Alameda County Employees' Retirement Association
BOARD OF RETIREMENT

AUDIT COMMITTEE/BOARD MEETING
NOTICE and AGENDA

ACERA MISSION:

To provide ACERA members and employers with flexible, cost-effective, participant-oriented benefits through prudent investment management and superior member services.

Thursday, May 16, 2019
1:00 p.m.

LOCATION	COMMITTEE MEMBERS	
ACERA C.G. "BUD" QUIST BOARD ROOM 475 14TH STREET, 10TH FLOOR OAKLAND, CALIFORNIA 94612-1900 MAIN LINE: 510.628.3000 FAX: 510.268.9574	HENRY LEVY, CHAIR	EX-OFFICIO
	TARRELL GAMBLE, VICE-CHAIR	APPOINTED
	KEITH CARSON	APPOINTED
	DALE AMARAL	ELECTED SAFETY
	ELIZABETH ROGERS	ELECTED GENERAL

Should a quorum of the Board attend this meeting, this meeting shall be deemed a joint meeting of the Board and Committee.

The order of agenda items is subject to change without notice. Board and Committee agendas and minutes are available online at www.acera.org.

Note regarding public comments: Public comments are limited to four (4) minutes per person in total.

Note regarding accommodations: The Board of Retirement will provide reasonable accommodations for persons with special needs of accessibility who plan to attend Board meetings. Please contact ACERA at (510) 628-3000 to arrange for accommodation.

AUDIT COMMITTEE/BOARD MEETING

Call to Order: 1:00 p.m.

Public Comment:

Action Items: Matters for Discussion and Possible Motion by the Committee

External Audit:

1. **Discussion and possible motion to recommend approval of the December 31, 2018 Audited Financial Statements and Independent Auditor's Report**

   - Margo Allen
   - Audrey Elbert

   Recommendation:
   The Audit Committee recommends to the Board of Retirement that the Board accept and file the December 31, 2018, Audited Financial Statements and Independent Auditors' Report.

2. **Discussion and possible motion to recommend adoption of the Government Accounting Standards Board (GASB) Statement No. 67 Actuarial Valuation as of December 31, 2018**

   - Margo Allen
   - Audrey Elbert

   Recommendation:
   The Audit Committee recommends to the Board of Retirement that the Board adopt the GASB Statement No. 67 Actuarial Valuation as of December 31, 2018.

3. **Discussion and possible motion to recommend adoption of the Government Accounting Standards Board (GASB) Statement No. 74 Actuarial Valuation as of December 31, 2018**

   - Margo Allen
   - Audrey Elbert

   Recommendation:
   The Audit Committee recommends to the Board of Retirement that the Board adopt the GASB Statement No. 74 Actuarial Valuation as of December 31, 2018.

4. **Discussion and possible motion to recommend adoption of the Addendums to the Governmental Accounting Standards Board (GASB) Statement No. 67 and Statement No 74 Actuarial Valuations as of December 31, 2018.**

   - Margo Allen
   - Audrey Elbert

   Recommendation:
   The Audit Committee recommends to the Board of Retirement that the Board adopt Addendums to the Governmental Accounting Standards Board (GASB) Statement No. 67 and Statement No 74 Actuarial Valuations as of December 31, 2018.

Information Items: These items are not presented for Committee action but consist of status updates and cyclical reports

External Audit

1. **None**

Internal Audit

2. **Progress report on the Internal Audit Plan**

   \- Harsh Jadhav

3. **Review of completed audits**

   \- Harsh Jadhav

Trustee Comment:

Future Discussion Items

External Audit

- Presentation of the 2018 Auditor's Observations and Recommendations (if any)
- Recommendation to receive and file the Observations and Recommendations from WACO (if any)
- Presentation and discussion of the Governmental Accounting Standards Board Statement No. 68 Valuation and Employer Schedules as of December 31, 2018
- Presentation and discussion of the Governmental Accounting Standards Board No. 75 Valuation and Employer Schedules as of December 31, 2018

Internal Audit

1. Progress report on the Internal Audit Plan
2. Review complete audits

Establishment of Next Meeting Date

June 20, 2019, at 1:00 pm

ACERA

MEMORANDUM TO THE AUDIT COMMITTEE

DATE: May 16, 2019

TO: Members of the Audit Committee

FROM: Margo Allen, Fiscal Services Officer MA

SUBJECT: December 31, 2018, Audited Financial Statements and Independent Auditor's Report

Executive Summary

Williams, Adley & Co., has completed its independent audit of ACERA's 2018 financial statements. The December 31, 2018, end-of-year financial audit encompassed ACERA's basic financial statements, that is:

- Statement of Fiduciary Net Position;
- Statement of Changes in Fiduciary Net Position;
- Notes to the Basic Financial Statements and Supplementary Information; and,
- Supplemental Schedules.

The auditor's responsibility is to express an opinion of ACERA's financial statements in accordance with the *Government Auditing Standards*. To that end, Williams Adley & Co. is here to present its findings for reasonable assurance about whether ACERA's financial statements are free from material misstatement.

Recommendation

Staff recommends that the Audit Committee recommend to the Board of Retirement that the Board accept and file the December 31, 2018, audited financial statements and independent auditor's report.

Attachment: 2018 Audited Financial Statement and Independent Auditor's Report.

ALAMEDA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

Financial Statements for the Year Ended

December 31, 2018

Draft as of May 16, 2019

Contents

FINANCIAL

Independent Auditor's Report....10
Management's Discussion and Analysis....12

Basic Financial Statements

Statement of Fiduciary Net Position....20
Statement of Changes in Fiduciary Net Position....21

Notes to the Basic Financial Statements

1. Summary of Significant Accounting Policies....23
2. Plan Description....25
3. Contributions....29
4. Reserves....31
5. Net Pension Liability....34
6. Actuarial Valuation....36
7. Postemployment Medical Benefits and Net OPEB Liability....39
8. Deposits and Investments....42
9. Capital Assets....55
10. Leases....56
11. Administration Expense....56
12. Related Party Transactions....57
13. Subsequent Events....57

Required Supplementary Information (RSI)

Pension Plan and Non-OPEB....58
Schedule of Changes in Net Pension Liability and Related Ratios....58
Schedule of Employer Contributions....59
Schedule of Investment Returns....59
Postemployment Medical Benefits....60
Schedule of Changes in Net OPEB Liability and Related Ratios....60
Schedule of Employer Contributions....61
Notes to Required Supplementary Information....62

Supplemental Schedules

Administration Expense....65
Investment Expenses....65
Payments to Other Consultants....65

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, 2018, 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, 2018, and the change 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

Net Pension Liability of Employers

As described in note 5, based on the most recent actuarial valuation as of December 31, 2018, ACERA's independent actuaries determined that, at December 31, 2018, the total pension liability exceeded the pension plan's fiduciary net position by $2.8 billion.

Net OPEB Liability of Employers

As described in note 7, based on the most recent actuarial valuation as of December 31, 2018, ACERA's independent actuaries determined that, at December 31, 2017, the total OPEB liability exceeded the OPEB plan's fiduciary net position by $232.9 million.

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 2017 financial statements, and our report dated June 25, 2018, expressed an unmodified opinion on those audited financial statements. In our opinion, the summarized comparative information presented herein as of and for the year ended December 31, 2017, 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 __, 2019, 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.

Oakland, California

June __, 2019

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, 2018. 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: Amounts in this section are rounded and may not add or agree to other sections of this CAFR.)

FINANCIAL HIGHLIGHTS

As of December 31, 2018, 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 $7.6 billion, a $0.5 billion decrease compared to December 31, 2017. This 6% decrease was primarily attributable to the decrease in fair value of ACERA's investment portfolio during 2018.

As of December 31, 2018, the Net Pension Liability (NPL) was $2,764.0 million, compared to $2,013.7 million as of December 31, 2017. The $750.3 million increase was primarily a result of the unfavorable investment return during calendar year 2018. The net investment loss was $216.3 million in 2018 was a 120% decrease from net investment income of $1,065.9 million in 2017.

As of December 31, 2018, the Net OPEB Liability (NOL) was $232.9 million, compared to $27.5 million as of December 31, 2017. The $205.4 million

DRAFT as of May 8, 2019 1:46 PM

increase was primarily a result of unfavorable investment return during calendar year 2018 of about negative $138.3 million, which was a 157% decrease from the net investment return of $243.2 million in 2017. 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, 2017, the date of the pension plan actuarial funding and SRBR sufficiency actuarial valuations used for the 2018 CAFR, actuarial investment rate of return assumption used was 7.25%. The inflation rate assumption was 3.00% with assumed across-the-board salary increases of 0.5%.

As of December 31, 2017, ACERA had $309.1 million in net deferred investment gains based on the actuarial value of assets. These deferred gains represent 3.8% of the fair value of assets, as of the December 31, 2017, 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 losses or other unfavorable experience, the recognition of the $309.1 million market gains is expected to have a positive 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.

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 2018 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 2018 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 Ratios and Schedule of Employer Contributions, 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 below, 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, 2018 and 2017 (Dollars in Millions)

	2018	2017	Increase (Decrease) Amount	Percent Change
ASSETS				
Current Assets	$ 220.7	$ 467.8	$ (247.1)	-53%
Investments at Fair Value	7,584.2	8,106.9	(522.7)	-6%
Capital Assets, net	1.5	1.6	(0.1)	-6%
Total Assets	**7,806.4**	**8,576.3**	**(769.9)**	**-9%**
LIABILITIES				
Current Liabilities	213.8	464.2	(250.4)	-54%
Total Liabilities	**213.8**	**464.2**	**(250.4)**	**-54%**
NET POSITION				
Restricted - Held in Trust for Benefits	**$ 7,592.6**	**$ 8,112.1**	**$ (519.5)**	**-6%**

Table 2: Changes In Fiduciary Net Position (Condensed)

For the Years Ended December 31, 2018 and 2017 (Dollars in Millions)

	2018	2017	Increase (Decrease) Amount	Percent Change
ADDITIONS				
Member Contributions	$ 94.7	$ 89.3	$ 5.4	6%
Employer Contributions	269.7	247.1	22.6	9%
Net Investment Income (Loss)	(356.0)	1,308.2	(1,664.2)	-127%
Miscellaneous Income	1.4	0.9	0.5	56%
Transfer to Employers' Advance Reserve from SRBR for Employer Contributions to 401(h) Account	43.8	38.3	5.5	14%
Transfer to Employers' Advance Reserve from SRBR for Implicit Subsidy	5.8	8.8	(3.0)	-34%
Transfer from Employers' Advance Reserve to SRBR for OPEB Related Administrative Expenses	1.2	1.2	-	0%
Total Additions	**60.6**	**1,693.8**	**(1,633.2)**	**-96%**
DEDUCTIONS				
Retirement Benefit Payments	463.2	437.4	25.8	6%
Postemployment Medical Benefits	40.9	37.9	3.0	8%
Member Refunds	8.7	7.9	0.8	10%
Administration	16.5	15.8	0.7	4%
Transfer from SRBR to Employers' Advance Reserve for Employer Contributions to 401(h) Account	43.8	38.3	5.5	14%
Transfer from SRBR to Employers' Advance Reserve for Implicit Subsidy	5.8	8.8	(3.0)	-34%
Transfer to SRBR from Employers' Advance Reserve for OPEB Related Administrative Expenses	1.2	1.2	-	0%
Total Deductions	**580.1**	**547.3**	**32.8**	**6%**
CHANGE IN NET POSITION	**(519.5)**	**1,146.5**	**(1,666.0)**	**-145%**
NET POSITION - JANUARY 1	**8,112.1**	**6,965.6**	**1,146.5**	**16%**
NET POSITION - DECEMBER 31	**$ 7,592.6**	**$ 8,112.1**	**$ (519.5)**	**-6%**

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, 2018, totaled approximately $7.6 billion. This is a $0.5 billion or a 6% decrease from the prior year, primarily a result of a decrease in the fair value of ACERA's invested assets. The Investment Section, starting on page 67, 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 decreased by $247.1 million from $467.8 million in 2017 to $220.7 million in 2018. This 53% decrease was directly due to the net decrease in cash and securities lending cash collateral totaling $239.4 million.

Investments at Fair Value

ACERA's investments at fair value decreased 6% from $8.1 billion in 2017 to $7.6 billion in 2018. The $0.5 billion decrease in investments at fair value includes ACERA's $173.5 million cash draw in 2018 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 $1.6 million in 2017 to $1.5 million in 2018. The net decrease of $0.1 million or 6% was due to the declining value of capital assets.

Total Assets

In all, total assets experienced a net decrease of $0.8 billion, from $8.6 billion in 2017 to $7.8 billion in 2018. The decrease in total investments at fair value accounted for most of the decrease 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 decreased by $250.4 million or 54% from $464.2 million in 2017 to $213.8 million in 2018. The net decrease is mainly attributed to the $223.9 million and $31.0 million decrease in securities lending liability and unsettled trades, respectively, offset by a net increase in foreign exchange contracts.

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 2018 financial activity. From January 1 to December 31, 2018, ACERA's fiduciary net position decreased by $0.5 billion. The decrease was almost exclusively due to depreciation 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, 2018, and 2017, were $60.6 million and $1.7 billion, respectively. This is a total net decrease of $1.6 billion or 96%. ACERA's net investment loss for 2018 was $356.0 million, compared to $1.3 billion investment gain in 2017. See the Net Investment Income (Loss) section on page 17 for a more comprehensive discussion of this decrease.

The December 31, 2017, 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 2018. The aggregate member contribution rate increased from 8.75% of payroll to 9.37% of payroll. This increase was primarily due to changes

DRAFT as of May 8, 2019 1:46 PM

in actuarial assumptions offset slightly by a change in membership demographics.

The aggregate employer contribution rate increased from 24.89% of payroll to 28.03% of payroll. This increase was primarily due to (a) small actuarial losses[1] and (b) changes in actuarial assumptions offset somewhat by (c) higher than expected return on investments (after smoothing); (d) lower than expected salary increases for active members, and (e) amortizing the prior year's UAAL over a larger than expected projected total payroll. Refer to the following member and employer contributions sections for further discussion.

Member Contributions

Total member contributions for 2018 were $94.7 million, up $5.4 million or 6% over 2017 total member contributions of $89.3 million. As previously stated, 2017 actuarial valuation contributions rates went into effect September 1, 2018[2].

Employer Contributions

Total employer contributions collected for 2018 were $269.7 million, an increase of 9% or $22.6 million over the $247.1 million in total contributions collected in 2017.

Net Investment Income (Loss)

Net investment loss for 2018 was $356.0 million, which is $1.7 billion less than the $1.3 billion in net investment gain for 2017. This decrease in net investment income was primarily due to a net depreciation in the fair value of invested assets. The 2018 net depreciation of investments was $417.8 million compared to a 2017 net appreciation of $1.2 billion.

Miscellaneous Income

Miscellaneous income for 2018 totaled $1.4 million, up $0.5 million or 56% from 2017. 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 $43.8 million and 38.3 million to their 401(h) accounts for years 2018 and 2017, respectively. See 401(h) Postemployment Medical Benefits Account on page 32 .

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 2018 and 2017.

There was a $5.8 million transfer from the SRBR to the employers' advance reserve in 2018 to compensate Alameda County for the 2017 blended rate health care implicit subsidy. The implicit subsidy transfer decreased by $3.0 million or 34% from the $8.8 million implicit subsidy transfer in 2017. This decrease was primarily due to the difference between the County's blended and unblended medical insurance rates for 2017 versus 2016.

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 2018 were $580.1 million. This is $32.8 million or a 6% increase over the $547.3 million in total deductions for 2017. Service retirement and disability benefit payments alone increased 6.0% or $25.8 million over 2017. The 401(h) transfer increased $5.5 million or 14% for 2018, and as already stated the implicit subsidy transfer decreased $3.0 million or 34% for 2018.

1 Including changes in membership demographics, lower contributions than expected and scheduled delay in implementing contributions rates after date of valuation.

2 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 2018, there was an eight-month period (January 1 through August 31, 2018) that the contribution rate was 8.75% and a four- month period (September 1 through December 31, 2018) that the contribution rate was 9.37%.

Retirement Benefit Payments

Retirement benefit payments in 2018 totaled $463.2 million, a $25.8 million or 6% increase over $437.4 million in 2017. 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 2018 were $40.9 million, an increase of $3.0 million or 8% over the $37.9 million paid from the 401(h) account in 2017. 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 2018 was $540.44 per member. For retirees 65 years and older, enrolled in the Medicare Exchange individual plans, ACERA utilized Health Reimbursement Accounts (HRAs). Retirees 65 years and older, who were on the Medicare Exchange, received a maximum of $414.00 Monthly Medical Allowance (MMA).

Member Refunds

Member refunds originate from either a member separation from service (termination) or an active member death. Member refunds increased by $0.8 million or 10% from $7.9 million in 2017 to $8.7 million in 2018. The increase was primarily due to increases in termination refunds and active member deaths.

Administration Expense

Total administration expense for 2018 increased to $16.5 million, from $15.8 million in 2017. 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 2018 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 6% or $0.7 million, from $12.3 million in 2017 to $13.0 million in 2018. 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 remained flat at $3.5 million in 2018. The categories of operating expenses not subject to the statutory limit include legal, technology, actuarial and business continuity expenses.

CURRENTLY KNOWN FACTS AND EVENTS

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

DRAFT as of May 8, 2019 1:46 PM

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,

Margaret M Allen

Margo Allen
Fiscal Services Officer
May 1, 2019

BASIC FINANCIAL STATEMENTS

Statement of Fiduciary Net Position

As of December 31, 2018, with Comparative Totals as of December 31, 2017 (Dollars in Thousands)

	Pension Plan & Non-OPEB	Postemployment Medical Benefits	Total 2018	Total 2017
ASSETS				
Cash	$ 1,573	$ -	$ 1,573	$ 17,130
Securities Lending Cash Collateral	183,003	-	183,003	406,876
Receivables				
Contributions	17,422	-	17,422	14,212
Investment Receivables	15,986	-	15,986	16,831
Unsettled Trades - Investments Sold	1,203	-	1,203	9,858
Future Contracts - Equity Index	-	-	-	341
Equity Index Swaps	-	-	-	803
Foreign Exchange Contracts	101	-	101	666
Other Receivables	108	-	108	199
Total Receivables	**34,820**	-	**34,820**	**42,910**
Prepaid Expenses	1,293	-	1,293	848
Total Current Assets	**220,689**	**-**	**220,689**	**467,764**
Investments at Fair Value				
Short-Term Investments	159,673	-	159,673	210,168
Domestic Equity	499,759	-	499,759	1,547,412
Domestic Equity Commingled Funds	1,717,777	-	1,717,777	1,082,242
International Equity	1,502,436	-	1,502,436	1,915,468
International Equity Commingled Funds	427,396	-	427,396	560,459
Domestic Fixed Income	930,750	-	930,750	953,511
International Fixed Income	137,245	-	137,245	136,735
International Fixed Income Commingled Funds	135,450	-	135,450	141,106
Real Estate - Separate Properties	69,121	-	69,121	66,538
Real Estate - Commingled Funds	492,121	-	492,121	445,602
Real Assets	293,198	-	293,198	301,579
Private Equity	522,443	-	522,443	443,631
Absolute Return	696,825	-	696,825	302,484
Total Investments	**7,584,194**	**-**	**7,584,194**	**8,106,935**
Non-OPEB Assets	39,366	-	39,366	37,517
Due from Pension Plan	(929,319)	889,953	(39,366)	(37,517)
Capital Assets at Cost (Net of Accumulated Depreciation and Amortization)	1,486	-	1,486	1,605
Total Assets	**6,916,416**	**889,953**	**7,806,369**	**8,576,304**
LIABILITIES				
Securities Lending Liability	183,003	-	183,003	406,876
Unsettled Trades - Investments Purchased	6,583	-	6,583	37,552
Future Contracts - Equity Index	1,153	-	1,153	231
Equity Index Swaps	239	-	239	-
Foreign Exchange Contracts	3,651	-	3,651	468
Investment-Related Payables	12,363	-	12,363	12,594
Accrued Administration Expenses	2,276	-	2,276	2,495
Members Benefits & Refunds Payable	4,151	-	4,151	3,473
Retirement Payroll Deductions Payable	363	-	363	515
Total Liabilities	**213,782**	**-**	**213,782**	**464,204**
NET POSITION - Held in Trust for Benefits	**$ 6,702,634**	**$ 889,953**	**$ 7,592,587**	**$ 8,112,100**

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

DRAFT as of May 8, 2019 1:46 PM

Statement of Changes in Fiduciary Net Position

For the Year Ended December 31, 2018, with Comparative Totals for the Year Ended December 31, 2017 (Dollars in Thousands)

	Pension Plan & Non-OPEB	Postemployment Medical Benefits	Total 2018	Total 2017
ADDITIONS				
Contributions				
Member	$ 94,736	$ -	$ 94,736	$ 89,326
Employer	225,907	43,777	269,684	247,064
Total Contributions	**320,643**	**43,777**	**364,420**	**336,390**
Investment Income				
From Investment Activities:				
Net Appreciation (Depreciation) in Fair Value of Investments	(417,757)	-	(417,757)	1,231,438
Dividends, Interest, & Other Investment Income	117,350	-	117,350	132,324
Total Income (Loss) from Investment Activities	**(300,407)**	**-**	**(300,407)**	**1,363,762**
Total Investment Expenses	(57,513)	-	(57,513)	(57,920)
Net Income (Loss) from Investment Activities	**(357,920)**	**-**	**(357,920)**	**1,305,842**
From Securities Lending Activities:				
Securities Lending Income	7,056	-	7,056	5,899
Securities Lending Expenses				
Borrower Rebates	(4,739)	-	(4,739)	(2,910)
Management Fees	(464)	-	(464)	(598)
Total Securities Lending Activity Expenses	**(5,203)**	**-**	**(5,203)**	**(3,508)**
Net Income from Securities Lending Activities	**1,853**	**-**	**1,853**	**2,391**
Earnings Allocated to Non-OPEB	3,180	-	3,180	2,773
Earnings Allocated	(75,977)	72,797	(3,180)	(2,773)
Total Net Investment Income (Loss)	**(428,864)**	**72,797**	**(356,067)**	**1,308,233**
Miscellaneous Income	1,426	-	1,426	864
Transfer to Employers' Advance Reserve from SRBR for Employer Contributions to 401(h) Account	43,777	-	43,777	38,328
Transfer to Employers' Advance Reserve from SRBR for Implicit Subsidy	5,801	-	5,801	8,788
Transfer from Employers' Advance Reserve to SRBR for OPEB Related Administrative Expense	-	1,224	1,224	1,204
Total Additions	**$ (57,217)**	**$ 117,798**	**$ 60,581**	**$ 1,693,807**

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, 2018, with Comparative Totals for the Year Ended December 31, 2017 (Dollars in Thousands)

	Pension Plan & Non-OPEB	Postemployment Medical Benefits	Total 2018	Total 2017
DEDUCTIONS				
Benefits				
Service Retirement and Disability Benefits	$ 459,142	$ -	$ 459,142	$ 433,464
Death Benefits	2,761	-	2,761	2,513
Burial Benefits - Non-OPEB	196	-	196	187
Supplemental Cost of Living Allowance - Non-OPEB	1,135	-	1,135	1,231
Post Employment Medical Benefits	-	40,879	40,879	37,904
Total Benefit Payments	**463,234**	**40,879**	**504,113**	**475,299**
Member Refunds	8,709	-	8,709	7,893
Administration				
Administrative Expenses	11,779	1,224	13,003	12,288
Legal Expenses	1,577	-	1,577	1,611
Technology Expenses	942	-	942	998
Actuarial Expenses	357	-	357	479
Business Continuity Expenses	591	-	591	399
Total Administration	**15,246**	**1,224**	**16,470**	**15,775**
Transfer from SRBR to Employers' Advance Reserve for Employer Contributions to 401(h) Account	-	43,777	43,777	38,328
Transfer from SRBR to Employers' Advance Reserve for Implicit Subsidy	-	5,801	5,801	8,788
Transfer to SRBR from Employers' Advance Reserve for OPEB Related Administrative Expense	1,224	-	1,224	1,204
Total Deductions	**488,413**	**91,681**	**580,094**	**547,287**
CHANGE IN NET POSITION	**(545,630)**	**26,117**	**(519,513)**	**1,146,520**
NET POSITION - JANUARY 1	**7,248,264**	**863,836**	**8,112,100**	**6,965,580**
NET POSITION - DECEMBER 31	**$ 6,702,634**	**$ 889,953**	**$ 7,592,587**	**$ 8,112,100**

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

DRAFT as of May 8, 2019 1:46 PM

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. 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 are 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. 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. 87 for the fiscal year beginning January 1, 2020.

GASB Statement No. 88, *Certain Disclosures Related to Debt*, was issued in April 2018. This Statement defines debt for purposes of disclosure in the notes to the financial statements and establishes additional disclosure requirements related to debt obligations, including direct borrowings and direct placements. For purposes of disclosure in notes to the financial statements, debt is defined as a liability that arises from a contractual obligation to pay cash (or other asses that may be used in lieu of cash) in one or more payments to settle an amount that is fixed at the date the contractual obligation is established. The requirements of this Statement are effective for reporting periods beginning after June 15, 2018. This Statement will not impact ACERA's note disclosures.

GASB Statement No. 89, *Accounting for Interest Cost Incurred before the End of a Construction Period*, was issued in June 2018. This Statement establishes accounting requirements for interest cost incurred before the end of a construction period. It requires that such cost be recognized as an expense in the period in which the cost is incurred for the financial statements prepared using the economic resources measurement focus and not be included in the historical cost of a capital asset reported in a business-type activity or enterprise fund. The requirements of this Statement are effective for reporting periods beginning after December 15, 2019. This statement will not impact ACERA.

GASB Statement No. 90, *Certain Majority Equity Interests-an amendment of GASB Statement No. 14 and No. 61*, was issued in August 2018. This Statement defines a majority equity interest and specifies that a majority equity interest in a legally separate organization should be reported as an investment if a government's holding of the equity interest meets the definition of an investment. For other holdings of a majority equity interest in a legally separate organization, a government should report the legally separate organization as a component unit. The requirements of this Statement are effective for reporting periods beginning after December 15, 2019. This statement will not impact ACERA.

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:

Board of Retirement

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

DRAFT as of May 8, 2019 1:46 PM

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
- 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, 2018

Members, Survivors, and Beneficiaries Now Receiving Benefits	
Service Retirement	7,623
Disability Retirement	926
Beneficiaries and Survivors	1,230
Subtotal	**9,779**
Active Members	
Active Vested Members	7,677
Active Non-vested Members	3,691
Subtotal	**11,368**
Deferred Members	2,592
Total Membership	**23,739**

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 29 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 2018, the CPI calculation of 2.94% was rounded to 3.0%, 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 2 and Tier 4 members will bank 1.0% as the 2018 COLA exceeds the 2% statutory cap.

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 nonservice 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 2018). 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 2018

Tier 1: (entry date prior to July 1, 1983)	
General	7.90% - 16.36%
Safety 3% @ 50	16.03% - 24.34%
Tier 2: (entry date July 1, 1983, and before January 1, 2013)	
General	5.42% - 11.43%
Safety 3% @ 50	13.46% - 19.79%
Tier 2: (entry date October 17, 2010, and before January 1, 2013)	
Safety 2% @ 50	10.00% - 16.05%
Safety 3% @ 55 (with less than 5 years of vesting service)	15.30% - 21.54%
Safety 3% @ 55 (with 5 or more years of vesting service)	13.30% - 19.54%
Tier 3: (LARPD only - entry date prior to January 1, 2013)	
General	9.20% -17.28%
Tier 4: (entry date January 1, 2013 or later)	
General	8.76%
Safety	15.75%

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.

DRAFT as of May 8, 2019 1:46 PM

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 $54.7 million in the year ended December 31, 2018.

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 postemployment 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, 2018, 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, 2018, the employers funded $43.8 million of 401(h) contributions, including $42.6 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, 2018, $1.1 million of Supplemental COLA and $0.2 million of retired member death benefits 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 2018

ACERA had $371.1 million losses from investment activities net of administrative expenses for the year ended December 31, 2018. The contingency reserve experienced a net decrease of $77.1 million during the year. At the December 31, 2018, interest crediting, the reserve was adjusted to 1% of total assets and subsequently reduced to zero to fund the interest crediting shortfall for the six-month period ended December 31, 2018. This reduction left the Contingency Reserve at 0.0% of total assets at the end of 2018.

The market stabilization reserve account decreased by $878.2 million during 2018 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 $584.2 million.

Reserves

As of December 31, 2018 (Dollars in Thousands)

	Pension and Non-OPEB	Postemployment Medical Benefits	Total
Member Reserve	$ 1,532,152	$ -	$ 1,532,152
Employers' Advance Reserve	1,045,827	-	1,045,827
Retired Member Reserve	4,654,408	-	4,654,408
SRBR	39,366	880,123	919,489
401(h) Account	-	9,830	9,830
Contingency Reserve	-	-	-
Market Stabilization Reserve Account	(569,119)	-	(569,119)
Total Reserves	**$ 6,702,634**	**$ 889,953**	**$ 7,592,587**

DRAFT as of May 8, 2019 1:46 PM

5. NET PENSION LIABILITY

The components of the Net Pension Liability were as follows:

Net Pension Liability

(Dollars in Thousands)

	December 31, 2018	December 31, 2017
Total Pension Liability	$ 9,535,149	$ 9,123,900
Plan Fiduciary Net Position[1]	6,771,147	7,110,224
Net Pension Liability	**$ 2,764,002**	**$ 2,013,676**
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	71.01%	77.93%

1 *For 2018, the Plan's Fiduciary Net Position amount shown ($6,771,147) includes market value of assets ($7,592,587), less OPEB-related SRBR assets ($873,183 in the SRBR-OPEB reserve, after reducing the reserve by $6,940 SRBR implicit subsidy transfer, and $9,830 in the 401(h) reserve), less a proportionate share of the deferred market losses (after adjustment to include the balance in the Contingency Reserve) commensurate with the size of the OPEB reserve ($61,573). For 2017, the Plan's Fiduciary Net Position amount shown ($7,110,224) includes the net market value of assets ($8,112,100), less OPEB-related SRBR assets ($850,424 in the SRBR-OPEB reserve after reducing the reserve by the $5,830 SRBR implicit subsidy transfer, and $7,582 in the 401(h) reserve), plus a proportionate share of one half of the deferred market gains (after adjustment to include the balance in the Contingency Reserve) commensurate with the size of the OPEB and non-OPEB reserves ($143,870). Note: The amounts may not total properly due to rounding.*

The Net Pension Liability (NPL) was measured as of December 31, 2018 and 2017. Plan's 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, 2017 and 2016, respectively.

The Total Pension Liability and the Plan's 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, 2018, and December 31, 2017, were determined using actuarial valuations as of December 31, 2017, and December 31, 2016, respectively. The actuarial assumptions used to develop the December 31, 2018, and December 31, 2017, TPLs are the same assumptions used in the December 31, 2018, and 2017, funding valuations for ACERA, respectively.

Key Assumptions Used in the Measurement

Valuation Date	December 31, 2018	December 31, 2017
Inflation	3.00%	3.00%
Salary Increases	General: 8.30% to 3.90% and Safety: 11.30% to 4.30%, vary by service, including inflation	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	7.25% , net of pension plan investment expense, including inflation
Mortality Tables	Headcount-Weighted RP-2014 (RPH-2014) Healthy Annuitant Mortality Tables, 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.	Headcount-Weighted RP-2014 (RPH-2014) Healthy Annuitant Mortality Tables, 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.
Date of Experience Study	December 1, 2013 through November 30, 2016	December 1, 2013 through November 30, 2016

DRAFT as of May 8, 2019 1:46 PM

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.

Target Asset Allocation and Projected Arithmetic Real Rate of Return

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, 2018, and December 31, 2017. 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

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.

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, 2018, and December 31, 2017.

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

The following presents the Net Pension Liability as of December 31, 2018, 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, 2018 (Dollars in Thousands)

	1% Decrease	Current Discount Rate	1% Increase
	(6.25%)	(7.25%)	(8.25%)
Net Pension Liability	$ 4,006,840	$ 2,764,002	$ 1,739,579

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, 2018, the annual money-weighted rate of return on the total investments (pension plan and OPEB) was negative 4.44%. 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.

DRAFT as of May 8, 2019 1:46 PM

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	12/31/2017
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)	15 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: 7.25% Inflation Rate: 3.00% Across-the-Board Salary Increases: 0.50% Salary Increases: General 8.30% - 3.90% and Safety 11.30% - 4.30% Demographic: refer to page 102
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 85.7% 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 7.25% 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	12/31/2017
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 7.00% 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	4.50%
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 7.25% 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 2038.

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	12/31/2017
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.

DRAFT as of May 8, 2019 1:46 PM

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, 2017, was used in the measurement of the Total OPEB Liability as of December 31, 2018.

Demographic Data as of December 31, 2017

Retired members receiving medical benefits	6,225
Retired members receiving dental and vison benefits	7,270
Vested terminated members entitled to, but not receiving benefits	381
Active members	11,323

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 2017 was $5.8 million. SRBR assets in this amount were treated as a pension contribution in 2018 upon the Board of Retirement's approval to compensate the County for the implicit subsidy. The implicit subsidy amount for 2018 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 2018 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 $47.91 in 2018.

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, 2018

Number of Subsidized Retirees	
Medical	5,018
Medicare Exchange	1,495
Medicare Part B	5,383
Dental and Vision	7,613

Contributions and Reserves

There are no legal or contractual contribution requirements for the OPEB plan. Please refer to Note 3 starting on page 29 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, 2018	December 31, 2017
Total OPEB Liability	$ 1,054,337	$ 1,029,354
Plan Fiduciary Net Position[1]	821,440	1,001,876
Net OPEB Liability	**$ 232,897**	**$ 27,478**
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	77.91%	97.33%

1 *For 2018, the Plan's Fiduciary Net Position ($821,440) includes the SRBR and 401(h) account ($889,953) less the estimated SRBR transfer to Employer Advance Reserve ($6,940) less the proportionate share of the deferred market losses after netting out the balance of the Contingency Reserve that was commensurate with the size of the OPEB reserve ($61,573). 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 the proportionate share of the deferred market losses after netting out the balance of the Contingency Reserve that was commensurate with the size of the OPEB reserve ($143,870).*

The Net OPEB Liability was measured as of December 31, 2018 and 2017. 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, 2017 and 2016, respectively.

Plan Provisions

The plan provisions used in the measurement of the Net OPEB Liability as of December 31, 2018 are the same as those used for the SRBR sufficiency valuation as of December 31, 2017.

Actuarial Assumptions

The Total OPEB Liabilities (TOLs) as of December 31, 2018, and December 31, 2017, were determined using the sufficiency valuations as of December 31, 2017, and December 31, 2016, respectively.

The actuarial assumptions including the health care assumptions used to develop the December 31, 2018 and December 31, 2017 TOLs are the same assumptions used for the December 31, 2018 and 2017 sufficiency valuations for ACERA, respectively.

Key Assumptions Used in the Measurement

Valuation Date	December 31, 2018	December 31, 2017
Investment Rate of Return	7.25% , net of OPEB investment expense, including inflation	7.25% , net of OPEB investment expense, including inflation
Inflation	3.00%	3.00%
Health Care Premium Trend Rates:		
Non-Medicare mdical plan	Graded from 7.00% to ultimate 4.50% over 10 years	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	Graded from 6.50% to ultimate 4.50% over 8 years
Dental/Vision	4.00%	4.50%
Medicare Part-B	4.00%	4.50%
Date of Experience Study	December 1, 2013 through November 30, 2016	December 1, 2013 through November 30, 2016

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:

Target Asset Allocation and Projected Arithmetic Real Rate of Return

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, 2018 and December 31, 2017. 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, 2018 and December 31, 2017.

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

The following presents the Net OPEB Liability as of December 31, 2018, 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, 2018 (Dollars in Thousands)

	1% Decrease	Current Discount Rate	1% Increase
	(6.25%)	(7.25%)	(8.25%)
Net OPEB Liability	$ 363,577	$ 232,897	$ 123,707

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, 2018, 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, 2018 (Dollars in Thousands)

	1% Decrease[1]	Current Trend Rates[1]	1% Increase[1]
Net OPEB Liability	$ 110,530	$ 232,897	$ 382,925

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 4.00% for all years for Dental, Vision and Medicare Part B costs. The medical trend rates shown above for 2019 (7.00% and 6.50% for non-Medicare and Medicare plans, respectively) are before reflecting a one-time adjustment to reflect the estimated impact of the Health Insurance Tax (HIT). The weighted average increase amongst all carriers is approximately 1.2% for non-Medicare and 0.9% for Medicare plans.*

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

DRAFT as of May 8, 2019 1:46 PM

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, 2018, thirteen investment managers managed the securities portfolios, twelve investment managers were used for real estate investments, nineteen investment managers were used for private equity, nine investment managers were used for absolute return (formerly known as alternative investments), and seven investment managers were used 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 may be 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 do 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 investments.

GASB 72 allows a government entity 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, 2018 (Dollars in Thousands)

Investments by Fair Value Level	Total	Fair Value Measurements Using		
		Quoted Prices in Active Markets for Identical Assets	Significant Other Observable Inputs	Significant Unobservable Inputs
		Level 1	Level 2	Level 3
Cash Equivalents				
Government Issues	$ 46,076	$ 46,076	$ -	$ -
STIF-Type Instrument	99,226	-	99,226	-
Total Cash Equivalents	**145,302**	**46,076**	**99,226**	**-**
Fixed Income Securities				
Asset-Backed Securities	65,304	-	65,304	-
Commercial Mortgage-Backed Securities	70,308	-	70,308	-
Convertible Bonds	16,555	-	16,555	-
Corporate Bonds	458,637	-	458,321	316
Municipal/Revenue Bonds	1,510	-	1,510	-
FHLMC	56,459	-	56,459	-
FNMA	73,992	-	73,992	-
GNMA I	1,879	-	1,879	-
GNMA II	13,585	-	13,585	-
Government Issues	309,766	225,748	84,018	-
Mutual Funds	135,450	-	135,450	-
Total Fixed Income Securities	**1,203,445**	**225,748**	**977,381**	**316**
Equity Securities				
Non-U.S. Equity	1,502,436	1,502,546	(110)	-
Pooled Investments	2,145,173	195,920	248,550	1,700,703
U.S. Equity	499,759	499,743	16	-
Total Equity Securities	**4,147,368**	**2,198,209**	**248,456**	**1,700,703**
Real Estate				
Properties	69,121	-	-	69,121
Total Real Estate	**69,121**	**-**	**-**	**69,121**
Collateral from Securities Lending	183,003	-	183,003	-
Total Investments by Fair Value Level	**5,748,239**	**$ 2,470,033**	**$ 1,508,066**	**$ 1,770,140**
Investments Measured at Net Asset Value (NAV)				
Real Assets	293,198			
Private Equity	522,443			
Absolute Return	696,825			
Real Estate	492,121			
Total Investments Measured at NAV	**2,004,587**			
Total Investments	**$ 7,752,826**			
Derivatives				
Equity Index Swaps	$ (239)	$ 8	$ (247)	$ -
Future Contracts Equity Index	(1,153)	(1,153)	-	-
Foreign Exchange Contracts	(3,550)	(3,550)	-	-
Total Derivatives	**$ (4,942)**	**$ (4,695)**	**$ (247)**	**$ -**

Investments Measured at the NAV

As of December 31, 2018 (Dollars in Thousands)

	Fair Value	Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Real Assets[1]	$ 293,198	$ 117,118	See note [1]	See note [1]
Private Equity[2]	522,443	565,610	See note [2]	See note [2]
Absolute Return[3]	696,825	70,091	See note [3]	See note [3]
Real Estate[4]	492,121	95,724	See note [4]	See note [4]
Total Investments Measured at NAV	**$ 2,004,587**	**$ 848,5423**	-	-

1 *Real Assets – The Real Assets portfolio consists of 8 funds investing primarily in commodities, infrastructure, and natural resources (energy). Three of the funds follow the hedge fund structure and five follow the private equity structure. The underlying investments within hedge funds are mostly liquid and the whole portfolio is valued and reported monthly based on month-end exchange prices or over-the-counter quotes in competitive markets. The funds that follow the hedge fund structure accept investments monthly and are eligible for month-end redemption after 5-60 days' written notice. The fair value of the private equity-type funds are determined using net assets value presented 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' lifespan.*

2 *Private Equity – The Private Equity portfolio consists of 44 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 capital proceeds over the funds' lifespan in either cash or "in-kind" shares of the funds' portfolio companies. Distributions to the funds' investors occur over the span of approximately 4 to 15 years.*

3 *Absolute Return – The Absolute Return portfolio consists of 9 funds, which are hedge manager-of-funds, currency managers and other alternative investments. Five of the funds follow the hedge fund structure and four follow the private equity structure but employ hedge fund type strategies. The funds that follow the hedge fund structure accept investments monthly and 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. The fair value of the funds that follow the private equity structure 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' lifespan.*

4 *Real Estate – The Real Estate portfolio consists of 16 funds and a separate building (1), which also 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, 2018, classified by type. For financial reporting purposes, all ACERA derivatives are classified as investment derivatives.

Investment Derivatives

For Year Ended December 31, 2018 (Dollars in Thousands)

Derivative Type	Classification	Notional Value/Shares	Fair Value	Changes in Fair Value[2]
Currency Forward Contracts	Receivable/Liability[1]	$ 474,488	$ (3,540)	$ (4,465)
Future Contracts - Long	Futures	1,490	-	(6,231)
Future Contracts - Short	Futures	(8)	-	2,012
Total Return Swaps Bond	Swaps	49,964	729	1,531
Total Return Swaps Equity	Swaps	(22,037)	(977)	(4,360)
Rights	Equity	17	8	23
Total			**$ (3,780)**	**$ (11,490)**

1 *Currency forward contracts are reported in Foreign Exchange Contracts, which exclude spot contracts because they are not considered as 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, 2018, 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, 2018, 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, 2018, resulting from a default of the borrowers or the securities lending agent.

For the year ended December 31, 2018, 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 2018, the short-term investment fund is separated into two investment pools: (a) a liquidity pool and (b) a duration pool. As of December 31, 2018, the Quality D Short –Term investment fund liquidity pool had an average duration of 27 days and an average weighted final maturity of 119 days for U.S. dollars collateral. The Quality D Short-Term investment fund duration pool had an average duration of 18 days and an average weighted final maturity of 1,701 days for U.S. dollars collateral. For the year ended December 31, 2018, 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, 2018, ACERA had securities on loan with a total fair value of $299.43 million; however, the cash collateral held against the loaned securities was $307.00 million and exceeded the total fair value of loaned securities by $7.57 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 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

DRAFT as of May 8, 2019 1:46 PM

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, 2018, cash held with a financial institution in a pooled money market fund amounted to $2.09 million, of which $0.25 million was insured and $1.84 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, 2018, 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, 2018, net collateral for derivatives was $6.9 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, 2018, 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:

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, 2018.

Credit Risk Analysis

As of December 31, 2018 (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	$ 70,308	$ 37,293	$ 75	$ 1,301	$ 2,408	$ 921	$ 2,251	$ 1,502	$ -	$ 24,557
Convertible Bonds	16,555	-	-	-	1,168	2,210	3,628	2,213	-	7,336
Corporate Bonds	458,637	12,168	7,488	82,397	277,815	67,300	8,326	1,559	-	1,584
Federal Home Loan Mortgage Corp.[2]	56,459	-	-	-	-	-	-	-	-	56,459
Federal National Mortgage Assn.[2]	73,992	-	-	-	-	-	-	-	-	73,992
Government National Mortgage Assn. I, II[2]	15,464	-	-	-	-	-	-	-	-	15,464
Government Issues[2]	309,766	235,410	7,310	41,077	-	5,584	1,651	-	-	18,734
Municipals	1,510	-	1,510	-	-	-	-	-	-	-
Other Asset Backed Securities	65,304	43,076	1,321	3,436	5,192	296	-	2,728	4,511	4,744
Subtotal Debt Investments	**1,067,995**	**327,947**	**17,704**	**128,211**	**286,583**	**76,311**	**15,856**	**8,002**	**4,511**	**202,870**
External Investment Pools of Debt Securities										
Securities Lending Cash Collateral Fund										
Liquidation Pool[3]	181,961	-	-	-	-	-	-	-	-	181,961
Duration Pool[3]	1,042	-	-	-	-	-	-	-	-	1,042
Master Custodian Short-Term Investment Fund[3]	99,226	-	-	-	-	-	-	-	-	99,226
Subtotal External Investment Pools	**282,229**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**282,229**
Total	**$ 1,350,224**	**$ 327,947**	**$ 17,704**	**$ 128,211**	**$ 286,583**	**$ 76,311**	**$ 15,856**	**$ 8,002**	**$ 4,511**	**$ 485,099**

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.

DRAFT as of May 8, 2019 1:46 PM

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, 2018. 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, 2018 (Dollars in Thousands)

Adjusted Moody's Credit Rating[1]	Fair Value
Aa	$ 153
A	2,574
Subtotal Derivatives in Asset Position	**2,727**
Derivatives in Liability Position	(6,507)
Total Derivatives in Asset/(Liability) Position	**$ (3,780)**

See footnote 1 on page 50.

As of December 31, 2018, the $2.7 million maximum exposure of derivatives credit risk was reduced by ($6.5) million of liabilities included in netting arrangements, resulting in a net exposure to credit risk of ($3.8) million (rounded).

ACERA has a 5.6% ($0.15 million) net exposure to credit risk with a credit rating of Aa, and a 94.4% ($2.6 million) net exposure to credit risk with a credit rating of A.

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:

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, 2018.

Interest Rate Risk Analysis – Duration

As of December 31, 2018 (Dollars in Thousands)

Debt Investments by Type	Fair Value	Duration in Years
Collateralized Mortgage Obligations	$ 70,308	3.7
Convertible Bonds	16,555	3.2
Corporate Bonds	458,637	5.3
Federal Home Loan Mortgage Corp.	56,459	4.5
Federal National Mortgage Assn.	73,992	4.1
Government National Mortgage Assn. I, II	15,464	2.8
Government Issues	309,766	7.6
Municipals	1,510	8.6
Other Asset Backed Securities	65,304	2.7
Total of Debt Investments	**$ 1,067,995**	
External Investment Pools of Debt Securities	**Fair Value**	**Duration**
Securities Lending Cash Collateral Fund		
Liquidity Pool	$ 181,961	27 days
Duration Pool	1,042	18 days
Master Custodian Short-Term Investment Fund	99,226	-
Total External Investment Pools	**$ 282,229**	

DRAFT as of May 8, 2019 1:46 PM

Fair Value Highly Sensitive to Changes in Interest Rates

The Interest Rate Risk Analysis table below 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 below. ACERA has no general investment policy with respect to investments with fair values that are highly sensitive to changes in interest rates.

Interest Rate Risk Analysis – Highly Sensitive

Investment with Fair Values Highly Sensitive to Changes in Interest Rates

As of December 31, 2018 (Dollars in Thousands)

Investment Type	Investment Description	Interest Rates	Fair Value
Collateralized Mortgage Obligations	Various debt related Securities	2.80% to 5.81%	$1,112
Corporate Bonds	Various debt related Securities	1.00% to 52.56%	25,350
Government Issues	Various debt related Securities	3.00% to 53.67%	41,087
Other Asset Backed	Various debt related Securities	4.46% to 6.24%	419

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, 2018 (Dollars in Thousands)

	Investment Type							
Trade Currency Name	Common Stock	Corporate Bonds	Foreign Currency	Government Issues	Total Return Swaps	Currency Swaps	Limited Partnership	Net Exposure
Argentine Peso	$ -	$ 1,181	$ -	$ 1,456	$ -	$ -	$ -	$ 2,637
Australian Dollar	24,688	-	79	16,972	(2)	(996)	-	40,741
Brazilian Real	9,722	-	-	-	-	-	-	9,722
Canadian Dollar	32,687	-	116	-	-	(1,810)	-	30,993
Danish Krone	37,591	-	51	-	-	(4)	-	37,638
Euro Currency	417,195	2,284	150	-	(131)	(179)	7,929	427,248
Hong Kong Dollar	119,276	-	567	-	(54)	(1)	-	119,788
Indian Rupee	37,606	-	-	-	-	-	-	37,606
Indonesian Rupiah	21,151	-	11	-	-	-	-	21,162
Japanese Yen	235,067	-	2,777	-	(686)	798	-	237,956
Malaysian Ringgit	-	-	-	12,052	-	-	-	12,052
Mexican Peso	-	66	-	16,802	-	-	-	16,868
New Israeli Sheqel	8,728	-	4	-	-	(12)	-	8,720
New Taiwan Dollar	17,960	-	-	-	-	-	-	17,960
New Zealand Dollar	1,068	-	45	-	-	(680)	-	433
Norwegian Krone	1,367	-	28	-	-	(504)	-	891
Philippine Piso	1,602	-	-	-	-	-	-	1,602
Polish Zloty	-	-	-	7,290	-	(6)	-	7,284
Pound Sterling	259,805	-	891	18,157	-	132	-	278,985
Singapore Dollar	34,922	-	124	-	-	14	-	35,060
South African Rand	13,076	-	-	5,584	-	(108)	-	18,552
South Korean Won	12,722	-	-	-	-	-	-	12,722
Swedish Krona	29,588	-	-	-	233	(58)	-	29,763
Swiss Franc	72,550	-	849	-	390	(136)	-	73,653
Turkish Lira	3,301	-	-	-	-	-	-	3,301
Grand Total	**$ 1,391,672**	**$ 3,531**	**$ 5,692**	**$ 78,313**	**$ (250)**	**$ (3,550)**	**$ 7,929**	**$ 1,483,337**

DRAFT as of May 8, 2019 1:46 PM

Real Estate

Real Estate Investment Income – Separate Properties

For the Year Ended December 31, 2018 (Dollars in Thousands)

Real Estate Investment Income	$	5,900
Real Estate Expenses		
Operating Expenses		2,641
Total Expenses		**2,641**
Real Estate Net Income	**$**	**3,259**

There is no outstanding real estate related debt assciated with the separate properties as of December 31, 2018.

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, 2018 (Dollars in Thousands)

	January 1, 2018	Additions	Deletions / Transfers	December 31, 2018
CAPITAL ASSETS - DEPRECIABLE				
Equipment and Furniture	$ 3,034	$ -	$ (2)	$ 3,032
Electronic Document Management System	4,163	-	-	4,163
Information Systems	10,457	-	-	10,457
Leasehold Improvements	2,585	-	-	2,585
Subtotal	**20,239**	**-**	**(2)**	**20,237**
CAPITAL ASSETS - NON DEPRECIABLE				
Construction-in-Progress	-	-	-	-
Total Capital Assets (Cost)	**20,239**	**-**	**(2)**	**20,237**
ACCUMULATED DEPRECIATION AND AMORTIZATION				
Equipment and Furniture	(2,972)	(24)	-	(2,996)
Electronic Document Management System	(4,165)	-	2	(4,163)
Information Systems	(10,457)	-	-	(10,457)
Leasehold Improvements	(1,040)	(95)	-	(1,135)
Total Accumulated Depreciation and Amortization	**(18,634)**	**(119)**	**2**	**(18,751)**
CAPITAL ASSETS - NET OF ACCUMULATED DEPRECIATION AND AMORTIZATION	**$ 1,605**	**$ (119)**	**$ -**	**$ 1,486**

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 $63,000 for the year ended December 31, 2018.

In addition, ACERA leases photocopy machines and water coolers to support operations. All current leases will expire in 2023. Equipment rental expenses were approximately $29,000 for the year ended December 31, 2018. 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	
2019	$	65
2020		55
2021		55
2022		53
2023		48
Total	**$**	**276**

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 2018.

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, 2018 (Dollars in Thousands)

Total Accrued Actuarial Liability as of December 31, 2017	$	10,138,324
Limit: Maximum Allowable fraction of Total Accrued Actuarial Liability (0.21%) times Total Accrued Actuarial Liability	$	21,290
Portion of Administrative Expenses for the Fiscal Year subject to the Statutory Limit		13,003
Excess of Limit over Portion of Administration Expense Subject to Limit	$	8,287
Portion of Administration Expense Subject to Limit as a Percentage of Accrued Actuarial Liability		0.13%

DRAFT as of May 8, 2019 1:46 PM

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, 2018 (Dollars in Thousands)

Reimbursed Cost of ACERA		
Staff Members	$	13,497
Reimbursed Costs of County Services		1,856
State Mandated Benefit Replacement Program (415M)		630
County Personnel Services		77
Partial Salary/Benefits Reimbursement for Elected Board Members		301
Total	**$**	**16,361**

13. SUBSEQUENT EVENTS

Management has evaluated subsequent events through May 16, 2019, 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)

	2018	2017	2016	2015	2014	2013
Total Pension Liability (TPL)[1]						
Service Cost	$ 209,890	$ 187,409	$ 175,642	$ 172,585	$ 167,120	$ 166,639
Interest	659,592	636,556	603,168	579,500	542,377	522,203
Changes of benefit terms	-	-	-	-	-	-
Differences between expected and actual experience	13,710	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	(471,943)	(445,288)	(422,223)	(401,298)	(378,689)	(359,938)
Net Change in Total Pension Liability	**411,249**	**712,921**	**439,088**	**318,822**	**677,292**	**267,542**
Total Pension Liability - Beginning	**9,123,900**	**8,410,979**	**7,971,891**	**7,653,069**	**6,975,777**	**6,708,235**
Total Pension Liability - Ending (a)	**$ 9,535,149**	**$ 9,123,900**	**$ 8,410,979**	**$ 7,971,891**	**$ 7,653,069**	**$ 6,975,777**
Plan Fiduciary Net Position (FNP)						
Contributions - employer[2]	$ 269,684	$ 247,064	$ 241,729	$ 224,607	$ 213,255	$ 191,180
Contributions - member	94,736	89,326	85,736	82,949	79,714	76,230
Net investment income	(216,308)	1,065,908	423,718	49,021	318,245	736,914
Benefit payments, including refunds of member contributions	(471,943)	(445,288)	(422,223)	(401,298)	(378,689)	(359,938)
Administrative expense	(15,246)	(14,571)	(14,618)	(14,262)	(13,855)	(13,634)
Other	-	-	-	-	-	-
Net Change in Plan Fiduciary Net Position	**(339,077)**	**942,439**	**314,342**	**(58,983)**	**218,670**	**630,752**
Plan Fiduciary Net Position[3] - Beginning	**7,110,224**	**6,167,785**	**5,853,443**	**5,912,426**	**5,693,756**	**5,063,004**
Plan Fiduciary Net Position[3] - Ending (b)	**$ 6,771,147**	**$ 7,110,224**	**$ 6,167,785**	**$ 5,853,443**	**$ 5,912,426**	**$ 5,693,756**
Net Pension Liability (NPL) - Ending (a) - (b)	**$ 2,764,002**	**$ 2,013,676**	**$ 2,243,194**	**$ 2,118,448**	**$ 1,740,643**	**$ 1,282,021**
FNP as a Percentage of the TPL	**71.01%**	**77.93%**	**73.33%**	**73.43%**	**77.26%**	**81.62%**
Covered Payroll[4]	**$ 1,046,034**	**$ 995,178**	**$ 947,568**	**$ 945,858[5]**	**$ 886,925**	**$ 853,350**
NPL as a Percentage of Covered Payroll	**264.24%**	**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 2018, the Plan's Fiduciary Net Position amount shown ($6,771,147) includes market value of assets ($7,592,587), less OPEB-related SRBR assets ($873,183 in the SRBR-OPEB reserve, after reducing the reserve by $6,940 SRBR implicit subsidy transfer, and $9,830 in the 401(h) reserve), less a proportionate share of the deferred market losses (after adjustment to include the balance in the Contingency Reserve) commensurate with the size of the OPEB reserve ($61,573). For 2017, the Plan's Fiduciary Net Position amount shown ($7,110,224) includes the net market value of assets ($8,112,100), less OPEB-related SRBR assets ($850,424 in the SRBR-OPEB reserve after reducing the reserve by the $5,830 SRBR implicit subsidy transfer, and $7,582 in the 401(h) reserve), plus a proportionate share of one half of the deferred market gains (after adjustment to include the balance in the Contingency Reserve) commensurate with the size of the OPEB and non-OPEB reserves ($143,870). Note: The amounts may not total properly due to rounding.

4 For years ended December 31, 2017 and later, covered payroll represents Compensation Earnable and Pensionable Compensation and is defined as the payroll on which contributions 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 and Pensionable Compensation that would possibly go into the determination of retirement benefits are 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
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	241,728	241,728	-	947,568	25.51%
2017	247,064	247,064	-	995,178	24.83%
2018	269,684	269,684	-	1,046,034	25.78%

1 For the years ended December 31, 2017 and later, 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)

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Annual Money-Weighted Rate of Return, net of Investment Expense	-4.44%	19.02%	7.16%	-0.10%	4.27%	19.87%	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 Years Ended December 31 (Dollars in Thousands)

	2018	2017
Total OPEB Liability[1]		
Service Cost[2]	$ 31,577	$ 26,991
Interest	73,427	69,879
Changes of benefit terms	-	-
Differences between expected and actual experience	(27,712)	(21,627)
Changes of assumptions	(11,430)	58,973
Benefit payments	(40,879)	(37,904)
Net Change in Total OPEB Liability	**24,983**	**96,312**
Total OPEB Liability - Beginning	**1,029,354**	**933,042**
Total OPEB Liability - Ending (a)	**$1,054,337**	**$ 1,029,354**
Plan Fiduciary Net Position (FNP)		
Contributions - employer[3]	N/A	N/A
Contributions - member	N/A	N/A
Net investment income	$ (138,333)	$ 243,189
Benefit payments	(40,879)	(37,904)
Administrative expense	(1,224)	(1,204)
Other	-	-
Net Change in Plan Fiduciary Net Position	**(180,436)**	**204,081**
Plan Fiduciary Net Position - Beginning[4]	**1,001,876**	**797,795**
Plan Fiduciary Net Position - Ending (b)[4]	**$ 821,440**	**$ 1,001,876**
Net OPEB Liability - Ending (a) - (b)	**$ 232,897**	**$ 27,478**
FNP as a Percentage of the Total OPEB Liability	**77.91%**	**97.33%**
Covered-Employee Payroll[5]	**N/A**	**N/A**
Net OPEB Liability as a Percentage of Covered-Employee Payroll	**N/A**	**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, 2017 and 2016, respectively.

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 For 2018 "Plan's Fiduciary Net Position - beginning" ($1,001,876) includes the SRBR and 401(h) account ($863,836) less the estimated SRBR transfer to the Employer Advance Reserve ($5,830) plus the proportionate share of one half of the deferred market gains after adjustment to include the balance in the Contingency Reserve ($143,870). "Plan's Fiduciary Net Position - ending" ($821,440) includes the SRBR and 401(h) account ($889,953) less the estimated SRBR transfer to Employer Advance Reserve ($6,940) less the proportionate share of the deferred market losses after netting out the balance in the Contingency Reserve that was commensurate with the size of the OPEB reserves ($61,573).

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.

DRAFT as of May 8, 2019 1:46 PM

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
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
2018	N/A	N/A	-	N/A	N/A

1 *Benefit 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.*

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, 2018, 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 2018 (or the second half of fiscal year 2017-2018) are calculated based on the December 31, 2016, valuation. Actuarially determined contribution rates for the last six months of calendar year 2018 (or the first half of fiscal year 2018-2019) are calculated based on the December 31, 2017, valuation.

Valuation Date	December 31, 2017	December 31, 2016
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 15 years remaining as of December 31, 2017). 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 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.
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, 2017	December 31, 2016
Investment rate of return	7.25%, net of pension plan investment expense, including inflation	7.60%, net of pension plan investment expense, including inflation
Inflation rate	3.00%	3.25%
Real across-the-board salary increases	0.50%	0.50%
Projected 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
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, 2017 funding actuarial valuation	Same as those used in the December 31, 2016 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, 2018, 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	4.00%
Medicare Part B reimbursement	4.00%
Other Assumptions	Based on the experience study for the period December 1, 2013 through November 30, 2016

DRAFT as of May 8, 2019 1:46 PM

Supplemental Schedules

Administration Expense

For the Year Ended December 31, 2018 (Dollars in Thousands)

Personnel Services		
Staff Wages	$	6,207
Fringe Benefits		3,429
Temporary Services		571
Total Personnel Services		**10,207**
Professional Services		
Computer Services		376
Audit		108
Total Professional Services		**484**
Communications		
Printing		56
Postage		58
Communication		85
Total Communications		**199**
Rental/Utilities		
Office Space		46
Equipment Leasing		21
Total Rental/Utilities		**67**
Other		
Depreciation and Amortization		80
Board Operating Expenses		316
Insurance		924
Miscellaneous		455
Training		184
Maintenance-Equipment		63
Supplies		24
Total Other		**2,046**
Subtotal: Administrative Expense Subject to Statutory Limit		**13,003**
Actuarial Expenses		357
Business Continuity		591
Legal Expenses		1,577
Technology Expenses		942
Subtotal: Administration Expense Excluded from Statutory Limit[1]		**3,467**
TOTAL ADMINISTRATION EXPENSE	**$**	**16,470**

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

Investment Expenses

For the Year Ended December 31, 2018 (Dollars in Thousands)

Investment Manager Fees[1]	$	49,969
Brokerage Commissions		1,402
Investment Allocated Costs		3,105
Investment Consultants		1,292
Other Investment Expenses		1,189
Investment Custodians		556
Total Investment Expenses	**$**	**57,513**

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, 2018 (Dollars in Thousands)

Actuarial & Audit Services	$	541
Human Resources Consulting		77
Legal Services		204
Other Specialized Services		596
Total Payments to Consultants	**$**	**1,418**

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

ALAMEDA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

Audit Results for the Year Ended December 31, 2018

AUDIT RESULTS

- Audit is substantially complete.
- Basic Financial Statements
  - Unqualified opinion.
- Internal Control and Compliance (Yellow Book)
  - No significant deficiencies or material weaknesses.
    - 37 Act Requirements – No exceptions.
    - Administrative Limitation – Within the limitation.
    - ACERA Policies and Procedures – No exceptions.
  - No compliance findings.
- Final report to be submitted to the full Board upon acceptance by the Audit Committee.

AUDIT RESULTS

Risk Area	Testing
Investments Additions (Revenue) Management Override of Controls	Tested areas as outlined in the audit plan, including areas of audit emphasis. - Reconciliations were reviewed. - Confirmed valuation of investments and contributions with employers. - Performed analytical procedures. - Updated understanding of internal controls, performed rotational testing, and tested journal entries.

REQUIRED COMMUNCATIONS

- There were no:
  - Sensitive accounting estimates;
  - Significant difficulties in dealing with management; or
  - Disagreements related to financial accounting, reporting, or auditing matters with management.
- There were no adjustments and no passed adjustments.
- We are not aware of any consultations by management with other accountants.
- We will request management to complete a management representation letter.
- As part of our audit, we considered ACERA's internal control solely for the purpose of determining our auditing procedures and not to provide any assurance concerning such internal control.

REQUIRED COMMUNCATIONS

- Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by ACERA are described in Note 1 of the financial statements.
- We noted no transactions entered into by ACERA during the year for which there is a lack of authoritative guidance or consensus.
- There are no significant transactions recognized in the financial statements in a different period than when the transaction occurred.

MEMORANDUM TO THE AUDIT COMMITTEE

DATE: May 16, 2019

TO: Members of the Audit Committee

FROM: Margo Allen, Fiscal Services Officer

SUBJECT: Governmental Accounting Standards Board (GASB) Statement No. 67 and Statement No. 74 Actuarial Valuations as of December 31, 2018

Executive Summary

Staff has completed its review and evaluation of the GASB Statement No. 67 and Statement No. 74 Actuarial Valuations as of December 31, 2018. Staff and ACERA's actuary, Segal Consulting, presented this information at the following meetings:

- April 18, 2019, Audit Committee Meeting; and
- April 24, 2019, Participating Employers' Meeting.

Having no need for further review, staff recommends the committee consider a motion to adopt the GASB Statement No. 67 and Statement No, 74 Actuarial Valuations as of December 31, 2018.

Recommendation

Staff recommends that the Audit Committee recommend to the Board of Retirement that the Board adopt the GASB Statement No. 67 and Statement No. 74 Actuarial Valuations as of December 31, 2018.

MEMORANDUM TO THE AUDIT COMMITTEE

DATE: May 16, 2019

TO: Members of the Audit Committee

FROM: Margo Allen, Fiscal Services Officer

SUBJECT: Addendums to the Governmental Accounting Standards Board (GASB) Statement No. 67 and Statement No. 74 Actuarial Valuations as of December 31, 2018

Executive Summary

Staff has completed its review and evaluation of the addendums to the GASB Statement No. 67 and Statement No. 74 Actuarial Valuations as of December 31, 2018. The addendums contain additional schedules recommended by the American Institute of Certified Public Accountants (AICPA) for use in allocating the Net Pension Liability (NPL) and the Net OPEB Liability (NOL) by employer, before issuing the full companion reports for the employers' financial reporting under GASB Statement No. 68 and Statement No.75.

Last year, Staff presented the addendums concurrently with the associated GASB valuations for committee review and approval; however, timing issues this year prevented concurrent presentation of the associated reports. Therefore, staff is requesting committee members consider the adoption of the addendums under a separate recommendation.

Participating employers were presented the GASB Statement No. 67 and Statement No. 74 Actuarial Valuations as of December 31, 2018, at the April 24, 2019, participating employers meeting, the addendums provide the same information contained in the valuations.

Recommendation

Staff recommends that the Audit Committee recommend to the Board of Retirement that the Board adopt the Addendums to the GASB Statement No. 67 and Statement No. 74 Actuarial Valuations as of December 31, 2018.

Attachments: Addendums to the Governmental Accounting Standards Board (GASB) Statement No. 67 and Statement No. 74 Actuarial Valuations as of December 31, 2018

Segal Consulting

180 Howard Street Suite 1100 San Francisco, CA 94105-6147
T 415.263.8200 www.segalco.com

VIA E-MAIL AND USPS

April 24, 2019

Ms. Margo Allen
Fiscal Services Officer
Alameda County Employees' Retirement Association
475 14th Street, Suite 1000
Oakland, CA 94612-1900

Re: Alameda County Employees' Retirement Association (ACERA)
Addendum to the Governmental Accounting Standards Board (GASB) Statement 67
Actuarial Valuation as of December 31, 2018

Dear Margo:

In our Governmental Accounting Standards Board (GASB) Statement 67 actuarial valuation draft report dated April 9, 2019, we provided the Net Pension Liability (NPL) and other elements that are required for completing the Plan's financial reporting requirements under GASB Statement 67. In this letter, we have provided as an Addendum to that report two additional schedules that the American Institute of Certified Public Accountants (AICPA) State and Local Government Expert Panel recommends be prepared by the Retirement Association's actuary (Segal Consulting) for use in allocating the NPL and the pension expense by employer, before we issue the full companion report for the employer's financial reporting for ACERA under GASB Statement 68.

The attached schedules have been developed based on the assumptions, methods, and results shown in our draft report dated April 9, 2019. Exhibits A1 and A2 detail the method used for allocating the NPL and they provide the NPL amounts allocated to the seven employers at ACERA as of December 31, 2017 and December 31, 2018, respectively.

The Board of Retirement adopted the Declining Employer Payroll Policy on October 18, 2018 and determined that the Policy applied to the Alameda County Office of Education (ACOE) and the Livermore Area Recreation and Park District (LARPD) Tier 1 members who were included as part of the General (non-LARPD Tier 3 and Tier 4) membership class in our prior funding and GASB valuations. As a result, an asset share calculated in accordance with that Policy was allocated to each of these two employers as of December 31, 2017. In addition, because the allocated assets were less than the actuarial accrued liability (AAL) attributable to these Tier 1 members for each of the two employers, there was also an implicit allocation of unfunded actuarial accrued liability (UAAL).

Pursuant to the Declining Employer Payroll Policy, changes in assets and AAL for ACOE have been tracked separately since January 1, 2018, and effective with the December 31, 2018 valuation ACOE is in its own separate membership class. Therefore, we have determined ACOE's NPL as of December 31, 2018 separately, in a manner consistent with past practice for each existing membership class.

For reference, as of December 31, 2017 there was no NPL allocated to ACOE based on the method of allocating NPL to employers within the General (non-LARPD Tier 3 and Tier 4) membership class in proportion to each employer's contribution amounts relative to the total for the group. (ACOE did not make any contributions during 2017 as their payroll decreased to $0 in 2017.)

Also pursuant to the Declining Employer Payroll Policy, changes in assets and AAL for LARPD Tier 1 members have been tracked separately since January 1, 2018, and effective with the December 31, 2018 valuation the assets and AAL for LARPD Tier 1 members were combined with the assets and AAL for LARPD Tier 3 and Tier 4, forming a new combined membership class that includes LARPD members from all tiers. Accordingly, the NPL attributable to LARPD Tier 1 members that was previously allocated proportionally from the General (non-LARPD Tier 3 and Tier 4) membership class is now determined directly as a part of the NPL for the entire LARPD membership class.[1]

The General (excluding LARPD Tier 3 and Tier 4) membership class as referenced in Exhibit A1 is now referred to as the General (excluding ACOE and LARPD) membership class in Exhibit A2. The changes in the beginning of year NPL for ACOE, LARPD and General (excluding ACOE and LARPD) due to the application of the Declining Employer Payroll Policy that we use to calculate the pension expense for 2018 are provided in Exhibit A3.

Please note that the above changes in the calculation of the NPL are only with respect to the liabilities for the Pension Plan. The calculation of the NPL for the non-OPEB SRBR (in proportion to employers' contribution amounts to the Pension Plan for the Association as a whole) is unchanged.

Exhibit B summarizes the allocated NPL, deferred outflows and inflows of resources, and pension expense by the seven employers. Additional information required under GASB Statement 68 that each of the employers will need to disclose will be prepared in a separate report, anticipated to be completed in June.

These calculations were performed under the supervision of Eva Yum, FSA, MAAA, Enrolled Actuary. We are members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

---

[1] The TPL, plan assets, deferred inflows, and deferred outflows allocated to the LARPD Tier 1 members as of December 31, 2017 (based on LARPD Tier 1 employer contributions) have been moved from the General (excluding LARPD Tier 3 and Tier 4) membership class to the new General LARPD membership class as of December 31, 2017 for purposes of reflecting the implementation of the Declining Employer Payroll Policy for the measurement date as of December 31, 2018.

Please give us a call if you have any questions.

Sincerely,

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

Eva Yum, FSA, MAAA, EA
Senior Actuary

DNA/bqb
Enclosures

EXHIBIT A1

Schedule of Employer Allocations as of December 31, 2017

Actual Employer Contributions by Employer and Membership Class
January 1, 2017 to December 31, 2017

	General Members, Excluding LARPD Tier 3 and Tier 4		General LARPD Tier 3 and Tier 4 Members Only		All General Members Combined	
Employer	**Contributions**	**Percentage[1]**	**Contributions**	**Percentage**	**Contributions**	**Percentage**
Alameda County	$102,195,576	63.903%	$0	0.000%	$102,195,576	63.563%
Health System	46,206,829	28.893%	0	0.000%	46,206,829	28.740%
Superior Court	9,297,985	5.814%	0	0.000%	9,297,985	5.783%
First 5	910,867	0.570%	0	0.000%	910,867	0.567%
Housing Authority	1,115,522	0.698%	0	0.000%	1,115,522	0.694%
LARPD	195,892	0.122%	853,951	100.000%	1,049,843	0.653%
ACOE	0	0.000%	0	0.000%	0	0.000%
Total for all Employers	$159,922,671	100.000%	$853,951	100.000%	$160,776,622	100.000%

Actual Employer Contributions by Employer and Membership Class
January 1, 2017 to December 31, 2017

	Safety Members		Total	
Employer	**Contributions**	**Percentage**	**Contributions**	**Percentage[1], [2]**
Alameda County	$86,286,928	100.000%	$188,482,504	76.289%
Health System	0	0.000%	46,206,829	18.702%
Superior Court	0	0.000%	9,297,985	3.763%
First 5	0	0.000%	910,867	0.369%
Housing Authority	0	0.000%	1,115,522	0.452%
LARPD	0	0.000%	1,049,843	0.425%
ACOE	0	0.000%	0	0.000%
Total for all Employers	$86,286,928	100.000%	$247,063,550	100.000%

(1) The unrounded percentages are used in the allocation of the NPL amongst the employers.

(2) Consistent with the practice we have been following since the inception of the implementation of GASB 67 and 68, we have used the unrounded percentages above in estimating the allocation of member contributions for purposes of determining pension expense amongst the employers. We have continued that practice through December 31, 2017 even though ACERA has since provided us with the actual member contributions by employer, as the difference between the actual and the estimated member contributions would only have the primary impact of changing the timing on when pension expense would have to be recognized by individual employers.

EXHIBIT A1

Schedule of Employer Allocations as of December 31, 2017 – continued

Allocation of December 31, 2017 Net Pension Liability

	General NPL, Excluding LARPD Tier 3 and Tier 4 (Excl. non-OPEB SRBR NPL)		General LARPD Tier 3 and Tier 4 NPL Only (Excl. non-OPEB SRBR NPL)		Total General NPL (Excl. non-OPEB SRBR NPL)	
Employer	**NPL**	**Percentage[1]**	**NPL**	**Percentage[1]**	**NPL**	**Percentage**
Alameda County	$711,665,897	63.903%	$0	0.000%	$711,665,897	63.594%
Health System	321,773,463	28.893%	0	0.000%	321,773,463	28.753%
Superior Court	64,748,975	5.814%	0	0.000%	64,748,975	5.786%
First 5	6,343,063	0.570%	0	0.000%	6,343,063	0.567%
Housing Authority	7,768,232	0.698%	0	0.000%	7,768,232	0.694%
LARPD	1,364,146	0.122%	5,415,907	100.000%	6,780,053	0.606%
ACOE	0	0.000%	0	0.000%	0	0.000%
Total for all Employers	$1,113,663,776	100.000%	$5,415,907	100.000%	$1,119,079,683	100.000%

Allocation of December 31, 2017 Net Pension Liability

	Safety NPL (Excl. non-OPEB SRBR NPL)		General & Safety Non-OPEB SRBR NPL		Total	
Employer	**NPL**	**Percentage[1]**	**NPL**	**Percentage[2]**	**NPL**	**Percentage**
Alameda County	$789,111,330	100.000%	$80,473,478	76.289%	$1,581,250,705	78.526%
Health System	0	0.000%	19,728,219	18.702%	341,501,682	16.959%
Superior Court	0	0.000%	3,969,818	3.763%	68,718,793	3.413%
First 5	0	0.000%	388,899	0.369%	6,731,962	0.334%
Housing Authority	0	0.000%	476,277	0.452%	8,244,509	0.409%
LARPD	0	0.000%	448,235	0.425%	7,228,288	0.359%
ACOE	0	0.000%	0	0.000%	0	0.000%
Total for all Employers	$789,111,330	100.000%	$105,484,926	100.000%	$2,013,675,939	100.000%

(1) Allocated based on the actual employer contributions within each membership class.
(2) Allocated based on the actual employer contributions in total.

EXHIBIT A1

Schedule of Employer Allocations as of December 31, 2017 – continued

Notes:

Based on the January 1, 2017 through December 31, 2017 employer contributions as provided by ACERA.

Pension (excluding non-OPEB SRBR)

The Net Pension Liability (NPL) for each membership class is the Total Pension Liability (TPL) minus the Plan's Fiduciary Net Position (plan assets). The Total Pension Liability for each membership class is obtained from internal valuation results. The Plan's Fiduciary Net Position for each membership class is obtained by allocating the total Plan's Fiduciary Net Position for Pension (excluding non-OPEB SRBR) proportionally based on the valuation value of assets (VVA) for each membership class relative to the total valuation value of assets for all membership classes.[1] The total Plan's Fiduciary Net Position for pension as of December 31, 2017 includes the net market value of assets less SRBR assets. The SRBR assets include the SRBR-OPEB reserve (after reducing the reserve by the SRBR implicit subsidy transfer), the 401(h) reserve, and the Non-OPEB SRBR reserve, plus a proportionate share of one half of the deferred market gains (after adjustment to include the balance in the Contingency Reserve) commensurate with the size of those SRBR reserves.

The General LARPD Tier 3 and Tier 4 membership class has only one employer (LARPD), so all of the NPL for General LARPD Tier 3 and Tier 4 is allocated to LARPD. The Safety membership class also has only one employer (County), so all of the NPL for Safety is allocated to the County.

For General excluding LARPD Tier 3 and Tier 4, the NPL is allocated based on the actual employer contributions within the General non-LARPD Tier 3 and Tier 4 membership class. The steps used for the allocation are as follows:

-First calculate the ratio of the employer's contributions to the total contributions for the membership class.
-This ratio is multiplied by the NPL for the membership class to determine the employer's proportionate share of the NPL for the membership class.

Non-OPEB SRBR

For non-OPEB SRBR, the NPL is allocated based on the actual employer contributions in total. The steps used for the allocation are as follows:

-First calculate the ratio of the employer's total contributions to the total contributions for all employers.
-This ratio is multiplied by the NPL for the non-OPEB SRBR to determine the employer's proportionate share of the NPL for the non-OPEB SRBR.

Total

The employer's total allocated NPL is the sum of its allocated pension NPL from each membership class and the non-OPEB SRBR. The proportionate share of the total plan NPL is then the ratio of the employer's total allocated NPL to the total NPL of all employers.

[1] As of December 31, 2017, the total Plan's Fiduciary Net Position for Pension (excluding non-OPEB SRBR) is $236.0 million **higher** than the valuation value of assets as of the same date due to the inclusion of deferred market **gains** and a non-zero Contingency Reserve.

EXHIBIT A2

Schedule of Employer Allocations as of December 31, 2018

Actual Employer Contributions by Employer and Membership Class
January 1, 2018 to December 31, 2018

	General Members, Excluding ACOE and LARPD		General ACOE Members Only		General LARPD Members Only		All General Members Combined	
Employer	Contributions	Percentage[1]	Contributions	Percentage	Contributions	Percentage	Contributions	Percentage
Alameda County	$112,075,994	64.134%	$0	N/A	$0	0.000%	$112,075,994	63.731%
Health System	50,652,924	28.985%	0	N/A	0	0.000%	50,652,924	28.804%
Superior Court	9,789,834	5.602%	0	N/A	0	0.000%	9,789,834	5.567%
First 5	1,022,889	0.585%	0	N/A	0	0.000%	1,022,889	0.582%
Housing Authority	1,213,308	0.694%	0	N/A	0	0.000%	1,213,308	0.690%
LARPD	0	0.000%	0	N/A	1,100,236	100.000%	1,100,236	0.626%
ACOE	0	0.000%	0	N/A	0	0.000%	0	0.000%
Total for all Employers	$174,754,949	100.000%	$0	N/A	$1,100,236	100.000%	$175,855,185	100.000%

Actual Employer Contributions by Employer and Membership Class
January 1, 2018 to December 31, 2018

	Safety Members		Total	
Employer	Contributions	Percentage	Contributions	Percentage[1], [2]
Alameda County	$93,829,624	100.000%	$205,905,618	76.351%
Health System	0	0.000%	50,652,924	18.782%
Superior Court	0	0.000%	9,789,834	3.630%
First 5	0	0.000%	1,022,889	0.379%
Housing Authority	0	0.000%	1,213,308	0.450%
LARPD	0	0.000%	1,100,236	0.408%
ACOE	0	0.000%	0	0.000%
Total for all Employers	$93,829,624	100.000%	$269,684,809	100.000%

[1] The unrounded percentages are used in the allocation of the NPL amongst the employers.
[2] In prior years, we used the unrounded percentages above in estimating the allocation of member contributions for purposes of determining pension expense amongst the employers. We had continued that practice through December 31, 2017 even though ACERA has since provided us with the actual member contributions by employer, as the difference between the actual and the estimated member contributions would only have the primary impact of changing the timing on when pension expense would have to be recognized by individual employers.

Starting with the 12/31/2018 actuarial valuation, ACERA has provided us with actual Pension Plan benefit payments by General (excluding ACOE and

LARPD), General ACOE, General LARPD and Safety membership classes (in addition to the actual member contributions by employers). Therefore, we now use the actual Pension Plan benefit payments by those four membership classes and actual member contributions by employer within each of the four membership class for purposes of determining pension expense amongst the employers. This is consistent with how we developed the valuation value of assets in the funding actuarial valuation.

EXHIBIT A2

Schedule of Employer Allocations as of December 31, 2018

Allocation of December 31, 2018 Net Pension Liability

	General NPL, Excluding ACOE and LARPD (Excl. non-OPEB SRBR NPL)		General ACOE NPL Only (Excl. non-OPEB SRBR NPL)		General LARPD NPL Only (Excl. non-OPEB SRBR NPL)		Total General NPL (Excl. non-OPEB SRBR NPL)	
Employer	**NPL**	**Percentage(1)**	**NPL**	**Percentage(1)**	**NPL**	**Percentage(1)**	**NPL**	**Percentage**
Alameda County	$1,056,842,788	64.134%	$0	0.000%	$0	0.000%	$1,056,842,788	63.481%
Health System	477,641,781	28.985%	0	0.000%	0	0.000%	477,641,781	28.690%
Superior Court	92,315,179	5.602%	0	0.000%	0	0.000%	92,315,179	5.545%
First 5	9,645,534	0.585%	0	0.000%	0	0.000%	9,645,534	0.579%
Housing Authority	11,441,128	0.694%	0	0.000%	0	0.000%	11,441,128	0.687%
LARPD	0	0.000%	0	0.000%	15,284,738	100.000%	15,284,738	0.918%
ACOE	0	0.000%	1,666,157	100.000%	0	0.000%	1,666,157	0.100%
Total for all Employers	$1,647,886,410	100.000%	$1,666,157	100.000%	$15,284,738	100.000%	$1,664,837,305	100.000%

Allocation of December 31, 2018 Net Pension Liability

	Safety NPL (Excl. non-OPEB SRBR NPL)		General & Safety Total (Excl. non-OPEB SRBR NPL)		General & Safety Non-OPEB SRBR NPL		Total	
Employer	**NPL**	**Percentage(1)**	**NPL**	**Percentage**	**NPL**	**Percentage(2)**	**NPL**	**Percentage**
Alameda County	$971,674,335	100.000%	$2,028,517,123	76.940%	$97,339,469	76.351%	$2,125,856,592	76.913%
Health System	0	0.000%	477,641,781	18.116%	23,945,577	18.782%	501,587,358	18.147%
Superior Court	0	0.000%	92,315,179	3.501%	4,628,029	3.630%	96,943,208	3.507%
First 5	0	0.000%	9,645,534	0.366%	483,559	0.379%	10,129,093	0.366%
Housing Authority	0	0.000%	11,441,128	0.434%	573,577	0.450%	12,014,705	0.435%
LARPD	0	0.000%	15,284,738	0.580%	520,124	0.408%	15,804,862	0.572%
ACOE	0	0.000%	1,666,157	0.063%	0	0.000%	1,666,157	0.060%
Total for all Employers	$971,674,335	100.000%	$2,636,511,640	100.000%	$127,490,335	100.000%	$2,764,001,975	100.000%

(1) Allocated based on the actual employer contributions within each membership class.
(2) Allocated based on the actual employer contributions in total. ACOE was not required to make any Pension Plan contributions during 2018 because their payroll was $0. However, they were required to make a contribution under the Declining Employer Payroll Policy starting in 2019. As they would be expected to make a large lump sum contribution to partially pay off their liability, we would consult with the auditor on whether any special adjustment needs to be made when we report their non-OPEB SRBR NPL next year.

EXHIBIT A2

Schedule of Employer Allocations as of December 31, 2018 – continued

Notes:

Based on the January 1, 2018 through December 31, 2018 employer contributions as provided by ACERA.

Pension (excluding non-OPEB SRBR)

The Net Pension Liability (NPL) for each membership class is the Total Pension Liability (TPL) minus the Plan's Fiduciary Net Position (plan assets). The Total Pension Liability for each membership class is obtained from internal valuation results. The Plan's Fiduciary Net Position for each membership class is obtained by allocating the total Plan's Fiduciary Net Position for Pension (excluding non-OPEB SRBR) proportionally based on the valuation value of assets for each membership class relative to the total valuation value of assets for all membership classes.[1] The total Plan's Fiduciary Net Position for pension as of December 31, 2018 includes the net market value of assets less SRBR assets. The SRBR assets include the SRBR-OPEB reserve (after reducing the reserve by the SRBR implicit subsidy transfer), the 401(h) reserve, and the Non-OPEB SRBR reserve, less a proportionate share of the deferred market losses (after adjustment to include the balance in the Contingency Reserve) commensurate with the size of those SRBR reserves.

The General ACOE membership class has only one employer (ACOE), so all of the NPL for General ACOE is allocated to the ACOE. The General LARPD membership class has only one employer (LARPD), so all of the NPL for General LARPD is allocated to LARPD. The Safety membership class also has only one employer (County), so all of the NPL for Safety is allocated to the County.

For General excluding ACOE and LARPD, the NPL is allocated based on the actual employer contributions within the General membership class excluding any contributions made by ACOE and LARPD. The steps used for the allocation are as follows:

-First calculate the ratio of the employer's contributions to the total contributions for the membership class.
-This ratio is multiplied by the NPL for the membership class to determine the employer's proportionate share of the NPL for the membership class.

Non-OPEB SRBR

For non-OPEB SRBR, the NPL is allocated based on the actual employer contributions in total. The steps used for the allocation are as follows:

-First calculate the ratio of the employer's total contributions to the total contributions for all employers.
-This ratio is multiplied by the NPL for the non-OPEB SRBR to determine the employer's proportionate share of the NPL for the non-OPEB SRBR.

Total

The employer's total allocated NPL is the sum of its allocated pension NPL from each membership class and the non-OPEB SRBR. The proportionate share of the total plan NPL is then the ratio of the employer's total allocated NPL to the total NPL of all employers.

[1] As of December 31, 2018, the total Plan's Fiduciary Net Position for Pension (excluding non-OPEB SRBR) is $504.8 million **lower** than the valuation value of assets as of the same date due to the inclusion of deferred market **losses** and no available Contingency Reserve.

EXHIBIT A3

Impact of the Application of the Declining Employer Payroll Policy for Use in the Determination of the Pension Expense for 2018

As a result of implementation of the Declining Employer Payroll Policy as adopted by the Board, we have separated the following Plan's Fiduciary Net Position and TPL from the General (Excluding LARPD Tier 3 and Tier 4) membership class to the General ACOE membership class and General LARPD membership class. This separation was calculated as of December 31, 2017, for purposes of the rollforward of the TPL in the calculation of the NPL as of December 31, 2018.

	Transfer as of December 31, 2017 (for purposes of the rollforward of TPL to December 31, 2018)	General ACOE Members	General LARPD Tier 1 Members (to be combined with General LARPD Tier 3 and Tier 4 to become General LARPD Members)	Changes in General Membership Class, Excluding LARPD Tier 3 and Tier 4
1.	Transfer of Plan's Fiduciary Net Position	$3,434,159(1)	$15,846,631(2)	- $19,280,790
2.	Transfer of TPL	4,676,346	21,578,633	-26,254,979
3.	NPL after application of the Declining Employer Payroll Policy (2. - 1.)	1,242,187(3)	5,732,002(4)	-6,974,189
4.	NPL before application of the Declining Employer Payroll Policy for ACOE and LARPD Tier 1 (from Exhibit A1)	0	1,364,146	
5.	Additional NPL for ACOE and LARPD Tier 1(5) (3. - 4.)	1,242,187	4,367,856	

(1) The $3,434,159 transfer of plan assets to ACOE is based on the allocated VVA of $3,319,475 as of December 31, 2017 plus a proportional share of the Contingency Reserve and Deferred Market gains as of that same date.

(2) The $15,846,631 transfer of plan assets to LARPD is based on the allocated VVA of $15,087,253 as of December 31, 2017, plus a true-up of $230,180 (on a VVA basis) as of December 31, 2017, plus a proportional share of the Contingency Reserve and Deferred Market gains as of that same date.

(3) This includes the NPL of the new beneficiary of the last active member who retired and died prior to December 31, 2017. This beneficiary was not included in the December 31, 2017 valuation data but has since been included in the December 31, 2018 valuation data.

(4) This includes a true-up of the NPL (TPL of $324,302 less plan assets of $238,132) as of December 31, 2017 to reflect the liability for a new retiree who was valued in the December 31, 2017 valuation as an inactive vested member based on the member's contribution account balance. The plan assets of $238,132 are based on a VVA of $230,180 as of December 31, 2017 plus a proportional share of the Contingency Reserve and Deferred Market gains as of that same date.

(5) These amounts, adjusted with interest, are used in determining the additional pension expense for 2018.

EXHIBIT B

Schedule of Pension Amounts by Employer as of December 31, 2018

Employer	Net Pension Liability	Deferred Outflows of Resources: Differences Between Expected and Actual Experience	Deferred Outflows of Resources: Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Deferred Outflows of Resources: Changes of Assumptions	Deferred Outflows of Resources: Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Deferred Outflows of Resources: Total Deferred Outflows of Resources
Alameda County	$2,125,856,592	$19,752,967	$227,497,573	$273,034,940	$2,466,421	$522,751,901
Health System	501,587,358	609,653	62,503,140	69,408,590	8,849,129	141,370,512
Superior Court	96,943,208	117,829	12,080,159	13,414,795	64,308	25,677,091
First 5	10,129,093	12,311	1,262,193	1,401,642	253,455	2,929,601
Housing Authority	12,014,705	14,603	1,497,161	1,662,569	80,751	3,255,084
LARPD	15,804,862	3,661,300	1,701,476	1,518,478	30,864	6,912,118
ACOE	1,666,157	1,086,897	267,129	0	4,996	1,359,022
Total for all Employers	**$2,764,001,975**	**$25,255,560**	**$306,808,831**	**$360,441,014**	**$11,749,924**	**$704,255,329**

EXHIBIT B

Schedule of Pension Amounts by Employer as of December 31, 2018 – continued

	Deferred Inflows of Resources					Pension Expense		
Employer	**Differences Between Expected and Actual Experience**	**Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments**	**Changes of Assumptions**	**Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions**	**Total Deferred Inflows of Resources**	**Proportionate Share of Plan Pension Expense**	**Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions**	**Total Employer Pension Expense**
Alameda County	$36,780,980	$0	$28,906,056	$6,013,423	$71,700,459	$413,358,952	-$440,550	$412,918,402
Health System	13,240,156	0	7,110,910	644,039	20,995,105	103,810,164	2,022,053	105,832,217
Superior Court	2,558,963	0	1,374,346	4,469,239	8,402,548	20,063,683	-1,443,652	18,620,031
First 5	267,373	0	143,598	57,626	468,597	2,096,351	24,723	2,121,074
Housing Authority	317,147	0	170,330	339,684	827,161	2,486,602	-112,051	2,374,551
LARPD	963,069	0	154,457	132,281	1,249,807	2,657,467	-24,898	2,632,569
ACOE	0	0	0	93,632	93,632	312,131	-25,625	286,506
Total for all Employers	**$54,127,688**	**$0**	**$37,859,697**	**$11,749,924**	**$103,737,309**	**$544,785,350**	**$0**	**$544,785,350**

EXHIBIT B

Schedule of Pension Amounts by Employer as of December 31, 2018 – continued

Notes:

Amounts shown in this exhibit were allocated first by employer within each of the four pension plan membership class (excl. non-OPEB SRBR) and within the non-OPEB SRBR based on the Employer Allocation Percentage calculated in Exhibit A2, and added together to produce the results by employer in total.

In determining the pension expense:

- Any differences between projected and actual investment earnings on pension plan investments are recognized over a period of five years beginning with the year in which they occur.
- Current-period (i.e., 2018) differences between expected and actual experience and changes of assumptions are recognized over the average of the expected remaining service lives of all employees that are provided with pensions through ACERA determined as of December 31, 2017 (the beginning of the measurement period ending December 31, 2018) and is 5.43 years.
- Prior-period differences between expected and actual experience and changes of assumptions are continued to be recognized based on the expected remaining service lives of all employees calculated as of those prior measurement dates.

The average of the expected remaining service lives of all employees was determined by:

- Calculating each active employee's expected remaining service life as the present value of $1 per year of future service at zero percent interest.
- Setting the remaining service life to zero for each nonactive or retired member.
- Dividing the sum of the above amounts by the total number of active employees and nonactive and retired members.

Segal Consulting

180 Howard Street Suite 1100 San Francisco, CA 94105-6147
T 415.263.8200 www.segalco.com

VIA E-MAIL and USPS

April 24, 2019

Ms. Margo Allen
Fiscal Services Officer
Alameda County Employees' Retirement Association
475 14th Street, Suite 1000
Oakland, CA 94612-1900

**Re: Alameda County Employees' Retirement Association (ACERA)
Addendum to the Governmental Accounting Standards Board (GASB)
Statement 74 Actuarial Valuation as of December 31, 2018**

Dear Margo,

In our Governmental Accounting Standards Board (GASB) Statement 74 actuarial valuation draft report dated April 9, 2019, we provided the Net OPEB Liability (NOL) and other elements that are required for completing the Plan's financial reporting requirements under GASB Statement 74. In this letter, we have provided as an Addendum to that report two additional schedules for use in allocating the NOL and OPEB expense by employer, before we issue the full companion report for the employer's financial reporting for ACERA under GASB Statement 75. This is similar to a recommendation made by the American Institute of Certified Public Accountants (AICPA) State and Local Government Expert Panel to have comparable schedules prepared for the Pension Plan when we implemented GASB Statements 67 and 68.

The attached schedules have been developed based on the assumptions, methods, and results shown in our draft report dated April 9, 2019. Exhibits A1 and A2 detail the method used for allocating the NOL and the NOL amounts allocated to the seven employers at ACERA as of December 31, 2017 and December 31, 2018, respectively.[1]

Exhibit B summarizes the allocated NOL, deferred outflows and inflows of resources, and OPEB expense by the seven employers. Additional information required under GASB Statement 75 that each of the employers will need to disclose will be provided in a separate report.

[1] The December 31, 2017 and December 31, 2018 NOL has been allocated to the different employers in proportion to the total employer contributions made by those employers to the Pension Plan during calendar years 2017 and 2018, respectively, based on discussions and approval provided by the Board.

The actuarial calculations were completed under the supervision of Thomas Bergman, ASA, MAAA, Enrolled Actuary and Andy Yeung, ASA, MAAA, FCA, Enrolled Actuary. The health care trend and other related medical assumptions have been reviewed by Melissa A. Krumholz, FSA, MAAA. We are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

Please give us a call if you have any questions.

Sincerely,

Andy Yeung

Thomas Bergman

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

Thomas Bergman, ASA, MAAA, EA
Retiree Health Actuary

TJH/bqb
Enclosures

EXHIBIT A1

Schedule of Employer Allocations as of December 31, 2017

Actual Employer Contributions by Employer
January 1, 2017 to December 31, 2017

Employer	Contributions	Percentage*
Alameda County	$188,482,504	76.289%
Health System	46,206,829	18.702%
Superior Court	9,297,985	3.763%
First 5	910,867	0.369%
Housing Authority	1,115,522	0.452%
LARPD	1,049,843	0.425%
ACOE	0	0.000%
Total for all Employers	$247,063,550	100.000%

* The unrounded percentages are used in the allocation of the NOL amongst employers.

Allocation of December 31, 2017 Net OPEB Liability

Employer	NOL	Percentage
Alameda County	$20,962,931	76.289%
Health System	5,139,101	18.702%
Superior Court	1,034,117	3.763%
First 5	101,306	0.369%
Housing Authority	124,068	0.452%
LARPD	116,763	0.425%
ACOE	0	0.000%
Total for all Employers	$27,478,286	100.000%

Notes:

1. Based on the January 1, 2017 through December 31, 2017 employer contributions in total as provided by ACERA.
2. The Net OPEB Liability (NOL) is the Total OPEB Liability (TOL) minus the OPEB SRBR Plan's Fiduciary Net Position (plan assets).
3. The employer's share of the total plan NOL is the ratio of the employer's total contributions to the total contributions for all employers.

EXHIBIT A2

Schedule of Employer Allocations as of December 31, 2018

Actual Employer Contributions by Employer
January 1, 2018 to December 31, 2018

Employer	Contributions	Percentage*
Alameda County	$205,905,618	76.351%
Health System	50,652,924	18.782%
Superior Court	9,789,834	3.630%
First 5	1,022,889	0.379%
Housing Authority	1,213,308	0.450%
LARPD	1,100,236	0.408%
ACOE	0	0.000%
Total for all Employers	$269,684,809	100.000%

* The unrounded percentages are used in the allocation of the NOL amongst employers.

Allocation of December 31, 2018 Net OPEB Liability

Employer	NOL	Percentage
Alameda County	$177,817,632	76.351%
Health System	$43,743,260	18.782%
Superior Court	$8,454,384	3.630%
First 5	$883,354	0.379%
Housing Authority	$1,047,799	0.450%
LARPD	$950,150	0.408%
ACOE	0	0.000%
Total for all Employers	$232,896,579	100.000%

Notes:

1. Based on the January 1, 2018 through December 31, 2018 employer contributions in total as provided by ACERA.
2. The Net OPEB Liability (NOL) is the Total OPEB Liability (TOL) minus the OPEB SRBR Plan's Fiduciary Net Position (plan assets).
3. The employer's share of the total plan NOL is the ratio of the employer's total contributions to the total contributions for all employers.
4. ACOE was not required to make any Pension Plan contributions during 2018 because their payroll was $0 in 2018. However, they are required to make a contribution under the Declining Employer Payroll Policy starting in 2019. As they would be expected to make a large lump sum contribution to partially pay off their liability in 2019, we would consult with the auditor on whether any special adjustment needs to be made when we report their NOL next year.

EXHIBIT B

Schedule of OPEB Amounts by Employer as of December 31, 2018

		Deferred Outflows of Resources				
Employer	Net OPEB Liability	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on OPEB Plan Investments	Changes of Assumptions	Changes in Proportion of Employer Contributions	Total Deferred Outflows of Resources
Alameda County	$177,817,632	$0	$43,618,321	$31,545,444	$74,606	$75,238,371
Health System	43,743,260	0	10,730,137	7,760,201	838,503	19,328,841
Superior Court	8,454,384	0	2,073,844	1,499,836	0	3,573,680
First 5	883,354	0	216,685	156,710	12,897	386,292
Housing Authority	1,047,799	0	257,023	185,883	0	442,906
LARPD	950,150	0	233,070	168,560	0	401,630
ACOE	0	0	0	0	0	0
Total for all Employers	**$232,896,579**	**$0**	**$57,129,080**	**$41,316,634**	**$926,006**	**$99,371,720**

EXHIBIT B

Schedule of OPEB Amounts by Employer as of December 31, 2018 - continued

	Deferred Inflows of Resources					OPEB Expense		
Employer	**Differences Between Expected and Actual Experience**	**Net Difference Between Projected and Actual Investment Earnings on OPEB Plan Investments**	**Changes of Assumptions**	**Changes in Proportion of Employer Contributions**	**Total Deferred Inflows of Resources**	**Proportionate Share of Plan OPEB Expense**	**Net Amortization of Deferred Amounts from Changes in Proportion of Employer Contributions**	**Total Employer OPEB Expense**
Alameda County	$29,555,406	$0	$7,418,434	$470,109	$37,443,949	$30,479,733	($87,294)	$ 30,392,439
Health System	7,270,650	0	1,824,940	0	9,095,590	7,498,034	175,547	7,673,581
Superior Court	1,405,219	0	352,711	334,671	2,092,601	1,449,166	(65,467)	1,383,699
First 5	146,824	0	36,853	2,566	186,243	151,416	1,727	153,143
Housing Authority	174,157	0	43,713	25,849	243,719	179,603	(5,451)	174,152
LARPD	157,926	0	39,640	84,296	281,862	162,865	(17,242)	145,623
ACOE	0	0	0	8,515	8,515	0	(1,820)	(1,820)
Total for all Employers	**$38,710,182**	**$0**	**$9,716,291**	**$926,006**	**$49,352,479**	**$39,920,817**	**$0**	**$ 39,920,817**

EXHIBIT B

Schedule of OPEB Amounts by Employer as of December 31, 2018 - continued

Notes:

1. Amounts shown in this exhibit were allocated by employer based on the Employer Allocation Percentage calculated in Exhibit A2.
2. In determining the OPEB expense:
   - Any differences between projected and actual investment earnings on OPEB plan investments are recognized over a period of five years beginning with the year in which they occur.
   - Current-period (i.e., 2018) changes in assumptions and differences between expected and actual experience are recognized over the average of the expected remaining service lives of all employees that are provided with OPEB benefits through ACERA determined as of December 31, 2017 (the beginning of the measurement period ending December 31, 2018) and is 6.67 years.[1]
3. The average of the expected remaining service lives of all employees was determined by:
   - Calculating each active employee's expected remaining service life as the present value of $1 per year of future service at zero percent interest.
   - Setting the remaining service life to zero for each nonactive or retired member.
   - Dividing the sum of the above amounts by the total number of active employees and nonactive and retired members.

[1] The remaining service lives of all employees of 6.67 years used here for GASB 75 is different from the 5.43 years used for GASB 68 because the number of payees and nonactive members (with 0 years of expected remaining service lives) receiving health benefits under the SRBR Plan is less than the number of payees and nonactive members receiving pension benefits.

MEMORANDUM TO THE AUDIT COMMITTEE

DATE: May 16, 2019

TO: Members of the Audit Committee

FROM: Harsh Jadhav, Chief of Internal Audit

SUBJECT: 2019 Internal Audit Program

Executive Summary

The Internal Audit Department is on target to complete the series of internal and compliance audits/reviews as specified on the audit program. The Alameda Health System (AHS) and Superior Courts employer audits are moving forward. We want to thank our colleagues at AHS and Superior Court for continuing to work with us to complete these audits. In addition, Internal Audit staff has been working on several internal initiatives in both an audit and consulting capacity to enhance internal controls for cybersecurity and preventing benefit overpayments.

Some of the more notable projects include developing a phishing program to test and educate our employees to avoid clicking harmful links to malicious websites, reviewing the current cybersecurity insurance policy, and completing monthly audits of Medical Part B Reimbursement (MBRP). We want to thank our colleagues in Benefits, Legal, Fiscal Services and PRISM for their assistance with these initiatives.

We have also reviewed the first draft of the Watchlist Audit Report with Investment staff. Investment staff will review the draft audit report with Verus (Investment Consultant) for their input. We had originally planned to deploy the Financial Fraud Hotline at the end of April, but after discussion with senior leaders, determined that the investigation process after a financial fraud was reported, was not robust enough. We are developing a better investigation process and will plan to release the hotline in Q3 2019.

Update on the Employer Audit Strategy

Participating Employer	2014	2015	2016	2017	2018	2019
Alameda County			X			
Superior Courts of California						X
Alameda Health System				X	→	→
First 5 Alameda County	X					
Housing Authority of the County of Alameda		X				
Livermore Area Recreation and Park District	X					

The Internal Audit Department is in the communication and report writing phase for the Alameda Health System audit. In addition, we are in the middle of the testing phase for the employer audit for the County of Alameda, Superior Courts. At this stage, we are testing membership and eligibility data. We want to extend our thanks to both participating employers for their excellent cooperation

2019 Audit Plan

Internal Audit Program (2019)	Service Line	Assigned	Status	Q1	Q2	Q3	Q4
Medical Part B Premium Reimbursement (MBRP) Audit	Internal Audit	Lyndon	Started				
Underpayments/Overpayments (Vendor Payments) Audit	Internal Audit	Lyndon	Not Started				
Investment Watchlist Audit	Internal Audit	Harsh	Started				
Cybersecurity and Data Security Review	Internal Audit	Harsh	Ongoing				
30 Year Membership Verification Audit	Internal Audit	Harsh	Not Started				
Employer Audit Testing/Report - Alameda Health System	Employer Audit	Caxton	Started				
Employer Audit Testing/Report - Superior Courts	Employer Audit	Caxton	Started				
2019 Annual Internal Audit Risk Assessment	Administration	Harsh	Complete				
2020 Annual Internal Audit Risk Assessment	Administration	Harsh	Not Started				
Actuarial Data Conversion	Administration	Lyndon	Not Started				
Implement Fraud Hotline	Special Project	Lyndon	Delayed				
Data Analytics Training for Staff	Special Project	Lyndon	Not Started				
Fraud Training for Staff	Special Project	Caxton/Lyndon	Started				

2019 Internal Audit Program

Internal Audits

Audit – Medical Part B Premium Reimbursement (MBRP)
The objective of this audit is to ensure the monthly medical allowance (specifically related to the Medicare Benefit Reimbursement Plan) is paid to eligible retirees.

Audit - Underpayment and Overpayment Audits (Vendor and Taxing Authority Payments)
The objective of this audit is to ensure business processes are in place and effective in preventing and recovering overpayments made to healthcare vendors and government taxing authorities. The review will include a walk-through of the business processes to determine how overpayments occur, the internal controls in place to mitigate overpayments, and the recovery process.

Audit – Investment Watchlist Audit
The objective of this audit is to review the Investment Department's procedures for monitoring fund managers based on the criteria listed in the General Investment Guidelines, Policies, and Procedures. Our focus will be to assess whether the internal controls were designed effectively to ensure performance decisions related to the Watchlist, Probation and Termination status, were made in accordance with the policy and established procedures.

.

Audit – Cybersecurity Review and Data Security
The objective of this review will be to work with the PRISM Department to determine if adequate firewall, access controls, employee training, and processes for incident response, business recovery, and threat analysis are in place to ensure sensitive organizational data and member data are protected and secure.

Audit – 30-Year Membership Verification
The objective of this audit is to verify members granted 30-Year Membership have met the requirements for contributions to stop after 30 years of service credit. The scope of work will include reciprocity, membership entry dates for both safety and general members, and membership tiers.

Employer Audits

Audit – PEPRA Employer Audit of Alameda Health System
The employer audit of the Alameda Health System will assess the participating employer's compliance with state laws, rules, regulations and administrative policies regarding the enrollment of members, reporting of member data, and the reporting and remittance of employer contributions in accordance with the Public Employees' Pension Reform Act of 2013.

Audit – PEPRA Employer Audit of Superior Courts of California
The employer audit of Superior Courts of California will assess the participating employer's compliance with state laws, rules, regulations and administrative policies regarding the enrollment of members, reporting of member data, and the reporting and remittance of employer contributions in accordance with the Public Employees' Pension Reform Act of 2013.

Special Projects

Data Analytics Training
Internal Audit staff plans to hold internal training sessions to educate ACERA staff on various technology tools and processes to improve the use of data analytics for business decision making.

Fraud Training
Internal Audit staff is developing a fraud awareness program to educate team members on anti-fraud activities that can reduce the cost of fraud within the organization. The training will cover fraud areas related to lack of segregation of duties, unauthorized use of data, operations, financial transactions, and theft.

Fraud Hotline
As part of their annual fraud assessment, the external auditor recommended for ACERA to implement a Financial Fraud Hotline. We are expecting the hotline to be functional by Q3 2019.

Summary

The 2019 Audit Program includes seven active audits/reviews and four key initiatives. Similar to the previous year, the proposed audit examinations cover a cross-section of departments and risks. I want to acknowledge my staff for their strong effort and dedication to delivering quality work. The Internal Audit Staff will continue to do a great job partnering with management, servicing the Board of Retirement, and protecting our members.

Alameda County Employees' Retirement Association
Internal Audit Department

Internal Audit Department
2019 Internal Audit Plan

May 16, 2019

Agenda

1. Progress on the Internal Audit Plan – 2019
2. Progress on the Employer Audit Plan – 2019
3. Phishing Training and Education Initiative
4. Questions

2019 Internal Audit Plan

Internal Audit Program (2019)	Service Line	Assigned	Status	Q1	Q2	Q3	Q4
Medical Part B Premium Reimbursement (MBRP) Audit	Internal Audit	Lyndon	Started				
Underpayments/Overpayments (Vendor Payments) Audit	Internal Audit	Lyndon	Not Started				
Investment Watchlist Audit	Internal Audit	Harsh	Started				
Cybersecurity and Data Security Review	Internal Audit	Harsh	Ongoing				
30 Year Membership Verification Audit	Internal Audit	Harsh	Not Started				
Employer Audit Testing/Report - Alameda Health System	Employer Audit	Caxton	Started				
Employer Audit Testing/Report - Superior Courts	Employer Audit	Caxton	Started				
2019 Annual Internal Audit Risk Assessment	Administration	Harsh	Complete				
2020 Annual Internal Audit Risk Assessment	Administration	Harsh	Not Started				
Actuarial Data Conversion	Administration	Lyndon	Not Started				
Implement Fraud Hotline	Special Project	Lyndon	Delayed				
Data Analytics Training for Staff	Special Project	Lyndon	Not Started				
Fraud Training for Staff	Special Project	Caxton/Lyndon	Started				

Employer Audit Plan

Participating Employer	2014	2015	2016	2017	2018	2019
Alameda County			X			
Superior Courts of California						X
Alameda Health System				X		
First 5 Alameda County	X					
Housing Authority of the County of Alameda		X				
Livermore Area Recreation and Park District	X					

Complete

In Process

What is Phishing?

The Impact of Phishing

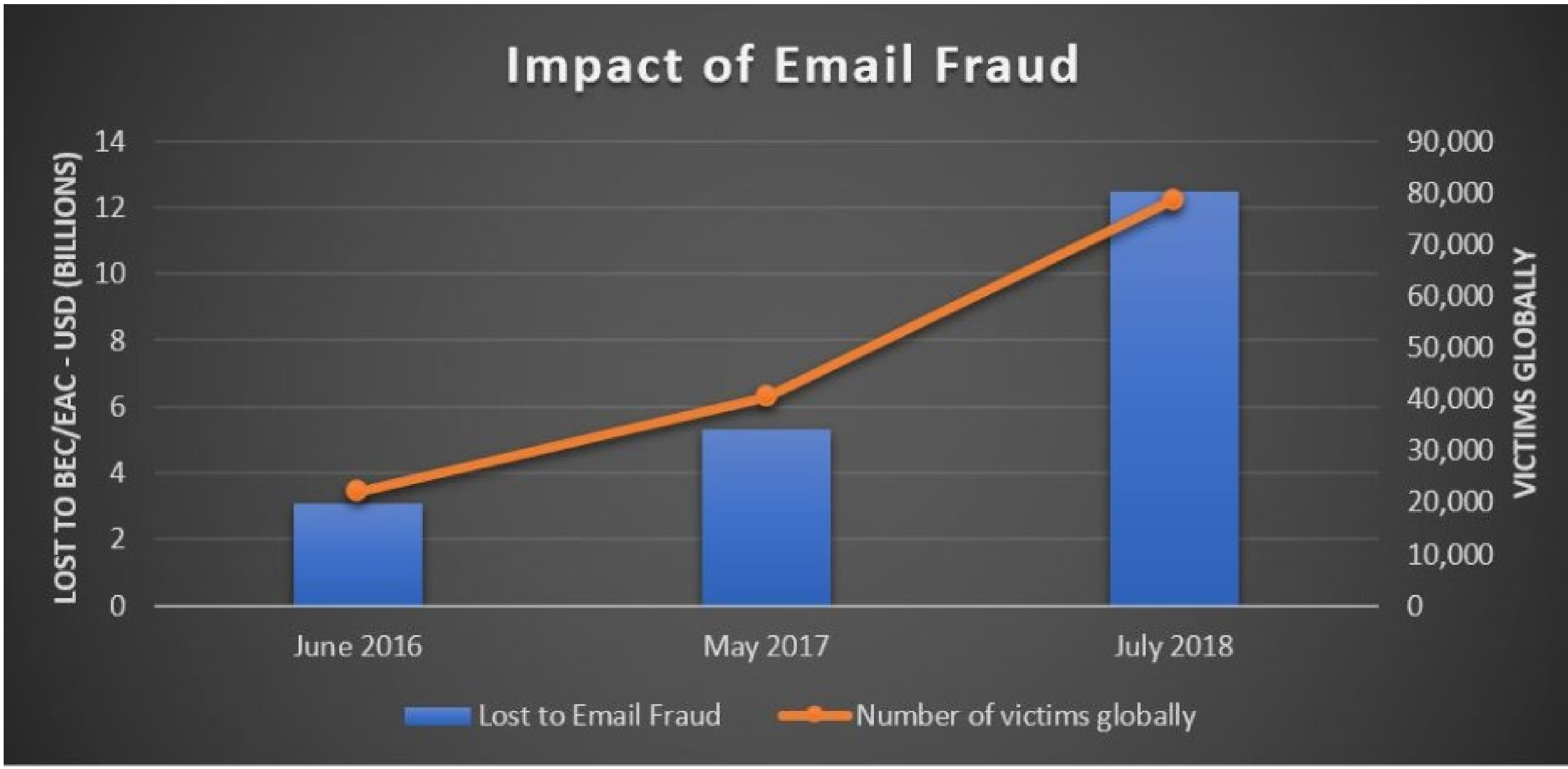
76% of businesses reported being a victim of a phishing attack in the last year. (Wombat Security)

Individual contributors and lower-level management accounted for 67% of highly targeted malware and phishing attacks. (www.proofpoint.com)

In a survey of over 1,300 IT decision makers, 56% of organizations identified targeted phishing attacks as their biggest current cybersecurity threat. (CyberArk)

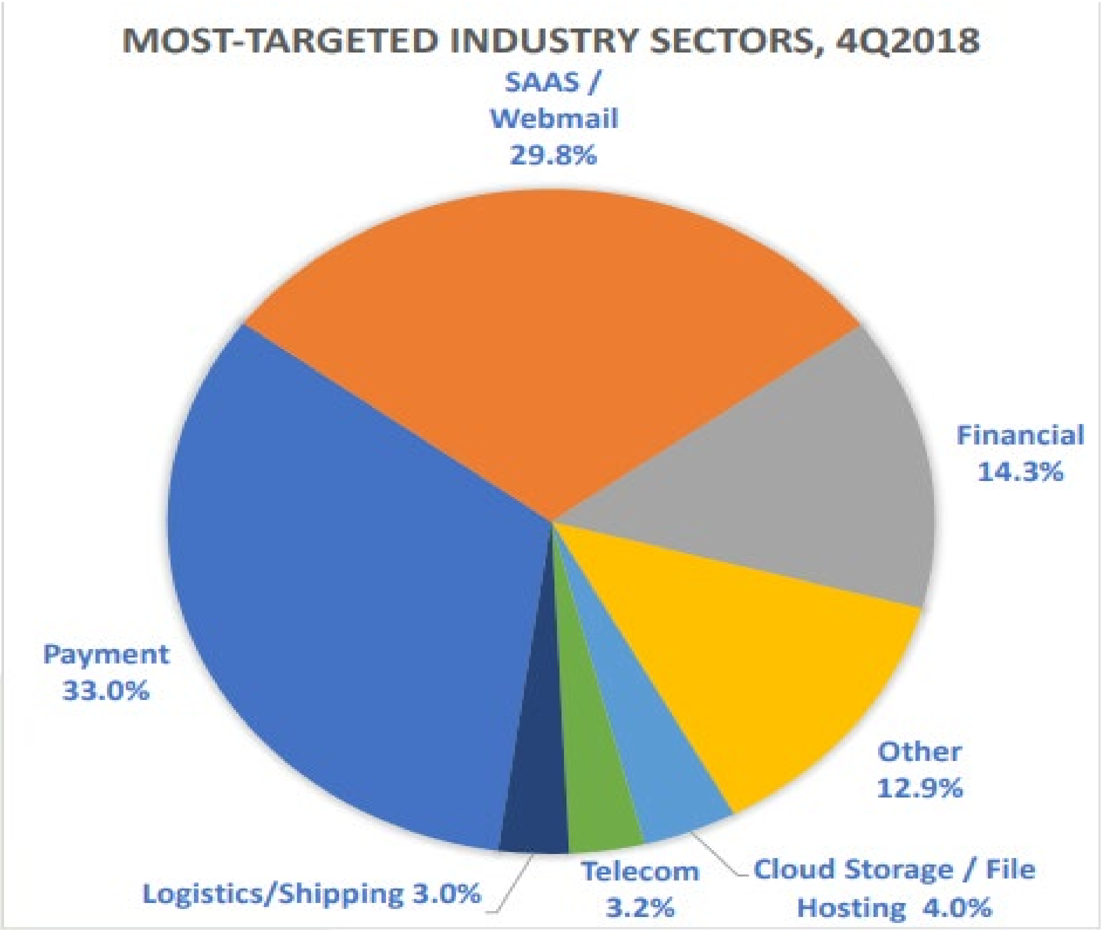
Verizon reports that users in the U.S open 30 percent of phishing all emails, with 12 percent of those targeted by these emails clicking on the infected links or attachments. (Verizon)

The Costs Of Email Fraud Are Rising



https://pdf.ic3.gov/2017_IC3Report.pdf (FBI)

Most Targeted Sectors



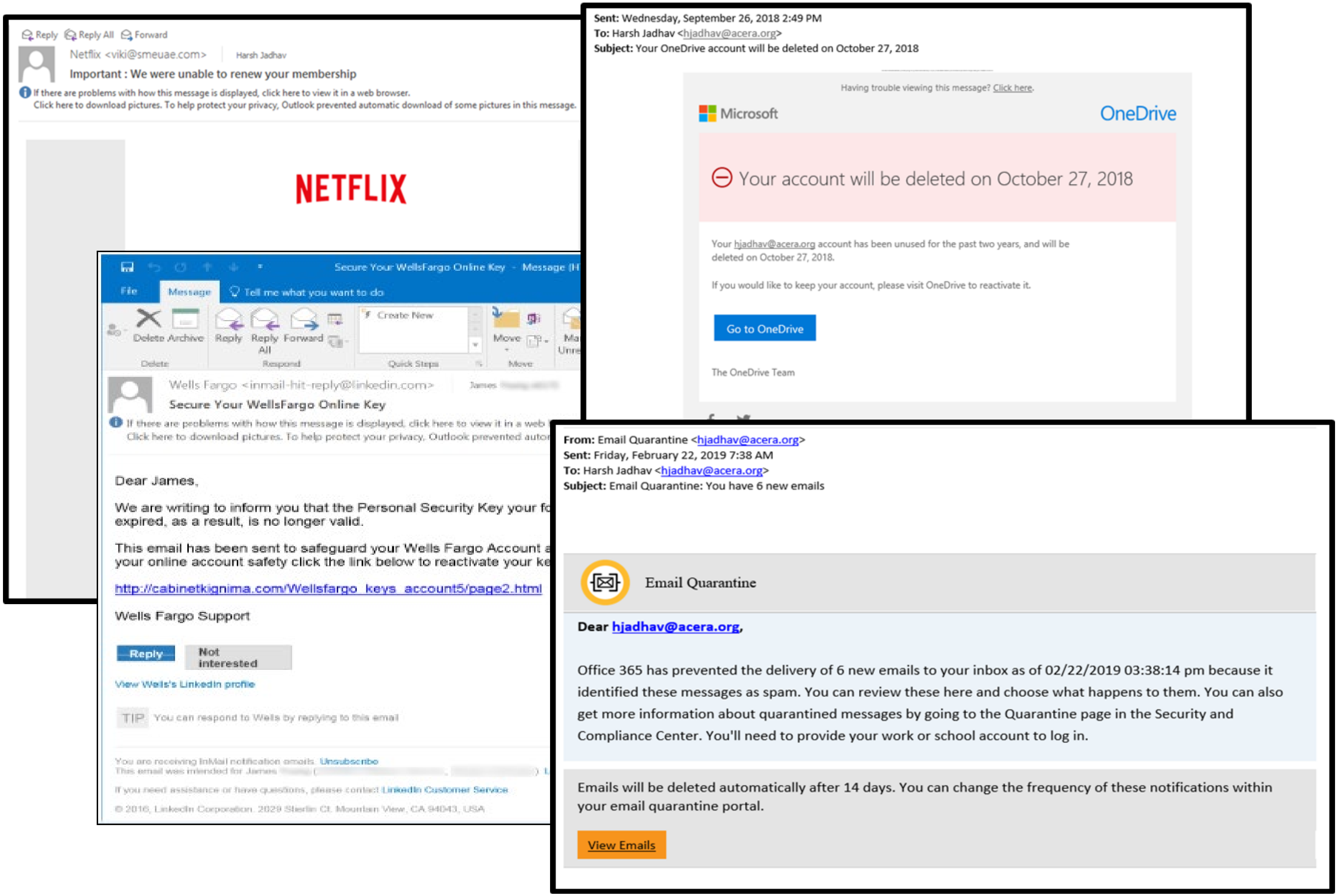
Source: APWG Phishing Activity Trends Report (4th Quarter 2018)

Most Common Phishing Attacks

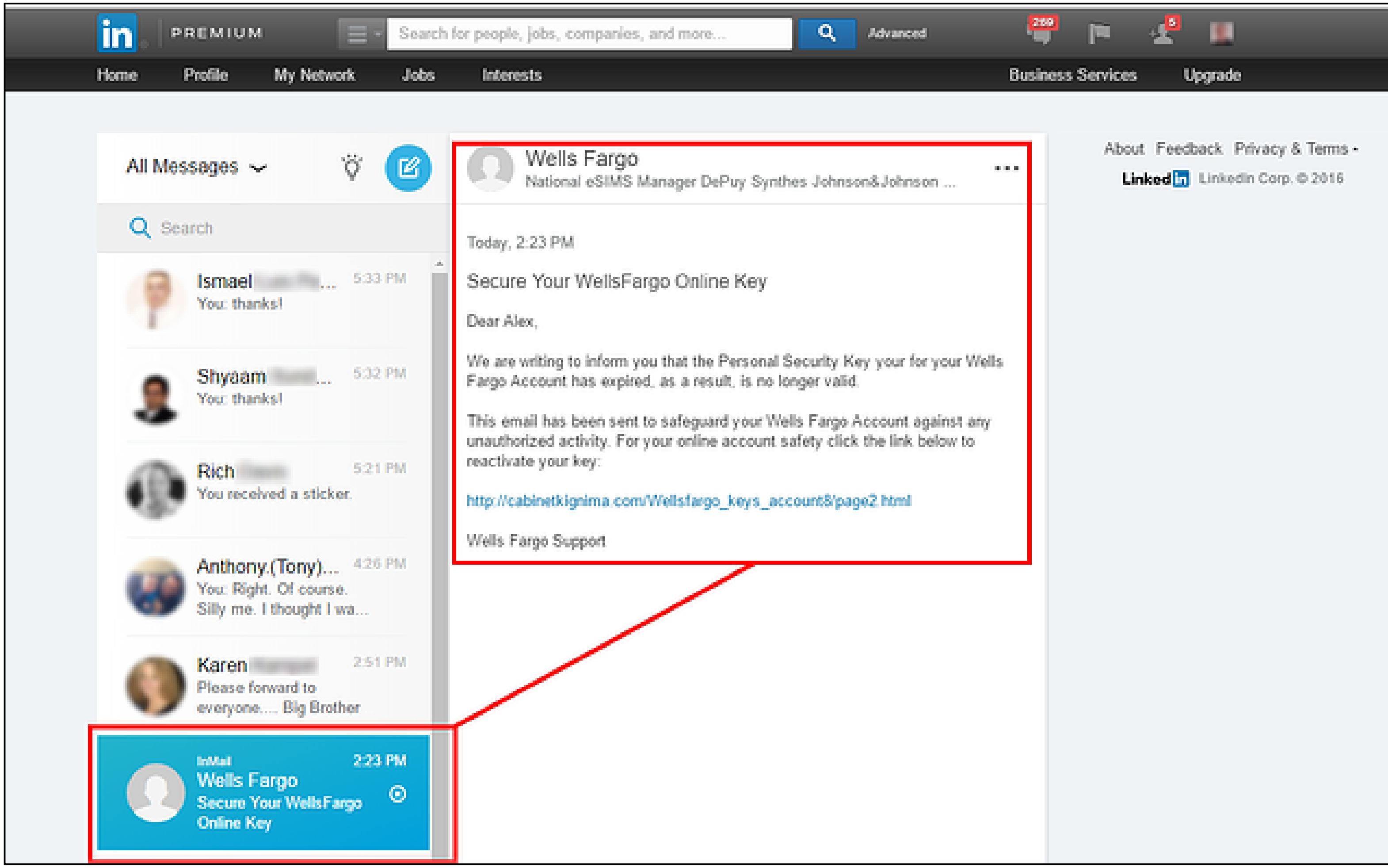
- Sending out e-mails with a link to a malicious website where you would be asked for sensitive information.
- Installing a backdoor using files attached via e-mail to enable the hacker to gain access to your workstation and the company's network.
- Sending an e-mail from a spoofed address. Sometimes you get an e-mail from the "boss" asking you to turn over some confidential files. What you do not realize is that the "boss" is not your employer, but a hacker.
- Getting company information over the phone by social engineering. Some hackers pose as a supplier, a superior, or the IT department to coax sensitive information out of you.
- There are also phishing attacks where cybercriminals add some code or program to your website to capture details and information about your site visitors.
- Man-in-the-middle phishing attacks, wherein attackers put themselves in between your customer and your website to get all the information they need.

Source: https://www.digitalinformationworld.com/2019/03/phishing-attacks-by-numbers.html

Advanced Phishing Techniques



Phishing Through LinkedIn



ACERA Phishing Training and Education

-Simulated phishing exercises deployed at least monthly.

-We are looking at options to customize phishing campaigns that are more ACERA-specific

-Specific education of employees who consistently fall victim to phishing emails.

-General training for all ACERA employees

-Create more effective agency awareness through posters, intranet site, and in-house training.

-Develop an agency-wide process to report and broadcast new phishing emails received by agency personnel

Capture metrics to determine if employees are becoming more effective at identifying phishing emails.

-Redesign phishing campaigns to address new phishing threats

Questions