LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM (A DEPARTMENT OF THE MUNICIPALITY OF THE CITY OF LOS ANGELES, CALIFORNIA)

ANNUAL FINANCIAL REPORT

FOR THE FISCAL YEAR ENDED JUNE 30, 2019

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BROWN ARMSTRONG

Certified Public Accountants

INDEPENDENT AUDITOR'S REPORT

Board of Administration Los Angeles City Employees' Retirement System Los Angeles, California

Report on the Financial Statements

We have audited the accompanying Retirement Plan and Postemployment Health Care Plan Statement of Fiduciary Net Position of the Los Angeles City Employees' Retirement System (LACERS), a department of the Municipality of the City of Los Angeles, California, as of June 30, 2019, and the related Retirement Plan and Postemployment Health Care Plan Statement of Changes in Fiduciary Net Position for the year then ended, and the related notes to the financial statements, which collectively comprise LACERS basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditor's Responsibility

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

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

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Retirement Plan and Postemployment Health Care Plan of LACERS as of June 30, 2019, and the changes in fiduciary net position for the year then ended in conformity with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

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

Other Information

Our audit was conducted for the purpose of forming an opinion on the financial statements of LACERS that collectively comprise LACERS basic financial statements. The supplemental schedules, as listed in the table of contents, are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The supplemental schedules are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the financial statements. Such information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used in the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated in all material respects in relation to the financial statements as a whole.

Report on Summarized Comparative Information

We have previously audited LACERS June 30, 2018 financial statements, and our report dated November 27, 2018, expressed an unmodified opinion on those audited financial statements. In our opinion, the summarized comparative information presented herein as of and for the year ended June 30, 2018, is consistent in all material respects, with the audited financial statements from which it has been derived.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated November 25, 2019, on our consideration of LACERS internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering LACERS internal control over financial reporting and compliance.

BROWN ARMSTRONG ACCOUNTANCY CORPORATION

Brown Armstrong Accountancy Corporation

Bakersfield, California November 25, 2019 MANAGEMENT'S DISCUSSION AND ANALYSIS

Financial Highlights

- The Los Angeles City Employees' Retirement System (LACERS or the System) fiduciary net position as of June 30, 2019 was \$17,707,910,000, an increase of \$718,294,000 or 4.2% over the prior fiscal year.
- The total additions to the fiduciary net position of LACERS, from employer contributions made by the City of Los Angeles (the City), Member contributions, self-funded dental insurance premium, Members' portion of premium reserve, and net investment income were \$1,802,166,000, a 21.9% decrease from the prior fiscal year. Self-funded dental insurance premium and Members' portion of premium reserve are two new funding sources for the newly established 115 Trust fund (refer to Note 3 Postemployment Health Care Plan Description on page 22).
- The employer contributions to the Retirement Plan represented 100% of the Actuarially Determined Contribution of the employer as defined by the Governmental Accounting Standards Board (GASB) Statements No. 67, *Financial Reporting for Pension Plans*, and No. 68, *Accounting and Financial Reporting for Pensions*.
- The employer contributions to the Postemployment Health Care Plan represented 100% of the Actuarially Determined Contribution of the employer as defined by GASB Statements No. 74, Financial Reporting for Postemployment Benefit Plans Other than Pension Plans, and No. 75, Accounting and Financial Reporting for Postemployment Benefits Other than Pensions.
- Net investment income for this fiscal year was \$968,497,000, representing a 36.2% decrease compared with an investment income of \$1,518,879,000 for the previous fiscal year.
- The total deductions from the fiduciary net position were \$1,083,872,000, a 7.7% increase from the prior fiscal year, for the payment of retirement and postemployment health care benefits, refunds of Member contributions, and administrative expenses.
- The System's Net Pension Liability (NPL) for the retirement benefits was \$5,977,828,000 as of June 30, 2019. NPL, a measure required by GASB Statement No. 67 to disclose in the financial notes of a pension plan, is the difference between the Total Pension Liability (TPL) and the plan fiduciary net position. As the plan fiduciary net position is equal to the market value (also referred to as the "fair value") of the

plan's assets, NPL is determined on a market value basis, and it fully reflects the plan's investment performance (6.2% rate of return, gross of fees) of this fiscal year. Compared with the previous fiscal year, the NPL increased by \$268,480,000.

- The System's Net Other Postemployment Benefits (OPEB) Plan Liability for the postemployment health care benefits was \$522,201,000 as of June 30, 2019. Net OPEB Liability (NOL) is a measure required by GASB Statement No. 74. NOL is determined on a market value basis, and is the difference between the Total OPEB Liability (TOL) and the plan fiduciary net position (market value of the plan's assets). NOL reflects the plan's investment performance (6.2% rate of return, gross of fees) for this fiscal year. As compared with the previous fiscal year, the NOL decreased by \$58,255,000.
- The plan fiduciary net position as a percentage of TPL for the Retirement Plan, another required disclosure of GASB Statement No. 67, was 71.3%, which is the same as the funded ratio on a market value basis reported in the actuarial valuation for the retirement benefits.
- The plan fiduciary net position as a percentage of TOL for the Postemployment Health Care Plan, another required disclosure of GASB Statement No. 74, was 84.3%, which is the same as the funded ratio on a market value basis reported in the actuarial valuation for the postemployment health care benefits.

Overview of the Financial Statements

The following discussion and analysis are intended to serve as an introduction to LACERS financial statements and the accompanying notes thereto. The required supplementary information and supplemental schedules provide additional financial data on LACERS operations.

Financial Statements

There are two financial statements presented by LACERS. The Statement of Fiduciary Net Position on page 12 gives a snapshot of the account balances at year-end and shows the amount of the fiduciary net position (the difference between the assets plus deferred outflows of resources, and liabilities plus deferred inflows of resources) available to pay future benefits. Over time, increases or decreases in fiduciary net position may serve as a useful indicator of whether the fiduciary net position of LACERS is improving or deteriorating. The Statement of

Overview of the Financial Statements (Continued)

Financial Statements (Continued)

Changes in Fiduciary Net Position on page 13 provides a view of current year additions to, and deductions from, the fiduciary net position.

Notes to the Basic Financial Statements

The notes to the basic financial statements (Notes) provide additional information that is essential for a full understanding of the data provided in the financial statements. The notes to the basic financial statements can be found on pages 14 - 36 of this report.

Required Supplementary Information

In addition to the Management's Discussion and Analysis, other required supplementary information consists of the Schedule of Net Pension Liability, Schedule of Changes in Net Pension Liability and Related Ratios, Schedule of Contribution History, and Schedule of Investment Returns for the Retirement Plan, and the Schedule of Net OPEB Liability, Schedule of Changes in Net OPEB Liability and Related Ratios, Schedule of Contribution History, and Schedule of Investment Returns for the Postemployment Health Care Plan. These schedules and notes primarily present multiyear information as required by the applicable financial reporting standards of GASB Statements No. 67 and No. 74. This required supplementary information can be found on pages 37 - 46 of this report.

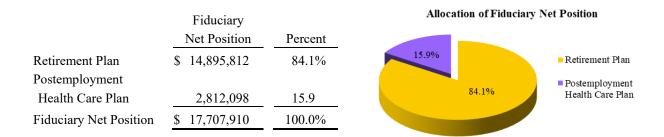
Supplemental Schedules

The supplemental schedules, including a Schedule of Administrative Expenses and a Schedule of Investment Fees and Expenses, are presented to provide additional financial information on LACERS operations for the current year. These can be found on pages 47 and 48 of this report.

Financial Analysis

Allocation of Fiduciary Net Position

Fiduciary net position may serve as a useful indicator of a plan's financial position. The total fiduciary net position is allocated between the Retirement Plan and Postemployment Health Care Plan, as required by the existing reporting standards. The following information provides a brief description of the asset allocation between the Retirement Plan and the Postemployment Health Care Plan as of June 30, 2019 (dollars in thousands):

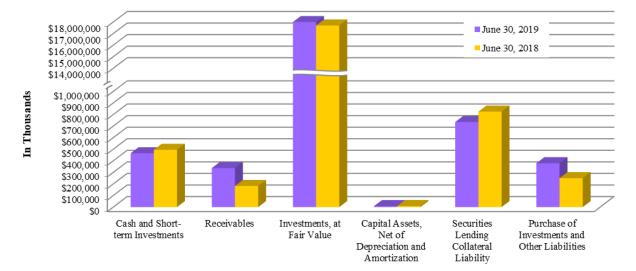


Fiduciary Net Position

The following table and graph detail the components of the fiduciary net position of LACERS as of June 30, 2019 and 2018 (dollars in thousands):

| | June 30, 2019 | June 30, 2018 | Change | | |
|--|-----------------------|-----------------------|------------------------|-----------------|--|
| Cash and Short-Term Investments Receivables | \$ 440,455 312,505 | \$ 470,390 157,483 | \$ (29,935) 155,022 | (6.4) % 98.4 | |
| Investments, at Fair Value Capital Assets, Net of Depreciation | 17,990,214 | 17,357,845 | 632,369 | 3.6 | |
| and Amortization | 8,789 | 9,185 | (396) | (4.3) | |
| Total Assets | 18,751,963 | 17,994,903 | 757,060 | 4.2 | |
| Securities Lending Collateral Liability Purchase of Investments and | 705,535 | 795,076 | (89,541) | (11.3) | |
| Other Liabilities | 338,518 | 210,211 | 128,307 | 61.0 | |
| Total Liabilities | 1,044,053 | 1,005,287 | 38,766 | 3.9 | |
| Fiduciary Net Position Restricted for Pension Benefits and Postemployment Health Care Benefits | <u>\$ 17,707,910</u> | <u>\$ 16,989,616</u> | <u>\$ 718,294</u> | 4.2 % | |

Fiduciary Net Position (Continued)



Components of Fiduciary Net Position

The majority of LACERS fiduciary net position is contained in its investment portfolio, which consists of cash and short-term investments, receivables, fixed income, equities, and other asset classes. Fiduciary net position increased by \$718,294,000, or 4.2%, during this fiscal year.

Net Increase in Fiduciary Net Position

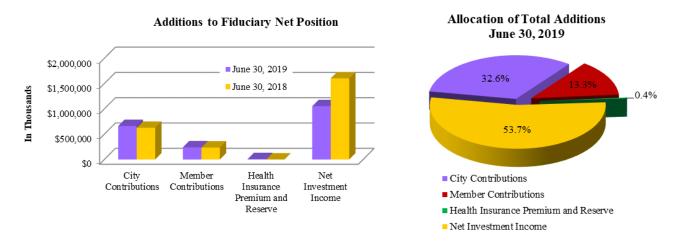
The increase in fiduciary net position during the reporting period was the net effect of factors that either added to or deducted from the fiduciary net position. The following table summarizes the changes in fiduciary net position during the report year, as compared with the prior year (dollars in thousands):

| | J | une 30, 2019 | J | une 30, 2018 | Change | ; |
|--|----|--------------|----|--------------|-----------------|----------|
| Additions | \$ | 1,802,166 | \$ | 2,306,348 | \$ (504,182) | (21.9) % |
| Deductions | | 1,083,872 | | 1,006,302 | 77,570 | 7.7 |
| Net Increase in Fiduciary Net Position Fiduciary Net Position, | | 718,294 | | 1,300,046 | (581,752) | (44.7) |
| Beginning of Year Fiduciary Net Position, | | 16,989,616 | | 15,689,570 | 1,300,046 | 8.3 |
| End of Year | \$ | 17,707,910 | \$ | 16,989,616 | \$ 718,294 | 4.2 % |

Net Increase in Fiduciary Net Position – Additions to Fiduciary Net Position

The following table and graph represent the components that make up the additions to fiduciary net position for LACERS for the fiscal years ended June 30, 2019 and 2018 (dollars in thousands):

| | Jı | June 30, 2019 | | ine 30, 2018 | Change |
|--------------------------------------|----|---------------|----|--------------|----------|
| City Contributions | \$ | 586,754 | \$ | 551,247 | 6.4 % |
| Member Contributions | | 240,357 | | 236,222 | 1.8 |
| Health Insurance Premium and Reserve | | 6,558 | | - | N/A |
| Net Investment Income | | 968,497 | | 1,518,879 | (36.2) |
| Additions to Fiduciary Net Position | \$ | 1,802,166 | \$ | 2,306,348 | (21.9) % |



The additions to LACERS fiduciary net position that constitute the funding sources of LACERS benefits are City Contributions, Member Contributions, Health Insurance Premium and Reserve, and Net Investment Income.

City contributions to the Retirement Plan, the Postemployment Health Care Plan, and the Family Death Benefit Plan were \$586,754,000 during the fiscal year. The total increase of \$35,507,000 or 6.4% over the prior fiscal year was due to a higher payroll base (approximately 2.5% increase in payroll) and higher contribution rate recommended by the actuary for the reporting year. The total City contributions include a \$36,017,000 true-up credit adjustment, a reduction from the City's advanced contribution payment, to reconcile the difference of the City's contributions based on projected payroll against actual payroll. This true-up amount, which included accrued interest at 7.25%, was recognized as liability as of the end of the reporting period. After reflecting the true-up adjustment, the aggregate employer contribution rate for this fiscal year was 27.83% (22.71% for the Retirement Plan and 5.12% for the Postemployment Health Care Plan), which is 1.04% higher than the prior fiscal year at 26.79%. \$478,717,000 of actual contribution to the Retirement Plan was equal to 100% of the Actuarially Determined Contribution (ADC) of the employer, as defined by GASB Statement No. 67. \$107,927,000 of actual contribution to the Postemployment Health Care Plan was equal to 100% of the ADC, as defined by GASB Statement No. 74.

In fiscal year 2018-19, Member contributions were \$240,357,000, which was \$4,135,000 or 1.8% greater than the prior year. The increase in Member contributions was primarily attributable to the increase in the number of Members and their salaries but lessened by decreased voluntary Larger Annuity contributions received by LACERS during the fiscal year.

Net Increase in Fiduciary Net Position - Additions to Fiduciary Net Position (Continued)

LACERS established a Postemployment Health Care 115 Trust fund (the "115 Trust fund") in late December 2018, and replaced the existing Delta Dental PPO Plan with a self-funded Dental Plan under the 115 Trust fund effective January 1, 2019. Accordingly, LACERS recognized revenue of \$5,034,000 representing monthly dental insurance premium and \$1,056,000 one-time payment received from existing 401 (h) Health Care fund to prepay a reserve for self-funded Dental Plan. Additionally, \$468,000 of Members' portion from the health insurance premium reserve amount was also recognized as revenue (refer to Note 1 – Description of LACERS and Significant Accounting Policies, subheading Reserves on pages 15-16).

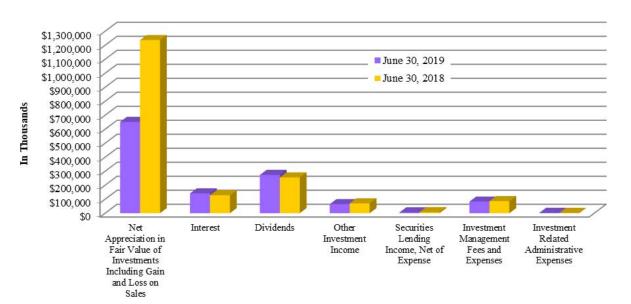
The net investment income was \$968,497,000, which included \$637,092,000 of net appreciation in the fair value of investments. This is discussed in more detail in the next section.

Investment Income

The following table and graph present the detail of investment income, net of investment management fees and expenses for the fiscal years ended June 30, 2019 and 2018 (dollars in thousands):

| | June 30, 2019 | | une 30, 2019 June 3 | | Change |
|--|---------------|-----------|---------------------|-----------|----------|
| Net Appreciation in Fair Value of Investments, | | | | | |
| Including Gain and Loss on Sales | \$ | 637,092 | \$ | 1,206,714 | (47.2) % |
| Interest | | 121,215 | | 107,942 | 12.3 |
| Dividends | | 238,458 | | 220,106 | 8.3 |
| Other Investment Income | | 49,475 | | 55,094 | (10.2) |
| Securities Lending Income, Net of Expense | | 6,179 | | 6,959 | (11.2) |
| Sub-Total | | 1,052,419 | | 1,596,815 | (34.1) |
| Less: Investment Management Fees and Expenses | | (81,582) | | (76,213) | 7.0 |
| Investment Related Administrative Expenses | | (2,340) | | (1,723) | 35.8 |
| Net Investment Income | \$ | 968,497 | \$ | 1,518,879 | (36.2) % |





Investment Income (Continued)

The net investment income for the current fiscal year was \$968,497,000, as compared with the income of \$1,518,879,000 for the previous fiscal year (36.2% decrease). This decrease was due primarily to a lower net appreciation in the fair value of investments of \$637,092,000, compared with the previous fiscal year's amount of \$1,206,714,000 (47.2% decrease). In general, public equity market returns were positive for the current year, but lower relative to the previous fiscal year. The Russell 3000 Index, which tracks U.S. broad market equities, returned 9.0% compared with 14.8% for the previous year. The MSCI All Country World ex-U.S. Index, which tracks non-U.S. equities in developed and emerging markets, returned 1.3% compared with 7.3% for the previous year. Fixed income markets, as represented by the Bloomberg Barclays U.S. Aggregate Bond Index, experienced a strong rally during the current fiscal year, returning 7.9% compared with -0.4% for the previous year. The net appreciation as reported reflects a deduction for carried interest in the amount of \$35,136,000, which represents a profit share that the general partners of these funds received as a compensation after the performance of the funds achieved agreed-upon return level.

Interest income derived from fixed income securities and dividend income derived from equities increased by \$13,273,000 or 12.3%, and \$18,352,000 or 8.3%, respectively. The increase in income from these sources resulted primarily from an increase in LACERS fixed income and equity holdings relative to the previous fiscal year.

Other investment income, primarily derived from private equity and private real estate partnership investments, decreased by \$5,619,000 or 10.2%, as the rate of partnership distributions slowed during the current fiscal year.

LACERS earns additional investment income by lending its securities to borrowers through its custodian bank. To earn income for LACERS, the custodian bank invests cash collateral pledged by borrowers on behalf of LACERS in short term fixed income securities. LACERS also generates income from fees paid by borrowers that pledge non-cash collateral. In the current fiscal year, LACERS securities lending income (net of expense) decreased by \$780,000 or 11.2%, from a year ago due to lower borrower demand for securities held in LACERS portfolio.

Total investment management fees, expenses, and investment related administrative expenses increased by \$5,986,000 or 7.7% from the prior year. This increase corresponded with the increase in the fair value of LACERS investments over the fiscal year.

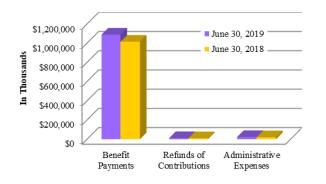
Net Increase in Fiduciary Net Position – Deductions from Fiduciary Net Position

The following table and graphs provide information related to the deductions from fiduciary net position for the fiscal years ended June 30, 2019 and 2018 (dollars in thousands):

| | Ju | June 30, 2019 | | une 30, 2018 | Change |
|---------------------------|----|---------------|----|--------------|--------|
| Benefit Payments | \$ | 1,049,283 | \$ | 975,112 | 7.6% |
| Refunds of Contributions | | 11,684 | | 10,412 | 12.2 |
| Administrative Expenses | | 22,905 | | 20,778 | 10.2 |
| Deductions from Fiduciary | | | | | |
| Net Position | \$ | 1,083,872 | \$ | 1,006,302 | 7.7% |

Deductions from Fiduciary Net Position

Financial Analysis (Continued)



Net Increase in Fiduciary Net Position – Deductions from Fiduciary Net Position (Continued)

Benefit Payments Refunds of Contributions Administrative Expenses LACERS administrative expenses also increased by \$2,127,000 or 10.2% from the prior fiscal year. There was an increase in personnel cost, which was mainly due to the mandatory COLA increases as well as increase in employee health and retirement benefit In addition, LACERS recorded full-year costs. amortization for the cost of Pension Administration System (PAS) that went live in March 2018, resulting in an increased depreciation and amortization expense compared to prior fiscal year. Post PAS implementation consulting fees were also incurred and recorded under administrative expense of the current fiscal year. In this reporting period, administrative expenses included certain expenses associated with the 115 Trust fund: \$365,000 of third party administrative fees charged for the self-funded Dental Plan claims and some legal counsel cost for legal advice and guidance needed for the establishment of 115 Trust fund (refer to Note 3 -

Requests for Information

page 22).

This financial report is designed to provide a general overview of LACERS finances. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to:

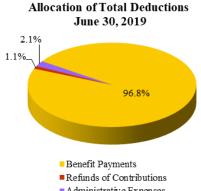
Postemployment Health Care Plan Description on

LACERS Fiscal Management Division PO Box 512218 Los Angeles, CA 90051-0218

LACERS deductions from fiduciary net position in this reporting period can be summarized as Benefit Payments, Refunds of Member Contributions, and Administrative Expenses. These deductions represent the types of benefit delivery operations undertaken by LACERS and the costs associated with them. Total deductions increased by \$77,570,000 or 7.7% from the prior fiscal year.

Compared to the prior fiscal year, benefit payments increased by \$74,171,000 or 7.6%. The benefit payments for the Retirement Plan increased by \$62,123,000 or 7.3% mainly due to the annual cost of living adjustments (COLA) (approximately 2.8% increase on average with a maximum of 3.0%); increased number of retirees and beneficiaries; and the average retirement allowance of newly retired Members being higher than those of the deceased Members who were removed from the retirement payroll. Payments for Postemployment Health Care Plan benefits also increased by \$12,048,000 or 9.4%. This increase was mainly due to the increased number of retirees and their dependents eligible for medical subsidy; increased reimbursement of Medicare Part B premium; and inclusion of \$1,056,000 one-time prepaid reserve for LACERS self-funded Dental Plan and \$4,018,000 dental benefit claims paid from the self-funded Plan for January through June 2019 which were additions to the health expense incurred by LACERS to cover subsidy portion of the self-funded Dental Plan premium payment made to the 115 Trust fund.

The refunds of Member contributions increased by \$1,272,000 or 12.2% from the prior fiscal year's \$10,412,000. It was mainly due to the increase in contribution refunds upon Members leaving the City service.



BASIC FINANCIAL STATEMENTS

Statement of Fiduciary Net Position Retirement Plan and Postemployment Health Care Plan As of June 30, 2019, with Comparative Totals

(In Thousands)

| | Retirement Plan | | 1 0 | | 2019 Total | | 2018 Total |
|---|--------------------|------------|-----|-----------|---------------|------------|-------------------|
| Assets | | | | | | | |
| Cash and Short-Term Investments | \$ | 370,509 | \$ | 69,946 | \$ | 440,455 | \$ 470,390 |
| Receivables | | | | | | | |
| Accrued Investment Income | | 52,854 | | 9,978 | | 62,832 | 57,237 |
| Proceeds from Sales of Investments | | 197,133 | | 37,216 | | 234,349 | 86,261 |
| Other | | 12,891 | | 2,433 | | 15,324 | 13,985 |
| Total Receivables | | 262,878 | | 49,627 | | 312,505 | 157,483 |
| Investments, at Fair Value | | | | | | | |
| U.S. Government Obligations | | 1,192,407 | | 225,108 | | 1,417,515 | 1,173,467 |
| Municipal Bonds | | - | | - | | - | 2,527 |
| Domestic Corporate Bonds | | 742,127 | | 140,102 | | 882,229 | 831,555 |
| International Bonds | | 504,459 | | 95,234 | | 599,693 | 546,920 |
| Other Fixed Income | | 759,252 | | 143,335 | | 902,587 | 1,033,950 |
| Bank Loans | | 7,460 | | 1,408 | | 8,868 | 5,397 |
| Opportunistic Debts | | 171,352 | | 32,349 | | 203,701 | 109,931 |
| Domestic Stocks | | 3,930,485 | | 742,015 | | 4,672,500 | 4,704,733 |
| International Stocks | | 4,407,841 | | 832,132 | | 5,239,973 | 5,078,641 |
| Mortgages | | 442,796 | | 83,593 | | 526,389 | 424,614 |
| Government Agencies | | 26,032 | | 4,915 | | 30,947 | 41,062 |
| Derivative Instruments | | (670) | | (127) | | (797) | 1,000 |
| Real Estate | | 666,661 | | 125,855 | | 792,516 | 801,634 |
| Private Equity | | 1,689,590 | | 318,968 | | 2,008,558 | 1,807,338 |
| Securities Lending Collateral | | 593,493 | | 112,042 | | 705,535 | 795,076 |
| Total Investments, at Fair Value | | 15,133,285 | | 2,856,929 |] | 17,990,214 | 17,357,845 |
| Capital Assets | | | | | | | |
| Furniture, Computer Hardware and Software | | | | | | | |
| (Net of Depreciation and Amortization) | | 7,393 | | 1,396 | | 8,789 | 9,185 |
| Total Assets | | 15,774,065 | | 2,977,898 |] | 18,751,963 | 17,994,903 |
| Liabilities | | | | | | | |
| Accounts Payable and Accrued Expenses | | 45,776 | | 8,642 | | 54,418 | 40,967 |
| Accrued Investment Expenses | | 8,130 | | 1,534 | | 9,664 | 10,455 |
| Purchases of Investments | | 230,854 | | 43,582 | | 274,436 | 158,789 |
| Securities Lending Collateral | | 593,493 | | 112,042 | | 705,535 | 795,076 |
| Total Liabilities | | 878,253 | | 165,800 | | 1,044,053 | 1,005,287 |
| Fiduciary Net Position Restricted for | | | | | | | |
| Pension Benefits and Postemployment | | | | | | | |
| Health Care Benefits | \$ | 14,895,812 | \$ | 2,812,098 | \$ 1 | 17,707,910 | \$ 16,989,616 |

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

Statement of Changes in Fiduciary Net Position Retirement Plan and Postemployment Health Care Plan For the Fiscal Year Ended June 30, 2019, with Comparative Totals

(In Thousands)

| | Retirement Plan | | Postemployment Health Care Plan | | 2019 Total | | | 2018 Total |
|--|--------------------|------------|---------------------------------------|-----------|---------------|------------|-------------|---------------|
| Additions | | | | | | | | |
| Contributions | | | | | | | | |
| City Contributions | \$ | 478,827 | \$ | 107,927 | \$ | 586,754 | \$ | 551,247 |
| Member Contributions | | 240,357 | | | | 240,357 | | 236,222 |
| Total Contributions | | 719,184 | | 107,927 | | 827,111 | | 787,469 |
| Self-Funded Insurance Premium | | - | | 6,090 | | 6,090 | | - |
| Health Insurance Premium Reserve | | - | | 468 | | 468 | | - |
| Investment Income | | | | | | | | |
| Net Appreciation in Fair Value of | | | | | | | | |
| Investments, Including Gain and Loss on Sales | | 519,661 | | 117,431 | | 637,092 | | 1,206,714 |
| Interest | | 102,364 | | 18,851 | | 121,215 | | 107,942 |
| Dividends | | 201,415 | | 37,043 | | 238,458 | | 220,106 |
| Other Investment Income | | 41,789 | | 7,686 | | 49,475 | | 55,094 |
| Securities Lending Income | | 6,139 | | 1,129 | | 7,268 | | 8,185 |
| Less: Securities Lending Expense | | (888) | | (201) | | (1,089) | | (1,226) |
| | | · · · | | · · · · | | | | |
| Sub-Total | | 870,480 | | 181,939 | | 1,052,419 | | 1,596,815 |
| Less: Investment Management Fees and Expenses | | (66,544) | | (15,038) | | (81,582) | | (76,213) |
| Investment Related Administrative Expenses | | (1,909) | _ | (431) | | (2,340) | | (1,723) |
| Net Investment Income | | 802,027 | | 166,470 | | 968,497 | | 1,518,879 |
| Total Additions | | 1,521,211 | | 280,955 | | 1,802,166 | | 2,306,348 |
| Deductions | | | | | | | | |
| Benefit Payments | | 909,154 | | 140,129 | | 1,049,283 | | 975,112 |
| Refunds of Contributions | | 11,684 | | - | | 11,684 | | 10,412 |
| Administrative Expenses | | 17,806 | | 5,099 | | 22,905 | | 20,778 |
| Total Deductions | | 938,644 | _ | 145,228 | | 1,083,872 | | 1,006,302 |
| Net Increase in Fiduciary Net Position | | 582,567 | | 135,727 | | 718,294 | | 1,300,046 |
| Fiduciary Net Position Restricted for Pension Benefits and Postemployment Health Care Benefits | | | | | | | | |
| Beginning of Year | | 14,313,245 | | 2,676,371 | | 16,989,616 |] | 5,689,570 |
| End of Year | \$ | 4,895,812 | \$ | 2,812,098 | \$ | 17,707,910 | \$ 1 | 6,989,616 |

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

1. Description of LACERS and Significant Accounting Policies

General Description

The Los Angeles City Employees' Retirement System (LACERS or the System) is under the exclusive management and control of its Board of Administration (the Board), whose authority is granted by statute in Article XVI, Section 17 of the California State Constitution, and Article XI of the Los Angeles City Charter. The Board has seven members. Four members, one of whom shall be a retired Member of the System, shall be appointed by the Mayor subject to the approval of the City Council. Two members shall be active employee Members of the System elected by active employee Members. One shall be a retired Member of the System elected by retired Members of the System. Elected Board members serve five-year terms in office, with no term limits. The System is a Department of the Municipality of the City of Los Angeles (the City). The System's financial statements are included in the City of Los Angeles Annual Financial Report as a pension trust fund.

The System operates a single-employer defined benefit plan (the Retirement Plan) and a singleemployer Postemployment Health Care Plan. Benefits and benefit changes are established by ordinance and approved by the City Council and the Mayor. A description of each plan is located in Note 2 and Note 3 on pages 17 - 27 of this report. All Notes to the Basic Financial Statements apply to both plans unless indicated otherwise.

Members who entered the System prior to February 21, 2016 are Tier 1 Members of LACERS. On or after February 21, 2016, new Members become Members of LACERS Tier 3 (refer to Note 2 – Retirement Plan Description on pages 17 - 18, and Note 3 – Postemployment Health Care Plan Description on pages 22 - 23 for each tier's eligibility requirements and benefits provided).

Basis of Accounting and Presentation

The financial statements have been prepared in accordance with the accounting principles generally accepted in the United States of America (US GAAP) as outlined by the Governmental Accounting Standards Board (GASB). The financial statements are maintained on the accrual basis of accounting. Contributions from the employer and Members were recognized when due pursuant to formal commitments and contractual requirements. Benefits, refunds, and other expenses are recognized when due and payable. The accompanying financial statements include information from the prior year summarized for comparative purpose only. Such information does not include sufficient detail to constitute a presentation in accordance with US GAAP.

Investments

Investment Policies

Funds of the System are invested pursuant to the System's investment policy, established by the Board, in compliance with Article XI Section 1106(d) of the City Charter. The System has a longterm investment horizon, and utilizes an asset allocation that encompasses a strategic, long run perspective of capital markets. The System's investment portfolio is composed of domestic and international equities, domestic and international bonds, bank loans, derivative instruments, real assets, private equity, and short-term investments. During the reporting period, there were no significant investment policy changes.

As of June 30, 2019, the Board's adopted asset allocation policy was as follows:

| | Target |
|-------------------------------------|------------|
| Asset Class | Allocation |
| Domestic and International Equities | 46.00% |
| Domestic and International Bonds | 13.75 |
| Private Equity | 14.00 |
| Real Assets | 13.00 |
| Short-Term Investments | 1.00 |
| Credit Opportunities | 12.25 |
| Total | 100.00% |

Fair Value of Investments

Securities traded on national or international exchanges are valued at the last reported sales price at the current exchange rates. Short-term investments, bonds, bank loans, stocks, and private equities are reported at fair value. The fair values of real estate investment funds are provided by the individual real estate fund managers based on periodic appraisals, in the form of either annual inhouse appraisals or longer-term appraisals by outside professionals, in accordance with industry practice. The fair value determined as such is also reviewed and evaluated by the Board's real estate consultant. The private equity funds ("partnership investment"), which are managed by third party investment managers, are valued on a quarterly and/or annual basis at their net asset value as reported by the investment managers under US GAAP. US GAAP requires that assets be reported at fair value in accordance with Accounting Standards Codification Topic 820 - Fair Value Measurement and The fair values of derivative Disclosures. instruments are determined using available market

1. Description of LACERS and Significant Accounting Policies (Continued)

Investments (Continued)

Fair Value of Investments (Continued)

information. Debt rewrites are valued based on yields currently available on comparable securities of issuers with similar credit ratings. LACERS investment strategy, as it relates to the debt portfolio, is mainly to achieve market appreciation and not to hold bonds to their maturities.

The provisions of the GASB Statement No. 72, *Fair Value Measurement and Application*, require investments to be measured at fair value as well as to classify the inputs used to determine fair value based on a three-level fair value hierarchy. This information is presented in Note 6 on pages 32 - 34.

Investment transactions are accounted for on the date the securities are purchased or sold (trade date). Unsettled investment trades as of fiscal year-end are reported in the financial statements on an accrual basis. The corresponding proceeds due from sales are reported on the Statement of Fiduciary Net Position under Receivables and labeled as Proceeds from Sales of Investments, and amounts payable for purchases are reported under Liabilities and labeled as Purchases of Investments. Dividend income is recorded on the ex-dividend date. Interest income is reported at the stated interest rate as earned, and any premiums or discounts on debt securities are not amortized. The calculation of realized gains and losses is independent of the calculation of the net change in the fair value of LACERS pension plan investment. Realized gains and losses on investments that had been held in more than one reporting period and sold in the current period were included as a change in the fair value reported in the prior period(s) and the current period.

For the future contracts, an initial margin is required to open a position and maintain the collateral requirement until the position is closed. LACERS reports the collateral for the future contracts in the short-term investments.

Concentrations

The investment portfolio as of June 30, 2019, contained no concentration of investments in any one entity that represented 5% or more of the total investment portfolio.

Rate of Return on Investments

For the fiscal year ended June 30, 2019, the aggregate annual money-weighted rate of return for the Retirement Plan and the Postemployment Health Care Plan on LACERS investments, net of investment expenses, was 5.62%. The moneyweighted rate of return expresses investment performance, net of investment expenses, adjusted for the changing amounts actually invested. Separate schedules for the money-weighted rate of return for Retirement Plan and Postemployment Health Care Plan are presented in the Required Supplementary Information (RSI) on pages 41 and 46, respectively.

Receivables

As of June 30, 2019, LACERS held no long-term contracts for contributions receivable from the City.

Capital Assets

Prior to July 1, 2001, purchases of capital assets, consisting primarily of office furniture and computer equipment, were recorded and expensed in the year acquired. Effective July 1, 2001, these purchases were capitalized upon acquisition if the cost of purchase was \$5,000 or more, and depreciated over five years using the straight-line method.

In order to comply with the requirements of GASB Statement No. 51, Accounting and Financial Reporting for Intangible Assets, certain costs for developing LACERS new Pension Administration System (PAS), a customized software solution critical to LACERS core operations, had been capitalized. The capitalized cost for the PAS project up to its completion in February 2018 was \$9,098,000. In addition, certain post-implementation costs of \$315,000 were capitalized during this fiscal year. The total capitalized cost for the PAS of \$9,413,000 is being amortized over 15 years using the straight-line method.

Administrative Expenses

All administrative expenses are funded from LACERS fiduciary net position, which represents accumulated investment earnings and contributions from the City and the Members net of payments.

Reserves

As provided in the Los Angeles City Charter, LACERS is maintained on a reserve basis, determined in accordance with recognized actuarial methods. The Los Angeles City Charter establishes reserves for the following:

Reserves for the Retirement Plan

Member Contributions (Mandatory) – To provide for individual accounts of Members consisting of Active Member mandatory contributions to the Retirement Plan and interest credited to Members accounts, less refunds of Members contributions and transfers to the Annuity reserve.

1. Description of LACERS and Significant Accounting Policies (Continued)

Reserves (Continued)

Reserves for the Retirement Plan (Continued)

Member Contributions (Voluntary) – To provide for individual accounts of Members participating in the larger annuity program of Active Member voluntary contributions and interest/investment return credited to Members' accounts, less refunds of Member contributions (voluntary) and transfers to the Larger Annuity reserve.

Basic Pensions – To provide for the City's guaranteed portion of retirement benefits consisting of City contributions; investment earnings (losses) including net appreciation (depreciation) in fair value of investments; less payments to retired Members and beneficiaries, and allocated investment and administrative expenses.

Annuity – To provide for the Members' share of retirement benefits consisting of Members' mandatory contribution balances transferred at retirement; investment earnings (losses) excluding net appreciation (depreciation) in fair value of investments; less payments to retired Members and beneficiaries, and allocated investment and administrative expenses.

Larger Annuity – To provide for the Larger Annuity benefit consisting of Members' voluntary contribution balances transferred at retirement including Internal Revenue Service (IRS) Section 457 deferred compensation and other rollovers; investment earnings (losses) including net appreciation (depreciation) in fair value of investments; less payments to participating retired Members and beneficiaries, and allocated investment and administrative expenses.

Family Death Benefit Plan (FDBP) – To pay benefits under the Family Death Benefit Plan administered by LACERS consisting of Active Member voluntary contributions; matching City contributions; and investment earnings (losses) including net appreciation (depreciation) in fair value of investments; less payments to beneficiaries and allocated investment and administrative expenses. Reserves for the Postemployment Health Care Plan

401(h) Account- To provide health care benefits for retirees consisting of City contributions; investment earnings (losses) including net appreciation (depreciation) in fair value of investments; less payments to insurance providers, including payment to the 115 Trust fund for the self-funded dental insurance premium and Members' portion of insurance premium reserve.

115 Trust Account – This new Health Care fund is currently limited to pay the benefit claims from LACERS self-funded Dental Plan, but ultimately will fund all health care benefits for retirees upon depletion of the existing 401(h) account reserves. The 115 Trust account currently consists of dental plan premium and prepayment; certain retired Members' health insurance premium deductions; and short-term investment earnings; less payments to the dental plan claims and for administration fees to the third party contractor who administered the dental plan claims for the System; and certain allocated administrative expenses. During this reporting year, funds from this reserve account were separately invested, thus they were not in LACERS investment pool, and therefore, investment earnings (losses) including net appreciation (depreciation) in fair value of investments were not distributed (refer to Note 3 -Postemployment Health Care Plan Description on page 22).

Reserve balances as of June 30, 2019, were as follows (in thousands):

Reserves for the Retirement Plan

| Member Contribution | IS: | |
|--|--|------------------|
| - Mandatory \$ | 2,504,742 | |
| - Voluntary | 7,101 | |
| Basic Pensions | 11,732,697 | |
| Annuity | 578,154 | |
| Larger Annuity | 56,435 | |
| FDBP | 16,683 | \$ 14,895,812 |
| Reserve for the Poster Health Care Plan 401 (h) Account 115 Trust Account | nployment 2,809,909 <u>2,189</u> | 2,812,098 |
| Total Reserves | | \$ 17,707,910 |

1. Description of LACERS and Significant Accounting Policies (Continued)

Estimates

The preparation of the financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting years. Actual results could differ from those estimates.

2. Retirement Plan Description

Plan Administration and Membership

LACERS administers a defined benefit pension plan that provides for service and disability retirement benefits, as well as death benefits.

The Retirement Plan covers all full-time personnel and department-certified part-time employees of the City, except for sworn employees of the Fire and Police departments, Department of Water and Power employees, elected officials who elected to participate in an alternative Defined Contribution Plan, certain Port Police officers of the Harbor, and certain Airport Peace Officers of the Airports who elected to opt out of LACERS. Upon transferring all active Tier 2 Members to Tier 1 as of February 21. 2016, Membership to Tier 1 is now closed to new entrants unless a Member meets one of the exceptions allowed in the Ordinance (No. 184134). Eligible employees hired on after or February 21, 2016, become Members of Tier 3.

As of June 30, 2019, the components of LACERS membership in both tiers (Tier 1 and Tier 3) were as follows:

| Active: | |
|----------------------------------|--------|
| Vested | 17,812 |
| Non-vested | 8,820 |
| | 26,632 |
| Inactive: | |
| Non-vested | 6,149 |
| Terminated Entitled to Benefits, | |
| Not Yet Receiving Benefits | 2,439 |
| Retired | 20,034 |
| Total | 55,254 |

Plan Members have a vested right to their own contributions and accumulated interest posted to their accounts. Generally, after five years of employment, Members are eligible for future retirement benefits, which increase with length of service. If a Member who has five or more years of continuous City service terminates employment, the Member has the option of receiving retirement benefits when eligible or having his or her contributions and accumulated interest refunded. Benefits are based upon age, length of service, and compensation.

Eligibility Requirement and Benefits Provided

Tier 1

Plan Members are eligible to retire with unreduced benefits if they have 10 or more years of continuous City service at age 60, or at least 30 years of City service at age 55, or with any years of City service at age 70 or older. Plan Members also are eligible to retire with age-based reduced benefits after reaching age 55 with 10 or more years of continuous City service, or at any age with 30 or more years of City service. Full (unreduced) retirement benefits are determined as 2.16% of the Member's average monthly pensionable salary during the Member's last 12 months of service, or during any other 12 consecutive months of service designated by the Member, multiplied by the Member's years of service credit. Plan Members with five years of continuous service are eligible for disability retirement, and the benefits are determined as 1/70 of the Member's final average monthly salary for each year of service or 1/3 of the Member's final average monthly salary, if greater. Upon an active Member's death, a refund of the Member's contributions and, depending on the Member's years of service, a limited pension benefit equal to 50% of monthly salary may be paid up to 12 months. Or, if such Member was eligible to retire, survivor benefits may be paid to an eligible spouse or qualified domestic partner. Upon a retired Member's death, a \$2,500 funeral allowance is paid, and a modified or unmodified allowance is continued to an eligible spouse or qualified domestic partner.

Tier 1 – Enhanced Benefits

In November 2016, voters approved a ballot measure resulting in approximately 550 sworn Airport peace officers provided an election to opt-out of the LACERS Plan and transfer to the Los Angeles Fire and Police Pension (LAFPP) Plan as its Tier 6 Members.

Eligibility Requirement and Benefits Provided (Continued)

Tier 1 – Enhanced Benefits (Continued)

On March 28, 2017, the City Council adopted an ordinance (No. 184853) to amend the Los Angeles Administrative Code (LAAC) authorizing certain sworn Airport Peace Officers (APO) at LACERS to elect to transfer into Tier 6 of LAFPP Plan or to remain in LACERS Plan with enhanced benefits. All new APO hired after that date would be enrolled in LAFPP Tier 6. Under the ordinance, APO Members who elect to remain in LACERS would be Tier 1 Members, and be eligible for enhanced benefits including more favorable disability benefits, death benefits, and a higher retirement factor of 2.30% (versus 2.16% for all other Tier 1 Members), contingent upon a mandatory additional contribution payment of \$5,700 required by LAAC Section 4.1002(e)(2) to LACERS before January 8, 2019, or prior to the Member's retirement date, whichever is earlier. Among 503 APO Members who elected to remain Members of LACERS on January 7, 2018, 469 APO Members, inclusive of 43 APO Members who retired with the enhanced benefits, paid their mandatory additional contribution.

Tier 3

Plan Members are eligible to retire with unreduced benefits if they have at least 10 or more years of City service at age 60 or at least 30 years of City service at age 55, provided that five years of service must be continuous. Full unreduced retirement benefits at age 60 with 10 years of City service are determined with a 1.5% retirement factor. Plan Members also are eligible to retire with an age-based reduced benefit before reaching age 60 with 30 or more years of City service with a retirement factor of 2.0%. If the Member is age 55 or older with 30 years of service at the time of retirement, his or her retirement allowance will not be subject to reduction on account of age. However, if the Member is younger than age 55 with 30 years of service at the time of retirement, his or her retirement allowance will be reduced by the applicable early retirement reduction factor. In addition, the System also provides Tier 3 Members enhanced retirement benefits with a 2.0% retirement factor if the Member retires at age 63 with at least 10 years of service, or a retirement factor of 2.1% if the Member retires at age 63 with 30 years of service. Tier 3 retirement benefits are determined by multiplying the Member's retirement factor (1.5% - 2.1%), with the Member's Final Average Compensation (FAC) based on the Member's pensionable salary for the last 36 months or any other 36 consecutive months designated by the Member, and by the Member's years of service credit (SC) as follows:

| Age at Retirement | Required Years of Service | Retirement Benefit ⁽¹⁾ |
|--|---------------------------------|--|
| Under 55 55 and Over 60 and Over 63 and Over 63 and Over | 10 Years 10 Years | 2.0% x FAC x Yrs. of SC ⁽²⁾ 2.0% x FAC x Yrs. of SC 1.5% x FAC x Yrs. of SC 2.0% x FAC x Yrs. of SC 2.1% x FAC x Yrs. of SC |

⁽¹⁾ Retirement allowance may not exceed 80% of final compensation except when benefit is based solely on the annuity component funded by the Member's contributions.

Plan Members with five years of continuous service are eligible for disability retirement, and the benefits are determined as 1/70 of the Member's final average monthly salary for each year of service or 1/3 of the Member's final average monthly salary, if greater. Upon an active Member's death, a refund of the Member's contributions and, depending on the Member's years of service, a limited pension benefit equal to 50% of monthly salary may be paid up to 12 months. Or, if such Member was eligible to retire, survivor benefits may be paid to an eligible spouse or qualified domestic partner. Upon a retired Member's death, a \$2,500 funeral allowance is paid, and a modified or unmodified allowance is continued to an eligible spouse or qualified domestic partner.

There were no Tier 3 Members who retired during this reporting period.

Cost of Living Adjustment

Retirement allowances are indexed annually for inflation. The Board has authority to determine, no later than May 1st of each year, the average annual percentage change in the Consumer Price Index (CPI) for the purpose of providing a Cost of Living Adjustment (COLA) to the benefits of eligible Members and beneficiaries in July. The adjustment is based on the prior year's change of Los Angeles area CPI subject to a maximum of 3.0% for Tier 1 Members or 2.0% for Tier 3 Members. For Tier 1 Members, the COLA percentage greater than 3.0% is banked for future use.

⁽²⁾ A reduction factor will be applied based on age at retirement.

Employer Contributions

The Los Angeles City Charter Sections 1158 and 1160 provide for periodic actuarially-determined employer contribution rates that, expressed as percentages of annual covered payroll, are sufficient to accumulate the required assets to pay benefits when due. For the fiscal year ended June 30, 2019, the actuarially-determined aggregate employer contribution rate to the Retirement Plan by the City was 23.06% of projected payroll, based on the June 30, 2017 actuarial valuation.

Upon closing the fiscal year 2018-19, LACERS recalculated the employer contribution rate using actual payroll incurred during the fiscal year, which was smaller than projected covered payroll used by the City to make the advance payment on July 15, 2018. As a result, employer contributions received for the Retirement Plan were \$31,179,000 more than required, and this amount was credited to the employer toward employer contributions for fiscal year 2019-20. Based on actual payroll, the effective rate of employer contribution for Retirement Plan was 22.71% for fiscal year 2018-19.

Member Contributions

Tier 1

The current contribution rate for Tier 1 Members is 11% of their pensionable salary including: 1) a 1% increase in the Member contribution rate pursuant to 2009 Early Retirement Incentive Program (ERIP) ordinance for all employees for a period of 15 years (or until the ERIP Cost obligation is fully recovered, whichever comes first); and 2) 4% additional contributions in exchange for a vested right to future increases in the maximum retiree medical subsidy pursuant to a 2011 City Council ordinance.

Tier 3

The contribution rate for Tier 3 Members is 11% of their pensionable salary including 4% additional contributions in exchange for a vested right to future increases in the maximum retiree medical subsidy. Unlike Tier 1, Tier 3 Members do not pay ERIP contribution, therefore, Tier 3 Members' contribution rate will not drop down when Tier 1 Members cease to pay the 1% ERIP contribution.

Net Pension Liability

In calculating the Plan's net pension liability, the total pension liability and the Plan fiduciary net position exclude amounts associated with Family Death and Larger Annuity Benefits. As of June 30, 2019, the components of the net pension liability were as follows (in thousands):

| Total Pension Liability Plan Fiduciary Net Position ⁽¹⁾ | \$ 20,793,421 14,815,593 |
|--|-----------------------------|
| Plan's Net Pension Liability | \$ 5,977,828 |
| Plan Fiduciary Net Position as a percentage of the Total Pension Liability | 71.3% |

(1) Plan fiduciary net position was \$14,895,812,000 as of June 30, 2019 without excluding amounts associated with Family Death and Larger Annuity Benefits.

Significant Assumptions

Projections of benefits for financial reporting purposes are based on the types of benefits provided to active, inactive, and retired Members at the time of each valuation, including expected future COLAs. The attribution method and significant assumptions used in the valuation year of June 30, 2019, are summarized below:

| Valuation Date | June 30, 2019 |
|---|--|
| Actuarial Cost Method | Entry Age Method – assuming a closed group (individual basis). |
| Amortization Method | Level Percent of Payroll |
| Actuarial Assumptions: | |
| Date of Experience Study | June 30, 2017 (July 1, 2014 through June 30, 2017) |
| Long-Term Expected Rate of Return | 7.25% |
| Inflation | 3.00% |
| Real Across-the-Board Salary Increase | 0.50% |
| Projected Salary Increases | Ranges from 3.90% to 10.00% based on years of service, including inflation assumption at 3.00% and the real across-the-board salary increase assumption of 0.50% . |
| Annual COLAs | 3.00% maximum for Tier 1 and 2.00% maximum for Tier 3. |
| Mortality Table for Retirees and Beneficiaries | Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table (separate tables for males and females) with no setback for males and females, projected generationally with the two-dimensional mortality improvement scale MP-2017. |
| Mortality Table for Disabled Retirees | Headcount-Weighted RP-2014 Disabled Retiree Mortality Table (separate tables for males and females) with no setback for males and females, projected generationally with the two-dimensional mortality improvement scale MP-2017. |
| Percent Married / Domestic Partner | 76% of male participants and 50% of female participants are assumed to be married or have a qualified domestic partner. |
| Spouse Age Difference | Male retirees are assumed to be three years older than their female spouses. Female retirees are assumed to be two years younger than their male spouses. |

Net Pension Liability (Continued)

Discount Rate

The discount rate used to measure the total pension liability was 7.25% as of June 30, 2019 and June 30, 2018.

The projection of cash flows used to determine the discount rate assumed Plan Member contributions will be made at the current contribution rates and that employer contributions will be made at rates equal to the actuarially-determined contribution rates. For this purpose, only employee and employer contributions that are intended to fund benefits for current Plan Members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs for future Plan Members and their beneficiaries, as well as projected contributions from future Plan Members, are not included.

Based on those assumptions, the retirement plan's fiduciary net position was projected to be available to make all projected future benefit payments for current Plan Members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability as of both June 30, 2019 and June 30, 2018.

The long-term expected rate of return on retirement plan investments was determined using a buildingblock method in which expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation and subtracting expected investment expenses and a risk margin. The target allocation and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before deducting investment expenses, are summarized in the following table. These values were used in the derivation of the long-term expected investment rate of return assumption that was used in the actuarial valuation as of June 30, 2019. This information is subject to change every three years based on the actuarial experience study. The last experience study was for July 1, 2014 through June 30, 2017. The next experience study will be conducted in 2020.

| Asset Class | Target <u>Allocation</u> | Arithmetic Long-Term Expected Real Rate of Return |
|------------------------|-----------------------------|---|
| U.S. Large Cap Equity | 14.00% | 5.3% |
| U.S. Small Cap Equity | 5.00 | 6.1 |
| Developed Int'l Large | 2100 | 011 |
| Cap Equity | 17.00 | 6.7 |
| Developed Int'l Small | | |
| Cap Equity | 3.00 | 7.1 |
| Emerging Market Equity | 7.00 | 8.9 |
| Core Bonds | 13.75 | 1.0 |
| High Yield Bonds | 2.00 | 3.1 |
| Bank Loans | 2.00 | 3.0 |
| Emerging Market Debt | 4.50 | 3.4 |
| Private Debt | 3.75 | 5.5 |
| Private Real Estate | 7.00 | 4.7 |
| Real Estate Investment | | |
| Trust (REIT) | 0.50 | 5.9 |
| Treasury Inflation | | |
| Protected Securities | | |
| (TIPS) | 3.50 | 1.0 |
| Commodities | 1.00 | 3.4 |
| Public Real Assets | 1.00 | 4.8 |
| Private Equity | 14.00 | 9.0 |
| Cash | 1.00 | 0.0 |
| Total | 100.00% | |

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

The following presents the net pension liability of LACERS as of June 30, 2019, calculated using the discount rate of 7.25%, as well as what LACERS net pension liability would be if it were calculated using a discount rate that is one percentage point lower (6.25%) or one percentage point higher (8.25%) than the current rate (dollar in thousands):

| | Current | |
|-------------|-------------|-------------|
| 1% | Discount | 1% |
| Decrease | Rate | Increase |
| (6.25%) | (7.25%) | (8.25%) |
| \$8,797,246 | \$5,977,828 | \$3,652,816 |

3. Postemployment Health Care Plan Description

Plan Administration and Membership

LACERS administers, and provides single-employer postemployment healthcare benefits to eligible retirees and their eligible spouses/domestic partners who participate in the Retirement Plan regardless of their membership tiers. These benefits consist of subsidies which may also apply to the coverage of other eligible dependent(s).

On November 9, 2018, the City Council approved Ordinance No. 185829 to amend Article 1 of Chapter 11, Division 4 of the Los Angeles Administrative Code to establish the LACERS Health Care Fund (115 Trust Account) for the sole purpose of funding the retiree healthcare benefits for eligible LACERS retirees and beneficiaries as well as to help stabilize premium rates over time.

The City and the Board of LACERS entered into a written trust agreement for the LACERS Health Care Fund which shall provide an alternative funding mechanism, in addition to or in lieu of the existing 401 (h) account described in LAAC Section 4.1102 for funding benefits under the health and welfare programs. The LACERS Health Care Fund is intended to qualify for federal tax exemption under Section 115 of the Internal Revenue Code. Because health benefits paid out of the LACERS Health Care Fund are not required to be subordinate to the Plan retirement benefits, the LACERS Health Care Fund would not become taxable if the Plan health benefits surpass the 25% threshold. Second, the LACERS Health Care Fund gives LACERS more flexibility to invest premium surpluses to provide for smoothing should healthcare premiums increase considerably in the future. Currently, the Health Care Coverage Account (401 (h) account) cannot receive full refunds of excess premiums from insurance providers. However, the LACERS Health Care Fund can receive full premium surplus refunds from insurance providers; therefore, the System can invest these funds at a higher rate of return than the insurance providers' reserve account interest rate.

Effective January 1, 2019, LACERS fully-insured Delta Dental PPO Plan was replaced with LACERS self-funded Delta Dental PPO Plan. Although Delta continues to administer the plan for a fee, LACERS sets and collects premiums from enrolled Members and pays billed claims to Delta. With this arrangement, LACERS bears financial risk if claims cost exceed collected premiums. This change does not affect the maximum dental subsidy amount to the eligible retired Members. As of June 30, 2019, the components of Membership, excluding non-participating retirees and surviving spouses of LACERS postemployment healthcare benefits were as follows:

| Retired Members/Surviving Spouses ⁽¹⁾ | 15,791 |
|---|--------|
| Vested terminated Members entitled | |
| to, but not yet receiving benefits ⁽²⁾ | 1,474 |
| Active Members | 26,632 |
| Total | 43,897 |

- (1) Total participants including married dependents and dependent children currently receiving benefits are 21,115.
- (2) Includes terminated Members due a refund of employee contributions.

Eligibility Requirement and Benefits Provided

To be eligible for LACERS postemployment healthcare benefits, Member must: 1) be at least age 55; 2) have at least 10 whole years of service with LACERS; and 3) be enrolled in a System-sponsored medical or dental plan or are a participant in the Medical Premium Reimbursement Program (MPRP). Retirees and surviving spouses/domestic partners can choose from the health plans that are available, which include medical, dental, and vision benefits, or participate in the MPRP if he/she resides in an area not covered by the available medical plans. Retirees and surviving spouses/domestic partners receive medical subsidies based on service years and service credit. The dental subsidies are provided to the retirees only, based on service years and service credit.

The maximum subsidies are set annually by the Effective February 21, 2016, healthcare Board. benefit eligibility requirements have changed for the Members who have periods of part-time service. Such Members are now eligible to participate in the LACERS retiree medical programs with a 10 whole years of service, even if some or all of that service was part-time, provided that the Member meets the eligibility requirements. Both Tier 1 and Tier 3 Members will be eligible for 40% of maximum medical plan premium subsidy for 1 - 10 whole years of service credit, and eligible Members earn 4% per year of service credit for their annual medical subsidy accrual after 10 years of service. Eligible spouses/domestic partners of Plan Members are entitled to the System's postemployment healthcare benefits after the retired Member's death. During the 2011 fiscal year, the City adopted an ordinance ("Subsidy Cap Ordinance") to limit the maximum medical subsidy at \$1,190 for those Members who retire on or after July 1, 2011; however, Members who at any time prior to retirement made additional

Eligibility Requirement and Benefits Provided (Continued)

contributions are exempted from the subsidy cap and obtain a vested right to future increases in the maximum medical subsidy at an amount not less than the dollar increase in the Kaiser two-party non-Medicare Part A and Part B premium. As of June 30, 2019, all active Tier 1 and Tier 3 Members were making the additional contributions, and therefore will not be subject to the medical subsidy cap (refer to Member Contributions of Note 2 – Retirement Plan Description on page 19).

Employer Contributions

The Los Angeles City Charter Sections 1158 and 1160 require periodic employer contributions at actuarially determined rates that, expressed as percentages of annual covered payroll, are sufficient to accumulate the required assets to pay benefits when due. The required contribution rate for the Postemployment Health Care Plan for the fiscal year ended June 30, 2019, was 5.10% of projected payroll, based on the June 30, 2017 actuarial valuation.

Upon closing the fiscal year 2018-19, LACERS recalculated employer contribution rate using actual payroll incurred during the fiscal year which was smaller than projected covered payroll used by the City to make the advance payment on July 15, 2018. As a result, employer contributions for Postemployment Health Care Plan were \$4,838,000 more than required, and this amount was returned to the employer as a credit toward employer contribution for fiscal year 2019-20. Based on the actual payroll, the effective rate of employer contribution for Postemployment Health Care Plan was 5.12%.

Net OPEB Liability

As of June 30, 2019, the components of the net OPEB liability were as follows (in thousands):

| Total OPEB Liability Plan Fiduciary Net Position | \$ 3,334,299 2,812,098 |
|---|------------------------------|
| Plan's Net OPEB Liability | \$ 522,201 |
| Plan Fiduciary Net Position as a percentage of the Total OPEB Liability | 84.3% |

Significant Assumptions

The total OPEB liability as of June 30, 2019 was determined by actuarial valuation as of June 30, 2019. The attribution method and significant assumptions used to measure the total OPEB liability, including assumptions about inflation, and healthcare cost trend rates in the valuation year of June 30, 2019, are summarized below:

| Valuation Date | June 30, 2019 |
|---|--|
| Actuarial Cost Method | Entry Age Cost Method – level percent of salary. |
| Amortization Method: | Level Percent of Payroll – assuming a 3.50% increase in total covered payroll. |
| Actuarial Assumptions: | |
| Date of Experience Study | June 30, 2017 (July 1, 2014 through June 30, 2017) |
| Long-Term Expected Rate of Return | 7.25% |
| Inflation | 3.00% |
| Salary Increase | Range from 3.90% to 10.00% based on years of service, including inflation assumption at 3.00%. |
| Mortality Table for Retirees and Beneficiaries | Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table (separate tables for males and females) with no setback for males and females, projected generationally with the two-dimensional mortality improvement scale MP-2017. |
| Mortality Table for Disabled Retirees | Headcount-Weighted RP-2014 Disabled Retiree Mortality Table (separate tables for males and females) with no setback for males and females, projected generationally with the two-dimensional mortality improvement scale MP-2017. |
| Marital Status | 60% of male and 35% of female retirees who receive a subsidy are assumed to be married or have a qualified domestic partner and elect dependent coverage. |
| Spouse Age Difference | Male retirees are assumed to be four years older than their female spouses. Female retirees are assumed to be two years younger than their male spouses. |
| Surviving Spouse Coverage | With regard to Members who are currently alive, 100% of eligible spouses or domestic partners are assumed to elect continued health coverage after the Member's death. |
| Participation | 100% of retirees becoming eligible for Medicare are assumed to be covered by both Parts A and B. |

Net OPEB Liability (Continued)

Significant Assumptions (Continued)

Healthcare Cost Trend Rates

Medical Premium Trend Rates to be applied in the following fiscal years, to all health plans. Trend Rate is to be applied to the premium for shown fiscal year to calculate next fiscal year's projected premium.

Medical Premium Trend Rates to be applied to fiscal year 2019-2020 and later years are:

| First Fiscal Year (July 1, 2019 through June 30, 2020) | | |
|--|--------|----------|
| Carrier | Under | Age 65 & |
| Camer | Age 65 | Over |
| Kaiser HMO | 3.37% | 3.12% |
| Anthem Blue Cross HMO | 7.89% | N/A |
| Anthem Blue Cross PPO | 3.40% | 3.88% |
| UHC Medicare HMO | N/A | 3.96% |

| Fiscal Year 2020 - 2021 and later | | |
|-----------------------------------|-----------------|--|
| Fiscal Year | Trend (Approx.) | |
| 2020 - 2021 | 6.62% | |
| 2021 - 2022 | 6.37% | |
| 2022 - 2023 | 6.12% | |
| 2023 - 2024 | 5.87% | |
| 2024 - 2025 | 5.62% | |
| 2025 - 2026 | 5.37% | |
| 2026 - 2027 | 5.12% | |
| 2027 - 2028 | 4.87% | |
| 2028 - 2029 | 4.62% | |
| 2029 - 2030 and later | 4.50% | |
| | | |

Dental Premium Trend to be applied is 4.00% for all years.

Medicare Part B Premium Trend is 4.50% for all years.

Net OPEB Liability (Continued)

Discount Rate

The discount rate used to measure the total OPEB liability was 7.25% as of June 30, 2019 and June 30, 2018.

The projection of cash flows used to determine the discount rate assumed that employer contributions will be made at rates equal to the actuarially-determined contribution rates. For this purpose, employer contributions that are intended to fund benefits only for current Plan Members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs for future Plan Members and their beneficiaries, as well as projected contributions from future Plan Members, are not included.

Based on those assumptions, the OPEB plan's fiduciary net position was projected to be available to make all projected future benefit payments for current Plan Members. Therefore, the long-term expected rate of return on OPEB plan investments was applied to all periods of projected benefit payments to determine the Total OPEB Liability as of June 30, 2019 and June 30, 2018.

The long-term expected rate of return on OPEB plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation and subtracting expected investment expenses and a risk margin. The target allocation and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before deducting investment expenses, are summarized in the following table. These values were used in the derivation of the long-term expected investment rate of return assumption for the actuarial valuation as of June 30, 2019. This information is subject to change every three years based on the actuarial experience study. The last experience study was for July 1, 2014 through June 30, 2017. The next experience study will be conducted in 2020.

| Asset Class | Target Allocation | Arithmetic Long-Term Expected Real Rate of Return |
|------------------------|----------------------|---|
| U.S. Large Cap Equity | 14.00% | 5.3% |
| U.S. Small Cap Equity | 5.00 | 6.1 |
| Developed Int'l Large | | - |
| Cap Equity | 17.00 | 6.7 |
| Developed Int'l Small | | |
| Cap Equity | 3.00 | 7.1 |
| Emerging Market Equity | 7.00 | 8.9 |
| Core Bonds | 13.75 | 1.0 |
| High Yield Bonds | 2.00 | 3.1 |
| Bank Loans | 2.00 | 3.0 |
| Emerging Market Debt | 4.50 | 3.4 |
| Private Debt | 3.75 | 5.5 |
| Private Real Estate | 7.00 | 4.7 |
| Real Estate Investment | | |
| Trust (REIT) | 0.50 | 5.9 |
| Treasury Inflation | | |
| Protected Securities | | |
| (TIPS) | 3.50 | 1.0 |
| Commodities | 1.00 | 3.4 |
| Public Real Assets | 1.00 | 4.8 |
| Private Equity | 14.00 | 9.0 |
| Cash | 1.00 | 0.0 |
| Total | 100.00% | |

Sensitivity of the Net OPEB Liability to Changes in the Discount Rate

The following presents the net OPEB liability of LACERS as of June 30, 2019, calculated using the discount rate of 7.25%, as well as what LACERS net OPEB liability would be if it were calculated using a discount rate that is one percentage point lower (6.25%) or one percentage point higher (8.25%) than the current rate (dollar in thousands):

| | Current | |
|-------------|------------|------------|
| 1% | Discount | 1% |
| Decrease | Rate | Increase |
| (6.25%) | (7.25%) | (8.25%) |
| \$1,000,088 | \$ 522,201 | \$ 131,811 |

Net OPEB Liability (Continued)

Sensitivity of the Net OPEB Liability to Changes in the Healthcare Cost Trend Rates

The following presents the net OPEB liability of LACERS as of June 30, 2019, calculated using the healthcare cost trend rates as well as what LACERS net OPEB liability would be if it were calculated using trend rates that are one percentage point lower or one percentage point higher than the current rates (dollar in thousands):

| | Current Healthcare | |
|-----------|-----------------------|-------------|
| 1% | Cost Trend | 1% |
| Decrease | Rates ⁽¹⁾ | Increase |
| \$ 80,855 | \$ 522,201 | \$1,101,307 |

(1) Current healthcare cost trend rates: 6.62% graded down to 4.50% over 9 years for Non-Medicare medical plan costs, and 6.12% graded down to 4.50% over 7 years for Medicare medical plan costs. 4.00% for all years for Dental and 4.50% for all years for Medicare Part B subsidy cost.

4. Contributions Required and Contributions Made

LACERS switched to the Entry Age cost method beginning from the June 30, 2012 actuarial valuation to determine the required annual contribution amount for the Retirement Plan and the Postemployment Health Care Plan. The required annual contribution amount is composed of two components: normal cost, which is the cost of the portion of the benefit that is allocated to a given year, and the payment to amortize the Unfunded Actuarial Accrued Liability (UAAL) which is the difference between LACERS actuarial liabilities and actuarial assets. The components of the UAAL are amortized as a level percent of pay. Based on LACERS funding policy, increases or decreases in the UAAL due to assumption changes are amortized over 20 years, except that healthcare cost trend and premium assumption changes are amortized over 15 years. Plan changes and experience gains and losses are amortized over 15 years, subject to adjustments to comply with GASB requirements on maximum amortization period of 30 years for all layers combined. The amortization periods are "closed" as each layer of the UAAL is systematically amortized over a "fixed" period.

The total contributions to LACERS for the fiscal year ended June 30, 2019, in the amount of \$827,111,000 (\$719,184,000 for the Retirement Plan and \$107,927,000 for the Postemployment Health Care Plan), consisted of the following (in thousands):

| | R | etirement Plan | Postemployment Health Care Plan | | | | |
|--------------------------|----|-------------------|---------------------------------------|---------|--|--|--|
| City Contributions: | | | | | | | |
| Required Contributions | \$ | 478,717 | \$ | 107,927 | | | |
| FDBP | | 110 | | - | | | |
| Total City Contributions | | 478,827 | | 107,927 | | | |
| Member Contributions | | 240,357 | | - | | | |
| Total Contributions | \$ | 719,184 | \$ | 107,927 | | | |

The City contributions made for the Retirement Plan under the Required Contributions category in the amount of \$478,717,000 were equal to 100% of the actuarially determined contribution of the employer. The City contributions made for the Postemployment Health Care Plan, in the amount of \$107,927,000, represents 100% of the actuarially determined contribution of the employer as defined by GASB Statement No. 74. Member contributions in the amount of \$240,357,000 were made toward the Retirement Plan, the voluntary Larger Annuity Plan and Family Death Benefit Plan.

5. Historical Trend Information

Historical trend information, designed to provide information about LACERS progress made in accumulating sufficient assets to pay benefits when due, is presented on pages 37 - 41 for the Retirement Plan and pages 42 - 46 for the Postemployment Health Care Plan.

6. Cash and Short-Term Investments and Investments

The Board has the responsibility for the investment of LACERS funds, and should discharge its duties with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with these matters would use in the conduct of an enterprise of a like character and with like aims, as prescribed by Article XI Section 1106(c) of the City Charter.

LACERS considers investments with a maturity of 12 months or less to be short-term investments. The carrying value of cash and short-term investments at June 30, 2019, for the Retirement Plan and Postemployment Health Care Plan included approximately \$2,375,000 held in LACERS general operating accounts with the City Treasurer and shortterm investments funds (STIF) of \$438,080,000 for a total of \$440,455,000. The amounts held by the City Treasurer are pooled with the monies of other City agencies and invested by the City Treasurer's office. These assets are not individually identifiable. At June 30, 2019, short-term investments included collective STIF of \$82,922,000, international STIF of \$146,133,000, and future contracts initial margin and collaterals of \$209,025,000.

The fair value of derivative instruments, including equity index, commodity, currency, and interest rate future contracts, currency forward contracts and options, and rights and warrants, are recorded in the Statement of Fiduciary Net Position with a net negative value of \$797,000. The changes in fair value of the derivative instruments during the fiscal year are recorded in the Statement of Changes in Fiduciary Net Position as Investment Income. LACERS enters into derivative contracts for investment purposes and to manage risks associated with its investment portfolio. For financial reporting purposes, all of LACERS derivatives for the current and previous fiscal years are classified as investment derivatives.

The notional amount and the fair value of derivative instruments as of June 30, 2019, are as follows (in thousands):

| Derivative Type | Notional Amount | Fair Value | Change in Fair Value | | | |
|--------------------|--------------------|---------------|----------------------------|--|--|--|
| Future Contracts - | | | | | | |
| Commodities | \$ 165,913 | \$(1,001) | \$ (2,058) | | | |
| Equity Index | 16,856 | 58 | (53) | | | |
| Foreign Exchange | (4,667) | (2) | 297 | | | |
| Interest Rate | (24,978) | 38 | 211 | | | |
| Currency Forward | | | | | | |
| Contracts | 269,031 | (87) | (22) | | | |
| Currency Options | N/A | - | (198) | | | |
| Right / Warrants | N/A | 197 | 26 | | | |
| Total Value | | \$ (797) | \$ (1,797) | | | |

Credit Risk – Investments

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. LACERS seeks to maintain a diversified portfolio of fixed income instruments in order to obtain the highest total return for the fund at an acceptable level of risk within this asset class. The credit quality ratings of investments in fixed income securities by Standard and Poor's (S&P), a nationally-recognized statistical rating organization, as of June 30, 2019, are as follows (dollars in thousands):

| S & P Ratings |] | Fair Value | Percentage | | | | |
|---|----|------------|------------|--|--|--|--|
| AAA | \$ | 59,686 | 1.94% | | | | |
| AA | | 1,365,523 | 44.40 | | | | |
| А | | 195,599 | 6.36 | | | | |
| BBB | | 523,906 | 17.04 | | | | |
| BB | | 268,067 | 8.72 | | | | |
| В | | 447,403 | 14.55 | | | | |
| CCC | | 30,097 | 0.98 | | | | |
| CC | | - | 0.00 | | | | |
| С | | 112 | 0.00 | | | | |
| D | | 2,622 | 0.09 | | | | |
| Not Rated | | 182,140 | 5.92 | | | | |
| | | 3,075,155 | 100.00% | | | | |
| U.S. Government Guaranteed Securities ⁽¹⁾ | | 1,496,813 | | | | | |
| Total Fixed Income Securities ⁽²⁾ | \$ | 4,571,968 | | | | | |
| (1) Consists of U.S. Con | | | | | | | |

 Consists of U.S. Government Bonds and GNMA Mortgage-Backed Securities which had the AA+ rating.

(2) Derivatives instrument of \$38,000 are included.

6. Cash and Short-Term Investments and Investments (Continued)

Credit Risk – Derivatives

Derivatives are subject to credit risk that the counterparty to a contract will default. LACERS is exposed to credit risk on reported assets of the investment derivatives that are traded over the counter. The credit risk of exchange traded derivatives for future contracts is considered minimal because the exchange clearing house is the counterparty and guarantees the performance.

LACERS permits investment managers, under the terms of individual guidelines, to use derivative instruments as set forth in each manager's investment guidelines to control portfolio risk. It is the responsibility of these investment managers to actively monitor counterparties on their financial safety and ensure compliance with the investment restrictions. LACERS has no general investment policy with respect to netting arrangements or collateral requirements. However, these individual investment managers have set up the arrangements with the counterparties to net off the positive and negative contracts with the same counterparty in case of the counterparty's default.

As of June 30, 2019, without respect to netting arrangements, LACERS maximum loss on derivative instruments subject to credit risk, namely currency forward contracts, is \$2,010,000. All counterparties of these investment derivatives had the credit rating of "A" or "AA" assigned by S&P.

Custodial Credit Risk

Custodial credit risk for deposits is the risk that, in the event of a financial institution's failure of depository financial institution, LACERS would not be able to recover its deposits or would not be able to recover collateral securities that are in the possession of an outside party. Deposits are exposed to custodial credit risk if they are not insured or not collateralized. As of June 30, 2019, LACERS has exposure to such risk in the amount of \$24,510,000 or 0.4% of the fair value of total international investments. The amount represents non-invested cash denominated in foreign currencies, managed by 13 different investment managers, and held outside of LACERS custodial bank. LACERS policy requires each individual publicly traded equities investment manager to hold no more than 10% of their portfolios in the form of cash. LACERS is in compliance with the policy.

Custodial credit risk for investments is the risk that, in the event of the failure of the counterparty to a transaction, LACERS would not be able to recover the value of the investment or collateral securities that are in the possession of an outside party. Investment securities are exposed to custodial credit risk if the securities are not insured, are not registered in LACERS name, and are held by the counterparty, or the counterparty's trust department or agent but not in LACERS name. As of June 30, 2019, LACERS investments were not exposed to custodial credit risk because all securities were registered in the name of the System.

Concentration of Credit Risk

The investment portfolio as of June 30, 2019, contained no concentration of investments in any one entity that represented 5% or more of the total investment portfolio.

6. Cash and Short-Term Investments and Investments (Continued)

Interest Rate Risk

Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. One of the ways LACERS manages its exposure to interest rate risk is by requiring the fixed income investment managers to maintain their portfolio effective duration within a specified range of the BC U.S. High Yield 2% Capped Index, the BC Intermediate Government Credit Index, the BC Aggregate Bond Index, or the J.P. Morgan EMBI Global Diversified Index, depending on the Board's mandates. The effective duration is a measure, in years, of interest-rate sensitivity in debt investments. The longer the effective duration, the greater the sensitivity to interest rate changes. Information about the sensitivity of the fair values of LACERS investments to market interest rate fluctuations as of June 30, 2019 is provided by the following table that shows the weighted average effective duration of LACERS fixed income securities by investment type (dollars in thousands):

| | | Weighted Average Duration |
|--|--------------|---------------------------------|
| Investment Type | Fair Value | (in Years) |
| Asset-Backed Securities | \$ 61,69 | 0.89 |
| Bank Loans | 8,869 | 0.06 |
| Commercial Mortgage- Backed Securities | 72,77 | 4.36 |
| Corporate Bonds | 1,096,737 | 5.51 |
| Government Agencies | 61,833 | 6.72 |
| Government Bonds | 977,249 | 7.65 |
| Government Mortgage- Backed Securities | 453,618 | 3 3.80 |
| Index Linked Government Bonds | 722,329 | 9 7.04 |
| Municipal/Provincial Bonds | 5,570 | 3.09 |
| Non-Government Backed Collateralized Mortgage | | |
| Obligations (C.M.O.s) | 4,975 | |
| Opportunistic Debts | 203,70 | 0.20 |
| Other Fixed Income (Funds) | 902,587 | 5.73 |
| Derivative Instruments | 38 | <u>3</u> 13.96 |
| Total Fixed Income Securities | \$ 4,571,968 | 3 |

Highly-Sensitive Investments

Highly-sensitive investments are certain debt investments whose terms may cause their fair value to be highly-sensitive to market interest rate changes. Terms include embedded options, coupon multipliers, benchmark indexes, and reset dates. LACERS assetbacked investments have embedded prepayment options that will typically cause prepayments by the obligees of the underlying investments when interest rates fall. Prepayments eliminate the stream of future interest payments and, therefore, diminish the fair value of the asset-backed investment. The following table shows the fair value of LACERS asset-backed investments by investment type (in thousands):

| Investment Type | Fair Value | | | |
|---------------------------------------|------------|---------|--|--|
| Asset-Backed Securities | \$ | 61,691 | | |
| Commercial Mortgage-Backed Securities | | 72,771 | | |
| Government Agencies | | 61,833 | | |
| Government Mortgage-Backed Securities | | 453,618 | | |
| Non-Government Backed C.M.O.s | | 4,975 | | |
| Total Asset-Backed Investments | \$ | 654,888 | | |

Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or deposit. LACERS Asset Allocation policy sets a target of 27% of the total portfolio for non-U.S. investments in equities. In addition, fixed income, real estate, and private equity managers may hold non-U.S. investments depending on their individual mandates. Forward currency contracts are permitted primarily to reduce the foreign currency risk.

6. Cash and Short-Term Investments and Investments (Continued)

Foreign Currency Risk (Continued)

LACERS non-U.S. currency investment holdings as of June 30, 2019, which represent 28.1% of the fair value of total investments, are as follows (in thousands):

| Foreign Currency Type | Ad | Cash and justments to Cash | | Equity | | Fixed Income | | Derivative Instruments | | Other Investments | | Total Fair Value in USD |
|-----------------------------|----|----------------------------------|----|-----------|-------|-----------------|----|---------------------------|----|----------------------|----|-------------------------------|
| Argentine peso | \$ | 1,350 | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 1,350 |
| Australian dollar | | 1,154 | | 175,457 | | - | | (21) | | - | | 176,590 |
| Brazilian real | | (2,666) | | 96,683 | | 215 | | (180) | | - | | 94,052 |
| British pound sterling | | 822 | | 583,513 | | - | | 22 | | - | | 584,357 |
| Canadian dollar | | (735) | | 219,928 | | - | | (16) | | - | | 219,177 |
| Chilean peso | | (5,118) | | 6,623 | | - | | (73) | | - | | 1,432 |
| Chinese yuan renminbi | | (1,828) | | 27,592 | | - | | 44 | | - | | 25,808 |
| Colombian peso | | (1,874) | | 4,281 | | - | | (126) | | - | | 2,281 |
| Czech koruna | | 1,927 | | 2,737 | | - | | (47) | | - | | 4,617 |
| Danish krone | | 53 | | 67,747 | | - | | - | | - | | 67,800 |
| Egyptian pound | | 1,925 | | 4,421 | | - | | (16) | | - | | 6,330 |
| Euro | | (5,924) | | 1,236,144 | 21 | ,014 | | 83 | | 87,943 | | 1,339,260 |
| Hong Kong dollar | | 1,401 | | 465,427 | | - | | (2) | | - | | 466,826 |
| Hungarian forint | | 190 | | 5,226 | | - | | (31) | | - | | 5,385 |
| Indian rupee | | 11,124 | | 130,769 | | - | | (5) | | - | | 141,888 |
| Indonesian rupiah | | (1,087) | | 28,971 | | - | | (63) | | - | | 27,821 |
| Israeli new shekel | | (1,776) | | 18,784 | | - | | (18) | | - | | 16,990 |
| Japanese yen | | 4,308 | | 759,309 | | - | | (33) | | - | | 763,584 |
| Malaysian ringgit | | 1,151 | | 14,575 | | - | | - | | - | | 15,726 |
| Mexican peso | | 4,475 | | 38,323 | | 581 | | - | | - | | 43,379 |
| New Romanian Leu | | - | | - | | - | | - | | - | | - |
| New Taiwan dollar | | (4,979) | | 147,990 | | - | | (72) | | - | | 142,939 |
| New Zealand dollar | | 109 | | 5,562 | | - | | (7) | | - | | 5,664 |
| Norwegian krone | | 97 | | 51,156 | | - | | - | | - | | 51,253 |
| Peruvian nuevo sol | | 2,123 | | - | | - | | (32) | | - | | 2,019 |
| Philippine peso | | (2,744) | | 17,706 | | - | | (35) | | - | | 14,927 |
| Polish zloty | | 934 | | 12,165 | | - | | (57) | | - | | 13,042 |
| Qatari riyal | | - | | 2,413 | | - | | - | | - | | 2,413 |
| Russian ruble | | 5,971 | | 16,471 | | - | | - | | - | | 22,442 |
| Singapore dollar | | 3,065 | | 76,107 | | - | | (57) | | - | | 79,115 |
| South African rand | | 150 | | 76,755 | | - | | (140) | | - | | 76,765 |
| South Korean won | | 1,637 | | 172,525 | | - | | (22) | | - | | 174,140 |
| Swedish krona | | 74 | | 108,389 | | - | | - | | - | | 108,463 |
| Swiss franc | | (1,705) | | 309,567 | | - | | (11) | | - | | 307,851 |
| Thai baht | | (23) | | 41,375 | | - | | (246) | | - | | 41,106 |
| Turkish lira | | (2,132) | | 10,771 | | - | | (489) | | - | | 8,150 |
| United Arab Emirates dirham | | 825 | | 3,006 | | - | | - | | - | | 3,831 |
| Total Investments Held | | | | | | | | | | | | |
| in Foreign Currency | \$ | 12,274 | \$ | 4,938,468 | \$ 21 | ,810 | \$ | (1,650) | \$ | 87,943 | \$ | 5,058,845 |

6. Cash and Short-Term Investments and Investments (Continued)

Fair Value Measurements

LACERS follows GASB Statement No. 72 (GASB 72), *Fair Value Measurements and Application*. GASB 72 addresses accounting and financial reporting issues related to fair value measurements and disclosures. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants in either a government's principal or the most advantageous market at the measurement date.

The System's investments are measured and reported within the fair value hierarchy established by US GAAP. The fair value hierarchy, which has three levels, is based on the valuation inputs used to measure an asset's fair value and gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are as follows:

Level 1 inputs are quoted prices (unadjusted) for identical assets or liabilities in active markets.

Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for an asset or liability, either directly or indirectly. Inputs to the valuation include: 1) quoted prices for similar assets or liabilities in active markets; 2) quoted prices for identical or similar assets or liabilities in markets that are not active; 3) inputs other than quoted prices that are observable for the asset or liability; and 4) market-corroborated inputs.

Level 3 inputs are unobservable inputs for an asset or liability where there are little market activities. The inputs into the determination of fair value are based upon the best information in the circumstances and may require management judgment or estimation.

Schedule of Investments by Fair Value Hierarchy

Equity securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities. Debt and equity securities classified in Level 2 or 3 of the fair value hierarchy are valued using a matrix pricing technique based on the availability of the market price, the pricing source and type, and the country of incorporation of the securities. The hierarchy levels are determined based on the level of corroborative information obtained from other market sources to assert that the prices provided represent observable data.

Private equity funds classified in Level 3 of the fair value hierarchy are valued based on the availability of market price of the underlying assets, and using either a discounted cash flow or Comparable Company Analysis with internal assumptions. Real estate funds classified in Level 2 or 3 of the fair value hierarchy are valued based on periodic appraisals in accordance with industry practice.

The exchange traded Future Contracts classified in Level 1 of the fair value hierarchy are valued using a daily settlement when available or as a daily mark to market. The Foreign Exchange Contracts classified in Level 2 of the fair value hierarchy are valued using independent pricing services including London Close mid-evaluation, WM/Reuters Company, Bloomberg, and Thomson Reuters.

Certain investments which do not have a readily determinable fair value have been valued at the Net Asset Value (NAV) per share (or its equivalent) provided that the NAV is calculated and used as a practical expedient to estimate fair value in accordance with US GAAP requirements. These investments are not categorized within the fair value hierarchy but disclosed in the Investments Measured at the NAV on page 34.

6. Cash and Short-Term Investments and Investments (Continued)

Fair Value Measurements (Continued)

Schedule of Investments by Fair Value Hierarchy (Continued)

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

| The System has the following recurring fair va | | | Fair Value Measurements Using | | | | | |
|---|----|------------|-------------------------------|--|-----------|--|----|---|
| | | | Ac | oted Prices in tive Markets or Identical Assets | Sig Ob | gnificant Other servable Inputs | S | ignificant Other observable Inputs |
| | | Total | | (Level 1) | (I | Level 2) | (| (Level 3) |
| Investments by Fair Value Level: | | | | | | | | |
| Debt securities: | | | | | | | | |
| Government Bonds | \$ | 1,699,578 | \$ | - | \$ | 1,699,578 | \$ | - |
| Government Agencies | | 61,833 | | - | | 61,833 | | - |
| Municipal/Provincial Bonds | | 5,570 | | - | | 5,570 | | - |
| Corporate Bonds | | 1,163,404 | | - | | 1,163,189 | | 215 |
| Bank Loans | | 8,868 | | - | | 8,868 | | - |
| Government Mortgage Bonds | | 453,618 | | - | | 453,618 | | - |
| Commercial Mortgage Bonds | | 72,771 | | - | | 72,771 | | - |
| Opportunistic Debts | | 14,167 | | - | | - | | 14,167 |
| Total Debt Securities | | 3,479,809 | | - | | 3,465,427 | | 14,382 |
| Equity Securities: | | | | | | | | |
| Common Stock: | | | | | | | | |
| Basic Industries | | 1,313,489 | | 1,313,368 | | - | | 121 |
| Capital Goods Industries | | 507,655 | | 507,637 | | 9 | | 9 |
| Consumer & Services | | 2,544,498 | | 2,543,516 | | - | | 982 |
| Energy | | 818,263 | | 818,183 | | - | | 80 |
| Financial Services | | 1,689,279 | | 1,689,207 | | - | | 72 |
| Health Care | | 1,052,003 | | 1,051,818 | | - | | 185 |
| Information Technology | | 1,407,988 | | 1,407,943 | | - | | 45 |
| Real Estate | | 501,487 | | 501,418 | | - | | 69 |
| Miscellaneous | | 10,594 | | 8,947 | | - | | 1,647 |
| Total Common Stock | | 9,845,256 | | 9,842,037 | | 9 | | 3,210 |
| Preferred Stock | | 54,402 | | 54,402 | | - | | - |
| Stapled Securities | | 12,814 | | 12,814 | | - | | - |
| Total Equity Securities | | 9,912,472 | | 9,909,253 | | 9 | | 3,210 |
| Private Equity Funds | | 258,834 | | | | | | 258,834 |
| Real Estate Funds | | 120,996 | | - | | 118,344 | | 2,652 |
| Total Investments by Fair Value Level | \$ | 13,772,111 | \$ | 9,909,253 | \$ | 3,583,780 | \$ | 279,078 |
| | + | | - | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | -,,- | | _,,,,,, |
| Investments Measured at the NAV: | | | | | | | | |
| Common Fund Assets | | 902,587 | | | | | | |
| Private Equity Funds | | 1,749,724 | | | | | | |
| Real Estate Funds | | 671,520 | | | | | | |
| Opportunistic Debts | | 189,534 | | | | | | |
| Total Investments Measured at the NAV | | 3,513,365 | | | | | | |
| Total Investments Measured at Fair Value ⁽¹⁾ | \$ | 17,285,476 | | | | | | |
| Investment Derivative Instruments | | | | | | | | |
| Investment Derivative Instruments: | ¢ | (007) | ¢ | (0.07) | ¢ | | ¢ | |
| Future Contracts (liabilities) | \$ | (907) | Э | (907) | Э | - | \$ | - |
| Foreign Exchange Contracts (liabilities) | | (87) | | - | | (87) | | - |
| Rights/Warrants | ¢ | (707) | \$ | (712) | \$ | (07) | ¢ | 2 |
| Total Investment Derivative Instruments | \$ | (797) | \$ | (712) | \$ | (87) | \$ | 2 |

(1) Excluded \$(797,000) of investment derivative instruments (shown separately) and 705,535,000 of securities lending collateral.

6. Cash and Short-Term Investments and Investments (Continued)

Fair Value Measurements (Continued)

| Investments Measured at the NAV: (in thousands) | | Fair Value | Unfunded ommitments | Redemption Frequency | Redemption Notice Period | |
|--|----|------------|------------------------|-------------------------|--------------------------------|--|
| Common Fund Assets ⁽¹⁾ | \$ | 902,587 | \$ - | Daily | 2 days | |
| Private Equity Funds ⁽²⁾ | | 1,749,724 | 761,307 | N/A | N/A | |
| Real Estate Funds ⁽³⁾ | | 671,520 | 63,049 | Daily, Quarterly | 1-90 days | |
| Opportunistic Debts (4) | | 189,534 | | Monthly | 30 days | |
| Total Investments Measured at the NAV | \$ | 3,513,365 | \$ 824,356 | | | |

- (1) Common fund assets This investment type includes one fund that primarily invests in U.S. bonds. The fair value of the investment has been determined using a practical expedient based on the investments' NAV per share (or its equivalent). This investment can be redeemed daily, with a two-day advance redemption notice period.
- (2) Private equity funds This investment type includes 183 closed-end commingled private equity funds that invest primarily in securities of privately held U.S. and non-U.S. companies. The fair values of these investments have been determined using a practical expedient based on the investments' NAV per share (or its equivalent). These investments are not redeemable. It is expected that these investments will be held for the entire lives of the funds and will not be sold in the secondary market. Distributions from each fund will be received as the underlying assets are liquidated by the fund managers. It is expected that the underlying assets of these funds will be liquidated over the next one to 13 years, depending on the vintage year of each fund.
- (3) Real estate funds This investment type includes 26 commingled real estate funds that invest primarily in U.S. commercial real estate. The fair values of these investments have been determined using a practical expedient based on the investments' NAV per share (or its equivalent). Ten investments, representing approximately 84.3% of the value of this investment type, are in open-end funds, which may be redeemed according to terms specific to each fund. Redemptions generally are subject to the funds' available cash and redemption queues. There is no intention to redeem any of these ten investments in the near future. Sixteen investments, representing approximately 15.7% of the value of this investment type, are in closed-end funds and are not redeemable. It is expected that these investments will be held for the entire lives of the funds and will not be sold in the secondary market. Distributions from each fund will be received as underlying assets are liquidated by the fund managers. It is expected that the underlying assets of these funds will be liquidated over the next one to 12 years, depending on the vintage year of each fund.
- (4) Opportunistic debts This investment type includes two commingled funds: one that invests primarily in senior loans of non-investment grade companies (senior loan fund) and another one invests primarily in the securities and obligations of companies experiencing operational or financial distress (distressed investment fund). The fair values of these investments have been determined using a practical expedient based on the investments' NAV per share (or its equivalent). The senior loan fund, representing approximately 99% of the value of this investment type, can be redeemed monthly. The distressed investment fund, representing approximately 1% of the value of this investment type, is being dissolved and is no longer making new underlying investments. Distributions from this fund will be received as underlying investments are liquidated by the fund manager. It is expected that this fund will be liquidated fully over the next two years.

7. Securities Lending Agreement

Under authority granted by the City Charter, LACERS has entered into various short-term arrangements with its custodian to lend securities to various brokers. There are no restrictions on the amount of securities that may be lent, and the custodian determines which lenders' accounts to lend securities from by using an impartial sequential system that matches loan requests with various lenders' accounts. All lenders are deemed to have relatively equal opportunity to profit from the lending of securities. Therefore, should a collateral deficiency occur beyond the custodian's responsibilities, the deficiency is allocated pro rata among all lenders.

Minimum collateralization is 102% of the fair value of the borrowed U.S. securities and 105% for international securities. Collateral consists of cash, government and corporate securities, and commercial bank obligations. Cash collateral is invested in a separate account comprised of money market or high quality short-term investments. It is the responsibility of the custodian to monitor the collateralization on a daily basis. If the collateral is below the minimum collateralization level, additional collateral will be requested from the borrower to meet the requirement. Collateral requested each morning is required to be received on the same day. If the borrower fails to deliver additional collateral, the custodian would notify the borrower that they are in default under the securities lending agreement. If the borrower does not provide the necessary collateral after receiving notification, the legal agreement allows the custodian to close the contract with the borrower and buy-in the securities on behalf of LACERS.

The borrower has all incidents of ownership with respect to borrowed securities and collateral, including the right to vote and transfer or loan borrowed securities to others. LACERS is entitled to receive all distributions, which are made by the issuer of the borrowed securities, directly from the borrower. Under the agreement, the custodian will indemnify LACERS as a result of the custodian's failure to: 1) make a reasoned determination of the creditworthiness of a potential borrower before lending and, during the term of the loan or loans, the borrower files a petition of bankruptcy or similar action: 2) demand adequate collateral: or 3) otherwise maintain the securities lending program in compliance with the Federal Financial Institutions Examination Council Supervisory Policy on Securities Lending.

These agreements provide for the return of the securities and revenue determined by the type of collateral received. The cash collateral values of securities on loan to brokers are shown at their fair values on the Statement of Fiduciary Net Position.

As of June 30, 2019, LACERS had no losses on securities lending transactions resulting from default of a borrower or lending agent. Due to the nature of the securities lending program and the custodian bank's collateralization of loans at amounts greater than the fair value of the loaned securities, it is deemed that there were no material credit risks to LACERS as defined in GASB Statement No. 28 and GASB Statement No. 40 by its participation in the securities lending program. However, similar to any other investment portfolio, there is risk associated with investing cash collateral in securities. The value of the invested collateral may fall below the value of the cash collateral pledged by the borrowers, and may impair LACERS ability to return cash collateral to the borrowers upon the redemption of loans. In this event, LACERS would be required to make up the deficiency in collateral and would incur a loss.

All securities loans can be terminated on demand by either LACERS or the borrower. Because of this nature, their duration did not generally match the duration of the investment made with the cash collateral. LACERS cannot pledge or sell non-cash collateral unless the borrower defaults.

The following table represents the fair value of securities on loan and cash/non-cash collateral received as of June 30, 2019 (in thousands):

| Securities on Loan | ir Value of curities on Loan | Cash/Non- Cash Collateral Received |
|----------------------|--|---|
| U.S. Government and | | |
| Agency Securities | \$ 405,669 | \$ 413,572 |
| Domestic Corporate | | |
| Fixed Income | | |
| Securities | 151,779 | 154,583 |
| International Fixed | | |
| Income Securities | 274,664 | 289,919 |
| Domestic Stocks | 370,266 | 375,642 |
| International Stocks | 650,727 | 694,322 |
| Total | \$ 1,853,105 | \$ 1,928,038 |

7. Securities Lending Agreement (Continued)

As of June 30, 2019, the fair value of the securities on loan was \$1,853,105,000. The fair value of associated collateral was \$1,928,038,000 (\$705,535,000 of cash collateral and \$1,222,503,000 of non-cash collateral). Non-cash collateral, which LACERS does not have the ability to sell unless the borrower defaults, is not reported in the Statement of Fiduciary Net Position. LACERS income and expenses related to securities lending were \$7,268,000 and \$1,089,000, respectively, for the fiscal year ended June 30, 2019.

8. Future and Forward Contracts

LACERS uses derivative financial instruments, primarily to manage portfolio risk. Future and forward contracts are marked to market and are recorded in the Statement of Fiduciary Net Position at fair value. Future contracts have little credit risk, as organized exchanges are the guarantors. Forward agreements are subject to the creditworthiness of the counterparties, which are principally large financial institutions (refer to Note 6 – Credit Risk - Derivatives on page 29).

As of June 30, 2019, LACERS had outstanding commodities, equity index, and interest rate future contracts with an aggregate notional amount of \$157,792,000, and foreign exchange future contract with a negative notional amount of \$4,667,000 due to its short position. In addition, at June 30, 2019, LACERS had outstanding forward purchase commitments with a notional amount of \$269,031,000 and offsetting forward sales commitments with notional amounts of \$269,031,000, which expire in September 2019. LACERS maintains margin collateral on the positions with brokers, consisting of cash and U.S. Treasury Bills. The total collateral margin was \$209,025,000 as of June 30, 2019.

9. Operating Lease

The System leases building facilities under a noncancelable operating lease that expires in March 2023, at which time a three-year renewal option is available.

The future minimum lease commitments are as follows as of June 30, 2019:

| Fiscal Year 2020 | \$ 806,000 |
|------------------|------------|
| Fiscal Year 2021 | 1,003,000 |
| Fiscal Year 2022 | 1,043,000 |
| Fiscal Year 2023 | 813,000 |

10. Commitments and Contingencies

As of June 30, 2019, LACERS was committed to future purchases of real estate and private equity investments at an aggregate cost of approximately \$1,168,724,000, including agreements for acquisition not yet initiated.

The federal Patient Protection and Affordable Care Act (PPACA, also referred to as the Affordable Care Act) of 2010 contains a provision that would impose a 40% excise tax on the annual value of high-cost health plans that exceed certain dollar thresholds beginning in 2022 (deferred from year 2020). If there is no change in the law or LACERS plan provisions between now and 2022, and if the current medical cost trend stays substantially the same during the same period, some of LACERS postemployment health care benefits will be subject to the excise tax in 2022 and thereafter. GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions, requires the inclusion of the excise tax in the liability. The impact of potential excise tax imposed by the Affordable Care Act (ACA) and related statutes on certain health plans in calculating the contribution rates for the employer was reflected in the valuation for fiscal year June 30, 2019.

11. Subsequent Events

Date of Management's Review

The potential for subsequent events was evaluated through November 25, 2019, which was the date of management's review.

Purchase of a Real Estate Property

On October 9, 2019, LACERS Board approved the purchase of a commercial office building and underground parking structure located at 977 N. Broadway in Los Angeles, California to serve as LACERS future headquarters building with the purchase price not to exceed \$34,000,000. The purchase was settled at \$33,750,000 on October 23, 2019.

REQUIRED SUPPLEMENTARY INFORMATION

Required Supplementary Information Retirement Plan

The schedules included in the Required Supplementary Information for the Retirement Plan are intended to show information for 10 years. However, the following schedules do not have a full 10-year trend, and therefore, Los Angeles City Employees' Retirement System (LACERS or the System) presented information only for those years for which information is available:

- 1) Schedule of Net Pension Liability
- 2) Schedule of Changes in Net Pension Liability and Related Ratios
- 3) Schedule of Investment Returns

Additional years will be displayed in the future as they become available.

Schedule of Net Pension Liability ⁽¹⁾ As of June 30 (Dollars in Thousands)

| | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 | 2013 |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Total Pension Liability | \$20,793,421 | \$19,944,578 | \$18,458,188 | \$17,424,996 | \$16,909,996 | \$16,248,853 | \$14,881,663 |
| Plan Fiduciary Net Position | 14,815,593 | 14,235,230 | 13,180,516 | 11,809,329 | 11,920,570 | 11,791,079 | 10,154,486 |
| Plan's Net Pension Liability | \$ 5,977,828 | \$ 5,709,348 | \$ 5,277,672 | \$ 5,615,667 | \$ 4,989,426 | \$ 4,457,774 | \$ 4,727,177 |
| Plan Fiduciary Net Position as a percentage of the Total Pension Liability | 71.3% | 71.4% | 71.4% | 67.8% | 70.5% | 72.6% | 68.2% |

(1) In calculating the Plan's net pension liability, the total pension liability and the Plan fiduciary net position exclude amounts associated with non-pension related benefits (Family Death and Larger Annuity Benefits).

Note to Schedule:

Refer to the notes to the Schedule of Changes in Net Pension Liability and Related Ratios.

Required Supplementary Information Retirement Plan

Schedule of Changes in Net Pension Liability and Related Ratios ⁽¹⁾ For the Fiscal Years Ended June 30 (Dollars in Thousands)

| | _ | 2019 | 2018 | 2017 | 2016 |
|--|----|------------|------------------|------------------|------------------|
| Total Pension Liability | | | | | |
| Service cost ⁽²⁾ | \$ | 370,409 | \$ 352,283 | \$ 340,759 | \$ 322,574 |
| Interest | | 1,439,661 | 1,332,878 | 1,302,278 | 1,263,556 |
| Changes of benefit terms | | - | 25,173 | - | - |
| Differences of expected and actual experience | | (46,035) | 144,224 | (146,474) | (300,813) |
| Changes of assumptions | | - | 483,717 | 340,718 | - |
| Benefit payments, including refunds of Member | | | | | |
| contributions | | (915,192) | (851,885) | (804,089) | (770,317) |
| Net change in total pension liability | | 848,843 | 1,486,390 | 1,033,192 | 515,000 |
| Total pension liability-beginning | | 19,944,578 | 18,458,188 | 17,424,996 | 16,909,996 |
| Total pension liability-ending (a) | \$ | 20,793,421 | \$ 19,944,578 | \$ 18,458,188 | \$ 17,424,996 |
| Plan fiduciary net position | | | | | |
| Contributions-employer | \$ | 478,717 | \$ 450,195 | \$ 453,356 | \$ 440,546 |
| Contributions-Member | | 237,087 | 230,757 | 221,829 | 206,377 |
| Net investment income | | 799,351 | 1,243,817 | 1,517,545 | 29,358 |
| Benefit payments, including refunds of Member | | | | | |
| contributions | | (915,192) | (851,885) | (804,089) | (770,318) |
| Administrative expenses | | (19,600) | (17,699) | (17,454) | (17,204) |
| Others ⁽³⁾ | | | (471) | - | - |
| Net change in Plan fiduciary net position | | 580,363 | 1,054,714 | 1,371,187 | (111,241) |
| Plan fiduciary net position-beginning | | 14,235,230 | 13,180,516 | 11,809,329 | 11,920,570 |
| Plan fiduciary net position-ending (b) | \$ | 14,815,593 | \$ 14,235,230 | \$ 13,180,516 | \$ 11,809,329 |
| Plan's net pension liability-ending (a)-(b) | \$ | 5,977,828 | \$ 5,709,348 | \$ 5,277,672 | \$ 5,615,667 |
| Plan fiduciary net position as a percentage of the total pension liability (b)/(a) | | 71.3% | 71.4% | 71.4% | 67.8% |
| Covered payroll | \$ | 2,108,171 | \$ 2,057,565 | \$ 1,973,049 | \$ 1,876,946 |
| Plan's net pension liability as a percentage of covered payroll | | 283.6% | 277.5% | 267.5% | 299.2% |

(1) In calculating the Plan's net pension liability, the total pension liability and the Plan fiduciary net position exclude amounts associated with non-pension related benefits (Family Death and Larger Annuity Benefits).

(2) The service cost is based on the previous year's valuation.

(3) On July 1, 2015, the System segregated Members' voluntary larger annuity contributions into the (non-pension related) Reserve for Larger Annuity Contributions pursuant to a suggestion made by the System's actuarial consultant. The Reserve balance for Larger Annuity Contributions as of June 30, 2015 was \$5,200,000. On July 1, 2017, the System reallocated \$471,000 of interest from the Reserve for Mandatory Member Contributions into the Reserve for Voluntary Member Contributions.

Schedule of Changes in Net Pension Liability and Related Ratios ⁽¹⁾ (Continued) For the Fiscal Years Ended June 30 (Dollars in Thousands)

| | 2015 | 2014 | 2013 |
|---|------------------|------------------|------------------|
| Total Pension Liability | | | |
| Service cost ⁽²⁾ | \$ 322,380 | \$ 317,185 | \$ 312,372 |
| Interest | 1,215,151 | 1,149,966 | 1,112,561 |
| Changes of benefit terms | - | - | - |
| Differences of expected and actual experience | (135,821) | (164,247) | (235,829) |
| Changes of assumptions | - | 785,439 | - |
| Benefit payments, including refunds of Member contributions | (740,567) | (721,153) | (701,400) |
| Net change in total pension liability | 661,143 | 1,367,190 | 487,704 |
| Total pension liability-beginning | 16,248,853 | 14,881,663 | 14,393,959 |
| Total pension liability-ending (a) | \$ 6,909,996 | \$ 16,248,853 | \$ 14,881,663 |
| Plan fiduciary net position | | | |
| Contributions-employer | \$ 381,141 | \$ 357,649 | \$ 346,181 |
| Contributions-Member | 202,463 | 203,975 | 197,722 |
| Net investment income | 306,980 | 1,810,782 | 1,268,939 |
| Benefit payments, including refunds of Member contributions | (740,567) | (721,153) | (701,400) |
| Administrative expenses | (15,860) | (12,372) | (13,281) |
| Others ⁽³⁾ | (4,666) | (2,288) | (2,514) |
| Net change in Plan fiduciary net position | 129,491 | 1,636,593 | 1,095,647 |
| Plan fiduciary net position-beginning | 11,791,079 | 10,154,486 | 9,058,839 |
| Plan fiduciary net position-ending (b) | \$ 11,920,570 | \$ 11,791,079 | \$ 10,154,486 |
| Plan's net pension liability-ending (a)-(b) | \$ 4,989,426 | \$ 4,457,774 | \$ 4,727,177 |
| Plan fiduciary net position as a percentage | | | |
| of the total pension liability (b)/(a) | 70.5% | 72.6% | 68.2% |
| Covered payroll | \$ 1,835,637 | \$ 1,802,931 | \$ 1,736,113 |
| Plan's net pension liability as a percentage of covered payroll | 271.8% | 247.3% | 272.3% |

(1) In calculating the Plan's net pension liability, the total pension liability and the Plan fiduciary net position exclude amounts associated with non-pension related benefits (Family Death and Larger Annuity Benefits).

(2) The service cost is based on the previous year's valuation.

(3) On July 1, 2015, the System segregated Members' voluntary larger annuity contributions into the (non-pension related) Reserve for Larger Annuity Contributions pursuant to a suggestion made by the System's actuarial consultant. The Reserve balance for Larger Annuity Contributions as of June 30, 2015 was \$5,200,000. On July 1, 2017, the System reallocated \$471,000 of interest from the Reserve for Mandatory Member Contributions into the Reserve for Voluntary Member Contributions.

Schedule of Changes in Net Pension Liability and Related Ratios (Continued)

Notes to Schedule:

Changes of Benefit Terms: The June 30, 2018 calculation reflected the newly adopted enhanced benefits for Airport Peace Officers (APO) who elected to stay at LACERS Plan (refer to Note 2 – Retirement Plan Description, Tier 1 – Enhanced Benefits on page 17). Enhanced benefits became effective as of January 7, 2018.

Change of Assumptions: The June 30, 2014 calculations reflected various assumption changes based on the triennial experience study for the period from July 1, 2011 through June 30, 2014. The increase of total pension liability for fiscal years ended on June 30, 2014 is primarily due to the lowered assumed investment rate of return from 7.75% to 7.50%, and longer assumed life expectancies for Members and beneficiaries while the June 30, 2017 increase is primarily due to the lowered assumed investment rate of return from 7.50% to 7.25%.

The June 30, 2018 calculations reflected changes in the actuarial assumptions adopted by the Board on August 14, 2018 based on the triennial experience study for the period from July 1, 2014 through June 30, 2017, including revising the mortality tables from static to generational to reflect future mortality improvement, contributing to increased total pension liability.

Schedule of Contribution History (Dollars in Thousands)

| Fiscal Year | Actuarially Determined Contributions (ADC) | Contributions in Relation to ADC | Contribution Deficiency | Covered Payroll | Contributions as a Percentage of Covered Payroll |
|----------------|---|--|----------------------------|--------------------|--|
| 2010 | \$ 258,643 | \$ 258,643 | \$ - | \$ 1,827,864 | 14.2% |
| 2011 | 303,561 | 303,561 | - | 1,678,059 | 18.1 |
| 2012 | 308,540 | 308,540 | - | 1,715,197 | 18.0 |
| 2013 | 346,181 | 346,181 | - | 1,736,113 | 19.9 |
| 2014 | 357,649 | 357,649 | - | 1,802,931 | 19.8 |
| 2015 | 381,141 | 381,141 | - | 1,835,637 | 20.8 |
| 2016 | 440,546 | 440,546 | - | 1,876,946 | 23.5 |
| 2017 | 453,356 | 453,356 | - | 1,973,049 | 23.0 |
| 2018 | 450,195 | 450,195 | - | 2,057,565 | 21.9 |
| 2019 | 478,717 | 478,717 | - | 2,108,171 | 22.7 |

Notes to Schedule:

Valuation DateActuarially determined contribution rates are calculated as of June 30, two years prior to
the end of the fiscal year in which the contributions are reported.

Methods and Assumptions Used to Determine Contribution Rates:

| Actuarial Cost Method | Entry Age Actuarial Cost Method (individual basis). |
|-----------------------|--|
| Amortization Method | Level Percent of Payroll. |
| Amortization Period | Multiple layers – closed amortization period. Actuarial gains/losses are amortized over 15 years. Assumption or method changes are amortized over 20 years. Plan changes, including the 2009 Early Retirement Incentive Program (ERIP), are amortized over 15 years. Future ERIPs will be amortized over five years. Any actuarial surplus is amortized over 30 years. The existing layers on June 30, 2012, except those arising from the 2009 ERIP and the two Governmental Accounting Standards Board (GASB) Statements No. 25/27 layers, were combined and amortized over 30 years. |

Schedule of Contribution History (Continued)

Notes to Schedule (Continued)

Methods and Assumptions Used to Determine Contribution Rates (Continued)

| Asset Valuation Method | Fair value of assets less unrecognized returns in each of the last seven years. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized over a seven-year period. The actuarial value of assets cannot be less than 60% or greater than 140% of the market value of assets. An Ad Hoc change was made in 2018 to combine the unrecognized returns and losses of prior years as of June 30, 2017 into one layer and recognize it evenly over six years from fiscal year 2017-18 through fiscal year 2022-23. |
|---|--|
| Actuarial Assumptions: | |
| Investment Rate of Return Inflation Real Across-the-Board | 7.25% 3.00% |
| Salary Increase | 0.50% |
| Projected Salary Increases ⁽¹⁾ | Ranges from 3.90% to 10.00% based on years of service. |
| Cost of Living Adjustment ⁽²⁾ | Tier 1: 3.00% Tier 3: 2.00% |
| Mortality | Healthy: Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table (separate tables for males and females) with no setback for males and females, projected generationally with the two-dimensional mortality improvement scale MP-2017. |
| | Disabled: Headcount-Weighted RP-2014 Disabled Retiree Mortality Table (separate tables for males and females) with no setback for males and females, projected generationally with the two-dimensional mortality improvement scale MP-2017. |
| (1) Includes inflation at promotional increases | 3.00% as of June 30, 2019, plus across-the-board salary increase of 0.50% plus merit and |

(2) Actual increases are contingent upon Consumer Price Index (CPI) increases with a 3.00% maximum for Tier 1 and a 2.00% maximum for Tier 3.

Schedule of Investment Returns For the Fiscal Years Ended June 30

| | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 |
|---|------|------|-------|------|------|-------|
| Annual money-weighted rate of return, net of investment expenses | 5.5% | 9.3% | 12.6% | 0.2% | 2.6% | 18.2% |

Note to Schedule:

The rates of investment returns for the fiscal years 2015 and 2016 were much lower compared to other fiscal years. It reflected the impact of divergent and volatile global markets on LACERS investment portfolio over these reporting periods.

Required Supplementary Information Postemployment Health Care Plan

The schedules included in the Required Supplementary Information for the Postemployment Health Care Plan are intended to show information for 10 years. However, the following schedules do not have a full 10-year trend, and therefore, Los Angeles City Employees' Retirement System (LACERS or the System) presented information only for those years for which information is available:

- 1) Schedule of Net OPEB Liability
- 2) Schedule of Changes in Net OPEB Liability and Related Ratios
- 3) Schedule of Investment Returns

Additional years will be displayed in the future as they become available.

Schedule of Net OPEB Liability As of June 30 (Dollars in Thousands)

| | 2019 | 2018 | 2017 | 2016 |
|---|------------------------------|------------------------------|------------------------------|------------------------------|
| Total OPEB Liability Plan Fiduciary Net Position | \$ 3,334,299 2,812,098 | \$ 3,256,827 2,676,371 | \$ 3,005,806 2,438,862 | \$ 2,793,689 2,134,877 |
| Plan's Net OPEB Liability | \$ 522,201 | \$ 580,456 | \$ 566,944 | \$ 658,812 |
| Plan Fiduciary Net Position as a percentage of the Total OPEB Liability | 84.3% | 82.2% | 81.1% | 76.4% |

Note to Schedule:

Refer to the notes to the Schedule of Changes in Net OPEB Liability and Related Ratios.

Required Supplementary Information Postemployment Health Care Plan

Schedule of Changes in Net OPEB Liability and Related Ratios For the Fiscal Years Ended June 30 (Dollars in Thousands)

| | 2019 | 2018 | 2017 | 2016 |
|---|-----------------|-----------------|-----------------|-----------------|
| Total OPEB Liability | | | | |
| Service cost ⁽¹⁾ | \$ 74,478 | \$ 74,611 | \$ 68,385 | \$ 62,360 |
| Interest | 236,678 | 218,686 | 210,170 | 199,078 |
| Changes of benefit terms | - | 948 | - | 17,215 |
| Differences between expected and actual experience ⁽²⁾ | (134,053) | (7,321) | 19,666 | (22,013) |
| Changes of assumptions | 33,940 | 92,178 | 33,512 | - |
| Benefit payments ⁽³⁾ | (133,571) | (128,081) | (119,616) | (109,940) |
| Net change in total OPEB liability | 77,472 | 251,021 | 212,117 | 146,700 |
| Total OPEB liability-beginning | 3,256,827 | 3,005,806 | 2,793,689 | 2,646,989 |
| Total OPEB liability-ending (a) | \$ 3,334,299 | \$ 3,256,827 | \$ 3,005,806 | \$ 2,793,689 |
| | | | | |
| Plan fiduciary net position | | | | |
| Contributions-employer | \$ 107,927 | \$ 100,909 | \$ 97,457 | 105,983 |
| Net investment income (loss) | 166,470 | 269,380 | 330,708 | (344) |
| Benefit payments ⁽³⁾ | (133,571) | (128,081) | (119,616) | (109,940) |
| Administrative expense | (5,099) | (4,699) | (4,564) | (4,528) |
| Net change in Plan fiduciary net position | 135,727 | 237,509 | 303,985 | 8,829 |
| Plan fiduciary net position-beginning | 2,676,371 | 2,438,862 | 2,134,877 | 2,143,706 |
| Plan fiduciary net position-ending (b) | \$ 2,812,098 | \$ 2,676,371 | \$ 2,438,862 | \$ 2,134,877 |
| Plan's net OPEB liability-ending (a)-(b) | \$ 522,201 | \$ 580,456 | \$ 566,944 | \$ 658,812 |
| Plan fiduciary net position as a percentage of the total OPEB liability (b)/(a) | 84.3% | 82.2% | 81.1% | 76.4% |
| Covered payroll | \$ 2,108,171 | \$ 2,057,565 | \$ 1,973,049 | \$ 1,876,946 |
| Plan's net OPEB liability as a percentage of covered payroll | 24.8% | 28.2% | 28.7% | 35.1% |

(1) The service cost is based on the previous year's valuation.

(2) After the GASB Statement No. 74 valuation report was issued for the fiscal year June 30, 2017, the System's consulting actuary reclassified \$12,450,000 of OPEB liability from the *Changes of Assumption* (revised from \$45,962,000 to \$33,512,000) to the *Differences Between Expected and Actual Experience* (revised from \$7,216,000 to \$19,666,000). However, this reclassification did not affect the recommended employer contribution rates or results of the OPEB valuation in total.

(3) Benefit payments associated with the self-funded insurance premium of \$6,090,000 and Member's health insurance premium reserve of \$468,000 that were reported as both additions and deductions in fiduciary net position for the fiscal year 2019 were excluded from the above schedule.

Schedule of Changes in Net OPEB Liability and Related Ratios (Continued)

Notes to Schedule:

Changes of Benefit Terms: The OPEB liability from the changes of benefit terms for the fiscal year ended June 30, 2016 is primarily due to providing retiree healthcare benefits to part-time employees who retired with 10 years of service but less than 10 years of service credit (refer to Note 3 – Postemployment Health Care Plan Description, Eligibility Requirement and Benefits Provided on pages 22 - 23) while the June 30, 2018 increase is primarily as a result of the newly adopted enhanced benefits for Airport Peace Officers (APO) who elected to stay at LACERS Plan (refer to Note 2 – Retirement Plan Description, Tier 1 – Enhanced Benefits on page 17) as some APO Members may retire earlier than expected. Enhanced benefits became effective as of January 7, 2018.

Changes of Assumptions: The OPEB liability from the changes of assumptions for the fiscal year ended June 30, 2017 is primarily due to the lowered assumed investment rate of return, from 7.50% to 7.25%, and the June 30, 2018 increase is primarily due to the new actuarial assumptions adopted in the triennial experience study (July 1, 2014 through June 30, 2017), including revising the mortality tables from static to generational, while the June 30, 2019 increase is mainly due to the increased Medicare Part B Premium Trend Rate from 4.0% to 4.5%.

Required Supplementary Information Postemployment Health Care Plan

| Fiscal Year | Actuarially Determined Contributions (ADC) | Contributions in Relation to ADC | Contribution Deficiency | Covered Payroll | Contributions as a Percentage of Covered Payroll |
|----------------|---|--|----------------------------|--------------------|--|
| 2010 | \$ 96,511 | \$ 96,511 | \$ - | \$ 1,827,864 | 5.3% |
| 2011 | 107,396 | 107,396 | - | 1,678,059 | 6.4 |
| 2012 | 115,209 | 115,209 | - | 1,715,197 | 6.7 |
| 2013 | 72,916 | 72,916 | - | 1,736,113 | 4.2 |
| 2014 | 97,841 | 97,841 | - | 1,802,931 | 5.4 |
| 2015 | 100,467 | 100,467 | - | 1,835,637 | 5.5 |
| 2016 | 105,983 | 105,983 | - | 1,876,946 | 5.7 |
| 2017 | 97,457 | 97,457 | - | 1,973,049 | 4.9 |
| 2018 | 100,909 | 100,909 | - | 2,057,565 | 4.9 |
| 2019 | 107,927 | 107,927 | - | 2,108,171 | 5.1 |

Schedule of Contribution History (Dollars in Thousands)

Notes to Schedule:

Valuation Date Actuarially determined contribution rates are calculated as of June 30, two years prior to the end of the fiscal year in which the contributions are reported.

Methods and Assumptions Used to Determine Contribution Rates:

Actuarial Cost Method Entry Age Actuarial Cost Method (level percent of payroll).

Amortization Method Level Percent of Payroll.

Amortization Period Multiple layers – closed amortization period.

Actuarial gains/losses are amortized over 15 years. Non-health related assumptions or method changes are amortized over 20 years. Health related assumptions or method changes are amortized over 15 years. Plan changes, including the 2009 Early Retirement Incentive Program (ERIP), are amortized over 15 years. Future ERIPs will be amortized over five years. Any actuarial surplus is amortized over 30 years. The existing layers on June 30, 2012, except those arising from the 2009 ERIP and the two Governmental Accounting Standards Board (GASB) Statements No. 25/27 layers, were combined and amortized over 30 years.

Asset Valuation Method Fair value of assets less unrecognized returns in each of the last seven years. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized over a sevenyear period. The actuarial value of assets cannot be less than 60% or greater than 140% of the market value of assets. An Ad Hoc change was made in 2018 to combine the unrecognized returns and losses of prior years as of June 30, 2017 into one layer and recognize it evenly over six years from fiscal year 2017-18 through fiscal year 2022-23.

| Actuarial Assumptions: | |
|---------------------------|-------|
| Investment Rate of Return | 7.25% |
| Inflation | 3.00% |
| Real Across-the-Board | |
| Salary Increase | 0.50% |

Schedule of Contribution History (Continued)

Notes to Schedule (Continued)

Methods and Assumptions Used to Determine Contribution Rates (Continued)

| Projected Salary Increases ⁽¹⁾ | Ranges from 3.90% to 10.00% based on years of service. |
|--|---|
| Mortality | Healthy: Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table (separate tables for males and females) with no setback for males and females, projected generationally with the two-dimensional mortality improvement scale MP-2017. |
| | Disabled: Headcount-Weighted RP-2014 Disabled Retiree Mortality Table (separate tables for males and females) with no setback for males and females, projected generationally with the two-dimensional mortality improvement scale MP-2017. |

(1) Includes inflation at 3.00% as of June 30, 2019, plus across-the-board salary increase of 0.50% plus merit and promotional increases.

Schedule of Investment Returns For the Fiscal Years Ended June 30

| | 2019 | 2018 | 2017 |
|---------------------------------------|------|-------|-------|
| | | | |
| Annual money-weighted rate of return, | | | |
| net of investment expenses | 6.1% | 10.8% | 15.2% |

Note to Schedule:

The required disclosure about factors that significantly affect trends in the money-weighted rate of return is not provided as only three years' rates are available. As additional years' money-weighted rate of return become available, the System will disclose factors that significantly affect trends in the rate of return.

SUPPLEMENTAL SCHEDULES

Schedule of Administrative Expenses For the Fiscal Year Ended June 30, 2019 (In Thousands)

| | Retirement Plan | Postemployment Health Care Plan | Total |
|--------------------------------------|-------------------|------------------------------------|--------------------|
| Personnel Services: Salaries | \$ 9,506 | \$ 2,148 | \$ 11,654 |
| Employee Benefits and Development | \$ 9,500 4,008 | \$ 2,148 906 | \$ 11,034 4,914 |
| Total Personnel Services | 13,514 | 3,054 | 16,568 |
| Professional Services: | | | |
| Actuarial | 261 | 59 | 320 |
| Audit | 76 | 17 | 93 |
| Legal Counsel | 562 | 133 | 695 |
| Disability Evaluation | 179 | 41 | 220 |
| Retirees' Health Admin Consulting | - | 704 | 704 |
| Benefit Payroll Processing | 192 | 43 | 235 |
| Self-Funded Dental Plan Admin Fees | - | 365 | 365 |
| Other Consulting | 101 | 23 | 124 |
| Total Professional Services | 1,371 | 1,385 | 2,756 |
| Information Technology: | | | |
| Computer Hardware and Software | 526 | 119 | 645 |
| Computer Maintenance and Support | 635 | 143 | 778 |
| Total Information Technology | 1,161 | 262 | 1.423 |
| Leases: | | | |
| Office Space | 750 | 170 | 920 |
| Office Equipment | 34 | 8 | 42 |
| Total Leases | 784 | 178 | 962 |
| Other Expenses: | | | |
| Fiduciary Insurance | 28 | 6 | 34 |
| Educational and Due Diligence Travel | 46 | 10 | 56 |
| Office Expenses | 313 | 71 | 384 |
| Depreciation and Amortization | 589 | 133 | 722 |
| Total Other Expenses | 976 | 220 | 1,196 |
| Total Administrative Expenses | \$ 17,806 | \$ 5,099 | \$ 22,905 |

Schedule of Investment Fees and Expenses For the Fiscal Year Ended June 30, 2019 (In Thousands)

| | Assets Under Management | | Fees and Expenses | | |
|---|----------------------------|-----------------------------------|----------------------|-------------------------------------|--|
| Retirement Plan | | | | | |
| Investment Management Fees: Fixed Income Managers Equity Managers | \$ | 3,845,917 8,337,624 | \$ | 5,062 20,041 | |
| Subtotal | | 12,183,541 | | 25,103 | |
| Other Investment Fees and Expenses: Private Equity Consulting Fees Real Estate Consulting Fees Other Consulting Fees Investment Related Administrative Expenses Subtotal | | N/A N/A N/A N/A | | 599 175 367 1,909 3,050 | |
| Postemployment Health Care Plan | | | | | |
| Investment Management Fees: Fixed Income Managers Equity Managers Subtotal | | 726,050 1,574,014 2,300,064 | | 1,144 4,529 5,673 | |
| Other Investment Fees and Expenses: Private Equity Consulting Fees Real Estate Consulting Fees Other Consulting Fees Investment Related Administrative Expenses | | N/A N/A N/A N/A | | 135 40 83 431 | |
| Subtotal | | N/A | | 689 | |
| Total Investment Fees and Expenses excluding Private Equity and Real Estate | \$ | 14,483,605 | \$ | 34,515 | |
| Private Equity Managers' Fees and Expenses: Retirement Plan Postemployment Health Care Plan | \$ | 1,689,590 318,968 | \$ | 32,289 7,297 | |
| Total Private Equity Managers' Fees and Expenses | \$ | 2,008,558 | \$ | 39,586 | |
| Real Estate Managers' Fees and Expenses: Retirement Plan Postemployment Health Care Plan | \$ | 666,661 125,855 | \$ | 8,011 1,810 | |
| Total Real Estate Managers' Fees and Expenses | \$ | 792,516 | \$ | 83,922 | |
| Total Assets Under Management and Fees and Expenses | \$ | 17,284,679 ⁽¹⁾ | \$ | 83,922 ⁽²⁾ | |

(1) Excluding Security Lending Collateral assets of \$705,535,000. Total Investments including Security Lending Collateral was \$17,990,214,000.

(2) Including Investment Management Fees and Expenses of \$81,582,000 and Investment Related Administrative Expenses of \$2,340,000.