

Ventura County Employees' Retirement Association

Actuarial Valuation and Review
as of June 30, 2017



This report has been prepared at the request of the Board of Retirement to assist in administering the Fund. This valuation report may not otherwise be copied or reproduced in any form without the consent of the Board of Retirement and may only be provided to other parties in its entirety. The measurements shown in this actuarial valuation may not be applicable for other purposes.

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December 12, 2017

*Board of Retirement
Ventura County Employees' Retirement Association
1190 S. Victoria Avenue, Suite 200
Ventura, CA 93003-6572*

Dear Board Members:

We are pleased to submit this Actuarial Valuation and Review as of June 30, 2017. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal 2018-2019 and analyzes the preceding year's experience.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist in administering the Plan. The census and financial information on which our calculations were based was provided by the Retirement Association. That assistance is gratefully acknowledged.

The measurements shown in this actuarial valuation may not be applicable for other purposes. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and changes in plan provisions or applicable law.

The actuarial calculations were completed under the supervision of John Monroe, ASA, EA, MAAA. 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. To the best of our knowledge, the information supplied in the actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Board are reasonably related to the experience of and the expectations for the Plan.

We look forward to reviewing this report at your next meeting and to answering any questions.

Sincerely,

Segal Consulting, a Member of The Segal Group, Inc.

By: 

*Paul Angelo, FSA, EA, MAAA, FCA
Senior Vice President and Actuary*



*John Monroe, ASA, EA, MAAA
Vice President and Actuary*

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SECTION 1: Valuation Summary for the Ventura County Employees' Retirement Association

Purpose and Scope

This report has been prepared by Segal Consulting to present a valuation of the Ventura County Employees' Retirement Association (VCERA) as of June 30, 2017. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The contribution requirements presented in this report are based on:

- The benefit provisions of the Retirement Association, as administered by VCERA;
- The characteristics of covered active members, terminated vested members, and retired members and beneficiaries as of June 30, 2017, provided by VCERA;
- The assets of the Plan as of June 30, 2017, provided by VCERA;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

One of the general goals of an actuarial valuation is to establish contributions that fully fund the system's liabilities, and which, as a percentage of payroll, remain as level as possible for each generation of active members. Annual actuarial valuations measure the progress toward this goal, as well as test the adequacy of the contribution rates.

In preparing this valuation, we have employed generally accepted actuarial methods and assumptions to evaluate the Association's assets, liabilities and future contribution requirements. Our calculations are based upon member data and financial information provided to us by the Association's staff. This information has not been audited by us, but it has been reviewed and found to be consistent, both internally and with the prior year's information.

Ref: Pg. 61

The contribution requirements are determined as a percentage of payroll. The Association's employer rates provide for both normal cost and a contribution to amortize any unfunded or overfunded actuarial accrued liabilities. In 2004, the Board elected to amortize the Association's Unfunded Actuarial Accrued Liability (UAAL) as of June 30, 2004 over a declining 15-year period. Any change in the UAAL after June 30, 2004 is amortized over separate 15-year declining amortization periods.

Ref: Pgs. 42-45

Effective with the June 30, 2012 valuation, any change in the UAAL that arises due to assumption changes is amortized over separate 20-year declining amortization periods. Also, any change in the UAAL that arises due to retirement incentives is annualized over separate declining amortization period of up to 5 years. A schedule of current amortization amounts may be found in Section 3, Exhibit I. Note that a graphical projection of the UAAL amortization bases and payments has been included as a new Exhibit J.

Ref: Pgs. 46-47

SECTION 1: Valuation Summary for the Ventura County Employees' Retirement Association

The rates calculated in this report may be adopted by the Board for the fiscal year that extends from July 1, 2018 through June 30, 2019.

The Actuarial Standards Board has adopted a revised Actuarial Standard of Practice (ASOP) No. 4 that provides guidelines for actuaries to follow when measuring pension obligations. For a plan such as that offered by the Retirement Association that may use undesignated excess earnings to provide supplemental benefits, the valuation report must indicate that the impact of any such future use of undesignated excess earnings on the future financial condition of the plan has not been explicitly measured or otherwise reflected in the valuation. However, it should be noted that under the Board's Interest Crediting Policy, the balance of \$1.08 billion (negative) in the Interest Crediting Shortfall Tracking Account (ICSTA) has to be fully restored out of future excess earnings before any subsequent earnings can be used to provide for any supplemental benefits. The ICSTA tracks any cumulative shortfalls in investment earnings relative to earnings required to credit full interest at the assumed rate to valuation reserves.

Ref: Pgs. 16, 70

In this report, the employer and member contribution rates shown in Chart 14 and Appendix A, respectively, are calculated based on a 50/50 sharing of Normal Cost for both PEPRA and non-PEPRA Tiers. For purposes of these calculations, we have been previously directed by VCERA to assume that the cessation of member contributions after 30 years of service for non-PEPRA members continues per the County Employees Retirement Law (CERL) and that the cost associated with this provision is to be paid for by employers.

Ref: Pgs. 72-78

The employer and member contribution rates calculated under the prior method (i.e., no 50/50 sharing of Normal Cost for non-PEPRA tiers) are shown in Appendix C and Appendix D, respectively.

Significant Issues in this Valuation

The following key findings were the result of this actuarial valuation:

Ref: Pgs. 10-11

➤ The market value of assets earned a return of 13.1% for the July 1, 2016 to June 30, 2017 plan year. The valuation value of assets earned a return of 8.0% for the same period due to the deferral of most of the current year investment gain and the recognition of prior investment gains and losses. This resulted in an actuarial gain when measured against the assumed rate of return of 7.50% for the 2016/2017 year. This actuarial investment gain decreased the average employer contribution rate by 0.30% of payroll.

Ref: Pg. 23

➤ The ratio of the valuation value of assets to actuarial accrued liabilities increased from 84.9% to 86.9%. The Association's UAAL decreased from \$813 million as of June 30, 2016 to \$744 million as of June 30, 2017. This decrease is primarily due to the contributions paying down a portion of the UAAL, investment gain (on the valuation value of assets) and lower than expected benefit increases for retirees and beneficiaries. The decrease is offset to some extent by higher than expected

Ref: Pg. 41

SECTION 1: Valuation Summary for the Ventura County Employees' Retirement Association

individual salary increases for actives and other experience losses. A complete reconciliation of the Association's UAAL is provided in Section 3, Exhibit H.

Ref: Pg. 20

- The average employer rate decreased from 27.52% of payroll to 27.09% of payroll. This decrease is primarily due to the investment gain (on the valuation value of assets), higher than expected total actual payroll growth and lower than expected benefit increases for retirees and beneficiaries offset to some extent by higher than expected individual salary increases for actives and other experience losses. A complete reconciliation of the Association's employer rate is provided in Section 2, Subsection D, Chart 15.

As previously adopted by the Board, we have continued to calculate the Basic and COLA UAAL rates on a combined basis for all General Tiers even though General Tier 2 and associated PEPRA tiers are overfunded this year. This results in more stable UAAL rates for General Tier 1.

Ref: Pg. 21

- The average member rate decreased from 9.80% of payroll in the June 30, 2016 valuation to 9.75% of payroll in the June 30, 2017 valuation. This decrease was mainly the result of a change in the membership demographics. A complete reconciliation of the member rate is provided in Section 2, Subsection D, Chart 16. The average member rate reflects the impact of the cessation of member contributions after 30 years of service for non-PEPRA tiers. This is a change from the prior valuation.

Ref: Pg. 5

- As indicated in Section 2, Subsection B, Chart 7 of this report, the net unrecognized investment gain as of June 30, 2017 is \$0.6 million as compared to an unrecognized loss of \$206 million in the June 30, 2016 valuation. This investment gain will be recognized in the determination of the valuation value of assets for funding purposes over the next few years. This means that even if the plan earns the current assumed rate of investment return of 7.50% per year (net of expenses) on a **market value** basis then the deferred gain will be recognized over the next few years as shown in the footnote to Chart 7.
- The June 30, 2017 unrecognized investment gains of \$0.6 million represents less than 0.1% of the market value of assets. Unless offset by future investment losses or other unfavorable experience, the recognition of the \$0.6 million market gains is expected to have a minimal impact on the Association's future funded ratio and average employer contribution rate. This potential impact may be illustrated as follows:

- If the net deferred gains were recognized immediately in the valuation value of assets, the funded ratio would increase slightly from 86.9% to 87.0%.

For comparison purposes, if all the deferred losses in the June 30, 2016 valuation had been recognized immediately in the June 30, 2016 valuation, the funded ratio would have decreased from 84.9% to 81.1%.

- If the net deferred gains were recognized immediately in the valuation value of assets, the average employer rate would decrease slightly from 27.09% to 27.08% of payroll.

SECTION 1: Valuation Summary for the Ventura County Employees' Retirement Association

For comparison purposes, if all the deferred losses in the June 30, 2016 valuation had been recognized immediately in the June 30, 2016 valuation, the average employer rate would have increased from 27.52% to about 30.12% of payroll.

- The actuarial valuation report as of June 30, 2017 is based on financial information as of that date. Changes in the value of assets subsequent to that date are not reflected. Declines in asset values will increase the actuarial cost of the Plan, while increases will decrease the actuarial cost of the Plan.

Impact of Future Experience on Contribution Rates

Future contribution requirements may differ from those determined in the valuation because of:

- Differences between actual experience and anticipated experience;
- Changes in actuarial assumptions or methods;
- Changes in statutory provisions; and
- Differences between the contribution rates determined by the valuation and those adopted by the Board.

SECTION 1: Valuation Summary for the Ventura County Employees' Retirement Association

Summary of Key Valuation Results (all dollar amounts in thousands)

| | June 30, 2017 | | June 30, 2016 | |
|--|---------------|--|---------------|--|
| Employer Contribution Rates: ⁽¹⁾ | | | | |
| | Total Rate | Estimated Annual Amount ⁽²⁾ | Total Rate | Estimated Annual Amount ⁽²⁾ |
| General Tier 1 | 24.70% | \$1,748 | 24.40% | \$1,910 |
| General Tier 2 | 16.09% | 34,640 | 16.54% | 35,503 |
| General PEPRA Tier 2 | 16.12% | 7,964 | 16.39% | 5,776 |
| General Tier 2C ⁽³⁾ | 20.84% | 44,883 | 20.72% | 44,794 |
| General PEPRA Tier 2C ⁽³⁾ | 20.83% | 17,030 | 20.50% | 13,149 |
| General Combined | 18.68% | 106,265 | 18.79% | 101,132 |
| Safety | 54.60% | 85,196 | 55.66% | 86,496 |
| Safety PEPRA | 52.19% | 10,404 | 53.49% | 6,663 |
| Safety Combined | 54.33% | 95,600 | 55.50% | 93,159 |
| All Categories combined | 27.09% | \$201,865 | 27.52% | \$194,291 |
| Average Member Contribution Rates: ⁽¹⁾⁽⁴⁾⁽⁵⁾ | | | | |
| | Total Rate | Estimated Annual Amount ⁽²⁾ | Total Rate | Estimated Annual Amount ⁽²⁾ |
| General Tier 1 | 10.33% | \$731 | 10.33% | \$809 |
| General Tier 2 | 7.03% | 15,140 | 7.11% | 15,265 |
| General PEPRA Tier 2 | 7.06% | 3,488 | 6.96% | 2,453 |
| General Tier 2C ⁽³⁾ | 9.66% | 20,802 | 9.74% | 21,061 |
| General PEPRA Tier 2C ⁽³⁾ | 9.69% | 7,922 | 9.59% | 6,152 |
| Safety | 13.94% | 21,751 | 13.95% | 21,678 |
| Safety PEPRA | 14.09% | 2,809 | 14.42% | 1,796 |
| All Categories combined | 9.75% | \$72,643 | 9.80% | \$69,214 |

⁽¹⁾ Before reflection of any member rate that may be "picked-up" by the employer. Contributions are assumed to be paid throughout the year.

⁽²⁾ Based on projected compensation for each year shown.

⁽³⁾ Throughout this report, this category represents those Tier 2 members who contribute a negotiated 2.63% of compensation for a fixed 2% COLA pursuant to Government Code 31627 that applies to service after March 2003.

⁽⁴⁾ The non-refundability factors as of June 30, 2017 are 0.99 for General Tier 1 and Tier 2 (non-PEPRA) and 1.00 for Safety (non-PEPRA) compared to 0.99 for General Tier 1 and Tier 2 (non-PEPRA) and 0.99 for Safety (non-PEPRA) from June 30, 2016.

⁽⁵⁾ Average member contribution rates for non-PEPRA tiers as shown in this exhibit are after reflecting the impact of the cessation of member contributions after 30 years of service. This is a change from the prior valuation. Individual member rates can be found in Appendix A and B.

SECTION 1: Valuation Summary for the Ventura County Employees' Retirement Association

Summary of Key Valuation Results (continued) (all dollar amounts in thousands)

| | June 30, 2017 | June 30, 2016 |
|--|---------------|---------------|
| Funded Status: | | |
| Actuarial accrued liability(AAL) ⁽¹⁾ | \$5,703,396 | \$5,398,756 |
| Valuation value of assets (VVA) ⁽¹⁾ | 4,959,070 | 4,585,713 |
| Market value of assets (MVA) | 4,964,247 | 4,386,837 |
| Funded percentage on VVA basis (VVA/AAL) | 86.95% | 84.94% |
| Funded percentage on MVA basis (MVA/AAL) | 87.04% | 81.26% |
| Unfunded actuarial accrued liability (UAAL) on VVA basis | \$744,326 | \$813,043 |
| Unfunded actuarial accrued liability (UAAL) on MVA basis | 739,149 | 1,011,919 |
| Key Assumptions: | | |
| Interest rate | 7.50% | 7.50% |
| Inflation rate | 3.00% | 3.00% |
| Across the board salary increase | 0.50% | 0.50% |

⁽¹⁾ Excludes liabilities and assets held for supplemental medical benefit reserve and statutory contingency reserve.

SECTION 1: Valuation Summary for the Ventura County Employees' Retirement Association

Summary of Key Valuation Demographic and Financial Data

| | June 30, 2017 | June 30, 2016 | Change From Prior Year |
|---|---------------|---------------|------------------------|
| Active Members: | | | |
| Number of members | 8,636 | 8,509 | 1.5% |
| Average age | 45.0 | 45.0 | 0.0 |
| Average service | 11.2 | 11.2 | 0.0 |
| Projected total compensation | \$744,917,386 | \$705,999,680 | 5.5% |
| Average projected compensation | \$86,257 | \$82,971 | 4.0% |
| Retired Member and Beneficiaries: | | | |
| Number of members: | | | |
| Service retired | 4,966 | 4,779 | 3.9% |
| Disability retired | 831 | 826 | 0.6% |
| Beneficiaries | 969 | 934 | 3.7% |
| Total | 6,766 | 6,539 | 3.5% |
| Average age | 70.2 | 69.8 | 0.4 |
| Average monthly benefit ⁽¹⁾ | \$3,108 | \$3,024 | 2.8% |
| Vested Terminated Members: | | | |
| Number of terminated vested members ⁽²⁾ | 2,809 | 2,639 | 6.4% |
| Average age | 45.9 | 46.0 | -0.1 |
| Total Members: | 18,211 | 17,687 | 3.0% |
| Summary of Financial Data (dollar amounts in thousands): | | | |
| Market value of assets | \$4,964,247 | \$4,386,837 | 13.2% |
| Return on market value of assets | 13.10% | 0.49% | N/A |
| Actuarial value of assets | \$4,963,653 | \$4,592,439 | 8.1% |
| Return on actuarial value of assets | 8.03% | 6.51% | N/A |
| Valuation value of assets | \$4,959,070 | \$4,585,713 | 8.1% |
| Return on valuation value of assets | 8.04% | 6.52% | N/A |

⁽¹⁾ Excludes monthly benefits for vested fixed supplemental and supplemental medical benefit amounts.

⁽²⁾ Includes terminated members with member contributions on deposit.

SECTION 1: Valuation Summary for the Ventura County Employees' Retirement Association

Important Information about Actuarial Valuations

An actuarial valuation is a budgeting tool with respect to the financing of future projected obligations of a pension plan. It is an estimated forecast – the actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.

In order to prepare an actuarial valuation, Segal Consulting (“Segal”) relies on a number of input items. These include:

- **Plan of benefits** Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan description in this report to confirm that Segal has correctly interpreted the plan of benefits.
- **Participant data** An actuarial valuation for a plan is based on data provided to the actuary by VCERA. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
- **Assets** This valuation is based on the market value of assets as of the valuation date, as provided by VCERA.
- **Actuarial assumptions** In preparing an actuarial valuation, Segal projects the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This projection requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of each participant for each year. In addition, the benefits projected to be paid for each of those events in each future year reflect actuarial assumptions as to salary increases and cost-of-living adjustments. The projected benefits are then discounted to a present value, based on the assumed rate of return that is expected to be achieved on the plan’s assets. There is a reasonable range for each assumption used in the projection and the results may vary materially based on which assumptions are selected. It is important for any user of an actuarial valuation to understand this concept. Actuarial assumptions are periodically reviewed to ensure that future valuations reflect emerging plan experience. While future changes in actuarial assumptions may have a significant impact on the reported results, that does not mean that the previous assumptions were unreasonable.

The user of Segal’s actuarial valuation (or other actuarial calculations) should keep the following in mind:

- The valuation is prepared at the request of the VCERA. Segal is not responsible for the use or misuse of its report, particularly by any other party.
- An actuarial valuation is a measurement of the plan’s assets and liabilities at a specific date. Accordingly, except where otherwise noted, Segal did not perform an analysis of the potential range of future financial measures. The actual long-term

SECTION 1: Valuation Summary for the Ventura County Employees' Retirement Association

cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.

- If the Association is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.
- Segal does not provide investment, legal, accounting, or tax advice. Segal's valuation is based on our understanding of applicable guidance in these areas and of the plan's provisions, but they may be subject to alternative interpretations. The Board should look to their other advisors for expertise in these areas.

As Segal Consulting has no discretionary authority with respect to the management or assets of VCERA, it is not a fiduciary in its capacity as actuaries and consultants with respect to VCERA.

SECTION 2: Valuation Results for the Ventura County Employees' Retirement Association

A. MEMBER DATA

The Actuarial Valuation and Review considers the number and demographic characteristics of covered members, including active members, vested terminated members, retired members and beneficiaries.

This section presents a summary of significant statistical data on these member groups.

More detailed information for this valuation year and the preceding valuation can be found in Section 3, Exhibits A, B, and C.

A historical perspective of how the member population has changed over the past ten valuations can be seen in this chart.

CHART 1
Member Population: 2008 – 2017

| Year Ended June 30 | Active Members | Vested Terminated Members⁽¹⁾ | Retired Members and Beneficiaries | Total Non-Actives | Ratio of Non-Actives to Actives |
|---------------------------|-----------------------|--|--|--------------------------|--|
| 2008 | 7,928 | 2,007 | 4,914 | 6,921 | 0.87 |
| 2009 | 8,045 | 2,055 | 5,041 | 7,096 | 0.88 |
| 2010 | 8,003 | 2,040 | 5,267 | 7,307 | 0.91 |
| 2011 | 8,040 | 2,097 | 5,481 | 7,578 | 0.94 |
| 2012 | 8,019 | 2,161 | 5,658 | 7,819 | 0.98 |
| 2013 | 8,068 | 2,249 | 5,888 | 8,137 | 1.01 |
| 2014 | 8,210 | 2,339 | 6,121 | 8,460 | 1.03 |
| 2015 | 8,299 | 2,441 | 6,338 | 8,779 | 1.06 |
| 2016 | 8,509 | 2,639 | 6,539 | 9,178 | 1.08 |
| 2017 | 8,636 | 2,809 | 6,766 | 9,575 | 1.11 |

⁽¹⁾ Includes terminated members with member contributions on deposit.

SECTION 2: Valuation Results for the Ventura County Employees' Retirement Association

Active Members

Plan costs are affected by the age, years of service and compensation of active members. In this year's valuation, there were 8,636 active members with an average age of 45.0, average service of 11.2 years and average compensation of \$86,257. The 8,509 active members in the prior valuation had an average age of 45.0, average service of 11.2 years and average compensation of \$82,971.

Among the active members, there were none with unknown age.

Inactive Members

In this year's valuation, there were 2,809 members with a vested right to a deferred or immediate vested benefit or entitled to a return of their member contributions versus 2,639 in the prior valuation.

These graphs show a distribution of active members by age and by years of service.

CHART 2
Distribution of Active Members by Age as of June 30, 2017

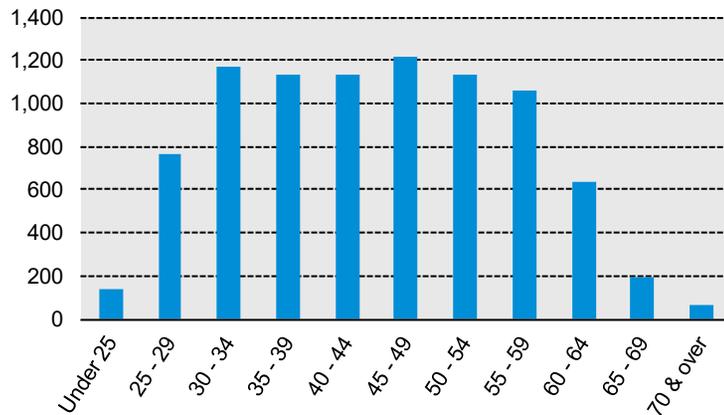
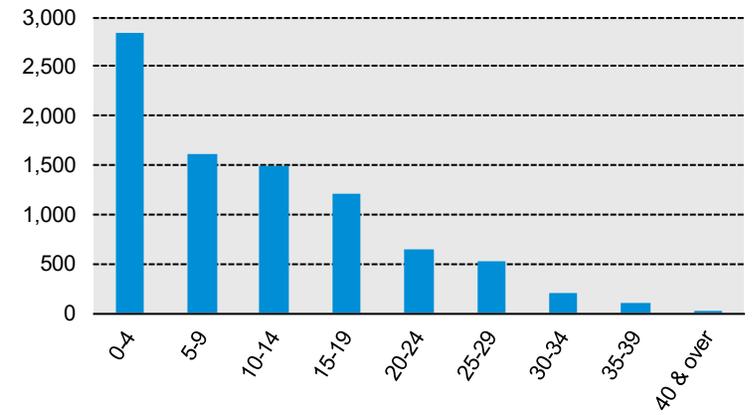


CHART 3
Distribution of Active Members by Years of Service as of June 30, 2017



SECTION 2: Valuation Results for the Ventura County Employees' Retirement Association

Retired Members and Beneficiaries

As of June 30, 2017, 5,797 retired members and 969 beneficiaries were receiving total monthly benefits of \$21,031,819. For comparison, in the previous valuation, there were 5,605 retired members and 934 beneficiaries receiving monthly benefits of \$19,776,496. These monthly benefits exclude benefits for vested fixed supplemental and supplemental medical benefit amounts.

These graphs show a distribution of the current retired members based on their monthly amount and age, by type of pension.

CHART 4

Distribution of Retired Members by Type and by Monthly Amount as of June 30, 2017

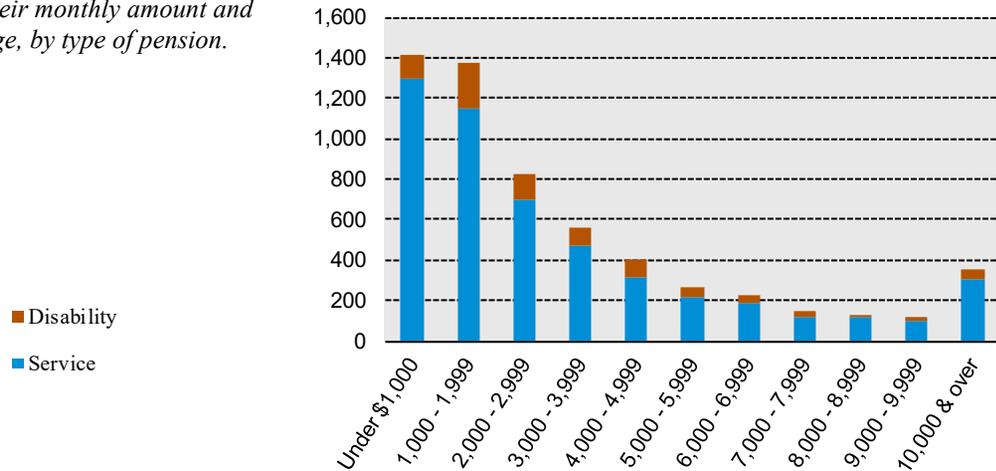
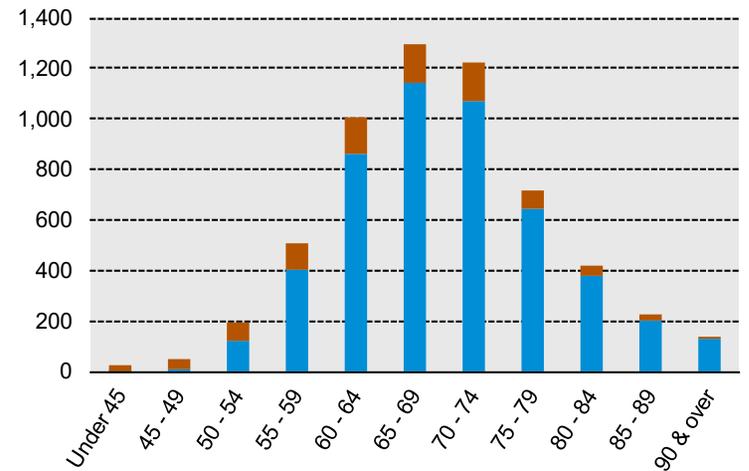


CHART 5

Distribution of Retired Members by Type and by Age as of June 30, 2017



SECTION 2: Valuation Results for the Ventura County Employees' Retirement Association

B. FINANCIAL INFORMATION

Retirement plan funding anticipates that, over the long term, both contributions and net investment earnings (less investment fees and administrative expenses) will be needed to cover benefit payments.

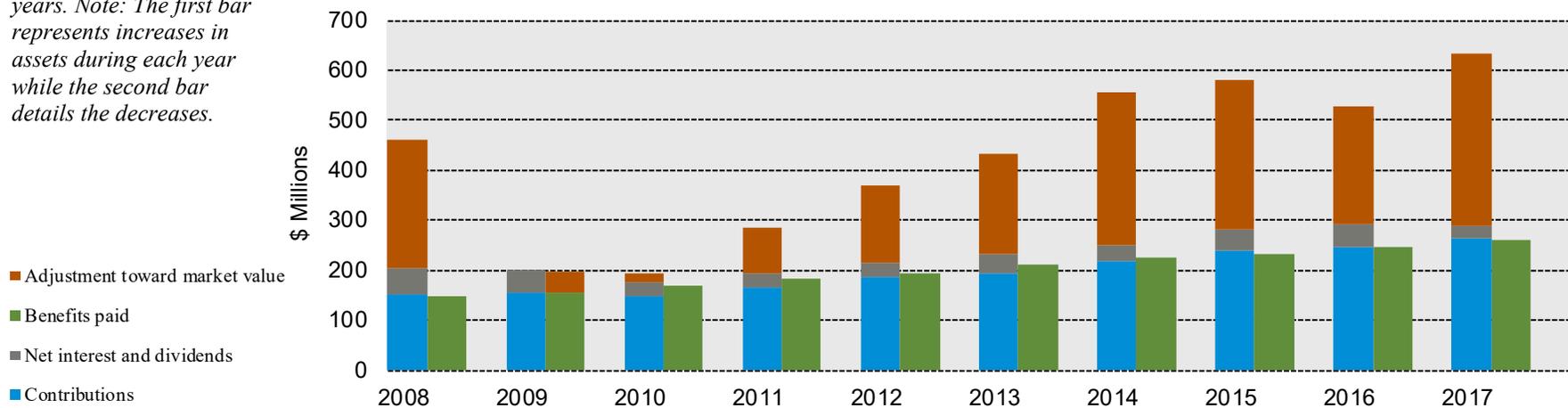
Retirement plan assets change as a result of the net impact of these income and expense components. The adjustment toward market value shown in the chart is the “non-cash” earnings on investments implicitly included in the actuarial value of assets. Additional financial information, including a summary of these transactions for the valuation year, is presented in Section 3, Exhibits D and E.

It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board of Retirement has approved an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable.

The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

The chart depicts the components of changes in the actuarial value of assets over the last ten years. Note: The first bar represents increases in assets during each year while the second bar details the decreases.

CHART 6
Comparison of Increases and Decreases in the Actuarial Value of Assets for Years Ended June 30, 2008 – 2017



SECTION 2: Valuation Results for the Ventura County Employees' Retirement Association

CHART 7

Determination of Actuarial and Valuation Value of Assets for Year Ended June 30, 2017

The chart shows the determination of the actuarial and valuation value of assets as of the valuation date.

| Six Month Period | | Total Actual Market Return (net) | Expected Market Return (net) | Investment Gain (Loss) | Deferred Factor | Deferred Return ⁽¹⁾ |
|--|---------|----------------------------------|------------------------------|------------------------|-----------------|--------------------------------|
| From | To | | | | | |
| 1/2012 | 6/2012 | \$203,623,364 | \$120,287,707 | \$83,335,657 | 0.0 | \$0 |
| 7/2012 | 12/2012 | 230,080,850 | 128,592,180 | 101,488,670 | 0.0 | 0 |
| 1/2013 | 6/2013 | 203,932,155 | 137,287,941 | 66,644,214 | 0.1 | 6,664,421 |
| 7/2013 | 12/2013 | 405,462,695 | 140,757,243 | 264,705,452 | 0.2 | 52,941,090 |
| 1/2014 | 6/2014 | 249,072,466 | 155,947,487 | 93,124,979 | 0.3 | 27,937,494 |
| 7/2014 | 12/2014 | 1,675,147 | 165,579,616 | (163,904,469) | 0.4 | (65,561,788) |
| 1/2015 | 6/2015 | 83,151,071 | 165,743,013 | (82,591,942) | 0.5 | (41,295,971) |
| 7/2015 | 12/2015 | (131,432,997) | 169,038,879 | (300,471,876) | 0.6 | (180,283,125) |
| 1/2016 | 6/2016 | 152,698,097 | 163,960,894 | (11,262,797) | 0.7 | (7,883,958) |
| 7/2016 | 12/2016 | 223,970,859 | 164,370,060 | 59,600,799 | 0.8 | 47,680,640 |
| 1/2017 | 6/2017 | 351,030,738 | 172,814,126 | 178,216,612 | 0.9 | <u>160,394,951</u> |
| 1. Total Deferred Return | | | | | | \$593,754 |
| 2. Net Market Value of Assets | | | | | | 4,964,246,776 |
| 3. a. Actuarial Value of Assets (Item 2 – Item 1) | | | | | | 4,963,653,022 |
| b. Ratio of Actuarial Value of Assets to Net Market Value of Assets (Item 3a / Item 2) | | | | | | 100.0% |
| 4. Non-valuation reserves | | | | | | |
| a. Supplemental Medical Benefit | | | | | | \$4,582,871 |
| b. Statutory Contingency | | | | | | <u>0</u> |
| c. Subtotal | | | | | | \$4,582,871 |
| 5. Valuation Value of Assets (Item 3a – Item 4c) | | | | | | \$4,959,070,151 |
| 6. Amount of Deferred Returns to be recognized in the following valuations: | | | | | | |
| a. June 30, 2018 | | | | | | \$14,147,774 |
| b. June 30, 2019 | | | | | | (54,770,237) |
| c. June 30, 2020 | | | | | | (23,042,647) |
| d. June 30, 2021 | | | | | | 46,437,203 |
| e. June 30, 2022 | | | | | | <u>17,821,661</u> |
| f. Subtotal | | | | | | \$593,754 |

⁽¹⁾ Recognition at 10% per six month period over 5 years.

SECTION 2: Valuation Results for the Ventura County Employees' Retirement Association

CHART 8

Allocation of Valuation Value of Assets as of June 30, 2017

The calculation of the valuation value of assets from June 30, 2016 to June 30, 2017 by category is provided below:

| | Allocated Assets for Funding | | | |
|--|------------------------------|-----------------|-----------------|-----------------|
| | General | | | Total |
| | Tier 1 | Tier 2 | Safety | |
| 1. Allocated Assets as of Beginning of Plan Year | \$518,591,160 | \$2,016,520,818 | \$2,050,600,980 | \$4,585,712,958 |
| 2. Member Contributions | 683,776 | 44,428,019 | 24,372,999 | 69,484,794 |
| 3. Member Buybacks | 194,947 | 1,322,667 | 455,955 | 1,973,569 |
| 4. Employer Pick-up Contributions Credited to Member Account | 33,367 | 899,835 | 2,977 | 936,179 |
| 5. Employer Contributions | 1,826,085 | 97,646,868 | 91,286,048 | 190,759,001 |
| 6. Refunds of Member Contributions and Death Benefits Paid | 291,822 | 4,342,102 | 530,489 | 5,164,413 |
| 7. Retiree Benefit Payments Excluding Supplemental Medical Payments | 77,806,317 | 75,522,661 | 100,108,978 | 253,437,956 |
| 8. Subtotal (Items 1 + 2 + 3 + 4 + 5 – 6 – 7) | \$443,231,196 | \$2,080,953,444 | \$2,066,079,492 | \$4,590,264,132 |
| 9. Weighted Average Fund Balance: Item 1 + ½ of (Items 2, 3, 4, 5) – ½ of (Items 6, 7) | 480,911,178 | 2,048,737,131 | 2,058,340,236 | 4,587,988,545 |
| 10. Earnings Allocated in Proportion to Item 9 | 38,658,104 | 164,687,984 | 165,459,931 | 368,806,019 |
| 11. Valuation Value of Assets (Items 8 + 10) | \$481,889,300 | \$2,245,641,428 | \$2,231,539,423 | \$4,959,070,151 |

Note: Results may not add due to rounding.

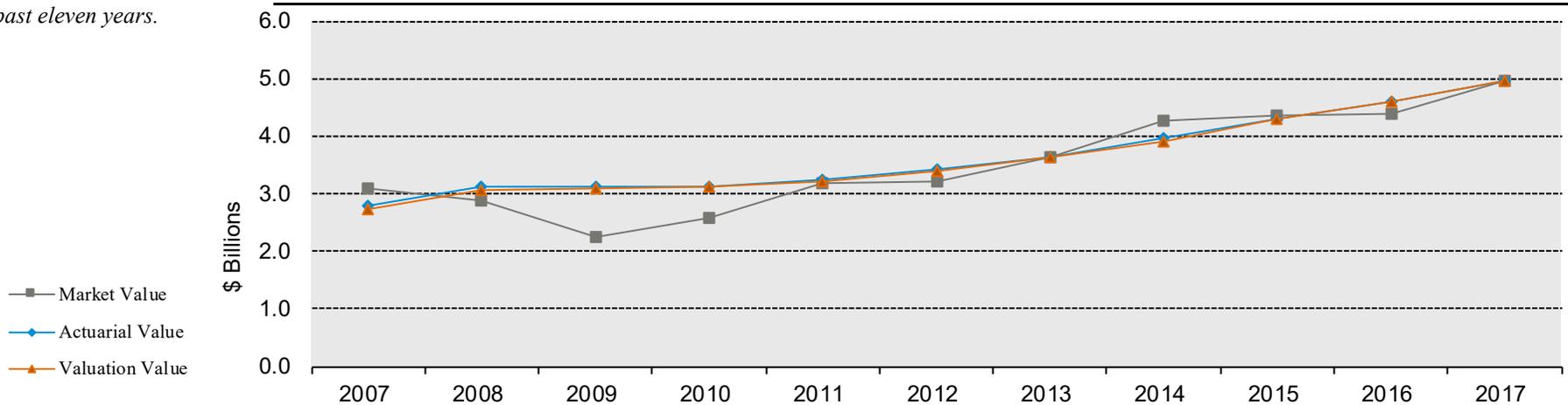
SECTION 2: Valuation Results for the Ventura County Employees' Retirement Association

The market value, actuarial value, and valuation value of assets are representations of VCERA's financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets, but with less volatility. The valuation value of assets is the actuarial value, excluding any non-valuation reserves. The valuation value of assets is significant because VCERA's liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the unfunded actuarial accrued liability is an important element in determining the contribution requirement.

This chart shows the change in market value, actuarial value and valuation value over the past eleven years.

CHART 9

Market Value, Actuarial Value and Valuation Value of Assets as of June 30, 2007 – 2017



SECTION 2: Valuation Results for the Ventura County Employees' Retirement Association

C. ACTUARIAL EXPERIENCE

To calculate the required contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain) the contribution requirement will decrease from the previous year. On the other hand, the contribution requirement will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term

development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

The total experience loss was \$2.7 million, including a \$24.7 million gain from investments and a \$27.4 million loss from all other sources. The net experience variation from individual sources other than investments experience was 0.5% of the actuarial accrued liability. A discussion of the major components of the actuarial experience is on the following pages.

This chart provides a summary of the actuarial experience during the past year.

CHART 10
Actuarial Experience for Year Ended June 30, 2017

| | |
|--|----------------------|
| 1. Net gain from investments ⁽¹⁾ | \$24,707,000 |
| 2. Net loss from other experience ⁽²⁾ | <u>(27,437,000)</u> |
| 3. Net experience loss: (1) + (2) | <u>\$(2,730,000)</u> |

⁽¹⁾ Details in Chart 11.

⁽²⁾ See Section 3, Exhibit H. Does not include the effect of plan or assumption changes, if any.

SECTION 2: Valuation Results for the Ventura County Employees' Retirement Association

Investment Rate of Return

A major component of projected asset growth is the assumed rate of return. The assumed return should represent the expected long-term rate of return, based on VCERA's investment policy. For valuation purposes, the assumed rate of return on the valuation value of assets is 7.50%. The actual rate of return on the valuation value of assets for the 2016/2017 plan year was 8.04%.

Since the actual return for the year was higher than the assumed return, the VCERA experienced an actuarial gain during the year ended June 30, 2017 with regard to its investments.

This chart shows the gain/(loss) due to investment experience.

CHART 11

Investment Experience for Year Ended June 30, 2017 – Market Value, Actuarial Value and Valuation Value of Assets

| | Market Value | Actuarial Value | Valuation Value |
|-------------------------------------|---------------------|------------------------|------------------------|
| 1. Actual return | \$575,001,597 | \$368,806,019 | \$368,806,019 |
| 2. Average value of assets | 4,388,040,944 | 4,593,642,768 | 4,587,988,545 |
| 3. Actual rate of return: (1) ÷ (2) | 13.10% | 8.03% | 8.04% |
| 4. Assumed rate of return | 7.50% | 7.50% | 7.50% |
| 5. Expected return: (2) x (4) | \$329,103,071 | \$344,523,208 | \$344,099,141 |
| 6. Actuarial gain/(loss): (1) – (5) | <u>245,898,526</u> | <u>24,282,811</u> | <u>24,706,878</u> |

SECTION 2: Valuation Results for the Ventura County Employees' Retirement Association

Because actuarial planning is long term, it is useful to see how the assumed investment rate of return has followed actual experience over time. The chart below shows the rate of return on an actuarial, valuation, and market basis for the last ten years.

CHART 12

Investment Return – Market Value, Actuarial Value and Valuation Value: 2008 – 2017

| Year Ended June 30 | Market Value Investment Return | | Actuarial Value Investment Return | | Valuation Value Investment Return | |
|--------------------------|-----------------------------------|----------|--------------------------------------|---------|--------------------------------------|---------|
| | Amount | Percent | Amount | Percent | Amount | Percent |
| 2008 | \$(211,806,573) | (6.86%) | \$307,776,354 | 11.01% | \$310,176,628 | 11.32% |
| 2009 | (628,718,568) | (21.86%) | 5,186,654 | 0.17% | 31,242,785 | 1.02% |
| 2010 | 343,005,717 | 15.33% | 43,756,165 | 1.41% | 43,756,185 | 1.42% |
| 2011 | 622,940,028 | 24.34% | 121,406,541 | 3.89% | 121,406,541 | 3.91% |
| 2012 | 47,147,363 | 1.49% | 184,787,098 | 5.72% | 184,909,716 | 5.75% |
| 2013 | 432,694,392 | 13.51% | 237,282,497 | 6.97% | 237,282,497 | 7.00% |
| 2014 | 654,535,161 | 18.06% | 338,343,729 | 9.32% | 294,307,214 | 8.13% |
| 2015 | 84,826,216 | 1.98% | 341,233,326 | 8.60% | 384,442,119 | 9.82% |
| 2016 | 21,265,100 | 0.49% | 280,531,179 | 6.51% | 280,531,179 | 6.52% |
| 2017 | 575,001,597 | 13.10% | 368,806,019 | 8.03% | 368,806,019 | 8.04% |
| Five-Year Average Return | | 8.91% | | 7.87% | | 7.90% |
| Ten-Year Average Return | | 5.75% | | 6.33% | | 6.44% |

Note: Each year's yield is weighted by the average asset value in that year.

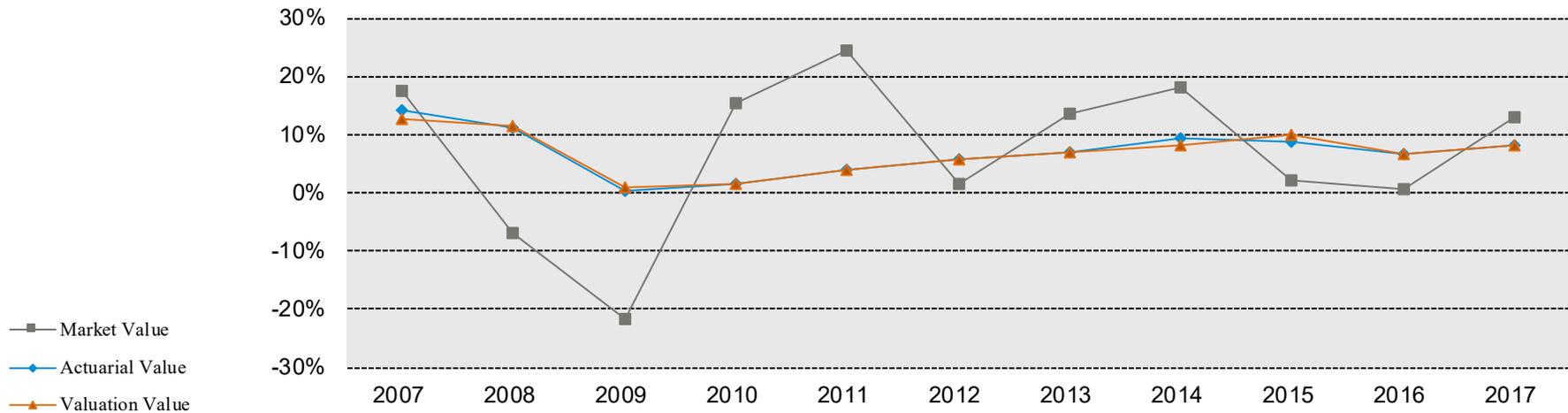
SECTION 2: Valuation Results for the Ventura County Employees' Retirement Association

Subsection B described the actuarial asset valuation method that gradually takes into account fluctuations in the market value rate of return. The effect of this is to stabilize the actuarial rate of return, which contributes to leveling pension plan costs.

This chart illustrates how this leveling effect has actually worked over the years 2007 - 2017.

CHART 13

Market, Actuarial and Valuation Rates of Return for Years Ended June 30, 2007 - 2017



SECTION 2: Valuation Results for the Ventura County Employees' Retirement Association

Other Experience

There are other differences between the expected and the actual experience that appear when the new valuation is compared with the projections from the previous valuation. These include:

- the extent of turnover among the participants,
- retirement experience (earlier or later than expected),
- mortality (more or fewer deaths than expected),
- the number of disability retirements,
- salary increases different than assumed, and
- COLA increases for retirees different than assumed.

The net loss from this other experience for the year ended June 30, 2017 amounted to \$27.4 million which is 0.5% of the actuarial accrued liability. This loss was mainly due to higher than expected individual salary increase for actives offset to some extent by lower than expected COLA increases for retirees and beneficiaries. See Exhibit H for a detailed development of the Unfunded Actuarial Accrued Liability.

SECTION 2: Valuation Results for the Ventura County Employees' Retirement Association

D. EMPLOYER AND MEMBER CONTRIBUTIONS

Employer contributions consist of two components:

Normal Cost

The annual contribution rate that, if paid annually from a member's first year of membership through the year of retirement, would accumulate to the amount necessary to fully fund the member's retirement-related benefits. Accumulation includes annual crediting of interest at the assumed investment earning rate. The contribution rate is expressed as a level percentage of the member's compensation.

Contribution to the Unfunded Actuarial Accrued Liability (UAAL)

The annual contribution rate that, if paid annually over the UAAL amortization period, would accumulate to the amount necessary to fully fund the UAAL. Accumulation includes annual crediting of interest at the assumed investment earning rate. The contribution (or rate credit in the case of a negative unfunded actuarial accrued liability) is calculated to remain as a level percentage of future active member payroll (including payroll for new members as they enter the Association) assuming a constant number of active members. In order to remain as a level percentage of payroll, amortization payments (credits) are scheduled to increase at the combined annual inflation and "across the board" increases rate of 3.50%. The June 30, 2004 UAAL is being amortized over a 15-year declining period effective June 30, 2004. The change in UAAL that arises due to actuarial gains or losses or due to plan amendments (with the exception of retirement incentives) at each valuation is amortized over its own declining 15-year period. Effective with the June 30, 2012 valuation, any change in UAAL that arises due to changes in actuarial assumptions or methods is amortized over its own declining 20-year period and any change in UAAL due to retirement incentives is amortized over its own declining period of up to 5 years.

VCERA's UAAL is determined separately for each tier depending on the assets and liabilities for that tier. Note that Non-PEPRA tiers are combined with PEPRA tiers for UAAL purposes.

Effective with the June 30, 2012 valuation, the Basic UAAL rate has been calculated on a combined basis for all General Tiers. Effective with the June 30, 2014 valuation, the COLA UAAL rate has been calculated on a combined basis for General Tiers that

SECTION 2: Valuation Results for the Ventura County Employees' Retirement Association

have a COLA. The recommended employer contribution rates determined under this combined methodology are provided on Chart 14. For reference purposes only, Appendix E shows the employer contribution rates under the previous non-combined methodology.

The employer contribution rates shown in Chart 14 are calculated based on a 50/50 sharing of Normal Cost for non-PEPRA Tiers. For purposes of these calculations, we have been previously directed by VCERA to assume that the cessation of member contributions after 30 years of service for non-PEPRA members continues per the County Employees Retirement Law (CERL) and that the cost associated with this provision is to be paid for by employers.

Appendix C shows employer contribution rates based on the prior methodology without a 50/50 sharing of Normal Cost for non-PEPRA Tiers.

Member Contributions *Non-PEPRA Members*

The non-PEPRA member contribution rates are provided in Appendix A. Please note that the member rates provided in the report are the full rate before reflecting any employer pickup. General Tier 2 members eligible for the fixed 2% cost-of-living benefit contribute a negotiated 2.63% of compensation per year towards the cost of that benefit that is reflected in this report.

Appendix D shows member contribution rates based on the prior methodology as defined in Articles 6 and 6.8 of the CERL for General members and Safety members. The basic member contribution rate is determined so that the accumulation of a member's basic contributions made in a given year until a certain age will be sufficient to fund an annuity at that age that is equal to 1/120 of Final Average Compensation for General members and 1/100 of Final Average Compensation for Safety members. That age is 55 for General Tier 1 members, 60 for General Tier 2 members and 50 for Safety members. It is assumed that contributions are made annually at the same rate, starting at entry age. In addition to their basic contributions, General Tier 1 and Safety members pay one-half of the total normal cost necessary to fund their cost-of-living benefits. Member contributions accumulate with interest at the lesser of the assumed investment earning rate or the rate on ten year U.S. Treasury notes. Any difference between the assumed investment earning rate and the actual

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interest crediting rate will be credited to the County Advance reserve. Please note that in calculating the basic member rate, we follow the Board's past practice and have not included any in-service pay redemptions that may potentially increase a member's final average compensation and hence retirement benefit.

PEPRA Members

Pursuant to Section 7522.30(a) of the Government Code, members under PEPRA tiers are required to contribute at least 50% of the Normal Cost. In addition, there are certain additional requirements that would have to be met such as requiring the new employees to pay the contribution rate of "similarly situated employees", if it is greater. (reference: Section 7522.30(c)). We further understand that different rules may have to be applied for collectively bargained employees, non-represented, managerial or other supervisory employees. (reference: Section 7522.30(e)). In preparing the Normal Cost rates in this report, we have assumed that exactly 50% of the Normal Cost would be paid by the new members and we have taken into account in this valuation only the requirements of Section 7522.30(c), but not the requirements of Section 7522.30(e). The only exception to this is that we have also shown the PEPRA Tier 2 with COLA contribution rates including the member COLA contribution rate of 2.63% of compensation based on current bargaining agreements.

Also of note is that based on our discussions with VCERA, we have used the discretion made available by Section 31620.5(a) to no longer round the PEPRA member's contribution rates to the nearest one quarter of one percent as was previously required by PEPRA. This is consistent with established practice for the Non-PEPRA plans and should allow for exactly one-half of the normal cost for the PEPRA plans to be paid by the employees and one-half by the employers. In addition, Section 31620.5(b) also provides that the "one percent rule" under Section 7522.30(d) does not apply. This section formerly limited the circumstances under which the PEPRA member rate would change.

The PEPRA member contribution rates are provided in Appendix B.

Tier 2 COLA Procedures

This benefit has been valued consistent with the methodologies described in our October 9, 2006 report entitled "Funding Policies and Procedures for General Tier 2 COLA Benefit".

SECTION 2: Valuation Results for the Ventura County Employees' Retirement Association

CHART 14a

Recommended Employer Contribution Rates (Dollar Amounts in Thousands) Based on 50/50 Sharing of Normal Cost for All Tiers (PEPRA and Non-PEPRA) – Current Valuation with Combined General UAAL Rates

| | June 30, 2017 Actuarial Valuation | | | | | |
|--|-----------------------------------|--|--------------|--|---------------|--|
| | BASIC | | COLA | | TOTAL | |
| | Rate | Estimated Annual Amount ⁽¹⁾ | Rate | Estimated Annual Amount ⁽¹⁾ | Rate | Estimated Annual Amount ⁽¹⁾ |
| General Tier 1 Members | | | | | | |
| Normal Cost ⁽²⁾ | 8.20% | \$580 | 2.75% | \$195 | 10.95% | \$775 |
| UAAL ⁽³⁾ | <u>9.06%</u> | <u>641</u> | <u>4.69%</u> | <u>332</u> | <u>13.75%</u> | <u>973</u> |
| Total Contribution | 17.26% | \$1,221 | 7.44% | \$527 | 24.70% | \$1,748 |
| General Tier 2 Members w/o COLA | | | | | | |
| Normal Cost | 7.03% | \$15,140 | 0.00% | \$0 | 7.03% | \$15,140 |
| UAAL ⁽³⁾ | <u>9.06%</u> | <u>19,500</u> | <u>0.00%</u> | <u>0</u> | <u>9.06%</u> | <u>19,500</u> |
| Total Contribution | 16.09% | \$34,640 | 0.00% | \$0 | 16.09% | \$34,640 |
| General PEPRA Tier 2 Members w/o COLA | | | | | | |
| Normal Cost | 7.06% | \$3,488 | 0.00% | \$0 | 7.06% | \$3,488 |
| UAAL ⁽³⁾ | <u>9.06%</u> | <u>4,476</u> | <u>0.00%</u> | <u>0</u> | <u>9.06%</u> | <u>4,476</u> |
| Total Contribution | 16.12% | \$7,964 | 0.00% | \$0 | 16.12% | \$7,964 |
| General Tier 2 Members w/COLA | | | | | | |
| Normal Cost ⁽⁴⁾ | 7.03% | \$15,139 | 0.06% | \$129 | 7.09% | \$15,268 |
| UAAL ⁽³⁾⁽⁵⁾ | <u>9.06%</u> | <u>19,501</u> | <u>4.69%</u> | <u>10,114</u> | <u>13.75%</u> | <u>29,615</u> |
| Total Contribution | 16.09% | \$34,640 | 4.75% | \$10,243 | 20.84% | \$44,883 |
| General PEPRA Tier 2 Members w/COLA | | | | | | |
| Normal Cost ⁽⁴⁾ | 7.06% | \$5,772 | 0.02% | \$17 | 7.08% | \$5,789 |
| UAAL ⁽³⁾⁽⁵⁾ | <u>9.06%</u> | <u>7,406</u> | <u>4.69%</u> | <u>3,835</u> | <u>13.75%</u> | <u>11,241</u> |
| Total Contribution | 16.12% | \$13,178 | 4.71% | \$3,852 | 20.83% | \$17,030 |
| All General Members⁽⁶⁾ | | | | | | |
| Normal Cost | 7.05% | \$40,119 | 0.06% | \$341 | 7.11% | \$40,460 |
| UAAL | <u>9.06%</u> | <u>51,524</u> | <u>2.51%</u> | <u>14,281</u> | <u>11.57%</u> | <u>65,805</u> |
| Total Contribution | 16.11% | \$91,643 | 2.57% | \$14,622 | 18.68% | \$106,265 |

Applicable footnotes are shown on page 17.

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CHART 14a (continued)

Recommended Employer Contribution Rates (Dollar Amounts in Thousands) Based on 50/50 Sharing of Normal Cost for All Tiers (PEPRA and Non-PEPRA) – Current Valuation with Combined General UAAL Rates

| | June 30, 2017 Actuarial Valuation | | | | | |
|--|-----------------------------------|--|-----------------|--|---------------|--|
| | BASIC | | COLA | | TOTAL | |
| | Rate | Estimated Annual Amount ⁽¹⁾ | Rate | Estimated Annual Amount ⁽¹⁾ | Rate | Estimated Annual Amount ⁽¹⁾ |
| Safety Members | | | | | | |
| Normal Cost ⁽⁷⁾ | 11.65% | \$18,178 | 4.85% | \$7,568 | 16.50% | \$25,746 |
| UAAL | <u>52.74%</u> | <u>82,293</u> | <u>(14.64%)</u> | <u>(22,843)</u> | <u>38.10%</u> | <u>59,450</u> |
| Total Contribution | 64.39% | \$100,471 | (9.79%) | \$(15,275) | 54.60% | \$85,196 |
| Safety PEPRA Members | | | | | | |
| Normal Cost | 9.96% | \$1,985 | 4.13% | \$824 | 14.09% | \$2,809 |
| UAAL | <u>52.74%</u> | <u>10,513</u> | <u>(14.64%)</u> | <u>(2,918)</u> | <u>38.10%</u> | <u>7,595</u> |
| Total Contribution | 62.70% | \$12,498 | (10.51%) | \$(2,094) | 52.19% | \$10,404 |
| All Safety Members⁽⁶⁾ | | | | | | |
| Normal Cost | 11.46% | \$20,163 | 4.77% | \$8,392 | 16.23% | \$28,555 |
| UAAL | <u>52.74%</u> | <u>92,806</u> | <u>(14.64%)</u> | <u>(25,761)</u> | <u>38.10%</u> | <u>67,045</u> |
| Total Contribution | 64.20% | \$112,969 | (9.87%) | \$(17,369) | 54.33% | \$95,600 |
| All Categories Combined⁽⁶⁾ | | | | | | |
| Normal Cost | 8.09% | \$60,282 | 1.17% | \$8,733 | 9.26% | \$69,015 |
| UAAL | <u>19.38%</u> | <u>144,330</u> | <u>(1.55%)</u> | <u>(11,480)</u> | <u>17.83%</u> | <u>132,850</u> |
| Total Contribution | 27.47% | \$204,612 | (0.38%) | \$(2,747) | 27.09% | \$201,865 |

⁽¹⁾ Amounts are in thousands, assumed to be paid throughout the year, and are based on June 30, 2017 annual payroll (also in thousands) shown below:

| | |
|-----------------------|---------------|
| General Tier 1 | \$7,076 |
| General Tier 2 | 215,358 |
| General PEPRA Tier 2 | 49,409 |
| General Tier 2C | 215,345 |
| General PEPRA Tier 2C | 81,759 |
| Safety | 156,036 |
| Safety PEPRA | <u>19,934</u> |
| Total | \$744,917 |

⁽²⁾ The total employer rate has been adjusted by 0.31% to account for the cost associated with the cessation of member contributions after 30 years of service.

⁽³⁾ Basic UAAL rates have been calculated on a combined basis for all General Tiers. COLA UAAL rates have been calculated on a combined basis for all General Tiers that have a COLA (excludes General Tier 2 without COLA and General PEPRA Tier 2 without COLA).

⁽⁴⁾ Reflects General Tier 2 member COLA contribution rate of 2.63% based on current bargaining agreements.

⁽⁵⁾ Includes 0.55% in COLA UAAL costs attributed to the first two years of service accrued for the fixed 2% COLA pursuant to Government Code 31627.

⁽⁶⁾ These aggregated rates are provided for informational purposes only as we understand that the tier specific rates will be implemented.

⁽⁷⁾ The total employer rate has been adjusted by 1.28% to account for the cost associated with the cessation of member contributions after 30 years of service.

SECTION 2: Valuation Results for the Ventura County Employees' Retirement Association

CHART 14b

Recommended Employer Contribution Rates (Dollar Amounts in Thousands) Based on 50/50 Sharing of Normal Cost for All Tiers (PEPRA and Non-PEPRA) – Prior Valuation with Combined General UAAL Rates

| | June 30, 2016 Actuarial Valuation | | | | | |
|--|-----------------------------------|--|--------------|--|---------------|--|
| | BASIC | | COLA | | TOTAL | |
| | Rate | Estimated Annual Amount ⁽¹⁾ | Rate | Estimated Annual Amount ⁽¹⁾ | Rate | Estimated Annual Amount ⁽¹⁾ |
| General Tier 1 Members | | | | | | |
| Normal Cost ⁽²⁾ | 8.13% | \$637 | 2.74% | \$214 | 10.87% | \$851 |
| UAAL ⁽³⁾ | <u>9.43%</u> | <u>738</u> | <u>4.10%</u> | <u>321</u> | <u>13.53%</u> | <u>1,059</u> |
| Total Contribution | 17.56% | \$1,375 | 6.84% | \$535 | 24.40% | \$1,910 |
| General Tier 2 Members w/o COLA | | | | | | |
| Normal Cost | 7.11% | \$15,265 | 0.00% | \$0 | 7.11% | \$15,265 |
| UAAL ⁽³⁾ | <u>9.43%</u> | <u>20,238</u> | <u>0.00%</u> | <u>0</u> | <u>9.43%</u> | <u>20,238</u> |
| Total Contribution | 16.54% | \$35,503 | 0.00% | \$0 | 16.54% | \$35,503 |
| General PEPRA Tier 2 Members w/o COLA | | | | | | |
| Normal Cost | 6.96% | \$2,453 | 0.00% | \$0 | 6.96% | \$2,453 |
| UAAL ⁽³⁾ | <u>9.43%</u> | <u>3,323</u> | <u>0.00%</u> | <u>0</u> | <u>9.43%</u> | <u>3,323</u> |
| Total Contribution | 16.39% | \$5,776 | 0.00% | \$0 | 16.39% | \$5,776 |
| General Tier 2 Members w/COLA | | | | | | |
| Normal Cost ⁽⁴⁾ | 7.11% | \$15,374 | 0.08% | \$173 | 7.19% | \$15,547 |
| UAAL ⁽³⁾⁽⁵⁾ | <u>9.43%</u> | <u>20,382</u> | <u>4.10%</u> | <u>8,865</u> | <u>13.53%</u> | <u>29,247</u> |
| Total Contribution | 16.54% | \$35,756 | 4.18% | \$9,038 | 20.72% | \$44,794 |
| General PEPRA Tier 2 Members w/COLA | | | | | | |
| Normal Cost ⁽⁴⁾ | 6.96% | \$4,465 | 0.01% | \$6 | 6.97% | \$4,471 |
| UAAL ⁽³⁾⁽⁵⁾ | <u>9.43%</u> | <u>6,049</u> | <u>4.10%</u> | <u>2,629</u> | <u>13.53%</u> | <u>8,678</u> |
| Total Contribution | 16.39% | \$10,514 | 4.11% | \$2,635 | 20.50% | \$13,149 |
| All General Members⁽⁶⁾ | | | | | | |
| Normal Cost | 7.10% | \$38,194 | 0.07% | \$393 | 7.17% | \$38,587 |
| UAAL | <u>9.43%</u> | <u>50,730</u> | <u>2.19%</u> | <u>11,815</u> | <u>11.62%</u> | <u>62,545</u> |
| Total Contribution | 16.53% | \$88,924 | 2.26% | \$12,208 | 18.79% | \$101,132 |

Applicable footnotes are shown on page 19.

SECTION 2: Valuation Results for the Ventura County Employees' Retirement Association

CHART 14b (continued)

Recommended Employer Contribution Rates (Dollar Amounts in Thousands) Based on 50/50 Sharing of Normal Cost for All Tiers (PEPRA and Non-PEPRA) – Prior Valuation with Combined General UAAL Rates

| | June 30, 2016 Actuarial Valuation | | | | | |
|--|-----------------------------------|--|-----------------|--|---------------|--|
| | BASIC | | COLA | | TOTAL | |
| | Rate | Estimated Annual Amount ⁽¹⁾ | Rate | Estimated Annual Amount ⁽¹⁾ | Rate | Estimated Annual Amount ⁽¹⁾ |
| Safety Members | | | | | | |
| Normal Cost ⁽⁷⁾ | 11.71% | \$18,197 | 4.88% | \$7,584 | 16.59% | \$25,781 |
| UAAL | <u>51.58%</u> | <u>80,156</u> | <u>(12.51%)</u> | <u>(19,441)</u> | <u>39.07%</u> | <u>60,715</u> |
| Total Contribution | 63.29% | \$98,353 | (7.63%) | \$(11,857) | 55.66% | \$86,496 |
| Safety PEPRA Members | | | | | | |
| Normal Cost | 10.21% | \$1,272 | 4.21% | \$524 | 14.42% | \$1,796 |
| UAAL | <u>51.58%</u> | <u>6,425</u> | <u>(12.51%)</u> | <u>(1,558)</u> | <u>39.07%</u> | <u>4,867</u> |
| Total Contribution | 61.79% | \$7,697 | (8.30%) | \$(1,034) | 53.49% | \$6,663 |
| All Safety Members⁽⁶⁾ | | | | | | |
| Normal Cost | 11.60% | \$19,469 | 4.83% | \$8,108 | 16.43% | \$27,577 |
| UAAL | <u>51.58%</u> | <u>86,581</u> | <u>(12.51%)</u> | <u>(20,999)</u> | <u>39.07%</u> | <u>65,582</u> |
| Total Contribution | 63.18% | \$106,050 | (7.68%) | \$(12,891) | 55.50% | \$93,159 |
| All Categories Combined⁽⁶⁾ | | | | | | |
| Normal Cost | 8.17% | \$57,663 | 1.20% | \$8,501 | 9.37% | \$66,164 |
| UAAL | <u>19.45%</u> | <u>137,311</u> | <u>(1.30%)</u> | <u>(9,184)</u> | <u>18.15%</u> | <u>128,127</u> |
| Total Contribution | 27.62% | \$194,974 | (0.10%) | \$(683) | 27.52% | \$194,291 |

⁽¹⁾ Amounts are in thousands, assumed to be paid throughout the year, and are based on June 30, 2016 annual payroll (also in thousands) shown below:

| | |
|-----------------------|---------------|
| General Tier 1 | \$7,830 |
| General Tier 2 | 214,696 |
| General PEPRA Tier 2 | 35,238 |
| General Tier 2C | 216,231 |
| General PEPRA Tier 2C | 64,147 |
| Safety | 155,401 |
| Safety PEPRA | <u>12,457</u> |
| Total | \$706,000 |

⁽²⁾ The total employer rate has been adjusted by 0.27% to account for the cost associated with the cessation of member contributions after 30 years of service.

⁽³⁾ Basic UAAL rates have been calculated on a combined basis for all General Tiers. COLA UAAL rates have been calculated on a combined basis for all General Tiers that have a COLA (excludes General Tier 2 without COLA and General PEPRA Tier 2 without COLA).

⁽⁴⁾ Reflects General Tier 2 member COLA contribution rate of 2.63% based on current bargaining agreements.

⁽⁵⁾ Includes 0.47% in COLA UAAL costs attributed to the first two years of service accrued for the fixed 2% COLA pursuant to Government Code 31627.

⁽⁶⁾ These aggregated rates are provided for informational purposes only as we understand that the tier specific rates will be implemented.

⁽⁷⁾ The total employer rate has been adjusted by 1.32% to account for the cost associated with the cessation of member contributions after 30 years of service.

SECTION 2: Valuation Results for the Ventura County Employees' Retirement Association

The employer contribution rates as of June 30, 2017 are based on all of the data described in the previous sections, the actuarial assumptions described in Section 4, and the Plan provisions adopted at the time of preparation of the Actuarial Valuation. They include all changes affecting future costs, adopted benefit changes, actuarial gains and losses and changes in the actuarial assumptions.

Reconciliation of Recommended Employer Contribution Rate

The chart below details the changes in the recommended average employer contribution rate from the prior valuation to the current year's valuation.

The chart reconciles the employer contribution from the prior valuation to the amount determined in this valuation.

CHART 15

Reconciliation of Recommended Average Employer Contribution Rate from June 30, 2016 to June 30, 2017 (Dollar Amounts in Thousands)

| | Contribution Rate | Estimated Annual Dollar Cost ⁽¹⁾ |
|--|-------------------|---|
| Recommended Average Employer Contribution Rate as of June 30, 2016 | 27.52% | \$194,291 |
| Effect of investment gain ⁽²⁾ | (0.30%) | \$(2,235) |
| Effect of lower than expected contributions ⁽³⁾ | 0.03% | 223 |
| Effect of greater than expected individual salary increases | 0.42% | 3,129 |
| Effect of greater than expected total payroll growth | (0.35%) | (2,607) |
| Effect of lower than expected COLA benefit increase for retirees and beneficiaries | (0.25%) | (1,862) |
| Effect of changes in member demographics on Normal Cost | (0.11%) | (819) |
| Effect of net other changes ⁽⁴⁾ | <u>0.13%</u> | <u>11,745</u> |
| Total change | <u>(0.43%)</u> | <u>\$7,574</u> |
| Recommended Average Employer Contribution Rate as of June 30, 2017 | 27.09% | \$201,865 |

⁽¹⁾ Based on projected payroll for each year.

⁽²⁾ The Association's valuation value of assets earned 8.04% which was higher than the 7.50% assumed rate of return for 2016/2017.

⁽³⁾ Contribution loss mainly from one-year delay in implementing higher contribution rates for Safety tiers from the June 30, 2016 valuation.

⁽⁴⁾ Other differences in actual versus expected experience including mortality, disability, withdrawal, retirement and in-service redemption experience. Estimated annual dollar cost also reflects change in payroll from prior valuation.

SECTION 2: Valuation Results for the Ventura County Employees' Retirement Association

The member contribution rates as of June 30, 2017 are based on all of the data described in the previous sections, the actuarial assumptions described in Section 4, and the Plan provisions adopted at the time of preparation of the Actuarial Valuation.

Reconciliation of Recommended Member Contribution Rate

The chart below details the changes in the recommended average member contribution rate from the prior valuation to the current year's valuation.

The chart reconciles the member contribution from the prior valuation to the amount determined in this valuation.

CHART 16

Reconciliation of Recommended Average Member Contribution Rate from June 30, 2016 to June 30, 2017 (Dollar Amounts in Thousands)

| | Contribution Rate ⁽¹⁾ | Estimated Annual Dollar Cost ⁽²⁾ |
|--|----------------------------------|---|
| Recommended Average Member Contribution Rate in June 30, 2016 Valuation | 9.80% | \$69,214 |
| Effect of changes in member demographics ⁽³⁾ | <u>(0.05%)</u> | <u>\$3,429</u> |
| Total change | <u>(0.05%)</u> | <u>\$3,429</u> |
| Recommended Average Member Contribution Rate in June 30, 2017 Valuation | 9.75% | \$72,643 |

⁽¹⁾ Average member contribution rates are after reflecting the impact of the cessation of member contribution after 30 years of service for non-PEPRA tiers. This is a change from the prior valuation.

⁽²⁾ Based on projected payroll for each year.

⁽³⁾ Estimated annual dollar cost also reflects change in payroll from prior valuation.

SECTION 2: Valuation Results for the Ventura County Employees' Retirement Association

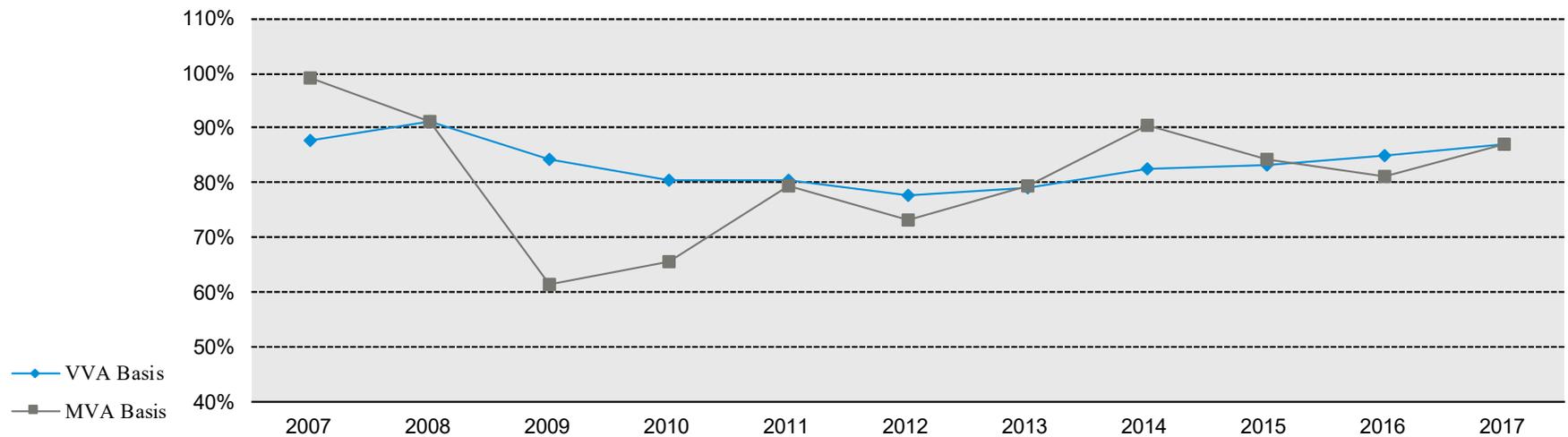
E. FUNDED RATIO

A commonly reported piece of information regarding the Plan's financial status is the funded ratio. These ratios compare the valuation value of assets and market value of assets to the actuarial accrued liabilities of the Plan as calculated. High ratios indicate a well-funded plan with assets sufficient to cover the plan's actuarial accrued liabilities. Lower ratios may indicate recent changes to benefit structures, funding of the plan below actuarial requirements, poor asset performance, or a variety of other factors. The chart below depicts a history of the funded

ratio for this plan. Chart 18 on the next page shows the Plan's schedule of funding progress for the last ten years.

The funded status measures shown in this valuation are appropriate for assessing the need for or amount of future contributions. However, they are not necessarily appropriate for assessing the sufficiency of Plan assets to cover the estimated cost of settling the Plan's benefit obligations. As the chart below shows, the measures are different depending on whether the valuation or market value of assets is used.

CHART 17
Funded Ratio for Plan Years Ending June 30, 2007 - 2017



SECTION 2: Valuation Results for the Ventura County Employees' Retirement Association

CHART 18

Schedule of Funding Progress

| Actuarial Valuation Date | Valuation Value of Assets⁽¹⁾ (a) | Actuarial Accrued Liability (AAL)⁽²⁾ (b) | Unfunded/ (Overfunded) AAL (UAAL) (b) - (a) | Funded Ratio (a) / (b) | Projected Covered Payroll (c) | UAAL as a Percentage of Projected Covered Payroll [(b) - (a) / (c)] |
|---------------------------------|--|--|--|-------------------------------|--------------------------------------|--|
| 06/30/2008 | \$3,055,756,000 | \$3,345,804,000 | \$290,048,000 | 91.33% | \$599,173,000 | 48.41% |
| 06/30/2009 | 3,090,148,000 | 3,663,701,000 | 573,553,000 | 84.34% | 634,777,000 | 90.36% |
| 06/30/2010 | 3,115,984,000 | 3,877,443,000 | 761,459,000 | 80.36% | 654,829,000 | 116.28% |
| 06/30/2011 | 3,220,388,000 | 3,995,352,000 | 774,964,000 | 80.60% | 637,037,000 | 121.65% |
| 06/30/2012 | 3,397,360,000 | 4,373,227,000 | 975,867,000 | 77.69% | 633,848,000 | 153.96% |
| 06/30/2013 | 3,621,709,000 | 4,575,063,000 | 953,354,000 | 79.16% | 638,764,000 | 149.25% |
| 06/30/2014 | 3,910,801,000 | 4,731,016,000 | 820,215,000 | 82.66% | 648,257,000 | 126.53% |
| 06/30/2015 | 4,302,330,000 | 5,178,157,000 | 875,827,000 | 83.09% | 678,705,000 | 129.04% |
| 06/30/2016 | 4,585,713,000 | 5,398,756,000 | 813,043,000 | 84.94% | 706,000,000 | 115.16% |
| 06/30/2017 | 4,959,070,000 | 5,703,396,000 | 744,326,000 | 86.95% | 744,917,000 | 99.92% |

⁽¹⁾ Excludes assets for supplemental medical benefit reserve and statutory contingency reserve.

⁽²⁾ Excludes liabilities held for supplemental medical benefit reserve and statutory contingency reserve.

SECTION 2: Valuation Results for the Ventura County Employees' Retirement Association

F. VOLATILITY RATIOS

Retirement plans are subject to volatility in the level of required contributions. This volatility tends to increase as retirement plans become more mature.

The Asset Volatility Ratio (AVR), which is equal to the market value of assets divided by total payroll, provides an indication of the potential contribution volatility for any given level of investment volatility. A higher AVR indicates that the plan is subject to a greater level of contribution volatility. This is a current measure since it is based on the current level of assets.

For VCERA, the current AVR is about 6.7. This means that a 1% asset gain/(loss) (relative to the assumed investment return) translates to about 6.7% of one-year's payroll. Since VCERA amortizes actuarial gains and losses over a period of 15 years, there would be a 0.6% of payroll decrease/(increase) in the required contribution for each 1% asset gain/(loss).

The Liability Volatility Ratio (LVR), which is equal to the Actuarial Accrued Liability divided by payroll, provides an indication of the longer-term potential for contribution volatility for any given level of investment volatility. This is because, over an extended period of time, the plan's assets should track the plan's liabilities. For example, if a plan is 50% funded on a market value basis, the liability volatility ratio would be double the asset volatility ratio and the plan sponsor should expect contribution volatility to increase over time as the plan becomes better funded.

The LVR also indicates how volatile contributions will be in response to changes in the Actuarial Accrued Liability due to actual experience or to changes in actuarial assumptions.

For VCERA, the current LVR is about 7.7. This is about 15% higher than the AVR. Therefore, we would expect that contribution volatility will increase over the long term.

CHART 19

Volatility Ratios for Years Ended June 30, 2009 – 2017

| Year Ended June 30 | Asset Volatility Ratios | | | Liability Volatility Ratios | | |
|--------------------|-------------------------|--------|-------|-----------------------------|--------|-------|
| | General | Safety | Total | General | Safety | Total |
| 2009 | 2.8 | 5.7 | 3.5 | 4.4 | 9.8 | 5.8 |
| 2010 | 3.1 | 6.3 | 3.9 | 4.4 | 10.1 | 5.9 |
| 2011 | 3.9 | 8.2 | 5.0 | 4.7 | 10.8 | 6.3 |
| 2012 | 3.8 | 8.7 | 5.1 | 5.1 | 12.3 | 6.9 |
| 2013 | 4.3 | 9.7 | 5.7 | 5.3 | 12.7 | 7.2 |
| 2014 | 4.9 | 11.5 | 6.6 | 5.4 | 12.9 | 7.3 |
| 2015 | 4.8 | 11.4 | 6.4 | 5.6 | 13.8 | 7.6 |
| 2016 | 4.5 | 11.7 | 6.2 | 5.5 | 14.5 | 7.6 |
| 2017 | 4.8 | 12.7 | 6.7 | 5.5 | 14.6 | 7.7 |

This chart shows how the asset and liability volatility ratios have varied over time, both for the plan in total and separately for General and Safety.

SECTION 3: Supplemental Information for the Ventura County Employees' Retirement Association

EXHIBIT A

Table of Plan Coverage

i. General Tier 1

| Category | Year Ended June 30 | | Change From Prior Year |
|--|--------------------|--------------|------------------------|
| | 2017 | 2016 | |
| Active members in valuation: | | | |
| Number | 49 | 60 | -18.3% |
| Average age | 62.5 | 61.7 | 0.8 |
| Average service | 33.5 | 32.7 | 0.8 |
| Projected total compensation ⁽¹⁾ | \$7,076,281 | \$7,830,126 | -9.6% |
| Projected average compensation | \$144,414 | \$130,502 | 10.7% |
| Account balances | \$11,606,918 | \$13,119,074 | -11.5% |
| Total active vested members | 49 | 60 | -18.3% |
| Vested terminated members⁽²⁾ | | | |
| | 41 | 49 | -16.3% |
| Retired members: | | | |
| Number in pay status | 1,389 | 1,417 | -2.0% |
| Average age | 76.3 | 75.7 | 0.6 |
| Average monthly benefit ⁽³⁾ | \$3,867 | \$3,721 | 3.9% |
| Disabled members: | | | |
| Number in pay status | 98 | 104 | -5.8% |
| Average age | 73.9 | 73.6 | 0.3 |
| Average monthly benefit ⁽³⁾ | \$2,481 | \$2,363 | 5.0% |
| Beneficiaries: | | | |
| Number in pay status | 352 | 352 | 0.0% |
| Average age | 79.7 | 79.7 | 0.0 |
| Average monthly benefit ⁽³⁾ | \$1,744 | \$1,695 | 2.9% |

⁽¹⁾ Calculated by increasing annualized bi-weekly compensations as of valuation date by one-half year of inflation and "across the board" salary increases.

⁽²⁾ Includes terminated members with member contributions on deposit.

⁽³⁾ Excludes vested fixed supplemental and supplemental medical benefit amounts.

SECTION 3: Supplemental Information for the Ventura County Employees' Retirement Association

EXHIBIT A (continued)

Table of Plan Coverage

ii. General Tier 2 and General Tier 2C

| Category | Year Ended June 30 | | Change From Prior Year |
|--|---------------------------|---------------|-------------------------------|
| | 2017 | 2016 | |
| Active members in valuation: | | | |
| Number | 4,868 | 5,155 | -5.6% |
| Average age | 49.1 | 48.6 | 0.5 |
| Average service | 14.2 | 13.3 | 0.9 |
| Projected total compensation ⁽¹⁾ | \$430,702,974 | \$430,926,973 | -0.1% |
| Projected average compensation | \$88,476 | \$83,594 | 5.8% |
| Account balances | \$398,807,087 | \$387,531,527 | 2.9% |
| Total active vested members | 4,519 | 4,547 | -0.6% |
| Vested terminated members⁽²⁾ | | | |
| | 1,986 | 1,971 | 0.8% |
| Retired members: | | | |
| Number in pay status | 2,824 | 2,641 | 6.9% |
| Average age | 68.6 | 68.2 | 0.4 |
| Average monthly benefit ⁽³⁾ | \$1,820 | \$1,746 | 4.2% |
| Disabled members: | | | |
| Number in pay status | 335 | 331 | 1.2% |
| Average age | 64.8 | 64.2 | 0.6 |
| Average monthly benefit ⁽³⁾ | \$1,505 | \$1,479 | 1.8% |
| Beneficiaries: | | | |
| Number in pay status | 344 | 319 | 7.8% |
| Average age | 69.4 | 68.2 | 1.2 |
| Average monthly benefit ⁽³⁾ | \$868 | \$840 | 3.3% |

⁽¹⁾ Calculated by increasing annualized bi-weekly compensations as of valuation date by one-half year of inflation and "across the board" salary increases.

⁽²⁾ Includes terminated members with member contributions on deposit.

⁽³⁾ Excludes vested fixed supplemental and supplemental medical benefit amounts.

SECTION 3: Supplemental Information for the Ventura County Employees' Retirement Association

EXHIBIT A (continued)

Table of Plan Coverage

iii. General PEPRA Tier 1

| Category | Year Ended June 30 | | Change From Prior Year |
|--|---------------------------|-------------|-------------------------------|
| | 2017 | 2016 | |
| Active members in valuation: | | | |
| Number | 0 | 0 | N/A |
| Average age | N/A | N/A | N/A |
| Average service | N/A | N/A | N/A |
| Projected total compensation ⁽¹⁾ | N/A | N/A | N/A |
| Projected average compensation | N/A | N/A | N/A |
| Account balances | N/A | N/A | N/A |
| Total active vested members | 0 | 0 | N/A |
| Vested terminated members⁽²⁾ | 3 | 3 | 0.0% |
| Retired members: | | | |
| Number in pay status | 0 | 0 | N/A |
| Average age | N/A | N/A | N/A |
| Average monthly benefit ⁽³⁾ | N/A | N/A | N/A |
| Disabled members: | | | |
| Number in pay status | 0 | 0 | N/A |
| Average age | N/A | N/A | N/A |
| Average monthly benefit ⁽³⁾ | N/A | N/A | N/A |
| Beneficiaries: | | | |
| Number in pay status | 0 | 0 | N/A |
| Average age | N/A | N/A | N/A |
| Average monthly benefit ⁽³⁾ | N/A | N/A | N/A |

⁽¹⁾ Calculated by increasing annualized bi-weekly compensations as of valuation date by one-half year of inflation and "across the board" salary increases.

⁽²⁾ Includes terminated members with member contributions on deposit.

⁽³⁾ Excludes vested fixed supplemental and supplemental medical benefit amounts.

SECTION 3: Supplemental Information for the Ventura County Employees' Retirement Association

EXHIBIT A (continued)

Table of Plan Coverage

iv. General PEPRA Tier 2 and General PEPRA Tier 2C

| Category | Year Ended June 30 | | Change From Prior Year |
|--|---------------------------|--------------|-------------------------------|
| | 2017 | 2016 | |
| Active members in valuation: | | | |
| Number | 2,211 | 1,800 | 22.8% |
| Average age | 37.9 | 37.0 | 0.9 |
| Average service | 2.0 | 1.5 | 0.5 |
| Projected total compensation ⁽¹⁾ | \$131,167,857 | \$99,384,839 | 32.0% |
| Projected average compensation | \$59,325 | \$55,214 | 7.4% |
| Account balances | \$19,960,108 | \$11,743,432 | 70.0% |
| Total active vested members | 26 | 12 | 116.7% |
| Vested terminated members⁽²⁾ | 454 | 309 | 46.9% |
| Retired members: | | | |
| Number in pay status | 0 | 0 | N/A |
| Average age | N/A | N/A | N/A |
| Average monthly benefit ⁽³⁾ | N/A | N/A | N/A |
| Disabled members: | | | |
| Number in pay status | 0 | 0 | N/A |
| Average age | N/A | N/A | N/A |
| Average monthly benefit ⁽³⁾ | N/A | N/A | N/A |
| Beneficiaries: | | | |
| Number in pay status | 0 | 0 | N/A |
| Average age | N/A | N/A | N/A |
| Average monthly benefit ⁽³⁾ | N/A | N/A | N/A |

⁽¹⁾ Calculated by increasing annualized bi-weekly compensations as of valuation date by one-half year of inflation and "across the board" salary increases.

⁽²⁾ Includes terminated members with member contributions on deposit.

⁽³⁾ Excludes vested fixed supplemental and supplemental medical benefit amounts.

SECTION 3: Supplemental Information for the Ventura County Employees' Retirement Association

EXHIBIT A (continued)

Table of Plan Coverage

v. Safety

| Category | Year Ended June 30 | | Change From Prior Year |
|--|---------------------------|---------------|-------------------------------|
| | 2017 | 2016 | |
| Active members in valuation: | | | |
| Number | 1,257 | 1,321 | -4.8% |
| Average age | 43.7 | 43.1 | 0.6 |
| Average service | 17.1 | 16.5 | 0.6 |
| Projected total compensation ⁽¹⁾ | \$156,035,986 | \$155,400,453 | 0.4% |
| Projected average compensation | \$124,134 | \$117,638 | 5.5% |
| Account balances | \$197,710,206 | \$186,394,260 | 6.1% |
| Total active vested members | 1,206 | 1,231 | -2.0% |
| Vested terminated members⁽²⁾ | | | |
| | 289 | 287 | 0.7% |
| Retired members: | | | |
| Number in pay status | 753 | 721 | 4.4% |
| Average age | 66.7 | 66.4 | 0.3 |
| Average monthly benefit ⁽³⁾ | \$7,713 | \$7,514 | 2.6% |
| Disabled members: | | | |
| Number in pay status | 398 | 391 | 1.8% |
| Average age | 64.3 | 63.9 | 0.4 |
| Average monthly benefit ⁽³⁾ | \$5,560 | \$5,378 | 3.4% |
| Beneficiaries: | | | |
| Number in pay status | 273 | 263 | 3.8% |
| Average age | 67.6 | 66.8 | 0.8 |
| Average monthly benefit ⁽³⁾ | \$3,079 | \$2,940 | 4.7% |

⁽¹⁾ Calculated by increasing annualized bi-weekly compensations as of valuation date by one-half year of inflation and "across the board" salary increases.

⁽²⁾ Includes terminated members with member contributions on deposit.

⁽³⁾ Excludes vested fixed supplemental and supplemental medical benefit amounts.

SECTION 3: Supplemental Information for the Ventura County Employees' Retirement Association

EXHIBIT A (continued)

Table of Plan Coverage

vi. Safety PEPRA

| Category | Year Ended June 30 | | Change From Prior Year |
|--|---------------------------|--------------|-------------------------------|
| | 2017 | 2016 | |
| Active members in valuation: | | | |
| Number | 251 | 173 | 45.1% |
| Average age | 29.7 | 29.6 | 0.1 |
| Average service | 2.1 | 1.7 | 0.4 |
| Projected total compensation ⁽¹⁾ | \$19,934,288 | \$12,457,289 | 60.0% |
| Projected average compensation | \$79,419 | \$72,007 | 10.3% |
| Account balances | \$4,934,014 | \$2,654,345 | 85.9% |
| Total active vested members | 1 | 0 | N/A |
| Vested terminated members⁽²⁾ | 36 | 20 | 80.0% |
| Retired members: | | | |
| Number in pay status | 0 | 0 | N/A |
| Average age | N/A | N/A | N/A |
| Average monthly benefit ⁽³⁾ | N/A | N/A | N/A |
| Disabled members: | | | |
| Number in pay status | 0 | 0 | N/A |
| Average age | N/A | N/A | N/A |
| Average monthly benefit ⁽³⁾ | N/A | N/A | N/A |
| Beneficiaries: | | | |
| Number in pay status | 0 | 0 | N/A |
| Average age | N/A | N/A | N/A |
| Average monthly benefit ⁽³⁾ | N/A | N/A | N/A |

⁽¹⁾ Calculated by increasing annualized bi-weekly compensations as of valuation date by one-half year of inflation and "across the board" salary increases.

⁽²⁾ Includes terminated members with member contributions on deposit.

⁽³⁾ Excludes vested fixed supplemental and supplemental medical benefit amounts.

SECTION 3: Supplemental Information for the Ventura County Employees' Retirement Association

EXHIBIT B

**Members in Active Service and Projected Average Compensation as of June 30, 2017
By Age and Years of Service**

i. General Tier 1

| Age | Total | Years of Service | | | | | | | | |
|-----------|-----------|------------------|-----|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40 & over |
| Under 25 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25 - 29 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30 - 34 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 35 - 39 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 40 - 44 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 45 - 49 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 50 - 54 | 3 | -- | -- | -- | 1 | 1 | 1 | -- | -- | -- |
| 55 - 59 | \$255,082 | -- | -- | -- | \$203,248 | \$245,774 | \$316,223 | -- | -- | -- |
| 60 - 64 | 15 | -- | -- | -- | 1 | -- | 3 | 1 | 9 | 1 |
| 65 - 69 | 153,469 | -- | -- | -- | 226,807 | -- | 236,979 | \$221,772 | \$113,036 | \$125,201 |
| 70 & over | 19 | -- | -- | -- | 3 | 1 | 2 | 1 | 6 | 6 |
| | ,602 | -- | -- | -- | 203,699 | 73,267 | 248,548 | 276,895 | 98,271 | 103,910 |
| | 6 | -- | -- | -- | 1 | -- | 1 | 2 | 2 | -- |
| | 109,454 | -- | -- | -- | 156,987 | -- | 214,710 | 67,097 | 75,415 | -- |
| | 6 | -- | -- | 1 | -- | -- | 1 | -- | -- | 4 |
| | 113,473 | -- | -- | \$199,501 | -- | -- | 147,904 | -- | -- | 83,358 |
| Total | 49 | -- | -- | 1 | 6 | 2 | 8 | 4 | 17 | 11 |
| | \$144,414 | -- | -- | \$199,501 | \$199,690 | \$159,520 | \$235,859 | \$158,215 | \$103,399 | \$98,372 |

SECTION 3: Supplemental Information for the Ventura County Employees' Retirement Association

EXHIBIT B (continued)

Members in Active Service and Projected Average Compensation as of June 30, 2017

By Age and Years of Service

ii. General Tier 2 and General Tier 2C

| Age | Total | Years of Service | | | | | | | | |
|-----------|----------|------------------|----------|----------|----------|----------|----------|-----------|-----------|-----------|
| | | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40 & over |
| Under 25 | 3 | 3 | -- | -- | -- | -- | -- | -- | -- | -- |
| | \$47,352 | \$47,352 | -- | -- | -- | -- | -- | -- | -- | -- |
| 25 - 29 | 76 | 35 | 40 | 1 | -- | -- | -- | -- | -- | -- |
| | 64,633 | 66,640 | \$63,035 | \$58,270 | -- | -- | -- | -- | -- | -- |
| 30 - 34 | 417 | 74 | 261 | 81 | 1 | -- | -- | -- | -- | -- |
| | 78,991 | 78,798 | 81,266 | 71,933 | \$71,146 | -- | -- | -- | -- | -- |
| 35 - 39 | 578 | 65 | 255 | 200 | 58 | -- | -- | -- | -- | -- |
| | 84,347 | 78,025 | 84,786 | 86,519 | 82,012 | -- | -- | -- | -- | -- |
| 40 - 44 | 654 | 39 | 186 | 217 | 185 | 27 | -- | -- | -- | -- |
| | 87,016 | 81,053 | 83,780 | 90,918 | 87,150 | \$85,655 | -- | -- | -- | -- |
| 45 - 49 | 761 | 44 | 178 | 198 | 187 | 99 | 55 | -- | -- | -- |
| | 91,169 | 81,609 | 84,497 | 93,718 | 97,527 | 93,705 | \$85,047 | -- | -- | -- |
| 50 - 54 | 803 | 36 | 146 | 186 | 193 | 113 | 106 | 22 | 1 | -- |
| | 92,145 | 82,842 | 84,715 | 89,956 | 93,073 | 105,926 | 91,287 | \$99,492 | \$111,758 | -- |
| 55 - 59 | 830 | 32 | 159 | 174 | 148 | 109 | 100 | 72 | 36 | -- |
| | 91,513 | 76,210 | 87,222 | 90,877 | 89,299 | 94,870 | 98,872 | 97,747 | 93,157 | -- |
| 60 - 64 | 529 | 14 | 92 | 110 | 107 | 69 | 82 | 38 | 17 | -- |
| | 91,754 | 81,008 | 90,968 | 82,677 | 88,050 | 92,927 | 96,082 | 118,574 | 101,330 | -- |
| 65 - 69 | 167 | 7 | 42 | 41 | 37 | 17 | 10 | 9 | 4 | -- |
| | 89,991 | 79,712 | 83,735 | 90,048 | 92,086 | 90,265 | 87,245 | 107,115 | 120,866 | -- |
| 70 & over | 50 | 3 | 6 | 13 | 8 | 10 | 4 | 4 | 2 | -- |
| | 83,097 | 57,598 | 82,276 | 79,721 | 89,413 | 99,194 | 80,502 | 64,300 | 82,788 | -- |
| Total | 4,868 | 352 | 1,365 | 1,221 | 924 | 444 | 357 | 145 | 60 | -- |
| | \$88,476 | \$77,884 | \$83,950 | \$88,322 | \$90,813 | \$96,483 | \$93,318 | \$103,129 | \$97,284 | -- |

SECTION 3: Supplemental Information for the Ventura County Employees' Retirement Association

EXHIBIT B

Members in Active Service and Projected Average Compensation as of June 30, 2017

By Age and Years of Service

iii. General PEPRA Tier 2 and General PEPRA Tier 2C

| Age | Total | Years of Service | | | | | | | | |
|-----------|----------|------------------|----------|----------|----------|-------|-------|-------|-------|-----------|
| | | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40 & over |
| Under 25 | 98 | 98 | -- | -- | -- | -- | -- | -- | -- | -- |
| | \$46,466 | \$46,466 | -- | -- | -- | -- | -- | -- | -- | -- |
| 25 - 29 | 497 | 496 | 1 | -- | -- | -- | -- | -- | -- | -- |
| | 50,307 | 50,254 | \$76,217 | -- | -- | -- | -- | -- | -- | -- |
| 30 - 34 | 527 | 523 | 3 | 1 | -- | -- | -- | -- | -- | -- |
| | 58,711 | 58,656 | 71,484 | \$49,077 | -- | -- | -- | -- | -- | -- |
| 35 - 39 | 323 | 322 | -- | 1 | -- | -- | -- | -- | -- | -- |
| | 63,528 | 63,426 | -- | 96,358 | -- | -- | -- | -- | -- | -- |
| 40 - 44 | 229 | 224 | 1 | 1 | 3 | -- | -- | -- | -- | -- |
| | 62,149 | 61,905 | 58,829 | 73,476 | \$77,720 | -- | -- | -- | -- | -- |
| 45 - 49 | 186 | 183 | 1 | 1 | 1 | -- | -- | -- | -- | -- |
| | 64,313 | 63,856 | 108,638 | 118,775 | 49,078 | -- | -- | -- | -- | -- |
| 50 - 54 | 137 | 134 | 2 | -- | 1 | -- | -- | -- | -- | -- |
| | 66,880 | 66,407 | 72,632 | -- | 118,775 | -- | -- | -- | -- | -- |
| 55 - 59 | 121 | 121 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 65,863 | 65,863 | -- | -- | -- | -- | -- | -- | -- | -- |
| 60 - 64 | 65 | 65 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 74,861 | 74,861 | -- | -- | -- | -- | -- | -- | -- | -- |
| 65 - 69 | 19 | 19 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 66,595 | 66,595 | -- | -- | -- | -- | -- | -- | -- | -- |
| 70 & over | 9 | 9 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 77,117 | 77,117 | -- | -- | -- | -- | -- | -- | -- | -- |
| Total | 2,211 | 2,194 | 8 | 4 | 5 | -- | -- | -- | -- | -- |
| | \$59,325 | \$59,173 | \$75,425 | \$84,422 | \$80,202 | -- | -- | -- | -- | -- |

SECTION 3: Supplemental Information for the Ventura County Employees' Retirement Association

EXHIBIT B (continued)

Members in Active Service and Projected Average Compensation as of June 30, 2017

By Age and Years of Service

iv. Safety

| Age | Total | Years of Service | | | | | | | | |
|-----------|-----------|------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40 & Over |
| Under 25 | 1 | 1 | -- | -- | -- | -- | -- | -- | -- | -- |
| | \$96,661 | \$96,661 | -- | -- | -- | -- | -- | -- | -- | -- |
| 25 - 29 | 60 | 19 | 39 | 2 | -- | -- | -- | -- | -- | -- |
| | 105,564 | 99,738 | \$107,985 | \$113,701 | -- | -- | -- | -- | -- | -- |
| 30 - 34 | 165 | 16 | 102 | 47 | -- | -- | -- | -- | -- | -- |
| | 108,902 | 97,885 | 108,402 | 113,739 | -- | -- | -- | -- | -- | -- |
| 35 - 39 | 215 | 7 | 52 | 120 | 36 | -- | -- | -- | -- | -- |
| | 114,108 | 112,236 | 115,463 | 112,371 | \$118,306 | -- | -- | -- | -- | -- |
| 40 - 44 | 241 | 5 | 22 | 58 | 119 | 36 | 1 | -- | -- | -- |
| | 123,893 | 114,974 | 109,349 | 111,651 | 127,580 | \$140,529 | \$160,904 | -- | -- | -- |
| 45 - 49 | 267 | 1 | 5 | 19 | 90 | 107 | 43 | 2 | -- | -- |
| | 129,478 | 73,309 | 115,857 | 100,115 | 125,717 | 131,760 | 146,912 | \$142,878 | -- | -- |
| 50 - 54 | 192 | 2 | 3 | 14 | 24 | 38 | 82 | 27 | 2 | -- |
| | 137,493 | 159,601 | 119,564 | 104,625 | 115,695 | 135,629 | 141,525 | 162,369 | \$168,220 | -- |
| 55 - 59 | 90 | -- | 6 | 1 | 9 | 12 | 25 | 20 | 17 | -- |
| | 139,645 | -- | 148,241 | 72,162 | 109,643 | 122,761 | 140,333 | 152,226 | 152,569 | -- |
| 60 - 64 | 22 | -- | -- | 3 | 4 | 1 | 5 | 6 | 2 | 1 |
| | 139,757 | -- | -- | 129,427 | 102,619 | 73,370 | 147,251 | 126,154 | 284,537 | \$140,276 |
| 65 - 69 | 4 | -- | 1 | 1 | 1 | -- | -- | -- | -- | 1 |
| | 158,295 | -- | 146,713 | 174,043 | 152,043 | -- | -- | -- | -- | 160,381 |
| 70 & over | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Total | 1,257 | 51 | 230 | 265 | 283 | 194 | 156 | 55 | 21 | 2 |
| | \$124,134 | \$104,135 | \$111,532 | \$111,452 | \$123,963 | \$133,287 | \$143,126 | \$154,021 | \$166,628 | \$150,328 |

SECTION 3: Supplemental Information for the Ventura County Employees' Retirement Association

EXHIBIT B

Members in Active Service and Projected Average Compensation as of June 30, 2017

By Age and Years of Service

v. Safety PEPR

| Age | Total | Years of Service | | | | | | | | |
|-----------|----------|------------------|-----|-----------|-------|-------|-------|-------|-------|-----------|
| | | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40 & over |
| Under 25 | 34 | 34 | -- | -- | -- | -- | -- | -- | -- | -- |
| | \$72,937 | \$72,937 | -- | -- | -- | -- | -- | -- | -- | -- |
| 25 - 29 | 131 | 131 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 75,854 | 75,854 | -- | -- | -- | -- | -- | -- | -- | -- |
| 30 - 34 | 59 | 59 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 81,762 | 81,762 | -- | -- | -- | -- | -- | -- | -- | -- |
| 35 - 39 | 14 | 13 | -- | 1 | -- | -- | -- | -- | -- | -- |
| | 87,049 | 84,916 | -- | \$114,786 | -- | -- | -- | -- | -- | -- |
| 40 - 44 | 5 | 5 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 107,703 | 107,703 | -- | -- | -- | -- | -- | -- | -- | -- |
| 45 - 49 | 3 | 3 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 80,204 | 80,204 | -- | -- | -- | -- | -- | -- | -- | -- |
| 50 - 54 | 2 | 2 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 137,117 | 137,118 | -- | -- | -- | -- | -- | -- | -- | -- |
| 55 - 59 | 2 | 2 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 141,010 | 141,010 | -- | -- | -- | -- | -- | -- | -- | -- |
| 60 - 64 | 1 | 1 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 139,490 | 139,490 | -- | -- | -- | -- | -- | -- | -- | -- |
| 65 - 69 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 70 & over | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Total | 251 | 250 | -- | 1 | -- | -- | -- | -- | -- | -- |
| | \$79,419 | \$79,278 | -- | \$114,786 | -- | -- | -- | -- | -- | -- |

SECTION 3: Supplemental Information for the Ventura County Employees' Retirement Association

EXHIBIT C

Reconciliation of Member Data – June 30, 2016 to June 30, 2017

| | Active Members | Vested Terminated Members⁽¹⁾ | Pensioners | Disableds | Beneficiaries | Total |
|-----------------------------------|---------------------------|--|-------------------|------------------|----------------------|--------------|
| Number as of June 30, 2016 | 8,509 | 2,639 | 4,779 | 826 | 934 | 17,687 |
| New members | 713 | 77 | 0 | 0 | 79 | 869 |
| Terminations – with vested rights | -294 | 294 | 0 | 0 | 0 | 0 |
| Contributions refunds | -87 | -82 | 0 | 0 | 0 | -169 |
| Retirements | -216 | -83 | 299 | 0 | 0 | 0 |
| New disabilities | -12 | 0 | -11 | 23 | 0 | 0 |
| Return to work | 29 | -26 | -3 | 0 | 0 | 0 |
| Died with or without beneficiary | -7 | -7 | -98 | -18 | -44 | -174 |
| Data adjustments | 1 | -3 | 0 | 0 | 0 | -2 |
| Number as of June 30, 2017 | 8,636 | 2,809 | 4,966 | 831 | 969 | 18,211 |

⁽¹⁾ *Includes terminated members with member contributions on deposit.*

SECTION 3: Supplemental Information for the Ventura County Employees' Retirement Association

EXHIBIT D

Summary Statement of Income and Expenses on an Actuarial Value Basis

| | Year Ended June 30, 2017 | Year Ended June 30, 2016 |
|---|--------------------------|--------------------------|
| Contribution income: | | |
| Employer contributions | \$190,759,001 | \$177,709,688 |
| Member contributions | <u>72,394,542</u> | <u>69,469,771</u> |
| Contribution income | \$263,153,543 | \$247,179,459 |
| Investment income: | | |
| Interest, dividends and other income | \$44,408,458 | \$62,654,675 |
| Adjustment toward market value ⁽¹⁾ | 345,055,232 | 236,773,776 |
| Less investment and administrative fees | <u>(20,657,671)</u> | <u>(18,897,272)</u> |
| Net investment income | <u>\$368,806,019</u> | <u>\$280,531,179</u> |
| Total income available for benefits | \$631,959,562 | \$527,710,638 |
| Less benefit payments | \$(260,745,073) | \$(246,403,038) |
| Change in reserve for future benefits | \$371,214,489 | \$281,307,600 |

⁽¹⁾ Equals the "non-cash" earnings on investments included in the Actuarial Value of Assets.

SECTION 3: Supplemental Information for the Ventura County Employees' Retirement Association

EXHIBIT E

Summary Statement of Net Assets

| | Year Ended June 30, 2017 | Year Ended June 30, 2016 |
|--|---------------------------------|---------------------------------|
| Cash equivalents | \$113,845,651 | \$287,041,397 |
| Pension software development cost | 14,507,383 | 12,961,635 |
| Accounts receivable: | | |
| Member and employer contributions | \$9,565,843 | \$8,300,490 |
| Accrued interest and dividends | 2,832,421 | 2,487,536 |
| Securities sold | 15,863,679 | 5,571,076 |
| Other | <u>33,621</u> | <u>43,714</u> |
| Total accounts receivable | 28,295,564 | 16,402,816 |
| Investments: | | |
| Equities | \$3,090,214,577 | \$2,491,464,213 |
| Fixed income | 945,943,802 | 834,771,950 |
| Real estate | 391,122,352 | 371,598,471 |
| Investments received on securities lending | 44,704,884 | 48,243,231 |
| Others | <u>413,507,540</u> | <u>380,549,757</u> |
| Total investments at market value | <u>4,885,493,155</u> | <u>4,126,627,622</u> |
| Total assets | \$5,042,141,753 | \$4,443,033,470 |
| Liabilities: | | |
| Securities lending | \$(44,704,883) | \$(48,243,230) |
| Security purchases | (27,617,313) | (2,936,604) |
| Accounts payable | (5,546,947) | (4,990,540) |
| Prepaid contributions | <u>(25,834)</u> | <u>(26,387)</u> |
| Total liabilities | \$(77,894,977) | \$(56,196,761) |
| Net assets at market value | <u>\$4,964,246,776</u> | <u>\$4,386,836,709</u> |
| Net assets at actuarial value | <u>\$4,963,653,022</u> | <u>\$4,592,438,533</u> |
| Net assets at valuation value | <u>\$4,959,070,151</u> | <u>\$4,585,712,958</u> |

SECTION 3: Supplemental Information for the Ventura County Employees' Retirement Association

EXHIBIT F

Actuarial Balance Sheet

An overview of the Plan's funding is given by an Actuarial Balance Sheet. In this approach, we first determine the amount and timing of all future payments that will be made by the Plan for current participants. We then discount these payments at the valuation interest rate to the date of the valuation, thereby determining their present value. We refer to this present value as the "liability" of the Plan.

Second, we determine how this liability will be met. These actuarial "assets" include the net amount of assets already accumulated by the Plan, the present value of future member contributions, the present value of future employer normal cost contributions, and the present value of future employer payments to amortize the UAAL.

Actuarial Balance Sheet (\$ in 000s)

| <u>Assets</u> | <u>June 30, 2017</u> | <u>June 30, 2016</u> |
|---|----------------------|----------------------|
| 1. Total valuation value of assets | \$4,959,070 | \$4,585,713 |
| 2. Present value of future contributions by members | 545,439 | 513,034 |
| 3. Present value of future employer contributions for: | | |
| a. Entry age normal cost | 571,174 | 556,204 |
| b. Unfunded actuarial accrued liability | <u>744,326</u> | <u>813,043</u> |
| 4. Total current and future assets | \$6,820,009 | \$6,467,994 |
| <u>Liabilities</u> | | |
| 5. Present value of benefits for retirees and beneficiaries | \$3,229,255 | \$3,065,942 |
| 6. Present value of benefits for vested terminated members | 159,743 | 145,994 |
| 7. Present value of benefits for active members | <u>3,431,011</u> | <u>3,256,058</u> |
| 8. Total liabilities | \$6,820,009 | \$6,467,994 |

SECTION 3: Supplemental Information for the Ventura County Employees' Retirement Association

EXHIBIT G

Summary of Allocated Reserves

| Reserves | | |
|--|-----------------------------|-----------------------------|
| | <u>June 30, 2017</u> | <u>June 30, 2016</u> |
| Member contributions reserve ⁽¹⁾ | \$725,090,318 | \$683,571,172 |
| Employer advance reserve ⁽¹⁾ | 2,599,031,479 | 2,350,035,512 |
| Offset: Interest crediting shortfall tracking account ⁽¹⁾ | (1,084,273,390) | (1,019,896,714) |
| Retiree reserve ⁽¹⁾ | 2,561,943,002 | 2,417,425,764 |
| Supplemental death benefit reserve ⁽¹⁾ | 15,242,982 | 14,773,547 |
| Vested fixed supplemental (\$108.44) reserve ⁽¹⁾ | 142,035,760 | 139,803,677 |
| Undistributed earnings ⁽¹⁾ | 0 | 0 |
| Valuation reserves | <u>\$4,959,070,151</u> | <u>\$4,585,712,958</u> |
| Supplemental medical (\$27.50) reserve ⁽²⁾ | 4,582,871 | 6,725,575 |
| Contingency reserve ⁽²⁾ | 0 | 0 |
| Total reserves (actuarial value) | <u>\$4,963,653,022</u> | <u>\$4,592,438,533</u> |
| Market stabilization reserve ⁽²⁾ | 593,754 | (205,601,824) |
| Net market value | <u>\$4,964,246,776</u> | <u>\$4,386,836,709</u> |

⁽¹⁾ *Included in valuation value of assets.*

⁽²⁾ *Not included in valuation value of assets.*

SECTION 3: Supplemental Information for the Ventura County Employees' Retirement Association

EXHIBIT H

Development of Unfunded/(Overfunded) Actuarial Accrued Liability for Year Ended June 30, 2017

| | | |
|--|--|----------------------|
| 1. Unfunded actuarial accrued liability at beginning of year | | \$813,043,000 |
| 2. Total Normal Cost payable at middle of year | | 137,451,000 |
| 3. Expected employer and member contributions | | (265,578,000) |
| 4. Interest (whole year on (1) plus half year on (2) + (3)) | | <u>56,680,000</u> |
| 5. Expected unfunded actuarial accrued liability at end of year | | <u>\$741,596,000</u> |
| 6. Actuarial (gain)/loss due to all changes: | | |
| (a) Gain from investment return on valuation value of assets (8.04%) | | \$(24,707,000) |
| (b) Actual contributions less than expected ⁽¹⁾ | | 2,515,000 |
| (c) Higher than expected individual salary increases | | 35,441,000 |
| (d) Lower than expected COLA benefit increase for retirees and beneficiaries | | (21,236,000) |
| (e) Other experience | | <u>10,717,000</u> |
| Total changes | | <u>\$2,730,000</u> |
| 7. Unfunded actuarial accrued liability at end of year | | <u>\$744,326,000</u> |

Note: Net loss from other experience of \$27,437,000 (as shown on page 8) is equal to the sum of items: 6(b) through 6(e).

⁽¹⁾ *Contribution loss mainly from one-year delay in implementing higher contribution rates for Safety tiers from the June 30, 2016 valuation.*

SECTION 3: Supplemental Information for the Ventura County Employees' Retirement Association

EXHIBIT I

Table of Amortization Bases

| | Date Established | Source | Initial Amount | Outstanding Balance | Years Remaining | Payment⁽¹⁾ |
|-----------------------|-------------------------|-------------------------------|-----------------------|----------------------------|------------------------|------------------------------|
| General Tier 1 | June 30, 2004 | Restart of Amortization | \$63,394,000 | \$17,721,000 | 2 | \$9,389,000 |
| | June 30, 2005 | Actuarial (Gain)/Loss | 22,085,000 | 8,735,000 | 3 | 3,143,000 |
| | June 30, 2006 | Actuarial (Gain)/Loss | 7,048,000 | 3,508,000 | 4 | 964,000 |
| | June 30, 2006 | Assumption Change | 41,538,000 | 20,633,000 | 4 | 5,673,000 |
| | June 30, 2007 | Actuarial (Gain)/Loss | (19,901,000) | (11,651,000) | 5 | (2,610,000) |
| | June 30, 2008 | Actuarial (Gain)/Loss | (18,128,000) | (12,013,000) | 6 | (2,284,000) |
| | June 30, 2009 | Actuarial (Gain)/Loss | 55,190,000 | 40,234,000 | 7 | 6,678,000 |
| | June 30, 2009 | Assumption Change | 18,574,000 | 13,532,000 | 7 | 2,246,000 |
| | June 30, 2010 | Actuarial (Gain)/Loss | 50,018,000 | 39,293,000 | 8 | 5,810,000 |
| | June 30, 2011 | Actuarial (Gain)/Loss | 36,225,000 | 30,201,000 | 9 | 4,042,000 |
| | June 30, 2012 | Actuarial (Gain)/Loss | 29,865,000 | 26,093,000 | 10 | 3,199,000 |
| | June 30, 2012 | Demographic Assumption Change | 38,104,000 | 37,363,000 | 15 | 3,333,000 |
| | June 30, 2012 | Economic Assumption Change | 19,517,000 | 19,134,000 | 15 | 1,707,000 |
| | June 30, 2013 | Actuarial (Gain)/Loss | 31,670,000 | 28,782,000 | 11 | 3,265,000 |
| | June 30, 2014 | Actuarial (Gain)/Loss | 16,119,000 | 15,118,000 | 12 | 1,600,000 |
| | June 30, 2015 | Actuarial (Gain)/Loss | 8,457,000 | 8,120,000 | 13 | 807,000 |
| | June 30, 2015 | Assumption Change | 47,959,000 | 47,806,000 | 18 | 3,739,000 |
| | June 30, 2016 | Actuarial (Gain)/Loss | 45,451,000 | 44,667,000 | 14 | 4,196,000 |
| | June 30, 2017 | Actuarial (Gain)/Loss | 53,640,000 | <u>53,640,000</u> | 15 | <u>4,785,000</u> |
| | | | | \$430,916,000 | | \$59,682,000 |

⁽¹⁾ As of middle of year.

SECTION 3: Supplemental Information for the Ventura County Employees' Retirement Association

EXHIBIT I (continued)

Table of Amortization Bases

| | Date Established | Source | Initial Amount | Outstanding Balance | Years Remaining | Payment⁽¹⁾ |
|-----------------------|-------------------------|-------------------------------|-----------------------|----------------------------|------------------------|------------------------------|
| General Tier 2 | June 30, 2004 | Restart of Amortization | \$49,731,000 | \$13,905,000 | 2 | \$7,367,000 |
| | June 30, 2005 | Actuarial (Gain)/Loss | 7,622,000 | 3,014,000 | 3 | 1,085,000 |
| | June 30, 2006 | Actuarial (Gain)/Loss | (9,108,000) | (4,529,000) | 4 | (1,245,000) |
| | June 30, 2006 | Assumption Change | 19,085,000 | 9,483,000 | 4 | 2,607,000 |
| | June 30, 2006 | Plan Provision Change | 14,731,000 | 7,314,000 | 4 | 2,011,000 |
| | June 30, 2007 | Actuarial (Gain)/Loss | (39,508,000) | (23,135,000) | 5 | (5,183,000) |
| | June 30, 2008 | Actuarial (Gain)/Loss | (34,794,000) | (23,051,000) | 6 | (4,383,000) |
| | June 30, 2009 | Actuarial (Gain)/Loss | 71,253,000 | 51,938,000 | 7 | 8,620,000 |
| | June 30, 2009 | Assumption Change | 22,696,000 | 16,537,000 | 7 | 2,745,000 |
| | June 30, 2010 | Actuarial (Gain)/Loss | 47,615,000 | 37,410,000 | 8 | 5,532,000 |
| | June 30, 2011 | Actuarial (Gain)/Loss | (6,949,000) | (5,808,000) | 9 | (777,000) |
| | June 30, 2012 | Actuarial (Gain)/Loss | (18,106,000) | (15,819,000) | 10 | (1,940,000) |
| | June 30, 2012 | Demographic Assumption Change | 29,420,000 | 28,834,000 | 15 | 2,572,000 |
| | June 30, 2012 | Economic Assumption Change | 32,874,000 | 32,245,000 | 15 | 2,876,000 |
| | June 30, 2013 | Actuarial (Gain)/Loss | (23,823,000) | (21,666,000) | 11 | (2,458,000) |
| | June 30, 2014 | Actuarial (Gain)/Loss | (49,125,000) | (46,076,000) | 12 | (4,877,000) |
| | June 30, 2015 | Actuarial (Gain)/Loss | (62,406,000) | (59,982,000) | 13 | (5,964,000) |
| | June 30, 2015 | Assumption Change | 50,090,000 | 49,937,000 | 18 | 3,906,000 |
| | June 30, 2016 | Actuarial (Gain)/Loss | (28,842,000) | (28,349,000) | 14 | (2,663,000) |
| | June 30, 2017 | Actuarial (Gain)/Loss | (41,622,000) | <u>(41,622,000)</u> | 15 | <u>(3,713,000)</u> |
| | | | | \$(19,420,000) | | \$6,118,000 |

⁽¹⁾ As of middle of year.

SECTION 3: Supplemental Information for the Ventura County Employees' Retirement Association

EXHIBIT I (continued)

Table of Amortization Bases

| | Date Established | Source | Initial Amount | Outstanding Balance | Years Remaining | Payment⁽¹⁾ |
|---------------|-------------------------|-------------------------------|-----------------------|----------------------------|------------------------|------------------------------|
| Safety | June 30, 2004 | Restart of Amortization | \$210,319,000 | \$58,791,000 | 2 | \$31,148,000 |
| | June 30, 2005 | Actuarial (Gain)/Loss | 19,142,000 | 7,573,000 | 3 | 2,725,000 |
| | June 30, 2006 | Actuarial (Gain)/Loss | 3,418,000 | 1,694,000 | 4 | 466,000 |
| | June 30, 2006 | Assumption Change | 42,167,000 | 20,945,000 | 4 | 5,759,000 |
| | June 30, 2007 | Actuarial (Gain)/Loss | (37,489,000) | (21,948,000) | 5 | (4,917,000) |
| | June 30, 2008 | Actuarial (Gain)/Loss | (22,443,000) | (14,860,000) | 6 | (2,826,000) |
| | June 30, 2009 | Actuarial (Gain)/Loss | 78,157,000 | 56,971,000 | 7 | 9,456,000 |
| | June 30, 2009 | Assumption Change | 49,982,000 | 36,436,000 | 7 | 6,048,000 |
| | June 30, 2010 | Actuarial (Gain)/Loss | 108,448,000 | 85,214,000 | 8 | 12,601,000 |
| | June 30, 2011 | Actuarial (Gain)/Loss | 8,879,000 | 7,409,000 | 9 | 992,000 |
| | June 30, 2012 | Actuarial (Gain)/Loss | (7,501,000) | (6,542,000) | 10 | (802,000) |
| | June 30, 2012 | Demographic Assumption Change | 55,513,000 | 54,443,000 | 15 | 4,856,000 |
| | June 30, 2012 | Economic Assumption Change | 51,887,000 | 50,869,000 | 15 | 4,537,000 |
| | June 30, 2013 | Actuarial (Gain)/Loss | 7,588,000 | 6,906,000 | 11 | 784,000 |
| | June 30, 2014 | Actuarial (Gain)/Loss | (54,478,000) | (51,093,000) | 12 | (5,408,000) |
| | June 30, 2015 | Actuarial (Gain)/Loss | (55,657,000) | (53,497,000) | 13 | (5,319,000) |
| | June 30, 2015 | Assumption Change | 119,953,000 | 119,576,000 | 18 | 9,353,000 |
| | June 30, 2016 | Actuarial (Gain)/Loss | (17,062,000) | (16,769,000) | 14 | (1,575,000) |
| | June 30, 2017 | Actuarial (Gain)/Loss | (9,288,000) | <u>(9,288,000)</u> | 15 | <u>(828,000)</u> |
| | | | | \$332,830,000 | | \$67,050,000 |

⁽¹⁾ *As of middle of year.*

SECTION 3: Supplemental Information for the Ventura County Employees' Retirement Association

EXHIBIT I (continued)

Table of Amortization Bases

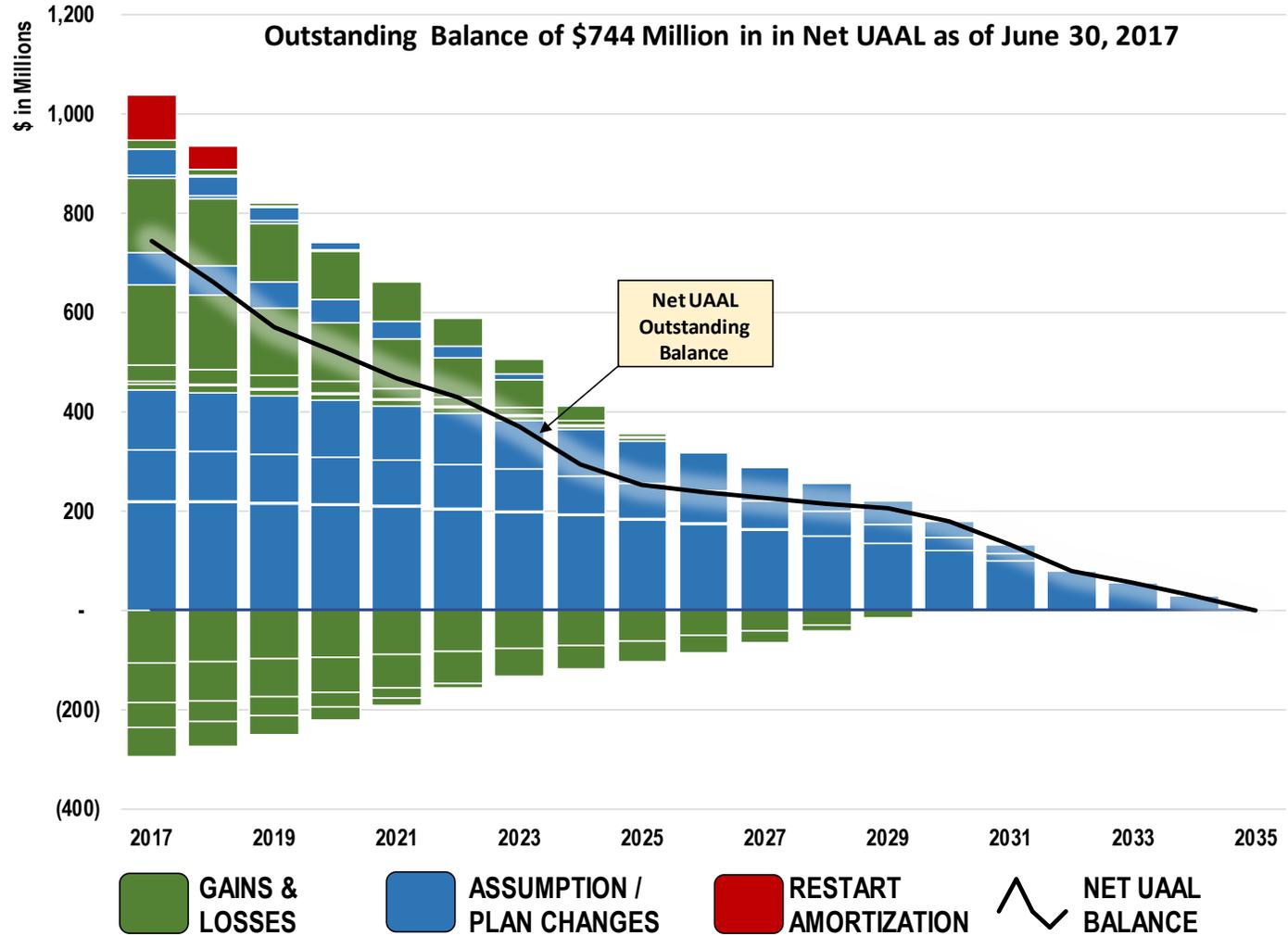
| | Date Established | Source | Initial Amount | Outstanding Balance | Years Remaining | Payment⁽¹⁾ |
|--------------------|-------------------------|-------------------------------|-----------------------|----------------------------|------------------------|------------------------------|
| Total VCERA | June 30, 2004 | Restart of Amortization | \$323,444,000 | \$90,417,000 | 2 | \$47,904,000 |
| | June 30, 2005 | Actuarial (Gain)/Loss | 48,849,000 | 19,322,000 | 3 | 6,953,000 |
| | June 30, 2006 | Actuarial (Gain)/Loss | 1,358,000 | 673,000 | 4 | 185,000 |
| | June 30, 2006 | Assumption Change | 102,790,000 | 51,061,000 | 4 | 14,039,000 |
| | June 30, 2006 | Plan Provision Change | 14,731,000 | 7,314,000 | 4 | 2,011,000 |
| | June 30, 2007 | Actuarial (Gain)/Loss | (96,898,000) | (56,734,000) | 5 | (12,710,000) |
| | June 30, 2008 | Actuarial (Gain)/Loss | (75,365,000) | (49,924,000) | 6 | (9,493,000) |
| | June 30, 2009 | Actuarial (Gain)/Loss | 204,600,000 | 149,143,000 | 7 | 24,754,000 |
| | June 30, 2009 | Assumption Change | 91,252,000 | 66,505,000 | 7 | 11,039,000 |
| | June 30, 2010 | Actuarial (Gain)/Loss | 206,081,000 | 161,917,000 | 8 | 23,943,000 |
| | June 30, 2011 | Actuarial (Gain)/Loss | 38,155,000 | 31,802,000 | 9 | 4,257,000 |
| | June 30, 2012 | Actuarial (Gain)/Loss | 4,258,000 | 3,732,000 | 10 | 457,000 |
| | June 30, 2012 | Demographic Assumption Change | 123,037,000 | 120,640,000 | 15 | 10,761,000 |
| | June 30, 2012 | Economic Assumption Change | 104,278,000 | 102,248,000 | 15 | 9,120,000 |
| | June 30, 2013 | Actuarial (Gain)/Loss | 15,435,000 | 14,022,000 | 11 | 1,591,000 |
| | June 30, 2014 | Actuarial (Gain)/Loss | (87,484,000) | (82,051,000) | 12 | (8,685,000) |
| | June 30, 2015 | Actuarial (Gain)/Loss | (109,606,000) | (105,359,000) | 13 | (10,476,000) |
| | June 30, 2015 | Assumption Change | 218,002,000 | 217,319,000 | 18 | 16,998,000 |
| | June 30, 2016 | Actuarial (Gain)/Loss | (453,000) | (451,000) | 14 | (42,000) |
| | June 30, 2017 | Actuarial (Gain)/Loss | 2,730,000 | <u>2,730,000</u> | 15 | <u>244,000</u> |
| | | | | \$744,326,000 | | \$132,850,000 |

⁽¹⁾ As of middle of year.

SECTION 3: Supplemental Information for the Ventura County Employees' Retirement Association

EXHIBIT J

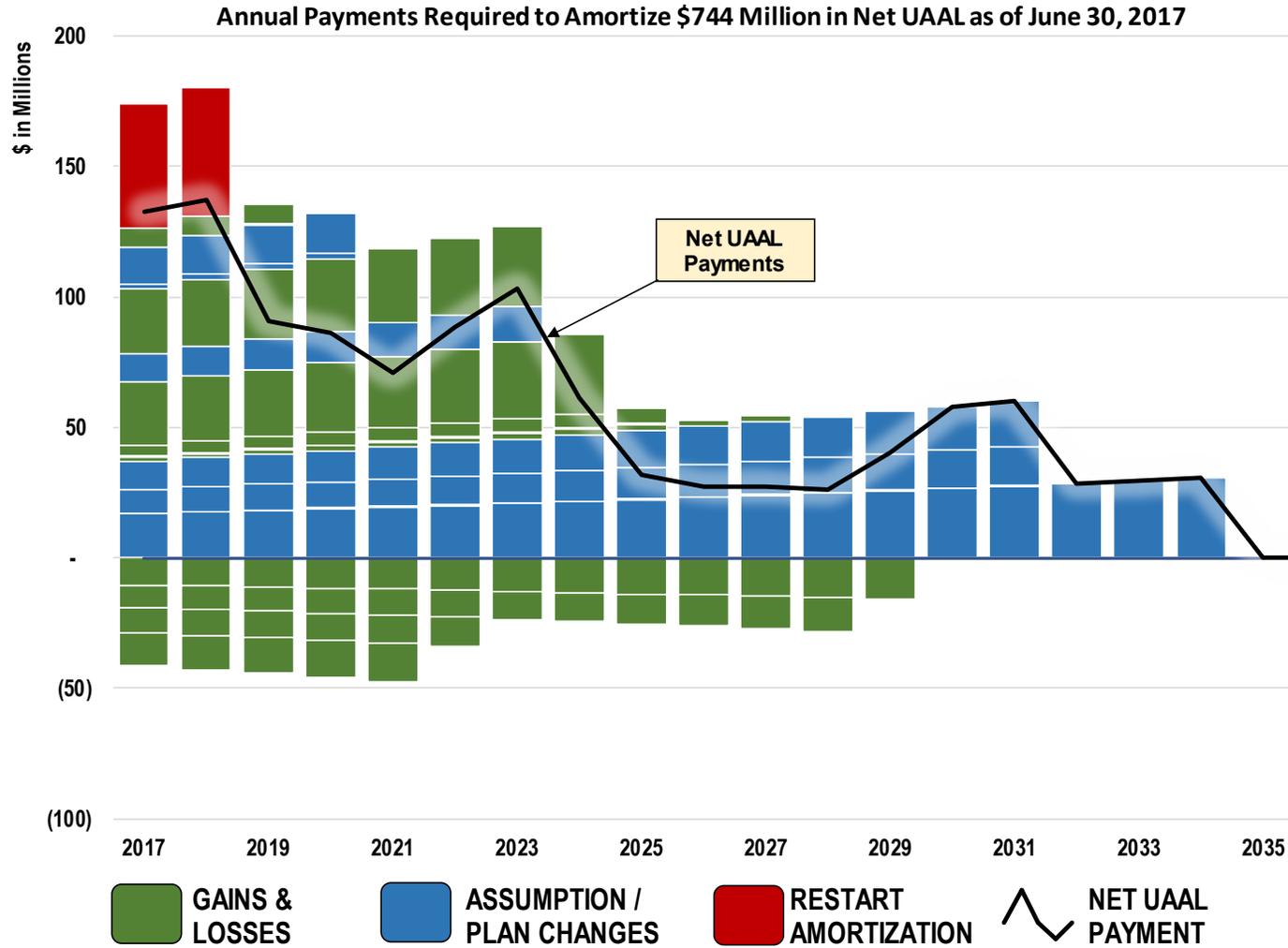
Projection of UAAL Balances and Payments



SECTION 3: Supplemental Information for the Ventura County Employees' Retirement Association

EXHIBIT J (continued)

Projection of UAAL Balances and Payments



SECTION 3: Supplemental Information for the Ventura County Employees' Retirement Association

EXHIBIT K

Section 415 Limitations

Section 415 of the Internal Revenue Code (IRC) specifies the maximum benefits that may be paid to an individual from a defined benefit plan and the maximum amounts that may be allocated each year to an individual's account in a defined contribution plan.

A qualified pension plan may not pay benefits in excess of the Section 415 limits. The ultimate penalty for non-compliance is disqualification: active participants could be taxed on their vested benefits and the IRS may seek to tax the income earned on the plan's assets.

In particular, Section 415(b) of the IRC limits the maximum annual benefit payable at the Normal Retirement Age to a dollar limit of \$160,000 indexed for inflation. That limit is \$215,000 for 2017 and \$220,000 for 2018. Normal Retirement Age for these purposes is age 62. These are the limits in simplified terms. They must be adjusted based on each participant's circumstances, for such things as age at retirement, form of benefits chosen and after tax contributions. Limits are also affected by the "grandfather" election under Section 415(b)(10).

For non-PEPRA members, benefits in excess of the limits may be paid through a qualified governmental excess plan that meets the requirements of Section 415(m).

Legal Counsel's review and interpretation of the law and regulations should be sought on any questions in this regard.

Contribution rates determined in this valuation have not been reduced for the Section 415 limitations. Actual limitations will result in gains as they occur.

SECTION 3: Supplemental Information for the Ventura County Employees' Retirement Association

EXHIBIT L

Definitions of Pension Terms

The following list defines certain technical terms for the convenience of the reader:

Assumptions or Actuarial Assumptions:

The estimates on which the cost of the Plan is calculated including:

- (a) Investment return — the rate of investment yield that the Plan is anticipated to earn over the long-term future;
- (b) Mortality rates — the death rates of employees and pensioners at each age;
- (c) Retirement rates — the rate or probability of retirement at a given age;
- (d) Turnover rates — the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement.

Normal Cost:

The amount of contributions required to fund the determined cost allocated to the current year of service, as a level % of payroll over the members' career.

Actuarial Accrued Liability for Actives:

The equivalent of the accumulated normal costs allocated to the years before the valuation date.

Actuarial Accrued Liability for Pensioners:

The single sum value of lifetime benefits to benefits to existing pensioners. This sum takes account of life expectancies appropriate to the ages of the pensioners and the interest that the sum is expected to earn before it is entirely paid out in benefits.

SECTION 3: Supplemental Information for the Ventura County Employees' Retirement Association

**Unfunded/(Overfunded) Actuarial
Accrued Liability:**

The extent to which the actuarial accrued liability of the Plan exceeds (or is exceeded by) the assets of the Plan.

**Amortization of the Unfunded/
(Overfunded) Actuarial
Accrued Liability:**

Payments made over a period of years equal in value to the Plan's unfunded or overfunded actuarial accrued liability.

Rate of Investment Return:

The rate of earnings of the Plan from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the market gains and losses to avoid significant swings in the value of assets from one year to the next.

Payroll or Compensation:

Compensation Earnable and Pensionable Compensation expected to be paid to active members during the twelve months following the valuation date. Only Compensation Earnable and Pensionable Compensation that would possibly go into the determination of retirement benefits are included.

SECTION 4: Reporting Information for the Ventura County Employees' Retirement Association

EXHIBIT I

Summary of Actuarial Valuation Results

The valuation was made with respect to the following data supplied to us:

| | |
|---|-------|
| 1. Retired members as of the valuation date (including 969 beneficiaries in pay status) | 6,766 |
| 2. Members inactive during year ended June 30, 2017 with vested rights ⁽¹⁾ | 2,809 |
| 3. Members active during the year ended June 30, 2017 | 8,636 |

The actuarial factors as of the valuation date are as follows (amounts in 000s):

| | |
|---|-------------|
| 1. Normal cost | \$143,678 |
| 2. Present value of future benefits | 6,820,009 |
| 3. Present value of future normal costs (employer and member) | 1,116,613 |
| 4. Actuarial accrued liability ⁽²⁾ | 5,703,396 |
| Retired members and beneficiaries | \$3,229,255 |
| Inactive members with vested rights ⁽¹⁾ | 159,743 |
| Active members | 2,314,398 |
| 5. Valuation value of assets ⁽²⁾ (\$4,964,247 at market value as reported by Retirement Association) | 4,959,070 |
| 6. Unfunded actuarial accrued liability | \$744,326 |

⁽¹⁾ Includes terminated members with member contributions on deposit.

⁽²⁾ Excludes liabilities and assets held for supplemental medical benefit reserve and statutory contingency reserve.

SECTION 4: Reporting Information for the Ventura County Employees' Retirement Association

EXHIBIT I (continued)

Summary of Actuarial Valuation Results

| The determination of the recommended average employer contribution is as follows | Dollar Amount (in 000s) | % of Payroll |
|--|-------------------------|----------------|
| 1. Total normal cost | \$141,658 | 19.01% |
| 2. Expected employee contributions | <u>(72,643)</u> | <u>(9.75%)</u> |
| 3. Employer normal cost: (1) + (2) | \$69,015 | 9.26% |
| 4. Amortization of unfunded actuarial accrued liability | <u>132,850</u> | <u>17.83%</u> |
| 5. Total recommended average employer contribution: (3) + (4) | \$201,865 | 27.09% |
| 6. Projected compensation | \$744,917 | |

SECTION 4: Reporting Information for the Ventura County Employees' Retirement Association

EXHIBIT II

Actuarial Assumptions and Methods

| | |
|---|--|
| Rationale for Assumptions: | The information and analysis used in selecting each assumption that has a significant effect on this actuarial valuation is shown in the July 1, 2011 through June 30, 2014 Actuarial Experience Study and June 30, 2015 Economic Actuarial Assumptions Report both dated April 14, 2015. Unless otherwise noted, all actuarial assumptions and methods shown below apply to both PEPRA and Non-PEPRA members. |
| <u>Economic Assumptions</u> | |
| Net Investment Return: | 7.50%, net of investment and administration expenses. |
| Member Contribution Crediting Rate: | 3.00% (actual increase is based on projected long term ten-year Treasury rate). |
| Consumer Price Index: | Increase of 3.00% per year; retiree COLA increases due to CPI are subject to a 3.0% maximum change per year for both PEPRA and Non-PEPRA General Tier 1 and both PEPRA and Non-PEPRA Safety. For both PEPRA and non-PEPRA General Tier 2, SEIU members receive a fixed 2% cost-of-living adjustment, not subject to changes in the CPI, that applies to future service after March 2003. |
| Payroll Growth: | Inflation of 3.00% per year plus “across the board” real salary increases of 0.50% per year. |
| Increase in the Internal Revenue Code Section 401(a)(17) Compensation Limit: | Increase of 3.00% per year from the valuation date. |
| Increase in Section 7522.10 Compensation Limit: | Increase of 3.00% per year from the valuation date. |

SECTION 4: Reporting Information for the Ventura County Employees' Retirement Association

Demographic Assumptions

Mortality Rates:

| | |
|-----------------------|---|
| <i>Healthy:</i> | For General Members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2035 set back one year for males and set forward one year for females. For Safety Members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2035 set back three years. |
| <i>Disabled:</i> | For General Members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2035 set forward six years for males and eight years for females. For Safety Members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2035 set forward two years. |
| <i>Beneficiaries:</i> | Beneficiaries are assumed to have the same mortality as a General Member of the opposite sex who has taken a service (non-disability) retirement. |

The above mortality tables contain about a 10% margin, based on actual to expected deaths, as a provision appropriate to reasonably anticipate future mortality improvement, based on a review of mortality experience as of the measurement date.

| | |
|-----------------------------------|--|
| <i>Member Contribution Rates:</i> | For General Members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2035 set back one year for males and set forward one year for females weighted one-third male and two-thirds female. For Safety Members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2035 set back three years weighted 80% male and 20% female. |
|-----------------------------------|--|

SECTION 4: Reporting Information for the Ventura County Employees' Retirement Association

Termination Rates Before Retirement:

| Age | Rate (%) Mortality | | | |
|-----|-----------------------|--------|--------|--------|
| | General | | Safety | |
| | Male | Female | Male | Female |
| 25 | 0.03 | 0.02 | 0.03 | 0.02 |
| 30 | 0.04 | 0.03 | 0.03 | 0.02 |
| 35 | 0.06 | 0.05 | 0.05 | 0.03 |
| 40 | 0.09 | 0.07 | 0.08 | 0.05 |
| 45 | 0.13 | 0.11 | 0.11 | 0.08 |
| 50 | 0.18 | 0.17 | 0.16 | 0.12 |
| 55 | 0.29 | 0.25 | 0.24 | 0.18 |
| 60 | 0.48 | 0.39 | 0.41 | 0.27 |
| 65 | 0.77 | 0.72 | 0.64 | 0.44 |

All pre-retirement deaths are assumed to be non-duty related.

SECTION 4: Reporting Information for the Ventura County Employees' Retirement Association

Termination Rates Before Retirement (continued):

| <u>Age</u> | Rate (%) | |
|------------|------------------------------|-----------------------------|
| | General⁽¹⁾ | Safety⁽²⁾ |
| 25 | 0.02 | 0.11 |
| 30 | 0.04 | 0.24 |
| 35 | 0.08 | 0.36 |
| 40 | 0.13 | 0.58 |
| 45 | 0.21 | 0.88 |
| 50 | 0.31 | 1.48 |
| 55 | 0.41 | 2.88 |
| 60 | 0.54 | 5.04 |
| 65 | 0.69 | 0.00 |
| 70 | 0.90 | 0.00 |

- (1) 35% of General disabilities are assumed to be duty disabilities and the other 65% are assumed to be ordinary disabilities.
- (2) 90% of Safety disabilities are assumed to be duty disabilities and the other 10% are assumed to be ordinary disabilities.

SECTION 4: Reporting Information for the Ventura County Employees' Retirement Association

Termination Rates Before Retirement (continued):

| Years of Service | Rate (%) | |
|------------------|---------------------------|--------|
| | Withdrawal ⁽¹⁾ | |
| | General | Safety |
| Less than 1 | 14.00 | 10.00 |
| 1 | 10.00 | 6.00 |
| 2 | 8.00 | 5.50 |
| 3 | 7.00 | 5.00 |
| 4 | 6.00 | 4.00 |
| 5 | 4.00 | 2.75 |
| 6 | 3.75 | 2.50 |
| 7 | 3.50 | 2.00 |
| 8 | 3.50 | 1.80 |
| 9 | 3.25 | 1.60 |
| 10 | 3.25 | 1.40 |
| 11 | 3.00 | 1.20 |
| 12 | 3.00 | 1.00 |
| 13 | 2.75 | 0.95 |
| 14 | 2.75 | 0.90 |
| 15 | 2.50 | 0.85 |
| 16 | 2.50 | 0.80 |
| 17 | 2.25 | 0.75 |
| 18 | 2.00 | 0.70 |
| 19 | 2.00 | 0.65 |
| 20 or more | 2.00 | 0.60 |

⁽¹⁾ The greater of a refund of member contributions and a deferred annuity is valued when a member withdraws.

No withdrawal is assumed after a member is first assumed to retire.

SECTION 4: Reporting Information for the Ventura County Employees' Retirement Association

Retirement Rates (%):

| Age | PEPRA | | | |
|-----|----------------------|----------------------|--------|--------------|
| | General Tier 1 and 2 | General Tier 1 and 2 | Safety | Safety PEPRA |
| 40 | 0.00 | 0.00 | 1.00 | 0.00 |
| 41 | 0.00 | 0.00 | 1.00 | 0.00 |
| 42 | 0.00 | 0.00 | 1.00 | 0.00 |
| 43 | 0.00 | 0.00 | 1.00 | 0.00 |
| 44 | 0.00 | 0.00 | 1.00 | 0.00 |
| 45 | 0.00 | 0.00 | 1.00 | 0.00 |
| 46 | 0.00 | 0.00 | 1.00 | 0.00 |
| 47 | 0.00 | 0.00 | 1.00 | 0.00 |
| 48 | 0.00 | 0.00 | 1.00 | 0.00 |
| 49 | 0.00 | 0.00 | 1.50 | 0.00 |
| 50 | 2.50 | 0.00 | 2.50 | 5.00 |
| 51 | 2.50 | 0.00 | 2.00 | 2.00 |
| 52 | 3.00 | 2.00 | 3.00 | 4.00 |
| 53 | 3.50 | 2.00 | 4.00 | 6.00 |
| 54 | 4.00 | 2.50 | 17.00 | 16.00 |
| 55 | 4.50 | 4.00 | 22.00 | 20.00 |
| 56 | 5.00 | 4.50 | 22.00 | 20.00 |
| 57 | 6.00 | 5.00 | 20.00 | 18.00 |
| 58 | 8.00 | 6.00 | 19.00 | 18.00 |
| 59 | 8.00 | 7.00 | 22.00 | 25.00 |
| 60 | 12.00 | 9.00 | 22.00 | 25.00 |
| 61 | 15.00 | 11.00 | 25.00 | 25.00 |
| 62 | 22.00 | 20.00 | 35.00 | 40.00 |
| 63 | 20.00 | 20.00 | 40.00 | 40.00 |
| 64 | 22.00 | 18.00 | 40.00 | 40.00 |
| 65 | 30.00 | 20.00 | 100.00 | 100.00 |
| 66 | 35.00 | 30.00 | 100.00 | 100.00 |
| 67 | 35.00 | 30.00 | 100.00 | 100.00 |
| 68 | 35.00 | 30.00 | 100.00 | 100.00 |
| 69 | 20.00 | 30.00 | 100.00 | 100.00 |
| 70 | 20.00 | 50.00 | 100.00 | 100.00 |
| 71 | 20.00 | 50.00 | 100.00 | 100.00 |
| 72 | 20.00 | 50.00 | 100.00 | 100.00 |
| 73 | 20.00 | 50.00 | 100.00 | 100.00 |
| 74 | 30.00 | 50.00 | 100.00 | 100.00 |
| 75 | 100.00 | 100.00 | 100.00 | 100.00 |

SECTION 4: Reporting Information for the Ventura County Employees' Retirement Association

**Retirement Age and Benefit for
Deferred Vested Members:**

For deferred vested members, we make the following retirement assumption:

General Age: 59
Safety Age: 54

We assume that 50% and 60% of future General and Safety deferred vested members, respectively, will continue to work for a reciprocal employer. For reciprocals, we assume 4.00% compensation increases per annum.

Future Benefit Accruals:

1.0 year of service per year.

Unknown Data for Members:

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

Definition of Active Members:

All active members of VCERA as of the valuation date.

Percent Married:

70% of male members and 55% of female members are assumed to be married at pre-retirement death or retirement. There is no explicit assumption for children's benefits.

Age of Spouse:

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

In-Service Redemptions:

Non-PEPRA Formulas

The following assumptions for in-service redemptions pay as a percentage of final average compensation are used:

General Tier 1 7.50%
General Tier 2 3.50%
Safety 7.25%

For determining the cost of the basic benefit (i.e., non-COLA component), the cost of this pay element is currently recognized in the valuation as an employer only cost and does not affect member contribution rates.

PEPRA Formulas

None

SECTION 4: Reporting Information for the Ventura County Employees' Retirement Association

Individual Salary Increases:

| Annual Rate of Compensation Increase | | |
|---|----------------|---------------|
| Inflation: 3.00% per year; plus “across the board” real salary increases of 0.50% per year; plus the following promotional and merit increases: | | |
| Years of Service | General | Safety |
| Less than 1 | 6.00% | 8.00% |
| 1 | 4.25 | 6.25 |
| 2 | 3.25 | 4.75 |
| 3 | 2.75 | 4.00 |
| 4 | 2.25 | 3.25 |
| 5 | 1.75 | 3.00 |
| 6 | 1.25 | 2.25 |
| 7 | 1.00 | 1.50 |
| 8 | 0.75 | 1.25 |
| 9 | 0.50 | 1.00 |
| 10 | 0.50 | 0.75 |
| 11 | 0.50 | 0.75 |
| 12 | 0.50 | 0.75 |
| 13 | 0.50 | 0.75 |
| 14 | 0.50 | 0.75 |
| 15 | 0.50 | 0.75 |
| 16 | 0.50 | 0.50 |
| 17 | 0.50 | 0.50 |
| 18 | 0.50 | 0.50 |
| 19 | 0.50 | 0.50 |
| 20 and Over | 0.50 | 0.50 |

**Average Entry Age for
Member Contribution Rates:**

For non-PEPRA members hired after November 1974, they will pay a contribution corresponding to a General and Safety member hired at entry age 35 and 27, respectively.

SECTION 4: Reporting Information for the Ventura County Employees' Retirement Association

Actuarial Methods

- Actuarial Cost Method:** Entry Age Actuarial Cost Method. Entry Age is the age at the member's hire date. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are based on costs allocated as a level percentage of compensation, as if the current benefit formulas for each individual have always been in effect (i.e., "replacement life").
- Actuarial Value of Assets:** Market value of assets less unrecognized returns in each of the last ten semi-annual accounting periods. Unrecognized returns are equal to the difference between the actual market return and the expected return on market value and are recognized over a five-year period.
- Valuation Value of Assets:** Actuarial Value of Assets, reduced by the value of the supplemental medical benefit reserve and statutory contingency reserve.
- Amortization Policy:** The UAAL, (i.e., the difference between the Actuarial Accrued Liability and the Valuation Value of Assets), as of June 30, 2011 shall continue to be amortized over separate 15-year period amortization layers based on the valuations during which each separate layer was previously established.
- Any new UAAL as a result of actuarial gains or losses identified in the annual valuation as of June 30 will be amortized over a period of 15 years.
- Any new UAAL as a result of change in actuarial assumptions or methods will be amortized over a period of 20 years.
- Unless an alternative amortization period is recommended by the Actuary and accepted by the Board based on the results of an actuarial analysis:
- i) with the exception noted in ii., below, the increase in UAAL as a result of any plan amendments will be amortized over a period of 15 years;
 - ii) the increase in UAAL resulting from a temporary retirement incentive, including the impact of benefits resulting from additional service permitted in Section 31641.04 of the 1937 CERL (Golden Handshake), will be funded over a period of up to 5 years.
- The UAAL will be amortized over "closed" amortization periods so that the amortization period for each layer decreases by one year with each actuarial valuation.

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The UAAL will be amortized as a level percentage of payroll so that the amortization amount in each year during the amortization period shall be expected to be a level percentage of covered payroll, taking into consideration the current assumption for general payroll increase.

If an overfunding exists (i.e., the total of all UAAL becomes negative so that there is a surplus), such surplus and any subsequent surpluses will be amortized over an “open” amortization period of 30 years. Any prior UAAL amortization layers will be considered fully amortized, and any subsequent UAAL, will be amortized over 15 years as the first of a new series of amortization layers.

These amortization policy components will apply separately to each of VCERA’s UAAL cost groups.

Basic UAAL contribution rates have been calculated on a combined basis for all General Tiers. COLA UAAL contribution rates have been calculated on a combined basis for all General Tiers that have a COLA.

Changes in Actuarial Assumptions and Methods:

There have been no changes in actuarial assumptions or methods since the previous actuarial valuation.

SECTION 4: Reporting Information for the Ventura County Employees' Retirement Association

EXHIBIT III

Summary of Plan Provisions

This exhibit summarizes the major provisions of the VCERA included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

| | |
|--------------------------------|---|
| Membership Eligibility: | All regular employees of the County of Ventura or contracting district, scheduled to work 64 or more hours biweekly, are eligible to become a member of the Retirement Association subject to classification below: |
| <i>General Tier 1</i> | All General members with membership dates before June 30, 1979, plus Deputy Sheriff trainees and certain executive management with membership dates before January 1, 2013. |
| <i>General Tier 2</i> | All General members with membership dates on or after June 30, 1979 and before January 1, 2013, except as noted above for General Tier 1. |
| <i>Safety</i> | All Safety members with membership dates before January 1, 2013. |
| <i>General PEPR Tier 1</i> | Deputy Sheriff trainees with membership dates on or after January 1, 2013 and before April 17, 2014. |
| <i>General PEPR Tier 2</i> | All General members with membership dates on or after January 1, 2013, except as noted above for General PEPR Tier 1. |
| <i>Safety PEPR</i> | All Safety members with membership dates on or after January 1, 2013. |

| | |
|---|--|
| Final Compensation for Benefit Determination: | |
| <i>General Tier 1 and Safety</i> | Highest consecutive twelve months of compensation earnable (§31462.1)(FAC1). |
| <i>General Tier 2</i> | Highest consecutive thirty-six months of compensation earnable (§31462)(FAC3). |
| <i>General PEPR Tier 1, General PEPR Tier 2 and Safety PEPR</i> | Highest consecutive thirty-six months of pensionable compensation (§7522.32) (FAS3). |

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Compensation Limit:

General Tier 1, General Tier 2 and Safety

For members with membership dates on or after July 1, 1996, Compensation Earnable is limited to Internal Revenue Code Section 401(a)(17). The limit as of July 1, 2017 is \$270,000. The limit is indexed for inflation on an annual basis.

General PEPRA Tier 1, General PEPRA Tier 2 and Safety PEPRA

Pensionable Compensation is limited to \$118,775 for 2017 (\$142,530, if not enrolled in Social Security). The limit is indexed for inflation on an annual basis.

Service:

Years of service. (Yrs)

Service Retirement Eligibility:

General

Age 50 with 10 years of service, or age 70 regardless of service, or after 30 years, regardless of age (§31672).

Safety

Age 50 with 10 years of service, or age 70 regardless of service, or after 20 years, regardless of age (§31663.25).

General PEPRA

Age 52 with 5 years of service (§7522.20(a)) or age 70 regardless of service (§31672.3).

Safety PEPRA

Age 50 with 5 years of service (§7522.25(d)) or age 70 regardless of service (§31672.3).

Benefit Formula:

| | Retirement Age | Benefit Formula |
|-----------------------------------|-----------------------|--|
| <i>General Tier 1</i> (§31676.11) | 50 | $(1.24\% \times \text{FAC1} - 1/3 \times 1.24\% \times \$350 \times 12) \times \text{Yrs}$ |
| | 55 | $(1.67\% \times \text{FAC1} - 1/3 \times 1.67\% \times \$350 \times 12) \times \text{Yrs}$ |
| | 60 | $(2.18\% \times \text{FAC1} - 1/3 \times 2.18\% \times \$350 \times 12) \times \text{Yrs}$ |
| | 62 | $(2.35\% \times \text{FAC1} - 1/3 \times 2.35\% \times \$350 \times 12) \times \text{Yrs}$ |
| | 65 or later | $(2.61\% \times \text{FAC1} - 1/3 \times 2.61\% \times \$350 \times 12) \times \text{Yrs}$ |

SECTION 4: Reporting Information for the Ventura County Employees' Retirement Association

| | Retirement Age | Benefit Formula |
|--|-----------------------|--|
| <i>General Tier 2 (§31676.1)</i> | 50 | $(1.18\% \times \text{FAC3} - 1/3 \times 1.18\% \times \$350 \times 12) \times \text{Yrs}$ |
| | 55 | $(1.49\% \times \text{FAC3} - 1/3 \times 1.49\% \times \$350 \times 12) \times \text{Yrs}$ |
| | 60 | $(1.92\% \times \text{FAC3} - 1/3 \times 1.92\% \times \$350 \times 12) \times \text{Yrs}$ |
| | 62 | $(2.09\% \times \text{FAC3} - 1/3 \times 2.09\% \times \$350 \times 12) \times \text{Yrs}$ |
| | 65 or later | $(2.43\% \times \text{FAC3} - 1/3 \times 2.43\% \times \$350 \times 12) \times \text{Yrs}$ |
| | | |
| | Retirement Age | Benefit Formula |
| <i>General PEPRA Tier 1 and General PEPRA Tier 2 (§7522.20(a))</i> | 52 | $(1.00\% \times \text{FAS3} \times \text{Yrs})$ |
| | 55 | $(1.30\% \times \text{FAS3} \times \text{Yrs})$ |
| | 60 | $(1.80\% \times \text{FAS3} \times \text{Yrs})$ |
| | 62 | $(2.00\% \times \text{FAS3} \times \text{Yrs})$ |
| | 65 | $(2.30\% \times \text{FAS3} \times \text{Yrs})$ |
| | 67 or later | $(2.50\% \times \text{FAS3} \times \text{Yrs})$ |
| | | |
| | Retirement Age | Benefit Formula |
| <i>Safety (Non-Integrated) (§31664)</i> | 50 | $(2.00\% \times \text{FAC1} \times \text{Yrs})$ |
| | 55 | $(2.62\% \times \text{FAC1} \times \text{Yrs})$ |
| | 60 or later | $(2.62\% \times \text{FAC1} \times \text{Yrs})$ |
| | | |
| | Retirement Age | Benefit Formula |
| <i>Safety PEPRA (§7522.25(d))</i> | 50 | $(2.00\% \times \text{FAS3} \times \text{Yrs})$ |
| | 55 | $(2.50\% \times \text{FAS3} \times \text{Yrs})$ |
| | 57 or later | $(2.70\% \times \text{FAS3} \times \text{Yrs})$ |

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Maximum Benefit:

| | |
|--|--|
| <i>General Tier 1, General Tier 2 and Safety</i> | 100% of Highest Average Compensation (§31676.1, §31676.11, §31664) |
| <i>General PEPRA Tier 1, General PEPRA Tier 2 and Safety PEPRA</i> | None |

Ordinary Disability:

| | |
|--|---|
| <i>General Tier 1, General Tier 2, General PEPRA Tier 1 and General PEPRA Tier 2</i> | |
| <i>Eligibility</i> | Five years of service (§31720). |
| <i>Benefit Formula</i> | 1.5% per year of service. If the benefit does not exceed one-third of Final Compensation, the service is projected to 65, but total benefit cannot be more than one-third of Final Compensation (§31727). |
| <i>Safety and Safety PEPRA</i> | |
| <i>Eligibility</i> | Five years of service (§31720). |
| <i>Benefit Formula</i> | 1.8% per year of service. If the benefit does not exceed one-third of Final Compensation, the service is projected to 55, but total benefit cannot be more than one-third of Final Compensation (§31727.2). |

Line-of-Duty Disability:

| | |
|------------------------|--|
| <i>All Members</i> | |
| <i>Eligibility</i> | No age or service requirements (§31720). |
| <i>Benefit Formula</i> | 50% of the Final Compensation or 100% of Service Retirement benefit, if larger (§31727.4). |

Pre-Retirement Death:

| | |
|--|--|
| <i>All Members</i> | |
| <i>Less than Five Years of Service</i> | Refund of employee contributions with interest, plus one month's compensation for each year of service to a maximum of six month's compensation (§31781). 50% of Final Compensation or 100% of Service Retirement benefit, if larger, payable to spouse if Line-of-Duty death (§31787). |

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Five or More Years of Service An additional lump sum benefit of one-year of compensation is paid if Line-of-Duty death for Safety member (§31787.6).
OR
60% of the greater of Service Retirement or Ordinary Disability Retirement benefit payable to surviving eligible spouse (§31765.1, §31781.1), in lieu of above.
An additional lump sum benefit of one-year of compensation is paid if Line-of-Duty death for Safety member (§31787.6).

Death After Retirement:

All Members
Service Retirement or Ordinary Disability Retirement 60% of member's unmodified allowance continued to eligible spouse (§31760.1). In addition, there is a \$5,000 lump sum benefit payable to member's beneficiary (§31789.3). An eligible spouse is a surviving spouse who was married to the member one year prior to the effective retirement date or at least two years prior to the date of death and has attained age 55 on or prior to the date of death (§31760.2, §31785.1).
Line-of-Duty Disability 100% of member's allowance continued to eligible spouse (§31786). In addition, there is a \$5,000 lump sum benefit payable to member's beneficiary (§31789.3). An eligible spouse is a surviving spouse who was married to the member one year prior to the effective retirement date or at least two years prior to the date of death and has attained age 55 on or prior to the date of death (§31786.1).

Withdrawal Benefits:

Less than Five Years of Service Refund of accumulated employee contributions with interest (§31628) or entitled to earned benefits commencing at anytime after eligible to retire (§31629.5).
Five or More Years of Service If contributions left on deposit, entitled to earned benefits commencing at any time after eligible to retire (§31700).

Post-retirement

Cost-of-Living Benefits:

General Tier 1, Safety, General PEPRA Tier 1 and Safety PEPRA Future changes based on Consumer Price Index to a maximum of 3% per year, excess "banked" (§31870.1).

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| | |
|--|--|
| <i>General Tier 2 and General PEPRA Tier 2</i> | SEIU members receive a fixed 2% cost-of-living adjustment, not subject to changes in the CPI, that applies to future service after March, 2003. This benefit has been valued consistent with the methodologies described in our October 9, 2006 report entitled “Funding Policies and Procedures for General Tier II COLA Benefit”. |
| Supplemental Benefit: | A supplemental benefit in the amount of \$108.44 per month is paid to retirees and their survivors. |
| Member Contributions: | Please refer to Appendix A for the specific rates. |
| <i>General Tier 1 and Safety</i> | Provide for 50% of total Normal Cost. |
| <i>General Tier 2</i> | Provide for 50% of total basic Normal Cost. In addition, for General Tier 2 with COLA members, the current member COLA contribution rate of 2.63% of compensation has been reflected. |
| <i>General PEPRA Tier 2</i> | Provide for 50% of total basic Normal Cost. In addition, for General Tier 2 with COLA members, the current member COLA contribution rate of 2.63% of compensation has been reflected. |
| <i>Safety PEPRA</i> | Provide for 50% of total Normal Cost. |
| Other Information: | For Non-PEPRA members hired after November 1974, they will pay a contribution corresponding to a General and Safety member hired at entry age 35 and 27, respectively. Non-Safety PEPRA members with 30 or more years of service are exempt from paying member contributions. The same applies for Non-General PEPRA members hired on or before March 7, 1973. |
| Plan Provisions Not Valued: | The Board of Retirement has approved a Supplemental Medical Benefit. This benefit is funded from Undistributed Excess Earnings, paid from a reserve that is not included in the Valuation Value of Assets and is subject at all times to the availability of funds. The Supplemental Medical Benefit is \$27.50 per month and is payable to virtually all retirees and beneficiaries. |

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Plan Changes: There have been no changes in plan provisions since the previous actuarial valuation.

NOTE: *The summary of major plan provisions is designed to outline principle plan benefits as interpreted for purposes of the actuarial valuation. If the Association should find the plan summary not in accordance with the actual provisions, the Association should alert Segal, to ensure the proper provisions are valued.*

SECTION 4: Reporting Information for the Ventura County Employees' Retirement Association

Appendix A

Member Contribution Rates Based on 50/50 Sharing of Normal Cost for Non-PEPRA Tiers

| | Basic | | COLA | | Total | |
|-----------------------------|-------------|------------|----------------------|----------------------|-------------|------------|
| | First \$350 | Over \$350 | First \$350 | Over \$350 | First \$350 | Over \$350 |
| General Tier 1 | 5.37% | 8.05% | 1.79% | 2.69% | 7.16% | 10.74% |
| General Tier 2 without COLA | 4.76% | 7.14% | 0.00% | 0.00% | 4.76% | 7.14% |
| General Tier 2 COLA | 4.76% | 7.14% | 2.63% ⁽¹⁾ | 2.63% ⁽¹⁾ | 7.39% | 9.77% |
| Safety | 10.75% | 10.75% | 4.47% | 4.47% | 15.22% | 15.22% |

⁽¹⁾ General Tier 2 members with COLA are required to pay COLA contributions of 2.63% of compensation based on current bargaining agreements.

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Appendix B

Member Contribution Rates for PEPRA Members

| | <u>Basic</u> | <u>COLA</u> | <u>Total</u> |
|-----------------------------|--------------|----------------------|--------------|
| General Tier 2 without COLA | 7.06% | 0.00% | 7.06% |
| General Tier 2 with COLA | 7.06% | 2.63% ⁽¹⁾ | 9.69% |
| Safety | 9.96% | 4.13% | 14.09% |

The PEPRA member contribution rate is 50% of the Normal Cost.

⁽¹⁾ *General Tier 2 members with COLA are required to pay COLA contributions of 2.63% of compensation based on current bargaining agreements.*

Note: It is our understanding that in the determination of pension benefits under the PEPRA tier formulas, the compensation that can be taken into account for 2017 is \$118,775. (For an employer that is not enrolled in Social Security, the maximum amount is \$142,530) (reference Section 7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2017 (reference Section 7522.10(d)).

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Appendix C

Employer Contribution Rates (Dollar Amounts in Thousands) Without 50/50 Sharing of Normal Cost for Non-PEPRA Tiers – Current Valuation with Combined General UAAL Rates

| | June 30, 2017 Actuarial Valuation | | | | | |
|--|--|--|--------------|--|---------------|--|
| | BASIC | | COLA | | TOTAL | |
| | Rate | Estimated Annual Amount ⁽¹⁾ | Rate | Estimated Annual Amount ⁽¹⁾ | Rate | Estimated Annual Amount ⁽¹⁾ |
| General Tier 1 Members | | | | | | |
| Normal Cost | 9.12% | \$645 | 2.79% | \$198 | 11.91% | \$843 |
| UAAL ⁽²⁾ | <u>9.06%</u> | <u>641</u> | <u>4.69%</u> | <u>332</u> | <u>13.75%</u> | <u>973</u> |
| Total Contribution | 18.18% | \$1,286 | 7.48% | \$530 | 25.66% | \$1,816 |
| General Tier 2 Members w/o COLA | | | | | | |
| Normal Cost | 8.30% | \$17,875 | 0.00% | \$0 | 8.30% | \$17,875 |
| UAAL ⁽²⁾ | <u>9.06%</u> | <u>19,500</u> | <u>0.00%</u> | <u>0</u> | <u>9.06%</u> | <u>19,500</u> |
| Total Contribution | 17.36% | \$37,375 | 0.00% | \$0 | 17.36% | \$37,375 |
| General PEPRA Tier 2 Members w/o COLA | | | | | | |
| Normal Cost | 7.06% | \$3,488 | 0.00% | \$0 | 7.06% | \$3,488 |
| UAAL ⁽²⁾ | <u>9.06%</u> | <u>4,476</u> | <u>0.00%</u> | <u>0</u> | <u>9.06%</u> | <u>4,476</u> |
| Total Contribution | 16.12% | \$7,964 | 0.00% | \$0 | 16.12% | \$7,964 |
| General Tier 2 Members w/COLA | | | | | | |
| Normal Cost ⁽³⁾ | 8.30% | \$17,874 | 0.06% | \$129 | 8.36% | \$18,003 |
| UAAL ⁽²⁾⁽⁴⁾ | <u>9.06%</u> | <u>19,501</u> | <u>4.69%</u> | <u>10,114</u> | <u>13.75%</u> | <u>29,615</u> |
| Total Contribution | 17.36% | \$37,375 | 4.75% | \$10,243 | 22.11% | \$47,618 |
| General PEPRA Tier 2 Members w/COLA | | | | | | |
| Normal Cost ⁽³⁾ | 7.06% | \$5,772 | 0.02% | \$17 | 7.08% | \$5,789 |
| UAAL ⁽²⁾⁽⁴⁾ | <u>9.06%</u> | <u>7,406</u> | <u>4.69%</u> | <u>3,835</u> | <u>13.75%</u> | <u>11,241</u> |
| Total Contribution | 16.12% | \$13,178 | 4.71% | \$3,852 | 20.83% | \$17,030 |
| All General Members⁽⁵⁾ | | | | | | |
| Normal Cost | 8.02% | \$45,654 | 0.06% | \$344 | 8.08% | \$45,998 |
| UAAL | <u>9.06%</u> | <u>51,524</u> | <u>2.51%</u> | <u>14,281</u> | <u>11.57%</u> | <u>65,805</u> |
| Total Contribution | 17.08% | \$97,178 | 2.57% | \$14,625 | 19.65% | \$111,803 |

SECTION 4: Reporting Information for the Ventura County Employees' Retirement Association

Appendix C (continued)

Employer Contribution Rates (Dollar Amounts in Thousands) Without 50/50 Sharing of Normal Cost for Non-PEPRA Tiers – Current Valuation with Combined General UAAL Rates

| | June 30, 2017 Actuarial Valuation | | | | | |
|--|-----------------------------------|--|-----------------|--|---------------|--|
| | BASIC | | COLA | | TOTAL | |
| | Rate | Estimated Annual Amount ⁽¹⁾ | Rate | Estimated Annual Amount ⁽¹⁾ | Rate | Estimated Annual Amount ⁽¹⁾ |
| Safety Members | | | | | | |
| Normal Cost | 13.47% | \$21,018 | 4.36% | \$6,803 | 17.83% | \$27,821 |
| UAAL | <u>52.74%</u> | <u>82,293</u> | <u>(14.64%)</u> | <u>(22,843)</u> | <u>38.10%</u> | <u>59,450</u> |
| Total Contribution | 66.21% | \$103,311 | (10.28%) | \$(16,040) | 55.93% | \$87,271 |
| Safety PEPRA Members | | | | | | |
| Normal Cost | 9.96% | \$1,985 | 4.13% | \$824 | 14.09% | \$2,809 |
| UAAL | <u>52.74%</u> | <u>10,513</u> | <u>(14.64%)</u> | <u>(2,918)</u> | <u>38.10%</u> | <u>7,595</u> |
| Total Contribution | 62.70% | \$12,498 | (10.51%) | \$(2,094) | 52.19% | \$10,404 |
| All Safety Members⁽⁵⁾ | | | | | | |
| Normal Cost | 13.07% | \$23,003 | 4.34% | \$7,627 | 17.41% | \$30,630 |
| UAAL | <u>52.74%</u> | <u>92,806</u> | <u>(14.64%)</u> | <u>(25,761)</u> | <u>38.10%</u> | <u>67,045</u> |
| Total Contribution | 65.81% | \$115,809 | (10.30%) | \$(18,134) | 55.51% | \$97,675 |
| All Categories Combined⁽⁵⁾ | | | | | | |
| Normal Cost | 9.22% | \$68,657 | 1.07% | \$7,971 | 10.29% | \$76,628 |
| UAAL | <u>19.38%</u> | <u>144,330</u> | <u>(1.55%)</u> | <u>(11,480)</u> | <u>17.83%</u> | <u>132,850</u> |
| Total Contribution | 28.60% | \$212,987 | (0.48%) | \$(3,509) | 28.12% | \$209,478 |

⁽¹⁾ Amounts are in thousands, assumed to be paid throughout the year, and are based on June 30, 2017 annual payroll (also in thousands) shown below:

| | |
|-----------------------|---------------|
| General Tier 1 | \$7,076 |
| General Tier 2 | 215,358 |
| General PEPRA Tier 2 | 49,409 |
| General Tier 2C | 215,345 |
| General PEPRA Tier 2C | 81,759 |
| Safety | 156,036 |
| Safety PEPRA | <u>19,934</u> |
| Total | \$744,917 |

⁽²⁾ Basic UAAL rates have been calculated on a combined basis for all General Tiers. COLA UAAL rates have been calculated on a combined basis for all General Tiers that have a COLA (excludes General Tier 2 without COLA and General PEPRA Tier 2 without COLA).

⁽³⁾ Reflects General Tier 2 member COLA contribution rate of 2.63% based on current bargaining agreements.

⁽⁴⁾ Includes 0.55% in COLA UAAL costs attributed to the first two years of service accrued for the fixed 2% COLA pursuant to Government Code 31627.

⁽⁵⁾ These aggregated rates are provided for informational purposes only as we understand that the tier specific rates will be implemented.

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Appendix D

Member Contribution Rates Without 50/50 Sharing of Normal Cost for Non-PEPRA Tiers

**General Tier 1 Members' Contribution Rates from the June 30, 2017 Actuarial Valuation
(Expressed as a Percentage of Monthly Payroll)**

Calculated Under Recommended Assumptions

| Entry Age | Basic | | COLA | | Total | |
|-----------|-------------|------------|-------------|------------|-------------|------------|
| | First \$350 | Over \$350 | First \$350 | Over \$350 | First \$350 | Over \$350 |
| 15 | 3.24% | 4.86% | 1.21% | 1.82% | 4.45% | 6.68% |
| 16 | 3.24% | 4.86% | 1.21% | 1.82% | 4.45% | 6.68% |
| 17 | 3.31% | 4.96% | 1.23% | 1.85% | 4.54% | 6.81% |
| 18 | 3.38% | 5.06% | 1.25% | 1.89% | 4.63% | 6.95% |
| 19 | 3.44% | 5.17% | 1.29% | 1.92% | 4.73% | 7.09% |
| 20 | 3.51% | 5.27% | 1.32% | 1.97% | 4.83% | 7.24% |
| 21 | 3.59% | 5.38% | 1.33% | 2.00% | 4.92% | 7.38% |
| 22 | 3.66% | 5.49% | 1.36% | 2.04% | 5.02% | 7.53% |
| 23 | 3.73% | 5.60% | 1.39% | 2.08% | 5.12% | 7.68% |
| 24 | 3.81% | 5.71% | 1.42% | 2.13% | 5.23% | 7.84% |
| 25 | 3.88% | 5.82% | 1.45% | 2.17% | 5.33% | 7.99% |
| 26 | 3.96% | 5.94% | 1.47% | 2.21% | 5.43% | 8.15% |
| 27 | 4.04% | 6.06% | 1.51% | 2.26% | 5.55% | 8.32% |
| 28 | 4.12% | 6.18% | 1.53% | 2.30% | 5.65% | 8.48% |
| 29 | 4.20% | 6.30% | 1.57% | 2.35% | 5.77% | 8.65% |
| 30 | 4.28% | 6.42% | 1.60% | 2.40% | 5.88% | 8.82% |
| 31 | 4.37% | 6.55% | 1.62% | 2.44% | 5.99% | 8.99% |
| 32 | 4.45% | 6.68% | 1.66% | 2.49% | 6.11% | 9.17% |
| 33 | 4.54% | 6.81% | 1.69% | 2.54% | 6.23% | 9.35% |
| 34 | 4.63% | 6.95% | 1.73% | 2.59% | 6.36% | 9.54% |
| 35 | 4.72% | 7.08% | 1.77% | 2.65% | 6.49% | 9.73% |
| 36 | 4.82% | 7.22% | 1.79% | 2.70% | 6.61% | 9.92% |
| 37 | 4.91% | 7.37% | 1.83% | 2.74% | 6.74% | 10.11% |
| 38 | 5.01% | 7.51% | 1.87% | 2.81% | 6.88% | 10.32% |

SECTION 4: Reporting Information for the Ventura County Employees' Retirement Association

**General Tier 1 Members' Contribution Rates from the June 30, 2017 Actuarial Valuation
(Expressed as a Percentage of Monthly Payroll)**

Calculated Under Recommended Assumptions

| Entry Age | Basic | | COLA | | Total | |
|------------------|--|-------------------|--------------------|-------------------|--------------------|-------------------|
| | First \$350 | Over \$350 | First \$350 | Over \$350 | First \$350 | Over \$350 |
| 39 | 5.11% | 7.66% | 1.90% | 2.86% | 7.01% | 10.52% |
| 40 | 5.21% | 7.82% | 1.95% | 2.92% | 7.16% | 10.74% |
| 41 | 5.32% | 7.98% | 1.99% | 2.98% | 7.31% | 10.96% |
| 42 | 5.43% | 8.14% | 2.02% | 3.04% | 7.45% | 11.18% |
| 43 | 5.54% | 8.32% | 2.07% | 3.10% | 7.61% | 11.42% |
| 44 | 5.66% | 8.50% | 2.12% | 3.17% | 7.78% | 11.67% |
| 45 | 5.79% | 8.69% | 2.16% | 3.24% | 7.95% | 11.93% |
| 46 | 5.91% | 8.87% | 2.21% | 3.31% | 8.12% | 12.18% |
| 47 | 6.03% | 9.04% | 2.24% | 3.37% | 8.27% | 12.41% |
| 48 | 6.14% | 9.21% | 2.29% | 3.43% | 8.43% | 12.64% |
| 49 | 6.23% | 9.35% | 2.33% | 3.49% | 8.56% | 12.84% |
| 50 | 6.31% | 9.47% | 2.36% | 3.53% | 8.67% | 13.00% |
| 51 | 6.37% | 9.56% | 2.38% | 3.56% | 8.75% | 13.12% |
| 52 | 6.42% | 9.62% | 2.39% | 3.59% | 8.81% | 13.21% |
| 53 | 6.43% | 9.64% | 2.39% | 3.59% | 8.82% | 13.23% |
| 54 & Over | 6.37% | 9.55% | 2.37% | 3.56% | 8.74% | 13.11% |
| Interest: | 7.50% | | | | | |
| COLA: | 3.00% | | | | | |
| COLA Loading: | 37.30% | | | | | |
| Mortality: | RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2035 set back one year for males and set forward one year for females weighted one-third male and two-thirds female. | | | | | |
| Salary Increase: | See Exhibit II. | | | | | |

Note: All members hired after November 1974, will pay a contribution corresponding to entry age 35. These rates are determined before any pickups by the employer.

SECTION 4: Reporting Information for the Ventura County Employees' Retirement Association

**General Tier 2 Members' Contribution Rates from the June 30, 2017 Actuarial Valuation
(Expressed as a Percentage of Monthly Payroll)**

Calculated Under Recommended Assumptions

| Entry Age | Basic Only | | Entry Age | Basic Only | |
|-----------|-------------|------------|-----------|-------------|------------|
| | First \$350 | Over \$350 | | First \$350 | Over \$350 |
| 16 | 2.66% | 3.99% | 38 | 4.13% | 6.20% |
| 17 | 2.72% | 4.08% | 39 | 4.21% | 6.32% |
| 18 | 2.77% | 4.16% | 40 | 4.29% | 6.44% |
| 19 | 2.83% | 4.25% | 41 | 4.38% | 6.57% |
| 20 | 2.89% | 4.33% | 42 | 4.47% | 6.70% |
| 21 | 2.95% | 4.42% | 43 | 4.55% | 6.83% |
| 22 | 3.01% | 4.51% | 44 | 4.65% | 6.97% |
| 23 | 3.07% | 4.61% | 45 | 4.74% | 7.11% |
| 24 | 3.13% | 4.70% | 46 | 4.84% | 7.26% |
| 25 | 3.20% | 4.80% | 47 | 4.94% | 7.41% |
| 26 | 3.26% | 4.89% | 48 | 5.05% | 7.57% |
| 27 | 3.33% | 4.99% | 49 | 5.15% | 7.72% |
| 28 | 3.39% | 5.09% | 50 | 5.25% | 7.88% |
| 29 | 3.46% | 5.19% | 51 | 5.35% | 8.02% |
| 30 | 3.53% | 5.30% | 52 | 5.44% | 8.16% |
| 31 | 3.60% | 5.40% | 53 | 5.51% | 8.27% |
| 32 | 3.67% | 5.51% | 54 | 5.57% | 8.36% |
| 33 | 3.75% | 5.62% | 55 | 5.61% | 8.42% |
| 34 | 3.82% | 5.73% | 56 | 5.63% | 8.45% |
| 35 | 3.89% | 5.84% | 57 | 5.61% | 8.42% |
| 36 | 3.97% | 5.96% | 58 | 5.81% | 8.72% |
| 37 | 4.05% | 6.08% | 59 & over | 6.02% | 9.03% |

Interest: 7.50%

COLA: SEIU members contribute a negotiated 2.63% for a fixed 2% COLA pursuant to Government Code 31627.

Mortality: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2035 set back one year for males and set forward one year for females weighted one-third male and two-thirds female.

Salary Increase: See Exhibit II.

Note: All members hired after November 1974, will pay a contribution corresponding to entry age 35. These rates are determined before any pickups by the employer.

SECTION 4: Reporting Information for the Ventura County Employees' Retirement Association

**Safety Members' Contribution Rates from the June 30, 2017 Actuarial Valuation
(Expressed as a Percentage of Monthly Payroll)**

Calculated Under Recommended Assumptions

| Entry Age | Basic | COLA | Total |
|------------------|--------------|-------------|--------------|
| 15 | 7.74% | 4.43% | 12.17% |
| 16 | 7.74% | 4.43% | 12.17% |
| 17 | 7.74% | 4.43% | 12.17% |
| 18 | 7.74% | 4.43% | 12.17% |
| 19 | 7.74% | 4.43% | 12.17% |
| 20 | 7.74% | 4.43% | 12.17% |
| 21 | 7.74% | 4.43% | 12.17% |
| 22 | 7.90% | 4.52% | 12.42% |
| 23 | 8.07% | 4.61% | 12.68% |
| 24 | 8.23% | 4.71% | 12.94% |
| 25 | 8.40% | 4.81% | 13.21% |
| 26 | 8.57% | 4.91% | 13.48% |
| 27 | 8.75% | 5.01% | 13.76% |
| 28 | 8.93% | 5.11% | 14.04% |
| 29 | 9.12% | 5.22% | 14.34% |
| 30 | 9.31% | 5.33% | 14.64% |
| 31 | 9.51% | 5.44% | 14.95% |
| 32 | 9.71% | 5.56% | 15.27% |
| 33 | 9.93% | 5.67% | 15.60% |
| 34 | 10.12% | 5.79% | 15.91% |
| 35 | 10.32% | 5.91% | 16.23% |
| 36 | 10.54% | 6.02% | 16.56% |
| 37 | 10.76% | 6.15% | 16.91% |
| 38 | 10.99% | 6.29% | 17.28% |
| 39 | 11.24% | 6.43% | 17.67% |
| 40 | 11.48% | 6.56% | 18.04% |
| 41 | 11.71% | 6.70% | 18.41% |
| 42 | 11.94% | 6.83% | 18.77% |
| 43 | 12.12% | 6.93% | 19.05% |
| 44 | 12.23% | 7.00% | 19.23% |

SECTION 4: Reporting Information for the Ventura County Employees' Retirement Association

**Safety Members' Contribution Rates from the June 30, 2017 Actuarial Valuation
(Expressed as a Percentage of Monthly Payroll)**

Calculated Under Recommended Assumptions

| Entry Age | Basic | COLA | Total |
|------------------|--------------|-------------|--------------|
| 45 | 12.34% | 7.06% | 19.40% |
| 46 | 12.40% | 7.10% | 19.50% |
| 47 | 12.42% | 7.11% | 19.53% |
| 48 | 12.33% | 7.05% | 19.38% |
| 49 & Over | 12.11% | 6.92% | 19.03% |

Interest: 7.50%
 COLA: 3.00%
 COLA Loading: 57.20%
 Mortality: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2035 set back three years weighted 80% male and 20% female.
 Salary Increase: See Exhibit II.

Note: All members hired after November 1974, will pay a contribution corresponding to entry age 27. These rates are determined before any pickups by the employers.

SECTION 4: Reporting Information for the Ventura County Employees' Retirement Association

Appendix E

Employer Contribution Rates (Dollar Amounts in Thousands) For Reference Purposes Only – Current Valuation Based on 50/50 Sharing of Normal Cost for All Tiers (PEPRA and Non-PEPRA) with Non-Combined General UAAL Rates

| | June 30, 2017 Actuarial Valuation | | | | | |
|--|-----------------------------------|--|----------------|--|----------------|--|
| | BASIC | | COLA | | TOTAL | |
| | Rate | Estimated Annual Amount ⁽¹⁾ | Rate | Estimated Annual Amount ⁽¹⁾ | Rate | Estimated Annual Amount ⁽¹⁾ |
| General Tier 1 Members | | | | | | |
| Normal Cost ⁽²⁾ | 8.20% | \$580 | 2.75% | \$195 | 10.95% | \$775 |
| UAAL ⁽³⁾ | <u>692.43%</u> | <u>48,996</u> | <u>151.01%</u> | <u>10,686</u> | <u>843.44%</u> | <u>59,682</u> |
| Total Contribution | 700.63% | \$49,576 | 153.76% | \$10,881 | 854.39% | \$60,457 |
| General Tier 2 Members w/o COLA | | | | | | |
| Normal Cost | 7.03% | \$15,140 | 0.00% | \$0 | 7.03% | \$15,140 |
| UAAL ⁽³⁾ | <u>0.45%</u> | <u>969</u> | <u>0.00%</u> | <u>0</u> | <u>0.45%</u> | <u>969</u> |
| Total Contribution | 7.48% | \$16,109 | 0.00% | \$0 | 7.48% | \$16,109 |
| General PEPRA Tier 2 Members w/o COLA | | | | | | |
| Normal Cost | 7.06% | \$3,488 | 0.00% | \$0 | 7.06% | \$3,488 |
| UAAL ⁽³⁾ | <u>0.45%</u> | <u>222</u> | <u>0.00%</u> | <u>0</u> | <u>0.45%</u> | <u>222</u> |
| Total Contribution | 7.51% | \$3,710 | 0.00% | \$0 | 7.51% | \$3,710 |
| General Tier 2 Members w/COLA | | | | | | |
| Normal Cost ⁽⁴⁾ | 7.03% | \$15,139 | 0.06% | \$129 | 7.09% | \$15,268 |
| UAAL ⁽³⁾⁽⁵⁾ | <u>0.45%</u> | <u>969</u> | <u>1.21%</u> | <u>2,606</u> | <u>1.66%</u> | <u>3,575</u> |
| Total Contribution | 7.48% | \$16,108 | 1.27% | \$2,735 | 8.75% | \$18,843 |
| General PEPRA Tier 2 Members w/COLA | | | | | | |
| Normal Cost ⁽⁴⁾ | 7.06% | \$5,772 | 0.02% | \$17 | 7.08% | \$5,789 |
| UAAL ⁽³⁾⁽⁵⁾ | <u>0.45%</u> | <u>368</u> | <u>1.21%</u> | <u>989</u> | <u>1.66%</u> | <u>1,357</u> |
| Total Contribution | 7.51% | \$6,140 | 1.23% | \$1,006 | 8.74% | \$7,146 |
| All General Members⁽⁶⁾ | | | | | | |
| Normal Cost | 7.05% | \$40,119 | 0.06% | \$341 | 7.11% | \$40,460 |
| UAAL | <u>9.06%</u> | <u>51,524</u> | <u>2.51%</u> | <u>14,281</u> | <u>11.57%</u> | <u>65,805</u> |
| Total Contribution | 16.11% | \$91,643 | 2.57% | \$14,622 | 18.68% | \$106,265 |

SECTION 4: Reporting Information for the Ventura County Employees' Retirement Association

Appendix E (continued)

Employer Contribution Rates (Dollar Amounts in Thousands) For Reference Purposes Only – Current Valuation Based on 50/50 Sharing of Normal Cost for All Tiers (PEPRA and Non-PEPRA) with Non-Combined General UAAL Rates

| | June 30, 2017 Actuarial Valuation | | | | | |
|--|-----------------------------------|--|-----------------|--|---------------|--|
| | BASIC | | COLA | | TOTAL | |
| | Rate | Estimated Annual Amount ⁽¹⁾ | Rate | Estimated Annual Amount ⁽¹⁾ | Rate | Estimated Annual Amount ⁽¹⁾ |
| Safety Members | | | | | | |
| Normal Cost ⁽⁷⁾ | 11.65% | \$18,178 | 4.85% | \$7,568 | 16.50% | \$25,746 |
| UAAL | <u>52.74%</u> | <u>82,293</u> | <u>(14.64%)</u> | <u>(22,843)</u> | <u>38.10%</u> | <u>59,450</u> |
| Total Contribution | 64.39% | \$100,471 | (9.79%) | \$(15,275) | 54.60% | \$85,196 |
| Safety PEPRA Members | | | | | | |
| Normal Cost | 9.96% | \$1,985 | 4.13% | \$824 | 14.09% | \$2,809 |
| UAAL | <u>52.74%</u> | <u>10,513</u> | <u>(14.64%)</u> | <u>(2,918)</u> | <u>38.10%</u> | <u>7,595</u> |
| Total Contribution | 62.70% | \$12,498 | (10.51%) | \$(2,094) | 52.19% | \$10,404 |
| All Safety Members⁽⁶⁾ | | | | | | |
| Normal Cost | 11.46% | \$20,163 | 4.77% | \$8,392 | 16.23% | \$28,555 |
| UAAL | <u>52.74%</u> | <u>92,806</u> | <u>(14.64%)</u> | <u>(25,761)</u> | <u>38.10%</u> | <u>67,045</u> |
| Total Contribution | 64.20% | \$112,969 | (9.87%) | \$(17,369) | 54.33% | \$95,600 |
| All Categories Combined⁽⁶⁾ | | | | | | |
| Normal Cost | 8.09% | \$60,282 | 1.17% | \$8,733 | 9.26% | \$69,015 |
| UAAL | <u>19.38%</u> | <u>144,330</u> | <u>(1.55%)</u> | <u>(11,480)</u> | <u>17.83%</u> | <u>132,850</u> |
| Total Contribution | 27.47% | \$204,612 | (0.38%) | \$(2,747) | 27.09% | \$201,865 |

⁽¹⁾ Amounts are in thousands, assumed to be paid throughout the year, and are based on June 30, 2017 annual payroll (also in thousands) shown below:

| | |
|-----------------------|---------------|
| General Tier 1 | \$7,076 |
| General Tier 2 | 215,358 |
| General PEPRA Tier 2 | 49,409 |
| General Tier 2C | 215,345 |
| General PEPRA Tier 2C | 81,759 |
| Safety | 156,036 |
| Safety PEPRA | <u>19,934</u> |
| Total | \$744,917 |

⁽²⁾ The total employer rate has been adjusted by 0.31% to account for the cost associated with the cessation of member contributions after 30 years of service.

⁽³⁾ Basic UAAL rates have not been calculated on a combined basis for all General Tiers.

⁽⁴⁾ Reflects General Tier 2 member COLA contribution rate of 2.63% based on current bargaining agreements.

⁽⁵⁾ Includes 0.55% in COLA UAAL costs attributed to the first two years of service accrued for the fixed 2% COLA pursuant to Government Code 31627.

⁽⁶⁾ These aggregated rates are provided for informational purposes only as we understand that the tier specific rates will be implemented.

⁽⁷⁾ The total employer rate has been adjusted by 1.28% to account for the cost associated with the cessation of member contributions after 30 years of service.

SECTION 4: Reporting Information for the Ventura County Employees' Retirement Association

Appendix E (continued)

Employer Contribution Rates (Dollar Amounts in Thousands) For Reference Purposes Only – Prior Valuation Based on 50/50 Sharing of Normal Cost for All Tiers (PEPRA and Non-PEPRA) with Non-Combined General UAAL Rates

| | June 30, 2016 Actuarial Valuation | | | | | |
|--|-----------------------------------|--|----------------|--|----------------|--|
| | BASIC | | COLA | | TOTAL | |
| | Rate | Estimated Annual Amount ⁽¹⁾ | Rate | Estimated Annual Amount ⁽¹⁾ | Rate | Estimated Annual Amount ⁽¹⁾ |
| General Tier 1 Members | | | | | | |
| Normal Cost ⁽²⁾ | 8.13% | \$637 | 2.74% | \$214 | 10.87% | \$851 |
| UAAL ⁽³⁾ | <u>572.72%</u> | <u>44,844</u> | <u>104.69%</u> | <u>8,197</u> | <u>677.41%</u> | <u>53,041</u> |
| Total Contribution | 580.85% | \$45,481 | 107.43% | \$8,411 | 688.28% | \$53,892 |
| General Tier 2 Members w/o COLA | | | | | | |
| Normal Cost | 7.11% | \$15,265 | 0.00% | \$0 | 7.11% | \$15,265 |
| UAAL ⁽³⁾ | <u>1.11%</u> | <u>2,383</u> | <u>0.00%</u> | <u>0</u> | <u>1.11%</u> | <u>2,383</u> |
| Total Contribution | 8.22% | \$17,648 | 0.00% | \$0 | 8.22% | \$17,648 |
| General PEPRA Tier 2 Members w/o COLA | | | | | | |
| Normal Cost | 6.96% | \$2,453 | 0.00% | \$0 | 6.96% | \$2,453 |
| UAAL ⁽³⁾ | <u>1.11%</u> | <u>391</u> | <u>0.00%</u> | <u>0</u> | <u>1.11%</u> | <u>391</u> |
| Total Contribution | 8.07% | \$2,844 | 0.00% | \$0 | 8.07% | \$2,844 |
| General Tier 2 Members w/COLA | | | | | | |
| Normal Cost ⁽⁴⁾ | 7.11% | \$15,374 | 0.08% | \$173 | 7.19% | \$15,547 |
| UAAL ⁽³⁾⁽⁵⁾ | <u>1.11%</u> | <u>2,400</u> | <u>1.29%</u> | <u>2,790</u> | <u>2.40%</u> | <u>5,190</u> |
| Total Contribution | 8.22% | \$17,774 | 1.37% | \$2,963 | 9.59% | \$20,737 |
| General PEPRA Tier 2 Members w/COLA | | | | | | |
| Normal Cost ⁽⁴⁾ | 6.96% | \$4,465 | 0.01% | \$6 | 6.97% | \$4,471 |
| UAAL ⁽³⁾⁽⁵⁾ | <u>1.11%</u> | <u>712</u> | <u>1.29%</u> | <u>828</u> | <u>2.40%</u> | <u>1,540</u> |
| Total Contribution | 8.07% | \$5,177 | 1.30% | \$834 | 9.37% | \$6,011 |
| All General Members⁽⁶⁾ | | | | | | |
| Normal Cost | 7.10% | \$38,194 | 0.07% | \$393 | 7.17% | \$38,587 |
| UAAL | <u>9.43%</u> | <u>50,730</u> | <u>2.19%</u> | <u>11,815</u> | <u>11.62%</u> | <u>62,545</u> |
| Total Contribution | 16.53% | \$88,924 | 2.26% | \$12,208 | 18.79% | \$101,132 |

SECTION 4: Reporting Information for the Ventura County Employees' Retirement Association

Appendix E (continued)

Employer Contribution Rates (Dollar Amounts in Thousands) For Reference Purposes Only – Prior Valuation Based on 50/50 Sharing of Normal Cost for All Tiers (PEPRA and Non-PEPRA) with Non-Combined General UAAL Rates

| | June 30, 2016 Actuarial Valuation | | | | | |
|--|-----------------------------------|--|-----------------|--|---------------|--|
| | BASIC | | COLA | | TOTAL | |
| | Rate | Estimated Annual Amount ⁽¹⁾ | Rate | Estimated Annual Amount ⁽¹⁾ | Rate | Estimated Annual Amount ⁽¹⁾ |
| Safety Members | | | | | | |
| Normal Cost ⁽⁷⁾ | 11.71% | \$18,197 | 4.88% | \$7,584 | 16.59% | \$25,781 |
| UAAL | <u>51.58%</u> | <u>80,156</u> | <u>(12.51%)</u> | <u>(19,441)</u> | <u>39.07%</u> | <u>60,715</u> |
| Total Contribution | 63.29% | \$98,353 | (7.63%) | \$(11,857) | 55.66% | \$86,496 |
| Safety PEPRA Members | | | | | | |
| Normal Cost | 10.21% | \$1,272 | 4.21% | \$524 | 14.42% | \$1,796 |
| UAAL | <u>51.58%</u> | <u>6,425</u> | <u>(12.51%)</u> | <u>(1,558)</u> | <u>39.07%</u> | <u>4,867</u> |
| Total Contribution | 61.79% | \$7,697 | (8.30%) | \$(1,034) | 53.49% | \$6,663 |
| All Safety Members⁽⁶⁾ | | | | | | |
| Normal Cost | 11.60% | \$19,469 | 4.83% | \$8,108 | 16.43% | \$27,577 |
| UAAL | <u>51.58%</u> | <u>86,581</u> | <u>(12.51%)</u> | <u>(20,999)</u> | <u>39.07%</u> | <u>65,582</u> |
| Total Contribution | 63.18% | \$106,050 | (7.68%) | \$(12,891) | 55.50% | \$93,159 |
| All Categories Combined⁽⁶⁾ | | | | | | |
| Normal Cost | 8.17% | \$57,663 | 1.20% | \$8,501 | 9.37% | \$66,164 |
| UAAL | <u>19.45%</u> | <u>137,311</u> | <u>(1.30%)</u> | <u>(9,184)</u> | <u>18.15%</u> | <u>128,127</u> |
| Total Contribution | 27.62% | \$194,974 | (0.10%) | \$(683) | 27.52% | \$194,291 |

⁽¹⁾ Amounts are in thousands, assumed to be paid throughout the year, and are based on June 30, 2016 annual payroll (also in thousands) shown below:

| | |
|-----------------------|---------------|
| General Tier 1 | \$7,830 |
| General Tier 2 | 214,696 |
| General PEPRA Tier 2 | 35,238 |
| General Tier 2C | 216,231 |
| General PEPRA Tier 2C | 64,147 |
| Safety | 155,401 |
| Safety PEPRA | <u>12,457</u> |
| Total | \$706,000 |

⁽²⁾ The total employer rate has been adjusted by 0.27% to account for the cost associated with the cessation of member contributions after 30 years of service.

⁽³⁾ Basic UAAL rates have not been calculated on a combined basis for all General Tiers.

⁽⁴⁾ Reflects General Tier 2 member COLA contribution rate of 2.63% based on current bargaining agreements.

⁽⁵⁾ Includes 0.47% in COLA UAAL costs attributed to the first two years of service accrued for the fixed 2% COLA pursuant to Government Code 31627.

⁽⁶⁾ These aggregated rates are provided for informational purposes only as we understand that the tier specific rates will be implemented.

⁽⁷⁾ The total employer rate has been adjusted by 1.32% to account for the cost associated with the cessation of member contributions after 30 years of service.

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