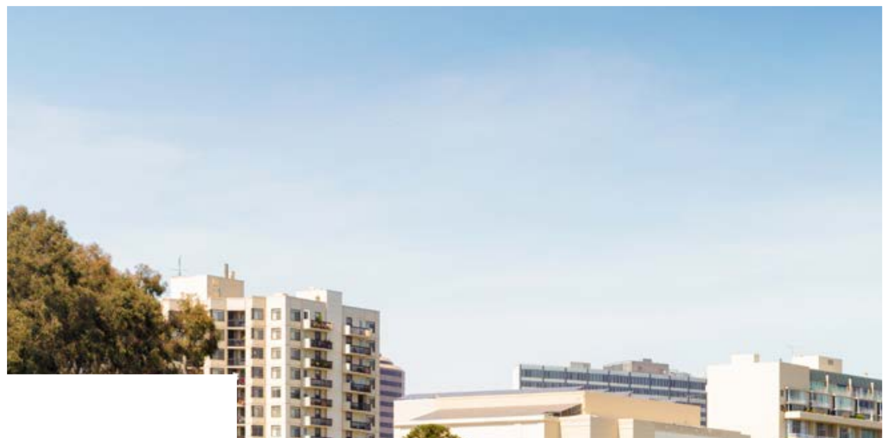
For the Year Ended
December 31 **2017**

Comprehensive Annual Financial Report





Building *Up* Your Future

Alameda County Employees' Retirement Association

A Pension Trust Fund of the County of Alameda
Oakland, CA

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A Comprehensive Annual Financial Report

for the Year Ended December 31, 2017

Issued By:

David Nelsen Chief Executive Officer

Margo Allen Fiscal Services Officer

ALAMEDA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

475 14th Street, Suite 1000, Oakland, CA 94612

A Pension Trust Fund of the County of Alameda (State of California)

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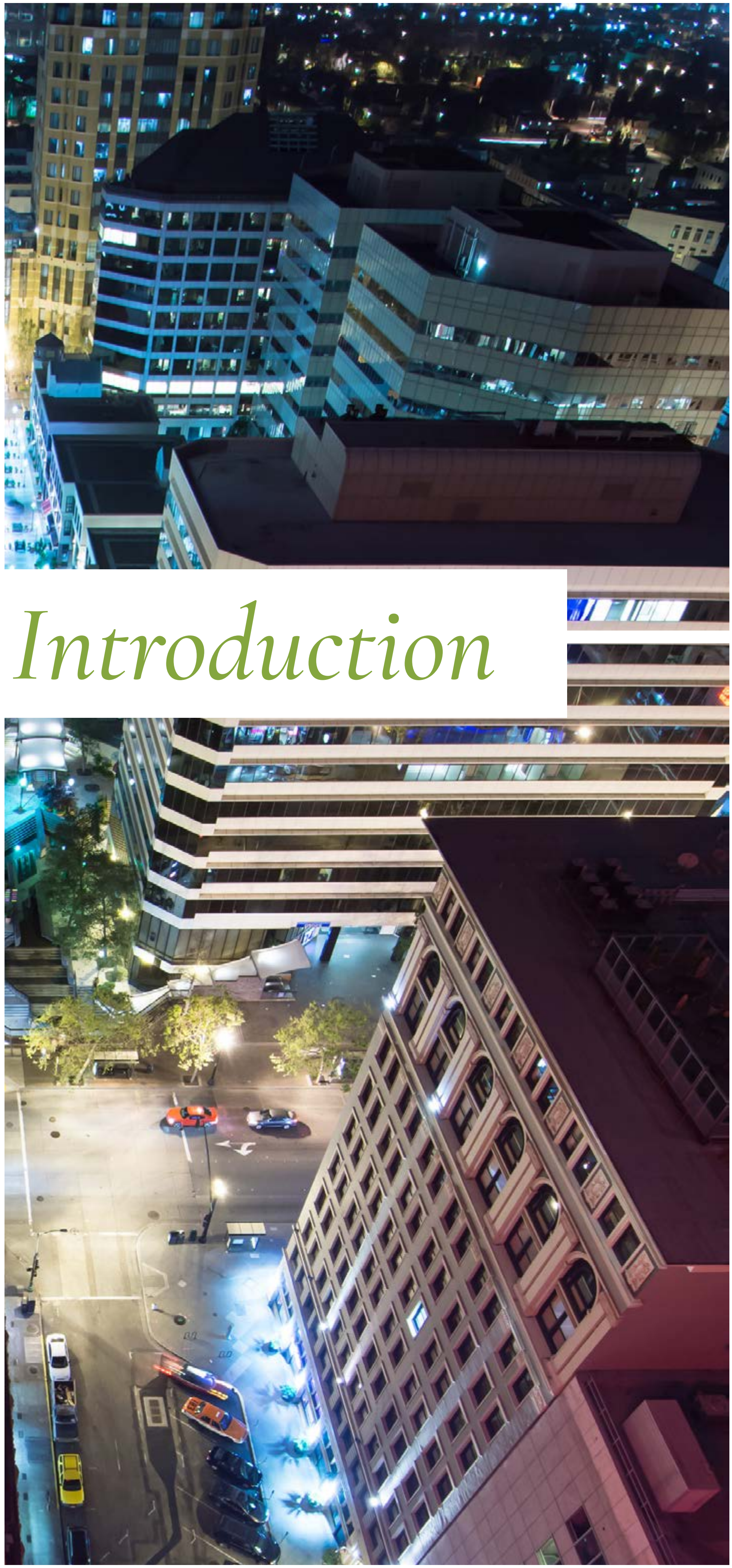
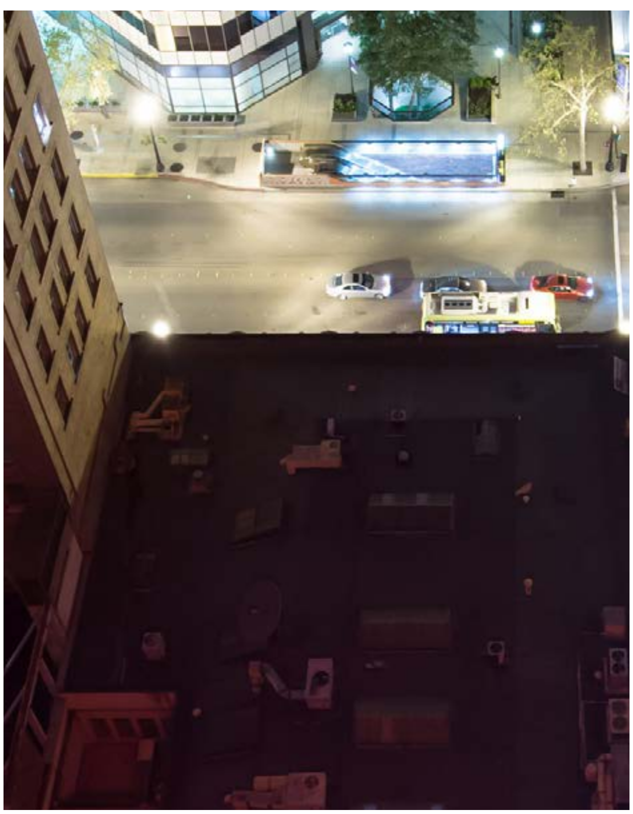
Introduction

This report presents the financial condition of the Pension Plan, the Other Postemployment Medical Benefits (OPEB), and Non-OPEB, as well as, investment results for the year ended December 31, 2017.





ALAMEDA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

475 14th Street, Suite 1000, Oakland, CA 94612 800/838-1932 510/628-3000 fax: 510/268-9574 www.acera.org

Letter of Transmittal

Dear Board of Retirement Members:

I am pleased to submit this *Comprehensive Annual Financial Report (CAFR) of the Alameda County Employees' Retirement Association for the Year Ended December 31, 2017.*

This report presents the financial condition of the Pension Plan, the Other Postemployment Medical Benefits (OPEB), and Non-OPEB, as well as, investment results for the year ended December 31, 2017. It also includes information from the current actuarial valuations as of December 31, 2016. The information presented is accurate and reliable. It conforms to generally accepted accounting principles and is free of material misstatements.

ACERA 2017 – OVERVIEW

Mission

ACERA provides members and employers with flexible, cost-effective, participant-oriented benefits through prudent investment management and superior member services. Under the supervision and direction of the Board of Retirement (the Board), ACERA deploys competent, professional, impartial, and open procedures designed to treat all members fairly and with courtesy and respect. ACERA manages investments by balancing the need for financial security of its members with superior performance.

ACERA and its Services

ACERA was established by the Alameda County Board of Supervisors in 1947, under the County Employees Retirement Law of 1937 (CERL), to provide retirement allowances and other benefits for County employees. ACERA's membership is composed of the following participating employers:

- Alameda County
- Alameda Health System (Formerly Alameda County Medical Center)
- First 5 Alameda County
- Housing Authority of the County of Alameda
- Livermore Area Recreation and Park District
- The Superior Court of California for the County of Alameda

In accordance with the CERL and ACERA's investment policies, ACERA collects and invests employer and member contributions to fund member benefits (including lifetime retirement, disability, and death benefits), pay administration expenses, and offer non-vested benefit programs for select medical and supplemental COLA benefits (subject to annual Board approval under CERL Article 5.5).

Investment Performance

In 2017, ACERA's total fund benefited from positive returns across all asset classes—especially equities—with the exception of a flat return from the real assets portfolio. U.S. equities markets enjoyed a historically strong year driven by positive economic fundamentals, earnings growth momentum, and the possibility of fiscal stimulus from the new administration. High earnings growth, as well as a weaker U.S. dollar, helped propel international equity markets to outperform domestic markets.

The total fund had a 19.5% gross rate of return and the fund ranked in the 3rd percentile for the year ended December 31, 2017. The market value of ACERA's net position increased by $1.15 billion, to $8.11 billion. ACERA's annualized gross rate of return over the last five and ten year spans was 10.2% and 6.5%, ranking ACERA's fund in the 18th and 14th percentiles, respectively. ACERA's investment goal is to operate at a level of performance in the upper quartile of comparable pension funds on a risk-adjusted basis.

Financial Reporting

ACERA management is responsible for the accuracy, completeness, and fair presentation of the information in this report. Williams, Adley & Company-CA, LLP provides external audit services to determine whether the financial statements are presented in conformity with generally accepted accounting principles. The Management's Discussion and Analysis (MD&A) Section starting on page 12 provides a thorough analysis of ACERA's operations and financial status.

Internal Controls

Management employs an annual risk assessment to design, implement, and maintain effective internal controls. Recognizing that even sound internal controls have inherent limitations, and the cost of a control should not exceed the benefits to be derived, ACERA's objective is to provide reasonable, rather than absolute, assurance, that the financial statements are free of any material misstatements. Common risk considerations include safeguarding pension assets, maintaining accurate and reliable accounting records, protecting member privacy, fraud prevention, and ensuring compliance with laws and regulations. The Board of Retirement oversees management's performance, and is ultimately responsible for confirming that management fulfills its duty in this regard. In addition, ACERA's Office of Internal Audit independently assesses whether the organization's risk management, control, and governance processes are adequate.

Actuarial Funding Status

ACERA engages an independent firm to conduct annual actuarial valuations. The pension plan's actuarial accrued liability increased from $7.88 billion in 2015 to $8.24 billion as of December 31, 2016. The plan's valuation value of assets increased from $6.08 billion in 2015 to $6.44 billion as of December 31, 2016. The Unfunded Actuarial Accrued Liability increased from $1.79 billion in 2015 to $1.80 billion as of December 31, 2016, with the funded ratio increasing from 77.3% to 78.1%, respectively. The Actuarial Section of this report contains a more detailed discussion of the funding requirements.

Supplemental Retiree Benefit Reserve

ACERA administers a Supplemental Retiree Benefit Reserve (SRBR) funded by regular earnings and sharing gains above the assumed actuarial investment rate of 7.60%[1]. As of December 31, 2016, the SRBR held $873.3 million in actuarial value of assets, of which, $837.2 million will fund the current benefit structure until the year 2039 for postemployment medical benefits and $36.2 million will fund the current non-OPEB benefit structure until the year 2034, even if no new earnings above the assumed investment rate of return are allocated to the SRBR.

Membership

In 2017, ACERA's active membership increased from 11,108 to 11,313. The number of retired members and beneficiaries receiving pension benefits increased from 9,246 to 9,499. Deferred membership increased from 2,267 to 2,438. Total membership increased from 22,621 to 23,250.

2017 ACCOMPLISHMENTS

In 2017, ACERA continued to focus on accountability and customer service enhancements to achieve our mission of excellent customer service while remaining cost effective and efficient in operations.

Administration

Administrative efficiency efforts have continued and accomplishments include completing a thorough review of cybersecurity response plans and procedures; engaging a Lean/Six-Sigma expert to assist in implementing organizational-wide Lean process improvement methodology; conducting an inaugural Lean project on the service retirement process to improve member experience and eliminate redundant work; developing an organization-wide fraud and theft training program to help team members better protect the agency from various internal and external threats; completing a participating employer audit of Alameda County for PEPRA compliance; instituting a "Participating Employer Best Practices Council" to facilitate PEPRA compliance; completing an internal audit to strengthen controls and efficiency in tracking potential overpayments resulting from unreported

1 Assumed actuarial investment rate of return was decreased to 7.25% as of December 31, 2017.

deaths; nearly completing development of an intranet to facilitate communication and collaboration; performing an asset tracking audit to ensure proper safeguards to prevent theft and mis-appropriation of high value assets; operationalizing GASB Statements No. 74 & 75 to complete the implementation of new OPEB (Other Post-Employment Benefits) Net OPEB Liability (NOL) reporting standards; receiving the 2016 GFOA Certificate of Achievement for Excellence in Financial Reporting for ACERA's CAFR and PAFR.

Investments

Risk assets continued to deliver strong performance. ACERA's Total Fund performance for the year ending 2017 was 19.5% (gross) and 19.2% (net).

ACERA adopted a new Private Equity Investment Policy and a new Absolute Return Policy, which like the previous PEARLS Policy, are standalone policies separate from the General Investment Guidelines, Policies and Procedures.

ACERA amended the mandate of its Emerging Investment Manager Program to International Equity asset class from U.S Equity asset class.

ACERA conducted a formal search for a general investment consulting firm. Amongst the finalists Meketa, NEPC, and Verus; ACERA selected the incumbent firm Verus, Inc. ACERA also conducted a search for passive equity managers, initiated a dedicated Emerging Market (Equity) Manager search, as well as obtained approval to conduct a small cap growth manager search.

ACERA continued to build out its newly separated Private Equity and Absolute Return asset classes by approving five commitments to the various subcategories of these two asset classes. For the year ending 12/31/2017, we had committed a total of over $232.7 million in commitments to new investments, increasing the total commitments closer to the target allocations. ACERA also made two commitments to the Real Assets asset class totaling $75 million. Additionally, ACERA made one commitment ($10m) to the Real Estate asset class.

Benefits

ACERA continued to enhance its customer service and benefits administration. Accomplishments include conducting a formal RFP for a benefits consulting firm; involving deferred compensation plan representation in existing retirement planning seminars; conducting a retiree "alive and well" audit project and developing an ongoing alive and well process to prevent erroneous payments to deceased members; initiating an upgrade/replacement project for ACERA's pension administration system; developing training plans for new benefits department employees as part of its onboarding process; initiating an upgrade of the Web Member Services member web portal, which will newly feature a responsive webpage design; and instituting a new medical advisor and disability claims management service to increase disability claims efficiency.

CERTIFICATE OF ACHIEVEMENT

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to ACERA for its Comprehensive Annual Financial Report for the year ended December 31, 2016 (See page 5). This has been the nineteenth year ACERA has received this prestigious award.

ACKNOWLEDGMENTS

The compilation of this report reflects the combined efforts of ACERA's management and staff under the leadership of the Board of Retirement. This report and the corresponding Popular Annual Financial Report are available to members and the general public on ACERA's website at www.acera.org.

The dedication of ACERA staff forms the nucleus of our service mission, and I wish to express deep gratitude to them for the success of our operation.

Respectfully submitted,

David Nelsen
Chief Executive Officer
June 26, 2018

Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

Alameda County

Employees' Retirement Association

California

For its Comprehensive Annual Financial Report for the Fiscal Year Ended

December 31, 2016

Christopher P. Morrill

Executive Director/CEO

ALSO AWARDED EACH YEAR FROM 1996 THROUGH 2010 AND 2012 THROUGH 2015

MEMBERS OF THE BOARD OF RETIREMENT

As of January 1, 2018

Tarrell V. Gamble
Chair
Appointed by the
Board of Supervisors

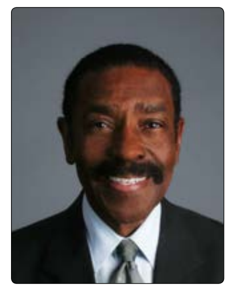
George Wood
First Vice Chair
Elected by General
Members

Henry C. Levy*
Second Vice Chair
Ex-Officio Member
Treasurer-Tax Collector
County of Alameda

Dale E. Amaral
Elected by Safety
Members

Ophelia B. Basgal
Appointed by the
Board of Supervisors

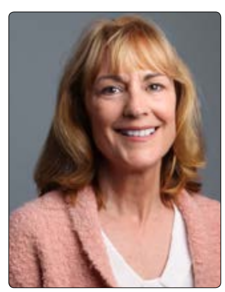
Annette Cain-Darnes**
Appointed by the
Board of Supervisors



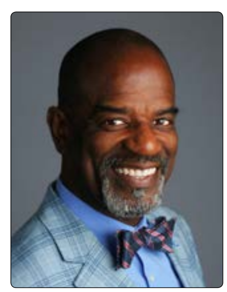
Keith Carson
Appointed by and
Member of the Board
of Supervisors

Liz Koppenhaver
Elected by Retired
Members

Nancy Reilly
Alternate Elected by
Retired Members



Elizabeth Rogers
Elected by General
Members



Darryl L. Walker Sr.
Alternate Elected by
Safety Members

2017 Board of Retirement

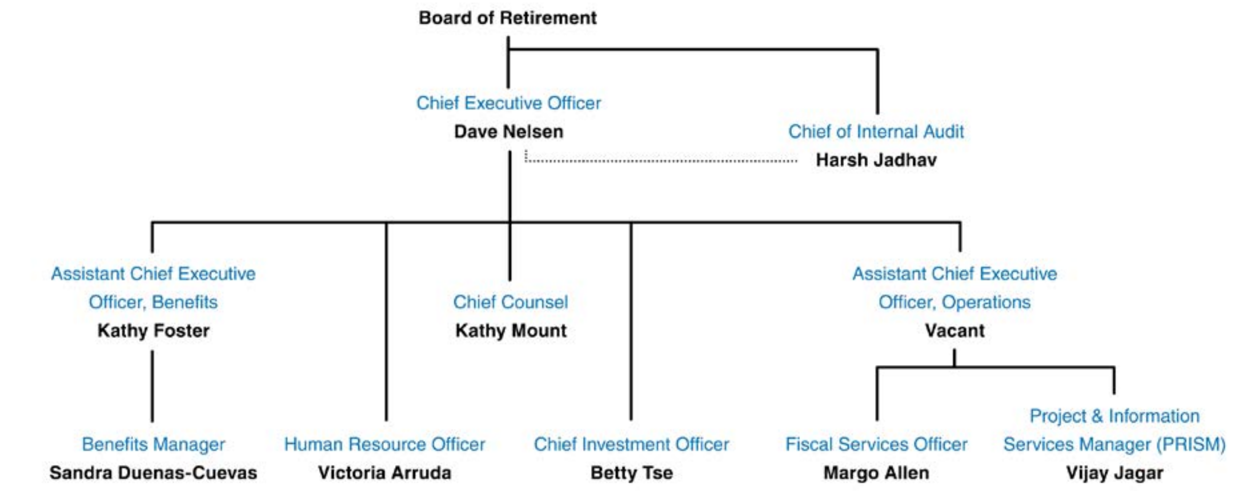
*Dale E. Amaral **(Chair)**, Tarrell V. Gamble **(First Vice Chair)**, Annette Cain-Darnes **(Second Vice Chair)**, Ophelia B. Basgal, Keith Carson, Liz Koppenhaver, Henry Levy, Elizabeth Rogers, George Wood, Nancy Reilly **(Alternate Retiree)**, Darryl L. Walker **(Alternate Safety)***

* Henry C. Levy was appointed as Treasurer-Tax Collector on April 26, 2017, to complete Donald R. White's remaining term of office.

** Annette Cain-Darnes resigned from the Board on June 5, 2018. The Board of Supervisors have appointed Jaime Godfrey to serve the remaining term until November 30, 2018.

ADMINISTRATIVE ORGANIZATIONAL CHART

As of December 31, 2017



PROFESSIONAL CONSULTANTS[1]

Actuary

Segal Consulting[2]

Administration

Leap Technologies, Inc

Benefits

EPO Design

Keenan & Associates

Fiscal Services

Armanino LLP

Human Resources

Lakeside Group

Independent Auditors

Williams, Adley & Company-CA, LLP

Information Technology

Corrao Group, LLC

Digital Deployment

Levi, Ray & Shoup Consulting

NEKO Industries

TopTal, LLC

West Coast Consulting Group, Inc

Legal

Amy Oppenheimer

Byers/Richardson

Hanson, Bridgett, LLP

Horowitz & Rubinoff, LLP

Ice Miller, LLP

Manatt, Phelps & Phillips

Meyers/Nave Professional Law Corporation

Nossaman, LLP

Reed Smith, LLP

Other Specialized Services

American Arbitration Association

Center for Occupational Psychiatry

Cherion, Inc.

Manager Medical Review Org., Inc.

Towers Matson

U.S. Healthworks Group

1 The listing of Investment Professionals found on page 86 provided services to the total fund which includes the pension plan and postemployment medical benefits. Also, the schedule of Brokerage Commissions and schedule of Investment Managers Fees are reported page 87 and page 88, respectively. Not all of the professional consultants listed above are required to file a Statement of Economic Interests (Form 700) under ACERA's Conflict of Interest Policy.

2 Segal Consulting also provides Administration and Benefits consulting services.

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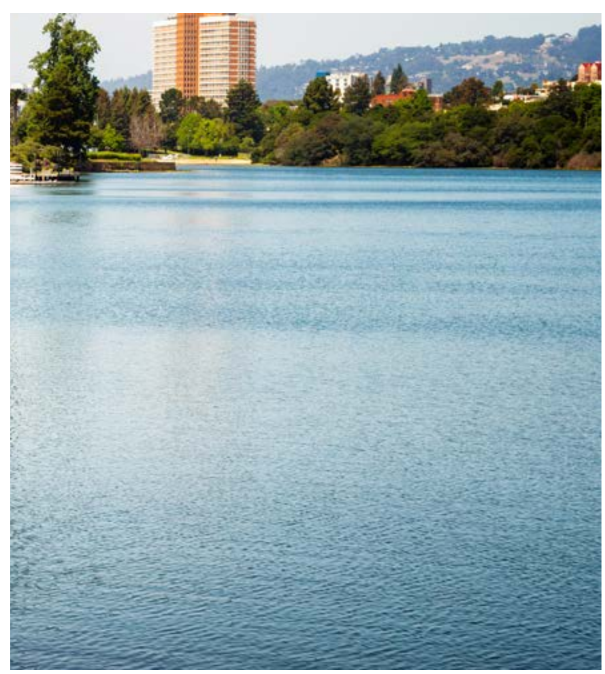
Financial

ACERA's investments at fair value increased 16% from $7.0 billion in 2016 to $8.1 billion in 2017.



WILLIAMS ADLEY

Independent Auditor's Report

Board of Retirement
Alameda County Employees' Retirement Association
Oakland, California

Report on the Financial Statements

We have audited the accompanying financial statements of the Alameda County Employees' Retirement Association (ACERA), as of and for the year ended December 31, 2017, and the related notes to the financial statements, which collectively comprise ACERA's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, 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 financial statements referred to above present fairly, in all material respects, the fiduciary net position of ACERA as of December 31, 2017, and the changes in its fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matters

Change in Accounting Principle

As described in note 1 to the financial statements, ACERA adopted new accounting guidance: Governmental Accounting Standards Board Statement (GASB) No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans* for the year ended December 31, 2017.

Net OPEB Liability of Employers

As described in note 7, based on the most recent actuarial valuation as of December 31, 2017, ACERA's independent actuaries determined that, at December 31, 2017, the total OPEB liability exceeded the OPEB plan's fiduciary net position by $27.5 million.

WILLIAMS, ADLEY & COMPANY-CA, LLP
Certified Public Accountants / Management Consultants
7677 Oakport Street, Suite 1000 • Oakland, CA 94621 • (510) 893-8114 • Fax: (510) 893-2603
http://wacllp.com

WILLIAMS ADLEY

Net Pension Liability of Employers

As described in note 5, based on the most recent actuarial valuation as of December 31, 2017, ACERA's independent actuaries determined that, at December 31, 2017, the total pension liability exceeded the pension plan's fiduciary net position by $2.0 billion.

Our opinion is not modified with respect to these matters.

Other Matters

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

Other Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise ACERA's basic financial statements. The schedules of administration expense, investment expenses, and payments to other consultants, and the introduction, investment, actuarial, and statistical sections, as listed in the table of contents, are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The schedules of administration expense, investment expenses, and payments to other consultants are the responsibility of management and were derived from and relate 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 statement themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated in all material respects in relation to the basic financial statements as a whole.

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

Report on Summarized Comparative Information

We have previously audited ACERA's 2016 financial statements, and our report dated June 9, 2017, expressed an unmodified opinion on those audited financial statements. In our opinion, the summarized comparative information presented herein as of and for the year ended December 31, 2016, is consistent, in all material respects, with the audited financial statements from which it has been derived.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated June 25, 2018, on our consideration of ACERA's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering ACERA's internal control over financial reporting and compliance.

Williams, Adley & Company-CA, LLP

Oakland, California

June 25, 2018

Management's Discussion and Analysis

Management's Discussion and Analysis (MD&A) presents the financial activities of the Alameda County Employees' Retirement Association (ACERA) for the year ended December 31, 2017. It provides an overview of the financial position and the combined results of operations for the pension plan and non-OPEB and Other Postemployment Benefits (OPEB). The narrative, in conjunction with the financial statements starting on page 20 and the notes to the financial statements beginning on page 23, presents ACERA's overall financial position, and the results of its operations. ACERA's funding is a combination of participating employer and member contributions and earnings on invested assets. The Chief Executive Officer's Letter of Transmittal starting on page 2 of this Comprehensive Annual Financial Report (CAFR) should be read along with the MD&A narrative.

(Note: Rounding standards applied throughout this section, except when rounding obfuscated the clarity and meaning of the information)

FINANCIAL HIGHLIGHTS

- As of December 31, 2017, ACERA's net position, which represents funds restricted for paying current and long-term pension benefit obligations and non-vested OPEB for plan members and their beneficiaries, was $8.1 billion, a $1.1 billion increase over December 31, 2016. This 16% increase was primarily attributable to the increase in fair value of ACERA's investment portfolio during 2017.
- As of December 31, 2017, the Net Pension Liability (NPL) was $2,013.7 million, compared to $2,243.2 million as of December 31, 2016. The $229.5 million decrease was primarily a result of the favorable investment return during calendar year 2017. The net investment income was $1,065.9 million, which was offset somewhat by the effect of the changes in the actuarial assumptions (which increased the NPL by about $316.7 million).
- As of December 31, 2017, the Net OPEB Liability (NOL) was $27.5 million, compared to $135.2 million as of December 31, 2016. The $107.7 million decrease was primarily a result of favorable investment return during calendar year 2017 of about $243.2 million, which was

offset somewhat by the effect of the changes in actuarial assumptions (which increased the NOL by about $59.0 million). Favorable investment results are allocated earnings to the Supplemental Retiree Benefits Reserve (SRBR), which are credited by semiannual transfers to the reserve as defined by Article 5.5 of the County Employees' Retirement Law of 1937.

- As of December 31, 2016, the date of the retirement plan actuarial funding and SRBR sufficiency actuarial valuations used for the 2017 CAFR, actuarial investment rate of return assumption used was 7.6%. The inflation rate assumption was 3.25% with assumed across-the-board salary increases of 0.5%.
- As of December 31, 2016, ACERA had $343.9 million in net deferred investment losses based on the actuarial value of assets. These deferred losses represent 4.9% of the market value of assets, as of the December 31, 2016, actuarial valuation date. For funding purposes, when determining the actuarial value of assets, deferred gains and losses are recognized over 10 six-month periods. Unless offset by future investment gains or other favorable experience, the recognition of the $343.9 million market losses is expected to have a negative impact on the Association's future funded percentage and contribution rate requirements.

OVERVIEW OF THE FINANCIAL STATEMENTS

This discussion and analysis serves as an introduction to ACERA's Basic Financial Statements, which comprise the following five components:

- Statement of Fiduciary Net Position
- Statement of Changes in Fiduciary Net Position
- Notes to the Basic Financial Statements
- Required Supplementary Information (RSI) and Notes to RS I
- Supplemental Schedules

The basic financial statements report the components of the fiduciary net position held in trust for benefits, the components of the changes in the fiduciary net position (additions and deductions), along with explanatory notes to the basic financial statements.

ACERA's basic financial statements have two reporting columns. The first column reports the pension plan and non-OPEB, and the second column reports the postemployment medical benefits. ACERA's pension benefits and the non-OPEB are valued together for the purpose of determining and reporting the NPL. In addition to the basic financial statements, this report contains required supplementary information and supplemental schedules intended to assess the historical context of ACERA's progress in meeting benefit obligations through funding of contributions and investment income.

For the fiscal year ended December 31, 2017, ACERA implemented the Governmental Accounting Standards Board's (GASB) Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans* and GASB Statement No. 85, *Omnibus 2017*. Statement No. 74 replaces the requirements of GASB Statement No 43, Statement No. 45, and Statement No. 50. Statement No. 85, addresses and corrects issues related to implementation of Statement No. 74. More specificity for these and other accounting pronouncements is contained in Note 1, New Accounting Pronouncements, starting on page 25.

The *Statement of Fiduciary Net Position* on page 20 provides a snapshot of account balances at year's end. It includes the assets available for future benefit payments as well as current liabilities outstanding at year's end.

ACERA did not have any transactions that met the criteria for deferred outflows of resources or deferred inflows of resources as defined in GASB Statement No. 63 and GASB Statement No. 65. As a result, those line items are not displayed on the 2017 Statement of Fiduciary Net Position.

The *Statement of Changes in Fiduciary Net Position* starting on page 21 provides a summary view of the additions to and deductions from the fiduciary net position that occurred over the course of the 2017 financial year.

The *Basic Financial Statements* include all assets and liabilities, using the accrual basis of accounting, in compliance with generally accepted accounting principles, similar to the accounting method used by most private-sector companies. All of the year's asset additions and deductions are taken into account regardless of when the corresponding cash is received or paid. All investment purchases and sales are reported as of the trade date. Investments are reported at current fair value and in accordance with

GASB Statement No. 31. Both realized and unrealized investment gains and losses are recognized. Each depreciable component of capital assets is depreciated over its useful life.

Notes to the Basic Financial Statements starting on page 23 provide additional information essential for a complete understanding of the basic financial statements.

Required Supplementary Information and Notes to Required Supplementary Information starting on page 58 illustrate the GASB Statement No. 67 financial reporting requirements in the Schedule of Changes in Net Pension Liability and Related Ratios, Schedule of Employer Contributions, Schedule of Investment Returns, and Notes to Required Supplementary Information for the Pension Plan and Non-OPEB. Also reported are the requirements of GASB Statement No. 74 in the Schedules of Changes in Net OPEB Liability and Related Rations, along with the Notes to the Required Supplementary Information for Postemployment Medical Benefits.

Supplemental Schedules of administrative expenses, investment expenses and payments to other consultants are presented on page 65.

Tables 1 and 2 starting on page 14, present condensed information about ACERA's financial position and results of operations for the current year in comparison to the preceding year, and form the basis for this financial discussion.

Table 1: Fiduciary Net Position (Condensed)

As of December 31, 2017 and 2016 (Dollars in Millions)

	2017	2016	Increase (Decrease) Amount	Percent Change
ASSETS				
Current Assets	$ 467.8	$ 363.0	$ 104.8	29%
Investments at Fair Value	8,106.9	6,963.5	1,143.4	16%
Capital Assets, net	1.6	1.8	(0.2)	-11%
Total Assets	**8,576.3**	**7,328.3**	**1,248.0**	**17%**
LIABILITIES				
Current Liabilities	464.2	362.7	101.5	28%
Total Liabilities	**464.2**	**362.7**	**101.5**	**28%**
NET POSITION				
Restricted - Held in Trust for Benefits	**$ 8,112.1**	**$ 6,965.6**	**$ 1,146.5**	**16%**

Table 2: Changes In Fiduciary Net Position (Condensed)

For the Years Ended December 31, 2017 and 2016 (Dollars in Millions)

	2017	2016	Increase (Decrease) Amount	Percent Change
ADDITIONS				
Member Contributions	$ 89.3	$ 85.8	$ 3.5	4%
Employer Contributions	247.1	241.7	5.4	2%
Net Investment Income (Loss)	1,308.2	470.0	838.2	178%
Miscellaneous Income	0.9	0.5	0.4	80%
Transfer to Employers' Advance Reserve from SRBR for Employer Contributions to 401(h) Account	38.3	33.8	4.5	13%
Transfer to Employers' Advance Reserve from SRBR for Implicit Subsidy	8.8	6.0	2.8	47%
Transfer from Employers' Advance Reserve to SRBR for OPEB Related Administrative Expenses	1.2	1.2	-	0%
Total Additions	**1,693.8**	**839.0**	**854.8**	**102%**
DEDUCTIONS				
Retirement Benefit Payments	437.4	413.8	23.6	6%
Postemployment Medical Benefits	37.9	34.9	3.0	9%
Member Refunds	7.9	8.5	(0.6)	-7%
Administration	15.8	15.8	-	0%
Transfer from SRBR to Employers' Advance Reserve for Employer Contributions to 401(h) Account	38.3	33.8	4.5	13%
Transfer from SRBR to Employers' Advance Reserve for Implicit Subsidy	8.8	6.0	2.8	47%
Transfer to SRBR from Employers' Advance Reserve for OPEB Related Administrative Expenses	1.2	1.2	-	0%
Total Deductions	**547.3**	**514.0**	**33.3**	**6%**
CHANGE IN NET POSITION	**1,146.5**	**325.0**	**821.5**	**253%**
NET POSITION - JANUARY 1	**6,965.6**	**6,640.6**	**325.0**	**5%**
NET POSITION - DECEMBER 31	**$ 8,112.1**	**$ 6,965.6**	**$ 1,146.5**	**16%**

ANALYSIS OF FINANCIAL POSITION

Fiduciary net position held in trust for benefits equals assets less liabilities. Table 1, on page 14, displays the condensed information of the fiduciary net position, which as of December 31, 2017, totaled approximately $8.1 billion. This is $1.1 billion or a 16% increase from the prior year, primarily a result of an increase in the fair value of ACERA's invested assets. The Investment Section, starting on page 68, provides further details about ACERA's investment performance.

Current Assets

The components of current assets are detailed on the Statement of Fiduciary Net Position on page 20. Total current assets increased by $104.8 million from $363.0 million in 2016 to $467.8 million in 2017. This 29% increase was almost entirely due to the net increase in cash and securities lending cash collateral of $99.9 million.

Investments at Fair Value

ACERA's investments at fair value increased 16% from $7.0 billion in 2016 to $8.1 billion in 2017. The $1.1 billion increase in investments at fair value was net of ACERA's $167.6 million cash draw in 2017 on the portfolio to pay retirement benefits and administrative costs.

Capital Assets, Net

Capital assets include equipment, furniture, information systems, and leasehold improvements. The value of capital assets decreased from $1.8 million in 2016 to $1.6 million in 2017. The net decrease of $0.2 million or -11% was due to the declining value of the useful life of capital assets.

Total Assets

In all, total assets experienced a net increase of $1.2 billion, from $7.3 billion in 2016 to $8.5 billion in 2017. The increase in total investments at fair value accounted for most of the increase in total assets.

Current Liabilities

The components of ACERA's current liabilities are detailed in the Statement of Fiduciary Net Position on page 20. Current liabilities increased by $101.5 million or 28% from $362.7 million in 2016 to $464.2 million in 2017. The net increase is mainly attributed to the $84.0 million and $19.0 million increase in securities lending liability and unsettled trades, respectively, offset by a net decrease in foreign exchange contracts and payables.

ANALYSIS OF RESULTS OF OPERATIONS

The change in fiduciary net position equals total additions less total deductions. Table 2, on page 15, displays the condensed information about ACERA's 2017 financial activity. From January 1 to December 31, 2017, ACERA's fiduciary net position increased by $1.1 billion. The increase was almost exclusively due to appreciation of the fair value of ACERA's invested assets.

Additions to Fiduciary Net Position

The primary funding sources for ACERA's member benefits are member contributions, employer contributions, and net investment income. Additions to and deductions from fiduciary net position include transfers to and from the employers' advance reserve and the supplemental retiree benefits reserve.

Total additions to ACERA's fiduciary net position for the years ended December 31, 2017, and 2016, were $1.7 billion and $839.0 million, respectively. This is a total net increase of $854.8 million or 102%. ACERA's net investment income for 2017 was $1.3 billion, compared to $470.0 million in 2016. See the Net Investment Income (Loss) section on page 17 for a more comprehensive discussion of this increase.

The December 31, 2016, actuarial valuation report recommended a contribution rate increase for members and employers. The Board of Retirement approved both increases to be in effect by September 2017. The aggregate member contribution rate increase from 8.77% of payroll to 8.80% of payroll. This increase was primarily due to the change in membership demographics.

The aggregate employer contribution rate increased from 24.89% of payroll to 25.00% of payroll. This increase was primarily due to (a) lower than expected return on investments (after smoothing); (b) amortizing the prior year's UAAL over a smaller than expected projected total payroll; offset somewhat by (c) lower than expected salary increases for active members; and, (d) other actuarial gains. Refer to the following member and employer contributions sections for further discussion.

Member Contributions

Total member contributions for 2017 were $89.3 million, up $3.5 million or 4% over 2016 total member contributions of $85.8 million. As previously stated, 2016 actuarial valuation contributions rates went into effect September 1, 2017[1].

Employer Contributions

Total employer contributions collected for 2017 were $247.1 million, an increase of 2% or $5.4 million over the $241.7 million in total contributions collected in 2016.

Net Investment Income (Loss)

Net investment gain for 2017 was $1.3 billion, which is $838.2 million higher than the $470.0 million in investment gain for 2016. This increase in net investment income was primarily due to a net appreciation in the fair value of invested assets. The 2017 net appreciation of investments was $1.2 billion compared to a 2016 net appreciation of $367.0 million. The 2017 gross investment return was 19.5% compared to a 7.4% gross investment returns in 2016. The Investment Section of this report starting on page 68 describes investment results and comparatives in greater detail.

Miscellaneous Income

Miscellaneous income for 2017 totaled $0.9 million, up $0.4 million or 80% from 2016. This increase is mainly due to a increase of class action securities litigation settlements.

Transfers between Employers' Advance Reserve and SRBR

Postemployment medical benefits are paid from employers' 401(h) accounts. Participating employers identify a portion of their contributions as 401(h) contributions. Employers funded $38.3 million and 33.8 million to their 401(h) accounts for years 2017 and 2016, respectively. See 401(h) Postemployment Medical Benefits Account on page 33.

In July 2011, ACERA applied the provisions of the 1937 Act (Section 31596.1) and allocated a portion of the 401(h) contributions towards administrative costs. As a result, $1.2 million was transferred from the employers' advance reserve to SRBR for both 2017 and 2016.

There was $8.8 million transfer from the SRBR to the employers' advance reserve in 2017 to compensate Alameda County for the 2016 blended rate health care implicit subsidy. The implicit subsidy transfer increased by $2.8 million or 47% from the $6.0 million implicit subsidy transfer in 2016. This increase was primarily due to an escalation in the utilization rates for retirees under age 65.

Deductions from Fiduciary Net Position

Total deductions are composed of four main categories, i.e., retirement benefits (including service retirement and disability payments, death benefits, non-OPEB burial benefits and supplemental COLA), postemployment medical benefits, member refunds, and administration expenses of the retirement system.

Total deductions from the fiduciary net position for 2017 were $547.3 million. This is 6% or a $33.3 million increase over the $514.0 million in total deductions for 2016. Service retirement and disability benefit payments alone increased 6.0% or $23.8 million over 2016. Transfer increases for 401(h) and implicit subsidy of $4.5 million (13%) and $2.8 million (47%), respectively.

1 For ACERA's plan year, there is an eight-month lag before new contribution rates go into effect. This means that a prior plan year's contribution rate is in effect for eight of the twelve months of the financial reporting period. Therefore, for 2017, there was an eight-month period (January 1 through August 31, 2017) that the contribution rate was 8.77% and a four- month period (September 1 through December 31, 2017) that the contribution rate was 8.80%.

Retirement Benefit Payments

Retirement benefit payments in 2017 totaled $437.4 million, a $23.6 million or 6% increase over $413.8 million in 2016. The increase in benefit payments is primarily due to higher average benefits of retirees added to the retirement payroll compared to the lower average retirement allowance of those retirees removed from the retirement payroll.

Postemployment Medical Benefits

Postemployment medical benefits paid from the 401(h) account in 2017 were $37.9 million, an increase of $3.0 million or 9% over the $34.9 million paid from the 401(h) account in 2016. This increase was due in part to higher non-Medicare health premiums and in part to an increase in new retirees. ACERA's maximum monthly medical benefit for 2017 was $540.44 per member. Retirees 65 years and older, who were on the Medicare Exchange, received a maximum of $414.00 Monthly Medical Allowance (MMA). For retirees 65 years and older, enrolled in the Medicare Exchange individual plans, ACERA utilized Health Reimbursement Accounts (HRAs).

Member Refunds

Member refunds originate from either a member separation from service (termination) or an active member death. Member refunds decreased by $0.6 million or 7% from $8.5 million in 2016 to $7.9 million in 2017. The decrease was primarily due to a decline in termination refunds.

Administration Expense

Total administration expense for both 2017 & 2016 remain $15.8 million. Administration expenses cover the basic cost of operating the retirement system. Some expenses are subject to the statutory limit, as defined in the following paragraph, and others are excluded from the statutory limit.

In accordance with legal spending restrictions outlined in the County Employee Retirement Law of 1937 (1937 Act), ACERA's Board of Retirement adopts an operating expense and administrative budget, effective for the following year. The annual amount of administrative budget is subject to legal and budgetary restrictions. Note 11 to the Basic Financial Statements, page 56, further describes the legal limitations. Consequently, the administrative budget for 2017 was kept in compliance with the "37 Act" legal spending restrictions of 0.21% of the accrued actuarial liability of the retirement system.

Administrative expenses subject to the statutory limit increase by 2% or $0.2 million, from $12.1 million in 2016 to $12.3 million in 2017. The major categories of operating expenses subject to the statutory limit include personnel services, professional services, communications, and utilities, and other (i.e., depreciation, board of retirement operating expenses, insurance, miscellaneous, training, maintenance-equipment, and supplies).

Administrative expenses excluded from the statutory limit decreased by 5% or $0.2 million, from $3.7 million in 2016 to $3.5 million in 2017. The categories of operating expenses not subject to the statutory limit include legal, technology, actuarial and business continuity expenses.

CURRENTLY KNOWN FACTS AND EVENTS

Actuarial: In December 2017, ACERA's Board of Retirement approved two important changes to the economic assumptions used for annual funding actuarial valuations. Based on the results of the Actuarial Experience Study report dated September 6, 2017, covering the period from December 1, 2013, through November 30, 2017, the Board adopted a 7.25% net investment rate of return assumption and a 3.00% inflation rate assumption to be used starting with the December 31, 2017, valuation.

Litigation: In the DSA v. ACERA lawsuit, the Deputy Sheriffs' Association and others alleged that in implementing AB 197 the ACERA Board violated the rights of legacy members to have various elements of compensation included in final compensation for purposes of calculating their retirement allowances. The case was combined with two similar lawsuits filed in Contra Costa and Merced, and a judgment was rendered in the trial court concluding that legacy members do not have a vested right to include the challenged amounts in calculating retirement allowances, unless the amounts were both earned and payable in the "final average salary" period, and were paid for work during normal working hours required of all employees in the same grade and class. ACERA implemented the court's decision as of July 11, 2014.

The decision in the trial court was appealed to the Court of Appeal, which issued a decision in January, 2018. Three parties to that lawsuit petitioned the California Supreme Court to accept review of the Court of Appeal decision, which was granted. The matter is now pending before the California Supreme Court, and the decision of the Court of Appeal was vacated. While awaiting a final decision from the California Supreme Court, ACERA continues to follow the direction of the trial court, and is not making any changes to the ACERA process until receiving direction from the California Supreme Court.

FIDUCIARY RESPONSIBILITIES

ACERA's Board of Retirement and management are fiduciaries of the retirement plan. Under the California Constitution and the 1937 Act, assets of the retirement plan can be used only for the exclusive benefit of the plan participants and their beneficiaries.

REQUESTS FOR INFORMATION

This report is designed to provide the Board of Retirement, the membership, participating employers, taxpayers, investment managers, vendors, and other stakeholders or interested parties with a general overview of ACERA's financial condition, financial activities, and funding status. Questions regarding any of the information provided in this report or requests for additional information should be addressed to:

ACERA
Fiscal Services Department
475 14th Street, Suite 1000
Oakland, California 94612-1900

You can also contact us by e-mail at info@acera.org or by phone at (510) 628-3000 during normal business hours. Our website www.acera.org contains a wealth of information and is always accessible.

Respectfully submitted,

Margo Allen
Fiscal Services Officer
May 1, 2018

BASIC FINANCIAL STATEMENTS

Statement of Fiduciary Net Position

As of December 31, 2017, with Comparative Totals as of December 31, 2016 (Dollars in Thousands)

	Pension Plan & Non-OPEB	Postemployment Medical Benefits	Total 2017	Total 2016
ASSETS				
Cash	$ 17,130	$ -	$ 17,130	$ 1,265
Securities Lending Cash Collateral	406,876	-	406,876	322,844
Receivables				
Contributions	14,212	-	14,212	12,753
Investment Receivables	16,831	-	16,831	15,617
Unsettled Trades - Investments Sold	9,858	-	9,858	8,465
Future Contracts - Equity Index	341	-	341	994
Equity Index Swaps	803	-	803	-
Foreign Exchange Contracts	666	-	666	24
Other Receivables	199	-	199	189
Total Receivables	**42,910**	-	**42,910**	**38,042**
Prepaid Expenses	848	-	848	823
Total Current Assets	**467,764**	**-**	**467,764**	**362,974**
Investments at Fair Value				
Short-Term Investments	210,168	-	210,168	209,671
Domestic Equity	1,547,412	-	1,547,412	1,334,452
Domestic Equity Commingled Funds	1,082,242	-	1,082,242	953,344
International Equity	1,915,468	-	1,915,468	1,479,954
International Equity Commingled Funds	560,459	-	560,459	400,848
Domestic Fixed Income	953,511	-	953,511	809,532
International Fixed Income	136,735	-	136,735	123,553
International Fixed Income Commingled Funds	141,106	-	141,106	115,954
Real Estate - Separate Properties	66,538	-	66,538	55,954
Real Estate - Commingled Funds	445,602	-	445,602	435,868
Real Assets	301,579	-	301,579	286,169
Private Equity	443,631	-	443,631	434,418
Absolute Return	302,484	-	302,484	323,821
Total Investments	**8,106,935**	**-**	**8,106,935**	**6,963,538**
Non-OPEB Assets	37,517	-	37,517	36,162
Due from Pension Plan	(901,353)	863,836	(37,517)	(36,162)
Capital Assets at Cost (Net of Accumulated Depreciation and Amortization)	1,605	-	1,605	1,756
Total Assets	**7,712,468**	**863,836**	**8,576,304**	**7,328,268**
LIABILITIES				
Securities Lending Liability	406,876	-	406,876	322,844
Unsettled Trades - Investments Purchased	37,552	-	37,552	18,503
Future Contracts - Equity Index	231	-	231	169
Equity Index Swaps	-	-	-	57
Foreign Exchange Contracts	468	-	468	2,957
Investment-Related Payables	12,594	-	12,594	12,660
Accrued Administration Expenses	2,495	-	2,495	2,055
Members Benefits & Refunds Payable	3,473	-	3,473	3,238
Retirement Payroll Deductions Payable	515	-	515	205
Total Liabilities	**464,204**	**-**	**464,204**	**362,688**
NET POSITION - Held in Trust for Benefits	**$ 7,248,264**	**$ 863,836**	**$ 8,112,100**	**$ 6,965,580**

The accompanying Notes to the Basic Financial Statements are an integral part of these Basic Financial Statements.

Statement of Changes in Fiduciary Net Position

For the Year Ended December 31, 2017, with Comparative Totals for the Year Ended December 31, 2016 (Dollars in Thousands)

	Pension Plan & Non-OPEB	Postemployment Medical Benefits	Total 2017	Total 2016
ADDITIONS				
Contributions				
Member	$ 89,326	$ -	$ 89,326	$ 85,736
Employer	208,736	38,328	247,064	241,729
Total Contributions	**298,062**	**38,328**	**336,390**	**327,465**
Investment Income				
From Investment Activities:				
Net Appreciation (Depreciation) in Fair Value of Investments	1,231,438	-	1,231,438	366,982
Dividends, Interest, & Other Investment Income	132,324	-	132,324	147,223
Total Income from Investment Activities	**1,363,762**	**-**	**1,363,762**	**514,205**
Total Investment Expenses	(57,920)	-	(57,920)	(47,355)
Net Income (Loss) from Investment Activities	**1,305,842**	**-**	**1,305,842**	**466,850**
From Securities Lending Activities:				
Securities Lending Income	5,899	-	5,899	4,898
Securities Lending Expenses				
Borrower Rebates	(2,910)	-	(2,910)	(1,025)
Management Fees	(598)	-	(598)	(775)
Total Securities Lending Activity Expenses	**(3,508)**	**-**	**(3,508)**	**(1,800)**
Net Income from Securities Lending Activities	**2,391**	**-**	**2,391**	**3,098**
Earnings Allocated to Non-OPEB	2,773	-	2,773	2,507
Earnings Allocated	(67,251)	64,478	(2,773)	(2,507)
Total Net Investment Income (Loss)	**1,243,755**	**64,478**	**1,308,233**	**469,948**
Miscellaneous Income	864	-	864	501
Transfer to Employers' Advance Reserve from SRBR for Employer Contributions to 401(h) Account	38,328	-	38,328	33,819
Transfer to Employers' Advance Reserve from SRBR for Implicit Subsidy	8,788	-	8,788	6,021
Transfer from Employers' Advance Reserve to SRBR for OPEB Related Administrative Expense	-	1,204	1,204	1,191
Total Additions	**$ 1,589,797**	**$ 104,010**	**$ 1,693,807**	**$ 838,945**

The accompanying Notes to the Basic Financial Statements are an integral part of these Basic Financial Statements.

Statement of Changes in Fiduciary Net Position (Continued)

For the Year Ended December 31, 2017, with Comparative Totals for the Year Ended December 31, 2016 (Dollars in Thousands)

	Pension Plan & Non-OPEB	Postemployment Medical Benefits	Total 2017	Total 2016
DEDUCTIONS				
Benefits				
Service Retirement and Disability Benefits	$ 433,464	$ -	$ 433,464	$ 409,693
Death Benefits	2,513	-	2,513	2,521
Burial Benefits - Non-OPEB	187	-	187	187
Supplemental Cost of Living Allowance - Non-OPEB	1,231	-	1,231	1,351
Post Employment Medical Benefits	-	37,904	37,904	34,927
Total Benefit Payments	**437,395**	**37,904**	**475,299**	**448,679**
Member Refunds	7,893	-	7,893	8,471
Administration				
Administrative Expenses	11,084	1,204	12,288	12,135
Legal Expenses	1,611	-	1,611	1,636
Technology Expenses	998	-	998	1,104
Actuarial Expenses	479	-	479	337
Business Continuity Expenses	399	-	399	597
Total Administration	**14,571**	**1,204**	**15,775**	**15,809**
Transfer from SRBR to Employers' Advance Reserve for Employer Contributions to 401(h) Account	-	38,328	38,328	33,819
Transfer from SRBR to Employers' Advance Reserve for Implicit Subsidy	-	8,788	8,788	6,021
Transfer to SRBR from Employers' Advance Reserve for OPEB Related Administrative Expense	1,204	-	1,204	1,191
Total Deductions	**461,063**	**86,224**	**547,287**	**513,990**
CHANGE IN NET POSITION	**1,128,734**	**17,786**	**1,146,520**	**324,955**
NET POSITION - JANUARY 1	**6,119,530**	**846,050**	**6,965,580**	**6,640,625**
NET POSITION - DECEMBER 31	**$ 7,248,264**	**$ 863,836**	**$ 8,112,100**	**$ 6,965,580**

The accompanying Notes to the Basic Financial Statements are an integral part of these Basic Financial Statements.

Notes to the Basic Financial Statements (an integral part of the Basic Financial Statements)

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Reporting Entity

ACERA is an independent, public employee retirement system with its own governing board. ACERA's financial statements are included in the County of Alameda's financial statements as a pension and other employee benefit fiduciary trust fund.

Basis of Accounting

ACERA follows generally accepted accounting principles in the United States and reporting guidelines set forth by the Governmental Accounting Standards Board (GASB). The major pronouncements that prescribe ACERA's defined benefit Pension Plan and Other Postemployment Benefits for financial reporting are GASB Statement No. 31, 40, 51, 53, 67, 72 and 74.

ACERA's (fiduciary trust fund) financial statements are prepared on the accrual basis of accounting. Employer and employee contributions are recognized when due, pursuant to formal commitments, as well as statutory or contractual requirements. Security purchases and sales are recognized in the financial statements as of the trade date. Retirement benefits and member refunds are recognized as liabilities when due and payable in accordance with the terms of the plan. Other expenses are recognized when the corresponding liabilities are incurred.

Investments

Investments are reported at fair value. Fair value for investments of publicly traded stocks and bonds and issues of the U.S. Government and its agencies is based on the last reported sale price as of the fiscal year end. Fair value of securities denominated in a foreign currency reflects exchange rates in effect at fiscal year-end. The fair value of ACERA's short-term investments held in external investment pools managed by the master custodian and securities lending agent is provided by the pool manager and is reported at net asset per share value for the pool. Fair value of investments in commingled funds of debt securities, equity securities, and real estate is based on the fund share price provided by the fund manager, which is based on net asset value. Fair value of investments in real estate separate properties is based on prices in a competitive market as determined by the investment manager relying on periodic appraisals and is reported net of the outstanding balance of associated mortgages. The Board of Retirement adopted a proposal to separate the PEARLS portfolio into private equity and absolute return during the last quarter of 2017. Fair value of investments in private equity and absolute return (formerly called alternative investments) is ACERA's respective net asset values as a limited partner. The fair value of private equity and absolute return is typically determined by the fund's general partner based on a variety of valuation methods including current market multiples for comparable companies, recent sales of comparable companies, net present value of expected cash flows, appraisals and adjustments to prevailing public market values based on control and/or liquidity as appropriate. The funds are audited annually by the funds' independent auditors.

Investment Income

Interest income is recognized as it accrues. Dividend income is recognized when the dividends are declared. Realized gains and losses and unrealized gains and losses on investments are combined and reported together as the net appreciation (depreciation) in the fair value of investments.

Securities Lending Activity

Securities lending transactions are short-term collateralized loans of ACERA's securities for the purpose of generating additional investment income. For each lending transaction, ACERA receives either cash collateral or non-cash collateral.

The underlying securities out on loan are reported on the Statement of Fiduciary Net Position as if the lending transaction had not occurred.

Cash collateral held (or any security that can be sold or pledged without a default by the borrower) is separately reported on the Statement of Fiduciary Net Position in current assets. A corresponding liability of an equal amount (the obligation to return the cash collateral) is reported as a liability.

Non-cash collateral held is not reported on the Statement of Fiduciary Net Position nor is there a corresponding liability reported on this statement.

Derivatives

ACERA's investments include the following types of investment derivatives: equity index futures contracts, currency forward contracts, equity index swaps, and rights. ACERA enters into derivative contracts for investment purposes and to manage risks associated with its investment portfolio.

The fair value of exchange traded derivatives such as futures contracts, equity index swaps, and rights are based on quoted market prices. The fair value of non-exchange traded derivatives such as currency forward contracts and certain futures contracts are determined by an external pricing service using various proprietary methods.

The fair value of derivative contracts is reported in investments as assets or liabilities on the Statement of Fiduciary Net Position.

Collateral and Margin Account

For the equity index futures, there is an initial margin requirement to open a contract position as well as a collateral maintenance requirement that must be kept until the position is closed out.

ACERA reports the collateral for the equity index futures in short-term investments.

Capital Assets

Capital assets are carried at cost, net of accumulated depreciation or amortization. ACERA's capitalization threshold is an initial cost of $5,000 and two years of useful life. Depreciation and amortization are calculated using the straight-line method over the estimated useful lives of the depreciable assets or over the term of the lease on leasehold improvements.

For each asset, ACERA recognizes one-half year of expense in the year the asset is placed in service and one-half year of expense in the year of retirement.

The estimated useful lives for the assets in each category are as follows:

	Years
Leasehold Improvements	27.5
Information System - Retirement	7.0
Office Furniture	7.0
Business Continuity Assets	5.0
Computer Hardware	5.0
Offsite Office Equipment	5.0
Electronic Document Management System	5.0
Information System - Accounting	3.0
Computer Software	3.0

Estimates

The preparation of financial statements in accordance with generally accepted accounting principles in the United States requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Naturally, actual results may differ from estimates.

Income Taxes

ACERA operates as a Defined Benefit Pension Plan, qualified under section 401(a) of the Internal Revenue Code and is not subject to tax under current income tax laws. All assets accumulated for the payment of benefits may legally be used to pay benefits, including refunds of member contributions to any of the plan members or beneficiaries, as defined by the terms of the plan.

New Accounting Pronouncements

GASB Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*, was issued in June 2015. ACERA implemented the provisions of Statement No. 74 for the fiscal year ended December 31, 2017. This Statement replaces the requirements of Statement No. 43, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*, as amended and Statement No. 50, *Pension Disclosures* for plans which provide defined benefit OPEB administered through a trust. The requirements of this Statement are expected to improve financial reporting of OPEB through enhanced note disclosures and schedules of required supplementary information similar to those required by Statement No. 67 for the pension plan.

GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefit Plans Other Than Pensions*, was issued in June 2015. Statement No. 75 replaces the requirements of Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*, for governments that provide defined benefit OPEB administered through a trust. The provisions of Statement No. 75 are effective for the fiscal years beginning after June 15, 2017. ACERA's participating employers are required to adopt the provisions of Statement No. 75 for their fiscal year ending June 30, 2018. ACERA is working with the participating employers to provide the information they need to comply with the reporting requirements of GASB Statement No. 75.

GASB Statement No. 84, *Fiduciary Activities*, was issued in January 2017. The Statement establishes criteria for identifying fiduciary activities of all state and local governments. It also improves guidance for accounting and financial reporting purposes and how those activities should be reported. The requirements of this Statement are effective for reporting periods beginning after December 15, 2018. This guidance is not applicable to ACERA.

GASB Statement No. 85, *Omnibus 2017*, was issued in March 2017. This Statement addresses practice issues that have been identified during implementation and application of such issues related to blending component units, goodwill, fair value measurement and application, and postemployment benefits. The requirements of this Statement are effective for reporting periods beginning after June 15, 2017. ACERA implemented the provisions of this Statement which pertained to accounting and financial reporting for OPEB, particularly the payroll-related measures presented in required supplementary information. As permitted by this Statement, ACERA is not required to report any payroll related measures as there are no payroll based contributions to the OPEB-Plan.

GASB Statement No. 86, *Certain Debt Extinguishment Issues*, was issued in May 2017. The Statement's primary objective is to improve consistency in accounting and financial reporting for in-substance defeasance of debt and prepaid insurance related to extinguished debt. The requirements of this Statement are effective for reporting periods beginning after June 15, 2017. This statement is not applicable to ACERA.

GASB Statement No. 87, *Leases*, was issued in June 2017. The objective of this Statement is to improve accounting and financial reporting for leases by governments to better meet the information needs of financial statement users. The 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 also establishes a single model for lease accounting based on the principle that leases are financings of the right to use an underlying asset. The requirements of this Statement are effective for reporting periods beginning after December 15, 2019. ACERA will adopt the provisions of Statement No. 86 for the fiscal year beginning with January 1, 2020.

Reclassification

Certain prior year amounts have been reclassified for consistency with the current year presentation. These reclassifications had no effect on the reported fiduciary net position or changes therein.

2. PLAN DESCRIPTION

ACERA is an independent public employees' retirement system which operates a cost-sharing, multiple-employer, defined benefit pension plan serving participating employers. In addition, ACERA administers Other Postemployment Medical Benefits (OPEB) and Non-OPEB. ACERA began operations in its present form on January 1, 1948.

ACERA is governed by the California constitution, and state and federal laws, including but not limited to the 1937 Act, beginning at California Government Code Section 31450 et. seq., PEPRA and the bylaws and policies adopted by the Board of Retirement.

These laws and policies govern ACERA's plan structure and operation. The provisions of state and federal laws govern requirements concerning membership, governance, contributions, benefits, service, retirement eligibility, disability, cost of living adjustment, financial provisions, optional allowances, reciprocal benefits, administration expenses, etc.

ACERA is not affiliated with the California Public Employees' Retirement System (CalPERS).

ACERA meets member and beneficiary obligations through member contributions, participating employer contributions, and investment income. Contributions are prudently invested in accordance with the 1937 Act.

ACERA provides basic lifetime retirement, disability, and death benefits to members who meet the minimum age and length-of-service requirements. In addition, ACERA administers supplemental retiree postemployment medical, dental care, vision care, and cost-of-living adjustments programs. In this report, "basic" benefits refers to vested benefits provided for in accordance with the 1937 Act, whereas "supplemental" benefits refers to additional non-vested benefits paid at the discretion of the Board of Retirement and subject to available funds.

Board of Retirement

The Board of Retirement has sole and exclusive responsibility over plan assets and the administration of the retirement system to ensure prompt delivery of benefits and related services as provided in Article XVI of the California Constitution.

The Board of Retirement has nine members and two alternates. The Alameda County Board of Supervisors appoints four members, and four are elected by ACERA's membership. The County Treasurer serves as an ex-officio board member. One alternate member is elected by safety members and one alternate member is elected by retired members. The Board of Retirement is currently composed of the following members:

Type of Member	Elected / Appointed By	# Of Members
County Treasurer	Ex-Officio Member	1
County Resident	Appointed by Board of Supervisors	4
General Member	Elected by General Members	2
Safety Member	Elected by Safety Members	1
Retired Member	Elected by Retired Members	1
Alternate Retired Member	Elected by Retired Members	1
Alternate Safety Member	Elected by Safety Members	1

Board members, with the exception of the County Treasurer, serve a three-year term in office, with no term limits.

The Board of Retirement oversees the Chief Executive Officer in the performance of his duties in accordance with the law and ACERA's board policies.

Authority for Establishing and Amending Benefit Provisions

State and federal laws, as well as the California constitution, provide the authority for establishing ACERA's benefit provisions. In most cases, where the 1937 Act provides options concerning the allowance of credit for service, the offering of benefits, or the modification of benefit levels, the law generally requires approval of the employers' governing boards for the option to take effect.

Separately, in 1984, the Alameda County Board of Supervisors and the Board of Retirement approved the adoption of Article 5.5 of the 1937 Act. This adoption permitted the establishment of a Supplemental Retirees Benefit Reserve (SRBR) for ACERA.

Article 5.5 provides for the systematic funding of the SRBR and stipulates that its assets be used only for the benefit of retired members and their beneficiaries. The 1937 Act grants exclusive authority over the use of SRBR funds to the Board of Retirement. The SRBR provides funding for non-vested and non-pension benefits including supplemental COLA and retired member death benefit. Other non-vested retiree health benefits are provided in agreement with ACERA's participating employers through the use of Internal Revenue Code 401(h) accounts. These retiree health benefits include dental and vision care, Medicare Part B reimbursement, and the Monthly Medical Allowance (MMA). Employer contributions fund the 401(h) benefits. ACERA treats an equal amount of SRBR assets as employer contributions for pensions. The provision of all supplemental benefits is subject to annual review and authorization by the Board of Retirement.

Participating Employers

ACERA operates as a cost-sharing, multiple-employer, defined benefit plan for Alameda County (the "County"), and five other participating employers (which are special districts) located in the County, but not under the control of the County Board of Supervisors. In this report, the County and special districts are referred to as "participating employers". All risks and costs, including benefit costs, are shared by the participating employers. The five other participating employers are:

- Superior Court of California for the County of Alameda
- Alameda Health System (formerly known as Alameda County Medical Center)
- First 5 Alameda County
- Housing Authority of the County of Alameda
- Livermore Area Recreation and Park District

Alameda County Office of Education is no longer an active participating employer. The last active member under this employer retired on December 30, 2016. ACERA still pays retirement benefits to several of its retired employees and retains the associated unfunded actuarial accrued liability for this employer.

Plan Membership

With the exception of Alameda Health System, all full-time employees of participating employers who are appointed to permanent positions are statutorily required to become members of ACERA. With the passage of AB1008 in 2013, employees of newly acquired hospitals by Alameda Health System are not eligible for membership unless they are subject to an existing memorandum of understanding. Effective October 31, 2013, all newly hired unrepresented employees of any Alameda Health System facility are prohibited from membership.

Safety and General Members

ACERA has two membership types, Safety and General, which are based on job classifications:

- Safety members are employees working in active law enforcement, deferred firefighters, or positions that have been designated Safety positions by the Board of Retirement (e.g., Juvenile Hall Group Counselors and Probation Officers).
- General members are all other members.

Defined Benefit Pension Plan

ACERA's Membership

As of December 31, 2017

Members, Survivors, and Beneficiaries Now Receiving Benefits	
Service Retirement	7,404
Disability Retirement	891
Beneficiaries and Survivors	1,204
Subtotal	**9,499**
Active Members	
Active Vested Members	7,681
Active Non-vested Members	3,632
Subtotal	**11,313**
Deferred Members	2,438
Total Membership	**23,250**

Membership Status and Vesting

Members are considered to be active, as long as they remain employed full-time by a participating employer (or subsequently change to part-time employment).

Members become vested in retirement benefits upon completion of five years of credited service.

Service Retirement

ACERA's regular (service) retirement benefits are based on service credit, final average salary, and age at retirement, according to the applicable statutory formula. Members who qualify for service retirement are entitled to receive monthly service retirement benefits for life.

Non-Tier 4 vested General members may retire at age 50, with 5 years of service credit and a total of 10 years of qualifying membership, or at any age with 30 years of service, or at age 70, regardless of service credit.

Non-Tier 4 vested Safety members may retire at age 50, with 5 years of service credit and a total of 10 years of qualifying membership, or at any age, with 20 years of service, or at age 70, regardless of service credit.

Tier 4 General members may retire at age 52, with 5 years of service credit or at age 70, regardless of service credit.

Tier 4 Safety members may retire at age 50, with 5 years of service credit or at age 70, regardless of service credit.

Active Member Death Benefits

ACERA provides specified active member death benefits to beneficiaries and members' survivors.

The basic active member death benefit consists of a member's retirement contributions plus interest plus one month's pay for each full year of service (up to the maximum of six-month's pay). Other death benefits may be available based on years of service, marital status, and whether the member has minor children.

Tier 1, Tier 2, Tier 3, and Tier 4 Benefit Levels

The structure of the plan provides for four benefit levels or tiers within General membership and three tiers within Safety membership. The tiers differ mainly in the magnitude of contributions required and benefits received.

Generally, members with an entry date prior to July 1, 1983, belong to Tier 1, while those with an entry date on or after July 1, 1983, and before January 1, 2013, belong to Tier 2, and members with an entry date on or after January 1, 2013, belong to Tier 4.

Most active ACERA members belong to Tier 2. Alameda County Housing Authority members are mostly in Tier 1, but those hired between September 30, 2011, and January 1, 2013, belong to Tier 2. Relative to the Tier 1 members, active members in Tier 2 contribute somewhat less to the pension plan as a percent of compensation and will receive somewhat lower retirement benefits.

Effective October 1, 2008, Livermore Area Recreation and Park District (LARPD) implemented a General Tier 3 plan for current and new employees. Those LARPD members hired before October 1, 2008, who elect General Tier 3 membership, and those hired after October 1, 2008, but before January 1, 2013, will receive an enhanced benefit of 2.5% at 55, which is higher than the Tier 1 benefit (at most retirement ages) as a result of higher employer and employee contribution rates.

Effective October 17, 2010, and before January 1, 2013, there are three benefit formula options for Safety membership within Tier 2. Two benefit formulas of 2% at 50 and 3% at 55 were implemented for new Safety members with different contribution rates. The Safety members hired before October 17, 2010, are still under the benefit formula of 3% at 50.

In accordance with PEPRA, General and Safety members hired on or after January 1, 2013, belong to Tier 4. Tier 4 members are required to contribute at least 50% of the Normal Cost rate. Under the Tier 4 formulas, General members will receive a benefit of 2.5% at age 67 and Safety members will receive a benefit of 2.7% at age 57. Note 3, Contributions, starting on page 30 explains retirement plan contribution rates.

Integration with Social Security

The contributions and benefits associated with the federal Social Security program are completely separate from ACERA members' contributions and benefits. Most General members of ACERA are covered by Social Security, and most Safety members are not.

ACERA contributions and benefits are integrated with Social Security for non-Tier 4 members who are covered by Social Security. The purpose of integration is to reduce the degree in which ACERA's plan coverage overlaps Social Security coverage.

Basic Cost of Living Adjustment

Retirement allowances are indexed for inflation. Retirees receive automatic basic Cost-of-Living Adjustments (COLAs) based upon the Consumer Price Index (CPI) for the San Francisco Bay Area. The adjustments go into effect on April 1 each year. Under the 1937 Act, annual COLA increases are capped at 3% for Tier 1 and Tier 3, and 2% for Tier 2 and Tier 4 members. The expected impact of future basic COLA is a factor in setting the contribution rates for members and employers. In any year that the basic COLA adjustment for a retiree falls short of the CPI increase for that year due to the statutory cap, the shortfall is carried over and applied in a future year to the extent that the CPI falls short of the statutory cap in the future year.

For 2017, the CPI calculation of 3.53% was rounded to 3.5%, the nearest one-half percent, in accordance with California Government Code Sections 31870 and 31870.1. There was a maximum of 3.0% COLA increase granted for all Tier 1 and Tier 3 members. A maximum COLA increase of 2.0% was granted to all Tier 2 and Tier 4 members. Tier 1 and Tier 3 members will bank 0.5% and Tier 2 and Tier 4 members will bank 1.5% as the 2017 COLA exceeds the 3% and 2% statutory cap, respectively.

Postemployment Medical Benefits

ACERA administers a medical benefits program for eligible retired members. Benefits include monthly medical allowances and Medicare Part B premium reimbursements. Dental and vision coverages are also available for eligible retired members. These benefits are paid through a 401(h) account, in accordance with federal tax laws. The maximum levels of the monthly medical allowances are reviewed annually by the Board of Retirement.

Program Membership

Retired members with a minimum of ten years of service credit or those who retired due to a service connected disability are eligible to receive a monthly medical allowance benefit if they enroll in one of the ACERA-sponsored medical plans or Medicare exchange. Retired members eligible for the monthly medical allowance benefit may also be reimbursed for the lowest standard Medicare Part B premium with proof of enrollment in Medicare Part B.

Members receiving a service retirement or a non-service connected disability, with ten or more years of ACERA service credit will be eligible to receive dental and vision allowances. The following are exemptions of the years-of-service eligibility requirements: (a) non-service connected disability recipients with less than ten years of ACERA service credit and with a retirement date effective prior to February 1, 2014; and, (b) all service connected disability recipients, regardless of years of service.

Non-OPEB

ACERA also provides non-health, postemployment benefits, such as supplemental COLA and a lump sum retired member death benefit.

Separate from the basic COLA, the Board of Retirement implemented an ad-hoc supplemental Cost-of-Living Adjustment (supplemental COLA) program effective January 1, 1998. The supplemental COLA is structured to maintain each retiree's purchasing power at no less than 85% of the purchasing power of the original benefit. Under this program, each retiree's current allowance is adjusted, as necessary, so that the adjusted allowance becomes at least 85% of the original benefit amount indexed with the CPI.

A lump sum retired member death benefit of $1,000 is provided to beneficiaries.

Program Membership

All retired members are eligible to receive supplemental COLA and retired member death benefit.

Actuarial Valuation

An annual actuarial funding valuation is performed for the pension plan. In addition, there is a separate annual actuarial valuation performed for Postemployment Medical Benefits and Non-OPEB. Note 6, Actuarial Valuation, starting on page 36 provides additional information about this topic.

3. CONTRIBUTIONS

Pension Plan

Authority for Establishing and Amending Obligations to Make Contributions

The California constitution, as well as state and federal laws, establishes the basic obligations for participating employers and active members to make contribution payments to the pension plan. Member and employer contribution rates are based on recommendations made by an independent actuary and adopted by the Board of Retirement. These rates are based on membership type (General and Safety) and tier (Tiers 1, 2, 3, and 4).

Funding Objective

One of the funding objectives of the pension plan is to establish member and participating employer contribution rates that will remain as level as possible over time as a percentage of payroll, unless plan benefit provisions are changed. The funding for retirement benefits arises from three sources: member contributions, employer contributions, and the earnings on invested assets.

Member Contributions and Refunds

Active members are required by statute to contribute toward pension plan benefits. The non-Tier 4 member contribution rates are formulated on the basis of age at the date of entry and actuarially calculated benefits. The 1937 Act authorizes participating employers to pay all or a portion of an employee's retirement contribution obligation on the employee's behalf. These employer payments are called contribution offsets. Member contributions and credited interest are refundable upon termination of membership. Note 4, Reserves, starting on page 31 explains semi-annual interest crediting. The employer paid contribution offsets may or may not be refundable.

Pursuant to PEPRA Section 7522.30, Tier 4 members are required to contribute 50% of the normal cost rate. The code also prohibits participating employers from paying any portion of the 50% share of members contributions on the employee's behalf.

Employer Contributions

The pension plan provides lifetime retirement and disability benefits to its members. Participating employers are required by statute to contribute the necessary amounts to fund these estimated benefits not otherwise funded by member contributions or expected investment earnings.

Employer contribution rates vary from year to year and depend on the established level of benefits, the rate of return on investments, and the cost of administering benefits.

Member Rates Based on Age-at-Date-of-Entry

The ranges of current non-Tier 4 member contribution rates based on age-at-date-of-entry are shown as follows (effective September 2017). Generally, each pair of percentages ranges from youngest to oldest within each category.

In November 2012, the Board of Retirement approved the use of a single, flat contribution rate, regardless of the age at entry for Tier 4 members.

Current Member Contribution Rates

Effective September 2017

Tier 1: (entry date prior to July 1, 1983)	
General	7.36% - 15.42%
Safety 3% @ 50	14.83% - 22.79%
Tier 2: (entry date July 1, 1983, and before January 1, 2013)	
General	5.03% - 10.92%
Safety 3% @ 50	12.55% - 18.87%
Tier 2: (entry date October 17, 2010, and before January 1, 2013)	
Safety 2% @ 50	9.10% - 15.12%
Safety 3% @ 55 (with less than 5 years of vesting service)	14.39% - 20.60%
Safety 3% @ 55 (with 5 or more years of vesting service)	12.39% - 18.60%
Tier 3: (LARPD only - entry date prior to January 1, 2013)	
General	8.63% -16.37%
Tier 4: (entry date January 1, 2013 or later)	
General	8.10%
Safety	14.20%

For non-Tier 4 members covered by Social Security, the contribution rates shown apply to biweekly salary over $161 (a one-third reduction in the rates applies to the first $161 of biweekly salary). The one-third reduction in the rates for the first $161 of biweekly salary does not apply to Tier 4 member contributions.

Postemployment Medical Benefits and Contributions

In accordance with federal tax law, postemployment medical benefits and related administrative expenses are paid through a 401(h) account with contributions from the participating employers. There is no requirement and no guarantee that the employers will continue to contribute to the 401(h) account. If authorized by the Board of Retirement, ACERA treats an equal amount of SRBR assets as employer contributions available for paying pension benefits. ACERA's Board of Retirement has no authority to demand future payments from employers to fund the 401(h) account. Consequently, these benefits can only be paid as long as assets are available. When assets are fully depleted, no postemployment medical benefits will be paid by ACERA. In compliance with 1937 Act Section 31618.5, employers allocate a portion of their contribution to the 401(h) account for administrative costs related to providing benefits in addition to contributions for the postemployment medical benefits.

Pension Obligation Bonds

In 1995 and 1996, Alameda County issued pension obligation bonds and contributed the net bond proceeds to the ACERA pension plan. ACERA received aggregate net proceeds of $591 million from these bonds. Alameda Health System (formerly known as Alameda County Medical Center), First 5 Alameda County, and the Superior Court of California for the County of Alameda were part of the County of Alameda when the pension obligation bonds were issued. They subsequently separated and became discretely presented component units or special districts of the County of Alameda. The net bond proceeds contributions allow ACERA to provide "pension obligation bond credits" to these employers (thus reducing contributions otherwise payable) over the period of time used by ACERA to amortize its Unfunded Actuarial Accrued Liability (UAAL). These employers received pension obligation bond credits of approximately $53.2 million in the year ended December 31, 2017.

4. RESERVES

Reserves represent components of the fiduciary net position. The annual change in ACERA's reserves equals the annual change in the fiduciary net position.

While a member is active, member and employer contributions associated with that member are accumulated in two separate components of reserves—the member reserve and employers' advance reserve. When a member retires, ACERA makes a one-time transfer of the associated contributions plus credited interest from these two reserve components into the retired member reserve, of an amount equal to the estimated lifetime benefit.

Actuarial Asset Smoothing

Net investment income reported on the Statement of Changes in Fiduciary Net Position affects the reserves indirectly through an actuarial asset "smoothing" process approved by the Board of Retirement. This process is intended to minimize the impact of short-term investment gains or losses. Smoothing of asset gains or losses is conducted semi-annually in conjunction with interest crediting, with calculation periods ending June 30 and December 31. It involves spreading the difference between actual and expected market returns over ten successive semi-annual periods to determine the actuarial value of assets.

Semi-annual Interest Crediting

ACERA updates reserve balances on a semi-annual basis as of June 30 and December 31 each year. At these times, ACERA carries out a multi-step process to calculate new reserve balances as specified in Article 5.5 of the 1937 Act. The amount of "net earnings" to be credited for the semi-annual period is calculated based on the actuarial smoothing process described earlier. To the extent that net earnings are available, interest is credited to all components of the reserves, with the exception of the market stabilization reserve and the contingency reserve. Interest credited is based upon the actuarial assumed interest rate (or the actual rate if lower). This is defined as "Regular Earnings."

In June 2014, the Board of Retirement approved the use of the contingency reserve to fund the interest shortfall, whenever the Regular Earnings during the 6-month interest crediting period are less than the assumed rate of return, but not negative.

If there are investment earnings above the target investment return rate, 50% is credited to the SRBR and the remaining 50% is credited proportionally to all other reserves (except for the contingency reserve and the market stabilization reserve).

Components of Reserves

The Member Reserve represents the total accumulated member contributions of current active and inactive (deferred) members. Additions include member contributions and credited interest; deductions include refunds of member contributions along with credited interest and transfers to the retired member reserve made when a member retires.

The Employers' Advance Reserve represents the total net accumulated employer contributions for future retirement payments to active and deferred members. Additions include contributions from the employers and credited interest; and deductions include transfers to the retired member reserve made when each member retires or payment of benefits upon the death of an active member. Employer contribution rates are actuarially determined taking into account other events such as a member electing a refund of contributions. Therefore, a refund of member contributions should not have an adverse impact on the accumulation of funds in the employers' advance reserve.

According to Section 31618.5 of the 1937 Act, to the extent that an employer contributes to the 401(h) account to pay the cost of administering post-employment medical benefits, there is an annual transfer from the employers' advance reserve to the supplemental retirees benefit reserve for an amount equal to the postemployment medical benefit related administrative expenses. For the year ended December 31, 2017, the transferred amount was $1.2 million.

The Retired Member Reserve represents funds accumulated to pay retirement benefits to retired members. This reserve represents the total net accumulated transfers from the member reserve and the employers' advance reserve (both made at the time a member retires), and credited interest, reduced by payments to retired members, beneficiaries, and survivors.

The Supplemental Retirees Benefit Reserve (SRBR) was established on January 1, 1985, under Article 5.5 of the 1937 Act. The SRBR represents funds required by statute to be set aside from regular earnings and investment earnings above the assumed rate of return to provide supplemental benefits to retirees. The reserves table on page 33 shows the amounts of the SRBR currently available to pay for non-vested benefits. The Board of Retirement decides on an annual basis what member benefits to pay from the SRBR.

When there are funds available in the SRBR, the Board of Retirement can approve a transfer of an amount equal to the participating employers' 401(h) contributions and 401(h) administrative cost contributions from the SRBR to the employers' advance reserve. The Board of Retirement may also approve a transfer from the SRBR to the employers' advance reserve to reimburse the employers' payment of implicit subsidy to pay the full cost of postemployment medical benefits. Non-vested benefits currently funded by the SRBR are described in the following two paragraphs.

The 401(h) Postemployment Medical Benefits Account is used to pay the medical allowances, Medicare Part B reimbursement, dental and vision, and the associated administrative cost. The account is set up under the provisions of Internal Revenue Code section 401(h), which provides for payment of benefits on a tax-free basis. Each year participating employers decide whether to contribute the needed funds and to identify them as 401(h) account contributions. For the year ended December 31, 2017, the employers funded $38.3 million of 401(h) contributions, including $37.1 million for estimated cost of postemployment medical benefits and $1.2 million for administrative cost of the 401(h) account.

The Non-OPEB Reserve is used to pay for the Supplemental COLA and the retired member death benefit. For the year ended December 31, 2017, $1.2 million of Supplemental COLA and $0.2 million of retired member death benefit were paid. The reserve is increased through interest crediting of regular earnings and investment earnings above the assumed rate of return.

The Contingency Reserve represents reserves accumulated to satisfy the statutory requirement of establishing a reserve against deficiencies in future interest crediting. The size of the reserve is determined semi-annually by the Board of Retirement. The 1937 Act stipulates that the contingency reserve cannot exceed 3.0% of total assets and that, if the reserve falls below 1.0% of total assets, earnings from subsequent periods shall fund the reserve until the reserve level is at least 1.0% of total assets. Effective with the June 30, 2014, interest crediting cycle, the Board of Retirement set the contingency reserve to be a minimum of 1.0% of total assets, and authorized the use of funds in the contingency reserve to cover interest shortfalls whenever earnings during the 6-month interest crediting period are less than the assumed rate of return, but not negative.

The Market Stabilization Reserve Account represents the deferred balance of investment gains or losses not yet realized in the interest crediting process. This balance arises from the five-year actuarial smoothing process for investment earnings. The market stabilization reserve account balance thus represents the difference between (1) the aggregate amounts initially deferred (smoothed) from the ten most recent semi-annual periods, and (2) the amounts subsequently recognized for semi-annual interest crediting from these same ten periods.

Allocation of Earnings to Reserves for 2017

ACERA had $1.3 billion gains from investment activities net of administrative expenses for the year ended December 31, 2017. The contingency reserve experienced a net increase of $77.1 million during the year. At the December 31, 2017, interest crediting, the reserve was adjusted to 1% of total assets and subsequently reduced by $8.6 million to meet the interest crediting shortfall at the assumed rate of return for the six-month period ended December 31, 2017. This reduction left the Contingency Reserve at 0.9% of total assets at the end of 2017.

The market stabilization reserve account increased by $653.0 million during 2017 as a result of applying the actuarial five-year smoothing process and the actuarial value corridor limits. All other reserve accounts received interest crediting of approximately $563.2 million.

Reserves

As of December 31, 2017 (Dollars in Thousands)

	Pension and Non-OPEB	Postemployment Medical Benefits	Total
Member Reserve	$ 1,462,721	$ -	$ 1,462,721
Employers' Advance Reserve	916,409	-	916,409
Retired Member Reserve	4,445,420	-	4,445,420
SRBR	37,517	856,254	893,771
401(h) Account	-	7,582	7,582
Contingency Reserve	77,124	-	77,124
Market Stabilization Reserve Account	309,073	-	309,073
Total Reserves	$ 7,248,264	$ 863,836	$ 8,112,100

5. NET PENSION LIABILITY

The components of the Net Pension Liability were as follows:

Net Pension Liability

(Dollars in Thousands)

	December 31, 2017	December 31, 2016
Total Pension Liability	$ 9,123,900	$ 8,410,979
Plan Fiduciary Net Position[1]	7,110,224	6,167,785
Net Pension Liability	**$ 2,013,676**	**$ 2,243,194**
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	77.93%	73.33%

1 For 2017, the Plan's Fiduciary Net Position amount shown ($7,110,224) includes market value of assets ($8,112,100), less OPEB-related SRBR assets ($1,001,876; OPEB-related SRBR assets include one half of the deferred market gains after restoring the Contingency Reserve to 1% of total assets). For 2016, the Plan's Fiduciary Net Position amount shown ($6,167,785) includes market value of assets ($6,965,580), less OPEB-related SRBR assets ($797,795; OPEB-related SRBR assets include a proportionate share of the deferred market losses after netting out the Contingency Reserve, reduced on a proportional basis relative to the total actual balances in the OPEB and non-OPEB reserves). Note: Results may not add up to total due to rounding.

The Net Pension Liability (NPL) was measured as of December 31, 2017 and 2016. Plan Fiduciary Net Position was valued as of the measurement date while the Total Pension Liability was determined based upon rolling forward the Total Pension Liability from actuarial valuations as of December 31, 2016 and 2015, respectively.

The Total Pension Liability and the Plan Fiduciary Net Position include liabilities and assets for non-OPEB. The assets for non-OPEB are held in the SRBR to pay non-vested Supplemental COLA and the retired member death benefit.

Actuarial Assumptions

The Total Pension Liabilities (TPL) as of December 31, 2017, and December 31, 2016, were determined using actuarial valuations as of December 31, 2016, and December 31, 2015, respectively. The actuarial assumptions used to develop the December 31, 2017, and December 31, 2016, TPLs are the same assumptions used in the December 31, 2017, and 2016, funding valuations for ACERA, respectively.

These assumptions were applied to all periods included in the measurement.

Valuation Date	December 31, 2017	December 31, 2016
Inflation	3.00%	3.25%
Salary Increases	General: 8.30% to 3.90% and Safety: 11.30% to 4.30%, vary by service, including inflation	General: 7.45% to 4.15% and Safety: 10.45% to 4.45%, vary by service, including inflation
Investment Rate of Return	7.25% , net of pension plan investment expense, including inflation	7.60% , net of pension plan investment expense, including inflation
Mortality Tables	Headcount-Weighed RP-2014 Healthy Annuitant Mortality Table, projected generationally with the two-dimensional MP-2016 projection scale for future mortality improvements based on review of the mortality experience in the December 1, 2013-November 30 2016 Actuarial Experience Study.	RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, adjusted for future mortality improvements based on a review of the mortality experience in the December 1, 2010 - November 30, 2013 Actuarial Experience Study.
Date of Experience Study	December 1, 2013 through November 30, 2016	December 1, 2010 through November 30, 2013

Long-Term Expected Rate of Return

Long-term expected rate of return on pension plan investments for funding valuation purposes was determined using a building-block method in which expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. The returns are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation and subtracting expected investment expenses and a risk margin. The target allocation and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before deducting investment expenses, used in the derivation of the long-term expected investment rate of return assumption are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Domestic Large Cap Equity	22.40%	5.75%
Domestic Small Cap Equity	5.60%	6.37%
Developed International Equity	19.50%	6.89%
Emerging Market Equity	6.50%	9.54%
U.S. Core Fixed Income	11.25%	1.03%
High Yield Bonds	1.50%	3.99%
International Bonds	2.25%	0.19%
TIPS	2.00%	0.98%
Real Estate	8.00%	4.47%
Commodities	3.00%	3.78%
Hedge Funds	9.00%	4.30%
Private Equity	9.00%	7.60%
Total	**100.00%**	

Discount Rate

The discount rate used to measure the Total Pension Liability was 7.25% as of December 31, 2017, and 7.60% as of December 31, 2016. Article 5.5 of the Statute, which authorizes the allocation of 50% of excess earnings to the SRBR, does not allow for the use of a different investment return assumption for funding than is used for interest crediting. In order to reflect the provisions of Article 5.5, future allocations to the SRBR have been treated as an additional outflow against the Plan's Fiduciary Net Position in the GASB crossover test[1]. It is estimated that the additional outflow would average approximately 0.60% of assets over time, based on the results of the actuarial stochastic modeling of the 50% allocation of future excess earnings to the SRBR.

The projection of cash flows used to determine the discount rate assumes plan member contributions will be made at the current member contribution rates, and that employer contributions will be made at rates equal to the actuarially determined contribution rates[2] plus additional future contributions that would follow from the future allocation of excess earnings to the SRBR. Projected employer contributions that are intended to fund the service costs for the future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the pension Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments for current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability as of both December 31, 2017, and December 31, 2016.

1 The purpose of the GASB crossover test is to determine if the full expected return can be used as the discount rate to determine the TPL and the NPL. That is, if there is no crossover point where the projected benefit payments would exceed the plan's fiduciary net position, then the full expected return assumption can be used. ACERA does pass the crossover test, which means that the full 7.25% investment rate of return assumption can be used as the discount rate to determine the TPL and the resulting NPL.

2 For this purpose, only employer contributions that are intended to fund benefits of current plan members and their beneficiaries are included.

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

The following presents the Net Pension Liability as of December 31, 2017, calculated using the discount rate of 7.25%, as well as what the Net Pension Liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.25%) or 1-percentage-point higher (8.25%) than the current rate:

As of December 31, 2017 (Dollars in Thousands)

	1% Decrease	Current Discount Rate	1% Increase
	(6.25%)	(7.25%)	(8.25%)
Net Pension Liability	$ 3,209,656	$ 2,013,676	$ 1,028,304

Money-Weighted Rate of Return

The annual money-weighted rate of return expresses investment performance, net of investment expenses, adjusted for the changing amounts actually invested. For the year ended December 31, 2017, the annual money-weighted rate of return on the total investments (pension plan and OPEB) was 19.02%. For trend information, refer to the Schedule of Investment Returns under the RSI section on page 59.

6. ACTUARIAL VALUATION

ACERA retains an independent actuarial firm to conduct actuarial valuations of the pension plan, postemployment medical benefits, and non-OPEB to monitor ACERA's funding status and to establish the contribution rate requirements for the pension plan.

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and health care cost trends. Actuarially determined amounts are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future.

Pension Plan

The purpose of the valuation is to reassess the magnitude of ACERA's benefit commitments in comparison with the assets currently available to support those commitments. As a result, employer and member contribution rates are adjusted accordingly. For the pension plan, the actuarial assumptions have been selected to estimate, as closely as possible, what the actual cost of the plan will be so as to permit an orderly method for setting aside contributions in the present to provide benefits in the future, and to maintain equity among generations of participants and taxpayers.

Contribution requirements are determined under the entry age cost method. This method is designed to collect contributions as a level percentage of pay. Any actuarial gains or losses that occur under this method are amortized as a level percentage of pay. To minimize the impact of short-term investment gains or losses, the Board of Retirement adopted an asset smoothing process described starting on page 31 under Actuarial Asset Smoothing.

There are no legal or contractual maximum contribution rates under the 1937 Act that would affect the projection of benefits for financial reporting purposes.

ACTUARIAL METHODS AND ASSUMPTIONS - Pension Plan

The status and funding progress for the pension plan is calculated based on the following actuarial methods and assumptions.

Valuation Date	12/31/2016
Actuarial Cost Method	Entry Age
Amortization Method	Level percent of payroll
Amortization of UAAL (Prior to January 1, 2012)	Closed 30 years decreasing period
Remaining Amortization Period (Prior to January 1, 2012)	16 years
Amortization of New UAAL (On or after January 1, 2012)	Plan amendments are amortized over separate decreasing 15-year periods. Early retirement incentive programs (ERIPs) are amortized over separate decreasing 5-year periods. Assumption and method changes are amortized over separate decreasing 20-year periods. Experience gains/losses are amortized over separate decreasing 20-year periods.
Asset Valuation Method	Actuarial Value of Assets is determined by phasing in any difference between actual and expected market return over 10 six-months interest crediting periods. The Valuation Value of Assets is the Actuarial Value of Assets reduced by the value of the non-valuation reserves.
Actuarial Assumptions	Interest Rate: 7.6% Inflation Rate: 3.25% Across-the-Board Salary Increases: 0.50% Salary Increases: General 7.45% - 4.15% and Safety 10.45% - 4.45% Demographic: refer to page 103
Postemployment Benefit Increases	3.00% of Tier 1 and Tier 3 retirement income 2.00% of Tier 2 and Tier 4 retirement income

Postemployment Medical Benefits

If participating employers continue to make contributions to the 401(h) account, and the Board of Retirement continues to treat equal amounts of SRBR assets as contributions for pensions, then the postemployment medical benefits are 92.0% funded assuming that the current benefit continues in perpetuity."

Actuarial calculations reflect a long-term perspective and employ methods and assumptions that are designed to reduce short-term volatility.

Under the actuarial assumed rate of 7.6% per year for future investment earnings, it is anticipated that available assets will be sufficient to fund postemployment medical benefits through year 2039.

ACTUARIAL METHODS AND ASSUMPTIONS - Postemployment Medical Benefits

The status and funding progress for the postemployment medical benefits is calculated based on the following actuarial methods and assumptions.

Valuation Date	12/31/2016
Actuarial Cost Method	Entry Age
Asset Valuation Method	Same as Pension Plan
Actuarial Assumptions	Same as Pension Plan
Health Care Cost Trend Rates:	
Non-Medicare Plan	Graded down from 6.50% by 0.25% per annum until ultimate rate of 4.50%
Medicare Advantage Plan	Graded down from 6.50% by 0.25% per annum until ultimate rate of 4.50%
Dental and Vision	4.50%
Medicare Part B	28.44% for 2017 and 4.50% for 2018 & thereafter
Postemployment Benefit Increases:	
Dental, Vision, and Medicare Part B	Subsidies are assumed to increase at 100% of the health care cost trend rates for these benefits.
Monthly Medical Allowance (MMA)	Subsidies are assumed to increase at 50% of the health care cost trend rates for MMA benefits or 3.125%, graded down to the ultimate rate of 2.25% over 7 years.

Non-OPEB

Actuarial calculations reflect a long-term perspective and employ methods and assumptions that are designed to reduce short-term volatility.

Under the actuarial assumed rate of 7.6% per year for future investment earnings, it is anticipated that available assets will be sufficient to fund the Supplemental COLA and retired member death benefit program through year 2034.

ACTUARIAL METHODS AND ASSUMPTIONS - Non-OPEB

The status and funding progress for the Non-OPEB is calculated based on the following actuarial methods and assumptions.

Valuation Date	12/31/2016
Actuarial Cost Method	Entry Age
Asset Valuation Method	Same as Pension Plan
Actuarial Assumptions	Same as Pension Plan
Postemployment Benefit Increases:	
Supplemental COLA Benefits	Payable when the current allowance from the pension plan drops below 85% of the original pension plan benefit indexed with CPI. Benefits are assumed to increase by the difference between inflation and the cost-of-living benefit guaranteed in the pension plan (3.00% for Tier 1 and Tier 3; and 2.00% for Tier 2, Tier 2C, Tier 2D, and Tier 4), subject to other limitations.

7. POSTEMPLOYMENT MEDICAL BENEFITS AND NET OPEB LIABILITY

Plan Description

ACERA administers a non-vested medical benefits program for eligible retired members. Retirees can also purchase medical benefits for eligible dependents on an out-of-pocket basis. The postemployment medical, dental and vision benefits and the related administrative costs are paid through a 401(h) account funded by the participating employers' 401(h) account contributions.

The plan provides the following postemployment benefits:

- Health care subsidy in the form of monthly medical allowance,
- Medicare Part B reimbursement, and
- Dental and vision subsidies.

These benefits are paid in the form of a monthly medical allowance. The allowance is subject to annual reauthorization by the Board of Retirement.

Plan Membership

The OPEB plan membership data as of December 31, 2016, was used in the measurement of the Total OPEB Liability as of December 31, 2017.

Demographic Data as of December 31, 2016

Retired members receiving medical benefits	6,018
Retired members receiving dental and vison benefits	7,049
Vested terminated members entitled to, but not receiving benefits	371
Active members	11,111

Benefits Provided

The County negotiates the medical contracts with the providers covering both active and retired members. This arrangement results in "blended" medical premium rates that allow early retirees under 65 years of age, not yet Medicare-eligible, to purchase medical insurance from one of these providers at rates lower than otherwise available (an "implicit subsidy"). ACERA and the County collectively determined that the total amount of implicit subsidy for the blended medical premium rate for the year 2016 was $8.8 million. SRBR assets in this amount were treated as a pension contribution in 2017 upon the Board of Retirement's approval to compensate the County for the implicit subsidy. The implicit subsidy amount for 2017 has not yet been determined.

Outside of the County negotiated group plans, retirees over the age of 65 have the option to purchase individual Medicare insurance through a Medicare exchange. ACERA utilizes Health Reimbursement Accounts (HRAs) to facilitate the monthly medical allowance for these members.

Benefit Eligibility

Only ACERA's retirees are eligible to receive the medical, dental and vision subsidies; dependents are ineligible to receive these benefits. Retirees eligible for monthly medical allowance are also eligible for reimbursement of Medicare Part B premiums. The 2017 maximum monthly allowance for group plans was $540.44 and $414.00 for members enrolled in the individual plans through the Medicare exchange. The maximum monthly combined dental and vision subsidy was $46.90 in 2017.

The actual amount of the monthly medical allowance for each retiree depends on the retiree's number of years of service. A minimum of 10 years of service is required for service retirement and non-duty disability retirement. There is no minimum service requirement for duty disability retirees. The subsidy are 50% for retirees with 10-14 years of service, 75% for retirees with 15-19 years of service, and 100% for retirees with 20+ years of service.

Covered Retirees

Retirees currently enrolled in the medical, dental, and vision plans through the program are as follows:

As of December 31, 2017

Number of Subsidized Retirees	
Medical	4,867
Medicare Exchange	1,424
Medicare Part B	5,162
Dental and Vision	7,380

Contributions and Reserves

There are no legal or contractual contribution requirements for the OPEB plan. Please refer to Note 3 starting on page 30 for details.

Reserve requirements of the SRBR are disclosed under Note 4 starting on page 31.

Investments

ACERA's OPEB plan is unique in that there are no direct contributions to invest for this plan. Funding for the OPEB plan relies entirely on semi-annual earnings allocations from the total fund to the Supplemental Retiree Benefits Reserve (SRBR) as mandated by Article 5.5 of the 1937 Act. ACERA's total fund includes assets of the pension plan and SRBR. The OPEB assets are accumulated in the 401(h) account and the SRBR OPEB reserve account. Therefore, references to investment target allocations, long-term expected rate of return, and discount rate all apply to the total fund.

The total fund's annual money-weighted rate of return on investments, net of investment expenses is reported on page 59 of the RSI.

Net OPEB Liability

The components of the Net OPEB Liability were as follows:

(Dollars in Thousands)

	December 31, 2017	December 31, 2016
Total OPEB Liability	$ 1,029,354	$ 933,042
Plan Fiduciary Net Position[1]	1,001,876	797,795
Net OPEB Liability	**$ 27,478**	**$ 135,247**
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	97.33%	85.50%

1 For 2017, the Plan's Fiduciary Net Position ($1,001,876) includes the SRBR and 401(h) account ($863,836) less the estimated SRBR transfer to Employer Advance Reserve ($5,830) plus one half of the deferred market gains after restoring the Contingency Reserve to 1% of total assets ($143,870). For 2016, the Plan's Fiduciary Net Position $797,795)) includes the SRBR and 401(h) account ($846,050) less the estimated SRBR transfer to Employer Advance Reserve ($8,865) less the proportionate share of the deferred market losses after netting out the Contingency Reserve that was commensurate with the size of the OPEB reserve ($39,389). Note: Results may not add up to total due to rounding.

The Net OPEB Liability was measured as of December 31, 2017 and 2016. The Plan's Fiduciary Net Position was valued as of the measurement date, while the Total OPEB Liability was determined by rolling forward the Total OPEB Liability from the SRBR sufficiency valuations as of December 31, 2016 and 2015, respectively.

Plan Provisions

The plan provisions used in the measurement of the Net OPEB Liability as December 31, 2017 are the same as those used for the SRBR sufficiency valuation as of December 31, 2016.

Actuarial Assumptions

The Total OPEB Liabilities (TOLs) as of December 31, 2017, and December 31, 2016, were determined using the sufficiency valuations as of December 31, 2016, and December 31, 2015, respectively. The actuarial assumptions including the health care assumptions used to develop the December 31, 2017 and December 31, 2016 TOLs are the same assumptions used for the December 31, 2017 and 2016 sufficiency valuations for ACERA, respectively.

These assumptions were applied to all periods included in the measurement:

Valuation Date	December 31, 2017	December 31, 2016
Investment Rate of Return	7.25% , net of OPEB investment expense, including inflation	7.60% , net of OPEB investment expense, including inflation
Inflation	3.00%	3.25%
Health Care Premium Trend Rates		
Non-Medicare medical plan	Graded from 7.00% to ultimate 4.50% over 10 years	Graded from 6.50% to ultimate 4.50% over 8 years
Medicare medical plan	Graded from 6.50% to ultimate 4.50% over 8 years	Graded from 6.50% to ultimate 4.50% over 8 years
Dental/Vision	4.50%	4.50%
Medicare Part-B	4.50%	28.44%, then 4.50% ultimate
Date of Experience Study	December 1, 2013 through November 30, 2016	December 1, 2010 through November 30, 2013

Long-Term Expected Rate of Return

Long-term expected rate of return on the OPEB plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation and subtracting expected investment expenses and a risk margin. The target allocation and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before deducting investment expenses, used in the derivation of the long-term expected investment rate of return assumption are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Domestic Large Cap Equity	22.40%	5.75%
Domestic Small Cap Equity	5.60%	6.37%
Developed International Equity	19.50%	6.89%
Emerging Market Equity	6.50%	9.54%
U.S. Core Fixed Income	11.25%	1.03%
High Yield Bonds	1.50%	3.99%
International Bonds	2.25%	0.19%
TIPS	2.00%	0.98%
Real Estate	8.00%	4.47%
Commodities	3.00%	3.78%
Hedge Funds	9.00%	4.30%
Private Equity	9.00%	7.60%
Total	**100.00%**	

Discount Rate

The discount rate used to measure the Total OPEB Liability was 7.25% as of December 31, 2017, and 7.60% as of December 31, 2016. The projection of cash flows used to determine the discount rate assumed benefits are paid out of the current OPEB SRBR assets. Based on those assumptions, the SRBR OPEB Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments for current plan members. Therefore, the long-term expected rate of return on the OPEB plan investments was applied to all periods of projected benefit payments to determine the Total OPEB Liability as of December 31, 2017 and December 31, 2016.

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

The following presents the Net OPEB Liability as of December 31, 2017, calculated using the discount rate of 7.25%, as well as what the Net OPEB Liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.25%) or 1-percentage-point higher (8.25%) than the current rate:

As of December 31, 2017 (Dollars in Thousands)

	1% Decrease	Current Discount Rate	1% Increase
	(6.25%)	(7.25%)	(8.25%)
Net OPEB Liability	$ 159,168	$ 27,478	$ (82,057)

Sensitivity of the Net OPEB Liability to Changes in the Health Care Cost Trend Rate

The following presents the Net OPEB liability as of December 31, 2017, calculated using the trend rate as well as what the Net OPEB Liability would be if it were calculated using a trend rate that is 1-percentage-point lower or 1-percentage-point higher than the current rate:

As of December 31, 2017 (Dollars in Thousands)

	1% Decrease[1]	Current Trend Rates[1]	1% Increase[1]
Net OPEB Liability	$ (94,686)	$ 27,478	$ 177,844

1 Current trend rates: 7.00% graded down to 4.50% over 10 years for Non-Medicare medical plan costs; 6.50% graded down to 4.50% over 8 years for Medicare medical plan costs and 4.50% for all years for Dental, Vision and Medicare Part B costs.

8. DEPOSITS AND INVESTMENTS

The 1937 Act gives the Board of Retirement exclusive control over ACERA's investment portfolio. Except as otherwise restricted by the California constitution or other laws, the 1937 Act allows the Board of Retirement to prudently invest, or delegate the authority to invest the investment portfolio through the purchase, holding, or sale of any form or type of investment, financial instrument, or financial transaction.

The Board of Retirement investment authority granted under the 1937 Act was also incorporated into the state constitution as the California Pension Protection Act of 1992 (Article 16, Section 17 of the California Constitution), which requires the Board, its officers, and employees to discharge their duties with respect to ACERA and the investment portfolio under the following rules:

- "The members of the retirement board shall discharge their duties with respect to the system solely in the interest of, and for the exclusive purposes of providing benefits to participants and their beneficiaries, minimizing employer contributions thereto, and defraying reasonable expenses of administering the system.
- The members of the retirement board shall discharge their duties with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with these matters would use in the conduct of an enterprise of a like character and with like aims.
- The members of the retirement board shall diversify the investments of the system so as to minimize the risk of loss and to maximize the rate of return, unless under the circumstances it is clearly not prudent to do so."

Deposits

Operational cash accounts held with a financial institution are swept daily into a pooled money market fund, which invests in repurchase agreements and U.S. treasury bills and notes.

Investments

ACERA's asset classes include domestic equity, international equity, domestic fixed income, international fixed income, real estate, private equity and absolute return (formerly known as alternative investments) and real assets. Investments in any asset class may be held in direct form, pooled form, or both.

As of December 31, 2017, thirteen investment managers managed securities portfolios, eleven investment managers were used for real estate investments, nineteen investment managers were used for private equity, seven managers were used for absolute return (formerly known as alternative investments), and six investment managers for real assets investments.

Available cash held by investment managers is swept daily into a pooled short-term investment fund managed by the custodial bank. This short-term investment fund holds short-term obligations and deposits, including U.S. treasury and agency obligations, corporate bonds, commercial paper, repurchase agreements, certificates of deposit, bankers' acceptances, time deposits, and floating-rate notes.

Likewise, cash collateral received in connection with the securities lending program in which ACERA participates is held in a separate short-term investment pool.

These two investment pools are each held in a trust fund sponsored by State Street Bank and Trust Company, the investment custodian, and the securities lending agent. They are regulated by the Federal Reserve, Comptroller of the Currency, the Massachusetts Commissioner of Banks, and the U.S. Department of Labor.

The value of the underlying instruments in these investments pools is adjusted to fair value. The fair value of ACERA's position in these investment pools is not materially different from the value of the pool shares.

Governmental Accounting Standards Board, Statement No.72 (GASB 72), *Fair Value Measurement and Application*, generally requires investments to be measured at fair value, using the appropriate valuation techniques under the circumstances and for which sufficient data are available to measure the fair value. The three approaches to measuring fair value are:

1. Market Approach (actual market transactions for identical or similar items);
2. Cost Approach (the current cost to replace the service capacity of an asset); and
3. Income Approach (discounting the current value of the future cash flows)

The quality of the data (inputs) used to determine fair value can vary. Some inputs are directly or indirectly observable (independently verifiable). Other inputs are unobservable. GASB 72 establishes a three-tier hierarchy of inputs used to measure fair value consisting of:

1. Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that a government can access at the measurement date. Level 1 investments include public equity securities and other publicly traded securities such as widely held domestic and international stocks, certain derivatives or U.S. Treasury securities.
2. Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for an asset or liability, either directly or indirectly. These inputs can include quoted prices for similar assets or liabilities in active or inactive markets, or market-corroborated inputs. Fair values maybe based on market multiples techniques and/or matrix pricing techniques. Level 2 investments include fixed or variable-income securities, commingled funds, certain derivatives and other assets that are valued using market information.
3. Level 3 inputs are unobservable inputs for an asset or liability. Included in this level are corporate bonds that are restricted and does not trade readily. The fair value of investments in real estate separate properties which is based on prices in a competitive market as determined by the investment manager relying on periodic appraisals is also included in Level 3 inputs.
4. GASB 72 allows a government to use net asset value (NAV) per share (or its equivalent) for an investment in a nongovernmental entity that does not have a readily determined fair value. Investments measured at NAV without determinable fair value are excluded from the level of fair value hierarchy. Selected additional disclosures are required for investments measured at NAV such as fair value measurement, government's unfunded commitments related to the investment type, general description of the terms and conditions upon which a government may redeem investments, and an estimate of when the redemption restriction might lapse for investments restricted from redemption. For private equity type investments, ACERA relies on the audited financial statements of its partnerships. The inputs used by the general partner include some or all of the following: the original transaction price, recent private transactions in the same or similar instruments, completed or pending third-party transactions in comparable businesses, recapitalizations and other transactions across the capital structure, public market valuation multiples for similar offerings in the equity or debt capital markets, as well as changes in the investment's earnings before interest, taxes, depreciation and amortization, cash flows, implied yields and leverage ratios.

Investments and Derivatives Measured at Fair Value - Pension Plan

As of December 31, 2017 (Dollars in Thousands)

Investments by Fair Value Level	Total	Fair Value Measurements Using		
		Quoted Prices in Active Markets for Identical Assets Level 1	Significant Other Observable Inputs Level 2	Significant Unobservable Inputs Level 3
Cash Equivalents				
Government Issues	$ 50,017	$ 50,017	$ -	$ -
STIF-Type Instrument	158,261	-	158,261	-
Total Cash Equivalents	**208,278**	**50,017**	**158,261**	**-**
Fixed Income Securities				
Asset-Backed Securities	73,551	-	73,551	-
Commercial Mortgage-Backed Securities	75,678	-	75,678	-
Convertible Bonds	21,572	-	21,572	-
Corporate Bonds	496,079	-	495,468	611
Municipal/Revenue Bonds	3,546	-	3,546	-
FHLMC	58,348	-	58,348	-
FNMA	65,885	-	65,885	-
GNMA I	2,255	-	2,255	-
GNMA II	13,212	-	13,212	-
Government Issues	280,119	174,245	105,874	-
Mutual Funds	141,107	-	141,107	-
Total Fixed Income Securities	**1,231,352**	**174,245**	**1,056,496**	**611**
Equity Securities				
Non-U.S. Equity	2,089,686	1,792,949	296,737	-
Pooled Investments	1,540,535	1,419,456	121,079	-
U.S. Equity	1,475,360	1,475,342	18	-
Total Equity Securities	**5,105,581**	**4,687,747**	**417,834**	**-**
Real Estate				
Properties	66,538	-	-	66,538
Total Real Estate	**66,538**	**-**	**-**	**66,538**
Collateral from Securities Lending	406,876	-	406,876	-
Total Investments by Fair Value Level	**7,018,625**	**$4,912,009**	**$2,039,467**	**$ 67,149**
Investments Measured at Net Asset Value (NAV)				
Real Assets	301,579			
Private Equity	438,023			
Absolute Return	308,092			
Real Estate	445,602			
Total Investments Measured at NAV	**1,493,296**			
Total Investments	**$8,511,921**			
Derivatives				
Equity Index Swaps	$ 803	$ -	$ -	$ 803
Future Contracts-Equity Index	272	272	-	-
Foreign Exchange Contracts	199	199	-	-
Total Derivatives	**$ 1,274**	**$ 471**	**$ -**	**$ 803**

Investments Measured at the NAV

As of December 31, 2017 (Dollars in Thousands)

	Fair Value	Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Real Assets[1]	$ 301,579	$ 55,999	None	30-day notice
Private Equity [2]	438,023	383,656	None	N/A
Absolute Return [3]	308,092	-	None	N/A
Real Estate[4]	445,602	29,147	None	N/A
Total Investments Measured at NAV	**$ 1,493,296**			

1 Real Assets – The Real Assets portfolio consists of seven funds investing primarily in commodities, infrastructure, and natural resources (energy). Three of the funds follow the hedge fund structure and four follow the private equity structure. The fair value of the private equity-type funds has been determined using net assets value represented in the audited financial statements plus/minus the latest quarterly cash flows. The private equity funds are not eligible for redemption but rather distribute proceeds over the funds' lifespans. The three funds structured using the hedge fund structure accept investments monthly. These funds are eligible for month-end redemption after 5-60 days' notice. These fund assets are valued and reported monthly based on month-end exchange prices or over-the-counter quotes in competitive markets.

2 Private Equity – The Private Equity portfolio consists of 37 funds, which invest primarily in buyout, debt-related, special situations, and venture capital opportunities. The fair value of these funds is determined using net assets value represented in the audited financial statements plus/minus the latest quarterly cash flows. These funds are not eligible for redemption but rather distribute proceeds over the funds' lifespans in either cash form or "in kind" shares of the funds' portfolio companies. Distributions to the funds' investors can occur over the span of 4 to 15 years.

3 Absolute Return – The Absolute Return portfolio consists of nine funds, which are hedge fund-of-funds, currency managers, and other alternative investments. Three funds are hedge fund structure and six follow the private equity model, but employ hedge fund type strategies. The fair value of the private equity-type funds is determined using net assets typically valued according to client capital account statements, one quarter in arrears, plus/minus the latest quarter's cash flows. These funds are not eligible for redemption but rather distribute proceeds over the funds' lifespans. Three of the funds are structured using the hedge fund structure accepting investments monthly. These funds are eligible for month-end or quarter-end redemption after 30 days' notice. These funds are valued and reported monthly based on month-end exchange prices or over-the-counter quotes in competitive markets.

4 Real Estate – ACERA's Real Estate portfolio consists of 14 funds and a separate building, which serves as ACERA's headquarters. The Real Estate funds in the portfolio invest primarily in U.S. commercial real estate (office, industrial, retail, multi-family, and other). These funds are designed as commingled funds or as limited partnerships (private equity structure). The investments that are structured as private equity or limited partnerships are not eligible for redemption but rather distribute proceeds over the funds' lifespan as distribution or return of capital. The primary objectives of the real estate portfolio are income and appreciation; distribution income is typically made on a quarterly basis throughout the lives of the funds. The fair value of these funds is determined using third-party appraisals every three years or an internal appraisal. Net asset values are typically reported one quarter in arrears, plus/minus the latest quarter's cash flows (capital calls and distributions). These funds are eligible for redemption or withdrawal typically with 90 day notice and a 90 to 180 day payout.

Derivatives

ACERA has the following types of derivatives: futures contracts-equity index, currency forward contracts, total return swaps, and rights. An equity index futures contract represents an agreement to purchase or sell an equity index for a given price at a specified future date. Currency forward contracts generally serve to hedge or offset, the impact of foreign currency exchange rate fluctuations on the reported U.S. dollar fair value of investments denominated in foreign currencies. A total return swap is a swap agreement in which one party makes payments based on a set rate, either fixed or variable, while the other party makes payments based on the return of an underlying asset, usually an equity index, loans, or bonds. Rights allow the holder the option to buy securities for a given price within a specified time period.

The following Investment Derivatives schedule reports the fair value balances, changes in fair value, and notional amounts of derivatives outstanding as of and for the year ended December 31, 2017, classified by type. For financial reporting purposes, all ACERA derivatives are classified as investment derivatives.

Investment Derivatives

For Year Ended December 31, 2017 (Dollars in Thousands)

Derivative Type	Classification	Notional Value/Shares	Fair Value	Changes in Fair Value[2]
Currency Forward Contracts	Receivable/Liability[1]	$ 378,312	$ 203	$ 4,968
Future Contracts - Long	Futures	1,843	-	15,176
Future Contracts - Short	Futures	(29)	-	(5,215)
Total Return Swaps Bond	Swaps	60,917	66	(5,213)
Total Return Swaps Equity	Swaps	(49,717)	737	5,837
Rights	Equity	-	-	202
Total			**$ 1,006**	**$ 15,755**

1 Currency forward contracts are reported in Foreign Exchange Contracts, which includes spot contracts which are not derivatives.

2 Change in fair value includes realized and unrealized gains and losses on derivatives and are reported as Net Appreciation (Depreciation) in Fair Value of Investments on the Statements of Changes in ACERA's Net Assets.

Securities Lending Activity

The Board of Retirement policies authorize ACERA to participate in a securities lending program. Securities lending transactions are short-term collateralized loans of ACERA's securities for the purpose of generating additional investment income. ACERA has a securities lending agreement in place that authorizes the securities lending agent to lend ACERA's securities to broker-dealers and banks pursuant to a loan agreement. For securities on loan, ACERA receives either cash or non-cash collateral. ACERA invests the cash collateral in a pooled short-term investment fund maintained by the securities lending agent and receives earnings on it in exchange for paying a loan rebate fee to the borrower. In the case of non-cash collateral, the borrower pays ACERA a loan premium.

For the year ended December 31, 2017, on behalf of ACERA, the securities lending agent lent ACERA's securities (government bonds, corporate stocks, corporate bonds, international equities, and international fixed income) to borrowers under the securities lending agreement and ACERA received cash (U.S. and foreign currency), securities issued or guaranteed by the United States government, and sovereign debt or irrevocable bank letters-of-credit as collateral.

ACERA did not have the ability to pledge or sell collateral securities delivered absent a borrower default (therefore, such non-cash collateral is not reported on the Statement of Fiduciary Net Position).

Borrowers were required to deliver collateral for each loan equal to:

- Loaned securities denominated in U.S. dollars or sovereign debt issued by foreign governments, with a margin of at least 102% of the fair value of the loaned securities; or
- Loaned securities not denominated in U.S. dollars, or whose primary trading market was not located in the United States, with a margin of at least 105% of the fair value of the loaned securities.

Moreover, borrowers were required to maintain the designated margin percentage of collateral on a daily basis.

ACERA did not impose any restrictions for the year ended December 31, 2017, on the amount of the loans that the securities lending agent made on its behalf. In the event the borrower failed to return the loaned securities, the securities lending agent indemnified ACERA by agreeing to purchase replacement securities. If the collateral was inadequate to replace the securities lent, the securities lending agent supplemented the amount of cash collateral. If the borrower failed to pay ACERA for any income distributions on loaned securities, the securities lending agent will also supplement the income amount due to ACERA. There were no losses during the year ended December 31, 2017, resulting from a default of the borrowers or the securities lending agent.

For the year ended December 31, 2017, ACERA and the borrowers maintained the right to terminate securities lending transactions upon notice. The cash collateral received on each loan was invested, together with the cash collateral of other qualified tax-exempt plan lenders in a short-term investment pool managed by the securities lending agent. For the fiscal year 2017, the short-term investment fund is separated into two investment pools: (a) a liquidity pool and (b) a duration pool. As of December 31, 2017, the Quality D Short –Term investment fund liquidity pool had an average duration of 28 days and an average weighted final maturity of 153 days for U.S. dollars collateral. The Quality D Short-Term investment fund duration pool had an average duration of 25 days and an average weighted final maturity of 3,185 days for U.S. dollars collateral. For the year ended December 31, 2017, ACERA had no credit risk exposure to borrowers because, for each borrower, the value of borrower collateral held exceeded the value of the securities on loan to the borrower.

As of December 31, 2017, ACERA had securities on loan with a total fair value of $493.8 million; however, the cash collateral held against the loaned securities was $511.8 million and exceeded the total fair value of loaned securities by $18.0 million.

Deposit, Investment, and Derivative Risks

GASB Statements No. 40 and 53 require the disclosure of specific risks that apply to ACERA's deposits, investments, and derivatives. They identify the following risks:

- Custodial Credit Risk—Deposits and Investments;
- Concentration of Credit Risk;
- Credit Risk—Investments and Derivatives
- Interest Rate Risk;
- Fair Value Highly Sensitive to Changes in Interest Rates;
- Foreign Currency Risk.

Investment Policies

GASB Statement No. 40 requires the disclosure of deposit or investment policies (or the lack thereof) that relate to investment and custodial risks.

ACERA has chosen to manage the investment risks described by GASB Statements No. 40 and 53 by contractually requiring each portfolio investment manager to abide by restrictive investment guidelines specifically tailored to that individual manager rather than adopting across-the-board investment policies with respect to these investment risks. The guidelines stipulate the investment style, performance objective, performance benchmarks, and portfolio characteristics.

For example, in the case of foreign currency risk, the policy guidelines for the U.S. dollars equity portfolios differ from those for the non-U.S. dollars equity portfolios. Likewise, in the case of credit risk, the guidelines for one fixed income manager stipulate a minimum acceptable credit rating for each debt instrument while the guidelines for a different fixed income portfolio merely require that the average of credit ratings for a certain fair value percentage of the portfolio meet a minimum requirement.

Each separate account manager is likewise subject to a "manager standard of care" that establishes a fiduciary relationship requiring the manager to act prudently and solely in the best interest of ACERA.

Separately, ACERA's guidelines also require each manager's investment return performance to compare favorably with the performance of the relevant passive market index such as the Barclays Capital Aggregate Bond Index.

ACERA's investment staff continually monitors all investment managers for compliance with the respective guidelines.

Custodial Credit Risk—Deposits

Custodial credit risk for deposits is the risk that, in the event of the failure of a depository financial institution, ACERA will not be able to recover deposits nor be able to recover collateral securities that are in the possession of an outside party. ACERA has no general policy on custodial credit risk for deposits.

By necessity, ACERA maintains operational cash deposits to support day-to-day cash management requirements. As of December 31, 2017, cash held with a financial institution in a pooled money market fund amounted to $5.28 million, of which $0.25 million was insured and $5.03 million was uninsured and uncollateralized subject to custodial credit risk.

Custodial Credit Risk—Investments

The custodial credit risk for investments is the risk that, in the event of the failure of a counterparty to a transaction, ACERA will not be able to recover the value of investment securities that are in the possession of an outside party. The individual investment guidelines for each investment manager require that managed investments be held and maintained with the master custodian in the name of ACERA. The master custodian may rely on sub-custodians. The custodial requirement does not apply to real estate investments, investments in commingled pools, and private equity and alternative investments. As of December 31, 2017, ACERA had no investments that were exposed to custodial credit risk.

Custodial Credit Risk—Derivatives

ACERA's investments include collateral associated with derivatives activity. As of December 31, 2017, net collateral for derivatives was $4.2 million. Each account was uninsured and uncollateralized, and subject to custodial credit risk.

Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of ACERA's investment in a single issuer of securities. The individual investment guidelines for each fixed income manager restrict concentrations greater than 5% in the securities of any one issuer (excluding direct obligations of the U.S. and/or eligible foreign governments, and those explicitly guaranteed by the U.S. and/or eligible foreign governments). As of December 31, 2017, ACERA had no investments in a single issuer that equaled or exceeded 5% of the fiduciary net position.

Credit Risk—Investments

Credit risk is the risk that the issuer of a debt security or other counterparty to an investment will not fulfill its obligations. The individual investment guidelines for each fixed income investment manager describe applicable restrictions on credit risk. The credit risk restrictions by investment portfolio are as follows:

- Medium-Grade Fixed Income: A minimum of 51% of the fair value of the portfolio must be rated BBB- or higher by Standard & Poor's (S&P) or Baa3 or higher by Moody's Investor Services (Moody's).
- Enhanced Index Fixed Income: Investments must be rated Baa/BBB or better by Moody's/S&P at time of purchase.
- Global Fixed Income: The average credit quality of the portfolio shall be grade "A" or better based on Moody's and/or S&P. Individual securities shall be of investment-grade quality, i.e., Baa3/BBB- and above.

The credit quality ratings of a security, (e.g., from Moody's or S&P) give an indication of the degree of credit risk for that security.

The Credit Risk Analysis schedule on page 50 discloses credit ratings of ACERA's debt investments by type and for each external investment pool as of December 31, 2017.

Credit Risk Analysis

As of December 31, 2017 (Dollars in Thousands)

		Adjusted Moody's Credit Rating[1]								
	Total	Aaa	Aa	A	Baa	Ba	B	Caa	Ca and Below	Not Rated
Debt Investments By Type										
Collateralized Mortgage Obligations	$ 50,468	$ 32,715	$ -	$ -	$ 3,260	$ 1,455	$ 3,189	$ 6,874	$ 1,536	$ 1,439
Convertible Bonds	21,739	-	-	-	2,053	2,982	4,112	1,755	-	10,837
Corporate Bonds	495,913	5,508	14,881	91,529	276,676	79,533	22,123	3,429	621	1,613
Federal Home Loan Mortgage Corp.[2]	80,898	5,213	-	-	-	-	-	-	-	75,685
Federal National Mortgage Assn.[2]	68,398	-	-	-	397	-	-	-	-	68,001
Government National Mortgage Assn. I, II[2]	15,467	-	-	-	-	-	-	-	-	15,467
Government Issues[2]	280,118	185,071	33,695	49,268	-	6,585	2,872	-	-	2,627
Municipals	3,546	-	1,499	2,047	-	-	-	-	-	-
Other Asset Backed Securities	73,699	36,889	985	4,705	9,990	5	148	2,841	9,610	8,526
Subtotal Debt Investments	**1,090,246**	**265,396**	**51,060**	**147,549**	**292,376**	**90,560**	**32,444**	**14,899**	**11,767**	**184,195**
External Investment Pools of Debt Securities										
Securities Lending Cash Collateral Fund										
Liquidation Pool[3]	403,297	-	-	-	-	-	-	-	-	403,297
Duration Pool[3]	3,555	-	-	-	-	-	-	-	-	3,555
Master Custodian Short-Term Investment Fund[3]	158,261	-	-	-	-	-	-	-	-	158,261
Subtotal External Investment Pools	**565,113**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**565,113**
Total	**$ 1,655,359**	**$ 265,396**	**$ 51,060**	**$ 147,549**	**$ 292,376**	**$ 90,560**	**$ 32,444**	**$ 14,899**	**$ 11,767**	**$ 749,308**

1 Adjusted Moody's Credit Rating: This schedule displays the fair value of investments by credit rating in increasing magnitude of risk. Investments are classified by Moody's credit rating, or by the Moody's rating that corresponds to the Standard & Poor's (S&P) credit rating if the investment has a S&P rating but not a Moody's rating. Also whenever both ratings for an investment exist and the S&P rating for the investment indicates a greater degree of risk than the Moody's rating, then the investment's Moody's credit rating is adjusted, solely for the purpose of this disclosure, to the Moody's rating corresponding to the greater degree of risk.

2 The investments in the following debt instruments–i.e., Federal Home Loan Mortgage Corp., Federal National Mortgage Assn., Government National Mortgage Assn. and Government Issues, that are Not Rated are implicitly guaranteed by the U.S. Government.

3 The external investment pools are not rated.

Credit Risk—Derivatives

ACERA is exposed to credit risk on investment derivatives that are traded over the counter and are reported in asset positions. Derivatives exposed to credit risk include currency forward contracts, and synthetic futures (which are included in futures contracts-equity index). To minimize credit risk exposure, ACERA's investment managers continually monitor credit ratings of counterparties. Should there be a counterparty failure, ACERA would be exposed to the loss of the fair value of derivatives that are in asset positions and any collateral provided to the counterparty, net of the effect of applicable netting arrangements. ACERA has no general investment policy with respect to netting arrangements or collateral requirements. Netting arrangements legally provide ACERA with a right of set-off in the events of bankruptcy or default by the counterparty. ACERA's investment managers may have collateral posting provisions associated with currency forward contracts. In the event of counterparty failure, ACERA would be exposed to loss of collateral provided to the counterparty. Collateral provided by the counterparty to ACERA reduces its credit risk exposure. The collateral associated with investments derivatives is disclosed on page 49 under Custodial Credit Risk—Derivatives.

The following Credit Risk—Derivatives schedule discloses the counterparty credit ratings of ACERA's investment derivatives in asset positions by type, as of December 31, 2017. These amounts represent the maximum loss that would be recognized if all counterparties fail to perform as contracted, without respect to any collateral or other security, or netting arrangement.

Credit Risk Analysis – Investment Derivatives Subject to Credit Risk

As of December 31, 2017 (Dollars in Thousands)

Adjusted Moody's Credit Rating[1]	Currency Forward Contracts
Aa	$ 302
A	2,867
Baa	715
Subtotal Derivatives in Asset Position	**3,884**
Derivatives in Liability Position	(2,883)
Total Derivatives in Asset/(Liability) Position	**$ 1,001**

1 See footnote 1 on page 50.

As of December 31, 2017, the $3.9 million maximum exposure of derivatives credit risk was reduced by ($2.9) million of liabilities included in netting arrangements, resulting in a net exposure to credit risk of $1.0 million (rounded).

ACERA has a 73.8% ($2.9 million) net exposure to credit risk with a credit rating of A, and a 18.0% ($0.7 million) with another counterparty with a credit rating of Baa.

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment.

ACERA has investments in three fixed income portfolios containing individual debt securities as well as investments in external investment pools containing debt securities. All of these investments are subject to interest rate risk. ACERA has no general policy on interest rate risk for the fixed income portfolios or for the investments in external pools. ACERA manages interest rate risk for the three fixed-income portfolios by setting limits on portfolio duration for each portfolio. The duration restrictions by investment portfolio (with portfolio style) are as follows:

- Duration Band: Barclays Baa Credit Capital Index duration +/- 2.5 years (Medium Grade Fixed Income);
- Duration: Match the Barclays Capital Aggregate Bond Index duration (Enhanced Index Fixed Income); and,
- Duration Band: 1–10 years duration (Global Fixed Income).

The following Interest Rate Risk Analysis—Duration schedule discloses the duration of ACERA's debt investments by type and the duration of each of the external investment pools of debt securities. Duration is a measure of a debt investment's exposure to fair value changes arising from changing interest rates. It uses the present values of cash flows, weighted for those cash flows as a percentage of the investment's full price. The Master Custodian Short-Term Investment Fund had an average weighted maturity of 24 days as of December 31, 2017.

Interest Rate Risk Analysis – Duration

As of December 31, 2017 (Dollars in Thousands)

Debt Investments by Type		Fair Value	Duration in Years
Collateralized Mortgage Obligations	$	50,467	4.6
Convertible Bonds		21,739	3.5
Corporate Bonds		495,913	6.4
Federal Home Loan Mortgage Corp.		80,899	4.4
Federal National Mortgage Assn.		68,398	3.9
Government National Mortgage Assn. I, II		15,467	4.3
Government Issues		280,118	7.6
Municipals		3,546	11.7
Other Asset Backed Securities		73,699	2.6
Total of Debt Investments	**$**	**1,090,246**	
External Investment Pools of Debt Securities		**Fair Value**	**Duration**
Securities Lending Cash Collateral Fund			
Liquidity Pool	$	403,297	28 days
Duration Pool		3,555	25 days
Master Custodian Short-Term Investment Fund		158,261	-
Total External Investment Pools	**$**	**565,113**	

Interest Rate Risk Analysis – Highly Sensitive

Investment with Fair Values Highly Sensitive to Changes in Interest Rates

As of December 31, 2017 (Dollars in Thousands)

Investment Type	Investment Description	Interest Rates		Fair Value
Corporate Bonds	Various debt related Securities	4.35% to 26.65%	$	48,752
Government Issues	Various debt related Securities	7.75% to 26.25%		20,948
Municipals	Municipal Electric Authority of Georgia	6.66%		2,047
Other Asset Backed	Various debt related Securities	1.86% to 5.21%		3,266

Fair Value Highly Sensitive to Changes in Interest Rates

The Interest Rate Risk Analysis table described here on page 52 discloses the degree to which ACERA's investments are sensitive to interest rate changes due simply to the remaining term to maturity. In contrast, ACERA's investments with fair values that are highly sensitive to interest rates due to other factors are disclosed on the Interest Rate Risk Analysis - Highly Sensitive schedule on page 52. ACERA has no general investment policy with respect to investments with fair values that are highly sensitive to changes in interest rates.

Foreign Currency Risk

Foreign currency risk is the risk that changes in foreign exchange rates will adversely affect the fair value of an investment or deposit. ACERA has no general investment policy with respect to foreign currency risk.

Foreign Currency Risk—Investments

The Foreign Currency Risk Analysis schedule on page 54 shows the fair value of investments that are exposed to this risk by currency denomination and investment type. This provides an indication of the magnitude of foreign currency risk for each currency.

Foreign Currency Risk—Equity Index Swaps and Futures

Equity index swaps and futures contracts-equity index are derivatives. An equity index swap represents an agreement between two parties to swap two sets of equity index values. An equity index futures contract represents an agreement to purchase or sell an equity index for a given price at a specified future date.

For those equity index swaps and futures contracts-equity index which are dollar-denominated securities issued by foreign countries, there is an exposure to a foreign currency risk.

Foreign Currency Risk—Foreign Exchange Contracts

Foreign exchange contracts are subject to foreign currency risk. Foreign exchange contracts include currency forward contracts and spot contracts.

Currency forward contracts are derivatives and are described in the derivatives section of this note. Spot contracts are generally used when ACERA is required to make or receive payments in a foreign currency. Spot contracts are agreements to buy or sell a certain amount of foreign currency at the current market rate, for settlement in two business days.

The dollar impact that foreign exchange contracts have on foreign currency risk is equal to the foreign currency settlement amounts translated in the same manner as the investments (i.e. spot exchange rate at the end of the year). The impact appears in the column labeled Foreign Currency on the schedule on page 54. The Net Exposure column of the schedule indicates the net foreign currency risk, i.e., the gross risk associated with the investments less the risk hedged by the outstanding foreign exchange contracts.

Foreign Currency Risk Analysis

Fair Value of Investments Exposed to Foreign Currency Risk by Currency

As of December 31, 2017 (Dollars in Thousands)

	Investment Type						
Trade Currency Name	Common Stock	Corporate Bonds	Foreign Currency	Government Issues	Total Return Swaps	Currency Swaps	Net Exposure
Argentine Peso	$ -	$ 2,135	$ 112	$ 1,789	$ -	$ -	$ 4,036
Australian Dollar	31,908	-	243	19,215	(4)	1,024	52,386
Brazilian Real	12,775	621	-	-	-	-	13,396
Canadian Dollar	44,562	-	396	-	-	301	45,259
Colombian Peso	-	3,608	-	-	-	-	3,608
Danish Krone	49,763	-	5	-	-	(8)	49,760
Euro Currency	506,959	4,563	375	-	(33)	(222)	511,642
Hong Kong Dollar	143,385	-	51	-	544	(1)	143,979
Indian Rupee	63,525	-	68	-	-	69	63,662
Indonesian Rupiah	23,805	-	-	-	-	-	23,805
Japanese Yen	298,003	-	(155)	-	226	(382)	297,692
Malaysian Ringgit	-	-	-	15,743	-	-	15,743
Mexican Peso	1,707	1,920	-	23,718	-	-	27,345
Israeli Sheqel	10,043	-	-	-	-	14	10,057
New Taiwan Dollar	24,624	-	-	-	-	3	24,627
New Zealand Dollar	732	-	-	-	-	404	1,136
Norwegian Krone	3,241	-	8	-	-	(363)	2,886
Polish Zloty	-	-	-	7,823	-	215	8,038
Pound Sterling	329,440	-	1,234	19,491	-	(154)	350,011
Singapore Dollar	37,922	-	163	-	-	10	38,095
South African Rand	29,560	-	-	6,585	-	(463)	35,682
South Korean Won	22,626	-	-	-	-	-	22,626
Swedish Krona	44,357	-	127	-	80	14	44,578
Swiss Franc	107,317	-	6	-	(10)	(263)	107,050
Thailand Baht	6,049	-	-	-	-	-	6,049
Turkish Lira	-	-	-	2,627	-	-	2,627
UAE Dirham	1,665	-	-	-	-	-	1,665
Grand Total	**$ 1,793,968**	**$ 12,847**	**$ 2,633**	**$ 96,991**	**$ 803**	**$ 198**	**$ 1,907,440**

Real Estate

Real Estate Investment Income – Separate Properties

For the Year Ended December 31, 2017 (Dollars in Thousands)

Real Estate Investment Income	$ 5,060
Real Estate Expenses	
Operating Expenses	2,399
Total Expenses	**2,399**
Real Estate Net Income	**$ 2,661**

There is no outstanding real estate related debt associated with the separate properties as of December 31, 2017.

9. CAPITAL ASSETS

ACERA's capital assets include equipment and furniture, electronic document management system, information systems, leasehold improvements, and construction in progress. See the following table for details.

Capital Assets and Accumulated Depreciation

For the Year Ended December 31, 2017 (Dollars in Thousands)

	January 1, 2017	Additions	Deletions / Transfers	December 31, 2017
CAPITAL ASSETS - DEPRECIABLE				
Equipment and Furniture	$ 3,019	$ 15	$ -	$ 3,034
Electronic Document Management System	4,163	-	-	4,163
Information Systems	10,457	-	-	10,457
Leasehold Improvements	2,585	-	-	2,585
Subtotal	**20,224**	**15**	**-**	**20,239**
CAPITAL ASSETS - NON DEPRECIABLE				
Construction-in-Progress	-	-	-	-
Total Capital Assets (Cost)	**20,224**	**15**	**-**	**20,239**
ACCUMULATED DEPRECIATION AND AMORTIZATION				
Equipment and Furniture	(2,926)	(46)	-	(2,972)
Electronic Document Management System	(4,140)	(25)	-	(4,165)
Information Systems	(10,457)	-	-	(10,457)
Leasehold Improvements	(945)	(95)	-	(1,040)
Total Accumulated Depreciation and Amortization	**(18,468)**	**(166)**	**-**	**(18,634)**
CAPITAL ASSETS - NET OF ACCUMULATED DEPRECIATION AND AMORTIZATION	**$ 1,756**	**$ (151)**	**$ -**	**$ 1,605**

10. LEASES

ACERA leases office space from Oakland 14th St. Office, a title holding corporation formed by ACERA. The term of the lease is seven years and seven months, with an option to renew for five additional years. Under the terms of the lease agreement, ACERA's base rent is abated. However, ACERA is required to pay its proportionate share of building operating expenses as defined in the lease. ACERA's share of these operating expenses was approximately $49,000 for the year ended December 31, 2017.

In addition, ACERA leases photocopy machines and water coolers to support operations. All current leases will expire in 2021. Equipment rental expenses were approximately $30,000 for the year ended December 31, 2017. The future estimated minimum rental payments for these leases are as follows:

Future Minimum Rental Payments

As of December 31 (Dollars in Thousands)

Year	Amount
2018	$ 27
2019	17
2020	9
2021	2
Total	**$ 55**

11. ADMINISTRATION EXPENSE

ACERA's Board of Retirement annually adopts an operating expense budget covering expenses to be incurred in the following fiscal year. The operating budget includes the administration expense budget which is subject to the statutory limit based on exclusions specified in the 1937 Act.

ACERA has adopted the provisions of the 1937 Act which allows ACERA to exclude actuarial, investment, legal, business continuity and technology direct costs from administration expenses. Since investment related expenses were offset against investment income, the remaining exclusions totaled $3.5 million for 2017.

ACERA also conforms to the provision of the 1937 Act that limits the administration cap to 0.21 percent of the Accrued Actuarial Liability (AAL). ACERA uses the AAL as of December 31 of the year in which the budget is adopted for this purpose.

A schedule of Administration Expense is included in the Supplemental Schedules on page 65.

Application of Statutory Limit on Administration Expense

For the Year Ended December 31, 2017 (Dollars in Thousands)

Total Accrued Actuarial Liability as of December 31, 2016	$	9,337,614
Limit: Maximum Allowable fraction of Total Accrued Actuarial Liability (0.21%) times Total Accrued Actuarial Liability	$	19,609
Portion of Administrative Expenses for the Fiscal Year subject to the Statutory Limit		12,288
Excess of Limit over Portion of Administration Expense Subject to Limit	$	7,321
Portion of Administration Expense Subject to Limit as a Percentage of Accrued Actuarial Liability		0.13%

12. RELATED PARTY TRANSACTIONS

By necessity, ACERA is involved in various business transactions with the County, the primary plan sponsor. These include reimbursement to the County for the salary and benefits of ACERA staff members paid through the County and reimbursement to the Alameda County Human Resources Department for personnel consulting services and for administering ACERA's retired members' health benefits. Also, under the Board of Retirement policy, ACERA reimburses the County for a portion of the salary and benefits of each County employee elected to the Board of Retirement. Lastly, ACERA reimburses the County for the cost of services provided in the following areas: insurance/risk management, information technology, and telecommunications.

Also, ACERA leases office space from Oakland 14th St. Office, a title holding company controlled by ACERA. Note 10—Leases describes this arrangement.

Related Party Transactions

For the Year Ended December 31, 2017 (Dollars in Thousands)

Reimbursed Cost of ACERA	
Staff Members	$ 12,573
Reimbursed Costs of County Services	1,225
State Mandated Benefit Replacement Program (415M)	613
County Personnel Services	77
Partial Salary/Benefits Reimbursement for Elected Board Members	291
Total	**$ 14,779**

13. SUBSEQUENT EVENTS

Management has evaluated subsequent events through June 25, 2018, the date the financial statements are available to be issued, and has determined that no adjustments are necessary to the amounts reported in the accompanying financial statements and no subsequent events have occurred, the nature of which would require disclosure.

Required Supplementary Information (RSI)

PENSION PLAN AND NON-OPEB

Schedule of Changes in Net Pension Liability and Related Ratios

For the Years Ended December 31 (Dollars in Thousands)

	2017	2016	2015	2014	2013
Total Pension Liability (TPL)[1]					
Service Cost	$ 187,409	$ 175,642	$ 172,585	$ 167,120	$ 166,639
Interest	636,556	603,168	579,500	542,377	522,203
Changes of benefit terms	-	-	-	-	-
Differences between expected and actual experience	17,516	(68,176)	(31,965)	(85,379)	(61,362)
Changes of assumptions	316,728	150,677	-	431,863	-
Benefit payments, including refunds of member contributions	(445,288)	(422,223)	(401,298)	(378,689)	(359,938)
Net Change in Total Pension Liability	**712,921**	**439,088**	**318,822**	**677,292**	**267,542**
Total Pension Liability - Beginning	**8,410,979**	**7,971,891**	**7,653,069**	**6,975,777**	**6,708,235**
Total Pension Liability - Ending (a)	**$ 9,123,900**	**$ 8,410,979**	**$ 7,971,891**	**$ 7,653,069**	**$ 6,975,777**
Plan Fiduciary Net Position (FNP)					
Contributions - employer[2]	$ 247,064	$ 241,729	$ 224,607	$ 213,255	$ 191,180
Contributions - member	89,326	85,736	82,949	79,714	76,230
Net investment income	1,065,908	423,718	49,021	318,245	736,914
Benefit payments, including refunds of member contributions	(445,288)	(422,223)	(401,298)	(378,689)	(359,938)
Administrative expense	(14,571)	(14,618)	(14,262)	(13,855)	(13,634)
Other	-	-	-	-	-
Net Change in Plan Fiduciary Net Position	**942,439**	**314,342**	**(58,983)**	**218,670**	**630,752**
Plan Fiduciary Net Position[3] - Beginning	**6,167,785**	**5,853,443**	**5,912,426**	**5,693,756**	**5,063,004**
Plan Fiduciary Net Position[3] - Ending (b)	**$ 7,110,224**	**$ 6,167,785**	**$ 5,853,443**	**$ 5,912,426**	**$ 5,693,756**
Net Pension Liability (NPL) - Ending (a) - (b)	**$ 2,013,676**	**$ 2,243,194**	**$ 2,118,448**	**$ 1,740,643**	**$ 1,282,021**
FNP as a Percentage of the TPL	**77.93%**	**73.33%**	**73.43%**	**77.26%**	**81.62%**
Covered Payroll[4]	**$ 995,178**	**$ 947,568**	**$ 945,858[5]**	**$ 886,925**	**$ 853,350**
NPL as a Percentage of Covered Payroll	**202.34%**	**236.73%**	**223.97%**	**196.26%**	**150.23%**

1 Total pension liability is not available for years prior to December 31, 2013. Ten years of information will be presented in future years as it becomes available.

2 Employer contributions are on a net basis after (i) considering the total cash contributions made by the employers, (ii) reducing by the employer contributions made to the 401(h) account, and (iii) increasing by the amount of transfer from the SRBR to the Employers Advance Reserve for employer contributions made to the 401(h) account in (ii).

3 For 2017 "Plan's Fiduciary Net Position – beginning," the amount shown ($6,167,785) includes market value of assets ($6,965,580), less OPEB-related SRBR assets ($797,795; OPEB-related SRBR assets include a proportionate share of the deferred market losses after netting out the Contingency Reserve, reduced on a proportional basis relative to the total actual balances in the OPEB and non-OPEB reserves). For 2017 "Plan's Fiduciary Net Position – ending," the amount shown ($7,110,224) includes market value of assets ($8,112,100), less OPEB-related SRBR assets ($1,001,876; OPEB-related SRBR assets include one half of the deferred market gains after restoring the Contingency Reserve to 1% of total assets). Note: Results may not add to total due to rounding.

4 For the year ended December 31, 2017, covered payroll represents Compensation Earnable and Pensionable Compensation and is defined as the payroll on which contribution to the pension plan are based. For the years ended before December 31, 2017, covered payroll was referred to as covered-employee payroll and only Compensation Earnable as Pensionale Compensation that would go into the determination of retirement benefits was included.

5 The covered payroll for the year 2015 includes 1 additional pay period.

Schedule of Employer Contributions

Last Ten Fiscal Years (Dollars in Thousands)

Year Ended December 31	Actuarially Determined Contributions (ADC)	Contributions in Relation to ADC	Contribution Deficiency (Excess)	Covered Payroll[1]	Contributions as a Percentage of Covered Payroll
2008	$ 129,660	$ 129,660	$ -	$ 810,713	15.99%
2009	132,199	132,199	-	838,141	15.77%
2010	147,543	147,543	-	839,617	17.57%
2011	162,879	162,879	-	837,482	19.45%
2012	179,649	179,649	-	845,933	21.24%
2013	191,180	191,180	-	853,350	22.40%
2014	213,255	213,255	-	886,925	24.04%
2015	224,607	224,607	-	945,858[2]	23.75%
2016	241,729	241,729	-	947,568	25.51%
2017	247,064	247,064	-	995,178	24.83%

1 For the year ended December 31, 2017, covered payroll represents Compensation Earnable and Pensionable Compensation and is defined as the payroll on which contribution to the pension plan are based. For the years ended before December 31, 2017, covered payroll was referred to as covered-employee payroll and only Compensation Earnable as Pensionale Compensation that would go into the determination of retirement benefits was included.

2 The covered payroll for the year 2015 includes 1 additional pay period.

Schedule of Investment Returns

Last Ten Fiscal Years[1] (As of December 31)

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Annual Money-Weighted Rate of Return, net of Investment Expense	19.02%	7.16%	-0.10%	4.27%	19.87%	N/A	N/A	N/A	N/A	N/A

1 Information prior to 2013 is not available. Ten years of information will be presented when it becomes available.

POSTEMPLOYMENT MEDICAL BENEFITS

Schedule of Changes in Net OPEB Liability and Related Ratios

For the Year Ended December 31 (Dollars in Thousands)

		2017
Total OPEB Liability[1]		
Service Cost[2]	$	26,991
Interest		69,879
Changes of benefit terms		-
Differences between expected and actual experience		(21,627)
Changes of assumptions		58,973
Benefit payments		(37,904)
Net Change in Total OPEB Liability		**96,312**
Total OPEB Liability - Beginning		**933,042**
Total OPEB Liability - Ending (a)	**$**	**1,029,354**
Plan Fiduciary Net Position (FNP)		
Contributions - employer[3]		N/A
Contributions - member		N/A
Net investment income	$	243,189
Benefit payments		(37,904)
Administrative expense		(1,204)
Other		-
Net Change in Plan Fiduciary Net Position		**204,081**
Plan Fiduciary Net Position - Beginning[4]		**797,795**
Plan Fiduciary Net Position - Ending (b)[4]	**$**	**1,001,876**
Net OPEB Liability - Ending (a) - (b)	**$**	**27,478**
FNP as a Percentage of the Total OPEB Liability		**97.33%**
Covered-Employee Payroll[5]	**$**	**N/A**
Net OPEB Liability as a Percentage of Covered-Employee Payroll		**N/A**

1 Total OPEB liability is not available for years prior to December 31, 2017. Information will be presented in future years as it becomes available.

2 The service cost is always based on the previous year's valuation, meaning the valuation as of December 31, 2016.

3 Employer contributions are on a net basis. Benefits are funded by employer contributions to the 401(h) account and similar amounts are transferred from the SRBR to the Employer Advance Reserve to backfill the employer contributions that would have otherwise been made to the Retirement Plan.

4 "Plan's Fiduciary Net Position – beginning" ($797,795) includes the SRBR and 401(h) account ($846,050) less the estimated SRBR transfer to Employer Advance Reserve ($8,865) less the proportionate share of the deferred market losses after netting out the Contingency Reserve that was commensurate with the size of the OPEB reserve ($39,389). "Plan's Fiduciary Net Position – ending" ($1,001,876) includes the SRBR and 401(h) account ($863,836) less the estimated SRBR transfer to Employer Advance Reserve ($5,830) plus one half of the deferred market gains after restoring the Contingency Reserve to 1% of total assets ($143,870). Note: Results may not add up to total due to rounding.

5 Covered-employee payroll is not shown as contributions to the OPEB plan are not based on a measure of pay. Covered-employee payroll represents Compensation Earnable and Pensionable Compensation. Only Compensation Earnable and Pensionable Compensation that would go into the determination of retirement benefits would otherwise be included.

Schedule of Employer Contributions

Last Ten Fiscal Years (Dollars in Thousands)

Year Ended December 31	Actuarially Determined Contributions (ADC)[1]	Contributions in Relation to ADC[1]	Contribution Deficiency (Excess)	Covered- Employee Payroll[2]	Contributions as a Percentage of Covered-Employee Payroll
2008	N/A	N/A	$ -	N/A	N/A
2009	N/A	N/A	-	N/A	N/A
2010	N/A	N/A	-	N/A	N/A
2011	N/A	N/A	-	N/A	N/A
2012	N/A	N/A	-	N/A	N/A
2013	N/A	N/A	-	N/A	N/A
2014	N/A	N/A	-	N/A	N/A
2015	N/A	N/A	-	N/A	N/A
2016	N/A	N/A	-	N/A	N/A
2017	N/A	N/A	-	N/A	N/A

1 Benefits are funded by employer contributions to the 401(h) account and similar amounts are transferred from the SRBR to the Employers Advance Reserve to backfill the employer contributions that would have otherwise been made to the Retirement Plan.

2 Covered-employee payroll is not shown as contributions to the OPEB plan are not based on a measure of pay. Covered-employee payroll represents Compensation Earnable and Pensionable Compensation. Only Compensation Earnable and Pensionable Compensation that would go into the determination of retirement benefits would otherwise be included.

The schedule of investment returns for the total fund is reported on page 59 of the RSI.

Notes to Required Supplementary Information

PENSION PLAN AND NON-OPEB

Actuarial Assumptions

The Total Pension Liabilities (TPLs) as of the measurement dates were calculated by rolling forward the liabilities from prior years' actuarial valuations. The actuarial assumptions used to develop the TPLs are the same assumptions used for the respective funding valuations. The key assumptions used for rolling forward the TPL to December 31, 2017, are as follows:

Inflation	3.00%
Salary Increases	General: 8.30% to 3.90% and Safety: 11.30% to 4.30%, vary by service, including inflation
Investment Rate of Return	7.25%, net of pension plan investment expense, including inflation

Methods and Assumptions Used to Establish Actuarially Determined Contribution (ADC) Rates

Actuarially determined contribution rates for the first six months of calendar year 2017 (or the second half of fiscal year 2016-2017) are calculated based on the December 31, 2015, valuation. Actuarially determined contribution rates for the last six months of calendar year 2017 (or the first half of fiscal year 2017-2018) are calculated based on the December 31, 2016, valuation.

Valuation Date	December 31, 2016	December 31, 2015
Actuarial Cost Method	Entry Age Cost Method	Entry Age Cost Method
Amortization Method	Level percentage of payroll	Level percentage of payroll
Remaining Amortization Period	Prior to January 1, 2012, the total UAAL was amortized on a 30-year decreasing period, with 21 years remaining as of December 31, 2011 (and 16 years remaining as of December 31, 2016). On or after January 1, 2012, any new UAAL resulting from plan amendments are amortized over separate decreasing 15-year periods. Early retirement incentive programs (ERIPs) are amortized over separate decreasing 5-year periods. Assumption and method changes are amortized over separate decreasing 20-year periods. Experience gains/losses are also amortized over separate decreasing 20-year periods.	Prior to January 1, 2012, the total UAAL was amortized on a 30-year decreasing period, with 21 years remaining as of December 31, 2011 (and 17 years remaining as of December 31, 2015). On or after January 1, 2012, any new UAAL resulting from plan amendments are amortized over separate decreasing 15-year periods. Early retirement incentive programs (ERIPs) are amortized over separate decreasing 5-year periods. Assumption and method changes are amortized over separate decreasing 20-year periods. Experience gains/losses are also amortized over separate decreasing 20-year periods.
Asset Valuation Method	The actuarial value of assets is determined by recognizing any difference between the actual and the expected market return over 10 six-month interest crediting periods. The actuarial value of assets is further adjusted, if necessary, to be within 40% of the market value of assets. The valuation value of asset is the actuarial value of assets reduced by the value of the non-valuation reserves.	

Actuarial Assumptions:	December 31, 2016	December 31, 2015
Investment rate of return	7.60%, net of pension plan investment expense, including inflation	7.60%, net of pension plan investment expense, including inflation
Inflation rate	3.25%	3.25%
Real across-the-board salary increases	0.50%	0.50%
Projected salary increases	General: 7.45% to 4.15% and Safety: 10.45% to 4.45%, vary by service, including inflation	General: 7.45% to 4.15% and Safety: 10.45% to 4.45%, vary by service, including inflation
Cost of living adjustments	3.00% of retirement income for General Tiers 1 and 3, and Safety Tier 1. 2.00% of retirement income for General Tiers 2 and 4, and Safety Tiers 2, 2C, 2D, and 4.	3.00% of retirement income for General Tiers 1 and 3, and Safety Tier 1. 2.00% of retirement income for General Tiers 2 and 4, and Safety Tiers 2, 2C, 2D, and 4.
Other assumptions	Same as those used in the December 31, 2016 funding actuarial valuation	Same as those used in the December 31, 2015 funding actuarial valuation

POSTEMPLOYMENT MEDICAL BENEFITS

The actuarial assumptions used for the postemployment medical benefits valuation were consistent with those applied to the pension plan with exception of Health Care Cost Trend Rate assumptions which are specific to the postemployment medical benefits.

The Total OPEB Liabilities as of the measurement dates were calculated by rolling forward the liabilities from prior years' sufficiency valuation. The key assumptions used for rolling forward the Total OPEB Liability to December 31, 2017, are as follows:

Investment Rate of Return	7.25% net of OPEB plan investment expense, including inflation
Inflation	3.00%
Health Care Premium Trend Rates	
Non-Medicare medical plan	Graded from 7.00% to ultimate 4.50% over 10 years
Medicare medical plan	Graded from 6.50% to ultimate 4.50% over 8 years
Dental and vision	4.50%
Medicare Part B reimbursement	4.50%
Other Assumptions	Based on the experience study for the period December 1, 2013 through November 30, 2016

Supplemental Schedules

Administration Expense

For the Year Ended December 31, 2017 (Dollars in Thousands)

Personnel Services		
Staff Wages	$	5,872
Fringe Benefits		3,253
Temporary Services		363
Total Personnel Services		**9,488**
Professional Services		
Computer Services		352
Audit		113
Total Professional Services		**465**
Communications		
Printing		54
Postage		59
Communication		61
Total Communications		**174**
Rental/Utilities		
Office Space		36
Equipment Leasing		22
Total Rental/Utilities		**58**
Other		
Depreciation and Amortization		96
Board Operating Expenses		315
Insurance		877
Miscellaneous		438
Training		296
Maintenance-Equipment		58
Supplies		23
Total Other		**2,103**
Subtotal: Administrative Expense Subject to Statutory Limit		**12,288**
Actuarial Expenses		479
Business Continuity		399
Legal Expenses		1,611
Technology Expenses		998
Subtotal: Administration Expense Excluded from Statutory Limit[1]		**3,487**
TOTAL ADMINISTRATION EXPENSE	**$**	**15,775**

1 Legal expenses, business continuity, and technology include an allocation of administration overhead expenses.

Investment Expenses

For the Year Ended December 31, 2017 (Dollars in Thousands)

Investment Manager Fees[1]	$	51,413
Brokerage Commissions		1,737
Investment Allocated Costs		2,828
Investment Consultants		1,220
Other Investment Expenses		179
Investment Custodians		543
Total Investment Expenses	**$**	**57,920**

1 The Investment Section of this report provides details of Investment Manager Fees by type of investment manager.

Payments to Other Consultants[1]

For the Year Ended December 31, 2017 (Dollars in Thousands)

Actuarial & Audit Services	$	668
Human Resources Consulting		77
Legal Services		244
Other Specialized Services		770
Total Payments to Consultants	**$**	**1,759**

1 These are payments to outside consultants other than investment advisors. See the table above for fees paid to investment professionals.

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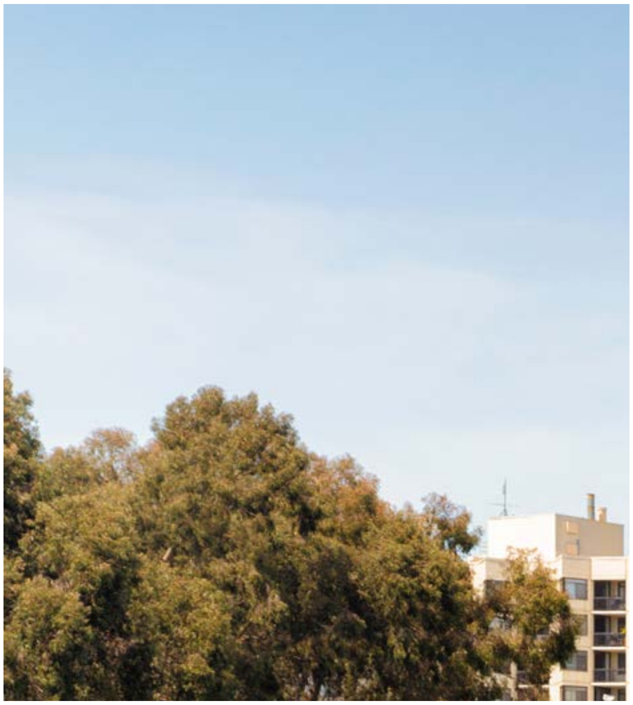
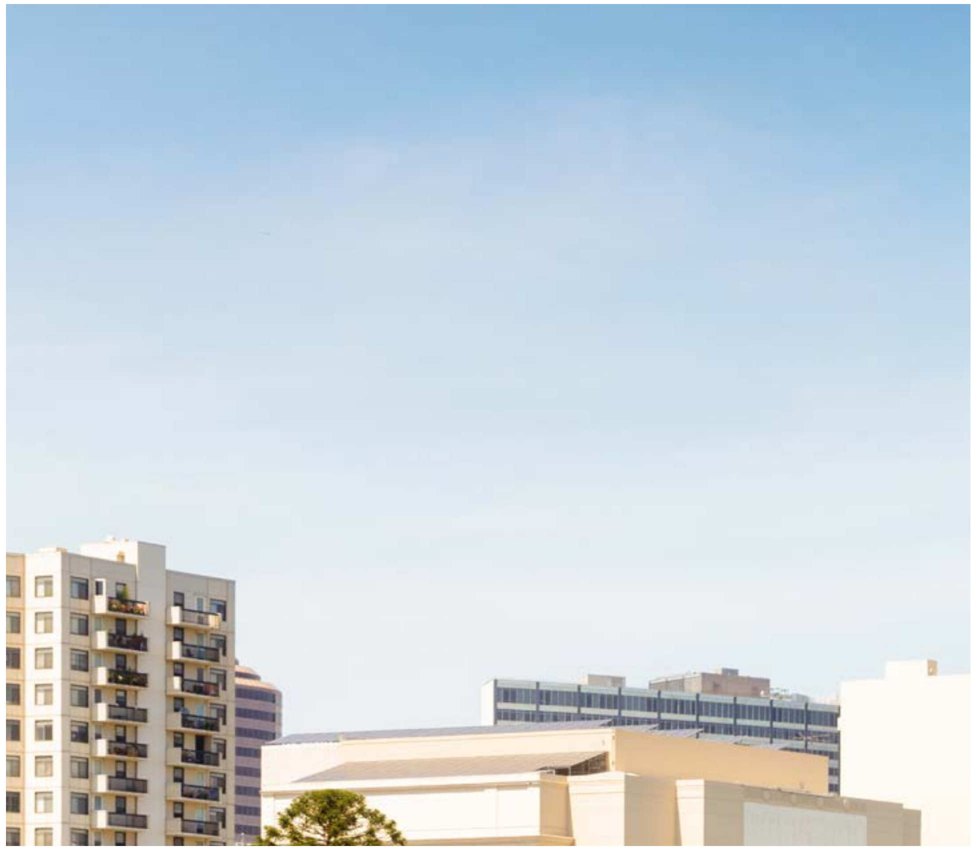
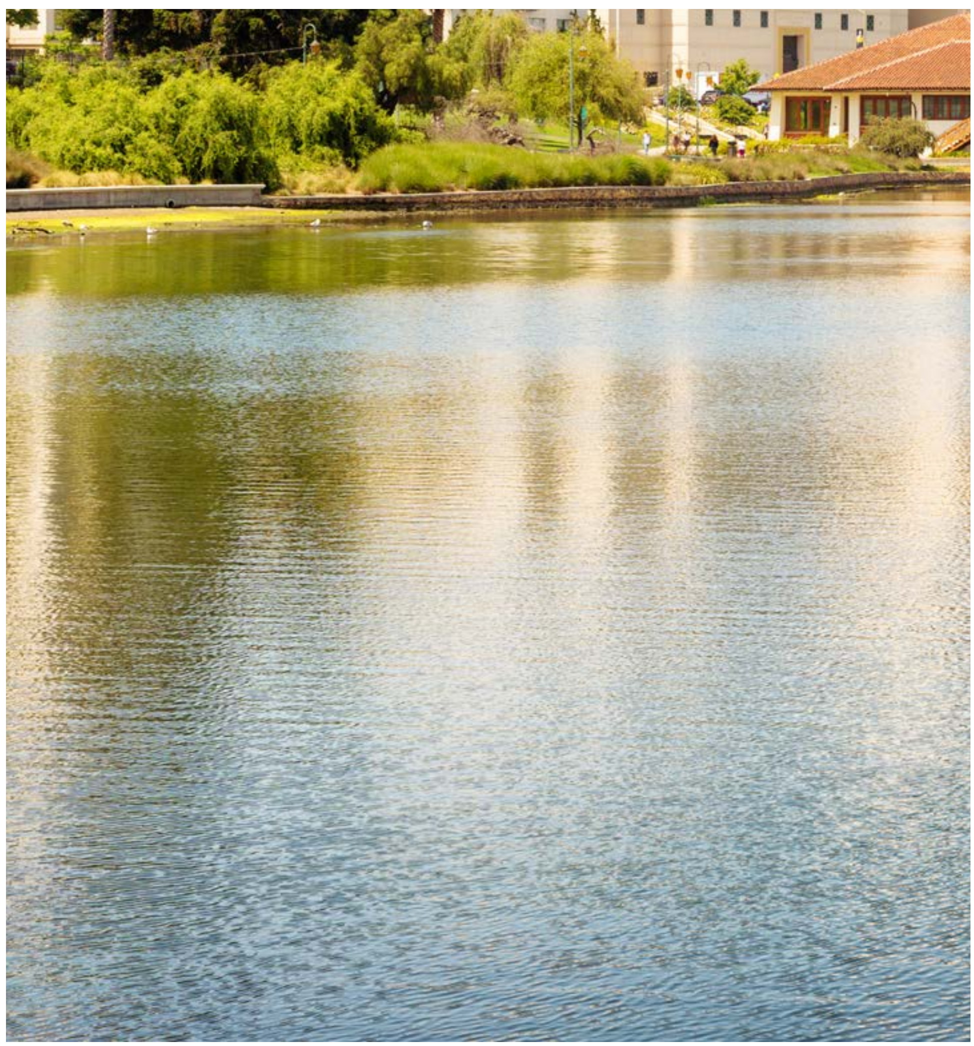




Investments

The fund experienced positive returns in every quarter throughout the year, returning 5.8%, 3.8%, 4.2%, and 4.3% respectively for each quarter. Ultimately the fund ended 2017 with an annual gross return of 19.5%, outperforming the Policy Index which returned 18.6%. The total value of the Fund portfolio increased $1.1 billion.



Chief Investment Officer's Report

PERFORMANCE HIGHLIGHTS OF ACERA'S INVESTMENT FUND (FUND)

In 2017, ACERA's Total Fund achieved a sixth straight year of positive returns. After averaging nearly double digit annual returns for the years 2012 through 2016, ACERA's portfolio had investment returns for the Total Fund of 19.5% in 2017, as the current bull market completed its 9th year.

YEAR ($ Values in Billions)	2017	$ Value	Actual %	Target %
Total Fund Return (as of 12/31/17)[1,2]	19.5%	$ 8.11	100.0%	100.0%
Policy Index	18.6%	-	-	-
Median	16.2%	-	-	-
Domestic Equity	23.3%	$ 2.66	32.8%	28.0%
International Equity	31.5%	$ 2.54	31.3%	26.0%
Fixed Income	8.3%	$ 1.35	16.6%	15.0%
Real Estate	8.6%	$ 0.52	6.4%	8.0%
Private Equity	14.2%	$ 0.45	5.5%	9.0%
Absolute Return	2.6%	$ 0.30	3.7%	9.0%
Real Assets	-0.1%	$ 0.30	3.7%	5.0%
Cash	1.2%	$ -0.01	-0.1%	0.0%
Year-End Total Fund (as of 12/31/17)	-	$ 8.11	-	-
Beginning Total Fund (as of 12/31/16)	-	$ 6.97	-	-
Total Change in Fund Value	-	$ 1.14	-	-

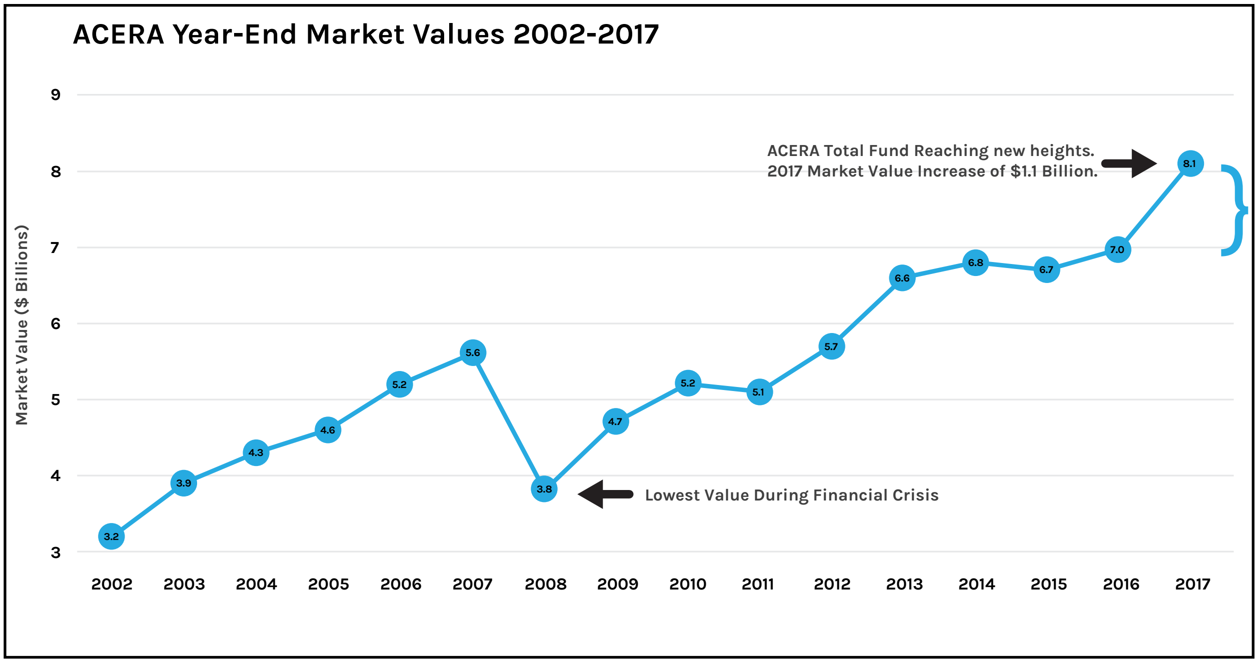
Source: Verus[3] (Gross of Fees)

1 All returns are gross of fees. Total Fund Return (net of fees) for 2017 is 19.2%.

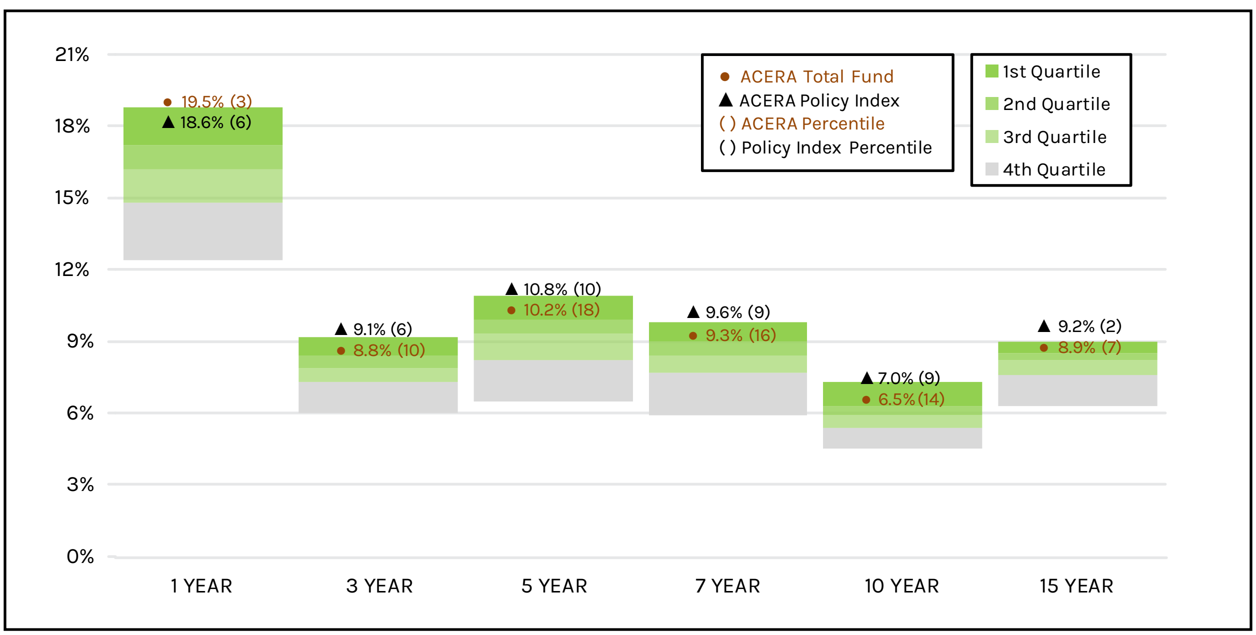
2 For 2017, ACERA made net disbursements of approximately $167.6M to pay supplemental retiree benefits, salaries, and administrative costs. For reference, net disbursements from the Total Fund for 2016, 2015, 2014 and 2013 were $150.5M, $140.0M, $137.3M and $142.4M, respectively.

3 Verus Advisory, Inc ("Verus") is ACERA's General Investment Consultant.

NOTE: Returns for periods greater than one year are annualized. Monthly return calculations are time-weighted, and market value based. Results of all publicly traded investments are presented in a format consistent with the CFAI Global Investment Performance Standards®.



ACERA TOTAL FUND RETURNS VS. TOTAL PUBLIC FUNDS ANNUALIZED RETURNS[1]



1 Total Fund and asset class composites are ranked against the InvestorForce universe. A ranking of 1 is a top percentile ranking and a ranking of 100 is a bottom percentile ranking.

	1 Year		3 Years		5 Years		7 Years		10 Years		15 Years	
	Return %	Rank	Return %	Rank	Return %	Rank	Return %	Rank	Return %	Rank	Return %	Rank
ACERA	19.5%	3	8.8%	10	10.2%	18	9.3%	16	6.5%	14	8.9%	7
Policy Index	18.6%	6	9.1%	6	10.8%	10	9.6%	9	7.0%	9	9.2%	2
Median	16.2%	50	7.9%	50	9.3%	50	8.4%	50	5.9%	50	8.2%	50

Source: Verus (Gross of Fees)

"The Board's primary goals in managing the Fund are:

1. To ensure that sufficient funds are available to pay vested benefits and maintain supplemental benefits;
2. To comply with all applicable fiduciary standards; and
3. To add marginal value that will help reduce the costs of the plan and/or to increase benefits for the beneficiaries[1]."

These are the goals as stated in the ACERA General Investment Guidelines, Policies and Procedures ("General Policy"). ACERA believes that prudent management of risk is a central element of the investment function and that diversification among asset classes will reduce risk and enhance returns of the overall investment portfolio over the long-term. ACERA has strong controls in place to monitor and manage portfolio risks and to ensure compliance with all relevant fiduciary standards. It is important to remember that pension plan investments should be viewed over the long-term and that past performance is not indicative of future results.

PERFORMANCE HIGHLIGHTS FOR 2017

In the first half of 2017, ACERA's Total Fund returned 9.8% which ranked in the 3rd percentile of public funds larger than $1 billion[2]. The fund outperformed the Policy Index and the median fund which returned 9.0% and 7.6%, respectively. Asset classes that outperformed include Domestic Equity at 10.3%, International Equity at 17.0%, Fixed Income at 5.8%, and Real Estate at 4.7%. The outperformance in the first half was helped by strong returns in equities, specifically active large cap domestic equity at 11.5%, and active large cap growth international equity at 20.2%. The first half of the year continued the strong performance from the end of 2016. There was optimism in the markets surrounding potential tax reform from the new administration.

For the second half of 2017, ACERA's Total Fund returned 8.7% gross which ranked in the 2nd percentile of public funds bigger than $1 billion. The Fund slightly underperformed the Policy Index and outperformed the median fund which returned 8.8% and 7.7%, respectively. During the second half of 2017 there were strong returns in U.S. Equity at 11.8%, and International Equity at 12.4%. Total Fixed Income had a 2.4 % return, outperforming the fixed income benchmark at 1.8%, and saw positive returns from both domestic and global fixed income managers.

Throughout 2017, ACERA's Total Fund value steadily increased with rising equity markets. The fund experienced positive returns in every quarter throughout the year, returning 5.8%, 3.8%, 4.2%, and 4.3% respectively for each quarter. Ultimately the fund ended 2017 with an annual return of 19.5%, outperforming the Policy Index which returned 18.6%. The total value of the Fund portfolio increased $1.1 billion.

The Domestic Equity asset class earned a return of 23.3% and represented 32.8% of the overall portfolio at year-end 2017. The International Equity asset class had a return of 31.5%, and represented 31.3% of the Fund at year-end. Private Equity returned 14.2% and had a current market value of 5.5% of the portfolio. Absolute Return had a return of 2.6% in 2017 and represented 3.7% of the overall portfolio in terms of current market value. The Real Estate asset class achieved 8.6% for the year and represented 6.4% of the ACERA portfolio. Fixed Income ended 2017 with a return of 8.3% and Real Assets returned -0.1%. The Fixed Income and Real Assets asset classes

1 ACERA General Guidelines, Policies, and Procedures, amended May 20, 2013, p.4.
2 Compared against InvestorForce Public Defined Benefit > $1 Billion universe. Data provided by Verus.

represented 16.6% and 3.7% of ACERA's total assets, respectively, at year-end.

The Fund outperformed its actuarial assumed rate of 7.60%[1] for the year, and continues to show strong performance over a longer time horizon. ACERA's Total Fund weathered the troubles during the 2008-2009 financial crisis and continues to achieve all-time highs in terms of fund size in 2017. For the trailing three-, five-, and ten-year periods, ACERA's Fund returned 8.8%, 10.2%, and 6.5%, respectively. Including the modest positive performance for the year in 2015, ACERA's fund continues to perform in the top 25th percentile (top quartile) of peer funds over the long-term (a stated goal in ACERA's General Investment Guidelines, Policies and Procedures).

FACTORS AFFECTING ACERA'S PORTFOLIO IN 2017

The Board's Actions

In 2017, ACERA's Board was busy making long-term strategic changes to ACERA's Total Fund, but continued to refine, diversify, and enhance ACERA's portfolio with several decisions designed to meet the portfolio's investment goals over the long-term. Most investment decisions must be approved by the Board, (see Private Equity Investment Policy and Absolute Return Policy Section VIII, C, 4 (Delegation), page 7).

ACERA concluded one request for proposal (RFP) in 2017 and monitored the process of several other RFPs. The Board selected BlackRock Inc. to manage the passive index portfolios for the domestic (Russell 1000) and international equity (MSCI ACWI ex US) asset classes. Other ongoing RFPs in 2017 include a search for a general investment consultant and a search for an emerging markets investment manager. In May of 2017, the Board approved a search for a domestic small cap growth manager.

In September 2017, the Board adopted a recommendation from Staff to create two separate policies from the current PEARLS Policy affording ACERA the opportunity to improve the definition and governance of the two asset classes (i.e. Private Equity Investment Policy and Absolute Return Policy). The PEARLS portfolio was divided into private equity (PE) and absolute return (AR) portfolios with separate governing investment policies (see ACERA's Portfolio – Detail for additional details). In addition, the two asset classes had reached sufficient size and maturity to merit their own policies. Each portfolio will be reported separately going forward and has newly assigned benchmarks that more appropriately track each asset class's performance and risk. Private equity will be compared to the Thomson Reuters C|A Global All Private Equity Index and the new absolute return asset class will be measured against the HFRI Fund of Funds Composite Index.

The Board continued to expand the Total Fund's investment in privately placed funds. Four new commitments to private equity were approved in 2017, totaling $152.75 million and one investment in absolute return was approved for $80 million. Two commitments to real assets were made in 2017 and one investment in real estate, totaling $75 million and $10 million, respectively. ACERA's private equity, absolute return, real assets, and real estate asset classes remain underweight and will continue to be built out in 2018 and beyond.

Other Board actions in 2017 include approvals to revise the domestic and international equity manager structures, amend the mandate for the emerging manager program, and provide authorization to extend ACERA's contract with its custodian bank.

The Board is made up of eleven appointed or elected members, including two alternates. All Board members are members of the Investment Committee. Both the Board and the Committee meet monthly. An experienced group of fiduciaries, they work closely with Staff and consultants to carry out their fiduciary responsibilities. Meeting agendas and minutes can be found on the ACERA website, www.acera.org.

ACERA'S PORTFOLIO - DETAIL

ACERA's portfolio is diversified among seven major asset classes: domestic equities, international equities, fixed income, real estate, private equity, absolute return, and real assets. The purpose of diversification is to reduce risk while maximizing potential long-term return. The portfolio was constructed such that its volatility (defined as a measure of risk, i.e. standard

1 The assumed annual rate of investment returns was lowered to 7.60% from 7.80% in December 2014. In December 2017, The Board lowered its assumed annual rate of investment returns to 7.25%.

deviation) is less than that of a traditional equity-only portfolio. ACERA's Fund is positioned to weather various market conditions and provide steady growth and net return over the long-term.

Asset Class Review - 2017

U.S. Equity	
Asset Class Allocation – Target	28.0%
Asset Class Allocation – Actual	32.8%
Return	23.3%
Benchmark (Russell 3000 Index)	21.1%
Over/(Under) Performance - relative to Benchmark	2.2%
InvestorForce[1] U.S. Equity (Gross) - Median	20.8%

Source: Verus

In 2017, ACERA's U.S. equity investments returned 23.3%, outperforming the assigned benchmark, the Russell 3000 Index, by 2.2%. ACERA's small cap growth portfolio was the strongest performer in 2017, returning 36.9% for the year, and outperforming its assigned benchmark by 12.2%. ACERA's large cap growth portfolio returned 33.1% and outperformed its assigned benchmark by 0.9%. The passive S&P 500 Index portfolio beat its benchmark by 10 basis points, returning 21.9% for 2017 and represented 40.0% of the total U.S. Equities and 13.2% of the Total Fund.

The large cap active equity composite returned 24.8%, compared to its benchmark, the Russell 1000, at 21.7%, accounting for 41.7% of U.S. Equities and 13.7% of the Total Fund's assets at year-end, outperforming its benchmark by 3.1%. The fund's large cap value manager returned 19.0% in 2017, outperforming its benchmark by 3.3%. The small and micro-cap managed accounts returned 23.4%, accounting for 18.2% of U.S. Equities and 6.0% of the Total Fund's assets at year-end, outperformed its benchmark, the Russell 2000, by 8.8%. The small cap value fund returned 14.0%, outperforming its benchmark by 3.7% in 2017. ACERA's all cap manager returned 20.2% in 2017, underperforming its relative benchmark by 0.9%.

The U.S. equity asset class is well-diversified due to its allocation to both large and small cap active management, which complement the large allocation to passive management.

International Equity	
Asset Class Allocation – Target	26.0%
Asset Class Allocation – Actual	31.3%
Return	31.5%
Benchmark (MSCI ACWI IMI – ex U.S. Index)	28.4%
Over/(Under) Performance – relative to Benchmark	3.1%
InvestorForce All DB ex-U.S. Equity (Gross) - Median	28.5%

Source: Verus

ACERA's international equity composite portfolio accounted for 31.3% of the Fund at year-end, returned 31.5%, outperforming its benchmark, the Morgan Stanley Capital International All Country World Index Investable Market Index– ex U.S. ("MSCI ACWI IMI – ex U.S. IMI Gross") by 3.1% in 2017. The Fund's international core/growth fund manager returned 37.9% and was the Fund's best performing international equities manager, outperforming its benchmark the MSCI ACWI ex U.S. Index by 10.1%. Accounting for 3.3% of the Fund, the international equity small cap manager returned 34.9% outperforming its benchmark (MSCI ACWI ex U.S. Small Cap Index) by 2.8%. The Fund's international value manager representing 8.7% of the Total Fund returned 23.5%, underperforming its benchmark the MSCI ACWI ex U.S. Index by 4.3% in 2017. ACERA's quantitative-oriented international equity manager outperformed the same benchmark by 1.0% in 2017, by returning 28.8%.

Fixed Income	
Asset Class Allocation – Target	15.0%
Asset Class Allocation – Actual	16.6%
Return	8.3%
Benchmark (75% BC Agg/15% Citi WGBI-ex U.S./10% BC HY)	4.9%
Over/(Under) Performance – relative to Benchmark	3.4%
InvestorForce Fixed Income (Gross) - Median	5.3%

Source: Verus

ACERA's fixed income portfolio returned 8.3% in 2017, outperforming its blended benchmark (75% Barclays Aggregate Bond Index, 15% Citigroup World Government Bond Index ex-U.S., and 10% Barclays

1 As of 12/31/2017, the InvestorForce Public DB Funds > $1B Gross universe consists of 100 members with a total market value of $1,887.6 Trillion.

Corporate High Yield Index) by 3.4%. ACERA's three active fixed income managers all outperformed their assigned benchmarks, with the best relative performance coming from the Fund's global fixed income manager, which returned 14.2%, outperforming the Citigroup World Global Bond Index by 6.7%. ACERA's U.S. core plus fixed income manager returned 8.9% in 2017, outperforming its benchmark by 1.5%. Lastly, ACERA's U.S. core fixed income manager returned 4.8%, outperforming the benchmark by 1.3%.

Real Estate	
Asset Class Allocation – Target	8.0%
Asset Class Allocation – Actual	6.4%
Return	8.6%
Benchmark (NCREIF ODCE Property Index)	7.6%
Over/(Under) Performance – relative to Benchmark	1.0%
InvestorForce Real Estate (Gross) - Median	7.6%

Source: Verus

The U.S. real estate market continued to perform well in 2017, which translated into respectable performance for ACERA's real estate portfolio investments. ACERA's real estate portfolio returned 8.6% in 2017, outperforming its benchmark, the National Council of Real Estate Investment Fiduciaries Open-End Diversified Core Property Index ("NCREIF ODCE") by 1.0%. ACERA's real estate portfolio return came in above the median return, which was 7.6% for the year.

Private Equity	
Asset Class Allocation – Target	9.0%
Asset Class Allocation – Actual Funded	5.5%
Asset Class Allocation – Actual Commitment *	12.0%
Return	14.2%
Benchmark (Thomson Reuters C|A Global All PE Index)	15.3%
Over/(Under) Performance – relative to Benchmark	-1.1%

Source: Verus, No Private Equity Median

* Estimated

ACERA's Private Equity portfolio returned 14.2% for the year, underperforming its newly adopted benchmark, the Thomson Reuters C|A Global All PE Index, by 1.1%. The new benchmark was proposed to more accurately measure the PE Portfolio by changing the formal benchmark to the Thomson Reuters C|A Global All PE Index, instead of the Russell 3000 Index. The Private Equity portfolio is currently invested across 41 funds and is segregated into three sub-asset classes: buyouts, venture capital, and debt-related/special situations. Private Equity continues to be an important asset class to the Fund, providing strong consistent returns, additional diversification, and cash-flow in the form of distributions. Because of the planned, gradual growth of the program and the return of capital distributions as a more mature program, the Private Equity portfolio continues to be funded toward its target allocation throughout 2018 and beyond. As of December 31, 2017, ACERA's Private Equity portfolio had estimated commitments of $972.2 million, accounting for 12.0% of Total Fund Value, and currently called capital of $447.1 million, accounting for 5.5% of the Total Fund Value at year-end 2017.

Absolute Return	
Asset Class Allocation – Target	9.0%
Asset Class Allocation – Actual Funded	3.7%
Asset Class Allocation – Actual Commitment *	4.4%
Return	2.6%
Benchmark (HFRI Fund of Funds Composite Index)	7.7%
Over/(Under) Performance – relative to Benchmark	-5.1%

Source: Verus, No Absolute Return Median

* Estimated

ACERA's Absolute Return (AR) portfolio, defined as non-traditional investments intended to generate a return stream that has a low correlation to equity markets, returned 2.6% for the year, underperforming its newly assigned benchmark, the HFRI Fund of Funds Composite Index, by 5.1%. Prior to the 4th quarter 2017, the AR portfolio was included in the PEARLS Portfolio and the benchmark was LIBOR + 400bps, which was an uncorrelated benchmark. The new benchmark was proposed to more accurately measure the AR Portfolio. The Absolute Return portfolio is currently invested across seven (7) funds and is segregated into three sub-asset classes: fund of funds, alternative premia strategies, and other/opportunistic investments. Absolute Return is an evolving asset class for ACERA, with the goal of providing superior risk adjusted returns with lower volatility and low correlations to global equity markets. Because of the relatively new nature of the program, the Absolute Return portfolio is below its target allocation and target diversification ranges. ACERA will continue to complete the investment plan throughout 2018. As of December 31, 2017, ACERA's Absolute Return portfolio had estimated commitments of $360 million, accounting for 4.4% of Fund Value, and currently called capital of $301.5 million, accounting for 3.7% of Fund Value at year-end 2017.

Real Assets	
Asset Class Allocation – Target	5.0%
Asset Class Allocation – Actual	3.7%
Return	-0.1%
Benchmark (50% Nat Res/35% Infra/15% BCOM)	18.6%
Over/(Under) Performance – relative to Benchmark	-18.7%

Source: Verus, No Real Assets Median

In April 2011, this portfolio (formerly known as the Real Return Pool with a 5% asset allocation target) was created to produce positive returns with a hedge against periods of unexpected U.S. inflation compared to a benchmark of CPI+300 basis points. In March 2016, the portfolio was repositioned to be named the Real Assets Portfolio with the same asset allocation target of 5%. The goal of this portfolio is to continue to protect against U.S. inflation, but also to invest in return-generating assets with low correlations to equity and fixed income assets. In 2017, the Real Assets Strategies returned -0.1%, underperforming the asset class's new blended benchmark (50% S&P Global Natural Resources Index/35% S&P Global Infrastructure Index[1]/15% Bloomberg Commodity Index). ACERA's actively-managed inflation protection allocation returned 0.5%, and the two commodity funds in the Real Assets portfolio both returned 5.0% respectively for the year. ACERA's investment in one of the energy-related Private Real Assets had a negative return that had an impact on the Total Fund's average return.

GENERAL ECONOMY AND INVESTMENT MARKETS IN 2017

The 2017 economic and market performance highlights are as follows:

2017 was another positive year across all major markets as domestic and international equities, plus fixed income, all produced positive returns for the year. Domestic equity markets finished the year at all-time highs similar to 2016. Markets were led by technology, materials, and consumer discretionary sectors, which were the top three performers in 2017. The price of oil continued to recover in 2017, with the price of West Texas Intermediate crude oil finishing the year at $61 a barrel, representing a 15% increase in price from the beginning of the year. The Federal Reserve raised rates again in 2017, making three 25 basis point rate increases throughout the year. These rate increases follow the Fed's plan of gradually raising rates over time. With equity markets at all-time highs, economic indicators confirmed positive trends for the U.S. economy. Gross Domestic Product (GDP) rose by 2.5% in 2017 signaling continued growth in the U.S economy. The Unemployment rate ended the year at 4.1%, representing multi year lows and a sharp decrease from the heights of the Global Financial Crisis, where the unemployment rate hit 10%. The U.S. economy has gained jobs for 86 consecutive months, the longest streak in history. The Consumer Confidence Index ended the year at 122.1, slightly below the 17-year high reported one month earlier in November, but still at historically high levels.

Outside of the U.S., global economic growth remained strong in 2017, with expectations for global GDP growth being revised upwards. Global stocks rose amid strong corporate earnings growth and improving world economic data.

Equity Markets - Domestic and International

The U.S. equity markets continued the bull market run extended from the end of the Global Financial

1 The S&P Global Infrastructure Index and S&P Global Natural Resources Index ("Indices") are products of S&P Dow Jones Indices LLC and/or its affiliates and has been licensed for use by Alameda County Employees' Retirement Association. Copyright © 2018 S&P Dow Jones Indices LLC, a division of S&P Global, Inc., and/or its affiliates. All rights reserved. Redistribution or reproduction in whole or in part are prohibited without written permission of S&P Dow Jones Indices LLC. For more information on any of S&P Dow Jones Indices LLC's indices please visit www.spdji.com. S&P® is a registered trademark of S&P Global and Dow Jones® is a registered trademark of Dow Jones Trademark Holdings LLC. Neither S&P Dow Jones Indices LLC, Dow Jones Trademark Holdings LLC, their affiliates nor their third party licensors make any representation or warranty, express or implied, as to the ability of any index to accurately represent the asset class or market sector that it purports to represent and neither S&P Dow Jones Indices LLC, Dow Jones Trademark Holdings LLC, their affiliates nor their third party licensors shall have any liability for any errors, omissions, or interruptions of any index or the data included therein.

Crisis and finished the year strong. The Dow Jones industrials gained 25.2%, while the S&P 500 gained 21.8%, followed by the NASDAQ returning 28.2% for the year. The Russell 1000 returned 21.7% and the Russell 3000 increased 21.1%. Markets remained strong, powered by a strengthening economy and optimism surrounding the new tax plan. Growth stocks continued to outperform value stocks and nine out of the eleven sectors were positive in 2017, with Energy (-1.0%) and Telecom (-1.3%) being the only sectors to not achieve positive performance. Technology (38.8%), Materials (23.8%), and Consumer Discretionary (23.0%) were the big winners of 2017, followed by Financials (22.2%), Healthcare (22.1%), Industrials (21.0%), Consumer Staples (13.5%), Utilities (12.1%) and Real Estate (10.9%). A strong U.S. economy helped drive the positive performance in the markets exemplified by Materials and Technology being top performers.

Unhedged international equity markets were also positive in 2017, as many countries also experienced a similar positive trajectory that was occurring in the U.S. The developed markets (as measured by the MSCI AC World Index ex USA) increased by 27.8%, led by Austria, Denmark, and the Netherlands, returning 58.3%, 34.7%, and 32.2%, respectively. Pacific-Asia was led by Hong Kong and Singapore, returning 36.2% and 35.6%. Emerging markets also performed strong in 2017, with the MSCI Emerging Markets Index returning 34.4%.

Fixed Income Markets - Domestic and Global

The U.S. fixed income markets were positive in 2017 continuing the strong performance from 2016. The Federal Reserve continued to raise rates in 2017, by raising its target rate by 25 basis three times throughout the year. This was the third consecutive year the Federal Reserve has raised rates after it ended the QE program in 2014. The U.S. continues its goal in raising short-term rates, while central banks around the globe continue to manage quantitative easing programs actively. For the year, U.S. Treasuries returned 2.3% as a group, while U.S. municipal bonds were strong, returning 5.5% for 2017. Corporate credit also performed strongly in 2017, with investment grade credit returning 6.4%, and High yield corporate credit returning 7.5%, making it the best performing credit sector in the U.S. Asset backed securities were positive in 2017, as U.S. Mortgage Backed Securities returned 2.5% for the year.

Global fixed income markets were also positive in 2017, as the Citi World Global Bond Index returned 1.2%, with Australia, the United Kingdom, and Spain leading the developed countries. Emerging markets fixed income had a strong year as well, performing better than developed countries, returning 9.3% in 2017.

Real Estate Markets

Following years of strong asset appreciation, the pace of growth in the U.S real estate market began to moderate in 2017. High quality assets in primary markets were still achieving strong valuations, but the significant cap rate compressions we had seen in the previous years have stabilized. The NCREIF ODCE Property Index rose 7.6% in 2017, marking the eighth consecutive year of positive quarterly returns since the first quarter of 2010.

The industrial sector remained the strongest performer in the index, returning 13.1% in 2017, followed by apartment and office returning 6.2% and 6.0%, respectively. Retail returned 5.7% for the year, with hotels being the worst performing sector, returning 5.0% in 2017.

Private Markets

The goal of private market investments is to pursue higher returns than those available in the public equity markets with a commensurate increase in risk. Private markets continued to see success fundraising in 2017 backed by strong demand from institutional investors. According to Preqin research, private equity funds raised $453 billion in 2017, eclipsing the $403 billion raised in 2016, and surpassing the previous peak of $414 billion set in 2007. Fund managers were also raising larger funds, as average fund sizes reached $542 million, which is significantly higher than the previous peak of $434 million back in 2007. 2017 was clearly the year of "mega funds", as the largest ever private equity fund was raised for $24.6 billion. The data underscores the extent to which large institutional investors are placing a growing portion of their money into private markets. With the large amount of capital in the market, competition has been fierce for deals, driving up acquisition prices and possibly eroding potential returns.

Absolute Return Markets

The goal of Absolute Return investments is to enhance overall returns by investing in strategies that generate superior returns commensurate with risk taken by using strategies that have a low correlation to the equity markets. Overall, 2017 was a decent year for many absolute return strategies. Long/short equity performed well, as the long bias of the strategy received a tailwind from the bullish equity market (with S&P 500, for example, appreciating by 22%) and both growth and momentum themes did well during the year. Event driven strategies, including merger arbitrage and spin-offs, also performed well as most trades completed successfully and gained. On the other hand, 2017 presented a difficult environment for global macro strategies, which ended the year as the worst performing sub-index within the Credit Suisse Hedge Fund Index. Many currency managers also struggled in 2017 as carry and momentum themes in currency did not do well during the year.

Real Assets Markets

The goal of the Real Assets investments is to provide return and risk above bonds, but below equity, with generally low correlations to both asset categories. 2017 was a record year for fundraising for Real Assets. Real Assets have seen some of the strongest allocation growth of all asset classes in recent years. During 2017, the cash yield on real assets led performance in generative real assets more than capital appreciation. Published surveys of investors indicate that more than 50% intend to increase real assets allocations in 2018.

ECONOMIC OUTLOOK FOR 2018

Global economic growth is projected to continue in 2018, as many forward-looking economic indicators remain positive. The World Bank forecasts global GDP to increase to 3.1 percent in 2018, following a strong 2017. Growth in developed markets is expected to be 2.2 percent as the upturn in investment growth stabilizes, while emerging market growth is projected to increase by 4.5 percent. The global Purchasing Managers' Index (PMI) advanced for most of 2017 and world export volume increased as well. A slightly weaker US dollar continues to strengthen global economies that export goods and services. Productivity, as measured by output per hour worked, is expanding in Germany and Japan, as well as other key developed markets. Asian exports have also seen a solid upturn as corporate profits globally have risen, lifting consumer and business confidence.

Meanwhile, after holding its Fed Funds Rate at close to zero for seven years, the Federal Reserve has raised interest rates the last three years and is likely to raise rates this year. Due to the extended nature of low rates, the US economy (and indeed all developed economies) had become dependent on cheap credit to fuel growth. However, the global economy has started to accelerate, producing higher quality growth from demand rather than being fueled by cheap money. As quality growth takes hold, rates should begin to rise over time. Bond yields are likely headed higher as financial conditions remain favorable.

Inflation pressures are beginning to appear in the U.S. and other developed economies, however actual inflation has been contained. The Fed's inflation target of 2.0% has not been met for more than two consecutive quarters. Future interest rate hikes by the Fed may cause inflation to accelerate in 2018 and beyond.

A new domestic tax plan enacted in 2017 is expected to stimulate growth in the U.S. going into 2018. The new law provides substantial tax cuts, reducing U.S. marginal effective taxes for corporations and many individual consumers. Corporate profits are expected to rise behind the new tax plan, giving hope for another positive year in the equity markets. If stocks remain positive in 2018, it would make 10 straight years of annual gains since the global financial crisis, and if stocks rally for another 18 months, it would mark the longest period in U.S. history. Given the ong period of success of equity markets, there are concerns regarding a potential end to this era of growth and a possible recession. However the U.S. economy has historically not experienced a recession when corporate profits are rising.

GENERAL INFORMATION

External investment management firms manage ACERA's assets. Professional investment consultants, along with ACERA's investment staff, closely monitor the activities of these managers and assist the Board with the implementation of investment policies and long-term strategies. ACERA's goal remains to achieve a level of performance that will rank the Fund in the upper quartile of comparable pension funds on a risk-adjusted basis. ACERA also seeks to be as fully funded as possible so that its benefit costs do not become a burden upon future generations of members and taxpayers.

Summary of ACERA's General Investment Guidelines, Policies and Procedures (General Policy)

The Board, having sole and exclusive authority and fiduciary responsibility for the investment and administration of the Fund, has adopted the General Policy for the management of ACERA's investments. The General Policy and other related policies are subject to the Board's review to ascertain that the goals, guidelines, and expectations set forth in the policies are consistent with the Board's expectations. The Board reserves the right to amend, supplement, or rescind the General Policy at any time. The General Policy establishes investment program goals and policies, asset allocation guidelines, performance objectives, investment management policies, and risk controls. It also defines the principal duties of the Board, staff, investment managers, master custodian, and consultants.

ACERA's primary investment objective is to undertake prudent risk, as necessary, to maximize the return on the portfolio and to minimize the cost of meeting the obligations of the Fund. The strategic asset allocation guidelines are an integral part of the overall investment policy. The allocation guidelines are designed to provide an optimal mix of asset categories with return expectations that reflect expected risk. The end result is a well-diversified portfolio that helps protect the Fund from declines that a particular asset class may experience in a given period. Both traditional assets (cash, domestic equities and fixed income, and real estate) and non-traditional assets (international equities, global fixed income, private equity and alternatives, and real assets) are included in the mix.

ACERA periodically updates its asset allocation targets, which are incorporated into the General Policy by the Board. The current targets, adopted in August 2015, were implemented in the second half of 2016.

SUMMARY OF ACERA'S OTHER INVESTMENT - RELATED POLICIES

Private Equity Policy

The ACERA Private Equity Policy governs all ACERA investments in the Private Equity asset class.

The purpose of this PE Policy is to 1) set forth the private equity policies and guidelines which are deemed to be appropriate and prudent; 2) establish criteria against which private equity opportunities are to be measured; and 3) serve as a review document to guide the ongoing oversight of ACERA's Private Equity Portfolio ("PE Portfolio") on a consistent basis. The Board believes the Fund's overall returns can be enhanced, on a risk-adjusted basis, by investing a portion of its assets in Private Equity. The strategic objective of such investments is to generate returns superior to those available in the public equity market to compensate the Fund for the long-term and illiquid commitments associated with Private Equity investments. The over-all PE Portfolio performance shall be benchmarked against the Thomson Reuters C|A Benchmark.

Absolute Return Policy

The ACERA Absolute Return Policy governs all ACERA investments in the Absolute Return asset class.
The purpose of this AR Policy is to 1) set forth the Absolute Return policies and guidelines which are deemed to be appropriate and prudent; 2) establish criteria against which Absolute Return investment opportunities are to be measured; and 3) serve as a review document to guide the ongoing oversight of ACERA's Absolute Return Portfolio ("AR Portfolio") on a consistent basis. The strategic objective of such investments is to: 1) generate superior returns commensurate with risk taken using strategies that have a low correlation to the equity markets; 2) enhance ACERA's long-term, risk-adjusted return and provide

additional diversification to ACERA's overall investment Fund; and, 3) generate total AR Portfolio returns at or above the HFRI Fund of Funds Composite Index, (net of all fees and expenses).

Real Estate Investment Guidelines, Policies, and Procedures (Real Estate Policy)

ACERA has determined that, over the long-term, inclusion of equity real estate investments should provide the following benefits:

- Generate a stable, predictable income stream to assist in providing cash flow needs
- Provide growth through appreciation
- Lower total portfolio risk due to low correlation with other portfolio asset classes
- Serve as a hedge against unanticipated inflation
- Provide an opportunity to enhance portfolio return through higher total return investments

To achieve the above benefits, ACERA's Real Estate Investment Guidelines, Policies, and Procedures, most recently updated in January 2016, establishes the specific objectives, policies and procedures involved in the implementation and oversight of ACERA's real estate program. The objectives define the specific risk tolerance and return expectations for the program. The policies provide specifications for acceptable investment styles and management of the various risks associated with the asset class. The procedures provide guidelines for the implementation and oversight of said policies.

The implementation of the real estate program is also subject to ACERA's General Policy as established by the ACERA Board.

Emerging Investment Manager Policy

The Emerging Investment Manager Policy governs the Emerging Manager Program, the strategic objective of which is to add incremental value to the Fund through the hiring of the most talented Emerging Investment Managers (EMs) to manage ACERA's assets. The primary goals of the EM Program are as follows: 1) to identify and gain early access to the most talented investment managers in their early business stages; 2) to generate superior Fund return performance through the EM Program; 3) to identify superior EMs and/or investment opportunities in California and Alameda County that are equal to or superior to comparable available investments; and 4) to further diversify the Fund's overall investment program so as to enhance the risk-adjusted returns of the Fund. The EM Policy was amended in January 2013.

Directed Brokerage Policy

The Directed Brokerage Policy governs the Directed Brokerage (DB) Program, the strategic objective of which is to recapture a portion of trade commissions paid to brokers. The primary goals of the DB Program are to: 1) recapture 50% or more of commissions paid on a specific percentage of trades sent to correspondent brokers on a timely basis; 2) identify a target percentage range of trades that may be subject to recapture to allow Investment Managers to have access to the research they need; 3) seek "Best Execution" through third-party administration oversight and outside consultant monitoring; and 4) encourage local broker and/or emerging broker participation through the use of an open correspondent network program. The Directed Brokerage Policy was updated in November 2014 to reflect minor changes in participating investment managers and the list of correspondent brokers.

Real Assets Policy

Real Assets investments are expected to produce attractive positive returns while protecting against U.S. inflation and trending inflation, especially during periods of unexpected U.S. inflation. The strategy is designed to consist of assets that exhibit positive correlation to inflation and will be implemented using a diverse set of exposures to inflation sensitive instruments, hedges intended to reduce various risk exposures, and active strategies intended to provide additional sources of absolute returns by under- and over-weighting the strategic risk target of the various inflation sensitive instruments and securities. In addition, investments may be made in private limited partnerships in sectors including, but not limited to, energy, mining, infrastructure, timberland, and farmland. The benchmark for the Real Assets asset class is measured against a blended benchmark consisting of the following: 50% S&P Global Natural Resources Index, 35% S&P Global Infrastructure Index, and 15% Bloomberg Commodity Index. All Real Assets investments/strategies are Alternative Investments.

Proxy Voting Guidelines and Procedures (Proxy Guidelines)

In recognition of its duty to manage retirement plan assets in the best interest of plan participants, the Board has established the Proxy Guidelines. They are intended to assist in the faithful discharge of the Board's duty to vote proxies on behalf of the plan participants. The Board incorporated the ISS Proxy Voting Guidelines into the Proxy Guidelines in 2005.

The Proxy Guidelines consist of preferences regarding specific, recurring proxy-voting issues followed by a general statement of voting policies. ACERA will, at all times, strive to cast proxy votes in accordance with the Proxy Guidelines towards advancing the overall good of the plan participants.

ACERA's Proxy Voting Guidelines and Procedures were revised in 2016 to reflect current proxy voting issues by aligning with the ISS Benchmark Proxy Voting Policy.

SPECIFIC INVESTMENT RESULTS BY ASSET CLASSIFICATION

In summary, ACERA's Total Fund gained 19.5% and finished 2017 with a market value of $8.11 billion.

- ACERA's U.S. equity composite ($2.7 billion) returned 23.3%, in 2017 outperforming its benchmark (Russell 3000 Index) by 2.2% and outperforming the median equity manager, by 2.5%.
- ACERA's international equity composite ($2.5 billion) returned 31.5%, outperforming its benchmark (MSCI ACWI ex-U.S. IMI) by 3.1% and outperformed the median of international equity managers by 3.0%.
- ACERA's total fixed income composite ($1.3 billion) returned 8.3% in 2017, which outperformed both its blended benchmark (75% Barclays Aggregate/15% Citigroup WGBI ex-U.S./10% Barclays High Yield) by 3.4%, and the Fixed Income median by 3.0%.
- ACERA's real estate composite ($0.5 billion) returned 8.6%, outperforming its benchmark (NCREIF ODCE) by 1.0% and beating the Real Estate median by the same amount.
- The private equity composite ($0.4 billion) returned 14.2%, underperforming its benchmark (Thomson Reuters C|A Global All PE) by 1.1%.
- ACERA's absolute return composite ($0.3 billion) returned 2.6%, underperforming the assigned benchmark (HFRI Fund of Funds Composite Index) by 5.1%.
- ACERA's real assets composite ($0.3 billion) earned -0.1% for the year, underperforming its blended benchmark (50% S&P Global Natural Resources Index/35% S&P Global Infrastructure Index/15% Bloomberg Commodity Index) by 18.7%.

As of December 31, 2017, ACERA's Fund was over-weighted in total equities, with 64.1% in total equities versus the target of 54.0%[1]. Domestic equities were over-weighted at 32.8% versus the target of 28.0%. International equities were 31.3% versus the target of 26.0%. Total fixed income was over-weighted at 16.6% versus the target of 15.0%. Real estate was below its 8.0% target at 6.4%. Private Equity was under-weight at 5.5% versus the target of 9.0%. Absolute Return was below its 9.0% target at 3.7%. At the close of 2017, the Real Assets portfolio represented 3.7% of the Fund, which is underweight with respect to the target of 5.0%. (Please refer to page 85 for two Pie Charts of Asset Allocation.)

Respectfully Submitted,

Betty Tse, CPA, CGMA, MBA
Chief Investment Officer, ACERA
March 31, 2018

1 It should be noted that the traditional equity and fixed income asset classes will be over-weighted until the Private Equity, Absolute Return, and Real Assets portfolios are fully funded.

Investment Consultant's Report

Verus

Memorandum

To: Alameda County Employees' Retirement Association

From: Verus

Date: February 28, 2018

RE: 2017 Review and Outlook

Executive Summary

In 2017, the Fund benefited from positive returns across all asset classes with the exception of a flat return from the real assets portfolio. Global Equity markets continued to rally with the MSCI ACWI gaining 24% for the year. Fixed income indices also gained ground in 2017 with the Bloomberg Barclays US Aggregate up 3.5%. Growth outperformed value during the calendar year by over 15% in U.S. Large Cap which was a reversal from 2016. Risk assets broadly appreciated.

2018 will be focused on the final implementation of ACERA's asset allocation plan adopted in 2015. As always, we emphasize taking a long-term strategic approach to allocating capital and evaluating portfolio risks. In recognition of the different risk/return objectives of PEARLS, in 2017 PEARLS was broken out into two separate portfolios (Private Equity and Absolute Return) each with their own policies. Both continue to be funded at an incremental pace as part of ACERA's target asset allocation. 2018 will complete outstanding manager searches, the first of which is for the standalone Emerging Markets Equity mandate. Full implementation of ACERA's asset allocation plan will reduce equity risk and increase inflation protection in the Fund.

In this memo, we will review the investment environment in 2017 for the major asset classes, detail 2017's initiatives and outline the work plan for 2018.

U.S. Equity

U.S. equities markets enjoyed a historically strong year in 2017, driven by positive economic fundamentals, earnings growth momentum, and the possibility of fiscal stimulus from the new administration. The S&P 500 returned 21.8% during the calendar year. In addition to posting high returns, equity markets were extremely calm, possibly influenced by low volatility in economic data. The annualized standard deviation of the S&P 500 was 6.6%, well below historical averages. An upward trending market with low volatility led to the significant outperformance of momentum strategies.

An acceleration in economic growth, which began prior to the presidential election in late 2016, and continued low inflation provided a positive environment for equities. The rest of the world also experienced a pickup in economic growth that started at the beginning of the year. This synchronized pickup in global growth created strong external demand for multinational U.S. companies, which helped lead to an improvement in corporate earnings growth. According to FactSet, the S&P 500 registered double-digit year-over-year earnings growth in all four quarters this year – larger companies with more exposure to international markets had the highest relative earnings growth.

At the end of the summer, increased tensions on the North Korean peninsula helped cause a short period of elevated volatility for the first time in the year. The political jawboning calmed down, however, and investors turned their

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attention to the potential of Congress passing tax reform by year end. While many were skeptical that any legislation would be passed in 2017, investors’ views seemed to change towards the beginning of November. During the negotiations in Congress, the market began pricing in potential tax cuts with increasing likelihood. Equities rallied to close the year, led by companies and sectors that stood to benefit the most from proposed tax cuts.

International Equity

High earnings growth, as well as a weaker U.S. dollar, helped propel international equity markets to outperform domestic markets. Within international equities, emerging markets were especially strong. The MSCI EAFE and MSCI EM Indexes returned 25.0% and 37.3%, respectively. An improvement in economic growth and low inflation were important factors that drove returns. Emerging market equities bounced back after several years of lackluster performance, driven by Asia and Latin America. Fears over a stronger U.S. dollar and higher interest rates following the U.S. election soon faded. Growth stabilized in China and several markets including Brazil and Russia emerged from deep recessions. Developed central banks, including the ECB and BOJ, continued to provide significant stimulus that finally showed signs of flowing through to the economy. Investors in the Eurozone avoided any potential political disruptions to the European Union for the time being after Marine Le Pen was defeated in the French election in April. Elsewhere in Europe, U.K. markets underperformed slightly amid uncertainty surrounding Brexit negotiations, although the economy held up better than some had initially feared.

Fixed Income

After raising interest rates only once in the previous year, the Fed took a more aggressive stance on monetary tightening in 2017 with three rate hikes. Officials pointed towards improving economic growth and a tight labor market as reasons to justify tighter monetary policy, although inflation remained below the 2% target. The Fed also announced the long-anticipated plan to unwind its $4 trillion balance sheet, which began in the fourth quarter. The unwind started slowly with $6 billion in Treasuries and $4 billion in MBS coming off the balance sheet each month, but the pace will step up commensurately ($12 billion of Treasuries and $8 billion of MBS in Q1 2018) each quarter until a total of $50 billion in securities are not reinvested every month. Despite the step up in monetary tightening leading to higher short-term interest rates, long-term rates were mostly unchanged over the course of the year and the yield curve flattened. Due to the stability on the long end of the curve, Treasury performance was mainly driven by carry – the BBgBarc U.S. Treasury Index returned 2.3%. Other developed central banks remained well behind the Fed in the monetary policy cycle. Both the ECB and BOJ made no changes to negative deposit rates and continued to purchase large quantities of assets in the open market. Mainly for this reason, sovereign developed rates stayed at historic low levels.

U.S. credit markets outperformed Treasuries as credit spreads tightened further during the year. The BBgBarc Corporate High Yield and BBgBarc Corporate Investment Grade Indexes returned 7.5% and 6.2%, respectively. Following the spike in energy related defaults in 2016, default rates fell back to very low levels, consistent with the economic and earnings growth environment. Within the high yield market, the riskiest (CCC rated) borrowers outperformed.

Outlook

Improving economic conditions around the globe should continue to support risk assets moving forward, albeit with greater volatility than in 2017. In the U.S., corporate tax cuts and fiscal stimulus may provide a modest boost to the economy in the short-term. Tax savings and repatriation of foreign profits have given companies even more cash to buyback equities, pay down debt, and increase investment. If history is any indication, the majority of tax savings are likely to be used to return capital to shareholders. Other components of the tax bill, such as immediate expensing of short-term assets, could lead to more corporate investment than during periods following past tax cuts. The current environment is not without risks, however, as economies move later into the cycle with elevated asset valuations. A further tightening of labor markets and the emergence of inflationary pressures are potential headwinds to economic growth at this stage of the cycle. The ability of central banks to successfully navigate monetary policy tightening without moving too quickly will play a crucial role in how assets perform over the next few years. The potential for interest rates to rise faster than anticipated is a concern since the market is pricing in only moderate monetary tightening, especially in international developed markets.

Investment Guidelines, Policies, and Practices

In 2017, ACERA continued to fund the Private Equity and Absolute Return strategies. As described above, PEARLS was broken out into two separate asset classes (Private Equity and Absolute Return) to reflect their different risk/return objectives, and separate policies for Absolute Return and Private Equity were developed. The Board's strategic investment objectives for each are listed below.

Absolute Return –

The Board believes the Fund's overall returns can be enhanced, on a risk-adjusted basis, by investing a portion of its assets in Absolute Return strategies. The strategic objective of such investments is to: 1) generate superior returns commensurate with risk taken using strategies that have a low correlation to the equity markets; 2) enhance ACERA's long-term, risk-adjusted return and provide additional diversification to ACERA's overall investment Fund; and, 3) generate total Absolute Return portfolio returns at or above the HFRI Fund of Funds Composite Index (net of all fees and expenses).

Private Equity –

The Board recognizes that when ACERA invests in new Private Equity investments, investment results may be difficult to measure during the first several years of the investments, and possibly longer. However, the Private Equity policy establishes performance expectations, ongoing monitoring and reporting duties for each investment and for the Private Equity portfolio as a whole.

The Board believes the Fund's overall returns can be enhanced by investing a portion of its assets in Private Equity. The strategic objective of such investments is to generate returns superior to those available in the public equity market to compensate the Fund for the long term and illiquid commitments associated with Private Equity investments. The overall Private Equity portfolio performance is now benchmarked against the Thomson Reuters C|A Benchmark.

Several other initiatives to strengthen plan policy and reiterate ACERA's strategic course were completed during the year, including the following:

- A review of capital markets expectations as relates to the plan
- Manager Structure reviews across asset classes with a resulting increase in passive exposure in U.S. large cap equity
- Completion of an U.S. and non-U.S. equity passive search, ACERA's largest search to date
- A review of the Emerging Investment Manager Structure
- A restructuring of the Absolute Return portfolio with additional commitments
- The continued build out of Private Equity and, to a lesser extent, Real Assets

Investment Objectives

In 2017, the total fund achieved a 19.5% gross return, beating the policy index return of 18.6%. ACERA ranked in the top 3% of its peers (InvestorForce Public DB >$1B). The portfolio's near equal weighting in international equities relative to domestic equities benefited the plan in 2017. The MSCI ACWI ex US was up 28% while the Russell 3000 was up 21%. Given valuations within both emerging markets and much of the developed international markets versus the US, we continue to think this positioning will be a tailwind longer-term.

The total fund's 3-year return was 8.8% and ranked in the top decile of its peers, but was slightly shy of the Policy return of 9.1%. Over longer annualized time periods (5-, 7- and 10-years), ACERA has returned in the top quartile versus its peers. 5- and 7- year returns have exceeded the Association's assumed return of 7.25% with total fund returns of 10.2% and 9.3%, respectively.

During the year, the Association once again met its goals of complying with applicable fiduciary standards, and of continuously enhancing its investment portfolio. Most importantly, the Association ensured the availability of sufficient funds to pay vested benefits and maintain supplemental benefits for its participants.

Asset Allocation

	PERCENTAGE TARGET*	12/31/17 ACTUAL
US EQUITY	28%	32.8%
NON-US EQUITY	26%	31.3%
FIXED INCOME	15%	16.6%
REAL ESTATE	8%	6.4%
PRIVATE EQUITY	9%	5.5%
ABSOLUTE RETURN	9%	3.7%
REAL ASSETS	5%	3.7%
CASH	0%	-0.1%

* ACERA's asset allocation target was adopted by the Board on 8/20/2015. An increased allocation to Private Equity and Absolute Return, is being funded from equities over a multi-year period.

Investment Results (Gross of Fees)*

	ANNUALIZED		
	2017	THREE YEARS	FIVE YEARS
DOMESTIC EQUITY			
Total Domestic Equity	23.3%	11.0%	15.5%
Median	20.8%	11.0%	15.3%
Benchmark: Russell 3000	21.1%	11.1%	15.6%
INTERNATIONAL EQUITY			
Total International Equity	31.5%	9.8%	8.9%
Median	28.5%	8.9%	7.9%
Benchmark: MSCI ACWI ex US IMI	28.4%	8.9%	7.7%
FIXED INCOME			
Total Fixed Income	8.3%	4.0%	3.9%
Median	5.3%	3.3%	2.8%
Benchmark: Hybrid Index	4.9%	2.6%	2.1%

	ANNUALIZED		
	2017	THREE YEARS	FIVE YEARS
REAL ESTATE			
Total Real Estate	8.6%	10.9%	11.8%
Benchmark: NCREIF ODCE	7.6%	10.4%	11.5%
PRIVATE EQUITY			
Total Private Equity	14.2%	14.0%	15.8%
Benchmark: Thomson Reuters Global All PE 1 QTR Lag	15.3%	10.2%	12.4%
ABSOLUTE RETURN			
Total Absolute Return	2.6%	2.9%	5.1%
Benchmark: HFRI Fund of Funds Composite	7.7%	2.6%	4.0%
REAL ASSETS			
Total Real Assets	-0.1%	-3.6%	-6.9%
Benchmark: 50% S&P Global Natural Resources/ 35% S&P Global Infrastructure/15% Bloomberg Commodity	18.6%	10.3%	8.0%
TOTAL FUND			
ACERA Total Fund	19.5%	8.8%	10.2%
Median	16.2%	7.9%	9.3%
Benchmark: Policy Index	18.6%	9.1%	10.8%

NOTE: Returns for periods greater than one year are annualized. Monthly return calculations are net time-weighted, and market value based. Results of all publicly traded investments are presented in a format consistent with the CFAI Global Investment Performance Standards®.

The Association has had very strong returns in 2017 and has exceeded its actuarial expected return over most annualized periods measured as of year end. The Fund continues to build out its alternatives portfolios (Private Equity, Absolute Return and Real Assets) to further diversify its holdings. Verus believes that ACERA's near term initiatives that combine return enhancement, equity risk reduction and inflation protection are prudent and will continue to benefit the Association and its participants and beneficiaries.

Margaret Jadallah

Margaret Jadallah

Managing Director
Verus Investments

__Past performance is no guarantee of future results__. This document is provided for informational purposes only and is directed to institutional clients and eligible institutional counterparties only and is not intended for retail investors. Nothing herein constitutes investment, legal, accounting or tax investment vehicle or any trading strategy. This document may include or imply estimates, outlooks, projections and other "forward-looking statements." No assurance can be given that future results described or implied by any forward looking information will be achieved. Investing entails risks, including possible loss of principal. Verus Advisory Inc. and Verus Investors, LLC ("Verus") file a single form ADV under the United States Investment Advisors Act of 1940, as amended.

Verus

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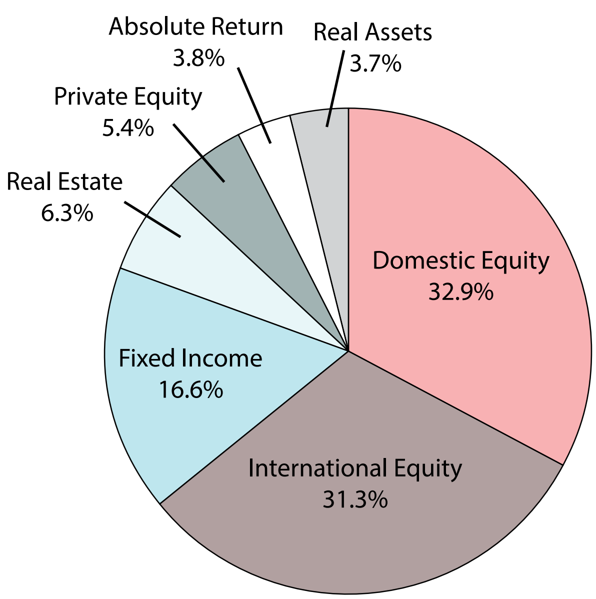
Asset Allocation

As of December 31, 2017

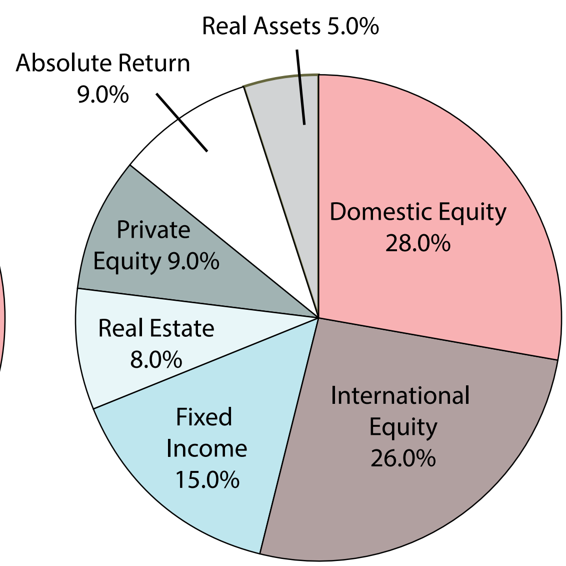
Investment Asset Class	Actual Asset Allocation[1]	Target Asset Allocation	Actual Allocation Over/-Under Target Allocation
Domestic Equity	32.9%	28.0%	4.9%
International Equity	31.3%	26.0%	5.3%
Fixed Income	16.6%	15.0%	1.6%
Real Estate	6.3%	8.0%	-1.7%
Private Equity	5.4%	9.0%	-3.6%
Absolute Return	3.8%	9.0%	-5.2%
Real Assets	3.7%	5.0%	-1.3%
Cash	0.0%	0.0%	0.0%
Total	**100.0%**	**100.0%**	**0%**

1 Based on total investment assets under management including receivable and payable balances as reported on the Statement of Fiduciay Net Position.

Actual Asset Allocation



Target Asset Allocation



Investment Professionals

For the Year Ended December 31, 2017

INVESTMENT MANAGERS

Domestic Equities

- Bivium Capital Partners, LLC
- Kennedy Capital Management, Inc.
- Mellon Capital Management Corporation
- Next Century Growth Investors, LLC
- Pzena Investment Management, LLC
- TCW Asset Management Company

International Equities

- AQR Capital Management, LLC
- Capital Group Institutional Investment Services
- Franklin Templeton Institutional
- Mondrian Investment Partners Ltd.

Fixed Income

- Baird Advisors
- Brandywine Global Investment Management, LLC
- Loomis, Sayles & Company, L.P.

REAL ESTATE (SEPARATE & COMMINGLED FUNDS)

- AEW Capital Management
- Artemis Real Estate Partners
- CIM Group
- Clarion LIT
- Heitman Capital Management
- Jamestown Premier Property
- J.P. Morgan Asset Management
- MetLife Investment Management
- Prudential Real Estate Investors
- RREEF America, LLC
- UBS Realty Investors LLC

PRIVATE EQUITY AND ALTERNATIVES

- ABRY Partners, LLC
- Angeles Equity Partners
- Angelo, Gordon & Co.
- Avista Capital Partners
- Catalyst Fund Limited Partnerships
- Centerbridge Partners, L.P.
- Cerberus Capital Management, L.P.
- Dyall Investors
- General Catalyst Partners
- Great Hill Partners
- Insight Equity
- JLL Partners
- Khosla Ventures
- KPS Capital Pertners, L.P.
- Lighthouse Strategic Alpha
- Lindsay Goldberg
- New Enterprise Association
- Oak Hill Advisors, L.P.
- Partners Group
- P/E Investments
- Peak Rock Capital
- Permal Group Inc.
- Sycamore Partners
- Third Rock Ventures
- Warburg Pincus, LLC

REAL ASSETS

- Gresham Investment Management, LLC
- AQR Capital Management, LLC
- Sheridan Production Partners
- Warburg Pincus Energy, LLC
- CIM Group
- Quantum Energy Partners

INVESTMENT CONSULTANTS

- Capital Institutional Services - (Third-Party Directed Brokerage Administrator)
- Doug McCalla dba Optimized Portfolio Rebalancing
- Zeno Consulting Group - (Trading Cost & Directed Brokerage)
- Institutional Shareholder Services - (Proxy Voting)
- Verus Advisory, Inc. - (General Investment and Private Equity and Alternatives)
- Callan Associates Inc – (Real Estate Investment)
- Cortex Applied Research, Inc. (RFP Consultant)

CUSTODIAL AND SECURITIES LENDING BANK

- State Street Bank and Trust Company

Investment Summary

As of December 31, 2017 (Dollars in Thousands)

Investment Asset Class	Fair Value	Percentage of Total Fair Value
Short-Term Investments	$ 210,168	2.59%
Domestic Securities	1,547,412	19.09%
International Securities	1,915,468	23.63%
Domestic & Int'l Equity Commingled Funds	1,642,701	20.26%
Fixed Income Securities	1,231,352	15.19%
Real Estate - Separate Properties	66,538	0.82%
Real Estate - Commingled Funds	445,602	5.50%
Private Equity	438,023	5.40%
Absolute Return	308,092	3.80%
Real Assets	301,579	3.72%
Total Investments at Fair Value	**$ 8,106,935**	**100.00%**

This schedule excludes Investment receivable and payable balances as of December 31, 2017.

Brokerage Commissions

For the Year Ended December 31, 2017

Brokerage Firm	Rank	Commissions (in Thousands)	Shares/Par Value Traded (in Thousands)	Commission Per Share
Capital Institutional SVCS Inc.	1	$ 134	3,819	$ 0.035
Liquidnet Inc.	2	122	8,814	0.014
Citigroup Global Markets Limited	3	87	6,677	0.013
Morgan Stanley Co Incorporated	4	84	21,500	0.004
Merrill Lynch & Co., Inc.	5	70	19,425	0.004
Credit Suisse Securities LLC	6	64	5,343	0.012
Sanford C. Bernstein & Co.	7	62	5,940	0.010
UBS Securities LLC	8	61	14,739	0.004
Instinet LLC	9	59	12,069	0.005
J.P. Morgan Securities Inc.	10	55	5,724	0.010
Virtu Americas LLC	11	52	2,275	0.023
Deutsche Bank Securities Inc.	12	45	9,905	0.005
Goldman Sachs & Co.	13	39	15,713	0.002
KCG Americas LLC	14	35	6,995	0.005
Barclays Capital Inc.	15	35	372	0.094
Keefe Bruyette & Woods Inc.	16	34	905	0.038
Stephens Inc.	17	32	813	0.039
Weeden & Co.	18	32	1,738	0.018
Jefferies & Company Inc.	19	29	2,060	0.014
Macquarie Bank Limited	20	26	3,141	0.008
Top 20 Firms by Commission Dollars		**1,157**	**147,967**	**0.008**
All Other Brokerage Firms		580	32,392	0.018
Total Brokerage Commissions		**1,737**	**180,359**	**0.010**
Brokerage Commission Recapture		(126)	-	-
Net Brokerage Commission		**$ 1,611**	**180,359**	**$ 0.009**

Investment Manager Fees

For the Year Ended December 31, 2017 (Dollars in Thousands)

Investment Asset Class	2017	
Domestic Equity	$	5,826
International Equity		14,171
Fixed Income		2,426
Real Estate		5,409
Private Equity		17,389
Absolute Return		3,758
Real Assets		2,434
Total Investment Manager Fees	**$**	**51,413**

Investment Assets Under Management (Fair Value)

As of December 31, 2017 (Dollars in Thousands)

Investment Asset Class	2017	
Domestic Equity	$	2,662,184
International Equity		2,537,925
Fixed Income		1,346,843
Real Estate		512,140
Private Equity		438,023
Absolute Return		308,092
Real Assets		301,579
Cash		(9,929)
Total Investment Assets Under Management	**$**	**8,096,857**

This schedule includes investment receivable and payable balances as of December 31, 2017.

Largest Stock Holdings[1]

As of December 31, 2017 (Dollars in Thousands)

Rank	Shares	Issuer	Fair Value	Percentage of Holdings
1	33,448	ALPHABET INC CLASS C	$ 35,000	1.011%
2	5,382,116	ENEL SPA	33,154	0.957%
3	181,222	FACEBOOK INC A	31,978	0.923%
4	268,590	VISA INC CLASS A SHARES	30,625	0.884%
5	23,232	AMAZON.COM INC	27,169	0.785%
6	249,348	SALESFORCE.COM INC	25,491	0.736%
7	2,079,457	VALE SA SP ADR	25,432	0.734%
8	3,229,565	IBERDROLA SA	25,052	0.723%
9	172,046	AMERICAN TOWER CORP	24,546	0.709%
10	131,200	ADOBE SYSTEMS INC	22,991	0.664%
Total of Largest Stock Holdings			**281,438**	**8.13%**
Total Stock Holdings			**$ 3,462,880**	**100.00%**

1 The Holdings Schedules pertain to holdings of individual securities; they do not reflect ACERA's investments in commingled funds. A complete list of portfolio holdings is available upon request.

Largest Bond Holdings[1]

As of December 31, 2017 (Dollars in Thousands)

Rank	Shares	Issuer	Maturity Date	Interest Rate	Fair Value	Percentage of Holdings
1	40,150,000	US TREASURY NTS	3/31/2022	1.750%	$ 39,491	3.622%
2	34,900,000	US TREASURY NTS	3/31/2022	1.875%	34,506	3.165%
3	31,000,000	US TREASURY BDS	5/15/2043	2.875%	31,875	2.924%
4	23,650,000	US TREASURY NTS	5/15/2024	2.500%	23,917	2.194%
5	20,875,000	US TREASURY BDS	2/15/2039	3.500%	23,842	2.187%
6	14,335,000	UK TSY 1.25 2018	7/22/2018	1.250%	19,491	1.788%
7	12,925,000	US TREASURY NTS	11/15/2026	2.000%	12,508	1.147%
8	11,270,000	AUSTRALIAN GOVERNMENT	10/21/2019	2.750%	8,933	0.819%
9	159,600,000	MEXICAN BONOS	11/13/2042	7.750%	8,108	0.744%
10	131,840,000	MEXICAN BONOS	11/18/2038	8.500%	7,224	0.663%
Total of Largest Bond Holdings					**209,895**	**19.25%**
Total Bond Holdings					**$ 1,090,246**	**100.00%**

1 The Holdings Schedules pertain to holdings of individual securities; they do not reflect ACERA's investments in commingled funds. A complete list of portfolio holdings is available upon request.

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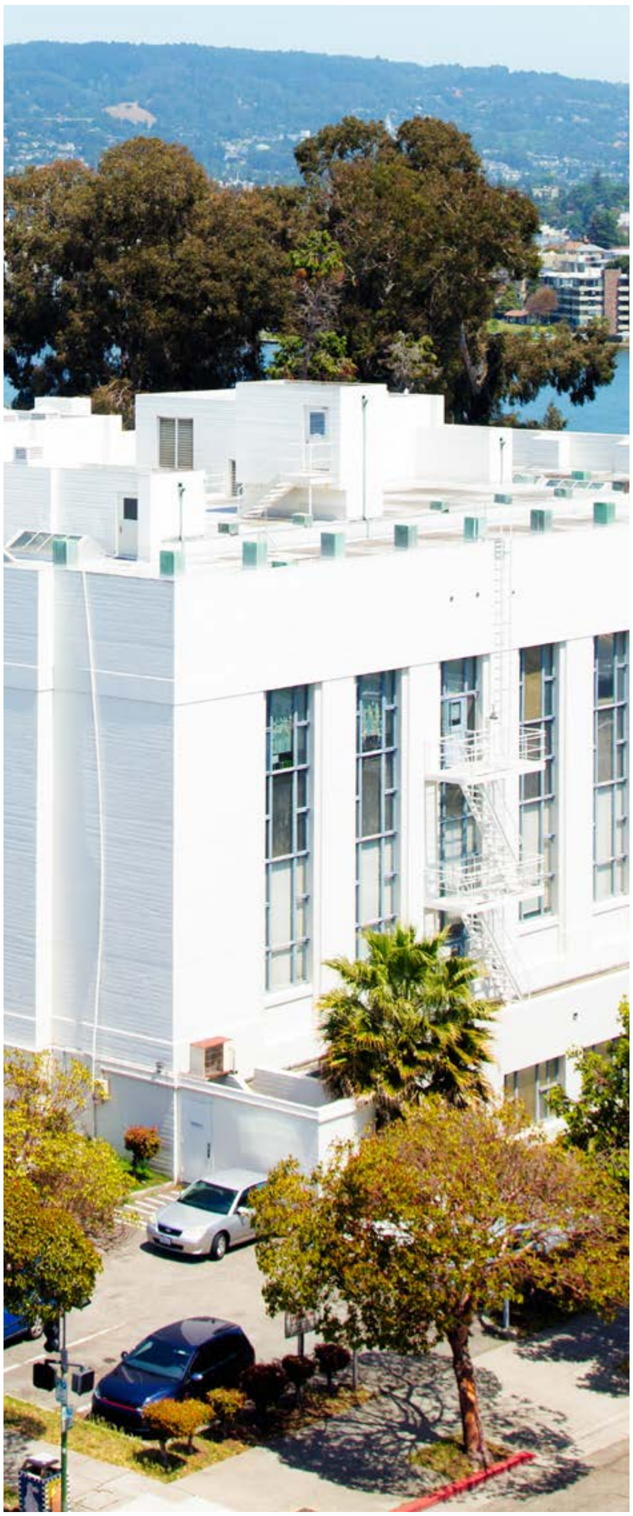
Actuarial



The ratio of the Pension Plan's valuation value of assets to actuarial accrued liabilities (funded percentage) as of December 31, 2016 increased to 78.1% compared to 77.3% as of December 31, 2015.

Actuary's Certification Letter—Pension Plan

Segal Consulting

100 Montgomery Street Suite 500 San Francisco, CA 94104-4308
T 415.263.8200 www.segalco.com

June 18, 2018

Board of Retirement
Alameda County Employees' Retirement Association
475 14th Street, Suite 1000
Oakland, California 94612-1900

Re: Alameda County Employees' Retirement Association
December 31, 2016 Actuarial Valuation of the Statutory Retirement Plan Benefits for Funding Purposes

Dear Members of the Board:

Segal Consulting (Segal) prepared the December 31, 2016 actuarial valuation of the statutory Retirement Plan benefits of the Alameda County Employees' Retirement Association (ACERA) for funding purposes. We certify that the valuation was performed in accordance with generally accepted actuarial principles and practices and ACERA's funding policy that was last reviewed with the Board in 2012. In particular, it is our understanding that the assumptions and methods used for funding purposes meet the parameters set by Actuarial Standards of Practice (ASOPs). (A discussion of the assumptions and methods used in the separate December 31, 2017 actuarial valuation for financial reporting purposes under Governmental Accounting Standards Board (GASB) Statement No. 67 is presented at the end of this letter.)

December 31, 2016 Actuarial Valuation for Funding Purposes

Actuarial valuations are performed on an annual basis with the last valuation completed as of December 31, 2016. The actuarial calculations presented in the valuation report have been made on a basis consistent with our understanding of the historical funding methods used in determination of the liability for statutory retirement benefits.

The December 31, 2016 actuarial valuation is based on the plan of benefits verified by ACERA and on participant and financial data provided by ACERA. Segal conducted an examination of all participant data for reasonableness and we concluded that it was reasonable and consistent with the prior year's data. Summaries of the employee data used in performing the actuarial valuations over the past several years are provided in our valuation report.

We did not audit the Association's financial statements. For actuarial valuation purposes, Retirement Plan assets are valued at actuarial value. Under this method, the assets used to determine employer contribution rates take into account market value by recognizing the differences between the total return at market value and the expected investment return over 10 six-month periods.

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Alameda County Employees' Retirement Association
June 18, 2018
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One funding objective of the Plan is to establish rates, which, over time, will remain level as a percentage of payroll unless Plan benefit provisions are changed. Actuarial funding is based on the Entry Age Cost Method. Under this method, the employer contribution rate provides for current cost (normal cost) plus a level percentage of payroll to amortize any unfunded actuarial accrued liability (UAAL). The UAAL is amortized as a level percentage of payroll using a layered approach. Prior to January 1, 2012, the total UAAL was amortized on a 30-year decreasing period, with 21 years remaining as of December 31, 2011 (and 16 years remaining as of December 31, 2016). On or after January 1, 2012, any new UAAL resulting from plan amendments are amortized over separate decreasing 15-year periods; early retirement incentive programs (ERIPs) are amortized over separate decreasing 5-year periods; assumption and method changes are amortized over separate decreasing 20-year periods; and experience gains/losses are also amortized over separate decreasing 20-year periods. The progress being made towards meeting the funding objective through December 31, 2016 is illustrated in the Schedule of Funding Progress.

Segal prepared all of the supporting schedules in the actuarial section of the Association's Comprehensive Annual Financial Report (CAFR) based on the results of the December 31, 2016 actuarial valuation for funding purposes. A listing of the supporting schedules related to the statutory retirement plan benefits that Segal prepared for inclusion in the actuarial and statistical sections of the Association's CAFR is provided below. ACERA's staff prepared the remaining trend data schedules in the statistical section.

<u>Actuarial Section (for Funding Purposes)</u>

Exhibit I	Schedule of Active Member Valuation Data[(1)];
Exhibit II	Retirees and Beneficiaries Added To and Removed From Retiree Payroll[(1)];
Exhibit III	Solvency Test;
Exhibit IV	Actuarial Analysis of Financial Experience;
Exhibit V	Schedule of Funding Progress;

<u>Statistical Section (for Funding Purposes)</u>

Exhibit VI	Schedule of Average Benefit Payments for Retirees and Beneficiaries;
Exhibit VII	Schedule of Participating Employers and Active Members Statistics[(1)];
Exhibit VIII	Schedule of Benefit Expenses by Type[(1)];
Exhibit IX	Schedule of Retiree Members by Type of Benefit and Option Selected; and
Exhibit X	Employer Contribution Rates.

(1) *As permitted by the Actuarial Standard of Practice No. 4 (Measuring Pension Obligations), Segal has utilized participant data provided by ACERA as of November 30, 2016 with age and years of service adjusted to December 31, 2016 in calculating the liabilities for the December 31, 2016 valuation.*

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Actuarial Assumptions for Funding Valuation

The non-economic valuation assumptions included in the Actuarial Section were adopted by the Retirement Board based on our recommendations following the November 30, 2013 Experience Analysis. The Board adopted a 7.60% investment return assumption for the December 31, 2016 valuation. The other changes in economic assumptions were documented in our November 30, 2013 Actuarial Experience Study report.

As we disclosed in our December 31, 2016 funding valuation report, the 7.60% investment return assumption that the Board approved for determining the liabilities for funding purposes and used for establishing the employer and employee contribution rates was developed without considering the impact of any future 50/50 excess earnings allocation. This is based on our understanding that Article 5.5 of the Statute, which authorizes the allocation of 50% of excess earnings to the SRBR, does not allow for the use of a different investment return for funding than is used for interest crediting. This would appear in effect to preclude the prefunding of the SRBR through the use of an assumption lower than the market earnings assumption of 7.60%.

As required by the Actuarial Standard of Practice (ASOP) No. 4 ("Measuring Pension Obligations and Determining Pension Plan Costs or Contributions"), we performed a stochastic model in 2013 to estimate the impact of the 50% allocation of future excess earnings to the SRBR. The results of our model indicated that the 50/50 allocation of future excess earnings would have about the same impact as an "outflow" (i.e., assets not available to fund the benefits included in the funding valuation) that would average approximately 0.75% of assets over time. **For informational purposes only**, when we applied the results of our stochastic model to this valuation, we estimated that such an annual outflow would increase the Actuarial Accrued Liability (AAL) measured in this valuation using a 7.60% investment return assumption from $8.24 billion to $8.97 billion (for a difference of $0.73 billion) and would increase the employer's contribution rate by about 5% - 6% of payroll.

It is our opinion that the assumptions used in the December 31, 2016 valuation produce results, which, in aggregate, reflect the future experience of the statutory Retirement Plan. An experience analysis is performed every three years, and the actuarial assumptions adopted by the Board resulting from the experience analysis performed as of November 30, 2013 first became effective in the valuation as of December 31, 2014, and continued in effect for the valuation as of December 31, 2016. The next experience analysis was performed as of November 30, 2016, and the assumptions adopted from that study would first become effective in the valuation as of December 31, 2017.

Valuation Results

In the December 31, 2016 valuation, the ratio of the valuation assets to actuarial accrued liabilities (funded percentage) increased from 77.3% to 78.1%. The aggregate employer rate has increased from 24.90% of payroll to 25.00% of payroll, while the aggregate employees' rate increased from 8.77% of payroll to 8.80% of payroll. The increase in the funded percentage was primarily the result of contributions made toward the unfunded liability, offset somewhat by

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investment and other losses. The increase in the aggregate employer contribution rate was primarily the result of lower than expected return on investments (after smoothing), offset somewhat by lower than expected salary increases for active members, while the increase in the aggregate employees' rate was due to a change in membership demographics.

Under the actuarial value of assets method, the total unrecognized net investment loss as of December 31, 2016 is $343.9 million. This net investment loss will be recognized in the determination of the actuarial value of assets for funding purposes in the next few years, and will offset any investment gains that may occur after December 31, 2016. This implies that if the Association earns the assumed net rate of investment return of 7.60% per year on a market value basis, it will result in investment losses on the actuarial value of assets in the next few years. So, if the actual market return is equal to the assumed 7.60% rate and all other actuarial assumptions are met, the contribution requirements would increase in each of the next few years.

The net deferred loss of $343.9 million represents 4.9% of the market value of assets as of December 31, 2016. Unless offset by future investment gains or other favorable experience, the recognition of the $343.9 million market losses is expected to have a significant impact on the Association's future funded percentage and contribution rate requirements. The recognition of the deferred loss (after netting out the Contingency Reserve, if available) will result in crediting the valuation reserves with interest at a rate of less than 7.60%. Under a simplified approach, which takes into account the size of the valuation and the SRBR reserves, this potential impact may be illustrated as follows:

- If a proportion of the net deferred loss that is commensurate with the size of the valuation reserves were recognized immediately in the valuation value of assets, the funded percentage would decrease from 78.1% to 74.5%.
- If a proportion of the net deferred loss that is commensurate with the size of the valuation reserves were recognized immediately in the valuation value of assets, the aggregate employer rate would increase from 25.00% to about 27.2% of payroll.

To the best of our knowledge, the December 31, 2016 funding valuation report is complete and accurate and in our opinion presents the Plan's current funding information.

December 31, 2017 GASB Statement 67 Actuarial Valuation for Financial Reporting Purposes

Segal also prepared the December 31, 2017 GASB Statement 67 actuarial valuation for financial reporting purposes. The valuation was performed in order to comply with GASB Statement 67 and we certify that the assumptions and methods used for financial reporting purposes meet the parameters set by ASOPs and our understanding of generally accepted accounting principles (GAAP) applicable in the United States of America as promulgated by GASB. The GASB rules only define pension liability and expense for financial reporting purposes, and do not apply to contribution amounts for pension funding purposes.

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When measuring pension liability, GASB uses the same actuarial cost method (Entry Age) and the same type of discount rate (expected return on assets) as ACERA uses for funding. This means that the Total Pension Liability (TPL) measure for financial reporting is determined on generally the same basis as ACERA's Actuarial Accrued Liability (AAL) measure for funding. The Net Pension Liability (NPL) is equal to the difference between the TPL and the Plan's Fiduciary Net Position. The Plan's Fiduciary Net Position is equal to the market value of assets and therefore, the NPL measure is very similar to an Unfunded Actuarial Accrued Liability (UAAL) calculated on a market value basis.[1]

As stated in the funding valuation subsection herein entitled *Actuarial Assumptions for Funding Valuation*, the investment return assumption used in the funding valuation excludes the impact of any future 50/50 excess earnings allocation to the SRBR. For the December 31, 2016 funding valuation, the investment return assumption adopted by the Board was 7.60%, as noted earlier. For the December 31, 2017 funding valuation, the Board adopted a 7.25% investment return assumption, and that assumption was also used for the December 31, 2017 GAS 67 valuation discussed in this section. In order to estimate the impact of the 50% allocation of future excess earnings to the SRBR for the December 31, 2017 valuation, we updated our stochastic model and the results of our model indicated that the 50% allocation would have about the same impact as an "outflow" (i.e., assets not available to fund the benefits included in the determination of the TPL) that would average approximately 0.60% of assets over time. For financial reporting purposes, we have taken the 0.60% "outflow" and incorporated that into our GASB crossover test[2] (Exhibit 5 in the GASB Statement 67 valuation report), along with the additional future employer contributions that would result from those future allocations of excess earnings to the SRBR under ACERA's funding policy.

The NPLs measured as of December 31, 2017 and 2016 were determined by rolling forward the TPLs for the funded benefits as of December 31, 2016 (that was calculated under the new actuarial assumptions effective for the December 31, 2017 valuation) and December 31, 2015, respectively. Similar to last year, we have included in the TPL as of December 31, 2017 the non-OPEB unlimited Actuarial Accrued Liability of $149.3 million, calculated by rolling forward the total unlimited non-OPEB AAL as of December 31, 2016 that was calculated under the new actuarial assumptions effective for the December 31, 2017 valuation (including the 7.25% investment return assumption).

We have also continued the practice of adjusting the Plan's Fiduciary Net Position as of December 31, 2017 to include an additional $43.9 million, calculated by (a) taking the $37.5 million set aside by the Retirement Board in the SRBR reserve to pay non-vested Supplemental COLA and retired member death benefits[3] as of December 31, 2017 and (b) adding $6.4 million to reflect the proportion of one-half of the net deferred investment gain[4] that is commensurate with the size of those reserves. The $105.4 million difference between the $149.3 million added to the TPL and the $43.9 million added to the Plan's Fiduciary Net Position as of December 31, 2017 represents the Net Pension Liability attributable to non-OPEB SRBR benefits.

1 *It should be noted that in determining the Plan's Fiduciary Net Position as of December 31, 2017, we have included one-half of the current deferred market gains after restoring the Contingency Reserve to 1% of total assets (i.e., $150.2 million out of a net $300.4 million in deferred market gains as of December 31, 2017, after restoring the Contingency Reserve) that would be available for determining future interest crediting rates for the Pension Plan.*

2 *The purpose of the GASB crossover test is to determine if the full expected return (or 7.25% in this case) can be used as the discount rate to determine the TPL and the NPL. That is, if there is no crossover point where the projected benefit payments would exceed the plan's fiduciary net position, then the full expected return assumption can be used. As detailed in the GASB Statement 67 valuation report, ACERA does pass the crossover test, which means that the full 7.25% investment rate of return assumption can be used as the discount rate to determine the TPL and the resulting NPL.*

3 *We have excluded the liability and the assets associated with the OPEB component of the SRBR reserve account because it is our understanding that those amounts are reportable under GASB 74/75.*

4 *After restoring the Contingency Reserve to 1% of total assets.*

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Note number 5 to the Basic Financial Statements and the Required Supplementary Information included in the Financial Section of the CAFR were prepared by the Association based on the results of the GASB Statement No. 67 actuarial valuation as of December 31, 2017 prepared by Segal.

The undersigned are members of the American Academy of Actuaries and meet the qualification requirements to render the actuarial opinion contained herein.

Sincerely,

Andy Yeung, ASA, EA, MAAA, FCA
Vice President and Actuary

Eva Yum, FSA, EA, MAAA
Associate Actuary

DNA/hy
Enclosures

Actuary's Certification Letter—SRBR

Segal Consulting

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June 18, 2018

Board of Retirement
Alameda County Employees' Retirement Association
475 14th Street, Suite 1000
Oakland, California 94612-1900

Re: Alameda County Employees' Retirement Association
December 31, 2016 Actuarial Valuation of the Discretionary SRBR Benefits for Sufficiency Purposes

Dear Members of the Board:

Segal Consulting (Segal) prepared the December 31, 2016 actuarial valuation of the discretionary benefits provided through the Supplemental Retiree Benefits Reserve (SRBR) of the Alameda County Employees' Retirement Association (ACERA) for sufficiency purposes. We certify that the valuation was performed in accordance with generally accepted actuarial principles and practices. In particular, it is our understanding that the assumptions and methods used for sufficiency purposes with regard to the Other Postemployment Benefits (OPEB) provided by the SRBR meet the parameters of the Governmental Accounting Standards Board (GASB) Statement No. 43.[1] It is also our understanding that the assumptions and methods used for sufficiency purposes with regard to the non-OPEB benefits provided by the SRBR meet the parameters set by Actuarial Standards of Practice (ASOPs).

A discussion of the assumptions and methods used in the separate December 31, 2017 actuarial valuation for financial reporting purposes under GASB Statement No. 74 for the discretionary OPEB benefits provided by the SRBR is presented at the end of this letter. In addition, we have also provided a discussion of the assumptions and methods used for financial reporting purposes under GASB Statement No. 67 for the statutory Retirement Plan benefits and the discretionary non-OPEB benefits provided by the SRBR at the end of our actuarial certification letter pertaining to the statutory Retirement Plan benefits dated June 18, 2018. The pertinent GASB Statement No. 67 information from that letter pertaining to the non-OPEB benefits provided by the SRBR is also provided herein.

December 31, 2016 Actuarial Valuation for Sufficiency Purposes

Actuarial valuations are performed on an annual basis with the last valuation completed on December 31, 2016. The actuarial calculations presented in the valuation report have been made on a basis consistent with our understanding

1 *It should be noted that GASB Statement No. 74 has replaced Statement No. 43 effective with the valuation as of December 31, 2017 for financial reporting purposes as noted further below in this letter.*

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of GASB Statement No. 43 for the determination of the liability for discretionary OPEB related SRBR benefits, and on a basis consistent with our understanding of generally accepted actuarial principles and practices for the determination of the liability for discretionary non-OPEB related SRBR benefits.

The December 31, 2016 actuarial valuation is based on the plan of benefits verified by ACERA and on participant, premium, and financial data provided by ACERA. Segal conducted an examination of all participant data for reasonableness and we concluded that it was reasonable and consistent with the prior year's data. A summary of the average OPEB for new retired members, by years of service, is enclosed as Exhibit IV.

We did not audit the Association's financial statements. For the actuarial valuation for sufficiency purposes, SRBR assets are valued at actuarial value. Under this method, the assets used to determine the liabilities of the SRBR and the number of years the SRBR can continue to pay its current level of benefits (i.e., the sufficiency) take into account market value by recognizing the differences between the total return at market value and the expected investment return over 10 six-month periods. It should be noted that under the actuarial value of assets (AVA) method, the total unrecognized net investment loss as of December 31, 2016 is $343.9 million. This net investment loss will be recognized in the determination of the actuarial value of assets in the next few years (i.e., deferred), and it will offset any investment gains that may occur after December 31, 2016.

The discretionary benefits provided through the SRBR include OPEB and non-OPEB. Benefits classified under OPEB (and reportable under GASB Statement No. 43) include postretirement medical, dental, and vision benefits. Benefits classified under non-OPEB (and reportable under GASB Statement No. 67) include supplemental COLAs and burial allowance.

For valuation purposes, the total cost of providing future postemployment benefits is projected, using actuarial assumptions that are common for both the statutory retirement and the discretionary SRBR benefits (e.g., turnover, mortality, disability, retirement, etc.), and assumptions that are unique to the discretionary SRBR OPEB (e.g., health care trend assumptions, etc.). The liabilities associated with providing non-OPEB SRBR benefits are disclosed together with the statutory Retirement Plan benefits under GASB 67. The liabilities associated with providing OPEB SRBR benefits are disclosed under GASB 43. Under that statement, the future cost to provide OPEB SRBR is discounted to determine an actuarial present value of projected benefits (APB). The actuarial accrued liability (AAL) is the portion of the present value of the total projected benefits allocated to years of employment prior to the measurement date. The unfunded actuarial accrued liability (UAAL) is the difference between the AAL and actuarial value of assets in the Plan allocated to these benefits.

As part of the transition to the new financial reporting requirements under GASB Statement No. 74, the Association's auditor recommended that the liabilities of the OPEB no longer be limited by the current SRBR assets, and that recommendation was approved by the Board. Accordingly, the summary of OPEB results in the December 31, 2016 actuarial valuation for sufficiency purposes shows the unlimited liabilities.

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Based on the AVA available as of December 31, 2016, the SRBR would only be able to pay benefits until 2039 for OPEB and until 2034 for non-OPEB. As we indicated in our certification letter for the statutory Retirement Plan benefits, the Association had deferred investment losses of $343.9 million that were not yet recognized in determining the combined actuarial value of assets for the Retirement Plan and the SRBR Plan as of December 31, 2016. The deferred losses of $343.9 million represent 4.9% of the market value of assets as of December 31, 2016, and will decrease the rate of return on the actuarial value of assets over the next few years, which may shorten the sufficiency period of the SRBR.

Our calculations were based upon the benefits provided under the terms of the substantive plan in effect at the time of the December 31, 2016 valuation.

Segal prepared all of the supporting schedules in the actuarial section of the Association's Comprehensive Annual Financial Report (CAFR) based on the results of the December 31, 2016 actuarial valuation for sufficiency purposes. A listing of the supporting schedules related to the discretionary SRBR benefits that Segal prepared for inclusion in the actuarial and statistical sections of the Association's CAFR is provided below. ACERA's staff prepared the remaining trend data schedules in the statistical section.

<u>Actuarial Section (for Sufficiency Purposes)</u>

Exhibit I Schedule of Active Member Valuation Data[(1)];
Exhibit II Retirees Added To and Removed From OPEB Payroll[(1)];
Exhibit III Solvency Test – OPEB and non-OPEB; and

<u>Statistical Section (for Sufficiency Purposes)</u>

Exhibit IV Schedule of Average Other Postemployment Benefits (OPEB).

(1) *As permitted by the Actuarial Standard of Practice No. 4 (Measuring Pension Obligations), Segal has utilized participant data provided by ACERA as of November 30, 2016 with age and years of service adjusted to December 31, 2016 in calculating the liabilities for the December 31, 2016 valuation.*

The non-economic valuation assumptions included in the Actuarial Section were adopted by the Retirement Board based on our recommendations following the November 30, 2013 Experience Analysis and specific health care related assumptions recommended for the December 31, 2016 SRBR valuation. The Board adopted a 7.60% investment return assumption for the December 31, 2016 valuation. The other changes in economic assumptions were documented in our November 30, 2013 Actuarial Experience Study report. Note that the investment return assumption for sufficiency purposes was developed without taking into consideration the impact of the 50/50 excess earnings allocation between the statutory retirement and SRBR asset pools.

The actuarial assumptions common to both the statutory retirement and discretionary SRBR benefits are provided in the Actuarial Section. Additional assumptions specific to the OPEB are included as an attachment to this letter (Schedule of Actuarial Assumptions). It is our opinion that the assumptions used in the December 31, 2016 valuation produce results, which, in aggregate, reflect the future experience of the SRBR. An experience analysis is performed

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every three years, and the actuarial assumptions adopted by the Board resulting from the experience analysis performed as of November 30, 2013 first became effective in the valuation as of December 31, 2014, and continued in effect for this valuation as of December 31, 2016. The next experience analysis was performed as of November 30, 2016, and the assumptions adopted from that study would first become effective in the valuation as of December 31, 2017.

To the best of our knowledge, the December 31, 2016 valuation report is complete and accurate and in our opinion presents the Plan's current sufficiency information.

December 31, 2017 GASB Statement No. 74 Actuarial Valuation for Financial Reporting Purposes for the Discretionary OPEB Benefits Provided by the SRBR

Segal also prepared the December 31, 2017 GASB Statement No. 74 actuarial valuation for financial reporting purposes, which included information for the OPEB benefits payable from the SRBR. The valuation was performed in order to comply with GASB Statement No. 74 and we certify that the assumptions and methods used for financial reporting purposes meet the parameters set by ASOPs and our understanding of generally accepted accounting principles applicable in the United States of America as promulgated by the GASB. For the December 31, 2016 SRBR sufficiency valuation, the investment return assumption adopted by the Board was 7.60%, as noted earlier. For the December 31, 2017 GASB Statement No. 74 (OPEB) and Statement No. 67 (non-OPEB) financial reporting valuations, the Board adopted a 7.25% investment return assumption, based on recommendations in the November 30, 2016 experience analysis referenced above. In addition, the results of the December 31, 2017 GASB Statement No. 74 valuation reflect the health care trend assumptions recommended for the impending sufficiency study for the SRBR as of December 31, 2017, which were provided in our letter dated March 27, 2018.

The Total OPEB Liability (TOL) measured as of December 31, 2017 of $1,029.4 million has been determined by rolling forward the liability results used in determining the sufficiency of the SRBR to provide medical and dental subsidy benefits as of December 31, 2016, adjusted to reflect the changes in actuarial assumptions referenced above.[1] The Plan's Fiduciary Net Position as of December 31, 2017 of $1,001.9 million was calculated by (a) taking the $858.0 million set aside by the Retirement Board in the SRBR reserve to pay OPEB as of December 31, 2017 and (b) adding $143.9 million to reflect the proportion of one-half of the net deferred investment gain[2] that is commensurate with the size of the OPEB reserves. The $27.5 million difference between the $1,029.4 million TOL and the $1,001.9 million Plan's Fiduciary Net Position is the Net OPEB Liability as of December 31, 2017.

Note number 7 to the Basic Financial Statements and the Required Supplementary Information included in the Financial Section of the CAFR were prepared by the Association based on the results of the GASB Statement No. 74 actuarial valuation as of December 31, 2017 prepared by Segal.

1 *When measuring OPEB liability, GASB uses the same actuarial cost method (Entry Age) and, for benefits that are being fully funded on an actuarial basis, the same type of discount rate (expected return on assets) as ACERA uses for funding. See discussions on page ii of the December 31, 2017 GASB Statement No. 74 actuarial valuation regarding the source of funding for payment of OPEB SRBR benefits not covered by current OPEB Plan's Fiduciary Net Position in the SRBR.*

2 *After restoring the Contingency Reserve to 1% of total assets.*

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December 31, 2017 GASB Statement No. 67 Actuarial Valuation for Financial Reporting Purposes for the Discretionary Non-OPEB Benefits Provided by the SRBR

As noted in our actuarial certification letter for the statutory Retirement Plan benefits dated June 18, 2018, Segal also prepared the December 31, 2017 GASB Statement No. 67 actuarial valuation for financial reporting purposes, which included information for the non-OPEB benefits payable from the SRBR. The valuation was performed in order to comply with GASB Statement No. 67 and we certify that the assumptions and methods used for financial reporting purposes meet the parameters set by ASOPs and our understanding of generally accepted accounting principles applicable in the United States of America as promulgated by the GASB.

For the statutory Retirement Plan benefits, the Net Pension Liabilities (NPLs) measured as of December 31, 2017 and 2016 have been determined by rolling forward the Total Pension Liabilities (TPLs) as of December 31, 2016 (that was calculated under the new actuarial assumptions effective for the December 31, 2017 valuation) and December 31, 2015, respectively.[3] Similar to last year, we have included in the TPL as of December 31, 2017 the non-OPEB unlimited Actuarial Accrued Liability of $149.3 million, calculated by rolling forward the total unlimited non-OPEB AAL as of December 31, 2016 that was calculated under the new actuarial assumptions effective for the December 31, 2017 valuation (including the 7.25% investment return assumption). We have also continued the practice of adjusting the Plan's Fiduciary Net Position as of December 31, 2017 to include an additional $43.9 million, calculated by (a) taking the $37.5 million set aside by the Retirement Board in the SRBR reserve to pay non-vested Supplemental COLA and retired member death benefits[4] as of December 31, 2017 and (b) adding $6.4 million to reflect the proportion of one-half of the net deferred investment gain[5] that is commensurate with the size of those reserves. The $105.4 million difference between the $149.3 million added to the TPL and the $43.9 million added to the Plan's Fiduciary Net Position as of December 31, 2017 represents the Net Pension Liability attributable to non-OPEB SRBR benefits.

Note number 5 to the Basic Financial Statements and the Required Supplementary Information included in the Financial Section of the CAFR were prepared by the Association based on the results of the GASB Statement No. 67 actuarial valuation as of December 31, 2017 prepared by Segal.

The undersigned are members of the American Academy of Actuaries and meet the qualification requirements to render the actuarial opinion contained herein.

Sincerely,

Andy Yeung, ASA, EA, MAAA, FCA
Vice President and Actuary

Eva Yum, FSA, EA, MAAA
Associate Actuary

Anna Buzueva, ASA, EA, MAAA
Senior Actuary

DNA/hy
Enclosures

3 *When measuring pension liability, GASB uses the same actuarial cost method (Entry Age) and the same type of discount rate (expected return on assets) as ACERA uses for funding of the statutory Retirement Plan benefits.*
4 *We have excluded the liability and the assets associated with the OPEB component of the SRBR reserve account because those amounts are reported under GASB 74, as discussed earlier in this letter.*
5 *After restoring the Contingency Reserve to 1% of total assets.*

Summary of Actuarial Assumptions and Methods

ASSUMPTIONS FOR PENSION PLAN

The following assumptions have been adopted by the Board of Retirement for the December 31, 2016 valuation based on the November 30, 2013, triennial experience study and on Board action to adopt a 7.60% investment return assumption.

Summary of Assumptions

Actuarial Assumed Interest Rate	7.60%
Inflation Rate	3.25%
Real Across-the-Board Salary Increase	0.50%
Projected Salary Increases	
General:	7.45% to 4.15%
Safety:	10.45% to 4.45%
These rates include inflation and real across-the-board salary increases.	
Retiree Cost-of-Living Adjustment (Basic)	
for Tier 1 and 3 members:	3.00%
for Tier 2 and 4 members:	2.00%
Employee Contribution Crediting Rate	7.60%

Net Investment Return

For valuation purposes, the assumed rate of return on the valuation value of assets was 7.6%, net of administration and investment expenses.

Employee Contribution Crediting Rate

7.6%, compounded semi-annually, subject to the availability of net earnings. ACERA operates under the Alternate Financial Provisions of Article 5.5 of the 1937 Act. The employee contribution crediting rate is the assumed actuarial investment rate of return to the extent that "net earnings" as defined in Article 5.5 are available. In addition, whenever there is a remaining balance of "net earnings", after all other required crediting, a portion of that remaining balance is also credited, as described in Article 5.5.

Actuarial Value of Assets

The Actuarial Value of Assets is determined by phasing in any difference between actual and expected market return over 10 six-month interest crediting periods.

Postretirement Mortality

The actuarial valuation uses the RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020 adjusted as follows:

(A) HEALTHY*	
General Members and All Beneficiaries	set back one year for males and females
Safety Members	with no setback for males and set back two years for females
(B) DISABILITY*	
General Members	set forward seven years for males and four years for females
Safety Members	set forward six years for males and three years for females
(C) FOR EMPLOYEE CONTRIBUTION RATE PURPOSES	
General Members	set back one year for males and females, weighted 30% male and 70% female
Safety Members	with no setback for males and set back two years for females, weighted 75% male and 25% female.

* The mortality tables shown above contain a margin of about 10% for General and Safety members and beneficiaries combined, based on actual to expected deaths, as a provision to reflect future mortality improvement, based on a review of mortality experience as of December 31, 2016.

Assumed Retirement and Termination Rates

The rates shown for each cause represent the likelihood that a given member will terminate at a particular age or with the particular service for the indicated reason. For example, if the rate of retirement for a General Tier 1 member age 50 is 4.00, then it is assumed that 4.00 percent of the General Tier 1 members in this age bracket will receive service retirement during the year.

The following schedule indicates the assumed retirement rates.

Assumed Retirement Rates

	Rates (%)							
Age	General Tier 1	General Tier 2	General Tier 3	General Tier 4	Safety Tier 1[1]	Safety Tier 2,2D[1]	Safety Tier 2C[1]	Safety Tier 4
50	4.00	2.00	6.00	0.00	35.00	15.00	4.00	4.00
51	4.00	2.00	3.00	0.00	30.00	15.00	2.00	2.00
52	4.00	2.00	5.00	4.00	25.00	15.00	2.00	2.00
53	4.00	2.00	6.00	1.50	35.00	15.00	3.00	3.00
54	4.00	2.00	6.00	1.50	45.00	15.00	6.00	6.00
55	7.00	2.00	12.00	2.50	45.00	15.00	10.00	10.00
56	9.00	3.00	13.00	2.50	45.00	20.00	12.00	12.00
57	12.00	4.00	13.00	3.50	45.00	25.00	20.00	20.00
58	12.00	4.00	14.00	4.50	45.00	25.00	10.00	10.00
59	16.00	5.00	16.00	4.50	45.00	25.00	15.00	15.00
60	24.00	6.00	21.00	4.50	100.00	30.00	60.00	60.00
61	24.00	9.00	20.00	7.50	100.00	30.00	60.00	60.00
62	40.00	18.00	30.00	19.00	100.00	30.00	60.00	60.00
63	35.00	18.00	25.00	15.00	100.00	30.00	60.00	60.00
64	35.00	20.00	25.00	17.00	100.00	100.00	100.00	100.00
65	35.00	25.00	30.00	21.00	100.00	100.00	100.00	100.00
66	35.00	25.00	25.00	20.00	100.00	100.00	100.00	100.00
67	30.00	25.00	25.00	20.00	100.00	100.00	100.00	100.00
68	25.00	30.00	25.00	30.00	100.00	100.00	100.00	100.00
69	35.00	35.00	50.00	35.00	100.00	100.00	100.00	100.00
70	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

1 Retirement rate is 100% after a member accrues a benefit of 100% of FAS.

Assumed Termination Rates Before Retirement

The following schedules indicate the assumed rates before retirement for disability, termination, and mortality.

Disability

Age	General Rate (%)[1]	Safety Rate (%)[2]
20	0.00	0.00
25	0.01	0.03
30	0.03	0.23
35	0.08	0.41
40	0.13	0.48
45	0.21	0.65
50	0.31	1.35
55	0.38	1.90
60	0.43	2.15

1 60% of General disabilities are assumed to be service connected disabilities. The other 40% are assumed to be non-service connected disabilities.

2 100% of Safety disabilities are assumed to be service connected disabilities.

Termination

Less than 5 Years of Service [3]		
Years of Service	General Rate (%)	Safety Rate (%)
0	10.00	5.00
1	9.00	4.00
2	7.00	3.00
3	6.00	2.00
4	5.00	1.00

5 Years of Service or More [4]		
Age	General Rate (%)	Safety Rate (%)
20	5.00	2.00
25	5.00	2.00
30	5.00	1.70
35	4.40	1.20
40	3.40	1.00
45	2.70	1.00
50	2.50	1.00
55	2.50	1.00
60	2.50	0.40

3 60% of all terminated members will choose a refund of contributions and 40% will choose a deferred vested benefit.

4 40% of all terminated members will choose a refund of contributions and 60% will choose a deferred vested benefit. No termination is assumed after a member is eligible for retirement.

Mortality[5]

	General Rate (%)		Safety Rate (%)	
Age	Male	Female	Male	Female
25	0.04	0.02	0.04	0.02
30	0.04	0.02	0.04	0.02
35	0.07	0.04	0.07	0.04
40	0.10	0.06	0.10	0.06
45	0.13	0.10	0.14	0.09
50	0.19	0.15	0.20	0.14
55	0.30	0.22	0.34	0.21
60	0.53	0.37	0.59	0.33
65	0.90	0.68	1.00	0.60

5 All preretirement deaths are assumed to be non-service connected.

Salary Increases

The annual rate of compensation increase has three components: inflation, across-the-board salary increases (other than inflation), and merit/promotional increases based on service.

Inflation: 3.25%

Across-the-board salary increase: 0.50%

Merit/promotional increases based on service:

Service	General	Safety
0-1	3.70%	6.70%
1-2	3.70%	6.70%
2-3	3.20%	5.90%
3-4	2.10%	3.80%
4-5	1.70%	3.30%
5-6	1.40%	2.50%
6-7	1.30%	1.40%
7-8	1.10%	0.90%
8-9	0.70%	0.80%
9-10	0.60%	0.80%
10-11	0.50%	0.70%
11+	0.40%	0.70%

Actuarial Cost Method

Entry Age Cost Method. Entry Age is the age at the member's hire date. Actuarial Accrued Liability is calculated on an individual basis and is based on costs allocated as a level percentage of compensation. The Normal Cost is also calculated on an individual basis where the Entry Age Normal Cost is calculated as the sum of the individual Normal Costs.

Amortization Method

Unfunded Actuarial Accrued Liability (UAAL) is amortized as a level percentage of payroll (3.75% payroll growth assumed).

Consumer Price Index (San Francisco Bay Area)

Inflation assumption is 3.25% per year. Retiree COLA increases due to CPI are subject to 3% maximum change per year for General Tier 1, General Tier 3 and Safety Tier 1; and 2% maximum change per year for General Tier 2, General Tier 4, Safety Tier 2, Safety Tier 2C, Safety Tier 2D, and Safety Tier 4.

Actuarial Experience Study

The postretirement and preretirement demographic assumptions are based on the plan's actuarial experience through the last triennial experience study as of November 30, 2013, which was approved by the Board of Retirement on December 18, 2014.

Retirement Age and Benefit for Deferred Vested Members

For current and future deferred vested members, retirement age assumptions are as follows:

General Age 60

Safety Age 56

It is assumed that 30% of future General and 60% of future Safety deferred vested members will continue to work for a reciprocal employer. For reciprocals, 4.15% and 4.45% compensation increases per annum are assumed for General and Safety, respectively.

Future Benefit Accruals

One year of service per year of employment plus 0.005 year of additional service to anticipate conversion of unused sick leave for each year of employment.

Inclusion of Deferred Vested Members

All deferred vested members are included in this valuation.

Percent of Members Married

70% of male members and 50% of female members.

Age of Spouse

Female (or male) spouses are 3 years younger (or older) than their spouses.

Unknown Data for Members

Same as those exhibited by members with similar known characteristics. If not specified, members are assumed to be male.

Terminal Pay Assumptions

Additional pay elements are expected to be received during a member's final average earnings period. The percentages, added to the final year salary, used in this valuation are:

Membership Category	Service Retirement	Disability Retirement
General Tier 1	8.00%	6.50%
General Tier 2	3.00%	1.40%
General Tier 3	8.00%	6.50%
General Tier 4	N/A	N/A
Safety Tier 1	8.50%	6.40%
Safety Tier 2	4.00%	2.10%
Safety Tier 2C	4.00%	2.10%
Safety Tier 2D	4.00%	2.10%
Safety Tier 4	N/A	N/A

CHANGES IN ACTUARIAL ASSUMPTIONS

There were no changes in assumptions from the prior valuation.

Active Member Valuation Data – Pension Plan (Actuary's Exhibit I)

Valuation Date[1]	No. of Participating Agencies	Plan Type	Number	Annual Payroll ($)[2]	Annual Average Pay ($)	% Increase in Average Pay[3]
12/31/2008	7	General	9,599	716,012,000	74,592	6.04%
		Safety	1,574	147,526,000	93,727	6.90%
		Total	**11,173**	**863,538,000**	**77,288**	**6.28%**
12/31/2009	7	General	9,407	730,681,649	77,674	4.13%
		Safety	1,520	151,923,235	99,949	6.64%
		Total	**10,927**	**882,604,884**	**80,773**	**4.51%**
12/31/2010	7	General	9,391	747,336,146	79,580	2.45%
		Safety	1,488	151,005,579	101,482	1.53%
		Total	**10,879**	**898,341,725**	**82,576**	**2.23%**
12/31/2011	7	General	9,283	745,444,475	80,302	0.91%
		Safety	1,441	147,044,625	102,043	0.55%
		Total	**10,724**	**892,489,100**	**83,224**	**0.78%**
12/31/2012	7	General	9,392	762,983,211	81,238	1.17%
		Safety	1,408	143,518,009	101,930	-0.11%
		Total	**10,800**	**906,501,220**	**83,935**	**0.85%**
12/31/2013	7	General	9,485	772,431,136	81,437	0.24%
		Safety	1,392	144,373,236	103,716	1.75%
		Total	**10,877**	**916,804,372**	**84,288**	**0.42%**
12/31/2014	7	General	9,617	800,224,521	83,209	2.18%
		Safety	1,408	148,623,609	105,557	1.78%
		Total	**11,025**	**948,848,130**	**86,063**	**2.11%**
12/31/2015	7	General	9,634	812,636,114	84,351	1.37%
		Safety	1,437	156,897,481	109,184	3.44%
		Total	**11,071**	**969,533,595**	**87,574**	**1.76%**
12/31/2016	7	General	9,673	839,157,054	86,753	2.85%
		Safety	1,438	164,494,775	114,391	4.77%
		Total	**11,111**	**1,003,651,829**	**90,330**	**3.15%**
12/31/2017	7[4]	General	9,887	884,429,873	89,454	3.11%
		Safety	1,436	171,231,780	119,242	4.24%
		Total	**11,323**	**1,055,661,653**	**93,232**	**3.21%**

1 As permitted by the Actuarial Standard of Practice Statement No. 4 (Measuring Pension Obligations), the actuarial valuation has been prepared based on participant data provided by ACERA as of November 30.

2 Projected compensation was calculated by increasing the prior calendar year's compensation (assuming every employee will work full time) by the salary increase assumption.

3 Reflects the increase in average salary for members at the beginning of the year versus those at the end of the year. It does not reflect the average salary increases received by members who worked the full year.

4 As of December 31, 2017, there were no active members in the Office of Education; however, there were still retired members in that participating agency as of that date.

Retirees and Beneficiaries Added To and Removed From Retiree Payroll (Actuary's Exhibit II)

	Added to Rolls		Removed from Rolls		Rolls at End of Year				
Valuation Date (December 31)[1]	Number	Annual Allowance[2] (in $000's)	Number	Annual Allowance (in $000's)	Number	Annual Allowance (in $000's)	% Increase in Retiree Allowance	Average Annual Allowance	Change in Average Annual Allowance
2008	403	$ 23,056	(340)[3]	$ (5,743)	7,246	$ 240,485	7.76%	$ 33,189	6.82%
2009	378	21,731	(291)	(5,780)	7,333	256,436	6.63%	34,970	5.37%
2010	489	27,700	(264)	(5,956)	7,558	278,180	8.48%	36,806	5.25%
2011	577	30,660	(229)	(6,177)	7,906	302,663	8.80%	38,283	4.01%
2012	511	30,485	(242)	(6,269)	8,175	326,879	8.00%	39,985	4.45%
2013	625	33,150	(234)	(6,182)	8,566	353,847	8.25%	41,308	3.31%
2014	498	28,677	(251)	(7,156)	8,813	375,368	6.08%	42,593	3.11%
2015	469	27,312	(292)	(9,125)	8,990	393,555	4.85%	43,777	2.78%
2016	523	31,922	(271)	(8,778)	9,242	416,699	5.88%	45,088	2.99%
2017	512	32,718	(275)	(8,112)	9,479	441,305	5.90%	46,556	3.26%

1 As permitted by the Actuarial Standard of Practice Statement No. 4 (Measuring Pension Obligations), the actuarial valuation has been prepared based on participant data provided by ACERA as of November 30.

2 Includes data adjustments and automatic cost-of-living adjustments granted on April 1.

3 Includes data adjustments made by ACERA on beneficiary file.

Actuarial Analysis of Financial Experience (Actuary's Exhibit IV)

(Dollars in Millions)

	Plan Years									
	2016	**2015**	**2014**	**2013**	**2012**	**2011**	**2010**	**2009**	**2008**	**2007**
Prior Valuation Unfunded/(Prefunded) Actuarial Accrued Liability	$ 1,791	$ 1,911	$ 1,651	$ 1,729	$ 1,491	$ 1,387	$ 1,110	$ 894	-	$ 697
a) Before Benefit Improvement	-	-	-	-	-	-	-	-	$ 552	-
b) After Benefit Improvement[1]	-	-	-	-	-	-	-	-	553	-
Salary Increase Greater (Less) than Expected	(8)	(36)	(37)	(72)	(92)	(106)	(80)	(25)	38	(42)
COLA Increase Greater (Less) than Expected	-	(15)	-	-	-	(11)	(7)	(31)	-	-
Asset Return Less (Greater) than Expected	22	(61)	(145)	(33)	300	225	339	179	245[2]	(125)
Other Experience (Including Scheduled UAAL Payment)	(3)	(8)	(18)	27	30	31	25	29	40	22
Economic Assumption Changes	-	-	-	-	-	-	-	64	-	-
Non-economic Assumption Changes	-	-	460[3]	-	-	7[3]	-	-	9	-
Data Corrections	-	-	-	-	-	(42)[4]	-	-	9	-
Ending Unfunded/(Prefunded) Actuarial Accrued Liability	**$ 1,802**	**$ 1,791**	**$ 1,911**	**$ 1,651**	**$ 1,729**	**$ 1,491**	**$ 1,387**	**$ 1,110**	**$ 894**	**$ 552**

1 Improved General Tier 3 benefit in Plan Year 2008.

2 Includes effect of change in the market value corridor for the calculation of the actuarial value of assets, from 80%-120% to 60%-140%.

3 Combined effect of changes in non-economic and economic assumptions.

4 Following direction provided by ACERA, some retirees who were previously assumed to be married are now classified as single with no beneficiary eligible for an automatic continuance benefit.

Solvency Test - Pension Plan[1] (Actuary's Exhibit III)

(Dollars in Thousands)

	Aggregate Accrued Liabilities for					Portion of Accrued Liabilities Covered by Reported Assets		
Valuation Date	Active Member Contributions	Retired/ Vested Members	Active Members (Employer Financed Portion)	Total	Valuation Value of Assets	Active Member Contributions	Retired/ Vested Members	Active Members (Employer Financed Portion)
12/31/2007	$ 898,321	$ 2,794,861	$ 1,419,221	$ 5,112,403	$ 4,560,213	100%	100%	61%
12/31/2008	970,152	3,036,649	1,531,118	5,537,919	4,644,010	100%	100%	42%
12/31/2009	962,821	3,244,535	1,691,975	5,899,331	4,789,000	100%	100%	34%
12/31/2010	953,663	3,487,411	1,721,666	6,162,740	4,776,128	100%	100%	19%
12/31/2011	943,618	3,748,179	1,667,686	6,359,483	4,868,689	100%	100%	11%
12/31/2012	930,649	4,006,969	1,675,311	6,612,929	4,883,872	100%	99%	0%
12/31/2013	916,196	4,307,763	1,637,728	6,861,687	5,210,944	100%	100%	0%
12/31/2014	994,870	4,785,190	1,812,012	7,592,072	5,681,097	100%	98%	0%
12/31/2015	1,070,157	4,966,693	1,838,170	7,875,020	6,083,536	100%	100%	3%
12/31/2016	1,122,671	5,210,571	1,904,473	8,237,715	6,436,138	100%	100%	5%

1 The exhibit includes actuarial funded liabilities and assets. The non-valuation reserves such as Supplemental Retirees Benefit Reserve, Death Benefit and Reserve for Interest Fluctuation, etc., are not included.

Events affecting year-to-year comparability:

12/31/2008 - Change in non-economic assumptions. Terminal pay assumption for Service Retirement decreased from 8.8% to 8.0% for General Tier 1 and General Tier 3, and increased from 3.0% to 4.0% for Safety Tier 2. Benefit improvement (2.5% @ 55 formula) for electing LARPD members (new General Tier 3), effective October 1, 2008.

12/31/2009 - Investment return assumption decreased from 8.00% to 7.90%; inflation assumption decreased from 3.75% to 3.50%; across-the-board salary increase assumption increased from 0.25% to 0.50%.

12/31/2011 - Change in non-economic assumptions. Investment return assumption decreased from 7.90% to 7.80%. Effective February 6, 2011 for ACMEA Probation Mgrs. and effective March 6, 2011 for Teamsters Local Union 856, members in these groups can elect to enroll in either Safety Tier 2C (2% @ 50 formula) or Safety Tier 2D (3% @ 55 formula), with payment of additional member cost sharing contributions for Safety Tier 2D. Effective September 30, 2011, all new members hired by the Housing Authority enter General Tier 2.

12/31/2012 - Modification to Entry Age cost method from aggregate basis to individual basis for normal cost calculation.

12/31/2014 - Changes in non-economic assumptions. Investment return assumption reduced from 7.80% to 7.60%; inflation assumption decreased from 3.50% to 3.25%.

Schedule of Funding Progress – Pension Plan (Actuary's Exhibit V)

(Dollars in Thousands)

Actuarial Valuation Date	Valuation Value of Assets[1] (a)	Actuarial Accrued Liability (AAL)[2] (b)	Unfunded (Overfunded) AAL (UAAL) (b-a)	Funded Ratio (%) (a/b)	Annual Covered Payroll (c)	UAAL as a % of Annual Covered Payroll (%) (b-a) /c
12/31/2007	$ 4,560,213	$ 5,112,403	$ 552,190	89.2	$ 793,558	69.6
12/31/2008	4,644,010	5,537,919	893,909	83.9	864,260	103.4
12/31/2009	4,789,000	5,899,331	1,110,331	81.2	882,606	125.8
12/31/2010	4,776,128	6,162,740	1,386,612	77.5	898,342	154.4
12/31/2011	4,868,689	6,359,483	1,490,794	76.6	892,489	167.0
12/31/2012	4,883,872	6,612,929	1,729,057	73.9	906,500	190.7
12/31/2013	5,210,944	6,861,687	1,650,743	75.9	916,803	180.1
12/31/2014	5,681,097	7,592,072	1,910,975	74.8	948,848	201.4
12/31/2015	6,083,536	7,875,020	1,791,484	77.3	969,534	184.8
12/31/2016	6,436,138	8,237,715	1,801,577	78.1	1,003,651	179.5

1 Excludes assets for SRBR and other non-valuation reserves. Includes the following amounts transferred from the SRBR to the employers' advance reserve to compensate the County for the implicit subsidy: 2007-$3,091; 2008-$4,149; 2009-$5,288; 2010 (estimate provided by ACERA thereafter) $4,500; 2011 $4,411; 2012 $7,370; 2013 $6,993; 2014 $5,215; 2015 $5,325; and 2016 $8,865.

2 Excludes liabilities for SRBR and other non-valuation reserves.

The actuarially determined contributions and actual contributions received from the participating employers, are presented in the Schedule of Employer Contributions, included in the Required Supplementary Information Section.

ASSUMPTIONS FOR OTHER POSTEMPLOYMENT BENEFITS (OPEB) PLAN

The actuarial assumptions used for the OPEB plan are consistent with those assumptions applied by the Retirement Board for the December 31, 2016 pension valuation, including the use of a 7.60% investment rate of return assumption. For a complete list of actuarial assumptions, refer to the summary of assumptions and methods for the pension plan. The actuarial assumptions that are specific to the OPEB plan are as follows:

Per Capita Health Costs

The combined monthly per capita dental and vision claims cost for plan year 2017 was assumed to be $46.90. The monthly Medicare Part B premium reimbursement for 2017 is $109.00. For calendar year 2017, medical costs for a retiree were assumed to be as follows:

Medical Plan	Election Assumption	Monthly Premium	Maximum Monthly Medical Allowance[1]
Under Age 65			
Kaiser HMO	85%	$ 729.08	$ 540.44
United Healthcare HMO	15%	982.06	540.44
Age 65 and Older			
Kaiser Senior Advantage	70%	$ 354.73	$ 540.44
OneExchange Individual Insurance Exchange	30%	278.65[2]	414.00

1 The Maximum Monthly Medical Allowance of $540.44 ($414 for retirees purchasing individual insurance from the Medicare exchange) is subject to the following subsidy schedule:

Completed Years of Service	Percentage Subsidized
10-14	50%
15-19	75%
20+	100%

2 The derivation of amounts expected to be paid out in 2017 from the Health Reimbursement Account for members with 20 plus years of service is provided in the following table. In the table, the amounts expected to be paid for members with 10-14 and 15-19 years of service is also provided.

	Derivation of OneExchange Monthly Per Capita Costs			
	Years of Service Category	10-14	15-19	20+
1	Maximum MMA for 2016	$ 207.00	$ 310.50	$ 414.00
2	Total of Maximum MMA[1] (From Jan. 2016 to Dec. 2016)	$ 384,936	$ 684,032	$ 4,325,721
3	Total of Actual Reimbursement (From Jan. 2016 to Dec. 2016)[1]	$ 294,309	$ 478,118	$ 2,479,490
4	Ratio of Actual Reimbursement to Maximum 2016 MMA [(3)/(2)]	76.46%	69.90%	57.32%
5	Average Monthly Per Capita Cost for 2016 [(1)*(4)]	$ 158.27	$ 217.03	$ 237.30
6	Increase for Expected Medical Trend (6.75%) from 2016 to 2017 [(5)*1.0675]	$ 168.95	$ 231.68	$ 253.32
7	Increase for Additional 10% Margin for 2016 Expenses Incurred in 2016 but Reimbursed after December 2016 [(6)*1.10]	**$ 185.84**	**$ 254.85**	**$ 278.65**

1 For retirees participating in OneExchange for all 12 months of 2016.

Implicit Subsidy

The estimated average per capita premium for retirees under age 65 is $9,204 per year. Because premiums for retirees under age 65 include active participants for purposes of underwriting, the retirees receive an implicit subsidy from the actives. Had the retirees under age 65 been underwritten as a separate group, their age-based premiums would be higher for most individuals. The excess of the age-based premium over the per capita premium charged makes up the subsidy. Below is a sample of the age-based costs for the retirees under age 65.

Age-Based Average Medical Costs for Retirees Under Age 65				
	Retiree		Spouse	
Age	Male	Female	Male	Female
50	$ 9,544	$ 10,871	$ 6,666	$ 8,729
55	11,335	11,702	8,921	10,104
60	13,461	12,614	11,942	11,718
64	15,443	13,381	15,075	13,189

Not all ACERA employers are receiving an implicit subsidy reimbursement from the Association. The projected implicit subsidy payments have been adjusted (by about 10% reduction of costs shown above) to account for this fact, based on data provided by the County of Alameda's health consultant.

The adjustment mentioned above has not been applied in the calculation of Accrued Actuarial Liability (AAL).

Health Care Cost Trend Rates

Health care trend measures the anticipated overall rate at which health plan costs are expected to increase in future years. The rates shown below are "net" and are applied to the net per capital costs shown above. The trend shown for a particular plan year is the rate that is to be applied to the premium for the shown calendar year to calculate the next calendar year's projected premium. For example, the projected 2018 calendar year premium for Kaiser (under age 65) is $735.64 per month ($729.08 increased by 0.90%).

	Rate (%)			
Calendar Year	All Non-Medicare Plans	Medicare Advantage Plans	Dental and Vision	Medicare Part B
2017	6.50[1]	6.50[1]	4.50[1]	28.44[2]
2018	6.25	6.25	4.50	4.50
2019	6.00	6.00	4.50	4.50
2020	5.75	5.75	4.50	4.50
2021	5.50	5.50	4.50	4.50
2022	5.25	5.25	4.50	4.50
2023	5.00	5.00	4.50	4.50
2024	4.75	4.75	4.50	4.50
2025 & Later	4.50	4.50	4.50	4.50

1 The actual trends are shown below, based on actual premium renewals for 2018 as reported by ACERA.

2 The increase in Part B premiums for continuing retirees from 2016 to 2017 had been limited due to relatively low Social Security cost-of-living-adjustment (COLA) and the hold-harmless provision (i.e. Medicare Part B premium dollar increases were limited to Social Security COLA dollar increases). Based on the 3.25% inflation assumption used in the pension valuation, it is expected that the Social Security COLA from 2017 to 2018 will be large enough to cover the dollar increases in the Medicare Part B premium for most retirees. This increases is expected to be at least $25 per month, from $109, the lowest standard Medicare Part B premium for 2017 to $134, the highest standard Medicare Part B premium. It is assumed that the standard premium for all retirees in 2018 will be $140 ($134 increased by 4.50%) per month.

Kaiser HMO Early Retiree	United Healthcare HMO Early Retiree	Kaiser Senior Advantage	Dental and Vision
0.90%	6.63%	3.52%	2.15%

Participation and Coverage Election

Based on proportion of current retirees receiving a medical benefit subsidy, actuary estimates that 80% of employees under age 65, and 90% of employees age 65 and older, who are eligible to retire and receive subsidized postretirement medical coverage will elect to participate in the plan.

Assumed Increase in Annual Maximum Benefits

For the "substantive plan design" shown in this report, actuary has assumed:

a) Maximum medical allowances for 2018 will remain at the 2017 levels, then increase with 50% of trend for medical plans, or 3.125% graded down to the ultimate rate of 2.25% over 7 years.

b) Dental and vision premium reimbursement will increase with full trend.

c) Medicare Part B premium reimbursement will increase with full trend.

Dependents

Demographic data was available for spouses of current retirees. For future retirees, husbands were assumed to be three years older than their wives. Of the future retirees who elect to continue their medical coverage at retirement, 35% of males and 15% of females were assumed to have an eligible spouse who also opts for health coverage at that time.

Please note that these assumptions are only used to determine the cost of the implicit subsidy.

Plan Design

Development of plan liabilities was based on the plan of benefits in effect as described in Exhibit II of the December 31, 2016, valuation report.

Administrative Expenses

An administrative expense load was not added to projected incurred claim costs in developing per capita health costs.

Missing Participant Data

Any missing census items for a given participant was set to equal to the average value of that item over all other participants of the same membership status for whom the item is known.

Active Member Valuation Data – OPEB (Actuary's SRBR Exhibit I)

Valuation Date[1]	No. of Participating Agencies	Plan Type	Number	Annual Payroll ($)[2]	Annual Average Pay ($)	% Increase in Average Pay[3]
12/31/2008	7	General	9,599	716,012,000	74,592	6.04%
		Safety	1,574	147,526,000	93,727	6.90%
		Total	**11,173**	**863,538,000**	**77,288**	**6.28%**
12/31/2009	7	General	9,407	730,681,649	77,674	4.13%
		Safety	1,520	151,923,235	99,949	6.64%
		Total	**10,927**	**882,604,884**	**80,773**	**4.51%**
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		Total	**10,879**	**898,341,725**	**82,576**	**2.23%**
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		Safety	1,441	147,044,625	102,043	0.55%
		Total	**10,724**	**892,489,100**	**83,224**	**0.78%**
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		Total	**10,800**	**906,501,220**	**83,935**	**0.85%**
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		Total	**10,877**	**916,804,372**	**84,288**	**0.42%**
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		Safety	1,408	148,623,609	105,557	1.78%
		Total	**11,025**	**948,848,130**	**86,063**	**2.11%**
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		Safety	1,437	156,897,481	109,184	3.44%
		Total	**11,071**	**969,533,595**	**87,574**	**1.76%**
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		Total	**11,111**	**1,003,651,829**	**90,330**	**3.15%**
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		Safety	1,436	171,231,780	119,242	4.24%
		Total	**11,323**	**1,055,661,653**	**93,232**	**3.21%**

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3 Reflects the increase in average salary for members at the beginning of the year versus those at the end of the year. It does not reflect the average salary increases received by members who worked the full year.

4 As of December 31, 2017, there were no active members in the Office of Education; however, there were still retired members in that participating agency as of that date.

Retirees Added To and Removed From OPEB Payroll (Actuary's SRBR Exhibit II)

	Added to Rolls		Removed from Rolls		Rolls at End of Year				
Valuation Date (December 31)[1]	Number	Annual Allowance (in $000's)	Number	Annual Allowance (in $000's)[2]	Number	Annual Allowance (in $000's)	% Increase in OPEB Allowance	Average Annual Allowance	Change in Average Annual Allowance
2012	426	$ 1,921	(184)	$ (935)	7,053	$ 32,687	3.1%	$ 4,634	-0.4%
2013	537	2,430	(179)	(1,699)	7,411	33,418	2.2%	4,509	-2.7%
2014	421	1,725	(189)	(735)	7,643	34,408	3.0%	4,502	-0.2%
2015	388	1,745	(229)	(424)	7,802	35,729	3.8%	4,579	1.7%
2016	426	1,801	(207)	(870)	8,021	36,660	2.6%	4,571	-0.2%
2017	443	1,979	(197)	365	8,267	39,004	6.4%	4,718	3.2%

1 As permitted by the Actuarial Standard of Practice Statement No. 4 (Measuring Pension Obligations), the actuarial valuation has been prepared based on participant data provided by ACERA as of November 30.

2 Also reflects changes in benefit for continuing members. For example, the increase for continuing members as of December 31, 2017 more than offsets the annual allowance removed from the rolls.

Note: Beneficiaries are not eligible for OPEB. The allowances include medical, dental, vision and Medicare Part B premium subsidies but do not include any implicit subsidy costs valued for SRBR sufficiency or valuation liabilities.

Solvency Test - OPEB
(Actuary's SRBR Exhibit III)
Actuarial Accrued Liability Not Limited to Actuarial Value of Assets[1]

(Dollars in Thousands)

	Aggregate Accrued Liabilities for					Portion of Accrued Liabilities Covered by Reported Assets		
Valuation Date	Active Member Contributions	Retired/ Vested Members[2]	Active Members (Employer Financed Portion)[2]	Total[2]	Actuarial Value of Assets	Active Member Contributions	Retired/ Vested Members[3]	Active Members (Employer Financed Portion)[3]
12/31/2007	N/A	$ 367,096	$ 272,725	$ 639,821	$ 614,444	N/A	100%	91%
12/31/2008	N/A	397,550	305,770	703,320	608,314	N/A	100%	69%
12/31/2009	N/A	428,232	335,269	763,501	591,289	N/A	100%	49%
12/31/2010	N/A	417,456	315,449	732,905	561,356	N/A	100%	46%
12/31/2011	N/A	429,316	324,900	754,216	542,936	N/A	100%	35%
12/31/2012								
Scenario A	N/A	432,005	322,833	754,838	545,429	N/A	100%	35%
Scenario B	N/A	432,005	322,833	754,838	549,655	N/A	100%	36%
12/31/2013	N/A	428,851	295,725	724,576	617,627	N/A	100%	64%
12/31/2014	N/A	489,588	341,746	831,334	759,200	N/A	100%	79%
12/31/2015	N/A	511,694	389,287	900,981	822,858	N/A	100%	80%
12/31/2016	N/A	544,660	365,696	910,356	837,185	N/A	100%	80%

1 When the actuarial accrued liabilities were limited to the current assets, the UAALs were $0. Similarly, the funded ratios were 100%.

2 Accrued liabilities have not been limited to benefits expected to be paid before the exhaustion of actuarial value of assets.

3 Assuming actuarial value of assets is first used to entirely fund the liabilities for retired/vested members before it is used to fund the liabilities for active members.

Events affecting year-to-year comparability:

12/31/08 - Change in non-economic assumptions. Terminal pay assumption for Service Retirement decreased from 8.8% to 8.0% for General Tier 1 and General Tier 3, and increased from 3.0% to 4.0% for Safety Tier 2.

12/31/09 - Investment return assumption decreased from 8.00% to 7.90%; inflation assumption decreased from 3.75% to 3.50%; across-the-board salary increase assumption increased from 0.25% to 0.50%.

12/31/11 - Change in non-economic assumptions. Investment return assumption decreased from 7.90% to 7.80%. The Board acted on July 19, 2012 to maintain the 2013 MMA at the 2012 level and to provide retirees currently enrolled in a United Healthcare Medicare group insurance plan with the option to purchase individual Medicare insurance from plans through a Medicare exchange, beginning in 2013. The maximum monthly medical allowance is reduced for the individual plans.

12/31/12 - Scenario A excludes benefits and assets associated with the $750 lump sum death benefit, whereas Scenario B includes benefits and assets associated with the $750 lump sum death benefit. Both of these scenarios reflect the discontinuance of the Active Death Equity Benefits and the $4,250 Lump Sum Death Benefit. These two scenarios were provided per the request of ACERA'S management to explore different options of consolidating or reclassifying the Death Benefit Reserve. The Board acted on July 18, 2013 to maintain the 2014 MMA at the 2013 level.

12/31/13 - The Board acted on July 17, 2014 to maintain the 2015 MMA at the 2014 level.

12/31/14 - Changes in non-economic assumptions. Investment return assumption decreased from 7.80% to 7.60%; inflation assumption decreased from 3.50% to 3.25%. The Board acted on July 16, 2015 to increase the 2015 MMA by 3.5% for 2016.

12/31/15 - The Board acted to leave the 2016 MMA unchanged for 2017.

12/31/16 - The Board acted to leave the 2017 MMA unchanged for 2018.

Note: At each valuation date, health care cost trend rates have been updated and starting premium costs have been revised to reflect updated data.

Solvency Test - Non-OPEB
(Actuary's SRBR Exhibit III)
Actuarial Accrued Liability Not Limited to Actuarial Value of Assets[1]

(Dollars in Thousands)

	Aggregate Accrued Liabilities for					Portion of Accrued Liabilities Covered by Reported Assets		
Valuation Date	Active Member Contributions	Retired/ Vested Members[2]	Active Members (Employer Financed Portion)[2]	Total[2]	Actuarial Value of Assets	Active Member Contributions	Retired/ Vested Members[3]	Active Members (Employer Financed Portion)[3]
12/31/2007	N/A	$ 91,441	$ 112,427	$ 203,868	$ 78,426	N/A	86%	0%
12/31/2008	N/A	80,182	122,352	202,534	76,005	N/A	95%	0%
12/31/2009	N/A	63,808	107,370	171,178	73,481	N/A	100%	9%
12/31/2010	N/A	68,955	107,546	176,501	69,256	N/A	100%	0%
12/31/2011	N/A	77,477	108,369	185,846	67,020	N/A	87%	0%
12/31/2012								
Scenario A	N/A	69,698	93,636	163,334	24,174	N/A	35%	0%
Scenario B	N/A	71,785	94,132	165,917	26,018	N/A	36%	0%
12/31/2013	N/A	81,814	96,985	178,799	26,870	N/A	33%	0%
12/31/2014	N/A	73,728	80,371	154,099	32,570	N/A	44%	0%
12/31/2015	N/A	83,016	84,635	167,651	35,194	N/A	42%	0%
12/31/2016	N/A	100,279	89,264	189,543	36,162	N/A	36%	0%

1 When the actuarial accrued liabilities were limited to the current assets, the UAALs were $0. Similarly, the funded ratios were 100%.

2 Accrued liabilities have not been limited to benefits expected to be paid before the exhaustion of actuarial value of assets.

3 Assuming actuarial value of assets is first used to entirely fund the liabilities for retired/vested members before it is used to fund the liabilities for active members.

Events affecting year-to-year comparability:

12/31/08 - Change in non-economic assumptions. Terminal pay assumption for Service Retirement decreased from 8.8% to 8.0% for General Tier 1 and General Tier 3, and increased from 3.0% to 4.0% for Safety Tier 2.

12/31/09 - Investment return assumption decreased from 8.00% to 7.90%; inflation assumption decreased from 3.75% to 3.50%; across-the-board salary increase assumption increased from 0.25% to 0.50%.

12/31/11 - Change in non-economic assumptions. Investment return assumption decreased from 7.90% to 7.80%.

12/31/12 - Scenario A excludes benefits and assets associated with the $750 lump sum death benefit, whereas Scenario B includes benefits and assets associated with the $750 lump sum death benefit. Both of these scenarios reflect the discontinuance of the Active Death Equity Benefit and the $4,250 Lump Sum Death Benefit. These two scenarios were provided per the request of ACERA's management to explore different options of consolidating or reclassifying the Death Benefit Reserve.

12/31/13 - Increase in lump sum death benefit from $750 to $1,000.

12/31/14 - Changes in non-economic assumptions. Investment return assumption decreased from 7.80% to 7.60%; inflation assumption decreased from 3.50% to 3.25%.

Summary of Plan Provisions

Benefits Sections 31676.1, 31676.12, 31676.18, 31664, 31664.1, and 31664.2 Of The County Employees Retirement Law Of 1937 ("1937 Act") and Government Code Sections 7522.20(a) for General Tier 4 and 7522.25(d) for Safety Tier 4

Briefly summarized below are major provisions of the 1937 Act and the California Government Code as amended through December 31, 2016, and as adopted by Alameda County or other participating employers.

Membership Eligibility

With the exception of Alameda Health System, all full-time employees of participating employers who are appointed to permanent positions are statutorily required to become members of ACERA. With the passage of AB1008 in 2013, employees of newly acquired hospitals by Alameda Health System are not eligible for membership unless they are subject to an existing Memorandum of Understanding. Effective October 31, 2013, all newly hired unrepresented employees of any Alameda Health System facility are prohibited from membership.

Membership with ACERA usually begins with the second pay period following appointment to a full-time County or participating employer position, except for Housing Authority of the County of Alameda and Livermore Area Recreation & Park District. Membership for these employees is effective on the first day of employee's hire in an ACERA covered position. ACERA members who change from full-time to part-time are required to continue membership at ACERA (with future contributions and benefits adjusted accordingly).

Tiers (Benefit Levels)

General and Safety Tier 1 include, depending on the employer, all General and Safety members hired on or before June 30, 1983. General and Safety Tier 2 include, depending on the employer, General and Safety members hired after June 30, 1983. General Tier 3 was effective October 1, 2008 for electing General active members of the Livermore Area Recreation and Park District (LARPD). LARPD adopted a benefit improvement for all service under the 2.5% @ 55 formula as an option to their employees. The County adopted Safety Tier 2 formulas, 2% @ 50 (Safety Tier 2C) and 3% @ 55 (Safety Tier 2D), for new hires starting October 17, 2010. General and Safety Tier 4 include all General and Safety members hired on or after January 1, 2013. See page 131 and page 132 for employer and employee contribution rates.

Final Compensation for Benefit Determination ("Final Average Salary")

Final Average Salary (FAS) is defined as the highest 12 consecutive months of compensation earnable for Tier 1 and Tier 3; and the highest 36 consecutive months for Tier 2. For Tier 4 members, FAS is defined as the highest 36 consecutive months of pensionable compensation.

Return of Contributions

If a member should resign or die before becoming eligible for retirement, his or her contributions plus interest will be refunded upon request. In lieu of receiving a return of contributions, a vested member or member terminated after January 1, 2003 may elect to leave his or her contributions on deposit and receive a deferred vested benefit when eligible for retirement.

Eligibility for Service Retirement

General non-Tier 4 members are eligible to retire: at age 50 with 5 years of service and a total of 10 years of qualifying membership; at age 70 regardless of years of service, or at any age with 30 years of service. General

Tier 4 members are eligible to retire at age 52 with 5 years of service or at age 70 regardless of service.

Safety non-Tier 4 members are eligible to retire: at age 50 with 5 years of service and a total of 10 years of qualifying membership; at age 70 regardless of years of service; or at any age with 20 years of service. Safety Tier 4 members are eligible to retire at age 50 with 5 years of service or at age 70 regardless of service.

Eligibility for Deferred Service Retirement

Vested deferred members are terminated members who have completed five years of service and leave accumulated contributions in the retirement fund. Vested deferred members are entitled to receive retirement benefits upon meeting the eligibility requirements.

Service Retirement Benefit

The monthly service retirement benefit depends on age at retirement and is based on a percentage of the final average salary (divided by 12 or 36 depending on Tier to get a monthly amount) multiplied by years of service. It is illustrated below for selected age-at-retirement figures.

For non-Tier 4 members integrated with Social Security, the benefit is reduced by one-third of the percentage shown below times the first $350 of monthly final average salary per year of service credited after January 1, 1956.

Percentage of Final Average Salary for Selected Age-at-Retirement

	General				Safety				
Age-at-Retirement	Tier 1	Tier 2	Tier 3	Tier 4	Tier 1	Tier 2	Tier 2C	Tier 2D	Tier 4
50	1.34%	1.18%	2.00%	n/a	3.00%	3.00%	2.00%	2.29%	2.00%
52	1.49%	1.30%	2.20%	1.00%	3.00%	3.00%	2.22%	2.54%	2.20%
55	1.77%	1.49%	2.50%	1.30%	3.00%	3.00%	2.62%	3.00%	2.50%
57	2.00%	1.64%	2.50%	1.50%	3.00%	3.00%	2.62%	3.00%	2.70%
60	2.34%	1.92%	2.50%	1.80%	3.00%	3.00%	2.62%	3.00%	2.70%
62	2.62%	2.09%	2.50%	2.00%	3.00%	3.00%	2.62%	3.00%	2.70%
65	2.62%	2.43%	2.50%	2.30%	3.00%	3.00%	2.62%	3.00%	2.70%
67 and over	2.62%	2.43%	2.50%	2.50%	3.00%	3.00%	2.62%	3.00%	2.70%

Maximum Benefit

The maximum basic benefit payable to a non-Tier 4 member or beneficiary is 100% of final average salary. There is no maximum basic benefit payable to Tier 4 members.

Disability Benefit

Members with five years of service, regardless of age, are eligible to apply for non-service connected disability benefits. As with the service retirement benefit, the disability benefit is based on a percentage of Final Average Salary (FAS).

The disability benefit is 1.8% per year of service for General Tier 1 and Tier 3 members; and 1.5% per year of service for General Tier 2 and Tier 4 members. If this benefit does not exceed one-third of FAS, the service is projected to age 62 for General Tier 1 and Tier 3, and to age 65 for General Tier 2 and Tier 4, but the total benefit cannot be more than one-third of FAS.

The disability benefit is 1.8% per year of service for Safety members. If this benefit does not exceed one-third of FAS, the service is projected to age 55, but the total benefit cannot be more than one-third of FAS.

If the disability is service connected ("job-related"), then there is no age or service requirement. This benefit is the greater of 50% of FAS, or the benefit amount derived from the member's age, years of service, and salary.

Members who apply for disability retirement benefits must be able to prove they are permanently unable to perform the usual duties of their current job. In addition, those who apply for a service connected disability must prove their incapacity to perform their duties was job-related.

Active Member Death Benefit

In addition to the return of contributions with credited interest, a lump sum death benefit is payable to the member's beneficiary or estate equal to one month's salary for each completed year of service under the retirement system, based on the final year's average salary, but not to exceed six months' salary.

If a member dies while eligible for service retirement or non-service connected disability, the eligible surviving spouse/domestic partner may elect to receive 60% of the allowance that the member would have received for retirement on the day of his or her death in lieu of the refund of employee contributions with interest and a lump sum death benefit.

Service Connected Death Benefit

If a member dies in the performance of duty, the eligible surviving spouse/domestic partner may elect to receive 50% of the member's FAS (or 100% of the service retirement benefit, if greater).

Retired Member Death Benefit

If a member dies after retirement, a lump sum amount of $1,000 is paid to the beneficiary or estate. This benefit is excluded from the pension plan funding valuation, but is included in the SRBR non-OPEB sufficiency valuation.

In addition, if the retirement was for service connected disability, 100% of the member's allowance as it was at death is continued to the qualified surviving spouse/domestic partner for life.

If the retirement was for other than service connected disability, 60% of the member's unmodified allowance is continued to the qualified surviving spouse/domestic partner for life.

Basic Cost-of-Living Adjustments (COLA)

The basic Cost-of-Living Adjustments are based on the change in the San Francisco Bay Area Consumer Price Index (CPI) for the calendar year prior to the April 1 effective date. The basic COLA increase in retirement allowance is up to 3% per year for Tier 1 and Tier 3; and up to 2% for Tier 2 and Tier 4 members. For any year in which the CPI exceeds the COLA percentage cap for a member, the excess percentage is accumulated ("banked") for that member and subsequently applied as an increase to the allowance in a later year when the CPI figure falls short of the relevant cap.

Supplemental Benefits Excluded from Actuarial Valuation

Non-vested supplemental COLA and retiree healthcare program benefits are paid to eligible retirees and survivors. These supplemental benefits have been excluded from the pension plan funding valuation, but are included in the SRBR, OPEB and non-OPEB sufficiency valuation.

Contribution Rates

Basic member contribution rates are based on a formula reflecting the age at entry into the Association. The rates are such as to provide, for each year of service, an average annuity at age 60 of 1⁄100 of FAS for General members under Tier 1; at age 60 of 1⁄120 of FAS for General members under Tier 2; at age 55 of 1⁄100 of FAS for General members under Tier 3; 50% of the total Normal Cost rate for General Tier 4 members; at age 50 of 1⁄100 of FAS for non-Tier 4 Safety members; and 50% of the total Normal Cost rate for Safety Tier 4 members.

Note that in estimating FAS, an assumption to anticipate how much unused vacation would be available for conversion at retirement is included for non-Tier 4 members. Member cost of living contribution rates are actuarially determined to pay for one-half of future cost of living liabilities.

For non-Tier 4 members whose benefits are integrated with Social Security, the above contributions are reduced by one-third of that portion of such contribution payable with respect to the first $161 of biweekly salary. Member contributions are refundable upon termination from employment.

Employer contribution rates are actuarially determined to provide for the balance of the contributions needed to fund the benefits promised under the pension plan.

Exemption from Contributions After Thirty Years of Service

Non-Tier 4 Safety members with 30 or more years of service and General members hired on or before March 7, 1973 with 30 or more years of service are exempt from paying member contributions. However, Safety members in Tier 2D are required to continue paying the 3% cost-sharing contribution after 30 years of service.

Statistical

This section provides the multi-year trend of financial and operating information to facilitate comprehensive understanding of how the organization's financial position and performance has changed over time. More specifically, the financial and operating information provides contextual data for the fiduciary net position, benefits, refunds, contribution rates and different types of retirement benefits.

Statistical

This section provides additional historical perspective, context, and detail in order to provide a more comprehensive understanding of this year's financial statements, note disclosures, and supplementary information, covering pension plan benefits, postemployment medical benefits and non-OPEB. This section also provides multi-year trend of financial and operating information to facilitate comprehensive understanding of how the organization's financial position and performance has changed over time. More specifically, the financial and operating information provides contextual data for the fiduciary net position, benefits, refunds, contribution rates and different types of retirement benefits. This information was produced by either ACERA's actuary or from ACERA's member database.

Additions to Fiduciary Net Position by Source

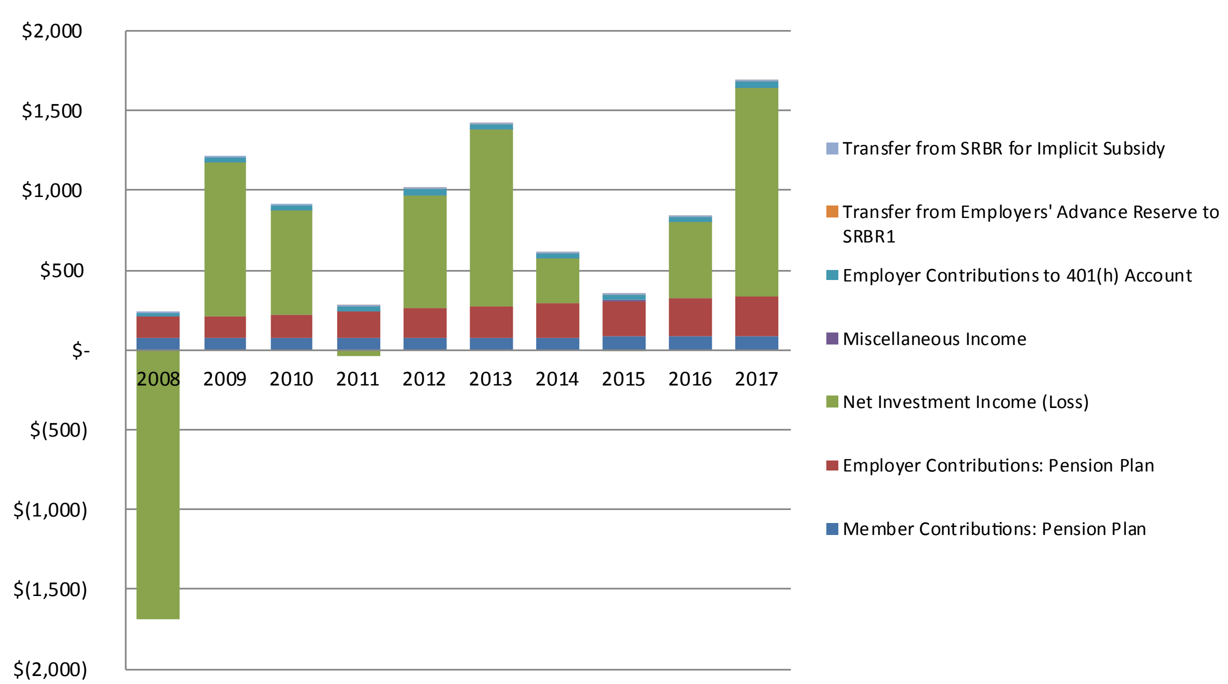
(Dollars in Millions)

Year Ended December 31	Member Contributions	Employer Contributions	Net Investment Income (Loss)	Misc. Income	Employer Contributions to 401(h) Account	Transfer from Employers' Advance Reserve to SRBR[1]	Transfer from SRBR for Implicit Subsidy	Total Additions
2008	$ 75.6	$ 129.7	$ (1,685.2)	$ 0.5	$ 28.5	$ -	$ 3.1	$ (1,447.8)
2009	77.3	132.2	963.6	2.3	27.9	-	4.1	1,207.4
2010	77.6	147.5	648.1	0.5	29.5	-	5.3	908.5
2011	78.0	162.9	(40.7)	0.7	32.3	0.4	4.4	238.0
2012	78.6	179.6	711.9	0.9	33.4	1.0	4.4	1,009.8
2013	76.2	191.2	1,109.7	0.2	32.2	1.1	7.4	1,418.0
2014	79.7	213.3	280.6	0.4	34.0	1.1	7.0	616.1
2015	82.9	224.6	(6.5)	2.0	36.5	1.2	5.3	346.0
2016	85.8	241.7	470.0	0.5	33.8	1.2	6.0	839.0
2017	89.3	247.1	1,308.2	0.9	38.3	1.2	8.8	1,693.8

1 Effective July 1, 2011, ACERA adopted Section 31618.5 of the 1937 Act. In compliance with this law, employers allocate a portion of their contribution to the 401(h) account for estimated administrative cost of these benefits, in addition to contributions for the Postemployment Medical Benefits.

Additions to Fiduciary Net Position by Source

(Dollars in Millions)



Deductions from Fiduciary Net Position by Type

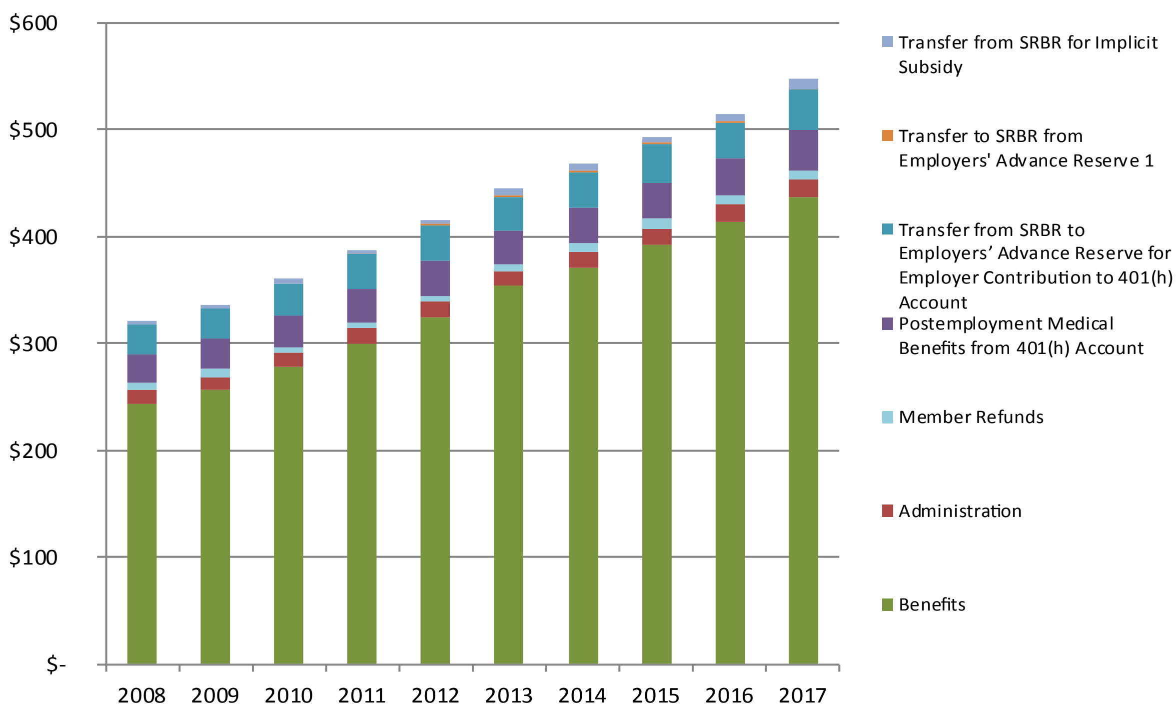
(Dollars in Millions)

Year Ended December 31	Benefits	Administration	Member Refunds	Postemployment Medical Benefits from 401(h) Account	Transfer from SRBR to Employers' Advance Reserve for Employer Contribution to 401(h) Account	Transfer to SRBR from Employers' Advance Reserve[1]	Transfer from SRBR for Implicit Subsidy	Total Deductions
2008	$ 242.9	$ 13.3	$ 6.5	$ 26.7	$ 28.5	$ -	$ 3.1	$ 321.0
2009	256.7	12.3	7.7	27.8	27.9	-	4.1	336.5
2010	277.7	13.0	5.6	29.8	29.5	-	5.3	360.9
2011	300.2	13.8	5.4	31.6	32.3	0.4	4.4	388.1
2012	324.5	14.1	5.9	32.7	33.4	1.0	4.4	416.0
2013	353.6	14.7	6.3	30.6	32.2	1.1	7.4	445.9
2014	371.2	15.0	7.5	32.6	34.0	1.1	7.0	468.4
2015	392.3	15.4	9.0	33.7	36.5	1.2	5.3	493.4
2016	413.8	15.8	8.5	34.9	33.8	1.2	6.0	514.0
2017	437.4	15.8	7.9	37.9	38.3	1.2	8.8	547.3

1 Effective July 1, 2011, ACERA adopted Section 31618.5 of the 1937 Act. In compliance with this law, employers allocate a portion of their contribution to the 401(h) account for estimated administrative cost of these benefits, in addition to contributions for the Postemployment Medical Benefits.

Deductions from Fiduciary Net Position by Type

(Dollars in Millions)



Changes in Pension Plan Net Position
Last Ten Fiscal Years

For the Years Ended December 31 (Dollars in Millions)

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
ADDITIONS										
Member Contributions	$ 89.3	$ 85.8	$ 82.9	$ 79.7	$ 76.2	$ 78.6	$ 78.0	$ 77.6	$ 77.3	$ 75.6
Employer Contributions	208.8	207.9	188.1	179.3	159.0	146.2	130.6	118.0	104.3	101.2
Total Contributions	**298.1**	**293.7**	**271.0**	**259.0**	**235.2**	**224.8**	**208.6**	**195.6**	**181.6**	**176.8**
Investment and Miscellaneous Income (Net of Expenses)	1,309.1	470.5	(4.5)	281.0	1,116.0	712.8	(40.0)	648.6	965.9	(1,684.7)
Transfer from SRBR for Employers contri-butios to 401(h) Account	38.3	33.8	36.5	34.0	32.2	33.4	32.3	29.5	27.9	28.5
Transfer from SRBR for Employers Implicit Subsidy	8.8	6.0	5.3	7.0	7.4	4.4	4.4	5.3	4.1	3.1
Earnings Allocated to Postemployment Medical Benefits Reserve	(64.5)	(58.8)	(102.8)	(179.4)	(109.8)	(8.4)	(17.4)	(4.4)	(16.1)	(24.7)
Earnings Allocated to Non-OPEB Reserve	(2.7)	(2.5)	(4.4)	(7.8)	(4.9)	(1.0)	(2.1)	(0.5)	(2.0)	(3.2)
Total Additions	**1,587.1**	**742.7**	**201.1**	**393.8**	**1,276.1**	**966.0**	**185.8**	**874.1**	**1,161.4**	**(1,504.2)**
DEDUCTIONS										
Benefit Payments	436.0	412.3	390.5	369.1	351.4	320.8	295.8	272.9	252.2	237.3
Refunds	7.9	8.5	9.0	7.5	6.3	5.9	5.4	5.6	7.7	6.5
Administration Expenses	14.6	14.6	14.2	13.9	13.6	13.1	13.4	13.0	12.3	13.3
Transfer to SRBR from Employers' Advance Reserve[1]	1.2	1.2	1.2	1.1	1.1	1.0	0.4	-	-	-
Total Deductions	**459.7**	**436.6**	**414.9**	**391.6**	**372.4**	**340.8**	**315.0**	**291.5**	**272.2**	**257.1**
Changes in Pension Plan Net Position	**$ 1,127.4**	**$ 306.1**	**$ (213.8)**	**$ 2.2**	**$ 903.7**	**$ 625.2**	**$ (129.2)**	**$ 582.6**	**$ 889.2**	**$(1,761.3)**

1 Effective July 1, 2011, ACERA adopted Section 31618.5 of the 1937 Act. In compliance with this law, employers allocate a portion of their contribution to the 401(h) account for estimated administrative cost of these benefits, in addition to contributions for the Postemployment Medical Benefits.

Changes in Postemployment Medical Benefits Net Position
Last Ten Fiscal Years

For the Years Ended December 31 (Dollars in Millions)

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
ADDITIONS										
Employer Contributions	$ 38.3	$ 33.8	$ 36.5	$ 34.0	$ 32.2	$ 33.4	$ 32.3	$ 29.5	$ 27.9	$ 28.5
Earnings Allocated to Postemployment Medical Benefits	64.5	58.8	102.8	179.4	109.8	8.4	17.4	4.4	16.1	24.7
Transfer from Employers' Advance Reserve to SRBR[1]	1.2	1.2	1.2	1.1	1.1	1.0	0.4	-	-	-
Transfer from SRBR Non-OPEB Reserve	-	-	-	-	34.1	-	-	-	-	-
Total Additions	**104.0**	**93.8**	**140.5**	**214.5**	**177.2**	**42.8**	**50.1**	**33.9**	**44.0**	**53.2**
DEDUCTIONS										
Administrative Expenses[1]	1.2	1.2	1.2	1.1	1.1	1.0	0.4	-	-	-
Postemployment Medical Benefits Payments[2]	37.9	34.9	33.7	32.6	30.6	32.7	31.6	29.8	27.8	26.7
Transfer to Employers' Advance Reserve from SRBR for Employer Contributions to 401(h) Account	38.3	33.8	36.5	34.0	32.2	33.4	32.3	29.5	27.9	28.5
Transfer to Employers' Advance Reserve for Implicit Subsidy	8.8	6.0	5.3	7.0	7.4	4.4	4.4	5.3	4.1	3.1
Total Deductions	**86.2**	**75.9**	**76.7**	**74.7**	**71.3**	**71.5**	**68.7**	**64.6**	**59.8**	**58.3**
Changes in Postemployment Medical Benefits Net Position	**$ 17.8**	**$ 17.9**	**$ 63.8**	**$ 139.8**	**$ 105.9**	**$ (28.7)**	**$ (18.6)**	**$ (30.7)**	**$ (15.8)**	**$ (5.1)**

1 Effective July 1, 2011, ACERA adopted Section 31618.5 of the 1937 Act. In compliance with this law, employers allocate a portion of their contribution to the 401(h) account for estimated administrative cost of these benefits, in addition to contributions for the Postemployment Medical Benefits.

2 Postemployment Medical Benefits are paid from the 401(h) account.

Changes in Non-OPEB Net Position
Last Ten Fiscal Years

For the Years Ended December 31 (Dollars in Millions)

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
ADDITIONS										
Earnings Allocated to Non-OPEB	$ 2.7	$ 2.5	$ 4.4	$ 7.8	$ 4.9	$ 1.0	$ 2.1	$ 0.5	$ 2.0	$ 3.2
Dispersal of the Death Benefit-Burial Reserve	-	-	-	-	(6.1)	-	-	-	-	-
Transfer to SRBR OPEB Reserve	-	-	-	-	(34.1)	-	-	-	-	-
Total Additions	**2.7**	**2.5**	**4.4**	**7.8**	**(35.3)**	**1.0**	**2.1**	**0.5**	**2.0**	**3.2**
DEDUCTIONS										
Non-OPEB Payments	1.4	1.5	1.8	2.1	2.2	3.7	4.4	4.8	4.5	5.6
Total Deductions	**1.4**	**1.5**	**1.8**	**2.1**	**2.2**	**3.7**	**4.4**	**4.8**	**4.5**	**5.6**
Changes in Non-OPEB Net Position	**$ 1.3**	**$ 1.0**	**$ 2.6**	**$ 5.7**	**$ (37.5)**	**$ (2.7)**	**$ (2.3)**	**$ (4.3)**	**$ (2.5)**	**$ (2.4)**

Benefit Expenses by Type (Actuary's Exhibit VIII)

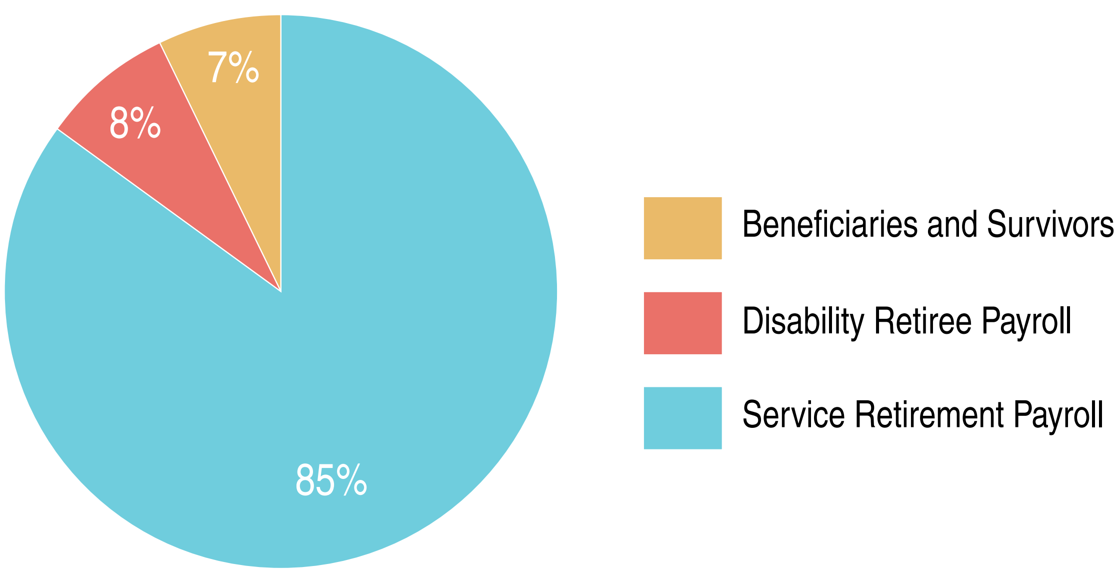
For the Years Ended December 31[1] (Dollars in Thousands)

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Service Retirement Payroll										
Basic	$ 290,499	$ 275,935	$ 263,509	$ 253,426	$ 240,582	$ 220,298	$ 204,448	$ 184,845	$ 168,694	$ 156,160
COLA	82,757	75,702	69,398	64,455	59,502	55,450	50,113	48,001	44,596	43,190
Total	**373,256**	**351,637**	**332,907**	**317,881**	**300,084**	**275,748**	**254,561**	**232,846**	**213,290**	**199,350**
Disability Retiree Payroll										
Basic	27,674	26,572	24,793	23,583	22,187	21,396	20,675	19,860	19,141	18,549
COLA	8,569	8,003	7,385	6,987	6,424	6,054	5,534	5,211	4,793	4,466
Total	**36,243**	**34,575**	**32,178**	**30,570**	**28,611**	**27,450**	**26,209**	**25,071**	**23,934**	**23,015**
Beneficiaries and Survivors										
Basic	19,179	18,643	17,495	16,675	15,550	14,559	13,558	12,484	11,887	11,212
COLA	12,627	11,844	10,975	10,242	9,602	9,122	8,335	7,779	7,325	6,908
Total	**31,806**	**30,487**	**28,470**	**26,917**	**25,152**	**23,681**	**21,893**	**20,263**	**19,212**	**18,120**
Total	**$ 441,305**	**$ 416,699**	**$ 393,555**	**$ 375,368**	**$ 353,847**	**$ 326,879**	**$ 302,663**	**$ 278,180**	**$ 256,436**	**$ 240,485**

1 As permitted by the Actuarial Standard of Practice Statement No. 4 (Measuring Pension Obligations), the actuarial valuation has been prepared based on participant data provided by ACERA as of November 30.

Benefit Expenses by Type

For the Year Ended December 31, 2017



Benefit and Refund Deductions Combined from Pension Plan, Postemployment Medical Benefits, and Non-OPEB Net Position by Type
Last Ten Fiscal Years[1]

For the Years Ended December 31 (Dollars in Thousands)

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Type of Benefit										
Age and Service Benefits:										
Retirees	$ 406,234	$ 383,144	$ 362,618	$ 344,463	$ 329,273	$ 302,105	$ 279,581	$ 259,279	$ 237,590	$ 221,532
Survivors	22,962	21,226	21,878	20,070	17,357	18,555	17,059	15,183	14,787	15,033
Death in Service Benefits:										
Survivors	2,967	2,809	2,797	2,791	2,786	2,714	2,641	2,362	2,161	4,030
Disability Benefits:										
Retirees - Duty	35,691	33,964	31,543	29,948	28,678	27,914	26,836	25,586	25,094	23,981
Retirees - Non-duty	4,115	4,264	4,165	3,944	3,728	3,847	3,796	3,473	3,332	3,539
Supplemental Disability	72	220	121	19	70	105	64	59	138	80
Survivors	3,258	3,052	2,871	2,592	2,296	2,000	1,774	1,563	1,385	1,317
Total Benefits	**$ 475,299**	**$ 448,679**	**$ 425,993**	**$ 403,827**	**$ 384,188**	**$ 357,240**	**$ 331,751**	**$ 307,505**	**$ 284,487**	**$ 269,512**
Type of Refund										
Death	$ 1,822	$ 1,501	$ 1,542	$ 313	$ 1,825	$ 529	$ 890	$ 2,097	$ 1,608	$ 1,093
Miscellaneous	56	295	14	25	130	9	39	28	81	74
Separation	6,015	6,675	7,435	7,115	4,364	5,355	4,477	3,520	6,029	5,360
Total Refunds	**$ 7,893**	**$ 8,471**	**$ 8,991**	**$ 7,453**	**$ 6,319**	**$ 5,893**	**$ 5,406**	**$ 5,645**	**$ 7,718**	**$ 6,527**

1 Postemployment Medical Benefits are paid from the 401(h) account.

Benefit and Refund Deductions from Pension Plan Net Position by Type
Last Ten Fiscal Years

For the Years Ended December 31 (Dollars in Thousands)

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Type of Benefit										
Age and Service Benefits:										
Retirees	$ 371,716	$ 351,440	$ 331,998	$ 314,702	$ 301,372	$ 271,692	$ 248,890	$ 229,982	$ 210,938	$ 196,469
Survivors	22,191	20,406	20,937	19,041	16,370	17,177	16,032	14,086	13,570	12,760
Death in Service Benefits:										
Survivors	2,908	2,744	2,730	2,715	2,698	2,611	2,539	2,258	2,051	3,384
Disability Benefits:										
Retirees - Duty	32,296	30,667	28,302	26,727	25,461	24,061	23,300	22,047	21,344	20,304
Retirees - Non-duty	3,606	3,753	3,638	3,424	3,218	3,266	3,291	2,997	2,755	2,960
Supplemental Disability	72	220	121	19	69	104	63	58	137	79
Survivors	3,188	2,984	2,811	2,536	2,234	1,933	1,711	1,509	1,331	1,317
Total Benefits	**$ 435,977**	**$ 412,214**	**$ 390,537**	**$ 369,164**	**$ 351,422**	**$ 320,844**	**$ 295,826**	**$ 272,937**	**$ 252,126**	**$ 237,273**
Type of Refund										
Death	$ 1,822	$ 1,501	$ 1,542	$ 313	$ 1,825	$ 529	$ 890	$ 2,097	$ 1,608	$ 1,093
Miscellaneous	56	295	14	25	130	9	39	28	81	74
Separation	6,015	6,675	7,435	7,115	4,364	5,355	4,477	3,520	6,029	5,360
Total Refunds	**$ 7,893**	**$ 8,471**	**$ 8,991**	**$ 7,453**	**$ 6,319**	**$ 5,893**	**$ 5,406**	**$ 5,645**	**$ 7,718**	**$ 6,527**

Benefit and Refund Deductions from Postemployment Medical Benefits Net Position by Type[1]
Last Ten Fiscal Years

For the Years Ended December 31 (Dollars in Thousands)

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Type of Benefit										
Age and Service Benefits:										
Retirees	$ 34,116	$ 31,239	$ 30,050	$ 29,030	$ 27,051	$ 28,482	$ 27,743	$ 26,039	$ 23,801	$ 22,743
Survivors	-	-	-	-	-	-	-	-	-	-
Disability benefits:										
Retirees - Duty	3,310	3,209	3,152	3,094	3,068	3,693	3,371	3,355	3,555	3,473
Retirees - Non-duty	478	479	484	466	449	516	440	407	482	465
Supplemental Disability	-	-	-	-	1	1	1	1	1	1
Survivors	-	-	-	-	-	-	-	-	-	-
Total Benefits	**$ 37,904**	**$ 34,927**	**$ 33,686**	**$ 32,590**	**$ 30,569**	**$ 32,692**	**$ 31,555**	**$ 29,802**	**$ 27,839**	**$ 26,682**

1 Postemployment Medical Benefits are paid from the 401(h) account.

Benefit and Refund Deductions from Non-OPEB Net Position by Type
Last Ten Fiscal Years

For the Years Ended December 31 (Dollars in Thousands)

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Type of Benefit										
Age and Service Benefits:										
Retirees	$ 402	$ 465	$ 570	$ 731	$ 850	$ 1,931	$ 2,948	$ 3,258	$ 2,851	$ 2,320
Survivors	771	820	941	1,029	987	1,378	1,027	1,097	1,217	2,273
Death in Service Benefits:										
Survivors	59	65	67	76	88	103	102	104	110	646
Disability Benefits:										
Retirees - Duty	85	88	89	127	149	160	165	184	195	204
Retirees - Non-duty	31	32	43	54	61	65	65	69	95	114
Supplemental Disability	-	-	-	-	-	-	-	-	-	-
Survivors	70	68	60	56	62	67	63	54	54	-
Total Benefits	**$ 1,418**	**$ 1,538**	**$ 1,770**	**$ 2,073**	**$ 2,197**	**$ 3,704**	**$ 4,370**	**$ 4,766**	**$ 4,522**	**$ 5,557**

Employer Contribution Rates (Percent of Payroll) (Actuary's Exhibit X) Last Ten Years

Fiscal Year Beginning July 1 - Effective month of September

	County								
	General Member			Safety Member					
Year	Tier 1	Tier 2	Tier 4[1]	Tier 1	Tier 2	Tier 2C[2]	Tier 2D[2]	Tier 4[1]	Aggregate[3]
2008/2009	13.81	11.89	-	34.90	27.46	-	-	-	15.85
2009/2010	14.60	13.05	-	43.51	33.51	-	-	-	18.23
2010/2011	15.78	14.47	-	48.72	37.14	36.37	34.36	-	20.10[4]
2011/2012	17.61	16.35	-	53.65	41.32	41.14	40.50	-	22.42
2012/2013	17.76	16.84	16.18	56.09	43.58	44.45	42.02	41.89	23.16[5]
2013/2014	19.86	19.19	17.77	62.25	48.91	51.05	46.61	47.27	26.04
2014/2015	19.58	18.66	17.45	66.88	49.57	52.29	47.01	50.68	25.65
2015/2016	20.86	20.11	19.22	71.82	54.00	55.81	51.41	52.72	27.67
2016/2017	20.22	19.39	18.54	70.87	52.73	54.05	50.10	50.89	26.96
2017/2018	20.10	19.37	18.63	68.31	53.25	54.64	51.11	50.90	27.09

	AHS, Superior Court and First 5			Other Participating Employers	Housing Authority[6]	LARPD	Housing Authority / Office of Education	LARPD Only
	General Member							
Year	Tier 1	Tier 2	Tier 4[1]	Tier 1	Tier 2	Tier 3	Tier 4[1]	Tier 4[1]
2008/2009	13.92	12.00	-	18.89	-	22.11	-	-
2009/2010	14.74	13.19	-	19.50	-	22.65	-	-
2010/2011	15.98	14.67	-	20.79	-	24.12	-	-
2011/2012	17.86	16.60	-	22.74	21.48	24.66	-	-
2012/2013	18.07	17.15	16.49	23.11	22.19	29.15	21.53	23.08
2013/2014	20.27	19.60	18.18	25.38	24.71	30.94	23.29	24.06
2014/2015	20.08	19.16	17.95	25.32	24.40	30.37	23.19	23.69
2015/2016	21.42	20.67	19.78	26.69	25.94	29.32	25.05	22.87
2016/2017	20.84	20.01	19.16	26.22	25.39	26.17	24.54	19.29
2017/2018	20.81	20.08	19.34	26.21	25.48	26.39	24.74	19.76

1 Resulting from CalPEPRA legislation. Tier 4 became effective January 1, 2013.

2 New Sheriff's Department employees (excluding Probation Officers) hired on or after October 17, 2010.

3 The aggregate rate is based on payroll as of the prior December 31 date.

4 Aggregate rate is calculated based on December 31, 2009 valuation projected payroll. It is determined prior to the establishment of Safety Tiers 2C and 2D.

5 Aggregate rate is calculated based on December 31, 2011 valuation projected payroll. It is determined prior to the establishment of Tier 4.

6 Rate combined with the Other Participating Employers before December 31, 2011 valuation.

Employee Contribution Rates (Percent of Payroll)
Last Ten Years

Fiscal Year Beginning July 1 - Effective month of September

	County and Other Participating Employers									
	General Member				Safety Member					
Year	Tier 1	Tier 2	Tier 3[1]	Tier 4	Tier 1	Tier 2	Tier 2C[2]	Tier 2D[3]	Tier 4	Aggregate
2008/2009	9.57	7.36	12.53	-	14.70	13.53	-	-	-	8.64
2009/2010	9.42	7.22	12.44	-	14.37	14.29	-	-	-	8.66
2010/2011	9.64	7.31	12.59	-	13.56	14.46	11.23	16.65	-	8.74
2011/2012	9.79	7.29	12.74	-	13.33	14.41	11.51	17.41	-	8.68
2012/2013	9.13	7.04	12.48	8.25	11.99	14.04	11.91	16.72	13.75	8.33
2013/2014	9.02	7.32	12.78	8.25	11.53	14.77	12.50	16.43	13.75	8.60
2014/2015	8.97	7.28	12.69	8.12	12.24	14.72	12.57	16.39	16.77	8.58
2015/2016	9.02	7.41	12.89	8.09	12.59	15.08	12.76	16.73	15.25	8.75
2016/2017	9.23	7.36	13.15	8.06	10.71	15.04	12.67	16.48	14.65	8.77
2017/2018	9.19	7.36	13.15	8.10	12.22	15.04	12.53	16.32	14.20	8.80

1 Tier 3 rate only applies to LARPD effective from October 1, 2008.

2 New Tiers starting as early as October 17, 2010. Estimated assuming new members would have the same demographic profile as current active members hired during the last three years prior to the December 31, 2009 valuation date, as actual data is not available.

3 Rate includes the 5% cost-sharing contribution (with less than 5 years of vesting service) and 3% (with 5 or more years of vesting service).

Retired Members by Type of Benefit and Option Selected - Summary of Monthly Allowances Being Paid for the Month of December 31, 2017[1] (Actuary's Exhibit IX)

			Monthly Allowance	
	Number	**Basic**	**Cost of Living**	**Total**
GENERAL MEMBERS				
Service Retirement				
Unmodified	5,438	$ 16,023,150	$ 4,612,551	$ 20,635,701
Option 1	390	1,015,792	204,464	1,220,256
Option 2	371	886,432	233,856	1,120,288
Option 3	23	56,866	16,668	73,534
Option 4	22	56,673	9,371	66,044
Total	**6,244**	**18,038,913**	**5,076,910**	**23,115,823**
Disability				
Unmodified	580	1,172,902	402,505	1,575,407
Option 1	21	32,206	9,558	41,764
Option 2	4	5,253	740	5,993
Option 3	2	4,699	1,169	5,868
Option 4	0	-	-	-
Total	**607**	**1,215,060**	**413,972**	**1,629,032**
Beneficiaries	961	1,113,264	765,337	1,878,601
Total General	**7,812**	**$ 20,367,237**	**$ 6,256,219**	**$ 26,623,456**

		Monthly Allowance		
	Number	**Basic**	**Cost of Living**	**Total**
SAFETY MEMBERS				
Service Retirement				
Unmodified	1,000	$ 5,581,750	$ 1,704,775	$ 7,286,525
Option 1	40	185,316	28,700	214,016
Option 2	90	364,624	81,264	445,888
Option 3	4	31,933	3,825	35,758
Option 4	1	5,730	955	6,685
Total	**1,135**	**6,169,353**	**1,819,519**	**7,988,872**
Disability				
Unmodified	271	1,069,723	290,714	1,360,437
Option 1	6	14,744	4,987	19,731
Option 2	2	3,371	497	3,868
Option 3	2	3,235	3,905	7,140
Option 4	0	-	-	-
Total	**281**	**1,091,073**	**300,103**	**1,391,176**
Beneficiaries	251	484,974	286,925	771,899
Total Safety	**1,667**	**$ 7,745,400**	**$ 2,406,547**	**$ 10,151,947**
Total General and Safety	**9,479**	**$ 28,112,637**	**$ 8,662,766**	**$ 36,775,403**

1 As permitted by the Actuarial Standard of Practice Statement No. 4 (Measuring Pension Obligations), the actuarial valuation has been prepared based on participant data provided by ACERA as of November 30.

Note: Results may not add due to rounding.

Retired Members by Type of Benefit – Pension Plan

As of December 31, 2017

Amount of Monthly Benefit	Number of Retired Members	Type of Benefit: Duty Disability Retirement	Non-Duty Disability Retirement	DRO Lifetime Annuity	Service Retirement	Survivorship	Continuance	Supplemental Disability	Option Selected: Unmodified - 60% Contingent Joint & Survivor	Option 1 - Single Life	Option 2 - 100% Contingent Joint & Survivor	Option 3 - 50% Contingent Joint & Survivor	Option 4 - 33% Contingent Joint & Survivor
$ 1 to $ 300	249	6	2	15	170	1	55	-	124	84	39	2	-
301 to 600	413	2	2	36	287	7	78	1	244	128	39	2	-
601 to 900	475	2	11	25	327	15	95	-	287	156	31	1	-
901 to 1,200	559	3	15	14	438	18	71	-	380	131	45	3	-
1,201 to 1,500	611	5	35	16	445	17	93	-	419	144	47	1	-
1,501 to 1,800	612	37	34	14	443	10	73	1	419	130	62	1	-
1,801 to 2,100	584	70	24	13	402	9	66	-	376	115	91	2	-
2,101 to 2,400	578	104	15	10	397	7	45	-	363	83	130	2	-
2,401 to 2,700	440	76	8	6	308	4	38	-	275	74	88	2	1
2,701 to 3,000	460	60	9	11	336	4	40	-	318	71	69	2	-
Over $3,000	4,518	357	11	28	3,851	23	247	1	3,473	486	546	13	-
Total	**9,499**	**722**	**166**	**188**	**7,404**	**115**	**901**	**3**	**6,678**	**1,602**	**1,187**	**31**	**1**

Retired Members by Type of Benefit - Postemployment Medical Benefits

As of December 31, 2017

Amount of Monthly Benefit	Number of Retired Members	Type of Benefit: Duty Disability Retirement	Non-Duty Disability Retirement	DRO Lifetime Annuity	Service Retirement	Survivorship	Continuance	Supplemental Disability	Option Selected: Unmodified - 60% Contingent Joint & Survivor	Option 1 - Single life	Option 2 - 100% Contingent Joint & Survivor	Option 3 - 50% Contingent Joint & Survivor	Option 4 - 33% Contingent Joint & Survivor
$ 1 to $ 300	2,522	266	87	-	2,169	-	-	-	1,985	113	413	10	1
301 to 600	4,828	450	69	-	4,309	-	-	-	3,904	287	622	15	-
601 to 900	35	3	1	-	31	-	-	-	30	1	4	-	-
Total	**7,385**	**719**	**157**	**-**	**6,509**	**-**	**-**	**-**	**5,919**	**401**	**1,039**	**25**	**1**

Retired Members by Type of Benefit – Non-OPEB

As of December 31, 2017

		Type of Benefit							Option Selected				
Amount of Monthly Benefit	Number of Retired Members	Duty Disability Retirement	Non-Duty Disability Retirement	DRO Lifetime Annuity	Service Retirement	Survivorship	Continuance	Supplemental Disability	Unmodified - 60% Contingent Joint & Survivor	Option 1 - Single life	Option 2 - 100% Contingent Joint & Survivor	Option 3 - 50% Contingent Joint & Survivor	Option 4 - 33% Contingent Joint & Survivor
$ 1 to $ 300	202	12	8	1	94	8	79	-	97	91	14	-	-
301 to 600	60	1	2	-	21	3	33	-	23	36	1	-	-
601 to 900	32	1	1	-	4	1	25	-	5	26	1	-	-
901 to 1,200	17	4	-	-	4	-	9	-	4	9	4	-	-
1,201 to 1,500	4	1	-	-	1	1	1	-	1	2	1	-	-
1,501 to 1,800	1	-	-	-	1	-	-	-	1	-	-	-	-
Total	**316**	**19**	**11**	**1**	**125**	**13**	**147**	**-**	**131**	**164**	**21**	**-**	**-**

Average Pension Benefit Payments (Actuary's Exhibit VI) Last Ten Fiscal Years

Retirement Effective Dates[1]	Years of Service 0-4	5-9	10-14	15-19	20-24	25-29	30+	Incomplete Data
Period 1/1/08–12/31/08								
Average Monthly Pension Benefit	$ 805	$ 1,471	$ 1,825	$ 2,257	$ 3,445	$ 5,772	$ 7,014	N/A
Average Final Average Salary	$ 7,749	$ 6,730	$ 6,270	$ 5,983	$ 6,667	$ 7,863	$ 8,449	N/A
Number of Retired Members Added	21	30	43	38	70	45	76	80
Period 1/1/09–12/31/09								
Average Monthly Pension Benefit	$ 956	$ 1,163	$ 1,681	$ 2,295	$ 3,653	$ 6,730	$ 6,913	N/A
Average Final Average Salary	$ 6,507	$ 5,698	$ 6,041	$ 6,700	$ 6,922	$ 9,144	$ 8,080	N/A
Number of Retired Members Added	17	19	26	27	70	58	70	91
Period 1/1/10–12/31/10								
Average Monthly Pension Benefit	$ 558	$ 1,417	$ 1,816	$ 2,512	$ 3,397	$ 5,336	$ 7,220	N/A
Average Final Average Salary	$ 8,930	$ 5,863	$ 6,998	$ 6,623	$ 6,831	$ 7,944	$ 8,790	N/A
Number of Retired Members Added	13	47	57	49	117	65	91	50
Period 1/1/11–12/31/11								
Average Monthly Pension Benefit	$ 638	$ 1,180	$ 1,735	$ 2,598	$ 3,852	$ 5,704	$ 6,799	N/A
Average Final Average Salary	$ 7,660	$ 6,031	$ 6,461	$ 6,426	$ 7,357	$ 8,320	$ 8,325	N/A
Number of Retired Members Added	21	59	84	63	124	83	90	53
Period 1/1/12–12/31/12								
Average Monthly Pension Benefit	$ 1,133	$ 1,343	$ 1,791	$ 2,852	$ 3,956	$ 5,560	$ 6,840	N/A
Average Final Average Salary	$ 6,971	$ 6,728	$ 6,445	$ 7,147	$ 7,722	$ 8,461	$ 8,302	N/A
Number of Retired Members Added	19	39	91	45	99	79	80	59
Period 1/1/13–12/31/13								
Average Monthly Pension Benefit	$ 1,214	$ 1,133	$ 1,755	$ 2,412	$ 3,933	$ 5,029	$ 6,764	N/A
Average Final Average Salary	$ 9,387	$ 5,454	$ 6,766	$ 6,470	$ 7,592	$ 8,074	$ 8,211	N/A
Number of Retired Members Added	20	48	113	53	150	88	103	50
Period 1/1/14–12/31/14								
Average Monthly Pension Benefit	$ 851	$ 1,230	$ 1,874	$ 2,904	$ 3,481	$ 5,438	$ 6,204	N/A
Average Final Average Salary	$ 9,411	$ 6,884	$ 6,929	$ 7,397	$ 7,290	$ 8,700	$ 8,095	N/A
Number of Retired Members Added	21	36	102	59	85	89	62	44
Period 1/1/15–12/31/15								
Average Monthly Pension Benefit	$ 1,004	$ 1,642	$ 1,912	$ 2,722	$ 3,682	$ 5,164	$ 6,238	N/A
Average Final Average Salary	$ 9,461	$ 7,007	$ 6,933	$ 7,198	$ 7,752	$ 8,271	$ 8,205	N/A
Number of Retired Members Added	24	45	92	62	76	63	68	39
Period 1/1/16–12/31/16								
Average Monthly Pension Benefit	$ 998	$ 1,820	$ 1,742	$ 2,737	$ 3,456	$ 5,217	$ 6,164	N/A
Average Final Average Salary	$ 13,095	$ 10,334	$ 10,108	$ 7,775	$ 7,960	$ 9,002	$ 8,324	N/A
Number of Retired Members Added	22	54	89	76	82	81	75	44
Period 1/1/17–12/31/17								
Average Monthly Pension Benefit	$ 597	$ 1,749	$ 2,051	$ 2,527	$ 3,896	$ 4,624	$ 7,324	N/A
Average Final Average Salary	$ 8,571	$ 7,388	$ 7,629	$ 7,037	$ 7,679	$ 7,751	$ 9,185	N/A
Number of Retired Members Added	30	50	87	76	83	82	69	35

1 As permitted by the Actuarial Standard of Practice Statement No. 4 (Measuring Pension Obligations), the actuarial valuation has been prepared based on participant data provided by ACERA as of November 30.

Average Monthly Other Postemployment Benefits (OPEB) (Actuary's SRBR Exhibit IV) Last Ten Fiscal Years

Retirement Effective Dates[1,2]	Years of Service						
	0-4	5-9	10-14	15-19	20-24	25-29	30+
Period 1/1/08–12/31/08							
Average OPEB	$ 37	$ 37	$ 148	$ 257	$ 363	$ 402	$ 434
Number of Retired Members Added	19	28	42	37	72	46	90
Period 1/1/09–12/31/09							
Average OPEB	$ 43	$ 43	$ 211	$ 296	$ 497	$ 489	$ 508
Number of Retired Members Added	24	21	26	33	76	59	70
Period 1/1/10–12/31/10							
Average OPEB	$ 43	$ 43	$ 242	$ 313	$ 496	$ 534	$ 523
Number of Retired Members Added	13	45	54	44	116	63	90
Period 1/1/11–12/31/11							
Average OPEB	$ 46	$ 46	$ 184	$ 301	$ 535	$ 561	$ 535
Number of Retired Members Added	15	55	82	50	119	75	98
Period 1/1/12–12/31/12							
Average OPEB	$ 47	$ 47	$ 244	$ 360	$ 466	$ 485	$ 510
Number of Retired Members Added	16	35	81	40	94	75	85
Period 1/1/13–12/31/13							
Average OPEB	$ 46	$ 46	$ 221	$ 349	$ 463	$ 491	$ 489
Number of Retired Members Added	15	39	100	43	137	88	115
Period 1/1/14–12/31/14							
Average OPEB	$ 0[3]	$ 0[3]	$ 207	$ 298	$ 498	$ 471	$ 484
Number of Retired Members Added	18	31	95	54	78	77	68
Period 1/1/15–12/31/15							
Average OPEB	$ 0	$ 0	$ 273	$ 326	$ 461	$ 483	$ 538
Number of Retired Members Added	23	34	79	53	67	58	74
Period 1/1/16–12/31/16							
Average OPEB	$ 0	$ 0	$ 205	$ 337	$ 504	$ 502	$ 567
Number of Retired Members Added	21	48	76	69	63	74	75
Period 1/1/17–12/31/17							
Average OPEB	$ 0	$ 0	$ 227	$ 398	$ 509	$ 528	$ 522
Number of Retired Members Added	26	40	76	72	75	78	76

1 As permitted by the Actuarial Standard of Practice Statement No. 6 (Measuring Retiree Group Benefits Obligations), the actuarial valuation has been prepared based on participant data provided by ACERA as of November 30.

2 Information for periods prior to 1/1/09 is not available to the actuary.

3 Dental and vision subsidies ended in 2014 for most retired members with less than 10 years of service.

Note: The "Average Final Average Salary" is not provided since these benefits are not dependent on salary.

Participating Employers and Active Members (Actuary's Exhibit VII)

As of November 30 [1]

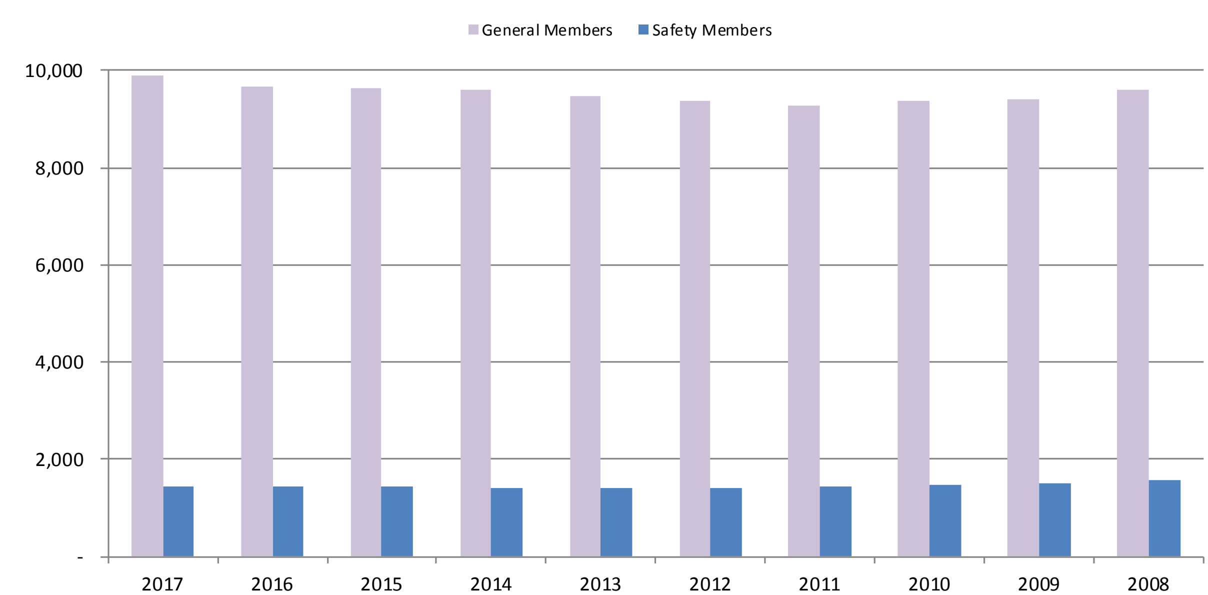
	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
County of Alameda										
General Members	6,681	6,606	6,601	6,584	6,448	6,334	6,361	6,417	6,415	6,446
Safety Members	1,436	1,438	1,437	1,408	1,392	1,408	1,441	1,488	1,520	1,574
Total	**8,117**	**8,044**	**8,038**	**7,992**	**7,840**	**7,742**	**7,802**	**7,905**	**7,935**	**8,020**
Other Participating Employers (General Members)										
Alameda Health System[2]	2,431	2,246	2,205	2,231	2,203	2,187	2,028	2,030	2,030	2,097
Alameda County Office of Education[3]	-	1	1	1	1	1	1	1	1	1
First 5 Alameda County	60	55	52	50	60	62	62	62	61	63
Housing Authority of the County of Alameda	57	59	62	61	63	66	65	73	71	72
Livermore Area Recreation & Park District	56	62	65	63	62	63	61	64	69	72
The Superior Court of California for the County of Alameda	602	644	648	627	648	679	705	744	760	848
Total	**3,206**	**3,067**	**3,033**	**3,033**	**3,037**	**3,058**	**2,922**	**2,974**	**2,992**	**3,153**
Total Active Membership										
General Members	9,887	9,673	9,634	9,617	9,485	9,392	9,283	9,391	9,407	9,599
Safety Members	1,436	1,438	1,437	1,408	1,392	1,408	1,441	1,488	1,520	1,574
Total	**11,323**	**11,111**	**11,071**	**11,025**	**10,877**	**10,800**	**10,724**	**10,879**	**10,927**	**11,173**

1 As permitted by the Actuarial Standard of Practice Statement No. 4 (Measuring Pension Obligations), the actuarial valuation has been prepared based on participant data provided by ACERA as of November 30.

2 Formerly named Alameda County Medical Center.

3 As of December 31, 2017, there were no active members in the Office of Education; however, there were still retired members in that participating agency as of that date.

Total Active Membership



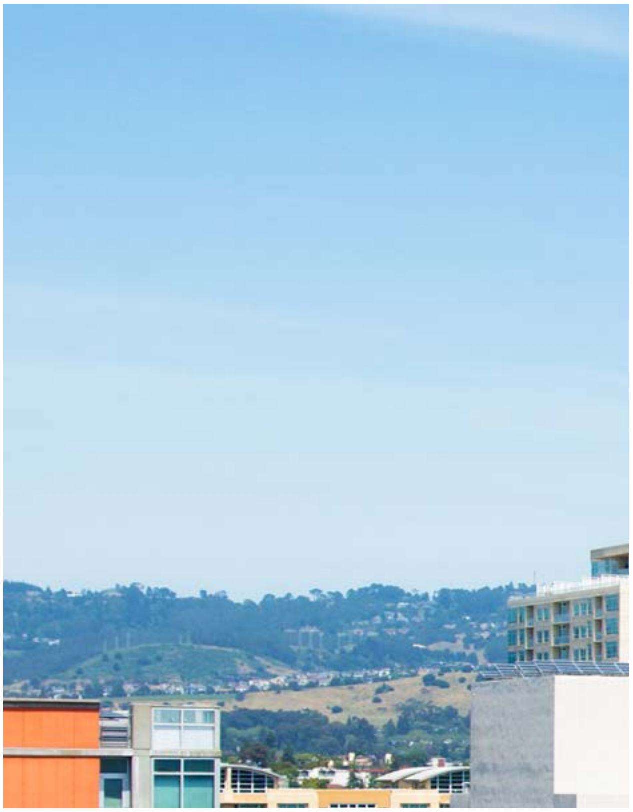
Principal Participating Employers for Pension Plan, Postemployment Medical Benefits and Non-OPEB - Current Year and Nine Years Ago

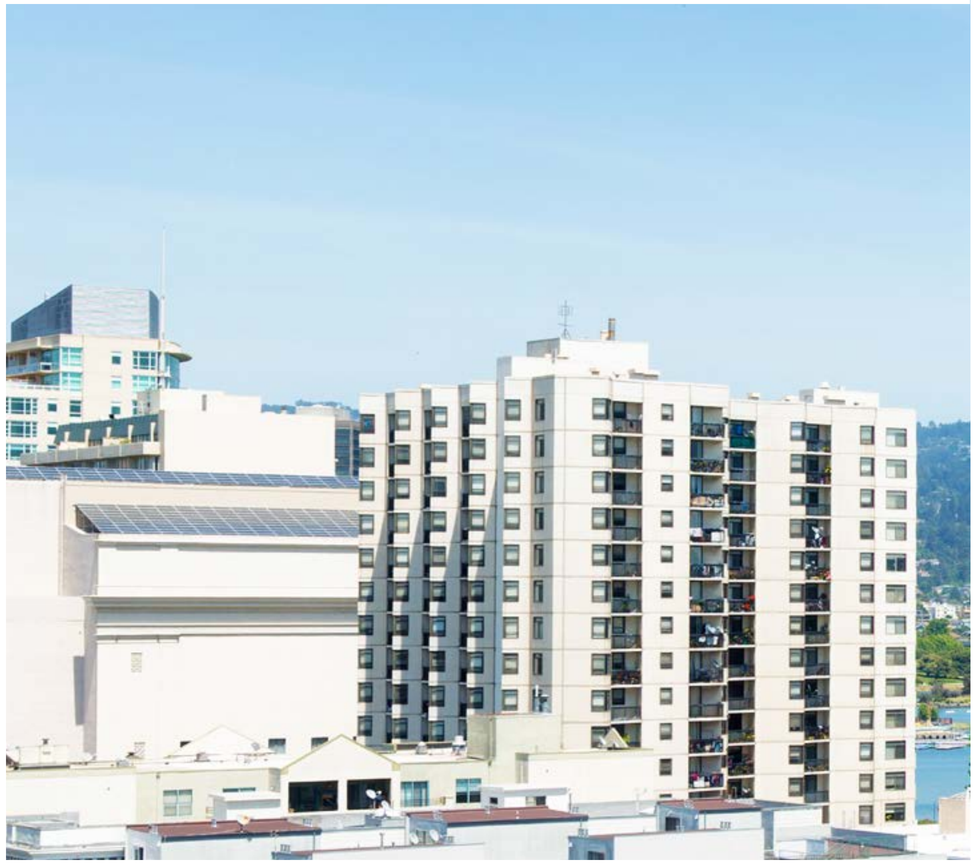
As of December 31

	2017				2008			
Participating Employers	**Covered Employees**	**Rank**	**Percentage of Total System**		**Covered Employees**	**Rank**	**Percentage of Total System**	
County of Alameda	8,107	1	71.7	%	8,031	1	72.1	%
Alameda Health System[1]	2,432	2	21.5		2,051	2	18.4	
The Superior Court of California for the County of Alameda	600	3	5.3		845	3	7.6	
Livermore Area Recreation & Park District	61	4	0.5		63	6	0.6	
Housing Authority of the County of Alameda	57	5	0.5		73	4	0.7	
First 5 Alameda County	56	6	0.5		72	5	0.6	
Alameda County Office of Education	-	-	-		1	7	-	
Total	**11,313**		**100**	**%**	**11,136**		**100**	**%**

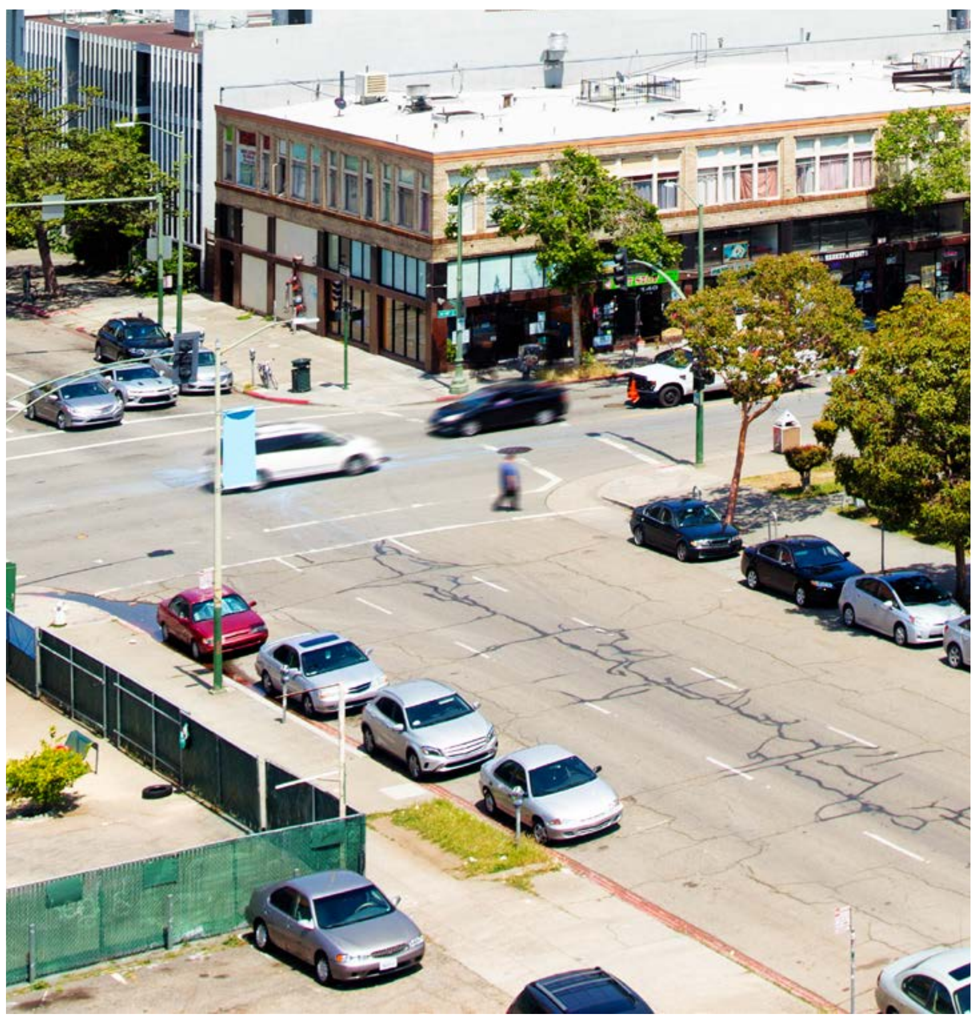
1 Formerly named Alameda County Medical Center.

Compliance





This report is an integral part of an audit performed in accordance with Government Auditing Standards in considering the entity's internal control and compliance.



WILLIAMS ADLEY

Independent Auditor's Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards*

Board of Retirement
Alameda County Employees' Retirement Association
Oakland, California

We have audited, in accordance with the 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, the financial statements of the Alameda County Employees' Retirement Association (ACERA), as of and for the year ended December 31, 2017, and the related notes to the financial statements, which collectively comprise ACERA's basic financial statements, and have issued our report thereon dated June 25, 2018.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered ACERA's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of ACERA's internal control. Accordingly, we do not express an opinion on the effectiveness of ACERA's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over financial reporting was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or, significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether ACERA's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, and contracts, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

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http://wacllp.com

WILLIAMS ADLEY

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communications is not suitable for any other purpose.

Williams, Adley & Company-CA, LLP

Oakland, California

June 25, 2018