PERF (Dollars in Millions)

California Investments	Fair Value	Cost
Public Equity ¹	\$16,321	\$10,647
Global Fixed Income ²	5,780	5,600
Real Assets ³	10,950	7,991
Private Equity ³	902	515
TOTAL CALIFORNIA INVESTMENTS	\$33,953	\$24,753

(1) Includes listed public equities corporate bonds.

(2) Fixed Income also includes a portion of MBS & ABS which have significant geographical exposure to CA, and MHLF.

(3) Real assets and private equity as of March 31, 2019.

Investment Section (continued)

PUBLIC EMPLOYEES' RETIREMENT FUND (CONTINUED)

Largest Stock Holdings at Fair Value – PERF (Dollars in Thousands)

Rank	Security Name	Shares	Fair Value
1	Microsoft Corporation	16,754,258	\$2,244,400
2	Apple Incorporation	9,057,148	1,792,591
3	Amazon.com Incorporation	781,531	1,479,931
4	Johnson & Johnson	9,228,094	1,285,289
5	Procter and Gamble Company	11,502,810	1,261,283
6	Coca Cola Company	24,534,237	1,249,283
7	Pepsi-Co Incorporation	9,274,204	1,216,126
8	Nestle Corporation	11,321,392	1,173,477
9	Visa Incorporation	6,705,056	1,163,662
10	Pfizer Incorporation	25,617,199	1,109,737

Largest Bond Holdings at Fair Value – PERF (Dollars in Thousands)

Rank	Bond	Interest Rate	Maturity Date	Par Value	Fair Value
1	United States Treasury	2.875%	5/15/2043	\$1,679,500	\$1,796,278
2	United States Treasury	2.250%	8/15/2027	1,622,000	1,661,283
3	United States Treasury	3.750%	11/15/2043	1,077,000	1,325,888
4	Federal Home Loan Mortgage Corp.	4.000%	8/1/2048	1,200,440	1,257,689
5	Federal National Mortgage Association	3.000%	7/15/2049	1,229,700	1,240,196
6	United States Treasury	0.500%	1/15/2028	1,210,264	1,230,299
7	United States Treasury	0.375%	7/15/2027	1,209,531	1,220,871
8	United States Treasury	2.375%	5/15/2027	1,051,400	1,087,049
9	United States Treasury	3.125%	8/15/2044	929,900	1,037,420
10	United States Treasury	4.500%	8/15/2039	760,800	1,027,437

A complete list of portfolio holdings is available upon request.

Investment Section (continued)

Schedule of Commissions & Fees (Dollars in Thousands)

Broker	Number of Shares Traded	Base Commission & Fees Amount	Broker	Number of Shares Traded	Base Commission & Fees Amount
B. Riley & Company, LLC	767,576	\$25	Goldman Sachs (Asia), LLC	4,915,762	\$50
Banco Itau S.A.	2,024,100	16	Goldman Sachs (India)	565,890	14
Bank of America Merrill Lynch	44,927,064	108	Goldman Sachs and Company	633,506,444	1,989
Barclays Capital	9,343,469	103	Goldman Sachs Australia Pty, Ltd.	801,565	13
Barclays Capital, Inc./LE	59,844,317	835	Goldman Sachs Do Brasil Corretora	13,454,011	68
BMO Capital Markets	2,174,495	55	Goldman Sachs International	23,906,257	98
BNP Paribas S.A.	16,507,795	31	Guzman and Company	21,436,827	231
BNP Paribas Securities India Private, Ltd.	197,287	14	Hongkong and Shanghai Banking, Corp.	5,605,642	51
BNP Paribas Securities Services	15,110,548	73	HSBC Bank, Plc	1,191,831,520	951
Bradesco S.A CTVM	17,537,037	71	HSBC Brokerage (USA), Inc.	11,728,103	104
Broadcort Capital, Corp.	531,901	10	HSBC Securities (USA), Inc.	46,195,755,983	820
BTG Pactual Chile S.A. Corredores de Bolsa	273,600,869	23	HSBC Securities India Holdings	98,836,307	229
BTIG, LLC	84,040,691	856	ICBC Financial Services, LLC	14,552,291	156
Cantor Fitzgerald and Company	1,806,958	30	ICICI Brokerage Services, Ltd.	2,102,043	9
Capital Institutional Services, Inc.	62,481,991	648	IM Trust S.A. Corredores de Bolsa	192,082,408	20
China International Capital, Corp.	4,217,000	47	Instinet	39,585,189	358
Citibank, N.A. Spain	2,495,191	16	Instinet Australia Clearing Svc. Pty., Ltd.	23,092,825	103
Citigroup Global Market Korea Secs., Ltd.	2,690,492	46	Instinet Europe, Ltd.	226,215,946	1,276
Citigroup Global Markets CME	9,519	20	Instinet Pacific, Ltd.	198,212,475	213
Citigroup Global Markets India	30,121,600	114	Instinet Singapore Services PT	11,525,013	14
Citigroup Global Markets Taiwan	128,796,976	93	Instinet, LLC	117,950,901	1,037
Citigroup Global Markets, Inc.	1,397,939,593	3,270	Investment Technology Group, Inc.	15,484,869	90
Citigroup Global Markets, Inc. Salomon Bro.	290,972	609	Investment Technology Group, Ltd.	290,171,778	1,052
Citigroup Global Markets, Ltd.	263,696,336	892	ISI Group, Inc.	2,081,312	45
CL Securities Taiwan and Company, Ltd.	9,381,000	51	ITG Australia, Ltd.	212,993,912	578
CLSA Americas	1,359,394	15	ITG Canada	12,509,376	98
CLSA Australia PTY, Ltd.	3,686,923	24	Jefferies and Company, Inc.	12,269,660	202
CLSA Securities Korea, Ltd.	571,421	73	Jefferies India Private, Ltd.	1,160,792	76
CLSA Singapore PTE, Ltd.	323,572,433	617	Jefferies International, Ltd.	4,467,832	56
Cowen and Company, LLC	3,184,645	48	JMP Securities	224,096	8
Cowen Execution Services, LLC	46,385,164	347	Joh Berenberg Gossler and Company	1,110,543	40
Credit Lyonnais Securities (Asia)	1,753,605,843	694	Jones Trading Institutional Services, LLC	23,809,703	289
Credit Lyonnais Securities India	2,115,608	83	JP Morgan Clearing, Corp.	11,541,202	111
Credit Suisse First Boston	235,433,954	284	JP Morgan India Private, Ltd.	23,417,306	182
Credit Suisse First Boston SA CTVM	1,685,684	24	JP Morgan Securities (Asia Pacific), Ltd.	643,661,939	532
Credit Suisse Secs India Private, Ltd.	38,822,784	242	JP Morgan Securities (Far East), Ltd. Seoul	920,144	17
Credit Suisse Securities (Europe), Ltd.	45,025,812	286	JP Morgan Securities (Singapore)	115,521,913	89
Credit Suisse Securities (USA), LLC	1,287,173,947	2,415	JP Morgan Securities Australia, Ltd.	6,680,185	34
CS First Boston (Hong Kong), Ltd.	3,325,419	29	JP Morgan Securities, Inc.	465,859,767	410
CS First Boston Australia Equities, Ltd.	503,310	11	JP Morgan Securities, LLC	56,836,831	958
Daiwa Securities America, Inc.	1,576,952	14	JP Morgan Securities, Ltd.	981,632	28
Deutsche Bank AG, London	32,255,942	178	JP Morgan Securities, PLC	164,827,628	865
Deutsche Bank Securities, Inc.	538,052,447	890	Keefe Bruyette and Woods, Inc.	544,660	19
Deutsche Morgan Grenfell Securities	1,522,946	12	Kepler Equities Paris	550,618	21
Deutsche Private Equity	1,396,643	9	Keybank Capital Markets, Inc.	455,144	11
Deutsche Securities Asia, Ltd.	155,239,799	114	Leerink Partners, LLC	234,084	8
Drexel Hamilton, LLC	1,852,169	15	Liquidnet, Inc.	57,937,715	609
DSP Merrill Lynch, Ltd.	5,488,498	72	Luminex Trading and Analytics, LLC	2,804,368	13
Exane SA	29,648,089	148	Macquarie Bank, Ltd.	84,223,129	213
Flow Corretora de mercadorias, Ltd.	4,672,300	38	Macquarie Capital (Europe), Ltd.	557,257	11
			Macquarie Securities (Korea), Ltd.	83,761	10

Investment Section (continued)

Schedule of Commissions & Fees (Dollars in Thousands) (continued)

Broker	Number of Shares Traded	Base Commission & Fees Amount	Broker	Number of Shares Traded	Base Commission & Fees Amount
Maxim Group, LLC	215,940	\$9	Various ¹	11,067,488,195	\$286
Merrill Lynch International	5,896,682,824	1,700			
Merrill Lynch Pierce Fenner and Smith, Inc.	202,211,135	2,283	TOTAL	80,045,297,321	\$46,615
Mischler Financial Group, Inc.-Equities	3,756,100	44	(1) Commissions and fees paid to brokers that totaled less than \$8,000 for the year are reported under the "Various" line item.		
Mitsubishi UFJ Securities (USA)	443,354	8			
Mizuho Securities USA, Inc.	1,140,094	26			
Morgan Stanley (Taiwan), Ltd.	282,571,975	238			
Morgan Stanley and Company International	145,468,412	154			
Morgan Stanley and Company, Inc.	631,197,444	2,251			
Morgan Stanley India Company PVT, Ltd.	19,912,229	157			
North South Capital, LLC	7,117,892	93			
Numis Securities, Ltd.	1,085,121	19			
Parel	276,793	16			
Pavilion Global Markets Ltd.	1,922,206	9			
Penserra Securities, LLC	50,082,559	531			
Pershing, LLC	18,467,611	193			
Pershing Securities, Ltd.	867,030	13			
Raymond James and Associates, Inc.	614,276	23			
RBC Capital Markets, LLC	4,222,610	63			
RBC Dominion Securities, Inc.	51,216,938	237			
Reburn (Europe). Ltd.	1,264,473	13			
Rosenblatt Securities, LLC	65,185,219	703			
Royal Bank of Canada Europe, Ltd.	100,447,133	506			
Sanford C. Bernstein, Ltd.	42,705,259	205			
Santander Investment Bolsa Sociedad de Valores	550,296	8			
SG Americas Securities, LLC	120,444,852	232			
SG Asia Securities (India) Pvt, Ltd.	47,988,154	183			
SG Securities (London), Ltd.	81,222,070	87			
SG Securities Hong Kong	397,564,229	553			
SMBC Securities, Inc.	799,722	17			
Societe Generale	26,190,455	98			
Societe Generale London Branch	71,180,498	566			
Stanford C Bernstein and Company, LLC	61,991,343	373			
State Street Bank and Trust Company	278,579	529			
Stifel Nicolaus and Company, Inc.	780,731	18			
Stuart Frankel and Co. Inc.	26,535,050	234			
The Hongkong and Shanghai Bank	5,818,606	72			
UBS Ag	193,095,749	809			
UBS Ag London Branch	28,688,856	209			
UBS. Ltd.	39,133,013	276			
UBS Securities Asia, Ltd.	1,645,389,360	687			
UBS Securities Canada, Inc.	4,261,215	44			
UBS Securities India Private, Ltd.	20,864,475	109			
UBS Securities Pte.,Ltd.	270,194,791	186			
UBS Securities Pte.,Ltd., Seoul	5,317,386	25			
UBS Securities, LLC	34,849,229	529			
Virtu Americas, LLC	63,443,559	741			
Weeden and Company	100,574,148	961			
Wells Fargo Securities, LLC	1,083,087	32			
XP Investimentos CCTVM SA	10,215,585	40			

Investment Section (continued)

Private Equity Management Fees & Profit Sharing – PERF^{1,5} (Dollars in Thousands)

Fund Name	Gross Management Fees	Net Offsets, Waivers, and Rebates ^{2,3}	Net Management Fees	Profit Sharing Paid ^{4,5}
57 Stars Global Opportunities Fund 2 (CalPERS), LLC	\$960	(\$166)	\$794	\$0
57 Stars Global Opportunities Fund, LLC	600	—	600	—
Aberdare Ventures IV, LP	202	(24)	178	—
Advent International GPE V-D, LP	78	—	78	—
Advent International GPE VI-A, LP	1,627	(6)	1,621	19,677
Advent International GPE VII-C, LP	4,370	(92)	4,278	42,720
Advent International GPE VIII-B Limited Partnership	7,500	(41)	7,459	—
Advent Latin America Private Equity Fund IV-D, LP	507	—	507	—
Advent Latin America Private Equity Fund V-H, LP	901	—	901	—
Advent Latin American Private Equity Fund III-D, LP	122	—	122	—
Affinity Asia Pacific Fund III, LP	684	—	684	3,047
Aisling Capital III, LP	269	(89)	180	19,849
Apollo Credit Opportunity Fund I, LP	175	(175)	—	1,110
Apollo Investment Fund IX, LP	6,334	(365)	5,969	—
Apollo Investment Fund VI, LP	—	(5)	(5)	—
Apollo Investment Fund VII, LP	1,309	(235)	1,074	—
Apollo Investment Fund VIII, LP	2,466	(1,916)	550	4,472
Apollo Special Opportunities Managed Account, LP	2,710	—	2,710	—
Arclight Energy Partners Fund IV, LP	(5)	—	(5)	3,580
Ares Corporate Opportunities Fund III, LP	1,218	(7)	1,211	14,462
Ares Corporate Opportunities Fund V, LP	5,950	(39)	5,911	—
Asia Alternatives Capital Partners II, LP	105	—	105	—
Asia Alternatives Capital Partners, LP	30	—	30	210
Baring Vostok Private Equity Fund IV, LP	385	—	385	—
BDC III C, LP	2,275	(341)	1,934	—
Birch Hill Equity Partners (US) III, LP	—	—	—	1,199
Birch Hill Equity Partners (US) IV, LP	1,014	(47)	967	—
Blackstone / GSO Capital Solutions Fund, LP	58	—	58	1,751
Blackstone Capital Partners IV, LP	—	—	—	2,593
Blackstone Capital Partners V, LP	—	—	—	1,537
Blackstone Capital Partners VI, LP	2,442	1,517	3,959	12,801
Blackstone Capital Partners VII, LP	6,250	—	6,250	1,430
Blackstone Tactical Opportunities Fund - C, LP	4,313	(172)	4,141	10,290
Blackstone Tactical Opportunities Fund (KG Co-Invest), LP	453	—	453	—
Blackstone Tactical Opportunities Fund (T4U Co-Invest), LP	203	—	203	—
Blackstone Tactical Opportunities Fund II - C, LP	3,208	(1,182)	2,026	3,721
Blackstone Tactical Opportunities Fund III - C, LP	20	—	20	—
Bridgepoint Europe II 'A', LP	—	—	—	220
Bridgepoint Europe II 'C', LP	—	—	—	55
Bridgepoint Europe IV 'B', LP	399	(11)	388	9,026
Bridgepoint Europe IV 'D', LP	1,513	(40)	1,473	34,236
Bridgepoint Europe V	4,235	(800)	3,435	—
Bridgepoint Europe VI 'H', LP	4,503	(326)	4,177	—
California Asia Investors, LP	251	—	251	3,043
California Emerging Ventures III, LLC	93	—	93	—
California Emerging Ventures IV, LLC	481	—	481	2,835
California Emerging Ventures, LLC	—	—	—	21
California Mezzanine Investment Fund, LP	229	—	229	—
CalPERS Clean Energy & Technology Fund, LLC	300	—	300	—
CalPERS Corporate Partners, LLC	—	—	—	14
Capital Link Fund I, LLC	286	—	286	550

Investment Section (continued)

Private Equity Management Fees & Profit Sharing – PERF^{1,5} (Dollars in Thousands) (continued)

Fund Name	Gross Management Fees	Net Offsets, Waivers, and Rebates ^{2,3}	Net Management Fees	Profit Sharing Paid ^{4,5}
Capital Link Fund II, LLC	\$380	\$0	\$380	(\$877)
Carlyle Asia Growth Partners IV, LP	503	—	503	—
Carlyle Asia Partners II, LP	(8)	8	—	1,032
Carlyle Asia Partners III, LP	571	(14)	557	9,353
Carlyle Asia Partners V, LP	2,718	(78)	2,640	—
Carlyle Europe Partners II, LP	—	—	—	32
Carlyle Europe Partners III, LP	266	(213)	53	233
Carlyle Europe Partners V, S.C.Sp	2,048	—	2,048	—
Carlyle Europe Technology Partners II, LP	212	—	212	—
Carlyle Global Financial Services Partners, LP	255	(4)	251	597
Carlyle Japan Partners II, LP	135	4	139	—
Carlyle Partners IV, LP	—	(3)	(3)	165
Carlyle Partners V, LP	594	(592)	2	4,412
Carlyle Partners VI, LP	4,125	(1,749)	2,376	—
Carlyle Partners VII, LP	8,079	(2,221)	5,858	—
Carlyle Realty Partners III, LP	—	—	—	2,528
Carlyle Strategic Partners II, LP	31	(33)	(2)	57
Carlyle Strategic Partners IV, LP	1,950	(33)	1,917	—
Carlyle U.S. Equity Opportunities II, LP	3,100	(686)	2,414	—
Carlyle U.S. Growth Fund III, LP	28	—	28	—
Carlyle/Riverstone Global Energy and Power Fund III, LP	496	(20)	476	—
CDH Fund V, LP	2,389	—	2,389	—
Centerbridge Capital Partners III, LP	2,250	(223)	2,027	1,272
Cerberus CAL II Partners, LP	1,053	(52)	1,001	—
Cerberus CP Partners, LP	2,212	(1,424)	788	—
Cerberus Institutional Partners V, LP	967	(266)	701	—
Clarus Lifesciences II, LP	324	(6)	318	3,236
Clayton, Dubilier & Rice Fund X, LP	2,250	(995)	1,255	—
Clearlake Capital Partners III, LP	434	(160)	274	16,087
Clearlake Capital Partners IV, LP	837	(287)	550	—
Clearlake Capital Partners V, LP	1,312	(964)	348	—
Clearlake Opportunities Partners (P), LP	992	(201)	791	—
Coller International Partners V-A, LP	65	—	65	7,711
Craton Equity Investors I, LP	53	—	53	—
CVC Capital Partners Strategic Opportunities Compounding Capital, LP	7,131	—	7,131	—
CVC Capital Partners VI, LP	5,342	(184)	5,158	—
CVC Capital Partners VII (A), LP	10,513	(1,856)	8,657	—
CVC Credit Strategic Investment A, LP	1,181	—	1,181	—
CVC European Equity Partners IV (D), LP	—	—	—	33
CVC European Equity Partners Tandem Fund (B), LP	—	(3)	(3)	730
CVC European Equity Partners V (B), LP	355	(265)	90	36,378
EMAlternatives Investments, LP	200	—	200	—
Essex Woodlands Health Ventures Fund VIII, LP	654	(5)	649	—
First Reserve Fund XII, LP	611	(24)	587	—
First Reserve Fund XIII, LP	5,440	(22)	5,418	—
Francisco Partners III, LP	607	(77)	530	6,256
GCM Grosvenor DEM II, LP	1,201	—	1,201	—
GCM Grosvenor DEM, LP	224	—	224	—
Golden State Investment Fund, LLC	185	—	185	5,739
Green Equity Investors IV, LP	(19)	10	(9)	1,148
Green Equity Investors V, LP	606	(527)	79	19,431
GSO Capital Opportunities Fund II, LP	792	(42)	750	1,877

Investment Section (continued)

Private Equity Management Fees & Profit Sharing – PERF^{1,5} (Dollars in Thousands) (continued)

Fund Name	Gross Management Fees	Net Offsets, Waivers, and Rebates ^{2,3}	Net Management Fees	Profit Sharing Paid ^{4,5}
GSO Capital Opportunities Fund, LP	\$16	\$0	\$16	\$0
GSO Capital Solutions Fund II, LP	2,128	73	2,201	—
GSO Energy Partners-C II, LP	1,532	—	1,532	—
GSO Energy Partners-C, LP	2,221	—	2,221	—
Hellman & Friedman Capital Partners IX, LP	2,140	(2,140)	—	—
Hellman & Friedman Capital Partners V, LP	—	—	—	700
Hellman & Friedman Capital Partners VI	—	—	—	(31)
Hellman & Friedman Capital Partners VII	745	(52)	693	17,153
Hellman & Friedman Capital Partners VIII, LP	7,821	(1,937)	5,884	—
ICV Partners II, LP	—	—	—	(677)
Insight Venture Partners Growth-Buyout Coinvestment Fund (B), LP	3,024	(3)	3,021	5,396
Insight Venture Partners IX, LP	1,634	(1)	1,633	1,241
Insight Venture Partners V Coinvestment Fund, LP	—	—	—	140
Insight Venture Partners X, LP	4,375	—	4,375	—
Ithaca, LP	—	—	—	—
Khosla Ventures III, LP	1,911	—	1,911	—
Khosla Ventures Seed, LP	756	—	756	—
KKR 2006 Fund, LP	348	—	348	3,327
KKR Asian Fund II, LP	1,819	—	1,819	10,783
KKR Asian Fund, LP	100	—	100	865
KKR European Fund II, LP	217	—	217	66
KKR European Fund III, LP	(2)	—	(2)	13,704
KKR Millennium Fund, LP	25	—	25	(224)
KM Corporate Partners Fund II, LP	622	(15)	607	—
KPS Special Situations Fund III, LP	386	(355)	31	7,395
Lime Rock Partners IV, LP	29	—	29	—
Lime Rock Partners V, LP	331	(6)	325	—
Lindsay Goldberg IV, LP	2,813	—	2,813	2,161
Lion Capital Fund II, LP	422	—	422	—
Madison Dearborn Capital Partners V, LP	110	(110)	—	30,100
MHR Institutional Partners III, LP	1,372	(8)	1,364	—
New Mountain Partners III, LP	1,457	(1,457)	—	4,602
Newbridge Asia IV, LP	122	10	132	132
Oak Hill Capital Partners II, LP	38	—	38	(58)
Oak Hill Capital Partners III, LP	978	(16)	962	69
Oaktree Opportunities Fund VIIIb, LP	1,669	(32)	1,637	—
Onex Partners IV, LP	4,364	(273)	4,091	—
Onex Partners V (B), LP	2,988	—	2,988	—
PAG Asia I, LP	613	—	613	203
PAG Asia III, LP	2,501	—	2,501	—
Palladium Equity Partners III, LP	—	—	—	2,937
Palladium Equity Partners IV, LP	2,626	(11)	2,615	—
Patria Brazilian Private Equity Fund V, LP	3,000	(32)	2,968	—
Permira Growth Opportunities I, LP 1	2,142	—	2,142	—
Permira IV, LP 2	—	(12)	(12)	750
Permira V, LP	2,657	(84)	2,573	—
Permira VI, LP 1	6,824	(23)	6,801	—
Polish Enterprise Fund V, LP	—	—	—	26
Polish Enterprise Fund VI, LP	—	—	—	3,860
RFG Private Equity Limited Partnership No. 1A, 1B and 1C	27	—	27	—
Rhone Partners III, LP	—	—	—	7

Investment Section (continued)

Private Equity Management Fees & Profit Sharing – PERF^{1,5} (Dollars in Thousands) (continued)

Fund Name	Gross Management Fees	Net Offsets, Waivers, and Rebates ^{2,3}	Net Management Fees	Profit Sharing Paid ^{4,5}
Richardson Capital Private Equity Limited Partnership No.2A, 2B and 2C	\$4	\$0	\$4	\$0
Riverstone Global Energy and Power Fund V, LP	2,595	(274)	2,321	—
Riverstone Global Energy and Power Fund VI, LP	7,500	(135)	7,365	—
Riverstone/Carlyle Global Energy and Power Fund IV, LP	1,391	(495)	896	—
Riverstone/Carlyle Renewable & Alternative Energy Fund II, LP	1,191	(97)	1,094	—
Riverwood Capital Partners (Parallel - A), LP	344	(48)	296	—
Sacramento Private Equity Partners, LP	1,000	—	1,000	6,113
SAIF Partners III, LP	945	—	945	—
SAIF Partners IV, LP	1,288	—	1,288	—
Sankaty Managed Account (CalPERS), LP	2,594	(186)	2,408	—
Silver Lake Partners II, LP	—	—	—	1,689
Silver Lake Partners III, LP	867	(35)	832	21,892
Silver Lake Partners IV, LP	2,370	(323)	2,047	12,718
Silver Lake Partners V, LP	5,567	(1,254)	4,313	—
Siris Partners III, LP	1,179	(157)	1,022	1,651
Siris Partners IV, LP	827	(333)	494	—
SL SPV-1, LP	381	—	381	—
Tailwind Capital Partners (PP), LP	260	(22)	238	1,164
Tailwind Capital Partners II, LP	1,124	(405)	719	—
Tailwind Capital Partners III, LP	3,447	(697)	2,750	—
TCV X, LP	262	—	262	—
The Central Valley Fund II SBIC, LP	148	(15)	133	—
The Resolute Fund II, LP	502	(187)	315	—
The Rise Fund (A), LP	1,181	—	1,181	—
Thomas H. Lee Equity Fund VI, LP	499	(236)	263	4,381
TowerBrook Investors II, LP	—	—	—	3,985
TowerBrook Investors III, LP	602	(56)	546	—
TowerBrook Investors IV (Onshore), LP	6,736	(680)	6,056	365
Towerbrook Structured Opportunities Fund (Onshore), LP	2,325	(126)	2,199	—
TPG Asia V, LP	128	(18)	110	14,181
TPG Asia VII (A), LP	6,588	(171)	6,417	—
TPG Biotechnology Partners II, LP	42	(42)	—	—
TPG Biotechnology Partners III, LP	228	(179)	49	—
TPG Growth IV, LP	1,313	(6)	1,307	—
TPG Partners IV, LP	—	—	—	644
TPG Partners VI, LP	801	(123)	678	15,808
Trident VI	2,053	(135)	1,918	—
Trident VII, LP	4,232	(854)	3,378	—
Triton Fund IV, LP	1,351	—	1,351	—
Triton Fund V, LP	1,211	(114)	1,097	—
T-VI Co-Invest-A, LP	—	(204)	(204)	—
Valor Equity Partners IV, LP	1,683	(436)	1,247	—
VantagePoint Venture Partners 2006 (Q), LP	639	—	639	—
Vicente Capital Partners Growth Equity Fund, LP	373	(128)	245	724
Vista Equity Partners Fund VII-Z, LP	514	—	514	—
W Capital Partners II, LP	218	(8)	210	—
WCAS XIII, LP	1,026	—	1,026	—
Wellspring Capital Partners V, LP	656	(656)	—	(1,471)
Welsh, Carson, Anderson & Stowe X, LP	—	—	—	80
Welsh, Carson, Anderson & Stowe XI, LP	314	(6)	308	3,810
Welsh, Carson, Anderson & Stowe XII, LP	4,987	(131)	4,856	15,366

Investment Section (continued)

Private Equity Management Fees & Profit Sharing – PERF^{1,5} (Dollars in Thousands) (continued)

Fund Name	Gross Management Fees	Net Offsets, Waivers, and Rebates ^{2,3}	Net Management Fees	Profit Sharing Paid ^{4,5}
Wigmore Street (BDC III), LP	\$1	\$0	\$1	\$0
Wigmore Street Co-investment No.1, LP	1	—	1	—
WLR Recovery Fund III, LP	(1)	—	(1)	—
WLR Recovery Fund IV, LP	90	(60)	30	—
Yucaipa American Alliance Fund II, LP	3,085	(390)	2,695	17,193
Yucaipa Corporate Initiatives Fund II, LP	299	—	299	—
TOTAL	\$294,529	(\$33,675)	\$260,854	\$536,799

(1) Amounts less than \$500 are indicated by a dash.

(2) Amounts include management fee waivers that may be paid in a subsequent period.

(3) Positive amounts are reflective of timing differences between when a waiver is used compared with when the fee is called.

(4) Profit sharing represents the investment manager's share of the gain realized during the fiscal year, net of any return of realized profit distributed in earlier years.

(5) Negative amounts are reflective of decreased investment value resulting in the return of realized profit.

Investment Section (continued)

INVESTMENT PERFORMANCE – LEGISLATORS’ RETIREMENT FUND (LRF)

LRF Portfolio Comparisons (Time-Weighted Rates of Return)

Category	1-Year Return	3-Year Return	5-Year Return	Index	1-Year Return	3-Year Return	5-Year Return
Total Fund	7.3%	5.5%	4.1%	Weighted Policy Benchmark	7.1%	5.2%	3.8%
Global Equity	5.0%	12.2%	6.6%	MSCI ACWI IMI (Net)	4.6%	11.9%	6.4%
Global Fixed Income	10.1%	3.4%	4.6%	Bloomberg Barclays Long Liability Index	10.1%	2.9%	4.0%
TIPS	4.9%	2.1%	1.7%	Bloomberg Barclays U.S. TIPS Index, Series L	4.8%	2.1%	1.8%
REITs	9.0%	5.6%	5.9%	FTSE EPRA/NAREIT Developed Liquid Index	8.1%	5.2%	5.7%
Commodities	(10.4%)	2.1%	(12.9%)	S&P GSCI Total Return Daily	(11.5%)	1.6%	(13.3%)

LRF Asset Allocation

Asset Class	Current Allocation	Current Year Target
Global Equity	22.0%	22.0%
Global Fixed Income	49.1%	49.0%
TIPS	16.0%	16.0%
REITs	7.9%	8.0%
Commodities	5.0%	5.0%
Total Fund	100.0%	100.0%

INVESTMENT PERFORMANCE – JUDGES’ RETIREMENT FUND II (JRF II)

JRF II Portfolio Comparisons (Time-Weighted Rates of Return)

Category	1-Year Return	3-Year Return	5-Year Return	Index	1-Year Return	3-Year Return	5-Year Return
Total Fund	6.7%	8.0%	5.0%	Weighted Policy Benchmark	6.4%	7.6%	4.8%
Global Equity	5.0%	12.2%	6.6%	MSCI ACWI IMI (Net)	4.6%	11.9%	6.4%
Global Fixed Income	10.2%	3.5%	4.6%	Bloomberg Barclays Long Liability Index	10.1%	2.9%	4.0%
TIPS	4.8%	2.1%	1.7%	Bloomberg Barclays U.S. TIPS Index, Series L	4.8%	2.1%	1.8%
REITs	9.0%	5.6%	5.9%	FTSE EPRA/NAREIT Developed Liquid Index	8.1%	5.2%	5.7%
Commodities	(11.4%)	1.7%	(13.1%)	S&P GSCI Total Return Daily	(11.5%)	1.6%	(13.3%)

JRF II Asset Allocation

Asset Class	Current Allocation	Current Year Target
Global Equity	52.1%	52.0%
Global Fixed Income	32.0%	32.0%
TIPS	5.0%	5.0%
REITs	7.9%	8.0%
Commodities	3.0%	3.0%
Total Fund	100.0%	100.0%

Investment Section (continued)

INVESTMENT PERFORMANCE – CALIFORNIA EMPLOYERS’ RETIREE BENEFIT TRUST FUND (CERBTf)

CERBTf Strategy 1 Portfolio Comparisons (Inception date is June 1, 2007) (Time-Weighted Rates of Return)

Category	1-Year Return	3-Year Return	5-Year Return	Index	1-Year Return	3-Year Return	5-Year Return
Total Fund	6.2%	8.2%	5.0%	Weighted Policy Benchmark	6.0%	7.8%	4.7%
Global Equity	4.9%	11.8%	6.4%	MSCI ACWI IMI (Net)	4.6%	11.4%	6.0%
Global Fixed Income	10.2%	3.5%	4.6%	Bloomberg Barclays Long Liability Index	10.1%	2.9%	4.0%
TIPS	4.8%	2.1%	1.7%	Bloomberg Barclays U.S. TIPS Index, Series L	4.8%	2.1%	1.8%
REITs	9.1%	5.0%	5.4%	FTSE EPRA/NAREIT Developed Liquid (Net)	8.1%	4.2%	4.5%
Commodities	(11.5%)	1.7%	(13.3%)	S&P GSCI Total Return Daily	(11.5%)	1.6%	(13.3%)

CERBTf Strategy 2 Portfolio Comparisons (Inception date is October 1, 2011) (Time-Weighted Rates of Return)

Category	1-Year Return	3-Year Return	5-Year Return	Index	1-Year Return	3-Year Return	5-Year Return
Total Fund	7.0%	6.8%	4.6%	Weighted Policy Benchmark	6.9%	6.4%	4.2%
Global Equity	4.9%	11.8%	6.4%	MSCI ACWI IMI (Net)	4.6%	11.4%	6.0%
Global Fixed Income	10.2%	3.5%	4.6%	Bloomberg Barclays Long Liability Index	10.1%	2.9%	4.0%
TIPS	4.9%	2.1%	1.7%	Bloomberg Barclays U.S. TIPS Index, Series L	4.8%	2.1%	1.8%
REITs	9.2%	5.0%	5.4%	FTSE EPRA/NAREIT Developed Liquid (Net)	8.1%	4.2%	4.5%
Commodities	(10.9%)	1.9%	(13.2%)	S&P GSCI Total Return Daily	(11.5%)	1.6%	(13.3%)

CERBTf Strategy 3 Portfolio Comparisons (Inception date is January 1, 2012) (Time-Weighted Rates of Return)

Category	1-Year Return	3-Year Return	5-Year Return	Index	1-Year Return	3-Year Return	5-Year Return
Total Fund	7.2%	5.3%	4.0%	Weighted Policy Benchmark	7.1%	5.0%	3.7%
Global Equity	4.9%	11.8%	6.4%	MSCI ACWI IMI (Net)	4.6%	11.4%	6.0%
Global Fixed Income	10.1%	3.4%	4.5%	Bloomberg Barclays Long Liability Index	10.1%	2.9%	4.0%
TIPS	4.9%	2.1%	1.8%	Bloomberg Barclays U.S. TIPS Index, Series L	4.8%	2.1%	1.8%
REITs	9.2%	5.0%	5.3%	FTSE EPRA/NAREIT Developed Liquid (Net)	8.1%	4.2%	4.0%
Commodities	(10.3%)	2.3%	(12.9%)	S&P GSCI Total Return Daily	(11.5%)	1.6%	(13.3%)

CERBTf Asset Allocation

Asset Class	Strategy 1		Strategy 2		Strategy 3	
	Current Allocation	Policy Target Allocation	Current Allocation	Policy Target Allocation	Current Allocation	Policy Target Allocation
Global Equity	58.9%	59.0%	40.0%	40.0%	22.0%	22.0%
Global Fixed Income	25.0%	25.0%	43.0%	43.0%	49.0%	49.0%
TIPS	5.0%	5.0%	5.0%	5.0%	16.0%	16.0%
REITs	7.9%	8.0%	7.9%	8.0%	7.9%	8.0%
Commodities	3.0%	3.0%	4.0%	4.0%	5.0%	5.0%
Cash Equivalents	0.2%	—	0.1%	—	0.1%	—
Total Fund	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Investment Section (continued)

INVESTMENT PERFORMANCE – HEALTH CARE FUND (HCF)

HCF Portfolio Comparisons (Time-Weighted Rates of Return)

Category	1-Year Return	3-Year Return	5-Year Return	Index	1-Year Return	3-Year Return	5-Year Return
Total Fund	7.9%	2.3%	3.1%	Bloomberg Barclays U.S. Aggregate Bond Index	7.9%	2.3%	2.9%

HCF Asset Allocation

Asset Class	Current Allocation	Current Year Target
Global Fixed Income	100.0%	100.0%
Total Fund	100.0%	100.0%

INVESTMENT PERFORMANCE – LONG-TERM CARE FUND (LTCF)

LTCF Portfolio Comparisons (Time-Weighted Rates of Return)

Category	1-Year Return	3-Year Return	5-Year Return	Index	1-Year Return	3-Year Return	5-Year Return
Total Fund	7.1%	4.2%	3.4%	Weighted Policy Benchmark	7.2%	4.2%	3.3%
Global Equity	4.9%	11.7%	6.3%	MSCI ACWI IMI (Net)	4.6%	11.4%	6%
Global Fixed Income	10.2%	2.9%	4.1%	Bloomberg Barclays Long Liability Index	10.1%	2.9%	4.0%
TIPS	4.8%	2.1%	1.8%	Bloomberg Barclays U.S. TIPS Index, Series L	4.8%	2.1%	1.8%
REITs	9.1%	5.0%	5.3%	FTSE EPRA/NAREIT Developed Liquid (Net)	8.1%	4.2%	4.5%
Commodities	(11.5%)	1.4%	(13.3%)	S&P GSCI Total Return Daily	(11.5%)	1.6%	(13.3%)

LTCF Asset Allocation

Asset Class	Current Allocation	Current Year Target
Global Equity	16.2%	15.0%
Global Fixed Income	60.1%	60.0%
TIPS	5.7%	6.0%
REITs	10.8%	11.0%
Commodities	7.2%	8.0%
Total Fund	100.0%	100.0%

This page intentionally left blank.

ACTUARIAL SECTION

- 116 Actuarial Certifications
- 118 Actuarial Methods & Assumptions
- 121 Summary of Funding Progress
- 122 Exhibit A: Funding Progress - Unfunded Liability & Funded Ratios
- 123 Exhibit B: Funding Progress - Solvency Test
- 125 Exhibit C: Sample Pay Increase Assumptions for Individual Members
- 126 Exhibit D: Sample Non-Economic Assumptions
- 135 Exhibit E: Single Life Retirement Values
- 135 Exhibit F: Schedule of Active Member Valuation Data
- 136 Exhibit G: Members in Valuation
- 139 Exhibit H: Schedule of Retirees & Beneficiaries Added to and Removed from Rolls
- 140 Exhibit I: Analysis of Financial Experience



70.2%

Funded status as of June 30, 2018 (PERF)

With the additional payments from the state,
we are in a **better position to manage liquidity
and move the needle on our funded status.**

Actuarial Section

ACTUARIAL CERTIFICATIONS

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

July 2019

It is our opinion that the valuations have been performed in accordance with generally accepted actuarial principles, in accordance with standards of practice prescribed by the Actuarial Standards Board, and that the assumptions and methods are internally consistent and reasonable for this plan, as prescribed by the CalPERS Board of Administration according to provisions set forth in the California Public Employees' Retirement Law.

As authorized, the CalPERS actuarial staff performs annual actuarial valuations of the CalPERS state, schools, and public agency defined benefit pension plans; the latest such valuations are as of June 30, 2018.

The funding objective for each of these plans is to accumulate assets equal to 100 percent of the accrued liability as measured by the Entry Age Normal Cost Method. Unfunded actuarial liabilities or surplus assets (excess assets) are amortized pursuant to Board policy.

The valuations are based on the member and financial data as of the valuation date, extracted from the various CalPERS databases. Both the membership and financial data are subject to extensive tests for reasonableness.

Further, we have provided information for the completion of Exhibits A through I in the Actuarial Section of the Comprehensive Annual Financial Report (CAFR).

Scott Terando, ASA, EA, MAAA, FCA, CFA
Chief Actuary, CalPERS

LEGISLATORS' RETIREMENT SYSTEM

February 2019

To the best of our knowledge, this report is complete and accurate and contains sufficient information to fully and fairly disclose the actuarial funded condition of the Legislators' Retirement System. This valuation is based on the member and financial data as of June 30, 2018 provided by the various CalPERS databases and the benefits under this plan with CalPERS as of the date this report was produced. In our opinion, this valuation has been performed in accordance with generally accepted actuarial principles, and in accordance with the standards of practice prescribed by the Actuarial Standards Board. The assumptions and methods are internally consistent and reasonable for this plan, as prescribed by the CalPERS Board of Administration according to provisions set forth in the California Public Employee's Retirement Law.

The undersigned are actuaries for CalPERS, who are members of the American Academy of Actuaries and the Society of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Alex Grunder, ASA, MAAA
Associate Pension Actuary, CalPERS

Scott Terando, ASA, EA, MAAA, FCA, CFA
Chief Actuary, CalPERS

Note: Actuarial reports and supporting documents for the state, schools, and local agencies and Legislators' Retirement System can be obtained on the CalPERS website, www.calpers.ca.gov.

ACTUARIAL CERTIFICATIONS

JUDGES' RETIREMENT SYSTEM

February 2019

To the best of our knowledge, this report is complete and accurate and contains sufficient information to fully and fairly disclose the actuarial funded condition of the Judges' Retirement System. This valuation is based on the member and financial data as of June 30, 2018 provided by the various CalPERS databases and the benefits under this plan with CalPERS as of the date this report was produced. It is our opinion that the valuation has been performed in accordance with generally accepted actuarial principles, in accordance with standards of practice prescribed by the Actuarial Standards Board. The assumptions and methods are internally consistent and reasonable for this plan, as prescribed by the CalPERS Board of Administration according to provisions set forth in the California Public Employees' Retirement Law.

The undersigned are actuaries for CalPERS, who are members of the American Academy of Actuaries and the Society of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Stuart Bennett, ASA, MAAA
Senior Pension Actuary, CalPERS

Scott Terando, ASA, EA, MAAA, FCA, CFA
Chief Actuary, CalPERS

JUDGES' RETIREMENT SYSTEM II

February 2019

To the best of our knowledge, this report is complete and accurate and contains sufficient information to fully and fairly disclose the actuarial funded condition of the Judges' Retirement System II. This valuation is based on the member and financial data as of June 30, 2018 provided by the various CalPERS databases and the benefits under this plan with CalPERS as of the date this report was produced. In our opinion, this valuation has been performed in accordance with generally accepted actuarial principles, and in accordance with the standards of practice prescribed by the Actuarial Standards Board. The assumptions and methods are internally consistent and reasonable for this plan, as prescribed by the CalPERS Board of Administration according to provisions set forth in the California Public Employee's Retirement Law.

The undersigned are actuaries for CalPERS, who are members of the American Academy of Actuaries and the Society of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Jean Fannjiang, ASA, MAAA
Senior Pension Actuary, CalPERS

Scott Terando, ASA, EA, MAAA, FCA, CFA
Chief Actuary, CalPERS

Note: The actuarial report and supporting documents for the Judges' Retirement System and Judges' Retirement System II can be obtained on the CalPERS website, www.calpers.ca.gov.

ACTUARIAL METHODS & ASSUMPTIONS

The ultimate cost that a retirement system such as the California Public Employees' Retirement System (CalPERS or the System) incurs is equal to benefits paid plus the expenses resulting from administration and financing. These costs are paid through contributions to the plan and investment earnings on the System's assets.

Actuarial Data

As stated in the Actuarial Certifications, the data which serves as the basis of these valuations have been obtained from the various CalPERS databases. We have reviewed the valuation data and believe that it is reasonable and appropriate in aggregate. We are unaware of any potential data issues that would have a material effect on the results of the valuations. Summary information regarding plan membership data for various groups is provided starting on page 135-138 in Exhibits F through G.

Actuarial Cost Method

The primary funding method used is the Entry Age Normal Cost Method. This method is used for all defined benefit pay-related plans within CalPERS, including the Legislators' Retirement System (LRS), the Judges' Retirement System (JRS) and the Judges' Retirement System II (JRS II). It is also used for the Indexed Level of 1959 Survivor Benefits.

Under this method, projected benefits are determined for all members and the associated liabilities are spread in a manner that produces level annual cost as a percentage of pay in each year from the member's entry age to their assumed retirement age on the valuation date. The cost allocated to the current fiscal year is called the normal cost.

The actuarial accrued liability for active members is calculated as the portion of the total cost of the plan allocated to prior years. The actuarial accrued liability for members currently receiving benefits and for separated members entitled to deferred benefits is equal to the present value of the benefits expected to be paid. No normal costs are applicable for these participants.

For CalPERS non-pay-related plans, the financial objective is to produce annual costs that coincide with the value of benefits earned for that year. The Term Insurance Cost Method is used for the plans within the 1959 Survivor Program that are not indexed. The Term Insurance Cost Method is also used for the State Group Term Life Insurance Program. The required contributions are calculated as one and one-half times the expected life insurance payments for the coming year less the current assets available to pay those benefits, but not less than zero.

Amortization of Unfunded Actuarial Accrued Liability

The excess of the total actuarial accrued liability over the market value of plan assets is called the unfunded actuarial accrued liability (UAL). Funding requirements are determined by adding the normal cost and an amortization payment toward the unfunded liability.

The unfunded liability is currently amortized as a "level percent of pay." Amortization periods are based on the source of the liability change. Gains or losses and changes in liability due to assumption changes are amortized with a five-year ramp-up at the beginning and a five-year ramp-down at the end of the amortization period. The five-year ramp-up means that the payments in the first four years of the amortization period are 20 percent, 40 percent, 60 percent and 80 percent of the "full" payment which begins in year five. The five-year ramp-down means that the reverse is true in the final four years of the amortization period. A summary of the current policy is provided in the table below:

Driver	Bases Created June 30, 2018 or Earlier				
	(Gain)/Loss		Assumption/ Method Change	Benefit Change	Golden Handshake
	Investment	Non- Investment			
Amortization Period	30 Years	30 Years	20 Years	20 Years	5 Years
Escalation Rate:					
Active Plans	2.75%	2.75%	2.75%	2.75%	2.75%
Inactive Plans	—%	—%	—%	—%	—%
Ramp-Up	5	5	5	N/A	N/A
Ramp-Down	5	5	5	N/A	N/A

Exceptions for Inactive Plans

The following exceptions apply to plans classified as Inactive. These plans have no active members and no expectation to have active members in the future.

- Amortization of the unfunded liability is on a "level dollar" basis rather than a "level percent of pay" basis. For amortization layers, which utilize a ramp-up and ramp-down, the "ultimate" payment is constant.
- Actuarial judgment will be used to shorten amortization periods for Inactive plans with existing periods that are deemed too long given the duration of the liability. The specific demographics of the plan will be used to determine if shorter periods may be more appropriate.

The CalPERS Board of Administration (the Board) adopted a new amortization policy effective with the June 30, 2019, actuarial valuations. The new policy shortens the period over which actuarial gains and losses are amortized from 30 years to 20 years with the payments computed using a level dollar

Actuarial Section (continued)

amount. In addition, the new policy removes the five-year ramp-up and ramp-down on UAL bases attributable to assumption changes and non-investment gains/losses. The new policy removes the five-year ramp-down on investment gains/losses. These changes will apply only to new UAL bases established on or after June 30, 2019.

For inactive employers the new amortization policy imposes a maximum amortization period of 15 years for all unfunded accrued liabilities effective June 30, 2017. Furthermore, the plan actuary has the ability to shorten the amortization period on any valuation date based on the life expectancy of plan members and projected cash flow needs to the plan.

Driver	Bases Created June 30, 2019 or Later				
	(Gain)/Loss		Assumption/ Method Change	Benefit Change	Golden Handshake
	Investment	Non- Investment			
Amortization Period	20 Years	20 Years	20 Years	20 Years	5 Years
Escalation Rate:					
Active Plans	—%	—%	—%	—%	—%
Inactive Plans	—%	—%	—%	—%	—%
Ramp-Up	5	N/A	N/A	N/A	N/A
Ramp-Down	N/A	N/A	N/A	N/A	N/A

Exception for JRS Plan

The JRS plan is not currently prefunded. The June 30, 2018, actuarial valuation provides a recommended contribution if the state were to begin prefunding. This recommended contribution includes a payment toward unfunded liability based on a 10-year amortization period and level dollar payments.

Asset Valuation Method

For all plans, market value of assets are used to set the required contributions.

ACTUARIAL ASSUMPTIONS

The actuarial assumptions used in determining actuarial liabilities and required employer contributions include both economic and non-economic assumptions. These assumptions represent the actuary's best estimate of anticipated future experience and are reviewed in depth periodically.

Economic Assumptions

Based upon the asset allocation of the Public Employees' Retirement Fund (PERF), the prescribed discount rate assumption for most plans as of June 30, 2018, (net of investment and administrative expenses) adopted by the

Board on December 21, 2016, is 7.00 percent compounded annually. The discount rate for the schools valuation as of June 30, 2018, is 7.25 percent. The discount rate for the schools plan will be decreased to 7.00 percent for the June 30, 2019 valuation.

Different asset allocations and lower assumed investment returns apply to the LRF, JRF, and JRF II.

The discount rates used for funding purposes are net of administrative expenses. The financial reporting discount rates are not reduced for administrative expenses.

The inflation assumption is a component of assumed investment return, assumed wage inflation, and assumed future post-retirement cost-of-living increases.

For plans within CalPERS, the overall payroll is assumed to increase by the inflation assumption plus a 0.25 percent per annum productivity increase assumption. The overall payroll growth assumption is used to project future payroll over which the unfunded liability is amortized.

For plans within CalPERS, the assumed growth in an individual employee's future pay is composed of the inflation assumption, an additional 0.25 percent per annum productivity component, and an annual merit increase based on the member's length of service. The service-based merit increase in an individual's salary recognizes that larger salary increases tend to occur earlier in an employee's career. Pay increase assumptions for individual members are shown for sample lengths of service on page 125 in Exhibit C. A summary of economic assumptions is provided below:

Economic Assumptions	Public Agencies	State	Schools
June 30, 2018 Funding Valuations			
Contribution Year	2020-21	2019-20	2019-20
Discount Rate/ Investment Return (net of expenses)	7.00%	7.00%	7.25%
Expenses	15 basis points	15 basis points	15 basis points
Inflation	2.50%	2.50%	2.625%
Wage Inflation ¹	2.75%	2.75%	2.875%
Fiscal Year 2018-19 Financial Reporting			
Discount Rate	7.15%	7.15%	7.15%
Inflation	2.50%	2.50%	2.50%
Wage Inflation	2.75%	2.75%	2.75%

(1) This is also the assumed payroll growth which is used to amortize unfunded liabilities.

Actuarial Section (continued)

Economic Assumptions	JRF	JRF II	LRF
June 30, 2018 Funding Valuations			
Contribution Year	2019-20	2019-20	2019-20
Discount Rate/ Investment Return (net of expenses)	3.00%	6.50%	5.00%
Expenses		15 basis points	25 basis points
Inflation	2.50%	2.50%	2.50%
Wage Inflation	2.75%	2.75% ¹	2.75%
Fiscal Year 2018-19 Financial Reporting			
Discount Rate	3.13%	6.65%	5.25%
Inflation	2.50%	2.50%	2.50%
Wage Inflation	2.75%	2.75%	2.75%

(1) This is also the assumed payroll growth which is used to amortize unfunded liabilities.

Non-Economic Assumptions

Non-economic assumptions for plans within the PERF are based upon the most recent CalPERS experience study (covering the period June 30, 1997, through June 30, 2015) that was completed and adopted by the Board in December 2017.

Post-retirement mortality rates are based on CalPERS experience and include 15 years of projected ongoing mortality improvement using 90 percent of Scale MP 2016 published by the Society of Actuaries. These tables are used to estimate the value of benefits expected to be paid for service and disability retirements. For disability retirements, impaired longevity is recognized by a separate table. Sample life annuity values based on these tables are shown on page 135 in Exhibit E.

CHANGES SINCE PRIOR VALUATION

Changes in Actuarial Methods

CalPERS has implemented a new actuarial valuation software system for the June 30, 2018 funding valuations. This new system has refined and improved calculation methodology.

Changes in Actuarial Assumptions

On December 21, 2016, the Board lowered the discount rate for the PERF for funding purposes from 7.50 percent to 7.00 percent using a three-year phase-in beginning with the June 30, 2016 actuarial valuations (the June 30, 2017 valuations for schools).

On December 19, 2017, the Board of Administration adopted new actuarial assumptions based on the recommendations in the December 2017 CalPERS Experience Study and Review of Actuarial Assumptions. This study reviewed the retirement rates, termination rates, mortality rates, rates of salary increases and inflation assumption for public agencies, state plan, and the schools plan. These new assumptions are incorporated into the June 30, 2017 actuarial valuations (June 30, 2018 for

schools). A summary of assumption changes for the PERF is shown below:

Assumptions Changes	Public Agencies	State	Schools
June 30, 2018 Funding Valuations			
Contribution Year	2020-21	2019-20	2019-20
Discount Rate/ Investment Return (net of expenses)	7.25% to 7.00%	7.25% to 7.00%	7.375% to 7.25%
Expenses	No change	No change	No change
Inflation	2.625% to 2.50%	2.625% to 2.50%	2.75% to 2.625%
Wage Inflation	2.875% to 2.75%	2.875% to 2.75%	3.00% to 2.875%
Demographic Assumptions	No change	No change	Updated based on 12/2017 experience study
Fiscal Year 2018-19 Financial Reporting			
Discount Rate	No change	No change	No change
Inflation	No change	No change	No change
Wage Inflation	No change	No change	No change
Demographic Assumptions	No change	No change	No change

With regard to the LRF, JRF, and JRF II, the only assumption change was a change to the discount rate for financial reporting purposes for JRF from 3.62 percent to 3.13 percent for Fiscal Year 2018-19.

Changes in Plan Provisions

There were no changes in the plan provisions for the school plans, state plans, LRF, JRF, and JRF II. Public agencies can make changes to their plan provisions; such changes occur on an ongoing basis. A summary of the plan provisions that were used for a specific plan can be found in Appendix B of the plan's Annual Valuation Report.

SUMMARY OF FUNDING PROGRESS

UNFUNDED LIABILITY & FUNDED RATIOS

For the plans in CalPERS, unfunded actuarial accrued liabilities are the difference between entry age normal accrued liabilities and the assets of the Fund. It is required that these unfunded liabilities be financed systematically over future years.

While no single measure can fully describe the financial condition of a plan, the ratio of a pension plan's market value of assets to its liabilities provides a meaningful index. The higher this ratio, the stronger the plan and observation of this ratio over a period of years can give an indication as to the financial strength of the system. This measure is presented on page 122 in Exhibit A.

For all plans, assets of the Fund refers to the market value of assets.

SOLVENCY TEST

Exhibit B, Funding Progress — Solvency Test shown on page 123 demonstrates System solvency as measured using the System's own assumptions and liability calculation methods.

INDEPENDENT REVIEW

To ensure the quality of its valuations, CalPERS contracts with independent consulting actuaries to review the valuations on an annual basis. The review is broken into three groups, so that each group is reviewed on a triennial basis.

Actuarial Section (continued)

EXHIBIT A: FUNDING PROGRESS – UNFUNDED LIABILITY & FUNDED RATIOS¹

Actuarial Valuation Date	Actuarial Value of Assets (1)	Actuarial Accrued Liability (AAL) (Entry Age) (2)	Unfunded AAL (UAAL)/ Surplus (AVA Basis) (3) = (2) - (1)	Funded Ratio (Actuarial Value of Assets Basis) (4) = (1) / (2)	Annual Covered Payroll (5)	UAAL/ Surplus as a % of Covered Payroll (6) = (3) / (5)	Market Value of Assets (MVA) (7)	Unfunded AAL (UAAL)/ Surplus (MVA Basis) (8) = (2) - (7)	Funded Ratio (Market Value of Assets Basis) (9) = (7) / (2)
PERF (Dollars in Millions)									
06/30/18	\$354,616	\$504,996	\$150,380	70.2%	\$53,903	279.0%	\$354,616	\$150,380	70.2%
06/30/17	326,182	465,046	138,864	70.1%	51,991	267.1%	326,182	138,864	70.1%
06/30/16	298,126	436,703	138,577	68.3%	49,833	278.1%	298,126	138,577	68.3%
06/30/15	302,418	413,700	111,282	73.1%	47,458	234.5%	302,418	111,282	73.1%
06/30/14	301,257	394,726	93,469	76.3%	44,958	207.9%	301,257	93,469	76.3%
06/30/13	281,928	375,019	93,091	75.2%	42,575	218.7%	261,622	113,397	69.8%
06/30/12	282,991	340,429	57,438	83.1%	42,599	134.8%	236,800	103,629	69.6%
06/30/11	271,389	328,567	57,178	82.6%	43,901	130.2%	241,740	86,827	73.6%
06/30/10	257,070	308,343	51,273	83.4%	44,984	114.0%	201,632	106,711	65.4%
06/30/09	244,964	294,042	49,078	83.3%	45,100	108.8%	178,860	115,182	60.8%
LRF (Dollars in Thousands)									
06/30/18	\$115,484	\$98,927	(\$16,557)	116.7%	\$1,098	(1,507.9%)	\$115,484	(\$16,557)	116.7%
06/30/17	116,884	100,845	(16,039)	115.9%	1,209	(1,326.6%)	116,884	(16,039)	115.9%
06/30/16	119,050	106,975	(12,075)	111.3%	1,321	(914.1%)	119,050	(12,075)	111.3%
06/30/15	121,469	105,746	(15,723)	114.9%	1,275	(1,233.2%)	121,469	(15,723)	114.9%
06/30/14	130,353	111,274	(19,079)	117.1%	1,500	(1,271.9%)	130,353	(19,079)	117.1%
06/30/13	123,201	115,806	(7,395)	106.4%	1,427	(518.2%)	122,148	(6,342)	105.5%
06/30/12	124,212	108,585	(15,627)	114.4%	1,983	(788.0%)	123,029	(14,444)	113.3%
06/30/11	125,646	108,977	(16,669)	115.3%	2,269	(734.6%)	123,570	(14,593)	113.4%
06/30/10	126,642	112,356	(14,286)	112.7%	2,159	(661.7%)	114,105	(1,749)	101.6%
06/30/09	134,195	111,898	(22,297)	119.9%	2,057	(1,084.0%)	111,829	69	99.9%
JRF (Dollars in Thousands)									
06/30/18	\$44,492	\$3,320,530	\$3,276,038	1.3%	\$35,335	9,271.4%	\$44,492	\$3,276,038	1.3%
06/30/17	48,275	3,315,731	3,267,456	1.5%	38,330	8,524.5%	48,275	3,267,456	1.5%
06/30/16	39,794	3,428,743	3,388,949	1.2%	42,430	7,987.2%	39,794	3,388,949	1.2%
06/30/15	41,178	3,322,610	3,281,432	1.2%	44,284	7,410.0%	41,178	3,281,432	1.2%
06/30/14	57,199	3,414,780	3,357,581	1.7%	52,335	6,415.6%	57,199	3,357,581	1.7%
06/30/13	53,820	3,383,310	3,329,490	1.6%	60,594	5,494.8%	53,820	3,329,490	1.6%
06/30/12	72,693	3,172,276	3,099,583	2.3%	69,227	4,477.4%	72,693	3,099,583	2.3%
06/30/11	54,383	3,296,538	3,242,155	1.6%	75,920	4,270.5%	54,383	3,242,155	1.6%
06/30/10	63,828	3,429,381	3,365,553	1.9%	85,947	3,915.8%	63,828	3,365,553	1.9%
06/30/09	41,390	3,582,992	3,541,602	1.2%	96,649	3,664.4%	41,390	3,541,602	1.2%
JRF II (Dollars in Thousands)									
06/30/18	\$1,531,543	\$1,554,348	\$22,805	98.5%	\$310,294	7.3%	\$1,531,543	\$22,805	98.5%
06/30/17	1,356,099	1,365,862	9,763	99.3%	291,383	3.4%	1,356,099	9,763	99.3%
06/30/16	1,172,953	1,272,751	99,798	92.2%	282,619	35.3%	1,172,953	99,798	92.2%
06/30/15	1,084,142	1,081,824	(2,318)	100.2%	272,698	(0.9%)	1,084,142	(2,318)	100.2%
06/30/14	1,013,840	950,642	(63,198)	106.6%	251,586	(25.1%)	1,013,840	(63,198)	106.6%
06/30/13	778,980	837,198	58,218	93.0%	241,988	24.1%	795,966	41,232	95.1%
06/30/12	667,557	702,732	35,175	95.0%	230,736	15.2%	655,384	47,348	93.3%
06/30/11	561,476	609,562	48,086	92.1%	229,650	20.9%	575,978	33,584	94.5%
06/30/10	461,071	520,687	59,616	88.6%	212,663	28.0%	422,101	98,586	81.1%
06/30/09	378,692	450,547	71,855	84.1%	198,793	36.1%	315,577	134,970	70.0%

(1) For contributions data, the actuarially determined contribution compared with actual employer contributions received (including the excess or deficiency for each of the last four years) is shown in the Schedule of Contributions in the Required Supplementary Information.

EXHIBIT B: FUNDING PROGRESS – SOLVENCY TEST

The funding objective for a retirement system is to be able to pay long-term benefit promises.

If a system follows actuarially sound financing principles, it will be able to pay all of its promised benefits when due—the ultimate test of financial soundness.

A short-term solvency test is one means of checking a system's funding progress. In a short-term solvency test, the plan's present assets (investments and cash) are compared with 1) member contributions on deposit, 2) the liabilities for future benefits to persons who have retired or terminated, and 3) the liabilities for projected benefits for service already rendered by active members. In a system that employs level contribution rate financing, the liabilities for member contributions on deposit (liability 1) and the liabilities for future benefits to present retirees (liability 2) will be fully covered by present assets, except in rare circumstances.

In addition, the liabilities for service already rendered by members (liability 3) will be partially covered by the remainder of present assets. Generally, if the system has been using level contribution rate financing, the funded portion of liability 3 will increase over time.

Refer to Exhibit B on page 124 for solvency test related to PERF, LRF, JRF, and JRF II.

Actuarial Section (continued)

EXHIBIT B: FUNDING PROGRESS – SOLVENCY TEST (CONTINUED)

Valuation Date	Accrued Liability				Valuation Assets	Portion of Actuarial Accrued Liabilities Covered by Valuation Assets		
	Member Contributions ¹ (1)	Terminated, Retirees & Beneficiaries (2)	Employer-Financed Portion of Active Members (3)	Total Accrued Liability (1) + (2) + (3)		(1)	(2)	(3)
PERF (Dollars in Millions)								
6/30/18	\$58,803	\$302,037	\$144,156	\$504,996	\$354,616	100.0%	97.9%	0.0%
6/30/17	56,009	275,222	133,815	465,046	326,182	100.0%	98.2%	—%
6/30/16	53,872	256,253	126,578	436,703	298,126	100.0%	95.3%	—%
6/30/15	51,572	241,931	120,197	413,700	302,418	100.0%	100.0%	7.4%
6/30/14	49,197	228,283	117,246	394,726	301,257	100.0%	100.0%	20.3%
6/30/13	46,343	203,680	124,996	375,019	281,900	100.0%	100.0%	25.5%
6/30/12	43,015	193,015	104,399	340,429	283,000	100.0%	100.0%	45.0%
6/30/11	42,322	179,069	107,176	328,567	271,400	100.0%	100.0%	46.7%
6/30/10	40,613	160,208	107,522	308,343	257,100	100.0%	100.0%	52.3%
6/30/09	39,071	146,753	108,218	294,042	245,000	100.0%	100.0%	54.6%
LRF (Dollars in Thousands)								
6/30/18	\$799	\$93,565	\$4,563	\$98,927	\$115,484	100.0%	100.0%	462.9%
6/30/17	731	95,188	4,926	100,845	116,884	100.0%	100.0%	425.6%
6/30/16	673	101,400	4,902	106,975	119,050	100.0%	100.0%	346.3%
6/30/15	556	100,658	4,532	105,746	121,469	100.0%	100.0%	446.9%
6/30/14	508	104,992	5,774	111,274	130,353	100.0%	100.0%	430.4%
6/30/13	351	110,313	5,142	115,806	123,201	100.0%	100.0%	243.8%
6/30/12	801	100,337	7,447	108,585	124,212	100.0%	100.0%	309.8%
6/30/11	1,608	99,305	8,064	108,977	125,646	100.0%	100.0%	306.7%
6/30/10	1,391	103,673	7,292	112,356	126,642	100.0%	100.0%	295.9%
6/30/09	1,047	105,002	5,849	111,898	134,195	100.0%	100.0%	481.2%
JRF (Dollars in Thousands)								
6/30/18	\$57,561	\$2,955,053	\$307,916	\$3,320,530	\$44,492	77.3%	0.0%	0.0%
6/30/17	61,748	2,914,854	339,129	3,315,731	48,275	78.2%	—	—
6/30/16	65,966	2,970,871	391,906	3,428,743	39,794	60.3%	—	—
6/30/15	66,911	2,761,781	493,918	3,322,610	41,178	61.5%	—	—
6/30/14	76,196	2,734,090	604,494	3,414,780	57,199	75.1%	—	—
6/30/13	84,692	2,691,326	607,292	3,383,310	53,820	64.0%	—	—
6/30/12	91,589	2,441,189	639,498	3,172,276	72,693	79.0%	—	—
6/30/11	94,320	2,494,653	707,565	3,296,538	54,383	58.0%	—	—
6/30/10	100,426	2,404,920	924,035	3,429,381	63,828	64.0%	—	—
6/30/09	105,851	1,949,177	1,527,964	3,582,992	41,390	39.0%	—	—
JRF II (Dollars in Thousands)								
6/30/18	\$393,673	\$305,259	\$855,416	\$1,554,348	\$1,531,543	100.0%	100.0%	97.3%
6/30/17	364,967	207,997	792,898	1,365,862	1,356,099	100.0%	100.0%	98.8%
6/30/16	357,069	145,526	770,156	1,272,751	1,172,953	100.0%	100.0%	87.0%
6/30/15	348,475	110,645	622,704	1,081,824	1,084,142	100.0%	100.0%	100.4%
6/30/14	285,683	79,563	585,396	950,642	1,013,840	100.0%	100.0%	110.8%
6/30/13	243,049	58,393	535,756	837,198	778,980	100.0%	100.0%	89.1%
6/30/12	223,897	41,142	437,693	702,732	667,557	100.0%	100.0%	92.0%
6/30/11	172,538	31,596	405,428	609,562	561,476	100.0%	100.0%	88.1%
6/30/10	136,179	14,430	370,078	520,687	461,071	100.0%	100.0%	83.9%
6/30/09	121,016	13,191	316,340	450,547	378,692	100.0%	100.0%	77.3%

(1) Includes accrued interest on member contributions.

EXHIBIT C: SAMPLE PAY INCREASE ASSUMPTIONS FOR INDIVIDUAL MEMBERS

Annual Percentage Increases by Duration of Service¹

Duration of Services	State Miscellaneous First & Second Tier			State Industrial First & Second Tier			State Safety		
	Entry Age 20	Entry Age 30	Entry Age 40	Entry Age 20	Entry Age 30	Entry Age 40	Entry Age 20	Entry Age 30	Entry Age 40
0	9.16%	8.34%	7.19%	10.03%	9.78%	9.17%	7.75%	7.75%	7.75%
3	8.03%	7.11%	5.80%	7.84%	7.45%	6.62%	5.82%	5.82%	5.82%
5	7.09%	6.31%	5.14%	6.77%	6.35%	5.51%	4.87%	4.87%	4.87%
10	5.05%	4.57%	3.91%	5.45%	4.91%	4.14%	3.59%	3.59%	3.59%
15	4.28%	3.99%	3.57%	4.55%	4.22%	3.80%	3.47%	3.47%	3.47%
20	3.77%	3.60%	3.33%	3.95%	3.75%	3.55%	3.36%	3.36%	3.36%
25	3.43%	3.33%	3.16%	3.56%	3.44%	3.32%	3.28%	3.28%	3.28%
30	3.20%	3.15%	3.04%	3.29%	3.22%	3.15%	3.20%	3.20%	3.20%

Duration of Services	State Peace Officer/Firefighter			California Highway Patrol			School		
	Entry Age 20	Entry Age 30	Entry Age 40	Entry Age 20	Entry Age 30	Entry Age 40	Entry Age 20	Entry Age 30	Entry Age 40
0	17.45%	17.45%	17.45%	9.77%	9.77%	9.77%	7.03%	6.94%	6.55%
3	9.50%	9.50%	9.50%	6.99%	6.99%	6.99%	6.29%	6.07%	5.55%
5	6.76%	6.76%	6.76%	5.44%	5.44%	5.44%	5.37%	5.09%	4.55%
10	3.95%	3.95%	3.95%	3.95%	3.95%	3.95%	4.46%	4.29%	3.87%
15	3.25%	3.25%	3.25%	3.95%	3.95%	3.95%	4.27%	4.09%	3.73%
20	4.15%	4.15%	4.15%	4.75%	4.75%	4.75%	4.10%	3.92%	3.61%
25	4.25%	4.25%	4.25%	4.95%	4.95%	4.95%	3.95%	3.78%	3.51%
30	3.75%	3.75%	3.75%	3.95%	3.95%	3.95%	3.62%	3.46%	3.23%

Duration of Services	Public Agency Miscellaneous			Public Agency Fire			Public Agency Police		
	Entry Age 20	Entry Age 30	Entry Age 40	Entry Age 20	Entry Age 30	Entry Age 40	Entry Age 20	Entry Age 30	Entry Age 40
0	11.25%	10.50%	9.25%	19.75%	19.75%	19.75%	13.02%	13.02%	13.02%
3	7.45%	7.00%	6.10%	8.55%	8.55%	8.55%	7.66%	7.66%	7.66%
5	6.15%	5.70%	4.90%	6.47%	6.47%	6.47%	5.75%	5.75%	5.75%
10	4.35%	4.10%	3.65%	4.40%	4.40%	4.40%	4.20%	4.20%	4.20%
15	3.95%	3.75%	3.35%	4.19%	4.19%	4.19%	4.25%	4.25%	4.25%
20	3.65%	3.50%	3.20%	4.01%	4.01%	4.01%	4.30%	4.30%	4.30%
25	3.55%	3.40%	3.15%	3.86%	3.86%	3.86%	4.35%	4.35%	4.35%
30	3.55%	3.40%	3.15%	3.72%	3.72%	3.72%	4.40%	4.40%	4.40%

Duration of Services	Public Agency County Peace Officer		
	Entry Age 20	Entry Age 30	Entry Age 40
0	15.95%	15.95%	15.95%
3	8.00%	8.00%	8.00%
5	6.10%	6.10%	6.10%
10	4.45%	4.45%	4.45%
15	4.25%	4.25%	4.25%
20	4.25%	4.25%	4.25%
25	4.50%	4.50%	4.50%
30	4.75%	4.75%	4.75%

(1) Increase includes the assumed inflation rate of 2.75 percent per year for all plans, except for CHP 3.00 percent per year.

EXHIBIT D: SAMPLE NON-ECONOMIC ASSUMPTIONS

State Miscellaneous First and Second Tier – Probability of an active member leaving due to:

AGE ¹	Termination with Refund	Termination with Vested Deferred Benefits	Service Retirement ³		Non-Industrial Death		Non-Industrial Disability		Industrial Death	Industrial Disability
	5 Years ²	5 Years ²	10 Years ²	25 Years ²	Male	Female	Male	Female	Male & Female	Male & Female
20	0.02720	0.04410	N/A	N/A	0.00022	0.00007	0.00019	0.00039	N/A	N/A
25	0.02720	0.04410	N/A	N/A	0.00029	0.00011	0.00019	0.00039	N/A	N/A
30	0.02230	0.03940	N/A	N/A	0.00038	0.00015	0.00019	0.00046	N/A	N/A
35	0.01740	0.03460	N/A	N/A	0.00049	0.00027	0.00036	0.00096	N/A	N/A
40	0.01600	0.02890	N/A	N/A	0.00064	0.00037	0.00103	0.00186	N/A	N/A
45	0.01470	0.02310	N/A	N/A	0.00080	0.00054	0.00204	0.00326	N/A	N/A
50	0.01540	0.01810	0.01000	0.01900	0.00116	0.00079	0.00274	0.00405	N/A	N/A
55	0.01600	0.01300	0.03700	0.09400	0.00172	0.00120	0.00238	0.00310	N/A	N/A
56	0.01600	0.01300	0.03500	0.08300	0.00187	0.00131	0.00222	0.00275	N/A	N/A
57	0.01600	0.01300	0.03600	0.08400	0.00203	0.00141	0.00200	0.00267	N/A	N/A
58	0.01600	0.01300	0.04300	0.08900	0.00221	0.00150	0.00200	0.00259	N/A	N/A
59	0.01600	0.01300	0.04800	0.10700	0.00239	0.00158	0.00200	0.00257	N/A	N/A
60	0.01600	0.01300	0.06200	0.14100	0.00255	0.00166	0.00200	0.00256	N/A	N/A
61	0.01600	0.01300	0.06800	0.14200	0.00271	0.00174	0.00200	0.00256	N/A	N/A
62	0.01600	0.01300	0.12700	0.26300	0.00287	0.00183	0.00200	0.00256	N/A	N/A
63	0.01600	0.01300	0.12500	0.26300	0.00306	0.00195	0.00200	0.00256	N/A	N/A
64	0.01600	0.01300	0.11900	0.23500	0.00331	0.00212	0.00200	0.00256	N/A	N/A
65	0.01600	0.01300	0.15800	0.24900	0.00363	0.00233	0.00200	0.00256	N/A	N/A
70	0.01600	0.01300	0.17600	0.27600	0.00623	0.00388	0.00200	0.00256	N/A	N/A

(1) Age for Termination with Refund and Termination with Vested Deferred Benefits means Entry Age. For all other decrements, age means Attained Age.

(2) Years of service.

(3) State Miscellaneous Second Tier members have the right to convert their Second Tier service to First Tier service provided that they make up the shortfall in their accumulated contributions with interest. The assumption is that all Second Tier members will elect to convert to First Tier service.

State Industrial – Probability of an active member leaving due to:

AGE ¹	Termination with Refund	Termination with Vested Deferred Benefits	Service Retirement		Non-Industrial Death		Non-Industrial Disability	Industrial Death	Industrial Disability
	5 Years ²	5 Years ²	10 Years ²	25 Years ²	Male	Female	Male & Female	Male & Female	Male & Female
20	0.01900	0.04960	N/A	N/A	0.00022	0.00007	0.00043	0.00004	0.00015
25	0.01900	0.04490	N/A	N/A	0.00029	0.00011	0.00043	0.00006	0.00015
30	0.01900	0.04050	N/A	N/A	0.00038	0.00015	0.00106	0.00007	0.00015
35	0.01900	0.03560	N/A	N/A	0.00049	0.00027	0.00184	0.00009	0.00029
40	0.01900	0.03110	N/A	N/A	0.00064	0.00037	0.00295	0.00010	0.00029
45	0.01900	0.00000	N/A	N/A	0.00080	0.00054	0.00448	0.00012	0.00044
50	0.01900	0.00000	0.00800	0.02600	0.00116	0.00079	0.00601	0.00013	0.00044
55	0.01900	0.00000	0.04700	0.14800	0.00172	0.00120	0.00771	0.00015	0.00058
56	0.01900	0.00000	0.04000	0.12600	0.00187	0.00131	0.00771	0.00015	0.00058
57	0.01900	0.00000	0.03600	0.11400	0.00203	0.00141	0.00771	0.00015	0.00058
58	0.01900	0.00000	0.04100	0.13100	0.00221	0.00150	0.00771	0.00015	0.00058
59	0.01900	0.00000	0.04800	0.15300	0.00239	0.00158	0.00771	0.00016	0.00058
60	0.01900	0.00000	0.06000	0.19100	0.00255	0.00166	0.00771	0.00016	0.00058
61	0.01900	0.00000	0.06400	0.20500	0.00271	0.00174	0.00771	0.00016	0.00058
62	0.01900	0.00000	0.11300	0.35700	0.00287	0.00183	0.00771	0.00017	0.00058
63	0.01900	0.00000	0.10300	0.32800	0.00306	0.00195	0.00771	0.00017	0.00058
64	0.01900	0.00000	0.09000	0.28600	0.00331	0.00212	0.00771	0.00017	0.00058
65	0.01900	0.00000	0.11700	0.37100	0.00363	0.00233	0.00771	0.00018	0.00058
70	0.01900	0.00000	0.13900	0.44300	0.00623	0.00388	0.00771	0.00019	0.00058

(1) Age for Termination with Refund and Termination with Vested Deferred Benefits means Entry Age. For all other decrements, age means Attained Age.

(2) Years of service.

Actuarial Section (continued)

EXHIBIT D: SAMPLE NON-ECONOMIC ASSUMPTIONS (CONTINUED)

California Highway Patrol – Probability of an active member leaving due to:

YRS ¹	Termination with Refund	AGE ²	Termination with Vested Deferred Benefits	Service Retirement		Non-Industrial Death		Non-Industrial Disability	Industrial Death	Industrial Disability
	Vary by Service		5 Years	10 Years	25 Years	Male	Female	Male & Female	Male & Female	Male & Female
0	0.10500	20	0.00900	N/A	N/A	0.00022	0.00007	0.00010	0.00004	0.00016
1	0.02430	25	0.00900	N/A	N/A	0.00029	0.00011	0.00010	0.00006	0.00035
2	0.01520	30	0.00900	N/A	N/A	0.00038	0.00015	0.00010	0.00007	0.00068
3	0.00910	35	0.00900	N/A	N/A	0.00049	0.00027	0.00010	0.00009	0.00122
4	0.00540	40	0.00900	N/A	N/A	0.00064	0.00037	0.00010	0.00010	0.00202
5	0.00290	45	0.00900	N/A	N/A	0.00080	0.00054	0.00020	0.00012	0.00316
6	0.00150	50	0.00900	0.03800	0.10700	0.00116	0.00079	0.00020	0.00013	0.01214
7	0.00080	55	0.00900	0.05000	0.11700	0.00172	0.00120	0.00020	0.00015	0.05407
8	0.00070	56	0.00900	0.05100	0.13900	0.00187	0.00131	0.00020	0.00015	0.07109
9	0.00060	57	0.00900	0.05100	0.15600	0.00203	0.00141	0.00020	0.00015	0.09310
10	0.00050	58	0.00900	0.04900	0.17100	0.00221	0.00150	0.00020	0.00015	0.12144
15	0.00030	59	0.00900	0.08800	0.27400	0.00239	0.00158	0.00020	0.00016	0.15781
20	0.00020	60	0.00900	1.00000	1.00000	0.00255	0.00166	0.00020	0.00016	0.20431
25	0.00020	61	0.00900	1.00000	1.00000	0.00271	0.00174	0.00020	0.00016	0.26350
30	0.00020	62	0.00900	1.00000	1.00000	0.00287	0.00183	0.00020	0.00017	0.27373
35	0.00010	63	0.00900	1.00000	1.00000	0.00306	0.00195	0.00020	0.00017	0.27395
40	0.00010	64	0.00900	1.00000	1.00000	0.00331	0.00212	0.00020	0.00017	0.27418
45	0.00010	65	0.00900	1.00000	1.00000	0.00363	0.00233	0.00020	0.00018	0.27440
50	0.00000	70	0.00900	1.00000	1.00000	0.00623	0.00388	0.00020	0.00019	0.27551

(1) Years of service.

(2) Age for Termination with Vested Deferred Benefits means Entry Age. For all other decrements, age means Attained Age.

Schools – Probability of an active member leaving due to:

AGE ¹	Termination with Refund	Termination with Vested Deferred Benefits	Service Retirement		Non-Industrial Death		Non-Industrial Disability		Industrial Death	Industrial Disability
	5 Years ²	5 Years ²	10 Years ²	25 Years ²	Male	Female	Male	Female	Male & Female	Male & Female
20	0.08080	0.04050	N/A	N/A	0.00022	0.00007	0.00010	0.00011	N/A	N/A
25	0.08080	0.04050	N/A	N/A	0.00029	0.00011	0.00010	0.00011	N/A	N/A
30	0.06340	0.03460	N/A	N/A	0.00038	0.00015	0.00011	0.00016	N/A	N/A
35	0.04610	0.02880	N/A	N/A	0.00049	0.00027	0.00053	0.00043	N/A	N/A
40	0.04090	0.02640	N/A	N/A	0.00064	0.00037	0.00119	0.00081	N/A	N/A
45	0.03580	0.02410	N/A	N/A	0.00080	0.00054	0.00195	0.00168	N/A	N/A
50	0.04030	0.02200	0.00700	0.01300	0.00116	0.00079	0.00261	0.00224	N/A	N/A
55	0.04470	0.01990	0.04200	0.07700	0.00172	0.00120	0.00246	0.00180	N/A	N/A
56	0.04470	0.01990	0.03700	0.06900	0.00187	0.00131	0.00241	0.00160	N/A	N/A
57	0.04470	0.01990	0.03800	0.07100	0.00203	0.00141	0.00236	0.00146	N/A	N/A
58	0.04470	0.01990	0.04500	0.08200	0.00221	0.00150	0.00231	0.00132	N/A	N/A
59	0.04470	0.01990	0.04900	0.09000	0.00239	0.00158	0.00226	0.00119	N/A	N/A
60	0.04470	0.01990	0.06600	0.12100	0.00255	0.00166	0.00221	0.00109	N/A	N/A
61	0.04470	0.01990	0.07200	0.13300	0.00271	0.00174	0.00216	0.00099	N/A	N/A
62	0.04470	0.01990	0.13100	0.24200	0.00287	0.00183	0.00211	0.00092	N/A	N/A
63	0.04470	0.01990	0.12600	0.23300	0.00306	0.00195	0.00206	0.00085	N/A	N/A
64	0.04470	0.01990	0.11700	0.21500	0.00331	0.00212	0.00206	0.00080	N/A	N/A
65	0.04470	0.01990	0.15800	0.29100	0.00363	0.00233	0.00206	0.00077	N/A	N/A
70	0.04470	0.01990	0.14000	0.25800	0.00623	0.00388	0.00206	0.00065	N/A	N/A

(1) Age for Termination with Refund and Termination with Vested Deferred Benefits means Entry Age. For all other decrements, age means Attained Age.

(2) Years of service.

Actuarial Section (continued)

EXHIBIT D: SAMPLE NON-ECONOMIC ASSUMPTIONS (CONTINUED)

State Safety – Probability of an active member leaving due to:

YRS ¹	Termination with Refund	AGE ²	Termination with Vested Deferred Benefits	Service Retirement		Non-Industrial Death		Non-Industrial Disability	Industrial Death	Industrial Disability
	Vary by Service		5 Years	10 Years	25 Years	Male	Female	Male & Female	Male & Female	Male & Female
0	0.14080	20	0.02460	N/A	N/A	0.00022	0.00007	0.00036	0.00004	0.00002
1	0.10140	25	0.02460	N/A	N/A	0.00029	0.00011	0.00054	0.00006	0.00076
2	0.07230	30	0.02460	N/A	N/A	0.00038	0.00015	0.00063	0.00007	0.00170
3	0.05330	35	0.02460	N/A	N/A	0.00049	0.00027	0.00072	0.00009	0.00264
4	0.04440	40	0.02460	N/A	N/A	0.00064	0.00037	0.00072	0.00010	0.00360
5	0.01550	45	0.02460	N/A	N/A	0.00080	0.00054	0.00108	0.00012	0.00457
6	0.01140	50	0.02460	0.01300	0.03200	0.00116	0.00079	0.00201	0.00013	0.00557
7	0.00850	55	0.02460	0.04300	0.18800	0.00172	0.00120	0.00240	0.00015	0.00658
8	0.00690	56	0.02460	0.03900	0.13800	0.00187	0.00131	0.00255	0.00015	0.00679
9	0.00510	57	0.02460	0.04100	0.15100	0.00203	0.00141	0.00262	0.00015	0.00700
10	0.00330	58	0.02460	0.04700	0.13200	0.00221	0.00150	0.00280	0.00015	0.00720
15	0.00190	59	0.02460	0.04900	0.14600	0.00239	0.00158	0.00290	0.00016	0.00741
20	0.00110	60	0.02460	0.05600	0.15800	0.00255	0.00166	0.00320	0.00016	0.00762
25	0.00060	61	0.02460	0.08000	0.16500	0.00271	0.00174	0.00350	0.00016	0.00783
30	0.00040	62	0.02460	0.09500	0.25300	0.00287	0.00183	0.00375	0.00017	0.00805
35	0.00020	63	0.02460	0.10500	0.25500	0.00306	0.00195	0.00420	0.00017	0.00826
40	0.00010	64	0.02460	0.10200	0.25500	0.00331	0.00212	0.00440	0.00017	0.00847
45	0.00010	65	0.02460	0.13800	0.25700	0.00363	0.00233	0.00459	0.00018	0.00869
50	0.00000	70	0.02460	0.16700	0.30900	0.00623	0.00388	0.00459	0.00019	0.00978

(1) Years of service.

(2) Age for Termination with Vested Deferred Benefits means Entry Age. For all other decrements, age means Attained Age.

State Peace Officer/Firefighter – Probability of an active member leaving due to:

YRS ¹	Termination with Refund	AGE ²	Termination with Vested Deferred Benefits	Service Retirement		Non-Industrial Death		Non-Industrial Disability	Industrial Death	Industrial Disability
	Vary by Service		5 Years	10 Years	25 Years	Male	Female	Male & Female	Male & Female	Male & Female
0	0.12170	20	0.01170	N/A	N/A	0.00022	0.00007	0.00030	0.00004	0.00039
1	0.07790	25	0.01170	N/A	N/A	0.00029	0.00011	0.00030	0.00006	0.00087
2	0.04310	30	0.01170	N/A	N/A	0.00038	0.00015	0.00030	0.00007	0.00167
3	0.03530	35	0.01170	N/A	N/A	0.00049	0.00027	0.00030	0.00009	0.00289
4	0.02750	40	0.01170	N/A	N/A	0.00064	0.00037	0.00040	0.00010	0.00464
5	0.00560	45	0.01170	N/A	N/A	0.00080	0.00054	0.00060	0.00012	0.00706
6	0.00520	50	0.01170	0.03000	0.22400	0.00116	0.00079	0.00098	0.00013	0.01027
7	0.00490	55	0.01170	0.05400	0.20900	0.00172	0.00120	0.00143	0.00015	0.01442
8	0.00460	56	0.01170	0.04400	0.21300	0.00187	0.00131	0.00150	0.00015	0.01538
9	0.00420	57	0.01170	0.04700	0.21500	0.00203	0.00141	0.00158	0.00015	0.01638
10	0.00390	58	0.01170	0.06500	0.22400	0.00221	0.00150	0.00165	0.00015	0.01742
15	0.00250	59	0.01170	0.05700	0.27600	0.00239	0.00158	0.00180	0.00016	0.01852
20	0.00150	60	0.01170	0.06600	0.27600	0.00255	0.00166	0.00188	0.00016	0.01966
25	0.00060	61	0.01170	0.06400	0.25100	0.00271	0.00174	0.00195	0.00016	0.02085
30	0.00030	62	0.01170	0.10400	0.32400	0.00287	0.00183	0.00203	0.00017	0.02209
35	0.00030	63	0.01170	0.09300	0.26800	0.00306	0.00195	0.00218	0.00017	0.02339
40	0.00030	64	0.01170	0.08100	0.30600	0.00331	0.00212	0.00225	0.00017	0.02474
45	0.00030	65	0.01170	0.08100	0.34200	0.00363	0.00233	0.00233	0.00018	0.02614
50	0.00000	70	0.01170	1.00000	1.00000	0.00623	0.00388	0.00233	0.00019	0.03403

(1) Years of service.

(2) Age for Termination with Vested Deferred Benefits means Entry Age. For all other decrements, age means Attained Age.

Actuarial Section (continued)

EXHIBIT D: SAMPLE NON-ECONOMIC ASSUMPTIONS (CONTINUED)

Public Agency 2% at 55 Miscellaneous – Probability of an active member leaving due to:

AGE ¹	Termination with Refund	Termination with Vested Deferred Benefits	Service Retirement		Non-Industrial Death		Non-Industrial Disability		Industrial Death	Industrial Disability
	5 Years ²	5 Years ²	10 Years ²	25 Years ²	Male	Female	Male	Female	Male & Female	Male & Female
20	0.02120	0.04220	N/A	N/A	0.00022	0.00007	0.00017	0.00010	N/A	N/A
25	0.01930	0.04220	N/A	N/A	0.00029	0.00011	0.00017	0.00010	N/A	N/A
30	0.01740	0.03930	N/A	N/A	0.00038	0.00015	0.00019	0.00024	N/A	N/A
35	0.01550	0.03640	N/A	N/A	0.00049	0.00027	0.00039	0.00071	N/A	N/A
40	0.01360	0.03440	N/A	N/A	0.00064	0.00037	0.00102	0.00135	N/A	N/A
45	0.01160	0.03250	N/A	N/A	0.00080	0.00054	0.00151	0.00188	N/A	N/A
50	0.00970	0.02710	0.01300	0.02200	0.00116	0.00079	0.00158	0.00199	N/A	N/A
55	0.00780	0.02180	0.04000	0.10900	0.00172	0.00120	0.00158	0.00149	N/A	N/A
56	0.00740	0.02180	0.05000	0.10700	0.00187	0.00131	0.00158	0.00138	N/A	N/A
57	0.00700	0.02180	0.04800	0.09600	0.00203	0.00141	0.00158	0.00128	N/A	N/A
58	0.00660	0.02180	0.05400	0.10600	0.00221	0.00150	0.00158	0.00119	N/A	N/A
59	0.00620	0.02180	0.05500	0.11500	0.00239	0.00158	0.00158	0.00111	N/A	N/A
60	0.00590	0.02180	0.07500	0.14300	0.00255	0.00166	0.00153	0.00105	N/A	N/A
61	0.00550	0.02180	0.08800	0.16300	0.00271	0.00174	0.00148	0.00100	N/A	N/A
62	0.00510	0.02180	0.11800	0.21300	0.00287	0.00183	0.00143	0.00096	N/A	N/A
63	0.00470	0.02180	0.13300	0.24900	0.00306	0.00195	0.00138	0.00093	N/A	N/A
64	0.00440	0.02180	0.12900	0.22300	0.00331	0.00212	0.00133	0.00090	N/A	N/A
65	0.00390	0.02180	0.17300	0.26600	0.00363	0.00233	0.00128	0.00088	N/A	N/A
70	0.00200	0.02180	0.17100	0.30400	0.00623	0.00388	0.00102	0.00084	N/A	N/A

(1) Age for Termination with Refund and Termination with Vested Deferred Benefits means Entry Age. For all other decrements, age means Attained Age.

(2) Years of service.

Public Agency 2.5% at 55 Miscellaneous – Probability of an active member leaving due to:

AGE ¹	Termination with Refund	Termination with Vested Deferred Benefits	Service Retirement		Non-Industrial Death		Non-Industrial Disability		Industrial Death	Industrial Disability
	5 Years ²	5 Years ²	10 Years ²	25 Years ²	Male	Female	Male	Female	Male & Female	Male & Female
20	0.02120	0.04220	N/A	N/A	0.00022	0.00007	0.00017	0.00010	N/A	N/A
25	0.01930	0.04220	N/A	N/A	0.00029	0.00011	0.00017	0.00010	N/A	N/A
30	0.01740	0.03930	N/A	N/A	0.00038	0.00015	0.00019	0.00024	N/A	N/A
35	0.01550	0.03640	N/A	N/A	0.00049	0.00027	0.00039	0.00071	N/A	N/A
40	0.01360	0.03440	N/A	N/A	0.00064	0.00037	0.00102	0.00135	N/A	N/A
45	0.01160	0.03250	N/A	N/A	0.00080	0.00054	0.00151	0.00188	N/A	N/A
50	0.00970	0.02710	0.01400	0.03300	0.00116	0.00079	0.00158	0.00199	N/A	N/A
55	0.00780	0.02180	0.03800	0.12200	0.00172	0.00120	0.00158	0.00149	N/A	N/A
56	0.00740	0.02180	0.04700	0.13600	0.00187	0.00131	0.00158	0.00138	N/A	N/A
57	0.00700	0.02180	0.04800	0.12300	0.00203	0.00141	0.00158	0.00128	N/A	N/A
58	0.00660	0.02180	0.05400	0.11200	0.00221	0.00150	0.00158	0.00119	N/A	N/A
59	0.00620	0.02180	0.05400	0.13100	0.00239	0.00158	0.00158	0.00111	N/A	N/A
60	0.00590	0.02180	0.07200	0.15800	0.00255	0.00166	0.00153	0.00105	N/A	N/A
61	0.00550	0.02180	0.07800	0.16100	0.00271	0.00174	0.00148	0.00100	N/A	N/A
62	0.00510	0.02180	0.09300	0.20500	0.00287	0.00183	0.00143	0.00096	N/A	N/A
63	0.00470	0.02180	0.12400	0.22600	0.00306	0.00195	0.00138	0.00093	N/A	N/A
64	0.00440	0.02180	0.11200	0.20700	0.00331	0.00212	0.00133	0.00090	N/A	N/A
65	0.00390	0.02180	0.15600	0.26500	0.00363	0.00233	0.00128	0.00088	N/A	N/A
70	0.00200	0.02180	0.15600	0.26500	0.00623	0.00388	0.00102	0.00084	N/A	N/A

(1) Age for Termination with Refund and Termination with Vested Deferred Benefits means Entry Age. For all other decrements, age means Attained Age.

(2) Years of service.

Actuarial Section (continued)

EXHIBIT D: SAMPLE NON-ECONOMIC ASSUMPTIONS (CONTINUED)

Public Agency 2.7% at 55 Miscellaneous – Probability of an active member leaving due to:

AGE ¹	Termination with Refund	Termination with Vested Deferred Benefits	Service Retirement		Non-Industrial Death		Non-Industrial Disability		Industrial Death	Industrial Disability
	5 Years ²	5 Years ²	10 Years ²	25 Years ²	Male	Female	Male	Female	Male & Female	Male & Female
20	0.02120	0.04220	N/A	N/A	0.00022	0.00007	0.00017	0.00010	N/A	N/A
25	0.01930	0.04220	N/A	N/A	0.00029	0.00011	0.00017	0.00010	N/A	N/A
30	0.01740	0.03930	N/A	N/A	0.00038	0.00015	0.00019	0.00024	N/A	N/A
35	0.01550	0.03640	N/A	N/A	0.00049	0.00027	0.00039	0.00071	N/A	N/A
40	0.01360	0.03440	N/A	N/A	0.00064	0.00037	0.00102	0.00135	N/A	N/A
45	0.01160	0.03250	N/A	N/A	0.00080	0.00054	0.00151	0.00188	N/A	N/A
50	0.00970	0.02710	0.01000	0.03300	0.00116	0.00079	0.00158	0.00199	N/A	N/A
55	0.00780	0.02180	0.05500	0.15600	0.00172	0.00120	0.00158	0.00149	N/A	N/A
56	0.00740	0.02180	0.06700	0.16900	0.00187	0.00131	0.00158	0.00138	N/A	N/A
57	0.00700	0.02180	0.06700	0.14200	0.00203	0.00141	0.00158	0.00128	N/A	N/A
58	0.00660	0.02180	0.06600	0.15100	0.00221	0.00150	0.00158	0.00119	N/A	N/A
59	0.00620	0.02180	0.07000	0.15800	0.00239	0.00158	0.00158	0.00111	N/A	N/A
60	0.00590	0.02180	0.08600	0.18200	0.00255	0.00166	0.00153	0.00105	N/A	N/A
61	0.00550	0.02180	0.09400	0.18400	0.00271	0.00174	0.00148	0.00100	N/A	N/A
62	0.00510	0.02180	0.12200	0.22600	0.00287	0.00183	0.00143	0.00096	N/A	N/A
63	0.00470	0.02180	0.16100	0.22200	0.00306	0.00195	0.00138	0.00093	N/A	N/A
64	0.00440	0.02180	0.14700	0.25400	0.00331	0.00212	0.00133	0.00090	N/A	N/A
65	0.00390	0.02180	0.17400	0.30600	0.00363	0.00233	0.00128	0.00088	N/A	N/A
70	0.00200	0.02180	0.18100	0.29100	0.00623	0.00388	0.00102	0.00084	N/A	N/A

(1) Age for Termination with Refund and Termination with Vested Deferred Benefits means Entry Age. For all other decrements, age means Attained Age.

(2) Years of service.

Public Agency 3% at 60 Miscellaneous – Probability of an active member leaving due to:

AGE ¹	Termination with Refund	Termination with Vested Deferred Benefits	Service Retirement		Non-Industrial Death		Non-Industrial Disability		Industrial Death	Industrial Disability
	5 Years ²	5 Years ²	10 Years ²	25 Years ²	Male	Female	Male	Female	Male & Female	Male & Female
20	0.02120	0.04220	N/A	N/A	0.00022	0.00007	0.00017	0.00010	N/A	N/A
25	0.01930	0.04220	N/A	N/A	0.00029	0.00011	0.00017	0.00010	N/A	N/A
30	0.01740	0.03930	N/A	N/A	0.00038	0.00015	0.00019	0.00024	N/A	N/A
35	0.01550	0.03640	N/A	N/A	0.00049	0.00027	0.00039	0.00071	N/A	N/A
40	0.01360	0.03440	N/A	N/A	0.00064	0.00037	0.00102	0.00135	N/A	N/A
45	0.01160	0.03250	N/A	N/A	0.00080	0.00054	0.00151	0.00188	N/A	N/A
50	0.00970	0.02710	0.01900	0.03800	0.00116	0.00079	0.00158	0.00199	N/A	N/A
55	0.00780	0.02180	0.05200	0.09500	0.00172	0.00120	0.00158	0.00149	N/A	N/A
56	0.00740	0.02180	0.05600	0.10200	0.00187	0.00131	0.00158	0.00138	N/A	N/A
57	0.00700	0.02180	0.06000	0.10900	0.00203	0.00141	0.00158	0.00128	N/A	N/A
58	0.00660	0.02180	0.05600	0.12600	0.00221	0.00150	0.00158	0.00119	N/A	N/A
59	0.00620	0.02180	0.06800	0.14400	0.00239	0.00158	0.00158	0.00111	N/A	N/A
60	0.00590	0.02180	0.10600	0.22600	0.00255	0.00166	0.00153	0.00105	N/A	N/A
61	0.00550	0.02180	0.11700	0.23000	0.00271	0.00174	0.00148	0.00100	N/A	N/A
62	0.00510	0.02180	0.15500	0.28200	0.00287	0.00183	0.00143	0.00096	N/A	N/A
63	0.00470	0.02180	0.16300	0.26800	0.00306	0.00195	0.00138	0.00093	N/A	N/A
64	0.00440	0.02180	0.15000	0.27700	0.00331	0.00212	0.00133	0.00090	N/A	N/A
65	0.00390	0.02180	0.24200	0.30000	0.00363	0.00233	0.00128	0.00088	N/A	N/A
70	0.00200	0.02180	0.25500	0.35800	0.00623	0.00388	0.00102	0.00084	N/A	N/A

(1) Age for Termination with Refund and Termination with Vested Deferred Benefits means Entry Age. For all other decrements, age means Attained Age.

(2) Years of service.

Actuarial Section (continued)

EXHIBIT D: SAMPLE NON-ECONOMIC ASSUMPTIONS (CONTINUED)

Public Agency 2% at 50 Police – Probability of an active member leaving due to:

YRS ¹	Termination with Refund	AGE ²	Termination with Vested Deferred Benefits	Service Retirement		Non-Industrial Death		Non-Industrial Disability	Industrial Death	Industrial Disability
	Vary by Service		5 Years	10 Years	25 Years	Male	Female	Male & Female	Male & Female	Male & Female
0	0.10130	20	0.01630	N/A	N/A	0.00022	0.00007	0.00010	0.00004	0.00000
1	0.06360	25	0.01630	N/A	N/A	0.00029	0.00011	0.00010	0.00006	0.00165
2	0.02710	30	0.01630	N/A	N/A	0.00038	0.00015	0.00020	0.00007	0.00476
3	0.02580	35	0.01630	N/A	N/A	0.00049	0.00027	0.00030	0.00009	0.00788
4	0.02450	40	0.01630	N/A	N/A	0.00064	0.00037	0.00040	0.00010	0.01100
5	0.00860	45	0.01630	N/A	N/A	0.00080	0.00054	0.00050	0.00012	0.01412
6	0.00790	50	0.00000	0.05000	0.05000	0.00116	0.00079	0.00080	0.00013	0.01846
7	0.00720	55	0.00000	0.07200	0.14100	0.00172	0.00120	0.00130	0.00015	0.04785
8	0.00660	56	0.00000	0.06600	0.12900	0.00187	0.00131	0.00150	0.00015	0.05032
9	0.00590	57	0.00000	0.06000	0.11800	0.00203	0.00141	0.00160	0.00015	0.05279
10	0.00530	58	0.00000	0.08000	0.13800	0.00221	0.00150	0.00180	0.00015	0.05527
15	0.00270	59	0.00000	0.08000	0.14000	0.00239	0.00158	0.00200	0.00016	0.05775
20	0.00170	60	0.00000	0.15000	0.15000	0.00255	0.00166	0.00200	0.00016	0.06024
25	0.00120	61	0.00000	0.14400	0.14400	0.00271	0.00174	0.00200	0.00016	0.06273
30	0.00090	62	0.00000	0.15000	0.15000	0.00287	0.00183	0.00200	0.00017	0.06523
35	0.00090	63	0.00000	0.15000	0.15000	0.00306	0.00195	0.00200	0.00017	0.06774
40	0.00090	64	0.00000	0.15000	0.15000	0.00331	0.00212	0.00200	0.00017	0.07025
45	0.00090	65	0.00000	1.00000	1.00000	0.00363	0.00233	0.00200	0.00018	0.07277
50	0.00000	70	0.00000	1.00000	1.00000	0.00623	0.00388	0.00200	0.00019	0.08549

(1) Years of service.

(2) Age for Termination with Vested Deferred Benefits means Entry Age. For all other decrements, age means Attained Age.

Public Agency 2% at 50 Fire – Probability of an active member leaving due to:

YRS ¹	Termination with Refund	AGE ²	Termination with Vested Deferred Benefits	Service Retirement		Non-Industrial Death		Non-Industrial Disability	Industrial Death	Industrial Disability
	Vary by Service		5 Years	10 Years	25 Years	Male	Female	Male & Female	Male & Female	Male & Female
0	0.12980	20	0.00940	N/A	N/A	0.00022	0.00007	0.00010	0.00004	0.00005
1	0.06740	25	0.00940	N/A	N/A	0.00029	0.00011	0.00010	0.00006	0.00019
2	0.03200	30	0.00940	N/A	N/A	0.00038	0.00015	0.00010	0.00007	0.00056
3	0.02370	35	0.00940	N/A	N/A	0.00049	0.00027	0.00010	0.00009	0.00119
4	0.00870	40	0.00940	N/A	N/A	0.00064	0.00037	0.00010	0.00010	0.00225
5	0.00520	45	0.00940	N/A	N/A	0.00080	0.00054	0.00020	0.00012	0.00398
6	0.00320	50	0.00940	0.00900	0.01300	0.00116	0.00079	0.00050	0.00013	0.02079
7	0.00190	55	0.00940	0.08900	0.13600	0.00172	0.00120	0.00070	0.00015	0.03066
8	0.00110	56	0.00940	0.08300	0.12700	0.00187	0.00131	0.00070	0.00015	0.03300
9	0.00070	57	0.00940	0.08200	0.12600	0.00203	0.00141	0.00070	0.00015	0.03548
10	0.00050	58	0.00940	0.08800	0.13600	0.00221	0.00150	0.00070	0.00015	0.03809
15	0.00040	59	0.00940	0.07400	0.11300	0.00239	0.00158	0.00070	0.00016	0.04085
20	0.00030	60	0.00940	0.10000	0.15400	0.00255	0.00166	0.00070	0.00016	0.04375
25	0.00020	61	0.00940	0.07200	0.11000	0.00271	0.00174	0.00070	0.00016	0.04681
30	0.00020	62	0.00940	0.09900	0.15200	0.00287	0.00183	0.00070	0.00017	0.05003
35	0.00010	63	0.00940	0.11400	0.17500	0.00306	0.00195	0.00070	0.00017	0.05341
40	0.00010	64	0.00940	0.11400	0.17500	0.00331	0.00212	0.00070	0.00017	0.05696
45	0.00010	65	0.00940	1.00000	1.00000	0.00363	0.00233	0.00070	0.00018	0.06069
50	0.00000	70	0.00940	1.00000	1.00000	0.00623	0.00388	0.00070	0.00019	0.08221

(1) Years of service.

(2) Age for Termination with Vested Deferred Benefits means Entry Age. For all other decrements, age means Attained Age.

Actuarial Section (continued)

EXHIBIT D: SAMPLE NON-ECONOMIC ASSUMPTIONS (CONTINUED)

Public Agency 3% at 50 Police – Probability of an active member leaving due to:

YRS ¹	Termination with Refund	AGE ²	Termination with Vested Deferred Benefits	Service Retirement		Non-Industrial Death		Non-Industrial Disability	Industrial Death	Industrial Disability
	Vary by Service		5 Years	10 Years	25 Years	Male	Female	Male & Female	Male & Female	Male & Female
0	0.10130	20	0.01630	N/A	N/A	0.00022	0.00007	0.00010	0.00004	0.00000
1	0.06360	25	0.01630	N/A	N/A	0.00029	0.00011	0.00010	0.00006	0.00165
2	0.02710	30	0.01630	N/A	N/A	0.00038	0.00015	0.00020	0.00007	0.00476
3	0.02580	35	0.01630	N/A	N/A	0.00049	0.00027	0.00030	0.00009	0.00788
4	0.02450	40	0.01630	N/A	N/A	0.00064	0.00037	0.00040	0.00010	0.01100
5	0.00860	45	0.01630	N/A	N/A	0.00080	0.00054	0.00050	0.00012	0.01412
6	0.00790	50	0.00000	0.05000	0.15500	0.00116	0.00079	0.00080	0.00013	0.01846
7	0.00720	55	0.00000	0.07000	0.17500	0.00172	0.00120	0.00130	0.00015	0.04785
8	0.00660	56	0.00000	0.06000	0.16500	0.00187	0.00131	0.00150	0.00015	0.05032
9	0.00590	57	0.00000	0.06000	0.16500	0.00203	0.00141	0.00160	0.00015	0.05279
10	0.00530	58	0.00000	0.08000	0.18500	0.00221	0.00150	0.00180	0.00015	0.05527
15	0.00270	59	0.00000	0.09000	0.18500	0.00239	0.00158	0.00200	0.00016	0.05775
20	0.00170	60	0.00000	0.15000	0.18500	0.00255	0.00166	0.00200	0.00016	0.06024
25	0.00120	61	0.00000	0.12000	0.16000	0.00271	0.00174	0.00200	0.00016	0.06273
30	0.00090	62	0.00000	0.15000	0.20000	0.00287	0.00183	0.00200	0.00017	0.06523
35	0.00090	63	0.00000	0.15000	0.20000	0.00306	0.00195	0.00200	0.00017	0.06774
40	0.00090	64	0.00000	0.15000	0.17500	0.00331	0.00212	0.00200	0.00017	0.07025
45	0.00090	65	0.00000	1.00000	1.00000	0.00363	0.00233	0.00200	0.00018	0.07277
50	0.00000	70	0.00000	1.00000	1.00000	0.00623	0.00388	0.00200	0.00019	0.08549

(1) Years of service.

(2) Age for Termination with Vested Deferred Benefits means Entry Age. For all other decrements, age means Attained Age.

Public Agency 3% at 50 Fire – Probability of an active member leaving due to:

YRS ¹	Termination with Refund	AGE ²	Termination with Vested Deferred Benefits	Service Retirement		Non-Industrial Death		Non-Industrial Disability	Industrial Death	Industrial Disability
	Vary by Service		5 Years	10 Years	25 Years	Male	Female	Male & Female	Male & Female	Male & Female
0	0.12980	20	0.00940	N/A	N/A	0.00022	0.00007	0.00010	0.00004	0.00005
1	0.06740	25	0.00940	N/A	N/A	0.00029	0.00011	0.00010	0.00006	0.00019
2	0.03200	30	0.00940	N/A	N/A	0.00038	0.00015	0.00010	0.00007	0.00056
3	0.02370	35	0.00940	N/A	N/A	0.00049	0.00027	0.00010	0.00009	0.00119
4	0.00870	40	0.00940	N/A	N/A	0.00064	0.00037	0.00010	0.00010	0.00225
5	0.00520	45	0.00940	N/A	N/A	0.00080	0.00054	0.00020	0.00012	0.00398
6	0.00320	50	0.00940	0.02000	0.13000	0.00116	0.00079	0.00050	0.00013	0.02079
7	0.00190	55	0.00940	0.04300	0.17400	0.00172	0.00120	0.00070	0.00015	0.03066
8	0.00110	56	0.00940	0.05300	0.19600	0.00187	0.00131	0.00070	0.00015	0.03300
9	0.00070	57	0.00940	0.05400	0.19700	0.00203	0.00141	0.00070	0.00015	0.03548
10	0.00050	58	0.00940	0.05200	0.19300	0.00221	0.00150	0.00070	0.00015	0.03809
15	0.00040	59	0.00940	0.07500	0.23900	0.00239	0.00158	0.00070	0.00016	0.04085
20	0.00030	60	0.00940	0.06500	0.21900	0.00255	0.00166	0.00070	0.00016	0.04375
25	0.00020	61	0.00940	0.07600	0.24100	0.00271	0.00174	0.00070	0.00016	0.04681
30	0.00020	62	0.00940	0.06800	0.22400	0.00287	0.00183	0.00070	0.00017	0.05003
35	0.00010	63	0.00940	0.02700	0.14300	0.00306	0.00195	0.00070	0.00017	0.05341
40	0.00010	64	0.00940	0.09400	0.27700	0.00331	0.00212	0.00070	0.00017	0.05696
45	0.00010	65	0.00940	1.00000	1.00000	0.00363	0.00233	0.00070	0.00018	0.06069
50	0.00000	70	0.00940	1.00000	1.00000	0.00623	0.00388	0.00070	0.00019	0.08221

(1) Years of service.

(2) Age for Termination with Vested Deferred Benefits means Entry Age. For all other decrements, age means Attained Age.

Actuarial Section (continued)

EXHIBIT D: SAMPLE NON-ECONOMIC ASSUMPTIONS (CONTINUED)

Public Agency 3% at 55 Police – Probability of an active member leaving due to:

YRS ¹	Termination with Refund	AGE ²	Termination with Vested Deferred Benefits	Service Retirement		Non-Industrial Death		Non-Industrial Disability	Industrial Death	Industrial Disability
	Vary by Service		5 Years	10 Years	25 Years	Male	Female	Male & Female	Male & Female	Male & Female
0	0.10130	20	0.01630	N/A	N/A	0.00022	0.00007	0.00010	0.00004	0.00000
1	0.06360	25	0.01630	N/A	N/A	0.00029	0.00011	0.00010	0.00006	0.00165
2	0.02710	30	0.01630	N/A	N/A	0.00038	0.00015	0.00020	0.00007	0.00476
3	0.02580	35	0.01630	N/A	N/A	0.00049	0.00027	0.00030	0.00009	0.00788
4	0.02450	40	0.01630	N/A	N/A	0.00064	0.00037	0.00040	0.00010	0.01100
5	0.00860	45	0.01630	N/A	N/A	0.00080	0.00054	0.00050	0.00012	0.01412
6	0.00790	50	0.00000	0.03500	0.07000	0.00116	0.00079	0.00080	0.00013	0.01846
7	0.00720	55	0.00000	0.07000	0.17500	0.00172	0.00120	0.00130	0.00015	0.04785
8	0.00660	56	0.00000	0.06000	0.16500	0.00187	0.00131	0.00150	0.00015	0.05032
9	0.00590	57	0.00000	0.06000	0.16500	0.00203	0.00141	0.00160	0.00015	0.05279
10	0.00530	58	0.00000	0.08000	0.18500	0.00221	0.00150	0.00180	0.00015	0.05527
15	0.00270	59	0.00000	0.09000	0.18500	0.00239	0.00158	0.00200	0.00016	0.05775
20	0.00170	60	0.00000	0.15000	0.18500	0.00255	0.00166	0.00200	0.00016	0.06024
25	0.00120	61	0.00000	0.12000	0.16000	0.00271	0.00174	0.00200	0.00016	0.06273
30	0.00090	62	0.00000	0.15000	0.20000	0.00287	0.00183	0.00200	0.00017	0.06523
35	0.00090	63	0.00000	0.15000	0.20000	0.00306	0.00195	0.00200	0.00017	0.06774
40	0.00090	64	0.00000	0.15000	0.17500	0.00331	0.00212	0.00200	0.00017	0.07025
45	0.00090	65	0.00000	1.00000	1.00000	0.00363	0.00233	0.00200	0.00018	0.07277
50	0.00000	70	0.00000	1.00000	1.00000	0.00623	0.00388	0.00200	0.00019	0.08549

(1) Years of service.

(2) Age for Termination with Vested Deferred Benefits means Entry Age. For all other decrements, age means Attained Age.

Public Agency 3% at 55 Fire – Probability of an active member leaving due to:

YRS ¹	Termination with Refund	AGE ²	Termination with Vested Deferred Benefits	Service Retirement		Non-Industrial Death		Non-Industrial Disability	Industrial Death	Industrial Disability
	Vary by Service		5 Years	10 Years	25 Years	Male	Female	Male & Female	Male & Female	Male & Female
0	0.12980	20	0.00940	N/A	N/A	0.00022	0.00007	0.00010	0.00004	0.00005
1	0.06740	25	0.00940	N/A	N/A	0.00029	0.00011	0.00010	0.00006	0.00019
2	0.03200	30	0.00940	N/A	N/A	0.00038	0.00015	0.00010	0.00007	0.00056
3	0.02370	35	0.00940	N/A	N/A	0.00049	0.00027	0.00010	0.00009	0.00119
4	0.00870	40	0.00940	N/A	N/A	0.00064	0.00037	0.00010	0.00010	0.00225
5	0.00520	45	0.00940	N/A	N/A	0.00080	0.00054	0.00020	0.00012	0.00398
6	0.00320	50	0.00940	0.00100	0.01600	0.00116	0.00079	0.00050	0.00013	0.02079
7	0.00190	55	0.00940	0.07300	0.17900	0.00172	0.00120	0.00070	0.00015	0.03066
8	0.00110	56	0.00940	0.06400	0.16100	0.00187	0.00131	0.00070	0.00015	0.03300
9	0.00070	57	0.00940	0.06300	0.15700	0.00203	0.00141	0.00070	0.00015	0.03548
10	0.00050	58	0.00940	0.06500	0.16300	0.00221	0.00150	0.00070	0.00015	0.03809
15	0.00040	59	0.00940	0.08800	0.21300	0.00239	0.00158	0.00070	0.00016	0.04085
20	0.00030	60	0.00940	0.10500	0.25100	0.00255	0.00166	0.00070	0.00016	0.04375
25	0.00020	61	0.00940	0.11800	0.28200	0.00271	0.00174	0.00070	0.00016	0.04681
30	0.00020	62	0.00940	0.08700	0.21000	0.00287	0.00183	0.00070	0.00017	0.05003
35	0.00010	63	0.00940	0.06700	0.16500	0.00306	0.00195	0.00070	0.00017	0.05341
40	0.00010	64	0.00940	0.06700	0.16500	0.00331	0.00212	0.00070	0.00017	0.05696
45	0.00010	65	0.00940	1.00000	1.00000	0.00363	0.00233	0.00070	0.00018	0.06069
50	0.00000	70	0.00940	1.00000	1.00000	0.00623	0.00388	0.00070	0.00019	0.08221

(1) Years of service.

(2) Age for Termination with Vested Deferred Benefits means Entry Age. For all other decrements, age means Attained Age.

Actuarial Section (continued)

EXHIBIT D: SAMPLE NON-ECONOMIC ASSUMPTIONS (CONTINUED)

Post-Retirement Mortality – Rates vary by age and gender. These rates are used for all plans.

AGE	Healthy Recipients		Non-Industrially Disabled (Not Job Related)		Industrially Disabled (Job Related)	
	Male	Female	Male	Female	Male	Female
50	0.00372	0.00346	0.01183	0.01083	0.00372	0.00346
55	0.00437	0.00410	0.01613	0.01178	0.00437	0.00410
60	0.00671	0.00476	0.02166	0.01404	0.00671	0.00476
65	0.00928	0.00637	0.02733	0.01757	0.01113	0.00765
70	0.01339	0.00926	0.03358	0.02183	0.01607	0.01111
75	0.02316	0.01635	0.04277	0.02969	0.02779	0.01962
80	0.03977	0.03007	0.06272	0.04641	0.04773	0.03609
85	0.07122	0.05418	0.09793	0.07847	0.08547	0.06501
90	0.13044	0.10089	0.14616	0.13220	0.14348	0.11098
95	0.21658	0.17698	0.21658	0.21015	0.21658	0.17698
100	0.32222	0.28151	0.32222	0.32226	0.32222	0.28151

Actuarial Section (continued)

EXHIBIT E: SINGLE LIFE RETIREMENT VALUES

Present value of \$1 monthly increase 2 percent annually after two-year waiting period. Discount rate of 7.25 percent for schools and 7.00 percent for public agencies and state.

AGE	Schools				AGE	Public Agencies and State					
	Service Retirement		Non-Industrial Disability Retirement			Service Retirement		Non-Industrial Disability Retirement		Industrial Disability Retirement	
	Male	Female	Male	Female		Male	Female	Male	Female	Male	Female
50	180.526	186.103	153.125	164.751	50	185.940	191.929	157.117	169.399	182.976	189.380
51	178.574	184.411	150.935	163.134	51	183.846	190.100	154.807	167.668	180.724	187.417
52	176.549	182.661	148.718	161.443	52	181.675	188.211	152.470	165.861	178.388	185.385
53	174.440	180.842	146.479	159.672	53	179.418	186.251	150.113	163.973	175.955	183.275
54	172.235	178.946	144.223	157.819	54	177.064	184.211	147.741	162.001	173.416	181.077
55	169.925	176.962	141.957	155.881	55	174.602	182.081	145.359	159.942	170.759	178.781
56	167.500	174.883	139.686	153.858	56	172.023	179.853	142.973	157.796	167.974	176.376
57	164.956	172.702	137.412	151.753	57	169.323	177.520	140.586	155.567	165.057	173.858
58	162.356	170.415	135.135	149.571	58	166.568	175.080	138.198	153.259	162.070	171.222
59	159.702	168.021	132.856	147.317	59	163.759	172.531	135.808	150.880	159.015	168.466
60	156.993	165.522	130.569	145.000	60	160.895	169.875	133.413	148.436	155.887	165.591
61	154.220	162.917	128.269	142.620	61	157.967	167.111	131.006	145.929	152.678	162.596
62	151.374	160.208	125.950	140.181	62	154.967	164.243	128.580	143.363	149.606	159.649
63	148.444	157.396	123.604	137.678	63	151.882	161.269	126.128	140.734	146.455	156.599
64	145.416	154.475	121.222	135.108	64	148.701	158.188	123.641	138.037	143.210	153.442
65	142.279	151.443	118.800	132.464	65	145.409	154.994	121.115	135.265	139.857	150.174
70	124.752	134.483	105.832	117.881	70	127.123	137.231	107.636	120.053	121.296	132.074
75	105.187	114.873	90.816	100.750	75	106.865	116.863	92.133	102.320	101.033	111.562
80	84.775	94.128	74.287	81.924	80	85.872	95.468	75.177	82.968	80.573	90.568
85	64.517	73.192	58.664	63.325	85	65.169	74.016	59.231	63.964	61.305	70.432
90	46.647	53.759	45.379	46.996	90	47.003	54.220	45.723	47.359	45.474	52.807
95	33.275	38.078	33.275	33.872	95	33.463	38.318	33.463	34.065	33.463	38.318
100	23.906	26.567	23.906	23.832	100	24.004	26.685	24.004	23.929	24.004	26.685

EXHIBIT F: SCHEDULE OF ACTIVE MEMBER VALUATION DATA

Valuation Date	Number of Active Members	Annual Covered Payroll (in Millions)	Average Annual Salary	% Increase in Average Pay	Number of Employers
6/30/2018	846,467	\$53,903	\$63,680	2.3 %	2,892
6/30/2017	835,473	51,991	62,229	2.3 %	2,946
6/30/2016	818,889	49,833	60,854	2.6 %	3,022
6/30/2015	800,205	47,458	59,307	1.9 %	3,008
6/30/2014	772,817	44,958	58,174	2.8%	3,094
6/30/2013	752,681	42,575	56,564	1.2%	3,090
6/30/2012	762,459	42,599	55,871	(0.8%)	3,065
6/30/2011	779,481	43,901	56,321	(0.6)%	3,104
6/30/2010	794,138	44,984	56,645	2.2 %	3,034
6/30/2009	812,864	45,100	55,425	1.9 %	3,027

EXHIBIT G: MEMBERS IN VALUATION

State Miscellaneous First Tier – By Attained Age & Years of Service – June 30, 2018

Attained Age	Distribution of Active Members by Age & Service Years of Service at Valuation Date ¹						Total	Total Valuation Payroll ²
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 & up		
15-24	2,776	9	—	—	—	—	2,785	\$103,048,564
25-29	11,116	919	6	1	—	—	12,042	562,864,027
30-34	12,619	4,638	951	68	2	—	18,278	1,061,815,353
35-39	10,190	5,244	3,708	1,202	66	2	20,412	1,354,844,746
40-44	7,344	4,177	4,074	3,687	699	58	20,039	1,437,413,089
45-49	6,176	3,832	4,401	5,335	2,229	1,038	23,011	1,730,530,951
50-54	5,169	3,346	3,697	5,243	2,771	4,527	24,753	1,916,673,049
55-59	4,350	3,095	3,280	4,902	2,605	6,444	24,676	1,915,194,876
60-64	2,654	2,317	2,371	3,282	1,705	4,146	16,475	1,273,234,702
65 & up	1,372	1,426	1,407	1,700	738	1,883	8,526	664,620,438
Total	63,766	29,003	23,895	25,420	10,815	18,098	170,997	\$12,020,239,795

(1) Counts of members included in the valuation are counts of the records processed by the valuation. Multiple records may exist for those who have service in more than one valuation group. This does not result in double count of liabilities.

(2) The grand total of Total Valuation Payroll may not agree to published valuation reports due to rounding.

State Miscellaneous Second Tier – By Attained Age & Years of Service – June 30, 2018

Attained Age	Distribution of Active Members by Age & Service Years of Service at Valuation Date ¹						Total	Total Valuation Payroll ²
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 & up		
15-24	4	—	—	—	—	—	4	\$204,549
25-29	28	—	—	—	—	—	28	1,691,912
30-34	12	8	—	—	—	—	20	1,440,238
35-39	20	10	4	24	3	—	61	4,106,970
40-44	22	9	21	149	68	1	270	18,071,537
45-49	27	18	31	211	237	112	636	42,728,132
50-54	17	15	27	225	272	283	839	56,410,984
55-59	9	12	18	158	238	337	772	54,402,617
60-64	9	12	10	120	143	223	517	34,310,278
65 & up	8	12	11	64	57	106	258	17,976,441
Total	156	96	122	951	1,018	1,062	3,405	\$231,343,658

(1) Counts of members included in the valuation are counts of the records processed by the valuation. Multiple records may exist for those who have service in more than one valuation group. This does not result in double count of liabilities.

(2) The grand total of Total Valuation Payroll may not agree to published valuation reports due to rounding.

State Industrial First & Second Tier – By Attained Age & Year of Service – June 30, 2018

Attained Age	Distribution of Active Members by Age & Service Years of Service at Valuation Date ¹						Total	Total Valuation Payroll
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 & up		
15-24	253	—	—	—	—	—	253	\$8,646,547
25-29	944	57	1	—	—	—	1,002	41,305,053
30-34	1,051	360	87	1	—	—	1,499	78,015,339
35-39	763	389	316	68	1	—	1,537	87,120,116
40-44	609	345	295	171	33	1	1,454	91,081,567
45-49	616	312	341	240	122	44	1,675	106,980,127
50-54	504	315	373	266	161	121	1,740	113,402,369
55-59	407	239	311	237	151	140	1,485	95,974,878
60-64	183	149	194	124	85	48	783	50,553,750
65 & up	91	82	93	55	39	23	383	26,173,153
Total	5,421	2,248	2,011	1,162	592	377	11,811	\$699,252,899

(1) Counts of members included in the valuation are counts of the records processed by the valuation. Multiple records may exist for those who have service in more than one valuation group. This does not result in double count of liabilities.

Actuarial Section (continued)

EXHIBIT G: MEMBERS IN VALUATION (CONTINUED)

State Safety – By Attained Age & Years of Service – June 30, 2018

Attained Age	Distribution of Active Members by Age & Service Years of Service at Valuation Date ¹						Total	Total Valuation Payroll ²
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 & up		
15-24	392	—	—	—	—	—	392	\$17,416,525
25-29	1,621	141	3	—	—	—	1,765	102,926,480
30-34	2,257	682	186	3	—	—	3,128	217,952,142
35-39	2,017	869	630	71	—	—	3,587	268,074,164
40-44	1,687	866	940	198	20	—	3,711	304,697,057
45-49	1,589	842	1,157	378	119	11	4,096	351,283,522
50-54	1,324	809	1,162	440	272	73	4,080	347,129,783
55-59	1,057	697	1,077	423	281	118	3,653	319,388,498
60-64	559	492	801	388	206	83	2,529	235,303,503
65 & up	218	271	469	228	140	68	1,394	151,953,239
Total	12,721	5,669	6,425	2,129	1,038	353	28,335	\$2,316,124,913

(1) Counts of members included in the valuation are counts of the records processed by the valuation. Multiple records may exist for those who have service in more than one valuation group. This does not result in double count of liabilities.

(2) The grand total of Total Valuation Payroll may not agree to published valuation reports due to rounding.

California Highway Patrol – By Attained Age & Years of Service – June 30, 2018

Attained Age	Distribution of Active Members by Age & Service Years of Service at Valuation Date ¹						Total	Total Valuation Payroll ²
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 & up		
15-24	157	—	—	—	—	—	157	\$13,679,437
25-29	572	30	—	—	—	—	602	57,623,993
30-34	427	431	280	—	—	—	1,138	124,744,087
35-39	197	434	572	218	—	—	1,421	164,976,599
40-44	26	226	397	694	212	1	1,556	190,051,818
45-49	1	49	164	563	691	157	1,625	209,214,289
50-54	1	1	22	91	352	224	691	94,229,971
55-59	1	—	—	4	35	80	120	17,202,271
60-64	—	—	—	—	—	1	1	172,656
65 & up	—	—	—	—	—	—	—	—
Total	1,382	1,171	1,435	1,570	1,290	463	7,311	\$871,895,121

(1) Counts of members included in the valuation are counts of the records processed by the valuation. Multiple records may exist for those who have service in more than one valuation group. This does not result in double count of liabilities.

(2) The grand total of Total Valuation Payroll may not agree to published valuation reports due to rounding.

State Peace Officer/Firefighter – By Attained Age & Years of Service – June 30, 2018

Attained Age	Distribution of Active Members by Age & Service Years of Service at Valuation Date ¹						Total	Total Valuation Payroll ²
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 & up		
15-24	1,209	1	—	—	—	—	1,210	\$57,646,525
25-29	4,623	166	—	—	—	—	4,789	296,378,259
30-34	3,305	1,109	1,062	—	—	—	5,476	401,892,066
35-39	1,653	1,168	2,933	766	2	—	6,522	550,772,661
40-44	858	768	2,302	2,562	530	3	7,023	639,248,821
45-49	557	564	1,606	2,138	2,421	426	7,712	748,548,823
50-54	322	336	985	1,155	1,409	644	4,851	472,433,682
55-59	142	164	536	617	637	414	2,510	241,808,484
60-64	58	85	199	223	244	127	936	89,197,581
65 & up	9	28	48	68	54	53	260	24,720,364
Total	12,736	4,389	9,671	7,529	5,297	1,667	41,289	\$3,522,647,266

(1) Counts of members included in the valuation are counts of the records processed by the valuation. Multiple records may exist for those who have service in more than one valuation group. This does not result in double count of liabilities.

(2) The grand total of Total Valuation Payroll may not agree to published valuation reports due to rounding.

Actuarial Section (continued)

EXHIBIT G: MEMBERS IN VALUATION (CONTINUED)

School – By Attained Age & Years of Service – June 30, 2018

Attained Age	Distribution of Active Members by Age & Service Years of Service at Valuation Date ¹						Total	Total Valuation Payroll ²
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 & up		
15-24	12,010	28	—	—	—	—	12,038	\$312,796,858
25-29	26,756	1,824	53	—	—	—	28,633	893,548,837
30-34	22,314	6,769	2,146	44	—	—	31,273	1,179,932,800
35-39	18,779	7,410	6,218	1,912	55	2	34,376	1,443,944,244
40-44	16,171	7,044	6,643	4,753	1,244	25	35,880	1,567,093,708
45-49	16,052	8,317	7,310	5,841	2,949	881	41,350	1,810,034,400
50-54	13,539	9,265	8,859	6,922	3,942	3,397	45,924	2,053,240,436
55-59	10,569	8,543	9,711	8,278	4,745	5,163	47,009	2,141,504,677
60-64	5,751	5,682	6,914	6,230	3,903	3,887	32,367	1,445,881,829
65 & up	2,812	2,846	3,176	2,643	1,678	1,702	14,857	602,027,774
Total	144,753	57,728	51,030	36,623	18,516	15,057	323,707	\$13,450,005,563

(1) Counts of members included in the valuation are counts of the records processed by the valuation. Multiple records may exist for those who have service in more than one valuation group. This does not result in double count of liabilities.

(2) The grand total of Total Valuation Payroll may not agree to published valuation reports due to rounding.

Public Agency Miscellaneous – By Attained Age & Years of Service – June 30, 2018

Attained Age	Distribution of Active Members by Age & Service Years of Service at Valuation Date ¹						Total	Total Valuation Payroll
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 & up		
15-24	5,309	21	—	—	—	—	5,330	\$204,098,738
25-29	15,737	1,362	69	—	—	—	17,168	856,694,838
30-34	17,108	4,816	2,378	83	—	—	24,385	1,479,684,346
35-39	14,045	5,599	6,418	1,880	104	1	28,047	1,974,096,348
40-44	10,271	4,501	6,485	4,654	1,084	78	27,073	2,080,504,833
45-49	8,494	4,120	6,283	5,628	2,782	1,150	28,457	2,308,864,659
50-54	6,936	3,668	5,644	5,560	3,388	4,051	29,247	2,453,474,805
55-59	5,360	3,072	5,083	4,988	3,053	4,940	26,496	2,215,372,843
60-64	2,932	2,034	3,309	3,326	1,915	3,045	16,561	1,344,479,834
65 & up	1,261	1,026	1,485	1,505	851	1,275	7,403	563,911,071
Total	87,453	30,219	37,154	27,624	13,177	14,540	210,167	\$15,481,182,315

(1) Counts of members included in the valuation are counts of the records processed by the valuation. Multiple records may exist for those who have service in more than one valuation group. This does not result in double count of liabilities.

Public Agency Safety – By Attained Age & Years of Service – June 30, 2018

Attained Age	Distribution of Active Members by Age & Service Years of Service at Valuation Date ¹						Total	Total Valuation Payroll
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 & up		
15-24	1,401	6	—	—	—	—	1,407	\$90,615,559
25-29	5,581	531	18	—	—	—	6,130	484,110,287
30-34	4,460	2,401	1,200	12	—	—	8,073	752,168,824
35-39	2,261	1,901	3,951	848	3	—	8,964	948,219,009
40-44	953	961	2,788	3,019	594	—	8,315	955,391,541
45-49	537	611	1,717	2,970	2,337	693	8,865	1,100,314,541
50-54	335	255	629	1,113	1,282	1,392	5,006	646,599,508
55-59	161	119	214	380	425	678	1,977	250,134,703
60-64	56	51	57	114	85	200	563	66,778,170
65 & up	18	16	12	20	17	62	145	16,459,354
Total	15,763	6,852	10,586	8,476	4,743	3,025	49,445	\$5,310,791,496

(1) Counts of members included in the valuation are counts of the records processed by the valuation. Multiple records may exist for those who have service in more than one valuation group. This does not result in double count of liabilities.

EXHIBIT H: SCHEDULE OF RETIREES & BENEFICIARIES ADDED TO AND REMOVED FROM ROLLS

Year Ended	Added to Rolls		Removed from Rolls		Rolls – End of Year		% Increase/ (Decrease) in Annual Allowances	Average Annual Allowance
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
PERF								
6/30/19	45,954	\$1,624,873,200	21,529	\$531,826,415	715,914	\$23,428,238,469	4.9%	\$32,725
6/30/18	46,834	1,601,849,767	21,614	504,232,434	691,489	22,335,191,684	5.2%	32,300
6/30/17 ¹	44,619	1,457,465,533	21,783	480,093,857	666,269	21,237,574,351	4.8%	31,875
6/30/16 ¹	43,132	1,379,126,240	20,399	475,981,343	643,433	20,260,202,675	4.7%	31,488
6/30/15 ¹	43,501	1,333,700,350	18,731	399,466,572	620,700	19,357,057,778	5.1%	31,186
6/30/14 ²	36,000	1,229,596,000	17,358	393,057,000	595,930	18,422,824,000	6.8%	30,914
6/30/13 ²	39,121	1,434,115,000	17,310	379,821,000	577,288	17,242,387,000	6.9%	29,868
6/30/12 ²	39,729	1,286,891,000	19,412	381,443,000	555,477	16,126,912,000	7.3%	29,033
LRF								
6/30/19	14	\$482,883	14	\$314,651	200	\$6,464,588	2.7%	\$32,323
6/30/18	—	—	8	293,767	200	6,296,356	(4.5%)	31,482
6/30/17 ¹	8	342,858	16	592,323	208	6,590,123	(3.6%)	31,683
6/30/16 ¹	3	86,709	8	250,007	216	6,839,588	(2.3%)	31,665
6/30/15 ¹	6	233,438	9	592,552	221	7,002,886	(4.9%)	31,687
6/30/14 ²	1	13,000	10	434,000	224	7,362,000	0.9%	32,866
6/30/13 ²	2	133,000	14	587,000	233	7,297,000	(5.0%)	31,318
6/30/12 ²	3	102,000	12	461,000	245	7,680,000	(2.4%)	31,347
JRF								
6/30/19	66	\$6,271,344	84	\$15,446,222	1,797	\$167,742,062	(5.2%)	\$93,346
6/30/18	74	7,011,721	96	9,836,577	1,815	176,916,940	(1.6%)	97,475
6/30/17 ¹	83	6,500,928	106	11,047,170	1,837	179,741,796	(2.5%)	97,845
6/30/16 ¹	68	4,719,741	80	8,389,989	1,860	184,288,038	(2.0%)	99,080
6/30/15 ¹	102	9,011,281	84	7,820,995	1,872	187,958,286	0.6%	100,405
6/30/14 ²	55	6,608,000	68	6,696,000	1,854	186,768,000	2.4%	100,738
6/30/13 ²	49	6,082,000	74	7,383,000	1,867	182,464,000	(1.3%)	97,731
6/30/12 ²	75	7,365,000	67	5,804,000	1,892	184,952,000	1.7%	97,755
JRF II								
6/30/19	55	\$6,043,661	4	\$536,208	262	\$25,900,504	27.0%	\$98,857
6/30/18	57	6,710,581	3	231,646	211	20,393,051	46.6%	96,650
6/30/17 ¹	41	4,654,642	1	125,977	157	13,914,116	48.3%	88,625
6/30/16 ¹	30	2,479,659	3	260,218	117	9,385,451	31.0%	80,218
6/30/15 ¹	27	2,551,990	2	164,980	90	7,166,010	49.9%	79,622
6/30/14 ²	20	1,648,000	3	378,000	65	4,779,000	35.7%	73,523
6/30/13 ²	13	1,172,000	2	232,000	48	3,522,700	13.9%	73,390
6/30/12 ²	9	744,000	2	195,000	37	3,093,000	43.9%	83,595

(1) These total counts and allowances account for all payments types with the exception of one-time lump-sum payments.

(2) These total counts and allowances are for service, disability, and industrial retirement, special death, 1957 Survivor, Pre-Retirement Option 2, and 1959 Survivor beneficiaries and nonmembers.

EXHIBIT I: ANALYSIS OF FINANCIAL EXPERIENCE

PERF B (Dollars in Millions)

	2018	2017
1) Total (Gain)/Loss for the Year		
a) Unfunded Accrued Liability (UAL) as of June 30	\$23,551	\$21,759
b) Expected Payment on the UAL	885	731
c) Interest	1,705	1,605
d) Expected UAL Before Other Changes [1a - 1b + 1c]	\$24,371	\$22,633
e) Change Due to Plan Changes	\$0	\$0
f) Change Due to Assumption Changes	3,279	1,282
g) Expected UAL After All Changes	\$27,650	\$23,915
h) Actual UAL as of June 30	\$27,225	\$23,551
i) Total (Gain)/Loss [1h - 1g]	(\$425)	(\$364)
2) Contribution (Gain)/Loss for the Year		
a) Expected Contributions	\$2,993	\$2,621
b) Actual Contributions	2,986	2,681
c) Contributions (Gain)/Loss [2a - 2b]	\$7	(\$60)
3) Asset (Gain)/Loss for the Year		
a) Market Value of Assets as of June 30	\$60,865	\$55,785
b) Prior Fiscal Year Receivables	(96)	(96)
c) Current Fiscal Year Receivables	104	96
d) Contributions Received	2,986	2,681
e) Benefits and Refunds Paid	(4,053)	(3,725)
f) Transfers and Miscellaneous Adjustments	30	—
g) Expected Interest	4,444	4,138
h) Expected Assets as of June 30 [3a + 3b + 3c + 3d + 3e + 3f + 3g]	\$64,280	\$58,879
i) Market Value of Assets as of June 30	\$64,846	\$60,865
j) Asset (Gain)/Loss [3h - 3i]	(\$566)	(\$1,986)
4) Liability (Gain)/Loss for the Year		
a) Total (Gain)/Loss (1i)	(\$425)	(\$364)
b) Contribution (Gain)/Loss (2c)	8	(60)
c) Asset (Gain)/Loss (3j)	(566)	(1,986)
d) Liability (Gain)/Loss [4a - 4b - 4c]	\$133	\$1,682

(Gains and losses in actuarial accrued liability resulting from differences between assumed and actual experience)

Actuarial Section (continued)

EXHIBIT I: ANALYSIS OF FINANCIAL EXPERIENCE (CONTINUED)

PERF C (Dollars in Millions)

	2018	2017
1) Total (Gain)/Loss for the Year		
a) Unfunded Accrued Liability (UAL) as of June 30	\$9,612	\$9,665
b) Expected Payment on the UAL	673	503
c) Interest	673	695
d) Expected UAL Before Other Changes [1a - 1b + 1c]	\$9,612	\$9,857
e) Change Due to Plan Amendments	\$0	\$0
f) Change Due to Plan Golden Handshakes and Service Purchases	1	1
g) Transfers Out of Risk Pool	—	7
h) Transfers Into Risk Pool	77	48
i) Change Due to Assumption Change	1,084	652
j) Change Due to Method Change	\$277	—
k) Change Due to Excessive Liability	\$2	—
l) Expected UAL After All Other Changes [1d + 1e + 1f - 1g + 1h + 1i + 1j + 1k]	\$11,053	\$10,551
m) Actual UAL as of June 30	\$10,893	\$9,612
n) Total (Gain)/Loss [1m-1l]	(\$160)	(\$939)
2) Asset (Gain)/Loss for the Year		
a) Market Value of Assets as of June 30	\$27,298	\$24,809
b) Transfers Out of Pool	2	45
c) Transfers Into Pool	162	108
d) Adjusted MVA at Beginning of Year [2a - 2b + 2c]	\$27,458	\$24,872
e) Receivables Prior Year	\$47	\$52
f) Receivables Current Year	45	47
g) Contributions Received	1,516	1,297
h) Benefits and Refunds Paid	(1,768)	(1,631)
i) Transfers and Miscellaneous Adjustments	16	19
j) Expected Interest	\$1,978	\$1,819
k) Expected Assets as of June 30 [2d - 2e + 2f + 2g + 2h + 2i + 2j]	\$29,198	\$26,371
l) Market Value of Assets as of June 30	\$29,500	\$27,298
m) Asset (Gain)/Loss [2k - 2l]	(\$302)	(\$927)
3) Liability (Gain)/Loss for the Year		
a) Total (Gain)/Loss (1n)	(\$160)	(\$939)
b) Asset (Gain)/Loss (2m)	(302)	(927)
c) Liability (Gain)/Loss [3a - 3b]	\$142	(\$12)

(Gains and losses in actuarial accrued liability resulting from differences between assumed and actual experience)

Actuarial Section (continued)

EXHIBIT I: ANALYSIS OF FINANCIAL EXPERIENCE (CONTINUED)

LRF (Dollars in Thousands)

	2018	2017
1) Total (Gain)/Loss for the Year		
a) Unfunded Accrued Liability (UAL) as of June 30	(\$16,039)	(\$12,075)
b) Expected Payment on the UAL	44	(14)
c) Interest	(803)	(603)
d) Expected UAL Before All Other Changes [1a - 1b + 1c]	(\$16,886)	(\$12,664)
e) Change Due to Revised Actuarial Methods	\$575	\$0
f) Change Due to New Actuarial Assumptions	—	(2,654)
g) Expected UAL After All Changes [1d + 1e + 1f]	(\$16,311)	(\$15,318)
h) Actual UAL as of June 30	(\$16,558)	(\$16,039)
i) Total (Gain)/Loss [1h - 1g]	(\$247)	(\$721)
2) Contribution (Gain)/Loss for the Year		
a) Expected Contributions	\$540	\$654
b) Interest on Expected Contributions	13	16
c) Actual Contributions	549	610
d) Interest on Actual Contributions	14	15
e) Contributions (Gain)/Loss [(2a + 2b) - (2c + 2d)]	(\$10)	\$45
3) Asset (Gain)/Loss for the Year		
a) Market Value of Assets as of June 30	\$116,884	\$119,050
b) Contributions Received	549	610
c) Benefits and Refunds Paid and Administrative Costs	(7,435)	(7,824)
d) Expected Interest	5,674	5,775
e) Expected Assets as of June 30 [3a + 3b + 3c + 3d]	\$115,672	\$117,611
f) Market Value of Assets as of June 30	\$115,484	\$116,884
g) Asset (Gain)/Loss [3e - 3f]	\$188	\$727
4) Liability (Gain)/Loss for the Year		
a) Total (Gain)/Loss (1i)	(\$247)	(\$721)
b) Contribution (Gain)/Loss (2e)	(10)	45
c) Asset (Gain)/Loss (3g)	188	727
d) Liability (Gain)/Loss [4a - 4b - 4c]	(\$425)	(\$1,493)

(Gains and losses in actuarial accrued liability resulting from differences between assumed and actual experience)

Actuarial Section (continued)

EXHIBIT I: ANALYSIS OF FINANCIAL EXPERIENCE (CONTINUED)

JRF (Dollars in Thousands)

	2018	2017
1) Total (Gain)/Loss for the Year		
a) Unfunded Accrued Liability (UAL) as of June 30	\$3,267,457	\$3,388,950
b) Expected Normal Cost During the Year	22,244	24,522
c) Contributions	(202,302)	(210,268)
d) Interest	95,679	99,273
e) Expected UAL Before All Other Changes [1a + 1b + 1c + 1d]	\$3,183,078	\$3,302,477
f) Change Due to Revised Actuarial Methods	\$5,705	\$0
g) Change Due to Assumption Change	—	3,330
h) Expected UAL [1e + 1f + 1g]	\$3,188,783	\$3,305,807
i) Actual UAL as of June 30	\$3,276,038	\$3,267,457
j) Total (Gain)/Loss [1i - 1h]	\$87,255	(\$38,350)
2) Asset (Gain)/Loss for the Year		
a) Market Value of Assets as of June 30	\$48,275	\$39,794
b) Contributions and Other Revenue Received	204,835	210,268
c) Benefits and Refunds Paid and Administrative Costs	(209,466)	(202,211)
d) Expected Interest	1,379	1,314
e) Expected Assets as of June 30 [2a + 2b + 2c + 2d]	\$45,023	\$49,165
g) Market Value of Assets as of June 30	\$44,492	\$48,275
h) Asset (Gain)/Loss [2e - 2f]	\$531	\$890
3) Liability (Gain)/Loss for the year		
a) Total (Gain)/Loss (1j)	\$87,255	(\$38,350)
b) Asset (Gain)/Loss (2h)	531	890
c) Liability (Gain)/Loss [3a - 3b]	\$86,724	(\$39,240)

(Gains and losses in actuarial accrued liability resulting from differences between assumed and actual experience)

Actuarial Section (continued)

EXHIBIT I: ANALYSIS OF FINANCIAL EXPERIENCE (CONTINUED)

JRF II (Dollars in Thousands)

	2018	2017
1) Total (Gain)/Loss for the Year		
a) Unfunded Accrued Liability (UAL) as of June 30	\$9,763	\$99,798
b) Expected Payment on the UAL	6,521	(8,210)
c) Interest	426	6,750
d) Expected UAL Before All Other Changes [1a - 1b + 1c]	\$3,668	\$114,758
e) Change Due To Revised Actuarial Methods	\$23,246	\$0
f) Change Due to New Actuarial Assumptions	—	(43,082)
g) Expected UAL After All Changes [1d + 1e + 1f]	\$26,914	\$71,676
h) Actual UAL as of June 30	\$22,805	\$9,763
i) Total (Gain)/Loss [1h - 1g]	(\$4,109)	(\$61,913)
2) Contribution (Gain)/Loss for the Year		
a) Expected Contributions	\$104,870	\$92,044
b) Interest on Expected Contributions	3,355	2,944
c) Actual Contributions	107,213	92,178
d) Interest on Actual Contributions	3,430	2,948
e) Contributions (Gain)/Loss [(2a + 2b) - (2c + 2d)]	(\$2,418)	(\$138)
3) Asset (Gain)/Loss for the Year		
a) Market Value of Assets as of June 30	\$1,356,099	\$1,172,953
b) Contributions Received	107,213	92,178
c) Benefits and Refunds Paid and Administrative Costs	(33,589)	(24,089)
d) Expected Interest	90,502	78,420
e) Expected Assets as of June 30 [3a + 3b + 3c + 3d]	\$1,520,225	\$1,319,462
f) Market Value of Assets as of June 30	\$1,531,543	\$1,356,099
g) Asset (Gain)/Loss [3e - 3f]	(\$11,318)	(\$36,637)
4) Liability (Gain)/Loss for the Year		
a) Total (Gain)/Loss (1i)	(\$4,109)	(\$61,913)
b) Contribution (Gain)/Loss (2e)	(2,418)	(138)
c) Asset (Gain)/Loss (3g)	(11,318)	(36,637)
d) Liability (Gain)/Loss [4a - 4b - 4c]	\$9,627	(\$25,138)

(Gains and losses in actuarial accrued liability resulting from differences between assumed and actual experience)

STATISTICAL SECTION

146	Introduction
146	Changes in Fiduciary Net Position – Retirement Programs
149	Changes in Fiduciary Net Position – OPEB Plan
150	Changes in Fiduciary Net Position – Custodial Funds
151	Public Employees' Retirement System Membership & Retirement Data
153	Public Employees' Retirement Fund Program Data
162	Public Agency Employers
180	Legislators' Retirement System Membership & Retirement Data
181	Legislators' Retirement System Program Data
184	Judges' Retirement System Membership & Retirement Data
185	Judges' Retirement System Program Data
188	Judges' Retirement System II Membership & Retirement Data
189	Judges' Retirement System II Program Data



2 Million members

We are on a **prudent and sustainable**
course to strengthen the fund and
achieve our goals for the next decade.

Statistical Section

INTRODUCTION

The Statistical section provides additional historical information to understand the economic condition of the California Public Employees' Retirement System (CalPERS).

The schedules presented contain information on financial trends, analysis, and additional analytical information on

employees' membership data, retirement benefits, health benefits, supplemental income, long-term care, and public agency employers.

The information in this section is obtained from comprehensive annual financial reports for relevant years and other internal sources.

CHANGES IN FIDUCIARY NET POSITION – RETIREMENT PROGRAMS

PERF Changes in Fiduciary Net Position, for the fiscal year ended June 30, 2019 – 10-Year Review (Dollars in Thousands)

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
ADDITIONS										
Member	\$4,664,618	\$4,415,129	\$4,214,578	\$4,015,754	\$3,826,072	\$3,775,038	\$3,896,078	\$3,598,437	\$3,600,089	\$3,378,867
Employer	15,612,678	19,917,796	12,329,837	10,892,489	9,977,705	8,777,602	8,123,833	7,772,913	7,465,397	6,955,049
Investment Income/(Loss)	22,969,664	27,448,098	32,977,020	1,398,927	6,579,019	45,471,821	30,284,807	(203,084)	43,904,425	25,567,295
Plan-to-Plan Resource Movement	167,612	116,552	134,661	49,803	469,688	—	—	—	—	—
Miscellaneous Income	111,079	121,573	153,008	149,494	123,978	126,223	7,176	7,070	3,011	10,234
TOTAL ADDITIONS	\$43,525,651	\$52,019,148	\$49,809,104	\$16,506,467	\$20,976,462	\$58,150,684	\$42,311,894	\$11,175,336	\$54,972,922	\$35,911,445
DEDUCTIONS										
Benefit Payments	\$24,209,283	\$22,654,444	\$21,215,889	\$20,093,933	\$18,922,292	\$17,760,584	\$16,635,263	\$15,356,696	\$14,242,258	\$12,972,457
Refund of Contributions	280,266	286,979	222,275	238,821	240,623	236,968	242,595	218,082	227,168	182,387
Administrative Expenses	252,558	505,513	441,283	184,426	340,880	381,497	426,077	380,404	357,779	278,036
Plan to Plan Resource Movement	167,612	116,552	134,661	49,803	469,688	—	—	—	—	—
TOTAL DEDUCTIONS	\$24,909,719	\$23,563,488	\$22,014,108	\$20,566,983	\$19,973,483	\$18,379,049	\$17,303,935	\$15,955,182	\$14,827,205	\$13,432,880
CHANGE IN NET POSITION	\$18,615,932	\$28,455,660	\$27,794,996	(\$4,060,516)	\$1,002,979	\$39,771,635	\$25,007,959	(\$4,779,846)	\$40,145,717	\$22,478,565
NET POSITION										
Beginning of Year	\$353,995,501	\$325,539,841 ¹	\$298,704,002	\$302,764,518	\$301,761,539	\$261,989,904	\$236,981,945	\$241,761,791	\$179,137,509 ¹	\$179,137,509
End of Year	\$372,611,433	\$353,995,501	\$326,498,998	\$298,704,002	\$302,764,518	\$301,761,539	\$261,989,904	\$236,981,945	\$241,761,791	\$201,616,074

(1) Due to prior period adjustment, beginning balance was restated.

Statistical Section (continued)

CHANGES IN FIDUCIARY NET POSITION – RETIREMENT PROGRAMS (CONTINUED)

LRF Changes in Fiduciary Net Position, for the fiscal year ended June 30, 2019 – 10-Year Review (Dollars in Thousands)

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
ADDITIONS										
Member	\$91	\$82	\$94	\$97	\$105	\$113	\$31	\$0	\$3	\$17
Employer	250	467	516	549	590	565	80	—	—	—
Investment Income/(Loss)	7,860	5,458	5,006	4,511	(125)	15,332	6,974	7,761	17,667	17,793
Miscellaneous Income	—	28	42	34	31	40	—	—	—	—
TOTAL ADDITIONS	\$8,201	\$6,035	\$5,658	\$5,191	\$601	\$16,050	\$7,085	\$7,761	\$17,670	\$17,810
DEDUCTIONS										
Benefit Payments	\$7,005	\$6,918	\$6,960	\$7,028	\$7,393	\$7,482	\$7,548	\$7,659	\$7,382	\$11,082
Refund of Contributions	344	—	289	379	1,693	—	—	202	440	35
Administrative Expenses	324	671	575	203	400	362	418	347	408	4,444
TOTAL DEDUCTIONS	\$7,673	\$7,589	\$7,824	\$7,610	\$9,486	\$7,844	\$7,966	\$8,208	\$8,230	\$15,561
CHANGE IN NET POSITION	\$528	(\$1,554)	(\$2,166)	(\$2,419)	(\$8,885)	\$8,206	(\$881)	(\$447)	\$9,440	\$2,249
NET POSITION										
Beginning of Year	\$113,876	\$115,430 ¹	\$119,050	\$121,469	\$130,354	\$122,148	\$123,029	\$123,476	\$114,036	\$111,787
End of Year	\$114,404	\$113,876	\$116,884	\$119,050	\$121,469	\$130,354	\$122,148	\$123,029	\$123,476	\$114,036

(1) Due to prior period adjustment, beginning balance was restated.

JRF Changes in Fiduciary Net Position, for the fiscal year ended June 30, 2019 – 10-Year Review (Dollars in Thousands)

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
ADDITIONS										
Member	\$2,679	\$3,062	\$3,398	\$3,559	\$3,877	\$4,724	\$4,909	\$5,796	\$6,658	\$7,361
Employer	195,903	199,241	204,475	192,287	180,910	191,148	161,945	196,402	167,302	185,389
Investment Income	1,166	845	424	194	88	54	76	80	184	332
Miscellaneous Income	2,776	2,533	2,395	2,568	2,198	2,529	2,694	2,877	3,216	3,486
TOTAL ADDITIONS	\$202,524	\$205,681	\$210,692	\$198,608	\$187,073	\$198,455	\$169,624	\$205,155	\$177,360	\$196,568
DEDUCTIONS										
Benefit Payments	\$221,954	\$207,815	\$200,440	\$199,271	\$201,734	\$193,925	\$187,084	\$185,428	\$185,119	\$178,861
Refund of Contributions	—	8	—	78	134	10	—	17	—	32
Administrative Expenses	10,032	2,106	1,771	642	1,227	1,141	1,413	1,163	1,188	968
TOTAL DEDUCTIONS	\$231,986	\$209,929	\$202,211	\$199,991	\$203,095	\$195,076	\$188,497	\$186,608	\$186,307	\$179,861
CHANGE IN NET POSITION	(\$29,462)	(\$4,248)	\$8,481	(\$1,383)	(\$16,022)	\$3,379	(\$18,873)	\$18,547	(\$8,947)	\$16,707
NET POSITION										
Beginning of Year	\$39,631	\$43,879 ¹	\$39,794	\$41,177	\$57,199	\$53,820	\$72,693	\$54,146	\$63,093	\$46,386
End of Year	\$10,169	\$39,631	\$48,275	\$39,794	\$41,177	\$57,199	\$53,820	\$72,693	\$54,146	\$63,093

(1) Due to prior period adjustment, beginning balance was restated.

Statistical Section (continued)

CHANGES IN FIDUCIARY NET POSITION – RETIREMENT PROGRAMS (CONTINUED)

JRF II Changes in Fiduciary Net Position, for the fiscal year ended June 30, 2019 – 10-Year Review (Dollars in Thousands)

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
ADDITIONS										
Member	\$31,376	\$27,513	\$25,076	\$24,598	\$22,242	\$20,413	\$18,819	\$18,757	\$18,589	\$16,178
Employer	84,099	79,699	67,102	65,839	65,629	57,027	54,025	53,711	53,863	42,589
Investment Income/(Loss)	106,781	101,244	114,331	20,213	(2,863)	149,679	79,214	13,947	91,596	50,801
Miscellaneous Income	—	576	726	597	462	489	—	—	—	—
TOTAL ADDITIONS	\$222,256	\$209,032	\$207,235	\$111,247	\$85,470	\$227,608	\$152,058	\$86,415	\$164,048	\$109,568
DEDUCTIONS										
Benefit Payments	\$36,045	\$31,745	\$22,326	\$21,549	\$14,024	\$8,865	\$10,518	\$3,536	\$2,236	\$1,392
Refund of Contributions	159	50	80	155	16	85	58	2,604	5,870	2,592
Administrative Expenses	1,477	2,370	1,683	732	1,127	785	899	725	716	494
TOTAL DEDUCTIONS	\$37,681	\$34,165	\$24,089	\$22,436	\$15,167	\$9,735	\$11,475	\$6,865	\$8,822	\$4,478
CHANGE IN NET POSITION	\$184,575	\$174,867	\$183,146	\$88,811	\$70,303	\$217,873	\$140,583	\$79,550	\$155,226	\$105,090
NET POSITION										
Beginning of Year	\$1,525,514	\$1,350,647 ¹	\$1,172,953	\$1,084,142	\$1,013,839	\$795,966	\$655,383	\$575,833	\$420,607	\$315,517
End of Year	<u>\$1,710,089</u>	<u>\$1,525,514</u>	<u>\$1,356,099</u>	<u>\$1,172,953</u>	<u>\$1,084,142</u>	<u>\$1,013,839</u>	<u>\$795,966</u>	<u>\$655,383</u>	<u>\$575,833</u>	<u>\$420,607</u>

(1) Due to prior period adjustment, beginning balance was restated.

DCF Changes in Fiduciary Net Position, for the fiscal year ended June 30, 2019 – 10-Year Review (Dollars in Thousands)

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
ADDITIONS										
Member	\$251,102	\$112,586	\$110,258	\$106,072	\$106,272	\$131,900	\$99,977	\$104,333	\$89,531	\$108,436
Employer	—	977	962	909	783	698	455	80	84	84
Investment Income	92,546	108,821	132,305	7,541	32,735	164,384	114,471	4,872	151,932	72,951
Miscellaneous Income	6,590	6,306	5,583	5,354	6,260	5,258	—	225	214	858
TOTAL ADDITIONS	\$350,238	\$228,690	\$249,108	\$119,876	\$146,050	\$302,240	\$214,903	\$109,510	\$241,761	\$182,329
DEDUCTIONS										
Participant Withdrawals	\$156,796	\$168,064	\$90,333	\$164,362	\$88,973	\$97,388	\$82,587	\$73,025	\$93,844	\$46,418
Administrative Expenses	4,202	5,296	4,576	4,677	4,320	4,101	3,467	3,131	3,874	3,491
TOTAL DEDUCTIONS	\$160,998	\$173,360	\$94,909	\$169,039	\$93,293	\$101,489	\$86,054	\$76,156	\$97,718	\$49,909
CHANGE IN NET POSITION	\$189,240	\$55,330	\$154,199	(\$49,163)	\$52,757	\$200,751	\$128,849	\$33,354	\$144,043	\$132,420
NET POSITION										
Beginning of Year	\$1,495,746	\$1,440,416 ¹	\$1,290,407	\$1,339,570	\$1,286,813	\$1,086,062	\$957,213 ¹	\$947,062	\$803,019	\$670,599
End of Year	<u>\$1,684,986</u>	<u>\$1,495,746</u>	<u>\$1,444,606</u>	<u>\$1,290,407</u>	<u>\$1,339,570</u>	<u>\$1,286,813</u>	<u>\$1,086,062</u>	<u>\$980,416</u>	<u>\$947,062</u>	<u>\$803,019</u>

(1) Due to prior period adjustment, beginning balance was restated.

Statistical Section (continued)

CHANGES IN FIDUCIARY NET POSITION – RETIREMENT PROGRAMS (CONTINUED)

SCPF Changes in Fiduciary Net Position, for the fiscal year ended June 30, 2019 – 10-Year Review (Dollars in Thousands)

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
ADDITIONS										
Member	\$251	\$252	\$246	\$269	\$127,833	\$160	\$164	\$208	\$285	\$536
Investment Income	5,360	4,362	6,890	416	1,058	2,077	2,051	3	3,610	1,884
Miscellaneous Income	337	619	628	668	305	111	—	—	—	33
TOTAL ADDITIONS	\$5,948	\$5,233	\$7,764	\$1,353	\$129,196	\$2,348	\$2,215	\$211	\$3,895	\$2,453
DEDUCTIONS										
Participant Withdrawals	\$7,749	\$9,046	\$11,041	\$16,130	\$15,751	\$1,013	\$1,448	\$1,219	\$2,113	\$1,624
Administrative Expenses	283	398	373	330	135	62	58	63	84	117
TOTAL DEDUCTIONS	\$8,032	\$9,444	\$11,414	\$16,460	\$15,886	\$1,075	\$1,506	\$1,282	\$2,197	\$1,741
Interfund Transfer In	\$0	\$0	\$0	\$5,582	\$0	\$0	\$0	\$0	\$0	\$0
CHANGE IN NET POSITION	(\$2,084)	(\$4,211)	(\$3,650)	(\$9,525)	\$113,310	\$1,273	\$709	(\$1,071)	\$1,698	\$712
NET POSITION										
Beginning of Year	\$116,135	\$120,346 ¹	\$124,354	\$133,879	\$20,569	\$19,296	\$18,587	\$19,658	\$17,960	\$17,248
End of Year	\$114,051	\$116,135	\$120,704	\$124,354	\$133,879	\$20,569	\$19,296	\$18,587	\$19,658	\$17,960

(1) Due to prior period adjustment, beginning balance was restated.

CHANGES IN FIDUCIARY NET POSITION – OPEB PLAN

CERBTF Changes in Fiduciary Net Position, for the fiscal year ended June 30, 2019 – 10-Year Review (Dollars in Thousands)

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
ADDITIONS										
Employer	\$4,007,941	\$3,915,969	\$3,754,709	\$1,780,240	\$1,714,060	\$1,681,053	\$1,031,619	\$771,750	\$758,251	\$674,406
Investment Income/(Loss)	568,801	530,189	559,967	76,638	(13,988)	515,507	237,710	8,066	331,492	128,918
Miscellaneous Income	7,490	6,985	5,599	4,048	4,932	4,483	—	—	—	—
TOTAL ADDITIONS	\$4,584,232	\$4,453,143	\$4,320,275	\$1,860,926	\$1,705,004	\$2,201,043	\$1,269,329	\$779,816	\$1,089,743	\$803,324
DEDUCTIONS										
OPEB Reimbursements & Employer Withdrawals	\$3,061,217	\$2,937,413	\$2,648,160	\$1,229,523	\$1,099,376	\$1,020,924	\$635,074	\$566,360	\$507,951	\$364,182
Administrative Expenses	1,882	3,862	3,014	1,559	2,044	1,786	2,062	1,910	2,305	822
TOTAL DEDUCTIONS	\$3,063,099	\$2,941,275	\$2,651,174	\$1,231,082	\$1,101,420	\$1,022,710	\$637,136	\$568,270	\$510,256	\$365,004
CHANGE IN NET POSITION	\$1,521,133	\$1,511,868	\$1,669,101	\$629,844	\$603,584	\$1,178,333	\$632,193	\$211,546	\$579,487	\$438,320
NET POSITION										
Beginning of Year	\$8,294,172	\$6,782,304 ¹	\$5,122,188	\$4,492,344	\$3,888,760	\$2,710,427	\$2,078,234	\$1,866,688	\$1,287,201	\$848,881
End of Year	\$9,815,305	\$8,294,172	\$6,791,289	\$5,122,188	\$4,492,344	\$3,888,760	\$2,710,427	\$2,078,234	\$1,866,688	\$1,287,201

(1) Due to prior period adjustment, beginning balance was restated.

CHANGES IN FIDUCIARY NET POSITION – CUSTODIAL FUNDS

RBF Changes in Fiduciary Net Position, for the fiscal year ended June 30, 2019 – 3-Year Review¹ (Dollars in Thousands)

	2019	2018	2017
ADDITIONS			
Replacement Benefits	\$25,756	\$22,487	\$20,573
Investment Income	301	163	168
Miscellaneous Income	482	444	239
TOTAL ADDITIONS	\$26,539	\$23,094	\$20,980
DEDUCTIONS			
Replacement Benefit Payments	\$25,756	\$22,487	\$20,573
Administrative Expenses	450	450	239
TOTAL DEDUCTIONS	\$26,206	\$22,937	\$20,812
CHANGE IN NET POSITION	\$333	\$157	\$168
NET POSITION			
Beginning of Year	\$325	\$168	\$0²
End of Year	\$658	\$325	\$168

(1) This is a 10-year schedule. Information in this schedule is not available prior to 2017 due to the implementation of GASB 84. Additional years will be added to this schedule in future fiscal years until 10 years of data is presented.

(2) Due to prior period adjustment, beginning balance was restated.

OASI Changes in Fiduciary Net Position, for the fiscal year ended June 30, 2019 – 1-Year Review¹ (Dollars in Thousands)

	2019
ADDITIONS	
Investment Income	\$1
TOTAL ADDITIONS	\$1
DEDUCTIONS	
Administrative Expenses	\$667
TOTAL DEDUCTIONS	\$667
CHANGE IN NET POSITION	(\$666)
NET POSITION	
Beginning of Year	\$0²
Adjustments	\$1,703
End of Year	\$1,037

(1) This is a 10-year schedule. Information in this schedule is not available prior to 2019 due to the breakout from the PERF. Additional years will be added to this schedule in future fiscal years until 10 years of data is presented.

(2) Due to prior period adjustment, beginning balance was restated.

PUBLIC EMPLOYEES' RETIREMENT SYSTEM MEMBERSHIP & RETIREMENT DATA

The presentation of the following table has been modified to better align statistical data with current categorizations of members and beneficiaries by rate plan and current pension reform changes. This table will continue populating each subsequent year until 10 years of data is available.

Public Employees' Retirement System – Five-Year Review

	2019	2018	2017	2016	2015
ACTIVE & INACTIVE MEMBERS					
STATE MEMBERS					
State Miscellaneous – Classic	189,514	200,645	216,008	216,647	233,574
State Miscellaneous – PEPRA	90,313	76,222	59,617	44,057	29,009
State Safety – Classic	60,807	64,165	68,086	68,020	64,167
State Safety – PEPRA	30,786	26,540	22,051	16,991	11,054
Total State Members	371,420	367,572	365,762	345,715	337,804
PUBLIC AGENCY MEMBERS					
School – Miscellaneous – Classic	332,074	348,372	376,546	396,832	422,114
School – Miscellaneous – PEPRA	200,455	167,654	137,356	102,550	67,363
Public Agency – Miscellaneous – Classic	204,679	216,445	231,458	241,605	269,528
Public Agency – Miscellaneous – PEPRA	123,966	103,226	84,913	64,234	46,091
Public Agency – Safety – Classic	43,263	45,704	48,596	50,372	54,825
Public Agency – Safety – PEPRA	18,397	15,345	12,769	9,601	6,896
Total Public Agency Members	922,834	896,746	891,638	865,194	866,817
TOTAL ACTIVE & INACTIVE MEMBERS¹	1,294,254	1,264,318	1,257,400	1,210,909	1,204,621
BENEFIT RECIPIENTS					
Retired					
Classic	614,257	595,483	576,228	557,679	530,725
PEPRA	1,145	534	284	166	90
Survivors and Beneficiaries					
Classic	96,570	98,457	91,488	90,774	80,250
PEPRA	143	96	59	26	13
TOTAL BENEFIT RECIPIENTS²	712,115	694,570	668,059	648,645	611,078
TOTAL MEMBERS AND BENEFIT RECIPIENTS	2,006,369	1,958,888	1,925,459	1,859,554	1,815,699

(1) A participant could be counted more than once if he/she has multiple active appointments on the report effective date.

(2) This total includes payments to individual retirees, survivors, and beneficiaries who have received any monthly and/or lump-sum payments.

Statistical Section (continued)

PUBLIC EMPLOYEES' RETIREMENT SYSTEM MEMBERSHIP & RETIREMENT DATA (CONTINUED)

Public Employees' Retirement System – Five-Year Review¹

	2014	2013	2012	2011	2010
ACTIVE & INACTIVE MEMBERS					
STATE MEMBERS					
Miscellaneous	236,552	227,291	228,667	223,251	224,084
University of California	44	44	45	49	56
Industrial	13,669	13,038	13,734	13,732	13,624
Alternative Retirement Plan	7,407	12,160	9,491	13,972	16,477
Highway Patrol	7,479	7,556	7,565	7,573	7,589
Safety	31,150	28,878	28,935	29,402	29,305
Peace Officer/Firefighter	45,346	45,116	47,162	48,243	49,437
Total State Members	341,647	334,083	335,599	336,222	340,572
PUBLIC AGENCY MEMBERS					
Schools	442,088	430,865	428,117	425,186	427,211
Cities	160,127	158,649	160,253	163,430	167,994
Counties	97,780	94,980	93,468	93,651	95,122
Districts & Other Public Agencies	87,372	85,660	85,003	84,937	85,145
Total Public Agency Members	787,367	770,154	766,841	767,204	775,472
TOTAL ACTIVE & INACTIVE MEMBERS	1,129,014	1,104,237	1,102,440	1,103,426	1,116,044
BENEFIT RECIPIENTS					
Service Retirement	505,031	486,625	464,601	450,263	428,821
Disability Retirement	44,242	43,857	43,626	43,347	43,090
Industrial Disability Retirement	37,686	36,493	35,495	34,733	33,951
Industrial Death	891	894	903	1,070	1,056
1957 Survivor Benefit	3,775	3,698	3,831	3,626	3,535
1959 Survivor Benefit	3,217	3,192	3,171	3,195	3,170
TOTAL BENEFIT RECIPIENTS¹	594,842	574,759	551,627	536,234	513,623
TOTAL MEMBERS	1,723,856	1,678,996	1,654,067	1,639,660	1,629,667

(1) Information presented using different categorization of members and beneficiaries.

PUBLIC EMPLOYEES' RETIREMENT FUND PROGRAM DATA

PRIMARY BENEFITS

CalPERS benefit categories are established in the Public Employees' Retirement Law (PERL) and the Public Employees' Pension Reform Act of 2013 (PEPRA). The PERL and PEPRA categorize members under two distinct levels of membership, which are:

- **Public Employees' Pension Reform Act (PEPRA) Members** – New members who first became members of the CalPERS System on or after January 1, 2013, or were hired on or after January 1, 2013, by a new employer after a break in service longer than six months from previous eligible employment.
- **Classic Members** – All members that do not fit within the definition of a new member as defined by PEPRA. These existing CalPERS members as of December 31, 2012, will retain the existing benefit levels for future service with the same employer. Because the new member determination is made on an appointment-by-appointment basis, classic members will be tested against the “new member” definition upon each new appointment.

Benefits are paid according to the category of employment and the type of benefit coverage provided by an employer. A local agency's benefits may vary based upon statutory elections made by the employer.

The four categories of membership are:

- **Miscellaneous Members** – Staff, operational, supervisory, and all other eligible employees who are not in special membership categories.
- **Safety Members** – California Highway Patrol officers, police officers, firefighters, and other employees whose principal duties are in active law enforcement or fire prevention and suppression work, or who occupy positions designated by law as safety member positions.
- **State Industrial Members** – Employees of the California Department of Corrections and Rehabilitation who have the same service retirement and other benefits as miscellaneous members, but who also have industrial death and disability benefits under certain limited circumstances.
- **State Peace Officer/Firefighter Members** – State employees who are involved in law enforcement, firefighting and fire suppression, public safety, protective services, or the management and supervision thereof, whose positions are defined as state peace officer/ firefighter members in the Government Code or by the Department of Human Resources.

SERVICE RETIREMENT

State Miscellaneous & State Industrial Members – Classic

- 2 percent at 55 – A guarantee of 2 percent of final compensation at age 55 for each year of service credit.
- 2 percent at 60 – A guarantee of 2 percent of final compensation at age 60 for each year of service credit.

Retirement may begin at age 50 with a reduced benefit rate, or at age 55 or 60 with an increased benefit rate to age 63.

- 1.25 percent at 65 – A guarantee of 1.25 percent of final compensation at age 65 for each year of service credit. Retirement may begin at age 55 with a reduced benefit rate.

State Miscellaneous & State Industrial Members – PEPRA

- 2 percent at 62 – A guarantee of 2 percent of final compensation at age 62 for each year of service credit. Retirement may begin at age 52 with a reduced benefit rate, or after age 62 with an increased benefit rate to age 67.
- 1.25 percent at 67 – A guarantee of 1.25 percent of final compensation at age 67 for each year of service credit. Retirement may begin at age 55 with a reduced benefit rate.

State Safety Members – Classic

- 2 percent at 55 – It provides 2 percent of final compensation for each year of service for retirement at age 55.
- 2.5 percent at 55 – It provides 2.5 percent of final compensation for each year of service for retirement at age 55.

The maximum allowance payable is 80 percent of final compensation. Retirement may begin at age 50 with a reduced benefit rate.

- 3 percent at 50 – It provides 3 percent of final compensation for each year of service for retirement at age 50.
- 3 percent at 55 – It provides 3 percent of final compensation for each year of service for retirement at age 55. Retirement may begin at age 50 with a reduced benefit rate.

The maximum allowance payable is 90 percent.

PUBLIC EMPLOYEES' RETIREMENT FUND PROGRAM DATA (CONTINUED)

State Safety Members – PEPRA

- 2 percent at 57 – It provides 2 percent of final compensation for each year of service for retirement at age 57.
- 2.5 percent at 57 – It provides 2.5 percent of final compensation for each year of service for retirement at age 57.
- 2.7 percent at 57 – It provides 2.7 percent of final compensation for each year of service for retirement at age 57.

Retirement may begin at age 50 with a reduced benefit rate.

School Members 2 Percent at 55 – Classic

A guarantee of 2 percent of final compensation at age 55 for each year of service credit. Retirement may begin at age 50 with a reduced benefit rate, or after age 55 with an increased benefit rate to age 63.

School Members 2 Percent at 62 – PEPRA

A guarantee of 2 percent of final compensation at age 62 for each year of service credit. Retirement may begin at age 52 with a reduced benefit rate, or after age 62 with an increased benefit rate to age 67.

Local Miscellaneous Members – Classic

- 2 percent at 55 – A guarantee of 2 percent of final compensation at age 55 for each year of service credit.
- 2 percent at 60 – A guarantee of 2 percent of final compensation at age 60 for each year of service.

Retirement may begin at age 50 with a reduced benefit rate, or after age 55 or 60 with an increased benefit rate to age 63.

- 2.5 percent at 55 – A guarantee of 2.5 percent of final compensation at age 55 for each year of service credit.
- 2.7 percent at 55 – A guarantee of 2.7 percent of final compensation at age 55 for each year of service credit.
- 3 percent at 60 – A guarantee of 3 percent of final compensation at age 60 for each year or service credit.

Retirement may begin at age 50 with a reduced benefit rate.

- 1.5 percent at 65 – A guarantee of 1.5 percent of final compensation at age 65 for each year of service credit. Retirement may begin at age 55 with a reduced benefit rate.

Local Miscellaneous Members 2 Percent at 62 – PEPRA

A guarantee of 2 percent of final compensation at age 62 for each year of service credit. Retirement may begin at age 52 with a reduced benefit rate, or after age 62 with an increased benefit rate to age 67.

Local Safety Members 2 Percent at 50 Formula

2 percent of final compensation for each year of service for retirement at age 50, with an increased benefit rate to age 55. The maximum allowance payable is 90 percent of final compensation.

Local Safety Members – Classic

- 2 percent at 50 – It provides 2 percent of final compensation for each year of service for retirement at age 50, with an increased benefit rate to age 55.
- 3 percent at 50 – It provides 3 percent of final compensation for each year of service for retirement at age 50.

The maximum allowance payable is 90 percent of final compensation.

- 2 percent at 55 – It provides 2 percent of final compensation for each year of service for retirement at age 55.
- 2.5 percent at 55 – It provides 2.5 percent of final compensation for each year of service retirement at age 55.
- 3 percent at 55 – It provides 3 percent of final compensation for each year of service for retirement at age 55.

Retirement may begin at age 50 with a reduced benefit rate. The maximum allowance payable is 90 percent of final compensation.

Local Safety Members – PEPRA

- 2 percent at 57 – It provides 2 percent of final compensation for each year of service for retirement at age 57.
- 2.5 percent at 57 – It provides 2.5 percent of final compensation for each year of service for retirement at age 57.
- 2.7 percent at 57 – It provides 2.7 percent of final compensation for each year of service for retirement at age 57.

Retirement may begin at age 50 with a reduced benefit rate.

PUBLIC EMPLOYEES' RETIREMENT FUND PROGRAM DATA (CONTINUED)

DISABILITY RETIREMENT

For Most Members

A monthly allowance of 1.8 percent of final compensation for each year of service, improved under certain conditions to 33.33 percent of final compensation, applicable to members with at least five years of service credit.

By Contract Amendment Only for Local Agencies

A monthly allowance of 30 percent of final compensation, plus an additional 1 percent for each year of service over five years to a maximum of 50 percent.

For State Second Tier Members

A monthly allowance of 1.125 percent of final compensation for each year of service, improved under certain conditions to 33.33 percent of final compensation, applicable to members with at least 10 years of service credit or five years if credited as of January 1, 1985.

For Certain Local Miscellaneous Second Tier Members

A monthly allowance of 1.35 percent of final compensation for each year of service, improved under certain conditions to 33.33 percent of final compensation, applicable to members with at least five years of service credit.

INDUSTRIAL DISABILITY RETIREMENT

For Most Members

A monthly allowance of 50 percent of final compensation, applicable to California Highway Patrol (CHP) members, state and local safety members, state peace officer/firefighter members, state industrial members, local miscellaneous members (by contract amendment only), and certain state miscellaneous members defined by law. The injury or illness must be job related and the member must be serving in one of these categories at the time the industrial disability occurs. CHP members may be entitled to an enhanced benefit if specific qualifying factors are met.

By Contract Amendment Only for Local Agencies

A monthly allowance of 75 percent of final compensation, if found totally disabled.

By Contract Amendment Only for Local Agencies

A monthly allowance of 50 percent to 90 percent of final compensation, depending on the disability rating by the Workers' Compensation Appeals Board.

SURVIVOR BENEFITS (PRIOR TO RETIREMENT)

STATE MEMBERS: LUMP SUM

Basic Death Benefit – State Members Only

Eligible to retire or not eligible to retire with 20 years or more of state service credit – a return of member contributions plus interest (compounded annually) and a state-paid portion equal to six months' pay (50 percent of the member's earnable pay for the 12 months prior to the member's death).

Not eligible to retire with less than 20 years of state service credit – a return of only the member contributions plus interest (compounded annually).

Insurance Benefit – State Members Only

Eligible to retire or not eligible to retire with 20 years or more of state service credit – \$5,000 in a lump sum.

Not eligible to retire with less than 20 years of state service credit – \$5,000 in a lump sum plus six months' pay (50 percent of annual compensation).

STATE MEMBERS – MONTHLY

Alternate Death Benefit¹ – For State Members in Bargaining Units Contracting for this Benefit

Not Eligible to Retire, With 20 Years or More of State Service Credit – a monthly allowance payable to a surviving spouse or registered domestic partner until death, then to children under age 18. It is calculated similarly to pre-retirement Option 2W (if the beneficiary is a spouse or registered domestic partner), or like a 1957 Survivor Benefit (if the beneficiary is a minor child), as though the member had been old enough to retire. A spouse or registered domestic partner or minor child may receive continued health and dental insurance with the Alternate Death Benefit. Once the allowance stops, the total allowance paid is compared with the Basic Death Benefit amount, and any difference is paid in a lump sum to all of the member's surviving children.

(1) The surviving spouse or registered domestic partner of other than a state member, or a guardian of a minor child, may elect the Basic Death Benefit or the 1957 Survivor Benefit. The surviving spouse or registered domestic partner of a state member may elect the Basic Death Benefit or the Pre-Retirement Option 2W Death Benefit.

PUBLIC EMPLOYEES' RETIREMENT FUND PROGRAM DATA (CONTINUED)

Pre-Retirement Option 2W Benefit¹ – For All State Members, Married, or Registered Domestic Partnership

A monthly allowance payable to the surviving spouse or registered domestic partner until death, then to children under age 18, equal to 100 percent of the option portion had the member retired on their date of death. Once the allowance stops, the total allowance paid is compared with the Basic Death Benefit amount, and any difference is paid in a lump sum to all of the member's surviving children.

1957 Survivor Benefit¹ – For All State Members, Not Married, or No Registered Domestic Partnership

For members eligible to retire who are not married or in a registered domestic partnership, a monthly allowance payable to the unmarried surviving minor children until age 18, equal to one-half of the highest allowance (unmodified) the member would have received had they retired on the date of death. Once allowance stops, the total allowance paid is compared with the Basic Death Benefit amount, and any difference is paid in a lump sum to all of the member's surviving children.

1959 Survivor Benefit – State Members

A monthly benefit paid to survivors of deceased members who died prior to retirement. This benefit is similar to the Social Security Survivor Benefit and is paid in addition to any other applicable pre-retirement survivor benefit, except the Special Death Benefit.

Special Death Benefit¹ – Survivors of State, State Industrial, State Peace Officer/Firefighter Members, State Miscellaneous²

A monthly allowance equal to 50 percent of final compensation payable to the surviving spouse or registered domestic partner until death, or if no spouse, to natural or adopted unmarried children up to age 22. For members who pass under the age of 50, the monthly allowance is recalculated annually on October 1 based on the salary rates for employees who work in the position the member held at the time of death until such time as the member would have attained age 50.

Special Death Benefit³ – Additional Special Death

Provides increased benefits (up to 75 percent of final compensation) based upon the number of surviving children, if the member's death is the result of external violence or physical force.

SCHOOL MEMBERS – LUMP SUM

Basic Death Benefit – School Members

Eligible to retire or not—A return of member contributions plus interest (compounded annually) and an employer-paid portion equal to one month's compensation earnable for each year of current service to a maximum of six months.

SCHOOL MEMBERS – MONTHLY

1957 Survivor Benefit¹ – School Members, Married, or Registered Domestic Partnership

For all members eligible to retire who are married or in a registered domestic partnership, a monthly allowance payable to the surviving spouse or registered domestic partner until death, then to children under age 18, equal to one-half of the highest allowance (unmodified) the member would have received had they retired on the date of death. Once the allowance stops, the total allowance paid is compared with the Basic Death Benefit amount, and any difference is paid in a lump sum to all of the member's surviving children.

1957 Survivor Benefit – For All School Members, Not Married, or No Registered Domestic Partnership

For members eligible to retire who are not married or in a registered domestic partnership, a monthly allowance payable to the unmarried surviving minor children until age 18, equal to one-half of the highest allowance (unmodified) the member would have received had they retired on the date of death. Once allowance stops, the total allowance paid is compared with the Basic Death Benefit amount, and any difference is paid in a lump sum to all of the member's surviving children.

(1) The surviving spouse or registered domestic partner of other than a state member, or a guardian of a minor child, may elect the Basic Death Benefit or the 1957 Survivor Benefit. The surviving spouse or registered domestic partner of a state member may elect the Basic Death Benefit or the Pre-Retirement Option 2W Death Benefit.

(2) The survivor of a state or local miscellaneous member qualifies for the Special Death Benefit if the member was killed or fatally injured while performing their official duties.

(3) The Special Death Benefit is payable if the member's death is job related.

PUBLIC EMPLOYEES' RETIREMENT FUND PROGRAM DATA (CONTINUED)

1959 Survivor Benefit – School Members

A monthly benefit paid to survivors of deceased members who died prior to retirement. This benefit is similar to the Social Security Survivor Benefit and is paid in addition to any other applicable pre-retirement death benefit, except the Special Death Benefit.

LOCAL AGENCY MEMBERS – LUMP SUM

Basic Death Benefit – Local Agency Members

Eligible to retire or not – A return of member contributions plus interest (compounded annually) and an employer-paid portion equal to one month's compensation earnable for each year of current service to a maximum of six months.

LOCAL AGENCY MEMBERS – MONTHLY

1957 Survivor Benefit¹ – Local Agency Members, Married, or Registered Domestic Partnership

For all members eligible to retire who are married or in a registered domestic partnership, a monthly allowance payable to the surviving spouse or registered domestic partner until death, then to children under age 18, equal to one-half of the highest allowance (unmodified) the member would have received had they retired on the date of death. Once the allowance stops, the total allowance paid is compared with the Basic Death Benefit amount, and any difference is paid in a lump sum to all of the member's surviving children.

1957 Survivor Benefit – For All Local Agency Members, Not Married, or No Registered Domestic Partnership

For members eligible to retire who are not married or in a registered domestic partnership, a monthly allowance payable to the unmarried surviving minor children until age 18, equal to one-half of the highest allowance (unmodified) the member would have received had they retired on the date of death. Once allowance stops, the total allowance paid is compared with the Basic Death Benefit amount, and any difference is paid in a lump sum to all of the member's surviving children.

1959 Survivor Benefit – Local Agency Members Not Coordinated With Social Security by Contract Option Amendment

A monthly benefit paid to survivors of deceased members who died prior to retirement. This benefit is similar to the Social Security Survivor Benefit and is paid in addition to any other applicable pre-retirement death benefit, except the Special Death Benefit.

Alternate Death Benefit for Firefighters – Local Agencies by Contract With 20 Years or More of Total Service Credit

A monthly non-job-related allowance payable to a surviving spouse or registered domestic partner until death, then to children under age 18. It is calculated similarly to Pre-Retirement Option 2W (if the beneficiary is a spouse or registered domestic partner, even if the agency does not contract separately for the Pre-Retirement Option 2W benefit), or like a 1957 Survivor Benefit (if the beneficiary is a minor child), as though the member had either been old enough to retire (if the member died before reaching retirement age), or based on the member's actual age if the member was eligible to retire at the time of death. This benefit applies to all service credit earned by the member, including service that may have been earned with a local agency that does not contract for the Alternate Death Benefit, as long as the member was employed at the time of death by a local agency that provides this benefit in their contract. Once the allowance stops, the total allowance paid is compared with the Basic Death Benefit amount, and any difference is paid in a lump sum to all of the member's surviving children.

Pre-Retirement Option 2W Benefit – Local Agencies by Contract, Married, or Registered Domestic Partnership

A monthly allowance payable to the surviving spouse or registered domestic partner until death, then to children under age 18, equal to 100 percent of the option portion had the member retired on their date of death. Once the allowance stops, the total allowance paid is compared with the Basic Death Benefit amount, and any difference is paid in a lump sum to all of the member's surviving children.

(1) The surviving spouse or registered domestic partner of other than a state member, or a guardian of a minor child, may elect the Basic Death Benefit or the 1957 Survivor Benefit. The surviving spouse or registered domestic partner of a state member may elect the Basic Death Benefit or the Pre-Retirement Option 2W Death Benefit.

PUBLIC EMPLOYEES' RETIREMENT FUND PROGRAM DATA (CONTINUED)

Special Death Benefit¹ – Survivors of Patrol, Local Safety & Local Miscellaneous by Contract Amendment²

A monthly allowance equal to 50 percent of final compensation payable to the surviving spouse or registered domestic partner until death, or if no spouse, to natural or adopted unmarried children up to age 22. For members who pass under the age of 50, the monthly allowance is recalculated annually on October 1 based on the salary rates for employees who work in the position the member held at the time of death until such time as the member would have attained age 50.

Special Death Benefit³ – Additional Special Death

Provides increased benefits (up to 75 percent of final compensation) based upon the number of surviving children, if the member's death is the result of external violence or physical force.

COST-OF-LIVING ADJUSTMENTS

For All Members – Except State Second Tier

A maximum of 2 percent compounded annually (up to 5 percent maximum as a contract option for retired members of local agencies). Note: Does not apply to the 1959 Survivor Death Benefit.

For State Second Tier Members Only

A fixed 3 percent compounded annually.

SEPARATION FROM EMPLOYMENT/REFUNDS

At permanent separation from employment, members may either leave their contributions on deposit and defer retirement⁴ or terminate membership by electing to take a refund of member contributions plus interest (compounded annually). With a refund election, CalPERS is required to deduct federal withholding of 20 percent from the untaxed portion of the refund, unless the taxable portion is directly rolled over to a qualified plan or IRA.

(1) The surviving spouse or registered domestic partner of other than a state member, or a guardian of a minor child, may elect the Basic Death Benefit or the 1957 Survivor Benefit. The surviving spouse or registered domestic partner of a state member may elect the Basic Death Benefit or the Pre-Retirement Option 2W Death Benefit.

(2) The survivor of a state or local miscellaneous member qualifies for the Special Death Benefit if the member was killed or fatally injured while performing their official duties.

(3) The Special Death Benefit is payable if the member's death is job-related.

(4) A member who has less than the required amount of service credit may return to CalPERS-covered employment to obtain the minimum service credit required to be eligible for retirement.

Statistical Section (continued)

PUBLIC EMPLOYEES' RETIREMENT FUND PROGRAM DATA (CONTINUED)

The presentation of the following table has been modified to better align statistical data with current categorizations of members and beneficiaries by rate plan and current pension reform changes. For financial reporting purposes only, the Public Employees' Retirement Fund (PERF) is comprised of and reported as three separate entities. PERF A is comprised of agent multiple-employer plans, which includes State of California and most public agencies' rate plans with more than 100 active members. PERF B is a cost-sharing multiple-employer plan of school employers consisting of non-teaching

and non-certified employees. PERF C is a cost-sharing multiple-employer plan of public agencies' plans with generally fewer than 100 active members. Under applicable law, the CalPERS Board of Administration (the Board) may terminate, or a public agency may terminate that agency's plan under either PERF A or PERF C. The terminated agency is liable to the System for all costs to fund all benefits under the agency's contract. An unpaid deficit in funding will result in a commensurate reduction in benefits provided under that agency's contract.

Retirement Benefit Recipients and Members by Employer Category – PERF – As of June 30, 2019

Employer/Category	Plan Type	Active ¹	Inactive	Retired ²	Survivors & Beneficiaries ³	Total
STATE						
Miscellaneous – Classic ⁴	PERF A	118,994	70,520	152,100	27,497	369,111
Miscellaneous – PEPRA ⁴	PERF A	73,586	16,727	273	3	90,589
Safety – Classic ⁵	PERF A	50,767	10,040	61,800	7,593	130,200
Safety – PEPRA ⁵	PERF A	26,815	3,971	106	1	30,893
Pre-Retirement Death – Classic	PERF A	—	—	—	3,060	3,060
Pre-Retirement Death – PEPRA	PERF A	—	—	—	10	10
TOTAL STATE		270,162	101,258	214,279	38,164	623,863
SCHOOL						
Miscellaneous – Classic	PERF B	187,685	144,389	195,972	28,778	556,824
Miscellaneous – PEPRA	PERF B	152,417	48,038	240	1	200,696
Pre-Retirement Death – Classic	PERF B	—	—	—	1,176	1,176
Pre-Retirement Death – PEPRA	PERF B	—	—	—	68	68
TOTAL SCHOOL		340,102	192,427	196,212	30,023	758,764
PUBLIC AGENCY						
Miscellaneous – Classic	PERF A	103,067	68,620	130,557	17,147	319,391
Miscellaneous – PEPRA	PERF A	78,340	24,557	335	2	103,234
Safety – Classic	PERF A	24,522	5,214	36,727	4,799	71,262
Safety – PEPRA	PERF A	10,236	1,664	41	—	11,941
Pre-Retirement Death – Classic	PERF A	—	—	—	1,450	1,450
Pre-Retirement Death – PEPRA	PERF A	—	—	—	39	39
Miscellaneous – Classic	PERF C	18,125	14,867	21,310	2,600	56,902
Miscellaneous – PEPRA	PERF C	15,720	5,349	117	2	21,188
Safety – Classic	PERF C	9,753	3,774	15,791	2,078	31,396
Safety – PEPRA	PERF C	5,374	1,123	33	—	6,530
Pre-Retirement Death – Classic	PERF C	—	—	—	392	392
Pre-Retirement Death – PEPRA	PERF C	—	—	—	17	17
TOTAL PUBLIC AGENCY		265,137	125,168	204,911	28,526	623,742
TOTAL BENEFIT RECIPIENTS AND MEMBERS		875,401	418,853	615,402	96,713	2,006,369

(1) A participant could be counted more than once if he/she has multiple active appointments on the report effective date.

(2) The actual number of retirees is by the employer category from which they retired, regardless of whether they had service in other employer categories.

(3) The total includes those recipients receiving either a lump sum, one-time only payment, and/or continuous payments.

(4) State miscellaneous includes state industrial.

(5) State safety includes Highway Patrol and Peace Officer/Firefighter.

Statistical Section (continued)

PUBLIC EMPLOYEES' RETIREMENT FUND PROGRAM DATA (CONTINUED)

Benefit and Refund Deductions from Fiduciary Net Position – Six-Year Review – PERF

Category	2019	2018	2017	2016	2015	2014
Service Retirement	\$21,288,786,325	\$19,851,652,792	\$18,537,701,906	\$17,482,814,843	\$16,399,932,312	\$15,318,518,965
Disability Retirement	640,390,289	629,909,937	621,706,049	614,204,683	599,845,301	575,825,287
Industrial Disability Retirement	2,044,665,647	1,946,751,674	1,867,178,738	1,784,205,878	1,695,674,147	1,583,017,137
PPPA Payments ¹	12,956,146	14,739,908	17,399,875	21,742,842	25,792,689	33,299,953
Total	\$23,986,798,407	\$22,443,054,311	\$21,043,986,568	\$19,902,968,246	\$18,721,244,449	\$17,510,661,342
Basic Death Benefit/Group Term Life Insurance	\$42,184,086	\$45,353,650	\$36,354,849	\$37,528,299	\$25,652,204	\$26,528,315
1957 Survivor Benefit	107,503,062	103,212,410	99,140,672	95,869,358	92,157,432	87,564,961
1959 Survivor Benefit	33,431,530	33,515,158	33,448,316	33,770,778	33,886,098	33,699,064
Industrial Death Allowance	53,295,292	50,041,476	48,682,349	47,735,846	45,653,060	43,918,078
Option 1, Temporary Annuity, Other Lump-Sum Death Benefits & Other Prior-Year Adjustments	41,755,031	44,705,434	30,796,681	36,775,082	55,058,746	57,285,779
Adjustments ²	(55,684,211)	(65,438,104)	(76,521,097)	(60,714,425)	(51,360,036)	—
Total	\$222,484,790	\$211,390,024	\$171,901,770	\$190,964,938	\$201,047,504	\$248,996,197
Total Retirement and Death Payments	\$24,209,283,197	\$22,654,444,335	\$21,215,888,338	\$20,093,933,184	\$18,922,291,953	\$17,759,657,539
Refunds	280,265,587	286,978,986	222,274,594	238,821,624	240,623,206	237,893,870
GRAND TOTAL	\$24,489,548,784	\$22,941,423,321	\$21,438,162,932	\$20,332,754,808	\$19,162,915,159	\$17,997,551,409

(1) These payments were made from the Purchasing Power Protection Account, which is structured to maintain current benefit levels and to restore CalPERS allowances to 75 percent of their original purchasing power (80 percent for public agencies).

(2) Adjustment category added in FY 2015 to accommodate manual claims and overpayment recoveries.

Statistical Section (continued)

PUBLIC EMPLOYEES' RETIREMENT FUND PROGRAM DATA (CONTINUED)

Program Data – PERF – Average Benefit Payments – As of June 30, 2019 – 10-Year Review

Retirement Effective Dates	Years of Service Credit						
	0 - 5	6 - 10	11 - 15	16 - 20	21 - 25	26 - 30	31+
2018-19							
Average Monthly Allowance ¹	\$613	\$1,037	\$1,752	\$2,563	\$3,807	\$5,484	\$6,199
Average Final Compensation	\$6,442	\$5,310	\$5,718	\$6,132	\$7,063	\$8,146	\$8,082
Number of Recipients ¹	1,552	4,643	5,825	6,429	5,391	5,685	5,961
2017-18							
Average Monthly Allowance ¹	\$614	\$1,069	\$1,766	\$2,508	\$3,672	\$5,510	\$6,192
Average Final Compensation	\$6,427	\$5,310	\$5,598	\$6,023	\$6,776	\$7,993	\$7,854
Number of Recipients ¹	1,482	4,669	5,531	6,209	5,100	5,994	5,620
2016-17							
Average Monthly Allowance ¹	\$569	\$1,059	\$1,630	\$2,426	\$3,487	\$5,288	\$5,841
Average Final Compensation	\$6,366	\$5,244	\$5,311	\$5,865	\$6,491	\$7,700	\$7,476
Number of Recipients ¹	1,551	5,101	5,481	5,806	4,641	5,805	5,312
2015-16							
Average Monthly Allowance ¹	\$541	\$1,053	\$1,641	\$2,392	\$3,443	\$5,223	\$5,744
Average Final Compensation	\$5,942	\$5,130	\$5,282	\$5,728	\$6,361	\$7,565	\$7,307
Number of Recipients ¹	1,383	4,840	5,571	5,140	4,741	5,599	5,057
2014-15							
Average Monthly Allowance ²	\$634	\$1,034	\$1,591	\$2,313	\$3,264	\$5,026	\$5,370
Average Final Compensation	\$6,024	\$5,028	\$5,131	\$5,625	\$6,227	\$7,503	\$7,081
Number of Recipients ²	1,510	5,240	5,908	5,277	5,020	5,534	5,168
2013-14							
Average Monthly Allowance ³	\$530	\$837	\$1,340	\$1,890	\$2,791	\$4,295	\$4,975
Average Final Compensation	\$5,923	\$4,680	\$4,782	\$5,041	\$5,643	\$6,680	\$6,720
Number of Recipients ³	880	5,029	5,707	4,890	5,013	5,085	5,808
2012-13							
Average Monthly Allowance ³	\$540	\$774	\$1,304	\$1,911	\$2,806	\$4,337	\$4,954
Average Final Compensation	\$6,098	\$4,537	\$4,758	\$5,127	\$5,651	\$6,692	\$6,686
Number of Recipients ³	774	5,053	5,864	4,958	5,664	5,557	6,861
2011-12							
Average Monthly Allowance ³	\$541	\$747	\$1,267	\$1,860	\$2,733	\$4,228	\$5,026
Average Final Compensation	\$6,104	\$4,442	\$4,679	\$5,037	\$5,722	\$6,587	\$6,700
Number of Recipients ³	763	4,688	5,628	4,735	5,746	5,163	6,726
2010-11							
Average Monthly Allowance ³	\$517	\$782	\$1,291	\$1,856	\$2,815	\$4,146	\$5,130
Average Final Compensation	\$6,442	\$4,508	\$4,739	\$4,927	\$5,606	\$6,500	\$6,741
Number of Recipients ³	713	4,322	5,128	4,607	5,993	5,243	7,572
2009-10							
Average Monthly Allowance ³	\$586	\$829	\$1,377	\$2,059	\$3,043	\$4,577	\$5,572
Average Final Compensation	\$6,806	\$4,460	\$4,760	\$5,153	\$5,819	\$6,738	\$7,076
Number of Recipients ³	878	4,172	4,322	4,208	5,596	5,322	7,092

(1) These averages and totals are for retired members only.

(2) These averages and totals are for retired members and community property only.

(3) These averages and totals are for retired members, survivors, beneficiaries, and community property recipients.

PUBLIC AGENCY EMPLOYERS

CONTRACTS SUMMARY

On June 30, 2019, 1,571 public agency contracts provided retirement, death, and survivor benefits for participants of 57 county offices of education; 4 school district offices; 452 cities and towns; 37 counties; the State of California; and 1,020 districts and other public agencies. The 57 county offices of education contracts provide benefits for 1,319 school districts and charter schools, bringing the total number of public agency employers to 2,890.

During Fiscal Year 2018-19, four additional agencies contracted with CalPERS for retirement, death, and survivor benefits. The new contracting agencies are:

New Contracts

Effective Date	Public Agency	Misc. Member Formula	Safety Member Formula
1/5/2019	Santa Clarita Valley Water Agency	2.0% @ 55 2.0% @ 62	N/A
1/13/2019	San Mateo Consolidated Fire Department	2.0% @ 62	2.7% @ 57
3/25/2019	Central Marin Fire Authority	2.5% @ 55 2.0% @ 62	3.0% @ 55 2.7% @ 57
4/1/2019	City of Foster City	2.7% @ 55 2.0% @ 62	2.0% @ 50 2.7% @ 57

Amendments

Public agency contracts vary depending upon the member categories covered, the formula the agency elects to provide, and the optional benefit provisions selected from the group of 41 benefits. These optional benefits may be provided at the time the original contract is established or they may be added later through the contract amendment process.

During Fiscal Year 2018-19, 66 contract amendments were completed.

Two Years of Additional Service Credit – "Golden Handshake"

Contracting agencies may amend their contracts to provide additional service credit if there are impending mandatory transfers, layoffs, or demotions. Eligible employees who retire within a 90- to 180-day window as established by the employer receive two years additional service credit. The county offices of education may also contract for this benefit when there is an impending curtailment of, or change in the manner of performing services, and their best interest would be served by granting the additional service credit. Once the contract is amended, the employer may establish additional window periods.

Popular Benefit Amendments

Benefit	Number of Amendments
Employees Sharing Additional Cost	54
Employees to be Included and Excluded	3
Public Service - Time as Volunteer	2
Fourth Level of 1959 Survivor Benefits	2
County Peace Officer - Sheriff - Jail	1
Election - Employees Included in Social Security System	1
Reclass - Local Firefighter - Various Including Emergency Medical Services	1
Removal of Contract Exclusions Prospectively Only	1
Two-Year Additional Service Credit	1

Mergers

- Pleasant Hill-Martinez Joint Facilities Agency merged to the City of Martinez, effective August 1, 2018

Terminations

CalPERS pension contract terminations are permissible under the Public Employees' Retirement Law (PERL), which defines the methods in which a contracting agency voluntarily or involuntarily exits CalPERS pension program. A contracting agency may voluntarily terminate its pension contract with the adoption of a formal resolution effectuating this action. The termination is effective with the agency's Board approval on the date designated in the resolution terminating the contract and any unfunded liabilities must be fully paid. In the case of an involuntary termination, the Board has the authority to terminate a contracting agency's pension contracts due to specific inabilities by a contracting agency to meet the requirements of participation as defined by the PERL.

- Armona Community Services District, effective February 14, 2019
- Janesville Fire Protection District, effective April 11, 2019
- Soledad Community Healthcare District, effective June 27, 2019
- Three Arch Bay Community Services District, effective April 25, 2019
- Torrance City Redevelopment Agency, effective February 26, 2019

Statistical Section (continued)

PUBLIC AGENCY EMPLOYERS (CONTINUED)

Reciprocal Systems

Reciprocity is a valuable addition to the CalPERS benefit package. Its purpose is to encourage career public service, by allowing members to move between employers under different public retirement systems without losing their retirement and related benefits. The following retirement systems have reciprocity with CalPERS:

Counties Under the County Employees' Retirement Law of 1937

- Alameda
- Contra Costa
- Fresno
- Imperial
- Kern
- Los Angeles
- Marin
- Mendocino
- Merced
- Orange
- Sacramento
- San Bernardino
- San Diego
- San Joaquin
- San Mateo
- Santa Barbara
- Sonoma
- Stanislaus
- Tulare
- Ventura

The University of California Retirement Plan (UCRP)

Reciprocal Public Retirement Systems

- Concord, City of
- Contra Costa Water District
- Costa Mesa, City of (safety only)
- East Bay Municipal Utility District
- East Bay Regional Park District (safety only)
- Fresno, City of
- Los Angeles City Employees' Retirement Plan
- Los Angeles County Metropolitan Transportation Authority (Non-Contract Employees' Retirement Income Plan)
- Oakland, City of (non-safety only)
- Pasadena, City of (fire and police only)
- Sacramento, City of
- San Clemente, City of (non-safety only)
- San Diego, City of
- San Francisco, City and County of
- San Jose, City of
- San Luis Obispo, County of

Systems with Limited Reciprocity

- Judges' Retirement System
- Judges' Retirement System II
- Legislators' Retirement System
- California State Teachers' Retirement System

PARTICIPATING PUBLIC AGENCIES BY TYPE

The following tables are counts of active participants, excluding retirees, sorted by public agency. In most cases, a participant is only counted once. A participant could be counted more than once if he/she has multiple active appointments on the report effective date. An active member is one who is currently employed by the State of California, a CalPERS contracting public agency, or a school district. Agencies that contract with CalPERS for retirement benefits and have zero participants were included.

For financial reporting purposes only, the PERF is comprised of and reported as three separate entities. PERF A is comprised of agent multiple-employer plans, which includes State of California and most public agency rate plans with more than 100 active members. PERF B is a cost-sharing multiple-employer plan of school employers consisting of non-teaching and non-certified employees. PERF C is a cost-sharing multiple-employer plan of public agency plans with generally fewer than 100 active members. Under applicable law, the Board may terminate or a public agency may terminate that agency's plan under either PERF A or PERF C. The terminated agency is liable to the System for all costs to fund all benefits under the agency's contract. An unpaid deficit in funding will result in a commensurate reduction in benefits provided under that agency's contract.

Largest Participating Employers – Current Year

Rank	Employer	2019	% of Total System
		Number of Employees ¹	
1	State of California	270,162	30.86%
2	Los Angeles County Schools	47,876	5.47%
3	San Diego County Schools	27,500	3.14%
4	Los Angeles Unified School District	27,183	3.11%
5	Orange County Schools	26,083	2.98%
6	Riverside County Schools	22,069	2.52%
7	San Bernardino County Schools	21,280	2.43%
	All Other	433,248	49.49%
	Total Covered Employees	875,401	100.00%

(1) Number of Employees includes only active members.

Largest Participating Employers – Nine Years Prior

Rank	Employer	2010	% of Total System
		Number of Employees ¹	
1	State of California	340,572	28.17%
2	Los Angeles County Office of Education	107,525	8.89%
3	Los Angeles Unified School District	45,402	3.76%
4	San Diego County Office of Education	36,354	3.01%
5	Orange County Office of Education	31,909	2.64%
6	County of Riverside	24,471	2.02%
7	San Bernardino County Office of Education	24,468	2.02%
	All Other	598,189	49.49%
	Total Covered Employees	1,208,890	100.00%

(1) Number of Employees includes active and inactive members.

Statistical Section (continued)

PUBLIC AGENCY EMPLOYERS (CONTINUED)

County Offices of Education (57)

	PERF B Active		PERF B Active
Alameda	11,357	Orange	26,056
Alpine	34	Placer	3,354
Amador	254	Plumas	297
Butte	2,608	Riverside	22,069
Calaveras	460	Sacramento	13,532
Colusa	380	San Benito	603
Contra Costa	8,218	San Bernardino	21,226
Del Norte	236	San Diego	27,429
El Dorado	1,763	San Joaquin	8,051
Fresno	12,459	San Luis Obispo	2,428
Glenn	441	San Mateo	5,429
Humboldt	1,719	Santa Barbara	4,194
Imperial	2,566	Santa Clara	13,365
Inyo	204	Santa Cruz	2,378
Kern	12,980	Shasta	2,186
Kings	1,625	Sierra	46
Lake	685	Siskiyou	690
Lassen	382	Solano	3,407
Los Angeles	47,817	Sonoma	4,172
Madera	1,675	Stanislaus	7,094
Marin	1,685	Sutter	1,069
Mariposa	157	Tehama	930
Mendocino	1,373	Trinity	192
Merced	3,886	Tulare	6,717
Modoc	208	Tuolumne	451
Mono	171	Ventura	7,774
Monterey	5,196	Yolo	1,807
Napa	1,379	Yuba	1,119
Nevada	733	Total	310,716

Counties (37 total)

	Active		Total
	PERF A	PERF C	
Alpine	—	86	86
Amador	294	99	393
Butte	2,239	—	2,239
Calaveras	479	94	573
Colusa	302	61	363
Del Norte	387	48	435
El Dorado	1,798	—	1,798
Glenn	437	28	465
Humboldt	2,140	—	2,140
Inyo	348	39	387
Kings	1,512	—	1,512
Lake	886	—	886
Lassen	342	59	401
Madera	1,413	—	1,413
Mariposa	348	69	417
Modoc	201	20	221
Mono	208	77	285
Monterey	5,218	—	5,218
Napa	1,345	113	1,458
Nevada	723	66	789
Placer	2,652	—	2,652
Plumas	337	33	370
Riverside	20,294	—	20,294
San Benito	392	77	469
San Joaquin	—	—	—
Santa Clara	19,539	—	19,539
Santa Cruz	2,424	—	2,424
Shasta	1,928	—	1,928
Sierra	—	110	110
Siskiyou	649	—	649
Solano	2,975	—	2,975
Sutter	1,003	—	1,003
Tehama	801	—	801
Trinity	264	54	318
Tuolumne	524	137	661
Yolo	1,648	—	1,648
Yuba	825	—	825
Total	76,875	1,270	78,145

School District Offices¹ (4)

	Active		Total
	PERF A	PERF B	
Los Angeles Unified School District	348	26,835	27,183
Los Angeles Community College District	—	2,551	2,551
Los Angeles County Office of Education	1,150	—	1,150
San Diego County Office of Education	756	—	756
Total	2,254	29,386	31,640

(1) Agencies that contract with CalPERS as public agencies and are not reflected elsewhere in this report.

Statistical Section (continued)

PUBLIC AGENCY EMPLOYERS (CONTINUED)

Cities & Towns (452)

City/Town	Active		Total	City/Town	Active		Total	City/Town	Active		Total
	PERF A	PERF C			PERF A	PERF C			PERF A	PERF C	
Adelanto	—	36	36	Calabasas	—	89	89	Del Mar	—	58	58
Agoura Hills	—	37	37	Calexico	—	149	149	Del Rey Oaks	—	15	15
Alameda	482	—	482	California City	—	113	113	Delano	—	51	51
Albany	—	103	103	Calimesa	—	11	11	Desert Hot Springs	—	82	82
Alhambra	396	—	396	Calipatria	—	11	11	Diamond Bar	—	59	59
Aliso Viejo	—	23	23	Calistoga	—	61	61	Dinuba	—	143	143
Alturas	—	21	21	Camarillo	144	—	144	Dixon	—	115	115
American Canyon	—	73	73	Campbell	138	47	185	Dos Palos	—	26	26
Anaheim	2,400	—	2,400	Canyon Lake	—	6	6	Downey	422	—	422
Anderson	—	60	60	Capitola	—	71	71	Duarte	—	52	52
Angels	—	35	35	Carlsbad	731	—	731	Dublin	—	98	98
Antioch	197	103	300	Carmel-By-The-Sea	—	74	74	Dunsmuir	—	12	12
Apple Valley	—	103	103	Carpinteria	—	34	34	East Palo Alto	—	101	101
Arcadia	313	—	313	Carson	412	—	412	Eastvale	—	26	26
Arcata	—	123	123	Cathedral City	—	183	183	El Cajon	411	—	411
Arroyo Grande	—	96	96	Cerritos	244	—	244	El Centro	191	82	273
Artesia	—	34	34	Chico	355	—	355	El Cerrito	—	184	184
Arvin	—	51	51	Chino	356	103	459	El Monte	291	—	291
Atascadero	—	146	146	Chowchilla	—	67	67	El Segundo	181	93	274
Atherton	—	45	45	Chula Vista	991	—	991	Elk Grove	—	349	349
Atwater	—	79	79	Citrus Heights	—	215	215	Emeryville	—	37	37
Auburn	—	66	66	Claremont	135	38	173	Encinitas	161	62	223
Avalon	—	70	70	Clayton	—	25	25	Escalon	—	31	31
Avenal	—	51	51	Clearlake	—	62	62	Escondido	799	—	799
Azusa	242	60	302	Cloverdale	—	39	39	Etna	—	14	14
Bakersfield	1,507	—	1,507	Clovis	634	—	634	Eureka	179	50	229
Baldwin Park	159	66	225	Coachella City	—	75	75	Exeter	—	38	38
Banning	136	24	160	Coalinga	—	74	74	Fairfax	—	36	36
Barstow	—	134	134	Colfax	—	12	12	Fairfield	527	—	527
Beaumont	—	149	149	Colma	—	46	46	Farmersville	—	27	27
Bell	—	102	102	Colton	202	86	288	Fillmore	—	33	33
Bell Gardens	—	151	151	Colusa	—	28	28	Firebaugh	—	34	34
Bellflower	—	87	87	Commerce	153	—	153	Folsom	439	—	439
Belmont	—	131	131	Compton	267	61	328	Fontana	735	—	735
Belvedere	—	18	18	Concord	400	—	400	Fort Bragg	—	56	56
Benicia	163	59	222	Corcoran	—	62	62	Fortuna	—	76	76
Berkeley	1,361	—	1,361	Corning	—	43	43	Foster City	132	36	168
Beverly Hills	911	—	911	Corona	488	88	576	Fountain Valley	—	217	217
Biggs	—	8	8	Coronado	191	74	265	Fowler	—	28	28
Bishop	—	39	39	Corte Madera	—	33	33	Fremont	912	—	912
Blue Lake	—	14	14	Costa Mesa	486	80	566	Fullerton	544	—	544
Blythe	—	57	57	Cotati	—	38	38	Galt	121	32	153
Bradbury	—	3	3	Covina	115	55	170	Garden Grove	621	—	621
Brawley	—	126	126	Crescent City	—	61	61	Gardena	357	92	449
Brea	286	—	286	Cudahy	—	21	21	Gilroy	252	—	252
Brentwood	233	64	297	Culver City	643	—	643	Glendale	1,884	—	1,884
Brisbane	—	90	90	Cupertino	195	—	195	Glendora	139	52	191
Buellton	—	19	19	Cypress	—	130	130	Goleta	—	70	70
Buena Park	192	86	278	Daly City	438	—	438	Gonzales	—	55	55
Burbank	1,282	—	1,282	Dana Point	—	61	61	Grand Terrace	—	18	18
Burlingame	198	35	233	Davis	260	96	356	Grass Valley	—	90	90

Statistical Section (continued)

PUBLIC AGENCY EMPLOYERS (CONTINUED)

Cities & Towns (continued)

City/Town	Active		Total	City/Town	Active		Total	City/Town	Active		Total
	PERF A	PERF C			PERF A	PERF C			PERF A	PERF C	
Greenfield	—	70	70	Lakewood	304	—	304	Moreno Valley	322	—	322
Gridley	—	42	42	Lancaster	261	—	261	Morgan Hill	164	37	201
Grover Beach	—	62	62	Larkspur	—	43	43	Morro Bay	—	94	94
Guadalupe	—	28	28	Lathrop	—	79	79	Mountain View	641	—	641
Gustine	—	23	23	Lawndale	—	55	55	Mt. Shasta	—	38	38
Half Moon Bay	—	35	35	Lemon Grove	—	56	56	Murrieta	—	272	272
Hanford	187	87	274	Lemoore	—	120	120	Napa	474	—	474
Hawaiian Gardens	—	78	78	Lincoln	—	155	155	National City	308	—	308
Hawthorne	172	88	260	Lindsay	—	41	41	Needles	—	48	48
Hayward	828	—	828	Live Oak	—	23	23	Nevada City	—	36	36
Healdsburg	—	135	135	Livermore	321	89	410	Newark	125	54	179
Hemet	272	—	272	Livingston	—	68	68	Newman	—	41	41
Hercules	—	78	78	Lodi	386	—	386	Newport Beach	801	—	801
Hermosa Beach	—	147	147	Loma Linda	—	85	85	Norco	—	61	61
Hesperia	—	108	108	Lomita	—	43	43	Norwalk	242	—	242
Hidden Hills	—	3	3	Lompoc	265	68	333	Novato	145	60	205
Highland	—	35	35	Long Beach	4,763	—	4,763	Oakdale	—	83	83
Hillsborough	—	81	81	Loomis	—	11	11	Oakland	3,936	—	3,936
Hollister	—	191	191	Los Alamitos	—	42	42	Oakley	—	80	80
Hughson	—	16	16	Los Altos	—	131	131	Oceanside	873	—	873
Huntington Beach	974	—	974	Los Altos Hills	—	21	21	Ojai	—	33	33
Huntington Park	—	151	151	Los Banos	—	161	161	Ontario	1,166	—	1,166
Imperial	—	70	70	Los Gatos	117	38	155	Orange	628	—	628
Imperial Beach	—	78	78	Lynwood	124	—	124	Orange Cove	—	28	28
Indian Wells	—	25	25	Madera	186	65	251	Orland	—	36	36
Indio	172	66	238	Malibu	—	82	82	Oroville	—	87	87
Industry	—	20	20	Mammoth Lakes	—	71	71	Oxnard	1,152	109	1,261
Inglewood	652	—	652	Manhattan Beach	257	89	346	Pacific Grove	—	87	87
Ione	—	17	17	Manteca	282	121	403	Pacifica	130	57	187
Irvine	987	—	987	Marina	—	94	94	Palm Desert	110	—	110
Irwindale	—	94	94	Martinez	—	127	127	Palm Springs	463	—	463
Jackson	—	32	32	Marysville	—	65	65	Palmdale	213	—	213
Kerman	—	67	67	Maywood	—	22	22	Palo Alto	942	—	942
King City	—	33	33	Mendota	—	26	26	Palos Verdes	—	—	—
Kingsburg	—	55	55	Menifee	—	115	115	Estates	—	48	48
La Canada Flintridge	—	37	37	Menlo Park	221	46	267	Paradise	—	55	55
La Habra	248	68	316	Merced	456	—	456	Paramount	—	91	91
La Habra Heights	—	27	27	Mill Valley	—	162	162	Parlier	—	54	54
La Mesa	258	—	258	Millbrae	—	82	82	Pasadena	1,783	—	1,783
La Mirada	—	82	82	Milpitas	365	—	365	Paso Robles	132	64	196
La Palma	—	58	58	Mission Viejo	152	—	152	Patterson	—	122	122
La Puente	—	33	33	Modesto	1,158	—	1,158	Perris	—	95	95
La Quinta	—	95	95	Monrovia	162	90	252	Petaluma	308	—	308
La Verne	—	156	156	Montague	—	8	8	Pico Rivera	147	—	147
Laguna Beach	165	102	267	Montclair	—	160	160	Piedmont	—	98	98
Laguna Hills	—	41	41	Monte Sereno	—	7	7	Pinole	—	95	95
Laguna Niguel	—	90	90	Montebello	428	—	428	Pismo Beach	—	84	84
Laguna Woods	—	6	6	Monterey	316	127	443	Pittsburg	182	85	267
Lake Elsinore	—	84	84	Monterey Park	313	—	313	Placentia	—	124	124
Lake Forest	—	72	72	Moorpark	—	58	58	Placerville	—	83	83
Lakeport	—	50	50	Moraga	—	36	36	Pleasant Hill	—	111	111

Statistical Section (continued)

PUBLIC AGENCY EMPLOYERS (CONTINUED)

Cities & Towns (continued)

City/Town	Active		Total	City/Town	Active		Total	City/Town	Active		Total
	PERF A	PERF C			PERF A	PERF C			PERF A	PERF C	
Pleasanton	432	78	510	San Luis Obispo	302	104	406	Temple City	—	51	51
Pomona	503	—	503	San Marcos	192	68	260	Thousand Oaks	358	—	358
Port Hueneme	—	98	98	San Marino	—	117	117	Tiburon	—	41	41
Porterville	207	102	309	San Mateo	466	—	466	Torrance	1,357	—	1,357
Portola	—	10	10	San Pablo	—	155	155	Tracy	517	—	517
Portola Valley	—	14	14	San Ramon	214	64	278	Truckee	—	119	119
Poway	184	50	234	Sand City	—	22	22	Tulare	242	104	346
Rancho Cordova	—	84	84	Sanger	—	109	109	Tulelake	—	8	8
Rancho Cucamonga	473	—	473	Santa Ana	1,008	—	1,008	Turlock	213	128	341
Rancho Mirage	—	86	86	Santa Barbara	928	95	1,023	Tustin	207	85	292
Rancho Palos Verdes	—	96	96	Santa Clara	1,046	—	1,046	Twentynine Palms	—	36	36
Rancho Santa Margarita	—	26	26	Santa Clarita	452	—	452	Ukiah	150	48	198
Red Bluff	—	99	99	Santa Cruz	690	146	836	Union City	187	75	262
Redding	783	—	783	Santa Fe Springs	106	52	158	Upland	145	66	211
Redlands	331	139	470	Santa Maria	374	181	555	Vacaville	526	—	526
Redondo Beach	484	—	484	Santa Monica	2,252	—	2,252	Vallejo	493	—	493
Redwood City	553	—	553	Santa Paula	—	104	104	Ventura	638	—	638
Reedley	—	118	118	Santa Rosa	1,191	—	1,191	Vernon	245	—	245
Rialto	321	—	321	Santee	—	123	123	Victorville	341	57	398
Richmond	703	—	703	Saratoga	—	58	58	Villa Park	—	7	7
Ridgecrest	—	101	101	Sausalito	—	65	65	Visalia	607	—	607
Rio Vista	—	45	45	Scotts Valley	—	52	52	Vista	213	83	296
Ripon	—	23	23	Seal Beach	—	94	94	Walnut	—	45	45
Riverbank	—	51	51	Seaside	—	176	176	Walnut Creek	336	81	417
Riverside	2,176	—	2,176	Sebastopol	—	46	46	Wasco	—	66	66
Rocklin	139	93	232	Selma	—	107	107	Waterford	—	18	18
Rohnert Park	158	73	231	Shafter	—	188	188	Watsonville	313	110	423
Rolling Hills	—	4	4	Shasta Lake	—	47	47	Weed	—	29	29
Rolling Hills Estates	—	23	23	Sierra Madre	—	81	81	West Covina	280	—	280
Rosemead	—	61	61	Signal Hill	—	107	107	West Hollywood	233	—	233
Roseville	1,299	—	1,299	Simi Valley	497	—	497	West Sacramento	294	125	419
Ross	—	20	20	Solana Beach	—	72	72	Westlake Village	—	15	15
Sacramento	3,947	—	3,947	Soledad	—	53	53	Westminster	138	78	216
Salinas	439	89	528	Solvang	—	32	32	Whittier	364	—	364
San Anselmo	—	35	35	Sonoma	—	41	41	Wildomar	—	18	18
San Bernardino	874	—	874	Sonora	—	41	41	Williams	—	38	38
San Bruno	158	78	236	South El Monte	—	54	54	Willits	—	49	49
San Carlos	—	83	83	South Gate	252	73	325	Willows	—	18	18
San Clemente	181	5	186	South Lake Tahoe	131	66	197	Windsor	—	98	98
San Dimas	—	93	93	South Pasadena	—	151	151	Winters	—	45	45
San Fernando	—	107	107	South San Francisco	458	—	458	Woodlake	—	29	29
San Francisco ¹	760	2	762	St. Helena	—	78	78	Woodland	288	—	288
San Gabriel	—	175	175	Stanton	—	35	35	Woodside	—	18	18
San Jacinto	—	56	56	Stockton	1,607	—	1,607	Yorba Linda	119	—	119
San Joaquin	—	12	12	Suisun City	—	97	97	Yountville	—	30	30
San Jose	—	8	8	Sunnyvale	891	—	891	Yreka	—	62	62
San Leandro	255	90	345	Susanville	—	65	65	Yuba City	191	113	304
				Sutter Creek	—	12	12	Yucaipa	—	53	53
				Taft	—	132	132	Yucca Valley	—	41	41
				Tehachapi	—	68	68	Total	96,476	24,622	121,098
				Temecula	191	—	191	(1) San Francisco has both City and County employees; however it is listed only in the "total" count of the Cities & Towns category.			

Statistical Section (continued)

PUBLIC AGENCY EMPLOYERS (CONTINUED)

Other Public Agencies that Contract with CalPERS for Retirement Benefits (1,020)

Other Public Agency	Active		Total	Other Public Agency	Active		Total
	PERF A	PERF C			PERF A	PERF C	
Academic Senate for California Community Colleges	—	10	10	Association of California Water Agencies - Joint Powers Insurance Authority	—	49	49
Access Services Incorporated	—	67	67	Association of Monterey Bay Area Governments	—	14	14
Agoura Hills and Calabasas Community Center	—	6	6	Atascadero Cemetery District	—	3	3
Alameda Alliance for Health	308	—	308	Auburn Area Recreation and Park District	—	49	49
Alameda Corridor Transportation Authority	—	11	11	Auburn Public Cemetery District	—	7	7
Alameda County Fire Department	349	76	425	Avila Beach Community Services District	—	1	1
Alameda County Law Library	—	7	7	Aztec Shops, Ltd.	—	42	42
Alameda County Mosquito Abatement District	—	18	18	Baldwin Park Unified School District	—	9	9
Alameda County Schools Insurance Group	—	3	3	Bard Water District	—	15	15
Alameda County Transportation Commission	—	35	35	Bardsdale Cemetery District	—	1	1
Alameda County Waste Management Authority	—	40	40	Barstow Cemetery District	—	5	5
Alameda County Water District	216	—	216	Bay Area Air Quality Management District	361	—	361
Alliance of Schools for Cooperative Insurance Programs	—	42	42	Bay Area Water Supply and Conservation Agency	—	8	8
Alpine Fire Protection District	—	16	16	Beach Cities Health District	—	66	66
Alpine Springs County Water District	—	3	3	Bear Mountain Recreation and Park District	—	6	6
Alta California Regional Center, Inc.	482	—	482	Bear Valley Community Services District	—	35	35
Alta Irrigation District	—	19	19	Beaumont District Library	—	10	10
Altadena Library District	—	19	19	Beaumont-Cherry Valley Recreation and Park District	—	15	15
Amador County Transportation Commission	—	3	3	Beaumont-Cherry Valley Water District	—	34	34
Amador Transit	—	23	23	Bella Vista Water District	—	24	24
Amador Water Agency	—	44	44	Belmont-San Carlos Fire Department	—	—	—
American Canyon Fire Protection District	—	18	18	Belvedere-Tiburon Library Agency	—	20	20
American River Flood Control District	—	9	9	Benicia City Housing Authority	—	9	9
Anderson Cemetery District	—	1	1	Bennett Valley Fire Protection District	—	7	7
Anderson Fire Protection District	—	8	8	Berkeley Housing Authority	—	10	10
Angiola Water District	—	5	5	BETA Healthcare Group Risk Management Authority	—	135	135
Antelope Valley Mosquito and Vector Control District	—	8	8	Big Bear Area Regional Wastewater Agency	—	15	15
Antelope Valley Schools Transportation Agency	207	—	207	Big Bear City Airport District	—	9	9
Antelope Valley Transit Authority	—	45	45	Big Bear City Community Services District	—	38	38
Apple Valley Fire Protection District	—	56	56	Big Bear Municipal Water District	—	11	11
Aptos/La Selva Fire Protection Agency	—	36	36	Bighorn-Desert View Water Agency	—	9	9
Arbuckle-College City Fire Protection District	—	3	3	Black Gold Cooperative Library System	—	5	5
Arcade Creek Recreation and Park District	—	4	4	Blanchard/Santa Paula Public Library District	—	5	5
Arcata Fire Protection District	—	23	23	Blue Lake Fire Protection District	—	1	1
Area 12 Agency on Aging	—	15	15	Bodega Bay Fire Protection District	—	13	13
Armona Community Services District	—	—	—	Bolinas Community Public Utility District	—	6	6
Aromas Water District	—	6	6	Bolinas Fire Protection District	—	2	2
Arrowbear Park County Water District	—	4	4	Bonita-Sunnyside Fire Protection District	—	13	13
Arroyo Grande District Cemetery	—	3	3	Boron Community Services District	—	4	4
Associated Students California State University San Bernardino	—	5	5	Borrego Springs Fire Protection District	—	14	14
Associated Students Incorporated of California State University East Bay	—	6	6	Borrego Water District	—	11	11
Associated Students Incorporated of California State University Stanislaus	—	5	5	Boulder Creek Fire Protection District	—	1	1
Associated Students of California State University, Chico	—	91	91	Branciforte Fire Protection District	—	8	8
Association of California Water Agencies	—	38	38	Brannan-Andrus Levee Maintenance District	—	2	2
				Broadmoor Police Protection District	—	10	10

Statistical Section (continued)

PUBLIC AGENCY EMPLOYERS (CONTINUED)

Other Public Agencies that Contract with CalPERS for Retirement Benefits (continued)

Other Public Agency	Active		Total	Other Public Agency	Active		Total
	PERF A	PERF C			PERF A	PERF C	
Brooktrails Township Community Services District	—	11	11	California Joint Powers Risk Management Authority	—	6	6
Browns Valley Irrigation District	—	11	11	California Maritime Academy Foundation, Inc.	—	—	—
Buena Park Library District	—	19	19	California Municipal Utilities Association	—	8	8
Burney Basin Mosquito Abatement District	—	1	1	California Pines Community Services District	—	12	12
Burney Fire District	—	6	6	California Redevelopment Association Foundation	—	—	—
Burney Water District	—	7	7	California School Boards Association	—	92	92
Butte County Air Quality Management District	—	10	10	California Special Districts Association	—	25	25
Butte County Association of Governments	—	12	12	California State University, Bakersfield Foundation	—	2	2
Butte County Fair Association	—	3	3	California State University, East Bay Foundation, Inc.	—	—	—
Butte County In-Home Supportive Services Public Authority	—	—	—	California State University, Fresno Athletic Corporation	—	60	60
Butte County Mosquito and Vector Control District	—	16	16	California State University, Stanislaus Auxiliary and Business Services	—	—	—
Butte Local Agency Formation Commission	—	3	3	California State University-Fresno Association, Inc.	—	61	61
Butte Schools Self-Funded Programs	—	2	2	Callayomi County Water District	—	4	4
Butte-Glenn Community College District	—	5	5	Calleguas Municipal Water District	—	68	68
Byron-Bethany Irrigation District	—	4	4	Camarillo Health Care District	—	26	26
Cabrillo College Foundation	—	5	5	Cambria Cemetery District	—	1	1
Cachuma Operation and Maintenance Board	—	16	16	Cambria Community Healthcare District	—	16	16
Cal Poly Corporation	271	—	271	Cambria Community Services District	—	38	38
Cal Poly Pomona Foundation, Inc.	—	222	222	Cameron Park Community Services District	—	18	18
Calaveras Council of Governments	—	3	3	Camrosa Water District	—	26	26
Calaveras County Water District	—	63	63	Capitol Area Development Authority	—	40	40
Calaveras Public Utility District	—	9	9	Carmel Area Wastewater District	—	27	27
California Association for Park and Recreation Indemnity	—	4	4	Carmel Highlands Fire Protection District of Monterey County	—	—	—
California Authority of Racing Fairs	—	5	5	Carmichael Water District	—	27	27
California Bear Credit Union	—	20	20	Carpinteria Sanitary District	—	15	15
California Central Valley Flood Control Association	—	2	2	Carpinteria Valley Water District	—	21	21
California Fair Services Authority	—	21	21	Casitas Municipal Water District	—	67	67
California Fairs Financing Authority	—	6	6	Castro Valley Sanitary District	—	21	21
California Firefighter's Joint Apprenticeship Committee	—	24	24	Castroville Community Services District	—	6	6
California Interscholastic Federation, Central Coast Section	—	4	4	Cawelo Water District	—	15	15
California Interscholastic Federation, Central Section	—	3	3	Cayucos Sanitary District	—	5	5
California Interscholastic Federation, North Coast Section	—	6	6	Cayucos-Morro Bay Cemetery District	—	3	3
California Interscholastic Federation, Northern Section	—	1	1	Centerville Community Services District	—	5	5
California Interscholastic Federation, Sac-Joaquin Section	—	6	6	Central Basin Municipal Water District	—	20	20
California Interscholastic Federation, San Diego Section	—	5	5	Central Calaveras Fire and Rescue Protection District	—	3	3
California Interscholastic Federation, Southern Section	—	16	16	Central Coast Computing Authority	—	—	—
California Interscholastic Federation, State Office	—	8	8	Central Coast Water Authority	—	29	29
California Joint Powers Insurance Authority	—	28	28	Central Contra Costa Solid Waste Authority	—	6	6
				Central Contra Costa Transit Authority	245	—	245
				Central County Fire Department	—	86	86
				Central Fire Protection District of Santa Cruz County	—	62	62

Statistical Section (continued)

PUBLIC AGENCY EMPLOYERS (CONTINUED)

Other Public Agencies that Contract with CalPERS for Retirement Benefits (continued)

Other Public Agency	Active		Total	Other Public Agency	Active		Total
	PERF A	PERF C			PERF A	PERF C	
Central Marin Fire Authority	—	34	34	Contra Costa County Law Library	—	4	4
Central Marin Police Authority	—	46	46	Contra Costa County Schools Insurance Group	—	30	30
Central Marin Sanitation Agency	—	42	42	Contra Costa Transportation Authority	—	19	19
Central Sierra Child Support Agency	—	34	34	Cooperative Organization for the Development of Employee Selection Procedures	—	6	6
Central Sierra Planning Council	—	—	—	Cooperative Personnel Services	171	—	171
Central Valley Regional Center, Inc.	446	—	446	Copperopolis Fire Protection District	—	10	10
Central Water District	—	4	4	Cordelia Fire Protection District of Solano County	—	5	5
Channel Islands Beach Community Services District	—	7	7	Cordova Recreation and Park District	—	45	45
Chester Public Utility District	—	14	14	Corning Water District	—	3	3
Chico Area Recreation and Park District	—	61	61	Costa Mesa Sanitary District	—	17	17
Children and Families Commission of San Luis Obispo County	—	4	4	Cosumnes Community Services District	419	—	419
Chino Basin Water Conservation District	—	14	14	Cottonwood Fire Protection District	—	3	3
Chino Basin Watermaster	—	10	10	Cottonwood Water District	—	3	3
Chino Valley Independent Fire District	—	138	138	CRA/LA, a Designated Local Authority	—	8	8
Citrus Heights Water District	—	36	36	Crescent City Harbor District	—	7	7
City/County Association of Governments of San Mateo County	—	2	2	Crescenta Valley Water District	—	34	34
Clear Creek Community Services District	—	13	13	Crestline Lake Arrowhead Water Agency	—	11	11
Clearlake Oaks County Water District	—	15	15	Crestline Village Water District	—	13	13
Cloverdale Citrus Fair	—	3	3	Crockett Community Services District	—	4	4
Cloverdale Fire Protection District	—	11	11	CSAC Excess Insurance Authority	—	79	79
Clovis Cemetery District	—	9	9	Cucamonga Valley Water District	121	—	121
Coachella Valley Association of Governments	—	19	19	Cutler Public Utility District	—	5	5
Coachella Valley Mosquito and Vector Control District	—	57	57	Cutler-Orosi Joint Powers Wastewater Authority	—	3	3
Coachella Valley Public Cemetery District	—	6	6	Cuyama Valley Recreation District	—	2	2
Coachella Valley Water District	547	—	547	Dairy Council of California	—	40	40
Coalinga/Huron Unified School District Library District	—	9	9	Davis Cemetery District	—	5	5
Coalinga-Huron Cemetery District	—	1	1	De Luz Community Services District	—	4	4
Coalinga-Huron Recreation and Park District	—	12	12	Del Norte County Library District	—	2	2
Coast Life Support District	—	12	12	Del Paso Manor Water District	—	1	1
Coastal Developmental Services Fdn DBA Westside Regional Center	226	—	226	Del Puerto Water District	—	5	5
Coastside County Water District	—	22	22	Del Rey Community Services District	—	5	5
Coastside Fire Protection District	—	—	—	Delano Mosquito Abatement District	—	6	6
Colfax Cemetery District	—	2	2	Delta Diablo	—	78	78
College of the Canyons Foundation	—	1	1	Delta Vector Control District	—	17	17
Colusa County One-Stop Partnership	—	9	9	Denair Community Services District	—	7	7
Colusa Mosquito Abatement District	—	3	3	Desert Water Agency	—	86	86
Community College League of California	—	23	23	Diablo Water District	—	16	16
Community Development Commission of Mendocino County	—	21	21	Diamond Springs/El Dorado Fire Protection District	—	21	21
Compass Community Credit Union	—	21	21	Dixon Public Library District	—	9	9
Compton Creek Mosquito Abatement District	—	1	1	Donald P. And Katherine B. Loker University Student Union, Inc.	—	11	11
Compton Unified School District	—	20	20	Dougherty Regional Fire Authority	—	—	—
Conejo Recreation and Park District	149	—	149	Downey Cemetery District	—	—	—
Consolidated Mosquito Abatement District	—	22	22	Dublin San Ramon Services District	—	113	113
Contra Costa Community College District	—	22	22	Durham Mosquito Abatement District	—	1	1
				East Bay Dischargers Authority	—	3	3

Statistical Section (continued)

PUBLIC AGENCY EMPLOYERS (CONTINUED)

Other Public Agencies that Contract with CalPERS for Retirement Benefits (continued)

Other Public Agency	Active		Total	Other Public Agency	Active		Total
	PERF A	PERF C			PERF A	PERF C	
East Bay Regional Park District	608	76	684	Fresno County Law Library	—	3	3
East Contra Costa Irrigation District	—	19	19	Fresno Westside Mosquito Abatement District	—	9	9
East County Schools Federal Credit Union	—	18	18	Fruitridge Fire Protection District	—	—	—
East Orange County Water District	—	11	11	Fullerton California State University Associated Students	—	61	61
East Palo Alto Sanitary District	—	2	2	Fulton-El Camino Recreation and Park District	—	11	11
East Quincy Services District	—	5	5	Garden Valley Fire Protection District	—	16	16
East Valley Water District	—	66	66	Georgetown Divide Public Utility District	—	24	24
Eastern Municipal Water District	603	—	603	Georgetown Divide Resource Conservation District	—	3	3
Eastern Sierra Transit Authority	—	48	48	Georgetown Fire Protection District	—	14	14
Ebbetts Pass Fire Protection District	—	23	23	Gilsizer County Drainage District	—	—	—
El Dorado County Fire Protection District	—	70	70	Glendale College, Associated Students of	—	1	1
El Dorado County Resource Conservation District	—	3	3	Glendale Community College District	—	8	8
El Dorado County Transit Authority	—	74	74	Glenn County Mosquito and Vector Control District	—	2	2
El Dorado County Transportation Commission	—	5	5	Gold Coast Transit	188	—	188
El Dorado County Water Agency	—	3	3	Gold Ridge Fire Protection District	—	17	17
El Dorado Hills Community Services District	—	29	29	Gold Ridge Resource Conservation District	—	10	10
El Dorado Hills County Water District	—	70	70	Golden Gate Bridge Highway and Transportation District	437	—	437
El Dorado Irrigation District	218	—	218	Golden Hills Community Services District	—	10	10
El Dorado Local Agency Formation Commission	—	4	4	Golden Sierra Job Training Agency	—	13	13
Encina Wastewater Authority	—	73	73	Goleta Sanitary District	—	33	33
Esparto Community Services District	—	7	7	Goleta Water District	—	63	63
Esparto Fire Protection District	—	2	2	Goleta West Sanitary District	—	7	7
Exeter District Ambulance	—	27	27	Granada Community Services District	—	2	2
Fair Oaks Recreation & Park District	—	21	21	Graton Community Services District	—	3	3
Fair Oaks Water District	—	28	28	Great Basin Unified Air Pollution Control District	—	24	24
Fairfield-Suisun Sewer District	—	56	56	Greater Anaheim Special Education Local Plan Area	—	56	56
Fall River Valley Community Services District	—	4	4	Greater Los Angeles County Vector Control District	—	86	86
Fallbrook Public Utility District	—	64	64	Greater Vallejo Recreation District	—	85	85
Far Northern Coordinating Council on Developmental Disabilities	188	—	188	Green Valley County Water District	—	2	2
Feather River Air Quality Management District	—	10	10	Gridley Biggs Cemetery District	—	4	4
Feather River Recreation and Park District	—	14	14	Grossmont Healthcare District	—	5	5
Feather Water District	—	3	3	Grossmont-Cuyamaca Community College District Auxiliary Organization	—	67	67
Felton Fire Protection District	—	1	1	Groveland Community Services District	—	16	16
Fern Valley Water District	—	4	4	Gualala Community Services District	—	4	4
Florin County Water District	—	13	13	Hacienda La Puente Unified School District	—	5	5
Florin Resource Conservation District Elk Grove Water District	—	27	27	Hamilton Branch Fire Protection District	—	—	—
Fontana Unified School District	—	18	18	Happy Camp Sanitary District	—	—	—
Foothill Municipal Water District	—	8	8	Happy Homestead Cemetery District	—	3	3
Foresthill Public Utility District	—	7	7	Happy Valley Fire District	—	2	2
Forestville Fire Protection District	—	13	13	Hayward Area Recreation and Park District	126	—	126
Forestville Water District	—	6	6	Health Plan of San Joaquin	—	341	341
Fort Bragg Fire Protection Authority	—	4	4	Heartland Communications Facility Authority	—	19	19
Fort Ord Reuse Authority	—	12	12	Heber Public Utility District	—	12	12
Foundation for California Community Colleges	—	332	332	Helendale Community Services District	—	16	16
Fresno City Housing Authority	106	—	106				
Fresno County Housing Authority	108	—	108				

PUBLIC AGENCY EMPLOYERS (CONTINUED)

Other Public Agencies that Contract with CalPERS for Retirement Benefits (continued)

Other Public Agency	Active		Total	Other Public Agency	Active		Total
	PERF A	PERF C			PERF A	PERF C	
Helix Water District	143	—	143	Inverness Public Utility District	—	6	6
Henry Miller Reclamation District No. 2131	—	30	30	Ironhouse Sanitary District	—	27	27
Heritage Ranch Community Services District	—	8	8	Irvine Child Care Project	—	—	—
Herlong Public Utility District	—	5	5	Irvine Ranch Water District	403	—	403
Hesperia Fire Protection District	—	—	—	Isla Vista Recreation and Park District	—	11	11
Hesperia Unified School District	—	8	8	Jackson Valley Irrigation District	—	3	3
Hesperia Water District	—	56	56	Jamestown Sanitary District	—	4	4
Hidden Valley Lake Community Services District	—	12	12	Joshua Basin Water District	—	27	27
Hi-Desert Water District	—	46	46	June Lake Public Utility District	—	6	6
Higgins Area Fire Protection District	—	12	12	Jurupa Area Recreation and Park District	—	23	23
Hilton Creek Community Services District	—	2	2	Jurupa Community Services District	—	181	181
Hopland Public Utility District	—	—	—	Kaweah Delta Water Conservation District	—	23	23
Housing Authority of the City of Alameda	—	49	49	Kelseyville Fire Protection District	—	21	21
Housing Authority of the City of Calixico	—	16	16	Kensington Community Services District	—	7	7
Housing Authority of the City of Eureka	—	20	20	Kentfield Fire Protection District	—	17	17
Housing Authority of the City of Livermore	—	11	11	Kenwood Fire Protection District	—	5	5
Housing Authority of the City of Los Angeles	713	—	713	Kern County Council of Governments	—	18	18
Housing Authority of the City of Madera	—	29	29	Kern County Law Library	—	5	5
Housing Authority of the City of San Buenaventura	—	59	59	Kern County Local Agency Formation Commission	—	3	3
Housing Authority of the City of San Luis Obispo	—	51	51	Kern Health Systems	—	394	394
Housing Authority of the City of South San Francisco	—	4	4	Kern River Valley Cemetery District	—	2	2
Housing Authority of the County of Butte	—	36	36	Kern-Tulare Water District	—	9	9
Housing Authority of the County of Kern	149	—	149	Kettleman City Community Services District	—	4	4
Housing Authority of the County of Santa Cruz	—	58	58	Kings County Area Public Transit Agency	—	6	6
Hub Cities Consortium	—	21	21	Kings County Association of Governments	—	6	6
Human Rights/Fair Housing Commission of the City and County of Sacramento	—	4	4	Kings County In-Home Supportive Services Public Authority	—	—	—
Humboldt Bay Fire Joint Powers Authority	—	56	56	Kings Mosquito Abatement District	—	15	15
Humboldt Bay Harbor Recreation and Conservation District	—	12	12	Kings Waste and Recycling Authority	—	31	31
Humboldt Bay Municipal Water District	—	28	28	Kinneloa Irrigation District	—	6	6
Humboldt Community Services District	—	21	21	Kirkwood Meadows Public Utility District	—	19	19
Humboldt County Association of Governments	—	5	5	Konocti County Water District	—	7	7
Humboldt State University Center Board of Directors	—	45	45	La Branza Water District	—	—	—
Humboldt Transit Authority	—	50	50	La Habra Heights County Water District	—	10	10
Humboldt Waste Management Authority	—	35	35	La Puente Valley County Water District	—	13	13
Idyllwild Fire Protection District	—	9	9	Laguna Beach County Water District	—	39	39
Independent Cities Association, Inc.	—	—	—	Lake Arrowhead Community Services District	—	54	54
Indian Wells Valley Water District	—	32	32	Lake County Fire Protection District	—	28	28
Inland Counties Regional Center, Inc.	760	—	760	Lake County Vector Control District	—	9	9
Inland Empire Health Plan	2,115	—	2,115	Lake Don Pedro Community Services District	—	5	5
Inland Empire Resource Conservation District	—	16	16	Lake Hemet Municipal Water District	—	48	48
Inland Empire Utilities Agency	276	—	276	Lake Oroville Area Public Utility District	—	8	8
Intelecom Intelligent Telecommunications	—	7	7	Lake Shastina Community Services District	—	9	9
Intergovernmental Training and Development Center	—	6	6	Lake Valley Fire Protection District	—	29	29
				Lakeport County Fire Protection District	—	16	16
				Lakeside Fire Protection District	—	49	49
				Lakeside Water District	—	13	13
				Lamont Public Utility District	—	11	11
				Las Gallinas Valley Sanitary District of Marin County	—	20	20

Statistical Section (continued)

PUBLIC AGENCY EMPLOYERS (CONTINUED)

Other Public Agencies that Contract with CalPERS for Retirement Benefits (continued)

Other Public Agency	Active		Total	Other Public Agency	Active		Total
	PERF A	PERF C			PERF A	PERF C	
Las Virgenes Municipal Water District	104	—	104	March Joint Powers Authority	—	16	16
Lassen County Waterworks District No. 1	—	1	1	Marin Children and Families Commission	—	2	2
League of California Cities	—	69	69	Marin Community College District	—	6	6
Leucadia Wastewater District	—	20	20	Marin County Housing Authority	—	35	35
Levee District No. 1 of Sutter County	—	2	2	Marin County In-Home Supportive Services Public Authority	—	4	4
Linda County Water District	—	17	17	Marin Healthcare District	—	—	—
Linda Fire Protection District	—	16	16	Marin Municipal Water District	227	—	227
Linden-Peters Rural County Fire Protection District	—	13	13	Marina Coast Water District	—	39	39
Lindsay Strathmore Public Cemetery District	—	5	5	Marinwood Community Services District	—	17	17
Little Lake Fire Protection District	—	4	4	Mariposa Public Utility District	—	8	8
Littlerock Creek Irrigation District	—	6	6	Maxwell Public Utility District	—	3	3
Live Oak Cemetery District	—	3	3	McCloud Community Services District	—	6	6
Livermore/Amador Valley Transit Authority	—	14	14	McFarland Recreation and Park District	—	10	10
Local Agency Formation Commission of Monterey County	—	4	4	McKinleyville Community Services District	—	25	25
Local Agency Formation Commission of Solano County	—	2	2	Meeks Bay Fire Protection District	—	1	1
Local Government Services Authority, a Joint Powers Authority	—	—	—	Meiners Oaks County Water District	—	5	5
Long Beach City College Associated Student Body Enterprises	—	—	—	Mendocino City Community Services District	—	4	4
Long Beach State University, Associated Students	—	64	64	Mendocino County Russian River Flood Control & Water Conservation Improvement Dt	—	1	1
Long Beach State University, Forty-Niner Shops, Inc.	—	53	53	Mendocino Transit Authority	—	59	59
Los Alamos Community Services District	—	6	6	Menlo Park Fire Protection District	—	140	140
Los Angeles County Area 'E' Civil Defense and Disaster Board	—	1	1	Merced County Housing Authority	—	37	37
Los Angeles County Development Authority	531	—	531	Merced County Mosquito Abatement District	—	14	14
Los Angeles County Law Library	—	36	36	Merced Irrigation District	183	—	183
Los Angeles County Sanitation District No. 2	1,646	—	1,646	Mesa Water District	—	49	49
Los Angeles County West Vector Control District	—	38	38	Metropolitan Transportation Commission	280	—	280
Los Angeles Memorial Coliseum Commission	—	—	—	Metropolitan Water District of Southern California	1,808	—	1,808
Los Angeles Regionalized Insurance Services Authority	—	—	—	Midpeninsula Regional Open Space District	—	157	157
Los Gatos-Saratoga Department of Community Education and Recreation	—	52	52	Mid-Peninsula Water District	—	17	17
Los Osos Community Services District	—	13	13	Mid-Placer Public Schools Transportation Agency	—	26	26
Lower Lake Cemetery District	—	1	1	Midway City Sanitary District	—	28	28
Lower Lake County Waterworks District No. 1	—	6	6	Midway Heights County Water District	—	3	3
Lower Tule River Irrigation District	—	34	34	Millview County Water District	—	—	—
Madera Cemetery District	—	19	19	Minter Field Airport District	—	7	7
Madera County Mosquito and Vector Control District	—	10	10	Mission Springs Water District	—	42	42
Main San Gabriel Basin Watermaster	—	8	8	Mojave Air and Space Port	—	23	23
Majestic Pines Community Services District	—	3	3	Mojave Water Agency	—	36	36
Mammoth Lakes Fire District	—	11	11	Mokelumne Rural Fire District	—	10	10
Mammoth Lakes Mosquito Abatement District	—	—	—	Monte Vista County Water District	—	33	33
Management of Emeryville Services Authority	—	108	108	Montecito Fire Protection District	—	44	44
				Montecito Sanitary District of Santa Barbara County	—	17	17
				Montecito Water District	—	27	27
				Monterey Bay Unified Air Pollution Control District	—	29	29
				Monterey County Regional Fire Protection District	—	65	65
				Monterey County Water Resources Agency	—	33	33

Statistical Section (continued)

PUBLIC AGENCY EMPLOYERS (CONTINUED)

Other Public Agencies that Contract with CalPERS for Retirement Benefits (continued)

Other Public Agency	Active		Total	Other Public Agency	Active		Total
	PERF A	PERF C			PERF A	PERF C	
Monterey Peninsula Airport District	—	24	24	North County Fire Protection District of San Diego County	—	77	77
Monterey Peninsula Regional Park District	—	13	13	North County Transit District	119	—	119
Monterey Peninsula Water Management District	—	23	23	North Delta Water Agency	—	2	2
Monterey Regional Waste Management District	137	—	137	North Kern Cemetery District	—	9	9
Monterey Regional Water Pollution Control Agency	—	89	89	North Kern Water Storage District	—	32	32
Monterey-Salinas Transit District	249	—	249	North Kern-South Tulare Hospital District	194	—	194
Montezuma Fire Protection District	—	12	12	North Los Angeles County Regional Center, Inc.	527	—	527
Morongo Basin Transit Authority	—	45	45	North Marin Water District	—	51	51
Mother Lode Job Training Agency	—	22	22	North of the River Municipal Water District	—	—	—
Moulton-Niguel Water District	—	151	151	North of the River Recreation and Park District	147	—	147
Mountains Recreation and Conservation Authority	—	137	137	North State Cooperative Library System	—	—	—
Mountain-Valley Library System	—	—	—	North Tahoe Fire Protection District	—	63	63
Mt. San Antonio College Auxiliary Services	—	5	5	North Tahoe Public Utility District	—	46	46
Mt. View Sanitary District of Contra Costa County	—	15	15	Northern California Power Agency	152	—	152
Municipal Pooling Authority	—	18	18	Northern California Special Districts Insurance Authority	—	—	—
Municipal Water District of Orange County	—	34	34	Northern Salinas Valley Mosquito Abatement District	—	7	7
Murphys Sanitary District	—	4	4	Northern Sierra Air Quality Management District	—	5	5
Murrieta Fire Protection District	—	48	48	Northshore Fire Protection District	—	25	25
Murrieta Valley Cemetery District	—	4	4	Northstar Community Services District	—	41	41
Napa County Mosquito Abatement District	—	9	9	Northwest Mosquito and Vector Control District	—	19	19
Napa County Resource Conservation District	—	9	9	Novato Sanitary District	—	19	19
Napa Sanitation District	—	52	52	Oakdale Irrigation District	—	74	74
Napa Valley Transportation Authority	—	14	14	Oakdale Rural Fire Protection District	—	—	—
National Orange Show	—	48	48	Oakland City Housing Authority	297	27	324
Natomas Fire Protection District	—	—	—	Oakland Unified School District	—	13	13
Nevada Cemetery District	—	4	4	Oceano Community Services District	—	8	8
Nevada County Consolidated Fire District	—	47	47	Ojai Valley Sanitary District	—	20	20
Nevada County Local Agency Formation Commission	—	3	3	Olivenhain Municipal Water District	—	85	85
Nevada County Resource Conservation District	—	2	2	Omnitrans	715	—	715
Nevada Irrigation District	203	—	203	Ophir Hill Fire Protection District	—	10	10
Nevada-Sierra Connecting Point Public Authority	—	22	22	Orange County Health Authority	1,311	—	1,311
Newcastle, Rocklin, Gold Hill Cemetery District	—	9	9	Orange County Transportation Authority	—	2	2
Nipomo Community Services District	—	17	17	Orange County Vector Control District	—	110	110
North Bay Cooperative Library System	—	—	—	Orchard Dale Water District	—	9	9
North Bay Regional Center	225	—	225	Orland Cemetery District	—	4	4
North Bay Schools Insurance Authority	—	28	28	Oro Loma Sanitary District	—	43	43
North Central Counties Consortium	—	5	5	Orosi Public Utility District	—	3	3
North Coast County Water District	—	16	16	Oroville Cemetery District	—	7	7
North Coast Railroad Authority	—	2	2	Oroville Mosquito Abatement District	—	—	—
North Coast Unified Air Quality Management District	—	14	14	Otay Water District	134	—	134
North County Dispatch Joint Powers Authority	—	28	28	Oxnard Harbor District	—	34	34
North County Fire Protection District of Monterey County	—	36	36	Pacific Fire Protection District	—	—	—
				Padre Dam Municipal Water District	134	—	134
				Pajaro Valley Fire Protection Agency	—	—	—
				Pajaro Valley Public Cemetery District	—	7	7
				Pajaro Valley Water Management Agency	—	12	12

Statistical Section (continued)

PUBLIC AGENCY EMPLOYERS (CONTINUED)

Other Public Agencies that Contract with CalPERS for Retirement Benefits (continued)

Other Public Agency	Active		Total	Other Public Agency	Active		Total
	PERF A	PERF C			PERF A	PERF C	
Palm Ranch Irrigation District	—	4	4	Purissima Hills Water District	—	8	8
Palmdale Water District	—	86	86	Quartz Hill Water District	—	12	12
Palo Verde Valley District Library	—	4	4	Quincy Community Services District	—	5	5
Palos Verdes Library District	—	52	52	Rainbow Municipal Water District	—	51	51
Paradise Recreation and Park District	—	11	11	Ramona Municipal Water District	—	47	47
Pasadena City College Bookstore	—	—	—	Rancho Adobe Fire Protection District	—	33	33
Paso Robles City Housing Authority	—	8	8	Rancho California Water District	136	—	136
Patterson Irrigation District	—	12	12	Rancho Cucamonga Fire Protection District	—	113	113
Pauma Valley Community Services District	—	17	17	Rancho Murieta Community Services District	—	33	33
Peardale Chicago Park Fire Protection District	—	5	5	Rancho Santa Fe Fire Protection District	—	71	71
Pebble Beach Community Services District	—	12	12	Rancho Santiago Community College Associated Students	—	—	—
Peninsula Fire Protection District	—	10	10	Rancho Simi Recreation & Park District	185	—	185
Peninsula Health Care District	—	4	4	Reclamation District No. 1000	—	12	12
Peninsula Traffic Congestion Relief Alliance	—	8	8	Reclamation District No. 1001	—	8	8
Penn Valley Fire Protection District	—	14	14	Reclamation District No. 1660	—	—	—
Personal Assistance Services Council	—	28	28	Reclamation District No. 3	—	2	2
Phelan Pinon Hills Community Services District	—	26	26	Reclamation District No. 833	—	2	2
Pico Water District	—	10	10	Reclamation District No. 999	—	4	4
Pine Cove Water District	—	5	5	Red Bluff Cemetery District	—	3	3
Pine Grove Mosquito Abatement District	—	1	1	Redwood Coast Regional Center	—	112	112
Pinedale County Water District	—	6	6	Redwood Empire Municipal Insurance Fund	—	4	4
Pioneer Cemetery District	—	2	2	Redwood Empire School Insurance Group	—	23	23
Pixley Irrigation District	—	4	4	Reedley Cemetery District	—	5	5
Placer County Cemetery District No. 1	—	6	6	Regional Center of Orange County	450	—	450
Placer County Resource Conservation District	—	2	2	Regional Center of the East Bay	431	—	431
Placer County Transportation Planning Agency	—	7	7	Regional Housing Authority	—	35	35
Placer County Water Agency	218	—	218	Regional Water Authority	—	7	7
Placer Hills Fire Protection District	—	17	17	Rescue Fire Protection District	—	10	10
Placer Mosquito and Vector Control District	—	21	21	Resort Improvement District No. 1	—	11	11
Planning and Service Area II Area Agency on Aging	—	10	10	Resource Conservation District of the Santa Monica Mountains	—	10	10
Pleasant Hill Recreation and Park District	—	64	64	Richardson Bay Sanitary District	—	4	4
Pleasant Valley County Water District	—	3	3	Rincon Del Diablo Municipal Water District	—	18	18
Pleasant Valley Recreation and Park District	—	39	39	Rincon Valley Fire Protection District	—	23	23
Plumas Eureka Community Services District	—	3	3	Rio Alto Water District	—	7	7
Plumas Local Agency Formation Commission	—	—	—	Rio Linda Elverta Community Water District	—	10	10
Pomerado Cemetery District	—	6	6	Rio Vista-Montezuma Cemetery District	—	4	4
Pomona Valley Transportation Authority	—	5	5	Riverbank City Housing Authority	—	—	—
Pomona, Calif State Polytechnic University, Associated Students, Inc.	—	63	63	Riverside County Air Pollution Control District	—	—	—
Port San Luis Harbor District	—	25	25	Riverside County Department of Waste Resources	—	12	12
Porter Vista Public Utility District	—	2	2	Riverside County Flood Control and Water Conservation District	212	—	212
Porterville Irrigation District	—	3	3	Riverside County Law Library	—	10	10
Porterville Public Cemetery District	—	10	10	Riverside County Regional Park and Open Space District	—	108	108
Public Agency Risk Sharing Authority of California	—	5	5	Riverside County Transportation Commission	—	44	44
Public Cemetery District No. 1 of Kern County	—	7	7	Riverside Transit Agency	492	—	492
Public Entity Risk Management Authority	—	5	5	Rosamond Community Services District	—	18	18
Public Transportation Services Corporation	2,679	—	2,679	Rose Bowl Operating Company	—	37	37
Pupil Transportation Cooperative	—	2	2				

Statistical Section (continued)

PUBLIC AGENCY EMPLOYERS (CONTINUED)

Other Public Agencies that Contract with CalPERS for Retirement Benefits (continued)

Other Public Agency	Active		Total	Other Public Agency	Active		Total
	PERF A	PERF C			PERF A	PERF C	
Rosedale-Rio Bravo Water Storage District	—	8	8	San Francisco Bay Area Rapid Transit District	3,994	—	3,994
Roseville Public Cemetery District	—	8	8	San Francisco Bay Area Water Emergency Transportation Authority	—	15	15
Ross Valley Fire Department	—	31	31	San Francisco City and County Housing Authority	120	—	120
Rowland Water District	—	23	23	San Francisco Community College District Bookstore Auxiliary	—	—	—
Rubidoux Community Services District	—	22	22	San Francisco County Transportation Authority	—	37	37
Running Springs Water District	—	36	36	San Francisco Health Authority	—	346	346
Rural County Representatives of California	—	29	29	San Francisco Law Library	—	7	7
Russian River Fire Protection District	—	12	12	San Francisquito Creek Joint Powers Authority	—	4	4
Sacramento Area Council of Governments	—	54	54	San Gabriel County Water District	—	15	15
Sacramento Area Flood Control Agency	—	16	16	San Gabriel Valley Council of Governments	—	27	27
Sacramento City Housing Authority	205	—	205	San Gabriel Valley Mosquito and Vector Control District	—	37	37
Sacramento County Public Law Library	—	18	18	San Gabriel Valley Municipal Water District	—	7	7
Sacramento Groundwater Authority	—	5	5	San Geronio Pass Water Agency	—	4	4
Sacramento Metropolitan Air Quality Management District	—	91	91	San Jacinto Valley Cemetery District	—	9	9
Sacramento Metropolitan Cable Television Commission	—	5	5	San Joaquin County Housing Authority	—	81	81
Sacramento Metropolitan Fire District	577	85	662	San Joaquin County IHSS Public Authority	—	7	7
Sacramento Municipal Utility District	2,259	—	2,259	San Joaquin Delta Community College District	—	12	12
Sacramento Public Library Authority	310	—	310	San Juan Water District	—	47	47
Sacramento Regional Fire/EMS Communications Center	—	45	45	San Lorenzo Valley Water District	—	34	34
Sacramento Suburban Water District	—	65	65	San Luis Obispo Cal Poly Associated Students, Inc.	—	77	77
Sacramento Transportation Authority	—	3	3	San Luis Obispo Council of Governments	—	17	17
Sacramento-Yolo Mosquito and Vector Control District	—	69	69	San Luis Obispo Regional Transit Authority	—	10	10
Salida Fire Protection District	—	8	8	San Luis Water District	—	15	15
Salinas Valley Solid Waste Authority	—	51	51	San Mateo Consolidated Fire Department	—	151	151
Salton Community Services District	—	20	20	San Mateo County Harbor District	—	30	30
Samoa Peninsula Fire Protection District	—	—	—	San Mateo County In-Home Supportive Services Public Authority	—	14	14
San Andreas Regional Center, Inc.	323	—	323	San Mateo County Law Library	—	2	2
San Andreas Sanitary District	—	5	5	San Mateo County Schools Insurance Group	—	7	7
San Benito County Water District	—	20	20	San Mateo County Transit District	728	—	728
San Bernardino City Unified School District	—	28	28	San Miguel Community Services District	—	7	7
San Bernardino County Housing Authority	125	—	125	San Miguel Consolidated Fire Protection District	—	85	85
San Bernardino County Transportation Authority	—	—	—	San Simeon Community Services District	—	—	—
San Bernardino Valley Municipal Water District	—	24	24	Sanger Cemetery District	—	7	7
San Bernardino Valley Water Conservation District	—	7	7	Sanitary District No. 1 of Marin County	—	34	34
San Diego Association of Governments	361	—	361	Sanitary District No. 5 of Marin County	—	9	9
San Diego Community College District	—	35	35	Santa Ana River Flood Protection Agency	—	—	—
San Diego County Law Library	—	15	15	Santa Ana Unified School District	—	27	27
San Diego County Water Authority	242	—	242	Santa Ana Watershed Project Authority	—	25	25
San Diego Metropolitan Transit System	—	162	162	Santa Barbara County Law Library	—	2	2
San Diego State University Associated Students	—	37	37	Santa Barbara County Special Education Local Plan Area	—	8	8
San Diego Trolley, Inc.	564	—	564	Santa Barbara Regional Health Authority	—	243	243
San Diego Unified School District	—	36	36	Santa Clara County Central Fire Protection District	235	76	311
San Dieguito Water District	—	24	24				
San Elijo Joint Powers Authority	—	21	21				

Statistical Section (continued)

PUBLIC AGENCY EMPLOYERS (CONTINUED)

Other Public Agencies that Contract with CalPERS for Retirement Benefits (continued)

Other Public Agency	Active		Total	Other Public Agency	Active		Total
	PERF A	PERF C			PERF A	PERF C	
Santa Clara County Health Authority	—	280	280	Sierra-Sacramento Valley Emergency Medical Services Agency	—	10	10
Santa Clara County Housing Authority	139	—	139	Silicon Valley Animal Control Authority	—	15	15
Santa Clara County Law Library	—	3	3	Silicon Valley Clean Water	—	84	84
Santa Clara County Schools Insurance Group	—	4	4	Silveyville Cemetery District	—	4	4
Santa Clara Valley Open Space Authority	—	34	34	Solano Cemetery District	—	10	10
Santa Clara Valley Transportation Authority	635	—	635	Solano County Mosquito Abatement District	—	9	9
Santa Clara Valley Water District	751	—	751	Solano County Water Agency	—	20	20
Santa Clarita Valley School Food Services Agency	—	91	91	Solano Irrigation District	—	78	78
Santa Clarita Valley Water Agency	—	196	196	Solano Transportation Authority	—	21	21
Santa Cruz County Law Library	—	—	—	Soledad Community Health Care District	—	—	—
Santa Cruz County Regional Transportation Commission	—	18	18	Sonoma County Fire District	—	37	37
Santa Cruz Local Agency Formation Commission	—	2	2	Sonoma County Junior College District	—	9	9
Santa Cruz Metropolitan Transit District	303	—	303	Sonoma County Library	208	—	208
Santa Cruz Port District	—	39	39	Sonoma Marin Area Rail Transit District	—	134	134
Santa Cruz Regional 9-1-1	—	52	52	Sonoma State Enterprises, Inc.	—	—	—
Santa Fe Irrigation District	—	46	46	Sonoma Student Union Corporation	—	—	—
Santa Margarita Water District	151	—	151	Soquel Creek Water District	—	45	45
Santa Maria Public Airport District	—	13	13	South Bay Regional Public Communications Authority	—	65	65
Santa Monica Community College District	—	17	17	South Central Los Angeles Regional Center for Developmentally Disabled Persons	357	—	357
Santa Nella County Water District	—	6	6	South Coast Water District	—	83	83
Santa Paula City Housing Authority	—	6	6	South County Support Services Agency	—	26	26
Santa Ynez River Water Conservation District, Improvement District No. 1	—	17	17	South Feather Water and Power Agency	—	59	59
Sausalito-Marín City Sanitary District	—	11	11	South Kern Cemetery District	—	5	5
Schell Vista Fire Protection District	—	3	3	South Orange County Wastewater Authority	—	61	61
School Risk And Insurance Management Group	—	8	8	South Placer Fire District	—	57	57
Schools Excess Liability Fund	—	7	7	South Placer Municipal Utility District	—	27	27
Schools Insurance Authority	—	79	79	South San Joaquin Irrigation District	—	97	97
Scotts Valley Fire Protection District	—	30	30	South San Luis Obispo County Sanitation District	—	8	8
Scotts Valley Water District	—	19	19	South Tahoe Public Utility District	—	113	113
Selma Cemetery District	—	6	6	Southeast Area Social Services Funding Authority	—	39	39
Selma-Kingsburg-Fowler County Sanitation District	—	31	31	Southern California Association of Governments	134	—	134
Serrano Water District	—	9	9	Southern California Library Cooperative	—	6	6
Sewer Authority Mid-Coastside	—	14	14	Southern California Public Power Authority	—	16	16
Sewerage Commission-Oroville Region	—	8	8	Southern California Regional Rail Authority	231	—	231
Shafter Wasco Irrigation District	—	10	10	Southern San Joaquin Municipal Utility District	—	14	14
Shasta Area Safety Communications Agency	—	41	41	Southern Sonoma County Resource Conservation District	—	—	—
Shasta Community Services District	—	5	5	Southwest Transportation Agency	—	49	49
Shasta Lake Fire Protection District	—	10	10	Special District Risk Management Authority	—	17	17
Shasta Local Agency Formation Commission	—	—	—	Squaw Valley Public Service District	—	32	32
Shasta Mosquito and Vector Control District	—	14	14	Stallion Springs Community Services District	—	13	13
Shasta Regional Transportation Agency	—	10	10	Stanislaus Consolidated Fire Protection District	—	48	48
Shasta Valley Cemetery District	—	2	2	Stanislaus County Housing Authority	—	87	87
Shiloh Public Cemetery District	—	4	4	State Bar of California	546	—	546
Sierra Lakes County Water District	—	3	3	State Center Community College District	—	17	17

Statistical Section (continued)

PUBLIC AGENCY EMPLOYERS (CONTINUED)

Other Public Agencies that Contract with CalPERS for Retirement Benefits (continued)

Other Public Agency	Active		Total	Other Public Agency	Active		Total
	PERF A	PERF C			PERF A	PERF C	
State Water Contractors	—	9	9	Truckee Sanitary District	—	40	40
Stege Sanitary District	—	11	11	Truckee Tahoe Airport District	—	26	26
Stinson Beach County Water District	—	8	8	Tulare Mosquito Abatement District	—	5	5
Stockton East Water District	—	37	37	Tulare Public Cemetery District	—	6	6
Stockton Unified School District	—	35	35	Tuolumne Fire District	—	2	2
Strawberry Recreation District	—	8	8	Tuolumne Utilities District	—	80	80
Student Union, San Bernardino, California State University	—	23	23	Turlock Mosquito Abatement District	—	13	13
Successor Agency to the Redevelopment Agency of the City of Fresno	—	1	1	Twain Harte Community Services District	—	13	13
Successor Agency to the Redevelopment Agency of the City of San Bernardino	—	1	1	Twentynine Palms Water District	—	22	22
Successor Agency to the Redevelopment Agency of the City & County of San Francisco	—	46	46	Twin Rivers Unified School District	—	19	19
Suisun Fire Protection District	—	2	2	Ukiah Valley Fire District	—	—	—
Suisun Resource Conservation District	—	9	9	Union Public Utility District	—	7	7
Summit Cemetery District	—	9	9	Union Sanitary District	137	—	137
Sunnyslope County Water District	—	23	23	United Water Conservation District	—	54	54
Susanville Sanitary District	—	6	6	University Enterprises Corporation at CSUSB	—	161	161
Sutter Cemetery District	—	11	11	University Enterprises, Inc.	178	—	178
Sweetwater Authority	125	—	125	University Student Union California State University Stanislaus	—	3	3
Sweetwater Springs Water District	—	11	11	Upland City Housing Authority	—	—	—
Sylvan Cemetery District	—	5	5	Upper San Gabriel Valley Municipal Water District	—	11	11
Tahoe City Public Utility District	—	53	53	Vacaville Fire Protection District	—	8	8
Tahoe Resource Conservation District	—	24	24	Vacaville-Elmira Cemetery District	—	6	6
Tahoe Transportation District	—	—	—	Vallecitos Water District	—	107	107
Tahoe-Truckee Sanitation Agency	—	50	50	Vallejo Flood and Wastewater District	—	88	88
Tehachapi Valley Recreation and Park District	—	12	12	Valley Center Municipal Water District	—	64	64
Tehachapi-Cummings County Water District	—	19	19	Valley County Water District	—	28	28
Tehama County Mosquito Abatement District	—	6	6	Valley Mountain Regional Center, Inc.	333	—	333
Temescal Valley Water District	—	10	10	Valley of the Moon Water District	—	13	13
Templeton Community Services District	—	33	33	Valley Sanitary District	—	28	28
Thermalito Water and Sewer District	—	12	12	Valley Springs Public Utility District	—	3	3
Three Rivers Community Services District	—	1	1	Valley-Wide Recreation and Park District	—	94	94
Three Valleys Municipal Water District	—	24	24	Vandenberg Village Community Services District	—	10	10
Tiburon Fire Protection District	—	33	33	Ventura College Foundation	—	7	7
Trabuco Canyon Water District	—	20	20	Ventura County Law Library	—	3	3
Tracy Rural County Fire Protection District	—	—	—	Ventura County Schools Business Services Authority	—	10	10
Transbay Joint Powers Authority	—	13	13	Ventura County Schools Self-Funding Authority	—	8	8
Transportation Agency for Monterey County	—	13	13	Ventura County Transportation Commission	—	21	21
Transportation Authority of Marin	—	13	13	Ventura Port District	—	44	44
Treasure Island Development Authority	—	—	—	Ventura River Water District	—	6	6
Tri-City Mental Health Center	—	181	181	Victor Valley Transit Authority	—	24	24
Tri-Counties Association for the Developmentally Disabled	339	—	339	Victor Valley Wastewater Reclamation Authority	—	32	32
Tri-County Schools Insurance Group	—	3	3	Visalia Public Cemetery District	—	12	12
Tri-Dam Project	—	26	26	Vista Irrigation District	—	87	87
Trindel Insurance Fund	—	13	13	Walnut Valley Water District	—	56	56
Trinity Public Utilities District	—	21	21	Wasco Recreation and Park District	—	6	6
Truckee Donner Public Utility District	—	68	68	Washington Colony Cemetery District	—	3	3
Truckee Fire Protection District	—	51	51	Water Employee Services Authority	165	—	165

Statistical Section (continued)

PUBLIC AGENCY EMPLOYERS (CONTINUED)

Other Public Agencies that Contract with CalPERS for Retirement Benefits (continued)

Other Public Agency	Active		Total
	PERF A	PERF C	
Water Facilities Authority	—	8	8
Water Replenishment District of Southern California	—	40	40
Weaverville Community Services District	—	5	5
Weaverville Sanitary District	—	3	3
West Almanor Community Services District	—	1	1
West Basin Municipal Water District	—	48	48
West Bay Sanitary District	—	28	28
West Cities Communication Center	—	23	23
West Contra Costa Integrated Waste Management Authority	—	2	2
West Contra Costa Transportation Advisory Committee	—	5	5
West County Transportation Agency	—	178	178
West County Wastewater District	—	50	50
West End Communications Authority	—	—	—
West Kern Water District	—	43	43
West Stanislaus Irrigation District	—	14	14
West Valley Mosquito and Vector Control District	—	22	22
West Valley Sanitation District of Santa Clara County	—	27	27
West Valley Water District	—	85	85
West Valley-Mission Community College District	—	9	9
Westborough Water District	—	5	5
Western Contra Costa Transit Authority	—	9	9
Western Municipal Water District	—	150	150
Western Riverside Council of Governments	—	28	28
Westlands Water District	—	112	112
Westwood Community Services District	—	6	6
Wheeler Ridge-Maricopa Water Storage District	—	43	43
Wildomar Cemetery District	—	—	—
Williams Fire Protection Authority	—	5	5
Willow County Water District	—	12	12
Willow Creek Community Services District	—	4	4
Willows Cemetery District	—	3	3
Wilton Fire Protection District	—	1	1
Winterhaven Water District	—	2	2
Winters Cemetery District	—	3	3
Winters Fire Protection District	—	—	—
Winton Water and Sanitary District	—	8	8
Woodbridge Rural County Fire Protection District	—	27	27
Woodlake Fire District	—	7	7
Woodside Fire Protection District	—	53	53
Yolo County Federal Credit Union	—	59	59
Yolo County Housing Authority	—	36	36
Yolo County In-Home Supportive Services Public Authority	—	3	3

Other Public Agency	Active		Total
	PERF A	PERF C	
Yolo County Public Agency Risk Management Insurance Authority	—	7	7
Yolo County Transportation District	—	11	11
Yolo Emergency Communications Agency	—	41	41
Yolo-Solano Air Quality Management District	—	21	21
Yorba Linda Water District	—	76	76
Yuba Community College District	—	4	4
Yuba County Water Agency	—	72	72
Yuba Sutter Transit Authority	—	5	5
Yucaipa Valley Water District	—	71	71
Yuima Municipal Water District	—	11	11
Total	40,560	23,080	63,640

LEGISLATORS' RETIREMENT SYSTEM MEMBERSHIP & RETIREMENT DATA

Legislators' Retirement System – 10-Year Review

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
ACTIVE & INACTIVE MEMBERS										
Members of the Legislature	2	4	4	6	6	6	7	8	8	15
Constitutional Officers	5	10	10	13	14	17	17	19	20	17
Legislative Statutory Officers	—	—	—	1	2	4	4	4	4	4
TOTAL ACTIVE & INACTIVE MEMBERS	7	14	14	20	22	27	28	31	32	36
BENEFIT RECIPIENTS										
Members of the Legislature										
Service Retirement	198	202	205	215	221	225	226	200	210	214
Disability Retirement	7	7	7	7	8	7	7	9	9	9
Pre-Retirement Option 2	1	1	1	1	1	2	2	—	—	—
Total Members of the Legislature	206	210	213	223	230	234	235	209	219	223
Constitutional Officers										
Service Retirement	19	14	14	12	12	11	10	26	26	25
Disability Retirement	1	1	1	1	1	1	1	1	1	1
Pre-Retirement Option 2	1	1	1	1	1	—	1	2	2	2
Total Constitutional Officers	21	16	16	14	14	12	12	29	29	28
Legislative Statutory Officers										
Service Retirement	1	1	1	1	1	1	1	5	5	5
Total Legislative Statutory Officers	1	1	1	1	1	1	1	5	5	5
TOTAL BENEFIT RECIPIENTS	228	227	230	238	245	247	248	243	253	256
TOTAL MEMBERS	235	241	244	258	267	274	276	274	285	292

LEGISLATORS' RETIREMENT SYSTEM PROGRAM DATA

PRIMARY BENEFITS

CalPERS has administered the Legislators' Retirement System (LRS) since its inception in 1947. The duties of the Board with respect to administering the LRS are the same as the PERF on such items as determining membership and benefit rights, making investments, crediting interest, and obtaining information necessary for administration. Benefits payable from the LRS are financed through the State's contribution as an employer, member contributions, and interest earned on investments.

The Board is authorized to establish actuarially determined rates. For Fiscal Year 2018-19, the Board approved an employer contribution rate of 38.145 percent. Effective January 1, 2013, Assembly Bill 340 added Government Code section 7522.52. Section 7522.52 requires that a public employer's contribution to a defined benefit plan, in combination with employee contributions to that defined benefit plan, shall not be less than the normal cost.

Member contributions to the LRS are made by active members based on position and membership date. Active Legislative Members and Constitutional Officers contribute 4 percent of compensation if first elected before March 4, 1972, or 8 percent of compensation if first elected after March 4, 1972. The interest credited to member accounts is the net earnings rate of investments.

ASSEMBLY BILL 340 – PUBLIC EMPLOYEES' PENSION REFORM ACT (PEPRA)

The California Legislature passed and the Governor signed the PEPRA of 2013 on September 12, 2012. PEPRA contained a number of provisions intended to reduce future pension obligations. PEPRA primarily affects new pension plan members who are enrolled for the first time after December 31, 2012. The financial impact will be gradually realized as total pension costs and the employer share of those costs decrease.

PEPRA amended the Legislators' Retirement Law, and permanently closed the LRS to all Constitutional and Legislative Statutory Officers who take office on or after January 1, 2013.

PROPOSITION 140

Proposition 140, the Political Reform Act of 1990, requires that Legislators (Senators and Members of the Assembly) first elected after November 7, 1990, participate in the federal Social Security program and in no other retirement system.

MEMBERSHIP

Members of the Legislature serving prior to November 7, 1990; elected Constitutional Officers; and Legislative Statutory Officers serving prior to January 1, 2013, were eligible for membership.

SERVICE RETIREMENT

Retirement Age

The retirement age is 60, with four or more years of service credit, or any age with 20 or more years. The retirement age for Legislative Statutory Officers is 55, or any age with 20 years or more of service credit.

Members of the Legislature Benefit Formula

The retirement formula consists of three separate formulas that are totaled together to provide the members with their allowance. The first part of the formula consists of 5 percent of the first \$500 of salary up to 15 years of service. The second part is 3 percent per year of the same \$500 of salary for years in excess of 15 years. And finally, total years of service is multiplied by 3 percent per year of their salary above \$500. In no case may members receive more than two-thirds of their salary.

Constitutional Officers' Benefit Formula

Five percent per year of service up to eight years (40 percent) of their highest salary. If the member has 24 or more years of service, the retirement allowance is 60 percent of their final salary.

Statutory Officers' Benefit Formula

Statutory Officers receive 3 percent per year of service, not to exceed 66 2/3 percent of final monthly compensation.

Early Retirement Options for Members of the Legislature & Constitutional Officers

Legislators and Constitutional Officers may retire before age 60 with 15 years of service. However, their retirement allowance is reduced by 2 percent for each year they retire before age 60.

DISABILITY RETIREMENT

Disability retirement uses the same formula as service retirement. There is no reduction if retirement is before age 60 for members of the Legislature.

Statistical Section (continued)

LEGISLATORS' RETIREMENT SYSTEM PROGRAM DATA (CONTINUED)

DEATH BENEFITS (BEFORE RETIREMENT)

Not Eligible to Retire

One month's salary for each year of service, plus the return of the member's contributions with interest payable to a survivor.

Eligible to Retire

A surviving spouse will receive a monthly allowance equal to the Optional Settlement 2. In lieu of this benefit, a surviving spouse of a Member of the Legislature may receive a monthly allowance equal to one-half of the unmodified allowance, payable for life or until remarriage.

DEATH BENEFITS WHILE IN OFFICE

Beneficiaries receive a lump-sum benefit in an amount equal to the annual compensation of an LRS member during the 12 months preceding the member's death, regardless of whether the member was eligible to retire.

LRS Active & Inactive Members

Category	Active	Inactive	Total
Members of the Legislature	1	1	2
Constitutional Officers	1	4	5
Total	2	5	7

LRS Benefit Payments by Type

Category	Amount Paid
Service Retirement	\$6,834,740
Disability Retirement	109,675
Beneficiary Death Benefits	17,644
Beneficiary Death Benefits/Allowance	78,752
Adjustments ¹	308,912
Total	\$7,349,723

(1) Adjustments contain manual claims and overpayment recoveries.

DEATH BENEFITS (AFTER RETIREMENT)

Members choose between one of four options. The level of survivor benefit is based on the option chosen, without a reduction in allowance for members of the Legislature. Constitutional Officers and Statutory Officers receive a reduced allowance based on their age at time of retirement and the option they choose. Beneficiaries also receive a \$600 lump-sum payment.

COST-OF-LIVING ADJUSTMENTS (COLA)

The annual COLA is determined by the Consumer Price Index for all Urban Consumers.

LRS Benefit Recipients by Retirement Type

Category	Retired ¹	Survivors & Beneficiaries ¹	Total
Members of Legislature			
Service Retirement	99	99	198
Disability Retirement	—	7	7
Pre-Retirement Option 2	—	1	1
TOTAL MEMBERS OF LEGISLATURE	99	107	206
Constitutional Officers			
Service Retirement	18	1	19
Disability Retirement	—	1	1
Pre-Retirement Option 2	—	1	1
TOTAL CONSTITUTIONAL OFFICERS	18	3	21
Legislative Statutory Officers			
Service Retirement	—	1	1
TOTAL LEGISLATIVE STATUTORY OFFICERS	0	1	1
TOTAL	117	111	228

(1) The actual number of benefit recipients is by the employer category from which they retired, regardless of whether they had service in other employer categories.

Statistical Section (continued)

LEGISLATORS' RETIREMENT SYSTEM PROGRAM DATA (CONTINUED)

LRS Average Benefit Payments – As of June 30, 2019 – 10-Year Review

Retirement Effective Dates	Years of Service Credit						
	0 - 5	6 - 10	11 - 15	16 - 20	21 - 25	26 - 30	31+
2018-19							
Average Monthly Allowance ¹	\$0	\$3,629.76	\$0	\$2,670.27	\$0	\$0	\$0
Average Final Compensation	\$0	\$10,784.83	\$0	\$14,145.25	\$0	\$0	\$0
Number of Recipients ¹	—	4	—	2	—	—	—
2017-18							
Average Monthly Allowance ¹	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Average Final Compensation	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Number of Recipients ¹	—	—	—	—	—	—	—
2016-17							
Average Monthly Allowance ²	\$2,353	\$3,661	\$0	\$0	\$0	\$0	\$0
Average Final Compensation	\$12,628	\$7,802	\$0	\$0	\$0	\$0	\$0
Number of Recipients ²	2	2	—	—	—	—	—
2015-16							
Average Monthly Allowance ²	\$1,921	\$5,305	\$0	\$0	\$0	\$0	\$0
Average Final Compensation	\$3,542	\$13,261	\$0	\$0	\$0	\$0	\$0
Number of Recipients ²	1	1	—	—	—	—	—
2014-15							
Average Monthly Allowance ³	\$0	\$2,458	\$0	\$0	\$0	\$0	\$0
Average Final Compensation	\$0	\$7,921	\$0	\$0	\$0	\$0	\$0
Number of Recipients ³	—	1	—	—	—	—	—
2013-14							
Average Monthly Allowance ³	\$1,074	\$552	\$0	\$0	\$0	\$0	\$0
Average Final Compensation	\$2,342	\$780	\$0	\$0	\$0	\$0	\$0
Number of Recipients ³	1	3	—	—	—	—	—
2012-13							
Average Monthly Allowance ³	\$0	\$4,479	\$2,103	\$6,699	\$0	\$0	\$0
Average Final Compensation	\$0	\$13,008	\$4,375	\$8,812	\$0	\$0	\$0
Number of Recipients ³	—	2	1	2	—	—	—
2011-12⁴							
Average Monthly Allowance ³	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Average Final Compensation	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Number of Recipients ³	—	—	—	—	—	—	—
2010-11							
Average Monthly Allowance ³	\$0	\$4,258	\$2,103	\$0	\$8,206	\$0	\$0
Average Final Compensation	\$0	\$6,481	\$4,375	\$0	\$9,215	\$0	\$0
Number of Recipients ³	—	3	1	—	1	—	—
2009-10							
Average Monthly Allowance ³	\$0	\$435	\$1,759	\$6,604	\$4,965	\$3,842	\$4,452
Average Final Compensation	\$0	\$1,600	\$0	\$13,767	\$0	\$0	\$0
Number of Recipients ³	—	4	1	1	1	1	1

(1) There were no retirements in FY 2017-18, thus no benefit amounts to report.

(2) These averages and totals are for retired members only.

(3) These averages and totals are for retired members and community property only.

(4) There were no retirements in FY 2011-12, thus no benefit amounts to report.

JUDGES' RETIREMENT SYSTEM MEMBERSHIP & RETIREMENT DATA

Judges' Retirement System – 10-Year Review

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
ACTIVE & DEFERRED MEMBERS										
Judges	147	170	201	225	241	285	325	431	466	528
TOTAL ACTIVE & DEFERRED MEMBERS	147	170	201	225	241	285	325	431	466	528
BENEFIT RECIPIENTS										
Service Retirement	1,202	1,165	1,171	1,182	1,193	1,157	1,151	654	655	648
Disability Retirement	75	78	85	89	100	100	50	46	46	46
Deferred Retirement	526	534	556	584	594	598	632	582	590	595
Optional Settlement Benefit	—	—	—	—	—	—	—	527	510	478
Industrial Disability Retired	1	1	1	1	1	1	—	—	—	—
Pre-Retirement Survivor	12	—	—	—	—	—	63	75	73	76
Pre-Retirement Death	42	57	57	61	60	66	—	—	—	—
Extended Service Incentive Program	22	27	18	9	29	—	—	—	—	—
TOTAL BENEFIT RECIPIENTS	1,880	1,862	1,888	1,926	1,977	1,922	1,896	1,884	1,874	1,843
TOTAL MEMBERS	2,027	2,032	2,089	2,151	2,218	2,207	2,221	2,315	2,340	2,371

JUDGES' RETIREMENT SYSTEM PROGRAM DATA

PRIMARY BENEFITS

The Judges' Retirement System (JRS) was established in 1937. The operational activities of the JRS were transferred from the State Controller's Office to CalPERS in 1979. Benefits payable through the JRS are financed by the General Fund, the payroll contributions of members, and the State's contribution as an employer. Both employer and members contribute at the rate of 8 percent of compensation.

MEMBERSHIP

The Judges' Retirement System provides retirement, disability, death, and survivor benefits for Supreme and Appellate Court Justices and Superior Court Judges elected prior to November 9, 1994, and beneficiaries. Health and dental benefits are provided to eligible retirees and beneficiaries of the JRS under the Public Employees' Medical and Hospital Care Act (PEMHCA).

SERVICE RETIREMENT

Retirement Age

Members must be at least age 60 with 20 years of service, or age 70 with at least 10 years of service.

Retirement Benefit Formula

The retirement allowance is a percentage of the current salary of the last judicial office held and is increased proportionally with active judicial salaries. The allowance is based on a member's age and years of service as follows:

Age	Years of Service	Retirement Allowance
60-70	20	75%
66	18	65%
67	16	65%
68	14	65%
69	12	65%
70	10	65%

Judges can work as long as they want and receive their full pension of either 65 percent or 75 percent (depending on credited service).

Deferred Retirement

Judges are eligible for deferred retirement at any age if they have at least five years of service. However, judges are not paid the allowance until they reach the age they would be eligible for normal retirement if they had remained in office. A judge must be at least age 63, or age 60 with 20 years of service, to receive a retirement allowance. The allowance is based on years of service multiplied by a percentage of the judge's final salary—varying from 2 percent for five years to

3.75 percent for 12 or more years of service. The maximum benefit they can receive is 75 percent of salary.

DISABILITY RETIREMENT

Judges must apply to the Commission on Judicial Performance to receive a disability retirement. Judges receive the same allowance for work-related disability retirement as non-work related disability retirement. The retirement allowance is 65 percent of the judge's final salary, or 75 percent of their final salary if the judge has 20 or more years of service.

DISABILITY RETIREMENT (NON-WORK RELATED)

There is no age requirement, but there may be a service requirement depending on when the person became a judge. Any person who became a judge prior to January 1, 1980, is not subject to a service requirement. Any person who became a judge between January 1, 1980 and December 31, 1988, must have at least two years of judicial service. Any person who became a judge on or after January 1, 1989, must have at least four years of judicial service.

DISABILITY RETIREMENT (WORK RELATED)

There is no age or service requirement if the disability is a result of injury or disease arising out of and in the course of judicial service.

DEATH BENEFITS (BEFORE RETIREMENT)

Not Eligible to Retire

Spouses or registered domestic partners can receive 25 percent of a current active judge's salary for life or return of contributions plus one month's salary, for each year of service not to exceed six months; or the surviving spouse or registered domestic partner can elect a monthly allowance for life, if the judge had paid an extra \$2 per month and had 10 to 20 years of service. This allowance would be equal to 1.625 percent of the salary multiplied by the number of years of service.

Eligible to Retire

Spouses or registered domestic partners receive one-half of what the retirement allowance would have been if the judge had retired on date of death. At any time while in office, a judge may make an irrevocable election for their eligible surviving spouse or registered domestic partner to receive the maximum survivor benefit (Option 2) in the event of the judge's pre-retirement death. This benefit is only payable if a judge dies after 20 or more years of service.

Statistical Section (continued)

JUDGES' RETIREMENT SYSTEM PROGRAM DATA (CONTINUED)

DEATH BENEFITS (AFTER RETIREMENT)

Spouses or registered domestic partners receive one-half of the unmodified allowance for life, if the member retired with the standard retirement benefit formula, or on disability.

Judges may elect to take a reduced retirement allowance in order to enhance the survivor benefits to their spouse, registered domestic partner, or a designated beneficiary.

COST-OF-LIVING ADJUSTMENTS

The allowance increases are based on the current salary of an active judge. Retirees receive the same increase as active judges.

JRS Active and Deferred Members

Category	Active	Deferred	Total
Judges	146	1	147
TOTAL	146	1	147

JRS Benefit Payments by Type

Category	Amount Paid
Service Retirement	\$177,145,413
Disability Retirement	4,976,329
Beneficiary Death Benefits	374,026
Beneficiary Death Benefits/Life Allowance	34,299,482
Extended Service Incentive Program	6,239,819
Adjustments ¹	(1,081,258)
TOTAL	\$221,953,811

(1) Adjustments contain manual claims and overpayment recoveries.

JRS Benefit Recipients by Retirement Type

Category	Retired ¹	Survivors & Beneficiaries ¹	Total
Service Retirement	880	322	1,202
Disability Retirement	33	42	75
Deferred Retirement	346	180	526
Industrial Disability Retirement	1	—	1
Pre-Retirement Death	—	42	42
Pre-Retirement Option 2	—	12	12
Extended Service Incentive Program	22	—	22
TOTAL	1,282	598	1,880

(1) The actual number of benefit recipients is by the employer category from which they retired, regardless of whether they had service in other employer categories.

Statistical Section (continued)

JUDGES' RETIREMENT SYSTEM PROGRAM DATA (CONTINUED)

JRS Average Benefit Payments – As of June 30, 2019 – 10-Year Review

Retirement Effective Dates	Years of Service Credit						
	0 - 5	6 - 10	11 - 15	16 - 20	21 - 25	25 - 30	31+
2018-19							
Average Monthly Allowance ¹	\$429	\$5,089	\$9,147	\$0	\$11,877	\$12,179	\$12,267
Average Final Compensation	\$17,285	\$17,285	\$17,285	\$0	\$17,285	\$17,701	\$17,909
Number of Recipients ¹	1	2	1	—	5	6	12
2017-18							
Average Monthly Allowance ¹	\$2,928	\$4,530	\$5,686	\$10,504	\$11,463	\$11,262	\$12,639
Average Final Compensation	\$16,670	\$16,670	\$16,670	\$19,077	\$16,670	\$17,732	\$18,274
Number of Recipients ¹	1	1	1	1	11	8	6
2016-17							
Average Monthly Allowance ¹	\$1,018	\$4,340	\$6,637	\$8,441	\$11,109	\$11,347	\$11,718
Average Final Compensation	\$15,968	\$15,753	\$10,645	\$7,984	\$9,581	\$14,450	\$16,544
Number of Recipients ¹	1	1	3	4	5	9	4
2015-16							
Average Monthly Allowance ¹	\$2,725	\$2,365	\$6,962	\$0	\$10,842	\$11,792	\$5,284
Average Final Compensation	\$15,753	\$15,753	\$7,877	\$0	\$11,027	\$16,890	\$0
Number of Recipients ¹	2	4	2	—	10	2	1
2014-15							
Average Monthly Allowance ²	\$2,165	\$2,554	\$7,224	\$9,556	\$10,612	\$9,184	\$11,749
Average Final Compensation	\$15,292	\$15,292	\$16,516	\$15,469	\$15,341	\$15,746	\$16,217
Number of Recipients ²	3	3	3	16	19	14	5
2013-14							
Average Monthly Allowance ²	\$0	\$3,723	\$5,343	\$7,529	\$8,959	\$10,439	\$9,800
Average Final Compensation	\$0	\$12,142	\$9,432	\$10,218	\$7,426	\$10,581	\$3,776
Number of Recipients ²	—	9	13	12	35	16	4
2012-13							
Average Monthly Allowance ²	\$2,233	\$3,325	\$4,546	\$9,156	\$8,434	\$8,549	\$11,147
Average Final Compensation	\$14,899	\$7,049	\$3,044	\$1,752	\$974	\$1,655	\$0
Number of Recipients ²	2	6	9	17	33	9	4
2011-12							
Average Monthly Allowance ²	\$1,316	\$3,160	\$7,580	\$8,055	\$9,795	\$10,090	\$0
Average Final Compensation	\$14,899	\$15,473	\$17,879	\$15,114	\$15,042	\$15,168	\$0
Number of Recipients ²	2	4	5	20	30	9	—
2010-11							
Average Monthly Allowance ²	\$1,447	\$4,186	\$5,586	\$8,680	\$8,645	\$7,809	\$9,245
Average Final Compensation	\$14,899	\$14,899	\$14,899	\$14,899	\$14,382	\$17,299	\$17,018
Number of Recipients ²	3	8	10	22	41	16	4
2009-10							
Average Monthly Allowance ²	\$2,352	\$3,914	\$7,133	\$8,742	\$8,730	\$8,892	\$7,771
Average Final Compensation	\$15,974	\$15,290	\$15,042	\$14,947	\$15,042	\$15,437	\$14,899
Number of Recipients ²	2	11	15	45	45	8	3

(1) These averages and totals are for retired members only.

(2) These averages and totals are for retired members and community property only.

JUDGES' RETIREMENT SYSTEM II MEMBERSHIP & RETIREMENT DATA

Judges' Retirement System II – 10-Year Review

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
ACTIVE MEMBERS										
Judges II – Classic	1,352	1,326	1,350	1,367	1,385	1,396	1,352	1,272	1,290	1,197
Judges II – PEPRA ⁽¹⁾	293	217	158	124	85	—	—	—	—	—
TOTAL ACTIVE MEMBERS	1,645	1,543	1,508	1,491	1,470	1,396	1,352	1,272	1,290	1,197
BENEFIT RECIPIENTS										
Service Retirement	214	172	118	86	68	47	30	14	7	6
Monetary Credit Annuity	2	1	—	—	—	—	—	—	—	—
Disability Retirement	19	18	18	13	10	11	18	9	13	7
Optional Settlement Benefit	—	—	—	—	—	—	—	—	6	4
Pre-Retirement Survivor	—	—	—	—	—	—	2	13	2	2
Industrial Disability Retirement	4	5	5	4	4	3	—	—	—	—
Surviving Spouse 50% Allowance	8	7	6	6	6	6	—	—	—	—
Survivor Continuance	18	9	9	8	5	4	—	—	—	—
Option 2 Survivor Death Benefit	1	1	1	—	—	—	—	—	—	—
36-month Judge's Salary	1	1	2	2	2	2	2	1	2	—
Monetary Credit	14	17	11	15	11	—	—	—	—	—
TOTAL BENEFIT RECIPIENTS	281	231	170	134	106	73	52	37	30	19
TOTAL MEMBERS	1,926	1,774	1,678	1,625	1,576	1,469	1,404	1,309	1,320	1,216

(1) Reporting for PEPRA active members began in Fiscal Year 2014-15.

JUDGES' RETIREMENT SYSTEM II PROGRAM DATA

PRIMARY BENEFITS

The Judges' Retirement System II (JRS II) was established in 1994 to create a fully funded, actuarially sound retirement system for judges appointed or elected on or after November 9, 1994. This system provides two different types of retirement benefits: a traditional defined benefit plan or a cash balance (monetary credits) plan. The defined benefit plan provides a lifetime monthly retirement allowance of up to 75 percent of final compensation.

Alternatively, a judge may elect to receive the amount of his or her monetary credits in either a lump sum or an annuity of actuarially equivalent value.

ASSEMBLY BILL 340 – PUBLIC EMPLOYEES' PENSION REFORM ACT (PEPRA)

The California Legislature passed and the Governor signed the Public Employees' Pension Reform Act of 2013 (PEPRA) on September 12, 2012. PEPRA contained a number of provisions intended to reduce future pension obligations. PEPRA primarily affects new pension plan members who are enrolled for the first time after December 31, 2012. The financial impact will be gradually realized as total pension costs and the employer share of those costs decrease.

The new law implemented new member contribution requirements for judges who meet the definition of a new member under PEPRA, effective January 1, 2013. The new requirements provide that all new PEPRA members must contribute to the JRS II an amount equal to half of the normal cost.

MEMBERSHIP

JRS II provides retirement, disability, death, and survivor benefits for Supreme and Appellate Court Justices, and Superior Court Judges, first appointed or elected on or after November 9, 1994, and their beneficiaries. Health and dental benefits are provided to eligible retirees and beneficiaries of JRS II under PEMHCA.

SERVICE RETIREMENT

Retirement Age

Judges must be at least age 65 with 20 years of service or age 70 with a minimum of five years of service to receive the defined benefit plan. Judges who leave office with five or more years of service but who do not meet the above criteria receive the amount of their monetary credits.

RETIREMENT FORMULA

Defined Benefit Plan

This option provides a defined benefit of 3.75 percent of the judge's final compensation per year of service, up to 75 percent of the judge's final compensation. Optional settlements are available which reduce a judge's retirement allowance to provide a lifetime benefit for a surviving spouse upon death of the judge.

The Public Employees' Pension Reform Act of 2013 (Chapter 296, Stats. 2012) (PEPRA) also added Government Code section 7522.32, which for the purpose of determining the retirement benefits to be paid to a new member of a public retirement system, defines final compensation as the highest average annual pensionable compensation earned by the member during a period of at least 36 consecutive months.

Monetary Credit Plan

The judge may elect to have his or her monetary credits paid in a single lump sum, as an annuity for his or her lifetime, or pursuant to one of the available optional settlements.

DISABILITY RETIREMENT (NON WORK-RELATED)

Judges who have five years of service and become permanently disabled because of a mental or physical disability may apply to the Commission on Judicial Performance for disability retirement.

A judge who retires for non work-related disability will receive an allowance in an amount equal to the lower of the following:

- 3.75 percent of the judge's final compensation on the effective date of the disability retirement multiplied by the number of years of service the judge would have been credited had the judge continued to work until the age the judge would have first been eligible for service retirement, or
- 65 percent of the judge's final compensation on the effective date of the disability retirement.

DISABILITY RETIREMENT (WORK RELATED)

Judges receive 65 percent of their final compensation on the effective date of the disability retirement, regardless of age or length of service, if the disability is predominantly a result of injury arising out of and in the course of judicial service.

Statistical Section (continued)

JUDGES' RETIREMENT SYSTEM II PROGRAM DATA (CONTINUED)

DEATH BENEFITS (BEFORE RETIREMENT)

Not Eligible to Retire

Spouses or registered domestic partners receive the judge's monetary credits or three times the judge's annual salary at the time of death, whichever is greater.

Eligible for the Defined Benefit Plan

Spouses or registered domestic partners receive either a monthly retirement allowance equal to one-half of the judge's defined benefit plan allowance or the judge's monetary credits. Or if elected by the judge, the surviving spouse or registered domestic partner of an eligible judge who dies after 20 or more years of service, will receive the maximum survivor benefit (Option 2).

JRS II Active Judges

	Active
Judges II - Classic	1,352
Judges II - PEPR	293
TOTAL	1,645

JRS II Benefit Payments by Type

Category	Amount Paid
Service Retirement	\$21,618,554
Disability Retirement	2,853,470
Beneficiary Death Benefits	208,456
Beneficiary Death Benefits/Life Allowance	1,387,702
Monetary Credit	9,949,148
Adjustments ¹	186,881
TOTAL	\$36,204,211

(1) Adjustments contain manual claims and overpayment recoveries.

JRS II Benefit Recipients by Retirement Type

Category	Retired ¹	Survivors & Beneficiaries ¹	Total
Service Retirement	208	6	214
Disability Retirement	19	—	19
Monetary Credit Annuity	2	—	2
Industrial Disability Retirement	4	—	4
Surviving Spouse 50% Allowance	—	8	8
Pre-Retirement Option 2	—	1	1
Survivor Continuance	—	18	18
36-month Judge's Salary	—	1	1
Monetary Credit	—	14	14
TOTAL	233	48	281

(1) The actual number of benefit recipients is by the employer category from which they retired, regardless of whether they had service in other employer categories.

DEATH BENEFITS (AFTER RETIREMENT)

Defined Benefit Plan

Spouses or registered domestic partners receive one-half of the judge's monthly allowance for life. Judges who retired under a service retirement may also elect an optional settlement to increase the monthly benefits to their eligible surviving spouse or registered domestic partner.

Monetary Credit Plan

If the judge elected to receive his or her monetary credits in a lump sum or as a lifetime annuity for his or her life alone, there are no other benefits payable. If the judge elected one of the available optional settlements, his or her surviving spouse or registered domestic partner will receive benefits based on the optional settlement elected.

COST-OF-LIVING ADJUSTMENTS

The retirement allowance of retired judges who have elected the defined benefit plan will be adjusted every January after the judge has been retired for more than six months. The adjustment is based on the United States city average of the Consumer Price Index for All Urban Consumers, as published by the United States Bureau of Statistics. No adjustment will be made unless the cost-of-living increase equals or exceeds 1 percent, and the allowance cannot be increased more than 3 percent in a single year.

Statistical Section (continued)

JUDGES' RETIREMENT SYSTEM II PROGRAM DATA (CONTINUED)

JRS II Average Benefit Payments – As of June 30, 2019 – 10-Year Review

Retirement Effective Dates	Years of Credited Service						
	0-5	6 - 10	11 - 15	16 - 20	21 - 25	26 - 30	31+
2018-19							
Average Monthly Allowance ¹	\$3,109	\$4,988	\$8,165	\$11,325	\$12,302	\$0	\$0
Average Final Compensation	\$16,495	\$16,924	\$16,819	\$17,059	\$16,912	\$0	\$0
Number of Recipients ¹	2	5	7	16	14	—	—
2017-18							
Average Monthly Allowance ¹	\$2,863	\$4,964	\$7,808	\$10,696	\$11,923	\$0	\$0
Average Final Compensation	\$16,400	\$16,445	\$16,278	\$16,291	\$16,420	\$0	\$0
Number of Recipients ¹	3	2	7	28	15	—	—
2016-17							
Average Monthly Allowance ¹	\$0	\$6,761	\$8,025	\$10,401	\$11,114	\$0	\$0
Average Final Compensation	\$0	\$15,865	\$15,882	\$15,889	\$15,879	\$0	\$0
Number of Recipients ¹	—	5	8	21	5	—	—
2015-16							
Average Monthly Allowance ¹	\$3,047	\$4,774	\$7,918	\$10,667	\$0	\$0	\$0
Average Final Compensation	\$15,638	\$15,521	\$15,683	\$15,710	\$0	\$0	\$0
Number of Recipients ²	1	3	5	11	—	—	—
2014-15							
Average Monthly Allowance ²	\$0	\$5,198	\$6,740	\$9,637	\$0	\$0	\$0
Average Final Compensation	\$0	\$15,149	\$15,225	\$15,253	\$0	\$0	\$0
Number of Recipients ²	—	1	8	13	—	—	—
2013-14							
Average Monthly Allowance ²	\$0	\$4,175	\$6,457	\$8,991	\$11,274	\$0	\$0
Average Final Compensation	\$0	\$11,205	\$14,949	\$14,942	\$15,032	\$0	\$0
Number of Recipients ²	—	4	12	4	1	—	—
2012-13							
Average Monthly Allowance ²	\$2,024	\$7,337	\$6,449	\$8,691	\$10,168	\$0	\$0
Average Final Compensation	\$14,899	\$14,899	\$14,899	\$14,899	\$14,899	\$0	\$0
Number of Recipients ²	3	5	3	6	1	—	—
2011-12							
Average Monthly Allowance ²	\$0	\$3,812	\$8,824	\$8,192	\$0	\$0	\$0
Average Final Compensation	\$0	\$14,899	\$15,975	\$14,899	\$0	\$0	\$0
Number of Recipients ²	—	3	2	4	—	—	—
2010-11							
Average Monthly Allowance ²	\$0	\$11,423	\$8,150	\$0	\$0	\$0	\$0
Average Final Compensation	\$0	\$14,899	\$14,899	\$0	\$0	\$0	\$0
Number of Recipients ²	—	3	6	1	1	—	—
2009-10							
Average Monthly Allowance ²	\$0	\$9,684	\$6,025	\$0	\$0	\$0	\$0
Average Final Compensation	\$0	\$14,899	\$15,437	\$0	\$0	\$0	\$0
Number of Recipients ²	—	1	4	—	—	—	—

(1) These averages and totals are for retired members only.

(2) These averages and totals are for retired members and community property only.

This page intentionally left blank.

STATISTICAL SECTION

Other Programs

- 194 Health Care Fund
- 195 Contingency Reserve Fund
- 196 Long-Term Care Fund
- 197 Health Benefits Program Data
- 205 Defined Contribution Plans
- 206 Long-Term Care Program Data

Statistical Section: Other Programs

HEALTH CARE FUND

Expenses & Revenues – 10-Year Review (Dollars in Thousands)

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
OPERATING REVENUES										
Premiums	\$3,681,106	\$3,945,826	\$3,826,107	\$3,741,352	\$3,594,279	\$2,744,305	\$1,921,838	\$1,846,210	\$1,709,975	\$1,362,081
Federal Government Subsidies	18,753	22,720	29,534	32,539	36,077	43,900	22,375	—	—	—
Federal Government Reimbursements	—	—	—	—	—	—	17	32,710	42,583	—
Total Operating Revenues	\$3,699,859	\$3,968,546	\$3,855,641	\$3,773,891	\$3,630,356	\$2,788,205	\$1,944,230	\$1,878,920	\$1,752,558	\$1,362,081
OPERATING EXPENSES										
Claims Expense	\$3,548,295	\$3,543,962	\$3,387,753	\$3,404,222	\$3,411,618	\$2,449,655	\$1,824,082	\$1,728,231	\$1,728,156	\$1,572,084
Increase (Decrease) in Estimated Liabilities	14,332	36,609	(14,701)	13,258	20,484	173,796	16,781	—	—	—
Administrative Expenses	298,887	304,319	312,832	355,702	371,915	192,987	105,154	96,043	88,391	90,292
Total Operating Expenses	\$3,861,514	\$3,884,890	\$3,685,884	\$3,773,182	\$3,804,017	\$2,816,438	\$1,946,017	\$1,824,274	\$1,816,547	\$1,662,376
OPERATING INCOME (LOSS)	(\$161,655)	\$83,656	\$169,757	\$709	(\$173,661)	(\$28,233)	(\$1,787)	\$54,646	(\$63,989)	(\$300,295)
NON-OPERATING REVENUES										
Investment Income	\$51,547	\$16,847	\$2,988	\$27,374	\$11,850	\$20,165	\$4,260	\$33,468	\$22,447	\$47,540
Total Non-Operating Revenues	\$51,547	\$16,847	\$2,988	\$27,374	\$11,850	\$20,165	\$4,260	\$33,468	\$22,447	\$47,540
NON-OPERATING EXPENSES										
Other Investment Expenses	\$166	\$89	\$92	\$77	\$83	\$157	\$87	\$75	\$0	\$0
Total Non-Operating Expenses	\$166	\$89	\$92	\$77	\$83	\$157	\$87	\$75	\$0	\$0
Securities Lending Income	\$0	\$0	\$0	\$0	\$0	\$15	\$41	\$54	\$0	\$0
Cost of Lending Securities	—	—	—	—	—	(3)	(8)	(12)	—	—
Net Securities Lending	\$0	\$0	\$0	\$0	\$0	\$12	\$33	\$42	\$0	\$0
NON-OPERATING INCOME	\$51,381	\$16,758	\$2,896	\$27,297	\$11,767	\$20,020	\$4,206	\$33,435	\$22,447	\$47,540
CHANGE IN UNRESTRICTED NET POSITION	(\$110,274)	\$100,414	\$172,653	\$28,006	(\$161,894)	(\$8,213)	\$2,419	\$88,081	(\$41,542)	(\$252,755)
TOTAL UNRESTRICTED NET POSITION										
Beginning of Year	\$485,636	\$385,222 ¹	\$314,274	\$286,268	\$448,162	\$456,375	\$453,956	\$365,875	\$407,417	\$660,172
End of Year	\$375,362	\$485,636	\$486,927	\$314,274	\$286,268	\$448,162	\$456,375	\$453,956	\$365,875	\$407,417

(1) Due to prior period adjustment, beginning balance was restated.

Statistical Section: Other Programs (continued)

CONTINGENCY RESERVE FUND

Expenses & Revenues – 10-Year Review (Dollars in Thousands)

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
OPERATING REVENUES										
Administrative Fees Earned & Other	\$22,375	\$30,152	\$27,487	\$27,668	\$26,712	\$24,899	\$17,809	\$25,490	\$23,956	\$22,528
Total Operating Revenues	\$22,375	\$30,152	\$27,487	\$27,668	\$26,712	\$24,899	\$17,809	\$25,490	\$23,956	\$22,528
OPERATING EXPENSES										
Administrative Expenses	\$18,799	\$34,763	\$27,239	\$11,983	\$29,735	\$28,891	\$27,402	\$28,073	\$27,448	\$27,065
Total Operating Expenses	\$18,799	\$34,763	\$27,239	\$11,983	\$29,735	\$28,891	\$27,402	\$28,073	\$27,448	\$27,065
OPERATING INCOME (LOSS)	\$3,576	(\$4,611)	\$248	\$15,685	(\$3,023)	(\$3,992)	(\$9,593)	(\$2,583)	(\$3,492)	(\$4,537)
NON-OPERATING REVENUES										
Investment Income	\$5,896	\$3,165	\$2,025	\$1,164	\$803	\$681	\$704	\$874	\$993	\$1,071
Total Non-Operating Revenues	\$5,896	\$3,165	\$2,025	\$1,164	\$803	\$681	\$704	\$874	\$993	\$1,071
NON-OPERATING EXPENSES										
Other Investment Expenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1	\$0	\$0
Total Non-Operating Expenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1	\$0	\$0
NON-OPERATING INCOME	\$5,896	\$3,165	\$2,025	\$1,164	\$803	\$681	\$704	\$873	\$993	\$1,071
CHANGE IN UNRESTRICTED NET POSITION	\$9,472	(\$1,446)	\$2,273	\$16,849	(\$2,220)	(\$3,311)	(\$8,889)	(\$1,710)	(\$2,499)	(\$3,466)
TOTAL UNRESTRICTED NET POSITION (DEFICIT)										
Beginning of Year	(\$57,787)	(\$56,341) ¹	\$10,025	(\$6,824)	(\$4,604)	(\$1,293)	\$7,596	\$9,306	\$11,805	\$15,271
End of Year	(\$48,315)	(\$57,787)	\$12,298	\$10,025	(\$6,824)	(\$4,604)	(\$1,293)	\$7,596	\$9,306	\$11,805

(1) Due to prior period adjustment, beginning balance was restated.

Statistical Section: Other Programs (continued)

LONG-TERM CARE FUND

Expenses & Revenues – 10-Year Review (Dollars in Thousands)

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
OPERATING REVENUES										
Premiums	\$283,445	\$296,323	\$306,303	\$282,426	\$272,362	\$286,571	\$307,812	\$313,466	\$314,099	\$285,948
Total Operating Revenues	\$283,445	\$296,323	\$306,303	\$282,426	\$272,362	\$286,571	\$307,812	\$313,466	\$314,099	\$285,948
OPERATING EXPENSES										
Claims Expense	\$324,841	\$306,879	\$293,693	\$271,742	\$248,785	\$225,691	\$198,185	\$174,896	\$156,118	\$133,042
Increase (Decrease) in Estimated Liabilities	80,892	295,142	213,048	376,284	310,565	345,547	(631,804)	1,063,318	(115,600)	(208,200)
Administrative Expenses	24,300	26,545	25,082	24,999	24,304	22,946	21,819	21,718	21,303	19,663
Total Operating Expenses	\$430,033	\$628,566	\$531,823	\$673,025	\$583,654	\$594,184	(\$411,800)	\$1,259,932	\$61,821	(\$55,495)
OPERATING INCOME (LOSS)	(\$146,588)	(\$332,243)	(\$225,520)	(\$390,599)	(\$311,292)	(\$307,613)	\$719,612	(\$946,466)	\$252,278	\$341,443
NON-OPERATING REVENUES										
Investment Income/(Loss)	\$321,711	\$177,562	\$68,986	\$226,526	(\$36,550)	\$393,354	\$119,607	\$114,947	\$537,156	\$351,745
Total Non-Operating Revenues	\$321,711	\$177,562	\$68,986	\$226,526	(\$36,550)	\$393,354	\$119,607	\$114,947	\$537,156	\$351,745
NON-OPERATING EXPENSES										
Other Investment Expenses	\$2,596	\$1,853	\$1,816	\$1,606	\$1,734	\$1,615	\$1,160	\$540	\$0	\$0
Total Non-Operating Expenses	\$2,596	\$1,853	\$1,816	\$1,606	\$1,734	\$1,615	\$1,160	\$540	\$0	\$0
Securities Lending Income	\$0	\$0	\$0	\$0	\$0	\$0	\$909	\$1,624	\$0	\$0
Cost of Lending Securities	—	—	—	—	—	—	(120)	(274)	—	—
Net Securities Lending	\$0	\$0	\$0	\$0	\$0	\$0	\$789	\$1,350	\$0	\$0
NON-OPERATING INCOME (LOSS)	\$319,115	\$175,709	\$67,170	\$224,920	(\$38,284)	\$391,739	\$119,236	\$115,757	\$537,156	\$351,745
CHANGE IN UNRESTRICTED NET POSITION	\$172,527	(\$156,534)	(\$158,350)	(\$165,679)	(\$349,576)	\$84,126	\$838,848	(\$830,709)	\$789,434	\$693,188
TOTAL UNRESTRICTED NET POSITION (DEFICIT)										
Beginning of Year	(\$76,755)	\$79,779 ¹	\$247,993	\$413,672	\$763,248	\$679,122	(\$159,726)	\$670,983	(\$118,451)	(\$811,639)
End of Year	\$95,772	(\$76,755)	\$89,643	\$247,993	\$413,672	\$763,248	\$679,122	(\$159,726)	\$670,983	(\$118,451)

(1) Due to prior period adjustment, beginning balance was restated.

Statistical Section: Other Programs (continued)

HEALTH BENEFITS PROGRAM DATA

Total Covered Lives by Health Plan as of June 30, 2019

	Basic					Medicare					Total Covered Lives
	State		Public Agency		Total	State		Public Agency		Total	
	Active	Retired	Active	Retired		Active	Retired	Active	Retired		
Health Maintenance Organization (HMO)											
Anthem HMO Select	12,444	1,556	18,305	1,328	33,633	—	—	—	—	—	33,633
Anthem HMO Traditional	2,368	928	9,888	1,903	15,087	—	1,153	2	1,038	2,193	17,280
Blue Shield Access+	60,618	13,761	44,569	6,260	125,208	—	—	—	—	—	125,208
Blue Shield EPO	605	209	203	40	1,057	—	—	—	—	—	1,057
Health Net Salud y Más	3,883	114	5,445	153	9,595	—	—	—	—	—	9,595
Health Net SmartCare	9,333	1,487	13,160	1,794	25,774	—	—	—	—	—	25,774
Kaiser	250,272	40,900	218,373	21,571	531,116	6	62,719	4	38,182	100,911	632,027
Kaiser/Out of State	6	395	6	381	788	—	1,415	—	825	2,240	3,028
Sharp	10,210	702	1,720	131	12,763	—	—	—	—	—	12,763
UnitedHealthcare	54,127	8,612	14,532	1,890	79,161	4	25,643	3	16,104	41,754	120,915
Western Health Advantage	5,815	905	2,918	412	10,050	—	—	—	—	—	10,050
SUBTOTAL	409,681	69,569	329,119	35,863	844,232	10	90,930	9	56,149	147,098	991,330
Preferred Provider Organization (PPO)											
Anthem EPO Del Norte	92	11	—	2	105	—	—	—	—	—	105
PERS Choice	54,670	29,726	51,188	11,882	147,466	7	46,304	1	27,092	73,404	220,870
PERS Select	34,165	2,572	34,674	2,115	73,526	—	907	—	1,332	2,239	75,765
PERSCare	6,237	6,773	11,828	5,792	30,630	4	44,071	—	18,799	62,874	93,504
SUBTOTAL	95,164	39,082	97,690	19,791	251,727	11	91,282	1	47,223	138,517	390,244
Association (ASN) Plans											
CAHP	22,088	6,165	—	—	28,253	—	4,443	—	—	4,443	32,696
CCPOA North	6,367	2,196	—	—	8,563	—	611	—	—	611	9,174
CCPOA South	26,158	5,276	—	—	31,434	—	740	—	—	740	32,174
PORAC	598	377	14,742	5,671	21,388	—	190	—	2,308	2,498	23,886
SUBTOTAL	55,211	14,014	14,742	5,671	89,638	—	5,984	—	2,308	8,292	97,930
TOTAL	560,056	122,665	441,551	61,325	1,185,597	21	188,196	10	105,680	293,907	1,479,504

10-Year Enrollments

Members	2019	2018	2017	2016	2015	2014 ²	2013 ²	2012 ²	2011 ²	2010 ²
Total Covered Lives ¹	1,479,504	1,462,260	1,442,156	1,424,983	1,400,960	1,390,104	1,382,151	1,369,235	1,358,496	1,309,209
Subscribers ¹	721,321	709,592	697,163	684,436	669,127	658,048	645,697	634,667	631,309	621,775

(1) Total Covered Lives and Subscribers as of June 30 of each reported year.

(2) Corrected figures from previously reported data in 2016.

Total Covered Lives Summary as of June 30, 2019

	State	Public Agency	Total
Total Covered Lives	870,938	608,566	1,479,504

Statistical Section: Other Programs (continued)

HEALTH BENEFITS PROGRAM DATA (CONTINUED)

State HMO Total Covered Lives by County as of June 30, 2019

County	Anthem HMO Select	Anthem HMO Traditional	Blue Shield Access+	Blue Shield EPO	Health Net Salud y Más	Health Net SmartCare	Kaiser	Kaiser/ Out of State	Sharp	United Healthcare	Western Health Advantage	Total
Alameda	627	264	1	—	—	911	12,111	—	—	2,429	—	16,343
Alpine	—	—	—	—	—	—	—	—	—	1	—	1
Amador	—	—	5	—	—	—	1,949	—	—	27	—	1,981
Butte	1	65	3,889	—	—	—	2	—	—	600	—	4,557
Calaveras	—	—	4	—	—	—	19	—	—	6	—	29
Colusa	—	—	—	85	—	—	—	—	—	15	5	105
Contra Costa	319	186	—	—	—	1,446	8,467	—	—	1,090	—	11,508
Del Norte	—	—	1	—	—	—	3	—	—	1	—	5
El Dorado	356	114	1,005	—	—	—	5,292	—	—	284	204	7,255
Fresno	127	92	3,247	—	—	393	11,663	—	—	9,036	—	24,558
Glenn	—	4	205	—	—	—	—	—	—	45	—	254
Humboldt	—	122	2,826	—	—	—	—	—	—	282	—	3,230
Imperial	1,056	48	1,084	—	—	—	—	—	—	113	—	2,301
Inyo	—	—	—	—	—	—	—	—	—	—	—	—
Kern	150	59	1,670	—	162	683	10,048	—	—	1,023	—	13,795
Kings	—	84	1,648	—	—	578	912	—	—	3,585	—	6,807
Lake	—	—	3	—	—	—	1	—	—	8	—	12
Lassen	—	—	1	—	—	—	4	—	—	3	—	8
Los Angeles	1,431	375	6,953	—	1,732	665	41,257	—	4	4,590	—	57,007
Madera	—	37	623	—	—	—	2,398	—	—	805	—	3,863
Marin	—	71	—	—	—	210	1,470	—	—	228	74	2,053
Mariposa	—	—	141	—	—	—	15	—	—	33	—	189
Mendocino	—	23	3	705	—	—	—	—	—	166	—	897
Merced	456	25	773	—	—	—	10	—	—	236	—	1,500
Modoc	—	—	—	—	—	—	—	—	—	—	—	—
Mono	—	—	—	—	—	—	—	—	—	—	—	—
Monterey	1,918	—	1	—	—	—	2	—	—	19	—	1,940
Napa	—	37	—	—	—	38	4,501	—	—	19	32	4,627
Nevada	153	51	499	—	—	—	49	—	—	255	—	1,007
Orange	399	154	4,057	—	590	90	12,424	—	3	2,312	—	20,029
Placer	320	147	2,249	—	—	—	14,164	—	—	3,615	147	20,642
Plumas	—	—	—	—	—	—	—	—	—	9	—	9
Riverside	358	113	4,164	—	245	127	16,855	—	—	2,228	—	24,090
Sacramento	2,446	923	19,828	2	—	10	109,500	—	—	24,320	5,263	162,292
San Benito	—	35	7	—	—	—	7	—	—	3	—	52
San Bernardino	551	126	3,094	—	663	319	21,869	—	—	3,249	—	29,871
San Diego	291	—	2,896	—	605	179	12,815	—	10,897	3,150	—	30,833
San Francisco	171	203	—	—	—	759	4,379	—	5	2,186	—	7,703
San Joaquin	435	145	1,913	—	—	482	10,751	—	—	1,988	2	15,716
San Luis Obispo	—	162	2,727	—	—	—	4	—	—	8,034	—	10,927
San Mateo	—	106	—	—	—	290	3,180	—	—	1,647	—	5,223
Santa Barbara	1	65	729	—	—	—	—	—	—	230	—	1,025
Santa Clara	447	110	—	—	—	332	8,559	—	—	1,416	—	10,864
Santa Cruz	54	20	517	—	—	32	355	—	—	717	—	1,695
Shasta	—	—	4	—	—	—	4	—	—	20	—	28
Sierra	—	—	—	22	—	—	—	—	—	16	—	38
Siskiyou	—	—	—	—	—	—	—	—	—	5	—	5
Solano	—	132	5	—	—	581	16,003	—	—	1,225	152	18,098
Sonoma	—	115	—	—	—	660	7,352	—	—	950	289	9,366
Stanislaus	302	30	941	—	—	—	3,732	—	—	1,268	—	6,273

Statistical Section: Other Programs (continued)

HEALTH BENEFITS PROGRAM DATA (CONTINUED)

State HMO Total Covered Lives by County as of June 30, 2019 (continued)

County	Anthem HMO Select	Anthem HMO Traditional	Blue Shield Access+	Blue Shield EPO	Health Net Salud y Más	Health Net SmartCare	Kaiser	Kaiser/ Out of State	Sharp	United Healthcare	Western Health Advantage	Total
Sutter	—	—	—	—	—	—	142	—	—	18	—	160
Tehama	1	—	—	—	—	—	1	—	—	8	—	10
Trinity	—	—	—	—	—	—	—	—	—	2	—	2
Tulare	1,020	12	3,737	—	—	2,032	89	—	—	448	—	7,338
Tuolumne	9	—	1	—	—	—	3	—	—	3	—	16
Ventura	427	48	780	—	—	—	3,241	—	—	610	—	5,106
Yolo	167	146	2,119	—	—	—	7,209	—	—	2,852	548	13,041
Yuba	2	—	—	—	—	—	973	—	—	11	—	986
Out of State	5	—	25	—	—	3	110	1,816	3	944	4	2,910
Out of Country/ Unknown	—	—	4	—	—	—	3	—	—	3	—	10
Total Covered Lives	14,000	4,449	74,379	814	3,997	10,820	353,897	1,816	10,912	88,386	6,720	570,190

State PPO Total Covered Lives by County as of June 30, 2019

County	Anthem EPO Del Norte	PERS Choice	PERS Select	PERSCare	Total
Alameda	—	1,457	251	1,030	2,738
Alpine	—	24	14	2	40
Amador	—	969	145	288	1,402
Butte	—	2,736	1,372	1,247	5,355
Calaveras	—	896	192	222	1,310
Colusa	—	43	11	37	91
Contra Costa	—	909	175	799	1,883
Del Norte	102	1,796	2,343	160	4,401
El Dorado	—	1,487	571	838	2,896
Fresno	—	3,934	1,227	1,554	6,715
Glenn	—	129	57	50	236
Humboldt	1	2,130	852	718	3,701
Imperial	—	808	438	212	1,458
Inyo	—	432	383	64	879
Kern	—	3,031	1,132	903	5,066
Kings	—	891	524	230	1,645
Lake	—	392	99	156	647
Lassen	—	2,676	3,809	249	6,734
Los Angeles	—	11,781	2,893	5,335	20,009
Madera	—	634	268	208	1,110
Marin	—	503	62	375	940
Mariposa	—	189	47	80	316
Mendocino	—	293	174	200	667
Merced	—	719	356	254	1,329
Modoc	—	201	79	31	311
Mono	—	171	62	14	247
Monterey	—	5,294	2,467	806	8,567
Napa	—	582	75	225	882
Nevada	—	553	155	383	1,091
Orange	—	5,111	1,246	2,908	9,265
Placer	—	1,723	308	1,193	3,224
Plumas	—	287	186	96	569

Statistical Section: Other Programs (continued)

HEALTH BENEFITS PROGRAM DATA (CONTINUED)

State PPO Total Covered Lives by County as of June 30, 2019 (continued)

County	Anthem EPO Del Norte	PERS Choice	PERS Select	PERSCare	Total
Riverside	—	2,860	771	1,353	4,984
Sacramento	—	7,152	2,374	6,203	15,729
San Benito	—	307	94	55	456
San Bernardino	—	2,381	788	1,114	4,283
San Diego	—	3,578	566	2,071	6,215
San Francisco	—	834	177	717	1,728
San Joaquin	—	1,145	250	746	2,141
San Luis Obispo	—	7,399	2,727	2,476	12,602
San Mateo	—	598	85	423	1,106
Santa Barbara	—	734	317	431	1,482
Santa Clara	—	1,694	250	778	2,722
Santa Cruz	—	570	117	306	993
Shasta	—	3,007	2,570	662	6,239
Sierra	—	21	17	21	59
Siskiyou	—	827	439	143	1,409
Solano	—	642	132	349	1,123
Sonoma	—	1,115	167	804	2,086
Stanislaus	—	810	180	498	1,488
Sutter	—	1,344	269	245	1,858
Tehama	—	806	671	148	1,625
Trinity	—	179	144	41	364
Tulare	—	3,603	1,380	926	5,909
Tuolumne	—	1,713	404	305	2,422
Ventura	—	2,115	444	967	3,526
Yolo	—	1,054	201	653	1,908
Yuba	—	613	114	149	876
Out of State	—	30,476	22	13,580	44,078
Out of Country/ Unknown	—	349	1	54	404
Total Covered Lives	103	130,707	37,644	57,085	225,539

Statistical Section: Other Programs (continued)

HEALTH BENEFITS PROGRAM DATA (CONTINUED)

State ASN Total Covered Lives by County as of June 30, 2019

County	CAHP	CCPOA North	CCPOA South	PORAC	Total	County	CAHP	CCPOA North	CCPOA South	PORAC	Total
Alameda	360	32	—	—	392	Placer	1,832	293	—	16	2,141
Alpine	10	—	—	—	10	Plumas	178	—	—	—	178
Amador	140	—	—	3	143	Riverside	2,802	—	4,836	49	7,687
Butte	486	62	5	26	579	Sacramento	1,466	1,245	5	27	2,743
Calaveras	165	—	—	10	175	San Benito	79	—	—	26	105
Colusa	46	—	—	3	49	San Bernardino	1,919	—	3,080	12	5,011
Contra Costa	508	99	—	6	613	San Diego	1,761	—	2,389	31	4,181
Del Norte	127	—	—	3	130	San Francisco	70	23	—	4	97
El Dorado	775	165	—	27	967	San Joaquin	653	1,098	—	3	1,754
Fresno	1,119	1,014	—	67	2,200	San Luis Obispo	925	—	2,896	94	3,915
Glenn	80	—	—	—	80	San Mateo	137	14	—	5	156
Humboldt	321	—	—	16	337	Santa Barbara	422	—	528	16	966
Imperial	306	—	4,947	8	5,261	Santa Clara	389	27	—	12	428
Inyo	118	—	—	1	119	Santa Cruz	219	25	—	23	267
Kern	1,390	—	10,528	21	11,939	Shasta	1,121	—	—	41	1,162
Kings	283	1,101	—	—	1,384	Sierra	4	—	—	—	4
Lake	169	—	—	15	184	Siskiyou	381	—	—	14	395
Lassen	141	13	—	2	156	Solano	692	320	—	—	1,012
Los Angeles	2,599	—	2,145	115	4,859	Sonoma	520	62	—	10	592
Madera	361	237	—	8	606	Stanislaus	592	452	—	3	1,047
Marin	114	33	—	—	147	Sutter	253	—	—	6	259
Mariposa	76	—	—	—	76	Tehama	301	—	—	9	310
Mendocino	158	—	—	—	158	Trinity	47	—	—	1	48
Merced	404	273	—	12	689	Tulare	760	2,435	11	6	3,212
Modoc	97	—	—	4	101	Tuolumne	163	—	—	8	171
Mono	34	—	—	2	36	Ventura	935	—	427	41	1,403
Monterey	353	—	—	83	436	Yolo	256	126	—	2	384
Napa	172	—	—	3	175	Yuba	103	—	—	2	105
Nevada	357	21	—	26	404	Out of State	1,191	4	13	155	1,363
Orange	1,245	—	364	88	1,697	Out of Country/ Unknown	11	—	—	—	11
Total Covered Lives							32,696	9,174	32,174	1,165	75,209

Public Agency HMO Total Covered Lives by County as of June 30, 2019

County	Anthem HMO Select	Anthem HMO Traditional	Blue Shield Access+	Blue Shield EPO	Health Net Salud y Más	Health Net SmartCare	Kaiser	Kaiser/ Out of State	Sharp	United Healthcare	Western Health Advantage	Total
Alameda	1,661	1,575	—	—	—	1,413	29,865	—	—	1,197	—	35,711
Alpine	—	—	—	—	—	—	—	—	—	—	—	—
Amador	4	—	—	—	—	—	130	—	—	4	—	138
Butte	—	11	590	—	—	—	—	—	—	235	—	836
Calaveras	—	—	—	—	—	—	4	—	—	19	—	23
Colusa	—	—	4	142	—	—	—	—	—	66	14	226
Contra Costa	1,505	1,286	2	—	—	3,567	32,161	—	—	1,171	—	39,692
Del Norte	—	—	—	—	—	—	—	—	—	3	—	3
El Dorado	50	37	483	—	—	—	2,460	—	—	86	115	3,231
Fresno	29	11	123	—	—	39	1,060	—	—	1,384	—	2,646
Glenn	—	7	289	—	—	2	—	—	—	94	—	392
Humboldt	—	8	184	—	—	—	—	—	—	96	—	288
Imperial	65	1	97	—	—	—	—	—	—	12	—	175

Statistical Section: Other Programs (continued)

HEALTH BENEFITS PROGRAM DATA (CONTINUED)

Public Agency HMO Total Covered Lives by County as of June 30, 2019 (continued)

County	Anthem HMO Select	Anthem HMO Traditional	Blue Shield Access+	Blue Shield EPO	Health Net Salud y Más	Health Net SmartCare	Kaiser	Kaiser/ Out of State	Sharp	United Healthcare	Western Health Advantage	Total
Inyo	—	—	—	—	—	—	—	—	—	1	—	1
Kern	32	14	107	—	45	150	685	—	—	145	—	1,178
Kings	5	—	6	—	—	13	15	—	—	32	—	71
Lake	—	—	—	—	—	—	2	—	—	7	—	9
Lassen	—	—	—	—	—	—	—	—	—	1	—	1
Los Angeles	2,659	1,882	20,596	—	3,285	4,105	52,723	—	—	5,053	—	90,303
Madera	—	8	152	—	—	—	1,299	—	—	1,269	—	2,728
Marin	—	135	—	—	—	198	3,174	—	—	186	149	3,842
Mariposa	1	—	18	—	—	—	4	—	—	30	—	53
Mendocino	—	—	—	39	—	—	1	—	—	26	—	66
Merced	194	2	378	—	—	—	7	—	—	83	—	664
Modoc	—	—	—	—	—	—	—	—	—	—	—	—
Mono	—	—	—	—	—	—	—	—	—	1	—	1
Monterey	1,944	—	2	—	—	—	10	—	—	54	—	2,010
Napa	—	27	—	—	—	35	6,415	—	—	13	88	6,578
Nevada	1,347	100	241	—	—	—	24	—	—	595	—	2,307
Orange	1,005	423	5,217	—	552	343	11,716	—	—	2,719	—	21,975
Placer	51	172	2,293	—	—	1	9,846	—	—	1,949	286	14,598
Plumas	—	—	2	—	—	—	—	—	—	2	—	4
Riverside	1,148	378	3,332	—	314	478	10,555	—	4	3,109	—	19,318
Sacramento	78	53	1,979	—	—	—	12,658	—	—	1,223	840	16,831
San Benito	—	41	—	—	—	—	4	—	—	13	—	58
San Bernardino	777	256	3,999	—	535	1,142	12,395	—	—	1,422	—	20,526
San Diego	186	—	849	—	866	176	2,622	—	1,847	1,703	—	8,249
San Francisco	172	422	—	—	—	329	2,653	—	—	162	—	3,738
San Joaquin	1,433	275	1,224	—	—	527	12,181	—	—	394	—	16,034
San Luis Obispo	—	36	442	—	—	—	1	—	—	2,029	—	2,508
San Mateo	3	2,424	5	—	—	735	10,631	—	—	963	—	14,761
Santa Barbara	—	76	1,602	—	—	—	—	—	—	115	—	1,793
Santa Clara	1,243	1,477	1	—	—	361	22,605	—	—	632	—	26,319
Santa Cruz	2,191	432	3,029	—	—	324	2,433	—	—	909	—	9,318
Shasta	—	—	—	—	—	—	2	—	—	17	—	19
Sierra	—	—	—	62	—	—	—	—	—	—	—	62
Siskiyou	—	—	—	—	—	—	—	—	—	12	—	12
Solano	4	708	—	—	—	543	20,098	—	—	385	342	22,080
Sonoma	3	163	—	—	—	398	5,662	—	—	166	243	6,635
Stanislaus	927	82	564	—	—	—	3,885	—	—	182	—	5,640
Sutter	—	—	—	—	—	—	16	—	—	6	—	22
Tehama	—	—	—	—	—	—	—	—	—	4	—	4
Trinity	—	—	—	—	—	—	—	—	—	1	—	1
Tulare	55	—	132	—	—	69	17	—	—	32	—	305
Tuolumne	1	—	—	—	—	—	4	—	—	11	—	16
Ventura	831	256	2,158	—	1	—	4,287	—	—	496	—	8,029
Yolo	19	45	701	—	—	—	3,524	—	—	1,005	1,253	6,547
Yuba	4	—	—	—	—	—	205	—	—	8	—	217
Out of State	6	8	28	—	—	6	81	1,212	—	995	—	2,336
Out of Country/ Unknown	—	—	—	—	—	—	10	—	—	2	—	12
Total Covered Lives	19,633	12,831	50,829	243	5,598	14,954	278,130	1,212	1,851	32,529	3,330	421,140

Statistical Section: Other Programs (continued)

HEALTH BENEFITS PROGRAM DATA (CONTINUED)

Public Agency PPO Total Covered Lives by County as of June 30, 2019

County	Anthem EPO Del Norte	PERS Choice	PERS Select	PERSCare	Total
Alameda	—	2,520	545	997	4,062
Alpine	—	10	2	9	21
Amador	—	209	35	65	309
Butte	—	637	1,773	200	2,610
Calaveras	—	559	263	107	929
Colusa	—	144	272	35	451
Contra Costa	—	2,537	631	1,055	4,223
Del Norte	2	65	93	20	180
El Dorado	—	657	307	254	1,218
Fresno	—	285	149	99	533
Glenn	—	188	253	36	477
Humboldt	—	876	2,539	71	3,486
Imperial	—	40	37	11	88
Inyo	—	1,192	169	177	1,538
Kern	—	423	185	87	695
Kings	—	18	19	3	40
Lake	—	130	32	64	226
Lassen	—	139	179	22	340
Los Angeles	—	18,465	5,200	9,865	33,530
Madera	—	322	245	94	661
Marin	—	513	99	245	857
Mariposa	—	102	15	47	164
Mendocino	—	85	27	36	148
Merced	—	289	197	107	593
Modoc	—	17	4	4	25
Mono	—	593	6	58	657
Monterey	—	8,731	2,964	516	12,211
Napa	—	814	286	195	1,295
Nevada	—	761	851	320	1,932
Orange	—	4,726	1,853	2,607	9,186
Placer	—	1,687	565	656	2,908
Plumas	—	218	291	56	565
Riverside	—	2,472	960	1,451	4,883
Sacramento	—	848	469	392	1,709
San Benito	—	514	224	48	786
San Bernardino	—	1,812	895	1,154	3,861
San Diego	—	992	321	508	1,821
San Francisco	—	395	86	221	702
San Joaquin	—	1,653	1,351	260	3,264
San Luis Obispo	—	1,350	1,264	379	2,993
San Mateo	—	2,373	338	1,044	3,755
Santa Barbara	—	675	810	261	1,746
Santa Clara	—	4,399	1,362	1,221	6,982
Santa Cruz	—	2,228	462	375	3,065
Shasta	—	1,366	3,218	319	4,903
Sierra	—	24	15	6	45
Siskiyou	—	602	1,185	47	1,834
Solano	—	744	256	265	1,265
Sonoma	—	640	113	230	983
Stanislaus	—	1,171	1,059	234	2,464
Sutter	—	359	70	34	463
Tehama	—	162	413	49	624

Statistical Section: Other Programs (continued)

HEALTH BENEFITS PROGRAM DATA (CONTINUED)

Public Agency PPO Total Covered Lives by County as of June 30, 2019 (continued)

County	Anthem EPO Del Norte	PERS Choice	PERS Select	PERSCare	Total
Trinity	—	357	219	22	598
Tulare	—	195	89	30	314
Tuolumne	—	866	511	200	1,577
Ventura	—	2,921	1,755	1,613	6,289
Yolo	—	486	260	198	944
Yuba	—	758	315	33	1,106
Out of State	—	11,795	14	7,665	19,474
Out of Country/Unknown	—	54	1	42	97
Total Covered Lives	2	90,163	38,121	36,419	164,705

Public Agency ASN Total Covered Lives by County as of June 30, 2019

County	CAHP	CCPOA North	CCPOA South	PORAC	Total	County	CAHP	CCPOA North	CCPOA South	PORAC	Total
Alameda	—	—	—	588	588	Placer	—	—	—	447	447
Alpine	—	—	—	—	—	Plumas	—	—	—	171	171
Amador	—	—	—	177	177	Riverside	—	—	—	1,083	1,083
Butte	—	—	—	492	492	Sacramento	—	—	—	199	199
Calaveras	—	—	—	65	65	San Benito	—	—	—	450	450
Colusa	—	—	—	54	54	San Bernardino	—	—	—	643	643
Contra Costa	—	—	—	718	718	San Diego	—	—	—	205	205
Del Norte	—	—	—	12	12	San Francisco	—	—	—	47	47
El Dorado	—	—	—	250	250	San Joaquin	—	—	—	327	327
Fresno	—	—	—	35	35	San Luis Obispo	—	—	—	228	228
Glenn	—	—	—	102	102	San Mateo	—	—	—	254	254
Humboldt	—	—	—	99	99	Santa Barbara	—	—	—	145	145
Imperial	—	—	—	22	22	Santa Clara	—	—	—	615	615
Inyo	—	—	—	218	218	Santa Cruz	—	—	—	832	832
Kern	—	—	—	32	32	Shasta	—	—	—	614	614
Kings	—	—	—	—	—	Sierra	—	—	—	8	8
Lake	—	—	—	83	83	Siskiyou	—	—	—	221	221
Lassen	—	—	—	56	56	Solano	—	—	—	106	106
Los Angeles	—	—	—	2,624	2,624	Sonoma	—	—	—	136	136
Madera	—	—	—	16	16	Stanislaus	—	—	—	81	81
Marin	—	—	—	71	71	Sutter	—	—	—	392	392
Mariposa	—	—	—	26	26	Tehama	—	—	—	64	64
Mendocino	—	—	—	23	23	Trinity	—	—	—	26	26
Merced	—	—	—	48	48	Tulare	—	—	—	6	6
Modoc	—	—	—	48	48	Tuolumne	—	—	—	392	392
Mono	—	—	—	98	98	Ventura	—	—	—	898	898
Monterey	—	—	—	2,359	2,359	Yolo	—	—	—	44	44
Napa	—	—	—	71	71	Yuba	—	—	—	321	321
Nevada	—	—	—	321	321	Out of State	—	—	—	2,360	2,360
Orange	—	—	—	2,697	2,697	Out of Country/ Unknown	—	—	—	1	1
Total Covered Lives	0	0	0	22,721	22,721						

DEFINED CONTRIBUTION PLANS

California Public Employees' Retirement System (CalPERS) administers a defined contribution plan and a deferred compensation plan to certain members to save for retirement.

These plans include:

- Deferred Compensation Program
- Supplemental Contributions Program

DEFERRED COMPENSATION PROGRAM

The Deferred Compensation Program is a way for participants to defer a portion of pre-tax salary into investments of an individual's choosing. It allows both the amount deferred and the amount earned on the investment to be protected from income tax until the money is distributed. The plan is intended to provide for supplemental savings to CalPERS or other defined benefit plans. Eligible public agencies and school employers may elect to offer the Deferred Compensation Program to their employees.

The CalPERS Board of Administration (the Board) designates the investment fund options made available to participants and provides the administrative functions of the program. Assets are held in trust by the Board for the exclusive benefit of participating employees.

As of June 30, 2019, the Deferred Compensation Program was adopted by 819 California public agencies and school districts. For a full listing of the program's participating public agencies, please visit our **Deferred Compensation** page at www.calpers.ca.gov.

SUPPLEMENTAL CONTRIBUTIONS PROGRAM

The Supplemental Contributions Program is available to State of California employees who are members of CalPERS, and active judges who are members of the Judges' Retirement System I or II. Participants may invest after-tax contributions through payroll deductions or cash contributions by check. Participant earnings grow tax-deferred until the program participants begin to take withdrawals in retirement or upon separation from state employment.

INVESTMENT FUND LINEUP

The Deferred Compensation Program and Supplemental Contributions Program for the Fiscal Year 2018-19 investment lineup allows participants to choose from 11 target retirement date funds and six core funds.

The investment fund lineup includes:

Eleven Target Retirement Date Funds

- Structured with five-year increments to allow participants to target their retirement date.
- Utilizes glide path strategy intended to reduce volatility risk as the member approaches retirement.

Six Core Funds

- Provide a broad range of asset class coverage to create a portfolio consistent with the participants' individual investment goals, time horizons, and risk tolerance.
- Span the risk-return spectrum, without duplication.

Statistical Section: Other Programs (continued)

LONG-TERM CARE PROGRAM DATA

As of June 30, 2019, the total long-term care (LTC) participant count decreased 3.1 percent to 120,632. This decrease may be attributable to the LTC program stabilization and sustainability measures and realized participant population attrition. Annual premiums as of June 30, 2019, were \$283.4 million.

Long-Term Care Program Data – Comprehensive Plans

Benefit Period	LTC 1 (1995-2002)		LTC 2 (2003-2004)		LTC 3 (2005-2008)		Total
	With Inflation	No Inflation	With Inflation	No Inflation	With Inflation	No Inflation	
Lifetime	18,145	5,032	1,062	608	1,092	1,028	26,967
10 Year	—	18,028	—	1,625	—	5	19,658
6 Year	1,975	16,891	19	1,458	3,064	3,174	26,581
3 Year	2,692	11,873	225	1,391	2,634	826	19,641
TOTAL	22,812	51,824	1,306	5,082	6,790	5,033	92,847

Long-Term Care Program Data – Facility Only Plans

Benefit Period	LTC 1 (1995-2002)		LTC 2 (2003-2004)		LTC 3 (2005-2008)		Total
	With Inflation	No Inflation	With Inflation	No Inflation	With Inflation	No Inflation	
Lifetime	2,423	1,006	116	53	171	141	3,910
10 Year	—	4,089	—	251	—	—	4,340
6 Year	314	4,365	9	246	197	682	5,813
3 Year	956	5,113	34	290	598	234	7,225
TOTAL	3,693	14,573	159	840	966	1,057	21,288

Partnership Plans with Inflation

Benefit Period	LTC 1 (1995-2002)	LTC 2 (2003-2004)	LTC 3 (2005-2008)	Total
2 Year	2,448	149	63	2,660
1 Year	1,295	74	33	1,402
6 Month	86	8	1	95
TOTAL	3,829	231	97	4,157

LTC 4¹ Comprehensive and Partnership Plans

Benefit Period	5% Compound Inflation	3% Compound Inflation	5% Simple Inflation	3% Simple Inflation	Benefit Increase Offer	No Inflation	Total
10 Year	16	59	6	298	47	17	443
6 Year	34	141	17	503	39	25	759
3 Year	51	204	15	733	64	36	1,103
2 Year	27	—	—	—	—	—	27
1 Year	8	—	—	—	—	—	8
TOTAL	136	404	38	1,534	150	78	2,340

(1) LTC 4 opened for enrollment in December 2013.

Nine-Year Historical Participant Counts

	2019	2018	2017	2016	2015	2014	2013	2012	2011
Total Covered Lives	120,632	124,472	128,276	132,274	136,253	139,947	144,933	150,330	154,634

INDEX

Tables, Charts and Lists

Index of Tables, Charts & Lists

A

Active & Inactive Members
LRS, 180, 182
PERF, 48, 151, 152, 159

Active Members
JRS, 184, 186
JRS II, 188, 190

Actuarial Assumptions and Methods Used to Set
the Actuarially Determined Contributions,
PERF B, PERF C, LRF, JRF, & JRF II, 83-84

Actuarial Assumptions Used to Measure the Total
Pension Liability, PERF B, PERF C, LRF, JRF, & JRF II, 65

Administrative Expenses, All Funds, 88

Amortization of Unfunded Actuarial Accrued Liability, 118, 119

Annual Money-Weighted Rate of Return, Net of Investment
Expense, Six-Year Review, 84

Asset Allocation
CERBTf, 112
HCF, 113
JRF II, 111
LRF, 111
LTCF, 113
PERF, 102

Asset Allocation, Target, PERF, LRF, JRF, & JRF II, 51

Asset Allocation, Target, CERBTf, 51

Average Benefit Payments, 10-Year Review
JRS, 187
JRS II, 191
LRS, 183
PERF, 161

B

Benefit and Refund Deductions from Fiduciary Net Position,
Six-Year Review, PERF, 160

Benefit Payments by Type
JRS, 186
JRS II, 190
LRS, 182

Benefit Recipients and Members, PERF, LRF, JRF, & JRF II, 48

Benefit Recipients and Members by Employer Category, PERF, 159

Benefit Recipients by Retirement Type
JRS, 186
JRS II, 190

LRS, 182

C

California Public Employees' Retirement System (CalPERS)
Debt Securities Subject to Interest Rate Risk, 57
Debt Security Investments Subject to Credit Risk, 58
Derivative Instruments Highly Sensitive to Interest
Rate Changes, 63
Derivative Instruments Subject to Counterparty Credit Risk, 64
Derivative Instruments Subject to Interest Rate Risk, 62
Derivative Instruments Summary, 62
International Investment Securities, Fair Value, 59
Securities Lending Collateral Subject to Credit Risk, 58
Securities Lending Collateral Subject to Interest Rate Risk, 58
SSGA Fund Weighted Average Maturity and Credit Risk, 57

CERBTf
Asset Allocation, 112
Asset Allocation, Target, 51
Changes in Fiduciary Net Position, 10-Year Review, 149
Other Post-Employment Benefit Trust Fund,
Changes in Fiduciary Net Position, 32
Other Post-Employment Benefit Trust Fund, Net Position, 32
Portfolio Comparisons, 112
Statement of Changes in Fiduciary Net Position, 43
Statement of Fiduciary Net Position, 41

Changes in Actuarial Assumptions, 120

Changes in Fiduciary Net Position, 10-Year Review,
Retirement Funds
DCF, 148
JRF, 147
JRF II, 148
LRF, 147
PERF, 146
SCPF, 149

Changes in Fiduciary Net Position
Custodial Fund, 34
Defined Contribution Plan Funds, 30
Other Defined Benefit Plan Funds, 26
Other Post-Employment Benefit Trust Fund, 32
PERF, 23

Change in Net Position
Enterprise Funds, 37

NOTE: For a glossary of frequently used acronyms that appear in this document, please see page 214.

Index of Tables, Charts & Lists (continued)

Changes in the Aggregate Estimated Claims Liabilities, HCF, 70	CRF, 195
Comprehensive and Partnership Plans, LTC 4, Long-Term Care Program, 206	LTCF, 196
Comprehensive Plans, Long-Term Care Program, 206	Net Position, 37
Consultant and Professional Services, 13	Exhibit A, Funding Progress, Unfunded Liability & Funded Ratios, PERF, LRF, JRF, & JRF II, 122
Consultant and Professional Services Expenses, 96-98	Exhibit B, Funding Progress, Solvency Test, PERF, LRF, JRF, & JRF II, 123-124
Contingency Reserve Fund (CRF)	Exhibit C, Sample Pay Increase Assumptions for Individual Members, 125
Expenses & Revenues, 10-Year Review, 195	Exhibit D, Sample Non-Economic Assumptions, 126-134
Statement of Cash Flows, 46	Exhibit E, Single Life Retirement Values, 135
Statement of Net Position, Proprietary Funds, 44	Exhibit F, Schedule of Active Member Valuation Data, 135
Statement of Revenues, Expenses and Changes in Net Position, Proprietary Funds, 45	Exhibit G, Members in Valuation, 136-138
Custodial Fund (RBF)	Exhibit H, Schedule of Retirees & Beneficiaries Added to and Removed from Rolls, PERF, LRF, JRF, & JRF II, 139
Changes in Fiduciary Net Position, Three-Year Review, 150	Exhibit I: Analysis of Financial Experience, PERF, LRF, JRF, & JRF II, 140-144
Statement of Changes in Fiduciary Net Position, 43	Expenses, Administrative, All Funds, 88
Statement of Fiduciary Net Position, 41	Expenses & Revenues, Enterprise Funds, 10-Year Review, HCF, 194
D	CRF, 195
Debt Securities Subject to Interest Rate Risk, 57	LTCF, 196
Debt Security Investments Subject to Credit Risk, 58	
Deferred Compensation Fund (DCF)	F
Changes in Fiduciary Net Position, 10-Year Review, 148	Facility Only Plans, Long-Term Care Program, 206
Members, 50	Fiduciary Funds, Statement of Changes in Fiduciary Net Position, 42-43
Statement of Changes in Fiduciary Net Position, 43	Fiduciary Funds, Statement of Fiduciary Net Position, 40-41
Statement of Fiduciary Net Position, 41	Funding Progress
Defined Contribution Plan Funds	Solvency Test, Exhibit B, PERF, LRF, JRF, & JRF II, 123-124
Changes in Fiduciary Net Position, 30	Unfunded Liability & Funded Ratios, Exhibit A, PERF, LRF, JRF, & JRF II, 122
Fiduciary Net Position, 30	
Derivative Instruments Highly Sensitive to	
Interest Rate Changes, 63-64	
Derivative Instruments Subject to Counterparty	
Credit Risk, 64	
Derivative Instruments Subject to Interest Rate Risk, 62	
Derivative Instruments Summary, 62	H
Discount Rate, 28	Health Benefits Program Data
	Public Agency ASN Total Covered Lives by County, 204
E	Public Agency HMO Total Covered Lives by County, 201-202
Economic Assumptions, 119, 120	Public Agency PPO Total Covered Lives by County, 203-204
Employers, PERF, 47	State ASN Total Covered Lives by County, 201
Enterprise Funds	State HMO Total Covered Lives by County, 198-199
Changes in Net Position, 37	State PPO Total Covered Lives by County, 199-200
Expenses & Revenues, 10-Year Review, HCF, 194	Total Covered Lives by Health Plan, 197

NOTE: For a glossary of frequently used acronyms that appear in this document, please see page 214.

Index of Tables, Charts & Lists (continued)

Total Covered Lives Summary, 197	Schedules of Plan Contributions, Pension Plans, Six-Year Review, 82
Ten-Year Enrollments, 197	Sensitivity Analysis, Discount Rate, +1%, -1%, 68
Health Care Fund (HCF)	Solvency Test, Exhibit B, Funding Progress, 123-124
Asset Allocation, 113	Statement of Changes in Fiduciary Net Position, 42
Changes in Aggregate Estimated Claims Liabilities, 70	Statement of Fiduciary Net Position, 40
Expenses & Revenues, 10-Year Review, 194	Target Asset Allocation, 51
Portfolio Comparisons, 113	Unfunded Liability & Funded Ratios, Exhibit A, Funding Progress, 122
Schedule of Claims Development Information, 85	Judges' Retirement Fund II (JRF II)
Statement of Cash Flows, 46	Actuarial Assumptions and Methods Used to Set the Actuarially Determined Contributions, 84
Statement of Net Position, Proprietary Funds, 44	Actuarial Assumptions Used to Measure the Total Pension Liability, 65
Statement of Revenues, Expenses and Changes in Net Position, Proprietary Funds, 45	Asset Allocation, 111
	Benefit Recipients and Members, 48
I	Changes in Fiduciary Net Position, 10-Year Review, 148
International Investment Securities, Fair Value, 59	Investment Performance, 111
Investment Expenses	Long-Term Expected Real Rates of Return by Asset Class, 66
Investment Management Fees, 89-91	Net Pension Liability/(Asset), 65
Other Investment Expenses, 93-95	Portfolio Comparisons, 111
Performance Fees, 92	Required Contribution Rates for Active Plan Members, and Employers, 49
Investment Performance, Portfolio Comparisons	Schedule of Changes in Net Pension Liability/(Asset) and Related Ratios, Six-Year Review, 81
CERBTf, 112	Schedules of Plan Contributions, Pension Plans, Six-Year Review, 82
HCF, 113	Sensitivity Analysis, Discount Rate, +1%, -1%, 68
JRF II, 111	Solvency Test, Exhibit B, Funding Progress, 123-124
LRF, 111	Statement of Changes in Fiduciary Net Position, 42
LTCF, 113	Statement of Fiduciary Net Position, 40
PERF, 101	Target Asset Allocation, 51
Investments at Fair Value, 54	Unfunded Liability & Funded Ratios, Exhibit A, Funding Progress, 122
Investments Measured at NAV, 55	Judges' Retirement System (JRS)
	Active Members, 184, 186
J	Average Benefit Payments, 10-Year Review, 187
Judges' Retirement Fund (JRF)	Benefit Payments by Type, 186
Actuarial Assumptions and Methods Used to Set the Actuarially Determined Contributions, 83	Benefit Recipients by Retirement Type, 186
Actuarial Assumptions Used to Measure the Total Pension Liability, 65	Membership & Retirement Data, 10-Year Review, 184
Benefit Recipients and Members, 48	Judges' Retirement System II (JRS II)
Changes in Fiduciary Net Position, 10-Year Review, 147	Active Members, 188, 190
Net Pension Liability/(Asset), 65	
Required Contribution Rates for Active Plan Members and Employers, 49	
Schedule of Changes in Net Pension Liability/(Asset) and Related Ratios, Six-Year Review, 79	

NOTE: For a glossary of frequently used acronyms that appear in this document, please see page 214.

Index of Tables, Charts & Lists (continued)

Average Benefit Payments, 10-Year Review, 191	Asset Allocation, 113
Benefit Payments by Type, 190	Expenses & Revenues, 10-Year Review, 196
Benefit Recipients by Retirement Type, 190	Portfolio Comparisons, 113
Membership & Retirement Data, 10-Year Review, 188	Statement of Cash Flows, 46
L	Statement of Net Position, Proprietary Funds, 44
Largest Participating Employers,	Statement of Revenues, Expenses and Changes in Net Position, Proprietary Funds, 45
Current Year, 163	Long-Term Care Program
Largest Participating Employers,	Comprehensive and Partnership Plans, LTC 4, 206
Nine-Years Prior, 163	Comprehensive Plans, 206
Largest Stock & Bond Holdings at Fair Value, PERF, 103	Facility Only Plans, 206
Legislators' Retirement Fund (LRF)	Partnership Plans with Inflation, 206
Actuarial Assumptions and Methods Used to Set the	Nine-Year Historical Participant Counts, 206
Actuarially Determined Contributions, 83	Long-Term Expected Real Rates of Return by Asset Class
Actuarial Assumptions Used to Measure	JRF II, 66
the Total Pension Liability, 65	LRF, 66
Asset Allocation, 111	PERF, 66
Benefit Recipients and Members, 48	M
Changes in Fiduciary Net Position, 10-Year Review, 147	Members in DCF and SCPF, 50
Investment Performance, 111	Members in Valuation, Exhibit G, 136-138
Long-Term Expected Real Rates of Return by Asset Class, 66	Membership & Retirement Data, 10-Year Review
Net Pension Liability/(Asset), 65	JRS, 184
Portfolio Comparisons, 111	JRS II, 188
Required Contribution Rates for Active Plan Members, 49	LRS, 180
Schedule of Changes in Net Pension Liability/(Asset)	PERS, Five-Year Review, 152
and Related Ratios, Six-Year Review, 78	PERS, Five-Year Review, 151
Schedules of Plan Contributions, Pension Plans,	Money-Weighted Rate of Return, 56
Six-Year Review, 82	N
Sensitivity Analysis, Discount Rate, +1%, -1%, 68	Net Pension Liability/(Asset),
Solvency Test, Exhibit B, Funding Progress, 123-124	PERF B, PERF C, LRF, JRF, & JRF II, 65
Statement of Changes in Fiduciary Net Position, 42	Net Position
Statement of Fiduciary Net Position, 40	Custodial Fund, 34
Target Asset Allocation, 51	Defined Contribution Plan Funds, 30
Unfunded Liability & Funded Ratios, Exhibit A,	Enterprise Funds, 37
Funding Progress, 122	Other Defined Benefit Plan Funds, 26
Legislators' Retirement System (LRS)	Other Post-Employment Benefit Trust Fund (CERBTF), 32
Active & Inactive members, 180, 182	PERF, 23
Average Benefit Payments, 10-Year Review, 183	New Contracts, Public Agency Employers, 162
Benefit Payments by Type, 182	
Benefit Recipients by Retirement Type, 182	
Membership & Retirement Data, 10-Year Review, 180	
Long-Term Care Fund (LTCF)	

NOTE: For a glossary of frequently used acronyms that appear in this document, please see page 214.

Index of Tables, Charts & Lists (continued)

O

Other Defined Benefit Plan Funds

Changes in Fiduciary Net Position, 26

Fiduciary Net Position, 26

Other Investment Expenses, 93-95

Other Post-Employment Benefit Trust Fund (CERBTF)

Changes in Fiduciary Net Position, 32

Fiduciary Net Position, 32

P

Participating Public Agencies by Type, Employers 163-179

Partnership Plans with Inflation, Long-Term Care Program, 206

Performance Fees, 92

Popular Benefit Amendments, Public Agency Employers, 162

Portfolio Comparisons

CERBTF, 112

HCF, 113

JRF II, 111

LRF, 111

LTCF, 113

PERF, 101

Portfolio of California Investments at Fair Value, PERF, 102

Private Equity Management Fees & Profit Sharing, PERF, 106-110

Proprietary Funds

Statement of Cash Flows, 46

Statement of Net Position, 44

Statement of Revenues, Expenses and Changes
in Fund Net Position, 45

Public Agency Employers

Largest Participating Employers, Current Year, 163

Largest Participating Employers, Nine-Years Prior, 163

New Contracts, 162

Participating by Type, Employers, 163-167

Popular Benefit Amendments, 162

Reciprocal Systems, 163

Public Employees' Health Care Fund, Schedule of Claims

Development Information, 85

Public Employees' Retirement Fund (PERF)

Active & Inactive Members, 48, 151, 152

Actuarial Assumptions and Methods Used to Set the
Actuarially Determined Contributions,
PERF B, PERF C, 83

Actuarial Assumptions Used to Measure the Total Pension
Liability, PERF B, PERF C, 65

Asset Allocation, Target, 51

Asset Allocations, 102

Average Benefit Payments - Ten-Year Review, 161

Benefit and Refund Deductions from Fiduciary Net Position,
Six-Year Review 160

Benefit Recipients and Members, 48

Changes in Fiduciary Net Position, 10-Year Review, 146

Changes in Fiduciary Net Position, 23

Fiduciary Net Position, 23

Investment Performance, Portfolio Comparisons, 101

Largest Stock & Bond Holdings at Fair Value, 103

Long-Term Expected Real Rate of Return by Asset Class, 66

Net Pension Liability/(Asset), PERF B, PERF C, 65

Portfolio of California Investments at Fair Value, 102

Required Contribution Rates for Active Plan Members, 49

Schedule of Changes in Net Pension Liability/(Asset) and
Related Ratios, PERF B, PERF C, Six-Year Review, 76, 77

Schedule of Commissions & Fees, 104-105

Schedules of Plan Contributions, Pension Plans,
PERF B, PERF C, Six-Year Review, 82

Sensitivity Analysis, Discount Rate, +1%, -1%,
PERF B, PERF C, 68

Solvency Test, Exhibit B, Funding Progress, 123-124

Statement of Changes in Fiduciary Net Position, 42

Statement of Fiduciary Net Position, 40

Summary of Investments, 101

Target Asset Allocation, 51

Unfunded Liability & Funded Ratios, Exhibit A, Funding
Progress, 122

Public Employees' Retirement System (PERS)

Membership & Retirement Data, Five-Year Review, 152

Membership & Retirement Data, Five-Year Review, 151

R

Reciprocal Systems, Public Agency Employers 163

Replacement Benefit Fund (RBF), 34, 69

Changes in Fiduciary Net Position, 150

Statement of Changes in Fiduciary Net Position, 43

Statement of Fiduciary Net Position, 41

NOTE: For a glossary of frequently used acronyms that appear in this document, please see page 214.

Index of Tables, Charts & Lists (continued)

Required Contribution Rates for Active Plan Members and Employers,
PERF, LRF, JRF & JRF II, 49

Retirement Programs

Changes in Fiduciary Net Position, 10-Year Review,

DCF, 148

JRF, 147

JRF II, 148

LRF, 147

PERF, 146

SCPF, 149

Membership & Retirement Data, 10-Year Review,

JRS, 184

JRS II, 188

LRS, 180

PERS, Five-Year Review, 152

PERS, Five-Year Review, 151

Long-Term Care Program, 206

Single Life Retirement Values, Exhibit E, 135

SSGA Fund Weighted Average Maturity and Credit Risk, 57

Statement of Cash Flows, Proprietary Funds, 46

Statement of Changes

in Fiduciary Net Position, Fiduciary Funds, 42-43

Statement of Fiduciary Net Position, Fiduciary Funds, 40-41

Statement of Net Position, Proprietary Funds, 44

Statement of Revenues, Expenses and Changes in

Net Position, Proprietary Funds, 45

Summary of Investments, PERF, 101

Supplemental Contributions Program Fund (SCPF)

Changes in Fiduciary Net Position, 10-Year Review, 149

Members, 50

Statement of Changes in Fiduciary Net Position, 43

Statement of Fiduciary Net Position, 41

S

Sample Non-Economic Assumptions, Exhibit D, 126-134

Sample Pay Increase Assumptions for Individual Members,
Exhibit C, 125

Schedule of Changes in Net Pension Liability/(Asset)
and Related Ratios, Six-Year Review

JRF, 79

JRF II, 81

LRF, 78

PERF B, 76

PERF C, 77

Schedule of Claims Development Information, Public Employees'
Health Care Fund, 85

Schedule of Commissions & Fees, PERF, 104-105

Schedule of Investment Returns, Annual Money-Weighted Rate
of Return, Net of Investment Expense, Six-Year Review, 84

Schedule of Retirees & Beneficiaries Added to/and Removed
from Rolls, Exhibit H, 139

Schedules of Plan Contributions, Pension Plans,

Six-Year Review, PERF B, PERF C, LRF, JRF & JRF II, 82

Securities Lending Collateral Subject to Credit Risk, 58

Securities Lending Collateral Subject to Interest Rate Risk, 58

Sensitivity Analysis, Discount Rate, +1%, -1%,

PERF B, PERF C, LRF, JRF & JRF II, 68

Nine-Year Historical Participant Counts,

T

Target Asset Allocation, PERF, LRF, JRF & JRF II, 51

Ten-Year Enrollments, Health Benefits Program Data, 197

U

Unfunded Liability & Funded Ratios, Exhibit A, Funding Progress,
PERF, LRF, JRF, & JRF II, 122

NOTE: For a glossary of frequently used acronyms that appear in this document, please see page 214.

Index of Tables, Charts & Lists (continued)

GLOSSARY OF ACRONYMS

AAL: Actuarial Accrued Liability	HCF: Health Care Fund
ACA: Affordable Care Act	HMO: Health Maintenance Organization
ALM: Asset Liability Management	IBNR: Incurred But Not Reported
CAFR: Comprehensive Annual Financial Report	IRC: Internal Revenue Code
CalPERS: California Public Employees' Retirement System	IRS: Internal Revenue Service
CERBTF: California Employers' Retiree Benefit Trust Fund	JRF: Judges' Retirement Fund
COLA: Cost-of-Living Adjustments	JRF II: Judges' Retirement Fund II
CRF: Contingency Reserve Fund	JRS: Judges' Retirement System
DCF: Public Agency Deferred Compensation Fund	JRS II: Judges' Retirement System II
EGWP: Federal Employer Group Waiver Plan	LRF: Legislators' Retirement Fund
eSec: ESecLending LLC	LRS: Legislators' Retirement System
ESG: Environmental, Social, and Governance	LTC: Long-Term Care
GASB: Governmental Accounting Standards Board	LTCF: Long-Term Care Fund
GASB 28: GASB Statement No. 28, Accounting and Financial Reporting for Securities Lending Transactions	MWRR: Money-Weighted Rate of Return
GASB 34: GASB Statement No. 34, Basic Financial Statements—and Management's Discussion and Analysis—for State and Local Governments	NAV: Net Asset Value
GASB 40: GASB Statement No. 40, Deposit and Investment Risk Disclosures—an amendment of GASB Statement No. 3	OASI: Old Age & Survivors' Insurance Revolving Fund
GASB 67: GASB Statement No. 67, Financial Reporting for Pension Plans—an amendment of GASB Statement No. 25	OCC: Options Clearing Corporation
GASB 68: GASB Statement No. 68, Accounting and Financial Reporting for Pensions, an amendment of GASB Statement No. 27	OPEB: Other Post-Employment Benefits
GASB 72: GASB Statement No. 72, Fair Value Measurement and Application	PEMHCA: Public Employees' Medical and Hospital Care Act
GASB 74: GASB Statement No. 74, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans	PEPRA: Public Employees' Pension Reform Act
GASB 75: GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefit Plans Other Than Pensions	PERF: Public Employees' Retirement Fund
GASB 84: GASB Statement No. 84, Fiduciary Activities	PERL: Public Employees' Retirement Law
	PERS: Public Employees' Retirement System
	RBF: Replacement Benefit Fund
	REIT: Real Estate Investment Trusts
	SCPF: Supplemental Contributions Program Fund
	SSB: State Street Bank
	SSGA: State Street Bank Global Advisors
	STIF: Short-Term Investment Fund
	System: The California Public Employees' Retirement System

LEGISLATIVE REPORTS

In accordance with Government Code Section 20232, California Public Employees' Retirement System (CalPERS) provides the following information to the Governor and Legislature. The table below provides guidance on where these items are located within the Comprehensive Annual Financial Report (CAFR).

Government Code	CAFR Section	Sub-Section
(a) A copy of the annual audit performed pursuant to Section 20228.	Financial Section	Independent Auditor's Report
(b) A review of the system's asset mix strategy, a market review of the economic and financial environment in which investments were made, and a summary of the system's general investment strategy.	Financial Section Financial Section Investment Section Investment Section	Notes to the Basic Financial Statements – Target Asset Allocation Notes to the Basic Financial Statements – Notes 4-7 Chief Investment Officer's Letter Asset Allocation – PERF
(c) A description of the investments currently held by this system at cost and market value. The description of investments shall include, but not be limited to, the asset classes reported pursuant to Section 20235. The report shall also include a list of all investment holdings at the close of the fiscal year, including any major divestitures taken during the fiscal year.	Financial Section Investment Section	Notes to the Basic Financial Statements – CalPERS Investments at Fair Value Summary of Investments – PERF
(d) The following information regarding the rate of return of this system by asset type: (1) Time-weighted market value rate of return on a five-year, three-year, and one-year basis. (2) Portfolio return comparisons by asset class that compare investment returns with an alternative theoretical portfolio of comparable funds, universes, and indexes.	Investment Section Investment Section	Portfolio Comparisons – PERF, LRF, JRF II, CERBTF, HCF, and LTCF Portfolio Comparisons – PERF, LRF, JRF II, CERBTF, HCF, and LTCF
(e) The use of outside investment advisers and managers, including costs and fees.	Financial Section	Other Supplementary Information – Investment Expense – All Funds Investment Management Fees Performance Fees Other Investment Expenses
(f) A description of the system's investments at cost and market value held in the state.	Investment Section	Portfolio of California Investments at Fair Value – PERF

This page intentionally left blank.

This page intentionally left blank.



**California Public Employees'
Retirement System**

400 Q Street
P.O. Box 942701
Sacramento, CA 94229-2701
(916) 795-3991
(916) 795-3507 fax
TTY: (877) 249-7442

www.calpers.ca.gov

