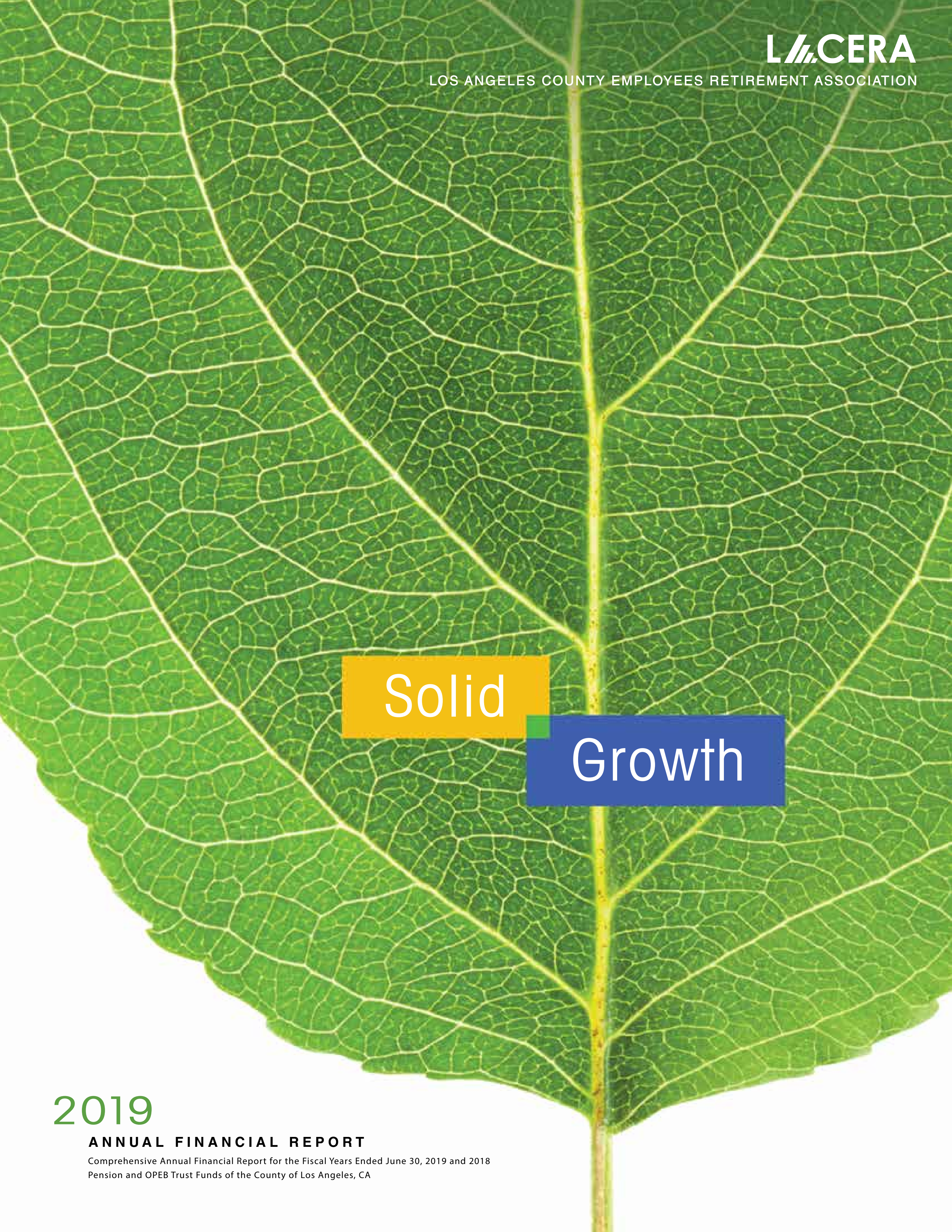

LACERA
LOS ANGELES COUNTY EMPLOYEES RETIREMENT ASSOCIATION

# Solid Growth

# 2019
## ANNUAL FINANCIAL REPORT

Comprehensive Annual Financial Report for the Fiscal Years Ended June 30, 2019 and 2018
Pension and OPEB Trust Funds of the County of Los Angeles, CA

For more than 80 years, LACERA has been proudly fulfilling our mission to produce, protect, and provide the promised benefits of L.A. County employees and retirees. In order to achieve that, LACERA's approach year after year has been the solid, sustained growth of the fund and the services we provide to our members.

# SOLID GROWTH
*Los Angeles County*


Los Angeles County
Employees Retirement
Association

**Santos H. Kreimann**
Chief Executive Officer

**JJ Popowich**
Assistant Executive Officer

300 N. Lake Avenue
Pasadena, CA 91101
626-564-6000  lacera.com

## Certificate of Achievement

Each year, a Certificate of Achievement for Excellence in Financial Reporting is presented by the **Government Finance Officers Association** of the United States and Canada (GFOA) to government units and public employee retirement systems whose Comprehensive Annual Financial Reports (CAFRs) achieve the highest standards in government accounting and reporting. This report must satisfy both Generally Accepted Accounting Principles (GAAP) and applicable legal requirements. For the **29th consecutive year**, LACERA has earned this prestigious award for its CAFR. We believe our current CAFR continues to meet the Certificate of Achievement Program's requirements, and we will submit it to the GFOA to determine its eligibility for another certificate.

## PPCC Award

LACERA received the **Public Pension Coordinating Council's** (PPCC)* Public Pension Standards 2019 Award, in recognition of meeting professional standards for plan design and administration as set forth in the Public Pension Standards. The Public Pension Standards are intended to reflect minimum expectations for public retirement systems management and administration, and serve as a benchmark by which all defined benefit public plans should be measured. LACERA is a **17-time recipient** of this important award.

**A confederation of NASRA, NCPERS, and NCTR.*

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**Employer Contribution Rates**

**Our long-term stability and fund health are based on our ability to evolve, embrace diversity, and maintain an environment conducive to growth.**

**Santos H. Kreimann**
Chief Executive Officer

December 3, 2019

Los Angeles County Employees Retirement Association
Board of Retirement and Board of Investments
300 N. Lake Avenue, Suite 820
Pasadena, CA 91101

I am pleased to present the Los Angeles County Employees Retirement Association (LACERA) Comprehensive Annual Financial Report (CAFR) for the fiscal year ended June 30, 2019. This report is intended to provide a detailed review of the association's financial, actuarial, and investment status. LACERA has the duty and authority to administer defined retirement plan benefits for the employees of Los Angeles County and outside districts. It is our mission to produce, protect, and provide the promised benefits to our members and their beneficiaries. In the course of fulfilling that mission, we provide comprehensive customer service to over 174,000 members, which includes over 66,000 benefit recipients.

## Solid Growth

In order to fulfill our commitments to our members now and into the future, LACERA's growth since our founding more than 80 years ago has been steady and multidirectional. Similar to the way a tree expands its roots, trunk, or crown, LACERA has grown in several aspects—in its membership, scope of services, and fund value. Likewise, LACERA gets stronger as it ages, advancing its reputation as an organization and its influence as an industry leader every year.

Our long-term stability and fund health are based on our ability to evolve, embrace diversity, and maintain an environment conducive to growth. We do that by continuing to stay true to our vision, values, and mission to produce, protect, and provide the promised benefits to our members.

## LACERA and Its Services

On January 1, 1938, LACERA was established to provide retirement allowances and other benefits to the general and safety members employed by Los Angeles County. Subsequently, LACERA expanded its membership program to include four other outside districts:

- Little Lake Cemetery District
- Local Agency Formation Commission
- Los Angeles County Office of Education
- South Coast Air Quality Management District

Since its inception, LACERA has been governed by the California Constitution, the County Employees Retirement Law of 1937 (CERL), and the regulations, procedures, and policies adopted by LACERA's Boards of Retirement and Investments. The Los Angeles County Board of Supervisors may also adopt resolutions, as permitted by the CERL, which may affect benefits of LACERA members. On September 12, 2012, California Governor Jerry Brown signed the Public Employees' Pension Reform Act of 2013 (PEPRA) into law. As of January 1, 2013, LACERA is governed by CERL and PEPRA. Both laws are contained in the California Government Code.

**Size of fund in 2010: $33.7 Billion**

**Size of fund in 2019: $58.4 Billion**

The Board of Retirement is responsible for the general management of LACERA. The Board of Investments is responsible for determining LACERA's investment objectives, strategies, and policies. Both Boards appoint a Chief Executive Officer, to whom is delegated the responsibility of overseeing the day-to-day management of LACERA and developing its annual administrative budget. Adoption of the budget is subject to approval by both Boards.

## Financial Information

*Internal Control*

The financial attest audit performed by Plante Moran Certified Public Accountants (CPAs) states that LACERA's financial statements, which are prepared by management, are presented in conformity with Generally Accepted Accounting Principles and are free of material misstatement. Management acknowledges it is responsible for the entire contents of this CAFR. In the course of sustaining a rigorous and comprehensive control environment throughout its operations, LACERA practices stringent risk management activities and annually performs a detailed, organization-wide risk assessment in which control objectives and their related processes are reviewed.

Maintaining appropriate internal controls is the responsibility of management; however, management recognizes no control or combination of controls can entirely free an organization from all error or misstatement. At their best, controls provide reasonable assurance such failings do not occur. The concept of reasonable assurance recognizes that the cost of a control should not exceed benefits likely derived; the valuation of costs and benefits requires estimates and judgments by management. LACERA management is provided such assurance through the ongoing efforts of its Internal Audit and Quality Assurance Divisions and its Boards. The Executive Office is confident that LACERA's established controls and the interactions of those controls detect all significant occurrences and prevent noteworthy inaccuracies.

## Analysis

An overview of LACERA's fiscal operations is presented in the Management's Discussion and Analysis (MD&A) preceding the financial statements. This transmittal letter, when taken into consideration with the MD&A, provides an enhanced picture of the organization's operational activities.

## Investment Activities

The Board of Investments adopted an Investment Policy Statement that provides a framework for the management of LACERA's investment portfolio. This statement establishes LACERA's investment policies and objectives and defines the principal duties of the Board of Investments, investment staff, investment managers, master custodian, and consultants.

A pension fund's strategic asset allocation policy, implemented in a consistent and disciplined manner, is generally recognized to have the most impact on a fund's investment performance. The asset allocation process determines a fund's optimal long-term asset class mix (target allocation), which is expected to achieve a specific set of investment objectives.

LACERA's strategic asset allocation targets are long-term by design because of the Pension Plan's long-term investment horizon and the illiquidity of certain asset types.

The total Pension Plan returned 6.4 percent (net of fees), which was 190 basis points below its Policy Benchmark, which returned 8.3 percent. Over the five-year period ended June 30, 2019, the total Pension Plan's annualized return was 6.5 percent (net of fees).

**JJ Popowich**
Assistant Executive Officer

## Actuarial Funding Status

Pursuant to provisions in the CERL, LACERA engages an independent actuarial firm to perform annual actuarial valuations. A system experience study is performed every three years. The economic and demographic actuarial assumptions are updated at the time each experience study is performed. Experience studies serve as the basis for changes in member contribution rates necessary to properly fund the system. LACERA also hires an independent actuarial firm to audit the results of each experience study. The latest experience study was conducted as of June 30, 2016.

LACERA is funded by member and employer contributions and investment earnings on those contributions. Normal member contributions are those required to fund a specific annuity at a specified age. Member contribution rates for members who entered LACERA membership prior to January 1, 2013, vary according to the member's plan and age at first membership. The CERL also requires members to pay half the contributions required to fund the cost-of-living benefit, which is affected by changes in both economic and demographic assumptions.

Liabilities not funded through member contributions are the responsibility of the employer. Changes in any of the economic and demographic assumptions impact employer contribution rates. The employer is responsible for contributing to cover the cost of benefits expected to be accrued in the future and half of the cost-of-living benefit. These are called normal cost contributions. The employer is responsible also for making additional contributions to eliminate any shortfalls in funding covering liabilities that have accrued in the past, which is known as the Unfunded Actuarial Accrued Liability (UAAL).

Provisions of the Public Employees' Pension Reform Act of 2013 (PEPRA) require equal sharing of normal costs between employers and employees. In January 2013, LACERA established two new retirement plans — General Plan G and Safety Plan C — for members with membership dates on or after January 1, 2013. Contributions for these plans are based on a single flat-rate percentage and are structured in accordance with the required 50/50 cost-sharing. A member's age at first membership is not considered.

The June 30, 2018 valuation, determining the funded ratio to be 80.6 percent, recognized an Unfunded Actuarial Accrued Liability (UAAL) of $13.3 billion. The Los Angeles County contribution rate was therefore set equal to 11.0 percent of payroll for the amortization of the UAAL over a closed 30-year layered period, plus the normal cost rate of 9.9 percent, for a total contribution rate of 20.9 percent of payroll.

In December 2016, the Board of Investments adopted a decrease in the investment return assumption to 7.25 percent, a decrease in the wage growth assumption to 3.25 percent, a decrease in the CPI assumption to 2.75 percent, and an increase in life expectancies. All assumption changes were adopted effective June 30, 2016, although the impact on the employer contribution rate was phased in over three years.

## Summary of Accomplishments for Fiscal Year 2018–2019

During the last fiscal year, Member Services answered over 120,000 phone inquiries, while Administrative Services processed 348,740 pieces of mail and scanned/indexed 891,151 member documents. Retiree Healthcare Division specialists answered 58,298 calls, mailed 52,216 annual healthcare packets, and processed 7,331 enrollment forms.

One-on-one retirement counseling sessions were provided to 20,533 members in our offices and various locations in Los Angeles County, and our specialists educated 18,812 attendees at 467 workshops and benefits fairs. We continue to diligently recruit and train Retirement Benefits Specialists for our Neighborhood Workshop Program, offering pre-retirement seminars and counseling to members in a location convenient to them.

LACERA's Benefits Division put 2,882 new retirees and survivors on the retiree payroll. They also ensured that 68,200 retirement allowances were paid on time each month. Meanwhile, our Benefit Protection Unit investigated 1,002 high-risk cases, which included instances of fraud, lost contact, and elder abuse.

Our Human Resources Division conducted 42 recruitments, 22 of which were promotional; hired 37 new staff members; and completed 44 staff promotions. In addition, LACERA boasts the County's highest staff participation rate in charitable giving, with 38 percent of employees contributing to charity through payroll donations.

Our Systems Division continued to expand the capabilities of My LACERA. At the end of September, upgrades were made to allow members to purchase service credit in a guided, step-by-step process, as well as upload PDF documents as part of their online transactions. My LACERA registration has climbed to 77,962 registered members. There were 179,000 visits to the site in the fiscal year, and a total of 206,512 Retirement Benefit Estimates were created.

## Awards and Recognition

For the 29th consecutive year, the Government Finance Officers Association (GFOA) awarded LACERA its Certificate of Achievement for Excellence in Financial Reporting. This award is in recognition of our CAFR for the fiscal year ended June 30, 2018.

LACERA was also a recipient of the GFOA Award for Outstanding Achievement in Popular Annual Financial Reporting for the 21st year in a row. We received this honor for our Popular Annual Financial Report (PAFR) for the fiscal year ended June 30, 2018.

These awards recognize contributions to the practice of government finance exemplifying outstanding financial management. In doing so, they stress practical, documented work that offers leadership to the profession.

The Public Pension Coordinating Council (PPCC) presented its Public Pension Standards Award to LACERA in recognition of compliance with professional standards for plan design and administration for the fiscal year ended June 30, 2019. LACERA is a 17-time recipient of this honor, which is judged on a retirement system's Comprehensive Benefit Program, Funding Adequacy, Actuarial Valuation, Independent Audit, Investments, and Communications.

## Acknowledgments

The preparation of this Comprehensive Annual Financial Report in a timely manner is made possible by the dedicated teamwork of LACERA staff under the leadership, dedication, and support of the LACERA Boards. I am sincerely grateful to the LACERA Boards and staff, as well as to all of our professional service providers, who perform so diligently to ensure the successful operation and financial soundness of LACERA.

Respectfully submitted,

*Santos H. Kreimann*

Santos H. Kreimann
Chief Executive Officer

## Over 80 Years of Expertise

In 1937, Los Angeles County established a pension trust fund to provide defined retirement and death benefits to eligible County employees. In 1938, the Los Angeles County Employees Retirement Association (LACERA) was introduced to administer it, and the Board of Retirement was established to oversee the organization. In the decades since, LACERA has dedicated itself to serving the needs of its growing membership by providing additional benefits and strategically managing the fund.

### Growth and Diversification

From the end of LACERA's first year—when the organization had 12,200 members and about $6 million in assets—to today (with over 174,000 members and a fund value of over $58 billion), managing the organization and fund has required expert leadership, planning, and execution.

Since its start, LACERA has striven to ensure that those who have dedicated themselves to public service are taken care of when they are no longer working, and over the years added disability retirement, cost-of-living increases, retiree healthcare, and other benefits. This has required the creation of specialized divisions to administer programs on the member services side, in addition to in-house financial professionals on the investments side.

As the fund grew over the decades, diversification became more important, and the Board of Investments was established in 1971 to spearhead LACERA's increasingly sophisticated strategies and achieve its long-term funding goals. As an example of how LACERA's investment approach has changed, in 1938, over three-quarters of the fund's investments were in bonds, and the rest in cash, short-term investments, and receivables.

In April 2018, the LACERA Board of Investments approved the use of a "functional" framework for the inclusion of a broader group of Pension Trust investments. The traditional asset classes were reassigned and expanded in these new functional asset categories, labeled as Growth, Credit, Real Assets and Inflation Hedges, and Risk Reduction and Mitigation.

LACERA's Board takes an active role in corporate governance at the companies in which it invests, and continues to fine tune its policies to minimize losses and maximize returns over the long term—ensuring that benefits are properly funded now and into the future.

# Specialized Staff

LACERA's dedicated employees work in 15 divisions, providing a full range of services and program support.

**DIVISIONS & Budgeted Positions**

| | |
|---|---|
| Administrative Services | 34 |
| Benefits | 71 |
| Communications | 13 |
| Disability Litigation | 7 |
| Disability Retirement | 41 |
| Executive Office | 8 |
| Financial and Accounting | 30 |
| Human Resources | 13 |
| Internal Audit | 11 |
| Investments | 44 |
| Legal | 26 |
| Member Services | 79 |
| Quality Assurance and Metrics | 19 |
| Retiree Healthcare | 31 |
| Systems | 60 |

## Board of Retirement

**Established: 1938**

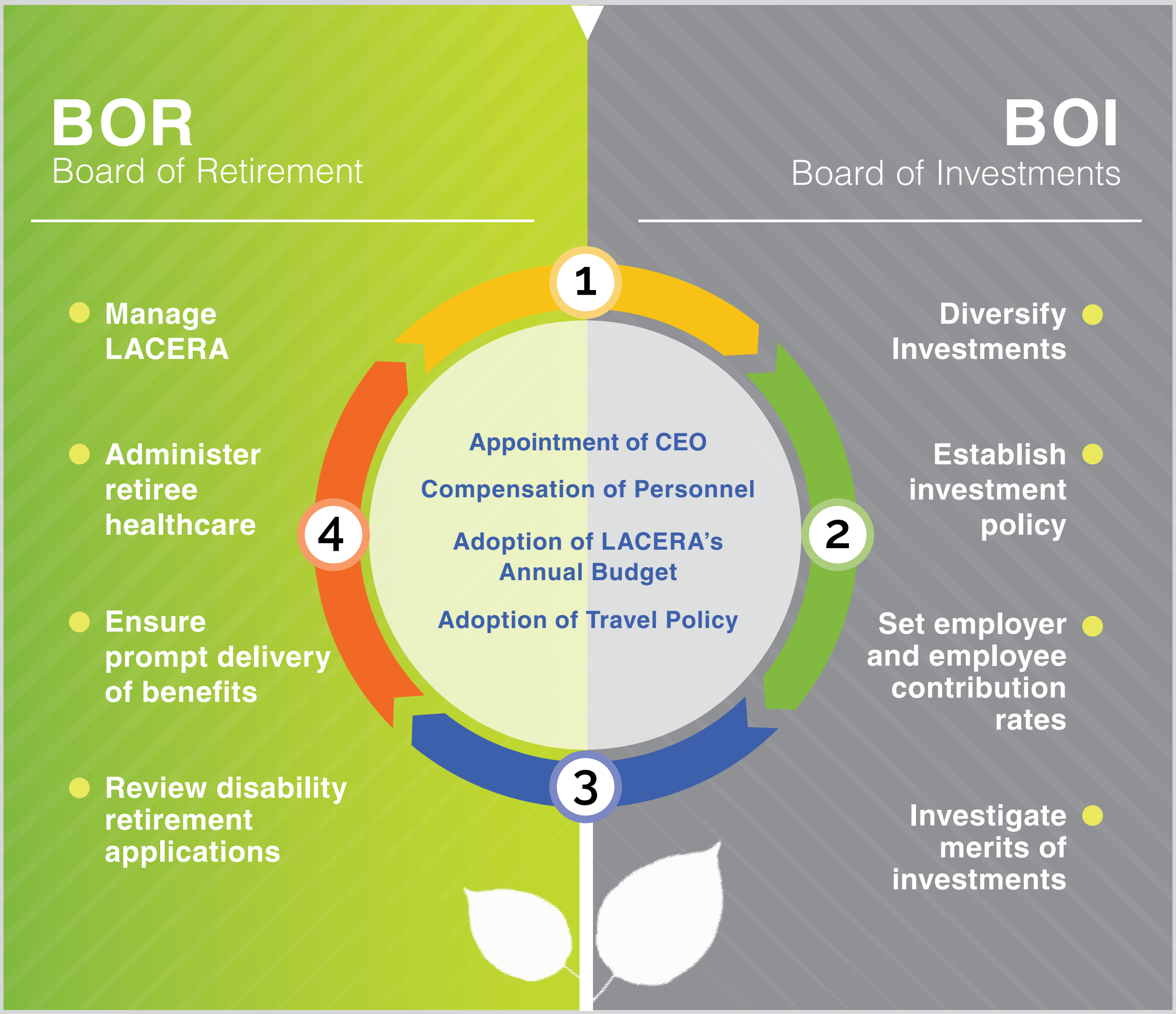
The Board of Retirement (BOR) is responsible for the administration of the retirement system, the retiree healthcare program, and the review and processing of disability retirement applications. The Board is composed of 11 members. Six members are elected: two are elected by active General Members; retired members elect one member and one alternate member; Safety Members elect one member and also have an alternate member. Four of its members are appointed by the Los Angeles County Board of Supervisors, and the law requires the County Treasurer and Tax Collector to serve as an ex-officio member.

## Board of Investments

**Established: 1971**

The Board of Investments is responsible for establishing LACERA's investment policy and objectives, as well as exercising authority and control over the investment management of the Fund. The Board is composed of nine members. Four members are elected: two are elected by active General Members; retired members elect one member, as do Safety Members. Four of its members are appointed by the Los Angeles County Board of Supervisors, and the law requires the County Treasurer and Tax Collector to serve as an ex-officio member.

## Board Responsibilities

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**1 ALAN J. BERNSTEIN**
**Chair**
Board of Retirement
Term Expires 2019
Board of Investments
Term Expires 2021
Appointed by Board of Supervisors

**2 VIVIAN H. GRAY**
Board of Retirement
Term Expires 2021
Elected by General Members

**3 DAVID GREEN**
Board of Investments
Term Expires 2020
Elected by General Members

**4 JAMES P. HARRIS**
Board of Retirement
Term Expires 2020
Elected by Retired Members

**5 SHAWN R. KEHOE**
**Chair**
Board of Investments
Term Expires 2019
Board of Retirement
Term Expires 2019
Elected by Safety Members

**6 KEITH KNOX**
Board of Retirement
Board of Investments
Acting County Treasurer and Tax Collector
Ex-Officio Member

**7 WAYNE MOORE**
**Secretary**
Board of Investments
Term Expires 2020
Appointed by Board of Supervisors

**8 DAVID L. MUIR**
Board of Investments
Term Expires 2020
Elected by Retired Members

**9 RONALD A. OKUM**
**Vice Chair**
Board of Investments
Term Expires 2019
Board of Retirement
Term Expires 2021
Appointed by Board of Supervisors

**10 WILLIAM R. PRYOR**
Board of Retirement
Alternate Member
Term Expires 2019
Elected by Safety Members

**11 LES ROBBINS**
**Vice Chair**
Board of Retirement
Term Expires 2020
Elected by Retired Members

**12 GINA V. SANCHEZ**
Board of Investments
Term Expires 2020
Appointed by Board of Supervisors

**13 HERMAN B. SANTOS**
Board of Retirement
Term Expires 2020
Board of Investments
Term Expires 2021
Elected by General Members

**14 THOMAS WALSH**
Board of Retirement
Term Expires 2020
Appointed by Board of Supervisors

**15 GINA ZAPANTA-MURPHY**
**Secretary**
Board of Retirement
Term Expires 2020
Appointed by Board of Supervisors

# the Boards

## Board of Retirement & Board of Investments


LACERA
Organizational
Chart
Board of Retirement
Board of Investments
Office of the Boards
Linda El-Farra
Bonnie Nolley
Chief Executive Officer
Santos H. Kreimann
Internal Audit
Richard Bendall
Investment Office
Jon Grabel
Disability Litigation
Vincent Lim
Legal Services
Steven Rice
Retiree Health Care Benefits Program
Cassandra Smith
Asst. Executive Officer
Vacant
Asst. Executive Officer
JJ Popowich
Financial & Accounting Services
Ted Granger*
Quality Assurance & Metrics
Derwin Brown
Member Services
Allan Cochran
Administrative Services
Kimberly Hines
Systems
James Brekk
Benefits
Bernie Buenaflor
Disability Retirement
Ricki Contreras
Communications
Cynthia Martinez
Human Resources
Annette Cleary*
*Interim assignment

## Consulting Actuary
Milliman

## Auditing Actuary
Cavanaugh Macdonald

## Financial Auditor
Plante Moran

## Commercial Banking and Custodian
State Street Bank and Trust Company

## Active Member Payroll Data Processing
Los Angeles County Internal Services Department

## Governance Consultants
Glass, Lewis & Company LLC
Institutional Shareholder Services Inc

## Investment Consultants
CGM Customized Fund Investments Group LP
Meketa Investment Group
Pavillion Alternatives Group LLC
Stepstone Group LP
The Townsend Group

## Mortgage Loan Custodians
Deutsche Bank National Trust Company

## Retiree Healthcare Consultant and Claims Auditor
Segal Consulting

## Medicare Part D Retiree Drug Subsidy Auditor
Mercer

Please refer to the Investment Section for a list of Investment Managers and the Schedule of Investment Management Fees.

## Legal Consultants
Alston & Bird LLP
Andrews Kurth LLP
Bernstein Litowitz Berger & Grossman LLP
Bleichmar Fonti & Auld LLP
Chapman & Cutler LLP
Cohen Milstein Sellers & Toll PLLC
Cox, Castle & Nicholson LLP
DLA Piper LLP
Foley & Lardner LLP
Foster Pepper PLLC
Glaser Weil Fink Jacobs Howard Avchen & Shapiro LLP
Goldstein & Russell PC
Gordon Rees Scully Mansukhani LLP
Greenberg Traurig LLP
Greines Martin Stein & Richland LLP
Groom Law Group, Chartered
Gutierrez Preciado & House LLP
Jackson Walker LLP
Kessler Topaz Meltzer & Check LLP
Labaton Sucharow LLP
Larson O'Brien LLP
Latham & Watkins LLP
Liebert Cassidy Whitmore
Lieff Cabraser Heimann & Bernstein LLP
Nora Ann Quinn
Nossaman LLP
Olson Hagel & Fishburn LLP
Orrick, Harrington & Sutcliffe LLP
Pillsbury Winthrop Shaw Pittman LLP
Quinn Emanuel Urquhart & Sullivan LLP
Reddock Law Group
Reed Smith LLP
Robbins Geller Rudman & Dowd LLP
Seyfarth Shaw LLP
Sheppard, Mullin, Richter & Hampton LLP
Spector Roseman Kodroff & Willis PC
Steptoe & Johnson LLP
Vivian Shultz
Winet Patrick Gayer Creighton & Hanes

# **Financial** Section

When LACERA was formed in 1938, it had over 12,000 members, and seed money of about $6 million. Since then, LACERA membership has greatly increased, mirroring the population growth of L.A. County. At the same time, our organization has responsibly grown the pension fund and continually added benefits for members.

Seeds are plant embryos that under the right conditions will germinate, root, and grow. To aid seedlings' survival, some flowering plants produce colorful, fleshy fruits to attract birds and animals that transfer the seed to a new location.

*Asian persimmons, while not native to California, were introduced in the mid-1800s and thrive in many parts of the state.*

Plante & Moran, PLLC.
27400 Northwestern Highway
P.O. Box 307
Southfield, MI 48037-0307
Tel: 248-352-2500
Fax: 248-352-0018
plantemoran.com

To the Board of Retirement and Board of Investments
Los Angeles County Employees Retirement Association

## Report on the Financial Statements

We have audited the accompanying financial statements of Los Angeles County Employees Retirement Association (LACERA) as of and for the years ended June 30, 2019 and 2018 and the related notes to the financial statements, which collectively comprise LACERA's basic financial statements, as listed in the table of contents.

## Management's Responsibility for the Financial Statements

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

## Auditor's Responsibility

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

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

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

## Opinion

In our opinion, the basic financial statements referred to above present fairly, in all material respects, the fiduciary net position of Los Angeles County Employees Retirement Association as of June 30, 2019 and 2018 and the changes in fiduciary net position thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

## Emphasis of Matter

As explained in Note P, the financial statements include investments valued at $14,265,613,000 (24 percent of net position) at June 30, 2019 and $13,991,093,000 (25 percent of net position) at June 30, 2018, whose fair values have been estimated by management in the absence of readily determinable market values. Given that publicly listed prices are not available, management uses alternative sources of information, including audited financial statements, unaudited interim reports, independent appraisals, and other similar sources of information to determine the fair value of investments. Our opinion is not modified with respect to this matter.

## Other Matters

*Required Supplementary Information*

Accounting principles generally accepted in the United States of America require that the Management's Discussion & Analysis and required supplementary information, as identified in the table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, which 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 opinions on the financial statements that collectively comprise Los Angeles County Employees Retirement Association's basic financial statements. The other supplementary information, as identified in the table of contents, and the investment, actuarial, and statistical sections are presented for the purpose of additional analysis and are not a required part of the basic financial statements.

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

The investment, actuarial, and statistical sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements, and, accordingly, we do not express an opinion or provide any assurance on them.

## Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated October 11, 2019 on our consideration of Los Angeles County Employees Retirement Association's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, grant agreements, and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on 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 Los Angeles County Employees Retirement Association's internal control over financial reporting and compliance.

Plante & Moran PLLC
October 11, 2019

Plante & Moran, PLLC

## INTRODUCTION

Management is pleased to provide this discussion and analysis (MD&A) of the financial activities of the Los Angeles County Employees Retirement Association (LACERA) for the year ended June 30, 2019. We encourage readers to consider the information presented here in conjunction with information included in the Letter of Transmittal found in the Introductory Section of the Comprehensive Annual Financial Report (CAFR).

**Beulah Auten**
Chief Financial Officer

## FINANCIAL HIGHLIGHTS

### Pension Plan

- Net Position Restricted for Benefits, as reported in the June 30, 2019 Statement of Fiduciary Net Position, totaled $58.3 billion, an increase of $2.0 billion or 3.5 percent from June 30, 2018.
- Total Additions, as reflected in the Statement of Changes in Fiduciary Net Position, were $5.5 billion. This was primarily due to positive investment earnings and increases in employer and member contributions. Although Total Additions increased in 2019, such increase equaled $1.4 billion or 19.8 percent less than the amounts realized in 2018.
- Total Deductions, as reflected in the Statement of Changes in Fiduciary Net Position, totaled $3.5 billion, an increase of $208 million or 6.3 percent from the prior year. The increase was primarily attributable to an increase in pension benefits paid to retired members.
- Milliman, LACERA's independent consulting actuary, completed the latest actuarial valuation as of June 30, 2018, which is used in preparing this CAFR, and determined the funded status of the Pension Plan (the ratio of actuarial value of assets to actuarial accrued liabilities) to be 80.6 percent versus 79.9 percent as of June 30, 2017. The increase in funded ratio was primarily due to employer contributions to amortize the Unfunded Actuarial Accrued Liability and the recognition of current and prior year investment gains.
- The Net Pension Liability, provided in accordance with Governmental Accounting Standards Board Statement Number 67 (GASB Statement No. 67), was $12.0 billion for the fiscal year ended June 30, 2019. This represents an increase of $1.2 billion from June 30, 2018, when the liability was $10.8 billion. As of June 30, 2019, the most recent measurement date, the Pension Plan's Fiduciary Net Position was 82.9 percent of the Total Pension Liability, a decrease from 84.0 percent as measured for the previous fiscal year ended 2018. This decrease was due to the growth in Total Pension Liability outpacing the growth in the Pension Plan's Fiduciary Net Position.

## FINANCIAL STATEMENT OVERVIEW

This MD&A serves as an introduction to the LACERA Basic Financial Statements, which include the following components: the Statement of Fiduciary Net Position; the Statement of Changes in Fiduciary Net Position; and the Notes to the Basic Financial Statements. The Basic Financial Statements are prepared in compliance with the accounting principles and reporting guidelines as set forth by the Governmental Accounting Standards Board (GASB), utilizing the accrual basis of accounting as prescribed by Generally Accepted Accounting Principles of the United States (GAAP). Separate statements are provided for the Pension Plan, OPEB Agency Fund, and OPEB Trust, which are distinct from each other and report the results of the annual financial activities within their respective presentations.

The *Statement of Fiduciary Net Position* is a snapshot of account balances at fiscal year-end. This statement reflects assets available for future payments to retirees and their beneficiaries, reduced by any current liabilities owed as of the report date. The Net Position Restricted for Benefits, which is the assets less the liabilities, or net position, reflects the funds available for future use.

The *Statement of Changes in Fiduciary Net Position* reflects all the financial transactions that occurred during the fiscal year and the impact of those additions and deductions had on the Net Position Restricted for Benefits. The additions versus deductions trend indicates the financial condition over time for, separately, the Pension Plan and the OPEB Trust.

The *Notes to the Basic Financial Statements* (Notes) are an integral part of the financial statements. The Notes provide a detailed discussion of key policies, programs, and activities that occurred during the year. Other information to supplement LACERA's Basic Financial Statements is provided as follows:

*Required Supplementary Information* (RSI) presents historical trend information based on GASB Statement No. 67 and contributes to the understanding of the changes in the Net Pension Liability of participating employers. There is some information provided to support compliance with GASB Statement No. 74 requirements under an Agent Plan.

*Other Supplementary Information* (OSI) includes the schedules of Administrative Expenses, Investment Expenses, Payments to Consultants, and the OPEB Agency Fund's Statement of Assets and Liabilities. The OSI is presented immediately following the RSI section of this CAFR.

## Pension Plan

Under the California Constitution, the County Employees Retirement Law of 1937 (CERL), and the California Public Employees' Pension Reform Act of 2013 (PEPRA), LACERA administers a cost-sharing multiple employer defined benefit retirement plan (Pension Plan) for the employees of the County of Los Angeles (County), the Los Angeles Superior Court (Court), and four Outside Districts (i.e., Little Lake Cemetery District, Local Agency Formation Commission, Los Angeles County Office of Education, and South Coast Air Quality Management District). The Pension Plan is presented separately in the Statement of Fiduciary Net Position as an irrevocable trust fund. LACERA collects contributions from employers and active members and earns income on invested assets so the Pension Plan balances accumulate over the long term, such that promised benefits can be paid to retirees now and in future years.

## Retiree Healthcare Benefits Program

In April 1982, the County adopted an ordinance pursuant to the County Employees Retirement Law of 1937 (CERL) that provided for a Retiree Healthcare Benefits Program (RHCBP), also referred to as the Other Post-Employment Benefits Program (OPEB Program) when including the death/burial benefits for retired employees and their eligible dependents. In 1982, the County and LACERA entered into an Agreement whereby LACERA would administer the RHCBP subject to the terms and conditions of the Agreement. In 1994, the County amended the Agreement so LACERA would continue to serve as the administrator even when there are changes to the active member insurance program.

In June 2014, the LACERA Board of Retirement approved the County's request to modify the agreement to create a new retiree healthcare benefits program in order to lower its costs. Structurally, the County segregated all the then current retirees and employees into LACERA-administered RHCBP (Tier 1) and placed all employees hired after June 30, 2014 into Los Angeles County RHCBP (Tier 2). Employees are eligible for

RHCBP if they are members of LACERA and retire from the County of Los Angeles, the Superior Court, or a participating Outside District. The RCHBP offers members an extensive choice of medical plans as well as two dental/vision plans. The medical plans are either HMOs or indemnity plans, and some are designed to work with Medicare benefits. Program benefits are provided through third party insurance carriers with the participant's cost for medical and dental/vision insurance varying according to the years of retirement service credit with LACERA, the plan selected, and the number of persons covered.

## OPEB Agency Fund

The OPEB Agency Fund reflects the activity of the OPEB Program for all participating employers (i.e., County, Court, and LACERA), including those that have not yet established any advanced funding in the OPEB Trust (i.e., Outside Districts). The assets and liabilities related to OPEB operational activities are reported in this manner as the OPEB Agency Fund, which was established as a revocable fund. The funds received and payments made from the OPEB Agency Fund are presented as additions and deductions to the balances. Plan sponsors and members provide monthly funding using a "pay-as-you-go" methodology, which is used to pay healthcare premiums including administrative fees, as well as other healthcare benefits provided by the OPEB Program. LACERA acts as a custodian for these funds on behalf of the plan sponsors and participants. Since assets are retained in the OPEB Agency Fund instead of a qualifying trust, only assets and liabilities are reported to reflect that LACERA is holding these assets in an agency capacity.

## OPEB Trust

Pursuant to the California Government Code, Los Angeles County established an irrevocable, tax-exempt OPEB Trust for the purpose of holding and investing assets to prefund the OPEB Program (or the retiree healthcare benefits program), which LACERA administers.

In May 2012, the County negotiated a Trust and Investment Services Agreement with the LACERA Board of Investments to manage and invest the OPEB Trust assets. The participating employers provide quarterly contributions and administrative costs are deducted from the County OPEB Trust. There are two participating employers in the County OPEB Trust: the County and LACERA. The Net Position Restricted for Benefits of the OPEB Trust is reported separately and legally distinct from that of the Pension Plan. Assets of the Pension Plan are not used to finance benefits provided for under the OPEB Program.

The Superior Court (Court) considered prefunding its OPEB obligations through a Court OPEB Trust to be effective and initially funded as of June 30, 2016. After discussions and negotiations between the County, the Court, and LACERA, it was determined that a separate OPEB Trust would be established for the Court. A Trust and Investment Services Agreement was negotiated between LACERA and the Court setting forth the terms under which the LACERA Board of Investments serves as Trustee of the Court OPEB Trust. The Court Agreement was submitted and approved by the Court's Judicial Council in April 2016 and executed in June 2016. Contributions are made on a discretionary basis at fiscal year end.

The County, LACERA, and the Court participate in the irrevocable OPEB Trust, which excludes the four Outside Districts. The purpose of this fund is for plan sponsors to set aside assets to offset the OPEB, or retiree healthcare benefits liability. The OPEB Trust is presented separately in the OPEB Trust's Statement of Fiduciary Net Position. The LACERA Board of Investments manages the OPEB Trust for the County, LACERA, and the Court, and utilizes an Investment Policy Statement to diversify investments based on the agencys' future obligations. The OPEB Trust's Net Position Restricted for Benefits at year-end serves as a funding gauge for paying future expenses associated with other post-employment benefits such as those provided through the OPEB Program. The OPEB Trust income and expenses are also presented separately in the OPEB Trust's Statement of Changes in Fiduciary Net Position.

## FINANCIAL ANALYSIS — PENSION PLAN
### Net Position Restricted for Benefits

The Pension Plan's Total Net Position Restricted for Benefits represents funds available for future promised benefits. As of June 30, 2019, LACERA had Total Assets of $61.4 billion which exceeded Total Liabilities of $3.1 billion, resulting in a Net Position Restricted for Benefits of $58.3 billion. This increase of $2.0 billion or 3.5 percent from the prior year, was due primarily to favorable investment market performance. As of June 30, 2018, LACERA had $59.4 billion of Total Assets which was greater than $3.1 billion in Total Liabilities, resulting in $56.3 billion in Net Position Restricted for Benefits.

### Net Position Restricted for Benefits — Pension Plan

*As of June 30, 2019, 2018, and 2017*

(Dollars in Millions)

| | 2019 | 2018 | 2017 | 2019-2018 % Change | 2018-2017 % Change |
|---|---|---|---|---|---|
| Investments | **$57,976** | $55,443 | $52,225 | 4.6 % | 6.2 % |
| Other Assets | **3,380** | 3,925 | 3,594 | (13.9)% | 9.2 % |
| Total Assets | **$61,356** | $59,368 | $55,819 | 3.3 % | 6.4 % |
| Total Liabilities | **(3,061)** | (3,068) | (3,075) | (0.2)% | (0.2)% |
| **Net Position Restricted for Benefits** | **$58,295** | **$56,300** | **$52,744** | **3.5 %** | **6.7%** |

### Additions and Deductions to Net Position Restricted for Benefits

The primary sources that finance the promised pension benefits LACERA provides to members and their beneficiaries are the collection of employer and member retirement contributions and realized investment income. For fiscal years ended 2019 and 2018, Total Additions amounted to $5.5 billion and $6.8 billion, respectively, and were due primarily to LACERA's diverse investment strategy producing positive investment performance.

The net investment gain for fiscal year 2019 was $3.2 billion, a decrease of $1.5 billion from the 2018 fiscal year when the net investment gain was $4.7 billion. This fiscal year's time-weighted investment returns of 6.4 percent (net of fees) is less than the actuarial assumed investment earnings rate of 7.25 percent. The investment gains and losses experienced will continue to impact the actuarial funded ratio over time as they are recognized in the future through the actuarial asset-smoothing process.

To finance employer contributions that are due to LACERA, the County and the Outside Districts made cash payments monthly or semi-monthly to coincide with the employee payroll cycle. For the fiscal years ended June 30, 2019 and 2018, the required employer contributions due to LACERA were paid in full.

The primary uses of LACERA's assets include the payment of the promised benefits to members and their beneficiaries, the refund of contributions to terminated employees, and the cost of administering the Pension Plan. These deductions totaled $3.5 billion for fiscal year 2019, an increase of $208 million or 6.3 percent from the prior year. The increase in deductions is partly attributable to an increase in the number of LACERA retirees and related increase in pension payments for the fiscal year ended June 30, 2019. Administrative and miscellaneous expenses increased 5.1 percent from the fiscal year ended 2018 to 2019 primarily due to the increase in organizational staffing and Memorandum of Understanding (MOU) negotiated salary increases. Additional staffing will allow LACERA to continue to serve the needs of its membership into the future.

## Additions and Deductions in Fiduciary Net Position — Pension Plan

*For the Fiscal Years Ended June 30, 2019, 2018, and 2017*

(Dollars in Millions)

| | | | | 2019-2018 | | 2018-2017 | |
|---|---|---|---|---|---|---|---|
| | **2019** | **2018** | **2017** | **Difference** | **% Change** | **Difference** | **% Change** |
| Contributions | **$2,304** | $2,116 | $1,858 | $188 | 8.9% | $258 | 13.9% |
| Net Investment Income/(Loss) | **3,181** | 4,722 | 6,136 | (1,541) | (32.6)% | (1,414) | (23.0)% |
| **Total Additions/ (Declines)** | **$5,485** | **$6,838** | **$7,994** | **($1,353)** | **(19.8%)** | **($1,156)** | **(14.5)%** |
| Benefits and Refunds | **($3,407)** | ($3,203) | ($3,030) | ($204) | 6.4% | ($173) | 5.7% |
| Administrative Expenses and Miscellaneous | **(83)** | (79) | (67) | (4) | 5.1% | (12) | 17.9% |
| **Total Deductions** | **($3,490)** | **($3,282)** | **($3,097)** | **($208)** | **6.3%** | **($185)** | **6.0%** |
| Net Increase/(Decrease) | **$1,995** | $3,556 | $4,897 | ($1,561) | (43.9%) | ($1,341) | (27.4)% |
| Fiduciary Net Position Beginning of Year | **56,300** | 52,744 | 47,847 | 3,556 | 6.7% | 4,897 | 10.2% |
| **Fiduciary Net Position at End of Year** | **$58,295** | **$56,300** | **$52,744** | **$1,995** | **3.5%** | **$3,556** | **6.7%** |

## Asset Allocation

Meketa Investment Group (Meketa), LACERA's general investment consultant, reviews the existing allocation structure on a regular basis to determine an appropriate allocation consistent with the economic environment, considering model assumptions and constraints. In September 2017, the LACERA Board of Investments approved Meketa's capital market assumptions and new asset allocation models which have more attractive return/risk quotients than the current portfolio and reflect greater diversification, potentially resulting in higher market performance throughout a full market cycle.

In April 2018, the LACERA Board of Investments approved the use of a "functional" framework for the inclusion of a broader group of Pension Trust investments. The traditional asset classes were reassigned and expanded in these new functional asset categories, labeled as Growth, Credit, Real Assets and Inflation Hedges, and Risk Reduction and Mitigation.

During fiscal year 2019, LACERA staff worked together internally and closely with its external service providers to transition the new functional asset allocation strategy. By June 30, 2019, the new model was implemented having completed the re-categorization of Pension Trust assets, repositioned assets where necessary, and updated communications to the LACERA Board of Investments pertinent to the new strategy. This CAFR provides financial accounting information in the Basic Financial Statements and Notes to the Financial Statements in the Financial Section using traditional asset categories such as equity, fixed income, private equity, real estate, and hedge funds. The Investment Section provides investment portfolio information using the new functional investment asset categories and classifications.

### Pension Liabilities

As GASB Statement No. 67 requires, LACERA reports the Total Pension Liability and the Net Pension Liability as calculated by LACERA's actuary. These liabilities, which are the employers' responsibilities, are solely calculated for financial reporting purposes and are *not* intended to provide information about the employers' funding of such liabilities. The actuarial valuation of retirement benefits report provides the Pension Plan funded status and required contributions. The Total Pension Liability as of June 30, 2019, was $70.3 billion or an increase of 4.8 percent from the Total Pension Liability of $67.1 billion as of June 30, 2018. The Net Pension Liability as of June 30, 2019, was $12.0 billion, representing an increase of 11.7 percent from the Net Pension Liability of $10.8 billion as of June 30, 2018. The Net Pension Liability increased by $1.3 billion because LACERA experienced a $3.3 billion increase in Total Pension Liability which is offset by a $2.0 billion increase in the Fiduciary Net Position.

GASB Statement No. 67 requires the presentation of the Fiduciary Net Position as a percentage of the Total Pension Liability. For the fiscal years ended June 30, 2019 and 2018, the Fiduciary Net Position as a percentage of the Total Pension Liability is reported as 82.9 percent and 84.0 percent, respectively. This slight decrease is due to an offsetting effect of growth in the Total Pension Liability of $3.3 billion compared to a smaller increase in LACERA's Fiduciary Net Position of $2.0 billion.

#### Net Pension Liability

*As of June 30, 2019 , 2018, and 2017*

(Dollars in Millions)

| | | | | 2019-2018 | | 2018-2017 | |
|---|---|---|---|---|---|---|---|
| | **2019** | **2018** | **2017** | **$ Change** | **% Change** | **$ Change** | **% Change** |
| Total Pension Liability | **$70,309** | $67,057 | $64,032 | $3,252 | 4.8% | $3,025 | 4.7% |
| Less: Fiduciary Net Position | **(58,295)** | (56,300) | (52,744) | (1,995) | 3.5% | (3,556) | 6.7% |
| **Net Pension Liability** | **$12,014** | **$10,757** | **$11,288** | **$1,257** | **11.7%** | **($531)** | **(4.7)%** |
| **Fiduciary Net Position as a Percentage of Total Pension Liability** | **82.9%** | **84.0%** | **82.4%** | **N/A** | **N/A** | **N/A** | **N/A** |

## FINANCIAL ANALYSIS – OPEB TRUST

As reflected in the Statement of Changes in Fiduciary Net Position, OPEB Trust additions included net investment income of $62.1 million and deductions of $0.2 million for total administrative expenses, as well as payments of custodial and investment management fees. The OPEB Trust's total Net Position Restricted for Benefits as of the fiscal year ended June 30, 2019, was $1.2 billion. As of June 30, 2018, the total OPEB Trust Net Position Restricted for Benefits was $941 million, after earning $78.7 million in net investment income and deducting $0.2 million for total administrative expenses.

Employers provided OPEB Trust pre-funding contributions of $236 million for fiscal year 2019 which was a 91.9 percent increase from $123 million for fiscal year 2018. GASB Statement No. 74 requires the Statement of Changes in Fiduciary Net Position for the OPEB Trust include an adjustment for pay-as-you-go additions to Fiduciary Net Position as OPEB payments become due that would not be reimbursed to the employers using OPEB Trust assets. Correspondingly, Service Benefits included as deductions were increased to reflect all benefit payments by employers as OPEB became due. Total OPEB Trust contributions including this adjustment was $863 million for fiscal year 2019 and $707 million for fiscal year 2018.

### Investment Structure

In June 2016, the LACERA Board of Investments approved the use of a unitized fund structure for the investment of the County and Court OPEB Trust funds. This structure created an OPEB Master Trust allowing for unitization of investments at the asset composite level while retaining individual net asset values for each participating employer. The OPEB Master Trust accommodates commingling and co-investing of the County and Court OPEB Trust funds. LACERA and its custodian completed the implementation process. The OPEB Master Trust is commonly referred to as the OPEB Trust throughout this CAFR and includes both the County and Court OPEB Trust investments. In December 2017, the LACERA Board of Investments adopted an asset allocation model including functional asset categories such as global equity, credit, risk reduction and mitigation, and inflation hedges. This new diversified strategy was implemented by the fiscal year ended June 30, 2018.

Information related to the OPEB Trust is included in the Financial Section, Note Q and other CAFR sections to meet financial reporting requirements. Due to the change to an agent plan structure, in accordance with GASB Statement No. 74, LACERA's financial statements have been updated to report limited information about the OPEB Program's Net OPEB Liability, previously reported under a cost sharing model. Refer to Note R for additional information.

## PLAN ADMINISTRATION

### LACERA Membership

The following table provides comparative LACERA membership data for the last two fiscal years. The County hired 871 new employees for the fiscal year ended June 30, 2019, as evidenced by the 0.8 percent increase in active members from the prior year. There was an increase of 1,621 or 2.5 percent in new retirees when comparing the two fiscal years ended June 30, 2019 and 2018.

**LACERA Membership**

*As of June 30, 2019 and 2018*

| | | | 2019-2018 | |
|---|---|---|---|---|
| | **2019** | **2018** | **Difference** | **% Change** |
| Active Members | **107,814** | 106,943 | 871 | 0.8% |
| Retired Members | **66,502** | 64,881 | 1,621 | 2.5% |
| **Total Membership** | **174,316** | **171,824** | **2,492** | **1.5%** |

## ADMINISTRATIVE EXPENSES

The LACERA Boards of Retirement and Investments jointly approve the annual operating budget, which controls administrative expenses and represents approximately 0.14 percent of the Net Position Restricted for Benefits for both fiscal years ended June 30, 2019 and 2018, respectively.

The CERL governing the LACERA Pension Plan requires the annual budget for administrative expenses may not exceed twenty-one hundredths of one percent (0.21 percent) of the Actuarial Accrued Liability

(AAL) as of the prior fiscal year. CERL provides allowances for other administrative costs such as legal representation and expenditures for information technology projects; LACERA includes such costs in the administrative expense allocation.

The table below provides a comparison of the actual administrative expenses for the fiscal years ended 2019 and 2018. The AAL was used to calculate the statutory budget amount. For both years, LACERA's administrative expenditures were well below the limit imposed by law.

### Budget-to-Actual Analysis of Administrative Expenses

*As of June 30, 2019 and 2018*
(Dollars in Thousands)

| | 2019 | 2018 |
|---|---|---|
| Administrative Expenses | **$82,906** | $78,181 |
| Basis for Budget Calculation (Actuarial Accrued Liability) | **65,310,803** | 62,199,214 |
| **Administrative Expenses as a Percentage of the Basis for Budget Calculation** | **0.13%** | 0.13% |
| Administrative Expense Budget Limit per CERL | **0.21%** | 0.21% |
| Net Position Restricted for Benefits | **$58,294,836** | $56,299,982 |
| **Administrative Expenses as a Percentage of Net Position Restricted for Benefits** | **0.14%** | 0.14% |

## ACTUARIAL FUNDING VALUATIONS

In order to determine whether the Net Position Restricted for Benefits will be sufficient to meet the Pension Plan's future obligations, the actuarial funded status needs to be calculated. An actuarial valuation is similar to an inventory process. On the valuation date, the assets available for the payment of promised benefits are appraised. These assets are compared with the actuarial liabilities, which represent the actuarial present value of all future benefits expected to be paid for each member. The purpose of the valuation is to determine what future contributions by the employers (plan sponsors) and the employees (members) are needed to pay all promised future benefits. A valuation is performed each year. An experience study is performed every three years to review the assumptions used in preparing the annual valuations.

### Board Policy

In December 2009, the LACERA Board of Investments adopted a revised Retirement Benefit Funding Policy (Funding Policy). In February 2013, the Funding Policy was further amended to conform to the new PEPRA provisions. In addition, beginning with the June 30, 2012 valuation and on a prospective basis, the LACERA Board of Investments approved inclusion of the Supplemental Targeted Adjustment for Retirees (STAR) Reserve balance in valuation assets. As such, the actuary includes the STAR Reserve as part of actuarial assets available for funding retirement benefits.

Provisions in the Funding Policy impacted the 2016 valuation, including the implementation of a smoothing calculation on actuarial gains and losses. This smoothing process recognizes an equal proportion of each year's investment gains and losses over a five-year period in order to minimize substantial variations in funding ratios. Variances between the actual market value and the actuarially computed expected market value from investment performance at the actuarially determined assumed rate of return are smoothed or recognized over a five-year period.

## Liabilities

The consulting actuary calculates contributions required to fund the Pension Plan. The difference between the present value of all future obligations and the present value of future normal cost contributions is referred to as the Actuarial Accrued Liability (AAL). The AAL is then compared to the value of assets available to fund benefits, and the difference is referred to as the Unfunded Actuarial Accrued Liability (UAAL). The Funding Policy provides an approach for managing the UAAL. LACERA utilizes what is referred to as a closed 30-year layered amortization method. For each fiscal year, gains or losses on the UAAL are calculated and then amortized over the 30-year period defined. A new layer is added each year. This process establishes a payoff schedule of the UAAL and helps dampen volatility in the required amortization payments which, in turn, provides some volatility mitigation in employer contribution rates.

## Assumptions

In December 2016, as a result of the most recent experience and assumption study completed as of June 30, 2016, the LACERA Board of Investments adopted a decrease in the investment return and other economic assumptions. The investment return assumption was reduced from 7.50 to 7.25 percent for the June 30, 2016 actuarial valuation. The LACERA Board of Investments adopted corresponding decreases in the price and wage inflation assumptions to be made at the same time as each decrease in the investment return assumption.

The funded ratio is a measurement of the funded status of the Pension Plan. It is calculated by dividing the Valuation Assets by the AAL. Valuation Assets are the value of cash, investments, and other assets belonging to the Pension Plan, as used by the actuary for the purpose of preparing the actuarial valuation. Positive investment returns, which have varied over the last three years, typically increase Valuation Assets. In 2016, the LACERA Board of Investments reduced the assumed rate of return (as described above and in the Actuarial Section of this CAFR). As a result of applying actuarial asset smoothing, the actuarial funded ratio increased from fiscal year ended 2017 to 2018.

## FUNDED RATIO, RATES OF RETURN, AND FAIR VALUE

LACERA's independent consulting actuary, Milliman, performed the latest actuarial valuation as of June 30, 2018 and determined that the Pension Plan's Funded Ratio of the actuarial assets to the AAL increased to 80.6 percent, as compared to 79.9 percent as of the June 30, 2017 valuation.

The positive 9.0 percent investment return on a market basis for 2018, which exceeded the actuarial assumed investment earnings rate, resulted in a 0.7 percent increase in the Funded Ratio when applying the five-year actuarial asset smoothing method. For the 2018 and 2017 fiscal year end valuations, respectively, the Pension Plan returned 9.0 percent and 12.7 percent (both net of fees), on a market basis, which were both greater than the assumed rate of 7.25 percent in 2018 and 2017. In total, there was an $858 million gain on market assets relative to the assumed rate of return. Under the actuarial asset method, which recognizes investment gains and losses over a five-year period, the return on actuarial assets was 8.1 percent for the fiscal year ended June 30, 2018, equivalent to a gain of $411 million relative to the assumed return.

The following table provides a three-year history of investment and actuarial returns and the actuarial funded ratios. As required by GASB Statement Nos. 67 and 74, the money-weighted rate of return is presented as an expression of investment performance, net of investment expense, adjusted for the changing amounts actually invested. For the year ended June 30, 2019, the annual money-weighted rate of return on Pension Plan investments was 5.5 percent (net of fees).

## Total Investment Rates of Return — Pension Plan

*For the Last Three Fiscal Years Ended June 30*
(Dollars in Thousands)

| Fiscal Year End | Total Investment Portfolio Fair Value | Total Fund Time-Weighted Return (net of fees)[1] | Total Fund Money-Weighted Return (net of fees) | Return on Smoothed Valuation Assets (net of fees)[2] | Actuarial Assumed Rate of Return | Actuarial Funded Ratio |
|---|---|---|---|---|---|---|
| 2017 | $52,225,457 | 12.7% | 12.7% | 8.2% | 7.25% | 79.9% |
| 2018 | 55,443,060 | 9.0% | 9.0% | 8.1% | 7.25% | 80.6% |
| **2019**[3] | **57,976,436** | **6.4%** | **5.5%** | — | — | — |

[1]The returns are presented net of investment management fees.
[2]Returns calculated using the money-weighted rate of return method.
[3]Actuarial valuation report for June 30, 2019 not available at CAFR publication.

The annual money-weighted rate of return on OPEB Trust investments, net of OPEB Trust investment expenses as of the fiscal years ended June 30, 2019 and 2018, were 6.0 percent and 10.0 percent, respectively. As determined for the July 1, 2018 OPEB valuation, the OPEB Program's Funded Ratio of the actuarial assets to the AAL increased to 4.5 percent, as compared to 2.8 percent reported in the July 1, 2017 valuation. The County, Superior Court, and LACERA continued to provide OPEB Trust contributions, which increased prefunding assets and offset the AAL.

## NEW ACCOUNTING AND FINANCIAL REPORTING STANDARDS

### LACERA OPEB Agency Fund Reporting

GASB Statement No. 84, *Fiduciary Activities*, establishes criteria for identifying all fiduciary activities for state and local government accounting and financial reporting purposes. The principal objective is to enhance the consistency and comparability of fiduciary activity reporting by state and local governments and improve the usefulness of fiduciary activity information for assessing the accountability of governments in their roles as fiduciaries. An activity meeting the criteria should be reported by a Fiduciary Fund in the Basic Financial Statements and present a Statement of Fiduciary Net Position and a Statement of Changes in Fiduciary Net Position. This new financial reporting provision is effective for the fiscal year ending June 30, 2020 in LACERA's financial statements and requires updates to use the new OPEB Custodial Fund terminology, remove the Statement of Changes in Assets and Liabilities — OPEB Agency Fund found in Other Supplementary Information, and instead report the additions, deductions, and net position of the fiduciary activity in a new statement, the Statement of Changes in Fiduciary Net Position, which was previously not reported.

### Leases

The GASB issued Statement No. 87, Leases, to increase the usefulness of governments' financial statements by requiring reporting of certain lease liabilities that currently are not reported. The new information will enhance comparability of financial statements among governments by requiring lessees and lessors to report leases under a single model. This statement will also enhance the decision- usefulness of the information provided to financial statement users by requiring notes to the financial statements including the timing, significance, and purpose of a government's leasing arrangements. For LACERA's financial statements, these requirements are effective for the fiscal year ending June 30, 2021.

## REQUESTS FOR INFORMATION

This comprehensive financial report is designed to provide the LACERA Boards of Retirement and Investments, our membership, and interested third parties with a general overview of LACERA's finances and to show accountability for the funds it receives and its management of the Pension Plan and OPEB Program it administers.

Address questions regarding this report and/or requests for additional financial information to:

Chief Financial Officer
LACERA
300 N. Lake Avenue, Suite 650
Pasadena, CA 91101

Respectfully submitted,

*Beulah S. Auten*

Beulah S. Auten, CPA, CGFM, CGMA
Chief Financial Officer

## Statement of Fiduciary Net Position

*As of June 30, 2019 and 2018*

(Dollars in Thousands)

| | 2019 | | | 2018 | | |
|---|---|---|---|---|---|---|
| | **Pension Plan** | **OPEB Trust** | **OPEB Agency Fund** | **Pension Plan** | **OPEB Trust** | **OPEB Agency Fund** |
| **Assets** | | | | | | |
| Cash and Short-Term Investments | **$1,310,027** | **$14,491** | **$46,617** | $1,786,940 | $14,150 | $80,915 |
| Cash Collateral on Loaned Securities | **814,829** | **—** | **—** | 1,191,235 | — | — |
| Receivables | | | | | | |
| Contributions Receivable | **$96,482** | **$—** | **$—** | $89,181 | $— | $— |
| Accounts Receivable - Sale of Investments | **1,046,945** | **13** | **1,451** | 707,665 | — | — |
| Accrued Interest and Dividends | **102,714** | **136** | **540** | 102,733 | 132 | 454 |
| Accounts Receivable - Other | **8,335** | **—** | **55,845** | 47,090 | — | 52,611 |
| **Total Receivables** | **$1,254,476** | **$149** | **$57,836** | **$946,669** | **$132** | **$53,065** |
| Investments at Fair Value | | | | | | |
| Equity | **$25,836,066** | **$624,039** | **$—** | $25,661,003 | $456,824 | $— |
| Fixed Income | **18,028,747** | **479,773** | **118,687** | 15,934,587 | 372,962 | 107,394 |
| Private Equity | **6,028,265** | **—** | **—** | 5,929,098 | — | — |
| Real Estate | **6,192,619** | **120,247** | **—** | 6,326,246 | 97,073 | — |
| Hedge Funds | **1,890,739** | **—** | **—** | 1,592,126 | — | — |
| **Total Investments at Fair Value** | **$57,976,436** | **$1,224,059** | **$118,687** | **$55,443,060** | **$926,859** | **$107,394** |
| **Total Assets** | **$61,355,768** | **$1,238,699** | **$223,140** | **$59,367,904** | **$941,141** | **$241,374** |
| **Liabilities** | | | | | | |
| Accounts Payable - Purchase of Investments | **$2,162,819** | **$—** | **$3,050** | $1,803,897 | $— | $14 |
| Retiree Payable and Other | **922** | **—** | **235** | 912 | — | 179 |
| Accrued Expenses | **44,518** | **222** | **343** | 35,831 | 134 | 209 |
| Tax Withholding Payable | **35,505** | **—** | **—** | 32,848 | — | — |
| Obligations under Securities Lending Program | **814,829** | **—** | **—** | 1,191,235 | — | — |
| Accounts Payable - Other | **2,339** | **—** | **86,780** | 3,199 | — | 121,450 |
| Due to Employers | **—** | **—** | **132,732** | — | — | 119,522 |
| **Total Liabilities** | **$3,060,932** | **$222** | **$223,140** | **$3,067,922** | **$134** | **$241,374** |
| **Fiduciary Net Position Restricted for Benefits** | **$58,294,836** | **$1,238,477** | **$—** | **$56,299,982** | **$941,007** | **$—** |

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

## Statement of Changes in Fiduciary Net Position

*For the Fiscal Years Ended June 30, 2019 and 2018*

(Dollars in Thousands)

| | 2019 | | 2018 | |
|---|---|---|---|---|
| | **Pension Plan** | **OPEB Trust** | **Pension Plan** | **OPEB Trust** |
| **Additions** | | | | |
| Contributions | | | | |
| Employer[1] | **$1,668,151** | **$863,028** | $1,524,823 | $706,709 |
| Member | **635,415** | **—** | 591,262 | — |
| **Total Contributions** | **$2,303,566** | **$863,028** | **$2,116,085** | **$706,709** |
| Investment Income | | | | |
| From Investing Activities: | | | | |
| Net Appreciation/(Depreciation) in Fair Value of Investments | **$1,215,625** | **$56,670** | $974,529 | $15,991 |
| Investment Income/(Loss) | **2,188,736** | **6,188** | 3,925,181 | 63,235 |
| **Total Investing Activity Income** | **$3,404,361** | **$62,858** | **$4,899,710** | **$79,226** |
| Less Expenses from Investing Activities | **($233,126)** | **($742)** | ($188,753) | ($480) |
| **Net Investing Activity Income** | **$3,171,235** | **$62,116** | **$4,710,957** | **$78,746** |
| From Securities Lending Activities: | | | | |
| Securities Lending Income | **$26,146** | **$—** | $18,796 | $— |
| Less Expenses from Securities Lending Activities: | | | | |
| Borrower Rebates | **($20,545)** | **$—** | ($11,787) | $— |
| Management Fees | **(1,113)** | **—** | (1,326) | — |
| Total Expenses from Securities Lending Activities | **(21,658)** | **—** | (13,113) | — |
| **Net Securities Lending Income** | **$4,488** | **$—** | **$5,683** | **$—** |
| **Total Net Investment Income** | **$3,175,723** | **$62,116** | **$4,716,640** | **$78,746** |
| Miscellaneous | **$5,958** | **$—** | $5,613 | $— |
| **Total Additions** | **$5,485,247** | **$925,144** | **$6,838,338** | **$785,455** |
| **Deductions** | | | | |
| Retiree Payroll | **$3,375,752** | **$—** | $3,177,726 | $— |
| Service Benefits[1] | **—** | **627,415** | — | 583,406 |
| Administrative Expenses | **82,906** | **234** | 78,181 | 190 |
| Refunds | **28,691** | **—** | 23,221 | — |
| Lump Sum Death Benefits | **2,711** | **—** | 2,428 | — |
| Redemptions | **—** | **25** | — | 3,735 |
| Miscellaneous | **333** | **—** | 451 | — |
| **Total Deductions** | **$3,490,393** | **$627,674** | **$3,282,007** | **$587,331** |
| **Net Increase/(Decrease) in Fiduciary Net Position** | **$1,994,854** | **$297,470** | **$3,556,331** | **$198,124** |
| **Fiduciary Net Position Restricted for Benefits** | | | | |
| Beginning of Year | **$56,299,982** | **$941,007** | **$52,743,651** | **$742,883** |
| End of Year | **$58,294,836** | **$1,238,477** | **$56,299,982** | **$941,007** |

[1]Employer Contributions are adjusted to reflect pre-funded contributions made to the OPEB Trust as well as additions to Fiduciary Net Position including amounts for OPEB, as the benefits become due that would be unreimbursed to the employers using OPEB Trust assets. Correspondingly, Service Benefits amounts were increased to reflect all benefit payments made through the OPEB Trust or by employers as OPEB payments became due (paragraphs 28a and 31 of GASB Statement No.74). See Note Q for OPEB Trust contributions.

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

## Note A — Plan Description

The Los Angeles County Employees Retirement Association (LACERA) was established on January 1, 1938. It is governed by the California Constitution, the County Employees Retirement Law of 1937 (CERL), the California Public Employees' Pension Reform Act of 2013 (PEPRA), and the regulations, procedures, and policies adopted by the LACERA Board of Retirement and the LACERA Board of Investments. The Los Angeles County (County) Board of Supervisors may also adopt resolutions, as permitted by CERL, which may affect the benefits of LACERA members. LACERA operates as a cost-sharing multiple-employer defined benefit Pension Plan for Los Angeles County, LACERA and the Los Angeles Superior Court, plus four Outside Districts: Little Lake Cemetery District, Local Agency Formation Commission, Los Angeles County Office of Education, and South Coast Air Quality Management District.

LACERA also administers a retiree healthcare program, which is also referred to as the Other Post-Employment Benefits (OPEB) Program. The OPEB Program is an agent defined benefit OPEB plan in which Los Angeles County, LACERA, Superior Court, and the Outside Districts participate. OPEB Program description and benefit provisions are explained in Note N — OPEB Program of the Financial Section.

### Governance

The LACERA Board of Retirement is responsible for the administration of the retirement system, the OPEB Program, and the review and processing of disability retirement applications. The Board is composed of nine Members, plus two alternate members. Six Members are elected: Two are elected by active general members; retired members elect one Member and one alternate Member; safety members elect one Member and one alternate Member. Four Members are appointed by the Los Angeles County Board of Supervisors. The law requires the County Treasurer and Tax Collector to serve as an Ex Officio Member.

The LACERA Board of Investments is responsible for establishing LACERA's investment policy and objectives, as well as exercising authority and control over the investment management of the Trust Funds. The Board is composed of nine Members. Four Members are elected: two are elected by active general members; retired members elect one Member, as do safety members. Four Members are appointed by the Los Angeles County Board of Supervisors, who are required as a condition of appointment to have significant prior experience in institutional investing. The law requires the County Treasurer and Tax Collector to serve as an Ex Officio Member.

### Membership

LACERA provides retirement, disability, and death benefits to its active safety and general members and administers the plan sponsors' Retiree Healthcare Benefits (or OPEB) Program. Safety membership includes law enforcement (Sheriff and District Attorney Investigators), firefighting, forester, and lifeguard classifications. General membership is applicable to all other occupational classifications. The retirement benefits within the Pension Plan are tiered based on the date of LACERA membership. Additional information regarding the benefit structure is available by contacting LACERA.

### LACERA Pension Plan Membership

*As of June 30, 2019 and 2018*

| | 2019 | 2018 |
|---|---|---|
| Active Members | | |
| Vested | **72,660** | 72,020 |
| Non-Vested | **26,536** | 26,464 |
| Terminated Vested (Deferred) | **8,618** | 8,459 |
| **Total Active Members** | **107,814** | **106,943** |
| Retired Members | | |
| Service | **47,518** | 46,296 |
| Disability | **9,891** | 9,707 |
| Survivors | **9,093** | 8,878 |
| **Total Retired Members** | **66,502** | **64,881** |
| **Total Membership** | **174,316** | **171,824** |

## Investments

**Pension Plan:** Assets in the Pension Plan are derived from three sources: employer contributions; employee contributions (including those made by the employer on behalf of employees pursuant to §414(h)(2) of the Internal Revenue Code); and realized investment earnings. Assets of the Pension Plan are held separate from any other assets, including the separate OPEB Trust and OPEB Agency Fund, and are invested pursuant to policies and procedures adopted by the LACERA Board of Investments. Pension Plan gross income is exempt from federal income taxation under §115 of the Internal Revenue Code.

**OPEB Trust:** The County and LACERA, as participating employers, established an OPEB Trust for the purpose of holding and investing assets to pre-fund the Retiree Healthcare Benefits Program administered by LACERA for eligible retired members and eligible dependents and survivors of LACERA members. The Superior Court also started making OPEB pre-funding contributions into the Court OPEB Trust as of June 2016. The OPEB Trusts do not modify the participating employer benefit programs. The assets held within the OPEB Trusts meet the definition of a qualifying trust under GASB 74 and are administered under an agent plan structure effective July 1, 2018.

The County and Superior Court entered into separate Trust and Investment Services Agreements with the LACERA Board of Investments to serve as Trustee with sole and exclusive authority, control over, and responsibility for directing the investment and management of the respective employers' OPEB Trust assets. The County and Court OPEB Trust documentation and structure are substantively similar. The LACERA Board of Investments serves as Trustee for the two OPEB Trusts, exercising similar authority for each employer's OPEB Trust assets. The two trusts are collectively referred to as the OPEB Trust throughout the financial statements and note disclosures except in the Investment Section where they are labeled as the OPEB Master Trust.

The LACERA Board of Investments adopted an Investment Policy Statement establishing the initial asset allocation for the purpose of effectively managing and monitoring the assets of the OPEB Trust. Contributions and transfers to the OPEB Trust are determined at the employer's discretion.

The LACERA Board of Investments approved formation of an OPEB Master Trust for the purpose of commingling funds of the County OPEB Trust and the Court OPEB Trust for investment purposes. The OPEB Master Trust Declaration was made on July 13, 2016. The LACERA Board of Investments serves as Trustee of the Master Trust assets. Gross income from all OPEB Trusts above is exempt from federal income taxation under §115 of the Internal Revenue Code (IRC). LACERA obtained letter rulings from the Internal Revenue Service to this effect.

**OPEB Agency Fund:** The County, the Superior Court, LACERA and participating Outside District employers provide a health insurance program and death benefits (OPEB Program) for retired employees and their dependents, which LACERA administers. Pursuant to an administrative agreement between the County and LACERA, and certain County ordinances, the County subsidizes, either in whole or in part, insurance premiums covering certain program participants who meet service credit hurdles.

LACERA maintains two investment accounts under the OPEB Agency Fund: the OPEB Operating Account and OPEB Reserve Account. The County, Superior Court, LACERA and participating Outside District employers provide monthly contributions to fund benefits and own the funds in these accounts, which LACERA reports and invests in cash and fixed income securities, separately from

Pension Plan assets and OPEB Trust funds. The funds held within the OPEB agency investment accounts do not meet the definition of a qualifying OPEB Trust under GASB 74 and are not used to reduce the employers' Total OPEB Liability. External managers invest funds in both accounts pursuant to policies and procedures approved by the LACERA Board of Investments. In addition, investment income realized in these types of accounts maintained by government entities generally is exempt from federal income taxation under §115 of the Internal Revenue Code.

*OPEB Operating Account:* This account is primarily used to fund the OPEB Program's operations. Additions include the monthly insurance subsidy collected from the County, insurance premiums collected from LACERA, Superior Court, and the Outside Districts, payments from program participants, and interest income. Deductions include premium payments to insurance carriers and Program administrative expenses.

*OPEB Reserve Account:* This account was established to help stabilize premium rates over time. Annual surpluses and deficits for the various insurance plans result from the difference between premiums received and the healthcare costs incurred. The accumulated surplus is held in this account to address deficits and/or emergency premiums. Additions include rebates from insurance carriers and other income. Deductions include management fees and County-authorized payments to offset waived premium costs (i.e., insurance premium holidays) for both the County and affected participants. In 2013, the LACERA Board of Retirement adopted a policy that established a reserve account balance target of 20 percent of the total annual premium cost by plan for indemnity medical and dental/vision plans.

## Benefit Provisions

Retirement benefit vesting occurs when a member accumulates five years of creditable service under contributory plans or accumulates 10 years of creditable service under the general service non- contributory plan. Depending on the plan, benefits, according to applicable statutory formula, are based upon 12 or 36 months of average compensation, age at retirement, and length of service as of the retirement date. Vested members who terminate employment before retirement age are considered terminated vested (deferred) members. Service-connected disability benefits may be granted regardless of length of service. Five years of service are required for nonservice-connected disability eligibility according to applicable statutory formula. Members of the non-contributory plan, who are covered under separate long-term disability provisions not administered by LACERA, are not eligible for disability benefits provided by LACERA. A Summary of Major Program Provisions for the Pension Plan is available upon request from LACERA. OPEB Program provisions are explained in the Note N — OPEB Program.

## Cost-of-Living Adjustment (COLA)

Each year, the LACERA Board of Retirement considers how the change in the cost of living, a measure of inflation, has affected the purchasing power of monthly pension allowances paid by LACERA. The cost of living is measured by the Bureau of Labor Statistics, which releases the Consumer Price Index (CPI) for all Urban Consumers in the Los Angeles-Long Beach-Anaheim area as of January 1 each year. The difference in the current and previous year's CPI shows whether the cost of living has increased or decreased in this geographic region during the past year.

If the CPI has increased, the LACERA Board of Retirement grants a Cost-of-Living Adjustment

(COLA) increase for monthly allowances. If the CPI has decreased, it is possible for the LACERA Board of Retirement to decrease monthly allowances; however, a decrease in allowances has never occurred. In any event, a cost-of-living decrease could not reduce a member's allowance to an amount less than the allowance received at the time of retirement.

LACERA members may receive more than one type of COLA:

*COLA ("April 1st COLA")*
The COLA percentage increase is effective annually on April 1. Members who retire prior to April 1, or eligible survivors of members who died prior to April 1, are eligible for that year's COLA increase. The increase begins with the April 30 monthly allowance. The COLA provision was added to CERL in 1966, and LACERA's first COLA increase was granted July 1, 1967. Until 2002, only contributory members were eligible for COLA.

*Plan E COLA*
Effective June 4, 2002, Plan E members and their survivors are also eligible for a COLA. The portion of the COLA percentage received by each Plan E member is a ratio of the member's service credit earned on and after June 4, 2002, to total service credit. The portion of the full increase not awarded may be purchased by the member.

## Supplemental Targeted Adjustment for Retirees (STAR) Program

In addition to cost-of-living increases, the CERL also provides the LACERA Board of Retirement the authority to grant supplemental cost-of-living increases for pensions. Under this program, known as the STAR Program, excess earnings have been used to restore retirement allowances to 80 percent of the purchasing power held by retirees at the time of retirement. STAR applies to contributory plans only. Retirees and survivors whose allowances have lost more than 20 percent of their purchasing power are eligible for STAR. The STAR percentage increase is effective annually on January 1.

Future ad hoc increases in the current STAR Program will be subject to approval by the LACERA Board of Retirement on an annual basis, provided sufficient excess earnings are available as determined by the LACERA Board of Investments. Permanent STAR benefits become part of the member's retirement allowance and are payable for life. Ad hoc STAR benefits are payable only for the calendar year approved.

Except for Program Year 2005, the LACERA Board of Retirement made permanent the 2001 through 2009 STAR benefits at an 80 percent level as authorized in the CERL. For Program Years 2010 through 2019, STAR benefits were not provided due to minimal increases in the CPI percentage such that all eligible members had COLA Accumulation accounts below the 20 percent threshold for providing STAR benefits.

From the inception of the STAR Program in 1990 to the present, the STAR Program has received $1.5 billion in funding. Except for Program Years 2005, the LACERA Board of Retirement made permanent the 2001 through 2009 STAR benefits, which totaled $353 million. STAR Program costs reduced the STAR Program reserve by $556 million. As of June 30, 2019, there is $614 million available in the STAR Program reserve to fund future benefits.

The STAR Program is administered on a calendar-year basis. The Statistical Section contains a 10-year trend schedule of STAR Program costs.

## NOTE B — Summary of Significant Accounting Policies

### Reporting Entity

LACERA, with its own two governing Boards, is an independent governmental entity separate and distinct from the County of Los Angeles (County). Due to the nature of the relationship between LACERA and the County, LACERA's Pension Plan and OPEB Trust funds are reflected as fiduciary funds within the County's basic financial statements. LACERA's operations are heavily dependent upon County funding, and the operational results are advantageous to the County, as well as LACERA members. Maintaining appropriate controls and preparing the financial statements are the responsibility of LACERA Management. LACERA's Audit Committee assists the LACERA Boards of Retirement and Investments (Boards) in fulfilling their fiduciary oversight responsibilities for the organization's financial reporting process, the system of internal controls, the audit processes, and the organization's method for monitoring compliance with laws and regulations.

### Method of Reporting

LACERA follows the accounting principles generally accepted in the United States of America (GAAP) as applicable to governmental units. Accounting and financial reporting pronouncements which guide LACERA are promulgated by the Governmental Accounting Standards Board (GASB).

The financial statements are prepared using the accrual basis of accounting to reflect LACERA's overall operations. Revenue is recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of related cash flows. Member and employer contributions are recognized in the period in which the contributions are due, pursuant to legal requirements. Benefits and refunds are recognized when due and payable in accordance with the terms of each benefit plan.

### Capital Assets (Including Intangible Assets)

Capital Assets are items that benefit the organization for more than one fiscal year. LACERA's potential Capital Assets are largely held in information technology systems. The information technology environment is continuously changing causing frequent upgrades and as such, LACERA treats these items as expenses, as they are immaterial to LACERA's overall financial statements. Management reviewed and considered all expenses that could be capitalized as capital or intangible assets and determined these items to be appropriately classified as expenses for the current fiscal year.

### Accrued Vacation and Sick Leave

Employees who terminate or retire from active employment are entitled to full compensation for all unused vacation and a percentage of their unused sick leave. The accrued vacation and sick leave balances for LACERA employees as of June 30, 2019 and 2018, were $3.7 million and $3.5 million, respectively.

### Cash and Short-Term Securities

Cash includes deposits with various financial institutions, the County, and non-U.S. currency holdings translated to U.S. dollars using the exchange rates in effect at June 30, 2019 and 2018.

LACERA classifies fixed income securities with a maturity of 12 months or less as short-term investments. Foreign exchange contracts held in pending status are also included in the category.

### Real Estate Separate Account Investments

LACERA's real estate investments utilize several different types of Special Purpose Entities (SPEs), including Title Holding Corporations (THCs) and Limited Liability Companies (LLCs). The THCs are nonprofit corporations under §501(c)(25) and §501(c)(2) of the Internal Revenue Code (IRC). The LLCs do not have tax-exempt status, but their income is excludable from taxation under IRC §115. Both THCs and LLCs invest in real estate assets located throughout the United States. Under GASB Statement No. 72, *Fair Value Measurement and Application*, the THCs and LLCs meet GASB's definition of an investment and therefore are included in the accompanying financial statements as investments at fair value.

## Fair Value

Investments are carried at fair value. Fair values for investments are derived by various methods, as indicated in the following chart:

| Investments | Source |
|---|---|
| **Publicly Traded Securities, such as stocks and bonds. Bonds include obligations of the U.S. Treasury, U.S. agencies, non-U.S. governments, and both U.S. and non-U.S. corporations. Also included are mortgage-backed securities and asset-backed securities.** | Valuations are provided by LACERA's custodian based on end-of-day prices from external pricing vendors. Non-U.S. securities reflect currency exchange rates in effect at June 30, 2019 and 2018. |
| **Whole Loan Mortgages** | For the LACERA Member Home Loan Program, valuation is performed by LACERA staff based on loan information provided by Ocwen Financial Corporation, the program's mortgage servicer, with fair market value adjustments based on the market returns of the Bloomberg Barclays mortgage-backed securities index. |
| **Real Estate Equity Commingled Funds[1]** | Fair value as provided by real estate fund managers, based on review of cash flow, exit capitalization rates, and market trends; fund managers commonly subject each property to independent third-party appraisal annually.<br>Investments under development are carried at cumulative cost until developed. |
| **Real Estate: Special Purpose Entities, including Title Holding Corporations and Limited Liability Companies** | Fair value of the investment as provided by investment managers. Each property is subject to independent third-party appraisals every three years. |
| **Real Estate Debt Investments** | Fair value for real estate debt investments as provided by investment managers. |
| **Private Equity[1]** | Fair value provided by investment managers as follows:<br>Private investments — valued by the General Partner giving consideration to financial condition and operating results of the portfolio companies, nature of investment, marketability, and other factors deemed relevant.<br>Public investments — valued based on quoted market prices, less a discount, if appropriate, for restricted securities.<br>Fair values are reviewed by LACERA's private equity consultant. |
| **Public Market Equity and Fixed Income Investments held in Institutional Commingled Fund/Partnership[1]** | Fair value is typically provided by third-party fund administrator, who performs this service for the fund manager. |

| Investments | Source |
|---|---|
| **Derivatives** | Over-the-counter derivatives (other than currency forwards) valuations are provided by the fund managers. Currency forward contracts are valued by the custodian bank. |
| **Hedge Fund of Funds[1]** | Valuation of the underlying funds is performed by those funds' General Partners. Valuation of the fund of funds portfolios is provided by third-party administrators and by the General Partner for the portfolios held in limited partnership vehicles. |

[1]These assets are reported by LACERA based on the practical expedient allowed under GAAP.
Note: The fair value hierarchy is provided in Note P – Fair Value.

There are certain market risks, credit risks, foreign currency exchange risks, liquidity risks, and event risks that may subject LACERA to economic changes occurring in certain industries, sectors, or geographies.

Dividend income is recorded on the ex-dividend date. Other investment income is recorded as earned on an accrual basis.

## Investment Policies — Pension Plan

**Investment Policy:** The allocation of investment assets within the LACERA Defined Benefit Pension Plan (Pension Plan) investment portfolio is approved by the LACERA Board of Investments, as outlined in the LACERA Investment Policy Statement (IPS). Pension Plan assets are managed on a total return basis with a long-term objective of achieving and maintaining a fully funded status for the benefits provided through the Pension Plan. The Investment Policy Statement calls for an asset liability study to be conducted no later than every three to five years.

In November 2018, the LACERA Board of Investments adopted a restated IPS to address topics such as Legal Authority, Investment Philosophy and Strategy, Investment Process, Risk Management, Roles and Responsibilities, Asset Allocation and Benchmarks, and Delegated Authorities. In addition, the IPS includes several related policies as attachments: Corporate Governance Principles, Corporate Governance Policy, Responsible Contractor Policy, Emerging Manager Policy, and Placement Agent Policy.

The LACERA Board of Investments and internal staff implement asset allocation targets through the use of external managers who manage portfolios using active and passive investment strategies.

Financial statements were prepared using traditional investment asset categories (i.e., equity, fixed income, private equity, real estate, and hedge funds). In the table on page 40 and in the Investment Section, investment information is presented in functional asset categories. LACERA's Board of Investments developed and practices its Investment Beliefs which state that long term strategic allocation will be the determinant of LACERA's risk/return outcomes. Based on the Pension Trust Asset Allocation Study completed by Meketa in March 2018, the Board of Investments approved the use of a functional framework for modeling purposes which offers the inclusion of a broader group of investments in Credit and Real Assets and Inflation Hedges. The functional categories include various asset classes that represent the risk/return characteristics of each area. LACERA expects the four functional categories to diversify the Fund and optimize upside growth while mitigating downside risk. The asset allocation determines what proportion of the Fund is allocated to each functional category and underlying asset class, including target weights and allowable ranges as a percentage of the Fund.

## Schedule of Target Allocation and Long-Term Expected Rate of Return

*For the Fiscal Year Ended June 30, 2019*

| Asset Class | Target Allocation (Policy) | | Weighted Average Long-Term Expected Real Rate of Return (After Expected 2.75% Inflation Rate) (Geometric) | |
|---|---|---|---|---|
| **Growth** | **47.0%** | | **6.5%** | |
| Global Equity | | 35.0% | | 5.7% |
| Private Equity | | 10.0% | | 7.1% |
| Opportunistic Real Estate | | 2.0% | | 6.2% |
| **Credit** | **12.0%** | | **3.4%** | |
| High Yield Bonds | | 3.0% | | 3.6% |
| Bank Loans | | 4.0% | | 3.3% |
| Emerging Market Bonds (local) | | 2.0% | | 2.5% |
| Illiquid Credit | | 3.0% | | 3.2% |
| **Real Assets and Inflation Hedges** | **17.0%** | | **3.8%** | |
| Core and Value Added Real Estate | | 7.0% | | 3.2% |
| Natural Resources and Commodities | | 4.0% | | 4.4% |
| Infrastructure | | 3.0% | | 4.1% |
| TIPS | | 3.0% | | 0.8% |
| **Risk Reduction and Mitigation** | **24.0%** | | **1.4%** | |
| Investment Grade Bonds | | 19.0% | | 1.1% |
| Diversified Hedge Fund Portfolio | | 4.0% | | 2.8% |
| Cash Equivalents | | 1.0% | | 0.1% |

**Target Allocation:** The LACERA Board of Investments approved the current target allocation as a result of the Asset Allocation Study completed by Meketa Investment Group (Meketa) in May 2018, which included a new functional allocation model and asset allocation policy ranges. At the time, the Board adopted the targets to provide for diversification of assets in an effort to meet LACERA's actuarial assumed rate of return, consistent with market conditions and risk control.

**Weighted Average Long-Term Expected Real Rate of Return:** The long-term expected real rate of return on Pension Plan investments is based on inflation expectations and nominal return expectations developed by Meketa Investment Group for each asset class. In the case of the total portfolio and broad asset groupings (e.g., Growth, Credit), returns are calculated using a portfolio approach that first calculates nominal expected returns by incorporating target weights, nominal expected returns, and volatility and correlations estimates for each asset class, adjusted by the defined return period. Nominal expected returns for each portfolio or broad asset groupings are converted to real expected returns by adjusting them for inflation, using a base inflation rate assumption of 2.75 percent.

It is worth noting that a simple weighted sum of asset classes return will not yield the total results shown on the table for the total portfolio and broad asset groupings, given the process followed to adjust for inflation, the compounding to a given time period, and the impact of volatility and correlations to the portfolio.

**Discount Rate:** GASB Statement No. 67 requires determination of whether the Pension Plan's Fiduciary Net Position is projected to be sufficient to make projected benefit payments. The discount rate used to measure the Total Pension Liability was 7.38 percent. This rate reflects the long-term assumed rate of return on assets for funding purposes of 7.25 percent, net of all expenses, increased by 0.13 percent, gross of administrative expenses.

The projection of cash flows used to determine the discount rate assumed that Pension Plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rates. Based on those assumptions, the Pension Plan's Fiduciary Net Position was projected to be sufficient to pay projected benefit payments in all future years. 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.

**Money-Weighted Rate of Return:** The annual money-weighted rate of return on Pension Plan investments, net of Pension Plan investment expenses as of the fiscal years ended June 30, 2019 and 2018, were 5.5 percent and 9.0 percent, respectively. The money-weighted rate of return is a measure of the performance of an investment calculated by finding the rate of return that will set the present values of all cash flows equal to the value of the initial investment. This method is equivalent to the internal rate of return. Historical returns are presented in the Schedule of Investment Returns – Pension Plan in the Required Supplementary Information Section.

**Time-Weighted Rate of Return:** The annual time-weighted rate of return on Pension Plan investments as of the fiscal years ended June 30, 2019 and 2018, were 6.4 percent and 9.0 percent, respectively. The time-weighted rate of return is a measure of the compound rate of growth in a portfolio. This measure is often used to compare the performance of investment managers because it eliminates the distorting effects on growth rates created by inflows and outflows of money. The time-weighted return breaks up the return on an investment portfolio into separate intervals based on whether money was added or withdrawn from the fund. Historical returns are presented in the Investments Results Based on Fair Value – Pension Plan in the Investment Section.

## Use of Estimates

The preparation of LACERA's financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes to the financial statements. Actual results may differ from these estimates.

## Reclassifications

Comparative data for the prior year have been presented in the selected sections of the accompanying Statement of Fiduciary Net Position and Statement of Changes in Fiduciary Net Position. Also, certain accounts presented in the prior year's data may have been reclassified to be consistent with the current year's presentation.

## Upcoming GASB Pronouncements

In January 2017, the Governmental Accounting Standards Board issued Statement No. 84, *Fiduciary Activities*. This statement establishes uniform criteria for identifying, classifying and reporting fiduciary activities of all state and local governments. Included in the requirements, the standard eliminates the use of the agency funds and in most cases, these activities will be accounted for in custodial funds. This standard will also require a Statement of Changes in Fiduciary Position for custodial funds. LACERA is currently evaluating the impact this standard will have on the financial statements when adopted. The provisions of this statement are effective for LACERA's financial statements for the year ending June 30, 2020.

In June 2017, the Governmental Accounting Standards Board issued Statement No. 87, Leases, which improves accounting and financial reporting for leases by governments. This Statement requires recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. It establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Under this Statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources. LACERA is currently evaluating the impact this standard will have on the financial statements, when adopted. The provisions of this statement are effective for LACERA's fiscal year ending June 30, 2021 financial statements.

## NOTE C — Pension Plan Contributions

In December 2009, the LACERA Board of Investments adopted a revised Retirement Benefit Funding Policy (Funding Policy). The Funding Policy was amended in February 2013 to conform to the new standards mandated in the California Public Employees' Pension Reform Act of 2013 (PEPRA).

Members and employers contribute to LACERA based on unisex rates recommended by an independent consulting actuary and adopted by the LACERA Board of Investments and the Los Angeles County Board of Supervisors. Contributory plan members are required to contribute between approximately 5 percent and 16 percent of their annual covered salary. Member and employer contributions received from the Outside Districts constitute part of LACERA's Pension Plan as a whole.

Participating employers are required to contribute the remaining amounts necessary to finance the coverage of their employees (members) through monthly or annual prefunded contributions at actuarially determined rates. Rates for contributory plan members who entered the Pension Plan prior to January 1, 2013, are based upon plan entry-age and plan-type enrollment. As of January 1, 2013, the PEPRA mandated retirement plan contributions for new members on and after January 1, 2013 are based on a single flat-rate percentage and are structured in accordance with the required 50/50 normal cost sharing between the employer and the employees.

Both member rate methodologies are actuarially designed for the employees, as a group, to make contributions into the Pension Plan, which when combined with employer contributions and investment earnings, provide sufficient funding. As a result of collective bargaining, actual member contribution rates for various Plan Types are controlled through these agreements and through additional employer contributions (for some contributory plans), known as the surcharge amount, which is subject to change each year. As required by GASB Statement No. 82, member contributions paid by the employer are included in the member contribution amounts.

The Employer contribution rate is composed of the normal cost and the UAAL amortization payment. Normal cost is the portion of the actuarial present value of retirement benefits attributable to the current year of service. Amortization of the UAAL is payments made for prior year unfunded benefits not provided by future normal costs. The latest actuarial valuation as of June 30, 2018 decreased the Employer normal cost rate from 9.94 percent to 9.92 percent and decreased the Employers' required contribution rate to finance the UAAL over a layered 30-year period from 11.06 percent to 10.99 percent. The change in the Employer contribution rates was primarily due to the recognition of investment gains. Member contribution rates remained the same for General Plan G and decreased for Safety Plan C members effective with the 2018 Actuarial Valuation with no change in rates for other Plans.

Although the Employer normal cost rate and UAAL amortization rates decreased in the June 30, 2018 valuation, the total Employer contribution rate increased 0.87 percent from the previous Valuation as of June 30, 2017 (from 20.04 percent to 20.91 percent) primarily due to the deferred recognition of new assumptions. The 20.91 percent reflects the full three-year phase-in of the increase in the Employer contribution rate due to the new assumptions adopted as a result of the 2016 Experience Study. The cost impact of the assumption changes has been fully phased into the Employer contribution rate as of June 30, 2018 Valuation report.

The most significant factor causing the increase was the additional year phase-in of the cost impact of the 2016 assumption changes which resulted in a 0.96 percent increase in the Employer contribution rate. This increase was partially offset by typical year-to-year fluctuations, including the impact of strong investment returns which caused a 0.30 percent decrease, with all other factors accounting for a 0.21 percent increase, resulting in a total increase of 0.87 percent.

For the fiscal years ended June 30, 2019 and June 30, 2018, Los Angeles County, including the Superior Court, and the Outside Districts, paid their employer and employee contributions due to LACERA in the form of cash payments. For the fiscal years ended June 30, 2019 and June 30, 2018, employer contributions totaled $1.67 billion and $1.52 billion, respectively, and employee contributions totaled $635 million and $591 million, respectively.

## Pension Plan Contributions

*For the Fiscal Years Ended June 30, 2019 and 2018*
(Dollars in Thousands)

| | 2019 | 2018 |
|---|---|---|
| **Employers** | | |
| Los Angeles County | **$1,605,150** | $1,466,411 |
| Superior Court | **62,875** | 58,291 |
| Local Agency Formation Commission | **119** | 106 |
| South Coast Air Quality Management District[1] | **—** | 8 |
| Little Lake Cemetery District | **7** | 7 |
| Los Angeles County Office of Education[2] | **—** | — |
| **Total Employer Contributions** | **$1,668,151** | $1,524,823 |
| Employee Contributions[3] | **$635,415** | $591,262 |
| **Total Contributions** | **$2,303,566** | $2,116,085 |

[1]South Coast Air Quality Management District has no active employees contributing to the Pension System for the fiscal year ended 2019.

[2]Los Angeles County Office of Education has no active employees contributing to the Pension System for the fiscal years ended 2019 and 2018.

[3]In accordance with GASB Statement No. 82, employer pick-up contributions are classified as Member (Employee) Contributions.

## NOTE D — Pension Plan Reserves

LACERA includes reserve accounts within its financial records for various operating purposes as outlined in LACERA's reserves accounting policies. Reserves are established from member and employer contributions and the accumulation of realized investment income after satisfying investment and administrative expenses. With the exception of the reserves required by CERL §31592, reserves are neither required nor recognized under accounting principles generally accepted in the United States of America (i.e., GAAP). They are not shown separately on the Statement of Fiduciary Net Position, as the sum of these reserves equals the Net Position Restricted for Benefits. The reserves do not represent the present value of assets needed, as determined by actuarial valuation, to satisfy retirement and other benefits as they become due. The balances contained within the Net Position Restricted for Benefits are used to satisfy member retirement benefits.

### Pension Plan

LACERA's major classes of reserves:

**Member Reserves** represent the balance of member contributions. Additions include member contributions and related earnings. Deductions include annuity payments to retirees, refunds to members, and related expenses.

**Employer Reserves** represent the balance of employer contributions for future retirement payments to current active members. Additions include contributions from employers and related earnings. Deductions include annuity payments to retired members, lump-sum death/burial benefit payments to members' survivors, and supplemental disability payments.

**Supplemental Targeted Adjustment for Retirees (STAR) Reserve** represents the balance of transfers from the Contingency Reserve for future supplemental cost-of-living adjustment (COLA) increases. Twenty-five percent (25%) of excess earnings in fiscal years 1995-1999 were credited to the STAR Reserve pursuant to the 1994 Retirement System Funding Agreement between LACERA and the County. Additions include transfers from the Contingency Reserve. Deductions include STAR Program payments to retirees and funding for permanent benefits. In October 2008, except for Program Year 2005, the LACERA Board of Retirement made permanent the 2001 through 2009 STAR Programs at an 80 percent level, as authorized in the County Employees Retirement Law of 1937 (CERL). For Program Years 2010 through 2018, additional STAR benefits were not provided. There were no new retirees or beneficiaries entitled to additional STAR benefits for Program Year 2019 due to the modest Consumer Price Index (CPI) percentage increase. Thus, all eligible members had COLA Accumulation accounts below the 20 percent threshold for providing STAR benefits.

Future ad hoc increases in the current STAR Program will be subject to approval by the Board of Retirement on an annual basis, provided sufficient excess earnings are available as determined by the LACERA Board of Investments. Permanent STAR benefits become part of the member's retirement allowance and are payable for life. Ad hoc STAR benefits are payable only for the calendar year approved.

**Contingency Reserve** represents reserves accumulated for future earning deficiencies, investment losses, and other contingencies. Additions include realized investment income and other revenues. Deductions include investment expenses; administrative expenses; interest allocated to other reserves, in priority order, to the extent that realized earnings are available for the six-month period, as defined in the 2009 Retirement Benefit Funding Policy (Funding Policy) amended in 2013, approved by the LACERA Board of Investments; and funding of the STAR Reserve when excess earnings are available and authorized by the LACERA Board of Retirement. For the fiscal years ended June 30, 2019 and 2018, the net investment earnings were applied as interest credits to some of the reserves in accordance with the Funding Policy, leaving no available credits for the Contingency Reserve.

## Pension Plan Reserves

*As of June 30, 2019 and 2018*

(Dollars in Thousands)

| | 2019 | 2018 |
|---|---|---|
| Member Reserves | **$22,363,376** | $21,438,278 |
| Employer Reserves | **22,464,894** | 22,610,763 |
| STAR Reserve | **614,011** | 614,011 |
| Contingency Reserve | **—** | — |
| **Total Reserves at Book Value** | **$45,442,281** | $44,663,052 |
| Unrealized Investment Portfolio Appreciation | **$12,852,555** | $11,636,930 |
| **Total Reserves at Fair Value[1]** | **$58,294,836** | $56,299,982 |

[1]Total Reserves at Fair Value equals the Net Position Restricted for Benefits as presented in the Basic Financial Statements.

## NOTE E — Pension Plan Liabilities

The County Employees Retirement Law of 1937 (CERL) requires an actuarial valuation to be performed at least every three years for the purpose of measuring the Pension Plan's funding progress and setting contribution rates. LACERA exceeds this requirement by engaging an independent actuarial consulting firm to perform an actuarial valuation for the Pension Plan annually. Employer contribution rates and employee contribution rates for new retirement plans established under the California Public Employees' Pension Reform Act of 2013 (PEPRA) may be updated each year as a result of the valuation.

Actuarial standards guide the frequency with which an investigation of experience (experience study) is performed. LACERA engages an independent actuarial consulting firm to perform the experience study at least every three years. The economic and demographic assumptions are reviewed and updated as deemed necessary each time an experience study is completed. The experience study and corresponding annual valuation serve as the basis for changes in employer and member contribution rates for both PEPRA and legacy retirement plans necessary to properly fund the Pension Plan.

The LACERA Board of Investments adopted new assumptions beginning with the June 30, 2013 and June 30, 2016 actuarial valuations, based on the results of the 2013 and 2016 triennial experience studies. For financial reporting purposes, LACERA reviews these assumptions annually to ensure they continue to represent appropriate plan assumptions under GAAP.

## Actuarial Assumptions

Actuarial valuations of an ongoing plan involve assumptions about the probability of the occurrence of events far into the future. Examples include assumptions about future employment, mortality, cost trends, assumed rate of return, inflation, and other demographic and economic changes over time. Actuarially determined assumptions are subject to continual review or modification as actual experience is compared with past expectations and new estimates are made about the future. Projections of benefits for financial reporting purposes are based on the adopted assumptions and actual demographics of the Pension Plan and include the types of benefits provided at the time of each valuation.

The Total Pension Liability as of June 30, 2019, was determined by completing a roll forward calculation based on an actuarial valuation conducted as of June 30, 2018, using the following actuarial assumptions in accordance with the requirements of GASB Statement No. 67 (GASB 67). The actuarial funding valuation serves as a basis for the GASB 67 information. All actuarial methods and assumptions used for this GASB analysis were the same as those used for the June 30, 2018 funding valuation, except where differences are noted. Key methods and assumptions used to calculate the Total Pension Liability are presented as follows. For additional information regarding the actuarial valuation, refer to the Actuarial Section.

## Actuarial Methods and Significant Assumptions

| Description | Method |
|---|---|
| **Actuarial Cost Method** | Individual Entry Age Normal. |
| **Discount Rate** | 7.38 percent, net of pension plan investment expense, including inflation.<br>This rate was adopted beginning with the June 30, 2016 valuation. |
| **Price Inflation** | 2.75 percent.<br>This rate was adopted beginning with the June 30, 2016 valuation. |
| **General Wage Growth And Projected Salary Increases** | General wage growth: 3.25 percent.<br>This rate was adopted beginning with the June 30, 2016 valuation.<br>Projected salary increases: 3.51 percent to 11.51 percent.<br>The total expected increase in salary includes both merit and the general wage increase assumption of 3.25 percent per annum. The total result is compounded rather than additive. Increases are assumed to occur mid-year (i.e., January 1) and apply only to base salary. The mid-year timing reflects that salary increases occur throughout the year, or on average mid-year.<br>These rates were adopted beginning with the June 30, 2016 valuation. |
| **Cost-of-Living Adjustments** | Post-retirement benefit increases of either 2.75 percent or 2.0 percent per year (a pro-rata portion for Plan E) are assumed.<br>This assumption was adopted with the June 30, 2016 valuation. The LACERA Funding Policy calls for the inclusion of the Supplemental Targeted Adjustment for Retirees (STAR) Reserve in the calculation of valuation assets for funding purposes, with no corresponding liability. For the Total Pension Liability, STAR COLA (Cost-of-Living Adjustments) benefits are assumed to be substantively automatic at the 80 percent purchasing power level until the STAR Reserve is projected to be insufficient to pay further STAR benefits. This roll-forward calculation includes a future liability for STAR COLA benefits.<br>See Note A — Plan Description for additional COLA and STAR COLA information. |
| **Mortality** | Various rates based on the RP–2014 mortality tables and including projection for expected future mortality improvement using the MP–2014 Ultimate Projection Scale.<br>This assumption was adopted with the June 30, 2016 valuation. |

## Discount Rate

The long-term expected rate of return was determined by adding expected inflation to expected long-term real returns and reflecting expected volatility and correlation. Milliman's December 2016 Investigation of Experience analysis was used to develop the 7.38 percent assumption used for the current reporting date. This is equal to the 7.25 percent long-term investment return assumption adopted by the Board (net of investment and administrative expenses), plus 0.13 percent assumed administrative expenses, as required by GASB 67. LACERA has reviewed this assumption as of the report date using current capital market assumptions provided by their external advisors.

The plan's projected Fiduciary Net Position, after reflecting employee and employer made contributions, was expected to be sufficient to make all future benefit payments of current active and inactive (deferred) employees. Therefore, the discount rate for calculating the Total Pension Liability is equal to the long-term expected rate of return, gross of administrative expenses.

## Other Key Assumptions

Other key actuarial assumptions used to calculate the Total Pension Liability as of the June 30, 2019 measurement date are the same as used to determine the June 30, 2018 actuarial funding valuation. For the determination of the Total Pension Liability as of the June 30, 2018 measurement date, other key actuarial assumptions were the same as used in the June 30, 2017 actuarial funding valuation.

## Net Pension Liability

GASB 67 requires public pension plans to provide the calculation of a Net Pension Liability. The Net Pension Liability is measured as the Total Pension Liability less the amount of the Pension Plan's Fiduciary Net Position.

The Net Pension Liability is an accounting measurement for financial statement reporting purposes. The funded status of the Plan is calculated separately by the consulting actuary and the results are included in the actuarial valuation report. The components of LACERA's (the Pension Plan's) Net Pension Liability at fiscal year end June 30, 2019 and 2018, were as follows:

### Schedule of Net Pension Liability

*For the Fiscal Years Ended June 30, 2019 and 2018*
(Dollars in Thousands)

| | **2019** | **2018** |
|---|---|---|
| Total Pension Liability | **$70,309,252** | $67,057,218 |
| Less: Fiduciary Net Position | **(58,294,837)** | (56,299,982) |
| **Net Pension Liability** | **$12,014,415** | $10,757,236 |
| Fiduciary Net Position as a Percentage of Total Pension Liability | **82.91%** | 83.96% |

## Sensitivity Analysis

In accordance with GASB 67, sensitivity of the Net Pension Liability to changes in the discount rate must be reported. The following presents the Net Pension Liability, calculated for the fiscal year ended June 30, 2019 using the discount rate of 7.38 percent, as well as what the Net Pension Liability would be if it were calculated using a discount rate that is 1 percentage point lower (6.38 percent) or 1 percentage point higher (8.38 percent) than the current rate (7.38 percent). A corresponding calculation is presented for the fiscal year ended June 30, 2018 based on the discount rate in effect for that year:

### Sensitivity Analysis

*For the Fiscal Years Ended June 30, 2019 and 2018*
(Dollars in Thousands)

| | 2019 | | | 2018 | | |
|---|---|---|---|---|---|---|
| | 1% Decrease [6.38%] | Current Discount Rate [7.38%] | 1% Increase [8.38%] | 1% Decrease [6.38%] | Current Discount Rate [7.38%] | 1% Increase [8.38%] |
| Total Pension Liability | $79,765,829 | $70,309,252 | $62,489,864 | $76,111,825 | $67,057,218 | $59,571,811 |
| Less: Fiduciary Net Position | (58,294,837) | (58,294,837) | (58,294,837) | (56,299,982) | (56,299,982) | (56,299,982) |
| **Net Pension Liability** | **$21,470,992** | **$12,014,415** | **$4,195,027** | **$19,811,843** | **$10,757,236** | **$3,271,829** |

## NOTE F — Partial Annuitization of Pension Benefit Payments

In January 1987, LACERA entered into agreements to purchase single life annuities from two insurance companies to provide pension benefit payments to a portion of the retired members. Under the terms of the agreements, LACERA continues to administer all pension benefit payments to covered members. There is no effect on covered members, since they retain all pension benefits accorded to LACERA members, including rights to continuance of benefits to survivors, health insurance subsidies, and cost-of-living adjustments (COLAs). The values of the annuities are entirely allocated to covered members. The monthly annuity reimbursement from the annuity providers is limited to the straight life annuity payments and statutory COLA increases.

LACERA is responsible for any difference in pension benefit payments payable to covered members which are unreimbursed by the insurance companies. The reimbursements received are netted against the pension and annuity payments in LACERA's financial statements. For the fiscal year ended June 30, 2019, LACERA paid $13.0 million to covered members and received $10.8 million in related reimbursements. For the fiscal year ended June 30, 2018, LACERA paid $15.3 million to covered members and received $12.6 million in related reimbursements. As the monthly annuity reimbursement from the annuity providers is allocated to covered members' pension payments, the fair value of contracts was excluded from pension plan assets and actuarially determined amounts.

## NOTE G — Deposit and Investment Risks

The County Employees Retirement Law of 1937 (CERL) vests the LACERA Board of Investments with exclusive control over LACERA's investment portfolio. The LACERA Board of Investments established Investment Policy Statements and Manager Guidelines for the management of the LACERA defined benefit retirement plan (Pension Plan) and the LACERA Other Post-Employment Benefit Master Trust (OPEB Master Trust or OPEB Trust). The LACERA Board of Investments exercises authority and control over the management of LACERA's Net Position Restricted for Benefits by setting a policy that the Investments staff executes either internally or through the use of prudent external experts.

Each Investment Policy Statement recognizes that every investment asset class and type is subject to certain risks. Outlined below are the Deposit and Investment Risks as they relate to fixed income investments.

### Credit Risk

Credit Risk is the risk that an issuer or a counterparty to an investment transaction will not fulfill its obligations, causing the investment to decline in value. LACERA seeks to maintain a diversified portfolio of fixed income instruments in order to obtain the highest total return for the Pension Plan at an acceptable level of risk within this asset class. To control Credit Risk, credit quality guidelines have been established.

### Investment Grade Bonds

Investment Grade bonds are categorized as a component of the Risk Reduction and Mitigation functional asset category presented in the Investment Section, and are subdivided into two types of strategies: Core and Core Plus, with target allocation weights of 80% for Core and 20% for Core Plus. Investment guidelines for Core managers require that they invest predominantly in sectors represented in their benchmark index, which consists 100% of bonds rated investment grade. As a result, Core portfolios consist almost 100% of bonds rated investment grade by the major credit rating agencies: Moody's, Standard and Poor's, and Fitch. Core Plus managers are afforded some latitude to deviate from the benchmark index in order to generate excess return, so investment grade bonds must comprise at least 70% of Core Plus portfolios.

### High Yield Bonds

Dedicated High Yield bond portfolios are categorized in the Credit functional asset category presented in the Investment Section. By definition, high yield bonds are securities rated below investment grade. Therefore, the majority of bonds in the high yield portfolios are rated below investment grade by at least one of the major credit rating agencies: Moody's, S&P, and Fitch.

High yield portfolios use the following credit quality guidelines:

- At least 95 percent of all rated securities, including Rule 144A securities, must be rated B- or higher by S&P or equivalent by a major credit rating agency at the time of purchase.
- Consistent with the preceding requirement, a maximum of 5 percent of the portfolio may be invested in issues rated below B- by S&P or equivalent; however, these issues must be rated at least CCC by S&P or Caa by Moody's.
- Unrated issues may be purchased, provided that, in the judgment of the Investment Manager, they would not violate LACERA's minimum credit criteria.
- Money market instruments must be rated at least A-2/P-2 or equivalent by at least one major credit rating agency.

The Credit portfolios allow for the assumption of more credit risk than Investment Grade portfolios by investing in securities that include unrated bonds, bonds rated below investment grade issued by corporations undergoing financial stress or distress, junior tranches of structured securities backed by residential and commercial mortgages, bank loans, illiquid credit, and emerging market debt. LACERA utilizes specific investment guidelines for these portfolios that limit maximum exposure by issuer, industry, and sector, which result in well-diversified portfolios.

*The following is a schedule for the year ended June 30, 2019 of the credit quality ratings by Moody's, a nationally recognized statistical rating organization, of investments in fixed income securities. Whole loan mortgages included in the Pension Plan portfolio of $27 million are excluded from this presentation.*

## Credit Quality Ratings of Investments in Fixed Income Securities — Pension Plan

*As of June 30, 2019*
(Dollars in Thousands)

| Quality Ratings | U.S. Treasuries | U.S. Govt. Agencies | Municipals | Corporate Debt/Credit Securities | Pooled Investments | Non-U.S. Fixed Income | Private Placement Fixed Income | Total | Percentage of Portfolio |
|---|---|---|---|---|---|---|---|---|---|
| Aaa | $1,605,167 | $2,040,089 | $831 | $237,230 | $— | $1,980 | $227,427 | $4,112,724 | 22.8% |
| Aa | — | 4,245 | 24,668 | 179,219 | — | 3,986 | 61,327 | 273,445 | 1.5% |
| A | — | — | 8,696 | 659,900 | — | 11,610 | 247,339 | 927,545 | 5.2% |
| Baa | — | — | 13,913 | 976,853 | — | 10,907 | 273,128 | 1,274,801 | 7.1% |
| Ba | — | — | — | 392,778 | — | 9,757 | 287,172 | 689,707 | 3.8% |
| B | — | — | 91 | 770,865 | — | 36,157 | 411,389 | 1,218,502 | 6.8% |
| Caa | — | — | — | 164,700 | — | 558 | 127,317 | 292,575 | 1.6% |
| Ca | — | — | 4,918 | 36,179 | — | — | 1,519 | 42,616 | 0.2% |
| C | — | — | — | 574 | — | — | 3 | 577 | —% |
| Not Rated | — | 100,216 | 5,134 | 182,793 | 8,555,790 | 10,824 | 314,293 | 9,169,050 | 50.9% |
| **Total** | **$1,605,167** | **$2,144,550** | **$58,251** | **$3,601,091** | **$8,555,790** | **$85,779** | **$1,950,914** | **$18,001,542** | **100%** |

*The following is a schedule for the year ended June 30, 2018 of the credit quality ratings by Moody's, a nationally recognized statistical rating organization, of investments in fixed income securities. Whole loan mortgages included in the Pension Plan portfolio of $33 million are excluded from this presentation.*

## Credit Quality Ratings of Investments in Fixed Income Securities — Pension Plan

*As of June 30, 2018*
(Dollars in Thousands)

| Quality Ratings | U.S. Treasuries | U.S. Govt. Agencies | Municipals | Corporate Debt/Credit Securities | Pooled Investment | Non-U.S. Fixed Income | Private Placement Fixed Income | Total | Percentage of Portfolio |
|---|---|---|---|---|---|---|---|---|---|
| Aaa | $1,708,192 | $1,837,787 | $10,219 | $604,685 | $— | $22,367 | $318,025 | $4,501,275 | 28.3% |
| Aa | — | — | 24,870 | 328,302 | 318,126 | 3,984 | 89,899 | 765,181 | 4.8% |
| A | — | — | 8,548 | 785,183 | — | 42,360 | 312,151 | 1,148,242 | 7.2% |
| Baa | — | 2,629 | 22,215 | 1,354,043 | 39,344 | 3,870 | 407,068 | 1,829,169 | 11.5% |
| Ba | — | — | — | 569,588 | — | 22,016 | 255,450 | 847,054 | 5.3% |
| B | — | — | 90 | 642,681 | 30,624 | 30,367 | 416,897 | 1,120,659 | 7.0% |
| Caa | — | — | — | 240,469 | — | 6,787 | 104,935 | 352,191 | 2.2% |
| Ca | — | — | — | 39,969 | — | — | 845 | 40,814 | 0.3% |
| C | — | — | 1,272 | 156 | — | — | 195 | 1,623 | —% |
| Not Rated | — | 1,743 | 7,144 | 205,324 | 4,913,260 | 5,843 | 162,215 | 5,295,529 | 33.3% |
| **Total** | **$1,708,192** | **$1,842,159** | **$74,358** | **$4,770,400** | **$5,301,354** | **$137,594** | **$2,067,680** | **$15,901,737** | **100%** |

## Credit Quality Ratings of Investments in Fixed Income Securities — OPEB Trust

*As of June 30, 2019*
(Dollars in Thousands)

| Quality Ratings | U.S. Treasuries | Corporate Debt/ Credit Securities | Pooled Investments | Private Placement Fixed Income | Total | Percentage of Portfolio |
|---|---|---|---|---|---|---|
| Aaa | $2,993 | $825 | $— | $512 | $4,330 | 0.9% |
| Aa | — | 1,333 | — | 468 | 1,801 | 0.4% |
| A | — | 3,382 | — | 1,249 | 4,631 | 1.0% |
| Not Rated | — | 679 | 468,061 | 271 | 469,011 | 97.8% |
| **Total** | **$2,993** | **$6,219** | **$468,061** | **$2,500** | **$479,773** | **100%** |

## Credit Quality Ratings of Investments in Fixed Income Securities — OPEB Trust

*As of June 30, 2018*
(Dollars in Thousands)

| Quality Ratings | U.S. Treasuries | Corporate Debt/ Credit Securities | Pooled Investments | Private Placement Fixed Income | Total | Percentage of Portfolio |
|---|---|---|---|---|---|---|
| Aaa | $991 | $983 | $— | $— | $1,974 | 0.5% |
| Aa | — | 784 | — | 779 | 1,563 | 0.4% |
| A | — | 3,813 | — | 3,014 | 6,827 | 1.8% |
| Not Rated | — | 155 | 362,154 | 289 | 362,598 | 97.2% |
| **Total** | **$991** | **$5,735** | **$362,154** | **$4,082** | **$372,962** | **100%** |

## Credit Quality Ratings of Investments in Fixed Income Securities — OPEB Agency Fund

*As of June 30, 2019*
(Dollars in Thousands)

| Quality Ratings | U.S. Treasuries | Corporate Debt/ Credit Securities | Private Placement Fixed Income | Total | Percentage of Portfolio |
|---|---|---|---|---|---|
| Aaa | $61,607 | $10,281 | $4,759 | $76,647 | 64.6% |
| Aa | — | 12,073 | 1,810 | 13,883 | 11.7% |
| A | — | 23,880 | 4,277 | 28,157 | 23.7% |
| **Total** | **$61,607** | **$46,234** | **$10,846** | **$118,687** | **100%** |

## Credit Quality Ratings of Investments in Fixed Income Securities — OPEB Agency Fund

*As of June 30, 2018*
(Dollars in Thousands)

| Quality Ratings | U.S. Treasuries | Corporate Debt/Credit Securities | Private Placement Fixed Income | Total | Percentage of Portfolio |
|---|---|---|---|---|---|
| Aaa | $58,525 | $5,983 | $2,797 | $67,305 | 62.7% |
| Aa | — | 8,782 | 1,777 | 10,559 | 9.8% |
| A | — | 22,509 | 3,718 | 26,227 | 24.4% |
| Baa | — | 587 | — | 587 | 0.5% |
| Not Rated | | 2,080 | 636 | 2,716 | 2.5% |
| **Total** | **$58,525** | **$39,941** | **$8,928** | **$107,394** | **100%** |

### Custodial Credit Risk

LACERA's contract with its custodian State Street Bank and Trust (Bank) provides that the Bank may hold LACERA's securities registered in the Bank's or its agent's nominee name, in bearer form, in book-entry form, with a clearing house corporation, or with a depository, so long as the Bank's records clearly indicate that the securities are held in custody for LACERA's account. The Bank may also hold securities in custody in LACERA's name when required by LACERA. When held in custody by the Bank, the securities are not at risk of loss in the event of the Bank's financial failure, because the securities are not property (assets) of the Bank. Cash invested overnight in the Bank's depository accounts is subject to the risk that in the event of the Bank's failure, LACERA might not recover all or some of those overnight deposits. This risk is mitigated when the overnight deposits are insured or collateralized.

LACERA's policy as incorporated in its current contract with the Bank requires the Bank to certify it has taken all steps to assure all LACERA monies on deposit with the Bank are eligible for and covered by "pass-through insurance," in accordance with applicable law and FDIC rules and regulations. The steps taken by the Bank include paying deposit insurance premiums when due, maintaining a "prompt corrective action" capital category of "well capitalized," and identifying on the Bank's records that it acts as a fiduciary for LACERA with respect to the monies on deposit. In addition, the Bank is required to provide evidence of insurance and to maintain a Financial Institution Bond, which would cover the loss of money and securities with respect to any and all property the Bank or its agents hold in or for LACERA's account, up to the amount of the bond. To implement certain investment strategies, some of LACERA's assets are invested in investment managers' pooled vehicles. The securities in these vehicles may be held by a different custodian other than State Street Bank and Trust.

### Counterparty Risk

Counterparty Risk for investments is the risk that, in the event of the failure of the counterparty to complete a transaction, LACERA would not be able to recover the value of the investment or collateral securities that are in the possession of an outside party. LACERA and its managers seek to minimize risk of loss from its counterparties by diversifying the number of counterparties, periodically reviewing their credit quality and seeking to structure agreements so that collateral is posted on accrued gains if they reach certain size thresholds.

### Concentration of Credit Risk

No more than 5 percent of the Investment Grade bond and High Yield bond portfolios may be invested in securities of a single issuer, except:

U.S. Treasury securities, government-guaranteed debt (including G-7 countries), agency debt, agency mortgage-backed securities, and approved commingled funds. As of June 30, 2019, LACERA did not hold any investments in any one issuer that would represent 5 percent or more of the Pension Plan Fiduciary Net Position. Investments issued or explicitly guaranteed by the U.S. government and pooled investments are excluded from this requirement.

## Interest Rate Risk

Interest Rate Risk is the risk that changes in interest rates will adversely affect the fair value of an investment. Duration is a measure of the price sensitivity of a fixed income portfolio to changes in interest rates. It is calculated as the weighted average time to receive a bond's coupon and principal payments. The longer the duration of a portfolio, the greater its price sensitivity to changes in interest rates.

To manage Interest Rate Risk, the duration of all Investment Grade bond portfolios is restricted to plus or minus 25.0 percent of the duration of the portfolios' respective benchmarks. Deviations from any of the stated guidelines require prior written authorization from LACERA.

*The Duration in Fixed Income Securities – Pension Plan schedule for the year ended June 30, 2019 presents the duration by investment type. Whole loan mortgages included in the Pension Plan portfolio of $27 million are excluded from this presentation.*

### Duration in Fixed Income Securities — Pension Plan

*As of June 30, 2019*
(Dollars in Thousands)

| Investment Type | Fair Value | Portfolio-Weighted Average Effective Duration[1] |
|---|---|---|
| U.S. Treasuries, U.S. Government Agency, and Municipal Instruments: | | |
| U.S. Treasuries | $1,605,167 | 8.26 |
| U.S. Government Agency | 2,144,550 | 1.86 |
| Municipal/Revenue Bonds | 58,250 | 9.12 |
| **Subtotal U.S. Treasuries, U.S. Government Agency, and Municipal Instruments** | **$3,807,967** | |
| Corporate Bonds and Credit Securities: | | |
| Asset-Backed Securities | $506,275 | 1.63 |
| Corporate and Other Credit | 3,121,985 | 3.55 |
| Fixed Income Swaps and Options | (27,169) | N/A |
| Pooled Funds | 8,555,790 | N/A |
| **Subtotal Corporate Bonds and Credit Securities** | **$12,156,881** | |
| Non-U.S. Fixed Income | $85,780 | 3.17 |
| Private Placement Fixed Income | 1,950,914 | 3.03 |
| **Subtotal Non-U.S. and Private Placement Securities** | **$2,036,694** | |
| **Total Fixed Income Securities** | **$18,001,542** | |

[1]Effective Duration is a measure of a bond's sensitivity to interest rates. It is calculated as the percentage change in a bond's price caused by a change in the bond's yield. For example, a duration of 5 indicates that a 1 percent increase in a bond's yield will cause the bond price to decline 5 percent.

*The Duration in Fixed Income Securities – Pension Plan schedule for the year ended June 30, 2018 presents the duration by investment type. Whole loan mortgages included in the Pension Plan portfolio of $33 million are excluded from this presentation.*

## Duration in Fixed Income Securities — Pension Plan

*As of June 30, 2018*
(Dollars in Thousands)

| **Investment Type** | **Fair Value** | **Portfolio-Weighted Average Effective Duration[1]** |
|---|---|---|
| U.S. Treasuries, U.S. Government Agency, and Municipal Instruments: | | |
| U.S. Treasuries | $1,708,192 | 7.18 |
| U.S. Government Agency | 1,842,159 | 0.19 |
| Municipal/Revenue Bonds | 74,358 | 9.06 |
| **Subtotal U.S. Treasuries, U.S. Government Agency, and Municipal Instruments** | **$3,624,709** | |
| Corporate Bonds and Credit Securities: | | |
| Asset-Backed Securities | $678,777 | 1.57 |
| Corporate and Other Credit | 4,083,686 | 3.47 |
| Fixed Income Swaps and Options | 7,936 | N/A |
| Pooled Funds | 5,301,355 | N/A |
| **Subtotal Corporate Bonds and Credit Securities** | **$10,071,754** | |
| Non-U.S. Fixed Income | $137,594 | 3.65 |
| Private Placement Fixed Income | 2,067,680 | 3.47 |
| **Subtotal Non-U.S. and Private Placement Securities** | **$2,205,274** | |
| **Total Fixed Income Securities** | **$15,901,737** | |

[1]Effective Duration is a measure of a bond's sensitivity to interest rates. It is calculated as the percentage change in a bond's price caused by a change in the bond's yield. For example, a duration of 5 indicates that a 1 percent increase in a bond's yield will cause the bond price to decline 5 percent.

## Duration in Fixed Income Securities — OPEB Trust

*As of June 30, 2019*
(Dollars in Thousands)

| Investment Type | Fair Value | Portfolio-Weighted Average Effective Duration[1] |
|---|---|---|
| U.S. Treasuries | $2,993 | 1.16 |
| Corporate Bonds and Credit Securities: | | |
| Asset-Backed Securities | $1,334 | 0.27 |
| Corporate and Other Credit | 4,885 | 0.55 |
| Pooled Investments | 468,061 | N/A |
| **Subtotal Corporate Bonds and Credit Securities** | **$474,280** | |
| Private Placement Fixed Income | $2,500 | 0.62 |
| **Total Fixed Income Securities** | **$479,773** | |

[1]Effective Duration is a measure of a bond's sensitivity to interest rates. It is calculated as the percentage change in a bond's price caused by a change in the bond's yield. For example, a duration of 5 indicates that a 1 percent increase in a bond's yield will cause the bond price to decline 5 percent.

## Duration in Fixed Income Securities — OPEB Trust

*As of June 30, 2018*
(Dollars in Thousands)

| Investment Type | Fair Value | Portfolio-Weighted Average Effective Duration[1] |
|---|---|---|
| U.S. Treasuries | $991 | 0.55 |
| Corporate Bonds and Credit Securities: | | |
| Asset-Backed Securities | $1,138 | 0.15 |
| Corporate and Other Credit | 4,597 | 1.43 |
| Pooled Investments | 362,154 | N/A |
| **Subtotal Corporate Bonds and Credit Securities** | **$367,889** | |
| Private Placement Fixed Income | $4,082 | 0.63 |
| **Total Fixed Income Securities - OPEB Trust** | **$372,962** | |

[1]Effective Duration is a measure of a bond's sensitivity to interest rates. It is calculated as the percentage change in a bond's price caused by a change in the bond's yield. For example, a duration of 5 indicates that a 1 percent increase in a bond's yield will cause the bond price to decline 5 percent.

## Duration in Fixed Income Securities — OPEB Agency Fund

*As of June 30, 2019*
(Dollars in Thousands)

| Investment Type | Fair Value | Portfolio-Weighted Average Effective Duration[1] |
|---|---|---|
| U.S. Treasuries | $61,607 | 2.28 |
| Corporate Bonds and Credit Securities: | | |
| Asset-Backed Securities | $9,414 | 1.25 |
| Corporate and Other Credit | 36,820 | 1.71 |
| **Subtotal Corporate Bonds and Credit Securities** | **$46,234** | |
| Private Placement Fixed Income | $10,846 | 1.41 |
| **Total Fixed Income Securities** | **$118,687** | |

[1]Effective Duration is a measure of a bond's sensitivity to interest rates. It is calculated as the percentage change in a bond's price caused by a change in the bond's yield. For example, a duration of 5 indicates that a 1 percent increase in a bond's yield will cause the bond price to decline 5 percent.

## Duration in Fixed Income Securities — OPEB Agency Fund

*As of June 30, 2018*
(Dollars in Thousands)

| Investment Type | Fair Value | Portfolio-Weighted Average Effective Duration[1] |
|---|---|---|
| U.S. Treasuries | $58,525 | 1.81 |
| Corporate Bonds and Credit Securities: | | |
| Asset-Backed Securities | 7,214 | 1.53 |
| Corporate and Other Credit | $32,727 | 2.14 |
| **Subtotal Corporate Bonds and Credit Securities** | **$39,941** | |
| Private Placement Fixed Income | $8,928 | 1.81 |
| **Total Fixed Income Securities - OPEB Agency Fund** | **$107,394** | |

[1]Effective Duration is a measure of a bond's sensitivity to interest rates. It is calculated as the percentage change in a bond's price caused by a change in the bond's yield. For example, a duration of 5 indicates that a 1 percent increase in a bond's yield will cause the bond price to decline 5 percent.

## 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. LACERA's authorized managers are permitted to invest in approved countries or regions, as stated in their respective investment guidelines. To mitigate Foreign Currency Risk with global equity, LACERA has implemented a passive currency hedging program, which hedges into U.S. dollars approximately 50 percent of LACERA's foreign currency exposure for developed market equities.

The schedule on the next page represents LACERA's exposure to Foreign Currency Risk in U.S. dollars. LACERA is invested in several non-U.S. commingled funds. This means LACERA owns units of commingled funds, and the fund holds actual securities and/or currencies. The values shown include LACERA's pro rata portion of non-U.S. commingled fund holdings.

## Non-U.S. Investment Securities at Fair Value — Pension Plan

*As of June 30, 2019*
(Dollars in Thousands)

| Currency | Equity | Fixed Income | Foreign Currency | Real Estate Commingled Funds | Private Equity Investments | Forward Contracts | Total |
|---|---|---|---|---|---|---|---|
| AFRICA | | | | | | | |
| Ghana New Cedi | $— | $216 | $— | $— | $— | $— | **$216** |
| Kenyan Shilling | 1,884 | — | — | — | — | — | **1,884** |
| Moroccan Dirham | 3,425 | — | — | — | — | — | **3,425** |
| Nigerian Naira | 11,860 | 199 | — | — | — | — | **12,059** |
| South African Rand | 210,439 | 12,135 | 26 | — | — | — | **222,600** |
| AMERICAS | | | | | | | |
| Argentine Peso | 5,374 | 15,001 | 159 | — | — | (88) | **20,446** |
| Brazilian Real | 212,043 | 40,224 | 507 | — | — | — | **252,774** |
| Canadian Dollar | 995,278 | 597 | (583) | — | — | (8,732) | **986,560** |
| Chilean Peso | 29,486 | 4,711 | — | — | — | — | **34,197** |
| Colombian Peso | 14,749 | 13,342 | 2 | — | — | — | **28,093** |
| Dominican Peso | — | 215 | — | — | — | — | **215** |
| Mexican Peso | 83,676 | 28,228 | 1,353 | — | — | (72) | **113,185** |
| Peruvian New Sol | 10,213 | 5,610 | — | — | — | — | **15,823** |
| Uruguayan Peso | — | 792 | — | — | — | — | **792** |
| ASIA | | | | | | | |
| Australian Dollar | 440,681 | 3,989 | 374 | — | — | 4,055 | **449,099** |
| Chinese Renminbi | 202,261 | 8,630 | 247 | — | — | — | **211,138** |
| Hong Kong Dollar | 911,449 | 16 | 1,280 | — | — | (280) | **912,465** |
| Indian Rupee | 287,263 | 15,991 | — | — | — | — | **303,254** |
| Indonesian Rupiah | 61,900 | 26,622 | 63 | — | — | — | **88,585** |
| Japanese Yen | 1,586,453 | (982) | 3,772 | — | — | (24,744) | **1,564,499** |
| Malaysian Ringgit | 49,707 | 4,522 | 29 | — | — | — | **54,258** |
| New Zealand Dollar | 36,756 | 238 | 73 | — | — | (120) | **36,947** |
| Pakistan Rupee | 913 | — | — | — | — | — | **913** |
| Philippine Peso | 27,783 | 1,825 | 1 | — | — | — | **29,609** |
| Singapore Dollar | 103,413 | 6,114 | 70 | — | — | 2 | **109,599** |
| South Korean Won | 442,579 | 8,084 | — | — | — | — | **450,663** |
| Taiwan Dollar | 215,762 | 4,773 | — | — | — | — | **220,535** |
| Thai Baht | 87,955 | 12,617 | 5 | — | — | — | **100,577** |
| Vietnamese Dong | 33,649 | — | — | — | — | — | **33,649** |

## Non-U.S. Investment Securities at Fair Value continued — Pension Plan

*As of June 30, 2019*

(Dollars in Thousands)

| Currency | Equity | Fixed Income | Foreign Currency | Real Estate Commingled Funds | Private Equity Investments | Forward Contracts | Total |
|---|---|---|---|---|---|---|---|
| EUROPE | | | | | | | |
| British Pound Sterling | 1,607,880 | 24,663 | 5,637 | 1,497 | 29,526 | 21,462 | **1,690,665** |
| Czech Republic Koruna | 2,090 | 12,597 | — | — | — | — | **14,687** |
| Danish Krone | 160,765 | 8,891 | 81 | — | — | (913) | **168,824** |
| Euro | 2,700,632 | 109,089 | 16,151 | 214,554 | 246,944 | (14,453) | **3,272,917** |
| Hungarian Forint | 14,420 | 11,199 | 30 | — | — | — | **25,649** |
| Iceland Krona | — | 55 | — | — | — | — | **55** |
| Norwegian Krone | 75,780 | — | 566 | — | — | (36) | **76,310** |
| Polish Zloty | 25,231 | 22,626 | 25 | — | — | — | **47,882** |
| Romanian New Leu | 13,717 | 3,741 | — | — | — | — | **17,458** |
| Russian Ruble | 92,780 | 23,715 | 454 | — | — | 2 | **116,951** |
| Swedish Krona | 315,312 | — | 270 | — | — | (1,270) | **314,312** |
| Swiss Franc | 721,518 | — | 49 | — | — | (10,084) | **711,483** |
| Ukrainian Hryvnia | — | 1,046 | — | — | — | — | **1,046** |
| MIDDLE EAST | | | | | | | |
| Egyptian Pound | 12,027 | 2,950 | — | — | — | — | **14,977** |
| Israeli New Shekel | 71,842 | 1,345 | 33 | — | — | (119) | **73,101** |
| Jordanian Dinar | 5,133 | — | — | — | — | — | **5,133** |
| Qatari Rial | 14,716 | — | 43 | — | — | — | **14,759** |
| Saudi Riyal | 24,685 | (1,250) | — | — | — | — | **23,435** |
| Turkish Lira | 50,502 | 3,311 | 10 | — | — | — | **53,823** |
| UAE Dirham | 17,092 | — | 10 | — | — | — | **17,102** |
| **Total Investment Securities Subject to Foreign Currency Risk** | **$11,993,073** | **$437,687** | **$30,737** | **$216,051** | **$276,470** | **($35,390)** | **$12,918,628** |

## Non-U.S. Investment Securities at Fair Value — Pension Plan

*As of June 30, 2018*
(Dollars in Thousands)

| Currency | Equity | Fixed Income | Foreign Currency | Real Estate Commingled Funds | Private Equity Investments | Forward Contracts | Total |
|---|---|---|---|---|---|---|---|
| AFRICA | | | | | | | |
| Ghana New Cedi | $2,402 | $— | $— | $— | $— | $— | **$2,402** |
| Kenyan Shilling | 3,586 | — | — | — | — | — | **3,586** |
| Moroccan Dirham | 3,390 | — | — | — | — | — | **3,390** |
| Nigerian Naira | 16,818 | — | — | — | — | — | **16,818** |
| South African Rand | 206,894 | — | 153 | — | — | — | **207,047** |
| AMERICAS | | | | | | | |
| Argentine Peso | 1,721 | 2,136 | 428 | — | — | 26 | **4,311** |
| Brazilian Real | 173,126 | (34) | 81 | — | — | — | **173,173** |
| Canadian Dollar | 839,897 | 555 | (111) | — | — | 10,729 | **851,070** |
| Chilean Peso | 30,462 | — | — | — | — | — | **30,462** |
| Colombian Peso | 13,625 | — | 1 | — | — | — | **13,626** |
| Mexican Peso | 94,675 | 39,999 | 2,419 | — | — | 55 | **137,148** |
| Peruvian New Sol | 12,401 | — | — | — | — | — | **12,401** |
| Uruguayan Peso | — | 3,406 | — | — | — | — | **3,406** |
| ASIA | | | | | | | |
| Australian Dollar | 567,221 | 3,714 | 4,015 | — | — | 11,930 | **586,880** |
| Chinese Renminbi | 122,583 | — | — | — | — | — | **122,583** |
| Hong Kong Dollar | 1,016,518 | — | 2,952 | — | — | 219 | **1,019,689** |
| Indian Rupee | 315,667 | — | — | — | — | — | **315,667** |
| Indonesian Rupiah | 52,087 | — | 20 | — | — | — | **52,107** |
| Japanese Yen | 2,046,373 | 423 | 16,857 | — | — | 37,477 | **2,101,130** |
| Malaysian Ringgit | 58,547 | — | 296 | — | — | — | **58,843** |
| New Taiwan Dollar | 272,839 | — | — | — | — | — | **272,839** |
| New Zealand Dollar | 18,189 | 227 | 56 | — | — | 609 | **19,081** |
| Pakistan Rupee | 1,851 | — | — | — | — | — | **1,851** |
| Philippine Peso | 21,580 | — | 1 | — | — | — | **21,581** |
| Singapore Dollar | 176,918 | — | 3,783 | — | — | 2,380 | **183,081** |
| South Korean Won | 502,754 | — | 515 | — | — | — | **503,269** |
| Thai Baht | 85,664 | — | 9 | — | — | — | **85,673** |
| Vietnamese Dong | 32,888 | — | — | — | — | — | **32,888** |

## Non-U.S. Investment Securities at Fair Value continued — Pension Plan

*As of June 30, 2018*

(Dollars in Thousands)

| Currency | Equity | Fixed Income | Foreign Currency | Real Estate Commingled Funds | Private Equity Investments | Forward Contracts | Total |
|---|---|---|---|---|---|---|---|
| EUROPE | | | | | | | |
| British Pound Sterling | 1,671,247 | 13,646 | 2,260 | 1,899 | 25,792 | 45,412 | **1,760,256** |
| Czech Republic Koruna | 2,213 | — | — | — | — | — | **2,213** |
| Danish Krone | 148,938 | 22,140 | — | — | — | 4,866 | **175,944** |
| Euro | 2,765,040 | 47,163 | 6,485 | 191,811 | 278,346 | 35,273 | **3,324,118** |
| Hungarian Forint | 11,197 | — | — | — | — | — | **11,197** |
| Norwegian Krone | 85,919 | — | 5 | — | — | 1,584 | **87,508** |
| Polish Zloty | 25,529 | — | 233 | — | — | — | **25,762** |
| Romanian New Leu | 8,686 | — | — | — | — | — | **8,686** |
| Russian Ruble | 83,826 | 5,578 | 42 | — | — | — | **89,446** |
| Swedish Krona | 281,171 | — | 30 | — | — | 10,158 | **291,359** |
| Swiss Franc | 641,643 | — | — | — | — | 8,361 | **650,004** |
| MIDDLE EAST | | | | | | | |
| Egyptian Pound | 7,509 | — | — | — | — | — | **7,509** |
| Israeli New Shekel | 59,323 | — | — | — | — | 828 | **60,151** |
| Lebanese Pound | 1,124 | — | — | — | — | — | **1,124** |
| Qatari Rial | 12,422 | — | 31 | — | — | — | **12,453** |
| Saudi Riyal | 4,058 | — | — | — | — | — | **4,058** |
| Turkish Lira | 59,738 | — | 248 | — | — | — | **59,986** |
| UAE Dirham | 11,966 | — | — | — | — | — | **11,966** |
| **Total Investment Securities Subject to Foreign Currency Risk** | **$12,572,225** | **$138,953** | **$40,809** | **$193,710** | **$304,138** | **$169,907** | **$13,419,742** |

## Non-U.S. Investment Securities at Fair Value — OPEB Trust

*As of June 30, 2019*
(Dollars in Thousands)

| Currency | Equity | Fixed Income | Total |
|---|---|---|---|
| AFRICA | | | |
| Liberian Dollar | $— | $3 | $3 |
| South African Rand | 4,243 | 4,287 | 8,530 |
| AMERICAS | | | |
| Argentine Peso | 250 | 175 | 425 |
| Brazilian Real | 5,553 | 5,014 | 10,567 |
| Canadian Dollar | 19,218 | 5,285 | 24,503 |
| Cayman Islands Dollar | — | 876 | 876 |
| Chilean Peso | 749 | 1,742 | 2,491 |
| Colombian Peso | 312 | 3,450 | 3,762 |
| Dominican Peso | — | 96 | 96 |
| Mexican Peso | 1,872 | 5,527 | 7,399 |
| Panamanian Balboa | — | 76 | 76 |
| Peruvian New Sol | 250 | 1,778 | 2,028 |
| Uruguay Peso | — | 158 | 158 |
| ASIA | | | |
| Australian Dollar | 13,664 | 428 | 14,092 |
| Chinese Renminbi | 21,152 | — | 21,152 |
| Hong Kong Dollar | 7,051 | — | 7,051 |
| Indian Rupee | 6,988 | — | 6,988 |
| Indonesian Rupiah | 1,560 | 4,976 | 6,536 |
| Japanese Yen | 46,734 | 478 | 47,212 |
| Malaysian Ringgit | 1,622 | 2,971 | 4,593 |
| New Zealand Dollar | 686 | — | 686 |
| Pakistan Rupee | 62 | — | 62 |
| Philippine Peso | 811 | 270 | 1,081 |
| Singapore Dollar | 2,683 | 8 | 2,691 |
| South Korean Won | 9,172 | 116 | 9,288 |
| Taiwan Dollar | 8,423 | — | 8,423 |
| Thailand Baht | 2,246 | 4,248 | 6,494 |
| EUROPE | | | |
| British Pound Sterling | 32,196 | 2,852 | 35,048 |
| Czech Republic Koruna | 125 | 2,127 | 2,252 |
| Danish Krone | 3,307 | 55 | 3,362 |
| Euro | 59,025 | 7,191 | 66,216 |
| Hungarian Forint | 187 | 2,232 | 2,419 |
| Norwegian Krone | 1,685 | 138 | 1,823 |
| Polish Zloty | 811 | 4,490 | 5,301 |
| Romanian Leu | — | 1,204 | 1,204 |
| Russian Ruble | 2,621 | 3,976 | 6,597 |
| Swedish Krona | 5,927 | 193 | 6,120 |
| Swiss Franc | 16,534 | — | 16,534 |
| MIDDLE EAST | | | |
| Egyptian Pound | 125 | — | 125 |
| Iraqi Dinar | — | 217 | 217 |
| Israeli New Shekel | 1,435 | 32 | 1,467 |
| Jordanian Dinar | — | 7 | 7 |
| Qatari Rial | 686 | — | 686 |
| Saudi Riyal | 998 | — | 998 |
| Turkish Lira | 437 | 1,773 | 2,210 |
| UAE Dirham | 499 | — | 499 |
| **Total Investment Securities Subject to Foreign Currency Risk** | **$281,899** | **$68,449** | **$350,348** |

## Non-U.S. Investment Securities at Fair Value — OPEB Trust

*As of June 30, 2018*

(Dollars in Thousands)

| Currency | Equity |
|---|---|
| AFRICA | |
| South African Rand | $3,334 |
| AMERICAS | |
| Brazilian Real | 2,969 |
| Canadian Dollar | 14,114 |
| Chilean Peso | 594 |
| Colombian Peso | 228 |
| Mexican Peso | 1,553 |
| Peruvian New Sol | 183 |
| ASIA | |
| Australian Dollar | 10,095 |
| Chinese Renminbi | 15,941 |
| Hong Kong Dollar | 4,933 |
| Indian Rupee | 4,887 |
| Indonesian Rupiah | 1,005 |
| Japanese Yen | 36,587 |
| Malaysian Ringgit | 1,279 |
| New Taiwan Dollar | 6,532 |
| New Zealand Dollar | 457 |
| Pakistan Rupee | 91 |
| Philippine Peso | 503 |
| Singapore Dollar | 1,918 |
| South Korean Won | 7,856 |
| Thai Baht | 1,188 |
| EUROPE | |
| British Pound Sterling | 26,355 |
| Czech Republic Koruna | 91 |
| Danish Krone | 2,512 |
| Euro | 45,905 |
| Hungarian Forint | 137 |
| Norwegian Krone | 1,325 |
| Polish Zloty | 594 |
| Russian Ruble | 1,690 |
| Swedish Krona | 4,339 |
| Swiss Franc | 10,551 |
| MIDDLE EAST | |
| Egyptian Pound | 137 |
| Israeli New Shekel | 1,051 |
| Qatari Rial | 411 |
| Turkish Lira | 411 |
| UAE Dirham | 320 |
| **Total Investment Securities Subject to Foreign Currency Risk** | **$212,076** |

## NOTE H — Securities Lending Program

The Board of Investments' policies authorize LACERA to participate in a securities lending program. Securities lending is an investment management activity that mirrors the fundamentals of a loan transaction. Securities are lent to brokers and dealers (borrower), and in turn, LACERA receives cash and non-cash collateral. When cash collateral is received, the income that is generated from securities lending has two sources: lending and reinvestment. LACERA pays the borrower interest on the collateral and invests the collateral with the goal of earning a higher yield than the interest rate paid to the borrower. When non-cash collateral is received, the borrower pays a fee for borrowing the security.

LACERA's securities lending program is managed by two parties: LACERA's custodian bank, State Street Bank and Trust, and a third-party lending agent, Goldman Sachs Agency Lending (GSAL). State Street Bank and Trust lends LACERA's non-U.S. equities, U.S. Treasury, and U.S. Agency securities. GSAL lends LACERA's U.S. equities and corporate bonds. Collateralization is set on non-U.S. loans at 105 percent and on U.S. loans at 102 percent of the market value of securities on loan.

State Street Global Advisors invests the collateral received from both lending programs. The collateral is invested in short-term highly liquid instruments. The maturities of the investments made with cash collateral typically do not match the maturities of their securities loans. Loans are marked-to-market daily, so that if the market value of a security on loan rises, LACERA receives additional collateral. Conversely, if the market value of a security on loan declines, then the borrower receives a partial return of the collateral. Earnings generated in excess of the interest paid to the borrowers represent net income. LACERA shares this net income with the two lending agents based on contractual agreements.

Under the terms of their lending agreements, both lending agents provide borrower default indemnification in the event a borrower does not return securities on loan. The terms of the lending agreements entitle LACERA to terminate all loans upon the occurrence of default and purchase a like amount of "replacement securities" when loaned securities are not returned. LACERA does not have the ability to pledge assets received as collateral without a borrower default. In the event the purchase price of replacement securities exceeds the amount of collateral, the lending agent is liable to LACERA for the difference, plus interest. Either LACERA or the borrower of the security can terminate a loan on demand.

At fiscal year-end, LACERA had no credit risk exposure to borrowers, because the amount of collateral received exceeded the value of securities on loan. LACERA had no losses on securities lending transactions resulting from the default of a borrower for the fiscal years ended June 30, 2019 and 2018.

As of June 30, 2019, the fair value of securities on loan was $927.1 million, with a value of cash collateral received of $814.8 million and non-cash collateral of $136.4 million. As of June 30, 2018, the fair value of securities on loan was $1.6 billion, with a value of cash collateral received of $1.2 billion and non-cash collateral of $425.6 million. LACERA's income, net of expenses from securities lending, was $4.5 million and $5.7 million for the fiscal years ended June 30, 2019 and 2018, respectively.

*The following table shows the fair value of securities on loan as well as cash and non-cash collateral received.*

## Securities Lending

*As of June 30, 2019 and 2018*

(Dollars in Thousands)

| | 2019 | | | | 2018 | | |
|---|---|---|---|---|---|---|---|
| **Securities on Loan** | **Fair Value of Securities on Loan** | **Cash Collateral Received** | **Non-Cash Collateral Received** | **Calculated Mark[1]** | **Fair Value of Securities on Loan** | **Cash Collateral Received** | **Non-Cash Collateral Received** |
| U.S. Equity | $197,819 | $199,522 | $— | $— | $255,378 | $262,055 | $— |
| U.S. Fixed Income | 674,828 | 604,323 | 90,445 | 115 | 1,230,315 | 913,980 | 369,603 |
| Non-U.S. Equity | 54,423 | 10,984 | 45,906 | 1,204 | 66,789 | 15,200 | 56,016 |
| **Total** | **$927,070** | **$814,829** | **$136,351** | **$1,319** | **$1,552,482** | **$1,191,235** | **$425,619** |

[1]Calculated Mark is performed daily, and it is the amount LACERA will collect from the borrower (if the amount is positive), or payment to the borrower (if the amount is negative), to bring the collateralization to appropriate levels based on market value. There was no Calculated Mark balance required for June 30, 2018.

## NOTE I — Derivative Financial Instruments

LACERA's Investment Policy Statement and Manager Guidelines allow the use of derivatives by certain investment managers. Derivatives are financial instruments that derive their value, usefulness, and marketability from an underlying instrument that represents direct ownership of an asset or an obligation of an issuer whose payments are based on or derived from the performance of some agreed-upon benchmark. Generally, investment guidelines require managers to mark-to-market derivative positions daily and trade with counterparties with a credit rating of A3/A-, as defined by Moody's Investors Service (Moody's) and Standard & Poor's (S&P), respectively. Gains and losses from derivatives are included in net investment income. The following types of derivatives are permitted: futures, currency forwards, options, and swaps. Given that hedge fund managers may already have discretion to use derivatives in the funds they manage, derivatives for hedge fund investments are discussed in Note O — Hedge Fund Investments.

### Futures

Futures are financial agreements to buy or sell an underlying asset at a specified future date and price. Futures are standardized instruments traded on organized exchanges, and they are marked-to-market daily. The futures exchange reduces counterparty credit risk by acting as a central counterparty. It does this by collecting a daily margin payment from one trade participant and crediting it to the other, based on price changes in the underlying asset.

### Currency Forwards

Similar to futures agreements, forwards represent an agreement to buy or sell an underlying asset at a specified future date and price. However, forwards are non-standardized agreements tailored to each specific transaction. Payment for the transaction is generally delayed until the settlement or expiration date. Forward contracts are privately negotiated and do not trade on a centralized exchange; therefore, they are considered "over the counter" instruments. Currency forward contracts are used to manage currency exposure, implement the passive currency hedge, and facilitate the settlement of international security purchases and sales.

## Currency Forwards Analysis

*As of June 30, 2019*

(Dollars in Thousands)

| Currency Name | Options | Currency Forward Contracts: Net Receivables | Currency Forward Contracts: Net Payables | Swaps | Total Exposure |
|---|---|---|---|---|---|
| Argentine Peso | $— | $1 | ($89) | $— | **($88)** |
| Australian Dollar | — | 1,401 | 2,654 | — | **4,055** |
| Brazilian Real | — | — | — | 1,184 | **1,184** |
| British Pound Sterling | (35) | 538 | 20,924 | (1,520) | **19,907** |
| Canadian Dollar | — | 1,189 | (9,921) | — | **(8,732)** |
| Danish Krone | — | 121 | (1,033) | — | **(913)** |
| Euro | (198) | 2,697 | (17,149) | (990) | **(15,641)** |
| Hong Kong Dollar | — | 36 | (316) | — | **(280)** |
| Israeli New Shekel | — | 36 | (155) | — | **(119)** |
| Japanese Yen | — | 114 | (24,858) | (982) | **(25,726)** |
| Mexican Peso | — | (2) | (70) | (205) | **(277)** |
| New Zealand Dollar | — | 94 | (214) | — | **(120)** |
| Russian Ruble | — | — | 2 | — | **2** |
| Norwegian Krone | — | 101 | (137) | — | **(36)** |
| Singapore Dollar | — | 84 | (83) | — | **2** |
| Swedish Krona | — | 339 | (1,609) | — | **(1,270)** |
| Swiss Franc | — | 382 | (10,466) | — | **(10,084)** |
| **Total** | **($233)** | **$7,131** | **($42,520)** | **($2,513)** | **($38,136)** |

## Options

An option contract is a type of derivative in which a buyer (purchaser) has the right, but not the obligation, to buy or sell a specified amount of an underlying security at a fixed price by exercising the option before its expiration date. The seller (writer) has an obligation to buy or sell the underlying security if the buyer decides to exercise the option.

## Swaps

A swap is an agreement between two or more parties to exchange a sequence of cash flows over a period of time in the future. The cash flows exchanged by the counterparties are tied to a notional amount. A swap agreement specifies the time period over which the periodic payments will be exchanged. The fair value represents the gains or losses since the prior mark-to-market.

*The Investment Derivatives schedule below reports the fair value balances, changes in fair value, and notional amounts of derivatives outstanding as of and for the year ended June 30, 2019, classified by type.*

## Investment Derivatives

*As of June 30, 2019*
(Dollars in Thousands)

| Derivative Type | Net Appreciation/ (Depreciation) in Fair Value | Fair Value | Notional Value (Dollars) | Notional Shares (Units) |
|---|---|---|---|---|
| Commodity Futures Long | ($150,352) | $— | $— | 435,361 |
| Commodity Futures Short | 59,819 | — | — | (33,747) |
| Credit Default Swaps Bought | (1,606) | (9,509) | 136,585 | — |
| Credit Default Swaps Written | 590 | 618 | 22,574 | — |
| Fixed Income Futures Long | 57,454 | — | — | 953,013 |
| Fixed Income Futures Short | (35,089) | — | — | (504,947) |
| Fixed Income Options Bought | 2,558 | 36 | — | 38,600 |
| Fixed Income Options Written | 1,152 | (74) | — | (255,602) |
| Futures Options Bought | (7,085) | 2,123 | — | 12,094 |
| Futures Options Written | 13,802 | (1,417) | — | (8,228) |
| FX Forwards | 154,854 | (35,389) | 7,617,475 | — |
| Pay Fixed Interest Rate Swaps | (47,054) | (32,205) | 1,082,132 | — |
| Receive Fixed Interest Rate Swaps | 8,634 | 3,963 | 222,420 | — |
| Rights | (765) | 33 | 3,728 | — |
| Total Return Swaps Bond | (6,049) | (1,263) | 73,135 | — |
| Total Return Swaps Equity | (32,778) | 11,551 | (518,403) | — |
| Warrants | (3) | 16 | 6,212 | — |
| **Total** | **$18,082** | **($61,517)** | **$8,645,858** | **636,544** |

All investment derivative positions are included as part of Investments at Fair Value in the Statement of Fiduciary Net Position. All changes in fair value are reported as part of Net Appreciation/(Depreciation) in Fair Value of Investments in the Statement of Changes in Fiduciary Net Position.

Investment information was provided by LACERA's investment managers and custodian bank, State Street Bank and Trust.

## Counterparty Credit Risk

LACERA is exposed to counterparty credit risk on investment derivatives that are traded over the counter and are reported in asset positions. Derivatives exposed to counterparty credit risk include currency forward contracts and certain swap agreements. To minimize counterparty credit risk exposure, LACERA's investment managers continually monitor credit ratings of counterparties. In addition, collateral provided by the counterparty reduces LACERA's counterparty credit risk exposure. Should there be a counterparty failure, LACERA would be exposed to the loss of the fair value of derivatives that have unrealized gains and any collateral provided to the counterparty, net of applicable netting arrangements. LACERA requires investment managers to have Master Agreements in place that permit netting in order to minimize credit risk. Netting arrangements provide LACERA with a legal right of setoff in the event of bankruptcy or default by the counterparty.

*The schedule displays the fair value of investments with each counterparty's S&P, Fitch, and Moody's credit rating by counterparty's name alphabetically.*

## Counterparty Credit Risk Analysis

*As of June 30, 2019*

(Dollars in Thousands)

| Counterparty Name | Total Fair Value | S&P Rating | Fitch Rating | Moody's Rating |
|---|---|---|---|---|
| Bank of America CME | $83 | A- | A+ | A2 |
| Bank of America ICE | 2 | A- | A+ | A2 |
| Barclays Bank PLC | 55 | A | A+ | A2 |
| Barclays Bank PLC Wholesale | 18 | A | A+ | A2 |
| BNP Paribas SA | 591 | A+ | A+ | Aa3 |
| Citibank N.A. | 2,899 | A+ | A+ | Aa3 |
| Citigroup Global Markets Inc | 36 | BBB+ | A | A3 |
| Citigroup Global Markets LCH | 75 | BBB+ | A | A3 |
| Credit Suisse FOB CME | 1 | A+ | A | A1 |
| Credit Suisse FOB LCH | 568 | A+ | A | A1 |
| Credit Suisse International | 1,359 | A+ | A | A1 |
| Credit Suisse Securities (USA) LLC | 463 | A+ | A | A1 |
| Deutsche Bank AG | 2,752 | BBB+ | BBB | A3 |
| Goldman Sachs CME | 2,932 | BBB+ | A | A3 |
| Goldman Sachs International | 18,570 | A+ | A | A1 |
| HSBC Bank USA | 2 | AA- | AA- | Aa3 |
| JP Morgan Chase Bank | 3,523 | A+ | AA | Aa2 |
| JP Morgan Chase Bank N.A. | 533 | A+ | AA | Aa2 |
| Macquarie Bank Limited | 1,660 | A | A | A2 |
| Merrill Lynch International | 812 | A- | A+ | A2 |
| Morgan Stanley and Co. International | 62 | A+ | NR | A1 |
| Morgan Stanley Capital Services Inc | 51 | BBB+ | A | A3 |
| Natwest Markets Plc | 4,241 | A- | A | Baa2 |
| State Street Bank And Trust Company | 80 | AA- | AA | Aa3 |
| UBS AG | 11,790 | A+ | AA- | Aa3 |
| Westpac Banking Corporation | 179 | AA- | AA- | Aa3 |
| **Total** | **$53,337** | | | |

## Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. Interest Rate Swaps are an example of an investment that has a fair value that is highly sensitive to interest rate changes. These investments are disclosed in the following table:

### Interest Rate Risk Analysis

*As of June 30, 2019*
(Dollars in Thousands)

| | | | | Investments Maturity (in Years) | | | | |
|---|---|---|---|---|---|---|---|---|
| **Investment Type** | **Notional Value (Dollar)** | **Notional Shares (Units)** | **Fair Value** | **Less Than 1** | **1 - 5** | **6 - 10** | **More than 10** | **No Maturity** |
| Credit Default Swaps Bought | $136,585 | — | ($9,509) | $— | ($9,509) | $— | — | $— |
| Credit Default Swaps Written | 22,574 | — | 618 | — | 608 | — | 9 | — |
| Fixed Income Options Bought | — | 38,600 | 36 | 36 | — | — | — | — |
| Fixed Income Options Written | — | (255,602) | (74) | (72) | (1) | — | (1) | — |
| Pay Fixed Interest Rate Swaps | 1,082,132 | — | (32,205) | — | (10,106) | (7,664) | (14,436) | — |
| Receive Fixed Interest Rate Swaps | 222,420 | — | 3,963 | 1,184 | 273 | 181 | 2,325 | — |
| Total Return Swaps Bond | 73,135 | — | (1,263) | (1,263) | — | — | — | — |
| Total Return Swaps Equity | (518,403) | — | 11,551 | 11,610 | (59) | — | — | — |
| **Total** | **$1,018,443** | **($217,002)** | **($26,883)** | **$11,495** | **($18,794)** | **($7,483)** | **($12,103)** | **$—** |

## NOTE J — Special Purpose Entities

LACERA uses several different types of Special Purpose Entities (SPEs) in its investment portfolio.

As of June 30, 2019, the LACERA real estate portfolio utilized various SPEs including 44 Title Holding Corporations (THCs) and 57 Limited Liability Companies (LLCs). As of June 30, 2018, the portfolio included 70 THCs and 54 LLCs.

*The following is a summary of the THCs' and LLCs' financial positions.*

### Title Holding Corporations and Limited Liability Companies Financial Position

*As of June 30, 2019 and 2018*

(Dollars in Thousands)

| | 2019 | 2018 |
|---|---|---|
| Assets | **$7,646,302** | $8,243,751 |
| Less: Liabilities | **(2,860,234)** | (2,971,880) |
| **Net Assets** | **$4,786,068** | $5,271,871 |
| **Net Income** | **$350,403** | $248,282 |

In March 2011, the LACERA Board of Investments approved allocating $200 million to each of two managers for investment in commercial real estate debt. The managers were Cornerstone Real Estate Advisors (now known as Barings Real Estate Advisors, the real estate investment unit of Barings LLC) and Quadrant Real Estate Advisors LLC. In July 2012 and June 2013, additional allocations of $200 million and $100 million were provided to the Barings account, bringing the total investable equity commitment to $500 million. Furthermore, in July 2012, an additional allocation of $100 million was made to the Quadrant account, bringing the total investable equity commitment to $300 million.

In September 2014, a $250 million commitment was added to the Barings account for the purpose of backstopping a subscription facility, though this equity is not considered investable.

Portfolio net assets increase when new loans are originated from LACERA's portfolio and such assets decrease when loans are paid back by the borrower.

As presented in the Investment Section, Real Estate assets are included in the following functional category portfolios: Growth, Credit, and Real Assets and Inflation Hedges.

*The following is a summary of the Debt Program's financial position.*

### Debt Program Financial Position

*As of June 30, 2019 and 2018*

(Dollars in Thousands)

| | 2019 | 2018 |
|---|---|---|
| Assets | **$401,540** | $230,190 |
| Less: Liabilities | **(197,346)** | (111,878) |
| **Net Assets** | **$204,194** | $118,312 |
| **Net Income** | **$15,306** | $25,548 |

## NOTE K — Related Party Transactions

### Office Lease

In 1991, LACERA, as the sole shareholder, formed a Title Holding Corporation (THC) to acquire Gateway Plaza, a 282,000 square foot 13-story office building located in Pasadena, California, which serves as the LACERA headquarters. At that time, LACERA entered into its original lease agreement with the THC to occupy approximately 85,000 square feet of office space. Under the terms of the agreement, LACERA's base rent is abated via a credit to base rent. However, LACERA is required to pay its proportionate share of the building's operating costs and property taxes as defined in the lease agreement.

Over time, numerous lease agreement amendments were executed which adjusted the rentable square footage and lease expiration dates. The Fifteenth Amendment to the Office Lease was completed on October 1, 2018 and the latest, the Sixteenth Amendment, was dated March 31, 2019. The amendments resulted in a net decrease of total rentable space from 126,157 to 125,525 square feet and maintained the lease's existing expiration date of December 31, 2020.

Total operating expenses charged to LACERA were approximately $2.1 million and $2.2 million for the fiscal years ended June 30, 2019 and 2018, respectively.

### Notes Receivable

LACERA had a notes receivable balance of approximately $22.5 million from one of its THCs for the fiscal year ended June 30, 2018. However, this note was paid off when the property was sold on October 10, 2018.

See Note J — Special Purpose Entities, for additional information regarding LACERA's real estate portfolio investments.

## NOTE L — Administrative Expenses

The LACERA Board of Retirement and Board of Investments annually adopt the operating budget for the administration of LACERA. The administrative expenses are charged against the investment earnings of the Pension Plan.

Beginning in fiscal year 2012, LACERA implemented a provision of the CERL which shifted the administrative budget limitation from an asset-based cap to a more stable liability-based cap. This CERL provision states that the annual budget for administrative expenses of a CERL retirement benefits plan may not exceed twenty-one hundredths of one percent (0.21 percent) of the actuarial accrued liability of the plan.

Expenses for computer software, hardware, and computer technology consulting services relating to such expenditures are included in the cost of administration. Pursuant to the CERL, the cost of internal legal representation by LACERA's Legal Office is not to exceed one-hundredth of one percent (0.01 percent) of retirement benefits plan assets in any budget year. LACERA's costs for legal representation is within the statutory limit and included in administrative expenses.

Under applicable sections of the CERL, both LACERA Boards approved the operating budgets for fiscal years ended June 30, 2019 and June 30, 2018, which were prepared based upon the twenty-one hundredths of one percent (0.21 percent) CERL limit.

*The following budget-to-actual analysis of administrative expenses schedule is based upon the budget, as approved by the LACERA governing boards, in comparison to actual administrative expenses.*

## Budget-to-Actual Analysis of Administrative Expenses

*As of June 30, 2019 and 2018*
(Dollars in Thousands)

| | 2019 | 2018 |
|---|---|---|
| **Basis for Budget Calculation, Actuarial Accrued Liability[1]** | **$65,310,803** | **$62,199,214** |
| Maximum Allowable for Administrative Expenses | **137,153** | 130,618 |
| **Total Statutory Budget Appropriation** | **$137,153** | **$130,618** |
| Operating Budget Request | **88,622** | 83,555 |
| Administrative Expenses | **(82,906)** | (78,181) |
| **Underexpended Operating Budget** | **$5,716** | **$5,374** |
| Administrative Expenses | **$82,906** | $78,181 |
| Basis for Budget Calculation | **$65,310,803** | $62,199,214 |
| **Administrative Expenses as a Percentage of the Basis for Budget Calculation** | **0.13%** | **0.13%** |
| Limit per CERL | **0.21%** | 0.21% |
| Administrative Expenses | **$82,906** | $78,181 |
| Net Position Restricted for Benefits | **$58,294,836** | $56,299,982 |
| **Administrative Expenses as a Percentage of Net Position Restricted for Benefits** | **0.14%** | **0.14%** |

[1]The 2019 and 2018 budget calculations are based on the actuarial accrued liability as of June 30, 2017, and June 30, 2016, respectively.

## NOTE M — Commitments and Contingencies

### Litigation

LACERA is a defendant in various lawsuits and other claims arising in the ordinary course of its operations. The management and legal counsel of LACERA estimate the ultimate outcome of such litigation will not have a material effect on LACERA's financial statements.

### Securities Litigation

In 2001, the LACERA Board of Investments adopted a Securities Litigation Policy in response to incidents of corporate corruption, fraud, and misconduct at publicly traded companies held by LACERA in its investment portfolio. The policy requires LACERA's Legal Office to monitor securities fraud class actions and to actively pursue recovery of LACERA's losses in accordance with the policy.

In 2010, the U.S. Supreme Court held that certain fraud provisions of the U.S. securities laws could not be applied to securities purchased outside the U.S. Therefore, the LACERA Board of Investments adopted a global policy to ensure that LACERA continues to meet its fiduciary duty by identifying, monitoring, and evaluating securities actions in which the fund has an interest both foreign and domestic and pursuing such claims when and in a manner the LACERA Board of Investments determines is in the best interest of the fund.

Compliance with the Securities Litigation Policy is part of the efforts of the LACERA Board of Investments, with the assistance of the LACERA Legal Office, to protect the financial interests of LACERA and its members.

### Leases

**Equipment:** LACERA leases equipment under lease agreements that expire over the next five years. The annual commitments and operating expenses for such equipment leases were approximately $263,000 and $292,000 in fiscal years 2019 and 2018, respectively.

**Office Lease:** The LACERA office space lease agreement was originally entered in January 1991. Subsequent amendments were made with the latest one dated March 31, 2019. LACERA agreed to reduce its leased space, while maintaining the existing lease expiration date of December 31, 2020.

LACERA's lease agreement is also discussed in Note K — Related Party Transactions. The total operating expenses for leasing the building premises are $2.1 million and $2.2 million in fiscal years 2019 and 2018, respectively.

### Capital Commitments

LACERA real estate, private equity, hedge fund, and activist investment managers identify and acquire investments on a discretionary basis. Investment activity is approved by the LACERA Board of Investments are controlled by investment management agreements which identify limitations on each investment manager's discretion. Such investment activities are further restricted by the amount of capital allocated or committed to each manager.

As of June 30, 2019, outstanding capital commitments to the various investment managers, as approved by the LACERA Board of Investments, totaled $5.3 billion.

## NOTE N — Other Post-Employment Benefits (OPEB) Program

### Program Description

In April 1982, the County adopted an ordinance pursuant to the County Employees Retirement Law of 1937 (CERL) that provided for a retiree healthcare insurance program and death/burial benefits for retired employees and their eligible dependents. In 1982, the County and LACERA entered into an Agreement whereby LACERA would administer the program subject to the terms and conditions of the Agreement. In 1994, the County amended the Agreement to continue to support LACERA's retiree insurance benefits program, regardless of the status of the active member insurance.

In June 2014, the LACERA Board of Retirement approved the County's request to modify the agreement to create a new retiree healthcare benefits program in order to lower its costs. Structurally, the County segregated all the then current retirees and employees into LACERA-administered Retiree Healthcare Benefits Program (Tier 1) and placed all employees hired after June 30, 2014 into Los Angeles County Retiree Healthcare Benefits Program (Tier 2).

On June 17, 2014, the Los Angeles County Board of Supervisors adopted changes to Los Angeles County Code Title 5 – Personnel, which established the Benefit Provisions for Tier 2.

A significant difference included in this modification concerns LACERA's administrative responsibility for the Retiree Healthcare Program. Under Tier 1, LACERA will continue its agreed-upon role as Program Administrator for retiree healthcare benefits as governed by the 1982 Agreement. Under Tier 2, LACERA is responsible for administering this program for as long as the County desires. The County may, at any time, choose another organization to administer the Tier 2 Program.

### Membership

Employees are eligible for the OPEB Program if they are members of LACERA and retire from the County of Los Angeles, the Superior Court, or a participating Outside District. Healthcare benefits are also offered to qualifying survivors of deceased retired members and qualifying survivors of deceased active employees who were eligible to retire at the time of death. Eligibility to receive a pension benefit is a prerequisite for retiree healthcare and death benefits; therefore, eligibility and qualifications applicable to retiree healthcare and death/ burial benefits are substantially similar to pension benefits. A Summary of Major OPEB Program Provisions is available upon request.

### LACERA Membership — OPEB Medical and Dental/Vision Benefits

*As of June 30, 2019 and 2018*

| | 2019 | | 2018 | |
|---|---|---|---|---|
| | Medical | Dental/ Vision | Medical | Dental/ Vision |
| Retired Participants | | | | |
| Retired Members and Survivors | 51,216 | 52,499 | 50,052 | 51,225 |
| Spouses and Dependents | 26,147 | 29,949 | 25,343 | 28,935 |
| **Total Retired** | **77,363** | **82,448** | **75,395** | **80,160** |
| Inactive Members — Vested | 8,618 | 8,618 | 8,459 | 8,459 |
| Active Members — Vested[2] | 72,660 | 72,660 | 72,020 | 72,020 |
| **Total Membership Eligible for Benefits** | **158,641** | **163,726** | **155,874** | **160,639** |

## LACERA Membership — OPEB Death Benefits

*As of June 30, 2019 and 2018*

| | 2019 | 2018 |
|---|---|---|
| Paid Death Benefits | **2,538** | 2,640 |
| Retired with Eligibility for Death Benefits[1] | **57,409** | 56,003 |
| Active Members — Vested[2] | **72,660** | 72,020 |
| **Total Membership Eligible for Benefits** | **132,607** | 130,663 |

[1]Survivors, spouses and dependents are not eligible for this death benefit.

[2]Active member counts exclude active members that are non-vested and therefore ineligible for OPEB benefits.

## Benefit Provisions

The OPEB Program offers members an extensive choice of medical plans as well as two dental/ vision plans. The medical plans are either HMOs or indemnity plans, and some are designed to work with Medicare benefits, such as the Medicare Supplement or Medicare HMO plans. Coverage is available regardless of preexisting medical conditions. Under Tier 2, retirees who are eligible for Medicare are required to enroll in that program. Medicare-eligible retirees and their covered dependents must enroll in Medicare Parts A and B and in a Medicare HMO plan or Medicare Supplement plan under Tier 2.

**Medical and Dental/Vision:** Program benefits are provided through third party insurance carriers with the participant's cost for medical and dental/vision insurance varying according to the years of retirement service credit with LACERA, the plan selected, and the number of persons covered. The County contribution subsidizing the participant's cost starts at 10 years of eligible service credit in the amount of 40 percent of the lesser of the benchmark plan rate or the premium of the plan in which the retiree is enrolled. For each year of eligible retirement service credit earned beyond 10 years, the County contributes four percent per year, up to a maximum of 100 percent for a member with 25 years of service credit. The County contribution can never exceed the premium of the benchmark plans. Members are responsible for premium amounts above the benchmark plans, including those with 25 or more years of service credit.

Under Tier 1, the County subsidy is based on the coverage elected by the retiree. The benchmark plans are Anthem Blue Cross Plans I and II for medical and Cigna Indemnity Dental/Vision for dental and vision. Under Tier 2, the County subsidy is based on retiree-only coverage. Tier 2 medical benchmark plans are Anthem Blue Cross Plans I and II for Medicare-ineligible members, Anthem Blue Cross Plan III for Medicare-eligible members, and Cigna Indemnity Dental/Vision for dental and vision plans.

**Medicare Part B:** The County reimburses the member's Medicare Part B Standard rate premiums paid by member to Social Security for Part B coverage, subject to annual approval by the County Board of Supervisors. Eligible members and their dependents must be currently enrolled in both Medicare Part A and Medicare Part B and enrolled in a LACERA-administered Medicare HMO Plan or Medicare Supplement Plan and meet all of the qualifications. Under Tier 2, the County reimburses for Medicare Part B (at the standard rate) for eligible members or eligible survivors only.

**Disability**: If a member is granted a service-connected disability retirement and has less than 13 years of service, the County contributes the lesser of 50 percent of the benchmark plan rate or the premium of the plan in which the retiree is enrolled. Under Tier 2, the benchmark plan rate is based on retiree-only premiums. A member with 13 years of service credit receives a 52 percent subsidy. This percentage increases 4 percent for each additional completed year of service, up to a maximum of 100 percent.

**Death/Burial Benefit:** There is a one-time lump-sum $5,000 death/burial benefit payable to the designated beneficiary upon the death of a retiree, reimbursed to LACERA by the County. Active and vested terminated (deferred) members are eligible for this benefit once they retire. Spouses and dependents are not eligible for this death benefit.

**Healthcare Reform**

In March 2010, President Obama signed into law the Affordable Care Act (ACA). The ACA impacts the County's future healthcare liabilities. Estimated ACA fees are included in the OPEB liabilities. As potential impacts become clearer, they will be reflected in the OPEB assumptions. However, as a "retiree only" group plan, LACERA is exempt from many of the provisions implemented thus far, including these significant provisions:

- Dependent Coverage for Adult Children up to Age 26
- Elimination of Lifetime Maximum Limits
- No Cost-Sharing for Approved Preventive Services

Other provisions of the ACA may or may not impact the Retiree Healthcare Benefits Program as these provisions and any governing regulations are clarified and implemented.

**Eligible Dependent Child Age Limit Increased to Age 26:** The plan sponsor, the County of Los Angeles, approved an extension of the dependent children age limit to age 26 under the Retiree Healthcare Program, regardless of a dependent child's marital or student status. This is a result of Senate Bill (SB) 1088. Until July 1, 2014, SB 1088 exempted retiree-only plans, such as LACERA's from this provision. It required health plan carriers to offer the coverage to dependents up to age 26 but does not obligate the plan sponsor, the County of Los Angeles, to pay for coverage up to age 26. However, in March 2015, the County determined that it will pay for dependent coverage up to age 26 under the contribution method described above.

## Summary of Significant Accounting Policies — OPEB Program

**Basis of Presentation**: OPEB activity is reported within two distinct funds, the OPEB Agency Fund and the OPEB Trust Fund, at LACERA, in accordance with GASB Statement No. 74 (GASB 74).

The OPEB Agency Fund accounts for assets held as an agent on behalf of others. The funds held within the OPEB Agency Fund do not meet the definition of a qualifying OPEB Trust under GASB 74 and are not used to reduce the employers' Total OPEB Liability. However, the ownership of the OPEB Agency Fund belongs to the County, Court and the participating Outside District employers. This fund is custodial in nature and does not measure the results of operations. Assets and liabilities are recorded using the accrual basis of accounting. Receivables include contributions due as of the reporting date. Payables include premium payments and refunds due to members and accrued investment and administrative expenses.

**OPEB Trust — Agent Plan**: The County, Superior Court, and LACERA have established separate accounts within the LACERA OPEB Trust to pre-fund their own OPEB Program liabilities. For better precision in allocating and accounting for these liabilities, as of July 1, 2018, the OPEB Program transitioned from a cost-sharing plan structure to an agent multiple-employer plan (agent plan) structure. Under the previous cost sharing plan structure, OPEB Program liabilities and costs were determined with respect to the total LACERA OPEB Program, rather than separately for each employer. An agent plan structure, however, determines program liabilities and costs directly by employer and allocates shared expenses. This provides employers liability and cost information that is more precise for their active, vested terminated, and retiree population, which helps them make informed decisions to better manage these OPEB costs. In addition, assets, while commingled for investment purposes, are separately tracked for each participating employer. The July 1, 2018 OPEB valuation marked the first actuarial valuation performed under an agent plan reflecting the funding information at the individual agent (employer) level.

For additional information pertaining to the OPEB Trust, see Note Q. Refer to Note R for disclosures regarding the OPEB Program cost sharing plan.

**Investment Valuation**: Investments are carried at fair value, which are derived from quoted market prices. For publicly traded securities and issues of the United States Government and its agencies, the most recent sales price as of fiscal year end is used.

**Contributions Authority**: Pursuant to the 1982, 1994, and 2014 Agreements between the County and LACERA, the parties agreed to the continuation of the health insurance benefits then in existence. The County agreed to subsidize a portion of the insurance premiums of certain retired members and their eligible dependents based on the member's length of service. The County further agreed to maintain the status quo of existing benefits provided to participants. As part of the 2014 Agreement, the County modified the existing healthcare benefit plan, which created a new benefit structure, Tier 2, for all employees hired after June 30, 2014. LACERA agreed not to change retired members' contributions toward insurance premiums or modify medical benefit levels without the County's prior consent.

**Premium Payments**: During the fiscal years ended June 30, 2019 and 2018, respectively, premium payments of $599.2 million and $557.8 million were made to insurance carriers. These premiums were funded by employer subsidy payments of $551.4 million and participant payments of $47.8 million for the fiscal year ended 2019. The employer subsidy payments for the fiscal year ended 2018 were $513.0 million with participant payments of $44.8 million.

In addition, $67.8 million and $8.6 million was funded by employer subsidy payments for Medicare Part B reimbursements and death/burial benefits, respectively, for the fiscal year ended June 30, 2019 and $61.7 million and $8.7 million for these benefits, respectively, during the fiscal year ended June 30, 2018.

A Premium Holiday is a temporary period in which the monthly premium costs for both the Program Sponsor (County) and affected members are waived. Affected members are those retirees enrolled in certain medical benefit plans who also pay their share of the monthly premiums. There was no Premium Holiday during fiscal year 2019.

**Excise Tax**: The ACA originally contained provisions to assess an excise tax in 2018 on employer-provided health insurance benefits that the ACA determined to be an excess benefit. The Consolidated Appropriations Act of 2016 was signed into law in December 2015, delaying the assessment of the Excise Tax until 2020. While the tax was originally non-tax deductible, the December 2015 changes made it tax deductible for employers who pay it. Additional legislation passed in January 2018 further delaying the Excise Tax implementation until 2022.

Milliman last estimated the impact of the Excise Tax on the projection of benefits in the measurement of the County's OPEB Actuarial Accrued Liability for funding purposes as of July 1, 2017 to be approximately $1.41

billion. Milliman recognized Excise Tax impact for funding purposes, and this $1.41 billion impact is reflected throughout the July 1, 2018 OPEB valuation.

The actuarial information prepared in accordance with GASB 74 also incorporates the impact of this Excise Tax.

## NOTE O — Hedge Fund Investments

The hedge fund category of investments is composed of strategies that may: 1) invest in securities within LACERA's existing asset classes or across multiple asset classes; 2) have an absolute return objective; and 3) include the ability to use specialized techniques, such as leverage and short-selling, and instruments such as derivatives.

As of the fiscal year end, LACERA employed two hedge fund of funds managers, Grosvenor Capital Management (GCM) and Goldman Sachs Asset Management (GSAM), with discretion to construct hedge fund portfolios. The hedge fund of funds managers identify, select, implement, and monitor portfolios consistent with LACERA's stated objectives, constraints, and Investment Policy Statement. Additionally, LACERA invested directly with five investment managers as part of a Direct hedge funds portfolio.

LACERA's Investment Policy Statement establishes the portfolio framework for the hedge funds program. Each underlying investment in the entire hedge fund program is in an entity legally structured to limit liability for each investor to the capital invested by that investor.

The GCM diversified portfolio, GSAM diversified portfolio, and Direct portfolio reside within the Diversified Hedge Funds class under the Risk Reduction and Mitigation functional asset category of LACERA's Total Fund, and the GCM credit portfolio resides within the Credit functional asset category. A prior credit portfolio, also managed by GCM, was liquidated during the fiscal year. For additional information regarding LACERA's investment portfolio and functional categories, see the Investment Section.

The investment performance for this strategy is measured separately from other asset classes. The fair values of assets invested in hedge funds as of June 30, 2019 and June 30, 2018, were $1.9 billion and $1.6 billion, respectively.

## NOTE P — Fair Value

For the fiscal year ended June 30, 2016, LACERA adopted GASB Statement No. 72, *Fair Value Measurement and Application*. GASB Statement No. 72 was issued to address accounting and financial reporting issues related to fair value measurements and disclosures. LACERA categorizes its fair value measurements within the fair value hierarchy established by Generally Accepted Accounting Principles in the United States of America (GAAP). The hierarchy is based on the valuation inputs used to measure the fair value of the investment securities and assets. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs. Certain investments held by LACERA are valued at net asset value (NAV) per share when an investment does not have a readily determined fair value, provided that the NAV is calculated and used as a practical expedient to estimate fair value in accordance with the requirements of GAAP.

### Equity and Fixed Income Securities

Equity securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets issued by pricing vendors for these securities. Fixed income and equity securities classified in Level 2 of the fair value hierarchy are valued using prices determined by matrix pricing techniques maintained by the various pricing vendors for these securities. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices. Fixed income and equity securities classified in Level 3 are securities whose stated market price is unobservable by the marketplace; many of these securities are priced by the issuers or industry groups for these securities. Fair value is defined as the quoted market value on the last trading day of the period. These prices are obtained from various pricing sources obtained by LACERA's custodian bank.

### Hedge Fund, Private Equity, and Real Estate Funds

Investments in Hedge Fund, Private Equity, and Real Estate funds are valued at estimated fair value, as determined in good faith by the General Partner (GP), in accordance with GAAP fair value principles and in instances where no observable public market values are available. Investments which are estimated at fair value, are initially valued at cost with subsequent adjustments that reflect third party transactions, financial operating results, and other factors deemed relevant by the GP. These assets are reported by LACERA based on the practical expedient allowed under GAAP.

### Real Estate Separate Account Investments

Investments in Real Estate are valued at estimated fair value, as determined in good faith by the Investment Manager. These investments are initially valued at cost, with subsequent adjustments that reflect third-party transactions, financial operating results, and other factors deemed relevant by the Investment Manager. Properties are subject to independent third-party appraisals every three years.

*LACERA has the following recurring fair value measurements as of June 30, 2019 and 2018:*

## Investments and Derivatives Measured at Fair Value — Pension Plan

*As of June 30, 2019*
(Dollars in Thousands)

| Investments by Fair Value Level | Total | Quoted Prices in Active Markets for Identical Assets Level 1 | Significant Other Observable Inputs Level 2 | Significant Unobservable Inputs Level 3 |
|---|---|---|---|---|
| **Fixed Income Securities** | | | | |
| Asset-Backed Securities | $506,275 | $— | $506,194 | $81 |
| Corporate and Other Credit | 3,121,985 | — | 3,116,458 | 5,527 |
| Municipal / Revenue Bonds | 58,251 | — | 58,251 | — |
| Non-U.S. Fixed Income | 85,780 | — | 85,780 | — |
| Private Placement Fixed Income | 1,950,914 | — | 1,950,914 | — |
| U.S. Government Agency | 2,144,550 | — | 2,144,550 | — |
| U.S. Treasuries | 1,605,167 | — | 1,605,167 | — |
| Pooled Investments | 7,243 | 7,243 | — | — |
| Whole Loan Mortgages | 27,205 | — | — | 27,205 |
| **Total Fixed Income Securities** | **$9,507,370** | **$7,243** | **$9,467,314** | **$32,813** |
| **Equity Securities** | | | | |
| Non-U.S. Equity | $1,811,817 | $1,810,709 | $1,100 | $8 |
| Pooled Investments | 285,532 | 285,532 | — | — |
| U.S. Equity | 13,932,458 | 13,920,038 | 11,499 | 921 |
| **Total Equity Securities** | **$16,029,807** | **$16,016,279** | **$12,599** | **$929** |
| **Collateral from Securities Lending** | **$814,829** | **$—** | **$814,829** | **$—** |
| **Total Investments by Fair Value Level** | **$26,352,006** | **$16,023,522** | **$10,294,742** | **$33,742** |
| **Investments Measured at Net Asset Value (NAV)** | | | | |
| Fixed Income | $8,548,547 | | | |
| Equity | 9,805,218 | | | |
| Hedge Funds | 1,890,739 | | | |
| Private Equity | 6,028,265 | | | |
| Real Estate | 6,192,619 | | | |
| **Total Investments Measured at NAV** | **$32,465,388** | | | |
| **Total Investments** | **$58,817,394** | | | |
| **Derivatives** | | | | |
| Foreign Exchange Contracts | ($35,389) | $— | ($35,389) | $— |
| Foreign Fixed Income Derivatives | 5,868 | (10) | 5,878 | — |
| Foreign Equity Derivatives | (223) | (223) | — | — |
| U.S. Equity Derivatives | 1,264 | 1,264 | — | — |
| U.S. Fixed Income Derivatives | (33,038) | (314) | (32,724) | — |
| **Total Derivatives** | **($61,518)** | **$717** | **($62,235)** | **$—** |

## Investments Measured at the Net Asset Value — Pension Plan

*As of June 30, 2019*
(Dollars in Thousands)

| | Fair Value | Unfunded Commitments | Redemption Frequency (If Currently Eligible) | Redemption Notice Period |
|---|---|---|---|---|
| Commingled Fixed Income Funds[1] | $8,548,547 | $— | Daily, Monthly or Not Eligible | 1-60 days or N/A |
| Commingled Equity Funds[2] | 9,805,218 | 14,544 | Daily, Monthly or Not Eligible | 1-60 days or N/A |
| Hedge Funds [3] | 1,890,739 | 18,500 | Daily, Monthly, Quarterly, Semi-Annual, Annual; Self-Liquidating | 5-180 days |
| Private Equity [4] | 6,028,265 | 4,337,030 | Not Eligible | N/A |
| Real Estate [4] | 6,192,619 | 970,531 | Quarterly or Not Eligible | 30 days+ or N/A |
| **Total Investments Measured at NAV** | **$32,465,388** | | | |

[1]**Commingled Fixed Income Funds:** Nine fixed income funds are considered commingled in nature. They are valued at the net asset value (NAV) of units held at the end of the period based upon the fair value of the underlying investments. Most of the funds are highly liquid within one month; two of the funds representing 3 percent of Commingled Fixed Income assets have liquidity available at the end of the fund terms which range from three to seven years.

[2]**Commingled Equity Funds:** Thirteen equity funds are considered commingled in nature. They are valued at the NAV of units held at the end of the period based upon the fair value of the underlying investments. Most of the funds are highly liquid within one month; three of these funds representing 5 percent of Commingled Equity assets have liquidity subject to lock-up periods that limit or prohibit redemptions for the next three to four years.

[3]**Hedge Funds:** This portfolio consists of 70 funds. Hedge Fund investments are valued at NAV per share. When considering liquidity terms, 78 percent of the fund assets are available within 12 months; these funds provide daily, monthly, quarterly, semi-annual, or annual liquidity. Some of these funds are subject to redemption notices that extend the time frame to receive redemptions beyond the next 12 months. The remaining 22 percent of fund assets are in self- liquidating funds which do not permit voluntary redemption/withdrawals or in funds that offer periodic liquidity that extends beyond the next 12 months.

LACERA's Hedge Funds portfolio invests in the following strategies:

(a) Macro and Tactical Trading: This strategy makes investments based on analyses and forecasts of macroeconomic trends, including governmental and central bank policies, fiscal trends, trade imbalances, interest rate trends, inter-country relations, and economic and technical analysis.
(b) Equity Long/Short: This strategy purchases and/or sells equities based on fundamental and/or quantitative analysis and other factors.
(c) Credit: This strategy includes long-biased credit, long/short credit, structured credit, and mortgage credit.
(d) Relative Value: This strategy's main focus is to benefit from valuation discrepancies that may be present in related financial instruments by purchasing and/or shorting these instruments.
(e) Multi-Strategy: This strategy aims to pursue varying strategies in order to diversify risks and reduce volatility.
(f) Event Driven: This strategy seeks to gain an advantage from pricing inefficiencies that may occur in the onset or aftermath of a corporate action or related event.

[4]**Private Equity and Real Estate Funds:** LACERA's Private Equity portfolio consists of 207 funds, investing primarily in Buyout Funds, with some exposure to Venture Capital, Special Situations. Due to contractual limitations, none of the 207 funds are eligible for redemption for up to 10 years. The Real Estate portfolio, composed of 23 commingled funds, invests in both U.S. and Non-U.S. commercial real estate. The fair values of these funds have been determined using net assets valued at the end of the period and net assets valued one quarter in arrears plus current quarter cash flows. Two out of 23 Real Estate funds are eligible for redemption depending upon the availability of cash for redemptions in the fund. Distributions are received as underlying investments within the funds are liquidated, which on average can occur over the span of 5 to 10 years. For Real Estate investments held in separate accounts and debt program investments, See Note J — Special Purpose Entities.

## Investments and Derivatives Measured at Fair Value — Pension Plan

*As of June 30, 2018*

(Dollars in Thousands)

| Investments by Fair Value Level | Total | Quoted Prices in Active Markets for Identical Assets Level 1 | Significant Other Observable Inputs Level 2 | Significant Unobservable Inputs Level 3 |
|---|---|---|---|---|
| **Fixed Income Securities** | | | | |
| Asset-Backed Securities | $678,777 | $— | $678,777 | $— |
| Corporate and Other Credit | 4,083,686 | — | 4,078,272 | 5,414 |
| Municipal / Revenue Bonds | 74,358 | — | 74,358 | — |
| Non-U.S. Fixed Income | 137,594 | — | 137,594 | — |
| Private Placement Fixed Income | 2,067,680 | 1,104 | 2,062,720 | 3,856 |
| U.S. Government Agency | 1,842,159 | — | 1,841,828 | 331 |
| U.S. Treasuries | 1,708,192 | — | 1,708,192 | — |
| Whole Loan Mortgages | 32,850 | — | — | 32,850 |
| **Total Fixed Income Securities** | **$10,625,296** | **$1,104** | **$10,581,741** | **$42,451** |
| **Equity Securities** | | | | |
| Non-U.S. Equity | $2,074,878 | $2,074,457 | $— | $421 |
| Pooled Investments | 295,080 | 295,080 | — | — |
| U.S. Equity | 13,130,228 | 13,122,685 | 3,865 | 3,678 |
| **Total Equity Securities** | **$15,500,186** | **$15,492,222** | **$3,865** | **$4,099** |
| **Collateral from Securities Lending** | **$1,191,235** | **$—** | **$1,191,235** | **$—** |
| **Total Investments by Fair Value Level** | **$27,316,717** | **$15,493,326** | **$11,776,841** | **$46,550** |
| **Investments Measured at Net Asset Value (NAV)** | | | | |
| Fixed Income | $5,301,354 | | | |
| Equity | 10,160,905 | | | |
| Hedge Funds | 1,592,126 | | | |
| Private Equity | 5,929,098 | | | |
| Real Estate | 6,326,246 | | | |
| **Total Investments Measured at NAV** | **$29,309,729** | | | |
| **Total Investments** | **$56,626,446** | | | |
| **Derivatives** | | | | |
| Foreign Exchange Contracts | $169,907 | $— | $169,907 | $— |
| Foreign Fixed Income Derivatives | (2,735) | (251) | (2,484) | — |
| U.S. Equity Derivatives | (88) | 49 | (137) | — |
| U.S. Fixed Income Derivatives | 10,672 | (7,477) | 18,149 | — |
| **Total Derivatives** | **$177,756** | **($7,679)** | **$185,435** | **$—** |

## Investments Measured at the Net Asset Value — Pension Plan

*As of June 30, 2018*

(Dollars in Thousands)

| | Fair Value | Unfunded Commitments | Redemption Frequency (If Currently Eligible) | Redemption Notice Period |
|---|---|---|---|---|
| Commingled Fixed Income Funds[1] | $5,301,354 | $— | Daily, Monthly or Not Eligible | 1-60 days or N/A |
| Commingled Equity Funds[2] | 10,160,905 | 43,431 | Daily, Monthly or Not Eligible | 1-60 days or N/A |
| Hedge Funds[3] | 1,592,126 | — | Daily, Monthly, Quarterly, Semi-Annual, Annual; Self- Liquidating | 5-180 days |
| Private Equity[4] | 5,929,098 | 3,762,043 | Not Eligible | N/A |
| Real Estate[4] | 6,326,246 | 335,408 | Quarterly or Not Eligible | 30 days+ or N/A |
| **Total Investments Measured at NAV** | **$29,309,729** | | | |

[1]**Commingled Fixed Income Funds:** Nine fixed income funds are considered commingled in nature. They are valued at the net asset value (NAV) of units held at the end of the period based upon the fair value of the underlying investments. Most of the funds are highly liquid within one month; two of the funds representing 7 percent of Commingled Fixed Income assets have liquidity available at the end of the fund terms which range from three to seven years.

[2]**Commingled Equity Funds:** Thirteen equity funds are considered commingled in nature. They are valued at the NAV of units held at the end of the period based upon the fair value of the underlying investments. Most of the funds are highly liquid within one month; three of the funds representing 5 percent of Commingled Equity assets have liquidity available subject to lock-up periods that limit or prohibit redemptions for the next three to four years.

[3]**Hedge Funds:** The portfolio consists of 90 funds. Hedge Fund investments are valued at NAV per share. When considering liquidity terms, 77 percent of the fund assets are available within 12 months; these funds provide daily, monthly, quarterly, semi-annual, or annual liquidity. Some of these funds are subject to redemption notices that extend the time frame to receive redemptions beyond the next 12 months. The remaining 23 percent of fund assets are in self-liquidating funds which do not permit voluntary redemption/withdrawals or in funds that offer periodic liquidity that extends beyond the next 12 months.

LACERA's Hedge Funds portfolio invests in the following strategies:

(a) Macro and Tactical Trading: This strategy makes investments based on analyses and forecasts of macroeconomic trends, including governmental and central bank policies, fiscal trends, trade imbalances, interest rate trends, inter-country relations, and economic and technical analysis.

(b) Equity Long/Short: This strategy purchases and/or sells equities based on fundamental and/or quantitative analysis and other factors.

(c) Credit: This strategy includes long-biased credit, long/short credit, structured credit, and mortgage credit.

(d) Relative Value: This strategy's main focus is to benefit from valuation discrepancies that may be present in related financial instruments by purchasing and/or shorting these instruments.

(e) Multi-Strategy: This strategy aims to pursue varying strategies in order to diversify risks and reduce volatility.

(f) Event Driven: This strategy seeks to gain an advantage from pricing inefficiencies that may occur in the onset or aftermath of a corporate action or related event.

(g) Commodities: This strategy invests across the global commodity markets based on an analysis of factors, including supply and demand, legislative and environmental policies, trends in growth rates and resource consumption, global monetary and trade policy, geopolitical events and technical factors.

[4]**Private Equity and Real Estate Funds:** LACERA's Private Equity portfolio consists of 250 funds, investing primarily in Buyout Funds, with some exposure to Venture Capital, Special Situations, and Non-U.S. Funds. Due to contractual limitations, none of the 250 funds are eligible for redemption for up to 10 years. The Real Estate portfolio, composed of 15 funds, invests in both U.S. and non-U.S. commercial real estate. The fair values of these funds have been determined using net assets valued one quarter in arrears plus current quarter cash flows. Two out of 15 funds are eligible for redemption depending upon the availability of cash for redemptions in the fund. Distributions are received as underlying investments within the funds are liquidated, which on average can occur over the span of five to 10 years. For Real Estate investments held in separate accounts and debt program investments, see Note J — Special Purpose Entities.

## Investments Measured at Fair Value — OPEB Trust

*As of June 30, 2019*

(Dollars in Thousands)

| Investments by Fair Value Level | Total | Quoted Prices in Active Markets for Identical Assets Level 1 | Significant Other Observable Inputs Level 2 | Significant Unobservable Inputs Level 3 |
|---|---|---|---|---|
| **Fixed Income Securities** | | | | |
| Asset-Backed Securities | $1,334 | $— | $1,334 | $— |
| Private Placement Fixed Income | 2,500 | — | 2,500 | — |
| Corporate and Other Credit | 4,885 | — | 4,885 | — |
| Pooled Investments | 122,194 | 122,194 | 0 | — |
| U.S. Treasuries | 2,993 | — | 2,993 | — |
| **Total Fixed Income Securities** | **$133,906** | **$122,194** | **$11,712** | **$—** |
| **Total Investment by Fair Value Level** | **$133,906** | **$122,194** | **$11,712** | **$—** |
| **Investments Measured at Net Asset Value (NAV)** | | | | |
| Fixed Income | $345,867 | | | |
| Equity | 624,039 | | | |
| Real Estate Investment Trust (REIT) | 120,247 | | | |
| **Total Investments Measured Trust at NAV** | **$1,090,153** | | | |
| **Total Investments** | **$1,224,059** | | | |

## Investments Measured at Net Asset Value — OPEB Trust

*As of June 30, 2019*

(Dollars in Thousands)

| Investments by Fair Value Level | Fair Value | Unfunded Commitments[2] | Redemption Frequency (If Currently Eligible) | Redemption Notice Period |
|---|---|---|---|---|
| **Fixed Income Securities** | | | | |
| Commingled Fixed Income Funds | $345,867 | $— | Daily, Monthly | 1-30 days or N/A |
| Commingled Equity Fund | 624,039 | — | Daily, Monthly | 1-30 days or N/A |
| Real Estate Investment Trust (REIT) | 120,247 | — | Daily, Monthly | 1-30 days or N/A |
| **Total Investments Measured at NAV[1]** | **$1,090,153** | | | |

[1]**Commingled Funds:** The OPEB Master Trust is invested in seven funds that are considered commingled in nature. They are valued at the net asset value (NAV) of units held at the end of the period based upon the fair value of the underlying investments. Most of the funds are highly liquid within one month.

[2]There are no unfunded commitments for the OPEB Trust. As of June 30, 2019 there was $2 million uninvested cash in the OPEB Trust, which was deposited into the OPEB cash account and then subsequently invested after month end.

## Investments Measured at Fair Value — OPEB Trust

*As of June 30, 2018*
(Dollars in Thousands)

| Investments by Fair Value Level | Total | Quoted Prices in Active Markets for Identical Assets Level 1 | Significant Other Observable Inputs Level 2 | Significant Unobservable Inputs Level 3 |
|---|---|---|---|---|
| **Fixed Income Securities** | | | | |
| Asset-Backed Securities | $1,138 | $— | $1,138 | $— |
| Private Placement Fixed Income | 4,082 | — | 4,082 | — |
| Corporate and Other Credit | 4,597 | — | 4,597 | — |
| Pooled Investments | 94,866 | 94,866 | 0 | — |
| U.S. Treasuries | 991 | — | 991 | — |
| **Total Fixed Income Securities** | **$105,674** | **$94,866** | **$10,808** | **$—** |
| **Total Investments by Fair Value Level** | **$105,674** | **$94,866** | **$10,808** | **$—** |
| **Investments Measured at Net Asset Value (NAV)** | | | | |
| Fixed Income | $267,288 | | | |
| Equity | 456,824 | | | |
| Real Estate Investment Trust (REIT) | 97,073 | | | |
| **Total Investments Measured Trust at NAV** | **$821,185** | | | |
| **Total Investments** | **$926,859** | | | |

## Investments Measured at Net Asset Value — OPEB Trust

*As of June 30, 2018*
(Dollars in Thousands)

| Investments by Fair Value Level | Fair Value | Unfunded Commitments[2] | Redemption Frequency (If Currently Eligible) | Redemption Notice Period |
|---|---|---|---|---|
| **Fixed Income Securities** | | | | |
| Commingled Fixed Income Funds | $267,288 | $— | Daily, Monthly | 1-30 days or N/A |
| Commingled Equity Fund | 456,824 | — | Daily, Monthly | 1-30 days or N/A |
| Real Estate Investment Trust (REIT) | 97,073 | — | Daily, Monthly | 1-30 days or N/A |
| **Total Investments Measured at NAV[1]** | **$821,185** | | | |

[1]**Commingled Funds:** The OPEB Master Trust is invested in eight funds that are considered commingled in nature. They are valued at the net asset value (NAV) of units held at the end of the period based upon the fair value of the underlying investments. Most of the funds are highly liquid within one month.

[2]There are no unfunded commitments for the OPEB Trust. As of June 30, 2018 there was $1.5 million uninvested cash in the OPEB Trust, which was deposited into the OPEB cash account and then subsequently invested after month end.

## Investments Measured at Fair Value — OPEB Agency Fund

*As of June 30, 2019*

(Dollars in Thousands)

| Investments by Fair Value Level | Total | Quoted Prices in Active Markets for Identical Assets Level 1 | Significant Other Observable Inputs Level 2 | Significant Unobservable Inputs Level 3 |
|---|---|---|---|---|
| **Fixed Income Securities** | | | | |
| Asset-Backed Securities | $9,414 | $— | $9,414 | $— |
| Private Placement Fixed Income | 10,846 | — | 10,846 | — |
| Corporate and Other Credit | 36,820 | — | 36,820 | — |
| U.S. Treasuries | 61,607 | — | 61,607 | — |
| **Total Fixed Income Securities** | **$118,687** | **$—** | **$118,687** | **$—** |
| **Total Investments by Fair Value Level** | **$118,687** | **$—** | **$118,687** | **$—** |

## Investments Measured at Fair Value — OPEB Agency Fund

*As of June 30, 2018*

(Dollars in Thousands)

| Investments by Fair Value Level | Total | Quoted Prices in Active Markets for Identical Assets Level 1 | Significant Other Observable Inputs Level 2 | Significant Unobservable Inputs Level 3 |
|---|---|---|---|---|
| **Fixed Income Securities** | | | | |
| Asset-Backed Securities | $7,214 | $— | $7,214 | $— |
| Private Placement Fixed Income | 8,928 | — | 8,928 | — |
| Corporate and Other Credit | 32,727 | — | 32,727 | — |
| U.S. Treasuries | 58,525 | — | 58,525 | — |
| **Total Fixed Income Securities** | **$107,394** | **$—** | **$107,394** | **$—** |
| **Total Investments by Fair Value Level** | **$107,394** | **$—** | **$107,394** | **$—** |

## NOTE Q — Other Post-Employment Benefits (OPEB) Trust

### Establishment of Los Angeles County (County) OPEB Trust

Pursuant to the California Government Code, the County established an irrevocable, tax exempt OPEB Trust for the purpose of holding and investing assets to pre-fund the Retiree Healthcare Benefits Program and applied globally where appropriate, which LACERA administers. In May 2012, the County Board of Supervisors approved entering into a Trust and Investment Services Agreement with the LACERA Board of Investments to serve as trustee and investment manager.

The County OPEB Trust was the County's first step to reduce its OPEB unfunded liability. It provides a framework where the County contributes to the Trust and transitions, over time, from funding post-retirement benefits as a pay-as-you-go model to a prefunding model. The County OPEB Trust does not modify the participating employers' existing benefit programs.

The County OPEB Trust serves as a funding tool for the participating employers to hold and invest assets used to pay expenses associated with future OPEB benefits, such as medical, dental and vision provided by the Retiree Healthcare Program including retiree death/burial benefit. The participating employers will be responsible for and have full discretion over the timing and use of those assets restricted for OPEB purposes as defined in the Trust Agreement. There are only two participating employers in the County OPEB Trust: Los Angeles County and LACERA.

### Establishment of Los Angeles Superior Court (Court) OPEB Trust

Similar to the OPEB Trust established by the County, the Court followed the County's lead and established a separate OPEB Trust Fund, the Court OPEB Trust, to begin prefunding its own OPEB unfunded liability.

Pursuant to the California Government Code, the Court established an irrevocable OPEB Trust for the purpose of holding and investing assets to prefund the Retiree Healthcare Program, which LACERA administers. In April 2016, the Judicial Council of California approved the Court's request to establish a qualified irrevocable Trust, as well as use LACERA's Board of Investments as trustee and investment services provider for the prefunding of the Court's OPEB liabilities.

In May 2016, to conform the language of the County OPEB Trust agreement to the language of the Court's OPEB Trust agreement, the Board of Supervisors approved the First Amendment to the *Trust and Investment Services Agreement for the County of Los Angeles OPEB Program* between the County and LACERA. This amendment permits the pooling of County and Court OPEB Trust assets solely for investment purposes and updates the fiduciary duty provisions due to the addition of the Court's OPEB Trust agreement.

In June 2016, similar to the County, the Court entered into a Trust and Investment Services Agreement with the LACERA Board of Investments.

### OPEB Master Trust

In July 2016, LACERA's Board of Investments adopted the OPEB Master Trust Declaration and unitization of OPEB Trust investments. As trustee of the separate OPEB Trusts established by the County and the Court, the Board of Investments has sole and exclusive authority, control over, and responsibility for directing the investment and management of the Master Trust assets.

A unitized fund structure may allow for synergy from the shared economy and leveraged investment opportunities for greater diversification of assets. Unitization also provides participants the ability to pool assets and resources while retaining total fund and functional category values and reporting for each participant. This approach can offer administrative efficiency, potential cost savings, and permit flexibility in asset allocation.

### Funding Policy

In June 2015, the Board of Supervisors approved the countywide budget with a dedicated funding promise for the OPEB liability using a multi-year approach to enhance the County's OPEB Trust funding in a consistent manner.

Under the County OPEB Trust, LACERA is defined as a "Contributing Employer." Separate accounts are maintained for the contributions and expense obligations of the County and LACERA. Since inception, LACERA participated in lock step funding with the County. LACERA's budget includes provisions for its pro rata share of OPEB Trust contributions. In December 2015, the LACERA Boards adopted the LACERA OPEB Funding Policy allowing LACERA to prefund its portion of retiree healthcare benefits in sync with the County, while also allowing LACERA to prefund its portion of the liability separately. LACERA is not legally obligated, under the Trust or otherwise, to match the County's funding practices, but such a course of action, which has been followed in the past, reduces LACERA's share of the unfunded liability.

The Court continues to pay its OPEB liability on a pay-as-you-go basis. Although the Court has not adopted a formal OPEB funding policy, when surplus funds are available at fiscal year end, the Court may earmark such excess funds as OPEB Trust contributions.

## Investment Policies — OPEB Master Trust

**Investment Policy:** The allocation of investment assets within the OPEB Master Trust are approved by the OPEB Trustee, the LACERA Board of Investment. As outlined in the OPEB Master Trust Investment Policy Statement, assets are managed on a total return basis with the overall goal to provide employees and retirees of the OPEB Trust with post-employment health care benefits as promised, via long-term investment program.

**Target Allocation:** The Board's revised asset allocation policy, adopted in December 2017, divides the Trust into four broad functional categories and contain asset classes that align with the purpose of each function. The Board has approved target weights at both the functional category and asset class level to provide for diversification of assets in an effort to meet LACERA's actuarial assumed rate of return, consistent with market conditions and risk control. The functional categories have target weights of 50.0 percent in Growth, 20.0 percent in Credit, 10.0 percent in Risk Reduction and Mitigation, and 20.0 percent in Inflation Hedges, respectively.

## Schedule of Target Allocation

*As of June 30, 2019*

| Asset Class | Target Allocation | |
|---|---|---|
| **Growth** | **50.0%** | |
| Global Equity | | 50.0% |
| **Credit** | **20.0%** | |
| High Yield Bonds | | 6.0% |
| Bank Loans | | 10.0% |
| EM Local Currency Bonds | | 4.0% |
| **Risk Reduction & Mitigation** | **10.0%** | |
| Cash Equivalents | | 2.0% |
| Investment Grade Bonds | | 8.0% |
| **Inflation Hedges** | **20.0%** | |
| Treasury Inflation-Protected Securities (TIPS) | | 6.0% |
| Real Estate Investment Trusts (REITs) | | 10.0% |
| Commodities | | 4.0% |

**Investment Concentrations**: At June 30, 2019, the OPEB Master Trust held approximately 50.5 percent in Growth, 19.9 percent in Credit, 9.9 percent in Risk Reduction and Mitigation, and 19.7 percent in Inflation Hedges. In addition, the OPEB Master Trust did not hold investments in any one issuer that would represent 5 percent or more of the OPEB Master Trust fiduciary net position. The Superior Court contributed $2.0 million on June 26, 2019 which was deposited into the OPEB cash account and then subsequently invested after month-end.

**Money-Weighted Rate of Return:** For the fiscal year ended June 30, 2019, the annual money-weighted rate of return on OPEB Trust investments, net of OPEB Trust investment expense, was 6.0 percent. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested. Historical returns will be presented as they become available, and are presented in the Schedule of Investment Returns – OPEB Program in the Required Supplementary Information section of this report.

**Contributions:** The participating employers historically discharged their current premium subsidy obligations on a pay-as-you-go basis. LACERA bills the healthcare premiums to the participating employers and members and receives reimbursement on a monthly basis. The County, Superior Court and LACERA use the OPEB Trust as a mechanism to pre-fund these obligations, depositing monies into the irrevocable OPEB Trust, for use in accordance with the terms of the Trust Agreement. Plan members are required to pay the difference between the employer-paid subsidy and the actual premium cost.

During fiscal years ended June 30, 2019 and 2018, the County, Superior Court, and LACERA made total pre-funding contributions to the OPEB Trust of $235.6 million and $123.3 million respectively, in excess of the pay-as-you-go amounts, both of which are recorded as revenue within the OPEB Trust.

During fiscal years ended June 30, 2019 and 2018, the Court redeemed $25 thousand to pay for investment and administrative expenses. There were no other redemptions during the year.

## Contributions — OPEB Trust

*For the Fiscal Years Ended June 30, 2019 and 2018*
(Dollars in Thousands)

| | 2019 | 2018 |
|---|---|---|
| Los Angeles County | **$230,495** | $120,796 |
| LACERA | **940** | 491 |
| Superior Court | **4,178** | 2,016 |
| **Total Contributions[1]** | **$235,613** | $123,303 |

[1]Contributions are limited to OPEB Trust prefunding and exclude pay-as-you-go contributions as included in OPEB Trust employer contributions in the Statement of Changes in Fiduciary Net Position.

**Administration:** The OPEB Trust administration costs include payments for investment management fees, custodial fees, and overhead charged by LACERA for administering the OPEB Trust Fund. Expenses totaled $1.0 million and $0.7 million for fiscal years ended June 30, 2019 and 2018, respectively. The increase was due to asset re-balancing and the addition of new investment accounts. For purposes of the GASB 74 actuarial valuation, the actuary reclassified approximately $8.7 million of costs from benefit payments to administrative expenses. These costs are paid with premiums, but represent a flat administrative charge of $8 per contract per month and the $8 administrative fee is included in the premium.

## Expenses — OPEB Trust

*For the Fiscal Years Ended June 30, 2019 and 2018*

| | 2019 | | | | |
|---|---|---|---|---|---|
| | **Management Fees** | **Custodial Fees** | **Consultant Fees** | **Administrative Expenses** | **Total** |
| Los Angeles County | $422,862 | $234,407 | $52,711 | $175,395 | $885,375 |
| LACERA | 1,620 | 902 | 203 | 11,693 | 14,418 |
| Superior Court | 18,033 | 9,392 | 2,086 | 46,772 | 76,283 |
| **Total Expenses** | **$442,515** | **$244,701** | **$55,000** | **$233,860** | **$976,076** |

| | 2018 | | | | |
|---|---|---|---|---|---|
| | **Management Fees** | **Custodial Fees** | **Consultant Fees** | **Administrative Expenses** | **Total** |
| Los Angeles County | $328,028 | $75,994 | $52,338 | $130,371 | $586,731 |
| LACERA | 1,254 | 290 | 200 | 14,600 | 16,344 |
| Superior Court | 15,595 | 3,571 | 2,462 | 44,984 | 66,612 |
| **Total Expenses** | **$344,877** | **$79,855** | **$55,000** | **$189,955** | **$669,687** |

**Fund Values:** OPEB Trust Fund additions include contributions from participating employers and investment income. Deductions include redemptions, investment expenses, and administrative expenses. The OPEB Trust Fund values were as follows:

## Fund Values — OPEB Trust

*As of June 30, 2019 and 2018*

(Dollars in Thousands)

| | 2019 | | |
|---|---|---|---|
| | **Book Value** | **Unrealized Investment Appreciation** | **Fair Value** |
| Los Angeles County | $1,049,568 | $139,838 | $1,189,406 |
| LACERA | 4,059 | 538 | 4,597 |
| Superior Court | 39,794 | 4,680 | 44,474 |
| **Total Value** | **$1,093,421** | **$145,056** | **$1,238,477** |

| | 2018 | | |
|---|---|---|---|
| | **Book Value** | **Unrealized Investment Appreciation** | **Fair Value** |
| Los Angeles County | $814,047 | $85,373 | $899,420 |
| LACERA | 3,111 | 327 | 3,438 |
| Superior Court | 35,463 | 2,686 | 38,149 |
| **Total Value** | **$852,621** | **$88,386** | **$941,007** |

## NOTE R — Other Post-Employment Benefits (OPEB) Program Under Cost-Sharing Plan

The following information is provided under the cost-sharing plan structure for the OPEB Program. As of July 1, 2018, the OPEB Program transitioned from a cost-sharing structure to an agent multiple- employer plan (agent plan) structure. Note N — OPEB Program of the Financial Section includes GASB Statement No. 74 disclosures under an agent plan for fiscal year ended 2019. The disclosures in this Note R are meant to satisfy GASB Statement No. 74 financial reporting requirements of the cost-sharing plan for the comparative fiscal year ended June 30, 2018.

### Summary of Significant Accounting Policies — OPEB Program

The OPEB Trust accounts for assets held in qualifying OPEB trusts, as defined by GASB Statement No. 74. As such, the OPEB Trust Fiduciary Net Position is used to reduce the Total OPEB Liability, resulting in a Net OPEB Liability to the participants within the OPEB Program for fiscal year ended 2018. See further discussion of the OPEB Trust in Note Q of the Financial Section.

### Actuarial Methods and Significant Assumptions — GASB Statement No. 74

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of the occurrence of events far into the future. Examples include assumptions about future employment, mortality, and cost trends. Actuarially determined amounts are subject to continual review or modification as actual results are compared with past expectations and new estimates are made about the future. Projections of benefits for financial reporting purposes are based on the OPEB Program and include the types of benefits provided at the time of each valuation.

Where applicable, the same actuarial methods and assumptions used for the LACERA retirement benefits plan (Pension Plan) are used for the LACERA-administered OPEB Program. The table below summarizes the primary GASB Statement No. 74 OPEB-related assumptions under a cost-sharing plan structure. The retirement benefits-related demographic and economic assumptions are based on those developed for the June 30, 2016 Investigation of Experience for the Pension Plan. Economic and demographic assumptions from the Retirement Benefit Investigation of Experience are integrated into the OPEB Investigation of Experience. The OPEB demographic assumptions are based on the results of the 2016 OPEB Investigation of Experience, dated July 21, 2017. OPEB-specific assumptions that have been updated since the 2016 OPEB Investigation of Experience include healthcare cost trend rates updated with information from the July 1, 2018 renewals, the long term expected rate of return, and carrier ACA Health Insurer Fee details and claim costs.

The Total OPEB Liability as of June 30, 2018, was determined by completing a roll-forward calculation based on an actuarial valuation conducted as of July 1, 2017, using the following actuarial assumptions applied to all prior periods included in the measurement in accordance with the requirements of GASB Statement No. 74. Key methods and significant assumptions used to calculate the 2018 Total OPEB Liability under a cost-sharing plan are presented on the following page.

### Key Methods and Significant Assumptions

| | |
|---|---|
| **Actuarial Cost Method** | Individual Entry Age Normal, Level Percent of Pay. |
| **Discount Rate** | 5.11 percent as of June 30, 2018. |
| **Mortality** | Various rates based on the RP-2014 Healthy and Disabled Annuitant mortality tables and including projection for expected future mortality improvement using the MP-2014 Ultimate Projection Scale. This assumption was adopted with the June 30, 2016 valuation report. Before 2016, assumption was RP-2000 Combined Mortality Tables for Males and Females, projected to 2025 using Projection Scale AA, with various age setbacks depending upon Plan type. |
| **Administrative Expenses** | Pursuant to GASB Statement No. 74, the operational administration costs, currently based on $8 Per Member, Per Plan, Per Month, are not included in the projected liabilities, service cost, or benefit payments. |
| **ACA Excise Tax** | The OPEB liability figures include the Excise Tax. This is based on the requirements of the Affordable Care Act (ACA) and The Consolidated Appropriations Act of 2016. Additional legislation passed in January 2018 further delayed the excise tax implementation until 2022. |
| **Basis of Contribution Requirements** | The Actuarially Determined Contribution (ADC) is a combination of the normal cost and the amortization of the Unfunded Actuarial Accrued Liability (UAAL) under the Projected Unit Credit (PUC) actuarial cost method with Excise Tax as determined in the July 1, 2017 OPEB Valuation Report. The UAAL is the AAL net of assets. The UAAL is amortized over 30 years as a level percent of payroll. |
| **Inflation Rate** | 2.75 percent per annum. This rate was adopted beginning with the July 1, 2016 OPEB valuation. |

**Healthcare Cost Trend Rates (with Excise Tax)**

| | FY 2018 to FY 2019 | FY 2019 to FY 2020 | Ultimate |
|---|---|---|---|
| LACERA Medical Under 65 | 5.80% | 6.30% | 4.50% |
| LACERA Medical Over 65 | 6.00% | 6.00% | 4.50% |
| Part B Premiums | 9.25% | 1.85% | 4.35% |
| Dental/Vision | — | 3.00% | 3.70% |
| Weighted Average Trend | 5.85% | 5.42% | 4.47% |

**Probability of Initial Enrollment Upon Retirement**

| Years of Service | Medical Plan and Medicare Part B | Dental/Vision |
|---|---|---|
| <10 | 8% | 11% |
| 10-14 | 44% | 49% |
| 15-19 | 61% | 64% |
| 20-24 | 81% | 82% |
| 25+ | 95% | 95% |
| Disabled | 95% | 94% |

**Key Methods and Significant Assumptions (continued)**

| Description | Method | | | | |
|---|---|---|---|---|---|
| **Medical Spouse/ Dependent Enrollment Probability** | **Non-Firefighter 1014[1]** | | | | **Firefighter 1014** |
| | **<65 Male** | **<65 Female** | **65+ Male** | **65+ Female** | **All** |
| | 77.5% | 50.0% | 66.0% | 32.0% | 93.0% |
| **Dental/Vision Spouse/ Dependent Enrollment Probability** | **Male** | | **Female** | | |
| | 76% | | 45% | | |

[1]Members covered by the Firefighters Local 1014 medical plan while actively employed by Los Angeles County may continue this coverage after retirement. Retired Local 1014 non-Firefighter members are eligible for the Local 1014 Firefighters' retiree medical plan.

The actuarial assumptions used in the July 1, 2017 OPEB Actuarial Valuation (Cost Sharing) were based on the results of the actuarial Experience Study for the period July 1, 2013 to June 30, 2016. LACERA's actuary has performed an Experience Study every three years.

## Schedule of Target Allocation and Long-Term Expected Rate of Return

*As of June 30, 2018*

| Asset Class | Target Allocation | | Weighted Average Long-Term Expected Real Rate of Return (After Expected 2.75% Inflation Rate) (Geometric) | |
|---|---|---|---|---|
| **Growth** | **50.0%** | | **4.7%** | |
| Global Equity | | 50.0% | | 4.7% |
| **Credit** | **20.0%** | | **2.4%** | |
| High Yield Bonds | | 6.0% | | 2.6% |
| Bank Loans | | 10.0% | | 2.2% |
| EM Local Currency Bonds | | 4.0% | | 2.6% |
| **Risk Reduction & Mitigation** | **10.0%** | | **0.7%** | |
| Cash Equivalents | | 2.0% | | 0.1% |
| Investment Grade Bonds | | 8.0% | | 0.8% |
| **Inflation Hedges** | **20.0%** | | **2.5%** | |
| TIPS | | 6.0% | | 0.5% |
| Real Estate Investment Trusts (REITs) | | 10.0% | | 3.9% |
| Commodities | | 4.0% | | 1.8% |

**Target Allocation:** The Board's revised asset allocation policy, adopted in December 2017, divides the Trust into four broad functional categories and contain asset classes that align with the purpose of each function. The Board has approved target weights at both the functional category and asset class level to provide for diversification of assets in an effort to meet LACERA's actuarial assumed rate of return, consistent with market conditions and risk control. The functional categories have target weights of 50.0 percent in Growth, 20.0 percent in Credit, 10.0 percent in Risk Reduction and Mitigation, and 20.0 percent in Inflation Hedges, respectively.

**Expected Long-Term Real Rate of Return:** The long-term expected rate of return on OPEB Trust investments was determined using a building-block method in which best estimate ranges of expected future real rates of return are developed for each major asset class. These ranges 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. Best estimates of geometric real rates of return, reduced by expected inflation as of June 30, 2018 for each major asset class are included in the table above.

The GASB Statement No. 74 investment rate of return assumption for the fiscal year ended June 30, 2018 was 6.30 percent.

**Money-Weighted Rate of Return:** For the fiscal year ended June 30, 2018, the annual money-weighted rate of return on OPEB Trust investments, net of OPEB Trust investment expense, was 10.0 percent. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

**Net OPEB Liability**

GASB Statement No. 74 requires public pension plans to provide the calculation of a Net OPEB Liability. The Net OPEB Liability is measured as the Total OPEB Liability less the amount of the OPEB Trust's Fiduciary Net Position.

The Net OPEB Liability is an accounting measurement for financial statement reporting purposes. The OPEB Program funded status is calculated separately by the consulting actuary and the results of which are included in the actuarial valuation report. The components of the Net OPEB Liability at June 30, 2018, were as follows:

### Schedule of Net OPEB Liability

*For the Fiscal Year Ended June 30, 2018*
*(Dollars in Thousands)*

| | 2018 |
|---|---|
| Total OPEB Liability | **$25,671,307** |
| Less: Fiduciary Net Position | **(941,007)** |
| **Net OPEB Liability** | **$24,730,300** |
| Fiduciary Net Position as a Percentage of Total OPEB Liability | **3.67%** |

## Discount Rate

GASB Statement No. 74 requires determination of whether the OPEB Trust's Fiduciary Net Position is projected to be sufficient to make projected benefit payments. The discount rate was developed using a depletion date projection, which included the following assumptions:

- The employers contribute the amount necessary to pay the current year benefits and the planned contribution amounts to the OPEB Trust from the Los Angeles County June 22, 2015 plan.
- Benefit payments are projected based on the actuarial assumptions and the current plan provisions.
- Members are assumed to terminate, retire, become disabled, and so forth according to the actuarial assumptions used for the July 1, 2017 OPEB Valuation.
- All cash flows are assumed to occur on average halfway through the year.
- The long-term expected rate of return on plan investments is 6.30 percent as of June 30, 2018.

- The 20-year tax-exempt municipal bond index rate is 3.87 percent as of June 30, 2018.
- The funding policy used to determine actuarially determined contributions did not change. The GASB Statement No. 74 Disclosure Report includes the ACA Excise Tax in the liabilities. The funding policy will include Excise Tax for the purposes of these calculations.
- The plan provisions did not change and there are no material future changes as of the measurement date.

The result of this process is a “blended” discount rate of 5.11 percent as of June 30, 2018. Actual results at each point in time will yield different values, reflecting the actual experience of the plan membership and assets.

## Sensitivity Analysis — Discount Rate

In accordance with GASB Statement No. 74, sensitivity of the Net OPEB Liability to changes in the discount rate must be reported. The following presents the Net OPEB Liability, calculated using the discount rate of 5.11 percent, as well as what the Net OPEB Liability would be if it were calculated using a discount rate that is 1 percentage point lower (4.11 percent) or 1 percentage point higher (6.11 percent) than the current rate (5.11 percent):

### Sensitivity Analysis — Changes in Discount Rate

*For the Fiscal Year Ended June 30, 2018*
(Dollars in Thousands)

| | 2018 | | |
|---|---|---|---|
| | **1% Decrease [4.11%]** | **Current Discount Rate [5.11%]** | **1% Increase [6.11%]** |
| Total OPEB Liability | $30,569,575 | $25,671,307 | $21,807,925 |
| Less: Fiduciary Net Position | (941,007) | (941,007) | (941,007) |
| **Net OPEB Liability** | **$29,628,568** | **$24,730,300** | **$20,866,918** |

## Sensitivity Analysis — Healthcare Cost Trend Rates

In accordance with GASB Statement No. 74, sensitivity of the Net OPEB Liability to changes in the healthcare cost trend rates must be reported. The following presents the Net OPEB Liability, calculated using the healthcare cost trend rates as reported in the July 1, 2016 OPEB Actuarial Valuation Health Cost Trend Assumptions with Excise Tax table, as well as what the Net OPEB Liability would be if it were calculated using the healthcare cost trend rates that are 1 percentage point lower or 1 percentage point higher than the current rates:

### Sensitivity Analysis — Changes in Healthcare Cost Trend Rates

*For the Fiscal Year Ended June 30, 2018*
(Dollars in Thousands)

| | 2018 | | |
|---|---|---|---|
| | **1% Decrease** | **Current Healthcare Cost Trend Rates[1]** | **1% Increase** |
| Total OPEB Liability | $21,106,685 | $25,671,307 | $31,728,783 |
| Less: Fiduciary Net Position | (941,007) | (941,007) | (941,007) |
| **Net OPEB Liability** | **$20,165,678** | **$24,730,300** | **$30,787,776** |

[1]As reported in the July 1, 2016 OPEB Actuarial Valuation Health Cost Trend Assumptions with Excise Tax table.

## NOTE S — Subsequent Events

Subsequent events have been evaluated by management through October 11, 2019, which is the date the financial statements were issued.

## Schedule of Net Pension Liability[1]

*For the Fiscal Years Ended June 30*
(Dollars in Thousands)

| | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|---|---|
| Total Pension Liability | **$70,309,252** | $67,057,218 | $64,031,677 | $58,528,457 | $56,570,520 | $54,977,021 |
| Less: Fiduciary Net Position | **(58,294,837)** | (56,299,982) | (52,743,651) | (47,846,694) | (48,818,350) | (47,722,277) |
| **Net Pension Liability** | **$12,014,415** | $10,757,236 | $11,288,026 | $10,681,763 | $7,752,170 | $7,254,744 |
| Fiduciary Net Position as a Percentage of Total Pension Liability | **82.91%** | 83.96% | 82.37% | 81.75% | 86.30% | 86.80% |
| Covered Payroll[2] | **$8,370,050** | $7,957,981 | $7,637,032 | $7,279,777 | $6,949,420 | $6,672,886 |
| Net Pension Liability as a Percentage of Covered Payroll | **143.54%** | 135.18% | 147.81% | 146.73% | 111.55% | 108.72% |

### Total Pension Liability

The Total Pension Liability was determined by an actuarial valuation as of the valuation date, calculated based on the discount rate and actuarial methods and assumptions noted below, and was then projected forward to the measurement date taking into account any significant changes between the valuation date and the fiscal year-end as prescribed by GASB Statement No. 67.

| Discount Rate | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|---|---|
| Discount Rate | **7.38%** | 7.38% | 7.38% | 7.63% | 7.63% | 7.63% |
| Long-Term Expected Rate of Return, Net of Expenses | **7.25%** | 7.25% | 7.25% | 7.50% | 7.50% | 7.50% |
| Municipal Bond Rate | **N/A** | N/A | N/A | N/A | N/A | N/A |

The long-term expected rate of return was determined by adding expected inflation to expected long-term real returns and reflecting expected volatility and correlation. Milliman's December 2016 Investigation of Experience analysis was used to develop the 7.38 percent assumption used for the current reporting date. This is equal to the 7.25 percent long-term investment return assumption adopted by the Board of Investments (net of investment and administrative expenses), plus 0.13 percent assumed administrative expenses.

The plan's projected Fiduciary Net Position, after reflecting employee and employer made contributions, was expected to be sufficient to make all future benefit payments of current active and inactive employees. Therefore, the discount rate for calculating the Total Pension Liability is equal to the long-term expected rate of return, gross of administrative expenses.

### Other Key Actuarial Assumptions

The actuarial assumptions used to calculate the Total Pension Liability as of the June 30, 2019 measurement date are the same as those used in the June 30, 2018 actuarial funding valuation which are both based on the June 30, 2016 experience study.

| | | | | | | |
|---|---|---|---|---|---|---|
| Valuation Date | **June 30, 2018** | June 30, 2017 | June 30, 2016 | June 30, 2015 | June 30, 2014 | June 30, 2013 |
| Measurement Date | **June 30, 2019** | June 30, 2018 | June 30, 2017 | June 30, 2016 | June 30, 2015 | June 30, 2014 |

For Other Actuarial Methods and Assumptions, see Notes to the Required Supplementary Information.

[1]Trend Information: Schedule will ultimately show information for 10 years. Additional years will be displayed as they become available prospectively.

[2]In accordance with GASB Statement No. 82, Covered Payroll is the payroll on which contributions are based.

## 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 | 2015 | 2014 |
|---|---|---|---|---|---|---|
| Total Pension Liability | | | | | | |
| Service Cost | **$1,239,396** | $1,220,274 | $1,106,755 | $1,069,328 | $1,024,288 | $1,009,834 |
| Interest on Total Pension Liability | **4,916,804** | 4,699,493 | 4,393,712 | 4,214,834 | 4,073,299 | 3,957,030 |
| Effect of Plan Changes | **—** | — | — | — | — | — |
| Effect of Assumption Changes or Inputs | **—** | — | 3,079,892 | — | — | — |
| Effect of Economic/ Demographic (Gains) or Losses | **502,989** | 309,149 | (47,506) | (437,039) | (736,010) | — |
| CalPERS Transfer | **—** | — | — | — | 332 | — |
| Benefit Payments and Refund of Contributions | **(3,407,155)** | (3,203,375) | (3,029,633) | (2,889,186) | (2,768,410) | (2,662,401) |
| Net Change in Total Pension Liability | **$3,252,034** | $3,025,541 | $5,503,220 | $1,957,937 | $1,593,499 | $2,304,463 |
| **Total Pension Liability — Beginning** | **67,057,218** | 64,031,677 | 58,528,457 | 56,570,520 | 54,977,021 | 52,672,558 |
| **Total Pension Liability — Ending (a)** | **$70,309,252** | $67,057,218 | $64,031,677 | $58,528,457 | $56,570,520 | $54,977,021 |
| Fiduciary Net Position | | | | | | |
| Contributions — Employer[2] | **$1,668,151** | $1,524,823 | $1,331,357 | $1,403,709 | $1,455,718 | $1,281,795 |
| Contributions — Metropolitan Transportation Authority | **—** | — | 2 | 3 | 25 | — |
| CalPERS Transfer | **—** | — | — | — | 332 | — |
| Contributions — Member[2] | **635,415** | 591,262 | 526,579 | 498,083 | 480,158 | 477,648 |
| Net Investment Income | **3,163,618** | 4,705,949 | 6,129,300 | 80,588 | 1,989,358 | 6,910,439 |
| Net Miscellaneous Income | **5,626** | 5,163 | 6,182 | 2,792 | 1,483 | — |
| Benefit Payments and Refund of Contributions | **(3,407,155)** | (3,203,375) | (3,029,633) | (2,889,186) | (2,768,410) | (2,662,401) |
| Administrative Expenses | **(70,800)** | (67,491) | (66,830) | (67,645) | (62,591) | (58,723) |
| Net Change in Fiduciary Net Position | **$1,994,855** | $3,556,331 | $4,896,957 | $(971,656) | $1,096,073 | $5,948,758 |
| **Fiduciary Net Position — Beginning** | **56,299,982** | 52,743,651 | 47,846,694 | 48,818,350 | 47,722,277 | 41,773,519 |
| **Fiduciary Net Position — Ending (b)** | **$58,294,837** | $56,299,982 | $52,743,651 | $47,846,694 | $48,818,350 | $47,722,277 |
| **Net Pension Liability — Ending (a) - (b)** | **$12,014,415** | $10,757,236 | $11,288,026 | $10,681,763 | $7,752,170 | $7,254,744 |
| Fiduciary Net Position as a Percentage of Total Pension Liability | **82.91%** | 83.96% | 82.37% | 81.75% | 86.30% | 86.80% |
| Covered Payroll[3] | **$8,370,050** | $7,957,981 | $7,637,032 | $7,279,777 | $6,949,420 | $6,672,886 |
| Net Pension Liability as a Percentage of Covered Payroll | **143.54%** | 135.18% | 147.81% | 146.73% | 111.55% | 108.72% |

[1]Trend Information: Schedule will ultimately show information for 10 years. Additional years will be displayed as they become available prospectively.

[2]In accordance with GASB Statement No. 82, employer pick-up contributions are classified as Member Contributions.

[3]In accordance with GASB Statement No. 82, Covered Payroll is the payroll on which contributions are based.

## Changes in Pension Plan Assumptions

In addition to the annual valuations, LACERA requires its actuary to review the reasonableness of the economic and demographic actuarial assumptions every three years. An experience study was performed by the consulting actuary for the three-year period ended June 30, 2016. This review, commonly referred to as the investigation of experience or experience study, is accomplished by comparing actual experience during the preceding three years to what was expected to happen according to the actuarial assumptions. Based upon the experience study, the actuary determines whether changing the assumptions or methodology will better project benefit liabilities and asset growth. At the December 2016 Board of Investments meeting, the Board adopted new valuation assumptions with the approval of the 2016 Investigation of Experience Report.

**2016 Assumption Changes:** The Board adopted a decrease in the investment return assumption to 7.38 percent, a decrease in the CPI assumption to 2.75 percent, and a corresponding decrease in the general wage growth assumption to 3.25 percent.

An increase in life expectancies was adopted. Mortality rates are based on the RP-2014 mortality tables and include projections for expected future mortality improvement using 100 percent of the MP-2014 Ultimate Projection Scale.

## Schedule of Employer Contributions History — Pension Plan

*Last 10 Fiscal Years*
(Dollars in Thousands)

| | 2019[2] | 2018[2] | 2017[1,2] | 2016[2] | 2015[2] |
|---|---|---|---|---|---|
| Actuarially Determined Contributions | **$1,668,151** | $1,524,823 | $1,331,357 | $1,403,709 | $1,455,718 |
| Contributions in Relation to Actuarially Determined Contributions | **1,668,151** | 1,524,823 | 1,331,357 | 1,403,709 | 1,455,718 |
| Contribution Deficiency/(Excess) | **$—** | $— | $— | $— | $— |
| Covered Payroll[3] | **$8,370,050** | $7,957,981 | $7,637,032 | $7,279,777 | $6,949,420 |
| Contributions as a Percentage of Covered Payroll | **19.93%** | 19.16% | 17.43% | 19.28% | 20.95% |

| | 2014[2] | 2013[1] | 2012 | 2011 | 2010 |
|---|---|---|---|---|---|
| Actuarially Determined Contributions | $1,281,795 | $1,172,014 | $1,078,929 | $944,174 | $843,704 |
| Contributions in Relation to Actuarially Determined Contributions | 1,281,795 | 1,172,014 | 1,078,929 | 944,174 | 843,704 |
| Contribution Deficiency/(Excess) | $— | $— | $— | $— | $— |
| Covered Payroll[3] | $6,672,886 | $6,595,902 | $6,619,816 | $6,650,674 | $6,695,439 |
| Contributions as a Percentage of Covered Payroll | 19.21% | 17.77% | 16.30% | 14.20% | 12.60% |

[1]Portion of contributions fulfilled by transfers from County Contribution Credit Reserve: $21,891 (FYE 2017, Superior Court) and, $448,819 (FYE 2013, County).

[2]In accordance with GASB Statement No. 82, employer pick-up contributions are classified as Member Contributions.

[3]In accordance with GASB Statement No. 82, Covered Payroll is the payroll on which contributions are based.

See Notes to Required Supplementary Information for funding valuation assumptions.

## Schedule of Investment Returns — Pension Plan[1]

*For the Fiscal Years Ended June 30*

| | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|---|---|
| Annual Money-Weighted Rate of Return (Net of Investment Expenses)[2] | **5.5%** | 9.0% | 12.7% | 0.7% | 4.1% | 17.2% |

[1]Trend Information: Schedule will ultimately show information for 10 years. Additional years will be displayed as they become available prospectively.

[2]Money-Weighted Rate of Return is calculated as the internal rate of return on Pension Plan investments, net of investment expenses.

## Notes to Required Supplementary Information — Pension Plan

### Actuarial Methods and Significant Assumptions

The actuarial assumptions used to determine the Plan liabilities, and employer and employee contributions, are based on the results of the 2016 triennial investigation of experience (experience study). The June 30, 2018 actuarial valuation prepared by the consulting actuary reflects all assumptions adopted by the LACERA Board of Investments in December 2016. The LACERA Board of Investments approved a three-year phase-in of the changes to employer contribution rates. The following are Key Methods and Assumptions used to determine contribution requirements:

**Key Methods and Significant Assumptions**

| | |
|---|---|
| **Valuation Timing** | 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. |
| **Actuarial Cost Method** | Entry Age Normal. |
| **Investment Rate of Return**[1] | Future investment earnings are assumed to accrue at an annual rate of 7.25 percent, compounded annually, net of both investment and administrative expenses. This rate was adopted beginning with the June 30, 2016 valuation. |
| **Consumer Price Index** | Increase of 2.75 percent per annum. This rate was adopted beginning with the June 30, 2016 valuation. |
| **General Wage Increases** | 3.25 percent. Rates of annual salary increases assumed for the purpose of the valuation range from 3.51 percent to 11.51 percent. In addition to increases in salary due to promotions and longevity, the increases include an assumed 3.25 percent per annum rate of increase in the general wage level of membership. |
| **Asset Valuation Method** | Assets are valued using a five-year smoothed method based on the difference between expected market value and actual market value. The recognition method is non-asymptotic, and there is no minimum or maximum corridor applied. |
| **Amortization Method** | The Unfunded Actuarial Accrued Liability (UAAL) is amortized as a level percentage of pay. The UAAL as of June 30, 2009 is amortized over a 30-year closed period. Each year thereafter, that year's UAAL is amortized over a new 30-year closed period. This is referred to as a "layered" amortization. The UAAL contribution rate calculated in the June 30, 2018 funding valuation included 10 layers. |

[1]Assumptions applied to funding valuation calculations vary with those applied to GASB 67 calculations.

**Key Methods and Significant Assumptions (continued)**

| | |
|---|---|
| **Retirement Age** | A schedule of the probabilities of employment termination based on age due to a particular cause is used. For additional information, see the Retirement Probability of Occurrence tables in the Actuarial Section. |
| **Cost-of-Living Adjustments (COLA)** | Post-retirement benefit increases of either 2.75 percent or 2.0 percent per year are assumed for the valuation in accordance with the benefits provided. This rate was adopted beginning with the June 30, 2016 valuation. |
| **Mortality** | Various rates based on RP-2014 mortality tables and using MP-2014 Ultimate Projection Scale. See the June 30, 2018 actuarial valuation report for additional information. |
| **Recognition of Inflows/Outflows** | |
| Gains or Losses | |
| Investment | Straight-line amortization over five years. |
| Economic/Demographic | Straight-line amortization over expected working life. |
| Assumption Changes or Inputs | Straight-line amortization over expected working life. |

## Schedule of Investment Returns — OPEB Program[1]

*For the Fiscal Years Ended June 30*

| | 2019 | 2018 | 2017 |
|---|---|---|---|
| Annual Money-Weighted Rate of Return (Net of Investment Expenses)[2] | **6.0%** | 10.0% | 16.0% |

[1]Trend Information: Schedule will ultimately show information for 10 years. Additional years will be displayed as they become available prospectively.

[2]Money-Weighted Rate of Return is calculated as the internal rate of return on OPEB Trust investments, net of investment expenses.

## Administrative Expenses — Pension Plan

*For the Fiscal Years Ended June 30, 2019 and 2018*

(Dollars in Thousands)

| | 2019 | 2018 |
|---|---|---|
| **Personnel Services** | | |
| Salaries and Wages | **$40,490** | $37,478 |
| Employee Benefits | **22,626** | 21,312 |
| **Total Personnel Services** | **$63,116** | $58,790 |
| **Consultant & Professional Services** | | |
| County Department Services | **$273** | $188 |
| External Audit Fees | **312** | 212 |
| Legal Consultants | **1,689** | 850 |
| Professional Services | **460** | 444 |
| Temporary Personnel Services | **2,831** | 2,595 |
| **Total Consultant & Professional Services** | **$5,565** | $4,289 |
| **Operating Expenses & Equipment** | | |
| Administrative Support | **$218** | $211 |
| General Expenses | **965** | 942 |
| Computer Software | **1,990** | 1,857 |
| Disability Medical Service Fees | **1,763** | 1,985 |
| Educational Expenses | **1,021** | 1,020 |
| Equipment | **1,346** | 1,636 |
| Facilities Operations | **3,277** | 3,755 |
| Insurance | **658** | 475 |
| Printing | **742** | 745 |
| Postage | **897** | 1,000 |
| Telecommunications | **564** | 602 |
| Transportation & Travel | **784** | 874 |
| **Total Operating Expenses & Equipment** | **$14,225** | $15,102 |
| **Total Administrative Expenses** | **$82,906** | $78,181 |

## Schedule of Investment Expenses

*For the Fiscal Years Ended June 30, 2019 and 2018*

(Dollars in Thousands)

| | Pension Plan | | OPEB Master Trust | | OPEB Agency Fund | |
|---|---|---|---|---|---|---|
| | **2019** | **2018** | **2019** | **2018** | **2019** | **2018** |
| **Investment Management Fees** | | | | | | |
| Cash and Short-Term | **$644** | $864 | **$10** | $73 | **$20** | $18 |
| Commodity | **4,640** | 4,240 | **62** | 2 | **—** | — |
| Global Equity | **47,146** | 52,482 | **177** | 243 | **—** | — |
| Fixed Income | **37,950** | 32,398 | **808** | 33 | **68** | 62 |
| Hedge Fund | **42,177** | 46,944 | **—** | — | **—** | — |
| Private Equity | **153,753** | 100,639 | **—** | — | **—** | — |
| Real Estate | **54,375** | 51,229 | **79** | 2 | **—** | — |
| **Total Investment Management Fees[1]** | **$340,685** | $288,796 | **$1,136** | $353 | **$88** | $80 |
| **Other Investment Expenses** | | | | | | |
| Consultants | **$3,679** | $2,014 | **$55** | $55 | **$—** | $— |
| Custodian | **2,738** | 3,003 | **245** | 80 | **32** | 30 |
| Legal Counsel | **285** | 979 | **—** | — | **—** | — |
| Other | **6,954** | 7,633 | **—** | — | **—** | — |
| **Total Other Investment Expenses** | **$13,656** | $13,629 | **$300** | $135 | **$32** | $30 |
| **Total Fees & Other Investment Expenses** | **$354,341** | $302,425 | **$1,436** | $488 | **$120** | $110 |

[1] Difference in management fee expense from the Statement of Changes in Fiduciary Net Position are due to the inclusion of incentive fees and carry allocations in the schedule above. These incentive fees and carry allocations are deducted from investment income in the Statement of Changes in Fiduciary Net Position.

## Schedule of Payments to Consultants — Pension Plan

*For the Fiscal Years Ended June 30, 2019 and 2018*
(Dollars in Thousands)

| | 2019 | 2018 |
|---|---|---|
| **Actuarial** | | |
| Actuarial Valuations and Consulting Services | **$333** | $451 |
| **Audit** | | |
| External Audit Services | **$312** | $212 |
| **Legal** | | |
| Investment Legal Counsel | **$285** | $979 |
| Legislative Consulting | **272** | 144 |
| Other Legal Services | **1,417** | 705 |
| **Sub-Total** | **$1,974** | $1,828 |
| **Management** | | |
| Management and Human Resources Consulting | **$182** | $154 |
| Information Technology Consulting | **74** | 40 |
| **Sub-Total** | **$256** | $194 |
| **Total Payments to Consultants** | **$2,875** | $2,685 |

Note: For fees paid to investment professionals, refer to Schedule of Investment Management Fees in the Investment Section.

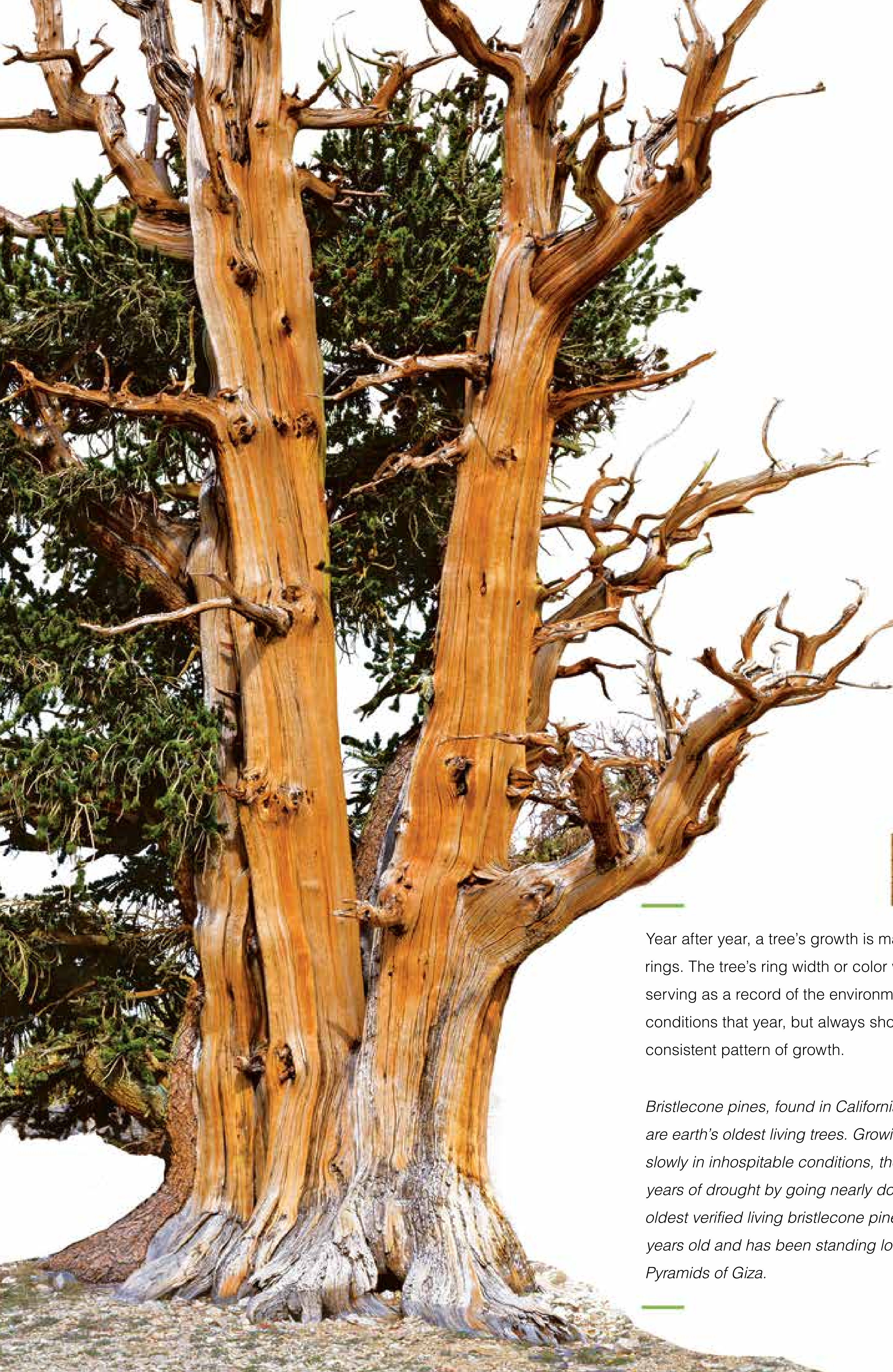
## Statement of Changes in Assets and Liabilities — OPEB Agency Fund

*For the Fiscal Year Ended June 30, 2019*
(Dollars in Thousands)

| | Balance July 1, 2018 | Additions | Deductions | Balance June 30, 2019 |
|---|---|---|---|---|
| **Assets** | | | | |
| Cash and Short-Term Investments | $80,915 | $742,497 | $776,795 | $46,617 |
| Accounts Receivable—Sale of Investments | — | 14,494 | 13,043 | 1,451 |
| Accrued Interest and Dividends | 454 | 585 | 499 | 540 |
| Accounts Receivable—Other | 52,611 | 711,648 | 708,414 | 55,845 |
| Fixed Income | 107,394 | 43,446 | 32,153 | 118,687 |
| **Total Assets** | **$241,374** | **$1,512,670** | **$1,530,904** | **$223,140** |
| **Liabilities** | | | | |
| Accounts Payable—Purchase of Investments | $14 | $17,099 | $14,063 | $3,050 |
| Retiree Payroll and Other Payables | 179 | 48,739 | 48,683 | 235 |
| Accrued Expenses | 209 | 354 | 220 | 343 |
| Accounts Payable—Other | 121,450 | 634,073 | 668,743 | 86,780 |
| Due to Employers | 119,522 | 17,064 | 3,854 | 132,732 |
| **Total Liabilities** | **$241,374** | **$717,329** | **$735,563** | **$223,140** |

## **Investments** Section

LACERA's investment returns fluctuate depending on market forces, but over time they have shown reliable growth and stability. This is due to our investment strategy of diversification, designed to minimize risk of losses and maximize rates of return.



Year after year, a tree's growth is marked by rings. The tree's ring width or color will vary, serving as a record of the environmental conditions that year, but always showing a consistent pattern of growth.

*Bristlecone pines, found in California and Nevada, are earth's oldest living trees. Growing extremely slowly in inhospitable conditions, they can survive years of drought by going nearly dormant. The oldest verified living bristlecone pine is over 4,850 years old and has been standing longer than the Pyramids of Giza.*

September 16, 2019

Board of Investments
Los Angeles County Employees Retirement Association
Gateway Plaza
300 North Lake Avenue, Suite 850
Pasadena, CA 91101

Dear Board Members:

LACERA's stated mission is to produce, protect, and provide the promised benefits. LACERA strives to align the portfolio's asset allocation, investments, and other related decision with the goals of the overall organization. Meketa Investment Group, LACERA's general investment consultant, works in concert with StepStone Group, The Townsend Group, and Albourne Partners to provide guidance to LACERA's Board of Investments (Board), and assist the Board with performance evaluation, asset allocation, manager selection, and other industry best practices.

This letter reviews the investment performance of LACERA for the fiscal year ending June 30, 2019.

## 2019 FISCAL YEAR IN REVIEW

While the early start of 2019 may have been characterized by worries of rising interest rates globally, this quickly shifted throughout the year as increasing concerns of slowing global growth — made worse by trade tensions between the U.S. and China — prompted major central banks to consider more accommodative policies. In the U.S., the Federal Reserve held its federal funds rate steady at its June meeting, while signaling the potential for future interest rate cuts. The European Central Bank (ECB) for its part also held rates steady with a potential for future reductions, and the Bank of Japan showed no signs of pulling back from its unprecedented monetary stimulus. Of all the central banks, the U.S. has the most room to lower rates, while Japan and Europe are already in negative interest rate territory. With growth revisions for 2019 and 2020 (according to the International Monetary Fund, 3.2 percent and 3.5 percent, respectively) down by 0.1 percent, key risks to monitor will not only be continued trade tensions between the U.S. and China, but also the declining growth in China, political uncertainty in Europe, and risks related to Brexit dealings.

While global equities rebounded significantly from December lows to close out fiscal year 2019, the past 12 months certainly saw heightened volatility, with the VIX reaching 36 in December before re-tracing to 25 and further retreating to more muted levels by the June 30 fiscal year end. Nonetheless, for much of the fiscal year, most markets embraced a "risk on" appetite.

U.S. equities, as represented by the Russell 3000 Index, finished off the fiscal year with a 9.0 percent return. Non-U.S. equity markets, however, did not fare as well. Emerging markets delivered negative returns in the first half of the year, to end the fiscal year with a 1.2 percent return. Trade tensions and a strong U.S. dollar continued to weigh down on results. The MSCI EAFE Index, representing foreign developed markets, followed closely behind returning 1.1 percent. Overall growth has declined in Europe given the slowdown in Germany, uncertainties related to Brexit, and trade tensions.

The trend of U.S. growth stocks outperforming value stocks persisted throughout the year, with growth holding a 3.3 percent lead over value, as the Russell 3000 Growth returned 10.6 percent over the year, versus 7.3 percent for the Russell 3000 Value.

Within fixed income, investment grade markets closed out the year on a strong note. Throughout the first half of Fiscal Year 2019, concerns over rising interest rates and inflation created headwinds. In the U.S., the Federal Reserve increased short-term interest rates to a range of 2.25 percent to 2.50 percent by December but this hawkish stance turned dovish in the second half as central banks abruptly shifted to a more accommodative policy by early January. Investment grade credit and high yield rebounded alongside the equity markets as a result, with the high yield market posting one of the strongest returns in nearly 10 years (7.3 percent for the quarter ending March 31, 2019). Despite this, the deterioration of U.S. and Chinese trade talks in May prompted a temporary drop in global equity prices and U.S. Treasury yields. The 3mo-10yr segment of the yield curve inverted for the second time in 2019, causing investors to question whether this might be a sign of worse things to come. Historically, the yield curve has been relied on as a barometer of economic strength and potential recession indicator. Inversions in the yield curve have historically (but not always) preceded recessions. However, there are inconsistent leading periods between inversions and market peaks.

Over the fiscal year, the broad U.S. bond market, represented by the Bloomberg Barclays Aggregate Index, returned 7.9 percent, high yield bonds as represented by the Barclays High Yield Index returned 7.5 percent, and TIPS, which are tied to the Barclays Tips Index, returned 4.8 percent. Emerging market bonds (as represented by JPM GBI-EM Global Diversified Index) posted a strong 9.0 percent return for the year.

Within other asset classes, natural resource stocks (S&P Global Natural Resources Index) returned -4.0 percent, commodities (Bloomberg Commodity Index) lost -6.8 percent, and REITs (MSCI U.S. REIT Index) gained 11.1 percent. U.S. crude settled at $58.5/barrel, down roughly 10 percent from prior fiscal year end levels, but well above the December 31 value of $47.8. OPEC-led production cuts along with sanctions on Iran and Venezuela drove the higher prices though tempered by the slowing global economy.

## 2020 FISCAL YEAR OUTLOOK

Looking forward, there are several issues that we will continue to monitor. The first issue is slowing global growth. After increasing rates over the last several years from record lows, major central banks have shifted to a more accommodative stance. With little room for a reduction in rates outside the U.S., there is speculation of other policy measures being implemented such as negative rates and/or further quantitative easing. Outside of the U.S., European economic conditions appear bleak as we continue to witness political uncertainty and ongoing structural issues. Brexit negotiations remain a concern. Within emerging markets, and China specifically, growth has slowed. Second, in the U.S., equity markets remain extended despite the volatility spike in the fourth quarter of 2018, and the current economic cycle has been one of the longest on record now going into the tenth year. Also in the U.S., trade policy remains a key issue. We also see declining growth in China and the impact of trade tensions with the U.S.

Given slowing global growth, compounded by trade tensions, major central banks have pivoted to a more dovish tone. The U.S. and ECB are expected to start cutting rates and could move back to quantitative easing. These policies have a major boost to the markets and could support global growth. The key questions remain whether or not global central banks are pivoting toward monetary easing too early and if the rally in risk assets is short-lived or more sustainable. *Note: following the close of fiscal year 2019, the Federal Reserve did cut rates by 25 basis points.*

The U.S. economy and equity markets have experienced a long period of growth since the Global Financial Crisis due in part to central bank support. Late cycle dynamics of low unemployment and rising inflation are in place, and valuations are stretched for equities, despite the recent pullback witnessed in December 2018. With the long economic and market expansions, and the many unresolved political and trade issues, we could see heightened volatility in the remainder of 2019. Other key issues in the U.S. will be policy uncertainty related to tariffs, immigration, and strategic alliances.

China has the second largest economy behind the U.S. After a long period of growth driven by government investment and exports, China continues to manage a repositioning of its economy to one based increasingly on domestic consumption. This rebalancing process has led to a slowing of the economy which has hurt countries that have become reliant on its trade. The recent focus on tariffs between the U.S. and China is another key issue that could have a disproportionately negative impact on China, as the U.S. is one of their largest export destinations (18 percent of exports). Another core issue in China remains its high debt levels, particularly in the corporate sector.

Europe continues to have the structural problem of maintaining a single currency and central bank, while fiscal policy rests with each individual country. Consequently, countries that are experiencing financial difficulties are unable to use the traditional tools of lowering interest rates and devaluing their currency to stimulate growth. This has caused tensions within the Eurozone, as highlighted by the recent elections in Italy and the prior elections in Germany, as well as the on-going issues in Greece. Given the size of Italy's bond market and economy within the euro area, an Italian sovereign debt crisis or its departure from the euro would have significant consequences. Further, Brexit uncertainty continues to affect the Eurozone. In March 2019, Theresa May's withdrawal proposal was rejected by Members of Parliament for a third time, increasing the likelihood of a no-deal Brexit when the current extension expires in October 2019. *Note: following the close of fiscal year 2019, Boris Johnson became U.K. Prime Minister in July, increasing the likelihood of a no-deal Brexit.* We will continue to monitor these issues and others.

## LACERA INVESTMENT RESULTS

Los Angeles County Employees Retirement Association ("LACERA") provides defined retirement plan benefits and other post-employment benefits for employees of the County of Los Angeles (County), the Los Angeles Superior Court (Court), and various outside districts. LACERA is responsible for the administration and investment of two separate funds (Funds): the LACERA defined benefit retirement plan (Pension Plan or

Plan), whose assets provide retirement benefits for employees of the County and outside districts, and the LACERA Other Post-Employment Benefit Master Trust Fund (OPEB Master Trust), whose assets provide other post-employment benefits such as retiree healthcare for employees of the County, LACERA, and the Court.

For the fiscal year, LACERA's Pension Plan portfolio returned 6.4 percent, underperforming the Total Fund Policy Benchmark by -1.9 percent as well as its assumed actuarial rate of return of 7.25 percent. On June 30, 2019, the Plan had approximately $58.4 billion in assets. For the fiscal year, LACERA had strong performance relative to peers, ranking in the 24th percentile[1] of the peer universe (1st percentile is best and 100th is worst). Over the trailing three-year and five year periods, the LACERA Pension Plan portfolio returned 9.4 percent and 6.5 percent on average annually. For the trailing three years, LACERA was in the 22nd percentile compared to peers, and over the trailing five years, LACERA was in the 15th percentile compared to peers. For the fiscal year, the OPEB Master Trust returned 5.5 percent at the end of June 2019, slightly outperforming its Custom OPEB Total Fund benchmark by 0.1 percent. The OPEB Master Trust stood at $1.2 billion at the end of June.

During fiscal year 2019, LACERA began implementing a new strategic asset allocation for the Pension Plan, which introduced a functional framework to provide an additional lens through which to view the portfolio and also added new asset classes aimed at enhancing diversification and risk-adjusted returns.

## SUMMARY

We continue to believe that the Pension Plan and OPEB Master Trust portfolios are well diversified. We look forward to continuing our work with the Board and Staff to help LACERA meet its mission of producing, protecting, and providing the promised benefits.

If you have any questions, please contact us at (760) 795-3450.
SPM/LAF/TF/srt

Sincerely,

Leandro Festino, CFA, CAIA
Managing Principal

Stephen P. McCourt, CFA
Managing Principal

[1]Based on InvestorForce peer rankings: Defined Benefit Public Funds over $1 billion in assets.

## Dear LACERA members:

I am pleased to present the Investment Section of LACERA's Comprehensive Annual Financial Report for Fiscal Year 2019. This section presents the investment performance for the two funds (Fund or Funds) that LACERA oversees for the County of Los Angeles, the defined benefit retirement plan (Pension Plan or the Plan) and the LACERA Other Post-Employment Benefit Master Trust (OPEB Trust or the Trust),[1] and describes the Investment Division's role in fulfilling LACERA's mission to produce, protect, and provide the promised retirement and healthcare benefits to its members.

**Jonathan Grabel**
Chief Investment Officer

The Pension Plan returned 6.4 percent during the fiscal year, while the OPEB Trust gained 5.5 percent during the same period.[2] LACERA aims to meet or exceed each Fund's benchmark over a full market cycle and actuarial expected return assumption over the long term. As illustrated below, the Pension Plan's return was below its policy benchmark for the past fiscal year but is modestly ahead of its benchmark over most longer time periods. The OPEB Trust matched its policy benchmark's return of 5.5 percent during the past fiscal year and exceeded it for the three-year and five-year periods.[3]

### Annualized Total Returns (Net of Fees)

*Fiscal Year Ended June 30, 2019*

| | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years |
|---|---|---|---|---|---|
| **Pension Plan** | 6.4% | 9.4% | 6.5% | 8.7% | 9.1% |
| *Policy Benchmark* | *8.3* | *9.1* | *6.8* | *8.6* | *8.9* |
| **OPEB Master Trust** | 5.5% | 12.3% | 6.9% | —% | —% |
| *Policy Benchmark* | *5.5* | *9.8* | *5.3* | *—%* | *—%* |

## Asset Allocation

LACERA's Board of Investments (the Board) adopts separate Investment Policy Statements (IPS's) to guide the Pension Plan's and the OPEB Trust's investments. Each IPS defines a strategic asset allocation that aims to maximize long-term growth while ensuring that LACERA meets its current and future obligations. To that end, LACERA expects both Funds' strategic asset allocations to be the core drivers of risk-adjusted returns over the long term.

Each Fund's strategic asset allocation apportions investment dollars among functional categories and sub-asset classes based on long-term return objectives and short-term needs. A table detailing the functional categories, sub-asset classes, and the role each is expected to fulfill in LACERA's investment portfolios is presented on the next page.[4]

[1] LACERA is responsible for the administration and investment of two separate funds: the County of Los Angeles (the County) defined benefit retirement plan, whose assets provide retirement benefits for employees of the County and outside districts, and the LACERA Other Post-Employment Benefit Master Trust, whose assets are held in trust to pre-fund post-employment healthcare benefits for retirees of the County, LACERA, and the Superior Court of California, County of Los Angeles.
[2] All returns are net of fees unless otherwise noted.
[3] Performance inception for the OPEB Trust is February 1, 2013.
[4] The functional frameworks of the Plan and the OPEB Trust differ as the OPEB Trust does not invest in private assets.

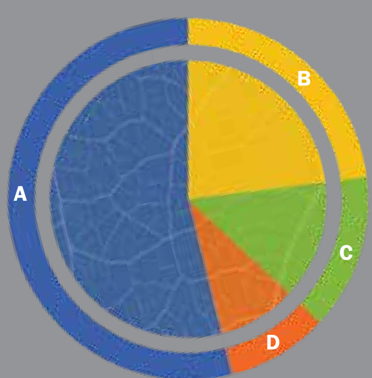
| Functional Category | Sub-Asset Classes | Role In Portfolio |
|---|---|---|
| Growth | Global Equity, Private Equity, Opportunistic Real Estate | Primary driver of long-term total returns |
| Credit | High Yield Bonds, Bank Loans, Emerging Market Debt, Illiquid Credit-Oriented Fixed Income | Produce current income and moderate long-term total returns with lower risk than growth assets |
| Real Assets and Inflation Hedges | Core and Value-Added Real Estate, Natural Resources/Commodities, Infrastructure, Treasury Inflation Protected Securities | Provide income and hedge against inflation |
| Risk Reduction and Mitigation | Investment Grade Bonds, Diversified Hedge Funds, Cash | Provide current income and a modest level of return while reducing total portfolio risk |

LACERA's Board of Investments reviews each Fund's strategic asset allocation every three to five years or more often if needed to ensure that both portfolios are aligned with anticipated risks and opportunities. Asset allocation studies consider a number of factors including, but not limited to: the Funds' current and projected funded status, liabilities, and liquidity requirements; the long-term risk, return, and correlation expectations for individual asset categories; and an assessment of future economic conditions. LACERA's Board approved updated strategic asset allocations for the Pension Plan in 2018 and the OPEB Trust in 2017. The updated allocation targets are intended to give each portfolio a more neutral risk profile primarily by reducing riskier assets, such as public equities, and establishing new and/or larger allocations to diversifying categories such as credit, infrastructure, natural resources, and other inflation hedges. These changes are expected to enhance the resiliency of both portfolios across changing market environments.

The Pension Plan is currently transitioning to its newly adopted targets. The Plan's June 30, 2019 actual and updated target asset allocation, expected to be achieved by December 31, 2019, are shown below.

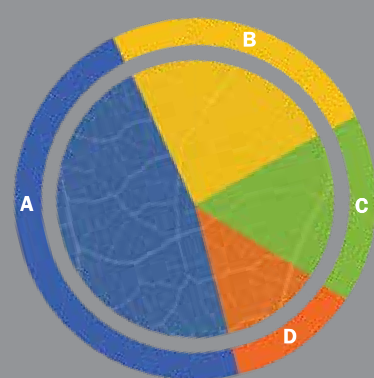
## **Pension Plan** Allocations

*As of June 30, 2019*




### Actual Asset Allocation

- A Growth 54%
- B Risk Reduction and Mitigation 23%
- C Real Assets and Inflation Hedges 14%
- D Credit 9%



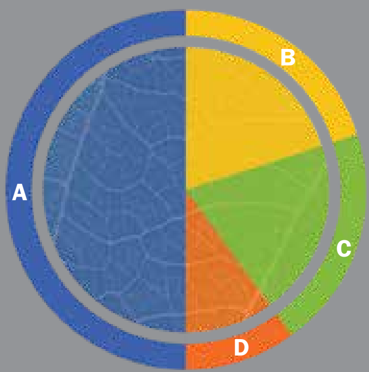

### Target Asset Allocation

- A Growth 47%
- B Risk Reduction and Mitigation 24%
- C Real Assets and Inflation Hedges 17%
- D Credit 12%

Based on its own liquidity needs and funding status, the OPEB Trust's strategic asset allocation differs from that of the Plan. The Trust's transition to its target asset allocation had been fully implemented by the end of fiscal year 2018. Its fiscal year-end and target allocations are illustrated on the following page.

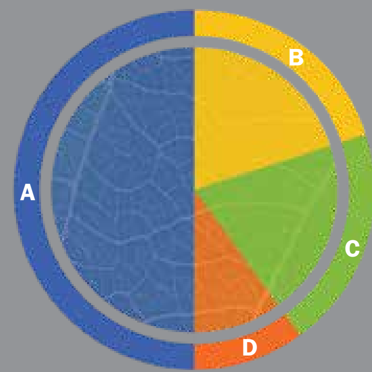
# **OPEB Trust** Allocations

*As of June 30, 2019*




### Actual Asset Allocation

- A Growth 50%
- B Credit 20%
- C Real Assets and Inflation Hedges 20%
- D Risk Reduction & Mitigation 10%




### Target Asset Allocation

- A Growth 50%
- B Credit 20%
- C Real Assets and Inflation Hedges 20%
- D Risk Reduction & Mitigation 10%

Both Funds were in compliance with their interim Policy target allocation ranges as of fiscal year end.

## Core Performance Drivers

All asset categories, with the exception of commodities, contributed to the Pension Plan's positive absolute performance. The private equity and real estate categories realized strong gains and exceeded long-term performance expectations. The domestic equity and fixed income categories also added to the Fund's total return; while gains in the international equity and hedge fund categories were more muted.

Following both investment portfolios' strategic asset allocation reviews, the Funds adopted benchmarks to reflect their revised allocation targets. While the transition of the Trust's portfolio to its new targets was accomplished in one quarter, implementation of the Pension Plan's new allocation will take longer given the complexity of the various mandates. The lag between benchmark adoption and portfolio modification has resulted in a gap in performance between the portfolio and its benchmark that should subside over time. Notwithstanding the potential for short-term variances, both Funds' revised strategic asset allocations are designed to temper volatility in a wide variety of market regimes.

The accompanying letter from Meketa Investment Group, LACERA's general investment consultant, discusses the market environment that shaped and influenced the Funds' performance during the past fiscal year. Continued economic and market uncertainty underscore the importance of LACERA's balanced approach with its focus on long-term, sustainable performance.

## Looking Forward

Both Funds' positive absolute returns lifted asset levels to new highs at the end of the fiscal year. LACERA recognizes the importance of preserving the Funds' assets to provide its members with secure retirement and healthcare benefits, and the further diversification of both portfolios should increase resiliency in the face of persistent geopolitical and macroeconomic challenges. To this end, we remain steadfast in diligently monitoring investment risks, remaining proactive in the face of evolving macroeconomic challenges and opportunities, and always striving to best serve the interests of LACERA members.

Respectfully submitted,

*Jonathan Grabel*

Jonathan Grabel
Chief Investment Officer

## Investment Summary — Pension Plan[1]

*For the Fiscal Year Ended June 30, 2019*

(Dollars in Thousands)

| Type of Investment[2] | Fair Value | | Percent of Total Fair Value |
|---|---|---|---|
| **Growth** | $31,256,657 | | |
| Global Equity | | 24,709,974 | 42.2% |
| Private Equity | | 5,625,088 | 9.6% |
| Opportunistic Real Estate | | 921,595 | 1.6% |
| **Credit** | $5,089,506 | | |
| High Yield | | 2,334,528 | 4.0% |
| Bank Loans | | 874,879 | 1.5% |
| Emerging Market Debt | | 852,921 | 1.5% |
| Illiquid Credit | | 1,026,127 | 1.8% |
| **Real Assets and Inflation Hedges** | $8,422,733 | | |
| Core and Value Added Real Estate | | 5,355,484 | 9.2% |
| Natural Resources & Commodities | | 1,740,726 | 3.0% |
| Infrastructure | | 814,441 | 1.4% |
| Treasury Inflation-Protected Securities | | 512,082 | 0.9% |
| **Risk Reduction and Mitigation** | $13,672,575 | | |
| Investment Grade Bonds | | 11,597,672 | 19.8% |
| Diversified Hedge Fund Portfolio | | 1,545,378 | 2.6% |
| Cash | | 529,524 | 0.9% |
| **Total Investments - Pension Plan** | | **$58,441,472** | **100.0%** |

## Investment Summary — OPEB Master Trust[1]

*For the Fiscal Year Ended June 30, 2019*

(Dollars in Thousands)

| Type of Investment[2] | Fair Value | | Percent of Total Fair Value |
|---|---|---|---|
| **Growth** | $623,947 | | |
| Global Equity | | 623,947 | 50.3% |
| **Credit** | $245,888 | | |
| High Yield | | 74,021 | 6.0% |
| Bank Loans | | 122,194 | 9.9% |
| EM Local Currency Bonds | | 49,673 | 4.0% |
| **Real Assets and Inflation Hedges** | $243,601 | | |
| Real Estate (REITs) | | 120,214 | 9.7% |
| Commodities | | 49,262 | 4.0% |
| Treasury Inflation-Protected Securities | | 74,125 | 6.0% |
| **Risk Reduction & Mitigation** | $122,792 | | |
| Investment Grade Bonds | | 98,731 | 8.0% |
| Cash Equivalents | | 24,061 | 1.9% |
| Uninvested Cash | $2,258 | | 0.2% |
| **Total Investments - OPEB Master Trust** | | **$1,238,486** | **100.0%** |

## Investment Summary — OPEB Agency Fund[1]

*For the Fiscal Year Ended June 30, 2019*

(Dollars in Thousands)

| Type of Investment | Fair Value | Percent of Total Fair Value |
|---|---|---|
| Cash and Cash Equivalents | $13,536 | 10.2% |
| Fixed Income | 119,209 | 89.8% |
| **Total Investments — OPEB Agency Fund** | **$132,745** | **100.0%** |

[1]Differences between fair values in the Statement of Fiduciary Net Position and this schedule are due to the utilization of investment manager asset classifications and their fair values.

[2]Type of Investment by revised asset allocation that divides the Trust into four broad functional categories.

## Investment Results Based on Fair Value[1,2] — Pension Plan[*, **]

*As of June 30, 2019*

| | Annualized (Net-of-Fees) | | | | |
|---|---|---|---|---|---|
| | **Quarter End June 30, 2019** | **Current Year** | **Three-year** | **Five-year** | **Ten-year** |
| **Growth** | **3.6%** | | | | |
| *Growth Custom BM* | *4.6%* | | | | |
| Global Equity | 3.4% | | | | |
| *Global Equity Custom BM* | *2.7%* | | | | |
| Private Equity - Growth | 4.7% | | | | |
| *Private Equity - Growth Custom BM* | *12.8%* | | | | |
| Opportunistic Real Estate | 1.7% | 8.1% | 11.2% | 13.6% | 1.7% |
| *Opportunistic Real Estate Custom BM* | *1.9%* | | | | |
| **Credit** | **2.3%** | | | | |
| *Credit Custom BM* | *3.0%* | | | | |
| High Yield | 2.1% | | | | |
| *High Yield Custom BM* | *3.1%* | | | | |
| Bank Loans | 1.9% | | | | |
| *Credit Suisse Leveraged Loans* | *1.6%* | | | | |
| Emerging Market Debt | 4.2% | 11.4% | | | |
| *EMD Custom BM* | *4.3%* | *11.1%* | | | |
| Illiquid Credit | 1.5% | | | | |
| *Illiquid Credit Custom BM* | *4.4%* | | | | |
| **Real Assets & Inflation Hedges** | **1.4%** | | | | |
| *Real Assets & Inflation Hedges Custom BM* | *1.8%* | | | | |
| Core & Value-Added Real Estate | 1.8% | 9.0% | 7.7% | 9.1% | 6.6% |
| *Core & Value-Added Real Estate Custom BM* | *1.3%* | | | | |
| Natural Resources & Commodities | (0.7)% | (6.2)% | (0.3)% | (8.0)% | (2.0)% |
| *Natural Resources & Commodities Custom BM* | *0.4%* | *(5.2)%* | *(1.7)%* | *(8.9)%* | *(3.6)%* |
| **Risk Reduction & Mitigation** | **2.8%** | | | | |
| *Risk Reduction & Mitigation Custom BM* | *2.7%* | | | | |
| Investment Grade Bonds | 3.1% | 7.8% | 3.2% | 3.3% | 5.1% |
| *Bloomberg Barclays U.S. Aggregate BM* | *3.1%* | *7.9%* | *2.3%* | *2.9%* | *3.9%* |
| Diversified Hedge Funds | 1.1% | | | | |
| *Diversified Hedge Funds Custom BM* | *1.2%* | | | | |
| Cash | 0.7% | 2.7% | 1.7% | 1.2% | 1.3% |
| *Cash Custom BM* | *0.6%* | *2.4%* | *1.4%* | *0.9%* | *0.5%* |
| **Total Fund (Net of Fees)** | **3.0%** | **6.4%** | **9.4%** | **6.5%** | **9.1%** |
| **Total Fund Custom Policy Benchmark** | **3.7%** | **8.3%** | **9.1%** | **6.8%** | **8.9%** |

*Functional asset categories that were in effect at fiscal year-end which are consistent with the financial statement asset classification as presented in the Financial Section.

**A complete list of custom benchmark definitions is available upon request.

[1]Functional asset category returns are calculated based on time-weighted rates of return, net of manager fees; Total Fund performance is calculated based on the weighted average returns of the functional asset categories, net of manager fees. The second calendar quarter of 2019 is the inaugural reporting period for which the functional asset allocation and interim policy target ranges adopted by the Board of Investments (BOI) in June 2018 are presented.

[2]Some asset categories and their benchmarks are reported with a one or three month lag.

## Investment Results Based on Fair Value[1] — OPEB Master Trust*, **

*As of June 30, 2019*

| | Annualized (Net-of-Fees) | | | |
|---|---|---|---|---|
| | **Quarter End June 30, 2019** | **Current Year** | **Three-year** | **Five-year** |
| **Growth** | **3.5%** | **4.9%** | **11.7%** | |
| Global Equity | 3.5% | 4.9% | 11.7% | 6.4% |
| *MSCI ACWI IMI Net* | *3.4%* | *4.6%* | *11.4%* | *6.0%* |
| **Credit** | **2.6%** | **5.7%** | | |
| *OPEB Master Trust Credit Custom BM* | *2.7%* | *6.1%* | | |
| Bank Loans | 1.5% | 3.6% | | |
| *S&P/LSTA Leveraged Loan Index* | *1.7%* | *4.0%* | | |
| High Yield | 2.6% | 7.6% | | |
| *BC High Yield Index* | *2.5%* | *7.5%* | | |
| EM Local Currency Bonds | 5.6% | 8.4% | | |
| *JPM GBI-EM Global Diversified Index* | *5.6%* | *9.0%* | | |
| **Real Assets & Inflation Hedges** | **1.0%** | **5.0%** | | |
| *OPEB Master Trust Real Asset & Inflation Hedges Custom BM* | *1.0%* | *5.1%* | | |
| Real Estate (REITs) | 0.8% | 9.7% | | |
| *DJ US Select Real Estate Sec Index* | *0.8%* | *9.8%* | | |
| Commodities | (1.2)% | (6.7)% | | |
| *Bloomberg Commodity Index (Total Return)* | *(1.2)%* | *(6.8)%* | | |
| Treasury Inflation-Protected Securities (TIPS) | 2.9% | 4.9% | | |
| *Bloomberg Barclays U.S. TIPS Index* | *2.9%* | *4.8%* | | |
| **Risk Reduction & Mitigation** | **2.6%** | **6.9%** | **3.2%** | |
| *OPEB Master Trust Risk Reduction & Mitigation Custom BM* | *2.6%* | *6.8%* | *2.8%* | |
| Investment Grade Bonds | 3.1% | 7.9% | | |
| *Bloomberg Barclays U.S. Aggregate* | *3.1%* | *7.9%* | | |
| Enhanced Cash | 0.8% | 3.2% | 1.9% | 1.3% |
| *FTSE 6 M T-Bill Index* | *0.6%* | *2.4%* | *1.4%* | *0.9%* |
| **Total OPEB Master Trust[2]** | **2.7%** | **5.5%** | **12.3%** | **6.9%** |
| **Total OPEB Master Trust Policy** | **2.8%** | **5.5%** | **9.8%** | **5.3%** |

* Functional asset categories that were in effect at fiscal year-end which are consistent with the financial statement asset classification as presented in the Financial Section.

** A complete list of custom benchmark definitions is available upon request.

[1]Functional asset category returns are calculated based on time-weighted rates of return, net of manager fees; Total OPEB Master Trust performance is calculated based on the weighted average returns of the asset classes, net of manager fees.

[2]Total OPEB Master Trust gross of fee returns for the one-year, three-year, and five-year periods are 5.6 percent, 12.3 percent, and 6.9 percent, respectively.

## Total Investment Rates of Return — Pension Plan

*For the Last 10 Fiscal Years Ended June 30*

(Dollars in Thousands)

| Fiscal Year-End | Total Investment Portfolio Fair Value | Total Fund Time-Weighted Return (net of fees)[1] | Total Fund Money-Weighted Return (net of fees)[2] | Return on Smoothed Valuation Assets (net of fees)[3] | Actuarial Assumed Rate of Return[4] | Actuarial Funded Ratio[5] |
|---|---|---|---|---|---|---|
| 2010 | $33,760,695 | 11.6% | —% | 0.5% | 7.75% | 83.3% |
| 2011 | 39,770,032 | 20.2% | —% | 3.3% | 7.70% | 80.6% |
| 2012 | 38,627,163 | —% | —% | 1.8% | 7.60% | 76.8% |
| 2013 | 42,285,906 | 11.9% | —% | 5.4% | 7.50% | 75.0% |
| 2014 | 49,033,365 | 16.5% | 17.5% | 11.8% | 7.50% | 79.5% |
| 2015 | 47,990,447 | 4.1% | 4.1% | 10.5% | 7.50% | 83.3% |
| 2016 | 47,898,667 | 0.8% | 0.7% | 6.5% | 7.25% | 79.4% |
| 2017 | 52,225,457 | 12.7% | 12.7% | 8.2% | 7.25% | 79.9% |
| 2018 | 55,443,060 | 9.0% | 9.0% | 8.1% | 7.25% | 80.6% |
| **2019[6]** | **$57,976,436** | **6.4%** | **5.5%** | | | |

[1]**Total Fund — Time-Weighted Rate of Return** is the aggregate increase or decrease in the value of the portfolio resulting from the net appreciation or depreciation of the principal of the fund, plus or minus the net income or loss experienced by the fund during the period. The returns are presented net of investment management fees.

[2]**Total Fund — Money-Weighted Rate of Return** is a measurement of investment performance, net of investment expenses, adjusted for the changing amounts actually invested. The returns are presented net of investment management fees.

[3]**Return on Smoothed Valuation Assets** consists of, annual investment income in excess or shortfall of the expected rate of return on a valuation (actuarial) basis smoothed over a specified period with a portion of the year's asset gains or losses being recognized each year beginning with the current year.

[4]**Actuarial Assumed Rate of Return** is the future investment earnings of the assets which are assumed to accrue at an annual rate, compounded annually, net of both investment and administrative expenses. The Actuarial Assumed Rate of Return is 7.25 percent as adopted by the Board of Investments based on the results of the Actuarial Investigation of Experience completed in December 2016. For Fiscal Year 2018-2019, interest crediting and operating tables applied the 7.25 percent Actuarial Assumed Rate of Return.

[5]**Actuarial Funded Ratio** is a measurement of the funded status of the fund calculated by dividing the valuation assets by the actuarial accrued liability.

[6]Actuarial Valuation report for June 30, 2019 not available at CAFR publication.

## Largest Equity Holdings — Pension Plan[1]

*As of June 30, 2019*
(Dollars in Thousands)

| Shares | Description | Fair Value |
|---|---|---|
| 2,947,217 | Microsoft Corporation | $394,809 |
| 1,802,323 | Apple Inc. | 356,716 |
| 161,012 | Amazon.com, Inc. | 304,897 |
| 932,046 | Facebook, Inc. Class A | 179,885 |
| 758,832 | Berkshire Hathaway Inc. Class B | 161,760 |
| 1,412,645 | Nestle S.A. | 146,422 |
| 1,039,028 | Johnson & Johnson | 144,716 |
| 1,270,699 | JPMorgan Chase & Co. | 142,064 |
| 118,252 | Alphabet Inc. Class C | 127,820 |
| 116,474 | Alphabet Inc. Class A | 126,118 |

Note: A complete list of portfolio holdings is available upon request.
[1]Reflects the global equity exposure of assets held in custody as well as certain commingled funds.

## Largest Fixed Income Holdings — Pension Plan[1]

*As of June 30, 2019*

(Dollars in Thousands)

| Par | Description | Fair Value |
|---|---|---|
| 144,600,000 | Federal National Mortgage Association TBA 30 Yr 3.500% 08/13/2019 | $147,806 |
| 120,667,000 | U.S. Treasury Note 2.875% 08/15/2028 | 129,671 |
| 100,488,000 | Federal Home Loan Discount Note 0.000% 08/14/2019 | 100,217 |
| 70,000,000 | Federal National Mortgage Association TBA 30 Yr 4.000% 08/13/2049 | 72,326 |
| 65,000,000 | U.S. Treasury Note 2.375% 08/15/2024 | 66,899 |
| 64,600,000 | Federal National Mortgage Association TBA 30 Yr 3.500% 09/12/2049 | 66,010 |
| 62,957,276 | Ginnie Mae II TBA 30 Yr 4.000% | 65,264 |
| 64,800,000 | U.S. Treasury Note 1.625% 05/15/2026 | 63,767 |
| 56,800,000 | U.S. Treasury Note 2.500% 08/15/2023 | 58,516 |
| 56,246,000 | U.S. Treasury Note 2.375% 05/15/2029 | 58,098 |

Note: A complete list of portfolio holdings is available upon request.
[1]Reflects fixed income exposure of assets held in custody as well as certain commingled funds.

## Schedule of Investment Management Fees

*For the Fiscal Years Ended June 30, 2019 and 2018*

(Dollars in Thousands)

| | Pension Plan | | OPEB Trust | | OPEB Agency Fund | |
|---|---|---|---|---|---|---|
| **Investment Managers** | **2019** | **2018** | **2019** | **2018** | **2019** | **2018** |
| Cash and Short-Term | $644 | $864 | $10 | $73 | $20 | $18 |
| Commodities | 4,640 | 4,240 | 62 | 2 | — | — |
| Global Equity | 47,146 | 52,482 | 177 | 243 | — | — |
| Fixed Income | 37,950 | 32,399 | 808 | 34 | 68 | 62 |
| Hedge Funds | 42,177 | 46,944 | — | — | — | — |
| Private Equity | 153,753 | 100,639 | — | — | — | — |
| Real Estate | 54,375 | 51,229 | 79 | 2 | — | — |
| **Total Investment Management Fees[1]** | **$340,685** | **$288,797** | **$1,136** | **$354** | **$88** | **$80** |

[1]Difference in expenses from investing activities in the Statement of Changes in Fiduciary Net Position is due to the inclusion of incentive fees, carry allocations, and operating expenses in the above schedule. These incentive fees, carry allocations, and operating expenses are deducted from investment income in the Statement of Changes in Fiduciary Net Position.

# GROWTH

## Global Equity

Acadian Asset Management, LLC
AQR Capital Management, LLC
BlackRock Institutional Trust Company, N.A.
Capital International, Inc.
Cevian Capital
Eagle Asset Management, Inc.
Frontier Capital Management Company, LLC
Genesis Investment Management, LLP
Global Alpha Capital Management, LTD
JANA Partners, LLC
Lazard Asset Management, LLC
Matarin Capital Management, LLC
Quantitative Management Associates, LLC
Symphony Financial Partners
Systematic Financial Management, LP

## Opportunistic Real Estate

Aermont Capital Management, S.a.r.l
Angelo, Gordon & Company, LP
Capri Capital Advisors, LLC
CityView Management Services, LLC
Europa Capital, LLP
Invesco Advisers, Inc.
Lowe Enterprises Residential Investors, LLC
Realty Associates Advisors, LLC (TA)
RREEF America, LLC
Starwood Capital Group
Stockbridge Capital Group
The Carlyle Group
TPG Capital

## Private Equity[1]

J.P. Morgan Investment Management, Inc.
Morgan Stanley Alternative Investments, LLC
Pathway Capital Management, LP

# CREDIT

## High Yield

Bain Capital Credit, LP
Beach Point Capital Management, LP
Brigade Capital Management, LLC
DoubleLine Capital, LP
Oaktree Capital Management, LP
TCW Asset Management Company

## Bank Loans

Crescent Capital Group, LP
Tennenbaum Capital Partners, LLC

## Emerging Market Debt

Aberdeen Asset Management, Inc.
Ashmore Investment Management LTD

## Illiquid Credit

Barings, LLC
Beach Point Capital Management, LP
Grosvenor Capital Management, LP
Quadrant Real Estate Advisors, LLC

# REAL ASSETS and INFLATION HEDGES

## Core and Value Added Real Estate

AEW Capital Management, LP
Avison Young
Barings, LLC
CapMan, PLC
Capri Capital Advisors, LLC
CB Richard Ellis Global Investors, LLC
CityView Management Services, LLC
Clarion Partners, LLC
Heitman Capital Management, LLC
Hunt Investment Management, LLC
Invesco Advisers, Inc.
Prologis Management II, S.a.r.l
Realty Associates Advisors, LLC (TA)
RREEF America, LLC
Stockbridge Capital Group
Vanbarton Group, LLC

## Natural Resources & Commodities

Credit Suisse Asset Management, LLC
Gresham Investment Management, LLC
Neuberger Berman Fixed Income, LLC
Pacific Investment Management Company, LLC (PIMCO)
RREEF America, LLC

## Infrastructure

RREEF America, LLC

## Treasury Inflation-Protected Securities

BlackRock Institutional Trust Company, N.A.

# RISK REDUCTION and MITIGATION

## Investment Grade Bonds

BlackRock Institutional Trust Company, N.A.
Dodge & Cox, Inc.
Pacific Investment Management Company, LLC (PIMCO)
Pugh Capital Management, Inc.
Wells Capital Management, Inc.
Western Asset Management Company

## Diversified Hedge Funds

AQR Capital Management
Capula Investment Management
Davidson Kempner Institutional Partners, LP
Goldman Sachs Hedge Fund Strategies, LLC
Grosvenor Capital Management, LP
HBK Capital Management
Pacific Investment Management Company, LLC (PIMCO)

## Cash

J.P. Morgan Investment Management, Inc.

## Mortgage Loan Servicer

Ocwen Loan Servicing, LLC

## Securities Lending Program

Goldman Sachs Agency Lending (GSAL)
State Street Bank & Trust Company
State Street Global Advisors

## Health Reserve Program

Standish Mellon Asset Management Company, LLC

## Other Post-Employment Benefits Trust

BlackRock Institutional Trust Company, N.A.
J.P. Morgan Investment Management, Inc.

## Overlay Program

Parametric Portfolio Associates, LLC

[1] A complete list of Private Equity Investment Managers by functional category is available upon request.

# **Actuarial** Section

Throughout their careers, County employees are strongly linked to the communities where they live and serve. Later, as retirees, they remain connected to each other through their shared histories and membership in LACERA.

Mushrooms are the visible “fruit,” but fungi are mostly an underground mass of thin threads that interconnect with the roots of plants and trees. Plants use these networks to help each other survive— through donating food to younger plants and sending warnings about invading insects and pathogens.

*The birch bolete is common in the Northern Hemisphere, but grows only in association with birch trees, hence its name.*

## Introduction

The actuarial process at the Los Angeles County Employees Retirement Association (LACERA) is governed by provisions in the County Employees Retirement Law of 1937 (CERL) and the California Public Employees' Pension Reform Act of 2013 (PEPRA). The regulatory provision requires LACERA to obtain an actuarial valuation of the Pension Plan at least once every three years. It further requires the LACERA Board of Investments to transmit its recommendations related to contribution rates to the County Board of Supervisors, the primary plan sponsor. The County Board of Supervisors adopts and may adjust contribution rates in accordance with LACERA's recommendations.

LACERA engages an independent actuarial consulting firm to perform the Pension Plan valuation annually exceeding the regulatory requirements. In addition, every three years, the consulting actuary performs an investigation of experience study (experience study). On a triennial basis, a separate actuarial firm reviews both the annual valuation and experience study.

## Valuation Policy

In December 2009, the LACERA Board of Investments adopted a new Retirement Benefit Funding Policy (Funding Policy). The Funding Policy was amended in February 2013 to conform to the new standards mandated in PEPRA. In addition, the LACERA Board of Investments approved inclusion of the Supplemental Targeted Adjustment for Retirees (STAR) Reserve balance as part of the valuation assets and on an ongoing basis for future valuations. The liability for STAR benefits that may be granted in the future is not included in the valuation.

The LACERA Board of Investments maintains the Retirement Benefit Funding Policy, which requires annual adjustment of the employer contribution rates based on the actuary's annual valuation. Milliman, the Pension Plan consulting actuary, reviewed the adequacy of the Plan Sponsor funding policies in accordance with Actuarial Standards of Practice (ASOP). Milliman performed the most recent actuarial valuation as of June 30, 2018, and recommended changes to the employer and employee (member) contribution rates. At its December 2018 meeting, the LACERA Board of Investments adopted Milliman's June 30, 2018 valuation report.

In addition to the annual valuations, LACERA requires its actuary to review the reasonableness of the economic and demographic actuarial assumptions every three years. This review, commonly referred to as the experience study, is accomplished by comparing actual experience during the preceding three years to what was expected to happen according to the actuarial assumptions. Based on this review, the actuary recommends changes in the assumptions or methodology that will better project benefit liabilities and asset growth. The LACERA Board of Investments adopts, possibly with modification, the recommended actuarial methods and assumptions to be used in future valuations. At its December 2016 meeting, the LACERA Board of Investments adopted Milliman's recommendations based on the 2016 Investigation of Experience for Retirement Benefit Assumptions report with a modification to the mortality improvement scale recommendation.

At the December 2016 meeting, the LACERA Board of Investments adopted a three-year phase-in of the impact of the change in employer contribution rate resulting from the new assumptions adopted effective June 30, 2016. For the fiscal year beginning July 1, 2019, the impact of the June 30, 2016 assumption changes are fully phased in.

## Member Contributions

As part of the experience study, the Pension Plan actuary recommends adjustments to member contribution rates, if necessary, due to changes in the underlying actuarial assumptions and methodologies used in calculating member rates for age-based contributory Plans (General Plans A, B, C, and D, and Safety Plans A and B). Therefore, it is expected that the age-based member rates will change no more frequently than every three years. As such, based on the June 30, 2018 valuation, the actuary did not recommend any changes to member contribution rates for these plans.

For the Plans that use single-rate member contribution rates (General Plan G and Safety Plan C), the Pension Plan actuary is required to recommend rates that are one-half the normal cost rate. As such, it is expected that member contribution rates for these plans may change annually. Based on the June 30, 2018 valuation, the actuary recommended new member contribution rates effective July 1, 2019 for Safety Plan C (a decrease from 13.87 percent to 13.69 percent). No changes in employee rates were recommended for General Plan G. Note that although General Plan G employee rates are subject to change every year, the Plan G Normal Cost rate was identical to the prior year, and therefore the associated employee rate remains the same.

## Employer Contributions

The consulting actuary reviews employer contribution rates each year, and recommends changes if necessary. The members and employers are responsible for contributing the portion of the present value of pension plan benefits and expenses which is allocated to a valuation year by the actuarial cost method. These contributions are known as normal cost contributions. The portion not funded by expected member contributions is the responsibility of the employers and is referred to as the employer normal cost. The employers are also responsible for contributions to eliminate funding shortfalls related to liabilities accrued in the past, including changes in the economic and demographic assumptions impacting past service. This portion of the employer's contribution rate is known as the Unfunded Actuarial Accrued Liability (UAAL) contribution rate.

For the June 30, 2018 valuation, the actuary recommended new employer normal cost contribution rates for all Plans and a new UAAL contribution rate, effective July 1, 2019. Based on the 2018 valuation, the employer normal cost rate decreased from 9.94 percent to 9.92 percent, and the employers' required contribution rate to finance the UAAL over a layered 30-year period decreased from 11.06 percent to 10.99 percent. The decrease in the calculated employer contribution rate, from 21.00 percent to 20.91 percent of payroll before reflecting the phase-in of contribution rate changes from the 2016 experience study, was primarily due to the recognition of investment gains and COLA increases, and salary increases greater than assumed. Reflecting the employer contribution rate phase-in, the calculated rate increased from 20.04 percent to 20.91 percent of payroll. The cost impact of the 2016 assumption changes was fully phased into the employer contribution rate as of the June 30, 2018 valuation.

## Actuarial Cost Method

The entry age normal actuarial cost method is used for both funding requirements and financial reporting purposes. This method was approved by LACERA in 1999, as recommended by the consulting actuary. The entry age normal method allocates costs to each future year as a level percentage of payroll, which is ideal for employers to budget for future costs.

## Reviews

The LACERA Board of Investments Actuarial Audit Policy Directive requires actuarial reviews of retirement benefit valuations and experience studies at regular intervals in the same cycle as LACERA's triennial experience study and valuation. Segal Consulting (Segal), as LACERA's reviewing actuary, performed the most recent review of Milliman's experience study and valuation report as of June 30, 2016. The Board of Investments engaged Cavanaugh McDonald to serve as reviewing actuary and perform the next review of the valuation and experience study for the June 30, 2019 valuation and experience study cycle.

In regard to the most recent review of the experience study, Segal concluded, "Milliman has employed generally accepted actuarial practices and principles in studying Plan experience, selecting assumptions, computing employer contribution rates, and presenting the results of their work. We believe that the actuarial assumptions as recommended by Milliman, as well as those approved by the LACERA Board of Investments, are reasonable for use in LACERA's actuarial valuation." The review of Milliman's valuation report, according to Segal, "confirms that the actuarial calculations as of June 30, 2016 are reasonable and based on generally accepted actuarial principles and practices."

## Other Actuarial Information

Actuarially Determined Contributions: The Schedule of Contributions History — Pension Plan included in the Required Supplementary Information of the Financial Section provides 10 years of actuarially determined contributions in relation to the actual contributions provided to the Pension Plan.

Actuarial Methods and Assumptions: A detailed description of the actuarial methods and assumptions for the Pension Plan valuation used by the Pension Plan consulting actuary is included in this Actuarial Section. In addition, the Financial Section provides a summary of the actuarial methods and significant assumptions used to prepare the Pension Plan (Retirement Benefits) valuation report, which determines the Pension Plan's funding requirements. The Financial Section also discusses the actuarial methods and significant assumptions used for financial reporting and required Governmental Accounting Standards Board (GASB) Statement No. 67 disclosures. Any differences between these assumptions used for actuarial funding and those applied for financial reporting purposes are noted.

The following additional information is included in this section:

- Actuary's Certification Letter — Pension Plan
- Summary of Actuarial Methods and Assumptions — Pension Plan
- Schedule of Funding Progress — Pension Plan
- Active Member Valuation Data — Pension Plan
- Retirants and Beneficiaries Added to and Removed from Retiree Payroll — Pension Plan
- Actuary Solvency Test — Pension Plan
- Actuarial Analysis of Financial Experience — Pension Plan
- Probability of Occurrence

A Summary of Major Pension Plan Provisions is available upon request.

See Note A in the Financial Section for plan description information.

September 20, 2019

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Board of Investments
Los Angeles County Employees Retirement Association
300 North Lake Avenue, Suite 820
Pasadena, CA 91101-4199

Dear Members of the Board:

The basic financial goal of LACERA is to establish contributions which fully fund the System's liabilities and which, as a percentage of payroll, remain level for each generation of active members.[1] Annual actuarial valuations measure the progress toward this goal, as well as test the adequacy of the contribution rates.

LACERA measures its funding status as the Funded Ratio, which is equal to the actuarial value of valuation assets over the actuarial accrued liabilities. The funding status based on the past three actuarial valuations is shown below:

| | |
|---|---|
| **Valuation Date:** June 30, 2016 | **Funded Ratio:** 79.4% |
| **Valuation Date:** June 30, 2017 | **Funded Ratio:** 79.9% |
| **Valuation Date:** June 30, 2018 | **Funded Ratio:** 80.6% |

It is our opinion that LACERA continues in sound financial condition as of June 30, 2018. Most of this year's increase in the Funded Ratio is due to employer contributions to amortize the Unfunded Actuarial Accrued Liability (UAAL) and recognition of current and past years' investment performance. Using the market value of assets on June 30, 2018, the Funded Ratio would be 81.3 percent. Currently, a net asset gain is being deferred.

LACERA's funding policy provides that the County's contributions are equal to the normal cost rate, net of member contributions, plus the amortization payment of any Unfunded Actuarial Accrued Liability (UAAL) or minus the amortization of any Surplus Funding. A UAAL occurs when the Funded Ratio is less than 100 percent. The amortization of the UAAL uses a layered 30-year approach, under which the UAAL as of June 30, 2009 is amortized over a closed 30-year period. Each year thereafter, any increase or decrease in the UAAL is amortized over a new closed 30-year period. Surplus Funding occurs when the Funded Ratio is greater than 120 percent. If the Funded Ratio exceeds 120 percent and all conditions in California Government Code Section 7522.52(b) are satisfied, then the Surplus Funding is amortized over an open 30-year period.

The current funding policy requires LACERA to consider all of the funds in the Contingency Reserve in excess of 1 percent of the market value of assets as part of the valuation assets. The STAR Reserve is also considered part of the valuation assets. The Board's policy does not include any corresponding liability for future STAR benefits in the valuation. Note that if all of the STAR Reserve funds were excluded from the valuation assets for funding purposes, the Funded Ratio on June 30, 2018 would decrease to 79.7 percent.

In preparing the June 30, 2018 valuation report, we relied, without audit, on information (some oral and some in writing) supplied by LACERA. This information includes, but is not limited to, statutory provisions, employee data, and financial information. In our examination of these data we have found them to be

[1] A further goal is to minimize employer contributions, consistent with the requirements of Article XVI, Section 17 of the California Constitution and Section 31595 of the California Government Code.

reasonably consistent and comparable with data used for other purposes, although we have not audited the data at the source. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

The valuation is also based on our understanding of LACERA's current benefit provisions and the actuarial assumptions which were reviewed and adopted by the Board of Investments. The funding assumptions were based on the triennial investigation of experience study report as of June 30, 2016 and adopted at the December 14, 2016 Board of Investments meeting. The assumptions and methods used for financial reporting under GASB 67 are the same as the funding assumptions and methods with the following exceptions:

1. The discount rate of 7.38 percent is gross of administrative expenses;
2. The STAR COLA is treated as substantively automatic and is valued to the extent it is projected to be paid in the future; and
3. The individual entry age normal cost method is used without modification.
4. The Fiduciary Net Position is equal to the market value of assets minus liabilities.

The actuarial computations presented in the valuation report are for purposes of determining the recommended funding amounts for LACERA consistent with our understanding of their funding requirements and goals. The liabilities are determined by using the entry age normal funding method. The actuarial assets are determined by using a five-year smoothed recognition method of asset gains and losses, determined as the difference of the actual market value to the expected market value. We believe the actuarial assumptions and methods are internally consistent and reasonable for their intended purpose.

Future actuarial measurements may differ significantly from the current measurements as presented in the valuation report and GASB 67 report due to such factors as the following: experience differing from that anticipated by the economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and changes in the program provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements.

Milliman's work is prepared exclusively for LACERA for a specific and limited purpose. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. It is a complex, technical analysis that assumes a high level of knowledge concerning LACERA's operations.

No third party recipient of Milliman's work product who desires professional guidance should rely upon Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their specific needs.

The consultants who worked on this assignment are retirement actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel. The signing actuaries are independent of the plan sponsor. We are not aware of any relationship that would impair the objectivity of our work.

Milliman prepared the following information for the actuarial section:

1. Retirees and Beneficiaries Added to and Removed from Benefits — Pension Plan
2. Actuarial Analysis of Financial Experience — Pension Plan
3. Actuary Solvency Test — Pension Plan
4. Schedule of Funding Progress — Pension Plan

In addition, for Note E — Pension Plan Liabilities of the financial section, Milliman prepared the Schedule of Net Pension Liability and Sensitivity Analysis.

Except as noted above, LACERA staff prepared the information in Note E and the Required Supplementary Information, based on information supplied in prior actuarial reports, our June 30, 2018 actuarial valuation, and our June 30, 2019 GASB 67 report. Milliman has reviewed the information in Note E for accuracy.

We certify that the assumptions and methods used for funding and financial reporting purposes in the June 30, 2018 funding valuation meet the parameters set by Actuarial Standards of Practice promulgated by the Actuarial Standards Board (ASB). We are members of the American Academy of Actuaries and have experience in performing valuations for public retirement systems.

Sincerely,

Mark C. Olleman, FSA, EA, MAAA
Principal and Consulting Actuary
MCO/NJC/arh

Nick J. Collier, ASA, EA, MAAA
Principal and Consulting Actuary

| | |
|---|---|
| **Actuarial Methods and Assumptions** | Recommended by Milliman, the consulting actuary, and adopted by the LACERA Board of Investments. The actuarial assumptions used to determine the liabilities are based on the results of the 2016 experience study. In December 2016, the LACERA Board of Investments adopted a decrease in the price inflation rate and other economic assumptions.<br><br>In 2009, the Board of Investments adopted a new Funding Policy. Under the Funding Policy, modifications to the asset valuation and amortization methods were adopted beginning with the June 30, 2009 actuarial valuation. The Funding Policy was amended in February 2013 to conform with the new standards mandated in the PEPRA and to specify that the Supplemental Targeted Adjustment for Retirees (STAR) Reserve should be included as a valuation asset on an ongoing basis. |
| **Actuarial Cost Method** | Entry Age Normal. |
| **Actuarial Asset Valuation Method** | The assets are valued using a five-year smoothed method based on the difference between expected and actual market value of assets as of the valuation date. The gains and losses on market value are recognized over a five-year period to spread out the impact of investment market performance, rather than recognizing the entire impact each year. The expected market value is the prior year's market value increased with the net cash flow of funds, all increased with interest during the past fiscal year at the expected investment return rate assumption. The five-year smoothing valuation basis for all assets was adopted beginning with the June 30, 2009 valuation.<br><br>The inclusion of the STAR Reserve in the valuation assets was formalized for current and future actuarial valuations in the February 2013 amendment to LACERA's Funding Policy. Since the June 30, 2013 valuation, Milliman has included the STAR Reserve as part of the valuation assets. |
| **Amortization of Unfunded Actuarial Accrued Liability (UAAL) or Funding Surplus** | In accordance with LACERA's Funding Policy, the employer contribution rates are set equal to the normal cost rate, net of expected member contributions for the next year, plus amortization of any UAAL or Surplus Funding. A UAAL occurs if the Funded Ratio is less than 100 percent. Surplus Funding occurs if the Funded Ratio is greater than 120 percent. The amortization of the UAAL beginning with the June 30, 2009 valuation is funded over a closed 30-year period. Any future unanticipated changes in the UAAL, such as assumption changes or actuarial gains and losses, are amortized over new closed 30- year periods beginning with the June 30, 2010 valuation. This approach is often referred to as a "layered amortization method." The employer contribution rate is not allowed to be less than the rate if LACERA amortized the total UAAL over a 30-year period. If the Funded Ratio is greater than 120 percent in future valuations, the amortization of any Surplus Funding is funded over an open or "rolling" 30-year period. If the Funded Ratio is between 100 and 120 percent, only the employer normal cost rate is contributed.<br><br>For the June 30, 2018 valuation, ten amortization layers were used to calculate the total amortization payment beginning July 1, 2019. |

| | |
|---|---|
| **Projected Salary Increases** | Rates of annual salary increases assumed for the purpose of the valuation range from 3.51 percent to 11.51 percent. In addition to increases in salary due to promotions and longevity, the increases include an assumed 3.25 percent per annum rate of increase in the general wage level of membership. Increases are assumed to occur mid-year (i.e., January 1) and apply only to base salary, excluding Megaflex compensation. The mid-year timing reflects that salary increases occur throughout the year, or on average, mid-year. For plans with a one-year final average compensation period, actual average annual compensation is used. These rates were adopted beginning with the June 30, 2016 valuation. |
| **Investment Rate of Return** | Future investment earnings are assumed to accrue at an annual rate of 7.25 percent, compounded annually, net of both investment and administrative expenses. The same rate of return is used to discount the actuarial accrued liability. This rate was adopted beginning with the June 30, 2016 valuation. |
| **Post-Retirement Benefit Increases** | Post-retirement benefit increases of either 2.75 percent or 2.0 percent per year are assumed for the valuation in accordance with the benefits provided. These adjustments, which are based on the Consumer Price Index (CPI), are assumed payable each year in the future, as they are no greater than the expected increase in the CPI of 2.75 percent per year.<br><br>Plan E members receive a prorated post-retirement benefit increase of 2.0 percent for service credit earned on and after June 4, 2002. The portion payable is based on a ratio of the member's years of service earned on and after June 4, 2002, to the member's total years of service. The portion of the full 2.0 percent increase not provided for may be purchased by the member. COLA adjustments for members with service credit earned prior to June 4, 2002, are based on a ratio of months of service earned on and after June 4, 2002, divided by the total months of service. |
| **Consumer Price Index (CPI)** | Increase of 2.75 percent per annum. This rate was adopted beginning with the June 30, 2016 valuation. |
| **Rates of Separation From Employment** | Various rates dependent upon member's age, gender, years of service, and retirement plan. Each rate represents the probability that a member will separate from service at each age (or service duration) due to the particular cause. These rates of separation from active service were adopted beginning with the June 30, 2016 valuation. The Probability of Occurrence schedule included in this Actuarial Section includes a summary of probability of retirement and withdrawal for sample ages. |

| | |
|---|---|
| **Expectation of Life After Retirement[1,2]** | The same post-retirement mortality rates are used in the valuation for deferred inactive members, members retired from service, and beneficiaries. Beneficiaries are assumed to have the same mortality as a general member of the opposite sex.<br><br>**Males:**<br>**General Members:** RP–2014 Healthy Annuitant Mortality Table for Males multiplied by 105 percent, with MP–2014 Ultimate Projection Scale.<br>**Safety Members:** RP–2014 Healthy Annuitant Mortality Table for Males multiplied by 95 percent, with MP–2014 Ultimate Projection Scale.<br><br>**Females:**<br>**General Members:** RP–2014 Healthy Annuitant Mortality Table for Females, with MP–2014 Ultimate Projection Scale.<br>**Safety Members:** RP–2014 Healthy Annuitant Mortality Table for Females, with MP–2014 Ultimate Projection Scale.<br>These rates were adopted effective June 30, 2016. |
| **Expectation of Life After Disability[1,2]** | **Males:**<br>**General Members:** Average of RP-2014 Healthy Annuitant Mortality Table for Males multiplied by 105 percent and RP-2014 Disabled Annuitant Mortality Table for Males, both projected with MP-2014 Ultimate Projection Scale.<br>**Safety Members:** RP-2014 Healthy Annuitant Mortality Table for Males, with MP-2014 Ultimate Projection Scale.<br><br>**Females:**<br>**General Members:** Average of RP-2014 Healthy Annuitant Mortality Table for Females multiplied by 100 percent and RP-2014 Disabled Annuitant Mortality Table for Females, both projected with MP-2014 Ultimate Projection Scale.<br>**Safety Members:** RP-2014 Healthy Annuitant Mortality Table for Females, with MP-2014 Ultimate Projection Scale.<br><br>These rates were adopted effective June 30, 2016. |

[1]The RP-2014 mortality tables were published by the Society of Actuaries (SOA's) Retirement Plans Experience Committee (RPEC) in October 2014. The data studied includes more than 10 million life-years of exposure over the period 2004 to 2008, and includes separate mortality tables for healthy annuitants, disabled retirees, and employees. These mortality tables reflect adjustments, using mortality improvement scale MP-2014 (discussed further below), to account for changes in mortality between the period of experience and 2014.

[2]The SOA's Mortality Improvement Scale MP-2014 (published in October 2014) is used to adjust the RP-2014 mortality tables to account for anticipated changes in mortality rates in future years. In general, it is assumed that mortality rates will improve (implying longer lifetimes) in future due partially to improvements in healthcare.

**Recent Changes and Their Financial Impact**

An experience study was performed by the consulting actuary for the three- year period ended June 30, 2016. The LACERA Board of Investments adopted the demographic assumptions recommended in that report with a modification to the mortality improvement scale, and with a three-year phase-in of the impact of the change on employer contribution rates. In addition, the Board of Investments adopted reductions in the economic assumptions. Changes to those assumptions and other financial impacts are discussed below.

**STAR Reserve:** The STAR Reserve is included in the 2018 valuation assets. There is no corresponding liability for future potential STAR benefits included in the valuation. The inclusion of the STAR Reserve in the valuation assets was formalized for the current and future actuarial valuations in the February 2013 amendment to LACERA's Funding Policy.

**2016 Assumption Changes:** At the December 2016 LACERA Board of Investments meeting, the Board adopted new assumptions with the 2016 Investigation of Experience report. The adopted assumptions included a decrease in the investment return assumption to 7.25 percent, a decrease in the wage growth assumption to 3.25 percent, a decrease in the CPI assumption to 2.75 percent, and an increase in life expectancies. All assumption changes have been reflected in the June 30, 2018 actuarial valuation, although the impact on the employer contribution rate is being phased in over three years.

**Employer Contributions:** The total required employer contribution rate calculated in the 2018 valuation increased over the prior year by 0.87 percent of payroll. The increase is primarily due to the additional year of phase-in of the cost impact of the 2016 assumption changes (0.96 percent of payroll) adopted by the LACERA Board of Investments effective June 30, 2016. This increase was partially offset by typical year-to-year fluctuations, including the impact of strong investment returns. The cost impact of the assumption changes has been fully phased into the employer contribution rate as of the June 30, 2018 valuation.

**Member Contributions:** New member contribution rates were implemented for Safety Plan C effective July 1, 2019, based on the normal cost rates calculated in the 2018 valuation. The recommended member rate for Safety Plan C is 13.69 percent, compared to 13.87 percent effective July 1, 2018. No changes in member rates were implemented for the other plans. Note that although General Plan G member rates are subject to change every year, the Plan G Normal Cost rate was identical to last year, and therefore the associated member rate remains the same.

**Funding:** The Funded Ratio increased from 79.9 percent to 80.6 percent primarily due to employer contributions to amortize the UAAL and the recognition of current and prior year asset gains, which caused a 0.7 percent increase.

## Schedule of Funding Progress — Pension Plan

(Dollars in Thousands)

| Actuarial Valuation Date | Actuarial Value of Valuation Assets (a) | Actuarial Accrued Liability (AAL)[1] (b) | Unfunded Actuarial Accrued Liability (UAAL) (b-a) | Funded Ratio (a/b) | Covered Payroll[2] (c) | UAAL as a Percentage of Covered Payroll [(b-a)/c] |
|---|---|---|---|---|---|---|
| June 30, 2009 | $39,541,865 | $44,468,636 | $4,926,771 | 88.9% | $6,547,616 | 75.2% |
| June 30, 2010 | 38,839,392 | 46,646,838 | 7,807,446 | 83.3% | 6,695,439 | 116.6% |
| June 30, 2011 | 39,193,627 | 48,598,166 | 9,404,539 | 80.6% | 6,650,674 | 141.4% |
| June 30, 2012 | 39,039,364 | 50,809,425 | 11,770,061 | 76.8% | 6,619,816 | 177.8% |
| June 30, 2013 | 39,932,416 | 53,247,776 | 13,315,360 | 75.0% | 6,595,902 | 201.9% |
| June 30, 2014 | 43,654,462 | 54,942,453 | 11,287,991 | 79.5% | 6,672,886 | 169.2% |
| June 30, 2015 | 47,328,270 | 56,819,215 | 9,490,945 | 83.3% | 6,949,420 | 136.6% |
| June 30, 2016 | 49,357,847 | 62,199,214 | 12,841,367 | 79.4% | 7,279,777 | 176.4% |
| June 30, 2017 | 52,166,307 | 65,310,803 | 13,144,496 | 79.9% | 7,637,032 | 172.1% |
| **June 30, 2018** | **$55,233,108** | **$68,527,354** | **$13,294,246** | **80.6%** | **$7,957,981** | **167.1%** |

[1]Using the Entry Age Normal actuarial cost method.
[2]Covered Payroll includes compensation paid to all active employees on which contributions are calculated.

## Active Member Valuation Data — Pension Plan

| Valuation Date | Plan Type | Member Count | Annual Salary[1] | Average Annual Salary | Percentage Increase/ (Decrease) in Average Salary |
|---|---|---|---|---|---|
| June 30, 2009 | General | 82,878 | $5,347,558,596 | $64,523 | 5.03% |
| | Safety | 12,910 | 1,239,655,092 | 96,023 | 3.74% |
| | Total | 95,788 | $6,587,213,688 | $68,769 | 4.74% |
| June 30, 2010 | General | 81,413 | $5,318,137,692 | $65,323 | 1.24% |
| | Safety | 12,997 | 1,257,305,532 | 96,738 | 0.75% |
| | Total | 94,410 | $6,575,443,224 | $69,648 | 1.28% |
| June 30, 2011 | General | 80,145 | $5,295,354,528 | $66,072 | 1.15% |
| | Safety | 12,641 | 1,239,553,116 | 98,058 | 1.36% |
| | Total | 92,786 | $6,534,907,644 | $70,430 | 1.12% |
| June 30, 2012 | General | 79,467 | $5,271,580,728 | $66,337 | 0.40% |
| | Safety | 12,485 | 1,229,922,420 | 98,512 | 0.46% |
| | Total | 91,952 | $6,501,503,148 | $70,705 | 0.39% |
| June 30, 2013 | General | 79,006 | $5,253,152,532 | $66,491 | 0.23% |
| | Safety | 12,539 | 1,234,902,228 | 98,485 | (0.03%) |
| | Total | 91,545 | $6,488,054,760 | $70,873 | 0.24% |
| June 30, 2014 | General | 79,943 | $5,487,670,164 | $68,645 | 3.24% |
| | Safety | 12,523 | 1,252,867,272 | 100,045 | 1.58% |
| | Total | 92,466 | $6,740,537,436 | $72,897 | 2.86% |
| June 30, 2015 | General | 81,228 | $5,706,302,532 | $70,250 | 2.34% |
| | Safety | 12,446 | 1,299,621,108 | 104,421 | 4.37% |
| | Total | 93,674 | $7,005,923,640 | $74,790 | 2.60% |
| June 30, 2016 | General | 82,916 | $5,949,587,940 | $71,754 | 2.14% |
| | Safety | 12,528 | 1,342,684,620 | 107,175 | 2.64% |
| | Total | 95,444 | $7,292,272,560 | $76,404 | 2.16% |
| June 30, 2017 | General | 84,513 | $6,290,061,336 | $74,427 | 3.73% |
| | Safety | 12,698 | 1,388,190,600 | 109,324 | 2.01% |
| | Total | 97,211 | $7,678,251,936 | $78,985 | 3.38% |
| **June 30, 2018** | **General** | **85,703** | **$6,610,313,328** | **$77,130** | **3.63%** |
| | **Safety** | **12,771** | **1,451,457,324** | **113,653** | **3.96%** |
| | **Total** | **98,474** | **$8,061,770,652** | **$81,867** | **3.65%** |

[1]Active Member Valuation Annual Salary is an annualized compensation of only those members who were active on the actuarial valuation date. Covered Payroll includes compensation paid to all active employees on which contributions are calculated.

## Retirants and Beneficiaries Added to and Removed From Retiree Payroll — Pension Plan

(Dollars in Thousands)

| | Added to Rolls | | Removed from Rolls | | Rolls at End of Year | | | |
|---|---|---|---|---|---|---|---|---|
| Valuation Date | Member Count | Annual Allowance[1,2] | Member Count | Annual Allowance | Member Count | Annual Allowance[1] | Percentage Increase in Retiree Allowance | Average Annual Allowance |
| June 30, 2009 | 2,505 | $157,469 | (1,786) | ($50,619) | 53,069 | $2,085,725 | 5.40% | $39.3 |
| June 30, 2010 | 2,947 | 188,724 | (1,820) | (54,105) | 54,196[3] | 2,220,344 | 6.45% | 41.0 |
| June 30, 2011 | 3,134 | 185,204 | (1,959) | (62,923) | 55,371 | 2,342,625 | 5.51% | 42.3 |
| June 30, 2012 | 3,194 | 193,865 | (1,795) | (61,588) | 56,770[3] | 2,474,902 | 5.65% | 43.6 |
| June 30, 2013 | 3,373 | 205,659 | (2,057) | (69,494) | 58,086[3] | 2,611,067 | 5.50% | 45.0 |
| June 30, 2014 | 3,128 | 172,743 | (1,985) | (71,730) | 59,229[3] | 2,712,080 | 3.87% | 45.8 |
| June 30, 2015 | 3,501 | 180,549 | (2,124) | (80,028) | 60,606[3] | 2,812,601 | 3.71% | 46.4 |
| June 30, 2016 | 3,479 | 220,632 | (2,171) | (80,881) | 61,914[3] | 2,952,352 | 4.97% | 47.7 |
| June 30, 2017 | 3,721 | 245,915 | (2,311) | (89,624) | 63,324[3] | 3,108,643 | 5.29% | 49.1 |
| **June 30, 2018** | **3,826** | **$276,118** | **(2,270)** | **($89,033)** | **64,880[3]** | **$3,295,728** | **6.02%** | **$50.8** |

[1]Annual Allowance is the monthly benefit allowance annualized for those members counted as of June 30.

[2]Includes COLAs that occurred during the fiscal year and therefore were not included in the previous years' Annual Allowance totals.

[3]For the actuarial valuation year, Member Count includes retirees who, due to timing at year end, are not yet included in the total Retired Members count disclosed in Note A — Plan Description of the Financial Section.

## Actuary Solvency Test — Pension Plan

(Dollars in Millions)

| | Actuarial Accrued Liability (AAL) for | | | | Portion of AAL Covered by Assets | | |
|---|---|---|---|---|---|---|---|
| Actuarial Valuation Date | (A) Active Member Contributions | (B) Retirees and Beneficiaries[1] | (C) Active Members (Employer Financed Portion) | Actuarial Value of Valuation Assets | (A) Active | (B) Retired | (C) Employer |
| June 30, 2009 | $5,795 | $24,692 | $13,982 | $39,542 | 100% | 100% | 65% |
| June 30, 2010 | 6,278 | 26,220 | 14,148 | 38,839 | 100% | 100% | 45% |
| June 30, 2011 | 6,529 | 27,559 | 14,511 | 39,194 | 100% | 100% | 35% |
| June 30, 2012 | 6,961 | 29,118 | 14,730 | 39,039 | 100% | 100% | 20% |
| June 30, 2013 | 7,837 | 30,980 | 14,430 | 39,932 | 100% | 100% | 8% |
| June 30, 2014 | 8,354 | 31,882 | 14,706 | 43,654 | 100% | 100% | 23% |
| June 30, 2015 | 8,805 | 32,734 | 15,280 | 47,328 | 100% | 100% | 38% |
| June 30, 2016 | 8,767 | 35,316 | 18,116 | 49,358 | 100% | 100% | 29% |
| June 30, 2017 | 9,482 | 37,077 | 18,752 | 52,166 | 100% | 100% | 30% |
| **June 30, 2018** | **$9,882** | **$39,192** | **$19,453** | **$55,233** | **100%** | **100%** | **32%** |

[1]Includes vested and non-vested former members.

## Actuarial Analysis of Financial Experience — Pension Plan

(Dollars in Millions)

| | Valuation as of June 30 | | | | |
|---|---|---|---|---|---|
| | **2018** | **2017** | **2016** | **2015** | **2014** |
| Unfunded Actuarial Accrued Liability | **$13,145** | $12,841 | $9,491 | $11,288 | $13,315 |
| Expected Increase/(Decrease) from Prior Valuation | **146** | 320 | 2,820 | (54) | 338 |
| Salary Increases Greater/(Less) than Expected | **223** | 277 | 162 | 79 | (291) |
| CPI Less/(Greater) than Expected | **45** | (139) | (191) | (570) | (427) |
| Asset Return Less/(Greater) than Expected | **(411)** | (421) | 496 | (1,263) | (1,664) |
| All Other Experience | **146** | 267 | 63 | 11 | 17 |
| **Ending Unfunded Actuarial Accrued Liability** | **$13,294** | **$13,145** | **$12,841** | **$9,491** | **$11,288** |

| | Valuation as of June 30 | | | | |
|---|---|---|---|---|---|
| | **2013** | **2012** | **2011** | **2010** | **2009** |
| Unfunded Actuarial Accrued Liability | $11,770 | $9,405 | $7,807 | $4,927 | $2,313 |
| Expected Increase/(Decrease) from Prior Valuation | 1,380 | 772 | 565 | 333 | (78) |
| Salary Increases Greater/(Less) than Expected | (563) | (629) | (579) | (353) | 380 |
| CPI Less/(Greater) than Expected | (190) | (181) | (215) | (29) | (4) |
| Asset Return Less/(Greater) than Expected | 893 | 2,337 | 1,761 | 2,879 | 2,465 |
| All Other Experience | 25 | 66 | 66 | 50 | (149) |
| **Ending Unfunded Actuarial Accrued Liability** | **$13,315** | **$11,770** | **$9,405** | **$7,807** | **$4,927** |

## Plans A, B, and C General Members

| Age | Service Retirement | Service Disability | Ordinary Disability | Service Death | Ordinary Death | Other Terminations |
|---|---|---|---|---|---|---|
| **Male** | | | | | | |
| 20 | 0.0000 | 0.0002 | 0.0001 | N/A | 0.0003 | 0.0050 |
| 30 | 0.0000 | 0.0002 | 0.0001 | N/A | 0.0004 | 0.0050 |
| 40 | 0.0300 | 0.0006 | 0.0002 | N/A | 0.0006 | 0.0050 |
| 50 | 0.0300 | 0.0011 | 0.0004 | N/A | 0.0014 | 0.0050 |
| 60 | 0.2600 | 0.0045 | 0.0010 | N/A | 0.0038 | 0.0050 |
| 70 | 0.2800 | 0.0045 | 0.0025 | N/A | 0.0113 | 0.0050 |
| 75 | 1.0000 | 0.0000 | 0.0000 | N/A | 0.0189 | 0.0000 |
| **Female** | | | | | | |
| 20 | 0.0000 | 0.0002 | 0.0001 | N/A | 0.0002 | 0.0050 |
| 30 | 0.0000 | 0.0002 | 0.0001 | N/A | 0.0002 | 0.0050 |
| 40 | 0.0300 | 0.0005 | 0.0002 | N/A | 0.0004 | 0.0050 |
| 50 | 0.0300 | 0.0013 | 0.0004 | N/A | 0.0011 | 0.0050 |
| 60 | 0.2600 | 0.0025 | 0.0010 | N/A | 0.0024 | 0.0050 |
| 70 | 0.2800 | 0.0030 | 0.0025 | N/A | 0.0063 | 0.0050 |
| 75 | 1.0000 | 0.0000 | 0.0000 | N/A | 0.0108 | 0.0000 |

## Plans D and G General Members

| Age | Service Retirement | Service Disability | Ordinary Disability | Service Death | Ordinary Death | Years of Service | Other Terminations |
|---|---|---|---|---|---|---|---|
| **Male** | | | | | | | |
| 20 | 0.0000 | 0.0002 | 0.0001 | N/A | 0.0003 | 5 | 0.0233 |
| 30 | 0.0000 | 0.0002 | 0.0001 | N/A | 0.0004 | 10 | 0.0170 |
| 40 | 0.0150 | 0.0006 | 0.0002 | N/A | 0.0006 | 15 | 0.0120 |
| 50 | 0.0150 | 0.0011 | 0.0004 | N/A | 0.0014 | 20 | 0.0076 |
| 60 | 0.0600 | 0.0045 | 0.0010 | N/A | 0.0038 | 25 | 0.0048 |
| 70 | 0.2000 | 0.0045 | 0.0025 | N/A | 0.0113 | 30 & up | 0.0000 |
| 75 | 1.0000 | 0.0000 | 0.0000 | N/A | 0.0189 | | |
| **Female** | | | | | | | |
| 20 | 0.0000 | 0.0002 | 0.0001 | N/A | 0.0002 | 5 | 0.0233 |
| 30 | 0.0000 | 0.0002 | 0.0001 | N/A | 0.0002 | 10 | 0.0170 |
| 40 | 0.0150 | 0.0005 | 0.0002 | N/A | 0.0004 | 15 | 0.0120 |
| 50 | 0.0150 | 0.0013 | 0.0004 | N/A | 0.0011 | 20 | 0.0076 |
| 60 | 0.0600 | 0.0025 | 0.0010 | N/A | 0.0024 | 25 | 0.0048 |
| 70 | 0.2000 | 0.0030 | 0.0025 | N/A | 0.0063 | 30 & up | 0.0000 |
| 75 | 1.0000 | 0.0000 | 0.0000 | N/A | 0.0108 | | |

## Plan E General Members

| Age | Service Retirement | Service Disability | Ordinary Disability | Service Death | Ordinary Death | Years of Service | Other Terminations |
|---|---|---|---|---|---|---|---|
| **Male** | | | | | | | |
| 20 | 0.0000 | N/A | N/A | N/A | 0.0003 | 5 | 0.0310 |
| 30 | 0.0000 | N/A | N/A | N/A | 0.0004 | 10 | 0.0200 |
| 40 | 0.0000 | N/A | N/A | N/A | 0.0006 | 15 | 0.0144 |
| 50 | 0.0000 | N/A | N/A | N/A | 0.0014 | 20 | 0.0108 |
| 60 | 0.0400 | N/A | N/A | N/A | 0.0038 | 25 | 0.0100 |
| 70 | 0.2000 | N/A | N/A | N/A | 0.0113 | 30 & up | 0.0100 |
| 75 | 1.0000 | N/A | N/A | N/A | 0.0189 | | |
| **Female** | | | | | | | |
| 20 | 0.0000 | N/A | N/A | N/A | 0.0002 | 5 | 0.0310 |
| 30 | 0.0000 | N/A | N/A | N/A | 0.0002 | 10 | 0.0200 |
| 40 | 0.0000 | N/A | N/A | N/A | 0.0004 | 15 | 0.0144 |
| 50 | 0.0000 | N/A | N/A | N/A | 0.0011 | 20 | 0.0108 |
| 60 | 0.0400 | N/A | N/A | N/A | 0.0024 | 25 | 0.0100 |
| 70 | 0.2000 | N/A | N/A | N/A | 0.0063 | 30 & up | 0.0100 |
| 75 | 1.0000 | N/A | N/A | N/A | 0.0108 | | |

## Plans A, B, and C Safety Members

| Age | Service Retirement | Service Disability | Ordinary Disability | Service Death | Ordinary Death | Years of Service | Other Terminations |
|---|---|---|---|---|---|---|---|
| **Male** | | | | | | | |
| 20 | 0.0000 | 0.0020 | 0.0000 | 0.0001 | 0.0002 | 5 | 0.0113 |
| 30 | 0.0000 | 0.0020 | 0.0000 | 0.0001 | 0.0005 | 10 | 0.0076 |
| 40 | 0.0100 | 0.0028 | 0.0000 | 0.0001 | 0.0005 | 15 | 0.0042 |
| 50 | 0.0100 | 0.0100 | 0.0000 | 0.0001 | 0.0009 | 20 & up | 0.0000 |
| 60 | 0.3000 | 0.1000 | 0.0000 | 0.0001 | 0.0025 | | |
| **Female** | | | | | | | |
| 20 | 0.0000 | 0.0030 | 0.0000 | 0.0001 | 0.0002 | 5 | 0.0113 |
| 30 | 0.0000 | 0.0042 | 0.0000 | 0.0001 | 0.0002 | 10 | 0.0076 |
| 40 | 0.0100 | 0.0092 | 0.0000 | 0.0001 | 0.0004 | 15 | 0.0042 |
| 50 | 0.0100 | 0.0180 | 0.0000 | 0.0001 | 0.0011 | 20 & up | 0.0000 |
| 60 | 0.3000 | 0.0800 | 0.0000 | 0.0001 | 0.0024 | | |

## Introduction

The actuarial valuation of the retiree medical, dental/vision, and death benefits promised to retired Los Angeles County (County) workers who also participate in the LACERA retirement benefits plan is governed by provisions in the LACERA Other Post-Employment Benefits (OPEB) Actuarial Valuation and Audit Policy (OPEB Policy), which the LACERA Board of Retirement establishes and adopts. The OPEB Policy is subject to periodic assessments to identify and incorporate necessary updates and revisions. In October 2017, the OPEB Policy (as discussed below) was revised and now parallels the policy applicable to the retirement benefits actuarial valuation and related review.

The OPEB actuarial valuations are performed at the County's request to review program funding metrics and to satisfy financial statement reporting guidelines that apply to sponsoring employers, such as the County, and those organizations who administer OPEB benefit programs, such as LACERA.

## Funding Policy and Contributions

The County historically discharged its premium subsidy obligations on a pay-as-you-go basis. LACERA bills the healthcare premiums to the County and members on a monthly basis. Plan members are required to pay the difference between the employer-paid subsidy and the actual premium cost. An administrative fee to cover the costs of administering the OPEB Program is included in the monthly premium.

In June 2015, the County Board of Supervisors approved the county-wide budget with a dedicated funding promise for the OPEB liability, using the multi-year approach to enhance the County's OPEB Trust in a consistent manner. This funding commitment provides pre-funding goals and indicates that the County has placed a priority on making OPEB contributions. The County, Superior Court, and LACERA regularly prefund these obligations, depositing monies into an irrevocable OPEB Trust. The plan sponsors provide updated funding projections each year. Milliman reviewed the adequacy of the Plan Sponsor funding policies and found them to be in compliance with Actuarial Standards of Practice (ASOP) Number 6.

## OPEB Policy

LACERA will periodically perform all OPEB actuarial projects to:

- Establish the actuarially determined values of the County's OPEB program liabilities.
- Validate that such an appraisal reflects actual experiences and appropriate assumptions.
- Certify that the appraisal is determined in accordance with all legislative, regulatory and professional standards.

## OPEB Policy Objectives

The objectives that provide the guiding principles in the development and implementation of the OPEB Policy include the following:

- Comply with the financial reporting requirements mandated by the Governmental Accounting Standards Board (GASB).
- Ensure data and assumptions used in the valuation are, when appropriate, consistent with those used in the valuation of retirement benefits.
- Promote operating effectiveness and optimize cost efficiencies where possible.
- Mirror the policy and principles guiding the retirement benefits actuarial projects.
- Coordinate consistently and efficiently with external audits of LACERA's financial statements when appropriate.

## Types and Frequency of OPEB Actuarial Projects

**Valuation:** A calculation of the actuarial values in accordance with all relevant legislative, regulatory, and professional requirements and standards.

- Required by: GASB
- Performed by: OPEB Consulting Actuary
- Frequency: Every year (annual)

- Rationale:
  - GASB requires the net OPEB liability measured as the total OPEB liability, less the amount of the OPEB program's fiduciary net position by employer.
  - The total OPEB liability and other OPEB cost related items are generally required to be determined through an actuarial valuation.
  - Actuarial valuations of the total OPEB liability must be performed at least every two years, with more frequent valuations encouraged.
  - All assumptions underlying the determination of the total OPEB liability must conform to the guidance in ASOP issued by the Actuarial Standards Board.
  - To ensure data and assumptions used in the OPEB valuation are consistent with the retirement benefits valuation, the OPEB Policy requires each annual OPEB valuation immediately after the annual retirement benefits valuation for the same fiscal year ending.
  - The OPEB Policy promotes operating efficiency by leveraging the efforts of the consulting actuary to complete two projects with each mobilization.

**Experience and Assumption Study**: An investigation of the experience and review of the assumptions used in the OPEB valuation.

- Required by: OPEB Policy
- Performed by: OPEB Consulting Actuary
- Frequency: Every three years (triennial)
- Rationale:
  - The County Employees Retirement Law of 1937 (1937 Act) requires an investigation of experience and assumption study (experience study) for LACERA retirement benefit assumptions performed triennially (every three years) to reset member contribution rates as appropriate. Certain experience data and assumptions from the retirement benefits valuation provide essential input variables to the experience study for the OPEB program.
  - To ensure data and assumptions common to both experience studies are used consistently, the Policy requires an experience study for the OPEB program to follow each experience study for the retirement benefits plan.
  - The OPEB Policy promotes operating efficiency by leveraging the efforts of the consulting actuary to complete two projects with each mobilization.

**Valuation Review**: A triennial audit of the OPEB valuation, including a parallel valuation (i.e., an independent reproduction of the detailed valuation results).

- Required by: OPEB Policy
- Performed by: OPEB Reviewing Actuary
- Frequency: Every three years (triennial)
- Rationale:
  - The 1937 Act requires the LACERA retirement benefits valuation be performed triennially. The Retirement Benefit Funding Policy (dated February 13, 2013 as amended) is currently in effect between the County and LACERA, which requires the retirement benefits valuation to be performed annually.
  - As a recognized leader in public pension plan administration, LACERA has long implemented the prudent policy and practice of performing triennial reviews of the retirement benefits valuation.
  - Governmental Finance Officers Association (GFOA) best practices recommend a comprehensive "audit" performed by an independent actuary of a pension plan's actuarial valuations at least once every five years.
  - Consistent with policy and practice of the retirement benefits valuation and audit cycle, this Policy requires a review (i.e., audit) of the OPEB valuation be performed triennially. This Policy is consistent with GFOA best practices regarding actuarial audits.

**Experience and Assumption Study Review:** A review of the OPEB experience study is performed in conjunction with the review of the OPEB valuation.

- Required by: OPEB Policy
- Performed by: OPEB Reviewing Actuary
- Frequency: Every three years (triennial)
- Rationale:
  - The 1937 Act requires an experience study performed triennially for the LACERA retirement benefits plan.
  - As a recognized leader in public pension plan administration, LACERA has long implemented the prudent policy and practice of performing a review of each triennial experience study for the retirement benefits plan.
  - Consistent with policy and practice of the retirement benefits valuation and audit cycle, and for cost-benefit optimization, the OPEB Policy requires a review of the OPEB experience study performed each time a triennial OPEB experience study is completed (see the previous section thereof).
  - Promoting operating efficiency by leveraging the efforts of the reviewing actuary teams in completing two projects with each mobilization, the OPEB Policy requires a review of the OPEB valuation immediately after a review of the OPEB experience study.

## Actuarial Cost Method

OPEB valuations beginning with the July 1, 2006 OPEB valuation have been prepared under the projected unit credit actuarial cost method. At that time, the County and LACERA worked together with a stakeholder group and selected projected unit credit as the cost method which best reflected the liabilities. Under this method, the actuarial present value of the projected benefits of each individual included in the valuation is allocated pro-rata to each year of service between entry age and assumed exit. For members who transferred between plans, entry age is based on original entry into the LACERA retirement benefits plan.

Effective with the July 1, 2018 OPEB valuation, the actuarial cost method was changed to entry age normal. Under the principles of this method, the actuarial present value of the projected benefits of each individual included in the valuation is allocated as a level percentage of the individual's projected compensation between entry age and assumed exit (until maximum retirement age). For members who transferred between plans, entry age is based on original entry into the system. The entry age normal actuarial cost method is also used for financial reporting purposes as required by GASB Statement No. 74.

## OPEB Agent Plan

The July 1, 2018 OPEB valuation marks the first valuation prepared under an agent plan structure, changing OPEB funding reporting from the cost-sharing plan structure used in OPEB valuations since July 1, 2006. At the direction of the County to precisely allocate its own liabilities, the agent plan structure allows for projecting the actuarial accrued liability based on each individual agent's assets and investment rate of return assumptions. The investment earnings assumption for agents that are pre-funding through the OPEB Trust is the expected return for the OPEB Trust. The investment earnings assumption for the agents that are not pre-funding through the OPEB Trust have an investment earnings assumption of the County's general funds' expected return. However, OPEB specific demographic assumptions such as initial enrollment, plan and tier selection, spouse age difference, and re-enrollment assumptions are combined for all of the agents.

The following agents and agent groupings were developed to determine the liability for the individual agents, the total OPEB Trust, and the total OPEB Program:

- Los Angeles County
- Superior Court

- LACERA
- Los Angeles County, Superior Court, and LACERA (total OPEB Trust)
- Los Angeles County, Superior Court, LACERA, and Outside Districts (total OPEB Program)

The total OPEB Program agent grouping is used to disclose the aggregate amounts throughout the Actuarial Section.

## Recent Financial Reporting Standards

In June 2015, the GASB issued Statement No. 74 and Statement No. 75, which govern new accounting and financial reporting standards for public sector post-retirement benefit programs and the employers that sponsor them. GASB 74 and 75 superseded GASB 43 and 45. GASB Statements 74 and 75 reflect a fundamental overhaul in the standards for accounting and financial reporting for post- employment benefits other than pensions (OPEB). The information required to be noted and disclosed as a result of GASB 74 is a foundational basis for the information required by GASB 75.

GASB 74 is for OPEB plans (LACERA) and was effective beginning for the plan fiscal year ended as of June 30, 2017.[1] GASB 75 is for employers that sponsor OPEB plans and is effective beginning for the employer fiscal year ended as of June 30, 2018.[2] The data, assumptions, program provisions, and funding goals described in the OPEB valuation report serve as a basis for the GASB 74 and 75 disclosure reports, which the actuary prepares separately. GASB sets forth specific financial reporting requirements for LACERA and the County, which result in different computations and data—including discount rates — than the information provided in the OPEB valuation report. The GASB reporting guidelines are intended to improve OPEB program cost disclosures and do not require any funding arrangements.

The implementation of these complex GASB statements required a high degree of coordination and alignment between the plan administrator (LACERA) and the employers (i.e., County, LACERA, Superior Court, and Outside Districts). As such, in February 2016, LACERA established a GASB 74/75 Task Force (Task Force) composed of LACERA staff, key stakeholders from the employer groups, and external professional service providers to collectively discuss LACERA's and the employers' requirements for implementing their respective new GASB standards. This strategic partnership provided the opportunity to open the lines of communication among the parties involved and collectively worked towards establishing timelines and a framework for implementation decisions.

Prior to October 2017, the OPEB actuarial valuation was performed biennially and the related experience study was performed triennially. The associated independent review of the actuarial valuation, as well as the audit of the experience study were conducted every six years. With the advent of GASB 75, the Task Force revisited the timing of these reporting requirements.

GASB 75 requires the reporting date to be a maximum of 30 months and one day after the actuarial valuation date. The Task Force believed this requirement, coupled with the one-year lag period stipulated by the County's GASB 75 implementation schedule, imposes a tight timeline that leaves no room for unforeseen issues or adversity for all parties concerned. Increasing the OPEB valuation schedule from every other year (biennial) to every year (annual) effectively eliminated this critical risk and highly improved compliance with GASB 75 firm reporting requirements, including the ability to conduct audits of the OPEB information which will be included in the County's financial statements. Similarly, improved OPEB actuarial valuation frequency equated to enhanced timing of the associated OPEB reviews (i.e., from every six years to every three years). More frequent updates provide more recent information to decision-makers, plan sponsors, and program administrators.

[1]LACERA implemented GASB 74 as of June 30, 2017.
[2]The LACERA participating employers implemented GASB 75 as of June 30, 2018.

## Timing of OPEB Actuarial Projects

Milliman, the OPEB consulting actuary, performed the most recent OPEB valuation as of July 1, 2018, using the 2018 OPEB experience study of actuarial assumptions. The revised OPEB policy not only requires annual OPEB valuations but also requires the actuary to review the reasonableness of the economic and non-economic assumptions every three years. As a result of the current OPEB policy's increased valuation and review frequency and for consistency with the retirement benefits valuation and review requirements, the timing of these actuarial projects were adjusted to promote operational efficiency.

Specifically, the OPEB experience study, OPEB valuation review, and OPEB experience study review as of July 1, 2018 and as of July 1, 2020 are catch-up two-year cycles to efficiently use the OPEB experience study during the four-year gap between the current and prior OPEB Policies. The first three-year cycle for the OPEB experience study, OPEB valuation review, and OPEB experience study review will be performed as of July 1, 2023.

## Latest Actuarial Review Results

The most recent actuarial reviews of the OPEB valuation and OPEB experience study were conducted based on the current OPEB Policy. The OPEB Program reviewing actuary, Cavanaugh Macdonald Consulting (CMC), performed reviews of Milliman's OPEB experience study and OPEB valuation prepared as of July 1, 2018.

In regard to the review of the OPEB experience study, CMC concluded, "We believe that the actuarial assumptions recommended by Milliman are reasonable and appropriate for use in the upcoming actuarial valuation for Los Angeles County's OPEB Program. We have no findings of material discrepancies with generally accepted actuarial principles or professional standards." CMC's review of Milliman's OPEB valuation determined, "Because of the complexity of actuarial work, we would not expect to match Milliman's valuation results exactly, nor would we necessarily expect our opinions regarding the results to be the same as those of Milliman. While we offer some different viewpoints or ideas, we believe that Milliman's work provides an appropriate assessment of the status of the OPEB Program for purposes of determining an appropriate funding strategy."

## Other Actuarial Information

Actuarial Methods and Assumptions: A description of the actuarial methods and assumptions for the OPEB valuation used by the OPEB consulting actuary are included in this Actuarial Section.

The following additional information is included in this section:

- Actuary's Certification Letter — OPEB Program
- Summary of Actuarial Methods and Assumptions — OPEB Program
- Schedule of Funding Progress — OPEB Program
- Active Member Valuation Data — OPEB Program
- Retirants and Beneficiaries Added to and Removed from Rolls — OPEB Program
- Actuary Solvency Test — OPEB Program
- Actuarial Analysis of Financial Experience — OPEB Program

A Summary of Major OPEB Program Provisions is available upon request.

See Note N — OPEB Program for details on the plan description.

September 20, 2019

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Board of Retirement
Los Angeles County Employees Retirement Association
300 North Lake Avenue, Suite 820
Pasadena, CA 91101-4199

Dear Members of the Board:

Los Angeles County provides Other Post-Employment Benefits (OPEB): retiree medical, dental/vision, and death/burial insurance benefits to the retired Los Angeles County (County) workers who also participate in the Los Angeles County Employees Retirement Association (LACERA) retirement benefits program. These healthcare related benefits are called the Los Angeles County OPEB Program, or the "Program". The Program provides these benefits on a "pay-as-you-go" basis. Biennial actuarial valuations provided the required financial disclosures for the Program through July 1, 2016. Effective July 1, 2017, OPEB actuarial funding valuations are performed annually. The next valuation is expected as of July 1, 2019.

A summary of the results of the past three actuarial valuations is shown below. All dollar amounts are in billions:

| Valuation Date | Actuarial Accrued Liability | Assets | Unfunded Actuarial Accrued Liability | ADC* as a Percentage of Payroll |
|---|---|---|---|---|
| July 1, 2016 | $25.91 | $0.56 | $25.35 | 27.03% |
| July 1, 2017 | $26.30 | $0.74 | $25.56 | 25.57% |
| July 1, 2018 | $21.07 | $0.94 | $20.13 | 20.56% |

*Actuarially Determined Contribution (ADC) based on GASB 74/75 methodology and previously known as Annual Required Contribution (ARC) based on GASB 43/45 methodology.

The County's Board of Supervisors affirmed their support for pre-funding its OPEB liabilities by providing specific initial appropriations to the OPEB Trust Fund. Since the July 1, 2012 Valuation, details of a long-term funding policy have been finalized. The funding policy provides for steady increases in contributions each year with the ultimate goal of making contributions equal to the ADC. The July 1, 2014, July 1, 2016, and annual OPEB Valuations thereafter include assets invested in the OPEB Trust.

In preparing the July 1, 2018 OPEB valuation report, we relied, without audit, on information (some oral and some in writing) supplied by Los Angeles County, LACERA, and Segal (LACERA's healthcare consultant). This information includes, but is not limited to, benefit descriptions, membership data, and financial information. We found this information to be reasonably consistent and comparable with data used for other purposes. The valuation results depend on the integrity of this information. In some cases, where the data was incomplete, we made assumptions as noted in Table C-10 of our July 1, 2018 valuation report. If any of this information is inaccurate or incomplete, our results may be different and our calculations may need to be revised.

The valuation is also based on our understanding of the Program's current benefit provisions and the actuarial assumptions, which were reviewed and adopted by the Board of Retirement. The retirement benefit related demographic and economic assumptions were based on those developed for the June 30, 2018 valuation of the LACERA retirement benefit program, approved by LACERA's Board of Investments. Economic and relevant demographic assumptions from the retirement benefit investigation of experience, conducted by Milliman, are included in the July 1, 2018 OPEB valuation. Assumptions unique to OPEB were identified and evaluated in Milliman's 2018 OPEB investigation of experience study report as of July 1, 2018, approved by LACERA's Board of Retirement.

The OPEB Program changed from cost sharing to agent effective with the July 1, 2018 OPEB valuation. The OPEB demographic and trend assumptions are combined for all of LACERA's agents. The investment rate of return assumption differs by the agents that are prefunding into the OPEB Trust and the agents that are not prefunding into the OPEB Trust.

With the change from cost sharing to agent, a GASB 74 disclosure report for LACERA's financial statements is no longer required to report the OPEB Program liability in LACERA's financial statements. The employer specific information will be provided in the GASB 75 disclosure reports for employer financial reporting. The assumptions and methods used for financial reporting under GASB 75 are the same as the funding assumptions and methods used in the July 1, 2018 OPEB valuation report, with the following exceptions:

1. The GASB 75 discount rate is determined using depletion date methodology, and it changes on each measurement date.
2. The GASB 75 liabilities have LACERA operational administrative expenses removed.

The actuarial computations presented in the July 1, 2018 OPEB valuation and the forthcoming June 30, 2020 GASB 75 disclosure reports are for purposes of fulfilling financial accounting requirements for LACERA's employers. The liabilities in the July 1, 2018 OPEB valuation and the GASB 75 disclosure reports are determined by using the entry age normal actuarial cost method. The assets are recognized at market value. We consider the actuarial assumptions and methods to be internally consistent, to represent a long-term perspective, and to be reasonable. We believe they also meet the parameters of Governmental Accounting Standards Board Statement No. 75 for fulfilling financial accounting requirements. Nevertheless, the emerging costs will vary from those presented in our report to the extent that actual experience differs from that projected by the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements presented in the OPEB funding valuation report and the GASB 75 disclosure report due to such factors as the following: OPEB program experience differing from that anticipated by the economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and changes in OPEB program provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements.

Milliman's work is prepared exclusively for LACERA for a specific and limited purpose. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. It is a complex, technical analysis that assumes a high level of knowledge concerning LACERA's operations, and uses LACERA's data, which Milliman has not audited.

No third party recipient of Milliman's work product who desires professional guidance should rely upon Milliman's work product, but should engage qualified professionals for advice appropriate to its own specific needs.

The consultants who worked on this assignment are employee benefit actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel. The signing actuaries are independent of the plan sponsor. We are not aware of any relationship that would impair the objectivity of our work.

Milliman prepared the following information for the Actuarial Section:

1. Retirees and Beneficiaries Added to and Removed from Benefits — OPEB Program
2. Actuarial Analysis of Financial Experience — OPEB Program
3. Actuary Solvency Test — OPEB Program
4. Schedule of Funding Progress — OPEB Program

LACERA staff prepared the information in Note N — OPEB Program, of the Financial Section and the Required Supplementary Information, based on information supplied in prior actuarial reports, our July 1, 2018 actuarial valuation, and our forthcoming June 30, 2020 GASB 75 report. Milliman has reviewed the information in Note N for accuracy.

We certify that the assumptions and methods used for funding and financial reporting purposes in the July 1, 2018 funding valuation meet the parameters set by Actuarial Standards of Practice promulgated by the Actuarial Standards Board (ASB). We are members of the American Academy of Actuaries and have experience in performing valuations for public OPEB programs.

Sincerely,

Robert L. Schmidt, FSA, EA, MAAA
Principal and Consulting Actuary

Janet O. Jennings, ASA, MAAA
Associate Actuary

RLS/bh

| | |
|---|---|
| **Actuarial Methods and Assumptions** | The OPEB actuarial methods and assumptions are recommended by the consulting actuary and adopted by the Board of Retirement. The actuarial assumptions used to determine the liabilities are based on the results of the 2016 Pension Plan and 2018 OPEB Program separate triennial Investigation of Experience Studies. Where applicable, the same assumptions are used for the OPEB Program as for the Pension Plan. The assumptions that overlap with the Pension Plan assumptions were reviewed and changed June 30, 2016, as a result of the 2016 Pension Plan triennial Investigation of Experience Study, approved by the Board of Investments in December 2016. The general wage increase and inflation assumptions were evaluated for the Pension Plan and applied to the OPEB Program.<br><br>The consulting actuary recommended an OPEB specific investment earnings assumption since investment earnings for the OPEB valuation are based on the expected return from the County's general assets or the expected return from the OPEB Trust. These assets are invested based on the OPEB Trust investment policy statement adopted by the Board of Investments which applies different asset allocations than the one used for the Pension Plan. The OPEB specific assumptions including election, tier selection, and medical cost trends were reviewed and updated as a result of the 2018 OPEB Investigation of Experience Study the LACERA Board of Retirement adopted in March 2019. These updated assumptions were applied to the OPEB valuation conducted as of July 1, 2018, which was adopted in August 2019 by the Board of Retirement.<br><br>See the schedule titled Active Member Valuation Data — OPEB Program for active member valuation purposes. |
| **Actuarial Cost Method** | Effective with the July 1, 2018 OPEB funding valuation, the Entry Age Normal (EAN) actuarial cost method was applied. Under the principles of this method, the actuarial present value of the projected benefits of each member included in the valuation is allocated as a level percentage of the member's projected compensation between entry age and assumed exit (until maximum retirement age). For members who transferred between plans, entry age is based on original entry into the system.<br><br>The portion of this actuarial present value allocated to a valuation year is called the Normal Cost (NC). The portion of this actuarial present value not provided for at a valuation date by the sum of (a) the actuarial value of the assets, and (b) the actuarial present value of future Normal Costs is called the Unfunded Actuarial Accrued Liability (UAAL). The UAAL is amortized as a level percentage of the projected salaries of the active members, both present and future, covered by the LACERA retirement benefits plan over a 30-year period from the valuation date. |

**Actuarial Asset Valuation Method**

Market Value.

**Investment Return**

The investment earnings assumption for agents that are pre-funding through the OPEB Trust is the OPEB Trust expected return of 6.00 percent. The investment earnings assumption for agents that are not pre-funding through the OPEB Trust is the County's general funds expected return of 3.69 percent.

The change from cost sharing to agent begins with the July 1, 2018 OPEB funding valuation. The investment earnings assumption approach for this funding valuation is intended to reflect the earnings associated with each agent. The separate GASB 75 disclosure report, which provides information for employers and is different from this funding valuation, follows a prescribed discount rate for accounting disclosures.

**Inflation Rate**

2.75 percent per annum. This rate was adopted beginning with the July 1, 2016 OPEB valuation.

**Amortization Method**

Level percentage of projected salaries of the active members, both present and future, over a 30-year period. This is commonly referred to as a "rolling 30-year amortization method" and does not cover interest on the UAAL. This assumption was adopted beginning with the July 1, 2006 OPEB valuation.

**Healthcare Cost Trend Rates**

| | FY 2019 to FY 2020 | FY 2020 to FY 2021 | Ultimate (Grading from June 30, 2019 to June 30, 2104) |
|---|---|---|---|
| LACERA Medical Under 65 | 3.30% | 6.40% | 4.40% |
| LACERA Medical Over 65 | 2.90% | 6.30% | 4.50% |
| Part B Premiums | 9.40% | 4.70% | 4.30% |
| Dental/Vision | —% | 4.50% | 3.70% |
| Weighted Average Trend | 3.53% | 6.02% | 4.46% |

| | |
|---|---|
| **Claim Costs** | Claim cost data is reviewed for the membership in aggregate including members of all employers, whether they participate in the OPEB Trust or not. The claim cost assumptions were updated as part of the July 1, 2018 valuation and differ by Tier 1 and Tier 2. Retiree Healthcare Benefits Program — Tier 1 is for members who were hired before July 1, 2014. Members who were hired after June 30, 2014 are in Retiree Healthcare Benefits Program — Tier 2. The tiers have different maximum employer contributions which impacts plan election patterns, resulting in different claim costs. Refer to Table A-21 of the July 1, 2018 OPEB valuation for more details. |
| **Retirement** | Members in General Plans A–D may retire at age 50 with 10 years of service, or any age with 30 years of service, or age 70 regardless of the number of years of service. General Plan G members are eligible to retire at age 52 with five years of service, or age 70 regardless of the number of years of service. Non-contributory Plan E members may retire at age 55 with 10 years of service. Members of Safety Plans A and B may retire at age 50 with 10 years of service, or any age with 20 years of service. Safety Plan C members are eligible to retire at age 50 with five years of County service. |
| **Expectation of Life After Retirement[1,2]** | The same post-retirement mortality rates are used in the valuation for active members after termination, members retired for service, and beneficiaries. Future beneficiaries are assumed to have the same mortality as a general member of the opposite gender. The mortality tables used are listed below while age based rates are illustrated in the July 1, 2018 OPEB valuation report. These rates were adopted June 30, 2016.<br><br>**Males:**<br>**General Members:** RP–2014 Healthy Annuitant Mortality Table for Males multiplied by 105 percent, with MP–2014 Ultimate Projection Scale.<br>**Safety Members:** RP–2014 Healthy Annuitant Mortality Table for Males multiplied by 95 percent, with MP–2014 Ultimate Projection Scale.<br><br>**Females:**<br>**General Members:** RP–2014 Healthy Annuitant Mortality Table for Females, with MP–2014 Ultimate Projection Scale.<br>**Safety Members:** RP–2014 Healthy Annuitant Mortality Table for Females, with MP–2014 Ultimate Projection Scale. |

| | |
|---|---|
| **Expectation of Life After Disability[1,2]** | For disabled members, the mortality tables used are listed below while age based rates are illustrated in the July 1, 2018 OPEB valuation report. These rates were adopted June 30, 2016.<br><br>**Males:**<br>**General Members:** Average of RP–2014 Healthy Annuitant Mortality Table for Males multiplied by 105 percent and RP–2014 Disabled Annuitant Mortality Table for Males, both projected with MP–2014 Ultimate Projection Scale.<br>**Safety Members:** RP–2014 Healthy Annuitant Mortality Table for Males, with MP–2014 Ultimate Projection Scale.<br><br>**Females:**<br>**General Members:** Average of RP–2014 Healthy Annuitant Mortality Table for Females and RP–2014 Disabled Annuitant Mortality Table for Females, both projected with MP–2014 Ultimate Projection Scale.<br>**Safety Members:** RP–2014 Healthy Annuitant Mortality Table for Females, with MP–2014 Ultimate Projection Scale. |
| **Retiree Medical and Dental/Vision Eligibility and Enrollment Assumptions** | Any retired or vested terminated members who have not elected a refund of their member pension contributions and will receive a pension benefit other than a refund are eligible for retiree medical and dental/vision enrollment. Refer to Tables A-14 through A-19 of the July 1, 2018 OPEB Valuation for more details regarding the enrollment assumptions. |
| **Other Employment Terminations** | Terminating employees may withdraw their contributions immediately upon termination of employment and forfeit the right to further retirement, medical, dental/vision and death benefits, or they may leave their contributions on deposit with LACERA. Former contributing members whose contributions are on deposit may later elect to receive a refund, may return to work, or may remain inactive until becoming eligible to receive a retirement benefit under either LACERA or a reciprocal retirement plan. All terminating members who are not eligible for vested benefits are assumed to withdraw their contributions immediately. All terminating members are assumed not to be rehired. The Probability of Occurrence schedule included in this Actuarial Section provides a summary of probability of retirement and withdrawal for sample ages. Although these assumptions were developed for the Pension Plan, they apply to the OPEB Program participant population. |

[1]The RP-2014 mortality tables were published by the Society of Actuaries (SOA's) Retirement Plans Experience Committee (RPEC) in October 2014. The data studied includes more than 10 million life-years of exposure over the period 2004 to 2008, and includes separate mortality tables for healthy annuitants, disabled retirees, and employees. These mortality tables reflect adjustments, using mortality improvement scale MP-2014 (discussed further below), to account for changes in mortality between the period of experience and 2014.

[2]The SOA's Mortality Improvement Scale MP-2014 (published in October 2014) is used to adjust the RP-2014 mortality tables to account for anticipated changes in mortality rates in future years. In general, it is assumed that mortality rates will improve (implying longer lifetimes) in future due partially to improvements in healthcare.

## Schedule of Funding Progress — OPEB Program

(Dollars in Thousands)

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded Actuarial Accrued Liability (UAAL) (b-a) | Funded Ratio (a/b) | Covered Employee Payroll (c) | UAAL as a Percentage of Covered Employee Payroll [(b-a)/c] |
|---|---|---|---|---|---|---|
| July 1, 2010 | $— | $24,031,000 | $24,031,000 | —% | N/A | N/A |
| July 1, 2012 | — | 26,952,700 | 26,952,700 | —% | N/A | N/A |
| July 1, 2014 | 483,800 | 28,546,600 | 28,062,800 | 1.7% | N/A | N/A |
| July 1, 2016 | 560,800 | 25,912,600 | 25,351,800 | 2.2% | N/A | N/A |
| July 1, 2017[1] | 742,900 | 26,300,800 | 25,557,900 | 2.8% | 8,544,140 | 299.1% |
| **July 1, 2018[2]** | **$941,010** | **$21,066,800** | **$20,125,790** | **4.5%** | **$8,954,417** | **224.8%** |

[1]The resulting July 1, 2017 OPEB valuation report was the first annual (versus biennial) valuation prepared in accordance with the revised OPEB Actuarial Valuation and Audit Policy Statement, which the LACERA Board of Investments approved in October 2017, to meet the plan sponsors' GASB Statement No. 75 reporting requirements.

[2]Effective with the July 1, 2018 OPEB valuation, the actuarial cost method used to project the AAL changed from projected unit credit to entry age normal.

## Active Member Valuation Data — OPEB Program

| Valuation Date | Plan Type | Member Count[2] | Annual Salary | Average Annual Salary | Percentage Increase/ (Decrease) in Average Salary |
|---|---|---|---|---|---|
| July 1, 2010 | General | 81,352 | $5,313,595,764 | $65,316 | 6.34% |
| | Safety | 12,991 | 1,256,733,372 | 96,739 | 4.50% |
| | **Total** | **94,343** | **$6,570,329,136** | **$69,643** | **6.08%** |
| July 1, 2012 | General | 79,416 | $5,267,863,044 | $66,333 | 1.56% |
| | Safety | 12,482 | 1,229,551,596 | 98,506 | 1.83% |
| | **Total** | **91,898** | **$6,497,414,640** | **$70,702** | **1.52%** |
| July 1, 2014 | General | 79,878 | $5,482,792,752 | $68,640 | 3.48% |
| | Safety | 12,515 | 1,251,582,744 | 100,007 | 1.52% |
| | **Total** | **92,393** | **$6,734,375,496** | **$72,888** | **3.09%** |
| July 1, 2016 | General | 82,780 | $5,938,289,628 | $71,736 | 4.51% |
| | Safety | 12,515 | 1,340,879,628 | 107,142 | 7.13% |
| | **Total** | **95,295** | **$7,279,169,256** | **$76,386** | **4.80%** |
| July 1, 2017[1] | General | 84,454 | $6,284,503,344 | $74,413 | 3.73% |
| | Safety | 12,695 | 1,387,680,972 | 109,309 | 2.02% |
| | **Total** | **97,149** | **$7,672,184,316** | **$78,973** | **3.39%** |
| **July 1, 2018** | **General** | **85,645** | **$6,604,776,960** | **$77,118** | **3.64%** |
| | **Safety** | **12,770** | **1,451,326,572** | **113,651** | **3.97%** |
| | **Total** | **98,415** | **$8,056,103,532** | **$81,858** | **3.65%** |

[1]The resulting OPEB valuation report was the first annual (versus biennial) valuation prepared in accordance with the revised OPEB Actuarial Valuation and Audit Policy Statement, which the LACERA Board of Investments approved in October 2017, to meet the plan sponsors' GASB Statement No. 75 reporting requirements.

[2]Includes both Medicare and non-Medicare eligible individuals.

## Retirants and Beneficiaries Added to and Removed From Rolls — OPEB Program

(Dollars in Thousands)

| | Added to Rolls | | Removed From Rolls | | Rolls at End of Year | | | |
|---|---|---|---|---|---|---|---|---|
| Valuation Date | Member Count | Annual Allowance[1] | Member Count | Annual Allowance | Member Count | Annual Allowance | Percentage Increase in Retiree Allowance | Average Annual Allowance |
| July 1, 2010 | — | $— | — | $— | 43,936 | $391,979 | —% | $8,922 |
| July 1, 2012 | 5,336 | 56,982 | (3,070) | (25,497) | 46,202 | 423,464 | 8.03% | 9,165 |
| July 1, 2014 | 5,335 | 89,205 | (3,369) | (29,925) | 48,168 | 482,744 | 14.00% | 10,022 |
| July 1, 2016 | 5,710 | 103,373 | (3,514) | (30,745) | 50,364 | 555,372 | 15.04% | 11,027 |
| July 1, 2017[2] | 3,229 | 41,266 | (1,839) | (18,052) | 51,754 | 578,586 | 4.18% | 11,180 |
| **July 1, 2018** | **3,028** | **$61,697** | **(1,977)** | **($20,530)** | **52,805** | **$619,753** | **7.12%** | **$11,737** |

[1]Includes changes for continuing retirees and beneficiaries.
[2]The resulting OPEB valuation report was the first annual valuation prepared in accordance with the revised OPEB Actuarial Valuation and Audit Policy Statement, which the LACERA Board of Investments approved in October 2017, to meet the plan sponsors' GASB Statement No. 75 reporting requirements.

## Actuary Solvency Test — OPEB Program[1]

(Dollars in Millions)

| | Actuarial Accrued Liability (AAL) for | | | | Portion of AAL Covered by Assets | | |
|---|---|---|---|---|---|---|---|
| Actuarial Valuation Date | (A) Active Member Contributions | (B) Retirees and Beneficiaries[2] | (C) Active Members (Employer-Financed Portion) | Actuarial Value of Valuation Assets | (A) Active | (B) Retired | (C) Employer |
| July 1, 2012 | $— | $10,681 | $16,272 | $— | N/A | —% | —% |
| July 1, 2014 | — | 11,791 | 16,756 | 484 | N/A | 4% | —% |
| July 1, 2016 | — | 11,365 | 14,548 | 561 | N/A | 5% | —% |
| July 1, 2017[3] | — | 11,640 | 14,661 | 743 | N/A | 6% | —% |
| **July 1, 2018** | **$—** | **$10,108** | **$10,959** | **$941** | **N/A** | **9%** | **—%** |

[1]Trend information: Schedule will ultimately show information for 10 years. Additional years will be displayed as they become available prospectively.
[2]Includes vested former members.
[3]The resulting OPEB valuation report was the first annual valuation prepared in accordance with the revised OPEB Actuarial Valuation and Audit Policy Statement, which the LACERA Board of Investments approved in October 2017, to meet the plan sponsors' GASB Statement No. 75 reporting requirements.

## Actuarial Analysis of Financial Experience — OPEB Program

(Dollars in Millions)

| | | Valuation as of July 1 | | | | | |
|---|---|---|---|---|---|---|---|
| | 2018 | 2017[4] | 2016 | 2014 | 2012 | 2010 | 2008 |
| Prior Unfunded Actuarial Accrued Liability | $25,558 | $25,352 | $28,063 | $26,953 | $24,031 | $21,864 | $21,216 |
| Expected Increase/(Decrease) from Prior Valuation | 1,170 | 1,462 | 3,240 | 3,873 | 3,771 | 3,478 | 3,341 |
| Claim Costs Greater/(Less) than Expected[1] | (1,067) | (1,213) | (2,322) | (5,471) | (3,864) | (1,267) | (3,131) |
| Change in Assumptions[2] | (6,936) | — | (3,385) | 3,238 | 3,423 | 287 | 536 |
| Asset Return Less/(Greater) than Expected | (28) | (54) | 78 | (484) | N/A | N/A | N/A |
| All Other Experience[3] | 1,429 | 11 | (322) | (46) | (408) | (331) | (98) |
| **Ending Unfunded Actuarial Accrued Liability** | **$20,126** | **$25,558** | **$25,352** | **$28,063** | **$26,953** | **$24,031** | **$21,864** |

[1]Includes the trend assumption change.
[2]In 2016, this amount includes the impact from implementing the Tier 2 retiree health care benefits plan.
[3]In 2018, this amount is primarily due to the impact of the Excise Tax.
[4]The resulting OPEB valuation report was the first annual valuation prepared in accordance with the revised OPEB Actuarial Valuation and Audit Policy Statement, which the LACERA Board of Investments approved in October 2017, to meet the plan sponsors' GASB Statement No. 75 reporting requirements.

# **Statistical** Section

LACERA is made up of thousands of members with different backgrounds and perspectives sharing common values and the goal of a secure retirement. Our combined strength as an organization stems from sharing ideas and valuing each individual's contribution.

A sunflower actually contains thousands of tiny flowers called florets. Although sunflowers can self-pollinate, insect pollination promotes greater genetic diversity, which makes plant populations more adaptable to changing conditions.

*Sunflowers were cultivated by Native Americans as early as 3,000 B.C., and may have been domesticated before corn.*

## Statistical Information Overview

The objective of the Statistical Section is to provide historical perspective, context, and detail to assist in utilizing the Basic Financial Statements, Notes to the Basic Financial Statements, and Required Supplementary Information to understand and assess the status of the Pension Plan and OPEB Program administered by LACERA as of the fiscal year-end. Statistical data is maintained within the Member Workspace (Workspace). Workspace is a sophisticated in-house data management system in which LACERA actively maintains member-specific information, comprehensive plan membership records, and related member-specific documents. This section reports the most current membership status information for each type of member (general, safety, active, retired, etc.).

The statistical information provided here is divided into Financial Trends Information and Operating Information.

Financial Trends Information is intended to assist readers in understanding how LACERA's financial position has changed over time:

- *Changes in Fiduciary Net Position – Pension Plan* and *Changes in Fiduciary Net Position — OPEB Trust* present additions by source, deductions by type, and the total change in Fiduciary Net Position for each year.
- *Pension Benefit Expenses by Type* presents retirement benefits, lump-sum death benefits, and refund deductions by type of benefit (e.g., Service and Disability Retirement from General and Safety Plans).

Operating Information provides contextual information about LACERA's operations and membership to assist readers in using financial statement information to comprehend and evaluate LACERA's fiscal condition:

- *Active Members* provides membership statistics for active vested and non-vested members as well as for deferred vested members.
- *Retired Members by Type of Pension Benefit and the Retired Members by Type of OPEB Benefit* present benefit information for the current year by benefit type and dollar level.
- *Schedule of Average Pension Benefit Payments* presents the average monthly benefit, average final salary, and number of retired members, organized in five-year increments of credited service.
- *Active Members and Participating Pension Employers* presents the employers and their corresponding covered employees.
- *Retired Members of Participating OPEB Employers* presents the number of covered members by medical or dental/vision benefits.
- *Employer Contribution Rates* are provided as additional information.
- The *Supplemental Targeted Adjustment for Retirees (STAR) Program Costs* trends the Program's costs through the current calendar year-end.

## Changes in Fiduciary Net Position — Pension Plan

*For the Last 10 Fiscal Years Ended June 30*

(Dollars in Thousands)

| | 2019 | 2018 | 2017 | 2016 | 2015 |
|---|---|---|---|---|---|
| **Additions** | | | | | |
| Employer Contributions | $1,668,151 | $1,524,823 | $1,331,359 | $1,403,712 | $1,494,975 |
| Member Contributions | 635,415 | 591,262 | 526,579 | 498,083 | 441,258 |
| Net Investment Income/(Loss) | 3,175,723 | 4,716,640 | 6,129,300 | 80,588 | 1,989,358 |
| Miscellaneous | 5,958 | 5,613 | 6,370 | 2,781 | 1,695 |
| **Total Additions/(Declines)** | **$5,485,247** | **$6,838,338** | **$7,993,608** | **$1,985,164** | **$ 3,927,286** |
| **Deductions** | | | | | |
| Total Benefit Expenses[1] | $3,407,154 | $3,203,375 | $3,029,633 | $2,889,186 | $2,768,410 |
| Administrative Expenses | 82,906 | 78,181 | 66,830 | 67,645 | 62,591 |
| Miscellaneous | 333 | 451 | 188 | (11) | 212 |
| **Total Deductions** | **$3,490,393** | **$3,282,007** | **$3,096,651** | **$2,956,820** | **$2,831,213** |
| **Net Increase/(Decrease) in Fiduciary Net Position** | **$1,994,854** | **$3,556,331** | **$4,896,957** | **($971,656)** | **$1,096,073** |

| | 2014 | 2013 | 2012 | 2011 | 2010 |
|---|---|---|---|---|---|
| **Additions** | | | | | |
| Employer Contributions | $1,320,442 | $723,195 | $1,078,929 | $944,174 | $843,704 |
| Member Contributions | 439,001 | 679,572 | 506,758 | 463,743 | 429,612 |
| Net Investment Income/(Loss) | 6,908,412 | 4,659,015 | (291,009) | 6,930,358 | 3,840,401 |
| Miscellaneous | 2,256 | 385 | 1,004 | 591 | 868 |
| **Total Additions/(Declines)** | **$8,670,111** | **$6,062,167** | **$1,295,682** | **$8,338,866** | **$5,114,585** |
| **Deductions** | | | | | |
| Total Benefit Expenses[1] | $2,662,401 | $2,541,351 | $2,390,598 | $2,269,791 | $2,130,738 |
| Administrative Expenses | 58,723 | 53,863 | 50,218 | 50,605 | 48,892 |
| Miscellaneous | 229 | 190 | 121 | 347 | 48 |
| **Total Deductions** | **$2,721,353** | **$2,595,404** | **$2,440,937** | **$2,320,743** | **$2,179,678** |
| **Net Increase/(Decrease) in Fiduciary Net Position** | **$5,948,758** | **$3,466,763** | **($1,145,255)** | **$6,018,123** | **$2,934,907** |

[1]See Pension Benefit Expenses by Type in this Statistical Section.

## Changes in Fiduciary Net Position — OPEB Trust

*For the Last Seven Fiscal Years Ended June 30*[1]
(Dollars in Thousands)

| | 2019 | 2018 | 2017 | 2016 |
|---|---|---|---|---|
| **Additions** | | | | |
| Employer Contributions[2] | **$863,028** | $706,709 | $645,381 | $615,275 |
| Net Investment Income/(Loss) | **62,116** | 78,746 | 94,505 | (8,095) |
| Miscellaneous | **—** | — | 2 | — |
| **Total Additions** | **$925,144** | **$785,455** | **$739,888** | **$607,180** |
| **Deductions** | | | | |
| Administrative Expenses | **$234** | $190 | $374 | $192 |
| Benefit Payments[2] | **627,415** | 583,406 | 557,381 | 534,597 |
| Redemptions | **25** | 3,735 | — | — |
| **Total Deductions** | **$627,674** | **$587,331** | **$557,755** | **$534,789** |
| **Net Increase in Fiduciary Net Position** | **$297,470** | **$198,124** | **$182,133** | **$72,391** |

| | 2015 | 2014 | 2013 |
|---|---|---|---|
| **Additions** | | | |
| Employer Contributions[2] | $— | $— | $448,819 |
| Net Investment Income/(Loss) | 4,688 | 35,113 | 209 |
| Miscellaneous | — | — | — |
| **Total Additions** | **$4,688** | **$35,113** | **$449,028** |
| **Deductions** | | | |
| Administrative Expenses | $153 | $144 | $173 |
| Benefit Payments[2] | — | — | — |
| Redemptions | — | — | — |
| **Total Deductions** | **$153** | **$144** | **$173** |
| **Net Increase in Fiduciary Net Position** | **$4,535** | **$34,969** | **$448,855** |

[1]Trend Information: Schedule will ultimately show information for 10 years. Additional years will be displayed as they become available prospectively.

[2]Beginning in 2016, the Trust is now reflecting both pre-funding contributions actually made to the OPEB Trust as well as additions to Fiduciary Net Position including amounts for OPEB as the benefits come due that will not be reimbursed to the employers using OPEB plan assets. Correspondingly, deductions to Fiduciary Net Position, starting in 2016, now reflect all benefit payments whether made through the Trust or by employers as OPEB comes due (per paragraph 28a and 31 of GASB Statement No. 74).

## Pension Benefit Expenses by Type

*For the Last 10 Fiscal Years Ended June 30*
(Dollars in Thousands)

| | 2019 | 2018 | 2017 | 2016 | 2015 |
|---|---|---|---|---|---|
| **Service Retiree Payroll** | | | | | |
| General | **$2,060,365** | $1,946,614 | $1,845,791 | $1,762,274 | $1,692,558 |
| Safety | **507,909** | 478,802 | 445,473 | 419,092 | 397,962 |
| **Total** | **$2,568,274** | **$2,425,416** | **$2,291,264** | **$2,181,366** | **$2,090,520** |
| **Disability Retiree Payroll** | | | | | |
| General | **$186,120** | $177,879 | $173,550 | $169,821 | $165,543 |
| Safety | **621,358** | 574,431 | 538,116 | 507,824 | 484,907 |
| **Total** | **$807,478** | **$752,310** | **$711,666** | **$677,645** | **$650,450** |
| **Total Retiree Payroll** | | | | | |
| General | **$2,246,485** | $2,124,493 | $2,019,341 | $1,932,095 | $1,858,101 |
| Safety | **1,129,267** | 1,053,233 | 983,589 | 926,916 | 882,869 |
| **Total** | **$3,375,752** | **$3,177,726** | **$3,002,930** | **$2,859,011** | **$2,740,970** |
| **Refunds** | | | | | |
| General | **$27,096** | $20,782 | $21,970 | $23,470 | $22,050 |
| Safety | **1,595** | 2,439 | 2,482 | 3,622 | 3,361 |
| **Total** | **$28,691** | **$23,221** | **$24,452** | **$27,092** | **$25,411** |
| **Lump-Sum Death Benefits** | **$2,711** | **$2,448** | **$2,251** | **$3,083** | **$2,029** |
| **Total Benefit Expenses** | **$3,407,154** | **$3,203,375** | **$3,029,633** | **$2,889,186** | **$2,768,410** |

| | 2014 | 2013 | 2012 | 2011 | 2010 |
|---|---|---|---|---|---|
| **Service Retiree Payroll** | | | | | |
| General | $1,631,285 | $1,556,814 | $1,465,218 | $1,383,478 | $1,295,574 |
| Safety | 384,248 | 367,471 | 340,177 | 315,745 | 291,796 |
| **Total** | **$2,015,533** | **$1,924,285** | **$1,805,395** | **$1,699,223** | **$1,587,370** |
| **Disability Retiree Payroll** | | | | | |
| General | $162,338 | $157,406 | $152,698 | $150,585 | $144,861 |
| Safety | 459,311 | 432,405 | 413,300 | 395,197 | 377,429 |
| **Total** | **$621,649** | **$589,811** | **$565,998** | **$545,782** | **$522,290** |
| **Total Retiree Payroll** | | | | | |
| General | $1,793,623 | $1,714,220 | $1,617,916 | $1,534,063 | $1,440,435 |
| Safety | 843,559 | 799,876 | 753,477 | 710,942 | 669,225 |
| **Total** | **$2,637,182** | **$2,514,096** | **$2,371,393** | **$2,245,005** | **$2,109,660** |
| **Refunds** | | | | | |
| General | $18,994 | $19,406 | $14,523 | $17,498 | $13,041 |
| Safety | 4,534 | 5,606 | 3,098 | 5,220 | 5,863 |
| **Total** | **$23,528** | **$25,012** | **$17,621** | **$22,718** | **$18,904** |
| **Lump-Sum Death Benefits** | **$1,691** | **$2,243** | **$1,584** | **$2,068** | **$2,174** |
| **Total Benefit Expenses** | **$2,662,401** | **$2,541,351** | **$2,390,598** | **$2,269,791** | **$2,130,738** |

## Active Members

*For the Last 10 Fiscal Years Ended June 30*

| | 2019 | 2018 | 2017 | 2016 | 2015 |
|---|---|---|---|---|---|
| **Active Vested** | | | | | |
| General | **62,589** | 61,734 | 61,608 | 61,820 | 62,532 |
| Safety | **10,071** | 10,286 | 10,429 | 10,743 | 11,024 |
| **Subtotal** | **72,660** | **72,020** | **72,037** | **72,563** | **73,556** |
| **Active Non-Vested** | | | | | |
| General | **23,811** | 23,975 | 22,915 | 21,096 | 18,696 |
| Safety | **2,725** | 2,489 | 2,269 | 1,785 | 1,422 |
| **Subtotal** | **26,536** | **26,464** | **25,184** | **22,881** | **20,118** |
| **Deferred Vested** | | | | | |
| General | **8,008** | 7,856 | 7,752 | 7,665 | 7,623 |
| Safety | **610** | 603 | 589 | 573 | 563 |
| **Subtotal** | **8,618** | **8,459** | **8,341** | **8,238** | **8,186** |
| **Total Active Members** | | | | | |
| General | **94,408** | 93,565 | 92,275 | 90,581 | 88,851 |
| Safety | **13,406** | 13,378 | 13,287 | 13,101 | 13,009 |
| **Total** | **107,814** | **106,943** | **105,562** | **103,682** | **101,860** |

| | 2014 | 2013 | 2012 | 2011 | 2010 |
|---|---|---|---|---|---|
| **Active Vested** | | | | | |
| General | 63,301 | 62,803 | 61,433 | 59,055 | 56,162 |
| Safety | 11,188 | 11,177 | 10,663 | 10,054 | 9,916 |
| **Subtotal** | **74,489** | **73,980** | **72,096** | **69,109** | **66,078** |
| **Active Non-Vested** | | | | | |
| General | 16,642 | 16,203 | 18,034 | 21,090 | 25,251 |
| Safety | 1,335 | 1,362 | 1,822 | 2,587 | 3,081 |
| **Subtotal** | **17,977** | **17,565** | **19,856** | **23,677** | **28,332** |
| **Deferred Vested** | | | | | |
| General | 7,550 | 7,462 | 7,379 | 7,423 | 7,478 |
| Safety | 540 | 497 | 480 | 465 | 460 |
| **Subtotal** | **8,090** | **7,959** | **7,859** | **7,888** | **7,938** |
| **Total Active Members** | | | | | |
| General | 87,493 | 86,468 | 86,846 | 87,568 | 88,891 |
| Safety | 13,063 | 13,036 | 12,965 | 13,106 | 13,457 |
| **Total** | **100,556** | **99,504** | **99,811** | **100,674** | **102,348** |

## Retired Members by Type of Pension Benefit

*As of June 30, 2019*

| Amount of Monthly Benefit | | | Number of Retired Members | Type of Retirement[1] | | |
|---|---|---|---|---|---|---|
| | | | | A | B | C |
| $1 | — | $1,000 | 14,009 | 8,876 | 1,175 | 3,958 |
| $1,001 | — | $2,000 | 14,210 | 9,680 | 1,938 | 2,592 |
| $2,001 | — | $3,000 | 10,920 | 8,055 | 1,764 | 1,101 |
| $3,001 | — | $4,000 | 7,594 | 5,833 | 1,161 | 600 |
| $4,001 | — | $5,000 | 5,393 | 4,321 | 748 | 324 |
| $5,001 | — | $6,000 | 3,853 | 3,074 | 567 | 212 |
| $6,001 | — | $7,000 | 2,751 | 2,151 | 485 | 115 |
| | > | $7,000 | 7,772 | 5,528 | 2,053 | 191 |
| **Total** | | | **66,502** | **47,518** | **9,891** | **9,093** |

| Amount of Monthly Benefit | | | Retirement Option Selected[2] | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Unmodified | Unmodified+Plus | Option 1 | Option 2 | Option 3 | Option 4 |
| $1 | — | $1,000 | 12,362 | 739 | 114 | 456 | 99 | 239 |
| $1,001 | — | $2,000 | 12,442 | 998 | 132 | 327 | 102 | 209 |
| $2,001 | — | $3,000 | 9,537 | 879 | 98 | 158 | 63 | 185 |
| $3,001 | — | $4,000 | 6,595 | 671 | 51 | 92 | 34 | 151 |
| $4,001 | — | $5,000 | 4,589 | 557 | 43 | 52 | 30 | 122 |
| $5,001 | — | $6,000 | 3,264 | 439 | 25 | 28 | 11 | 86 |
| $6,001 | — | $7,000 | 2,223 | 402 | 12 | 23 | 4 | 87 |
| | > | $7,000 | 5,752 | 1,626 | 28 | 22 | 27 | 317 |
| **Total** | | | **56,764** | **6,311** | **503** | **1,158** | **370** | **1,396** |

[1] Type of Retirement:
A - Service Retiree
B - Disability Retiree
C - Beneficiary/Continuant/Survivor

[2] Retirement Option Selected:
Unmodified — For Plans A-D and G, beneficiary receives 65 percent of the member's allowance (60 percent if the member retired before June 4, 2002); for Plan E, beneficiary receives 55 percent of member's allowance (50 percent if the member retired before June 4, 2002).

**The following options reduce the member's monthly benefit:**
Unmodified+Plus — For all Plans (A-G), member's allowance is reduced to pay an increased continuing allowance to an eligible surviving spouse/partner.
Option 1 - Beneficiary receives lump sum of member's unused contributions.
Option 2 - Beneficiary receives 100 percent of member's reduced monthly benefit.
Option 3 - Beneficiary receives 50 percent of member's reduced monthly benefit.
Option 4 - Beneficiary(ies) receives percentage of member's reduced monthly benefit as designated by member.

## Retired Members by Type of OPEB Benefit

*As of June 30, 2019*

| | Medical Benefit/Premium Amounts | | | | | Total Member Count |
|---|---|---|---|---|---|---|
| | $1-$500 | $501-$1,000 | $1,001-$1,500 | $1,501-$2,000 | > $2,000 | |
| **Medical Plans by Plan Type** | | | | | | |
| Anthem Blue Cross I | 3 | — | 762 | 22 | 323 | 1,110 |
| Anthem Blue Cross II | 2 | — | 2,184 | 174 | 2,638 | 4,998 |
| Anthem Blue Cross III | 6,729 | 4,034 | 81 | 1,175 | — | 12,019 |
| Anthem Blue Cross Prudent Buyer Plan | 1 | — | 654 | 316 | 81 | 1,052 |
| Cigna-HealthSpring Preferred Rx | 30 | 15 | 1 | 9 | 2 | 57 |
| Cigna Network Model Plan | — | — | — | 300 | 157 | 457 |
| Kaiser - California | — | — | 3,364 | 43 | 2,808 | 6,215 |
| Kaiser - Senior Advantage | 10,752 | 5,489 | 1,913 | — | — | 18,154 |
| Kaiser - Colorado | 33 | 12 | 2 | — | 4 | 51 |
| Kaiser - Georgia | 62 | 29 | 22 | 11 | 4 | 128 |
| Kaiser - Hawaii | 31 | 21 | 4 | 5 | — | 61 |
| Kaiser - Oregon-Washington | 76 | 43 | 9 | 9 | 2 | 139 |
| Firefighters Local 1014 | — | — | 494 | — | 1,452 | 1,946 |
| SCAN Health Plan | 307 | 103 | — | — | — | 410 |
| UnitedHealthcare | 1 | — | 463 | — | 751 | 1,215 |
| UnitedHealthcare Medicare Advantage (HMO) | 1,719 | 1,040 | — | 445 | — | 3,204 |
| **Total Medical by Plan Type** | **19,746** | **10,786** | **9,953** | **2,509** | **8,222** | **51,216** |
| **Medical Plans by Retirement Type** | | | | | | |
| Service Retirees | 14,472 | 9,315 | 6,929 | 1,823 | 5,368 | 37,907 |
| Disability Retirees | 1,528 | 1,395 | 1,394 | 507 | 2,696 | 7,520 |
| Survivors | 3,746 | 76 | 1,630 | 179 | 158 | 5,789 |
| **Total Medical by Retirement Type** | **19,746** | **10,786** | **9,953** | **2,509** | **8,222** | **51,216** |

| | Dental/Vision Benefit Premium Amounts |
|---|---|
| | $1 - $500 |
| **Dental/Vision Plans by Plan Type** | |
| CIGNA Indemnity Dental/Vision | 46,847 |
| CIGNA HMO Dental/Vision | 5,652 |
| **Total Dental/Vision by Plan Type** | **52,499** |
| **Dental/Vision Plans by Retirement Type** | |
| Service Retirees | 38,633 |
| Disability Retirees | 7,888 |
| Survivors | 5,978 |
| **Total Dental/Vision by Retirement Type** | **52,499** |

## Schedule of Average Pension Benefit Payments

*For the Last 10 Fiscal Years Ended June 30*

| | Years of Credited Service | | | | | |
|---|---|---|---|---|---|---|
| **Retirement Effective Dates** | **5 - 9** | **10 - 14** | **15 - 19** | **20 - 24** | **25 - 29** | **30+** |
| **7/1/09 to 6/30/10** | | | | | | |
| **Retirants** | | | | | | |
| General Members | | | | | | |
| Average Monthly Benefit | $1,242 | $1,204 | $1,782 | $2,559 | $3,418 | $5,319 |
| Average Final Salary | $4,984 | $4,790 | $5,072 | $5,888 | $6,525 | $6,923 |
| Number of Active Retirants | 116 | 242 | 251 | 210 | 258 | 888 |
| Safety Members | | | | | | |
| Average Monthly Benefit | $4,656 | $3,461 | $3,008 | $4,840 | $7,055 | $10,450 |
| Average Final Salary | $8,092 | $7,848 | $8,377 | $8,519 | $10,104 | $12,206 |
| Number of Active Retirants | 14 | 22 | 10 | 11 | 85 | 157 |
| **Survivors** | | | | | | |
| General Members | | | | | | |
| Average Monthly Benefit | $737 | $825 | $1,077 | $1,201 | $1,336 | $2,528 |
| Average Final Salary | $4,738 | $4,069 | $4,592 | $3,875 | $3,732 | $4,926 |
| Number of Active Survivors | 19 | 31 | 33 | 40 | 59 | 89 |
| Safety Members | | | | | | |
| Average Monthly Benefit | $5,467 | $1,895 | $3,210 | $3,413 | $3,884 | $5,653 |
| Average Final Salary | $8,746 | $7,268 | $8,850 | $7,809 | $7,374 | $7,554 |
| Number of Active Survivors | 1 | 3 | 6 | 7 | 11 | 10 |
| **7/1/10 to 6/30/11** | | | | | | |
| **Retirants** | | | | | | |
| General Members | | | | | | |
| Average Monthly Benefit | $1,721 | $1,249 | $1,810 | $2,784 | $3,418 | $5,082 |
| Average Final Salary | $5,702 | $5,064 | $5,296 | $6,286 | $6,576 | $6,820 |
| Number of Active Retirants | 127 | 238 | 269 | 284 | 258 | 922 |
| Safety Members | | | | | | |
| Average Monthly Benefit | $2,336 | $4,135 | $5,198 | $5,308 | $7,347 | $9,667 |
| Average Final Salary | $6,862 | $9,057 | $9,158 | $9,679 | $10,365 | $11,617 |
| Number of Active Retirants | 10 | 28 | 21 | 30 | 91 | 152 |
| **Survivors** | | | | | | |
| General Members | | | | | | |
| Average Monthly Benefit | $629 | $786 | $871 | $1,654 | $1,325 | $2,485 |
| Average Final Salary | $3,677 | $3,698 | $3,359 | $5,351 | $3,678 | $5,238 |
| Number of Active Survivors | 24 | 36 | 43 | 44 | 60 | 93 |
| Safety Members | | | | | | |
| Average Monthly Benefit | $3,187 | $1,715 | $2,386 | $3,499 | $3,788 | $5,461 |
| Average Final Salary | $6,572 | $5,766 | $5,589 | $6,862 | $6,768 | $6,929 |
| Number of Active Survivors | 3 | 2 | 8 | 4 | 10 | 25 |

## Schedule of Average Pension Benefit Payments continued

*For the Last 10 Fiscal Years Ended June 30*

| | Years of Credited Service | | | | | |
|---|---|---|---|---|---|---|
| **Retirement Effective Dates** | **5 - 9** | **10 - 14** | **15 - 19** | **20 - 24** | **25 - 29** | **30+** |
| **7/1/11 to 6/30/12** | | | | | | |
| **Retirants** | | | | | | |
| General Members | | | | | | |
| Average Monthly Benefit | $1,793 | $1,362 | $2,082 | $2,567 | $3,525 | $4,956 |
| Average Final Salary | $5,624 | $5,141 | $5,683 | $5,686 | $6,711 | $6,830 |
| Number of Active Retirants | 141 | 291 | 234 | 278 | 297 | 918 |
| Safety Members | | | | | | |
| Average Monthly Benefit | $2,203 | $4,924 | $6,474 | $4,417 | $7,372 | $9,750 |
| Average Final Salary | $6,307 | $8,948 | $9,929 | $9,108 | $10,380 | $11,587 |
| Number of Active Retirants | 8 | 29 | 13 | 33 | 103 | 183 |
| **Survivors** | | | | | | |
| General Members | | | | | | |
| Average Monthly Benefit | $1,055 | $691 | $965 | $1,770 | $1,643 | $2,736 |
| Average Final Salary | $4,661 | $3,821 | $3,766 | $5,244 | $4,301 | $5,662 |
| Number of Active Survivors | 21 | 46 | 26 | 43 | 57 | 94 |
| Safety Members | | | | | | |
| Average Monthly Benefit | $2,786 | $2,352 | $2,789 | $3,271 | $3,221 | $5,580 |
| Average Final Salary | $5,771 | $6,466 | $7,785 | $7,019 | $6,127 | $7,824 |
| Number of Active Survivors | 5 | 5 | 5 | 7 | 8 | 23 |
| **7/1/12 to 6/30/13** | | | | | | |
| **Retirants** | | | | | | |
| General Members | | | | | | |
| Average Monthly Benefit | $1,825 | $1,562 | $2,116 | $2,663 | $3,570 | $5,043 |
| Average Final Salary | $6,046 | $5,405 | $6,042 | $6,009 | $6,758 | $6,888 |
| Number of Active Retirants | 112 | 324 | 233 | 271 | 338 | 897 |
| Safety Members | | | | | | |
| Average Monthly Benefit | $2,233 | $5,909 | $6,416 | $5,507 | $7,360 | $10,046 |
| Average Final Salary | $7,299 | $9,266 | $9,611 | $9,843 | $10,481 | $11,921 |
| Number of Active Retirants | 12 | 29 | 20 | 33 | 118 | 191 |
| **Survivors** | | | | | | |
| General Members | | | | | | |
| Average Monthly Benefit | $861 | $804 | $1,097 | $1,403 | $1,889 | $2,496 |
| Average Final Salary | $4,743 | $4,020 | $3,961 | $4,451 | $4,930 | $5,611 |
| Number of Active Survivors | 22 | 54 | 39 | 70 | 60 | 103 |
| Safety Members | | | | | | |
| Average Monthly Benefit | $989 | $1,523 | $2,523 | $3,378 | $4,137 | $5,460 |
| Average Final Salary | $4,454 | $4,896 | $5,990 | $8,242 | $7,055 | $7,468 |
| Number of Active Survivors | 6 | 7 | 10 | 5 | 20 | 31 |

*For the Last 10 Fiscal Years Ended June 30*

| | Years of Credited Service | | | | | |
|---|---|---|---|---|---|---|
| **Retirement Effective Dates** | **5 - 9** | **10 - 14** | **15 - 19** | **20 - 24** | **25 - 29** | **30+** |
| **7/1/13 to 6/30/14** | | | | | | |
| **Retirants** | | | | | | |
| General Members | | | | | | |
| Average Monthly Benefit | $1,913 | $1,624 | $2,024 | $2,722 | $3,553 | $4,788 |
| Average Final Salary | $6,415 | $5,241 | $5,657 | $5,930 | $6,724 | $6,733 |
| Number of Active Retirants | 109 | 307 | 240 | 305 | 358 | 726 |
| Safety Members | | | | | | |
| Average Monthly Benefit | $1,542 | $4,454 | $6,018 | $5,225 | $7,467 | $9,719 |
| Average Final Salary | $6,452 | $8,381 | $10,140 | $9,414 | $10,753 | $11,823 |
| Number of Active Retirants | 8 | 31 | 18 | 20 | 83 | 212 |
| **Survivors** | | | | | | |
| General Members | | | | | | |
| Average Monthly Benefit | $1,017 | $837 | $936 | $1,726 | $1,888 | $2,550 |
| Average Final Salary | $4,475 | $4,679 | $3,794 | $4,913 | $4,732 | $6,064 |
| Number of Active Survivors | 29 | 51 | 37 | 41 | 63 | 119 |
| Safety Members | | | | | | |
| Average Monthly Benefit | $1,031 | $1,709 | $2,056 | $3,132 | $3,827 | $5,358 |
| Average Final Salary | $6,377 | $6,249 | $5,830 | $6,874 | $6,772 | $7,309 |
| Number of Active Survivors | 2 | 8 | 6 | 6 | 15 | 22 |
| **7/1/14 to 6/30/15** | | | | | | |
| **Retirants** | | | | | | |
| General Members | | | | | | |
| Average Monthly Benefit | $1,422 | $1,716 | $2,202 | $3,106 | $3,360 | $5,017 |
| Average Final Salary | $5,939 | $5,543 | $5,903 | $6,731 | $6,294 | $6,970 |
| Number of Active Retirants | 126 | 331 | 280 | 308 | 436 | 784 |
| Safety Members | | | | | | |
| Average Monthly Benefit | $2,917 | $5,412 | $5,374 | $6,477 | $7,082 | $9,923 |
| Average Final Salary | $7,015 | $9,261 | $9,810 | $10,748 | $10,400 | $11,847 |
| Number of Active Retirants | 20 | 19 | 21 | 28 | 116 | 215 |
| **Survivors** | | | | | | |
| General Members | | | | | | |
| Average Monthly Benefit | $903 | $1,021 | $1,342 | $1,854 | $1,799 | $2,741 |
| Average Final Salary | $4,076 | $4,471 | $5,243 | $5,464 | $4,814 | $5,525 |
| Number of Active Survivors | 32 | 53 | 40 | 52 | 71 | 126 |
| Safety Members | | | | | | |
| Average Monthly Benefit | $2,101 | $2,054 | $1,768 | $2,911 | $4,530 | $6,206 |
| Average Final Salary | $5,564 | $6,518 | $4,737 | $6,552 | $6,815 | $8,367 |
| Number of Active Survivors | 6 | 4 | 9 | 12 | 16 | 29 |

## Schedule of Average Pension Benefit Payments continued

*For the Last 10 Fiscal Years Ended June 30*

| | Years of Credited Service | | | | | |
|---|---|---|---|---|---|---|
| **Retirement Effective Dates** | **5 - 9** | **10 - 14** | **15 - 19** | **20 - 24** | **25 - 29** | **30+** |
| **7/1/15 to 6/30/16** | | | | | | |
| **Retirants** | | | | | | |
| General Members | | | | | | |
| Average Monthly Benefit | $1,619 | $1,809 | $2,265 | $2,893 | $3,462 | $5,163 |
| Average Final Salary | $6,022 | $5,607 | $6,020 | $6,414 | $6,440 | $7,372 |
| Number of Active Retirants | 118 | 331 | 273 | 274 | 471 | 837 |
| Safety Members | | | | | | |
| Average Monthly Benefit | $3,134 | $3,776 | $5,743 | $6,290 | $7,540 | $10,730 |
| Average Final Salary | $7,077 | $9,355 | $10,057 | $10,613 | $11,062 | $12,654 |
| Number of Active Retirants | 24 | 16 | 27 | 22 | 109 | 205 |
| **Survivors** | | | | | | |
| General Members | | | | | | |
| Average Monthly Benefit | $929 | $752 | $957 | $1,174 | $1,745 | $2,470 |
| Average Final Salary | $6,444 | $4,670 | $3,996 | $4,367 | $4,825 | $5,339 |
| Number of Active Survivors | 30 | 55 | 50 | 51 | 69 | 143 |
| Safety Members | | | | | | |
| Average Monthly Benefit | $1,446 | $3,207 | $3,071 | $3,053 | $4,468 | $5,611 |
| Average Final Salary | $5,927 | $6,777 | $6,628 | $6,941 | $6,825 | $7,529 |
| Number of Active Survivors | 6 | 6 | 8 | 9 | 16 | 33 |
| **7/1/16 to 6/30/17** | | | | | | |
| **Retirants** | | | | | | |
| General Members | | | | | | |
| Average Monthly Benefit | $1,416 | $1,858 | $2,364 | $3,425 | $3,730 | $5,149 |
| Average Final Salary | $5,917 | $5,860 | $6,367 | $7,202 | $6,791 | $7,441 |
| Number of Active Retirants | 142 | 338 | 328 | 209 | 507 | 856 |
| Safety Members | | | | | | |
| Average Monthly Benefit | $2,987 | $3,087 | $6,412 | $6,885 | $7,888 | $11,358 |
| Average Final Salary | $7,651 | $8,870 | $10,320 | $11,308 | $11,362 | $13,288 |
| Number of Active Retirants | 24 | 25 | 50 | 36 | 153 | 248 |
| **Survivors** | | | | | | |
| General Members | | | | | | |
| Average Monthly Benefit | $833 | $786 | $1,392 | $1,577 | $1,898 | $2,942 |
| Average Final Salary | $5,469 | $4,190 | $4,959 | $5,059 | $5,175 | $6,105 |
| Number of Active Survivors | 29 | 52 | 63 | 41 | 72 | 136 |
| Safety Members | | | | | | |
| Average Monthly Benefit | $3,522 | $4,150 | $2,131 | $3,715 | $4,316 | $6,581 |
| Average Final Salary | $6,792 | $7,451 | $7,234 | $6,906 | $7,400 | $8,411 |
| Number of Active Survivors | 3 | 5 | 9 | 7 | 16 | 36 |

*For the Last 10 Fiscal Years Ended June 30*

| | Years of Credited Service | | | | | |
|---|---|---|---|---|---|---|
| **Retirement Effective Dates** | **5 - 9** | **10 - 14** | **15 - 19** | **20 - 24** | **25 - 29** | **30+** |
| **7/1/17 to 6/30/18** | | | | | | |
| **Retirants** | | | | | | |
| General Members | | | | | | |
| Average Monthly Benefit | $1,639 | $1,752 | $2,482 | $3,609 | $3,907 | $5,275 |
| Average Final Salary | $7,147 | $5,725 | $6,223 | $7,627 | $7,071 | $7,605 |
| Number of Active Retirants | 99 | 339 | 323 | 255 | 470 | 883 |
| Safety Members | | | | | | |
| Average Monthly Benefit | $3,140 | $4,015 | $5,714 | $6,482 | $8,329 | $11,650 |
| Average Final Salary | $7,739 | $9,039 | $10,242 | $11,266 | $11,835 | $13,559 |
| Number of Active Retirants | 22 | 21 | 36 | 32 | 126 | 241 |
| **Survivors** | | | | | | |
| General Members | | | | | | |
| Average Monthly Benefit | $681 | $1,112 | $1,345 | $1,503 | $2,179 | $2,888 |
| Average Final Salary | $4,138 | $5,668 | $5,145 | $5,071 | $5,596 | $6,179 |
| Number of Active Survivors | 17 | 50 | 47 | 38 | 80 | 133 |
| Safety Members | | | | | | |
| Average Monthly Benefit | $2,815 | $3,252 | $3,528 | $3,200 | $3,603 | $5,479 |
| Average Final Salary | $7,817 | $7,192 | $6,670 | $6,327 | $6,905 | $7,833 |
| Number of Active Survivors | 7 | 8 | 5 | 7 | 18 | 31 |
| **7/1/18 to 6/30/19** | | | | | | |
| **Retirants** | | | | | | |
| General Members | | | | | | |
| Average Monthly Benefit | $1,659 | $1,578 | $3,091 | $3,613 | $3,994 | $6,007 |
| Average Final Salary | $6,332 | $5,585 | $7,078 | $7,481 | $7,398 | $8,630 |
| Number of Active Retirants | 122 | 337 | 371 | 313 | 447 | 938 |
| Safety Members | | | | | | |
| Average Monthly Benefit | $4,251 | $4,072 | $5,960 | $8,466 | $9,038 | $12,076 |
| Average Final Salary | $8,564 | $9,754 | $10,348 | $12,556 | $12,737 | $14,367 |
| Number of Active Retirants | 25 | 30 | 36 | 38 | 137 | 278 |
| **Survivors** | | | | | | |
| General Members | | | | | | |
| Average Monthly Benefit | $1,129 | $921 | $1,243 | $1,660 | $1,894 | $2,898 |
| Average Final Salary | $5,507 | $5,704 | $5,510 | $5,402 | $5,204 | $5,928 |
| Number of Active Survivors | 38 | 69 | 80 | 81 | 111 | 183 |
| Safety Members | | | | | | |
| Average Monthly Benefit | $801 | $2,157 | $2,885 | $2,704 | $3,208 | $6,016 |
| Average Final Salary | $4,148 | $6,656 | $7,462 | $5,607 | $6,217 | $8,495 |
| Number of Active Survivors | 4 | 8 | 14 | 17 | 29 | 45 |

## Active Members and Participating Pension Employers

*For the Last 10 Fiscal Years Ended June 30*

| | 2010 | | 2011 | |
|---|---|---|---|---|
| **County of Los Angeles** | **Covered Members** | **Percentage of Total Covered Members** | **Covered Members** | **Percentage of Total Covered Members** |
| General Members | 81,400 | 86.220% | 80,133 | 86.363% |
| Safety Members | 12,997 | 13.767% | 12,641 | 13.624% |
| **Total** | **94,397** | **99.987%** | **92,774** | **99.987%** |
| **Participating Agencies (General Membership)** | | | | |
| South Coast Air Quality Mgmt. District | 2 | 0.002% | 1 | 0.001% |
| Los Angeles County Office of Education | 3 | 0.003% | 3 | 0.003% |
| Little Lake Cemetery District | 1 | 0.001% | 1 | 0.001% |
| Local Agency Formation Commission | 7 | 0.007% | 7 | 0.008% |
| **Total** | **13** | **0.013%** | **12** | **0.013%** |
| **Total Active Membership[1]** | | | | |
| General Members | 81,413 | 86.233% | 80,145 | 86.376% |
| Safety Members | 12,997 | 13.767% | 12,641 | 13.624% |
| **Total** | **94,410** | **100.000%** | **92,786** | **100.000%** |

| | 2012 | | 2013 | |
|---|---|---|---|---|
| **County of Los Angeles** | **Covered Members** | **Percentage of Total Covered Members** | **Covered Members** | **Percentage of Total Covered Members** |
| General Members | 79,459 | 86.413% | 78,997 | 86.293% |
| Safety Members | 12,485 | 13.578% | 12,539 | 13.697% |
| **Total** | **91,944** | **99.991%** | **91,536** | **99.990%** |
| **Participating Agencies (General Membership)** | | | | |
| South Coast Air Quality Mgmt. District | 1 | 0.001% | 1 | 0.001% |
| Los Angeles County Office of Education | — | 0.000% | — | 0.000% |
| Little Lake Cemetery District | 1 | 0.001% | 1 | 0.001% |
| Local Agency Formation Commission | 6 | 0.007% | 7 | 0.008% |
| **Total** | **8** | **0.009%** | **9** | **0.010%** |
| **Total Active Membership[1]** | | | | |
| General Members | 79,467 | 86.422% | 79,006 | 86.303% |
| Safety Members | 12,485 | 13.578% | 12,539 | 13.697% |
| **Total** | **91,952** | **100.000%** | **91,545** | **100.000%** |

[1]Active Membership excludes terminated vested (deferred) members.

*For the Last 10 Fiscal Years Ended June 30*

| | 2014 | | 2015 | |
|---|---|---|---|---|
| **County of Los Angeles** | **Covered Members** | **Percentage of Total Covered Members** | **Covered Members** | **Percentage of Total Covered Members** |
| General Members | 79,934 | 86.447% | 81,219 | 86.704% |
| Safety Members | 12,523 | 13.543% | 12,446 | 13.286% |
| **Total** | **92,457** | **99.990%** | **93,665** | **99.990%** |
| **Participating Agencies (General Membership)** | | | | |
| South Coast Air Quality Mgmt. District | 1 | 0.001% | 1 | 0.001% |
| Los Angeles County Office of Education | — | 0.000% | — | 0.000% |
| Little Lake Cemetery District | 1 | 0.001% | 1 | 0.001% |
| Local Agency Formation Commission | 7 | 0.008% | 7 | 0.008% |
| **Total** | **9** | **0.010%** | **9** | **0.010%** |
| **Total Active Membership[1]** | | | | |
| General Members | 79,943 | 86.457% | 81,228 | 86.714% |
| Safety Members | 12,523 | 13.543% | 12,446 | 13.286% |
| **Total** | **92,466** | **100.000%** | **93,674** | **100.000%** |

| | 2016 | | 2017 | |
|---|---|---|---|---|
| **County of Los Angeles** | **Covered Members** | **Percentage of Total Covered Members** | **Covered Members** | **Percentage of Total Covered Members** |
| General Members | 82,907 | 86.865% | 84,515 | 86.931% |
| Safety Members | 12,528 | 13.126% | 12,698 | 13.061% |
| **Total** | **95,435** | **99.991%** | **97,213** | **99.992%** |
| **Participating Agencies (General Membership)** | | | | |
| South Coast Air Quality Mgmt. District | 1 | 0.001% | 1 | 0.001% |
| Los Angeles County Office of Education | — | 0.000% | — | 0.000% |
| Little Lake Cemetery District | 1 | 0.001% | 1 | 0.001% |
| Local Agency Formation Commission | 7 | 0.007% | 6 | 0.006% |
| **Total** | **9** | **0.009%** | **8** | **0.008%** |
| **Total Active Membership[1]** | | | | |
| General Members | 82,916 | 86.874% | 84,523 | 86.939% |
| Safety Members | 12,528 | 13.126% | 12,698 | 13.061% |
| **Total** | **95,444** | **100.000%** | **97,221** | **100.000%** |

[1]Active Membership excludes terminated vested (deferred) members.

### Participating Pension Employers — Active Members continued

*For the Last 10 Fiscal Years Ended June 30*

| | 2018 | | 2019 | |
|---|---|---|---|---|
| **County of Los Angeles** | **Covered Members** | **Percentage of Total Covered Members** | **Covered Members** | **Percentage of Total Covered Members** |
| General Members | 85,701 | 87.020% | **86,392** | **87.092%** |
| Safety Members | 12,775 | 12.972% | **12,796** | **12.900%** |
| **Total** | **98,476** | **99.992%** | **99,188** | **99.992%** |
| **Participating Agencies (General Membership)** | | | | |
| South Coast Air Quality Mgmt. District | — | 0.000% | **—** | **0.000%** |
| Los Angeles County Office of Education | — | 0.000% | **—** | **0.000%** |
| Little Lake Cemetery District | 1 | 0.001% | **1** | **0.001%** |
| Local Agency Formation Commission | 7 | 0.007% | **7** | **0.007%** |
| **Total** | **8** | **0.008%** | **8** | **0.008%** |
| **Total Active Membership[1]** | | | | |
| General Members | 85,709 | 87.028% | **86,400** | **87.100%** |
| Safety Members | 12,775 | 12.972% | **12,796** | **12.900%** |
| **Total** | **98,484** | **100.000%** | **99,196** | **100.000%** |

[1]Active Membership excludes terminated vested (deferred) members.

## Retired Members of Participating OPEB Employers

*For the Last 10 Fiscal Years Ended June 30*

| | 2010 | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|---|
| **Los Angeles County and Participating Agencies** | | | | | |
| Medical | 41,676 | 42,627 | 43,746 | 44,753 | 45,576 |
| Dental/Vision | 42,045 | 43,114 | 44,344 | 45,485 | 46,383 |

| | 2015 | 2016 | 2017 | 2018 | **2019** |
|---|---|---|---|---|---|
| **Los Angeles County and Participating Agencies** | | | | | |
| Medical | 46,567 | 47,653 | 48,812 | 50,052 | **51,216** |
| Dental/Vision | 47,486 | 48,671 | 49,890 | 51,225 | **52,499** |

## Employer Contribution Rates: County of Los Angeles

*For the Last 10 Years*

| | General Members | | | | | | Safety Members | | |
|---|---|---|---|---|---|---|---|---|---|
| **Effective Date** | **Plan A** | **Plan B** | **Plan C** | **Plan D** | **Plan E** | **Plan G[1]** | **Plan A** | **Plan B** | **Plan C[1]** |
| 7/1/2009 to 9/30/2010 | 17.28% | 10.62% | 9.88% | 10.48% | 10.45% | — | 27.83% | 20.35% | — |
| 10/1/2010 to 9/30/2011 | 19.40% | 12.74% | 12.23% | 12.65% | 12.67% | — | 29.46% | 22.69% | — |
| 10/1/2011 to 9/30/2012 | 21.59% | 15.00% | 14.51% | 14.80% | 15.30% | — | 30.38% | 24.10% | — |
| 10/1/2012 to 9/30/2013 | 22.65% | 15.55% | 15.35% | 16.00% | 16.77% | — | 31.55% | 25.37% | — |
| 1/1/2013 to 9/30/2013 | — | — | — | — | — | 15.61% | — | — | 20.98% |
| 10/1/2013 to 9/30/2014 | 25.08% | 17.95% | 17.54% | 18.24% | 19.09% | 17.81% | 34.63% | 27.92% | 23.18% |
| 10/1/2014 to 6/30/2015 | 26.99% | 19.49% | 19.01% | 19.74% | 20.95% | 19.53% | 35.91% | 29.26% | 25.29% |
| 7/1/2015 to 6/30/2016 | 25.13% | 17.45% | 16.90% | 17.70% | 18.97% | 17.66% | 34.64% | 27.50% | 23.46% |
| 7/1/2016 to 9/30/2017 | 24.11% | 15.94% | 15.32% | 16.19% | 17.49% | 16.07% | 32.25% | 25.94% | 21.93% |
| 10/1/2017 to 9/30/2018 | 26.06% | 17.50% | 16.80% | 18.17% | 19.57% | 18.04% | 34.45% | 27.75% | 23.73% |
| **10/1/2018 to 9/30/2019** | **26.94%** | **18.04%** | **16.85%** | **18.51%** | **19.84%** | **18.53%** | **34.11%** | **28.36%** | **23.97%** |

[1]As a result of PEPRA implementation, effective January 1, 2013.

## Employer Contribution Rates: Little Lake Cemetery District,[1] Local Agency Formation Commission,[2] and Los Angeles County Office of Education[3]

*For the Last 10 Years*

| Effective Date | General Members Plan A | General Members Plan D | General Members Plan E | General Members Plan G[4] |
|---|---|---|---|---|
| 7/1/2009 to 9/30/2010 | 17.28% | 10.48% | 10.45% | — |
| 10/1/2010 to 9/30/2011 | 19.40% | 12.65% | 12.67% | — |
| 10/1/2011 to 9/30/2012 | 21.59% | 14.80% | 15.30% | — |
| 10/1/2012 to 9/30/2013 | — | 16.00% | 16.77% | — |
| 1/1/2013 to 9/30/2013 | — | — | — | 15.61% |
| 10/1/2013 to 9/30/2014 | — | 18.24% | 19.09% | 17.81% |
| 10/1/2014 to 6/30/2015 | — | 19.74% | 20.95% | 19.53% |
| 7/1/2015 to 6/30/2016 | — | 17.70% | 18.97% | 17.66% |
| 7/1/2016 to 9/30/2017 | — | 16.19% | 17.49% | 16.07% |
| 10/1/2017 to 9/30/2018 | — | 18.17% | — | 18.04% |
| **10/1/2018 to 9/30/2019** | **—** | **18.51%** | **—** | **18.53%** |

[1] Rates applicable to Little Lake Cemetery District are limited to Plan D.

[2] Rates applicable to the Local Agency Formation Commission are limited to Plans D, E, and G. As of November 2016, there were no participating members under Plan E.

[3] Rates applicable to the Los Angeles County Office of Education are limited to Plan A. As of June 2012, there were no participating members.

[4] Rates effective January 1, 2013, were a result of PEPRA implementation.

## Employer Contribution Rates: South Coast Air Quality Management District (SCAQMD)[1]

*For the Last 10 Years*

| Effective Date | General Members Plan A[2] | General Members Plan B[3] |
|---|---|---|
| 7/1/2009 to 9/30/2010 | 22.02% | 16.51% |
| 10/1/2010 to 9/30/2011 | 24.14% | 18.64% |
| 10/1/2011 to 9/30/2012 | — | 20.90% |
| 10/1/2012 to 9/30/2013 | — | 21.45% |
| 10/1/2013 to 9/30/2014 | — | 23.87% |
| 10/1/2014 to 6/30/2015 | — | 25.38% |
| 7/1/2015 to 6/30/2016 | — | 21.24% |
| 7/1/2016 to 6/30/2017 | — | 17.62% |
| 7/1/2017 to 9/30/2017 | — | 15.94% |
| 10/1/2017 to 9/30/2018 | — | 17.50% |
| **10/1/2018 to 9/30/2019** | **—** | **—** |

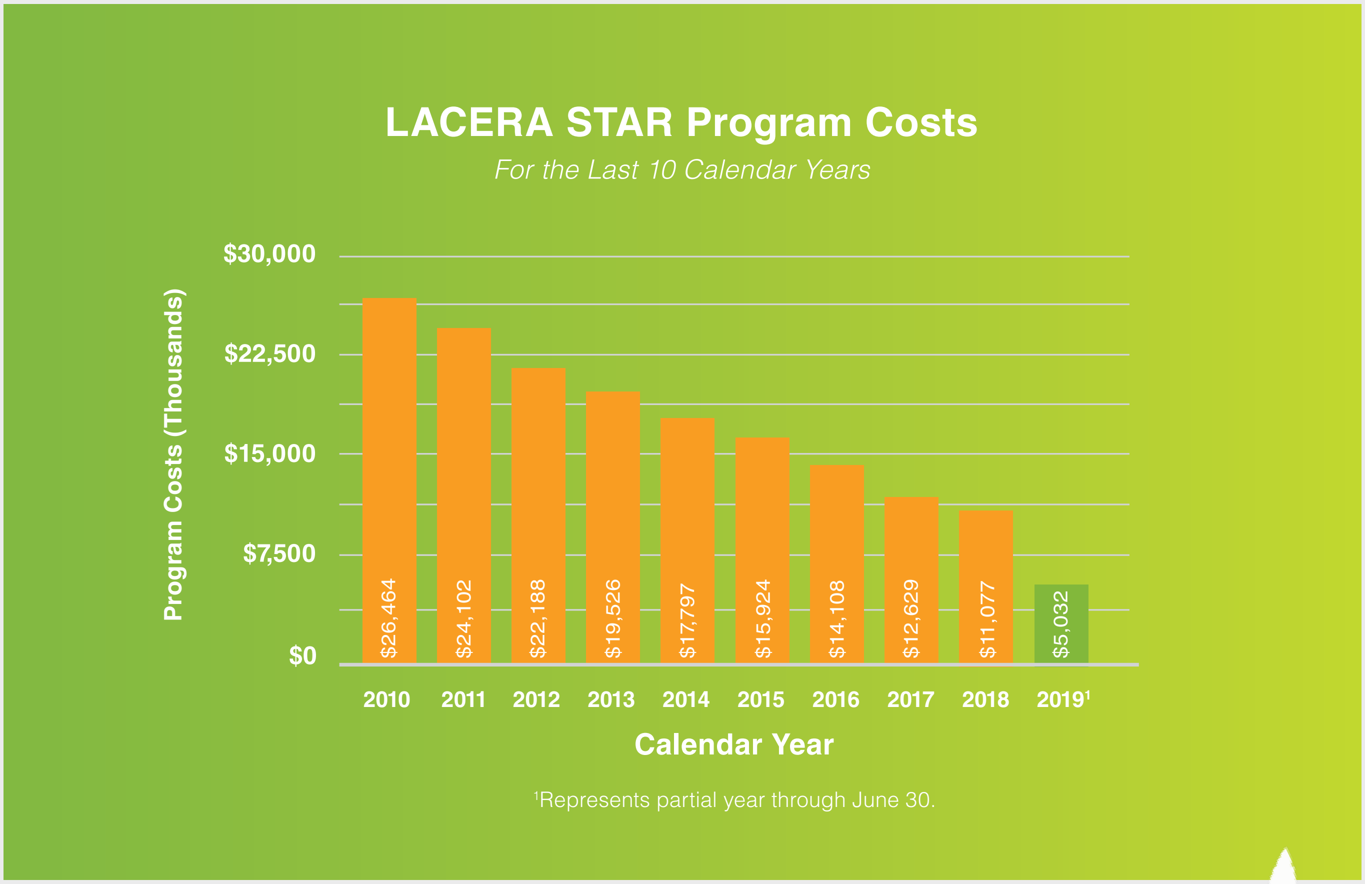
[1] SCAQMD recalculates its employer contribution rates to pick up a portion of its employee rates, in accordance with its labor contract. As of July 1, 2017, per memorandum of agreement, SCAQMD will no longer pick up a portion of employee's contribution and will use LACERA's contribution rates with no pick-up adjustment.

[2] Effective March 31, 2011, participating member in Plan A retired, leaving no active members in Plan A.

[3] Effective March 31, 2018, participating member in Plan B retired, leaving no active members in Plan B.

## Supplemental Targeted Adjustment for Retirees (STAR) Program Costs — Pension Plan

The STAR Program is administered on a calendar-year basis. The chart below represents the STAR Program costs for the last 10 years.




**We Produce, Protect, and Provide the Promised Benefits.**


LACERA

LOS ANGELES COUNTY EMPLOYEES RETIREMENT ASSOCIATION

**2019 Comprehensive Annual Financial Report**

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