

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

BOARD OF RETIREMENT

DISABILITY & BUSINESS MEETING

DECEMBER 9, 2019

AGENDA

PLACE: Ventura County Government Center
Hall of Administration Building, Multi-Purpose Room
800 S. Victoria Avenue
Ventura, CA 93009

TIME: 9:00 a.m.

Members of the public may comment on any item under the Board's jurisdiction by filling out a speaker form and presenting it to the Clerk. Unless otherwise directed by the Chair, comments related to items on the agenda will be heard when the Board considers that item. Comments related to items not on the agenda will generally be heard at the time designated for Public Comment.

ITEM:

I.	<u>CALL TO ORDER</u>	Master Page No.
II.	<u>APPROVAL OF AGENDA</u>	1 – 4
III.	<u>APPROVAL OF MINUTES</u>	
	A. Business Minutes of November 18, 2019.	5 – 10
IV.	<u>CONSENT AGENDA</u>	
	A. Approve Regular and Deferred Retirements and Survivors Continuances for the Month of November 2019.	11
	B. Receive and File Report of Checks Disbursed in November 2019.	12 – 15
	C. Receive and File Budget Summary for FY 2018-19 Month Ending November 30, 2019.	16 – 17
	D. Receive and File Statement of Fiduciary Net Position, Statement of Changes in Fiduciary Net Position, Investments and Cash Equivalents, and Schedule of Investment Management Fees for the Period Ending October 31, 2019.	18 – 23
V.	<u>RECEIVE AND FILE PENDING DISABILITY APPLICATION STATUS REPORT</u>	24 – 58
VI.	<u>APPLICATIONS FOR DISABILITY RETIREMENT</u>	
	A. Application for Service-connected Disability Retirement - Dawson, Robin G.; Case No. 18-016.	59 – 159

**BOARD OF RETIREMENT
DISABILITY/BUSINESS MEETING**

DECEMBER 9, 2019

**AGENDA
PAGE 2**

VI. APPLICATIONS FOR DISABILITY RETIREMENT (continued)

1. Application for Service-connected Disability Retirement, filed May 10, 2018.
 2. Medical Analysis and Employer's Statement of Position, including Supporting Medical Documentation, submitted by County of Ventura, Risk Management, in support of the Application for Service-connected Disability Retirement, dated November 8, 2019.
 3. Hearing Notice dated, December 4, 2019.
- B. Application for Service-connected Disability Retirement - Johnston, Edward C.; Case No. 19-008. 160 – 217
1. Application for Service-connected Disability Retirement, filed February 19, 2019.
 2. Disability Retirement Evaluation Report, submitted by LACERA, in support of the Application for Service-connected Disability Retirement, received by VCERA November 4, 2019.
 3. Orthopedic Independent Medical Evaluation Report, dated September 27, 2019, by Dr. Neil Ghodadra.
 4. Hearing Notice dated, November 20, 2019.
- C. Application for Service-connected Disability Retirement - Gonzalez, Carmen M.; Case No. 15-028. 218 – 226
1. Findings of Fact and Conclusions of Law and Decision, filed by Stephen D. Roberson, Attorney for Respondent, County of Ventura-Risk Management, submitted November 14, 2019.
 2. Hearing Notice dated, November 13, 2019.

VII. ACTUARIAL INFORMATION

- A. Review and Approval of Annual Actuarial Valuation Report as of June 30, 2019 – Segal Consulting, Paul Angelo and John Monroe.
RECOMMENDED ACTION: Approve.
1. June 30, 2019 Actuarial Valuation Report. 227 – 327
- B. Review of GAS 67 Actuarial Valuation Report as of June 30, 2019 – Segal Consulting, Paul Angelo and John Monroe.
RECOMMENDED ACTION: Receive and File.
1. June 30, 2019 GAS 67 Actuarial Valuation Report. 328 – 350
- C. Recommendation to Approve PEPRRA Annual Compensation Limit.
RECOMMENDED ACTION: Approve.

**BOARD OF RETIREMENT
DISABILITY/BUSINESS MEETING**

DECEMBER 9, 2019

**AGENDA
PAGE 3**

VII. ACTUARIAL INFORMATION (continued)

- | | |
|--|-----------|
| 1. Staff Letter. | 351 |
| 2. California Actuarial Advisory Panel PEPRA Pension Compensation Limits for the Calendar Year 2020. | 352 – 354 |

VIII. INVESTMENT MANAGER PRESENTATIONS

- | | |
|--|-----------|
| A. Receive Annual Investment Presentation from Loomis Sayles, Jim Sia. | 355 – 387 |
|--|-----------|

IX. INVESTMENT INFORMATION

None.

X. OLD BUSINESS

None.

XI. NEW BUSINESS

- | | |
|--|-----------|
| A. Request to Add One (1) Staff Services Manager Allocation.
RECOMMENDED ACTION: Approve. | |
| 1. Staff Letter. | 388 – 389 |
| 2. Job Description – Staff Services Manager II. | 390 – 391 |
| B. Request to Increase Brentwood I.T.'s Contracted Not-To-Exceed Amount to Support Office Renovation.
RECOMMENDED ACTION: Approve. | |
| 1. Staff Letter. | 392 – 393 |
| 2. Proposed Amendment to Brentwood I.T. Contract. | 394 |
| C. Recommendation for Authorization for General Counsel to Attend the NAPPA 2020 Winter Seminar, Tempe, AZ, February 19 – 21, 2020.
RECOMMENDED ACTION: Approve. | |
| 1. Staff Letter. | 395 |
| 2. NAPPA Conference Brochure. | 396 – 401 |
| D. Annual Appointment of Chair and Vice-Chair. | |
| 1. Staff Letter. | 402 – 403 |

XII. INFORMATIONAL

XIII. PUBLIC COMMENT

XIV. STAFF COMMENT

**BOARD OF RETIREMENT
DISABILITY/BUSINESS MEETING**

DECEMBER 9, 2019

**AGENDA
PAGE 4**

XV. BOARD MEMBER COMMENT

XVI. ADJOURNMENT

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

BOARD OF RETIREMENT

BUSINESS MEETING

NOVEMBER 18, 2019

MINUTES

TRUSTEES

PRESENT:

Steven Hintz, Treasurer-Tax Collector
Mike Sedell, Public Member
Jordan Roberts, General Employee Member
Arthur E. Goulet, Retiree Member
Will Hoag, Alternate Retiree Member
Robert Ashby, Safety Employee Member
Ed McCombs, Alternate Public Member

TRUSTEES

ABSENT:

Steve Bennett, Public Member
William W. Wilson, Vice Chair, Public Member
Craig Winter, General Employee Member

STAFF

PRESENT:

Linda Webb, Retirement Administrator
Henry Solis, Chief Financial Officer
Dan Gallagher, Chief Investment Officer
Lori Nemiroff, County Counsel
Leah Oliver, Chief Technology Officer
Chris Ayala, Program Assistant

PLACE:

Ventura County Government Center
Hall of Administration Building, Multi-Purpose Room
800 S. Victoria Avenue
Ventura, CA 93009

TIME:

9:00 a.m.

**BOARD OF RETIREMENT
BUSINESS MEETING**

NOVEMBER 18, 2019

**MINUTES
PAGE 2**

ITEM:

I. CALL TO ORDER

In absence of Vice-Chair Wilson, the Treasurer/Tax Collector, Trustee Hintz, presided the meeting as Chair.

Trustee Hintz called the Business Meeting of November 18, 2019, to order at 9:00 a.m.

II. APPROVAL OF AGENDA

MOTION: Approve.

Moved by Sedell, seconded by Goulet.

Vote: Motion carried

Yes: Ashby, Goulet, Hintz, McCombs, Roberts, Sedell

No: -

Absent: Bennett, Wilson, Winter

Abstain:

III. APPROVAL OF MINUTES

A. Disability Minutes of November 4, 2019.

Ms. Webb offered a correction to the minutes on page 7 where, prior to the motion when Vice-Chair Wilson directed staff to schedule a meeting, it should have read, "*Vice-Chair Wilson then directed staff to schedule a meeting with County CEO Powers and the Auditor-Controller, including himself, Trustee Sedell and Trustee Bennett if he were to be available*".

After discussion by the Board, the following motion was made:

MOTION: Approve with Correction.

Moved by Goulet, seconded by Roberts.

Vote: Motion carried

Yes: Ashby, Goulet, Hintz, McCombs, Roberts, Sedell

No: -

Absent: Bennett, Wilson, Winter

Abstain:

IV. CONSENT AGENDA

A. Approve Regular and Deferred Retirements and Survivors Continuances for the Month of October 2019.

B. Receive and File Report of Checks Disbursed in October 2019.

C. Receive and File Budget Summary for FY 2019-20 Month Ending October 31, 2019.

**BOARD OF RETIREMENT
BUSINESS MEETING**

NOVEMBER 18, 2019

**MINUTES
PAGE 3**

- D. Receive and File Statement of Fiduciary Net Position, Statement of Changes in Fiduciary Net Position, Schedule of Investments and Cash Equivalents, and Schedule of Investment Management Fees for the Period Ending September 30, 2019.

MOTION: Approve.

Moved by Sedell, seconded by Ashby.

Vote: Motion carried

Yes: Ashby, Goulet, Hintz, McCombs, Roberts, Sedell

No: -

Absent: Bennett, Wilson, Winter

Abstain:

V. INVESTMENT MANAGER PRESENTATIONS

- A. Receive Annual Investment Presentation from BlackRock, Ross Ramatici and Drew Pinson.

Ross Ramatici and Drew Pinson reviewed BlackRock's organizational changes, and discussed the firm's investment outlook, portfolio strategy, composition and performance.

VI. INVESTMENT INFORMATION

NEPC – Allan Martin.

VCERA – Dan Gallagher, Chief Investment Officer.

- A. Preliminary Performance Report Month Ending October 31, 2019.

RECOMMENDED ACTION: Receive and file.

- B. Quarterly Investment Performance Report for Period Ending September 30, 2019.

RECOMMENDED ACTION: Receive and file.

Mr. Martin presented the Preliminary Performance Report for October 2019 and the Quarterly Investment Performance Report for the 3rd quarter to the Board.

After discussion by the Board, staff and consultant, the following motion was made:

MOTION: Receive and File the Preliminary Performance Report Month Ending October 31, 2019 and the Quarterly Investment Performance Report for Period Ending September 30, 2019.

Moved by Ashby, seconded by Goulet.

Vote: Motion carried

Yes: Ashby, Goulet, Hintz, McCombs, Roberts, Sedell

No: -

Absent: Bennett, Wilson, Winter

Abstain:

VII. OLD BUSINESS

- A. Update on Business Plan Risk Management Regarding Data Integrity.

**BOARD OF RETIREMENT
BUSINESS MEETING****NOVEMBER 18, 2019****MINUTES
PAGE 4**

Ms. Webb reported that a meeting on this issue took place on November 8th at the County CEO's office, and in attendance were herself, Vice-Chair Wilson, Trustee Sedell, County Executive Officer Mike Powers, Auditor-Controller Jeff Burgh, and Assistant County Executive Officer Mike Pettit. During the meeting, CEO Powers had pledged additional resources for the Auditor-Controller's office to accelerate the data correction process. She continued that she and Trustees Sedell and Wilson were encouraged by the CEO's pledge, and that staff would be tracking the progress going forward and providing regular updates to both the Board and CEO Powers' office.

Trustee Sedell remarked that Ms. Webb's comprehensive memorandum was instrumental in relaying the need for a cooperative plan to resolve the issue.

Trustee Goulet asked how long it take to get the funding for the pledged additional resources.

Ms. Webb replied that the C.E.O.'s office had indicated that they would be taking steps immediately to resolve the issue, and that Auditor-Controller Burgh had indicated he already had identified a specific resource to begin. Because VCERA staff met with the Auditor-Controller's staff on a regular basis, staff would update the Board on progress.

VIII. NEW BUSINESS

- A. Receive CA Govt. Code Section 7514.7 Annual Reporting – Real Estate Funds.
RECOMMENDED ACTION: Receive and File.

1. Staff Letter by C.I.O., Dan Gallagher.
2. CA Govt. Code Section 7514.7 Annual Reports for Prudential and UBS.

Mr. Gallagher said the provided report concluded the annual public disclosure requirement for alternative investments under California Government Code, Section 7514.7 for real estate funds. He reminded the Board that at the October business meeting, the mandatory reports for private equity and private credit were presented by Abbott and NEPC, respectively. Mr. Gallagher said he anticipated both reports to be issued together in the future.

After discussion by the Board and staff the following motion was made:

MOTION: Receive and File.

Moved by Sedell, seconded by Ashby.

Vote: Motion carried

Yes: Ashby, Goulet, Hintz, McCombs, Roberts, Sedell

No: -

Absent: Bennett, Wilson, Winter

Abstain:

- B. Request for Authorization for Up to Two Trustees and C.I.O., Dan Gallagher to Attend the NEPC 2020 Public Funds Workshop in Tempe, AZ on February 4 – 5, 2020.

RECOMMENDED ACTION: Approve.

1. Staff Letter by C.I.O., Dan Gallagher.

**BOARD OF RETIREMENT
BUSINESS MEETING**

NOVEMBER 18, 2019

**MINUTES
PAGE 5**

2. NEPC 2020 Public Funds Workshop Agenda - Draft.

MOTION: Approve Request to Authorize up to 2 VCERA Trustees and the C.I.O. to Attend NEPC's 2020 Public Funds Workshop in Tempe, Arizona, on February 4 – 5, 2020.

Moved by Sedell, seconded by Ashby.

Vote: Motion carried

Yes: Ashby, Goulet, Hintz, McCombs, Roberts, Sedell

No: -

Absent: Bennett, Wilson, Winter

Abstain:

C. Proposed Investment Manager Presentations and On-Site Due Diligence Visit Calendars for 2020.

RECOMMENDED ACTION: Approve.

1. Staff Letter by C.I.O., Dan Gallagher.

2. Proposed Investment Manager Presentations Calendar for 2020.

3. Proposed On-Site Due Diligence Visit Calendar for 2020.

Mr. Gallagher noted that the proposed manager presentations for 2020 were in the same order as for 2019, but with minor changes to accommodate the managers' schedules, and with consideration to the adopted board meeting calendar for 2020.

After discussion by the Board and staff the following motion was made:

MOTION: Approve the Proposed 2020 Calendars for Investment Presentations and Investment On-Site Due Diligence Travel, and Authorize the Necessary Expenditures, in Accordance with the Board's Adopted Travel Policy.

Moved by Ashby, seconded by Goulet.

Vote: Motion carried

Yes: Ashby, Goulet, Hintz, McCombs, Roberts, Sedell

No: -

Absent: Bennett, Wilson, Winter

Abstain:

D. Request for Authorization for Trustee Roberts to Attend the CALAPRS Overview Course on December 6, 2019 in San Mateo, CA.

RECOMMENDED ACTION: Approve.

1. Staff Letter.

MOTION: Approve Request for Authorization for Trustee Roberts to Attend the CALAPRS Overview Course on December 6, 2019 in San Mateo, CA.

Moved by Sedell, seconded by Ashby.

**BOARD OF RETIREMENT
BUSINESS MEETING**

NOVEMBER 18, 2019

**MINUTES
PAGE 6**

Vote: Motion carried
Yes: Ashby, Goulet, Hintz, McCombs, Roberts, Sedell
No: -
Absent: Bennett, Wilson, Winter
Abstain:

IX. INFORMATIONAL

A. Announcement Regarding BlueBay Private Debt Relunched as Arcmont Asset Management.

X. PUBLIC COMMENT

None.

XI. STAFF COMMENT

Ms. Webb said that SACRS would be reporting education hours for the trustees who attended the Fall conference. She also offered copies of the RVK Public Fund Universe Analysis report that was provided at the conference for those who were not able to attend.

XII. BOARD MEMBER COMMENT

None.

XIII. ADJOURNMENT

The meeting was adjourned at 9:59 a.m.

Respectfully submitted,



LINDA WEBB, Retirement Administrator

Approved,

STEVE HINTZ, Chairman

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
REPORT OF REGULAR AND DEFERRED RETIREMENTS AND SURVIVORS CONTINUANCES

November 2019

FIRST NAME	LAST NAME	G/S	DATE OF MEMBERSHIP	BENEFIT SERVICE*	DEPARTMENT	EFFECTIVE DATE
REGULAR RETIREMENTS:						
Don	Aguirre	G	10/04/1976	43.08	Human Services Agency	11/02/2019
Katherine	Basurto	G	08/30/1992	10.23	District Attorney (deferred)	11/03/2019
Jennifer	Bowles	G	10/11/1999	8.42	Health Care Agency (deferred)	11/01/2019
Jolene	Cargile	G	09/14/2014	11.36	Sheriff's Office	09/23/2019
Joice	Davis	G	04/30/2001	16.40	CEO	11/02/2019
Francisco	De Leon	G	08/13/1973		Human Services Agency (deferred)	09/23/2019
Mila	Gilmour	G	07/24/2000	18.72	Health Care Agency	10/22/2019
Eva	Gonzalez	G	08/25/1996	23.72	Health Care Agency	11/02/2019
David	Hubenthal	G	11/29/1999	19.65	Public Works Agency	10/20/2019
Richard	Janda	G	01/15/2012	6.32	Health Care Agency (deferred)	11/10/2019
Douglas	Lindebaum	G	01/16/1994	2.29	Public Works Agency (deferred)	10/31/2019
Nancy	Littlefield	G	10/04/1999	2.21	Health Care Agency	09/06/2019
Gonzalo	Lopez	G	10/15/1989	29.79	County Clerk-Recorder	10/26/2019
Pamela	Mack	G	05/21/2006	13.38	Fire Protection District	10/26/2019
Maria Nava	Nunes	G	06/09/1991	30.14	Human Services Agency	08/24/2019
Margaret	Reyes	G	03/23/2008	11.39	Human Services Agency	10/19/2019
Jennifer	Roach	G	09/05/2001	5.08	Health Care Agency (deferred)	10/29/2019
Hortensia	Robles	G	08/05/1990	27.36	Auditor-Controller (deferred)	10/18/2019
Ildefonso	Rodriguez	G	06/09/2013	5.67	Health Care Agency	10/07/2019
Cheryl	Sanders	G	11/03/1996	1.10	General Services Agency (deferred)	10/21/2019
Martin	Schwartz	G	11/03/1996	23.10	General Services Agency	10/24/2019
Michelle	Valdez	G	04/05/1998	17.42	Child Support Services (deferred)	11/14/2019

DEFERRED RETIREMENTS:

Lisa	Bidwell	G	04/06/2009	10.59	Area Agency on Aging	11/09/2019
Yelen E.	Carino-Talavera	G	09/18/2011	5.61	Health Care Agency	04/06/2019
Carla	Cross	G	10/09/2005	13.82	Health Care Agency	10/05/2019
Diana R.	Patton	G	01/06/2012	7.61	Health Care Agency	10/23/2019
Andres P.	Solis	G	10/14/2012	6.90	Health Care Agency	11/09/2019
Marivic	Visitacion-Tinoco	G	09/23/2007	11.93	Health Care Agency	11/01/2019

SURVIVORS' CONTINUANCES:

Tony	Alonzo
Jacob	Fry
Bill	Spieler
Joanne	Temple

* = Excludes reciprocal service or service from any previous retirements
 ** = Member establishing reciprocity

Disability & Business Meeting Agenda - IV. CONSENT AGENDA

Date: Friday, November 29, 2019
Time: 01:32PM
User: 101602

Ventura County Retirement Assn

Check Register - Standard

Period: 05-20 As of: 11/29/2019

Page: 1 of 4
Report: 03630.rpt
Company: VCERA

Check Nbr	Check Type	Check Date	Vendor ID Vendor Name	Period To Post Closed	Ref Nbr	Doc Type	Invoice Number	Invoice Date	Discount Taken	Amount Paid
Company:			VCERA							
Acct / Sub:	10300		000000							
028323	CK	11/7/2019	BERKLESTE STEPHANIE BERKLEY	05-20	001148	VO	TRAVEL REIMB	11/7/2019	0.00	44.40
028324	CK	11/7/2019	BRENTWOODI BRENTWOOD IT	05-20	001149	VO	IT/CAPITAL PROJ	11/7/2019	0.00	8,890.00
028325	CK	11/7/2019	GOULETARTH ARTHUR E. GOULET	05-20	001154	VO	MILEAGE REIMB	11/7/2019	0.00	39.44
028326	CK	11/7/2019	HARRISWATE HARRIS WATER CONDITIONING	05-20	001150	VO	ADMIN EXP	11/7/2019	0.00	274.50
028327	CK	11/7/2019	NOSSAMAN NOSSAMAN LLP	05-20	001151	VO	LEGAL FEES	11/7/2019	0.00	8,480.70
028328	CK	11/7/2019	VENCELJOSI JOSIAH VENCEL	05-20	001153	VO	TRAVEL REIMB	11/7/2019	0.00	1,127.70
028329	CK	11/7/2019	WESTERNASS WESTERN ASSET MANAGEMEN	05-20	001152	VO	INVESTMENT FEES	11/7/2019	0.00	245,079.91
028330	CK	11/13/2019	ACCESSINFO ACCESS INFORMATION PROTEC	05-20	001155	VO	ADMIN EXP	11/13/2019	0.00	391.51
028331	CK	11/13/2019	ATTMOBILIT AT&T MOBILITY	05-20	001156	VO	IT	11/13/2019	0.00	416.18
028332	CK	11/13/2019	AYALAIRENE IRENE P. AYALA	05-20	001157	VO	ADMIN EXP	11/13/2019	0.00	9,887.50
028333	CK	11/13/2019	BANKOFAMER BUSINESS CARD	05-20	001158	VO	ADMIN/IT	11/13/2019	0.00	2,536.87
028334	CK	11/13/2019	BOOTHPAUL PAUL BOOTH	05-20	001159	VO	ADMIN EXP	11/13/2019	0.00	300.00
028335	CK	11/13/2019	DIGITALDEP DIGITAL DEPLOYMENT	05-20	001160	VO	IT	11/13/2019	0.00	650.00

Disability & Business Meeting Agenda - IV. CONSENT AGENDA

Date: Friday, November 29, 2019
Time: 01:32PM
User: 101602

Ventura County Retirement Assn

Check Register - Standard

Period: 05-20 As of: 11/29/2019

Page: 2 of 4
Report: 03630.rpt
Company: VCERA

Check Nbr	Check Type	Check Date	Vendor ID Vendor Name	Period To Post Closed	Ref Nbr	Doc Type	Invoice Number	Invoice Date	Discount Taken	Amount Paid
028336	CK	11/13/2019	HANSONBRID HANSON BRIDGETT LLP	05-20	001161	VO	LEGAL FEES	11/13/2019	0.00	199.80
028337	CK	11/13/2019	JANOPRINTI JANO PRINTING & MAILWORKS	05-20	001162	VO	ADMIN EXP	11/13/2019	0.00	8,176.13
028338	CK	11/13/2019	SHREDITUSA SHRED-IT USA	05-20	001165	VO	ADMIN EXP	11/13/2019	0.00	193.60
028339	CK	11/13/2019	SUBICASSOC SUBIC & ASSOCIATES, INC	05-20	001163	VO	CAPITAL PROJECT	11/13/2019	0.00	840.00
028340	CK	11/13/2019	VSGHOSTING VSG HOSTING, INC.	05-20	001166	VO	IT	11/13/2019	0.00	65,068.20
028341	CK	11/20/2019	ABBOTTCAP ABBOTT CAPITAL MANAGEMENT	05-20	001167	VO	INVESTMENT FEES	11/20/2019	0.00	152,073.00
028342	CK	11/20/2019	COMPUWAVE COMPUWAVE	05-20	001168	VO	CAPITAL PROJECT	11/20/2019	0.00	495.11
028343	CK	11/20/2019	DRAGANTROL VICKIE DRAGAN	05-20	001169	VO	ADMIN EXP	11/20/2019	0.00	8,188.29
028344	CK	11/20/2019	HOAGWILL WILL HOAG	05-20	001170	VO	TRAVEL REIMB	11/20/2019	0.00	1,020.14
028345	CK	11/20/2019	LINEASOLUT LINEA SOLUTIONS	05-20	001171	VO	ADMIN EXP	11/20/2019	0.00	11,559.25
028346	CK	11/20/2019	TRICOUNTYO TRI COUNTY OFFICE FURNITURE	05-20	001172	VO	CAPITAL PROJECT	11/20/2019	0.00	27,220.60
028347	CK	11/27/2019	COMPUWAVE COMPUWAVE	05-20	001173	VO	IT/CAP PROJ	11/27/2019	0.00	357.33
028348	CK	11/27/2019	FEDEX FEDEX	05-20	001174	VO	ADMIN EXP	11/27/2019	0.00	21.55

Disability & Business Meeting Agenda - IV. CONSENT AGENDA

Date: Friday, November 29, 2019
Time: 01:32PM
User: 101602

Ventura County Retirement Assn

Check Register - Standard

Period: 05-20 As of: 11/29/2019

Page: 3 of 4
Report: 03630.rpt
Company: VCERA

Check Nbr	Check Type	Check Date	Vendor ID Vendor Name	Period To Post Closed	Ref Nbr	Doc Type	Invoice Number	Invoice Date	Discount Taken	Amount Paid
028349	CK	11/27/2019	GOULETARTH ARTHUR E. GOULET	05-20	001175	VO	MILEAGE REIMB	11/27/2019	0.00	39.44
028350	CK	11/27/2019	MEGAPATH FUSION CLOUD COMPANY, LLC	05-20	001176	VO	IT	11/27/2019	0.00	595.57
028351	CK	11/27/2019	MFDAILYCOR M.F. DAILY CORPORATION	05-20	001177	VO	ADMIN EXP	11/27/2019	0.00	9,719.15
028352	CK	11/27/2019	NEMIROFFLO LORI NEMIROFF	05-20	001178	VO	TRAVEL REIMB	11/27/2019	0.00	1,134.12
028353	CK	11/27/2019	NOSSAMAN NOSSAMAN LLP	05-20	001179	VO	LEGAL FEES	11/27/2019	0.00	46.36
028354	CK	11/27/2019	PRUDENTIAL PRUDENTIAL INSURANCE	05-20	001180	VO	INVESTMENT FEES	11/27/2019	0.00	158,413.48
028355	CK	11/27/2019	THOMSONREU THOMSON REUTERS- WEST	05-20	001182	VO	IT	11/27/2019	0.00	484.05
028356	CK	11/27/2019	TIMEWARNER TIME WARNER CABLE	05-20	001181	VO	IT	11/27/2019	0.00	294.99
028357	CK	11/27/2019	VITECHSYST VITECH SYSTEMS GROUP, INC.	05-20	001183	VO	IT	11/27/2019	0.00	25,702.50

Check Count: 35

Acct Sub Total: 749,961.37

Check Type	Count	Amount Paid
Regular	35	749,961.37
Hand	0	0.00
Electronic Payment	0	0.00
Void	0	0.00
Stub	0	0.00
Zero	0	0.00
Mask	0	0.00
Total:	35	749,961.37

Disability & Business Meeting Agenda - IV. CONSENT AGENDA

Date: Friday, November 29, 2019
 Time: 01:32PM
 User: 101602

Ventura County Retirement Assn

Check Register - Standard

Period: 05-20 As of: 11/29/2019

Page: 4 of 4
 Report: 03630.rpt
 Company: VCERA

Check Nbr	Check Type	Check Date	Vendor ID Vendor Name	Period To Post	Period Closed	Ref Nbr	Doc Type	Invoice Number	Invoice Date	Discount Taken	Amount Paid
						Company Disc Total		0.00	Company Total		749,961.37

Ventura County Employees' Retirement Association
Budget Summary Fiscal Year 2019-2020

For the Five Months Ended November 30, 2019 and Year-To-Date - 41.67% of Fiscal Year Expended

	<i>Adopted 2020 Budget</i>	<i>Adjusted 2020 Budget</i>	<i>November 2019</i>	<i>Expended Fiscal Year to Date</i>	<i>Available Balance</i>	<i>Percent Expended</i>
Salaries and Benefits						
Regular Salary	\$3,299,200.00	\$3,299,200.00	\$241,213.78	\$1,212,247.72	\$2,086,952.28	36.74%
Extra-Help/Temporary Services	170,900.00	170,900.00	11,559.25	45,614.25	125,285.75	26.69%
Supplemental Payments	65,400.00	65,400.00	5,289.08	23,796.93	41,603.07	36.39%
Vacation Redemption	162,200.00	162,200.00	7,539.50	95,291.19	66,908.81	58.75%
Retirement Contributions	603,400.00	603,400.00	39,669.54	207,016.74	396,383.26	34.31%
OASDI Contribution	200,400.00	200,400.00	9,876.30	54,694.54	145,705.46	27.29%
FICA-Medicare	55,300.00	55,300.00	3,673.20	19,102.95	36,197.05	34.54%
Medical Insurance	360,600.00	360,600.00	26,327.84	127,905.55	232,694.45	35.47%
Retiree Health Insurance	0.00	0.00	1,046.06	5,230.30	(5,230.30)	0.00%
Life Insurance	1,300.00	1,300.00	90.37	440.95	859.05	33.92%
Unemployment Insurance	1,700.00	1,700.00	122.66	589.09	1,110.91	34.65%
Mgmt Disability Insurance	24,400.00	24,400.00	1,542.57	9,295.01	15,104.99	38.09%
Workers Compensation Insurance	114,000.00	114,000.00	8,438.40	44,469.24	69,530.76	39.01%
401K Plan Contribution	86,600.00	86,600.00	5,715.92	28,792.92	57,807.08	33.25%
Total Salaries & Benefits	\$5,145,400.00	\$5,145,400.00	\$362,104.47	\$1,874,487.38	\$3,270,912.62	36.43%

Services & Supplies

Board Member Stipend	\$13,200.00	\$13,200.00	\$900.00	\$3,900.00	\$9,300.00	29.55%
Other Professional Services	93,000.00	93,000.00	11,551.89	46,752.75	46,247.25	50.27%
Auditing	101,400.00	101,400.00	0.00	40,178.65	61,221.35	39.62%
Hearing Officers	40,000.00	40,000.00	9,887.50	29,522.50	10,477.50	73.81%
Legal	425,000.00	425,000.00	8,726.86	60,790.49	364,209.51	14.30%
Actuary-Valuation	62,000.00	62,000.00	0.00	31,000.00	31,000.00	50.00%
Actuary-GASB 67	13,000.00	13,000.00	0.00	0.00	13,000.00	0.00%
Actuary-415 Calculation	110,000.00	110,000.00	0.00	(29.00)	110,029.00	-0.03%
Actuary-Misc Hrly Consult	16,000.00	16,000.00	0.00	(85.00)	16,085.00	-0.53%
Printing	40,000.00	40,000.00	3,649.84	15,260.46	24,739.54	38.15%
Postage	65,000.00	65,000.00	15,135.71	28,785.20	36,214.80	44.28%
Copy Machine	4,500.00	4,500.00	0.00	0.00	4,500.00	0.00%
General Liability	15,200.00	15,200.00	0.00	0.00	15,200.00	0.00%
Fiduciary Liability	86,000.00	86,000.00	0.00	83,619.00	2,381.00	97.23%
Cost Allocation Charges	34,400.00	34,400.00	17,193.00	17,193.00	17,207.00	49.98%
Education Allowance	6,000.00	6,000.00	0.00	305.00	5,695.00	5.08%
Training/Travel-Staff	64,600.00	64,600.00	2,734.15	9,052.35	55,547.65	14.01%
Training/Travel-Trustee	38,200.00	38,200.00	1,312.74	2,504.43	35,695.57	6.56%
Travel-Due Diligence-Staff	9,300.00	9,300.00	0.00	1,654.99	7,645.01	17.80%
Travel-Due Diligence-Trustee	13,600.00	13,600.00	0.00	786.54	12,813.46	5.78%
Mileage-Staff	4,800.00	4,800.00	459.36	819.38	3,980.62	17.07%
Mileage -Trustee	5,000.00	5,000.00	386.28	509.24	4,490.76	10.18%
Mileage-Due Diligence-Staff	1,000.00	1,000.00	0.00	79.69	920.31	7.97%
Mileage-Due Diligence-Trustee	1,000.00	1,000.00	0.00	77.72	922.28	7.77%
Auto Allowance	6,900.00	6,900.00	575.00	2,875.00	4,025.00	41.67%
Facilities-Security	2,700.00	2,700.00	256.00	1,280.00	1,420.00	47.41%
Facilities-Maint & Repairs	3,300.00	3,300.00	0.00	0.00	3,300.00	0.00%
Equipment-Maint & Repairs	2,000.00	2,000.00	0.00	0.00	2,000.00	0.00%
General Office Expense	10,400.00	10,400.00	276.10	3,110.39	7,289.61	29.91%
Books & Publications	2,500.00	2,500.00	0.00	651.70	1,848.30	26.07%
Office Supplies	17,000.00	17,000.00	128.69	917.92	16,082.08	5.40%
Memberships & Dues	16,300.00	16,300.00	25.63	8,745.63	7,554.37	53.65%
Bank Service Charges	500.00	500.00	38.95	264.28	235.72	52.86%
Offsite Storage	5,200.00	5,200.00	391.51	1,607.84	3,592.16	30.92%
Rents/Leases-Structures	210,900.00	210,900.00	9,719.15	81,896.16	129,003.84	38.83%
Depreciation /Amortization	1,460,600.00	1,460,600.00	121,716.16	608,580.80	852,019.20	41.67%
Total Services & Supplies	\$3,000,500.00	\$3,000,500.00	\$205,064.52	\$1,082,607.11	\$1,917,892.89	36.08%
Total Sal, Ben, Serv & Supp	\$8,145,900.00	\$8,145,900.00	\$567,168.99	\$2,957,094.49	\$5,188,805.51	36.30%

***Ventura County Employees' Retirement Association
Budget Summary Fiscal Year 2019-2020
For the Five Months Ended November 30, 2019 and Year-To-Date - 41.67% of Fiscal Year Expended***

	<i>Adopted 2020 Budget</i>	<i>Adjusted 2020 Budget</i>	<i>November 2019</i>	<i>Expended Fiscal Year to Date</i>	<i>Available Balance</i>	<i>Percent Expended</i>
<i>Technology</i>						
Technology Hardware	\$118,500.00	\$118,500.00	\$699.30	\$70,654.43	\$47,845.57	59.62%
Technology Software Lic & Maint.	60,000.00	60,000.00	1,523.07	33,181.32	26,818.68	55.30%
Technology Software Suppt & Maint.	41,500.00	41,500.00	544.68	5,025.68	36,474.32	12.11%
Technology Systems Support	0.00	0.00	65,068.20	130,191.40	(130,191.40)	0.00%
Technology Cloud Services	3,600.00	3,600.00	847.40	1,811.00	1,789.00	50.31%
Technology Website Services	8,900.00	8,900.00	650.00	2,600.00	6,300.00	29.21%
Technology Infrastruct Support	168,100.00	168,100.00	0.00	0.00	168,100.00	0.00%
Technology V3 Software & VSG	754,900.00	754,900.00	29,527.70	98,154.00	656,746.00	13.00%
Technology Data Communication	55,700.00	55,700.00	4,230.92	20,124.34	35,575.66	36.13%
Total Technology	<u>\$1,211,200.00</u>	<u>\$1,211,200.00</u>	<u>\$103,091.27</u>	<u>\$361,742.17</u>	<u>\$849,457.83</u>	<u>29.87%</u>
<i>Capital Expenses</i>						
Capitalized Structures	1,184,000.00	1,184,000.00	43,430.63	308,472.18	875,527.82	26.05%
Total Capitalized Expenses	<u>\$1,184,000.00</u>	<u>\$1,184,000.00</u>	<u>\$43,430.63</u>	<u>\$308,472.18</u>	<u>\$875,527.82</u>	<u>26.05%</u>
Congtingency	<u>\$747,700.00</u>	<u>\$747,700.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$747,700.00</u>	<u>0.00%</u>
Total Current Year	<u><u>\$11,288,800.00</u></u>	<u><u>\$11,288,800.00</u></u>	<u><u>\$713,690.89</u></u>	<u><u>\$3,627,308.84</u></u>	<u><u>\$7,661,491.16</u></u>	<u><u>32.13%</u></u>

***Ventura County Employees' Retirement Association
Statement of Fiduciary Net Position
As of October 31, 2019 (Unaudited)***

Assets

Cash & Cash Equivalents		\$177,506,149
Receivables		
Interest and Dividends	5,390,516	
Securities Sold	13,942,011	
Miscellaneous	27,421	
Total Receivables		19,359,947
Investments at Fair Value		
Domestic Equity	1,669,760,611	
Non U.S. Equity	949,052,993	
Global Equity	653,503,362	
Fixed Income	1,140,910,445	
Private Equity	500,971,043	
Real Assets	880,762,060	
Cash Overlay	68,921	
Total Investments		5,795,029,435
Capital Assets, Net of Accumulated Depreciation & Amortization		11,156,822
Total Assets		6,003,052,353

Liabilities

Securities Purchased	17,058,632	
Accounts Payable	709,947	
Tax Withholding Payable	3,405,169	
Deferred Revenue (PrePaid Contributions)	127,660,167	
Total Liabilities		148,833,915
Net Position Restricted for Pensions		\$5,854,218,438

***Ventura County Employees' Retirement Association
Statement of Changes in Fiduciary Net Position
For The Four Months Ending October 31, 2019 (Unaudited)***

ADDITIONS

Contributions		
Employer	\$63,865,014	
Employee	23,877,140	
Total Contributions		87,742,154

Investment Income		
Net Appreciation (Depreciation) in Fair Value of Investments	124,905,365	
Interest Income	8,979,084	
Dividend Income	3,306,167	
Other Investment Income	316,306	
Real Estate Operating Income, Net	5,052,989	
Security Lending Income	1,129,091	
Total Investment Income	143,689,003	

Less Investment Expenses		
Management & Custodial Fees	5,281,199	
Other Investment Expenses	125,469	
Securities Lending Borrower Rebates	954,597	
Securities Lending Management Fees	63,479	
Total Investment Expenses	6,424,744	

Net Investment Income/(Loss)		137,264,259
-------------------------------------	--	--------------------

Total Additions		225,006,413
------------------------	--	--------------------

DEDUCTIONS

Benefit Payments	101,221,852	
Member Refunds and Death Benefit Payments	2,138,135	
Administrative Expenses	1,762,600	
Other Expenses	1,025,550	
Total Deductions		106,148,137

Net Increase/(Decrease)		118,858,276
--------------------------------	--	--------------------

Net Position Restricted For Pensions

Beginning of Year		5,735,360,159
--------------------------	--	----------------------

Ending Balance		\$5,854,218,435
-----------------------	--	------------------------

Ventura County Employees' Retirement Association
Investments, Cash, and Cash Equivalents
As of October 31, 2019 (Unaudited)

	Investments	Cash & Cash Equivalents
Equity		
Domestic Equity		
Blackrock - Russell 1000	\$1,384,461,453	\$0
Blackrock - Russell 2500	66,293,318	0
Western Asset Enhanced Equity Index Plus	219,005,841	16,922,436
Total Domestic Equity	1,669,760,611	16,922,436
Non U.S. Equity		
Blackrock - ACWI ex - US	484,074,348	0
Hexavest	94,793,690	0
Sprucegrove	227,680,140	0
Walter Scott	142,504,814	0
Total Non U.S. Equity	949,052,993	0
Global Equity		
Blackrock - ACWI Index	653,503,362	0
Total Global Equity	653,503,362	0
Fixed Income		
Blackrock - Bloomberg Barclays Aggregate Index	245,224,393	0
Loomis Sayles Multi Sector	85,659,061	3,637,445
Loomis Sayles Strategic Alpha	48,286,027	0
Reams	331,740,258	10
Reams - US Treasury	107,641,475	16,544
Western Asset Management	322,359,231	6,350,677
Total Fixed Income	1,140,910,445	10,004,676
Private Equity		
Abry Partners	1,413,997	0
Abbott Secondaries	16,439,953	0
Adam Street	186,489,800	0
Advent Int'l	1,150,000	0
Astorg	435,839	0
Battery Ventures	9,527,891	0
Blue Bay	7,114,468	0
Buenaventure One	28,935,263	0
Buenaventure Two	283,982	0
Carval Investors	19,150,146	0
Clearlake Investors	7,659,119	0
GGV Capital	2,819,443	0
Drive Capital	18,144,057	0
ECI 11 GP LP	2,657,987	0
Genstar Capital	1,455,845	0
GTCR Fund XII	7,614,013	0
Harbourvest	95,966,608	0
Insight Ventures	21,190,049	0
MC Partners	845,064	0
Monroe Capital	17,632,108	0
Pantheon	38,845,518	0
Pimco	8,250,000	0
Resolute Fund IV LP	5,128,434	0
The Riverside Fund V LP	1,821,459	0
Total Private Equity	500,971,043	0
Real Assets		
Prudential Real Estate	163,568,319	0
LaSalle	0	0
UBS Realty	269,318,526	0
Bridgewater All Weather	342,353,800	0
Tortoise (MLPs)	105,521,415	2,854,568
Total Real Assets	880,762,060	2,854,568

*Ventura County Employees' Retirement Association
Investments, Cash, and Cash Equivalents
As of October 31, 2019 (Unaudited)*

	<u>Investments</u>	<u>Cash & Cash Equivalents</u>
Parametric (Cash Equitization)	68,921	34,447,988
State Street Bank and Trust		110,383,369
County Treasury and Bank of America		2,893,110
Total Investments, Cash, and Cash Equivalents	<u>\$5,795,029,435</u>	<u>\$177,506,149</u>

***Ventura County Employees' Retirement Association
Schedule of Investment Management Fees
For the Four Months Ending October 31, 2019 (Unaudited)***

Equity Managers**Domestic Equity**

Blackrock - Russell 1000	\$33,991
Blackrock - Russell 2500	2,464
Western Asset Enhanced Equity Index Plus	101,128
Total Domestic Equity	137,583

Non U.S. Equity

Blackrock - ACWI ex - US	117,040
Hexavest	103,199
Sprucegrove	193,004
Walter Scott	232,242
Total Non U.S. Equity	645,485

Global Equity

Blackrock - ACWI Index	63,723
Total Global Equity	63,723

Fixed Income Managers

Blackrock Bloomberg Barclays Aggregate Index	29,572
Loomis Sayles Multi Sector	84,665
Loomis Sayles Strategic Alpha	48,655
Reams Asset Management	142,489
Reams US Treasury	2,697
Western Asset Management	143,952
Total Fixed Income	452,029

Private Equity

Abbott Secondary Opportunities	57,155
Abry Partners	71,256
Adams Street	511,850
Advent Int'l	
Battery Ventures	72,023
Blue Bay	85,705
Carval, CVI A Fund	45,000
Clearlake	30,073
Drive Capital	50,000
ECI 11 GP LP	(43,562)
Genstar	13,490
GGV Capital	76,625
GTCR XII/A & B	81,513
Harbourvest	426,329
Insight Venture Partners	104,645
Monroe Capital	368,326
Pantheon	135,264
Pimco	
Resolute Fund	48,299
Riverside	172,283
Total Private Equity	2,306,274

Real Assets

Prudential Real Estate Advisors	342,994
LaSalle	
UBS Realty	486,085
Bridgewater All Weather	312,245
Tortoise (MLPs)	178,993
Total Real Assets	1,320,318

***Ventura County Employees' Retirement Association
Schedule of Investment Management Fees
For the Four Months Ending October 31, 2019 (Unaudited)***

Cash Overlay (Parametric)	41,825
Securities Lending	
Borrower's Rebate	954,597
Management Fees	63,479
Total Securities Lending	<u>1,018,076</u>
Other	
Investment Consultant (NEPC)	77,500
Investment Consultant (Abbott Capital)	152,073
Investment Custodian (State Street)	84,388
Total Other Fees	<u>313,961</u>
Total Investment Management Fees	<u><u>\$6,299,275</u></u>

**Ventura County Employees'
Retirement Association**

**Actuarial Valuation and Review as of
June 30, 2019**



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, unless expressly authorized by Segal. The measurements shown in this actuarial valuation may not be applicable for other purposes.

Copyright © 2019 by The Segal Group, Inc. All rights reserved.



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

November 8, 2019

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, 2019. It summarizes the actuarial data used in the valuation, analyzes the preceding year's experience, and establishes the funding requirements for July 1, 2020 to June 30, 2021.

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

The actuarial calculations were directed under the supervision of John Monroe, ASA, MAAA and Enrolled Actuary. We are members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of our knowledge, the information supplied in this 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 Association.

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:

A handwritten signature in black ink, appearing to read "Paul Angelo", written over a horizontal line.

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

A handwritten signature in black ink, appearing to read "John Monroe", written over a horizontal line.

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

Table of Contents

Ventura County Employees' Retirement Association Actuarial Valuation and Review as of June 30, 2019

Section 1: Actuarial Valuation Summary

Purpose and Basis	4
Significant Issues	6
Summary of Key Valuation Results	9
Important Information About Actuarial Valuations	12

Section 2: Actuarial Valuation Results

A. Member Data	14
B. Financial Information	18
C. Actuarial Experience	22
D. Other Changes in the Actuarial Accrued Liability	27
E. Development of Unfunded Actuarial Accrued Liability	28
F. Recommended Contribution	29
G. Funded Status	35
H. Actuarial Balance Sheet	37
I. Volatility Ratios	38
J. Risk Assessment	40

Section 3: Supplemental Information

Exhibit A – Table of Plan Coverage	43
Exhibit B – Members in Active Service as of June 30, 2019	52
Exhibit C – Reconciliation of Member Data	60
Exhibit D – Summary Statement of Income and Expenses on a Market Value Basis	61
Exhibit E – Summary Statement of Plan Assets	62
Exhibit F – Summary of Reported Reserve Information	63
Exhibit G – Development of the Fund Through June 30, 2019	64
Exhibit H – Table of Amortization Bases	65
Exhibit I – Projection of UAAL Balances and Payments	69
Exhibit J – Definition of Pension Terms	71

Section 4: Actuarial Valuation Basis

Exhibit I – Actuarial Assumptions and Methods	75
Exhibit II – Summary of Plan Provisions	87
Exhibit III – Member Contribution Rates	92
Exhibit IV – Employer Contribution Rates <u>Without</u> 50/50 Sharing of Normal Cost for Non- PEPRA Tiers	94
Exhibit V – Member Contribution Rates <u>Without</u> 50/50 Sharing of Normal Cost for Non- PEPRA Tiers	96

Section 1: Actuarial Valuation Summary

Purpose and Basis

This report was prepared by Segal Consulting (“Segal”) to present a valuation of the Ventura County Employees’ Retirement Association (“VCERA” or “the Association”) as of June 30, 2019. The valuation was performed to determine whether the assets and contribution rates are sufficient to provide the prescribed benefits. The measurements shown in this actuarial valuation may not be applicable for other purposes. In particular, the measures herein are not necessarily appropriate for assessing the sufficiency of current plan assets to cover the estimated cost of settling the plan’s accrued benefit obligations.

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; and changes in plan provisions or applicable law.

The contribution requirements presented in this report are based on:

- The benefit provisions of the pension plan, as administered by the Board of Retirement;
- The characteristics of covered active members, inactive vested members, and retired members and beneficiaries as of June 30, 2019, provided by VCERA;
- The assets of the plan as of June 30, 2019, provided by VCERA;
- Economic assumptions regarding future salary increases and investment earnings adopted by the Retirement Board for the June 30, 2019 valuation;
- Other actuarial assumptions regarding employee terminations, retirement, death, etc. adopted by the Retirement Board for the June 30, 2019 valuation; and
- The funding policy adopted by the Board of Retirement.

One of the general goals of an actuarial valuation is to establish contributions which fully fund the Association’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 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 prior year's information.

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 this valuation, we have applied the funding policy last reviewed and adopted by the Board in 2018. Details of the funding policy are provided in *Section 4, Exhibit I on pages 82 and 83*.

A schedule of current amortization balances and payments may be found in *Section 3, Exhibit H beginning on page 65*. A graphical projection of the Unfunded Actuarial Accrued Liability (UAAL) amortization balances and payments has been included in *Section 3, Exhibit I on pages 69 and 70*.

The Actuarial Standards Board Actuarial Standard of Practice (ASOP) No. 4 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 \$1.33 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.

In this report, the employer and member contribution rates shown in *Section 2, Subsection F* and *Section 4, Exhibit III*, 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.

The employer and member contribution rates calculated under the prior method (i.e., without 50/50 sharing of Normal Cost for non-PEPRA tiers) are shown in *Section 4, Exhibit IV and Exhibit V, respectively, beginning on page 94*.

The rates calculated in this report may be adopted by the Board for the fiscal year that extends from July 1, 2020 through June 30, 2021.

Significant Issues

- Ref: Pgs. 65 - 68* 1. The restarted UAAL amortization layers established as of the June 30, 2004 valuation, which accounted for more than one-third of the net annual UAAL amortization payment as of June 30, 2018, have been fully amortized as of June 30, 2019. This resulted in a reduction in the UAAL contribution rate of about 6.5% of payroll for the plan in total (3.0% of payroll for General and 17.9% of payroll for Safety) in the June 30, 2019 valuation.
- Ref: Pg. 36* 2. The ratio of the Valuation Value of Assets to Actuarial Accrued Liabilities increased slightly from 87.8% to 88.0%. The ratio of the Market Value of Assets to the Actuarial Accrued Liability increased from 88.0% to 89.1%. The Association's UAAL (which is based on the Valuation Value of Assets) has increased from \$747 million to \$775 million. The increase in UAAL is primarily due to the investment return (after "smoothing") less than the 7.25% return assumption and actual contributions less than expected during fiscal year 2018/2019, offset to some extent by contributions paying down a portion of the UAAL. A complete reconciliation of the Association's UAAL is provided in *Section 2, Subsection E*.
- Ref: Pg. 28*
- Ref: Pg. 30* 3. The average employer contribution rate calculated in this valuation decreased from 28.49% of payroll to 23.32% of payroll. This decrease is primarily due to the 2004 UAAL layer becoming fully amortized, partially offset by the investment return (after "smoothing") less than the 7.25% return assumption and actual contributions less than expected during fiscal year 2018/2019. A complete reconciliation of the Association's average employer rate is provided in *Section 2, Subsection F*.
- 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. 31* 4. The average member rate calculated in this valuation has decreased from 10.05% of payroll to 9.99% of payroll. This change was due to changes in member demographics amongst the tiers. A complete reconciliation of the Association's average member rate is provided in *Section 2, Subsection F*.
- Ref: Pg. 19* 5. The total unrecognized net investment gain as of June 30, 2019 is about \$70.8 million as compared to an unrecognized net investment gain of \$11.3 million in the previous valuation. This deferred investment gain of \$70.8 million will be recognized in the determination of the Actuarial Value of Assets for funding purposes in the next few years as shown in *Section 2, Subsection B*.

The net deferred gains of \$70.8 million represent about 1.2% of the Market Value of Assets. Unless offset by future investment losses or other unfavorable experience, the recognition of the \$70.8 million market gains is expected to have an impact on the Association's future funded ratio and contribution rate requirements. This potential impact may be illustrated as follows:

- a. If the net deferred gains in this year's valuation were recognized immediately and entirely in the Valuation Value of Assets, the funded ratio would increase from 88.0% to 89.1%.

For comparison purposes, if all the net deferred gains in the June 30, 2018 valuation had been recognized immediately in the June 30, 2018 valuation, the funded ratio in last year's valuation would have increased from 87.8% to 88.0%.

- b. If the net deferred gains in this year's valuation were recognized immediately and entirely in the Valuation Value of Assets, the average employer contribution rate would decrease from 23.32% to 22.52% of payroll.

For comparison purposes, if all the net deferred gains in the June 30, 2018 valuation had been recognized immediately in the June 30, 2018 valuation, the average employer contribution rate in last year's valuation would have decreased from 28.49% to 28.36% of payroll.

- 6. The non-vested supplemental benefit of \$27.50 per month paid to retirees and their survivors has been terminated upon issuance of the June 2019 payment. This was due to the depletion of the funds in this reserve.
- 7. The actuarial valuation report as of June 30, 2019 is based on financial information as of that date. Changes in the assets subsequent to that date, to the extent that they exist, 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.
- 8. The Actuarial Standards Board approved a new Actuarial Standard of Practice No. 51 (ASOP 51) regarding risk assessment. ASOP 51 is effective with VCERA's June 30, 2019 actuarial valuation. ASOP 51 requires actuaries to identify and assess risks that "may reasonably be anticipated to significantly affect the plan's future financial condition". Examples of key risks listed that are particularly relevant to VCERA are asset/liability mismatch risk, investment risk, and longevity risk. The standard also requires an actuary to consider if there is any ongoing contribution risk to the plan, however it does not require the actuary to evaluate the particular ability or willingness of contributing entities to make contributions when due, nor does it require the actuary to assess the likelihood or consequences of future changes in applicable law.

The actuary's initial assessment can be strictly a qualitative discussion about potential adverse experience and the possible effect on future results, but it may also include quantitative numerical demonstrations where informative. The actuary is also encouraged to consider a recommendation as to whether a more detailed assessment or risk report would be significantly beneficial for the intended user in order to examine particular financial risks. When making that recommendation, the actuary will take into account such factors as the plan's design, risk profile, maturity, size, funded status, asset allocation, cash flow, possible insolvency and current market conditions.

Because the actuarial valuation results are dependent on a fixed set of assumptions and data as of a specific date, there is risk that emerging results may differ, perhaps significantly, as actual experience is fluid and will not exactly track current assumptions. This potential divergence may have a significant impact on the future financial condition of the plan. We have not been engaged to perform a detailed analysis of the potential range of the impact of risk relative to the Association's future financial condition, but have included a brief discussion of key risks that may affect the Association in *Section 2, Subsection J*. A more detailed assessment of the risks tailored to specific interests or concerns of the Board could provide the Board with a

better understanding of the inherent risks. This assessment would further discuss and highlight information and risks particular to VCERA such as detailed historical experience and key events, growing plan maturity, heightened contribution sensitivity to asset and liability changes, and projected sensitivity to potential future investment returns through selected scenario or stress test projections.

Summary of Key Valuation Results

		June 30, 2019		June 30, 2018	
		Total Rate	Estimated Annual Dollar Amount ⁽¹⁾ (\$ in '000s)	Total Rate	Estimated Annual Dollar Amount ⁽¹⁾ (\$ in '000s)
Employer Contribution Rates: ⁽²⁾	• General Tier 1	24.26%	\$1,108	25.75%	\$1,494
	• General Tier 2	14.83%	31,870	17.04%	36,054
	• General PEPRA Tier 2	14.94%	10,610	17.09%	10,256
	• General Tier 2 w/ COLA ⁽³⁾	21.46%	43,625	23.13%	48,620
	• General PEPRA Tier 2 w/ COLA ⁽³⁾	21.63%	22,894	23.23%	21,740
	• General Combined	18.36%	110,107	20.34%	118,164
	• Safety	39.78%	60,458	55.20%	84,241
	• Safety PEPRA	37.32%	12,605	52.89%	14,345
	• Safety Combined	39.33%	73,063	54.85%	98,586
All Categories Combined		23.32%	\$183,170	28.49%	\$216,750
Average Member Contribution Rates: ⁽²⁾⁽⁴⁾⁽⁵⁾	• General Tier 1	10.32%	\$471	9.98%	\$579
	• General Tier 2	7.38%	15,862	7.45%	15,758
	• General PEPRA Tier 2	7.49%	5,319	7.50%	4,501
	• General Tier 2 w/ COLA ⁽³⁾	10.01%	20,349	10.08%	21,185
	• General PEPRA Tier 2 w/ COLA ⁽³⁾	10.12%	10,711	10.13%	9,480
	• Safety	13.73%	20,867	13.77%	21,015
	• Safety PEPRA	14.43%	4,874	14.42%	3,911
All Categories Combined		9.99%	\$78,453	10.05%	\$76,429

⁽¹⁾ Based on projected compensation for each year.

⁽²⁾ Before reflection of any member rate that may be "picked-up" by the employer. Contributions are assumed to be paid throughout the year.

⁽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 are 1.00 for General Tier 1, Tier 2 (non-PEPRA) and Safety (non-PEPRA) for both June 30, 2019 and June 30, 2018.

⁽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. Individual member rates can be found in Section 4, Exhibit III.

Summary of Key Valuation Results (continued)

		June 30, 2019 (\$ in '000s)	June 30, 2018 (\$ in '000s)
Actuarial Accrued Liability as of June 30:	<ul style="list-style-type: none"> Retired members and beneficiaries Inactive vested members⁽¹⁾ Active members Total Actuarial Accrued Liability Normal Cost for plan year beginning June 30 	\$3,682,653 184,277 2,572,458 6,439,388 154,954	\$3,476,620 171,131 2,482,007 6,129,758 150,769
Assets as of June 30:	<ul style="list-style-type: none"> Market Value of Assets (MVA) Valuation Value of Assets (VVA)⁽²⁾ 	\$5,735,360 5,664,526	\$5,396,463 5,382,777
Funded status as of June 30:	<ul style="list-style-type: none"> Unfunded Actuarial Accrued Liability on Market Value of Assets basis Funded percentage on MVA basis Unfunded Actuarial Accrued Liability on Valuation Value of Assets basis Funded percentage on VVA basis 	\$704,028 89.07% \$774,862 87.97%	\$733,295 88.04% \$746,981 87.81%
Key assumptions:	<ul style="list-style-type: none"> Net investment return Price inflation Payroll growth 	7.25% 2.75% 3.25%	7.25% 2.75% 3.25%

⁽¹⁾ Includes inactive members with member contributions on deposit.⁽²⁾ Excludes non-valuation reserves.

Summary of Key Valuation Results (continued)

		June 30, 2019	June 30, 2018	Change From Prior Year
Demographic data as of June 30:	Active Members:			
	• Number of members	8,696	8,611	1.0%
	• Average age	44.9	44.9	0.0
	• Average service	11.3	11.3	0.0
	• Total projected compensation	\$785,402,037	\$760,815,215	3.2%
	• Average projected compensation	\$90,318	\$88,354	2.2%
	Retired Members and Beneficiaries:			
	• Number of members:			
	– Service retired	5,428	5,234	3.7%
	– Disability retired	817	819	-0.2%
	– Beneficiaries	1,035	985	5.1%
	– Total	7,280	7,038	3.4%
	• Average age	70.5	70.3	0.2
	• Average monthly benefit	\$3,329	\$3,230	3.1%
	Inactive Vested Members:			
	• Number of members ⁽¹⁾	3,041	2,909	4.5%
	• Average Age	46.0	46.0	0.0
	Total Members:	19,017	18,558	2.5%

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

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 a 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. Even where they appear precise, outside factors may change how they operate. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan summary included in our 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 the Association. 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	The valuation is based on the Market Value of Assets as of the valuation date, as provided by the Association. The Association uses a “Valuation Value of Assets” that differs from market value to gradually reflect six-month changes in the Market Value of Assets in determining the contribution requirements.
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, termination, 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 actuarial valuation is prepared at the request of the Association. 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 cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan. 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; and
 - Changes in statutory provisions.
- 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 Association 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 the plan, it is not a fiduciary in its capacity as actuaries and consultants with respect to the plan.

Section 2: Actuarial Valuation Results

A. Member Data

The Actuarial Valuation and Review considers the number and demographic characteristics of covered members, including active members, inactive vested 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.*

MEMBER POPULATION: 2010 – 2019

Year Ended June 30	Active Members	Inactive Vested Members ⁽¹⁾	Retired Members and Beneficiaries	Total Non-Actives	Ratio of Non-Actives to Actives	Ratio of Retired Members and Beneficiaries to Actives
2010	8,003	2,040	5,267	7,307	0.91	0.66
2011	8,040	2,097	5,481	7,578	0.94	0.68
2012	8,019	2,161	5,658	7,819	0.98	0.71
2013	8,068	2,249	5,888	8,137	1.01	0.73
2014	8,210	2,339	6,121	8,460	1.03	0.75
2015	8,299	2,441	6,338	8,779	1.06	0.76
2016	8,509	2,639	6,539	9,178	1.08	0.77
2017	8,636	2,809	6,766	9,575	1.11	0.78
2018	8,611	2,909	7,038	9,947	1.16	0.82
2019	8,696	3,041	7,280	10,321	1.19	0.84

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

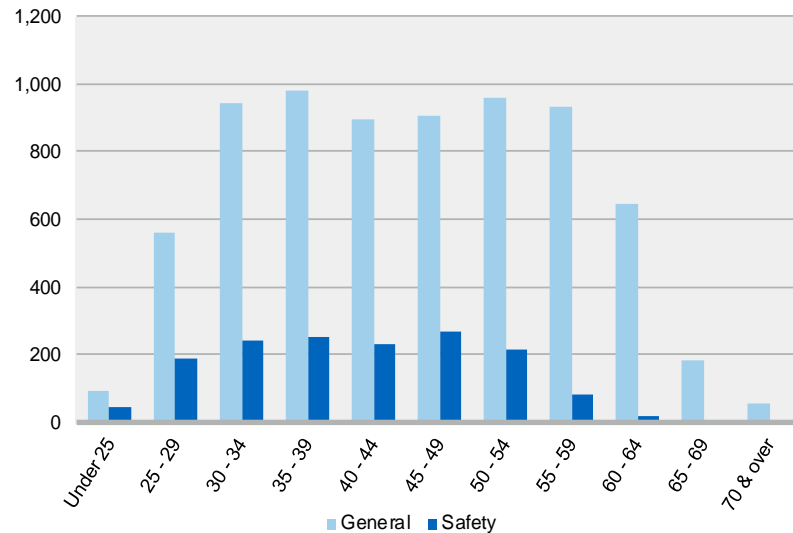
Active Members

Plan costs are affected by the age, years of service and compensation of active members. In this year's valuation, there were 8,696 active members with an average age of 44.9, average years of service of 11.3 years and average compensation of \$90,318. The 8,611 active members in the prior valuation had an average age of 44.9, average service of 11.3 years and average compensation of \$88,354.

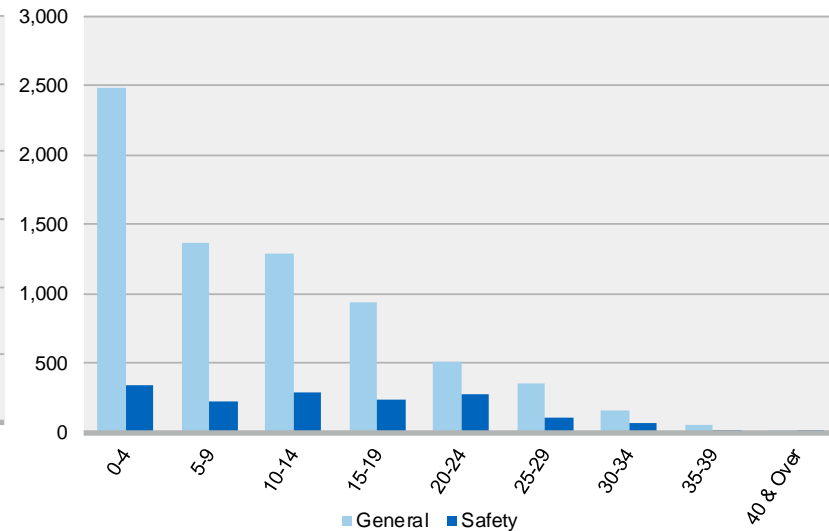
Among the active members, there were none with unknown age information.

Distribution of Active Participants as of June 30, 2019

ACTIVES BY AGE



ACTIVES BY YEARS OF SERVICE



Inactive Members

In this year's valuation, there were 3,041 members with a vested right to a deferred or immediate vested benefit or entitled to a return of their member contributions versus 2,909 in the prior valuation.

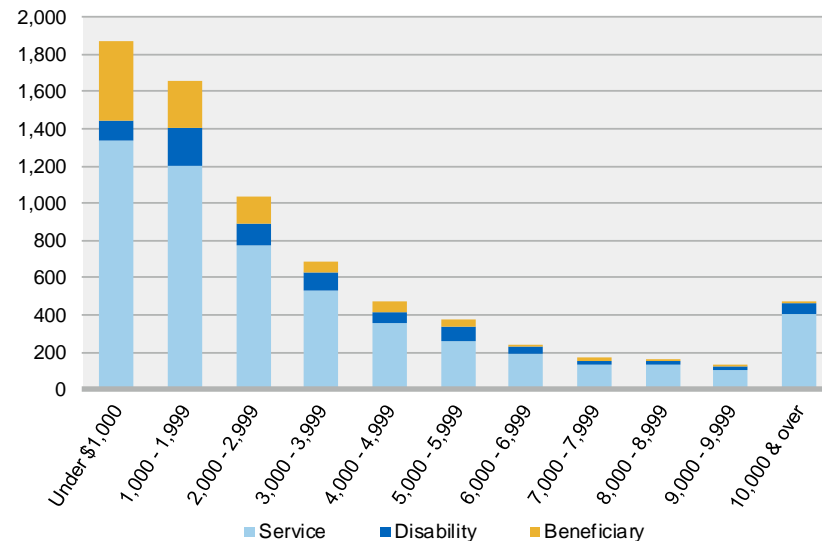
Retired Members and Beneficiaries

As of June 30, 2019, 6,245 retired members and 1,035 beneficiaries were receiving total monthly benefits of \$24,234,476. For comparison, in the previous valuation, there were 6,053 retired members and 985 beneficiaries receiving monthly benefits of \$22,732,545. These monthly benefits exclude any benefits for vested fixed supplemental and non-vested supplemental benefit amounts.

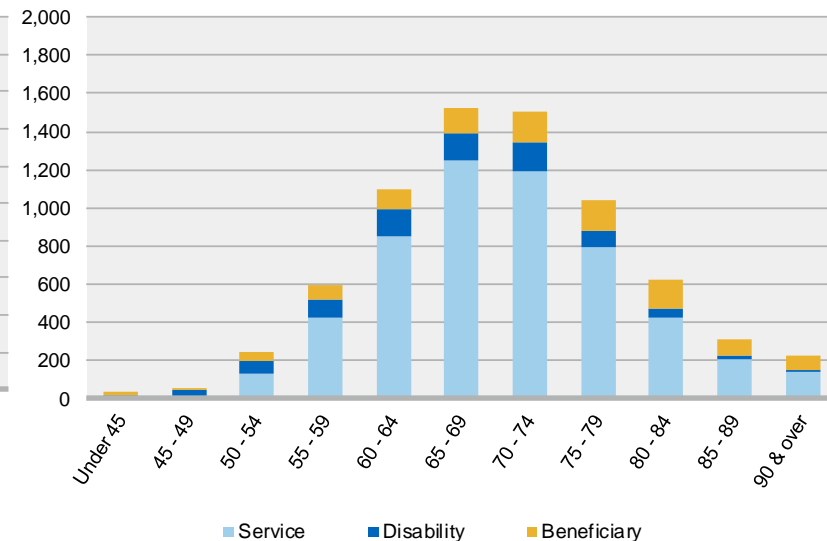
As of June 30, 2019, the average monthly benefit for retired members and beneficiaries is \$3,329, compared to \$3,230 in the previous valuation. The average age for retired members and beneficiaries is 70.5 in the current valuation, compared with 70.3 in the prior valuation.

Distribution of Retired Members and Beneficiaries as of June 30, 2019

RETIRED MEMBERS AND BENEFICIARIES BY
TYPE AND MONTHLY AMOUNT



RETIRED MEMBERS AND BENEFICIARIES BY
TYPE AND AGE



Historical Plan Population

The chart below demonstrates the progression of the active population over the last ten years. The chart also shows the growth among the retired population over the same time period.

MEMBER STATISTICS: 2010 – 2019

Year Ended June 30	Active Participants			Retired Members and Beneficiaries		
	Count	Average Age	Average Service	Count	Average Age	Average Monthly Amount
2010	8,003	45.0	10.6	5,267	68.2	\$2,572
2011	8,040	45.1	10.9	5,481	68.5	2,678
2012	8,019	45.4	11.1	5,658	68.9	2,769
2013	8,068	45.4	11.2	5,888	69.1	2,862
2014	8,210	45.3	11.2	6,121	69.4	2,897
2015	8,299	45.2	11.2	6,338	69.6	2,936
2016	8,509	45.0	11.2	6,539	69.8	3,024
2017	8,636	45.0	11.2	6,766	70.2	3,108
2018	8,611	44.9	11.3	7,038	70.3	3,230
2019	8,696	44.9	11.3	7,280	70.5	3,329

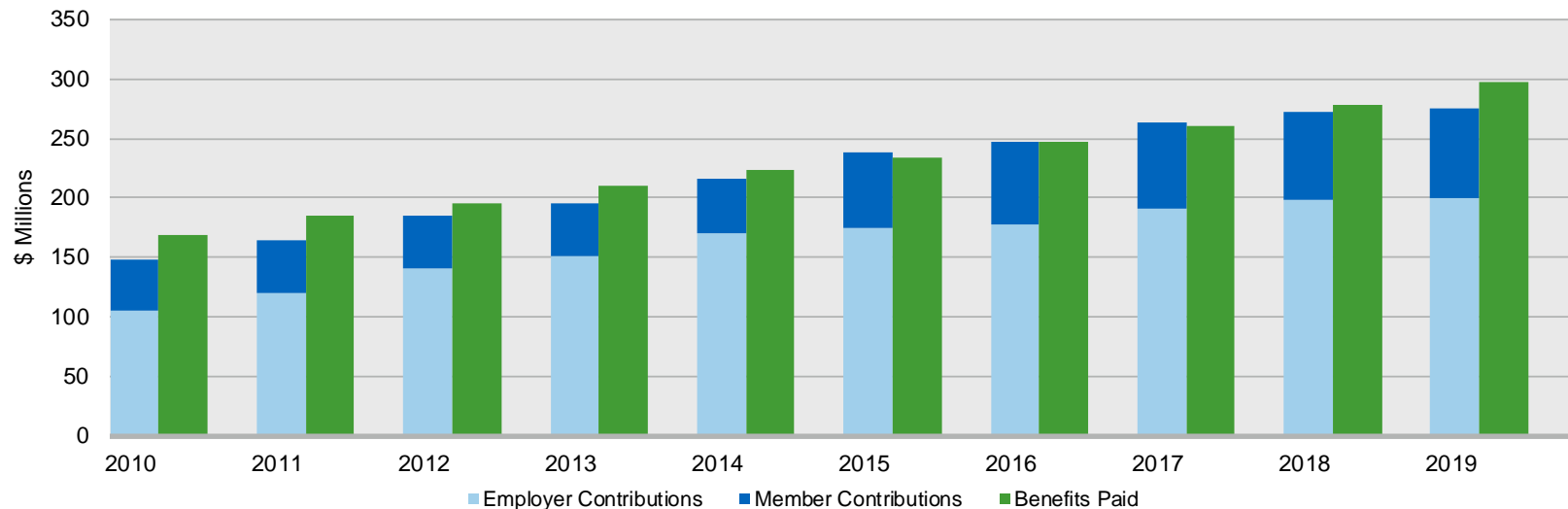
B. Financial Information

Retirement plan funding anticipates that, over the long term, both contributions and 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.

Additional financial information, including a summary of transactions for the valuation year, is presented in *Section 3, Exhibits D, E, F and G*.

It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board 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 valuation 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.

COMPARISON OF CONTRIBUTIONS WITH BENEFITS FOR YEARS ENDED JUNE 30, 2010 – 2019



DETERMINATION OF ACTUARIAL VALUE OF ASSETS

1	Market Value of Assets					\$5,735,360,159
2	Calculation of unrecognized return	Actual Return	Expected Return	Investment Gain / (Loss)	Percent Deferred	Unrecognized Amount⁽¹⁾
a)	Six months ended June 30, 2014	\$249,072,466	\$155,947,487	\$93,124,979	0%	\$0
b)	Six months ended December 31, 2014	1,675,147	165,579,616	(163,904,469)	0	0
c)	Six months ended June 30, 2015	83,151,071	165,743,013	(82,591,942)	10	(8,259,194)
d)	Six months ended December 31, 2015	(131,432,997)	169,038,879	(300,471,876)	20	(60,094,375)
e)	Six months ended June 30, 2016	152,698,097	163,960,894	(11,262,797)	30	(3,378,839)
f)	Six months ended December 31, 2016	223,970,859	164,370,060	59,600,799	40	23,840,320
g)	Six months ended June 30, 2017	351,030,738	172,814,126	178,216,612	50	89,108,306
h)	Six months ended December 31, 2017	399,470,558	185,992,710	213,477,848	60	128,086,709
i)	Six months ended June 30, 2018	38,736,481	200,860,519	(162,124,038)	70	(113,486,827)
j)	Six months ended December 31, 2018	(247,595,921)	201,992,652	(449,588,573)	80	(359,670,859)
k)	Six months ended June 30, 2019	608,522,342	192,294,765	416,227,577	90	<u>374,604,819</u>
l)	Total unrecognized return ⁽²⁾					\$70,750,060
3	Actuarial Value of Assets 1 – 2l					<u>\$5,664,610,099</u>
4	Actuarial Value of Assets as a percentage of Market Value of Assets 3 / 1					98.8%
5	Non-valuation reserves:					
a)	Non-vested Supplemental Benefit					\$84,037
b)	Statutory Contingency					<u>0</u>
c)	Subtotal					\$84,037
6	Valuation Value of Assets 3 – 5c					<u>\$5,664,526,062</u>

Note: Results may be slightly off due to rounding.

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

⁽²⁾ Deferred return as of June 30, 2019 recognized in each of the next five years:

(a)	Amount recognized on June 30, 2020	\$(19,444,084)
(b)	Amount recognized on June 30, 2021	50,035,765
(c)	Amount recognized on June 30, 2022	21,420,224
(d)	Amount recognized on June 30, 2023	(22,884,603)
(e)	Amount recognized on June 30, 2024	<u>41,622,758</u>
(f)	Subtotal	\$70,750,060

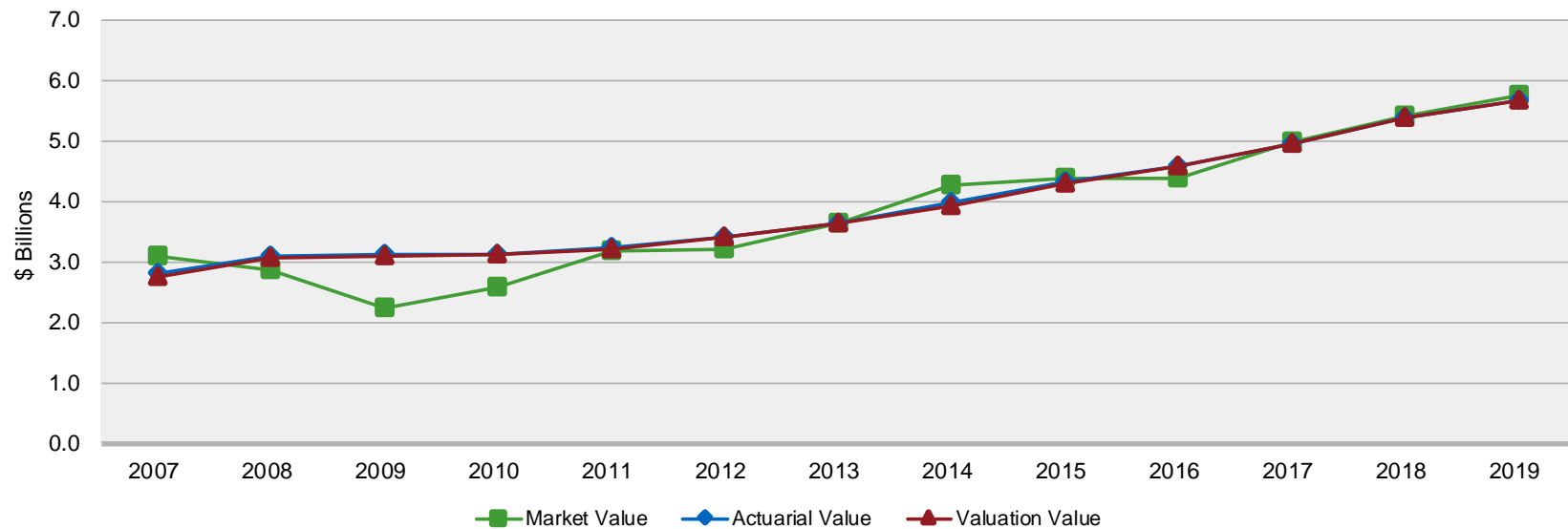
ALLOCATION OF VALUATION VALUE OF ASSETS AS OF JUNE 30, 2019

	Allocated Assets for Funding			
	General Tier 1	General Tier 2	Safety	Total
1 Allocated Assets as of Beginning of Plan Year	\$444,059,129	\$2,501,003,373	\$2,437,714,573	\$5,382,777,075
2 Member Contributions	498,056	46,435,440	25,464,083	72,397,579
3 Member Buybacks	58,374	1,345,371	483,644	1,887,389
4 Employer Pick-up Contributions Credited to Member Account	21,154	836,923	14,211	872,288
5 Employer Contributions	1,327,920	102,159,626	96,444,952	199,932,498
6 Refunds of Member Contributions and Death Benefits Paid	312,722	3,615,974	414,534	4,343,230
7 Retiree Benefit Payments Excluding Non-vested Supplemental Payments	<u>79,938,872</u>	<u>94,082,611</u>	<u>116,469,040</u>	<u>290,490,523</u>
8 Subtotal (Items 1 + 2 + 3 + 4 + 5 – 6 – 7)	\$365,713,039	\$2,554,082,148	\$2,443,237,889	\$5,363,033,076
9 Weighted Average Fund Balance: Item 1 + ½ of (Items 2, 3, 4, 5) – ½ of (Items 6, 7)	404,886,084	2,527,542,761	2,440,476,231	5,372,905,076
10 Earnings Allocated in Proportion to Item 9	<u>22,719,611</u>	<u>141,829,495</u>	<u>136,943,880</u>	<u>301,492,986</u>
11 Valuation Value of Assets (Items 8 + 10)	\$388,432,650	\$2,695,911,643	\$2,580,181,769	\$5,664,526,062

Note: Results may be slightly off due to rounding.

The Market Value, Actuarial Value and Valuation Value of Assets are representations of the plan's financial status. As investment gains and losses are gradually taken into account, the Actuarial Value of Assets tracks the Market Value of Assets. The Valuation Value of Assets is generally the Actuarial Value, excluding any non-valuation reserves. The Valuation Value of Assets is significant because the plan'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.

MARKET VALUE, ACTUARIAL VALUE, AND VALUATION VALUE OF ASSETS AS OF JUNE 30, 2007 – 2019



C. Actuarial Experience

To calculate any actuarially determined 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 actuarially determined contribution will decrease from the previous year. On the other hand, the actuarially determined contribution 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. There are no assumption changes reflected in this report.

The net total loss is \$120.8 million, which includes \$88.0 million from investment losses, a loss of \$18.7 million from contribution experience and \$14.0 million in losses from all other sources. The net experience variation from individual sources other than investments and contributions was 0.2% of the Actuarial Accrued Liability. A discussion of the major components of the actuarial experience is on the following pages.

ACTUARIAL EXPERIENCE FOR YEAR ENDED JUNE 30, 2019

1	Net loss from investments ⁽¹⁾	\$(88,043,000)
2	Net loss from contribution experience	(18,733,000)
3	Net loss from other experience ⁽²⁾	<u>(14,038,000)</u>
4	Net experience loss: 1 + 2 + 3	\$(120,814,000)

⁽¹⁾ Details on next page.

⁽²⁾ See *Subsection E* for further details. Does not include the effect of plan or assumption changes, if any.

Investment Experience

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 the plan's investment policy. The rate of return on the Market Value of Assets was 6.70% for the year ended June 30, 2019.

For valuation purposes, the assumed rate of return on the Valuation Value of Assets is 7.25%. The actual rate of return on a valuation basis for the 2019 plan year was 5.61%. Since the actual return for the year was less than the assumed return, the plan experienced an actuarial loss during the year ended June 30, 2019 with regard to its investments.

INVESTMENT EXPERIENCE FOR YEAR ENDED JUNE 30, 2019

	Market Value	Actuarial Value	Valuation Value
1 Net investment income	\$360,926,420	\$301,492,986	\$301,492,986
2 Average value of assets	5,385,448,131	5,374,131,505	5,372,905,076
3 Rate of return: 1 ÷ 2	6.70%	5.61%	5.61%
4 Assumed rate of return	7.25%	7.25%	7.25%
5 Expected investment income: 2 x 4	<u>\$390,444,989</u>	<u>\$389,624,534</u>	<u>\$389,535,618</u>
6 Actuarial gain/(loss): 1 – 5	<u>\$(29,518,570)</u>	<u>\$(88,131,548)</u>	<u>\$(88,042,632)</u>

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 and valuation basis compared to the actual market value investment return for the last ten years, including averages over select time periods.

INVESTMENT RETURN – MARKET VALUE, ACTUARIAL VALUE AND VALUATION VALUE: 2010 - 2019

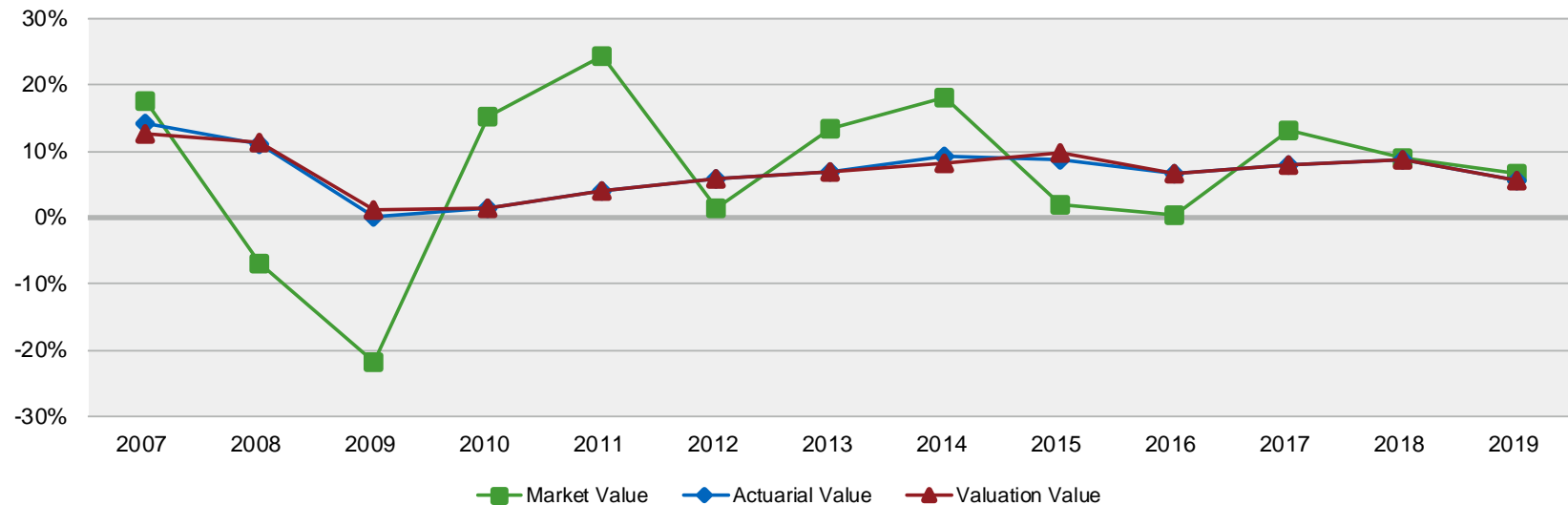
Year Ended June 30	Market Value Investment Return ⁽¹⁾		Actuarial Value Investment Return ⁽¹⁾		Valuation Value Investment Return ⁽¹⁾	
	Amount	Percent	Amount	Percent	Amount	Percent
2010	\$343,005,717	15.33%	\$43,756,165	1.41%	\$43,756,185	1.42%
2011	622,940,028	24.34%	121,406,541	3.89%	121,406,541	3.91%
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%
2018	438,207,040	8.83%	427,484,168	8.62%	427,484,169	8.62%
2019	360,926,420	6.70%	301,492,986	5.61%	301,492,986	5.61%
Most recent five-year geometric average return		6.34%	7.41%		7.62%	
Most recent ten-year geometric average return		9.39%	6.66%		6.69%	

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

⁽¹⁾ Net of administrative and investment expenses.

Subsection B described the actuarial asset valuation method that gradually recognizes fluctuations in the market value rate of return. The goal of this is to stabilize the actuarial rate of return and to produce more level pension plan costs.

MARKET, ACTUARIAL AND VALUATION RATES OF RETURN FOR YEARS ENDING JUNE 30, 2007 – 2019



Contributions

Contributions for the year ended June 30, 2019 totaled \$275.1 million, compared to the projected amount of \$293.2 million. This resulted in a loss of \$18.7 million from contribution experience for the year, when adjusted for timing.

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 participants,
- retirement experience (earlier or later than projected),
- mortality (more or fewer deaths than projected),
- the number of disability retirements (more or fewer than projected),
- salary increases (greater or smaller than projected), and
- cost-of-living adjustments (COLAs) higher or lower than anticipated.

The net loss from this other experience for the year ended June 30, 2019 amounted to \$14.0 million, which is 0.2% of the Actuarial Accrued Liability. See *Subsection E* for a detailed development of the Unfunded Actuarial Accrued Liability.

D. Other Changes in the Actuarial Accrued Liability

The Actuarial Accrued Liability as of June 30, 2019 is \$6.4 billion, an increase of \$0.3 billion, or 5.1%, from the Actuarial Accrued Liability as of the prior valuation date. The liability is expected to grow each year with Normal Cost and interest, and to decline due to benefit payments made. Additional fluctuations can occur due to actual experience that differs from expected (as discussed in the previous subsection).

Actuarial Assumptions

- There are no assumption changes reflected in this valuation report.
- Details on actuarial assumptions and methods are in *Section 4, Exhibit I*.

Plan Provisions

- There were no changes in plan provisions since the prior valuation. Note that the non-vested supplemental benefit of \$27.50 was terminated after the June 2019 payment due to the depletion of the funds in this reserve. As described in *Section 4, Exhibit II on page 91*, this benefit has never been valued in the actuarial valuation.
- A summary of plan provisions is in *Section 4, Exhibit II*.

E. Development of Unfunded Actuarial Accrued Liability**DEVELOPMENT FOR YEAR ENDED JUNE 30, 2019**

1	Unfunded Actuarial Accrued Liability at beginning of year	\$746,981,000
2	Total Normal Cost at middle of year	150,769,000
3	Expected employer and member contributions	(293,179,000)
4	Interest	<u>49,477,000</u>
5	Expected Unfunded Actuarial Accrued Liability at end of year	\$654,048,000
6	Changes due to:	
	a) Investment return less than expected (after "smoothing")	\$88,043,000
	b) Actual contributions less than expected	18,733,000
	c) COLA increases higher than expected	4,802,000
	d) Individual salary increases lower than expected	(2,944,000)
	e) Retiree mortality experience loss (fewer deaths than expected)	2,825,000
	f) Other experience loss	<u>9,355,000</u>
	Total changes	<u>\$120,814,000</u>
7	Unfunded Actuarial Accrued Liability at end of year	<u>\$774,862,000</u>

Note: The sum of items 6c, 6d, 6e and 6f equals the "Net loss from other experience" shown in Subsection C.

F. Recommended Contribution

The recommended contribution is equal to the employer Normal Cost payment and a payment on the Unfunded Actuarial Accrued Liability. As of June 30, 2019, the average recommended employer contribution is 23.32% of compensation.

Under the current funding policy, the Association's required contribution rate decreased as a percentage of pay. This was mainly the result of the effect of the 2004 UAAL amortization layer becoming fully amortized, partially offset by the investment return (after "smoothing") less than the 7.25% return assumption and actual contributions less than expected during fiscal year 2018/2019.

The Board sets the funding policy used to calculate the recommended contribution based on layered amortization periods. See *Section 4, Exhibit I* for further details on the funding policy.

The contribution requirement as of June 30, 2019 is based on the data previously described, the actuarial assumptions and plan provisions described in *Section 4*, including all changes affecting future costs adopted at the time of the actuarial valuation, actuarial gains and losses, and changes in the actuarial assumptions.

AVERAGE RECOMMENDED EMPLOYER CONTRIBUTION FOR YEAR ENDING JUNE 30

All Tiers Combined		June 30, 2019		June 30, 2018	
		Amount (\$ in '000s)	% of Projected Compensation	Amount (\$ in '000s)	% of Projected Compensation
1	Total Normal Cost	\$154,954	19.73%	\$150,769	19.82%
2	Expected member Normal Cost contributions	<u>(78,453)</u>	<u>(9.99%)</u>	<u>(76,429)</u>	<u>(10.05%)</u>
3	Employer Normal Cost: 1 + 2	\$76,501	9.74%	\$74,340	9.77%
4	Actuarial Accrued Liability	6,439,388		6,129,758	
5	Valuation Value of Assets	<u>5,664,526</u>		<u>5,382,777</u>	
6	Unfunded Actuarial Accrued Liability (UAAL): 4 – 5	\$774,862		\$746,981	
7	Payment on UAAL	\$106,669	<u>13.58%</u>	\$142,410	<u>18.72%</u>
8	Total average recommended employer contribution: 3 + 7	\$183,170	<u>23.32%</u>	\$216,750	<u>28.49%</u>
9	Projected compensation	\$785,403		\$760,815	

Note: Contributions are assumed to be paid at the middle of the year.

Reconciliation of Average Recommended Employer Contribution Rate

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

RECONCILIATION OF AVERAGE RECOMMENDED EMPLOYER CONTRIBUTION RATE FROM JUNE 30, 2018 TO JUNE 30, 2019

	Contribution Rate	Estimated Annual Dollar Amount ⁽¹⁾ (\$ in '000s)
Average Recommended Employer Contribution as of June 30, 2018	28.49%	\$216,750
• Effect of investment return less than expected (after "smoothing")	1.00%	\$7,854
• Effect of actual contributions less than expected	0.21%	1,649
• Effect of COLA increases higher than expected	0.05%	393
• Effect of individual salary increases lower than expected	(0.03%)	(236)
• Effect of amortizing prior year's UAAL over a smaller than expected projected total payroll	0.00%	0
• Effect of retiree mortality experience loss (fewer deaths than expected)	0.03%	236
• Effect of changes in demographics of members amongst tiers on Normal Cost	(0.03%)	(236)
• Effect of the 2004 UAAL layer being fully amortized ⁽²⁾	(6.51%)	(51,130)
• Effect of other experience loss ⁽³⁾	<u>0.11%</u>	<u>7,890</u>
Total change	(5.17%)	\$(33,580)
Average Recommended Employer Contribution as of June 30, 2019	23.32%	\$183,170

⁽¹⁾ Based on projected compensation for each year.

⁽²⁾ The restarted UAAL amortization layers established as of June 30, 2004 has been fully paid off as of the June 30, 2019 valuation. Reduction is 3.0% of payroll for General and 17.9% of payroll for Safety.

⁽³⁾ Other differences in actual versus expected experience including (but not limited to) retirement, disability, termination and in-service redemption experience. Estimated annual dollar cost also reflects change in payroll from prior valuation.

Reconciliation of Average Recommended Member Contribution Rate

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

RECONCILIATION OF AVERAGE RECOMMENDED MEMBER CONTRIBUTION RATE FROM JUNE 30, 2018 TO JUNE 30, 2019

	Contribution Rate ⁽¹⁾	Estimated Annual Dollar Amount ⁽²⁾ (\$ in '000s)
Average Recommended Member Contribution as of June 30, 2018	10.05%	\$76,429
• Effect of changes in member demographics amongst tiers ⁽³⁾	<u>(0.06%)</u>	<u>2,024</u>
Total change	(0.06%)	\$2,024
Average Recommended Member Contribution as of June 30, 2019	9.99%	\$78,453

⁽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.

⁽²⁾ Based on projected compensation for each year.

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

Recommended Employer Contribution Rates

	June 30, 2019 Actuarial Valuation Recommended Rates for FY 2020-21				June 30, 2018 Actuarial Valuation Recommended Rates for FY 2019-20			
	Basic	COLA	Total	Estimated Annual Dollar Amount ⁽¹⁾ (\$ in '000s)	Basic	COLA	Total	Estimated Annual Dollar Amount ⁽¹⁾ (\$ in '000s)
General Tier 1 Members								
Normal Cost ⁽²⁾	8.04%	2.56%	10.60%	\$484	7.95%	2.55%	10.50%	\$609
UAAL ⁽³⁾	<u>7.45%</u>	<u>6.21%</u>	<u>13.66%</u>	<u>624</u>	<u>9.59%</u>	<u>5.66%</u>	<u>15.25%</u>	<u>885</u>
Total Contributions	15.49%	8.77%	24.26%	\$1,108	17.54%	8.21%	25.75%	\$1,494
General Tier 2 Members								
Normal Cost	7.38%	0.00%	7.38%	\$15,862	7.45%	0.00%	7.45%	\$15,758
UAAL ⁽³⁾	<u>7.45%</u>	<u>0.00%</u>	<u>7.45%</u>	<u>16,008</u>	<u>9.59%</u>	<u>0.00%</u>	<u>9.59%</u>	<u>20,296</u>
Total Contributions	14.83%	0.00%	14.83%	\$31,870	17.04%	0.00%	17.04%	\$36,054
General PEPRA Tier 2 Members								
Normal Cost	7.49%	0.00%	7.49%	\$5,319	7.50%	0.00%	7.50%	\$4,501
UAAL ⁽³⁾	<u>7.45%</u>	<u>0.00%</u>	<u>7.45%</u>	<u>5,291</u>	<u>9.59%</u>	<u>0.00%</u>	<u>9.59%</u>	<u>5,755</u>
Total Contributions	14.94%	0.00%	14.94%	\$10,610	17.09%	0.00%	17.09%	\$10,256
General Tier 2 Members w/ COLA								
Normal Cost ⁽⁴⁾	7.38%	0.42%	7.80%	\$15,856	7.45%	0.43%	7.88%	\$16,561
UAAL ⁽³⁾⁽⁵⁾	<u>7.45%</u>	<u>6.21%</u>	<u>13.66%</u>	<u>27,769</u>	<u>9.59%</u>	<u>5.66%</u>	<u>15.25%</u>	<u>32,059</u>
Total Contributions	14.83%	6.63%	21.46%	\$43,625	17.04%	6.09%	23.13%	\$48,620
General PEPRA Tier 2 Members w/ COLA								
Normal Cost ⁽⁴⁾	7.49%	0.48%	7.97%	\$8,436	7.50%	0.48%	7.98%	\$7,468
UAAL ⁽³⁾⁽⁵⁾	<u>7.45%</u>	<u>6.21%</u>	<u>13.66%</u>	<u>14,458</u>	<u>9.59%</u>	<u>5.66%</u>	<u>15.25%</u>	<u>14,272</u>
Total Contributions	14.94%	6.69%	21.63%	\$22,894	17.09%	6.14%	23.23%	\$21,740
All General Members⁽⁶⁾								
Normal Cost	7.42%	0.24%	7.66%	\$45,957	7.47%	0.26%	7.73%	\$44,897
UAAL	<u>7.45%</u>	<u>3.25%</u>	<u>10.70%</u>	<u>64,150</u>	<u>9.59%</u>	<u>3.02%</u>	<u>12.61%</u>	<u>73,267</u>
Total Contributions	14.87%	3.49%	18.36%	\$110,107	17.06%	3.28%	20.34%	\$118,164

Note: Applicable footnotes are shown on next page.

Recommended Employer Contribution Rates (continued)

	June 30, 2019 Actuarial Valuation Recommended Rates for FY 2020-21				June 30, 2018 Actuarial Valuation Recommended Rates for FY 2019-20			
	Basic	COLA	Total	Estimated Annual Dollar Amount ⁽¹⁾ (\$ in '000s)	Basic	COLA	Total	Estimated Annual Dollar Amount ⁽¹⁾ (\$ in '000s)
Safety Members								
Normal Cost ⁽⁷⁾	12.15%	4.74%	16.89%	\$25,670	12.03%	4.70%	16.73%	\$25,532
UAAL	<u>46.49%</u>	<u>(23.60%)</u>	<u>22.89%</u>	<u>34,788</u>	<u>55.68%</u>	<u>(17.21%)</u>	<u>38.47%</u>	<u>58,709</u>
Total Contributions	58.64%	(18.86%)	39.78%	\$60,458	67.71%	(12.51%)	55.20%	\$84,241
Safety PEPRAs Members								
Normal Cost	10.34%	4.09%	14.43%	\$4,874	10.34%	4.08%	14.42%	\$3,911
UAAL	<u>46.49%</u>	<u>(23.60%)</u>	<u>22.89%</u>	<u>7,731</u>	<u>55.68%</u>	<u>(17.21%)</u>	<u>38.47%</u>	<u>10,434</u>
Total Contributions	56.83%	(19.51%)	37.32%	\$12,605	66.02%	(13.13%)	52.89%	\$14,345
All Safety Members⁽⁶⁾								
Normal Cost	11.82%	4.62%	16.44%	\$30,544	11.78%	4.60%	16.38%	\$29,443
UAAL	<u>46.49%</u>	<u>(23.60%)</u>	<u>22.89%</u>	<u>42,519</u>	<u>55.68%</u>	<u>(17.21%)</u>	<u>38.47%</u>	<u>69,143</u>
Total Contributions	58.31%	(18.98%)	39.33%	\$73,063	67.46%	(12.61%)	54.85%	\$98,586
All Categories Combined⁽⁶⁾								
Normal Cost	8.46%	1.28%	9.74%	\$76,501	8.49%	1.28%	9.77%	\$74,340
UAAL	<u>16.68%</u>	<u>(3.10%)</u>	<u>13.58%</u>	<u>106,669</u>	<u>20.48%</u>	<u>(1.76%)</u>	<u>18.72%</u>	<u>142,410</u>
Total Contributions	25.14%	(1.82%)	23.32%	\$183,170	28.97%	(0.48%)	28.49%	\$216,750

⁽¹⁾ Based on projected compensation for each year shown on next page.

⁽²⁾ The total General Tier 1 employer rate has been adjusted by 0.14% and 0.26% for June 30, 2019 and June 30, 2018, respectively, 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 PEPRAs Tier 2 without COLA).

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

⁽⁵⁾ Includes 0.71% and 0.66% in COLA UAAL costs for June 30, 2019 and June 30, 2018, respectively, 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 Safety employer rate has been adjusted by 1.58% and 1.48% for June 30, 2019 and June 30, 2018, respectively, to account for the cost associated with the cessation of member contributions after 30 years of service.

Recommended Employer Contribution Rates (continued)

The projected compensation that is used to estimate the annual dollar amount shown on the prior pages as of June 30, 2019 and June 30, 2018 are as follows:

	June 30, 2019 Projected Compensation (\$ in '000s)	June 30, 2018 Projected Compensation (\$ in '000s)
General Tier 1	\$4,566	\$5,803
General Tier 2	214,931	211,518
General PEPR Tier 2	71,020	60,012
General Tier 2 w/ COLA	203,288	210,167
General PEPR Tier 2 w/ COLA	105,842	93,581
Safety	151,981	152,611
Safety PEPR	<u>33,775</u>	<u>27,123</u>
Total	\$785,403	\$760,815

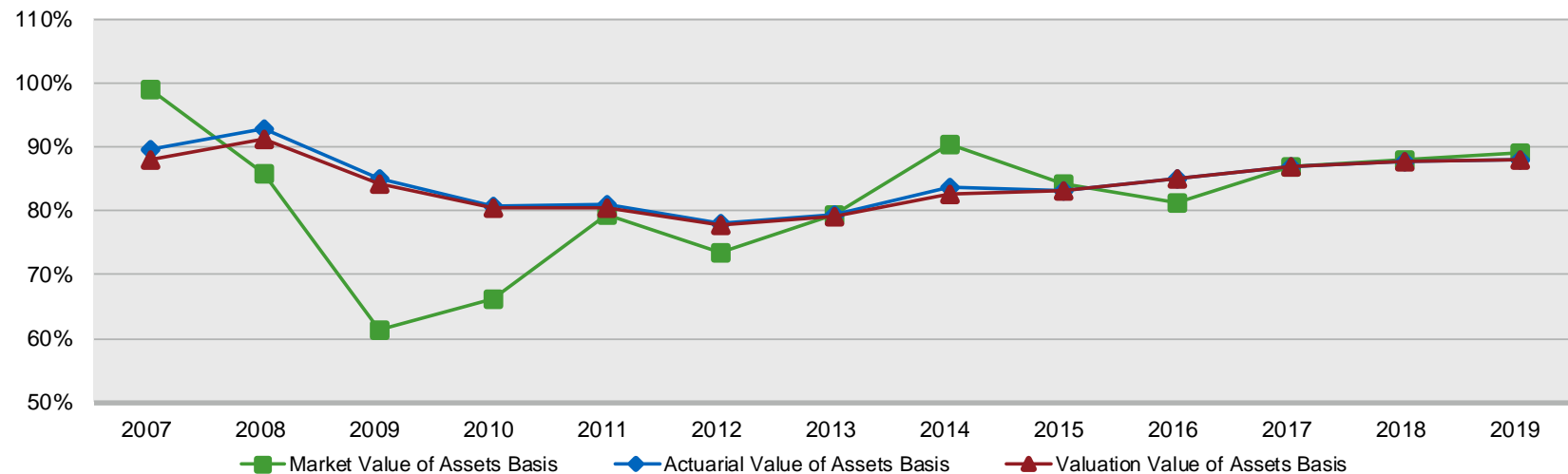
G. Funded Status

A commonly reported piece of information regarding the plan's financial status is the funded ratio. These ratios compare the Market, Actuarial and Valuation Value of Assets to the Actuarial Accrued Liability of the plan. Higher ratios indicate a relatively well-funded plan while lower ratios may indicate recent changes to actuarial assumptions, funding of the plan below actuarial requirements, poor asset performance, or a variety of other causes.

The chart below depicts a history of the funded ratio for the plan. The chart 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 Market, Actuarial or Valuation Value of Assets is used.

FUNDED RATIO FOR PLAN YEARS ENDING JUNE 30, 2007 – 2019



**SCHEDULE OF FUNDING PROGRESS
FOR PLAN YEARS ENDING JUNE 30, 2010 - 2019**

Actuarial Valuation Date as of June 30	Valuation Value of Assets (a)	Actuarial Accrued Liability (AAL) (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)
2010	\$3,115,984,000	\$3,877,443,000	\$761,459,000	80.36%	\$654,829,000	116.28%
2011	3,220,388,000	3,995,352,000	774,964,000	80.60%	637,037,000	121.65%
2012	3,397,360,000	4,373,227,000	975,867,000	77.69%	633,848,000	153.96%
2013	3,621,709,000	4,575,063,000	953,354,000	79.16%	638,764,000	149.25%
2014	3,910,801,000	4,731,016,000	820,215,000	82.66%	648,257,000	126.53%
2015	4,302,330,000	5,178,157,000	875,827,000	83.09%	678,705,000	129.04%
2016	4,585,713,000	5,398,756,000	813,043,000	84.94%	706,000,000	115.16%
2017	4,959,070,000	5,703,396,000	744,326,000	86.95%	744,917,000	99.92%
2018	5,382,777,000	6,129,758,000	746,981,000	87.81%	760,815,000	98.18%
2019	5,664,526,000	6,439,388,000	774,862,000	87.97%	785,403,000	98.66%

H. Actuarial Balance Sheet

An overview of the plan's funding is given by an Actuarial Balance Sheet. In this approach, first the amount and timing of all future payments that will be made by the plan for current participants is determined. Then these payments are discounted at the valuation interest rate to the date of the valuation, thereby determining the present value, referred to as the Actuarial Present Value of Future Benefits of the plan.

Second, this Actuarial Present Value of Future Benefits is compared to the assets. The "assets" for this purpose 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 amortization payments for the Unfunded Actuarial Accrued Liability.

ACTUARIAL BALANCE SHEET

	Year Ended	
	June 30, 2019 (\$ in '000s)	June 30, 2018 (\$ in '000s)
Actuarial Present Value of Future Benefits		
• Present value of benefits for retired members and beneficiaries	\$3,682,653	\$3,476,620
• Present value of benefits for inactive vested members ⁽¹⁾	184,277	171,131
• Present value of benefits for active members	<u>3,835,128</u>	<u>3,712,901</u>
Total Actuarial Present Value of Future Benefits	<u>\$7,702,058</u>	<u>\$7,360,652</u>
Current and future assets		
• Total Valuation Value of Assets	\$5,664,526	\$5,382,777
• Present value of future contributions by members	618,804	597,469
• Present value of future employer contributions for:		
» Entry age Normal Cost	643,866	633,425
» Unfunded Actuarial Accrued Liability	<u>774,862</u>	<u>746,981</u>
Total of current and future assets	<u>\$7,702,058</u>	<u>\$7,360,652</u>

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

I. 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 measurement since it is based on the current level of assets.

The current AVR is about 7.3. This means that a 1% asset gain or loss (relative to the assumed investment return) translates to about 7.3% of one year's payroll. Since actuarial gains and losses are amortized over 15 years, there would be a 0.7% 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.

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. The current total plan LVR is about 8.2, but is 5.9 for General compared to 15.5 for Safety. This means, for example, that assumption changes will have a greater impact on employer contribution rates for Safety than for General.

The chart on the next page shows how the asset and liability volatility ratios have varied over time.

VOLATILITY RATIOS FOR YEARS ENDED JUNE 30, 2010 – 2019

Year Ended June 30	Asset Volatility Ratio			Liability Volatility Ratio		
	General	Safety	Total	General	Safety	Total
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
2018	5.1	13.6	7.1	5.9	15.2	8.1
2019	5.2	14.1	7.3	5.9	15.5	8.2

J. Risk Assessment

Since the actuarial valuation results are dependent on a fixed set of assumptions and data as of a specific date, there is risk that emerging results may differ, perhaps significantly, as actual experience is fluid and will not exactly track current assumptions. This potential divergence may have a significant impact on the future financial condition of the plan.

This section does not contain a detailed analysis of the potential range of future measurements, but does include a concise discussion of some of the primary risks that may affect the plan's future financial condition. A more detailed assessment of the risks could provide the Board with a better understanding of the risks inherent in the plan that could inform both financial preparation and future decision making. This assessment would enable us to work with the Board to highlight and illustrate particular risks or potential future outcomes it may be interested in discussing and could include tailored scenario testing, sensitivity testing, stress testing and stochastic modeling.

This section provides descriptions and basic assessments of the primary risks that are likely to have an ongoing influence on the plan's financial health, as well as a discussion of historical trends and maturity measures.

Risk Assessments

- Asset/Liability Mismatch Risk (the potential that future plan experience does not affect asset and liability values in the same way, causing them to diverge)

The most significant asset/liability mismatch risk to the plan is investment risk, as discussed below. In fact, investment risk has the potential to impact asset/liability mismatch in two ways. The first mismatch is evident in annual valuations: when asset values deviate from assumptions, they are typically independent from liability changes. The second mismatch can be caused when systemic asset deviations from assumptions may signal the need for an assumption change, which causes liability values and contribution rates to move in the opposite direction from any changes in the expected experience of asset growth rates.

Asset/liability mismatch can also be caused by demographic assumption risk such as longevity, which affects liabilities but have no impact on asset levels. This risk is also discussed below.

- Investment Risk (the risk that investment returns will be different than expected)

The investment return assumption is a long-term, static assumption for valuation purposes even though in reality market experience can be quite volatile in any given year. That volatility can cause significant changes in the financial health of the plan, affecting both funded status and contribution rates. The inherent year-to-year volatility is reduced by smoothing through the Actuarial Value of Assets, however investment experience can still have a sizable impact. As discussed in *Section 2, Subsection I, Volatility Ratios*, on page 38, a 1% asset gain or loss (relative to the assumed investment return) translates to about 7.3% of one-year's payroll. Since

actuarial gains and losses are amortized over 15 years, there would be a 0.7% of payroll decrease/(increase) in the required contribution for each 1% asset gain or loss.

The single year market value rate of return over the last 10 years has ranged from a low of 0.49% to a high of 24.34%.

- Longevity Risk (the risk that mortality experience will be different than expected)

The actuarial valuation includes current life expectancy assumptions and an expectation of future improvement in life expectancy, which are significant assumptions given the relatively long duration of liabilities for pension plans. Emerging plan experience that does not match these expectations will result in increases or decreases in the actuarially determined contribution over time. This risk can be reduced by using tables appropriate for the plan (public experience tables) that are weighted by benefit levels, and by using generational mortality projections.

- Other Risks

In addition to longevity, the valuation includes a variety of other assumptions that are unlikely to match future experience exactly. One example is projected salary scales over time. As salary is central to the determination of benefits paid in retirement, deviations from the projected salary scales could have a material impact on the benefits anticipated for each member. Examples of demographic assumptions include retirement, termination and disability assumptions, and will likely vary in significance for different groups (for example, disability assumptions are typically more significant for safety groups).

Some plans also carry significant contribution risk, defined as the potential for actual future contributions deviating from expected future contributions. However, the employers have a proven track-record of making the Actuarially Determined Contributions based on the Board's Actuarial Funding Policy, so contribution risk is minimal.

Evaluation of Historical Trends

Past experience can help demonstrate the sensitivity of key results to the plan's actual experience. Over the past ten years:

- The funded percentage on the Valuation Value of Assets basis has increased from 80.4% to 88.0%. This is primarily due to contributions made to amortize the UAAL (i.e., amortizing each layer of UAAL over 15 years as a level percentage of pay) and average investment return over recent years higher than the assumption on a smoothed basis. For a more detailed history see *Section 2, Subsection G, Funded Status* starting on page 35.
- The average geometric investment return on the Valuation Value of Assets over the last 10 years was 6.69%. This includes a high of a 9.82% return and a low of 1.42%. The average over the last 5 years 7.62%. For more details see the Investment Return table in *Section 2, Subsection C* on page 24.

- The primary source of new UAAL was the strengthening of assumptions through multiple assumption changes. For example, the assumption changes in 2015 reduced the discount rate from 7.75% to 7.50% and updated mortality tables, adding \$218 million in unfunded liability. The assumption changes in 2018 reduced the discount rate from 7.50% to 7.25% and again updated mortality tables, adding \$149 million in unfunded liability. For more details on the unfunded liability changes see *Section 3, Exhibit H, Table of Amortization Bases* starting on page 65.
- The plan's funding policy effectively deals with these unfunded liabilities over time. This can be seen most clearly in *Section 3, Exhibit I, Projection of UAAL Balances and Payments* provided on pages 69 and 70.

Maturity Measures

In the last 10 years the ratio of members in pay status to active participants has increased from 0.66 to 0.84. An increased ratio indicates that the plan has grown in maturity over time. This is to be expected, but is also informative for understanding plan sensitivity to particular risks. For more details see *Section 2, Subsection A, Member Data* on page 14.

As pension plans mature, the cash needed to fulfill benefit obligations will increase over time. Therefore, cash flow projections and analysis should be performed to assure that the plan's asset allocation is aligned to meet emerging pension liabilities. For the prior year benefits paid were \$22 million more than contributions received. Plans with high levels of negative cash flows may have a need for a larger allocation to income generating assets, which can create a drag on investment return. However, this plan currently has relatively low levels of negative cash flows. For more details on historical cash flows see the Comparison of Contributions with Benefits in *Section 2, Subsection B, Financial Information* on page 18.

A further discussion of plan maturity measures and how they relate to changes in assets and liabilities is included in *Section 2, Subsection I, Volatility Ratios* starting on page 38.

Section 3: Supplemental Information

EXHIBIT A – TABLE OF PLAN COVERAGE TOTAL PLAN

Category	Year Ended June 30		Change From Prior Year
	2019	2018	
Active members in valuation:			
• Number	8,696	8,611	1.0%
• Average age	44.9	44.9	0.0
• Average years of service	11.3	11.3	0.0
• Total projected compensation ⁽¹⁾	\$785,402,037	\$760,815,215	3.2%
• Average projected compensation	\$90,318	\$88,354	2.2%
• Account balances	\$706,953,325	\$670,719,345	5.4%
• Total active vested members	5,886	5,762	2.2%
Inactive vested members:⁽²⁾			
• Number	3,041	2,909	4.5%
• Average age	46.0	46.0	0.0
Retired members:			
• Number in pay status	5,428	5,234	3.7%
• Average age	70.7	70.5	0.2
• Average monthly benefit ⁽³⁾	\$3,504	\$3,408	2.8%
Disabled members:			
• Number in pay status	817	819	-0.2%
• Average age	66.5	66.0	0.5
• Average monthly benefit ⁽³⁾	\$3,899	\$3,729	4.6%
Beneficiaries:			
• Number in pay status	1,035	985	5.1%
• Average age	72.7	72.6	0.1
• Average monthly benefit ⁽³⁾	\$1,963	\$1,867	5.1%

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

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

⁽³⁾ Excludes vested fixed supplemental benefit amount.

EXHIBIT A – TABLE OF PLAN COVERAGE (CONTINUED)
GENERAL TIER 1

Category	Year Ended June 30		Change From Prior Year
	2019	2018	
Active members in valuation:			
• Number	25	35	-28.6%
• Average age	64.0	62.8	1.2
• Average years of service	33.6	33.2	0.4
• Total projected compensation ⁽¹⁾	\$4,565,842	\$5,802,740	-21.3%
• Average projected compensation	\$182,634	\$165,793	10.2%
• Account balances	\$7,848,816	\$9,343,680	-16.0%
• Total active vested members	25	35	-28.6%
Inactive vested members:⁽²⁾			
• Number	38	40	-5.0%
• Average age	46.3	45.5	0.8
Retired members:			
• Number in pay status	1,283	1,337	-4.0%
• Average age	77.1	76.7	0.4
• Average monthly benefit ⁽³⁾	\$4,300	\$4,079	5.4%
Disabled members:			
• Number in pay status	85	90	-5.6%
• Average age	74.7	74.1	0.6
• Average monthly benefit ⁽³⁾	\$2,773	\$2,644	4.9%
Beneficiaries:			
• Number in pay status	345	342	0.9%
• Average age	79.7	79.5	0.2
• Average monthly benefit ⁽³⁾	\$1,976	\$1,866	5.9%

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

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

⁽³⁾ Excludes vested fixed supplemental benefit amount.

EXHIBIT A – TABLE OF PLAN COVERAGE (CONTINUED) GENERAL TIER 2

Category	Year Ended June 30		Change From Prior Year
	2019	2018	
Active members in valuation:			
• Number	1,782	1,825	-2.4%
• Average age	50.9	50.5	0.4
• Average years of service	16.3	15.7	0.6
• Total projected compensation ⁽¹⁾	\$214,930,938	\$211,517,740	1.6%
• Average projected compensation	\$120,612	\$115,900	4.1%
• Account balances	\$196,922,010	\$188,612,792	4.4%
• Total active vested members	1,739	1,764	-1.4%
Inactive vested members: ⁽²⁾			
• Number	885	922	-4.0%
• Average age	51.7	51.4	0.3
Retired members:			
• Number in pay status	1,862	1,762	5.7%
• Average age	69.8	69.5	0.3
• Average monthly benefit ⁽³⁾	\$2,091	\$1,996	4.8%
Disabled members:			
• Number in pay status	239	245	-2.4%
• Average age	66.8	66.2	0.6
• Average monthly benefit ⁽³⁾	\$1,583	\$1,535	3.1%
Beneficiaries:			
• Number in pay status	276	265	4.2%
• Average age	71.9	71.3	0.6
• Average monthly benefit ⁽³⁾	\$879	\$867	1.4%

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

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

⁽³⁾ Excludes vested fixed supplemental benefit amount.

EXHIBIT A – TABLE OF PLAN COVERAGE (CONTINUED)
GENERAL TIER 2 W/ COLA

Category	Year Ended June 30		Change From Prior Year
	2019	2018	
Active members in valuation:			
• Number	2,570	2,757	-6.8%
• Average age	49.5	49.0	0.5
• Average years of service	15.1	14.3	0.8
• Total projected compensation ⁽¹⁾	\$203,287,951	\$210,167,487	-3.3%
• Average projected compensation	\$79,100	\$76,230	3.8%
• Account balances	\$228,765,579	\$224,845,410	1.7%
• Total active vested members	2,487	2,640	-5.8%
Inactive vested members:⁽²⁾			
• Number	1,044	1,045	-0.1%
• Average age	47.2	46.6	0.6
Retired members:			
• Number in pay status	1,440	1,326	8.6%
• Average age	68.3	67.9	0.4
• Average monthly benefit ⁽³⁾	\$1,885	\$1,817	3.7%
Disabled members:			
• Number in pay status	87	85	2.4%
• Average age	63.9	63.0	0.9
• Average monthly benefit ⁽³⁾	\$1,584	\$1,558	1.7%
Beneficiaries:			
• Number in pay status	108	97	11.3%
• Average age	66.2	66.0	0.2
• Average monthly benefit ⁽³⁾	\$973	\$976	-0.3%

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

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

⁽³⁾ Excludes vested fixed supplemental benefit amount.

EXHIBIT A – TABLE OF PLAN COVERAGE (CONTINUED)
GENERAL PEPRA TIER 1

Category	Year Ended June 30		Change From Prior Year
	2019	2018	
Active members in valuation:			
• Number	0	0	N/A
• Average age	N/A	N/A	N/A
• Average years of service	N/A	N/A	N/A
• Total projected compensation ⁽¹⁾	N/A	N/A	N/A
• Average projected compensation	N/A	N/A	N/A
• Account balances	N/A	N/A	N/A
• Total active vested members	0	0	N/A
Inactive vested members:⁽²⁾			
• Number	3	3	0.0%
• Average age	42.7	41.7	1.0
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 compensation as of valuation date by one-half year of inflation and "across the board" salary increases.

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

⁽³⁾ Excludes vested fixed supplemental benefit amount.

EXHIBIT A – TABLE OF PLAN COVERAGE (CONTINUED)
GENERAL PEPRA TIER 2

Category	Year Ended June 30		Change From Prior Year
	2019	2018	
Active members in valuation:			
• Number	877	748	17.2%
• Average age	41.0	41.0	0.0
• Average years of service	2.7	2.4	0.3
• Total projected compensation ⁽¹⁾	\$71,020,134	\$60,011,431	18.3%
• Average projected compensation	\$80,981	\$80,229	0.9%
• Account balances	\$12,820,501	\$9,053,431	41.6%
• Total active vested members	117	36	225.0%
Inactive vested members:⁽²⁾			
• Number	223	151	47.7%
• Average age	39.9	41.0	-1.1
Retired members:			
• Number in pay status	4	2	100.0%
• Average age	70.9	73.3	-2.4
• Average monthly benefit ⁽³⁾	\$598	\$181	230.4%
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 compensation as of valuation date by one-half year of inflation and "across the board" salary increases.

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

⁽³⁾ Excludes vested fixed supplemental benefit amount.

EXHIBIT A – TABLE OF PLAN COVERAGE (CONTINUED)
GENERAL PEPRA TIER 2 W/ COLA

Category	Year Ended June 30		Change From Prior Year
	2019	2018	
Active members in valuation:			
• Number	1,899	1,721	10.3%
• Average age	37.7	37.3	0.4
• Average years of service	3.0	2.6	0.4
• Total projected compensation ⁽¹⁾	\$105,841,534	\$93,581,095	13.1%
• Average projected compensation	\$55,735	\$54,376	2.5%
• Account balances	\$28,070,185	\$21,101,671	33.0%
• Total active vested members	313	87	259.8%
Inactive vested members:⁽²⁾			
• Number	502	409	22.7%
• Average age	38.8	38.2	0.6
Retired members:			
• Number in pay status	6	1	500.0%
• Average age	67.0	71.5	-4.5
• Average monthly benefit ⁽³⁾	\$581	\$10	5710.0%
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 compensation as of valuation date by one-half year of inflation and "across the board" salary increases.

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

⁽³⁾ Excludes vested fixed supplemental benefit amount.

EXHIBIT A – TABLE OF PLAN COVERAGE (CONTINUED) SAFETY

Category	Year Ended June 30		Change From Prior Year
	2019	2018	
Active members in valuation:			
• Number	1,147	1,192	-3.8%
• Average age	44.6	44.1	0.5
• Average years of service	18.0	17.5	0.5
• Total projected compensation ⁽¹⁾	\$151,981,001	\$152,611,256	-0.4%
• Average projected compensation	\$132,503	\$128,030	3.5%
• Account balances	\$220,417,317	\$209,672,135	5.1%
• Total active vested members	1,139	1,182	-3.6%
Inactive vested members:⁽²⁾			
• Number	295	291	1.4%
• Average age	43.9	43.2	0.7
Retired members:			
• Number in pay status	833	806	3.3%
• Average age	67.0	66.8	0.2
• Average monthly benefit ⁽³⁾	\$8,267	\$8,014	3.2%
Disabled members:			
• Number in pay status	406	399	1.8%
• Average age	65.1	64.7	0.4
• Average monthly benefit ⁽³⁾	\$5,994	\$5,784	3.6%
Beneficiaries:			
• Number in pay status	306	281	8.9%
• Average age	67.8	67.5	0.3
• Average monthly benefit ⁽³⁾	\$3,275	\$3,119	5.0%

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

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

⁽³⁾ Excludes vested fixed supplemental benefit amount.

EXHIBIT A – TABLE OF PLAN COVERAGE (CONTINUED) SAFETY PEPRA

Category	Year Ended June 30		Change From Prior Year
	2019	2018	
Active members in valuation:			
• Number	396	333	18.9%
• Average age	30.8	30.3	0.5
• Average years of service	3.0	2.5	0.5
• Total projected compensation ⁽¹⁾	\$33,774,637	\$27,123,466	24.5%
• Average projected compensation	\$85,289	\$81,452	4.7%
• Account balances	\$12,108,917	\$8,090,226	49.7%
• Total active vested members	66	18	266.7%
Inactive vested members:⁽²⁾			
• Number	51	48	6.3%
• Average age	32.2	31.1	1.1
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 compensation as of valuation date by one-half year of inflation and "across the board" salary increases.

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

⁽³⁾ Excludes vested fixed supplemental benefit amount.

**EXHIBIT B – MEMBERS IN ACTIVE SERVICE AS OF JUNE 30, 2019
BY AGE, YEARS OF SERVICE, AND AVERAGE PROJECTED COMPENSATION
TOTAL PLAN**

Age	Years of Service									
	Total	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 & over
Under 25	138	138	--	--	--	--	--	--	--	--
	\$54,751	\$54,751	--	--	--	--	--	--	--	--
25 - 29	751	633	118	--	--	--	--	--	--	--
	\$61,454	\$58,534	\$77,116	--	--	--	--	--	--	--
30 - 34	1,186	679	390	117	--	--	--	--	--	--
	\$75,280	\$64,368	\$88,771	\$93,637	--	--	--	--	--	--
35 - 39	1,233	426	335	382	90	--	--	--	--	--
	\$88,834	\$68,738	\$94,486	\$103,290	\$101,560	--	--	--	--	--
40 - 44	1,123	273	200	278	287	85	--	--	--	--
	\$94,978	\$70,283	\$89,944	\$102,510	\$106,704	\$121,912	--	--	--	--
45 - 49	1,172	200	168	244	245	246	67	2	--	--
	\$101,142	\$71,899	\$87,645	\$102,051	\$102,779	\$123,125	\$130,632	\$155,910	--	--
50 - 54	1,174	190	131	202	210	202	171	66	2	--
	\$102,180	\$71,537	\$88,678	\$96,461	\$100,998	\$123,234	\$115,873	\$138,524	\$102,682	--
55 - 59	1,013	141	113	180	187	134	126	92	38	2
	\$98,996	\$71,373	\$95,986	\$93,081	\$97,742	\$108,555	\$108,233	\$122,975	\$122,378	\$96,170
60 - 64	664	99	98	118	103	87	75	53	28	3
	\$97,351	\$78,004	\$97,185	\$96,294	\$92,725	\$103,197	\$109,833	\$107,570	\$112,507	\$137,945
65 - 69	187	31	35	39	30	17	15	14	3	3
	\$94,905	\$75,409	\$85,611	\$96,169	\$100,167	\$79,213	\$131,899	\$106,240	\$149,346	\$132,368
70 & over	55	5	7	16	11	5	1	6	2	2
	\$91,848	\$68,131	\$99,445	\$86,294	\$107,746	\$93,627	\$144,704	\$99,730	\$56,686	\$62,181
Total	8,696	2,815	1,595	1,576	1,163	776	455	233	73	10
	\$90,318	\$65,797	\$90,136	\$99,330	\$101,611	\$117,119	\$115,527	\$122,554	\$117,361	\$112,764

EXHIBIT B – MEMBERS IN ACTIVE SERVICE AS OF JUNE 30, 2019 (CONTINUED)
BY AGE, YEARS OF SERVICE, AND AVERAGE PROJECTED COMPENSATION
GENERAL TIER 1

Age	Years of Service									
	Total	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	1	--	--	--	--	1	--	--	--	--
	\$260,012	--	--	--	--	\$260,012	--	--	--	--
55 - 59	5	--	--	--	--	--	1	2	--	2
	\$199,784	--	--	--	--	--	\$334,072	\$236,253	--	\$96,170
60 - 64	12	--	--	--	2	1	--	1	5	3
	\$176,458	--	--	--	\$268,168	\$253,835	--	\$297,093	\$123,279	\$137,945
65 - 69	4	--	--	--	1	--	2	--	--	1
	\$212,148	--	--	--	\$171,626	--	\$263,432	--	--	\$150,101
70 & over	3	--	--	--	1	--	--	--	--	2
	\$113,608	--	--	--	\$216,463	--	--	--	--	\$62,181
Total	25	--	--	--	4	2	3	3	5	8
	\$182,634	--	--	--	\$231,106	\$256,923	\$286,979	\$256,533	\$123,279	\$110,080

EXHIBIT B – MEMBERS IN ACTIVE SERVICE AS OF JUNE 30, 2019 (CONTINUED)
BY AGE, YEARS OF SERVICE, AND AVERAGE PROJECTED COMPENSATION
GENERAL TIER 2

Age	Years of Service									
	Total	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 & over
Under 25	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
25 - 29	7	1	6	--	--	--	--	--	--	--
	\$80,892	\$52,165	\$85,680	--	--	--	--	--	--	--
30 - 34	62	4	48	10	--	--	--	--	--	--
	\$104,713	\$93,817	\$107,594	\$95,242	--	--	--	--	--	--
35 - 39	196	8	80	87	21	--	--	--	--	--
	\$114,276	\$84,669	\$120,409	\$114,093	\$102,947	--	--	--	--	--
40 - 44	226	7	50	77	74	18	--	--	--	--
	\$117,990	\$95,656	\$123,183	\$125,350	\$112,795	\$102,127	--	--	--	--
45 - 49	315	8	50	97	88	57	13	2	--	--
	\$119,774	\$114,666	\$108,636	\$126,412	\$119,338	\$122,136	\$103,259	\$155,910	--	--
50 - 54	332	3	36	83	73	73	50	12	2	--
	\$124,030	\$113,153	\$115,826	\$120,160	\$123,765	\$130,209	\$130,275	\$119,696	\$102,682	--
55 - 59	330	6	40	69	68	51	51	29	16	--
	\$125,607	\$99,549	\$126,308	\$120,479	\$123,432	\$131,847	\$125,903	\$134,447	\$128,131	--
60 - 64	233	5	33	47	33	47	37	22	9	--
	\$123,848	\$128,177	\$119,359	\$123,066	\$116,551	\$116,565	\$133,958	\$136,689	\$133,816	--
65 - 69	67	1	11	20	12	6	8	5	3	1
	\$115,754	\$165,915	\$109,021	\$114,815	\$113,500	\$92,804	\$128,222	\$124,446	\$149,346	\$79,218
70 & over	14	--	3	4	2	1	1	3	--	--
	\$131,387	--	\$109,573	\$133,975	\$174,988	\$90,224	\$144,704	\$129,963	--	--
Total	1,782	43	357	494	371	253	160	73	30	1
	\$120,612	\$103,146	\$116,502	\$120,840	\$118,590	\$123,143	\$127,526	\$132,417	\$130,261	\$79,218

EXHIBIT B – MEMBERS IN ACTIVE SERVICE AS OF JUNE 30, 2019 (CONTINUED)
BY AGE, YEARS OF SERVICE, AND AVERAGE PROJECTED COMPENSATION
GENERAL TIER 2 W/ COLA

Age	Years of Service									
	Total	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 & over
Under 25	1	1	--	--	--	--	--	--	--	--
	\$54,640	\$54,640	--	--	--	--	--	--	--	--
25 - 29	18	3	15	--	--	--	--	--	--	--
	\$64,821	\$53,182	\$67,149	--	--	--	--	--	--	--
30 - 34	198	11	124	63	--	--	--	--	--	--
	\$76,291	\$65,284	\$77,398	\$76,035	--	--	--	--	--	--
35 - 39	325	8	128	155	34	--	--	--	--	--
	\$81,254	\$61,221	\$83,482	\$80,712	\$80,049	--	--	--	--	--
40 - 44	374	17	88	138	111	20	--	--	--	--
	\$80,585	\$67,729	\$80,511	\$80,684	\$83,213	\$76,578	--	--	--	--
45 - 49	374	11	68	118	105	60	12	--	--	--
	\$79,272	\$72,040	\$80,628	\$78,094	\$78,867	\$82,881	\$75,290	--	--	--
50 - 54	419	15	57	109	105	53	69	11	--	--
	\$78,521	\$65,985	\$76,327	\$77,476	\$79,103	\$81,693	\$81,580	\$77,319	--	--
55 - 59	463	11	57	108	111	66	62	37	11	--
	\$79,119	\$58,143	\$76,370	\$75,223	\$80,664	\$82,903	\$83,321	\$81,586	\$82,287	--
60 - 64	290	4	37	71	66	38	36	28	10	--
	\$78,855	\$74,234	\$80,807	\$78,572	\$75,180	\$82,152	\$83,019	\$76,266	\$79,476	--
65 - 69	77	2	18	17	16	11	5	8	--	--
	\$77,896	\$69,118	\$73,577	\$73,538	\$83,575	\$71,800	\$85,169	\$91,551	--	--
70 & over	31	--	2	12	8	4	--	3	2	--
	\$76,406	--	\$102,620	\$70,400	\$77,346	\$94,477	--	\$69,497	\$56,686	--
Total	2,570	83	594	791	556	252	184	87	23	--
	\$79,100	\$65,427	\$79,261	\$78,246	\$79,886	\$81,727	\$82,135	\$79,834	\$78,838	--

EXHIBIT B – MEMBERS IN ACTIVE SERVICE AS OF JUNE 30, 2019 (CONTINUED)
BY AGE, YEARS OF SERVICE, AND AVERAGE PROJECTED COMPENSATION
GENERAL PEPRA TIER 2

Age	Years of Service									
	Total	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 & over
Under 25	22	22	--	--	--	--	--	--	--	--
	\$50,279	\$50,279	--	--	--	--	--	--	--	--
25 - 29	128	122	6	--	--	--	--	--	--	--
	\$63,610	\$63,563	\$64,554	--	--	--	--	--	--	--
30 - 34	180	159	21	--	--	--	--	--	--	--
	\$75,215	\$73,410	\$88,876	--	--	--	--	--	--	--
35 - 39	150	128	22	--	--	--	--	--	--	--
	\$84,587	\$83,304	\$92,050	--	--	--	--	--	--	--
40 - 44	103	85	18	--	--	--	--	--	--	--
	\$85,651	\$87,980	\$74,655	--	--	--	--	--	--	--
45 - 49	86	73	13	--	--	--	--	--	--	--
	\$87,404	\$86,893	\$90,276	--	--	--	--	--	--	--
50 - 54	92	74	17	--	1	--	--	--	--	--
	\$89,528	\$87,533	\$96,177	--	\$124,180	--	--	--	--	--
55 - 59	47	44	3	--	--	--	--	--	--	--
	\$94,950	\$93,417	\$117,434	--	--	--	--	--	--	--
60 - 64	49	39	10	--	--	--	--	--	--	--
	\$95,550	\$97,967	\$86,122	--	--	--	--	--	--	--
65 - 69	16	14	1	1	--	--	--	--	--	--
	\$91,758	\$93,628	\$106,594	\$50,734	--	--	--	--	--	--
70 & over	4	2	2	--	--	--	--	--	--	--
	\$89,273	\$97,468	\$81,078	--	--	--	--	--	--	--
Total	877	762	113	1	1	--	--	--	--	--
	\$80,981	\$79,963	\$87,730	\$50,734	\$124,180	--	--	--	--	--

EXHIBIT B – MEMBERS IN ACTIVE SERVICE AS OF JUNE 30, 2019 (CONTINUED)
BY AGE, YEARS OF SERVICE, AND AVERAGE PROJECTED COMPENSATION
GENERAL PEPRA TIER 2 W/ COLA

Age	Years of Service									
	Total	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 & over
Under 25	70	70	--	--	--	--	--	--	--	--
	\$42,674	\$42,674	--	--	--	--	--	--	--	--
25 - 29	410	362	48	--	--	--	--	--	--	--
	\$49,015	\$48,315	\$54,290	--	--	--	--	--	--	--
30 - 34	502	412	90	--	--	--	--	--	--	--
	\$57,490	\$56,330	\$62,801	--	--	--	--	--	--	--
35 - 39	311	250	59	2	--	--	--	--	--	--
	\$60,171	\$58,362	\$67,544	\$68,866	--	--	--	--	--	--
40 - 44	191	156	35	--	--	--	--	--	--	--
	\$59,954	\$58,689	\$65,593	--	--	--	--	--	--	--
45 - 49	129	102	27	--	--	--	--	--	--	--
	\$56,685	\$56,514	\$57,331	--	--	--	--	--	--	--
50 - 54	113	93	19	1	--	--	--	--	--	--
	\$57,526	\$56,334	\$63,620	\$52,623	--	--	--	--	--	--
55 - 59	87	76	11	--	--	--	--	--	--	--
	\$54,522	\$52,695	\$67,148	--	--	--	--	--	--	--
60 - 64	64	51	13	--	--	--	--	--	--	--
	\$61,605	\$58,116	\$75,294	--	--	--	--	--	--	--
65 - 69	19	14	5	--	--	--	--	--	--	--
	\$57,312	\$51,624	\$73,236	--	--	--	--	--	--	--
70 & over	3	3	--	--	--	--	--	--	--	--
	\$48,573	\$48,573	--	--	--	--	--	--	--	--
Total	1,899	1,589	307	3	--	--	--	--	--	--
	\$55,735	\$54,293	\$63,125	\$63,452	--	--	--	--	--	--

EXHIBIT B – MEMBERS IN ACTIVE SERVICE AS OF JUNE 30, 2019 (CONTINUED)
BY AGE, YEARS OF SERVICE, AND AVERAGE PROJECTED COMPENSATION
SAFETY

Age	Years of Service									
	Total	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 & over
Under 25	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
25 - 29	19	--	19	--	--	--	--	--	--	--
	\$117,076	--	\$117,076	--	--	--	--	--	--	--
30 - 34	123	1	78	44	--	--	--	--	--	--
	\$119,247	\$120,274	\$119,670	\$118,475	--	--	--	--	--	--
35 - 39	213	2	38	138	35	--	--	--	--	--
	\$121,242	\$80,831	\$119,040	\$122,337	\$121,623	--	--	--	--	--
40 - 44	223	2	9	63	102	47	--	--	--	--
	\$130,564	\$132,864	\$122,798	\$122,406	\$127,849	\$148,781	--	--	--	--
45 - 49	261	2	7	29	52	129	42	--	--	--
	\$137,086	\$133,598	\$118,584	\$118,049	\$123,039	\$142,281	\$154,916	--	--	--
50 - 54	212	--	2	9	31	75	52	43	--	--
	\$143,101	--	\$126,361	\$112,705	\$120,797	\$143,979	\$147,528	\$159,435	--	--
55 - 59	77	1	1	3	8	17	12	24	11	--
	\$148,224	\$278,615	\$201,033	\$105,779	\$116,325	\$138,270	\$143,032	\$163,480	\$154,102	--
60 - 64	15	--	4	--	2	1	2	2	4	--
	\$135,384	--	\$152,951	--	\$103,156	\$124,027	\$146,194	\$130,756	\$133,678	--
65 - 69	4	--	--	1	1	--	--	1	--	1
	\$147,024	--	--	\$153,395	\$134,192	--	--	\$132,725	--	\$167,785
70 & over	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
Total	1,147	8	158	287	231	269	108	70	15	1
	\$132,503	\$136,684	\$120,779	\$120,960	\$124,291	\$143,568	\$149,877	\$159,621	\$148,656	\$167,785

EXHIBIT B – MEMBERS IN ACTIVE SERVICE AS OF JUNE 30, 2019 (CONTINUED)
BY AGE, YEARS OF SERVICE, AND AVERAGE PROJECTED COMPENSATION
SAFETY PEPRA

Age	Years of Service									
	Total	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 & over
Under 25	45	45	--	--	--	--	--	--	--	--
	\$75,727	\$75,727	--	--	--	--	--	--	--	--
25 - 29	169	145	24	--	--	--	--	--	--	--
	\$82,580	\$79,968	\$98,360	--	--	--	--	--	--	--
30 - 34	121	92	29	--	--	--	--	--	--	--
	\$87,753	\$82,738	\$103,662	--	--	--	--	--	--	--
35 - 39	38	30	8	--	--	--	--	--	--	--
	\$92,126	\$90,008	\$100,068	--	--	--	--	--	--	--
40 - 44	6	6	--	--	--	--	--	--	--	--
	\$77,794	\$77,794	--	--	--	--	--	--	--	--
45 - 49	7	4	3	--	--	--	--	--	--	--
	\$79,079	\$73,814	\$86,099	--	--	--	--	--	--	--
50 - 54	5	5	--	--	--	--	--	--	--	--
	\$109,247	\$109,247	--	--	--	--	--	--	--	--
55 - 59	4	3	1	--	--	--	--	--	--	--
	\$145,504	\$144,334	\$149,016	--	--	--	--	--	--	--
60 - 64	1	--	1	--	--	--	--	--	--	--
	\$143,530	--	\$143,530	--	--	--	--	--	--	--
65 - 69	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
70 & over	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
Total	396	330	66	--	--	--	--	--	--	--
	\$85,289	\$81,989	\$101,792	--	--	--	--	--	--	--

EXHIBIT C – RECONCILIATION OF MEMBER DATA

	Active Members	Inactive Vested Members ⁽¹⁾	Retired Members	Disabled	Beneficiaries	Total
Number as of June 30, 2018	8,611	2,909	5,234	819	985	18,558
• New members	656	62	0	0	90	808
• Terminations – with vested rights	(257)	257	0	0	0	0
• Contribution refunds	(75)	(67)	0	0	0	(142)
• Retirements	(243)	(90)	333	0	0	0
• New disabilities	(7)	(2)	(9)	18	0	0
• Return to work	23	(21)	(2)	0	0	0
• Died with or without beneficiary	(12)	(4)	(129)	(20)	(38)	(203)
• Data adjustments	<u>0</u>	<u>(3)</u>	<u>1</u>	<u>0</u>	<u>(2)</u>	<u>(4)</u>
Number as of June 30, 2019	8,696	3,041	5,428	817	1,035	19,017

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

EXHIBIT D – SUMMARY STATEMENT OF INCOME AND EXPENSES ON A MARKET VALUE BASIS

	Year Ended June 30, 2019	Year Ended June 30, 2018
Net assets at market value at the beginning of the year	\$5,396,462,523	\$4,964,246,776
Contribution income:		
• Employer contributions	\$199,932,498	\$197,682,857
• Member contributions	<u>75,157,256</u>	<u>74,044,246</u>
Net contribution income	\$275,089,754	\$271,727,103
Investment income:		
• Interest, dividends, asset appreciation and other income	\$390,702,277	\$462,274,631
• Less investment and administrative fees	(27,378,983)	(21,253,969)
• Less other expenses	<u>(2,396,874)</u>	<u>(2,813,622)</u>
Net investment income	<u>\$360,926,420</u>	<u>\$438,207,040</u>
Total income available for benefits	\$636,016,174	\$709,934,143
Less benefit payments:		
• Benefits paid	\$(292,775,308)	\$(272,288,077)
• Member refunds	<u>(4,343,230)</u>	<u>(5,430,319)</u>
Net benefit payments	<u>\$(297,118,538)</u>	<u>\$(277,718,396)</u>
Change in net assets at market value	\$338,897,636	\$432,215,747
Net assets at market value at the end of the year	\$5,735,360,159	\$5,396,462,523

Note: Results may be slightly off due to rounding.

EXHIBIT E – SUMMARY STATEMENT OF PLAN ASSETS

	Year Ended June 30, 2019	Year Ended June 30, 2018
Cash equivalents	\$110,410,529	\$119,098,426
Pension software development cost	11,643,686	13,104,280
Accounts receivable:		
• Member and employer contributions	\$11,562,565	\$10,505,031
• Accrued interest and dividends	5,058,394	3,593,289
• Securities sold	14,569,520	18,440,457
• All other	<u>43,633</u>	<u>35,561</u>
Total accounts receivable	\$31,234,112	\$32,574,338
Investments:		
• Equities	\$3,619,478,132	\$3,489,835,458
• Fixed income	1,117,653,469	942,574,067
• Investments received on securities lending	120,907,332	47,614,918
• Others	<u>880,892,084</u>	<u>851,026,049</u>
Total investments at market value	\$5,738,931,017	\$5,331,050,492
Total assets	\$5,892,219,344	\$5,495,827,536
Liabilities:		
• Securities lending	\$(120,907,332)	\$(47,614,918)
• Security purchases	(30,300,997)	(45,858,296)
• Account payable	(5,623,037)	(5,860,796)
• Prepaid contributions	<u>(27,819)</u>	<u>(31,003)</u>
Total liabilities	\$(156,859,185)	\$(99,365,013)
Net assets at market value	\$5,735,360,159	\$5,396,462,523
Net assets at actuarial value	\$5,664,610,099	\$5,385,145,897
Net assets at valuation value	\$5,664,526,062	\$5,382,777,075

Note: Results may be slightly off due to rounding.

EXHIBIT F – SUMMARY OF REPORTED RESERVE INFORMATION

	June 30, 2019	June 30, 2018
Used in Development of Valuation Value of Assets:		
• Member contributions reserve	\$793,803,493	\$758,313,620
• Employer advance reserve	3,071,594,239	2,819,632,958
• Offset: Interest crediting shortfall tracking account	(1,327,148,830)	(1,123,566,014)
• Retiree reserve	2,963,426,996	2,768,421,677
• Supplemental death benefit reserve	16,355,116	15,793,858
• Vested fixed supplemental (\$108.44) reserve	146,495,048	144,180,976
• Undistributed earnings	<u>0</u>	<u>0</u>
Subtotal: Valuation Value of Assets	\$5,664,526,062	\$5,382,777,075
Not Used in Development of Valuation Value of Assets:		
• Non-vested supplemental (\$27.50) reserve	\$84,037	\$2,368,822
• Contingency reserve	<u>0</u>	<u>0</u>
Subtotal	\$84,037	\$2,368,822
Subtotal: Actuarial Value of Assets	\$5,664,610,099	\$5,385,145,897
• Market stabilization reserve	<u>70,750,060</u>	<u>11,316,625</u>
Total: Gross Market Value of Assets	\$5,735,360,159	\$5,396,462,522

Note: Results may be slightly off due to rounding.

EXHIBIT G – DEVELOPMENT OF THE FUND THROUGH JUNE 30, 2019

Year Ended June 30	Employer Contributions	Member Contributions	Net Investment Return⁽¹⁾	Benefit Payments	Market Value of Assets at Year-End	Valuation Value of Assets at Year-End	Valuation Value as a Percent of Market Value
2010	\$105,702,929	\$42,466,182	\$343,005,717	\$169,255,990	\$2,569,551,855	\$3,115,984,329	121.27%
2011	120,053,545	44,237,695	622,940,029	184,458,061	3,172,325,063	3,220,387,920	101.52%
2012	140,772,726	44,486,749	47,147,363	195,114,694	3,209,617,207	3,397,359,919	105.85%
2013	150,687,842	44,463,983	432,694,392	209,957,957	3,627,505,467	3,621,708,536	99.84%
2014	169,703,083	46,674,443	654,535,161	223,532,290	4,274,885,864	3,910,800,797	91.48%
2015	175,099,550	63,678,770	84,826,217	233,695,213	4,364,795,188	4,302,330,424	98.57%
2016	177,709,688	69,469,771	21,265,100	246,403,038	4,386,836,709	4,585,712,958	104.53%
2017	190,759,001	72,394,542	575,001,597	260,745,073	4,964,246,776	4,959,070,151	99.90%
2018	197,682,857	74,044,246	438,207,040	277,718,396	5,396,462,523	5,382,777,075	99.75%
2019	199,932,498	75,157,256	360,926,420	297,118,538	5,735,360,159	5,664,526,062	98.76%

⁽¹⁾ On a market basis, net of investment fees and administrative expenses.

EXHIBIT H – TABLE OF AMORTIZATION BASES

Date Established	Source	Initial Amount (\$ in '000s)	Initial Period	Outstanding Balance (\$ in '000s)	Years Remaining	Amortization Amount (\$ in '000s)
General Tier 1						
June 30, 2004	Restart of Amortization	\$63,394	15	\$0	0	\$0
June 30, 2005	Actuarial loss	22,085	15	3,230	1	3,355
June 30, 2006	Actuarial loss	7,048	15	1,945	2	1,029
June 30, 2006	Assumption change	41,538	15	11,444	2	6,056
June 30, 2007	Actuarial gain	(19,901)	15	(7,750)	3	(2,786)
June 30, 2008	Actuarial gain	(18,128)	15	(8,876)	4	(2,438)
June 30, 2009	Actuarial loss	55,190	15	31,856	5	7,129
June 30, 2009	Assumption change	18,574	15	10,713	5	2,398
June 30, 2010	Actuarial loss	50,018	15	32,652	6	6,202
June 30, 2011	Actuarial loss	36,225	15	26,023	7	4,315
June 30, 2012	Actuarial loss	29,865	15	23,119	8	3,415
June 30, 2012	Demographic assumption	38,104	20	35,824	13	3,559
June 30, 2012	Economic assumption	19,517	20	18,343	13	1,822
June 30, 2013	Actuarial loss	31,670	15	26,071	9	3,486
June 30, 2014	Actuarial loss	16,119	15	13,949	10	1,709
June 30, 2015	Actuarial loss	8,457	15	7,605	11	862
June 30, 2015	Assumption change	47,959	20	46,966	16	3,993
June 30, 2016	Actuarial loss	45,451	15	42,361	12	4,480
June 30, 2017	Actuarial loss	53,640	15	51,434	13	5,110
June 30, 2018	Actuarial loss	51,584	15	50,575	14	4,747
June 30, 2018	Assumption change	3,972	20	3,962	19	298
June 30, 2019	Actuarial loss	80,777	15	<u>80,777</u>	15	<u>7,200</u>
General Tier 1 Subtotal				\$502,223		\$65,941

EXHIBIT H – TABLE OF AMORTIZATION BASES (CONTINUED)

Date Established	Source	Initial Amount (\$ in '000s)	Initial Period	Outstanding Balance (\$ in '000s)	Years Remaining	Amortization Amount (\$ in '000s)
General Tier 2						
June 30, 2004	Restart of Amortization	\$49,731	15	\$0	0	\$0
June 30, 2005	Actuarial loss	7,622	15	1,115	1	1,158
June 30, 2006	Actuarial gain	(9,108)	15	(2,511)	2	(1,329)
June 30, 2006	Assumption change	19,085	15	5,259	2	2,783
June 30, 2006	Plan provision change	14,731	15	4,057	2	2,147
June 30, 2007	Actuarial gain	(39,508)	15	(15,391)	3	(5,532)
June 30, 2008	Actuarial gain	(34,794)	15	(17,035)	4	(4,678)
June 30, 2009	Actuarial loss	71,253	15	41,116	5	9,202
June 30, 2009	Assumption change	22,696	15	13,093	5	2,930
June 30, 2010	Actuarial loss	47,615	15	31,092	6	5,906
June 30, 2011	Actuarial gain	(6,949)	15	(5,000)	7	(829)
June 30, 2012	Actuarial gain	(18,106)	15	(14,020)	8	(2,071)
June 30, 2012	Demographic assumption	29,420	20	27,645	13	2,746
June 30, 2012	Economic assumption	32,874	20	30,919	13	3,072
June 30, 2013	Actuarial gain	(23,823)	15	(19,630)	9	(2,625)
June 30, 2014	Actuarial gain	(49,125)	15	(42,505)	10	(5,207)
June 30, 2015	Actuarial gain	(62,406)	15	(56,180)	11	(6,368)
June 30, 2015	Assumption change	50,090	20	49,067	16	4,171
June 30, 2016	Actuarial gain	(28,842)	15	(26,887)	12	(2,844)
June 30, 2017	Actuarial gain	(41,622)	15	(39,908)	13	(3,965)
June 30, 2018	Actuarial gain	(86,831)	15	(85,135)	14	(7,992)
June 30, 2018	Assumption change	111,232	20	110,934	19	8,355
June 30, 2019	Actuarial gain	(8,940)	15	<u>(8,940)</u>	15	<u>(797)</u>
General Tier 2 Subtotal				\$(18,845)		\$(1,767)

EXHIBIT H – TABLE OF AMORTIZATION BASES (CONTINUED)

Date Established	Source	Initial Amount (\$ in '000s)	Initial Period	Outstanding Balance (\$ in '000s)	Years Remaining	Amortization Amount (\$ in '000s)
Safety						
June 30, 2004	Restart of Amortization	\$210,319	15	\$0	0	\$0
June 30, 2005	Actuarial loss	19,142	15	2,801	1	2,909
June 30, 2006	Actuarial loss	3,418	15	940	2	497
June 30, 2006	Assumption change	42,167	15	11,618	2	6,148
June 30, 2007	Actuarial gain	(37,489)	15	(14,601)	3	(5,248)
June 30, 2008	Actuarial gain	(22,443)	15	(10,986)	4	(3,017)
June 30, 2009	Actuarial loss	78,157	15	45,107	5	10,095
June 30, 2009	Assumption change	49,982	15	28,848	5	6,456
June 30, 2010	Actuarial loss	108,448	15	70,821	6	13,453
June 30, 2011	Actuarial loss	8,879	15	6,389	7	1,059
June 30, 2012	Actuarial gain	(7,501)	15	(5,794)	8	(856)
June 30, 2012	Demographic assumption	55,513	20	52,193	13	5,185
June 30, 2012	Economic assumption	51,887	20	48,763	13	4,844
June 30, 2013	Actuarial loss	7,588	15	6,263	9	837
June 30, 2014	Actuarial gain	(54,478)	15	(47,141)	10	(5,775)
June 30, 2015	Actuarial gain	(55,657)	15	(50,105)	11	(5,680)
June 30, 2015	Assumption change	119,953	20	117,495	16	9,988
June 30, 2016	Actuarial gain	(17,062)	15	(15,904)	12	(1,682)
June 30, 2017	Actuarial gain	(9,288)	15	(8,896)	13	(884)
June 30, 2018	Actuarial gain	(29,088)	15	(28,521)	14	(2,677)
June 30, 2018	Assumption change	33,306	20	33,217	19	2,502
June 30, 2019	Actuarial loss	48,977	15	<u>48,977</u>	15	<u>4,366</u>
Safety Subtotal				\$291,484		\$42,520

EXHIBIT H – TABLE OF AMORTIZATION BASES (CONTINUED)

Date Established	Source	Initial Amount (\$ in '000s)	Initial Period	Outstanding Balance (\$ in '000s)	Years Remaining	Amortization Amount (\$ in '000s)
Total VCERA						
June 30, 2004	Restart of Amortization	\$323,444	15	\$0	0	\$0
June 30, 2005	Actuarial loss	48,849	15	7,146	1	7,422
June 30, 2006	Actuarial loss	1,358	15	374	2	197
June 30, 2006	Assumption change	102,790	15	28,321	2	14,987
June 30, 2006	Plan provision change	14,731	15	4,057	2	2,147
June 30, 2007	Actuarial gain	(96,898)	15	(37,742)	3	(13,566)
June 30, 2008	Actuarial gain	(75,365)	15	(36,897)	4	(10,133)
June 30, 2009	Actuarial loss	204,600	15	118,079	5	26,426
June 30, 2009	Assumption change	91,252	15	52,654	5	11,784
June 30, 2010	Actuarial loss	206,081	15	134,565	6	25,561
June 30, 2011	Actuarial loss	38,155	15	27,412	7	4,545
June 30, 2012	Actuarial loss	4,258	15	3,305	8	488
June 30, 2012	Demographic assumption	123,037	20	115,662	13	11,490
June 30, 2012	Economic assumption	104,278	20	98,025	13	9,738
June 30, 2013	Actuarial loss	15,435	15	12,704	9	1,698
June 30, 2014	Actuarial gain	(87,484)	15	(75,697)	10	(9,273)
June 30, 2015	Actuarial gain	(109,606)	15	(98,680)	11	(11,186)
June 30, 2015	Assumption change	218,002	20	213,528	16	18,152
June 30, 2016	Actuarial gain	(453)	15	(430)	12	(46)
June 30, 2017	Actuarial loss	2,730	15	2,630	13	261
June 30, 2018	Actuarial gain	(64,335)	15	(63,081)	14	(5,922)
June 30, 2018	Assumption change	148,510	20	148,113	19	11,155
June 30, 2019	Actuarial loss	120,814	15	<u>120,814</u>	15	<u>10,769</u>
Total				\$774,862		\$106,694

EXHIBIT I – PROJECTION OF UAAL BALANCES AND PAYMENTS

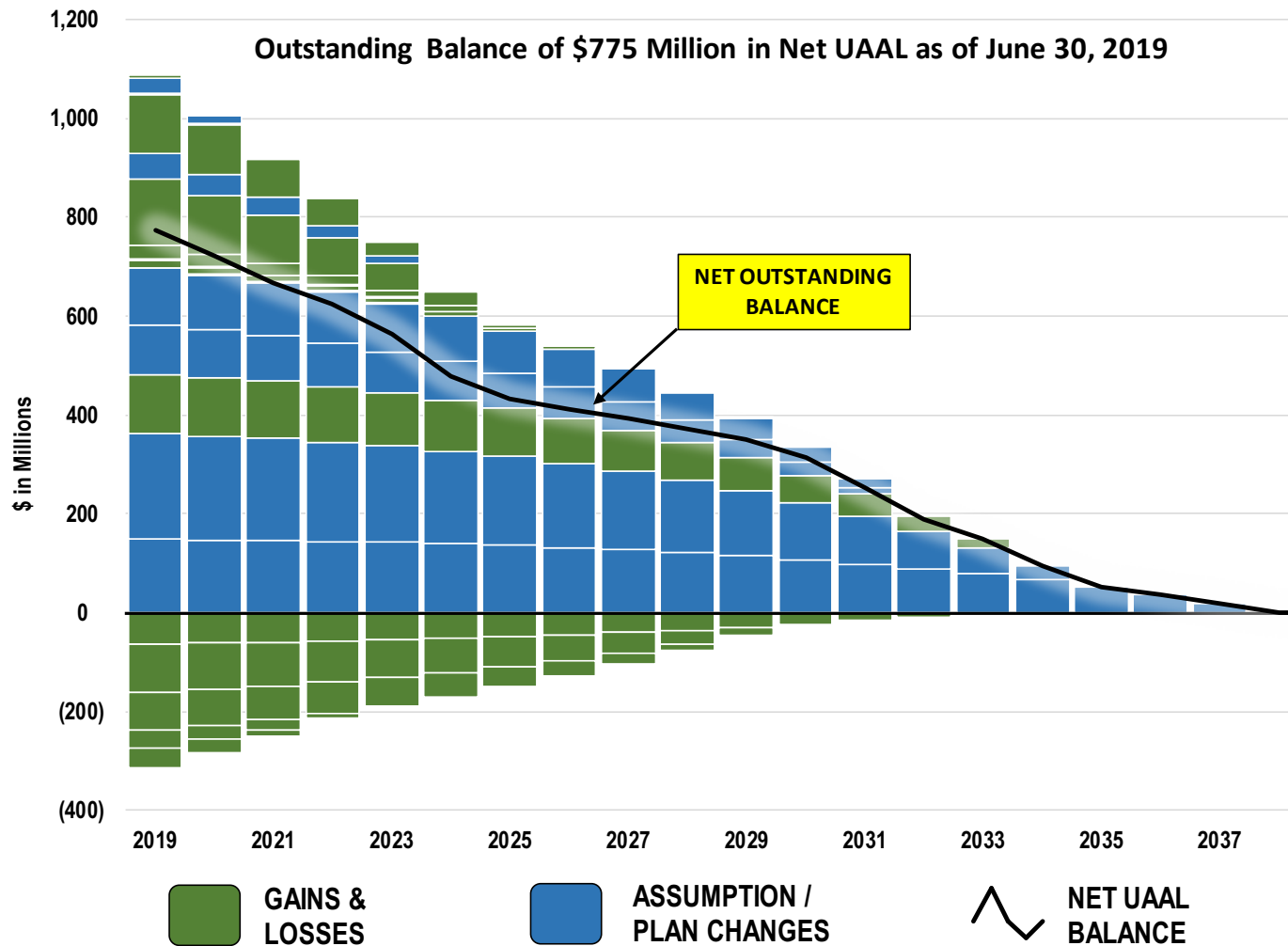


EXHIBIT I – PROJECTION OF UAAL BALANCES AND PAYMENTS (CONTINUED)

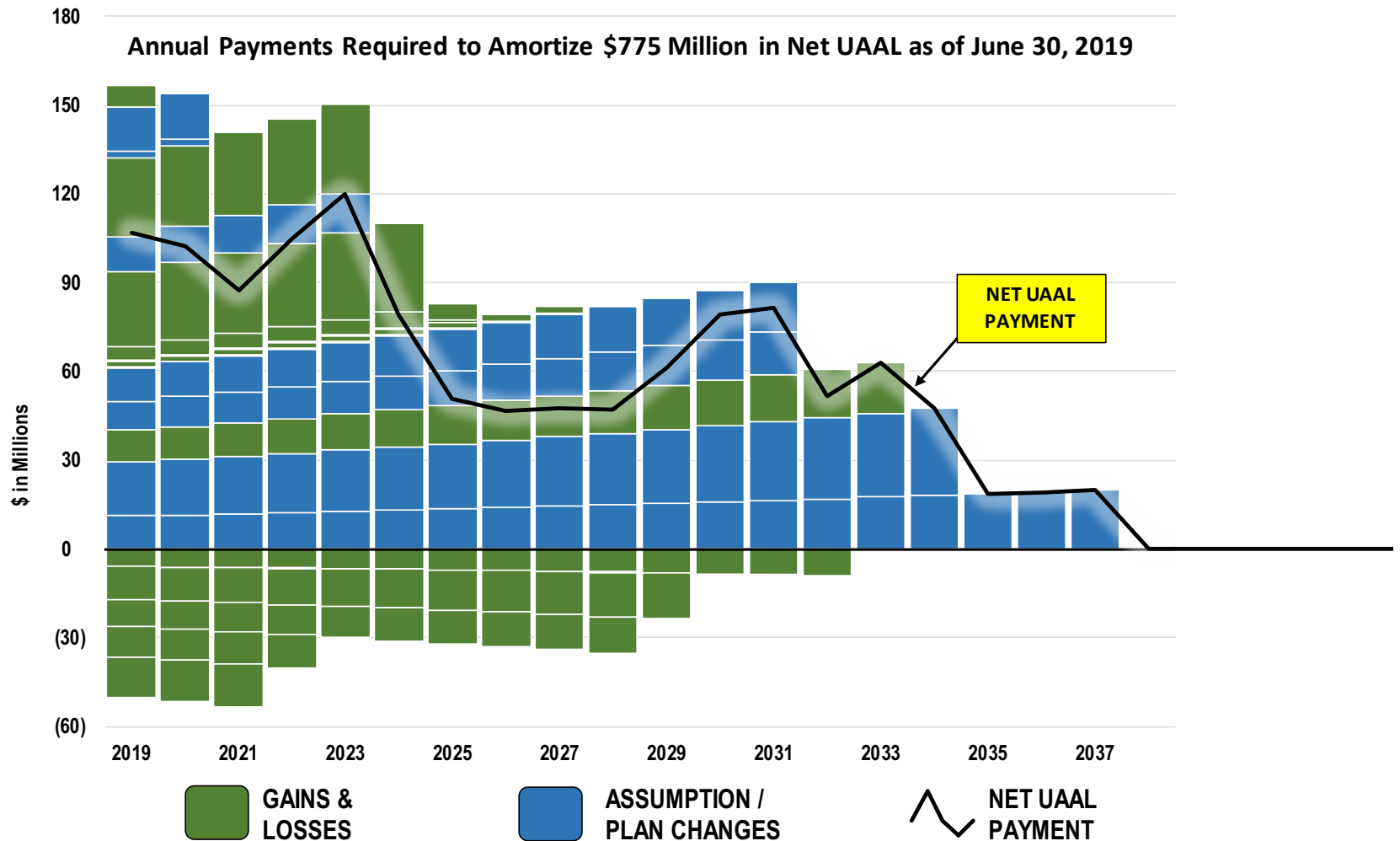


EXHIBIT J – DEFINITION OF PENSION TERMS

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

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 and Beneficiaries:	Actuarial Present Value of lifetime benefits to existing pensioners and beneficiaries. This sum takes account of life expectancies appropriate to the ages of the annuitants and the interest that the sum is expected to earn before it is entirely paid out in benefits.
Actuarial Cost Method:	A procedure allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability that are used to determine the recommended contribution.
Actuarial Gain or Loss:	A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge which may be the same as forecasted, or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., assets earn more than projected, salary increases are less than assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results yield actuarial liabilities that are larger than projected.
Actuarially Equivalent:	Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.
Actuarial Present Value (APV):	<p>The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. Each such amount or series of amounts is:</p> <p>Adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.)</p> <p>Multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination, etc.) on which the payment is conditioned, and</p> <p>Discounted according to an assumed rate (or rates) of return to reflect the time value of money.</p>

Actuarial Present Value of Future Benefits:	The Actuarial Present Value of benefit amounts expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age, anticipated future compensation, and future service credits. The Actuarial Present Value of Future Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive members entitled to either a refund of member contributions or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.
Actuarial Valuation:	The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan, as well as Actuarially Determined Contributions.
Actuarial Value of Assets (AVA):	The value of the plan's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly plans use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the Actuarially Determined Contribution.
Actuarially Determined:	Values that have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the plan.
Actuarially Determined Contribution (ADC):	The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under the plan's funding policy. The ADC consists of the employer Normal Cost and the Amortization Payment.
Amortization Method:	A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the Unfunded Actuarial Accrued Liability. Under the Level Percentage of Pay method, the Amortization Payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the Unfunded Actuarial Accrued Liability. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.
Amortization Payment:	The portion of the pension plan contribution, or ADC, that is intended to payoff the Unfunded Actuarial Accrued Liability.

Assumptions or Actuarial Assumptions:	The estimates upon which the cost of the plan is calculated, including: <u>Investment return</u> - the rate of investment yield that the plan will earn over the long-term future; <u>Mortality rates</u> - the rate or probability of death at a given age for employees and pensioners; <u>Retirement rates</u> - the rate or probability of retirement at a given age or service; <u>Disability rates</u> - the rate or probability of disability retirement at a given age; <u>Termination rates</u> - the rate or probability at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement; <u>Salary increase rates</u> - the rates of salary increase due to inflation, real wage growth and merit and promotion increases.
Closed Amortization Period:	A specific number of years that is counted down by one each year, and therefore declines to zero with the passage of time. For example, if the amortization period is initially set at 20 years, it is 19 years at the end of one year, 18 years at the end of two years, etc. See Open Amortization Period.
Decrements:	Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or termination.
Defined Benefit Plan:	A retirement plan in which benefits are defined by a formula based on the member's compensation, age and/or years of service.
Defined Contribution Plan:	A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.
Experience Study:	A periodic review and analysis of the actual experience of the plan that may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified based on recommendations from the Actuary.
Funded Ratio:	The ratio of the Valuation Value of Assets (VVA) to the Actuarial Accrued Liability (AAL). Plans sometimes also calculate a market funded ratio, using the Market Value of Assets (MVA), rather than the VVA.
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 capital gains and losses to avoid significant swings in the value of assets from one year to the next.
Normal Cost:	The portion of the Actuarial Present Value of Future Benefits allocated to a valuation year by the Actuarial Cost Method. Any payment with respect to an Unfunded Actuarial Accrued Liability is not part of the Normal Cost (see Amortization Payment). For pension plan benefits that are provided in part by employee contributions, Normal Cost refers to the total of member contributions and employer Normal Cost unless otherwise specifically stated.

Open Amortization Period:	An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. If the initial period is set as 30 years, the same 30-year period is used in each future year in determining the Amortization Period.
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.
Unfunded Actuarial Accrued Liability:	The excess of the Actuarial Accrued Liability over the Valuation Value of Assets. This value may be negative, in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, also called the Funding Surplus or an Overfunded Actuarial Accrued Liability.
Valuation Date or Actuarial Valuation Date:	The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Benefits is determined. The expected benefits to be paid in the future are discounted to this date.
Valuation Value of Assets:	The Actuarial Value of Assets reduced by the value of non-valuation reserves.

Section 4: Actuarial Valuation Basis

EXHIBIT I – 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, 2014 through June 30, 2017 Actuarial Experience Study dated May 24, 2018. Unless otherwise noted, all actuarial assumptions and methods shown below apply to members for all tiers. These assumptions were adopted by the Board.
<u>Economic Assumptions</u>	
Net Investment Return:	7.25%; net of investment and administrative expenses. Based on the Actuarial Experience Study reference above, expected investment expenses represent about 0.2% of the Actuarial Value of Assets.
Member Contribution Crediting Rate:	2.75% (Actual rate is based on projected long term ten-year Treasury rate).
Consumer Price Index:	Increase of 2.75% per year. Retiree COLA increases due to CPI are subject to a 3.00% 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, members represented by SEIU 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 2.75% per year plus “across the board” real salary increases of 0.50% per year, used to amortize the UAAL as a level percentage of payroll.
Increase in Internal Revenue Code Section 401(a)(17) Compensation Limit:	Increase of 2.75% per year from the valuation date.
Increase in Section 7522.10 Compensation Limit:	Increase of 2.75% per year from the valuation date.

Salary Increases:

The annual rate of compensation increase includes: inflation at 2.75%, plus “across the board” salary increases of 0.50% per year, plus the following merit and promotion increases:

Merit and Promotion Increases		
Years of Service	Rate (%)	
	General	Safety
Less than 1	7.00	8.50
1-2	5.25	6.50
2-3	4.00	5.00
3-4	3.50	4.25
4-5	2.75	3.75
5-6	2.25	3.50
6-7	2.00	2.50
7-8	1.75	1.50
8-9	1.50	1.25
9-10	1.25	1.00
10-11	1.00	0.95
11-12	0.95	0.90
12-13	0.90	0.85
13-14	0.85	0.80
14-15	0.80	0.70
15-16	0.75	0.70
16-17	0.70	0.70
17-18	0.65	0.70
18-19	0.60	0.70
19-20	0.55	0.70
20 & Over	0.50	0.70

Demographic Assumptions																																																																				
Post-Retirement Mortality Rates:	Healthy																																																																			
	<ul style="list-style-type: none">• General Members and All Beneficiaries: Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table (separate tables for males and females) times 90% for males and 100% for females, projected generationally with the two-dimensional mortality improvement scale MP-2017.• Safety Members: Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table (separate tables for males and females) times 75% for males and 85% for females, projected generationally with the two-dimensional mortality improvement scale MP-2017.																																																																			
	Disabled																																																																			
	<ul style="list-style-type: none">• General Members: Headcount-Weighted RP-2014 Disabled Retiree Mortality Table (separate tables for males and females) times 85% for males and 100% for females, projected generationally with the two-dimensional mortality improvement scale MP-2017.• Safety Members: Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table (separate tables for males and females) times 100% for males and 115% for females, projected generationally with the two-dimensional mortality improvement scale MP-2017.																																																																			
The RP-2014 mortality tables and adjustments as shown above reflect the mortality experience as of the measurement date. The generational projection is a provision for future mortality improvement.																																																																				
Pre-Retirement Mortality Rates:	<ul style="list-style-type: none">• General and Safety Members: Headcount-Weighted RP-2014 Employee Mortality Table times 80%, projected generationally with the two-dimensional MP-2017 projection scale.																																																																			
	<table><tr><th rowspan="3">Age</th><th colspan="4">Rate (%)</th></tr><tr><th colspan="2">General⁽¹⁾</th><th colspan="2">Safety⁽¹⁾</th></tr><tr><th>Male</th><th>Female</th><th>Male</th><th>Female</th></tr><tr><td>25</td><td>0.05</td><td>0.02</td><td>0.05</td><td>0.02</td></tr><tr><td>30</td><td>0.05</td><td>0.02</td><td>0.05</td><td>0.02</td></tr><tr><td>35</td><td>0.05</td><td>0.03</td><td>0.05</td><td>0.03</td></tr><tr><td>40</td><td>0.06</td><td>0.04</td><td>0.06</td><td>0.04</td></tr><tr><td>45</td><td>0.10</td><td>0.07</td><td>0.10</td><td>0.07</td></tr><tr><td>50</td><td>0.17</td><td>0.11</td><td>0.17</td><td>0.11</td></tr><tr><td>55</td><td>0.27</td><td>0.17</td><td>0.27</td><td>0.17</td></tr><tr><td>60</td><td>0.45</td><td>0.24</td><td>0.45</td><td>0.24</td></tr><tr><td>65</td><td>0.78</td><td>0.36</td><td>0.78</td><td>0.36</td></tr><tr><td>70</td><td>1.27</td><td>0.59</td><td>1.27</td><td>0.59</td></tr></table>					Age	Rate (%)				General ⁽¹⁾		Safety ⁽¹⁾		Male	Female	Male	Female	25	0.05	0.02	0.05	0.02	30	0.05	0.02	0.05	0.02	35	0.05	0.03	0.05	0.03	40	0.06	0.04	0.06	0.04	45	0.10	0.07	0.10	0.07	50	0.17	0.11	0.17	0.11	55	0.27	0.17	0.27	0.17	60	0.45	0.24	0.45	0.24	65	0.78	0.36	0.78	0.36	70	1.27	0.59	1.27	0.59
	Age	Rate (%)																																																																		
		General ⁽¹⁾		Safety ⁽¹⁾																																																																
		Male	Female	Male	Female																																																															
	25	0.05	0.02	0.05	0.02																																																															
	30	0.05	0.02	0.05	0.02																																																															
	35	0.05	0.03	0.05	0.03																																																															
	40	0.06	0.04	0.06	0.04																																																															
	45	0.10	0.07	0.10	0.07																																																															
	50	0.17	0.11	0.17	0.11																																																															
	55	0.27	0.17	0.27	0.17																																																															
	60	0.45	0.24	0.45	0.24																																																															
65	0.78	0.36	0.78	0.36																																																																
70	1.27	0.59	1.27	0.59																																																																
All pre-retirement deaths are assumed to be non-service connected.																																																																				
⁽¹⁾ Generational projections beyond the base year (2014) are not reflected in the above mortality rates.																																																																				

Mortality Rates for Member Contributions:	<ul style="list-style-type: none">• General Members: Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table (separate tables for males and females) times 90% for males and 100% for females, projected 20 years with the two-dimensional mortality improvement scale MP-2017, weighted one-third male and two-thirds female.• Safety Members: Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table (separate tables for males and females) times 75% for males and 85% for females, projected 20 years with the two-dimensional mortality improvement scale MP-2017, weighted 80% male and 20% female.																																											
Disability Incidence:	<table><tr><th colspan="3">Disability Incidence</th></tr><tr><th rowspan="2">Age</th><th colspan="2">Rate (%)</th></tr><tr><th>General</th><th>Safety</th></tr><tr><td>20</td><td>0.01</td><td>0.05</td></tr><tr><td>25</td><td>0.02</td><td>0.11</td></tr><tr><td>30</td><td>0.03</td><td>0.24</td></tr><tr><td>35</td><td>0.06</td><td>0.36</td></tr><tr><td>40</td><td>0.11</td><td>0.52</td></tr><tr><td>45</td><td>0.17</td><td>0.84</td></tr><tr><td>50</td><td>0.23</td><td>1.30</td></tr><tr><td>55</td><td>0.31</td><td>2.76</td></tr><tr><td>60</td><td>0.41</td><td>5.64</td></tr><tr><td>65</td><td>0.54</td><td>2.80</td></tr><tr><td>70</td><td>0.69</td><td>0.00</td></tr></table> <p>25% of General disabilities are assumed to be service connected (duty) disabilities and the other 75% are assumed to be non-service connected (ordinary) disabilities.</p> <p>90% of Safety disabilities are assumed to be service connected (duty) disabilities and the other 10% are assumed to be non-service connected (ordinary) disabilities.</p>			Disability Incidence			Age	Rate (%)		General	Safety	20	0.01	0.05	25	0.02	0.11	30	0.03	0.24	35	0.06	0.36	40	0.11	0.52	45	0.17	0.84	50	0.23	1.30	55	0.31	2.76	60	0.41	5.64	65	0.54	2.80	70	0.69	0.00
Disability Incidence																																												
Age	Rate (%)																																											
	General	Safety																																										
20	0.01	0.05																																										
25	0.02	0.11																																										
30	0.03	0.24																																										
35	0.06	0.36																																										
40	0.11	0.52																																										
45	0.17	0.84																																										
50	0.23	1.30																																										
55	0.31	2.76																																										
60	0.41	5.64																																										
65	0.54	2.80																																										
70	0.69	0.00																																										

Termination:

Termination		
Years of Service	Rate (%)	
	General	Safety
Less than 1	14.00	11.00
1-2	10.00	6.00
2-3	8.25	5.75
3-4	7.25	4.50
4-5	6.00	4.25
5-6	5.00	3.00
6-7	4.00	2.50
7-8	3.50	2.25
8-9	3.50	1.80
9-10	3.25	1.60
10-11	3.25	1.40
11-12	3.00	1.20
12-13	3.00	1.00
13-14	2.75	0.95
14-15	2.75	0.90
15-16	2.50	0.85
16-17	2.50	0.80
17-18	2.25	0.75
18-19	2.00	0.70
19-20	2.00	0.65
20 & Over	2.00	0.60

The member is assumed to receive the greater of the member's contribution balance or a deferred retirement benefit.

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

Retirement Rates:	Retirement Rates (%)					
	General Tier 1 and 2		Safety Non-PEPRA		General PEPRA Tier 1 and 2	Safety PEPRA
	Less than 30 Years of Service	30 or More Years of Service	Less than 30 Years of Service	30 or More Years of Service		
	Age					
	Under 50	0.00	50.00	1.00	1.00	0.00
	50	2.00	2.00	2.00	2.00	4.00
	51	2.00	2.00	2.25	2.25	2.25
	52	2.50	2.50	2.50	2.50	3.50
	53	3.00	3.00	3.50	3.50	5.50
	54	3.25	3.25	13.00	13.00	2.00
	55	4.75	4.75	20.00	30.00	4.00
	56	5.00	5.00	20.00	30.00	4.50
	57	5.50	5.50	18.00	27.00	5.00
	58	7.00	7.00	22.00	33.00	5.50
	59	7.50	7.50	22.00	33.00	6.00
	60	10.50	15.75	25.00	37.50	9.00
	61	14.00	21.00	28.00	42.00	11.00
	62	25.00	37.50	35.00	45.00	22.50
	63	20.00	30.00	35.00	45.00	20.00
	64	20.00	30.00	35.00	45.00	18.00
	65	28.00	42.00	100.00	100.00	20.00
	66	35.00	52.50	100.00	100.00	30.00
	67	30.00	45.00	100.00	100.00	30.00
	68	30.00	45.00	100.00	100.00	25.00
	69	22.50	22.50	100.00	100.00	35.00
	70	22.50	22.50	100.00	100.00	50.00
	71	20.00	20.00	100.00	100.00	50.00
	72	20.00	20.00	100.00	100.00	50.00
	73	20.00	20.00	100.00	100.00	50.00
	74	20.00	20.00	100.00	100.00	50.00
	75	100.00	100.00	100.00	100.00	100.00

Section 4: Actuarial Valuation Basis as of June 30, 2019 for the Ventura County Employees' Retirement Association

Retirement Age and Benefit for Deferred Vested Members:	<p>General Retirement Age: 59 Safety Retirement Age: 53</p> <p>Future deferred vested members who terminate with less than five years of service and are not vested are assumed to retire at age 70 for both General and Safety if they decide to leave their contributions on deposit.</p> <p>45% of future General and 60% of future Safety deferred vested members are assumed to continue to work for a reciprocal employer. For reciprocals, 3.75% and 3.95% compensation increases are assumed per annum for General and Safety, respectively.</p>										
Future Benefit Accruals:	1.0 year of service per year of employment.										
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.										
Form of Payment:	All active and inactive members are assumed to elect the unmodified option at retirement.										
Percent Married:	For all active and inactive members, 70% of male members and 55% of female members are assumed to be married at pre-retirement death or retirement.										
Age and Gender of Spouse:	For all active and inactive members, male members are assumed to have a female spouse who is 3 years younger than the member and female members are assumed to have a male spouse who is 2 years older than the member.										
In-Service Redemptions:	<p>The following assumptions for in-service redemptions pay as a percentage of final average compensation are used:</p> <table> <tr> <td>General Tier 1:</td><td>7.50%</td></tr> <tr> <td>General Tier 2:</td><td>3.50%</td></tr> <tr> <td>Safety:</td><td>7.00%</td></tr> <tr> <td>General PEPRAs:</td><td>0.00%</td></tr> <tr> <td>Safety PEPRAs:</td><td>0.00%</td></tr> </table> <p>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.</p>	General Tier 1:	7.50%	General Tier 2:	3.50%	Safety:	7.00%	General PEPRAs:	0.00%	Safety PEPRAs:	0.00%
General Tier 1:	7.50%										
General Tier 2:	3.50%										
Safety:	7.00%										
General PEPRAs:	0.00%										
Safety PEPRAs:	0.00%										
Average Entry Age for Member Contribution Rates:	For non-PEPRA members hired after November 1974 who are not contributing fifty percent of Normal Cost, they will pay a contribution corresponding to a General and Safety member hired at entry age 35 and 27, respectively.										

<u>Actuarial Funding Policy</u>	
Actuarial Cost Method:	Entry Age Actuarial Cost Method. Entry Age is the age on the valuation date minus years of service. 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 formula for each individual has always been in effect (i.e., "replacement life within a tier").
Actuarial Value of Assets:	Market value of assets (MVA) 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 the market value, and are recognized annually over a five-year period.
Valuation Value of Assets:	Actuarial Value of Assets, reduced by the value of the non-vested supplemental benefit reserve and statutory contingency reserve.

Amortization Policy:

The UAAL 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:

- With the exception noted below, the increase in UAAL as a result of any plan amendments will be amortized over a period of 15 years;
- 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.

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 (i.e., wage inflation).

If an overfunding or "surplus" exists (i.e., the VVA exceeds the AAL, so that the total of all UAAL amortization layers becomes negative), any prior UAAL amortization layers will be considered fully amortized, and any subsequent UAAL will be amortized as the first of a new series of amortization layers, using the above amortization periods.

If the surplus exceeds 20% of the AAL per Section 7522.52 of the Government Code, then the amount of surplus in excess of 20% of the AAL (and any subsequent surpluses in excess of that amount) will be amortized over an "open" amortization period of 30 years, but only if the other conditions of Section 7522.52 have also been met. If those conditions are not met, then the surplus will not be amortized and the full Normal Cost will be contributed.

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.

<u>Other Actuarial Methods</u>	
Employer Contributions:	<p>Employer contributions consist of two components:</p> <p><i>Normal Cost</i></p> <p>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.</p> <p><i>Contribution to the Unfunded Actuarial Accrued Liability (UAAL)</i></p> <p>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 UAAL) 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 annual rate of 3.25% (i.e., 2.75% inflation plus 0.50% "across the board" salary increase).</p> <p>The amortization policy is described on the previous page.</p> <p>The recommended employer contributions shown in <i>Section 2, Subsection F</i> 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.</p> <p>The recommended employer contributions shown in <i>Section 4, Exhibit IV</i> are calculated under the prior method (i.e., <u>without</u> 50/50 sharing of Normal Cost for non-PEPRA tiers).</p>

Member Contributions:

The member contribution rates for all members are provided in *Section 4, Exhibit III*, which are calculated based on a 50/50 sharing of Normal Cost.

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 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.

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.

Non-PEPRA Members (Prior Methodology)

The recommended member contributions shown in *Section 4, Exhibit V* are calculated under the prior method (i.e., without 50/50 sharing of Normal Cost for non-PEPRA tiers). 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.

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 AB1380 to not round the PEPRA member's contribution rates to the nearest one quarter of one percent as was previously required by PEPRA.

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".
Internal Revenue Code Section 415:	<p>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.</p> <p>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.</p> <p>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 \$225,000 for 2019. 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.</p> <p>Non-PEPRA benefits in excess of the limits may be paid through a qualified governmental excess plan that meets the requirements of Section 415(m).</p> <p>Legal Counsel's review and interpretation of the law and regulations should be sought on any questions in this regard.</p> <p>Contribution rates determined in this valuation have not been reduced for the Section 415 limitations. However, it is anticipated that PEPRA members will not be limited in the future due to the PEPRA compensation limit applied in the determination of their benefit. Actual limitations will result in actuarial gains as they occur.</p>
Changed Actuarial Assumptions:	There have been no changes in actuarial assumptions since the last valuation.

EXHIBIT II – SUMMARY OF PLAN PROVISIONS

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

Plan Year:	July 1 through June 30
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 plan 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>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</i>	All Safety members with membership dates before January 1, 2013.
<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) (FAS1).
<i>General Tier 2</i>	Highest consecutive thirty-six months of compensation earnable (§31462) (FAS3).
<i>General PEPR Tier 1, General PEPR Tier 2 and Safety PEPR</i>	Highest consecutive thirty-six months of pensionable compensation (§7522.10(c), §7522.32 and §7522.34) (FAS3).
Compensation Limit:	
<i>General Tier 1, General Tier 2 and Safety</i>	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, 2019 is \$280,000. The limit is indexed for inflation on an annual basis.
<i>General PEPR Tier 1, General PEPR Tier 2 and Safety PEPR</i>	Pensionable Compensation is limited to \$124,180 for 2019 (\$149,016, 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:		
General Tier 1 (§31676.11)	Retirement Age	Benefit Formula
	50	1.24% x (FAS1 – \$1,400) x Yrs
	55	1.67% x (FAS1 – \$1,400) x Yrs
	60	2.18% x (FAS1 – \$1,400) x Yrs
	62	2.35% x (FAS1 – \$1,400) x Yrs
	65 and over	2.61% x (FAS1 – \$1,400) x Yrs
General Tier 2 (§31676.1)	Retirement Age	Benefit Formula
	50	1.18% x (FAS3 – \$1,400) x Yrs
	55	1.49% x (FAS3 – \$1,400) x Yrs
	60	1.92% x (FAS3 – \$1,400) x Yrs
	62	2.09% x (FAS3 – \$1,400) x Yrs
	65 and over	2.43% x (FAS3 – \$1,400) x Yrs
General PEPRA Tier 1 and General PEPRA Tier 2 (§7522.20(a))	Retirement Age	Benefit Formula
	52	1.00% x FAS3 x Yrs
	55	1.30% x FAS3 x Yrs
	60	1.80% x FAS3 x Yrs
	62	2.00% x FAS3 x Yrs
	65	2.30% x FAS3 x Yrs
	67 and over	2.50% x FAS3 x Yrs

Safety (§31664)	Retirement Age	Benefit Formula
	50	2.00% x FAS1 x Yrs
	55 and over	2.62% x FAS1 x Yrs
Safety PEPPRA (§7522.25(d))	Retirement Age	Benefit Formula
	50	2.00% x FAS3 x Yrs
	55	2.50% x FAS3 x Yrs
	57 and over	2.70% x FAS3 x Yrs
Maximum Benefit:		
General Tier 1, General Tier 2 and Safety	100% of Highest Average Compensation (§31676.1, §31664.11, §31664).	
General PEPPRA Tier 1, General PEPPRA Tier 2 and Safety PEPPRA	There is no final compensation limit on the maximum retirement benefit.	
Ordinary Disability:		
General		
Eligibility	Five years of service (§31720).	
Benefit	1.5% per year of service. If the benefit does not exceed one-third of Final Compensation, the service is projected to 65, but the total benefit cannot be more than one-third of Final Compensation (§31727). For all members, 100% of the Service Retirement benefit will be paid, if greater.	
Safety		
Eligibility	Five years of service (§31720).	
Benefit	1.8% per year of service. If the benefit does not exceed one-third of Final Compensation, the service is projected to 55, but the total benefit cannot be more than one-third of Final Compensation (§31727.2). For all members, 100% of the Service Retirement benefit will be paid, if greater.	
Line-of-Duty Disability:		
Eligibility	No age or service requirements (§31720).	
Benefit	50% of the Final Compensation or 100% of Service Retirement benefit, if greater (§31727.4).	

Pre-Retirement Death:	
<i>All Members</i>	
<i>Eligibility</i>	None.
<i>Basic lump sum benefit</i>	Refund of member contributions with interest, plus one month's compensation for each year of service, to a maximum of six months' compensation (§31781).
<i>Line-of-Duty Death</i>	50% of Final Compensation or 100% of Service Retirement benefit, if greater, payable to spouse or minor children (§31787). An additional lump sum payment of one-year of compensation is paid if Line-of-Duty death for Safety member (§31787.6).
<i>Vested Members</i>	
<i>Eligibility</i>	Five years of service.
<i>Basic benefit</i>	60% of the greater of Service Retirement or Ordinary Disability Retirement benefit payable to surviving eligible spouse or eligible children (§31765.1, §31781.1), in lieu of the basic lump sum benefit above (§31781). An additional lump sum payment of one-year of compensation is paid if Line-of-Duty death for Safety member (§31787.6).
Death After Retirement:	
<i>All Members</i>	
<i>Service Retirement or Ordinary Disability Retirement</i>	Unless another option was selected at retirement, 60% of member's unmodified allowance continued to eligible spouse (§31760.1). 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).
<i>Line-of-Duty Disability</i>	Unless another option was selected at retirement, 100% of member's unmodified allowance continued to eligible spouse (§31786). 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).
<i>Additional Death Benefit</i>	A lump sum benefit of \$5,000 lump sum benefit payable to member's beneficiary (§31789.3).
Withdrawal Benefits:	
<i>Less than Five Years of Service</i>	Refund of accumulated member contributions with interest (§31628). A member may also elect to leave contributions on deposit in the retirement fund (§31629.5).
<i>Five or More Years of Service</i>	If contributions left on deposit, a member is entitled to earned benefits commencing at any time after eligible to retire (§31700). Service for eligibility includes service credited as an employee of a reciprocal system.

Post-retirement Cost-of-Living Benefits: <i>General Tier 1, Safety, General PEPRA Tier 1 and Safety PEPRA</i> <i>General Tier 2 and General PEPRA Tier 2</i>	<p>Future changes based on changes to the Consumer Price Index to a maximum of 3% per year, excess “banked” (\$31870.1).</p> <p>Members represented by SEIU 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”.</p>
Supplemental Benefit:	A supplemental benefit in the amount of \$108.44 per month is paid to retirees and their survivors.
Member Contributions: <i>General Tier 1, Safety and Safety PEPRA</i> <i>General Tier 2 and General PEPRA Tier 2</i>	<p>Please refer to <i>Section 4, Exhibit III</i> for the specific rates.</p> <p>Provide for 50% of total Normal Cost.</p> <p>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.</p>
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. Safety Non-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:	<p>The Board of Retirement has approved a non-vested supplemental 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.</p> <p>The non-vested supplemental benefit of \$27.50 per month paid to retirees and their survivors has been terminated upon issuance of the June 2019 payment. This was due to the depletion of the funds in this reserve.</p>
Changed Plan Provisions:	There have been no changes in plan provisions since the last valuation.

Note: The summary of major plan provisions is designed to outline principal 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 the actuary so they can both be sure the proper provisions are valued.

EXHIBIT III – MEMBER CONTRIBUTION RATES

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	5.33%	8.00%	1.70%	2.54%	7.03%	10.54%
General Tier 2	4.99%	7.49%	0.00%	0.00%	4.99%	7.49%
General Tier 2 w/ COLA ⁽¹⁾	4.99%	7.49%	2.63%	2.63%	7.62%	10.12%
Safety	11.01%	11.01%	4.30%	4.30%	15.31%	15.31%

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

EXHIBIT III – MEMBER CONTRIBUTION RATES (CONTINUED)

Member Contribution Rates for PEPRA Members

	Basic	COLA	Total
General Tier 2	7.49%	0.00%	7.49%
General Tier 2 w/ COLA ⁽¹⁾	7.49%	2.63%	10.12%
Safety	10.34%	4.09%	14.43%

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

**EXHIBIT IV – EMPLOYER CONTRIBUTION RATES
WITHOUT 50/50 SHARING OF NORMAL COST FOR NON-PEPRA TIERS**

	June 30, 2019 Actuarial Valuation Recommended Rates for FY 2020-21				June 30, 2018 Actuarial Valuation Recommended Rates for FY 2019-20			
	Basic	COLA	Total	Estimated Annual Dollar Amount ⁽¹⁾ (\$ in '000s)	Basic	COLA	Total	Estimated Annual Dollar Amount ⁽¹⁾ (\$ in '000s)
General Tier 1 Members								
Normal Cost	8.56%	2.54%	11.10%	\$507	8.31%	2.49%	10.80%	\$627
UAAL ⁽²⁾	<u>7.45%</u>	<u>6.21%</u>	<u>13.66%</u>	<u>624</u>	<u>9.59%</u>	<u>5.66%</u>	<u>15.25%</u>	<u>885</u>
Total Contributions	16.01%	8.75%	24.76%	\$1,131	17.90%	8.15%	26.05%	\$1,512
General Tier 2 Members								
Normal Cost	8.67%	0.00%	8.67%	\$18,635	8.81%	0.00%	8.81%	\$18,635
UAAL ⁽²⁾	<u>7.45%</u>	<u>0.00%</u>	<u>7.45%</u>	<u>16,008</u>	<u>9.59%</u>	<u>0.00%</u>	<u>9.59%</u>	<u>20,296</u>
Total Contributions	16.12%	0.00%	16.12%	\$34,643	18.40%	0.00%	18.40%	\$38,931
General PEPRA Tier 2 Members								
Normal Cost	7.49%	0.00%	7.49%	\$5,319	7.50%	0.00%	7.50%	\$4,501
UAAL ⁽²⁾	<u>7.45%</u>	<u>0.00%</u>	<u>7.45%</u>	<u>5,291</u>	<u>9.59%</u>	<u>0.00%</u>	<u>9.59%</u>	<u>5,755</u>
Total Contributions	14.94%	0.00%	14.94%	\$10,610	17.09%	0.00%	17.09%	\$10,256
General Tier 2 Members w/ COLA								
Normal Cost ⁽³⁾	8.67%	0.42%	9.09%	\$18,479	8.81%	0.43%	9.24%	\$19,419
UAAL ⁽²⁾⁽⁴⁾	<u>7.45%</u>	<u>6.21%</u>	<u>13.66%</u>	<u>27,769</u>	<u>9.59%</u>	<u>5.66%</u>	<u>15.25%</u>	<u>32,059</u>
Total Contributions	16.12%	6.63%	22.75%	\$46,248	18.40%	6.09%	24.49%	\$51,478
General PEPRA Tier 2 Members w/ COLA								
Normal Cost ⁽³⁾	7.49%	0.48%	7.97%	\$8,436	7.50%	0.48%	7.98%	\$7,468
UAAL ⁽²⁾⁽⁴⁾	<u>7.45%</u>	<u>6.21%</u>	<u>13.66%</u>	<u>14,458</u>	<u>9.59%</u>	<u>5.66%</u>	<u>15.25%</u>	<u>14,272</u>
Total Contributions	14.94%	6.69%	21.63%	\$22,894	17.09%	6.14%	23.23%	\$21,740
All General Members⁽⁵⁾								
Normal Cost	8.32%	0.25%	8.57%	\$51,376	8.46%	0.26%	8.72%	\$50,650
UAAL	<u>7.45%</u>	<u>3.25%</u>	<u>10.70%</u>	<u>64,150</u>	<u>9.59%</u>	<u>3.02%</u>	<u>12.61%</u>	<u>73,267</u>
Total Contributions	15.77%	3.50%	19.27%	\$115,526	18.05%	3.28%	21.33%	\$123,917

Note: Applicable footnotes are shown on next page.

EXHIBIT IV – EMPLOYER CONTRIBUTION RATES
WITHOUT 50/50 SHARING OF NORMAL COST FOR NON-PEPRA TIERS (CONTINUED)

	June 30, 2019 Actuarial Valuation Recommended Rates for FY 2020-21				June 30, 2018 Actuarial Valuation Recommended Rates for FY 2019-20			
	Basic	COLA	Total	Estimated Annual Dollar Amount ⁽¹⁾ (\$ in '000s)	Basic	COLA	Total	Estimated Annual Dollar Amount ⁽¹⁾ (\$ in '000s)
Safety Members								
Normal Cost	14.00%	4.23%	18.23%	\$27,706	13.87%	4.16%	18.03%	\$27,516
UAAL	<u>46.49%</u>	<u>(23.60%)</u>	<u>22.89%</u>	<u>34,788</u>	<u>55.68%</u>	<u>(17.21%)</u>	<u>38.47%</u>	<u>58,709</u>
Total Contributions	60.49%	(19.37%)	41.12%	\$62,494	69.55%	(13.05%)	56.50%	\$86,225
Safety PEPRA Members								
Normal Cost	10.34%	4.09%	14.43%	\$4,874	10.34%	4.08%	14.42%	\$3,911
UAAL	<u>46.49%</u>	<u>(23.60%)</u>	<u>22.89%</u>	<u>7,731</u>	<u>55.68%</u>	<u>(17.21%)</u>	<u>38.47%</u>	<u>10,434</u>
Total Contributions	56.83%	(19.51%)	37.32%	\$12,605	66.02%	(13.13%)	52.89%	\$14,345
All Safety Members⁽⁵⁾								
Normal Cost	13.33%	4.21%	17.54%	\$32,580	13.34%	4.15%	17.49%	\$31,427
UAAL	<u>46.49%</u>	<u>(23.60%)</u>	<u>22.89%</u>	<u>42,519</u>	<u>55.68%</u>	<u>(17.21%)</u>	<u>38.47%</u>	<u>69,143</u>
Total Contributions	59.82%	(19.39%)	40.43%	\$75,099	69.02%	(13.06%)	55.96%	\$100,570
All Categories Combined⁽⁵⁾								
Normal Cost	9.51%	1.18%	10.69%	\$83,956	9.61%	1.18%	10.79%	\$82,077
UAAL	<u>16.68%</u>	<u>(3.10%)</u>	<u>13.58%</u>	<u>106,669</u>	<u>20.48%</u>	<u>(1.76%)</u>	<u>18.72%</u>	<u>142,410</u>
Total Contributions	26.19%	(1.92%)	24.27%	\$190,625	30.09%	(0.58%)	29.51%	\$224,487

⁽¹⁾ Based on projected compensation for each year shown on page 34.

⁽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 0.71% and 0.66% in COLA UAAL costs for June 30, 2019 and June 30, 2018, respectively, 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.

EXHIBIT V – MEMBER CONTRIBUTION RATES
WITHOUT 50/50 SHARING OF NORMAL COST FOR NON-PEPRA TIERS

General Tier 1						
Entry Age	Basic		COLA		Total	
	First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350
16	3.37%	5.06%	1.15%	1.73%	4.52%	6.79%
17	3.44%	5.16%	1.17%	1.76%	4.61%	6.92%
18	3.51%	5.27%	1.20%	1.80%	4.71%	7.07%
19	3.59%	5.38%	1.22%	1.84%	4.81%	7.22%
20	3.66%	5.49%	1.25%	1.88%	4.91%	7.37%
21	3.74%	5.61%	1.28%	1.92%	5.02%	7.53%
22	3.81%	5.72%	1.31%	1.96%	5.12%	7.68%
23	3.89%	5.84%	1.34%	2.00%	5.23%	7.84%
24	3.97%	5.96%	1.36%	2.04%	5.33%	8.00%
25	4.06%	6.08%	1.38%	2.08%	5.44%	8.16%
26	4.14%	6.21%	1.41%	2.12%	5.55%	8.33%
27	4.22%	6.34%	1.45%	2.17%	5.67%	8.51%
28	4.31%	6.47%	1.48%	2.21%	5.79%	8.68%
29	4.40%	6.60%	1.51%	2.26%	5.91%	8.86%
30	4.49%	6.74%	1.54%	2.30%	6.03%	9.04%
31	4.59%	6.88%	1.56%	2.35%	6.15%	9.23%
32	4.68%	7.02%	1.60%	2.40%	6.28%	9.42%
33	4.78%	7.17%	1.63%	2.45%	6.41%	9.62%
34	4.88%	7.32%	1.67%	2.50%	6.55%	9.82%
35	4.98%	7.47%	1.70%	2.55%	6.68%	10.02%
36	5.08%	7.63%	1.74%	2.61%	6.82%	10.24%
37	5.19%	7.78%	1.77%	2.66%	6.96%	10.44%
38	5.29%	7.94%	1.81%	2.71%	7.10%	10.65%
39	5.40%	8.09%	1.84%	2.77%	7.24%	10.86%

EXHIBIT V – MEMBER CONTRIBUTION RATES
WITHOUT 50/50 SHARING OF NORMAL COST FOR NON-PEPRA TIERS (CONTINUED)

General Tier 1 (continued)						
Entry Age	Basic		COLA		Total	
	First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350
40	5.50%	8.25%	1.88%	2.82%	7.38%	11.07%
41	5.61%	8.41%	1.91%	2.87%	7.52%	11.28%
42	5.72%	8.58%	1.95%	2.93%	7.67%	11.51%
43	5.83%	8.74%	1.99%	2.99%	7.82%	11.73%
44	5.94%	8.92%	2.04%	3.05%	7.98%	11.97%
45	6.05%	9.08%	2.07%	3.10%	8.12%	12.18%
46	6.16%	9.23%	2.10%	3.15%	8.26%	12.38%
47	6.25%	9.38%	2.13%	3.20%	8.38%	12.58%
48	6.34%	9.51%	2.17%	3.25%	8.51%	12.76%
49	6.43%	9.64%	2.19%	3.29%	8.62%	12.93%
50	6.50%	9.75%	2.22%	3.33%	8.72%	13.08%
51	6.54%	9.81%	2.23%	3.35%	8.77%	13.16%
52	6.57%	9.85%	2.24%	3.36%	8.81%	13.21%
53	6.54%	9.82%	2.24%	3.35%	8.78%	13.17%
54 & Over	6.46%	9.68%	2.20%	3.31%	8.66%	12.99%

Interest: 7.25% per annum

COLA: 2.75%

Mortality: See Section 4, Exhibit I

Salary Increase: Inflation (2.75%) + Across-the-Board Increase (0.50%) + Merit (See Section 4, Exhibit I)

COLA Loading Factor: 34.17%

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.

EXHIBIT V – MEMBER CONTRIBUTION RATES
WITHOUT 50/50 SHARING OF NORMAL COST FOR NON-PEPRA TIERS (CONTINUED)

General Tier 2						
Entry Age	Basic		COLA		Total	
	First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350
16	2.78%	4.17%	0.00%	0.00%	2.78%	4.17%
17	2.84%	4.26%	0.00%	0.00%	2.84%	4.26%
18	2.90%	4.35%	0.00%	0.00%	2.90%	4.35%
19	2.96%	4.44%	0.00%	0.00%	2.96%	4.44%
20	3.02%	4.53%	0.00%	0.00%	3.02%	4.53%
21	3.08%	4.63%	0.00%	0.00%	3.08%	4.63%
22	3.15%	4.72%	0.00%	0.00%	3.15%	4.72%
23	3.21%	4.82%	0.00%	0.00%	3.21%	4.82%
24	3.28%	4.92%	0.00%	0.00%	3.28%	4.92%
25	3.35%	5.02%	0.00%	0.00%	3.35%	5.02%
26	3.42%	5.13%	0.00%	0.00%	3.42%	5.13%
27	3.49%	5.23%	0.00%	0.00%	3.49%	5.23%
28	3.56%	5.34%	0.00%	0.00%	3.56%	5.34%
29	3.64%	5.45%	0.00%	0.00%	3.64%	5.45%
30	3.71%	5.57%	0.00%	0.00%	3.71%	5.57%
31	3.79%	5.68%	0.00%	0.00%	3.79%	5.68%
32	3.87%	5.80%	0.00%	0.00%	3.87%	5.80%
33	3.95%	5.92%	0.00%	0.00%	3.95%	5.92%
34	4.03%	6.04%	0.00%	0.00%	4.03%	6.04%
35	4.11%	6.17%	0.00%	0.00%	4.11%	6.17%
36	4.20%	6.29%	0.00%	0.00%	4.20%	6.29%
37	4.28%	6.42%	0.00%	0.00%	4.28%	6.42%
38	4.37%	6.56%	0.00%	0.00%	4.37%	6.56%
39	4.46%	6.69%	0.00%	0.00%	4.46%	6.69%

EXHIBIT V – MEMBER CONTRIBUTION RATES
WITHOUT 50/50 SHARING OF NORMAL COST FOR NON-PEPRA TIERS (CONTINUED)

General Tier 2 (continued)						
Entry Age	Basic		COLA		Total	
	First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350
40	4.55%	6.83%	0.00%	0.00%	4.55%	6.83%
41	4.64%	6.97%	0.00%	0.00%	4.64%	6.97%
42	4.74%	7.10%	0.00%	0.00%	4.74%	7.10%
43	4.83%	7.24%	0.00%	0.00%	4.83%	7.24%
44	4.92%	7.38%	0.00%	0.00%	4.92%	7.38%
45	5.02%	7.52%	0.00%	0.00%	5.02%	7.52%
46	5.11%	7.67%	0.00%	0.00%	5.11%	7.67%
47	5.21%	7.81%	0.00%	0.00%	5.21%	7.81%
48	5.30%	7.96%	0.00%	0.00%	5.30%	7.96%
49	5.40%	8.09%	0.00%	0.00%	5.40%	8.09%
50	5.48%	8.22%	0.00%	0.00%	5.48%	8.22%
51	5.56%	8.34%	0.00%	0.00%	5.56%	8.34%
52	5.64%	8.45%	0.00%	0.00%	5.64%	8.45%
53	5.70%	8.55%	0.00%	0.00%	5.70%	8.55%
54	5.75%	8.62%	0.00%	0.00%	5.75%	8.62%
55	5.77%	8.66%	0.00%	0.00%	5.77%	8.66%
56	5.77%	8.66%	0.00%	0.00%	5.77%	8.66%
57	5.73%	8.59%	0.00%	0.00%	5.73%	8.59%
58	5.92%	8.88%	0.00%	0.00%	5.92%	8.88%
59 & Over	6.12%	9.19%	0.00%	0.00%	6.12%	9.19%

Interest: 7.25% per annum

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

Mortality: See *Section 4, Exhibit I*

Salary Increase: Inflation (2.75%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit I*)

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.

EXHIBIT V – MEMBER CONTRIBUTION RATES
WITHOUT 50/50 SHARING OF NORMAL COST FOR NON-PEPRA TIERS (CONTINUED)

Safety			
Entry Age	Basic	COLA	Total
16	7.24%	3.96%	11.20%
17	7.38%	4.04%	11.42%
18	7.53%	4.12%	11.65%
19	7.67%	4.20%	11.87%
20	7.82%	4.28%	12.10%
21	7.97%	4.36%	12.33%
22	8.12%	4.44%	12.56%
23	8.28%	4.53%	12.81%
24	8.44%	4.62%	13.06%
25	8.60%	4.70%	13.30%
26	8.76%	4.79%	13.55%
27	8.93%	4.89%	13.82%
28	9.11%	4.98%	14.09%
29	9.29%	5.08%	14.37%
30	9.47%	5.18%	14.65%
31	9.66%	5.28%	14.94%
32	9.85%	5.39%	15.24%
33	10.05%	5.50%	15.55%
34	10.26%	5.61%	15.87%
35	10.48%	5.73%	16.21%
36	10.69%	5.85%	16.54%
37	10.91%	5.97%	16.88%
38	11.14%	6.10%	17.24%
39	11.38%	6.23%	17.61%

**EXHIBIT V – MEMBER CONTRIBUTION RATES
WITHOUT 50/50 SHARING OF NORMAL COST FOR NON-PEPRA TIERS (CONTINUED)**

Safety (continued)			
Entry Age	Basic	COLA	Total
40	11.64%	6.37%	18.01%
41	11.89%	6.50%	18.39%
42	12.14%	6.64%	18.78%
43	12.30%	6.73%	19.03%
44	12.39%	6.78%	19.17%
45	12.46%	6.82%	19.28%
46	12.51%	6.84%	19.35%
47	12.51%	6.85%	19.36%
48	12.41%	6.79%	19.20%
49 & Over	12.16%	6.65%	18.81%

Interest: 7.25% per annum

COLA: 2.75%

Mortality: See Section 4, Exhibit I

Salary Increase: Inflation (2.75%) + Across-the-Board Increase (0.50%) +
Merit (See Section 4, Exhibit I)

COLA Loading Factor: 54.71%

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 employer.

5589740v3/05325.002



Ventura County Employees' Retirement Association

**Governmental Accounting Standards (GAS) 67
Actuarial Valuation as of June 30, 2019**

This report has been prepared at the request of the Board of Retirement to assist in administering the Plan. 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, unless expressly authorized by Segal. The measurements shown in this actuarial valuation may not be applicable for other purposes.

Copyright © 2019 by The Segal Group, Inc. All rights reserved.



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

November 8, 2019

*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 Governmental Accounting Standards (GAS) 67 Actuarial Valuation as of June 30, 2019. It contains various information that will need to be disclosed in order to comply with GAS 67.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist VCERA in preparing items related to the pension plan in their financial report. The census and financial information on which our calculations were based was prepared by VCERA. 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, MAAA, Enrolled Actuary. We are members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. 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 expectations for the Plan.

We look forward to reviewing this report with you and to answering any questions.

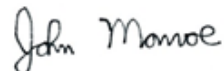
Sincerely,

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

By: 

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

AW/



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

5598334v3/05325.001

SECTION 1	SECTION 2	SECTION 3
VALUATION SUMMARY	GAS 67 INFORMATION	AICPA SCHEDULES
Purpose i	EXHIBIT 1	EXHIBIT A
General Observations on GAS 67	General Information – “Financial	Schedule of Employer
Actuarial Valuation..... i	Statements”, Note Disclosures	Allocations as of
Significant Issues in Valuation	and Required Supplementary	June 30, 2019 13
Year..... ii	Information for a Cost-Sharing	EXHIBIT B
Summary of Key Valuation	Pension Plan..... 1	Schedule of Pension Amounts
Results iii	EXHIBIT 2	by Employer as of
Important Information about	Net Pension Liability 5	June 30, 2019 14
Actuarial Valuations iv	EXHIBIT 3	
	Schedules of Changes in	
	Net Pension Liability –	
	Last Two Fiscal Years 8	
	EXHIBIT 4	
	Schedule of Employer	
	Contributions – Last Ten	
	Fiscal Years..... 9	
	EXHIBIT 5	
	Calculation of Discount Rate as of	
	June 30, 2019 11	

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

Purpose

This report has been prepared by Segal Consulting to present certain disclosure information required by Governmental Accounting Standards (GAS) 67 as of June 30, 2019. This valuation is based on:

- The benefit provisions of VCERA, as administered by the Board;
- The characteristics of covered active members, terminated vested members, and retired members and beneficiaries as of June 30, 2018, provided by VCERA;
- The assets of the Plan as of June 30, 2019, provided by VCERA;
- Economic assumptions regarding future salary increases and investment earnings adopted by the Board for the June 30, 2019 valuation; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc. adopted by the Board for the June 30, 2019 valuation.

General Observations on GAS 67 Actuarial Valuation

The following points should be considered when reviewing this GAS 67 report:

- The Governmental Accounting Standards Board (GASB) rules only define pension liability and expense for financial reporting purposes, and do not apply to contribution amounts for actual pension funding purposes. Employers and plans still develop and adopt funding policies under current practices.
- When measuring pension liability GASB uses the same actuarial cost method (Entry Age method) and the same type of discount rate (expected return on assets) as VCERA uses for funding. This means that the Total Pension Liability (TPL) measure for financial reporting shown in this report is determined on generally the same basis as VCERA's Actuarial Accrued Liability (AAL) measure for funding. We note that the same is generally true for the Normal Cost component of the annual plan cost for funding and financial reporting.
- The TPL and the Plan's Fiduciary Net Position include liabilities and assets held for the Supplemental Medical (\$27.50) Reserve. The TPL only includes a liability up to the amount in the Supplemental Medical (\$27.50) Reserve. However, it is our understanding that VCERA has terminated the Supplemental Medical Reserve after the June 2019 payment due to the depletion of that Reserve.

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

- The Net Pension Liability (NPL) is equal to the difference between the TPL and the Plan's Fiduciary Net Position. The Plan's Fiduciary Net Position is equal to the market value of assets and therefore, the NPL measure is very similar to an Unfunded Actuarial Accrued Liability (UAAL) calculated on a market value basis.
- For this report, the reporting dates for the Plan are June 30, 2019 and 2018. The NPL's measured as of June 30, 2019 and 2018 have been determined by rolling forward the TPL as of June 30, 2018 and 2017, respectively. The Plan's Fiduciary Net Position (plan assets) was valued as of the measurement dates. In addition, any changes in actuarial assumptions or plan provisions that occurred between the valuation date and the measurement date have been reflected.

Significant Issues in Valuation Year

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

- The NPL decreased from \$725 million as of June 30, 2018 to \$687 million as of June 30, 2019 primarily due to contributions made to pay down the UAAL. Changes in these values during the last two fiscal years ending June 30, 2019 and June 30, 2018 can be found in Exhibit 3.
- The discount rate used to determine the TPL and NPL as of June 30, 2019 was 7.25%, following the same assumption used by VCERA in the pension funding valuation as of June 30, 2018. The detailed derivation of the discount rate of 7.25% used in calculation of the TPL and NPL as of June 30, 2019 can be found in Exhibit 5 of Section 2. Various other information that is required to be disclosed can be found throughout Exhibits 1 through 4 in Section 2.
- Section 3 contains two schedules that the American Institute of Certified Public Accountants (AICPA) recommends be prepared by cost sharing pension plans. These two schedules contain summary information related to GAS 68 and are based on many of the results that will be shown in a separate GAS 68 report. The first schedule shows the method used for allocating the NPL along with the NPL amounts allocated amongst all of the employers in VCERA. The second schedule is a summary that shows the allocated NPL, deferred outflows and inflows of resources and pension expense by employer. Further information regarding GAS 68 including additional information that employers will need to disclose will be provided in a separate report that is anticipated to be completed during the first quarter of 2020.

SECTION 1: Valuation Summary for the Ventura County Employees' Retirement Association**Summary of Key Valuation Results**

	2019	2018
Disclosure elements for fiscal year ending June 30:		
Service cost ⁽¹⁾	\$145,337,461	\$138,876,553
Total Pension Liability	6,422,185,952	6,121,952,634
Plan's Fiduciary Net Position	5,735,360,159	5,396,462,523
Net Pension Liability	686,825,793	725,490,111
Schedule of contributions for fiscal year ending June 30:		
Actuarially determined contributions ⁽²⁾	\$199,890,664	\$197,638,153
Actual employer contributions	199,890,664	197,638,153
Contribution deficiency (excess)	0	0
Demographic data for plan year ending June 30:⁽³⁾		
Number of retired members and beneficiaries	7,280	7,038
Number of inactive vested members ⁽⁴⁾	3,041	2,909
Number of active members	8,696	8,611
Key assumptions:		
Investment rate of return	7.25%	7.25%
Inflation rate	2.75%	2.75%
Projected salary increases ⁽⁵⁾	General: 3.75% to 10.25% and Safety: 3.95% to 11.75%	General: 3.75% to 10.25% and Safety: 3.95% to 11.75%

⁽¹⁾ The service cost is based on the previous year's valuation, meaning the 2019 and 2018 values are based on the valuations as of June 30, 2018 and June 30, 2017, respectively. The 2019 service cost has been calculated using the assumptions shown in the 2018 column and the 2018 service cost has been calculated using the assumptions used in the June 30, 2017 valuation. The key assumptions as of June 30, 2017 are as follows:

Key assumptions as of June 30, 2017:

Investment rate of return	7.50%
Inflation rate	3.00%
Projected salary increases*	General: 4.00% to 9.50% and Safety: 4.00% to 11.50%

* Includes inflation at 3.00% plus real across-the-board salary increases of 0.50% plus merit and promotion increases.

⁽²⁾ Actuarially Determined Contributions exclude employer paid member contributions.

⁽³⁾ Data as of June 30, 2018 is used in the measurement of the TPL as of June 30, 2019.

⁽⁴⁾ Includes inactive members with member contributions on deposit.

⁽⁵⁾ Includes inflation at 2.75% plus real across-the-board salary increases of 0.50% plus merit and promotion increases that vary by service.

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 (as well as the plan summary included in our funding valuation report) to confirm that Segal has correctly interpreted the plan provisions.
- **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 measurement 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 Board to assist VCERA in preparing items related to the pension plan in their financial reports. Segal is not responsible for the use or misuse of its report, particularly by any other party.

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

- 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 cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.
- If VCERA 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: GAS 67 Information for Ventura County Employees' Retirement Association**EXHIBIT 1****General Information – “Financial Statements”, Note Disclosures and Required Supplementary Information for a Cost-Sharing Pension Plan****Plan Description**

Plan administration. The Ventura County Employees' Retirement Association (VCERA) was established by the County of Ventura in 1947. VCERA is administered by the Board of Retirement and governed by the County Employees' Retirement Law of 1937 (California Government Code Section 31450 et seq.) and the California Public Employees' Pension Reform Act of 2013 or “PEPRA” (California Government Code Section 7522 et seq.). VCERA is a cost-sharing multiple employer public employee retirement system whose main function is to provide service retirement, disability, death and survivor benefits to the safety and general members employed by the County of Ventura. VCERA also provides retirement benefits to the employee members of the Ventura County Courts, Air Pollution Control District, the Ventura Regional Sanitation District and VCERA.

The management of VCERA is vested with the VCERA Board of Retirement. The Board consists of nine members and three alternates. The County Treasurer is elected by the general public and a member of the Board of Retirement by law. Four members and one alternate, one of whom may be a County Supervisor, are appointed by the Board of Supervisors. Two members are elected by the general membership; one member and one alternate are elected by the safety membership, one member and one alternate are elected by the retired members of the Association. All members of the Board of Retirement serve terms of three years except for the County Treasurer whose term runs concurrent with his term as County Treasurer.

Plan membership. At June 30, 2019, pension plan membership consisted of the following:

Retired members or beneficiaries currently receiving benefits	7,280
Inactive vested members entitled to but not yet receiving benefits ⁽¹⁾	3,041
Active members	<u>8,696</u>
Total	19,017

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

Note: Data as of June 30, 2019 is not used in the measurement of the TPL as of June 30, 2019.

Benefits provided. VCERA provides service retirement, disability, death and survivor benefits to eligible employees. All permanent employees of the County of Ventura or contracting district who work a regular schedule of 64 or more hours per bi-weekly pay period become members of VCERA upon appointment. There are separate retirement plans for safety and general

SECTION 2: GAS 67 Information for Ventura County Employees' Retirement Association

member employees. Safety membership is extended to those involved in active law enforcement, fire suppression, and probation. The table below indicates all existing VCERA membership tiers:

<u>Membership Tier</u>	<u>Retirement Eligibility</u>
Tier 1 - General Legacy Members hired before January 1, 2013	Age 50 and 10 or more years of service credit, or 30 years or more of service credit, regardless of age. Age 70, regardless of service.
Tier 1 - Safety Legacy Members hired before January 1, 2013	Age 50 and 10 or more years of service credit, or 20 years or more of service credit, regardless of age. Age 70, regardless of service.
Tier 2 - General Legacy Members hired before January 1, 2013	Age 50 and 10 or more years of service credit, or 30 years or more of service credit, regardless of age. Age 70, regardless of service.
Tier 2 COLA - General Legacy Members hired before January 1, 2013	Age 50 and 10 or more years of service credit, or 30 years or more of service credit, regardless of age. Age 70, regardless of service.
Tier 5 - General PEPRA Members hired on or after January 1, 2013	Age 52 and five years of service credit. Age 70, regardless of service credit.
Tier 6 - General PEPRA Members hired on or after January 1, 2013	Age 52 and five years of service credit. Age 70, regardless of service credit.
Tier 7 - Safety PEPRA Members hired on or after January 1, 2013	Age 50 and five years of service credit. Age 70, regardless of service credit.
Tier 8 COLA - General PEPRA Members hired on or after January 1, 2013	Age 52 and five years of service credit. Age 70, regardless of service credit.

The retirement benefit the member will receive is based upon age at retirement, final average compensation, years of retirement service credit and retirement plan and tier.

SECTION 2: GAS 67 Information for Ventura County Employees' Retirement Association

General member benefits for Tier 1 and Tier 2 are calculated pursuant to the provisions of sections 31676.11 and 31676.1, respectively. The monthly allowance is equal to 1/90th of the first \$350 of final compensation, plus 1/60th of the excess final compensation times years of accrued retirement service credit times age factor from either section 31676.11 (Tier 1) or 31676.1 (Tier 2). General member benefits for those who are first hired on or after January 1, 2013, are calculated pursuant to the provisions of California Government Code Section 7522.20(a). The monthly allowance is equal to the final compensation multiplied by years of accrued retirement credit multiplied by the age factor from section 7522.20(a).

Safety member benefits are calculated pursuant to the provisions of California Government Code Section 31664. The monthly allowance is equal to 1/50th of final compensation times years of accrued retirement service credit times age factor from Section 31664. For those Safety members first hired on or after January 1, 2013, benefits are calculated pursuant to the provisions of California Government Code Section 7522.25(d). The monthly allowance is equal to the final compensation multiplied by years of accrued retirement credit multiplied by the age factor from section 7522.25(d).

For members with membership dates before January 1, 2013, the maximum monthly retirement allowance is 100% of final compensation. There is no 100% of final average compensation limit on the maximum monthly retirement allowance benefit for members with membership dates on or after January 1, 2013. However, the maximum amount of compensation earnable that can be considered for purposes of retirement contributions and benefit calculations for 2019 for members hired on or after July 1, 1996 but before January 1, 2013 is \$280,000. For members hired on or after January 1, 2013 who are enrolled in Social Security, the maximum amount of pensionable compensation that can be considered for purposes of retirement contributions and benefit calculations for 2019 is \$124,180 (\$149,016 for those not enrolled in Social Security). These limits are adjusted on an annual basis. Members are exempt from paying member contributions and employers are exempt from paying employer contributions on compensation in excess of the annual cap¹.

Final average compensation consists of the highest 12 consecutive months for Legacy Safety and Tier 1 General members. The final average compensation consists of the highest 36 consecutive months for all other tiers.

The member may elect an unmodified retirement allowance, or choose an optional retirement allowance. The unmodified retirement allowance provides the highest monthly benefit and a 60% continuance to an eligible surviving spouse. An eligible surviving spouse is one 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. There are four optional retirement allowances the member may choose. Each of the optional retirement allowances requires a reduction in the unmodified retirement allowance in order to allow the member the ability to provide certain benefits to a surviving spouse or named beneficiary having an insurable interest in the life of the member.

¹ *Members and employers do not pay contributions on compensation in excess of the pensionable compensation caps.*

SECTION 2: GAS 67 Information for Ventura County Employees' Retirement Association

VCERA provides an annual cost-of-living adjustment (COLA) benefit to Safety and Tier 1 General member retirees. The COLA, based upon the Consumer Price Index for the Los Angeles-Long Beach-Anaheim Area, is capped at 3.0%. Certain Tier 2 and all Tier 8 General member retirees receive a fixed 2% COLA pursuant to collective bargaining agreements.

The employers contribute to the retirement plan based upon actuarially determined contribution rates adopted by the Board of Retirement. Employer contribution rates are adopted annually based upon recommendations received from VCERA's actuary after the completion of the annual actuarial valuation. The average employer contribution rate as of June 30, 2019 for 2018/2019 (based on the June 30, 2017 valuation) was 27.09% of compensation.

Members are required to make contributions to VCERA up to the requisite limits, regardless of the retirement plan or tier². The average member contribution rate as of June 30, 2019 for 2018/2019 (based on the June 30, 2017 valuation) was 9.75% of compensation.

² *Safety Legacy members with 30 or more years of service are exempt from paying member contributions. The same applies for General Legacy members hired on or before March 7, 1973.*

SECTION 2: GAS 67 Information for Ventura County Employees' Retirement Association**EXHIBIT 2****Net Pension Liability**

The components of the Net Pension Liability as follows:	June 30, 2019	June 30, 2018
Total Pension Liability	\$6,422,185,952	\$6,121,952,634
Plan's Fiduciary Net Position	<u>(5,735,360,159)</u>	<u>(5,396,462,523)</u>
Net Pension Liability	\$686,825,793	\$725,490,111
Plan's Fiduciary Net Position as a percentage of the Total Pension Liability	89.31%	88.15%

The Net Pension Liability (NPL) was measured as of June 30, 2019 and 2018. The Plan's Fiduciary Net Position (plan assets) was valued as of the measurement date while the Total Pension Liability (TPL) was determined based upon rolling forward the TPL from actuarial valuations as of June 30, 2018 and 2017, respectively.

Plan provisions. The plan provisions used in the measurement of the NPL as of June 30, 2019 and 2018 are the same as those used in the VCERA actuarial valuations as of June 30, 2019 and 2018. The TPL and the Plan's Fiduciary Net Position include liabilities and assets held for the Supplemental Medical (\$27.50) Reserve.³

Actuarial assumptions. The TPLs as of June 30, 2019 and 2018 were determined by actuarial valuations as of June 30, 2018 and 2017, respectively. The actuarial assumptions used were based on the results of an experience study for the period from July 1, 2014 through June 30, 2017 and they are the same assumptions used in the June 30, 2019 and 2018 funding valuations for VCERA. In particular, the following actuarial assumptions were applied to all periods included in the measurement:

Inflation	2.75%
Salary increases	General: 3.75% to 10.25% and Safety: 3.95% to 11.75%, varying by service, including inflation
Investment rate of return	7.25%, net of pension plan investment expense, including inflation
Other assumptions	See analysis of actuarial experience during the period July 1, 2014 through June 30, 2017

³ It is our understanding that the VCERA has terminated the Supplemental Medical Reserve after the June 2019 payment due to the depletion of that Reserve.

SECTION 2: GAS 67 Information for Ventura County Employees' Retirement Association

The Entry Age Actuarial Cost Method used in VCERA's annual actuarial valuation has also been applied in measuring the service cost and TPL with one exception. For purposes of measuring the service cost and TPL, we have reflected the same plan provisions used in determining the member's Actuarial Present Value of Projected Benefits. This is different from the version of this method applied in VCERA's annual funding valuation, where the Normal Cost and Actuarial Accrued Liability are determined as if the current benefit accrual rate had always been in effect.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage, adding expected inflation and subtracting expected investment expenses and a risk margin. The target allocation and projected arithmetic real rates of return for each major asset class, after deducting inflation but before deducting investment expenses are shown in the following table. This information was used in the derivation of the long-term expected investment rate of return assumption for the June 30, 2019 and 2018 actuarial valuations. This information will change every three years based on the actuarial experience study.

Asset Class	Target Allocation	Long-Term Expected Arithmetic Real Rate of Return
Large Cap U.S. Equity	27.04%	5.32%
Small Cap U.S. Equity	4.48%	6.07%
Developed International Equity	17.32%	6.68%
Emerging Market Equity	4.16%	8.87%
Core Bonds	9.00%	1.04%
Real Estate	8.00%	4.65%
Master Limited Partnerships	4.00%	6.31%
Absolute Return (Fixed Income)	7.00%	1.71%
Private Debt/Credit Strategies	3.00%	5.50%
Absolute Return (Risk Parity)	6.00%	4.63%
Private Equity	<u>10.00%</u>	8.97%
Total	100.00%	

SECTION 2: GAS 67 Information for Ventura County Employees' Retirement Association

Discount rate: The discount rate used to measure the TPL was 7.25% as of June 30, 2019 and 2018. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the actuarially determined contribution rates. For this purpose, only employer contributions that are intended to fund benefits for current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs for future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments for current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the TPL as of both June 30, 2019 and 2018.

Sensitivity of the June 30, 2019 Net Pension Liability to changes in the discount rate. The following presents the NPL as of June 30, 2019, calculated using the discount rate of 7.25%, as well as what the NPL would be if it were calculated using a discount rate that is 1-percentage-point lower (6.25%) or 1-percentage-point higher (8.25%) than the current rate:

	1% Decrease (6.25%)	Current Discount Rate (7.25%)	1% Increase (8.25%)
Net Pension Liability as of June 30, 2019	\$1,547,867,567	\$686,825,793	\$(21,285,158)

SECTION 2: GAS 67 Information for Ventura County Employees' Retirement Association**EXHIBIT 3****Schedules of Changes in Net Pension Liability – Last Two Fiscal Years**

	2019	2018
Total Pension Liability		
1. Service cost	\$145,337,461	\$138,876,553
2. Interest	444,176,250	427,800,170
3. Change of benefit terms	0	0
4. Differences between expected and actual experience	7,838,145	26,563,801
5. Changes of assumptions	0	129,009,389
6. Benefit payments, including refunds of member contributions	<u>(297,118,538)</u>	<u>(277,718,396)</u>
7. Net change in Total Pension Liability	\$300,233,318	\$444,531,517
8. Total Pension Liability – beginning	<u>6,121,952,634</u>	<u>5,677,421,117</u>
9. Total Pension Liability – ending	<u>\$6,422,185,952</u>	<u>\$6,121,952,634</u>
Plan's Fiduciary Net Position		
10. Contributions – employer ⁽¹⁾	\$199,890,664	\$197,638,153
11. Contributions – employee ⁽¹⁾	75,199,090	74,088,950
12. Net investment income	368,664,889	445,902,067
13. Benefit payments, including refunds of member contributions	(297,118,538)	(277,718,396)
14. Administrative expense	(5,341,595)	(4,881,405)
15. Other expense	<u>(2,396,874)</u>	<u>(2,813,622)</u>
16. Net change in Plan's Fiduciary Net Position	\$338,897,636	\$432,215,747
17. Plan's Fiduciary Net Position – beginning	<u>5,396,462,523</u>	<u>4,964,246,776</u>
18. Plan's Fiduciary Net Position – ending	\$5,735,360,159	\$5,396,462,523
19. Net Pension Liability – ending (9) – (18)	<u>\$686,825,793</u>	<u>\$725,490,111</u>
20. Plan's Fiduciary Net Position as a percentage of the Total Pension Liability	89.31%	88.15%
21. Covered payroll ⁽²⁾	\$754,657,000	\$736,994,000
22. Plan's Net Pension Liability as percentage of covered payroll	91.01%	98.44%

⁽¹⁾ See footnote (2) under Exhibit 4 on next page.

⁽²⁾ Covered payroll represents payroll on which contributions to the pension plan are based.

Notes to Schedule:

Benefit changes: None

SECTION 2: GAS 67 Information for Ventura County Employees' Retirement Association

EXHIBIT 4

Schedule of Employer Contributions – Last Ten Fiscal Years

Year Ended June 30	Actuarially Determined Contributions⁽¹⁾⁽²⁾	Contributions in Relation to the Actuarially Determined Contributions⁽²⁾	Contribution Deficiency (Excess)	Covered Payroll⁽³⁾	Contributions as a Percentage of Covered Payroll
2010	\$97,324,000	\$97,324,000	\$0	\$634,777,000	15.33%
2011	111,585,000	111,585,000	0	654,829,000	17.04%
2012	132,386,000	132,386,000	0	637,037,000	20.78%
2013	142,370,000	142,370,000	0	632,146,000	22.52%
2014	161,247,000	161,247,000	0	642,779,000	25.09%
2015	173,269,000	173,269,000	0	665,086,000	26.05%
2016	177,830,000	177,830,000	0	688,233,000	25.84%
2017	190,712,000	190,712,000	0	716,033,000	26.63%
2018	197,638,000	197,638,000	0	736,994,000	26.82%
2019	199,890,664	199,890,664	0	754,657,000	26.49%

See accompanying notes to this schedule on next page.

⁽¹⁾ All "Actuarially Determined Contributions" through June 30, 2014 were determined as the "Annual Required Contribution" under GAS 25 and 27.

⁽²⁾ Actuarially Determined Contributions exclude employer paid member contributions.

⁽³⁾ Covered payroll represents payroll on which contributions to the pension plan are based.

SECTION 2: GAS 67 Information for Ventura County Employees' Retirement Association**Notes to Exhibit 4****Methods and assumptions used to establish "actuarially determined contribution" rates:**

Valuation date	Actuarially determined contribution rates are calculated as of June 30, two years prior to the end of the fiscal year in which contributions are reported
Actuarial cost method	Entry Age Actuarial Cost Method
Amortization method	Level percent of payroll for total unfunded actuarial accrued liability
Remaining amortization period	15 years for UAAL as of June 30, 2004. Any changes in UAAL after June 30, 2004 are separately amortized over a 15-year closed period effective with that valuation. Effective June 30, 2012, any changes in UAAL due to actuarial gains or losses or due to plan amendments (with the exception of a change due to retirement incentives) will be amortized over a 15-year closed period effective with that valuation (up to a 5-year closed period for retirement incentives). Any change in UAAL due to changes in actuarial assumptions or methods will be amortized over a 20-year closed period effective with that valuation.
Asset valuation method	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. The Actuarial Value of Assets is reduced by the value of the supplemental medical benefit reserve and statutory contingency reserve.

Actuarial assumptions:

	<u>June 30, 2019 Valuation Date</u>	<u>June 30, 2018 Valuation Date</u>
Investment rate of return	7.25%, net of pension plan administration and investment expenses, including inflation	7.25%, net of pension plan administration and investment expenses, including inflation
Inflation rate	2.75%	2.75%
Real across-the-board salary increase	0.50%	0.50%
Projected salary increases ⁽¹⁾	General: 3.75% to 10.25% and Safety: 3.95% to 11.75%	General: 3.75% to 10.25% and Safety: 3.95% to 11.75%
Cost of living adjustments	Increase of 2.75% per year; retiree COLA increases due to CPI are subject to a 3.00% 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, members represented by SEIU receive a fixed 2% cost-of-living adjustment, not subject to changes in the CPI, that applies to future service after March 2003.	Increase of 2.75% per year; retiree COLA increases due to CPI are subject to a 3.00% 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, members represented by SEIU receive a fixed 2% cost-of-living adjustment, not subject to changes in the CPI, that applies to future service after March 2003.
Other assumptions	Same as those used in the June 30, 2019 funding actuarial valuation	Same as those used in the June 30, 2018 funding actuarial valuation

⁽¹⁾ Includes inflation at 2.75% plus real across-the-board salary increases of 0.50% plus merit and promotion increases that vary by service.

SECTION 2: GAS 67 Information for Ventura County Employees' Retirement Association**EXHIBIT 5****Calculation of Discount Rate as of June 30, 2019****Projection of Pension Plan's Fiduciary Net Position (\$ in millions)**

Year Beginning July 1	Projected Beginning Plan's Fiduciary Net Position (a)	Projected Total Contributions (b)	Projected Benefit Payments (c)	Projected Administrative Expenses (d)	Projected Investment Earnings (e)	Projected Ending Plan's Fiduciary Net Position (f) = (a) + (b) - (c) - (d) + (e)
2018	\$5,396	\$275	\$297	\$8	\$369	\$5,735
2019	5,735	235	324	8	412	6,050
2020	6,050	228	342	9	434	6,362
2021	6,362	205	361	9	455	6,652
2022	6,652	216	380	10	476	6,955
2023	6,955	229	400	10	498	7,272
2024	7,272	184	420	10	518	7,544
2025	7,544	152	441	11	536	7,780
2026	7,780	144	462	11	552	8,004
2027	8,004	142	482	11	568	8,220
2043	9,997	54	779	14	698	9,957
2044	9,957	51	793	14	695	9,895
2045	9,895	47	806	14	690	9,812
2046	9,812	44	817	14	683	9,708
2047	9,708	41	825	14	675	9,586
2092	660	4	69	1	45	639
2093	639	3	57	1	44	629
2094	629	3	47	1	44	628
2095	628	3	38	1	44	637
2096	637	3	30	1	45	653
2097	653	2	24	1	47	678
2128	5,103	7	0 *	7	370	5,473
2129	5,473					
2129 Discounted Value:		2 **				

* Less than \$1 million, when rounded.

** \$5,473 million when discounted with interest at the rate of 7.25% per annum has a value of about \$2 million as of June 30, 2018.

SECTION 2: GAS 67 Information for Ventura County Employees' Retirement Association

EXHIBIT 5 (continued)

Calculation of Discount Rate as of June 30, 2019

Projection of Pension Plan's Fiduciary Net Position (\$ in millions)

Notes:

- (1) Amounts may not total exactly due to rounding.
- (2) Amounts shown in the year beginning July 1, 2018 row are actual amounts, based on the unaudited financial statements provided by VCERA.
- (3) Years 2028-2042, 2048-2091, and 2097-2128 have been omitted from this table.
- (4) Column (a): Except for the "discounted value" shown for 2129, none of the projected beginning Plan's Fiduciary Net Position amounts shown have been adjusted for the time value of money.
- (5) Column (b): Projected total contributions include employee and employer normal cost rates applied to closed group projected payroll (based on covered active members as of June 30, 2018), plus employer contributions to the unfunded actuarial accrued liability. Contributions are assumed to occur halfway through the year, on average.
- (6) Column (c): Projected benefit payments have been determined in accordance with paragraph 39 of GASB Statement No. 67, and are based on the closed group of active, inactive vested, retired members, and beneficiaries as of June 30, 2018. The projected benefit payments reflect the cost of living increase assumptions used in June 30, 2019 valuation report.
- (7) Column (d): Projected administrative expenses are calculated as approximately 0.14% of the projected beginning Plan's Fiduciary Net Position amount. The 0.14% portion was based on the actual fiscal year 2018/2019 administrative and other expenses (unaudited) as a percentage of the actual beginning Plan's Fiduciary Net Position as of July 1, 2018. Administrative expenses are assumed to occur halfway through the year, on average.
- (8) Column (e): Projected investment earnings are based on the assumed investment rate of return of 7.25% per annum.
- (9) As illustrated in this Exhibit, the Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments for current Plan members. In other words, there is no projected "cross-over date" when projected benefits are not covered by projected assets. Therefore, the long-term expected rate of return on Plan investments of 7.25% per annum was applied to all periods of projected benefit payments to determine the Total Pension Liability as of June 30, 2019 shown earlier in this report, pursuant to paragraph 44 of GASB Statement No. 67.

SECTION 3: AICPA Schedules for Ventura County Employees' Retirement Association**EXHIBIT A****Schedule of Employer Allocations as of June 30, 2019**

July 1, 2018 to June 30, 2019 Actual Compensation by Employer and Tier							
<u>Employer ID</u>	<u>Employer</u>	<u>General Tier 1 and 2</u>	<u>General Tier 1 and 2 %</u>	<u>Safety Tier</u>	<u>Safety Tier %</u>	<u>Total Compensation</u>	<u>Total %</u>
01	County of Ventura	\$529,888,254	92.703%	\$183,059,353	100.000%	\$712,947,607	94.473%
10	Ventura County Courts	\$31,560,164	5.521%	\$0	0.000%	\$31,560,164	4.182%
11	Ventura County Air Pollution Control District	\$4,469,687	0.782%	\$0	0.000%	\$4,469,687	0.592%
22	Ventura Regional Sanitation District	\$5,679,228	0.994%	\$0	0.000%	\$5,679,228	0.753%
	Total	\$571,597,334	100.000%	\$183,059,353	100.000%	\$754,656,687	100.000%

Allocation of June 30, 2019 Net Pension Liability (NPL)							
<u>Employer ID</u>	<u>Employer</u>	<u>General Tier 1 and 2</u>	<u>General Tier 1 and 2 %</u>	<u>Safety Tier</u>	<u>Safety Tier %</u>	<u>Total NPL</u>	<u>Employer Allocation Percentage</u>
01	County of Ventura	\$357,810,786	92.703%	\$300,850,657	100.000%	\$658,661,443	95.899%
10	Ventura County Courts	21,311,223	5.521%	0	0.000%	21,311,223	3.103%
11	Ventura County Air Pollution Control District	3,018,188	0.782%	0	0.000%	3,018,188	0.439%
22	Ventura Regional Sanitation District	3,834,939	0.994%	0	0.000%	3,834,939	0.558%
	Total	\$385,975,136	100.000%	\$300,850,657	100.000%	\$686,825,793	100.000%

Notes:

Actual July 1, 2018 through June 30, 2019 compensation information was provided by VCERA. Results may not total due to rounding.

The Net Pension Liability (NPL) for each tier is the Total Pension Liability (TPL) minus the Plan's Fiduciary Net Position. The TPL for each tier is obtained from internal valuation results based on the actual participants in each tier. The Plan's Fiduciary Net Position for each tier was determined by adjusting each tier's internally tracked valuation value of assets (which is used to determine employer contribution rates by tier) by the ratio of the total VCERA Plan's Fiduciary Net Position to total VCERA valuation value of assets. Based on this methodology, any non-valuation reserves (such as the \$27.50 Supplemental Medical Benefit) are allocated amongst the tiers based on each tier's valuation value of assets.

The Safety Tier only has one employer (County of Ventura), so all of the NPL for that tier is allocated to the County.

For the two other tiers that have multiple employers, the NPL is allocated based on the actual compensation for each employer in the tier during the period ending on the measurement date within the tier.

- Calculate ratio of employer's compensation to the total compensation for the tier.
- This ratio is multiplied by the NPL for the tier to determine the employer's proportionate share of the NPL for the tier.
- If the employer is in several tiers, the employer's total allocated NPL is the sum of its allocated NPL from each tier.
- Proportionate share of total plan NPL is then the ratio of the employer's total allocated NPL to the total NPL of all employers.
- In this allocation, General Tier 1 and 2 were treated as one tier (combined) consistent with the determination of the Basic UAAL rate in the actuarial valuation.

For purposes of the above results, the reporting date for the employer under GAS 68 is June 30, 2020. The reporting date and measurement date for the plan under GAS 67 are assumed to be June 30, 2019. Consistent with the provisions of GAS 68, the assets and liabilities measured as of June 30, 2019 are not adjusted or "rolled forward" to June 30, 2020 for employer reporting under GAS 68. Other results, such as the total deferred inflows and outflows would also be allocated based on the same proportionate shares determined above.

SECTION 3: AICPA Schedules for Ventura County Employees' Retirement Association**EXHIBIT B****Schedule of Pension Amounts by Employer as of June 30, 2019**

	County of Ventura	Ventura County Courts	Ventura County Air Pollution Control District	Ventura Regional Sanitation District	Total for All Employers
Deferred Outflows of Resources					
Differences Between Expected and Actual Experience	\$22,304,561	\$721,672	\$102,206	\$129,864	\$23,258,303
Net Excess of Projected Over Actual Earnings on Pension Plan Investments (If Any)	0	0	0	0	0
Changes of Assumptions	87,228,215	2,822,300	399,706	507,871	90,958,092
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	<u>734,031</u>	<u>2,383,348</u>	<u>233,881</u>	<u>679,441</u>	<u>4,030,701</u>
Total Deferred Outflows of Resources	\$110,266,807	\$5,927,320	\$735,793	\$1,317,176	\$118,247,096
Deferred Inflows of Resources					
Differences Between Expected and Actual Experience	\$36,932,431	\$1,194,962	\$169,236	\$215,033	\$38,511,662
Net Excess of Actual Over Projected Earnings on Pension Plan Investments (If Any)	64,841,483	2,097,969	297,123	377,528	67,614,103
Changes of Assumptions	0	0	0	0	0
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	<u>3,172,064</u>	<u>585,466</u>	<u>29,125</u>	<u>244,046</u>	<u>4,030,701</u>
Total Deferred Inflows of Resources	\$104,945,978	\$3,878,397	\$495,484	\$836,607	\$110,156,466
Net Pension Liability as of June 30, 2018	\$698,071,969	\$20,635,567	\$3,103,796	\$3,678,779	\$725,490,111
Net Pension Liability as of June 30, 2019	\$658,661,443	\$21,311,223	\$3,018,188	\$3,834,939	\$686,825,793
Pension Expense Excluding That Attributable to Employer-Paid Member Contributions					
Proportionate Share of Allocable Plan Pension Expense	\$207,728,282	\$6,721,123	\$951,875	\$1,209,460	\$216,610,740
Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	<u>(355,368)</u>	<u>159,127</u>	<u>65,030</u>	<u>131,211</u>	<u>0</u>
Total Employer Pension Expense Excluding That Attributable to Employer-Paid Member Contributions	\$207,372,914	\$6,880,250	\$1,016,905	\$1,340,671	\$216,610,740

SECTION 3: AICPA Schedules for Ventura County Employees' Retirement Association

EXHIBIT B (continued)

Schedule of Pension Amounts by Employer as of June 30, 2019

Notes:

Amounts shown in this exhibit, excluding the differences between employer contributions and proportionate share of contributions, were allocated by employer based on the Employer Allocation Percentage calculated in Exhibit A.

In determining the pension expense:

- Any differences between projected and actual investment earnings on pension plan investments are recognized over a period of five years beginning with the year in which they occur.
- Differences between expected and actual experience and between employer contributions and proportionate share of contributions are recognized over the average of the expected remaining service lives of all employees that are provided with pensions through VCERA determined as of June 30, 2018 (the beginning of the measurement period ending June 30, 2019) and is 5.41 years.

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

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



December 9, 2019

Board of Retirement
Ventura County Employees' Retirement Association
1190 South Victoria Avenue, Suite 200
Ventura, CA 93003

SUBJECT: PEPRA ANNUAL COMPENSATION LIMIT FOR 2020

Dear Board Members,

The California Public Employees' Pension Reform Act (PEPRA) limits the pensionable compensation used in the calculation of retirement benefits. Specifically, the PEPRA statutes set an initial limit of the Social Security maximum, or 120% of the maximum for member plans not integrated with Social Security. VCERA General Member plans are integrated with Social Security, while the Safety Member plans are not. Additionally, PEPRA instructs "retirement systems" to adjust the compensation limit annually for inflation based upon annual changes to the Consumer Price Index for All Urban Consumers.

As an advisory organization, the California Actuarial Advisory Panel (CAAP) issues a letter annually for California public retirement systems, detailing its calculation of the PEPRA compensation limits. In 2014, the VCERA Board of Retirement directed staff to identify the annual adjustments to the PEPRA compensation limits and submit them to the Board for approval.

In November 2019, CAAP again calculated the compensation limit amounts using the required criteria, with the results producing an increase to both amounts, as follows:

- \$126,291 (integrated with Social Security)
- \$151,549 (not integrated with Social Security)

The calculation steps are detailed in the full published letter, which is attached.

RECOMMENDED ACTION: ADOPT THE 2020 PEPRA COMPENSATION LIMITS OF \$126,291 AND \$151,549 AS CALCULATED BY THE CALIFORNIA ACTUARIAL ADVISORY PANEL (CAAP).

I would be pleased to respond to any questions on this matter at our December 9, 2019 meeting.

Sincerely,

Linda Webb
Retirement Administrator

STATE OF CALIFORNIA

California Actuarial Advisory Panel



Paul Angelo
Senior Vice President
and Actuary
Segal Consulting
Chairperson

John Bartel
President
Bartel Associates
Vice Chairperson

Ian Altman
Managing Partner
Altman and Cronin Benefit
Consultants, LLC

David Driscoll
Principal and Consulting Actuary
Buck Consultants

David Lamoureux
Deputy System Actuary
California State Teachers'
Retirement System

Steve Ohanian
Retired, Former Vice President
and Consultant
Segal

Graham Schmidt
Consulting Actuary
Cheiron, Inc.

Scott Terando
Chief Actuary
CalPERS

November 22, 2019

SUBJECT: PEPRA Compensation Limit for 2020 (Code Section 7522.10)

To Whom It May Concern:

Pursuant to a request from a Public Agency, the California Actuarial Advisory Panel (the Panel) is publishing this letter to provide a calculation of the Pension Compensation Limits for the Calendar Year 2020.

Background

Pursuant to Government Code section 7507.2(b), the responsibilities of the Panel include "Replying to policy questions from public retirement systems in California" and "Providing comment upon request by public agencies." In 2013, members of the Panel received a request from a public retirement system (the San Joaquin County Employees' Retirement Association) to compute and publish the annual compensation limit prescribed by the California Public Employees' Pension Reform Act of 2013 (PEPRA), as amended by Senate Bill No. 13 (SB 13). This request was made to address a concern that minor calculation or rounding differences could result in different systems calculating slightly different pension compensation limits.

The Panel agreed to calculate the dollar amounts of the pension compensation limits for 2014 and future years, as we believe that the use of a uniform compensation limit will provide administrative benefits to California's public retirement systems. However, as the Panel is an advisory body only (Government Code section 7507.2(e) states that "The opinions of the California Actuarial Advisory Panel are nonbinding and advisory only"), the Panel encourages each system to independently review the calculation of the pension compensation limits contained in this letter.

State Controller's Office
California Actuarial Advisory Panel
c/o State Accounting and Reporting Division
P.O. Box 942850, Sacramento, CA 94250
Phone: 916-322-3702 Fax: 916-323-4807

To Whom It May Concern
November 22, 2019
Page 2

Analysis

Section 7522.10 of the Government Code is as follows:

7522.10. (a) On and after January 1, 2013, each public retirement system shall modify its plan or plans to comply with the requirements of this section for each public employer that participates in the system.
(b) Whenever pensionable compensation, as defined in Section 7522.34, is used in the calculation of a benefit, the pensionable compensation shall be subject to the limitations set forth in subdivision (c).
(c) The pensionable compensation used to calculate the defined benefit paid to a new member who retires from the system shall not exceed the following applicable percentage of the contribution and benefit base specified in Section 430(b) of Title 42 of the United States Code on January 1, 2013:
(1) One hundred percent for a member whose service is included in the federal system.
(2) One hundred twenty percent for a member whose service is not included in the federal system.
(d) (1) The retirement system shall adjust the pensionable compensation described in subdivision (c) based on the annual changes to the Consumer Price Index for All Urban Consumers: U.S. City Average, calculated by dividing the Consumer Price Index for All Urban Consumers: U.S. City Average, for the month of September in the calendar year preceding the adjustment by the Consumer Price Index for All Urban Consumers: U.S. City Average, for the month of September of the previous year rounded to the nearest thousandth. The adjustment shall be effective annually on January 1, beginning in 2014.

The annual pensionable compensation limit computed by the Panel for 2019 was \$124,180 for those included in the federal Social Security system and \$149,016 for those not included.

The Consumer Price Indices for All Urban Consumers (CPI-U) U.S. City Average for the months of September 2018 and 2019 are as follows¹:

- September, 2019: 256.759
- September, 2018: 252.439

The annual change, computed by dividing the 2019 Index by the 2018 Index, rounded to the nearest thousandth is as follows:

- $256.759 \div 252.439 = 1.017$

¹ <http://data.bls.gov/timeseries/CUUR0000SA0>

To Whom It May Concern
November 22, 2019
Page 3

Applying this annual adjustment to the 2019 limits yields the following limits for calendar year 2020:

- $\$124,180 \times 1.017 = \$126,291$ (included in federal system)
- $\$149,016 \times 1.017 = \$151,549$ (not included in federal system)

The indexation of the maximum compensation to be used by CalSTRS using the February CPI-U, based on AB 1381 passed by the legislature in 2013, is not addressed in this letter.

Conclusion

The calculations described above indicate the compensation limit for PEPRA members for Calendar Year 2020 will increase to \$126,291 for members participating in the federal system (7522.10(c)(1) limit) and \$151,549 for members not participating in the federal system (7522.10(c)(2) limit). The Panel intends to provide similar calculations in future years. The contents of this letter are nonbinding and advisory only, and we encourage each public retirement system to independently evaluate these calculations.

Sincerely,



Paul Angelo
Chair, California Actuarial Advisory Panel

cc: Panel members
John Bartel, Vice Chair
Ian Altman
David Driscoll
David Lamoureux
Steve Ohanian
Graham Schmidt
Scott Terando



VENTURA COUNTY EMPLOYEES' RETIREMENT

PRESENTED BY:
Jim Sia, CFA
Vice President, Head of Relationship Management



December 9, 2019

loomis sayles at a glance

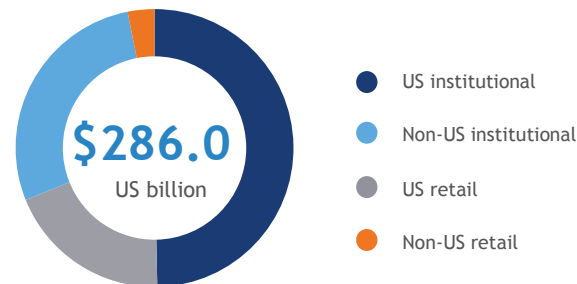
Firm Overview

Serving clients with integrity and a
global perspective since **1926**



BOSTON • CHICAGO • DETROIT
• LONDON • SAN FRANCISCO • SINGAPORE

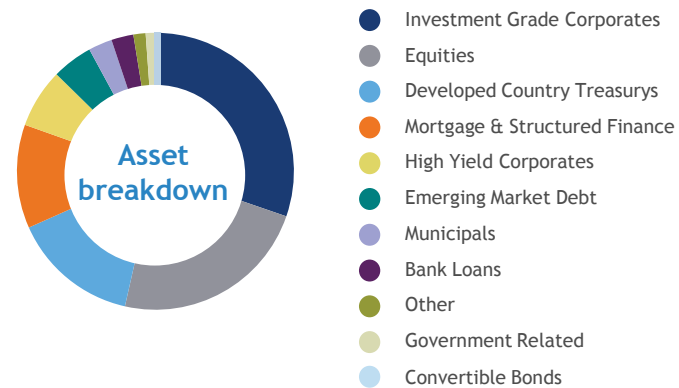
AUM by client base



Investment expertise across asset classes

Fixed income: **\$220.6 B**

Equity: **\$65.4 B**



As of 9/30/2019. Due to rounding, pie chart total may not equal 100%.

Other includes cash & equivalents and derivatives.

Total AUM includes the assets of both Loomis, Sayles & Co., LP, and Loomis Sayles Trust Company, LLC. (\$25.8 billion for the Loomis Sayles Trust Company).










Loomis Sayles Trust Company is a wholly owned subsidiary of Loomis, Sayles & Company, L.P.



FO0120
MALR023711
1563458834

foundation for alpha

Firm Overview

CREDIT RESEARCH	EQUITY	MACRO	MORTGAGE & STRUCTURED FINANCE	QUANTITATIVE RESEARCH & RISK ANALYSIS
<i>Alpha generation through differentiated insights</i>	<i>Driving alpha through independent thinking</i>	<i>Guiding light to signal and inform</i>	<i>Opportunities outside traditional asset classes</i>	<i>Bringing together the art and science of investing</i>
Providing insight and differentiated perspectives across the credit classes , risk spectrum , and capital structure	Active long-term strategies built on differentiated non-consensus insight	Analyzing the global credit cycle to derive insights on relative value and deliver investment recommendations	Uncovering hidden alpha in complex structured markets	Generating signals that can identify risk patterns and opportunities
				
TRADING	ESG	INVESTMENT RISK OVERSIGHT	TECHNOLOGY	BUSINESS INFRASTRUCTURE
<i>Beyond trade execution</i>	<i>Integrate and engage</i>	<i>Ensuring investment teams are meeting client needs & expectations</i>	<i>Translating data into insight</i>	<i>Allowing investors to remain focused on alpha generation</i>
+50 trading professionals integrated within all investment processes every step of the way	Training and tools for investment teams to assess material ESG factors	A common foundation underlying all strategies: <ul style="list-style-type: none"> • Sound philosophy • Rigorous, repeatable process • Proprietary research • Disciplined portfolio construction • Integrated risk management 	Tapping the power of our proprietary In2! technology platform, integrating more than 5 billion data points each day	Legal, compliance, distribution, marketing, relationship management, & client services
				

alpha engines

Firm Overview

FIXED INCOME

ALPHA STRATEGIES	BANK LOANS	DISCIPLINED ALPHA	EMERGING MARKET DEBT	FULL DISCRETION	GLOBAL	MORTGAGE & STRUCTURED FINANCE	MUNICIPAL	RELATIVE RETURN
Credit Asset	Senior Loans	Core	Corporate	Multisector	Global Bond	Agency MBS	Short	Short Duration
World Credit Asset	Senior Floating Rate and Fixed Income	Intermediate Corporate	Local Currency Short Duration	Core Plus Full Discretion	Global Credit	Investment Grade Securitized	Intermediate	Inter. Duration
Multi-Asset Income	Credit Opportunities	Long Corporate	Asia Credit	High Yield Full Discretion	Global Debt Unconstrained	Securitized Credit (ERISA)	Medium	Core
Inflation Protected (TIPS)	CLOs	Long Gov't Corp		Global High Yield	Global Disciplined Alpha**	High Yield Securitized	Crossover**	Core Plus
Risk Premia Strategies		Long Credit		US High Yield		Private Debt and Equity		IG Corporate
		Global Disciplined Alpha**		High Yield Conservative				IG Inter. Corp
				Strategic Alpha				Long Corporate
								Long Credit
								Long Gov't/Credit
								Custom LDI
\$8.0 B*	\$6.8 B	\$14.5 B	\$2.8 B	\$67.0 B	\$30.9 B	\$8.6 B*	\$7.5 B	\$85.9 B

EQUITY

GROWTH EQUITY STRATEGIES	GLOBAL EMERGING MARKETS EQUITY	GLOBAL EQUITY OPPORTUNITIES	SMALL CAP GROWTH	SMALL CAP VALUE
All Cap Growth	Global Emerging Markets Equity	Global Allocation	Small Cap Growth	Small Cap Value
Global Growth	Global Emerging Markets Equity Long/Short	Global Equity Opportunities	Small/Mid Cap Growth	Small/Mid Cap Core
Large Cap Growth				
Long/Short Equity				
\$54.0 B	\$25 M***	\$4.2 B	\$4.4 B	\$2.8 B

As of 9/30/2019.

*Includes accounts that may also be counted as part of other strategies **Co-managed investment strategy ***Assets represent seed money from our parent company

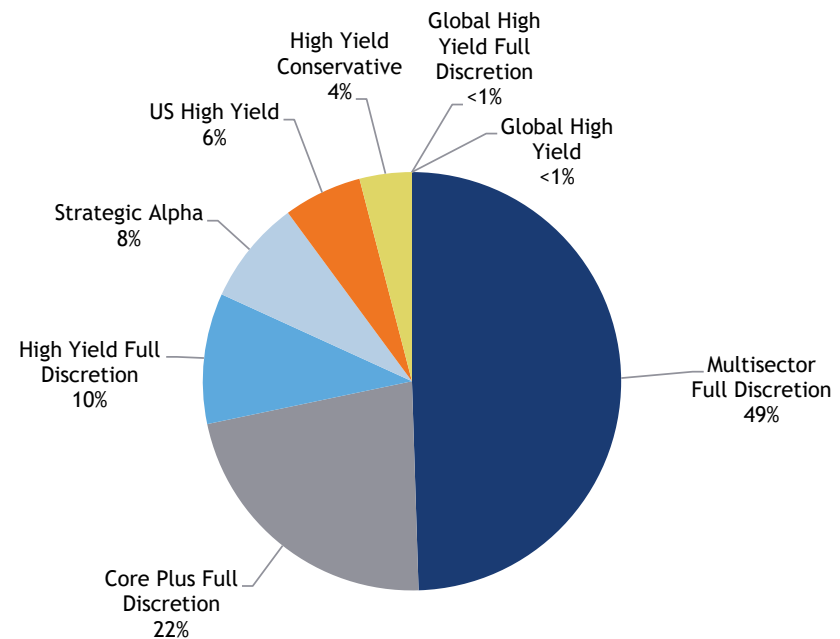
FO0120
MALR023711
1563458931

investment process

LOOMIS SAYLES FULL DISCRETION TEAM ASSETS UNDER MANAGEMENT

\$67 billion as of September 30, 2019

	ASSETS (\$ millions)
Multisector Full Discretion	33,042
Core Plus Full Discretion	15,098
High Yield Full Discretion	6,794
Strategic Alpha	5,200
US High Yield	3,951
High Yield Conservative	2,390
Global High Yield	491
Global High Yield Full Discretion	492



As of 9/30/2019. Due to rounding, pie chart total may not equal 100%.

investment process

HIGHLY EXPERIENCED, SEASONED TEAM

PRODUCT TEAM	MATTHEW EAGAN Portfolio Manager		DAN FUSS Portfolio Manager		BRIAN KENNEDY Portfolio Manager		ELAINE STOKES Portfolio Manager						
	Yrs of industry experience: 29		61		29		32						
	Yrs with firm: 22		43		25		31						
	SCOTT DARCI Equity and Derivatives Strategist		JOHN DEVOY Senior Credit Strategist		BRIAN HESS Global Strategist		VISHAL PATEL Emerging Market Corporate Strategist		PETER SHEEHAN Convertibles and Special Situations Strategist		TODD VANDAM Portfolio Manager		
	Yrs of industry experience: 13		20		16		17		12		25		
	Yrs with firm: 11		4		5		4		7		25		
	KEN JOHNSON Product Manager						FRED SWEENEY Product Manager						
	Yrs of industry experience: 28						32						
	Yrs with firm: 19						24						
KEY SUPPORT		Investment Analysts						Portfolio Specialists					
		K. Doyle		C. Romanelli		M. Fitzgerald		A. Steede					
		B. Hazelton		S. Xiao		R. Gartaganis		M. Tierney					
SECTOR TEAMS		Global Asset Allocation		Developed Non-US Markets				US Yield Curve					
		Emerging Markets	High Yield / Bank Loans	Convertibles	Mortgage & Structured Finance		Inv Grade / Global Credit		US Government				
FIRM RESOURCES		Macro Strategies		Credit Research		Quantitative Research & Risk Analysis				Fixed Income Trading			
		Sovereign Research		Mortgage & Structured Finance		Convertibles & Special Situations				Equity Research			

As of 9/30/2019.

Full Discretion includes Multisector Full Discretion, Core Plus Full Discretion, and Strategic Income strategies.



FIT0820
MALR023950
0000001426

guideline summary

BENCHMARK

- 65% BBG Barclays Aggregate, 30% FTSE High Yield Mkt, 5% JP Morgan ex US Hedged \$US

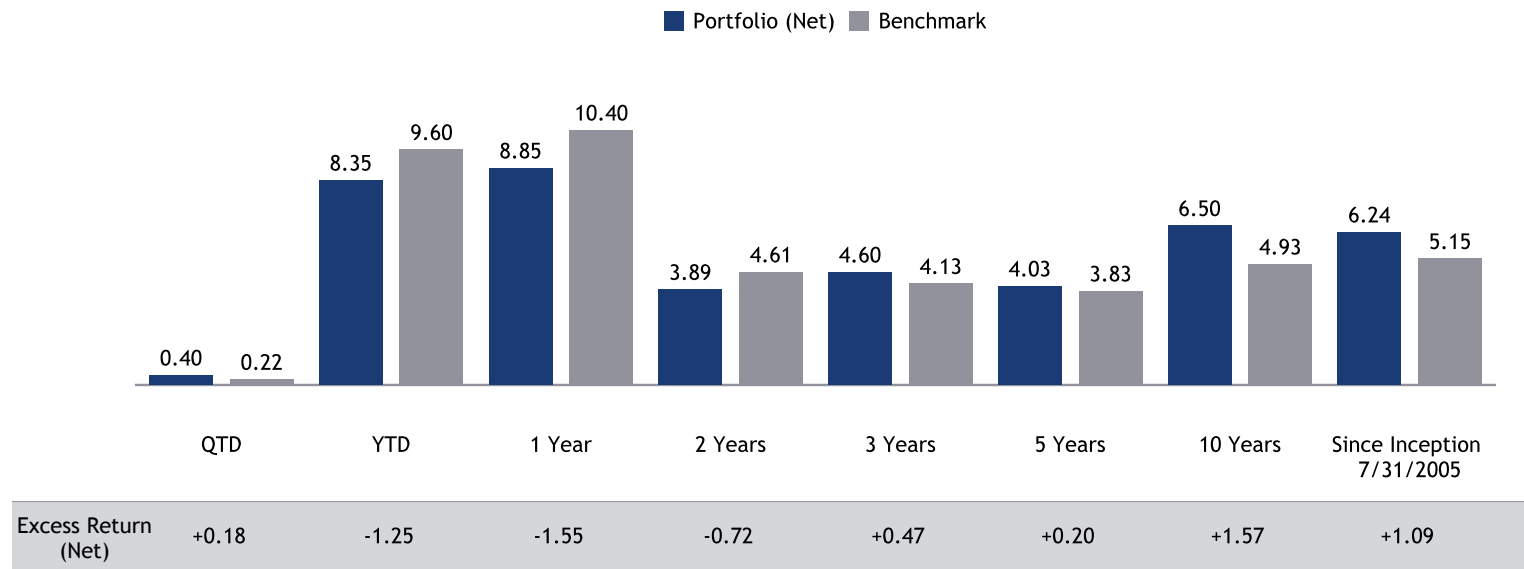
GUIDELINES & LIMITATIONS

- Issuer: 5% maximum market value in a single US issuer, with the exception of US Government, Agency and GSE issuers.
- Emerging Market: 10% maximum market value in emerging market securities not domiciled in the JP Morgan Government Bond Index and 2% maximum market value in securities issued by a single entity domiciled in a country not included in the JP Morgan Government Bond Index (Emerging Market Index).
- Country: 40% maximum market value in bonds issued by non-US entities, including yankees, sovereign debt, structured notes linked to non-US markets, supranationals, and emerging market bonds.
- Currency: Maximum 20% market value in non-US dollar denominated securities
- Credit Quality: All securities shall be rated no lower than C, at the time of purchase, by Moody's, S&P or Fitch. If a security is not rated by either of Moody's, S&P, or Fitch, the Loomis Sayles equivalent rating applies. For split rated securities, the lower rating will govern.
- The minimum average rating of the portfolio shall be equivalent to Moody or S&P Baa3/BBB-. If not rated by either of the rating agencies, the Loomis Sayles rating will be used. In the case of split rated securities, the lower of the ratings will govern.
- Account may hold up to 55% market value in the aggregate of securities not rated investment grade by Moody, S&P, or Fitch, foreign bonds, non-144A private placements and unusually interest rate sensitive MBS. In the case of split rated securities, the higher rating will govern split-rated securities. If these securities are not rated (NR), Loomis Sayles rating will be used.
- Account must hold at least 65% market value in securities rated equal to or above Baa3/BBB-/BBB- by Moody, S&P or Fitch. In the case of split rated securities, the higher rating will govern split-rated securities. If these securities are not rated (NR), Loomis Sayles rating will be used.
- Account may not purchase equity securities, excluding preferred stock, but may hold equities resulting from conversions, exchanges or debt restructurings; account may hold no more than 5% market value in such equity securities.

Guideline summary is not a complete restatement of guidelines. The slide is intended to be a summary to aid in the review process.

performance

TRAILING RETURNS AS OF 10/31/2019 (%)



PORTFOLIO VALUATION (USD)

	Portfolio 10/31/2018	Portfolio 10/31/2019
Total	82,298,702	89,936,041

Benchmarks: 60% Barclays Agg, 35% Citigroup HY Mkt, 5% JPM X US Hdg \$US (7/31/2005 - 11/30/2007). 65% BBG BARC Agg 30% FTSE High Yield, 5% JPM Ex US Hedged US (11/30/2007 - 10/31/2019).

The current benchmark is 65% BBG BARC Agg 30% FTSE High Yield 5% JPM Ex US Hedged US Index.



LOOMIS SAYLES®

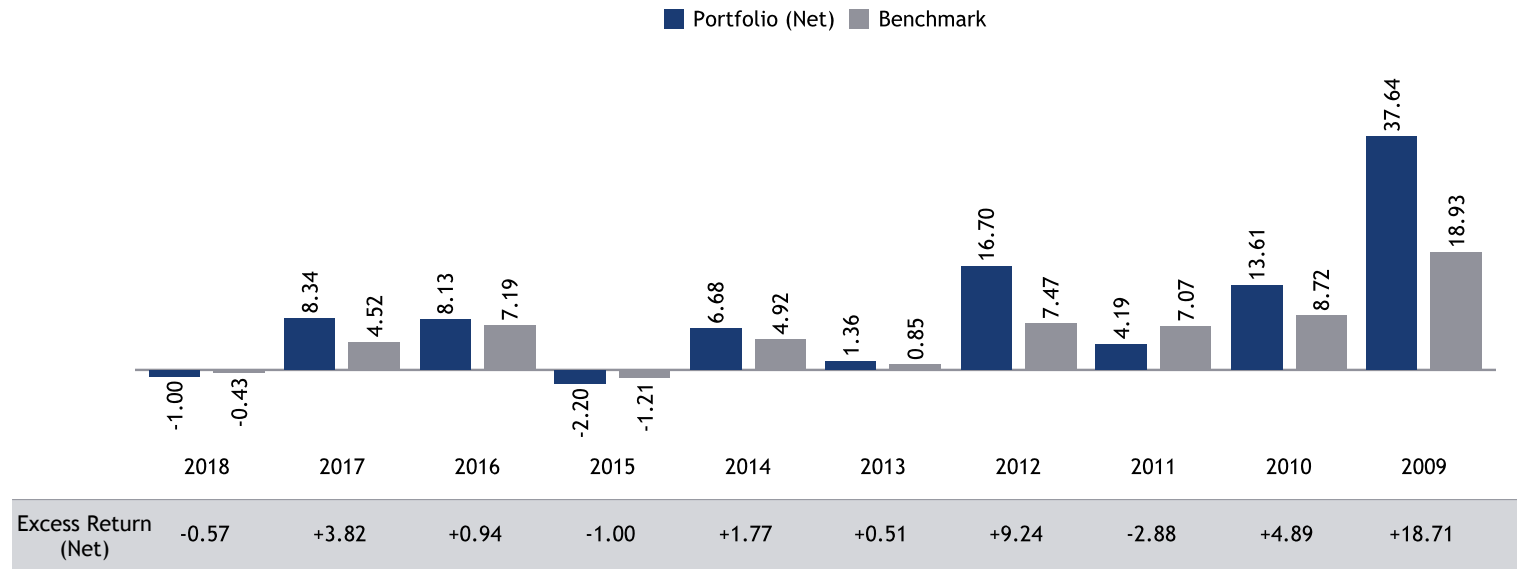
Sources: Loomis, Sayles & Company, L.P. and others

For Institutional Investor Use Only. Not for Further Distribution

October 31, 2019

performance

CALENDAR YEAR RETURNS AS OF 10/31/2019 (%)



Benchmarks: 60% Barclays Agg, 35% Citigroup HY Mkt, 5% JPM X US Hdg \$US (7/31/2005 - 11/30/2007). 65% BBG BARC Agg 30% FTSE High Yield, 5% JPM Ex US Hedged US (11/30/2007 - 10/31/2019).

The current benchmark is 65% BBG BARC Agg 30% FTSE High Yield 5% JPM Ex US Hedged US Index.



LOOMIS SAYLES®

Sources: Loomis, Sayles & Company, L.P. and others

For Institutional Investor Use Only. Not for Further Distribution

October 31, 2019

attribution analysis

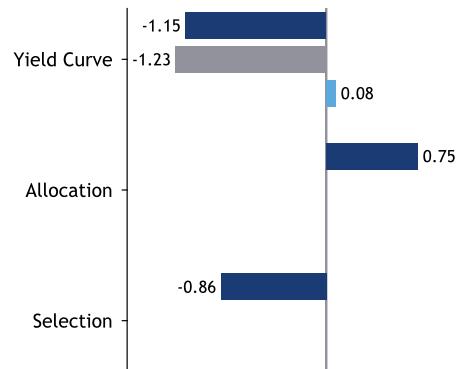
10/31/2018 TO 10/31/2019

TOTAL RETURNS

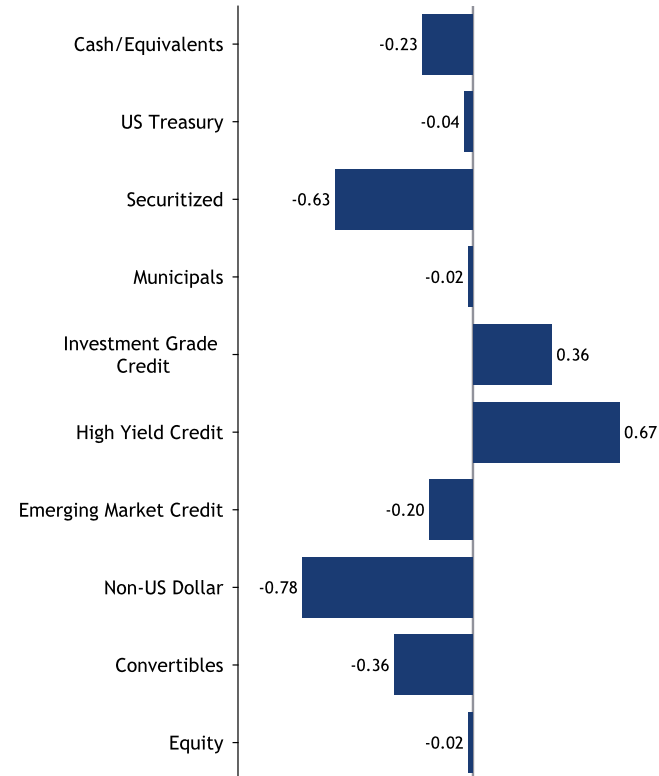
	Total Return (Gross)
Portfolio Return	9.27
Benchmark Return	10.40
Excess Return	-1.14

EXCESS RETURN ATTRIBUTION

■ Total ■ Parallel ■ Non-Parallel



EXCESS RETURN ATTRIBUTION BY SECTOR



Figures on the bar chart may not add up to total excess return as they exclude impact of trading and pricing differences.
The current benchmark is 65% BBG BARC Agg 30% FTSE High Yield 5% JPM Ex US Hedged US Index.



LOOMIS SAYLES

Sources: Loomis, Sayles & Company, L.P. and others

For Institutional Investor Use Only. Not for Further Distribution

October 31, 2019

attribution analysis

10/31/2018 TO 10/31/2019

SECTOR DISTRIBUTION

	Portfolio Final Weight	Benchmark Final Weight	Portfolio Average Weight	Benchmark Average Weight	Portfolio Return	Benchmark Return	Total Effect
High Yield Credit	6.37	29.47	9.83	29.77	9.03	7.68	0.67
Investment Grade Credit	49.41	19.08	45.52	18.72	12.74	14.35	0.36
Municipals	0.00	0.22	0.00	0.19	0.00	20.28	-0.02
Equity	0.01	0.00	0.02	0.00	-33.71	10.40	-0.02
US Treasury	9.78	25.78	8.34	25.44	12.07	11.10	-0.04
Emerging Market Credit	4.52	1.38	5.02	1.34	6.77	17.56	-0.20
Cash/Equivalents	4.06	0.00	3.33	0.00	2.19	10.40	-0.23
Convertibles	1.78	0.00	2.74	0.00	-3.36	10.40	-0.36
Securitized	22.13	19.06	22.33	19.54	6.38	8.97	-0.63
Non-US Dollar	1.93	5.00	2.86	5.00	-10.91	11.52	-0.78

*Total Effects are impacted by sector returns, allocation shifts and market timing. Total Effect includes yield curve impact.
The current benchmark is 65% BBG BARC Agg 30% FTSE High Yield 5% JPM Ex US Hedged US Index.*



LOOMIS SAYLES

Sources: Loomis, Sayles & Company, L.P. and others

For Institutional Investor Use Only. Not for Further Distribution

October 31, 2019

attribution analysis

10/31/2018 TO 10/31/2019

TOP 10 INDUSTRIES BY TOTAL EFFECT

	Portfolio Weight	Benchmark Weight	Total Effect
Communications	5.66	6.90	0.58
Banking	8.07	4.00	0.34
Agency	0.00	17.92	0.27
Energy	8.45	6.02	0.13
Brokerage Asset Managers Exchanges	0.75	0.32	0.09
Basic Industry	3.77	2.53	0.08
Reits	2.41	0.64	0.07
Owned No Guarantee	1.02	0.88	0.03
Government Sponsored	0.00	0.32	0.01
Government Guarantee	0.02	0.55	0.01

BOTTOM 10 INDUSTRIES BY TOTAL EFFECT

	Portfolio Weight	Benchmark Weight	Total Effect
Local Authorities	0.76	0.60	-0.46
Treasuries	10.82	30.44	-0.31
Sovereign	0.21	0.62	-0.29
Home Equity	5.72	0.00	-0.29
Car Loan	6.28	0.16	-0.25
Consumer Cyclical	5.05	5.76	-0.17
Capital Goods	3.55	3.47	-0.16
Credit Card	2.19	0.15	-0.14
ABS Other	3.46	0.00	-0.12
Consumer Non Cyclical	9.50	7.08	-0.09

Out-of-benchmark allocations defaulted to security selection.

The current benchmark is 65% BBG BARC Agg 30% FTSE High Yield 5% JPM Ex US Hedged US Index.



LOOMIS SAYLES

Sources: Loomis, Sayles & Company, L.P. and others

For Institutional Investor Use Only. Not for Further Distribution

October 31, 2019

attribution analysis

10/31/2018 TO 10/31/2019

TOP 10 ISSUERS BY TOTAL EFFECT

	Portfolio Weight	Benchmark Weight	Total Effect
AT&T Inc	1.19	0.24	0.20
Charter Communications Inc	1.31	0.69	0.18
HCA Healthcare Inc	1.66	0.40	0.16
Telefonica SA	0.56	0.04	0.14
Petroleo Brasileiro SA	0.58	0.00	0.11
Fannie Mae	0.00	4.46	0.10
Jefferies Financial Group Inc	0.75	0.02	0.10
Mylan NV	0.21	0.02	0.09
Morgan Stanley	1.49	0.23	0.09
Government National Mortgage A	0.00	3.10	0.09

BOTTOM 10 ISSUERS BY TOTAL EFFECT

	Portfolio Weight	Benchmark Weight	Total Effect
Provincia DE Buenos Aire	0.57	0.00	-0.41
GOVT OF ARGENTINA	0.21	0.00	-0.24
Chesapeake Energy Corp	0.50	0.11	-0.22
Teva Pharmaceutical Industries Ltd	0.88	0.00	-0.11
GOVT of Norway	0.53	0.00	-0.11
California Resources Corp	0.18	0.04	-0.10
EnLink Midstream Partners LP	0.60	0.08	-0.07
Whiting Petroleum Corp	0.42	0.06	-0.06
GOVT of Italy	0.00	0.52	-0.06
YPF SA	0.37	0.00	-0.06

The current benchmark is 65% BBG BARC Agg 30% FTSE High Yield 5% JPM Ex US Hedged US Index.



LOOMIS SAYLES®

Sources: Loomis, Sayles & Company, L.P. and others

For Institutional Investor Use Only. Not for Further Distribution

October 31, 2019

attribution analysis

10/31/2018 TO 10/31/2019

CURRENCY DISTRIBUTION

	Portfolio Weight Pre- Hedge	Portfolio Weight Post- Hedge	Currency Contribution	Bond Contribution	Hedging Effect	Total Effect
Argentine Peso	0.52	0.52	-0.31	-0.16	0.00	-0.47
Australian Dollar	0.00	0.00	0.00	0.00	0.00	0.00
British Pound Sterling	0.00	0.00	-0.01	-0.01	0.00	-0.01
Canadian Dollar	0.24	0.12	0.01	-0.02	0.00	-0.02
Danish Krone	0.00	0.00	0.00	0.00	0.00	0.00
Euro	0.00	0.00	0.04	-0.01	-0.01	0.02
Japanese Yen	0.00	0.00	-0.08	0.10	0.00	0.02
Mexican Peso	0.06	0.06	0.01	-0.02	-0.01	-0.01
South African Rand	0.64	0.27	0.02	0.02	-0.04	0.00
Swedish Krona	0.00	0.00	0.00	0.00	0.00	0.00
US Dollar	96.87	96.87	-0.01	-0.45	0.00	-0.46
Unrealized FX Gain/Loss	0.00	0.00	0.00	0.00	0.00	0.00
Hungarian Forint	0.27	0.27	-0.02	-0.02	0.00	-0.04
Malaysian Ringgit	0.57	0.57	-0.01	-0.04	0.00	-0.05
Norwegian Krone	0.55	0.55	-0.05	-0.06	0.00	-0.11
Polish Zloty	0.26	0.26	-0.01	-0.03	0.00	-0.04
Brazilian Real	0.00	0.00	0.00	0.00	0.00	-0.01

*Weights reflect end of period holdings. Effects are as of the entire period. Bond Contribution is the sum of Country Allocation and Local Market effects.
The current benchmark is 65% BBG B/ARC Agg 30% FTSE High Yield 5% JPM Ex US Hedged US Index.*



LOOMIS SAYLES®

Sources: Loomis, Sayles & Company, L.P. and others

For Institutional Investor Use Only. Not for Further Distribution

October 31, 2019

portfolio summary

AS OF 10/31/2019

	Portfolio 10/31/2019	Benchmark 10/31/2019	Portfolio 10/31/2018	Benchmark 10/31/2018	Quality	Portfolio 10/31/2019	Benchmark 10/31/2019	Portfolio 10/31/2018	Benchmark 10/31/2018
Yield to Worst (%)	3.61	3.17	4.92	4.45	AAA	24.29	47.98	23.95	48.25
Effective Duration (years)	4.72	5.11	4.33	5.49	AA	2.25	4.58	4.42	4.93
Effective Maturity (years)	6.37	6.79	6.00	7.37	A	23.24	10.23	18.63	9.85
OAS * (bps)	164	150	129	143	BAA	39.88	8.18	38.98	7.89
Coupon (%)	4.05	3.98	4.08	3.97	BA	8.79	16.85	10.37	16.43
Current Yield (%)	4.01	3.97	4.43	4.17	B	1.21	9.89	3.39	10.27
Average Quality	A3	A2	A3	A2	CAA	0.34	2.20	0.09	2.30
Number of Securities	398	13,081	370	12,332	CA	0.00	0.09	0.00	0.06
Number of Issuers	237	1,731	235	1,744	C	0.00	0.00	0.00	0.00
					NR	0.01	0.00	0.16	0.03

* OAS is option adjusted spread.

Client Guideline Quality Methodology presented.

The current benchmark is 65% BBG BARC Agg 30% FTSE High Yield 5% JPM Ex US Hedged US Index.



Sources: Loomis, Sayles & Company, L.P. and others

For Institutional Investor Use Only. Not for Further Distribution

October 31, 2019

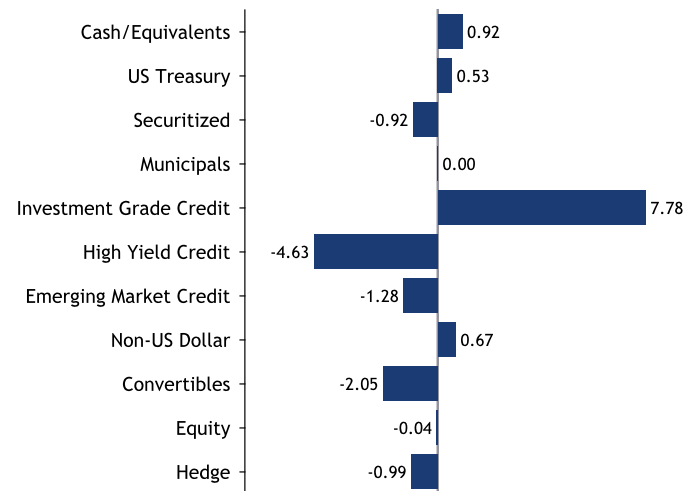
sector allocation

10/31/2018 TO 10/31/2019 (%)

SECTOR DISTRIBUTION

	Portfolio 10/31/2019	Over/Under Weight
Cash/Equivalents	4.06	4.06
US Treasury	9.78	-16.00
Securitized	22.13	3.07
Municipals	0.00	-0.22
Investment Grade Credit	49.41	30.33
High Yield Credit	6.37	-23.10
Emerging Market Credit	4.52	3.14
Non-US Dollar	1.49	1.49
Convertibles	1.78	1.78
Equity	0.01	0.01
Hedge	0.44	-4.56

SECTOR ALLOCATION CHANGE



The current benchmark is 65% BBG BARC Agg 30% FTSE High Yield 5% JPM Ex US Hedged US Index.



LOOMIS SAYLES

Sources: Loomis, Sayles & Company, L.P. and others

For Institutional Investor Use Only. Not for Further Distribution

October 31, 2019

country of risk allocation

AS OF 10/31/2019

Total Developed Countries Exposure	Portfolio Weight %	Benchmark Weight %	Total EM Countries Exposure (USD & Non USD)	Portfolio Weight %	Benchmark Weight %	Non Dollar Exposure	Portfolio Weight %	Benchmark Weight %
Developed	94.12	98.63	Emerging Markets *	5.88	1.37	Total Non USD †	2.03	0.00
Americas	79.61	90.18	Africa	1.14	0.16	Developed	0.68	0.00
United States	77.75	87.82	South Africa	0.89	0.01	Norwegian Krone	0.62	0.00
Canada	1.03	2.35	Zambia	0.25	0.15	Canadian Dollar	0.05	0.00
Cayman Islands	0.45	0.00	Americas	3.16	0.80	Australian Dollar	0.00	0.00
Bermuda	0.38	0.01	Brazil	1.68	0.10	British Pound Sterling	0.00	0.00
Asia	0.00	2.15	Mexico	0.64	0.36	Danish Krone	0.00	0.00
Other	0.00	2.15	Argentina	0.61	0.01	Euro	0.00	0.00
Europe	12.51	5.14	Colombia	0.23	0.13	Japanese Yen	0.00	0.00
United Kingdom	3.12	1.40	Other	0.00	0.21	Emerging Markets	1.35	0.00
Germany	1.75	0.83	Asia	0.69	0.32	Malaysian Ringgit	0.69	0.00
Netherlands	1.52	0.35	Malaysia	0.69	0.00	Brazilian Real	0.50	0.00
France	1.48	0.78	Other	0.00	0.32	Argentine Peso	0.17	0.00
Switzerland	1.05	0.11	Europe	0.00	0.06			
Italy	1.04	0.63	Other	0.00	0.06			
Spain	0.87	0.46	Middle East	0.89	0.02			
Denmark	0.85	0.03	Israel	0.89	0.02			
Norway	0.41	0.03	Total	100.00	100.00			
Luxembourg	0.34	0.02						
Finland	0.07	0.00						
Other	0.00	0.51						
Oceania	0.12	0.29						
Australia	0.12	0.28						
Other	0.00	0.01						
Supranational **	1.88	0.87						
Supranational	1.88	0.87						

* Emerging markets includes countries with middle or low income economies, as designed by the World Bank, also taking into consideration capital market liquidity and accessibility.

** Supranational includes debt from an entity sponsored by a combination of multiple governments to promote economic development.

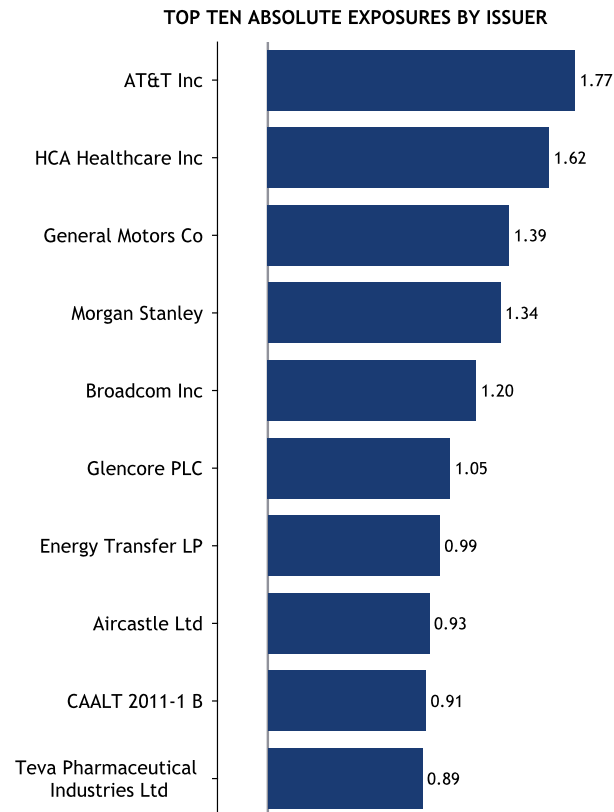
† Values shown include impact of hedging, if utilized.

Due to active management, country and currency allocation will evolve over time. Due to rounding, totals may not equal 100%.

The current benchmark is 65% BBG BARC Agg 30% FTSE High Yield 5% JPM Ex US Hedged US Index.

absolute exposures by issuer

AS OF 10/31/2019 (%)



The current benchmark is 65% BBG BARC Agg 30% FTSE High Yield 5% JPM Ex US Hedged US Index.



LOOMIS SAYLES

Sources: Loomis, Sayles & Company, L.P. and others

For Institutional Investor Use Only. Not for Further Distribution

October 31, 2019

This page intentionally left blank.

investment team

HIGHLY EXPERIENCED, SEASONED TEAM

PRODUCT TEAM	MATTHEW EAGAN Portfolio Manager		KEVIN KEARNS Portfolio Manager		TODD VANDAM Portfolio Manager	
	Yrs of industry experience: 29		33		25	
	Yrs with firm: 22		12		25	
	BRIAN HESS Global Strategist		ELAINE KAN Rates & Currency Strategist		PETER SHEEHAN Convertibles and Special Situations Strategist	
	Yrs of industry experience: 16		22		12	
	Yrs with firm: 5		8		7	
	SCOTT DARCI Equity and Derivatives Strategist		VISHAL PATEL Emerging Markets Corporate Strategist		JOHN DEVOY Senior Investment Credit Strategist	
	Yrs of industry experience: 13		17		20	
	Yrs with firm: 11		4		4	
		ROGER ACKERMAN Product Manager				
				32		
				10		
KEY SUPPORT		Investment Analysts		Portfolio Specialists		Product Managers
		Kristen Doyle		Brian Hazelton		Fred Sweeney
		Christopher Romanelli		Shong Xiao		Ken Johnson
				Boeurn Kan-Crawford		
				Anthony Falzarano		
SECTOR TEAMS		Global Asset Allocation		Developed Non-US Markets		US Yield Curve
		Emerging Markets		High Yield / Bank Loans		US Government
				Convertible		
				Mortgage & Structured Finance		
				Inv Grade / Global Credit		
FIRM RESOURCES		Macro Strategies		Credit Research		Quant. Research & Risk Analysis
		2 Directors		Director		Director
		Associate Director		Head of Municipal Research		Associate Director
		Senior Equity Strategist		37 Senior Analysts		Director, LDI Solutions
		Economist		11 Analysts		Senior Quantitative Analyst
		Senior Quantitative Analyst		4 Research Senior Associates		8 Quantitative Analysts
		Senior Commodities Analyst		7 Research Associates		
		Research Analyst		Mortgage & Structured Finance		Convertibles & Special Situations
		2 Senior Research Assoc. / Assocs.		Head		Assoc. Director
				Portfolio Manager		4 Senior Analysts
				4 Strategists		2 Research Analysts
				3 Senior Analysts		
				2 Research Analysts		Fixed Income Trading
				2 Research Associates		25 Traders/TAs
				Director, MSF Trading		Director,
				4 MSF Traders/TAs		Portfolio Implementation
						16 Portfolio Specialists
						Director,
						Operational Trading Risk Mgt.
						Risk Analyst

As of 9/30/2019.

guideline summary

BENCHMARK

- ICE BofAML US Dollar LIBOR 3-month Constant Maturity

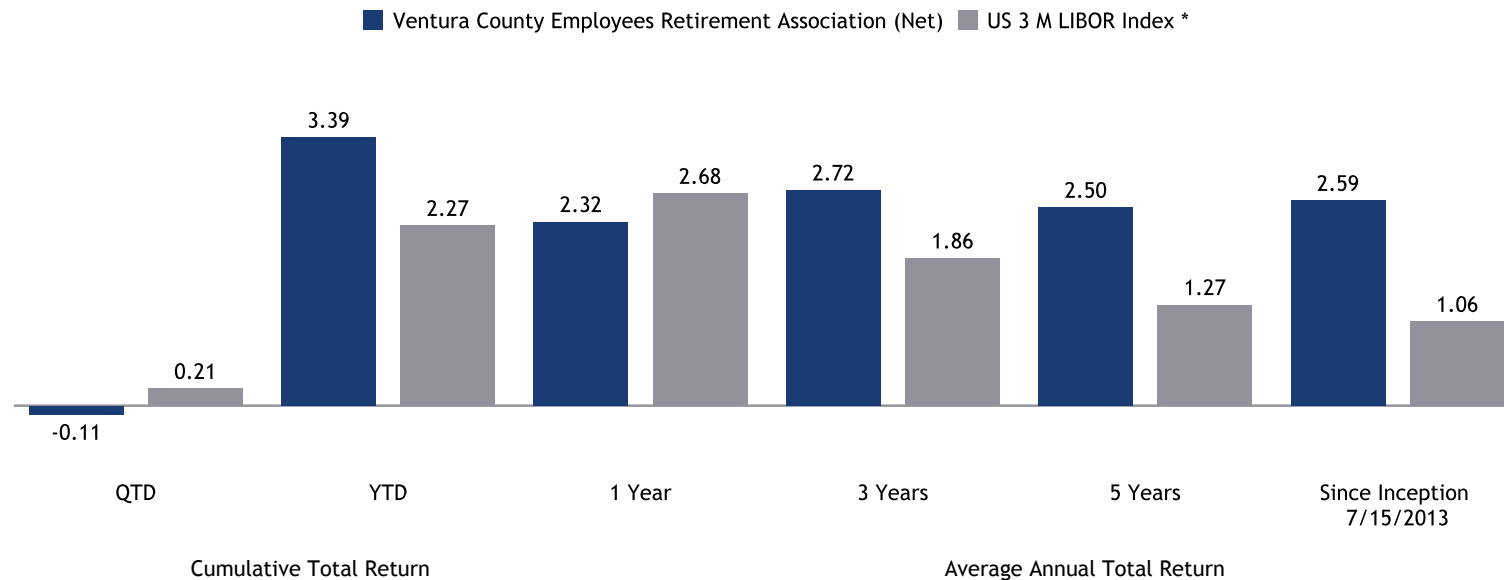
GUIDELINES & LIMITATIONS

- Minimum Credit Quality: The Fund will not hold more than +/-50% MV in securities rated below Baa3/BBB-/BBB- by Moody, S&P and Fitch (best) as determined at the time of purchase. If unrated, Loomis rating applies.
- Emerging Markets: The Account's NET emerging market currency exposure shall be limited to +/-20% as determined at the time of purchase.
- Convertibles & Residual Equity: The Account's net equity exposure is +/-5%, excluding Preferred Stock, Convertible Preferred Stock and Commingled Pools as determined at the time of purchase.
- Duration: The effective duration of the Fund will not exceed 5 years and may be as low as -2 years.
- Industry Concentration: The Fund's NET exposure to any individual industry is +/- 25%, excluding securities issued or guaranteed by Government issuers as determined at time of purchase.
- Currency: The Account's NET individual currency, excluding U.S. dollar shall be limited to +/-15% as determined at the time of purchase.

Guideline summary is not a complete restatement of guidelines. The slide is intended to be a summary to aid in the review process.

trust performance

AS OF 10/31/2019 (%)



Sources: State Street Bank, Bloomberg and Loomis Sayles.

*The Trust's investment objective seeks to provide absolute returns in excess of 3-month US LIBOR + 2-4%. This return objective is used for the purpose of portfolio construction, is unofficial, and is provided for informational purposes only. There is no guarantee the strategy will achieve its return objective.

Trust data is being shown as supplemental information.

Performance for multi-year periods is annualized. Total return assumes reinvestment of dividends and capital gains distributions. Gross returns are net of administrative costs and trading costs. Net returns are gross returns less management fees for the period.

Investment return and principal value may fluctuate so that shares, when redeemed, may be worth more or less than their original cost. Performance data quoted represents past performance and current returns may be higher or lower.

Investors should consider a trust's objective, risks and expenses carefully before investing. This and other information can be found in the Trust's Confidential Private Placement Memorandum. Investments in the Trust are not insured by the FDIC, and are not deposits, obligations of, or endorsed or guaranteed in any way, by any bank. Any losses in the Trust will be borne solely by investors, not by Loomis Sayles or its affiliates.

Please see the Key Investment Risks and the Fee Schedule for the Strategic Alpha Trust included in this presentation.

Returns may increase or decrease as a result of currency fluctuations.

Performance data shown represents past performance and is no guarantee of, and not necessarily indicative of, future results.



SA-NT0519
MALR021972

portfolio summary

10/31/2018 TO 10/31/2019

PORTFOLIO SUMMARY

	Portfolio 10/31/2019	Portfolio 10/31/2018	Change 10/31/2018 to 10/31/2019
Yield to Worst (%)	3.90	5.08	-1.18
Effective Duration (years)	2.31	1.25	1.06
Coupon (%)	3.48	3.57	-0.10
Maturity (years)	3.45	2.29	1.15
Average Quality	A3	A3	-
Number of Issuers	336	336	0

QUALITY SUMMARY

	Portfolio % 10/31/2019	Portfolio % 10/31/2018	Change in Exposure % 10/31/2018 to 10/31/2019
Investment Grade	82.58	71.29	11.29
AAA	22.13	31.73	-9.60
AA	12.13	6.85	5.28
A	22.41	14.02	8.39
BBB	25.91	18.68	7.23
High Yield	10.56	19.52	-8.95
BB	5.65	10.09	-4.44
B	3.07	7.84	-4.76
CCC & Below	1.84	1.59	0.25
NR**	-0.69	-2.50	1.80

Source: Loomis Sayles.

Rating categories include unrated securities of comparable quality as determined by Loomis Sayles. Equity securities are deemed to have a duration and maturity value of zero.

**NR consists of non-rated issues plus securities such as common stock, ADR's, ETF's, CDX's and forwards.



LOOMIS SAYLES

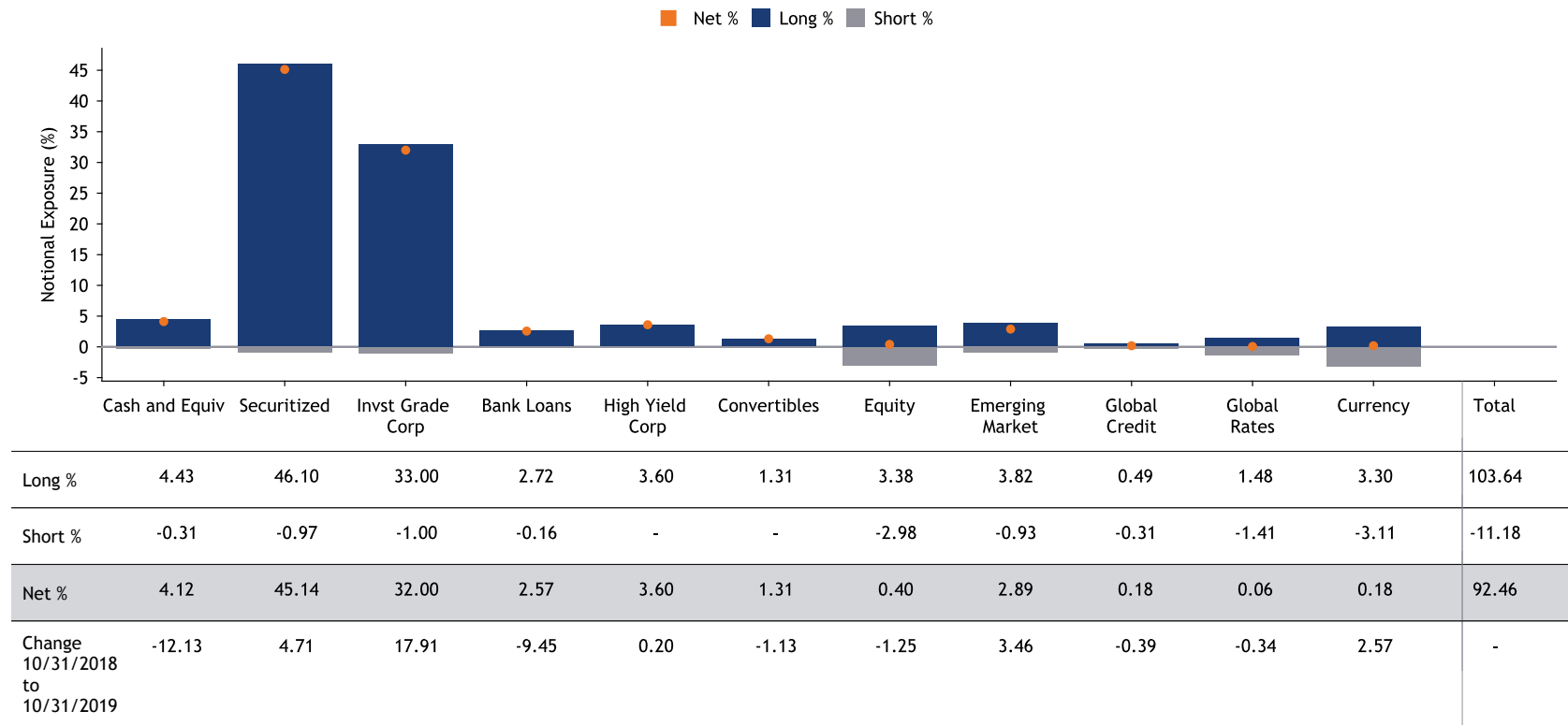
Sources: Loomis, Sayles & Company, L.P. and others

For Institutional Investor Use Only. Not for Further Distribution

October 31, 2019

portfolio review

NOTIONAL EXPOSURE BY STRATEGY AS OF 10/31/2019



Source: Loomis Sayles.

Strategies are based on internal Loomis Sayles classifications. Certain portfolio exposures may be excluded from this chart because, in our view, they are best represented in terms of contribution to duration as shown later in the presentation. Portfolio Strategy Exposure does not include derivative offsets, included in the portfolio's total net assets. The portfolio's long and short investment exposures may, at times, each reach 100% of the assets invested in the portfolio (excluding derivatives used for duration, interest rate or yield curve management and cash and cash equivalents), although these exposures may be higher or lower at any given time.



LOOMIS SAYLES®

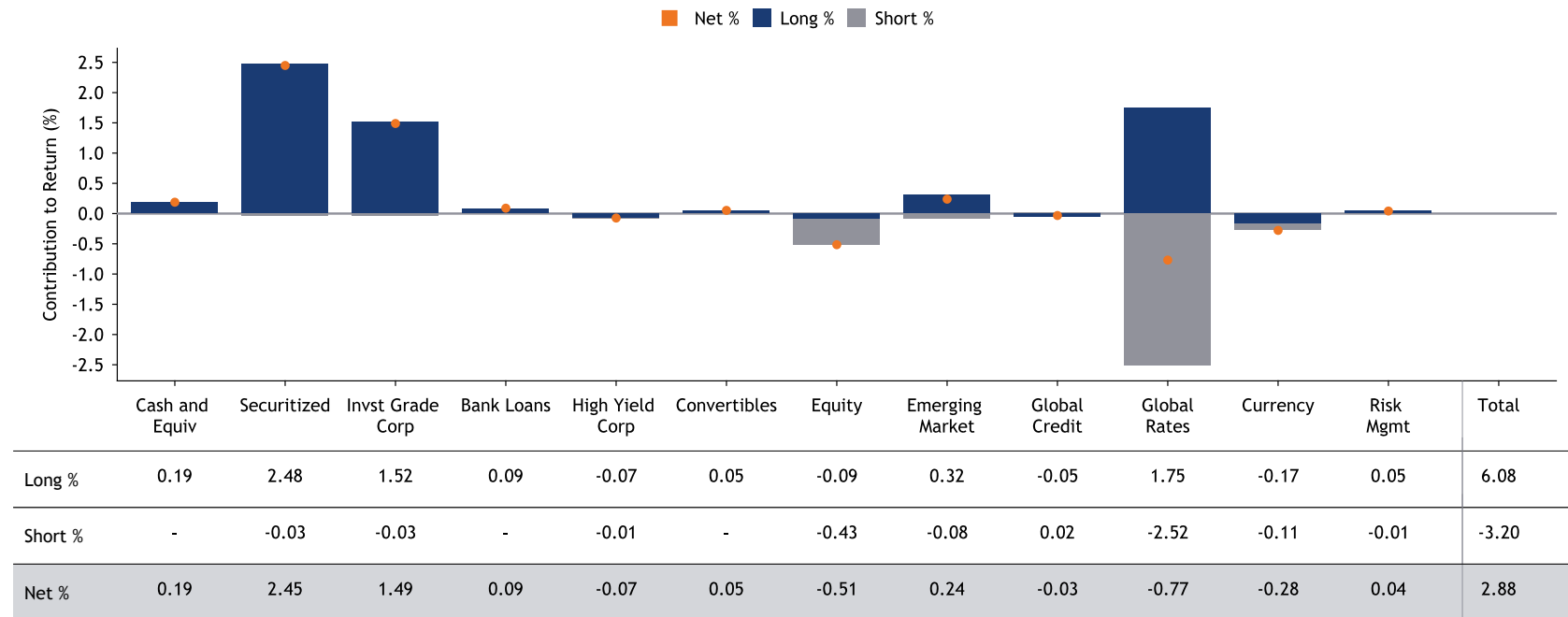
Sources: Loomis, Sayles & Company, L.P. and others

For Institutional Investor Use Only. Not for Further Distribution

October 31, 2019

portfolio review

ONE YEAR CONTRIBUTION (GROSS) AS OF 10/31/2019



Source: Loomis Sayles.

Performance data shown represents past performance and is no guarantee of, and not necessarily indicative of, future results.

Strategies are based on internal Loomis Sayles classifications. Due to the differences in calculation methodologies, the total return shown for attribution may differ from the actual return for the account. Please see the returns for actual return information. Contribution account returns are gross of fees



LOOMIS SAYLES

Sources: Loomis, Sayles & Company, L.P. and others

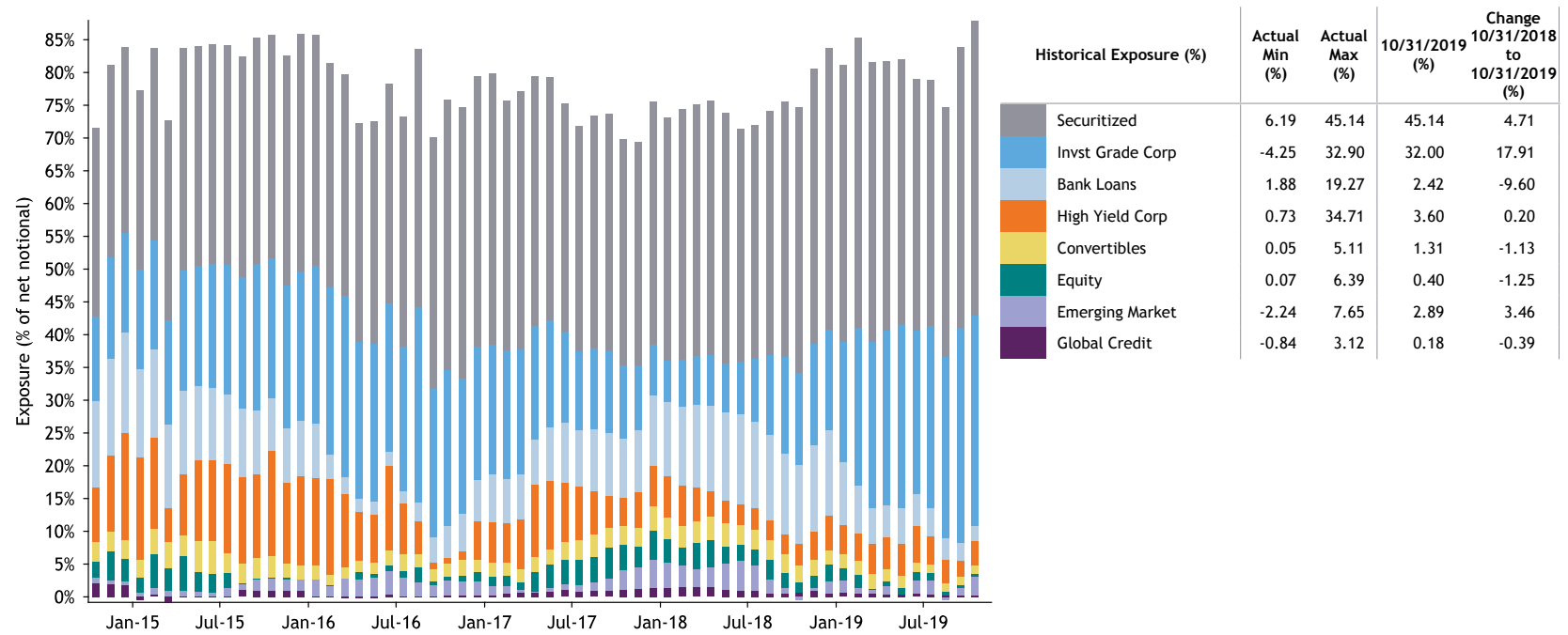
For Institutional Investor Use Only. Not for Further Distribution

October 31, 2019

alpha generation

CREDIT

The portfolio's flexibility in credit market beta allows it to tactically adjust these allocations throughout various market environment and economic regimes



Source: Loomis Sayles, as of 10/31/2019

Due to active management, allocations will evolve over time. The chart above shows credit markets only. Certain portfolio exposures may be excluded from this chart because in our view, they are best represented in terms of contribution to duration as shown later in the presentation.



Sources: Loomis, Sayles & Company, L.P. and others

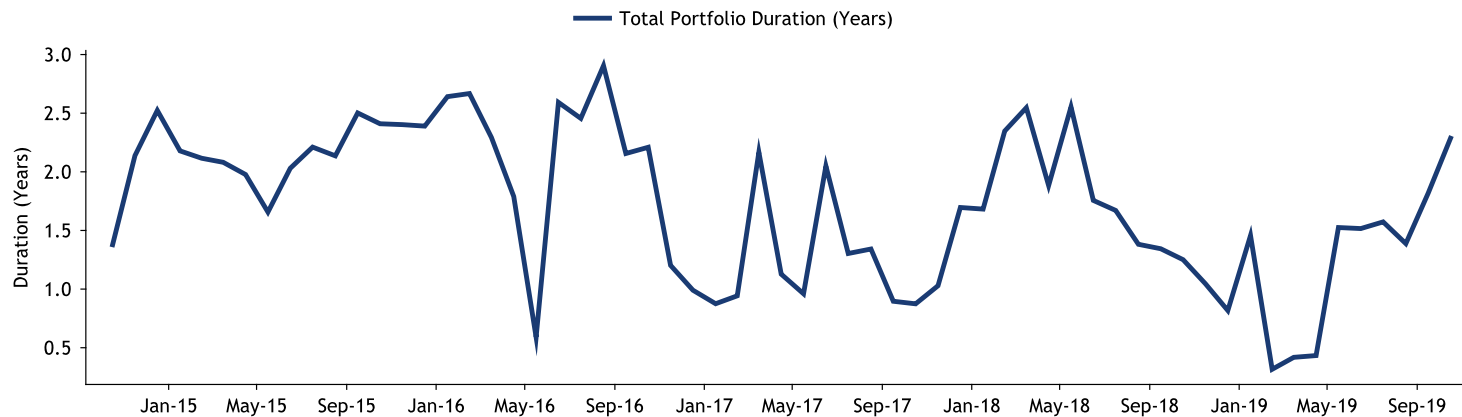
For Institutional Investor Use Only. Not for Further Distribution

October 31, 2019

alpha generation

CURVE

Seeks to benefit from movements in global interest rates. Portfolio's flexibility allows duration to be adjusted tactically.



	Actual Min (%)	Actual Max (%)	10/31/2019 (%)	10/31/2018 (%)
Total Portfolio Duration (Years)	0.32	4.41	2.29	1.25

Source: Loomis Sayles, as of 10/31/2019



LOOMIS SAYLES

Sources: Loomis, Sayles & Company, L.P. and others

For Institutional Investor Use Only. Not for Further Distribution

October 31, 2019

alpha generation

CURRENCY

	Currency Exposure						Change in Exposure % 10/31/2018 to 10/31/2019
	10/31/2019			10/31/2018			
	Total %	Physical %	Forward %	Total %	Physical %	Forward %	
Singapore Dollar	-2.08	-	-2.08	-	-	-	-2.08
Euro	-1.06	0.28	-1.34	-1.10	0.19	-1.29	0.04
Thailand Baht	-1.03	-	-1.03	-	-	-	-1.03
Malaysian Ringgit	0.99	-	0.99	-0.06	-	-0.06	1.05
Norwegian Krone	0.94	-	0.94	-	-	-	0.94
Australian Dollar	0.50	-	0.50	-	-	-	0.50
Brazilian Real	0.49	-	0.49	-	-	-	0.49
Hungarian Forint	0.37	-	0.37	-1.51	-	-1.51	1.89
Argentine Peso	0.27	0.27	-	1.06	1.06	-	-0.78
British Pound Sterling	-0.21	0.43	-0.64	0.71	0.73	-0.02	-0.92

Source: Loomis Sayles.

Currency exposure excludes credit derivatives.



LOOMIS SAYLES

Sources: Loomis, Sayles & Company, L.P. and others

For Institutional Investor Use Only. Not for Further Distribution

October 31, 2019

This page intentionally left blank.

James A. Sia, CFA



Jim Sia is a vice president of Loomis, Sayles & Company and the head of relationship management. In this role, he ensures that the relationship management group delivers effective communication and service to all clients. Jim works closely with portfolio managers, relationship managers, investment strategists and marketing and sales staff as well as other relevant stakeholders to develop and implement policies and procedures for serving existing institutional clients. He joined Loomis Sayles in 2017 and has 30 years of investment industry experience.

Prior to Loomis Sayles, Jim was director of sub-advisory and defined contribution at Standard Life Investments, responsible for developing and executing strategic direction for institutional client segments, including direct calling on prospects, joint development efforts with clients and a co-coverage model for diversified prospects. Prior to this, he was a specialty team leader for sub-advisory and defined contribution at GMO, LLC, where he established direction and executed business strategy for sub-advisory and defined contribution initiatives, and was responsible for client inventory, gap assessment, strategy refresh, client relationship leadership, and client management. Before joining GMO as a defined contribution practice leader, Jim was director of defined contribution and an associate partner at Wellington Management Company, leading a team focused on growth and servicing of investment only defined contribution assets, specifically and across their Americas Institutional Group, and was responsible for key strategic initiatives including marketing, business development, relationship management and support of research and product development. He has also held positions at Charles Schwab, Credit Suisse First Boston and Fidelity Investments. Jim earned a BS in finance, investments, and economics from Babson College and an MBA from Boston University Questrom School of Business.

This page intentionally left blank.

contacts

RELATIONSHIP MANAGEMENT

Stephanie S. Lord, CFA, CIC
VP, Senior Relationship Manager
630-684-8759
SLord@loomissayles.com

Chad Gross
VP, Institutional Services
720-943-8665
CGross@loomissayles.com

Timothy Jurevic
Senior Client Portfolio Analyst
617-603-7334
TJurevic@loomissayles.com

Risa Y. Sampson
Client Portfolio Manager Assistant
415-364-5326
RSampson@loomissayles.com

MULTISECTOR FULL DISCRETION INVESTMENT MANAGEMENT

Daniel J. Fuss, CFA, CIC
Vice Chairman Loomis, Sayles & Co., L.P.
Executive VP, Senior Fixed Income Portfolio Manager

Matthew J. Eagan, CFA
Executive VP, Portfolio Manager

Elaine M. Stokes
Executive VP, Portfolio Manager

Brian Kennedy
VP, Portfolio Manager

STRATEGIC ALPHA INVESTMENT MANAGEMENT

Matthew J. Eagan, CFA
Executive VP, Portfolio Manager

Kevin Kearns
VP, Portfolio Manager &
Senior Derivatives Strategist

Todd Vandam, CFA
VP, Portfolio Manager

Roger Ackerman
VP, Product Manager

This report is a service provided to customers of Loomis Sayles for informational purposes and is not a recommendation to purchase or sell securities. Unless otherwise noted, the performance shown is gross of management fees. Past performance is not a guarantee of future results. Loomis Sayles believes the information contained in this report is reliable but we do not guarantee its accuracy. Additional information on portfolio holdings, portfolio attribution and portfolio transactions are available to all investors upon request.



December 9, 2019

Board of Retirement
Ventura County Employees' Retirement Association
1190 South Victoria Avenue, Suite 200
Ventura, CA 93003

SUBJECT: REQUEST TO ADD ONE (1) STAFF SERVICES MANAGER ALLOCATION

Dear Board Members:

At the October 7, 2019 disability meeting, the Board approved a new disability retirement process that will require staff to perform full in-house independent investigations of disability applications and prepare recommendations for the Board's approval or denial. Staff is currently developing a detailed model of this process to reflect the Board's direction and to address the Board's concerns regarding the existing Disability Hearing Procedures.

While full development of the new model is still in progress, the work and discussions thus far have clearly identified to VCERA management a need for a management-level position for this specific area. Given the challenges of adopting a new model, prompt hiring of a well-qualified manager would allow the individual to assist in building and refining the pending model; once the process is finalized, that individual would then oversee the daily operations of the Disability Retirement Unit. Staff has researched positions and reporting structures of disability departments for other 1937 Act systems and the majority have comparable positions in this capacity.

It is essential for this "Disability Manager" to have the requisite experience and knowledge of disability administration and investigation to assist in building this new model and to oversee the daily operations of the Disability Retirement Unit. The Disability Manager would direct and supervise two Program Administrator II positions in daily operations, assist in formulating and implementing disability related policies, and implement the new disability process once it is finalized and approved by the Board.

While this new requested position would be assigned in the area of *disability* retirements, the duties and responsibilities are aligned to a great degree with the existing Benefits Manager (Staff Services II) positions in Operations (which is currently vacant); staff believes that the same level of allocation, Staff Services Manager II, is appropriate. The Benefits Manager positions are currently undergoing a classification and compensation study/review at CEO - Human Resources; therefore, if this position were approved by the Board, it would be included in that study/review.

In the current fiscal year, staff is requesting funding at mid-step in the amount of \$59,900 for salary and benefits for approximately five months based on a hire date of January 27, 2020. The annualized cost would be \$141,600.

Allocation Request
December 9, 2019
Page 2 of 2

Given the Board's direction, I support the addition of this position and believe it will assist VCERA in achieving a fiduciarily sound disability program and provide the essential specialized disability-related knowledge, skills and abilities to this agency.

RECOMMENDATIONS:

1. Approve the addition of one allocation with the following payroll title and salary range and any changes resulting from the classification and compensation study:

Job Code	Description	FTE	Salary (S) Range (Annual)
01710	Staff Services Manager II	1.0	\$78,024.46 - \$109,244.97 (S)

2. Authorize Staff to process the following Budgetary Adjustments for FY 2019-20:
INCREASE - Salaries & Employee Benefits \$ 59,900
DECREASE - Contingency \$ 59,900

Staff will be pleased to answer any questions at the December 9, 2019 board meeting.

Sincerely,



Linda Webb
Retirement Administrator



STAFF/SERVICES MANAGER II

Class Code:
01710

Bargaining Unit: Management/Confidential
Clerical/Unrepresented Others

VENTURA COUNTY
Established Date: Dec 15, 1996

SALARY RANGE

\$37.51 - \$52.52 Hourly
\$3,000.94 - \$4,201.73 Biweekly
\$6,502.04 - \$9,103.75 Monthly
\$78,024.46 - \$109,244.97 Annually

DEFINITION:

Under general direction, provides supervision and/or management of agency/department operations/services to the departmental or agency management.

Distinguishing Characteristics:

This classification series differs from the Administrative Assistant and Administrative Officer series by its focus on staff or line operations and service delivery, in contrast to the Administrative series which typically performs budgetary, fiscal, or personnel matters.

EXAMPLES OF DUTIES:

Duties may include but are not limited to the following:

- Plans, organizes, coordinates and supervises/manages the activities of subordinate administrative, technical or operations staff within a service unit or division.
- Analyzes and prepares budgets, sets rates and prepares related reports.
- Monitors and may supervise the work of subordinates or coordinate the work of others assigned to perform general or specialized tasks.
- Confers with managers on policy matters and work problems; interprets policies and procedures of the unit/division.
- Designs effective work processes and monitors performance outcomes.
- Represents the County and the agency/department in contacts with other governmental agencies or departments and the public.
- Markets the services of the unit, establishes and maintains an effective customer service program and looks for areas of revenue enhancement.

- Prepares required reports and activity/work measurement reports; compiles and analyzes financial and statistical information to improve operations and/or change service delivery methods.
- May serve as liaison to technical, operations, or administrative staff to analyze new legislation, work methods or reporting requirements, set up and make enhancements to automated systems, train staff and assist in presenting informational sessions to agency/departmental staff and staff from other agencies and departments.
- Represents the agency or department in developing, negotiating and monitoring contracts and contractor performance.

QUALIFICATION GUIDELINES:

Knowledge, Skills, and Abilities:

Depending on the assignment and level in the series, one or more of the following:

Considerable to thorough knowledge of: the principles of supervision and management; the principles and techniques of budgetary preparation and analysis, fiscal management, organization and staffing; application of office automation to business processes; contract negotiation; marketing of services both internal and external to the County; and, public relations.

Working ability to: analyze administrative and organizational problems; prepare a variety of reports and recommendations; communicate effectively in an oral and written manner; plan, organize, and supervise the work of others; develop and present training programs for agency/department staff and others.

RECRUITING STANDARDS:

Education/Experience:

Some (at the lower levels) to considerable (at the highest level): administrative support, supervision or management, or specific operations or technical experience which has led to the acquisition of the required knowledge, skills and abilities.

OTHER REQUIREMENTS:

Special Requirements:

As necessary, specific education and/or experience applicable to the allocated position shall be established for each individual recruitment and selection process. In addition, special certificates, licenses or specific training may be required depending on assignment.

CLASS SPEC TITLE 7:

Reviewed: 2/7/13, 5/7/12



December 9, 2019

Board of Retirement
Ventura County Employees' Retirement Association
1190 South Victoria Avenue, Suite 200
Ventura, CA 93003

SUBJECT: REQUEST TO INCREASE BRENTWOOD I.T.'S CONTRACTED NOT-TO-EXCEED AMOUNT TO SUPPORT OFFICE RENOVATION

Dear Board Members:

Brentwood I.T.'s contract, which was executed on July 16, 2019, included a Not-to-Exceed (NTE) amount of \$160,000, which included \$20,000 from VCERA's remodel budget.

Due to the Chief Technology Officer's embedded support of VCERA's remodel and dedicated VCERA I.T. staff not yet being hired, many of the specific remodel I.T. tasks have required additional support from Brentwood I.T.; further, during the final phases of the remodel, there are additional I.T. tasks that require Brentwood I.T.'s support in completing. Examples of those tasks:

- Configuration of the newly expanded server room, new server equipment, redundant battery backup and monitoring.
- Boardroom audio-visual hardware and software planning, installation and configuration.
- Conference room audio-visual hardware and software planning, installation and configuration.
- Security camera and wireless access point installation and configuration.
- VCERA specific application installation, configuration and support on new staff computers.

After discussions with VCERA's CFO Henry Solis, CTO Leah Oliver, and CBRE Project Manager, Anne Barronton, we have determined that funding is available in the approved remodel budget to reallocate an additional \$25,000 to cover up to an additional 175 hours of Brentwood I.T. support, specifically related to remodel I.T. tasks. The funds would be reallocated from FF&E IT/networking (actual costs were lower than what was budgeted), as well as the soft cost/plan check costs and contingency from FF&E and Soft Cost (if needed).

While the Board has indicated that staff may reallocate within the total approved renovation budget, we cannot increase the Board-approved Not to Exceed (NTE) amount without Board action.

A contract amendment for Attachment B: Schedule of Fees from Brentwood I.T.'s current contract is provided, identifying the increase of the contracted NTE amount to a total of \$185,000.

December 9, 2019
Brentwood IT Contract NTE Request
Page 2 of 2

RECOMMENDATION:

- **APPROVE AN INCREASE OF BRENTWOOD I.T.'S CONTRACTED NOT-TO-EXCEED AMOUNT TO A TOTAL OF \$185,000 TO SUPPORT OFFICE RENOVATION; AND**
- **AUTHORIZE THE RETIREMENT ADMINISTRATOR TO EXECUTE THE PROVIDED CONTRACT AMENDMENT, INCREASING THE NOT-TO-EXCEED AMOUNT TO \$185,000.**

Staff will be pleased to answer any questions at the December 9, 2019 board meeting.

Sincerely,

A handwritten signature in cursive script, appearing to read "Linda Webb".

Linda Webb
Retirement Administrator

AMENDMENT TO THE PROFESSIONAL SERVICES CONTRACT
BY AND BETWEEN
VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
AND
BRENTWOOD IT

This Amendment to the Professional Services Contract effective as of July 1, 2019 by and between Ventura County Employees' Retirement Association ("Client") and Brentwood IT ("CONTRACTOR") is effective as of December 9, 2019.

WHEREAS, the parties to the Agreement desire to amend the Agreement as provided herein;

1. Item number 2 in ATTACHMENT B, SCHEDULE OF FEES of the Agreement is replaced with the following:

The total contract is not to exceed \$185,000.

This Amendment shall amend and is incorporated into and made part of the Agreement.

IN WITNESS WHEREOF the parties have caused this Amendment to be executed in duplicate by their duly authorized officers, who represent that they have the authority sufficient to do so, as of the Effective Date.

Brentwood IT

**Ventura County Employees' Retirement
Association**

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

Date: _____

Date: _____



December 9, 2020

Board of Retirement
Ventura County Employees' Retirement Association
1190 South Victoria Avenue, Suite 200
Ventura, CA 93003

**SUBJECT: AUTHORIZATION FOR BOARD GENERAL COUNSEL'S ATTENDANCE AT NAPPA
WINTER SEMINAR; FEBRUARY 19th – 21st, 2020; TEMPE, AZ**

Dear Board Members:

Staff recommends authorization for Ms. Nemiroff, Board General Counsel, Ms. to attend the NAPPA Winter Seminar being held February 19th – 21st, 2020 in Tempe, Arizona. The cost to attend is estimated to be \$1,750 including event registration, hotel, air fare and other travel related expenses. The Conference brochure is attached.

VCERA staff will be pleased to respond to any questions you may have on this matter at the December 9, 2020, board meeting.

Sincerely,

Linda Webb
Retirement Administrator

Attachment



Registration Information & Deadlines

Online registration begins Tuesday, December 3, 2019.

To register for the conference:

Go to www.nappa.org

Click on "Winter Seminar Registration"

December 3 - January 29	Winter Seminar Registration Open Winter Seminar Fee: \$485 (if registered before 1/15) Winter Seminar Fee: \$585 (if registered 1/15 or after)
December 3 - January 29	Senior Counsel Meeting Registration Open Senior Counsel Registration Fee: \$70 This session is designed for attorneys with substantial experience as in-house/outside counsel for a public retirement system. Less experienced counsel are welcome, but may not find this session as valuable.
January 29, 2020	Last day to register for the Winter Seminar

Seminar Cancellation Policy

Prior to January 15	Full refund
January 15 - January 29	\$100 administrative fee charged
January 30 or later	No refund

If you have any questions, please call the NAPPA office at (573) 616-1895, or send an email to:

Karen Holterman Karen@nappa.org
 Brenda Faken Brenda@nappa.org
 Doris Dorge Doris@nappa.org

Hotel Information



All meetings will be held at the:

Tempe Mission Palms Hotel
60 E. 5th Street
Tempe, AZ 85281
Phone: (480) 894-1400
Toll Free: (800) 547-8705
www.missionpalms.com

Conference Room Rate: \$229 per night (single/double occupancy)

A block of rooms has been reserved at the Tempe Mission Palms Hotel. The block room rate will be available until the room block is filled or until January 29, 2020, at 5:00 p.m. (MST), whichever comes first.

Hotel Reservations

To ensure registered members can book a room in the NAPPA block, we would appreciate you registering for the conference before booking your room.

Hotel Cancellation Policy: Guest room reservations must be cancelled 48 hours prior to arrival date or you will be charged for one night's accommodation.

Please Note!

- Materials will be provided electronically through the mobile app.
- NAPPA does not apply for CLE credits for the Winter Seminar.
- You are responsible for your own airfare and hotel accommodations.
- There is a "No Smoking" policy at all sessions.
- Dress is business casual. Please note that most meeting rooms tend to be on the chilly side, so a sweater or jacket is recommended.

Solicitation and Marketing are prohibited at all NAPPA meetings.

Phone: (573) 616-1895 | Fax: (573) 616-1897 | www.nappa.org

3

Wednesday, February 19

7:00 a.m. - 4:30 p.m. Registration

7:30 a.m. - 8:15 a.m. Breakfast (provided by NAPPA)

Investment Section Meeting (8:30 a.m. - 11:30 a.m.)

8:30 a.m. - 9:30 a.m. You Can't Always Get What You Want, But if You Try Sometimes...

As noted by the famed philosophers, Richards and Jagger, even if you can't get what you want, you sometimes get what you need. However, in the current GP-advantaged fundraising environment, investors may not even be able to get what they need! This session will discuss the most important issues for in-house counsel to address when negotiating private fund investments, as well as provide a perspective of the outside investment counsel in connection with such negotiations. The speakers will also share their recommendations and strategies for successfully balancing the need to document the public pension system's internal requirements, established policies and regulations with fund terms, especially in oversubscribed funds.

9:30 a.m. - 9:45 a.m. Break

9:45 a.m. - 10:10 a.m. ILPA PART I - Aspirational Guidance for Private Equity Investors: How Principles 3.0 Drives Alignment, Transparency and Governance

This session will provide an overview of the Principles 3.0 released in 2019 by the Institutional Limited Partners Association (ILPA) for private equity investments. This panel will discuss how Principles 3.0 was designed to address the evolving demands of the private funds industry. The 3rd iteration of the ILPA Principles builds on ILPA's recommendations in the previous versions (Principles 1.0, released in 2009, and Principles 2.0, released in 2011) to help guide public pension systems and other institutional investors with respect to the terms they should be seeking in fund documents with private equity managers to ensure greater alignment between LPs and GPs.

10:10 a.m. - 10:25 a.m. Break

10:25 a.m. - 11:40 a.m. ILPA PART II - Practical Application: The ILPA Model LPA and How it Can Help You Negotiate a Better Deal

This session will discuss the benefits of the first, complimentary publicly available model limited partnership agreement (LPA) in the marketplace. ILPA released its model LPA in October, 2019 after a two-year creation process to drive a practical application of ILPA Principles 3.0. The panel will include investment attorneys who were involved in the

4 NAPPA | 2410 Hyde Park Road, Suite B | Jefferson City, MO 65109

Wednesday, February 19 (continued)

drafting process of the model LPA. The panel will cover the various elements of the model LPA, including fund economics; standard of care; exculpation and indemnification; fund governance; removal/termination rights; and access to information. The panel will explain how the model LPA template can be utilized, and the various provisions altered, to best suit the needs of public pension systems during negotiation of investment terms with private equity managers.

11:40 a.m. - 1:00 p.m. Lunch (provided by NAPPA)

Fiduciary and Plan Governance Section Meeting
(1:30 p.m. - 4:30 p.m.)

1:30 p.m. - 2:20 p.m. Fiduciary Implications of Corporate Principles

A one-page statement of corporate principles signed by the heads of more than 180 U.S. companies created a furor in the field of fiduciary law this past fall, raising implications for public pension funds. The Business Roundtable's statement emphasized that corporate leaders should balance the needs of shareholders with customers, employees, suppliers, and local communities. This panel will consider what the principles from this statement mean for public pension plans as institutional investors. How might this affect the fiduciary duty owed to pension plans as shareholders versus the fiduciary duty of the public pension trustees themselves to members and beneficiaries? Is the analysis akin to consideration of ESG factors in investment decision making? Can the statement be reconciled with existing law on fiduciary duty? Is shareholder supremacy under attack?

2:20 p.m. - 2:35 p.m. Break

2:35 p.m. - 3:25 p.m. The Nuts and Bolts of Board Governance

This session will discuss some practical aspects of board governance. Recognizing the practical differences among systems and that good governance is not based on a "one size fits all" standard, the panel will share some governance models and an overview of key governance documents. The panel will also provide examples of effective governance documents and best practices. Finally, the panel will focus on governance-related self-assessment and accountability strategies and practices.

3:25 p.m. - 3:40 p.m. Break

3:40 p.m. - 4:30 p.m. Counsel's Role in Educating Board Members and Staff About Governance and Fiduciary Topics

Governance matters and fiduciary standards raise many issues for board members, staff, and counsel as they fulfill their respective roles. Building on the last panel's presentation, "The Nuts and Bolts of Board Governance," this session will shift into

Phone: (573) 616-1895 | Fax: (573) 616-1897 | www.nappa.org 5

Wednesday, February 19 (continued)

a discussion of education. How can counsel develop a good working knowledge of governance and fiduciary topics? What could be counsel's role in providing continuing education about these topics to board members and staff? How can such education and effective counsel help board meetings to be as orderly, efficient, and fair as possible? How often should fiduciary education be provided, to whom, and on what topics? If regular education is provided, what topics or approaches are used to keep training sessions fresh and relevant? What are some common practices, practical techniques, and legal considerations for counsel to consider? Panelists will share their approaches.

5:00 p.m. - 6:30 p.m. Reception (provided by NAPPA)

Thursday, February 20

7:00 a.m. - 4:30 p.m. Registration

7:30 a.m. - 8:15 a.m. Breakfast (provided by NAPPA)

Benefits Section Meeting
(8:30 a.m. - 11:30 a.m.)

8:30 a.m. - 9:20 a.m. Dead or Alive: We Just Need to Know

This session will explore processes and challenges of confirming the life status of retirees and beneficiaries who are receiving regular (typically monthly) retirement benefits.

9:20 a.m. - 9:35 a.m. Break

9:35 a.m. - 10:25 a.m. Mental Health, Disability Claims and Employee/Employer Accommodations

This session will discuss the increasing prevalence of mental health conditions affecting public safety and non-public safety employees and the approaches public pension plans are taking to address these conditions. The panel will also look at Post-Traumatic Stress Disorder and other psychological conditions as the basis for disability claims and examine what role pension plans should or should not play when plan sponsor employers are unable or unwilling to accommodate employee medical and psychological conditions that may contribute to disability claims.

10:25 a.m. - 10:40 a.m. Break

6 NAPPA | 2410 Hyde Park Road, Suite B | Jefferson City, MO 65109

Thursday, February 20 (continued)

10:40 a.m. - 11:30 a.m. Come On Take the Money & Run: Uncashed Checks, Disclaimer of Benefits, and Missing Participants

This session will discuss how systems are handling the mounting amount of uncashed checks, including a discussion on recent rulings regarding handling and reporting uncashed checks. In addition, you will hear from panelists regarding guidance from the IRS on locating missing participants and the efforts pension systems undertake to locate missing and lost participants. Finally, this panel will examine legal considerations and analysis when a recipient attempts to disclaim a benefit.

11:30 a.m. - 1:00 p.m. Lunch (provided by NAPPA)

Tax Section Meeting
(1:30 p.m. - 4:30 p.m.)

1:30 p.m. - 1:45 p.m. Legislative and Regulatory Tax Updates

What prospective changes to federal law will affect pension plans? Is there anything lurking that plan sponsors should know about? This session will provide updates on what may (or may not) be coming this legislative session.

1:45 p.m. - 2:20 p.m. Vesting—What Does it REALLY Mean?

This session will focus on what it means to be vested in a governmental plan and what protection (if any) plan participants might get from attempted plan sponsor cutbacks. We will review the vesting protections of governmental plans provided by the Internal Revenue Code, as well as potential vesting pitfalls triggered by changes to plan design and outdated actuarial assumptions.

2:20 p.m. - 2:35 p.m. Break

2:35 p.m. - 3:25 p.m. Reviewing and Negotiating Fund Documents: Key Tax Issues

This session will focus on key tax provisions to be considered by public pension plan investors when reviewing and negotiating private equity fund documents. Learn from the drafters of the ILPA model LPA template about what to look for and best practices in side letters.

3:25 p.m. - 3:40 p.m. Break

3:40 p.m. - 4:30 p.m. Prepare for the Worst With Risk Insurance. (Or, Protecting NAPPA Members Against Yet Another Hour of Tax.)

What insurance do plans really need? When will it protect the plan? This session will provide practical information about situations when insurance is critical to protecting the plan sponsor, and when insurance won't provide that protection.

Phone: (573) 616-1895 | Fax: (573) 616-1897 | www.nappa.org

7

Friday, February 21

7:00 a.m. - 11:30 a.m. Registration

7:30 a.m. - 8:15 a.m. Breakfast - For Senior Counsel Attendees Only (provided by NAPPA)

Senior Counsel Meeting
Pre-Registration Required
(8:30 a.m. - 11:45 a.m.)

8:30 a.m. - 9:30 a.m. Role of the General Counsel In Public Pension Plans: Counselor and Strategic Advisor?

When a general counsel is part of the executive leadership that makes strategic business and operational decisions, those decisions are informed by not only a legal perspective, but also by broad ethical and public policy considerations. The general counsel is a diverse and unique voice at the executive table and increasingly public plan Board of Trustees recognize the value of the general counsel as a strategic advisor.

This panel will explore the reporting relationships of the general counsel in public plans. Does the general counsel report directly to the Board of Trustees or to the Executive Director, or is there dotted line reporting on an administrative basis? If not a direct report to the Board of Trustees, how do organizations ensure the independence of the legal function? Given the importance of the general counsel in matters of ethics, compliance, corporate governance, and risk and reputation management, this panel will also explore the role of general counsel functioning as a key ally and partner in establishing a culture that supports the performance of an organization without compromising ethical behavior and legal and regulatory compliance.

9:30 a.m. - 9:45 a.m. Break

9:45 a.m. - 10:45 a.m. Strategies for Building (and Maintaining) an Effective Compliance Program

An effective compliance program is critical to ensuring that organizations (large and small) and its employees conduct operations and activities ethically, with the highest level of integrity, and in compliance with legal and organizational rules and requirements. This session will include a frank and thoughtful discussion of the various strategies, considerations, and elements that go into building and maintaining an effective compliance program.

8 NAPPA | 2410 Hyde Park Road, Suite B | Jefferson City, MO 65109

Friday, February 21 (*continued*)

10:45 a.m. - 11:45 a.m. Pension System Participation Class Action Lawsuits

This panel will discuss pension system participation as a lead or co-lead plaintiff in action lawsuits, including:

- Important considerations when determining whether to participate as a lead plaintiff in these cases, including board policies defining the circumstances under which the system will participate;
- What it means/what duties are assumed when the system is appointed as lead plaintiff;
- Weighing the system's paramount fiduciary duty to the system's members against the duty owed to the class members;
- Setting (and managing) reasonable expectations regarding recovery of losses and the internal resources that will need to be (must be?) dedicated to effective prosecution of the action;
- The involvement of the retirement board in oversight of the litigation, litigation strategy decisions, and settlement discussions;
- The role of the system's general counsel in these matters; and
- Additional considerations when your system is a co-lead plaintiff.

These sessions are designed for attorneys with substantial experience as in-house/ outside counsel for a public retirement system. Less experienced counsel are welcome, but may not find these sessions as valuable.

NAPPA Executive Board

- Ashley Dunning, *President* (Nossaman)
- Mary Beth Foley, *Vice President* (Ohio Police & Fire Pension Fund)
- Adam Franklin (Colorado Public Employees' Retirement Association)
- Michael Herrera (Los Angeles County Employees Retirement Association)
- Joe Indelicato (New York State Teachers' Retirement System)
- Paul Madden (Whiteford, Taylor & Preston)
- Erin Perales (Houston Municipal Employees Pension System)
- Gina Ratto (Orange County Employees Retirement System)
- Georgette Schaefer (Morgan, Lewis & Bockius)

NAPPA Staff

- Susie Dahl, *Executive Director*
- Karen Holterman, *Administrative Assistant*
- Brenda Faken, *Administrative Technician*
- Doris Dorge, *Administrative Aide*

Phone: (573) 616-1895 | Fax: (573) 616-1897 | www.nappa.org

9

2019 - 2020 Section Steering Committees

Investment Section

- Yuliya Oryol, *Chair* (Nossaman)
- Don Ampansiri (New York State Teachers' Retirement System)
- Julie Borisov (Colorado Public Employees' Retirement Association)
- Carolina de Onis (Texas Teacher Retirement System)
- Karen Grenon (Connecticut Office of the State Treasurer)
- Maureen Hazen (Florida State Board of Administration)
- Ann Marie Johnson (Delaware Department of Justice)
- Carrie Rief (Morgan, Lewis & Bockius)
- Christine Roseland (Los Angeles County Employees Retirement Association)
- Steven Skoff (Pennsylvania Public School Employees' Retirement System)
- Chris Supple (Massachusetts Pension Reserves Investment Management Board)
- Georgette Schaefer, *Board Liaison* (Morgan, Lewis & Bockius)

Tax Section

- John Nixon, *Co-Chair* (Duane Morris)
- Megan Peitzmeier, *Co-Chair* (Colorado Public Employees' Retirement Association)
- Luke Bailey (Clark Hill)
- Jessica Culotti (Reinhart Boerner Van Deuren)
- Robert Gauss (Ice Miller)
- Susan Lenczewski (Minnesota Legislative Commission on Pensions and Retirement)
- Marc Purinton (Williams Mullen)
- Tony Roda (Williams & Jensen)
- Joshua Vecchio (Pennsylvania Municipal Retirement System)
- Melanie Walker (The Segal Company)
- Don Wellington (Reed Smith)
- Paul Madden, *Board Liaison* (Whiteford, Taylor & Preston)

10 NAPPA | 2410 Hyde Park Road, Suite B | Jefferson City, MO 65109

2019 - 2020 Section Steering Committees

Benefits Section

- Jason Paulsmeyer, *Chair* (Missouri Local Government Employees Retirement System)
- Kristin Bellar (Michigan Municipal Employees' Retirement System)
- Valerie Budzik (New York City Teachers' Retirement System)
- Audra Ferguson-Allen (Ice Miller)
- Tina Grant (Louisiana State Employees' Retirement System)
- David Levine (Groom Law Group)
- Michelle Mellon-Werch (Texas Municipal Retirement System)
- Jonathan Needle (Houston Firefighters' Relief & Retirement Fund)
- David Nispel (Wisconsin Department of Employee Trust Funds)
- Michael Weinstein (Ottosen Britz Kelly Cooper Gilbert & DiNolfo)
- Erin Perales, *Board Liaison* (Houston Municipal Employees Pension System)

Fiduciary & Plan Governance Section

- Dee Larsen, *Chair* (Utah Retirement Systems)
- Julie Becker (Aon Hewitt)
- Chuck Campbell (Jackson Walker)
- Aaron Castle (VanOverbeke, Michaud & Timmony)
- Rachel Cohen (Maryland State Retirement & Pension System, Office of the Attorney General)
- Suzanne Dugan (Cohen Milstein Sellers & Toll)
- Anya Freedman (Los Angeles City Attorney's Office)
- Benita Harper (Fort Worth Employees' Retirement Fund)
- Eric Harrell (Ohio Public Employees Retirement System)
- Lara Hjortsberg (Maryland Teachers & State Employees Supplemental Retirement Plans, Office of the Attorney General)
- Miriam Horwitz (Milwaukee Office of the City Attorney)
- Lindsay Knowles (Ice Miller)
- Davetta Lee (Mississippi Public Employees' Retirement System)
- Alice McAfee (Texas Teacher Retirement System)
- Melanie Walker (The Segal Company)
- Gina Ratto, *Board Liaison* (Orange County Employees Retirement System)

Phone: (573) 616-1895 | Fax: (573) 616-1897 | www.nappa.org 11

Future Conferences



2020 Legal Education Conference - Ft. Lauderdale, FL
Tuesday, June 23 - Friday, June 26, 2020
New Member Education Sessions on Tuesday, June 23, 2020
Ft. Lauderdale Marriott Harbor Beach



2021 Winter Seminar - Tempe, AZ
Wednesday, February 24 - Friday, February 26, 2021
Tempe Mission Palms Hotel



2021 Legal Education Conference - Denver, CO
Tuesday, June 22 - Friday, June 25, 2021
New Member Education Sessions on Tuesday, June 22, 2021
Hilton Denver City Center



2022 Winter Seminar - Washington, DC
Wednesday, February 23 - Friday, February 25, 2022
Grand Hyatt Washington



2022 Legal Education Conference - Louisville, KY
Tuesday, June 21 - Friday, June 24, 2022
New Member Education Sessions on Tuesday, June 21, 2022
Omni Louisville Hotel

12 NAPP | 2410 Hyde Park Road, Suite B | Jefferson City, MO 65109



December 19, 2019

Board of Retirement
Ventura County Employees' Retirement Association
1190 South Victoria Avenue, Suite 200
Ventura, CA 93003

SUBJECT: APPOINTMENT OF 2020 CHAIR AND VICE CHAIR

Dear Board Members:

Background

The Board of Retirement Bylaws and Regulations ("Regulations") require the Board to take action at the first meeting in December to appoint a Chair and Vice Chair for the upcoming calendar year. The same provision is included in the charters for the Chair and Vice Chair. The Regulations and charters state that no member shall serve in either capacity until he/she has served on the Board for a minimum of one year.

As the Board is aware, Tracy Towner was appointed as the 2018 Chair, but in April of that year, he was terminated from employment by the County of Ventura. Mr. Towner exercised his rights to timely appeal his termination to the Civil Service Commission (CSC), and requested that the Board pursue filling his trustee position only in the event the CSC upheld the termination. The Ventura County Deputy Sheriffs' Association (VCDSA) also asked that the Board postpone filling the position until the CSC process was complete. The Board took action to allow Mr. Towner's Board seat to remain open pending the outcome of his termination appeal. In December of 2019, the Board appointed Mr. Wilson as temporary Chair, and Mr. Bianchi as temporary Vice Chair, in anticipation that a decision by the CSC would be issued during 2019, at which time a permanent Chair and Vice Chair would be appointed.

The CSC issued a written decision in Mr. Towner's favor on July 12, 2019, and he returned to the Board on July 15, 2019. At the September 23, 2019 meeting, the Board appointed Mr. Towner as Chair for the remainder of 2019, replacing Mr. Wilson who had been serving as temporary Chair, and Mr. Wilson was appointed as permanent Vice Chair. On August 27, 2019, the County filed a Petition for Writ of Mandate in Superior Court, seeking an order compelling the CSC to set aside its decision and enter a new decision upholding the termination. On September 18, 2019, the County filed a request that the CSC Decision be stayed, pending final judgment on the writ petition. The Court granted the request for a stay on October 18, 2019, making Mr. Towner ineligible to serve as a trustee until the Court issues a judgment on the writ petition. The hearing on the writ petition is scheduled for March 27, 2020.

Potential Action(s)

As stated above, the Board traditionally appoints the positions in December in accordance with the Regulations and charters. Given the unusual circumstances, the Board may wish to consider the following alternatives in appointing a Chair and Vice Chair, which were the same alternatives presented in December of 2018.:

1. Appoint a permanent Chair and Vice Chair for 2020, per the Regulations and charters;

December 9, 2019

Board Options Regarding Appointment of Chair and Vice Chair

Page 2 of 2

2. Maintain the status quo, having the Vice Chair continue presiding as Chair, appoint a temporary Vice Chair and postpone appointment of a permanent Chair and Vice Chair for the until the Court issues judgment on the County's writ petition;
3. Appoint a temporary Chair and Vice Chair to serve until after the Court issues its judgment or until a date specified by the Board.

Staff will be pleased to answer any questions at the December 9, 2019 Board meeting.

Sincerely,

A handwritten signature in cursive script, appearing to read "Linda Webb".

Linda Webb

Retirement Administrator