BASIC FINANCIAL STATEMENTS

Fiscal Year Ended June 30, 2019

Prepared through the joint efforts of CalPERS team members.

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CalPERS

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

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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 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'

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 Agent	PERF B Cost-Sharing Schools	PERF C 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 Agent	PERF B Cost-Sharing Schools	PERF C 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.

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

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 Pension*s.

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 accounts 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).

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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**

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			
	Agent	Schools Cost-Sharing	Public Agency Cost-Sharing	LRF	JRF	JRF II
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**

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.

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.

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 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: Active	Members: Inactive or Deferred	Total
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.

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.

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 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 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 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 Value[1] (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.

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.

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.

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.

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%
Total[3]	**$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%
Total[3]	**$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 Securities[1] – 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 Summary[1] (Dollars in Thousands)

Investment	Net Appreciation/ (Depreciation) in Fair Value for the Fiscal Year Ended June 30, 2019	Fair value at June 30, 2019		
Derivatives (by Type)	Amount	Classification	Amount	Notional (Dollars)
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 Maturities (in years)			
Investment Type	Fair Value June 30, 2019	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%**	

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.

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 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.

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	**$740,437**	**$764,066**

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

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 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.

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 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.

Required Supplementary Information

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

PERF B – Six-Year Review[1] (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 Review[1] (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 Review[1] (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.

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

JRF – Six-Year Review[1] (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 Review[1] (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.

SCHEDULES OF PLAN CONTRIBUTIONS

Six-Year Review[1] (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 Review[1]

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.

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**

INVESTMENT EXPENSES – ALL FUNDS

Investment Management Fees[1,2] (Dollars in Thousands)

	Fees
Equity Managers	
Allianz Global Investors U.S., LLC	$6,065
Arrowstreet Capital, LP	23,505
Baillie Gifford Overseas, Ltd.	1,748
Cartica Corporate Governance Fund, LP	5,854
Epoch Investment Partners, Inc.	5,703
Fidelity Institutional Asset Management	709
First Quadrant, LP	346
FIS Group, Inc.	1,755
Hamilton Lane Advisors, LLC	484
Hermes European Equities Limited	2,714
J.P. Morgan Investment Management, Inc.	1,193
Lazard Asset Management, LLC	4,362
Leading Edge Investment Advisors, LLC	3,105
Legato Capital Management Investments, LLC	5,333
Progress Investment Management Company	3,700
Pyramis Global Advisors Trust Company	632
Pzena Investment Management, LLC	1,201
State Street Global Advisors	5,293
Strategic Investment Management, LP	3,491
The Boston Company Asset Management, LLC	257
Wellington Management Company, LLP	7,851
Total Equity Managers	**$85,301**
Fixed Income Managers	
Alliance Bernstein, LP	$336
Baring International Investment Limited	189
Bluebay Asset Management, LLP	(13)
Investec Asset Management North America	395
Neuberger Berman Investment Advisers, LLC	520
Pacific Investment Management Co. LLC	900
Total Fixed Income Managers	**$2,327**
Private Equity Funds[3]	
57 Stars Global Opportunities Fund 2 (CalPERS), LLC	$794
57 Stars Global Opportunities Fund, LLC	600
Aberdare Ventures IV, LP	178
Advent International GPE V-D, LP	78
Advent International GPE VI-A, LP	1,621
Advent International GPE VII-C, LP	4,278
Advent International GPE VIII-B Limited Partnership	7,459
Advent Latin America Private Equity Fund IV-D, LP	507
Advent Latin America Private Equity Fund V-H, LP	901
Advent Latin American Private Equity Fund III-D, LP	122
Affinity Asia Pacific Fund III, LP	684
Aisling Capital III, LP	180
Apollo Investment Fund IX, LP	5,969
Apollo Investment Fund VI, LP	(5)
Apollo Investment Fund VII, LP	1,074
Apollo Investment Fund VIII, LP	550

	Fees
Apollo Special Opportunities Managed Account, LP	$2,710
ArcLight Energy Partners Fund IV, LP	(5)
Ares Corporate Opportunities Fund III, LP	1,211
Ares Corporate Opportunities Fund V, LP	5,911
Asia Alternatives Capital Partners II, LP	105
Asia Alternatives Capital Partners, LP	30
Baring Vostok Private Equity Fund IV, LP	385
BDC III C, LP	1,934
Birch Hill Equity Partners (US) IV, LP	967
Blackstone / GSO Capital Solutions Fund, LP	58
Blackstone Capital Partners VI, LP	3,959
Blackstone Capital Partners VII, LP	6,250
Blackstone Tactical Opportunities Fund - C, LP	4,141
Blackstone Tactical Opportunities Fund (KG Co-Invest), LP	453
Blackstone Tactical Opportunities Fund (T4U Co-Invest), LP	203
Blackstone Tactical Opportunities Fund II - C, LP	2,026
Blackstone Tactical Opportunities Fund III - C, LP	20
Bridgepoint Europe IV 'B', LP	388
Bridgepoint Europe IV 'D', LP	1,473
Bridgepoint Europe V	3,435
Bridgepoint Europe VI 'H', LP	4,177
California Asia Investors, LP	251
California Emerging Ventures III, LLC	93
California Emerging Ventures IV, LLC	481
California Mezzanine Investment Fund, LP	229
CalPERS Clean Energy & Technology Fund, LLC	300
Capital Link Fund I, LLC	286
Capital Link Fund II, LLC	380
Carlyle Asia Growth Partners IV, LP	503
Carlyle Asia Partners III, LP	557
Carlyle Asia Partners V, LP	2,640
Carlyle Europe Partners III, LP	53
Carlyle Europe Partners V, S.C.Sp	2,048
Carlyle Europe Technology Partners II, LP	212
Carlyle Global Financial Services Partners, LP	251
Carlyle Japan Partners II, LP	139
Carlyle Partners IV LP	(3)
Carlyle Partners V, LP	2
Carlyle Partners VI, LP	2,376
Carlyle Partners VII, LP	5,858
Carlyle Strategic Partners II, LP	(2)
Carlyle Strategic Partners IV, LP	1,917
Carlyle U.S. Equity Opportunities II, LP	2,414
Carlyle U.S. Growth Fund III, LP	28
Carlyle/Riverstone Global Energy and Power Fund III, LP	476
CDH Fund V, LP	2,389
Centerbridge Capital Partners III, LP	2,027
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
Clearlake Capital Partners III, LP	$274
Clearlake Capital Partners IV, LP	550
Clearlake Capital Partners V, LP	348
Clearlake Opportunities Partners (P), LP	791
Coller International Partners V-A, LP	65
Craton Equity Investors I, LP	53
CVC Capital Partners Strategic Opportunities Compounding Capital, LP	7,131
CVC Capital Partners VI, LP	5,158
CVC Capital Partners VII (A), LP	8,657
CVC Credit Strategic Investment A, LP	1,181
CVC European Equity Partners Tandem Fund (B), LP	(3)
CVC European Equity Partners V (B), LP	90
EMAlternatives Investments, LP	200
Essex Woodlands Health Ventures Fund VIII, LP	649
First Reserve Fund XII, LP	587
First Reserve Fund XIII, LP	5,418
Francisco Partners III, LP	530
GCM Grosvenor DEM II, LP	1,201
GCM Grosvenor DEM, LP	224
Golden State Investment Fund, LLC	185
Green Equity Investors IV, LP	(9)
Green Equity Investors V, LP	79
GSO Capital Opportunities Fund II, LP	750
GSO Capital Opportunities Fund, LP	16
GSO Capital Solutions Fund II, LP	2,201
GSO Energy Partners-C II, LP	1,532
GSO Energy Partners-C, LP	2,221
Hellman & Friedman Capital Partners VII	693
Hellman & Friedman Capital Partners VIII, LP	5,884
Insight Venture Partners Growth-Buyout Coinvestment Fund (B), LP	3,021
Insight Venture Partners IX, LP	1,633
Insight Venture Partners X, LP	4,375
Ithaca, LP	—
Khosla Ventures III, LP	1,911
Khosla Ventures Seed, LP	756
KKR 2006 Fund, LP	348
KKR Asian Fund II, LP	1,819
KKR Asian Fund, LP	100
KKR European Fund II, LP	217
KKR European Fund III, LP	(2)
KKR Millennium Fund, LP	25
KM Corporate Partners Fund II, LP	607
KPS Special Situations Fund III, LP	31
Lime Rock Partners IV, LP	29
Lime Rock Partners V, LP	325
Lindsay Goldberg IV, LP	2,813
Lion Capital Fund II, LP	422
MHR Institutional Partners III, LP	1,364
Newbridge Asia IV, LP	132
Oak Hill Capital Partners II, LP	38

	Fees
Oak Hill Capital Partners III, LP	$962
Oaktree Opportunities Fund VIIIb, LP	1,637
Onex Partners IV, LP	4,091
Onex Partners V (B), LP	2,988
PAG Asia I, LP	613
PAG Asia III, LP	2,501
Palladium Equity Partners IV, LP	2,615
Patria Brazilian Private Equity Fund V, LP	2,968
Permira Growth Opportunities I, LP 1	2,142
Permira IV, LP 2	(12)
Permira V, LP	2,573
Permira VI, LP 1	6,801
RFG Private Equity Limited Partnership No. 1A, 1B and 1C	27
Richardson Capital Private Equity Limited Partnership No.2A, 2B and 2C	4
Riverstone Global Energy and Power Fund V, LP	2,321
Riverstone Global Energy and Power Fund VI, LP	7,365
Riverstone/Carlyle Global Energy and Power Fund IV, LP	896
Riverstone/Carlyle Renewable & Alternative Energy Fund II, LP	1,094
Riverwood Capital Partners (Parallel - A), LP	296
Sacramento Private Equity Partners, LP	1,000
SAIF Partners III, LP	945
SAIF Partners IV, LP	1,288
Sankaty Managed Account (CalPERS), LP	2,408
Silver Lake Partners III, LP	832
Silver Lake Partners IV, LP	2,047
Silver Lake Partners V, LP	4,313
Siris Partners III, LP	1,022
Siris Partners IV, LP	494
SL SPV-1, LP	381
Tailwind Capital Partners (PP), LP	238
Tailwind Capital Partners II, LP	719
Tailwind Capital Partners III, LP	2,750
TCV X, LP	262
The Central Valley Fund II SBIC, LP	133
The Resolute Fund II, LP	315
The Rise Fund (A), LP	1,181
Thomas H. Lee Equity Fund VI, LP	263
TowerBrook Investors III, LP	546
TowerBrook Investors IV (Onshore), LP	6,056
Towerbrook Structured Opportunities Fund (Onshore), LP	2,199
TPG Asia V, LP	110
TPG Asia VII (A), LP	6,417
TPG Biotechnology Partners III, LP	49
TPG Growth IV, LP	1,307
TPG Partners VI, LP	678
Trident VI	1,918
Trident VII, LP	3,378
Triton Fund IV, LP	1,351
Triton Fund V, LP	1,097
T-VI Co-Invest-A LP	(204)

INVESTMENT EXPENSES – ALL FUNDS (CONTINUED)

Investment Management Fees[1,2] (Dollars in Thousands) (continued)

	Fees
Valor Equity Partners IV, LP	$1,247
VantagePoint Venture Partners 2006 (Q), LP	639
Vicente Capital Partners Growth Equity Fund, LP	245
Vista Equity Partners Fund VII-Z, LP	514
W Capital Partners II, LP	210
WCAS XIII, LP	1,026
Welsh, Carson, Anderson & Stowe XI, LP	308
Welsh, Carson, Anderson & Stowe XII, LP	4,856
Wigmore Street (BDC III), LP	1
Wigmore Street Co-investment No.1, LP	1
WLR Recovery Fund III, LP	(1)
WLR Recovery Fund IV, LP	30
Yucaipa American Alliance Fund II, LP	2,695
Yucaipa Corporate Initiatives Fund II, LP	299
Total Private Equity Funds	**$260,854**
Real Asset Funds	
AGI Resmark Housing Fund, LLC	$139
Alinda Infrastructure Fund I, LP	6
Alinda Infrastructure Fund II, LP	961
ARA Asia Dragon Fund II	393
ARA China Long Term Hold	6,429
Archmore International Infrastructure Fund II (B), LP	446
Archmore International Infrastructure Fund II (C), LP	947
CalEast Canada Limited Partnership	11
CalEast Industrial Investors, LLC	67
CalEast Solstice - Base	7,414
CalEast Solstice - DT Land	1,584
CalEast Solstice - DT Other	2,002
CalWest - CalPERS	10
CalWest CalPERS GIP	20
Canyon Catalyst Fund II, LLC	1,949
Carlyle Infrastructure Partners, LP	39
CIM Fund III, LP	3,990
CIM Infrastructure Fund, LP	2,212
CIM Urban Real Estate Fund, LP	4,333
FSP - Base	24,525
FSP - DT 2012 and Beyond	1,679
Global Infrastructure Partners II, LP (GIP II)	2,798
Golden Reef Infrastructure Trust	2,131
GRI - Base	15,381
GRI - DT 2012 and Beyond	115
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

	Fees
HCR LTH, LLC	$4,015
IHP Investment Fund I, LP	386
IHP Investment Fund III, LP	3,454
IMI - Base	24,538
IMP - Base	23,002
IMP - DT 2012 and Beyond	1,143
IMP - ICMI	2,645
IMP Abaca	393
Institutional Core Multifamily Investors	920
Institutional Logistics Partners, LLC	4,104
KC 2011, LLC	2,367
KSC Affordable Housing Investment Fund, LLC	348
Land Management Company, LLC	3,512
Lincoln Timber, LP	2,956
North Haven Infrastructure Partners II, LP	2,052
ORA Multifamily Investments I, LLC	687
ORA Residential Investments I, LP	1,547
Pacific Multifamily Investors, LLC	5,251
Sacramento Venture - Base	361
Sacramento Venture - DT	409
SF Mission Street Partners, LLC	20
Stockbridge Hollywood Park Co-Investors, LP	312
Stockbridge Real Estate Fund II -B, LP	90
Strategic Property Fund Asia SCSP	2,038
Sylvanus, LLC	1,938
TechCore, LLC	8,716
Whitney Ranch Venture, LLC	984
Xander Co-Investment	55
Total Real Asset Funds	**$188,102**
Other Investment Management Fees	
AQR	$3,773
Brookside Capital Partners Fund, LP	15
Fidelity Investments	4,721
LongTail Alpha, LLC	3,233
OZ Domestic Partners II, L.P.	—
OZ Eureka Fund, LP	277
Perella Weinberg Partners	3,625
Standard Life	1,946
Universa Investments, LP	22,542
Total Other Investment Management Fees	**$40,132**
Total Management Fees	**$576,716**

Other Supplementary Information (continued)

INVESTMENT EXPENSES – ALL FUNDS (CONTINUED)

Performance Fees[4] (Dollars in Thousands)

	Fees
Equity Managers	
Arrowstreet Capital, LP	$13,216
Baillie Gifford Overseas, Ltd.	16,864
The Boston Company Asset Management, LLC	3,763
Total Equity Managers	**$33,843**
Fixed Income Managers	
Alliance Bernstein, LP	$210
Baring International Investment Limited	81
Pacific Investment Management Co. LLC	2,065
Total Fixed Income Managers	**$2,356**
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	**$125,577**

	Fees
Other Investment Managers	
Brookside Capital Partners Fund, LP	$103
OZ Domestic Partners II, LP	8
OZ Eureka Fund, LP	189
Total Other Investment Managers	**$300**
Total Performance Fees	**$162,076**
Total Management and Performance Fees	**$738,792**

Other Supplementary Information (continued)

INVESTMENT EXPENSES – ALL FUNDS (CONTINUED)

Other Investment Expenses[1,5] (Dollars in Thousands)

	Fees
Advisory Fees	
Alliance Bernstein, LP	$2,600
AXA Rosenberg Investment Management, LLC	627
FIS Group, Inc.	1,000
Goldman Sachs Asset Management, LP	510
Lazard Asset Management, LLC	2,590
Legato Capital Management, LLC	1,750
LEIA GEM Investment, LLC	1,000
Principal Life Insurance Company	933
Progress Investment Management Company	1,000
QS Investors, LLC	839
Quantitative Management Associates, LLC	2,008
Research Affiliates, LLC	740
Strategic Investment Management, LP	1,000
TOBAM SAS	861
Total Advisory Fees	**$17,458**
Appraisal Fees	
RERC, LLC	$4,614
Total Appraisal Fees	**$4,614**
Auditor Fees	
Conrad, LLP	$59
KPM & Associates, LLP	55
RSM US, LLP	11
Total Auditor Fees	**$125**
Company Expense	
FIS Group, Inc.	$107
Leading Edge Investment Advisors, LLC	129
Legato Capital Management, LLC	247
LongTail Alpha, LLC	231
Progress Investments, LLC	172
Strategic Investment Group, LLC	111
Universa Investments, LP	142
Total Company Expense	**$1,139**
Fund Administration Fees	
State Street Bank and Trust Company	$4,169
Total Fund Administration Fees	**$4,169**
Investment Consultant Fees	
Bard Consulting, LLC	$1,381
Callan, LLC	105
Crosswater Realty Advisors, LLC	243
Cutter Associates, LLC	271
Demeter International Investments, Ltd	1,063
Ernst & Young, LLP	90
Garland Associates, Inc.	(29)
Hamilton Lane Advisors, LLC	75
JLynn Consulting, Inc.	153
Lenox Park Solutions, Inc.	100

	Fees
Meketa Investment Group, Inc.	$78
Mercer Alternatives Limited	340
Mercer Investment Consulting, LLC	130
Mosaic Investment Advisors, Inc.	200
MSys International, Inc.	191
Northfield Information Services, Inc.	38
Pacific Community Ventures, Inc.	194
Propoint Technology, Inc.	2,378
Pyramid Technical Consultants, Inc.	274
RCLCO	197
Ryedale, Inc.	204
SRI Infotech, Inc.	208
Steer Davies Gleave Limited	255
Stout Risius Ross, LLC	85
Technology Crest Corporation	195
The Boston Consulting Group, Inc.	400
The Spaulding Group	84
Trinity Technology Group, Inc.	23
Wilcox Miller & Nelson	40
Total Investment Consultant Fees	**$8,966**
Legal Fees	
Berman Tabacco	$590
Cox, Castle & Nicholson, LLP	1
DLA Piper, LLP	173
Foster Pepper, PLLC	58
Hogan Lovells, US, LLP	230
K & L Gates, LLP	285
Katten Muchin Rosenman, LLP	(5)
Morgan Lewis & Bockius, LLP	661
Orrick Herrington & Sutcliffe, LLP	22
Pillsbury Winthrop Shaw Pittman, LLP	993
Reed Smith, LLP	64
Stoel Rives, LLP	5
Vasquez Benisek & Lindgren, LLP	2
Wilson Sonsini Goodrich & Rosati	577
Total Legal Fees	**$3,656**
Master Custodian Fees	
State Street Bank and Trust Company	$10,107
Total Master Custodian Fees	**$10,107**
Tax Advisory Fees	
Ernst & Young, LLP	$821
Total Tax Advisory Fees	**$821**
Technology Expenses	
13D Research, Inc	$70
Abel Noser Solutions, LLC	48
Acadiasoft, Inc.	10
Alef Advisory	9
Axioma, Inc.	237

Other Supplementary Information (continued)

INVESTMENT EXPENSES – ALL FUNDS (CONTINUED)

Other Investment Expenses[1,5] (Dollars in Thousands) (continued)

	Fees
Babelfish Analytics, Inc.	$35
Barclays Capital	129
Barra, LLC	2,289
BCA Research	259
BDO USA, LLP	28
Blackrock Financial Management, Inc.	9,279
Bloomberg, LP	3,048
Broadridge Investor Communications	5
Cambridge Associates, LLC	20
Candeal, Inc.	—
Carahsoft Technology Corp.	247
CEM Benchmarking, Inc.	70
Charles River Systems, Inc.	2,923
Clarity Solutions Group, LLC	50
Convergence, Inc.	35
Cornerstone Macro, LP	132
Costar Investment Analysis	173
Covenant Review, LLC	48
Credit Market Analysis Limited	21
Creditsights	135
Dow Jones & Company, Inc.	2
DTCC ITP, LLC	149
eFront Financial Solutions, Inc.	2,039
eMBS, Inc.	9
Empirical Research Partners, LLC	400
Equilar, Inc.	45
Etrali North America, LLC	323
Eurasia Group	138
Euromoney Trading Limited	19
eVestment Alliance	29
Factset Research Systems, Inc.	2,431
Fitch Ratings, Inc.	(55)
Fitch, Inc.	236
Four Twenty Seven, Inc.	30
Frank Russell Company	34
FTSE	752
Gartner, Inc.	139
GaveKal Capital Management Limited	45
Glass Lewis & Co., LLC	498
Global Investor Collaboration Svcs., LLC	5
Green Street Advisors	135
Haver Analytics, Inc.	134
IHS Global, Inc.	98
Institutional Shareholder Services, Inc.	180
Intex Solutions, Inc.	245
Investment Property Databank	73
Kyriba Corporation	26
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

	Fees
Moody's Analytics, Inc.	$417
Mountainview Analytics, LLC	10
MRB Partners, Inc.	50
MRI Software, LLC	310
MSCI, Inc.	1,695
MUFG Capital Analytics, LLC	5,259
Noel L Scherf	6
NWN Corporation	1
NYSE Market, Inc.	12
Option Research & Technology Services, LLC	56
Options Price Reporting Authority	2
Preqin Limited	47
Proxy Insight Limited	5
Quantal International, Inc.	45
Radianz Americas, Inc.	171
Real Capital Analytics, Inc.	91
Refinitiv US, LLC	261
RiskVal Financial Solutions, LLC	120
Ryedale Europe Limited	770
S&P Global Market Intelligence, LLC	1,546
S&P Dow Jones Indices, LLC	69
SASB Foundation	6
Solutions Simplified	2
SpiderRock EXS, LLC	14
StepStone Group, LP	205
Stone & Kanto, LLC	8
STOXX Limited	16
Summit Financial Printing, LLC	(1)
Sustainalytics U.S., Inc.	30
The Burgiss Group, LLC	159
The Depository Trust & Clearing Corp.	20
The Mathworks, Inc.	99
The Statestore, Inc.	2
The Yield Book, Inc.	193
Tradeweb	181
Trend Macrolytics, LLC	27
TRGRP, Inc.	161
TriOptima AB	42
TSX, Inc.	26
Viola Risk Advisors, LLC	7
William O'Neil & Company	30
Wood Mackenzie, Inc.	120
Yardeni Research, Inc.	19
Total Technology Expenses	**$39,963**
Internal Investment Personal and Administrative Expenses	
Internal Investment Personal and Administrative Expenses	$78,826
Total Internal Investment Personal and Administrative Expenses	**$78,826**

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	**$98,153**
Total Other Investment Fees and Expenses	**$267,997**
Total Investment Expenses - All Funds	**$1,006,789**

(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 EXPENSES[1] – 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 EXPENSES[1] – 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, Moskovitz, 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 EXPENSES[1] – 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	**$331,572**	

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