Alameda County Employees' Retirement Association
BOARD OF RETIREMENT

ACTUARIAL COMMITTEE/BOARD MEETING
NOTICE and AGENDA

[THIS MEETING WILL BE CONDUCTED VIA TELECONFERENCE [SEE EXECUTIVE ORDER N-29-20 ATTACHED AT THE END OF THIS AGENDA.]

ACERA MISSION:

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

Thursday, June 17, 2021
11:00 am

LOCATION	COMMITTEE MEMBERS	
The public can view the teleconference and comment via audio during the meeting To join the teleconference, please click the link below: https://zoom.us/join Meeting ID: 812 8792 3104 Password: 467868 For help joining a Zoom meeting, see: https://support.zoom.us/hc/en-us/articles/201362193	**TARRELL GAMBLE, CHAIR**	**APPOINTED**
	OPHELIA BASGAL, VICE CHAIR	**APPOINTED**
	KEITH CARSON	**APPOINTED**
	LIZ KOPPENHAVER	**ELECTED RETIRED**
	GEORGE WOOD	**ELECTED GENERAL**

This is a meeting of the Actuarial Committee if a quorum of the Actuarial Committee attends, and it is a meeting of the Board if a quorum of the Board attends. This is a joint meeting of the Actuarial Committee and the Board if a quorum of each attends.

The order of agenda items is subject to change without notice. Board and Committee agendas and minutes, and all documents distributed to the Board or a Committee in connection with a public meeting (unless exempt from disclosure), are available online at www.acera.org.

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

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

ACTUARIAL COMMITTEE/BOARD MEETING

Call to Order: 11:00 am

Public Input

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

1. Motion to recommend that the Board of Retirement approve a Memorandum of Understanding with the County of Alameda regarding its anticipated extraordinary contributions to fund a portion of its Safety unfunded liabilities.

2. Motion to recommend that the Board of Retirement adopt revised 2021-2022 Safety contribution rates for the County of Alameda if it makes extraordinary contributions to fund a portion of its Safety unfunded liabilities.

3. Motion to recommend that the Board of Retirement approve ACERA's receipt of the Livermore Area Recreation & Park District's anticipated Pension Obligation Bond (POB) contributions to fund a portion of its unfunded liabilities.

4. Motion to recommend that the Board of Retirement adopt revised 2021-2022 contribution rates for LARPD if it makes POB contributions to fund a portion of its unfunded liabilities.

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

1. Segal presentation of the Risk Assesment including deterministic projections based on the Actuarial Valuation and Review as of December 31, 2020

-Margo Allen
-Andy Yeung, Segal

Future Discussion Items

None

Establishment of Next Meeting Date

Thursday October 21, 2021 at 11:00 a.m.

Adjournment

EXECUTIVE DEPARTMENT
STATE OF CALIFORNIA

EXECUTIVE ORDER N-29-20

WHEREAS on March 4, 2020, I proclaimed a State of Emergency to exist in California as a result of the threat of COVID-19; and

WHEREAS despite sustained efforts, the virus continues to spread and is impacting nearly all sectors of California; and

WHEREAS the threat of COVID-19 has resulted in serious and ongoing economic harms, in particular to some of the most vulnerable Californians; and

WHEREAS time bound eligibility redeterminations are required for Medi-Cal, CalFresh, CalWORKs, Cash Assistance Program for Immigrants, California Food Assistance Program, and In Home Supportive Services beneficiaries to continue their benefits, in accordance with processes established by the Department of Social Services, the Department of Health Care Services, and the Federal Government; and

WHEREAS social distancing recommendations or Orders as well as a statewide imperative for critical employees to focus on health needs may prevent Medi-Cal, CalFresh, CalWORKs, Cash Assistance Program for Immigrants, California Food Assistance Program, and In Home Supportive Services beneficiaries from obtaining in-person eligibility redeterminations; and

WHEREAS under the provisions of Government Code section 8571, I find that strict compliance with various statutes and regulations specified in this order would prevent, hinder, or delay appropriate actions to prevent and mitigate the effects of the COVID-19 pandemic.

NOW, THEREFORE, I, GAVIN NEWSOM, Governor of the State of California, in accordance with the authority vested in me by the State Constitution and statutes of the State of California, and in particular, Government Code sections 8567 and 8571, do hereby issue the following order to become effective immediately:

IT IS HEREBY ORDERED THAT:

1. As to individuals currently eligible for benefits under Medi-Cal, CalFresh, CalWORKs, the Cash Assistance Program for Immigrants, the California Food Assistance Program, or In Home Supportive Services benefits, and to the extent necessary to allow such individuals to maintain eligibility for such benefits, any state law, including but not limited to California Code of Regulations, Title 22, section 50189(a) and Welfare and Institutions Code sections 18940 and 11265, that would require redetermination of such benefits is suspended for a period of 90 days from the date of this Order. This Order shall be construed to be consistent with applicable federal laws, including but not limited to Code of Federal Regulations, Title 42, section 435.912, subdivision (e), as interpreted by the Centers for Medicare and Medicaid Services (in guidance issued on January 30, 2018) to permit the extension of

otherwise-applicable Medicaid time limits in emergency situations.

2. Through June 17, 2020, any month or partial month in which California Work Opportunity and Responsibility to Kids (CalWORKs) aid or services are received pursuant to Welfare and Institutions Code Section 11200 et seq. shall not be counted for purposes of the 48-month time limit set forth in Welfare an Institutions Code Section 11454. Any waiver of this time limit shall not be applied if it will exceed the federal time limits set forth in Code of Federal Regulations, Title 45, section 264.1.

3. Paragraph 11 of Executive Order N-25-20 (March 12, 2020) is withdrawn and superseded by the following text:

   Notwithstanding any other provision of state or local law (including, but not limited to, the Bagley-Keene Act or the Brown Act), and subject to the notice and accessibility requirements set forth below, a local legislative body or state body is authorized to hold public meetings via teleconferencing and to make public meetings accessible telephonically or otherwise electronically to all members of the public seeking to observe and to address the local legislative body or state body. All requirements in both the Bagley-Keene Act and the Brown Act expressly or impliedly requiring the physical presence of members, the clerk or other personnel of the body, or of the public as a condition of participation in or quorum for a public meeting are hereby waived.

   In particular, any otherwise-applicable requirements that

   (i) state and local bodies notice each teleconference location from which a member will be participating in a public meeting;

   (ii) each teleconference location be accessible to the public;

   (iii) members of the public may address the body at each teleconference conference location;

   (iv) state and local bodies post agendas at all teleconference locations;

   (v) at least one member of the state body be physically present at the location specified in the notice of the meeting; and

   (vi) during teleconference meetings, a least a quorum of the members of the local body participate from locations within the boundaries of the territory over which the local body exercises jurisdiction

   are hereby suspended.

   A local legislative body or state body that holds a meeting via teleconferencing and allows members of the public to observe and address the meeting telephonically or otherwise electronically, consistent with the notice and accessibility requirements set forth below, shall have satisfied any requirement that the body allow members of the public to attend the meeting and offer public comment. Such a body need not make available any physical location from which members of the public may observe the meeting and offer public comment.

Accessibility Requirements: If a local legislative body or state body holds a meeting via teleconferencing and allows members of the public to observe and address the meeting telephonically or otherwise electronically, the body shall also:

(i) Implement a procedure for receiving and swiftly resolving requests for reasonable modification or accommodation from individuals with disabilities, consistent with the Americans with Disabilities Act and resolving any doubt whatsoever in favor of accessibility; and

(ii) Advertise that procedure each time notice is given of the means by which members of the public may observe the meeting and offer public comment, pursuant to subparagraph (ii) of the Notice Requirements below.

Notice Requirements: Except to the extent this Order expressly provides otherwise, each local legislative body and state body shall:

(i) Give advance notice of the time of, and post the agenda for, each public meeting according to the timeframes otherwise prescribed by the Bagley-Keene Act or the Brown Act, and using the means otherwise prescribed by the Bagley-Keene Act or the Brown Act, as applicable; and

(ii) In each instance in which notice of the time of the meeting is otherwise given or the agenda for the meeting is otherwise posted, also give notice of the means by which members of the public may observe the meeting and offer public comment. As to any instance in which there is a change in such means of public observation and comment, or any instance prior to the issuance of this Order in which the time of the meeting has been noticed or the agenda for the meeting has been posted without also including notice of such means, a body may satisfy this requirement by advertising such means using "the most rapid means of communication available at the time" within the meaning of Government Code, section 54954, subdivision (e); this shall include, but need not be limited to, posting such means on the body's Internet website.

All of the foregoing provisions concerning the conduct of public meetings shall apply only during the period in which state or local public health officials have imposed or recommended social distancing measures.

All state and local bodies are urged to use sound discretion and to make reasonable efforts to adhere as closely as reasonably possible to the provisions of the Bagley-Keene Act and the Brown Act, and other applicable local laws regulating the conduct of public meetings, in order to maximize transparency and provide the public access to their meetings.

IT IS FURTHER ORDERED that as soon as hereafter possible, this Order be filed in the Office of the Secretary of State and that widespread publicity and notice be given of this Order.

This Order is not intended to, and does not, create any rights or benefits, substantive or procedural, enforceable at law or in equity, against the State of California, its agencies, departments, entities, officers, employees, or any other person.

IN WITNESS WHEREOF I have hereunto set my hand and caused the Great Seal of the State of California to be affixed this 17th day of March 2020.

GAVIN NEWSOM
Governor of California

ATTEST:

ALEX PADILLA
Secretary of State

ACERA

Office of the Chief Counsel

To:	Actuarial Committee
From:	Jeff Rieger, Chief Counsel
Meeting:	June 17, 2021
Subject:	Possible Extraordinary County Contribution To ACERA

The County may contribute approximately $800 million to ACERA on or before June 30, 2021, to fund a substantial portion of the County's unfunded liability associated with its former and current Safety employees. This payment would be subject to the Board of Retirement's and Board of Supervisor's approval of the Memorandum of Understanding (MOU) attached hereto. Staff recommends that the Board approve the MOU.

On May 20, 2021, the Board revised its Actuarial Funding Policy and Interest Crediting Policy. Like those policy revisions, the MOU is designed to ensure that (a) the County receives full credit for its contribution, and (b) ACERA's other participating employers and the SRBR are not negatively impacted by the contribution. The key terms of the MOU are:

- In the Recitals, the County acknowledges that its extraordinary contribution "shall be subject to the same investment risks as other funds in the System" and, if returns differ from ACERA's assumed rate, that will impact the County's expected contribution reductions resulting from the extraordinary contribution.
- Section 2 provides that the recent amendments to the Actuarial Funding Policy and Interest Crediting Policy are necessary to accomplish the purpose of the MOU and that any future amendments must ensure that (a) the County receives full credit for its supplemental contributions, and (b) ACERA's other participating employers and the SRBR are not negatively impacted by the contribution.
- Section 4 (and its referenced Exhibits) establishes how the Board will apply the contribution to the County's Safety UAAL payments over time, starting when the County adopts its new contribution rates in September 2021. It also specifies that this contribution may <u>not</u> be used to offset the County's Normal Cost contributions.
- Section 5 specifies that the County's funds will be co-mingled with ACERA's other funds for investment purposes.

Agreeing to the proposed MOU is within the Board's constitutional and statutory authority regarding actuarial matters. *See* Cal. Const., art. XVI § 17(e); Gov't Code § 31454.7 (Legislature affirming the Board's "plenary authority to recommend adjustments to county and district contributions as necessary to ensure the appropriate funding of the system"). Also, case law establishes that the Board can take account of extraordinary contributions before the next annual valuation when setting employer contribution rates. *See Bandt v. Board of Retirement* (2006) 136 Cal.App.4th 140. Thus, the Board has discretion to approve the MOU, and adopt the resulting revised Safety contribution rates for the County, if it determines that doing so is in the interests of ACERA's members and beneficiaries.

Andy Yeung and I will be available at the Committee meeting to answer any questions.

MEMORANDUM OF UNDERSTANDING BETWEEN THE

COUNTY OF ALAMEDA

AND

ALAMEDA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

This **MEMORANDUM OF UNDERSTANDING** ("MOU") is made and entered into this ___ day of June 2021, by and between the **COUNTY OF ALAMEDA** ("County"), a political subdivision of the State of California, and the **ALAMEDA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION** ("ACERA"), a retirement association operating under Sections 31450 et seq. and other applicable provisions of the Government Code.

RECITALS

WHEREAS, ACERA, acting through its Board of Retirement, has the power and duty to manage and administer a retirement system (the "System") for participating current and retired employees of the County, the Superior Court of California for the County of Alameda, the Alameda Health System, First 5 of Alameda County, the Livermore Area Parks and Recreation District, the Housing Authority of Alameda County, and the Alameda County Office of Education (collectively, the "Participating Employers"); and

WHEREAS, ACERA has two member classifications: General Members and Safety Members; among the ACERA Participating Employers, only the County has current or former Safety Members; and

WHEREAS, as of the most recent actuarial valuation date of December 31, 2020, the System is approximately 76% funded with an unfunded actuarial accrued liability ("UAAL") of approximately $2.5 billion; the UAAL is currently being funded by the Participating Employers through annual contributions determined by a series of layered amortization bases, each with a duration of 20 years or less; and

WHEREAS, as of the most recent actuarial valuation date of December 31, 2020, the Safety Member component of the System has an allocated UAAL of approximately $935 million, which is being funded by the County through annual contributions determined by a series of layered amortization bases, each with a duration of 20 years or less; and

WHEREAS, during the 2014-15 budget hearings the County Board of Supervisors directed the County Administrator and Auditor-Controller to develop a multi-year plan to reduce the County's UAAL; and

WHEREAS, on April 7, 2015 the County Board of Supervisors created a Pension Liability Reduction Plan Account ("PLRP") and began making annual contributions to the PLRP; as of May 6, 2021, the balance of the PLRP is approximately $800 million; and

WHEREAS, to provide greater security for ACERA benefits for former and current County participating employees; enhance the solvency of the System; and decrease the County's long term costs of contributing to the System by reducing the Safety UAAL, the County has requested that ACERA accept deposits of supplemental funding amounts from the PLRP in addition to the County's annual Actuarially Determined Contributions ("ADC"); and

WHEREAS, the County understands that the effect of contributing supplemental funding amounts in accordance with this MOU will reduce the County's Safety Member ADC that the County would otherwise owe ACERA prospectively; and

WHEREAS, the County understands that any such supplemental contributions shall be subject to the same investment risks as other funds in the System and that investment gains or losses may differ from the expected rate of return, which will affect the Safety UAAL and the projected reductions that the supplemental contributions are expected to have on the County's Safety ADC prospectively;

WHEREAS, the County understands that Government Code §§ 31610 et seq. and ACERA's policies related to Government Code §§ 31610 et seq. apply to any supplemental contributions the County makes to ACERA under this MOU; and

WHEREAS, the County understands that all additional or supplemental contributions made to the Retirement Fund will be used solely to provide System benefits to members and their beneficiaries and to pay administrative costs of the System.

AGREEMENT

NOW, THEREFORE, in consideration of the mutual covenants contained herein, and for good and valuable consideration, the parties mutually agree as follows:

1. Definitions. Capitalized terms not defined in the Recitals are used as defined below:

(a) "**Actuarially Determined Contribution**" or "**ADC**" means the County's employer contribution rate as determined by ACERA's Board of Retirement in accordance with the County Employees Retirement Law of 1937 ("CERL").

(b) "**Actuarial Valuation**" means the actuarial valuation of the System required pursuant to Section 31611 of the CERL.

(c) "**County Safety Voluntary Contribution Reserve**" means the ACERA Valuation Reserve to which the County's voluntary contributions to pay UAAL associated with the County's past and present Safety employees is credited, including interest credited on the balance of the Reserve. Pursuant to the Board's Actuarial Funding Policy, the County Safety Voluntary Contribution Reserve will be subject to a separate five-year asset smoothing schedule that excludes any known deferred investment gains or losses attributable to other valuation reserves and the SRBR for periods before the County makes a voluntary contribution. The separate smoothing schedule will be established and used to calculate interest only for the County Safety Voluntary Contribution Reserve for each six-month crediting period until five years after each such contribution to that Reserve has been on deposit. Five years after the County makes any such contribution, the same five-year asset smoothing schedule that is used to calculate interest for the other valuation reserves and the SRBR will then be used for funds in the County Safety Voluntary Contribution Reserve that are attributable to such contribution.

(d) "**County Safety Voluntary Contribution**" or "**CSVC**" means County's voluntary supplemental employer contribution, in excess of the ADC, toward UAAL associated with the County's past and present Safety employees. County intends to make a one-time lump sum CSVC of Eight Hundred Million Dollars ($800,000,000). County may make more than one payment. County may make aggregate payments in excess of $800 million with approval of the Board of Retirement, which will not be unreasonably withheld or delayed.

(e) "**Fiscal Year**" means the period of twelve consecutive months beginning on July 1 of any calendar year and ending on June 30 of the following calendar year.

(f) "**Normal Cost**" means the portion of the actuarial present value of pension plan benefits allocated to a valuation year by the actuarial cost method as defined in the "Actuarial Funding Policy" (Exhibit B).

(g) "**Retirement Fund**" means the fund established under the System, as defined in Section 31475 of CERL.

(h) "**Supplemental Retiree Benefit Reserve**" or "**SRBR**" means the non-valuation reserve account established pursuant to Section 31618 for the benefit of retired members and beneficiaries, which is funded as provided by Government Code §§ 31610 et seq. and the Board of Retirement's policies.

2. Amendment of ACERA Policies.

On May 20, 2021, ACERA's Board of Retirement amended its "Interest Crediting Policy" and "Actuarial Funding Policy" as shown in Exhibit A and Exhibit B, respectively, which policies are incorporated by reference in this MOU. Such amendments are necessary and proper to allow the parties to accomplish the terms of the MOU. The Board of Retirement may further amend those policies from time to time, but any such amendments shall be consistent with the intent of the May 20, 2021 amendments and this MOU, which is to ensure that (a) the County receives full credit for its supplemental contributions, and (b) ACERA's other Participating Employers and the SRBR are not negatively impacted by the CSVC contribution.

3. County Safety Voluntary Contributions and Reserve

A. On or before June 30, 2021, County may make one or more payments to ACERA of County Safety Voluntary Contributions equal to at least Eight Hundred Million Dollars ($800,000,000). At any time thereafter, County may elect to make additional CSVC contributions with approval of the Board of Retirement, which will not be unreasonably withheld or delayed.

B. ACERA shall (i) establish the County Safety Voluntary Contribution Reserve, (ii) accept all CSVC payments made by County, and (iii) immediately upon receipt of each County CSVC payment, deposit the CSVC payment into the County Safety Voluntary Contribution Reserve.

4. Supplemental Actuarial Valuation; Reduction of County Safety UAAL Contributions.

A. As of the most recent actuarial valuation date of December 31, 2020, the Safety Member component of the System has an allocated UAAL of approximately $935 million. This Safety UAAL is funded by the County through annual contributions determined by a series of layered amortization bases, each with a duration of 20 years or less, generally as shown in Exhibit C.

B. Upon receipt of the CSVC contributions described in paragraph 3B above, ACERA will issue a supplemental actuarial valuation to determine the County's Safety UAAL contribution rate starting in September 2021 to reflect the financial effects of the CSVC. ACERA will establish a new amortization base layer to track the outstanding CSVS balance as CSVC Reserve funds are used to partially fund the County's annual Safety UAAL obligation, anticipated to be generally as shown in Exhibit E. Application of the CSVC contributions and the new contribution rate are anticipated to result in an amortization of the County's annual Safety UAAL obligation generally as shown in Exhibit D.

C. At no time shall any County Safety Voluntary Contribution or funds in the County Safety Voluntary Contribution Reserve be recognized for the purpose of calculating employer contributions for General members or for Participating Employers other than the County. Further, ACERA may not use funds on deposit in the CSVC Reserve to offset any Normal Cost payment required of the County.

D. Beginning with the County's September 2021 contributions, ACERA shall draw down funds from the County Safety Voluntary Contribution Reserve to reduce the County's Safety UAAL contributions, transferring such funds to the Employer Advance (Basic) Reserve and Cost-of-Living Reserve for credit to the County's Safety UAAL obligation. Transfers shall be made consistent with Exhibit A ("Interest Crediting Policy") and Exhibit B ("Actuarial Funding Policy").

E. ACERA and its Actuary shall track plan assets separately for General and Safety classification groups until all funds in the County Safety Voluntary Contribution Reserve are exhausted.

5. Crediting Investment Gains and Losses to County Safety Voluntary Contributions

ACERA may comingle the funds on deposit in the County Safety Voluntary Contribution Reserve with its other funds and shall invest them in the same manner as the rest of the Retirement Fund. Earnings and losses, net of proportionate costs for investment and other administrative costs, with regards to the CSVC Reserve will accrue to the funds in the Reserve, as provided by law and ACERA policies, including Exhibit A ("Interest Crediting Policy") and Exhibit B ("Actuarial Funding Policy"); provided such policies are not inconsistent with this MOU.

6. Audits and Inspection of Records

ACERA will maintain and make available to the County upon reasonable notice, during regular business hours, accurate books and accounting records relating to its obligations pursuant to this MOU. ACERA will maintain such records in an accessible location and condition for a period of not less than five (5) years after each year to which the records pertain or until a final audit has been resolved, whichever is later.

7. Notice to Parties

A. Unless otherwise specified herein, all notices, requests, demands and other communications pertaining to this MOU must be in writing and shall be deemed to have been duly given when hand delivered or five (5) days after being deposited in the United States mail, if mailed by certified or registered mail, return receipt requested, postage prepaid, addressed to the authorized agents to this MOU at the following addresses, and to the attention of the person named:

To County:	County of Alameda 1221 Oak Street, Room 555. Oakland, CA 94612 ATTN: County Administrator
To ACERA:	ACERA 475 14th Street, Suite 1000 Oakland, CA 94612 ATTN: Chief Executive Officer

B. Addresses and persons to be notified may be changed by either party by giving ten (10) calendar days prior written notice thereof to the other party.

8. Amendments

All amendments, consents or waivers to this MOU, including its exhibits, shall be in writing and signed by the authorized parties to this MOU.

9. Severability

This MOU is subject to all applicable laws, statutes, rules and regulations. If any provision of this MOU is found by any court or other legal authority, or is agreed upon in writing by County and ACERA to be in conflict with any law, statute, rule or regulation, the conflicting provision shall be null and void. The remainder of this MOU shall continue in full force and effect.

10. Entire Agreement

This MOU constitute the entire agreement of the parties, and supersedes all previous agreements, written or oral, and all communications between the parties relating to the subject matter of this MOU.

11. Time of the Essence

Time is of the essence for every provision of this MOU.

12. Waiver

A waiver by any party hereto shall be in writing and signed by the waiving party and shall not be construed as a waiver of any succeeding breach of any covenant, agreement, restriction or condition of this MOU. No failure to exercise and no delay in exercising any right or remedy hereunder shall operate as a waiver thereof.

13. Authority

County and ACERA each have all requisite power and authority to conduct its respective duties and to execute, deliver and perform this MOU. Each party hereto warrants that the individuals who have executed this MOU have the legal power, right and authority to enter into this MOU and to bind each respective party.

14. Cooperation

County and ACERA shall cooperate in good faith to implement this MOU, and to agree to do such further acts and things and to execute and deliver such additional agreements and instruments as may be reasonably necessary to give effect to the purpose of this MOU and their parties' agreements hereunder.

15. Assignment

Neither party shall assign any of its rights or delegate any of its obligations hereunder without the prior written consent of the other party.

16. Event of Default; Dispute Resolution; Legal Actions

A. *Event of Default*. An event of default shall arise should either party breach or fail to comply with or perform any of its covenants and obligations under this MOU and such default remain uncured thirty (30) days from receipt of a notice from the non-defaulting party to cure such breach or failure, or if a cure is not possible within thirty (30) days, to begin such cure and diligently prosecute such cure to completion. If the defaulting party does not cure within such period, then the non-defaulting party shall be entitled to any rights afforded it in law or in equity, including seeking mandamus or specific performance of this MOU.

B. *Informal Resolution*. If any dispute arises between the parties as to interpretation or application of this MOU, the parties shall attempt to resolve the dispute in accordance with this MOU prior to judicial reference or formal court action. As to any such dispute, the parties shall first meet and confer in good faith to resolve the matter between themselves. Each party shall make all reasonable efforts to provide to the other party all information relevant to the dispute, to the end that both parties will have appropriate and adequate information to resolve the dispute

C. *Mediation*. In the event that a dispute arises between any of the parties in connection with this MOU, before resorting to any other legal remedy, the parties shall attempt in good faith to resolve any such controversy or claim by mediation conducted by one mediator, in accordance with the Commercial Mediation Rules of the American Arbitration Association.

17. Choice of Law

This MOU and the rights and obligations of the parties hereunder shall be governed by, and construed and interpreted in accordance with, the laws of the State of California.

18. Calendar Days

Unless specifically stated to the contrary, all references to days herein shall be deemed to refer to calendar days. If the final date for payment of any amount or performance of any act hereunder falls on a Saturday, Sunday or state of California holiday, such payment may be made, or act performed on the next succeeding business day.

19. Headings

Headings are for the convenience of the parties and are not to be used to interpret the MOU. The parties hereto, having read and considered the above provisions, indicate their agreement by their authorized signatures below.

20. Counterparts; Electronic Signature

This agreement may be executed in counterparts, each of which shall be an original and both of which shall constitute one and the same agreement. This agreement may be executed digitally by either party in accordance with applicable California law.

IN WITNESS WHEREOF, the parties have caused this MOU to be executed by their duly authorized officers on the date first herein written.

ALAMEDA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION	COUNTY OF ALAMEDA
By: ___________________________	By: ___________________________
David Nelsen, CEO	Keith Carson, President Board of Supervisors
APPROVED AS TO FORM: JEFF RIEGER, General Counsel	APPROVED AS TO FORM: DONNA R ZIEGLER, County Counsel
___________________________	By: ___________________________
	Andrea L. Weddle Chief Assistant County Counsel

Exhibit A

Interest Crediting Policy

I. Purpose

The purpose of this policy is to establish the process to be used by the Alameda County Employees' Retirement Association ("ACERA") to credit semi-annual interest to reserves. This policy shall include, but may not be limited to, the following:

A. Defining the reserves maintained by ACERA;

B. Determining the regular and excess rates of interest at which reserves are to be credited; and

C. Determining the priorities and sequence by which interest will be credited to the reserves.

II. Objectives

The policy has been developed with the following objectives:

A. To comply with appropriate legal and regulatory requirements.

B. To maintain consistency between the reserving structure and the actuarial funding of ACERA.

C. To limit, to the extent possible, the volatility of interest crediting from period to period.

D. To limit, to the extent possible, the charging of losses to valuation reserves.

E. To assure that the reserve values track the market value of assets over the long term.

III. Governing Law

ACERA is governed by provisions of the County Employees Retirement Law of 1937 ("CERL"), as well as other federal and State laws relating to public retirement systems.

CERL generally governs interest crediting and excess earnings. Under CERL, interest is credited on June 30 and December 31 each year to all contributions, reserves, and accounts in the retirement fund which have been on deposit for 6 months. Various reserves and designations are established and maintained by the Board under procedures adopted by the Board pursuant to Article 5.5 of CERL.

IV. Reserves

ACERA maintains the following reserves:

A. Valuation Reserves

1. Member Deposit Basic and Cost-of-Living Reserves – The reserves to which member contributions are credited. These contributions may be refunded to the member upon separation from service or left on deposit by the member upon separation from service (deferred retirement). Upon retirement of a member, transfers are made to Annuity and Cost-of-Living Reserves.

2. Employer Advance (Basic) Reserve – The reserve to which basic employer contributions are credited, including amounts made directly to the retirement plan as well as amounts made to the 401(h) Reserve Account for payment of estimated retiree health benefits (OPEB) for the next fiscal year but reimbursed with a transfer from the SRBR. Upon retirement of a member, a transfer is made to Pension (Current and Prior) Reserves (Pension).

3. Cost-of-Living Reserve – The reserve to which cost-of-living employer contributions are credited and Member Cost-of-Living contributions for new retirees are transferred when the member retires.

4. Retired Member Reserves (Annuity & Pension) – The reserves to which transfers are made from Member Deposit Basic and Employer Advance (Basic) Reserve at the time of a member's retirement. The total of these reserves should equal the present value of the total benefits (excluding cost-of-living increases) due all

retirees and eligible beneficiaries had there been no actuarial gains or losses and changes in actuarial assumptions.

5. Survivor Death Benefit Reserve – The reserve is credited with the present value of death and survivor benefits expected to be paid upon the death of an active member.

6. County Safety Voluntary Contribution Reserve – The reserve to which the County's voluntary contributions to pay Unfunded Actuarial Accrued Liability (UAAL) associated with the County's past and present Safety employees are credited. Pursuant to the Board's Actuarial Funding Policy, the County Safety Voluntary Contribution Reserve will be subject to a separate five-year asset smoothing schedule that excludes any known deferred investment gains or losses carried over from periods before the County makes a voluntary contribution. Five years after the County makes any such contribution, the same five-year asset smoothing schedule that is used to calculate interest for the other valuation reserves will then be used for amounts in the County Safety Voluntary Contribution Reserve that are attributable to such contribution.

B. Non-Valuation Reserves

1. Contingency Reserve Account – The reserve is maintained in an amount equal to 1% of the total market value of assets to provide funds to offset future deficiencies in interest earnings, losses on investment or other contingencies. This reserve consists of the minimum 1% required pursuant to Section 31616. If the Contingency Reserve is negative, then it will be included as an offset to the valuation value of assets used to determine the employers' contribution rates in the annual actuarial valuation. The Board may transfer funds from the Contingency Reserve to different valuation reserves at different rates (including no transfer at all to one or more valuation reserves) in order to take account of the timing of extraordinary employer contributions to ACERA in a manner that is equitable to all employers and the SRBR.

2. 401(h) Reserve Account – The reserve is credited with employer contributions in an amount sufficient for payment of estimated retiree health benefits (OPEB) for the next fiscal year. Once the employers make the contributions to this Account,

there will be a reimbursement to the Employer Advance Reserve through a transfer from the SRBR.

3. Supplemental Retiree Benefit Reserve (SRBR) – This reserve is used for the payment of benefits provided to members who are retired or beneficiaries as determined by the Board in accordance with Section 31618 of the CERL. For book-keeping purposes only, the SRBR Reserve is divided into two parts:

   a. OPEB Reserve – This reserve is used to fund discretionary retiree health benefits.

   b. Non-OPEB Reserve – This reserve is used to fund discretionary supplemental COLA benefits and to fund vested $1,000 lump sum death benefits.

C. Financial Statement Reserves and Accounts

Market Stabilization Reserve – The difference between the current market value of assets and the actuarial value of assets used to establish the above reserves.

V. Guidelines

A. "Available Earnings" are determined on current period earnings of the fund calculated on the actuarial value of assets as determined under the Board's funding policy, plus any positive balance in the Contingency Reserve.

B. Credit regular interest at the assumed annual valuation interest rate on the valuation reserves, the 401(h) Reserve Account and the SRBR. Earnings will be credited twice each year to all reserves that have been on deposit for six full months, in accordance with Section 31615 of the CERL. The crediting of interest will take effect on June 30 and December 31 of each year.

C. Maintain a 1% Contingency Reserve Account required pursuant to Section 31616. (It should be noted that an additional amount up to 2% may be included at the discretion of the Board as permitted by Section 31616. The Board's current policy is not to include any such additional discretionary amount.)

D. Any Available Earnings remaining after crediting full interest to valuation reserves, the 401(h) Reserve Account, the SRBR, and restoring the Contingency Reserve Account to its target level constitute Excess Earnings. The Excess Earnings will be allocated in the following manner:

1. Allocate one-half to the Unallocated SRBR.

2. Allocate the other one-half of the remaining earnings to the valuation reserves and the 401(h) Reserve Account in proportion to the amounts in each of those reserves.

E. The Glossary of terms is attached as Exhibit A.

VI. Regular Interest Crediting Process

Step 1 Determine "Available Earnings" for accounting period as the sum of:

A. Earnings of the retirement fund for the period based on actuarial value of assets, expressed in dollars. This could be a negative amount.

B. Any positive balance in the Contingency Reserve Account.

C. If sum of A. and B. is negative, such negative amount is credited only to the Contingency Reserve Account but not to the valuation reserves, the 401(h) Reserve Account or the SRBR.

Step 2 Credit interest to the valuation reserves, the 401(h) Reserve Account, and the SRBR

A. If in the prior accounting period the Contingency Reserve Account was reduced below 1% to meet the interest crediting requirements under Step 2 in the prior period, transfer Available Earnings from the current period into the Contingency Reserve Account to restore it to 1% of total assets.

B. Credit the valuation reserves, the 401(h) Reserve Account and the SRBR at a rate up to one-half of the assumed annual valuation interest rate, if there are enough Available Earnings.

Available Earnings outlined in Step 1 (A) above for crediting to the County Safety Voluntary Contribution Reserve will be determined without regard to any known deferred investment gains or losses carried over from periods before the County makes an additional UAAL contribution to that Reserve.

Interest will be credited to the County Safety Voluntary Contribution Reserve using the weighted outstanding balance of that Reserve after taking into consideration periodic transfers made from that Reserve to the Employer Advance Reserve and the Cost-of-Living Reserve to offset the County's Safety UAAL contribution requirement.

The Board may transfer funds from the Contingency Reserve to different valuation reserves at different rates (including no transfer at all to one or more valuation reserves) in order to take account of the timing of extraordinary employer contributions to ACERA in a manner that is equitable to all employers and the SRBR.

C. Deduct the interest credited above from Available Earnings which includes the Contingency Reserve Account even if that Account was just restored to 1% in Step 2A[1]. If the amount of interest credited is more than the Available Earnings, credit in Step 2B only up to the amount of the Available Earnings.

Step 3 Maintain a Contingency Reserve of 1%

Transfer from any remaining Available Earnings from Step 2C into the Contingency Reserve the amount required to maintain a Contingency Reserve of 1% of total assets.

VII. Excess Interest Crediting Process

Apply any remaining available earnings (excess earnings) as follows:

A. Allocate one-half of any remaining earnings to the SRBR.

B. Allocate the other one-half of the remaining earnings to the valuation reserves and the 401(h) Reserve Account in proportion to the amounts in each of those reserves, on the balance in the fund for at least six full months.

[1] *Restoring the Contingency Reserve to 1% in Step 2A and immediately including the amount in that Reserve as Available Earnings in Step 2C in the same interest crediting period would have the effect of not restoring the 1% Contingency Reserve for use in the subsequent interest crediting period until Step 3, i.e., until after crediting interest to all the reserves in Step 2B. This order of crediting interest to the Reserves has been researched by ACERA's legal counsel and determined to be a reasonable exercise of discretion available to the Board in accordance with Government Code Section 31616. It would also result in more stable pattern of interest crediting in some situations, based on scenarios developed by ACERA's actuary.*

The above allocation to the County Safety Voluntary Contribution Reserve will be determined without regard to any known deferred investment gains or losses carried over from periods before the County makes an additional UAAL contribution to that Reserve.

The above allocation to the County Safety Voluntary Contribution Reserve will be made using the weighted outstanding balance of that Reserve after taking into consideration periodic transfers made from that Reserve to the Employer Advance Reserve and the Cost-of-Living Reserve to offset the County's Safety UAAL contribution requirement.

VIII. Policy Review

This policy has been adopted by a majority vote of the ACERA Board, and can be amended by the ACERA Board by a majority vote. This policy is effective with the six-month interest crediting period ending December 31, 2015. This policy will be reviewed as deemed necessary.

IX. Policy History

A. The Board adopted this policy on December 17, 2015.

B. The Board approved this policy, without revisions, on November 8, 2018.

C. The Board revised this policy on May 20, 2021.

<u>Exhibit A</u>

Glossary

Actuarial Terms and Definitions

The following list defines certain technical terms relevant to the Regular Interest and Excess Interest Crediting Policy for the convenience of the reader:

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 reflects a smoothing of market gains and losses to avoid significant swings in the value of assets from one year to the next.

Actuarial Value of Assets

Market value of assets less unrecognized market value gains and losses from each of the last five years. Market value gains and losses are equal to the difference between the actual market return and the expected return on the market value, and are recognized semi-annually over a five-year period. The actuarial value of assets is limited to no greater than 140% or less than 60% of the market value of assets.

Valuation Value of Assets

The actuarial value of assets reduced by the value of the Non-Valuation Reserves (401(h) Reserve Account, SRBR and Contingency Reserve (unless negative).

Assumed Annual Valuation Interest Rate

This is the interest rate adopted by the Board from the actuarial valuation that established the employer and employee contribution rates for that fiscal year.

Exhibit B

Actuarial Funding Policy

I. Purpose

The purpose of the Actuarial Funding Policy (Policy) is to record the funding objectives and policy set by the Board of Retirement (Board) for the Alameda County Employees' Retirement Association (ACERA). This Policy is to ensure the systematic funding of future benefit payments for members of ACERA. In addition, this Policy records guidelines established by the Board to assist in administering ACERA's retirement fund in a consistent and efficient manner.

II. Assumptions

A. ACERA is a public employee retirement system that was established in 1948 to provide retirement allowances and other benefits to all permanent General and Safety employees of the County of Alameda and participating special districts.

B. These benefits are financed through a combination of employee and employer contributions along with the investment return on those contributions. Benefit and contribution level may vary within ACERA depending on the member's classification (General or Safety), tier and by participating employer (the County or one of the Special Districts).

C. ACERA is governed by the provisions of the County Employees Retirement Law of 1937 (1937 Act). Alameda County adopted Article 5.5 of the 1937 Act. This Article creates a Supplemental Retiree Benefit Reserve (SRBR) through which the Board may pay supplemental benefits to retirees and beneficiaries.

D. An actuarial valuation is performed annually as of December 31 of each year to determine the contribution rates for the fiscal year that begins 6 months after the valuation date.

E. This Policy applies to "regular benefits" which refer to the retirement, disability, survivor and withdrawal benefits, and all cost-of-living increases that were adopted by the County of Alameda (or the special districts) and whose payments are guaranteed by those agencies. This Policy does not cover benefits financed by the SRBR. Also, this Policy does not cover the interest crediting procedure that is used by the Board to allocate earnings among the different reserves (i.e., the valuation reserves used for the "regular benefits" and SRBR for "excess earnings benefits").

F. This Policy supersedes any previous actuarial funding policies.

III. Objectives

A. To achieve long-term full funding of the cost of "retiree benefits" provided by ACERA;

B. To seek reasonable and equitable allocation of the cost of "retiree benefits" over time;

C. To minimize volatility of the plan sponsor's contribution to the extent reasonably possible, consistent with other policy goals; and

D. To the extent that it does not conflict with the above goals, the Board will try to pool risks across all portions of ACERA to the extent that groups of members have similar benefit provisions, contribution provisions and contribution histories. Separate cost sharing groups will be set up to recognize meaningful differences in benefit structure (e.g., Safety or General), employer contribution history (e.g., payment of extraordinary contributions like Pension Obligation Bond payments and credit from reimbursement of implicit retiree health benefit subsidy) and benefit changes for a specific employer.

IV. Funding Requirements and Components

ACERA annual funding requirement for "regular benefits" is comprised of a payment of the Normal Cost and a payment towards the Unfunded Actuarial Accrued Liability (UAAL). The Normal Cost and the amount of payment on UAAL are determined by the following three components of this Policy:

A. <u>Actuarial Cost Method</u>: the techniques to allocate the total Present Value of Future Benefits to each years of service, including all past years;

B. Asset Smoothing Method: the techniques that spread the recognition of investment gains or losses over a period of time for the purposes of determining the Actuarial Value of Assets used in the actuarial valuation process; and

C. Amortization Policy: the decisions on how, in terms of duration and pattern of contributions, to reduce the difference between the Actuarial Accrued Liability and the Valuation Value of Assets in a systematic manner.

Actuarial Cost Method:

The Entry Age method shall be applied to the projected retirement benefits in determining the Normal Cost and the Actuarial Accrued Liability. The Normal Cost shall be determined on an individual basis for each active member.

Asset Smoothing Method:

The investment gains or losses of each valuation period, as a result of comparing the actual market return and the expected market return, shall be recognized semi-annually in level amounts over 5 years in calculating the Actuarial Value of Assets. Total Net Deferred investment gains or losses cannot exceed 40% of the Market Value of Assets. Note that the Valuation Value of Assets is the Actuarial Value of Assets reduced by any applicable Non-Valuation Reserves, as defined in ACERA's Interest Crediting Policy.

A separate five-year asset smoothing schedule that excludes any known deferred investment gains or losses carried over from periods before the County makes a voluntary additional Safety UAAL contribution will apply to the amounts in the County Safety Voluntary Contribution Reserve attributable to such voluntary contribution (including previously credited interest) until the contribution has been on deposit for five years. Thereafter, the same five-year asset smoothing schedule used for the other valuation reserves will be used for the outstanding balance of amounts attributable to that contribution.

Amortization Policy:

A. The UAAL, (i.e., the difference between the Actuarial Accrued Liability and the Valuation Value of Assets), as of December 31, 2011 shall be amortized separately from any future changes in UAAL over a period of 21 years from December 31, 2011.

B. After December 31, 2011, any new UAAL as a result of actuarial gains or losses identified in the annual valuation as of December 31 will be amortized over a period of 20 years.

C. After December 31, 2011, any new UAAL as a result of change in actuarial assumptions or methods will be amortized over a period of 20 years.

D. A County voluntary Safety UAAL contribution to the County Safety Voluntary Contribution Reserve, and accrued interest thereon, will be used to offset the County's Safety UAAL contributions that would otherwise be required of the County over a period determined by the Board. The annual actuarial valuation report will show both (1) the County's Safety contribution rate in the absence of such transfers, and (2) the County's actual Safety contribution rate, which takes account of such transfers.

E. Unless an alternative amortization period is recommended by the Actuary and accepted by the Board based on the results of an actuarial analysis:

   1. With the exception noted in 2., below, the change in UAAL as a result of any plan amendments will be amortized over a period of 15 years or less;

   2. The increase in UAAL resulting from a temporary retirement incentive, including the impact of benefits resulting from additional service permitted under Section 31641.04 of the 1937 CERL (Golden Handshake), will be funded over a period of up to 5 years.

F. UAAL shall be amortized over "closed" amortization periods so that the remaining amortization period for each layer decreases by one year with each actuarial valuation.

G. UAAL shall 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.

H. If an overfunding exists (i.e., the total of all UAAL becomes negative so that there is a surplus) and the amount of such surplus is in excess of 20% of the AAL per Section 7522.52 of PEPRA, such surplus that is in excess of 20% of the AAL and any subsequent such surpluses will be amortized over an "open" amortization period of 30 years. Any prior UAAL amortization layers will be considered fully amortized, and any subsequent UAAL will be amortized over 20 years as the first of a new series of amortization layers.

I. These amortization policy components will apply separately to each of ACERA's UAAL cost sharing groups.

V. Other Policy Considerations

A. Timing of Contributions

1. The contribution rates determined in each valuation (as of December 31) will apply to the fiscal year that begins after the date of the valuation. The UAAL contribution rates in the actuarial valuation are not adjusted in advance to account for this delay.

2. Any change in contribution rate requirement that results from a plan amendment (including a change in member contribution rates) is generally implemented as of the effective date of the plan amendment or as soon as administratively feasible.

3. For purposes of calculating employer contributions, the employer and member contributions are assumed to be made during consistent intervals throughout the year.

B. Cost Groups

Separate cost groups will be set up in order to recognize differences in benefit structure (e.g., General Tiers 1 through 4 and Safety Tiers 1, 2, 2C, 2D and 4), member contribution levels, employer contribution history (e.g., payment of extraordinary contributions like Pension Obligation Bond (POB) payments as well as any credit from reimbursement of implicit retiree health benefit subsidy), and other differences that the Board deems significant, such as benefit changes for a specific employer.

An employer may be contributing to one or more different cost groups depending on the benefit structure adopted for its employees.

1. ACERA's total (employer and member) Normal Cost is determined separately for each group of members that have the same benefit formula (on a prospective basis) based on the Actuarial Cost Method described above. This means that to the extent

that members have the same plan provisions for future benefit accruals, then the total Normal Cost (as a percentage of payroll) for those employers will be the same.

2. The net employer Normal Cost is calculated by reducing the total Normal Cost for expected member contributions. This is done separately for each of the different member contribution arrangements and benefit structures that exist for the various employers. The various member contribution arrangements are described in more detail in the actuarial valuation report.

3. ACERA's UAAL is determined separately based on contribution and benefit history. This means that there could be separate calculations of AAL for cost groups that have significantly different contribution histories, or prior benefit accrual provisions (e.g., General versus Safety). Plan assets are tracked separately for groups with different UAAL contribution histories unless otherwise established by the Board.

4. There is a further adjustment made to the UAAL contribution rate for LARPD General Tiers 3 and 4 to account for the District's Tier 3 employees receiving the 2.5% @ 55 formula for past service and the payment of the District's other UAAL as a level percent of payroll over a closed amortization period. This adjustment is described in more detail in the actuarial valuation report.

5. The outstanding balance in the County Safety Voluntary Contribution Reserve will be adjusted with interest under the Interest Crediting Policy and to account for transfers from that Reserve to the Employer Advance Reserve and the Cost-of-Living Reserve to offset the Safety UAAL contributions that would otherwise be required of the County. The Actuary will monitor the available contribution offset and recommend modifications to the Board if actual experience causes significant changes to the offset expected from that Reserve.

VI. Glossary of Funding Policy Terms

<u>Present Value of Future Benefits (PVB)</u>: the present value at a particular point in time of all projected future benefit payments for current plan members. The future benefit payments and the present value of those payments are determined using actuarial assumptions as to future events. Examples of these assumptions are estimates of retirement patterns, salary increases, investment returns, etc. Another way to think of the PVB is that if the plan has

assets equal to the PVB and all actuarial assumptions are met, then no future contributions would be needed to provide all future service benefits for all current members, including future service and salary increases for current active members.

Actuarial Cost Method: allocates a portion of the total cost (PVB) to each year of service, both past service and future service.

Normal Cost (NC): the cost allocated under the Actuarial Cost Method to each year of active member service.

Entry Age Actuarial Cost Method: A funding method that calculates the Normal Cost as a level percentage of pay over the working lifetime of the plan's members.

Actuarial Accrued Liability (AAL): the value at a particular point in time of all past Normal Costs. This is the amount of assets the plan would have today if the current plan provisions, actuarial assumptions and participant data had always been in effect, contributions equal to the Normal Cost had been made and all actuarial assumptions came true.

Market Value of Assets (MVA): the fair value of assets of the plan as reported in the plan's audited financial statements.

Actuarial Value of Assets (AVA) or smoothed value: a market-related value of the plan assets. The AVA tracks the market value of assets over time and smoothes out short-term fluctuations in market values.

Valuation Value of Assets (VVA): the value of assets used in the actuarial valuation to determine contribution rate requirements. It is equal to the Actuarial Value of Assets reduced by the value of any applicable Non-Valuation Reserves as defined in ACERA's Interest Crediting Policy. In particular, the VVA will not include assets allocated to the SRBR.

Unfunded Actuarial Accrued Liability (UAAL): the positive difference, if any, between the AAL and the VVA.

Surplus: the positive difference, if any, between the VVA and the AAL.

Actuarial Gains and Losses: changes in UAAL or surplus due to actual experience different from what is assumed in the actuarial valuation. For example, if during a given year the assets (after smoothing) earn more than the investment return assumption, the amount of earnings above the assumption will cause an unexpected reduction in UAAL, or "actuarial gain" as of the next valuation. Actuarial gains and losses include contribution gains and losses that result from actual contributions made being greater or less than the level determined under this Policy.

VII. Policy Modification

The Actuarial Committee, or other committee designated by the Board, shall review this policy at least every three (3) years. The Committee shall make recommendations to the Board concerning any improvements or modifications it deems necessary.

VIII. Policy History

A. The Board adopted this Policy on September 18, 2014.

B. The Board approve this Policy, without revisions, November 8, 2018.

C. The Board revised this Policy on May 20, 2021.

Exhibit C

Alameda County Employees' Retirement Association
County Safety

Unfunded Actuarial Accrued Liability (UAAL) Amortization Schedule
Based on the December 31, 2020 Valuation
Before Assumed Additional Contributions of $800 Million
(for informational purposes only)

Annual Interest Rate: 7.00%
Annual Payroll Inflation: 3.25%

Year		Beginning of Year Balance	Annual Payment	Interest Paid	Principal Paid	End of Year Balance
2021		$935,456,000 (1)	$89,258,000	$62,671,000	$26,587,000	$908,869,000
2022		908,869,000	92,158,000	60,719,000	31,439,000	877,430,000
2023		877,430,000	95,153,000	58,421,000	36,732,000	840,698,000
2024		840,698,000	98,247,000	55,754,000	42,493,000	798,205,000
2025		798,205,000	101,441,000	52,678,000	48,763,000	749,442,000
2026		749,442,000	104,738,000	49,163,000	55,575,000	693,867,000
2027		693,867,000	108,140,000	45,163,000	62,977,000	630,890,000
2028		630,890,000	111,654,000	40,645,000	71,009,000	559,881,000
2029		559,881,000	115,285,000	35,559,000	79,726,000	480,155,000
2030		480,155,000	119,032,000	29,862,000	89,170,000	390,985,000
2031		390,985,000	122,899,000	23,495,000	99,404,000	291,581,000
2032		291,581,000	126,895,000	16,414,000	110,481,000	181,100,000
2033	(2)	181,100,000	37,680,000	11,492,000	26,188,000	154,912,000
2034	(3)	154,912,000	40,207,000	9,577,000	30,630,000	124,282,000
2035	(4)	124,282,000	32,623,000	7,673,000	24,950,000	99,332,000
2036	(5)	99,332,000	35,452,000	5,836,000	29,616,000	69,716,000
2037	(6)	69,716,000	33,980,000	3,810,000	30,170,000	39,546,000
2038	(7)	39,546,000	15,957,000	2,265,000	13,692,000	25,854,000
2039	(8)	25,854,000	15,204,000	1,331,000	13,873,000	11,981,000
2040	(9)	11,981,000	12,428,000	447,000	11,981,000	0
Total			**$1,508,431,000**	**$572,975,000**	**$935,456,000**	

Note: Totals may be slightly off due to rounding.

(1) UAAL as of December 31, 2020.

(2) Note that the combined base established as of December 31, 2011 and experience loss base established as of December 31, 2012 have dropped off as of the prior year.

(3) Note that the experience gain base established as of December 31, 2013 has dropped off as of the prior year.

(4) Note that the experience gain base established as of December 31, 2014 and change in assumptions base established as of December 31, 2014 have dropped off as of the prior year.

(5) Note that the experience gain base established as of December 31, 2015 has dropped off as of the prior year.

(6) Note that the experience loss base established as of December 31, 2016 has dropped off as of the prior year.

(7) Note that the experience loss base established as of December 31, 2017 and change in assumptions base established as of December 31, 2017 have dropped off as of the prior year.

(8) Note that the experience loss base established as of December 31, 2018 has dropped off as of the prior year.

(9) Note that the experience loss base established as of December 31, 2019 has dropped off as of the prior year.

Exhibit D

Alameda County Employees' Retirement Association
County Safety

Unfunded Actuarial Accrued Liability (UAAL) Amortization Schedule
Based on the December 31, 2020 Valuation
After Additional Contributions Assumed to be made on June 30, 2021
(for informational purposes only)

Annual Interest Rate:	7.00%
Annual Payroll Inflation:	3.25%

Year	Beginning of Year Balance	Annual Payment	Interest Paid	Principal Paid	End of Year Balance
2021	$935,456,000 (1)	$50,386,000	$35,696,000	$14,690,000	$120,766,000
2022	120,766,000	12,523,000	8,061,000	4,462,000	116,304,000
2023	116,304,000	12,930,000	7,733,000	5,197,000	111,107,000
2024	111,107,000	13,352,000	7,357,000	5,995,000	105,112,000
2025	105,112,000	13,786,000	6,923,000	6,863,000	98,249,000
2026	98,249,000	14,235,000	6,431,000	7,804,000	90,445,000
2027	90,445,000	14,695,000	5,868,000	8,827,000	81,618,000
2028	81,618,000	15,173,000	5,236,000	9,937,000	71,681,000
2029	71,681,000	15,668,000	4,524,000	11,144,000	60,537,000
2030	60,537,000	16,177,000	3,729,000	12,448,000	48,089,000
2031	48,089,000	16,702,000	2,838,000	13,864,000	34,225,000
2032	34,225,000	17,246,000	1,854,000	15,392,000	18,833,000
2033	18,833,000	19,536,000 (2)	703,000	18,833,000	0
2034					
2035					
2036					
2037					
2038					
2039					
2040					
Total		**$232,409,000**	**$96,953,000**	**$135,456,000**	
(including Lump Sum Payment)		**$1,032,409,000**	**$96,953,000**	**$935,456,000**	

Note: Totals may be slightly off due to rounding.

(1) UAAL as of December 31, 2020. For 2021, the beginning of year balance does not reflect $800 million additional contributions assumed to be made on June 30, 2021, but the end of year balance includes the effect of this assumed deposit. Also, the contribution credits from the additional contributions are assumed to be effective July 1, 2021 and are reflected in the annual payments.

(2) As of December 31, 2032, the County Safety UAAL balance is $181 million as shown in Exhibit 1 and the $800 million additional contributions has a credit balance of $162 million as shown in Exhibit 2. With that difference of $19 million, we determined that a payment of about $19.5 million in year 13 or 2033 (together with the credit balance from the additional contributions) would pay off the remaining County Safety UAAL and all amortization layers would drop off.

Exhibit E

Alameda County Employees' Retirement Association
County Safety

Amortization Schedule for Additional Contributions Assumed to be made on June 30, 2021 (Amortized Over 13 Fiscal Years)
Based on the December 31, 2020 Valuation
(for informational purposes only)

Annual Interest Rate: 7.00%
Annual Payroll Inflation: 3.25%

Year	Beginning of Year Balance	Annual Payment	Interest Paid	Principal Paid	End of Year Balance
2021	($800,000,000) [1]	($38,872,000) [2]	($26,975,000)	($11,897,000)	($788,103,000)
2022	(788,103,000)	(79,635,000)	(52,658,000)	(26,977,000)	(761,126,000)
2023	(761,126,000)	(82,223,000)	(50,688,000)	(31,535,000)	(729,591,000)
2024	(729,591,000)	(84,895,000)	(48,397,000)	(36,498,000)	(693,093,000)
2025	(693,093,000)	(87,655,000)	(45,755,000)	(41,900,000)	(651,193,000)
2026	(651,193,000)	(90,503,000)	(42,732,000)	(47,771,000)	(603,422,000)
2027	(603,422,000)	(93,445,000)	(39,295,000)	(54,150,000)	(549,272,000)
2028	(549,272,000)	(96,481,000)	(35,409,000)	(61,072,000)	(488,200,000)
2029	(488,200,000)	(99,617,000)	(31,035,000)	(68,582,000)	(419,618,000)
2030	(419,618,000)	(102,855,000)	(26,133,000)	(76,722,000)	(342,896,000)
2031	(342,896,000)	(106,197,000)	(20,657,000)	(85,540,000)	(257,356,000)
2032	(257,356,000)	(109,649,000)	(14,560,000)	(95,089,000)	(162,267,000)
2033	(162,267,000)	(113,213,000)	(7,792,000)	(105,421,000)	(56,846,000)
2034	(56,846,000)	(57,979,000) [2]	(1,133,000)	(56,846,000)	0
2035	0	0	0	0	0
2036	0	0	0	0	0
2037	0	0	0	0	0
2038	0	0	0	0	0
2039	0	0	0	0	0
2040	0	0	0	0	0
Total		**($1,243,219,000)**	**($443,219,000)**	**($800,000,000)**	

Note: Totals may be slightly off due to rounding.

(1) Outstanding balance of credit as of June 30, 2021.

(2) Six months of payments. For purposes of this illustration, we assumed that the credit from the additional contributions would be effective on July 1, 2021 for FY 21-22, even though historically new contribution rates have generally taken effect around September.

Alameda County Employees' Retirement Association

Reserving and Interest Crediting

June 17, 2021

Prepared by Andy Yeung and Eva Yum

5691814v2

Segal

Outline

- Reserve mechanics and structure
  - Before and after establishing County Safety Voluntary Contribution Reserve
  - County Safety Voluntary Contribution Reserve – established for about $800 million to be made by the County around 6/29/21
- ACERA Interest Crediting Policy
  - Before and after establishing County Safety Voluntary Contribution Reserve
  - First interest credit to be applied to County Safety Voluntary Contribution Reserve on 12/31/21
    - Different interest crediting rates to be applied on 12/31/21 through 12/31/25 to County Safety Voluntary Contribution Reserve

Reserve Mechanics

- Reserves track contributions, payments and investment earnings
- Add contributions to Member Deposit, Employer Advance and Cost-of-Living Reserves
- Transfer Present Value (PV) of benefits (excl. COLA) to Retired Members Reserve for new retirees
- Deduct payments from Member Deposit, Retired Members and Cost-of-Living Reserve
- Credit interest

ACERA – Reserving Structure –Before and After Establishing County Safety Voluntary Contribution Reserve

Reserves	
Market Stabilization Reserve*** *****6/30/21 balance tracked separately**	**Market Value of Assets (MVA)**
SRBR **401(h) Account*** **Contingency Reserve (CR)**,***** *****6/30/21 balance tracked separately**	**Actuarial Value of Assets (AVA)** ***(Non-Valuation Reserves)***
Employers Advance Reserve **Member Deposit Reserve** **Cost-of-Living Reserve** **Retired Members Reserve** **Survivor Death Benefit Reserve** **County Safety Vol. Cont. Reserve**	**Valuation Value of Assets (VVA)** ***(Valuation Reserves)***

*** Funded by employer contributions with SRBR offset.**

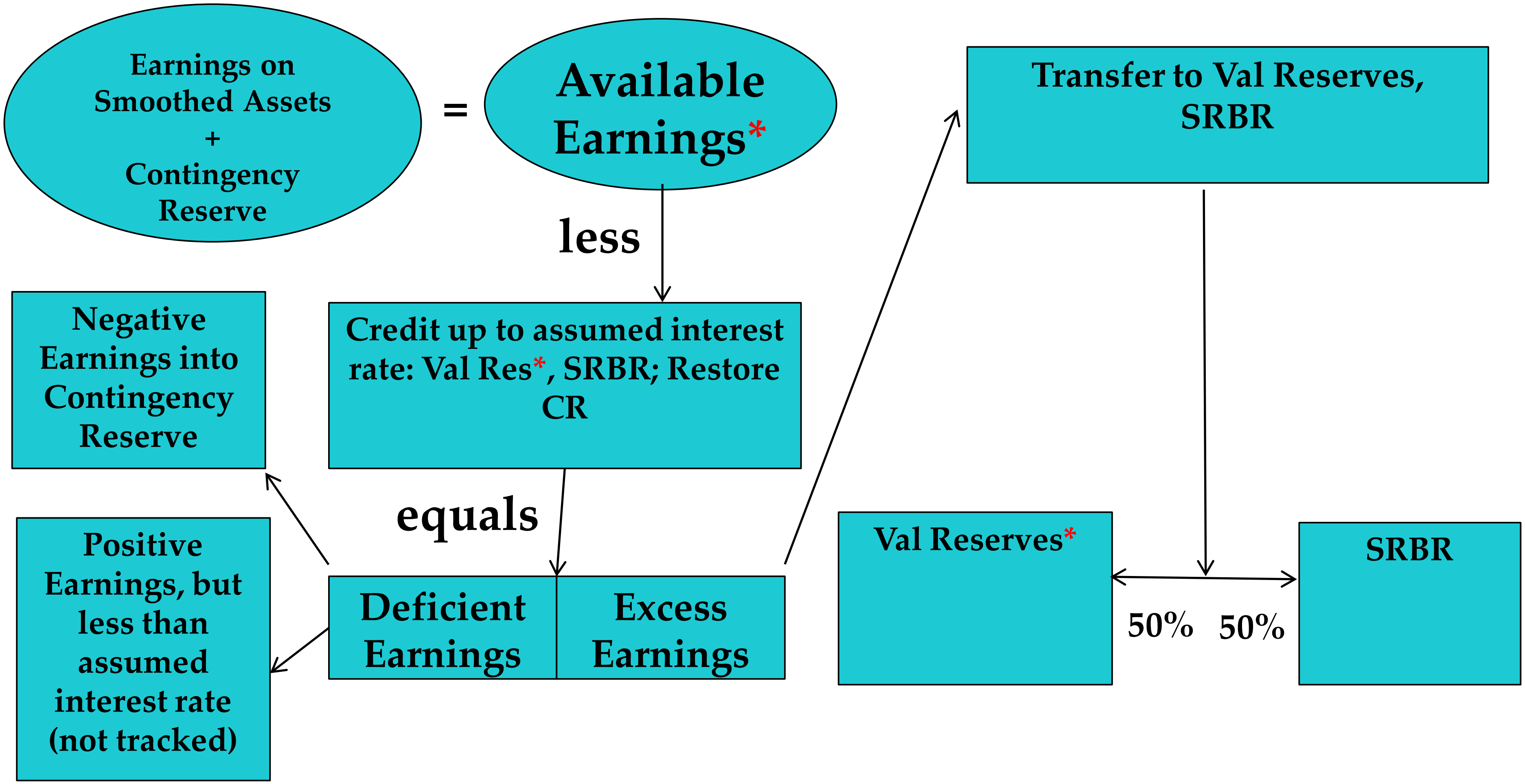
**** Treated as a valuation reserve if negative.**

ACERA Interest Crediting Policy – Before and After Establishing County Safety Voluntary Contribution Reserve

- Determine "Available Earnings" for the period
  - All current period earnings on Actuarial Value of Assets (AVA) basis
    - Include balance in Contingency Reserve (CR)

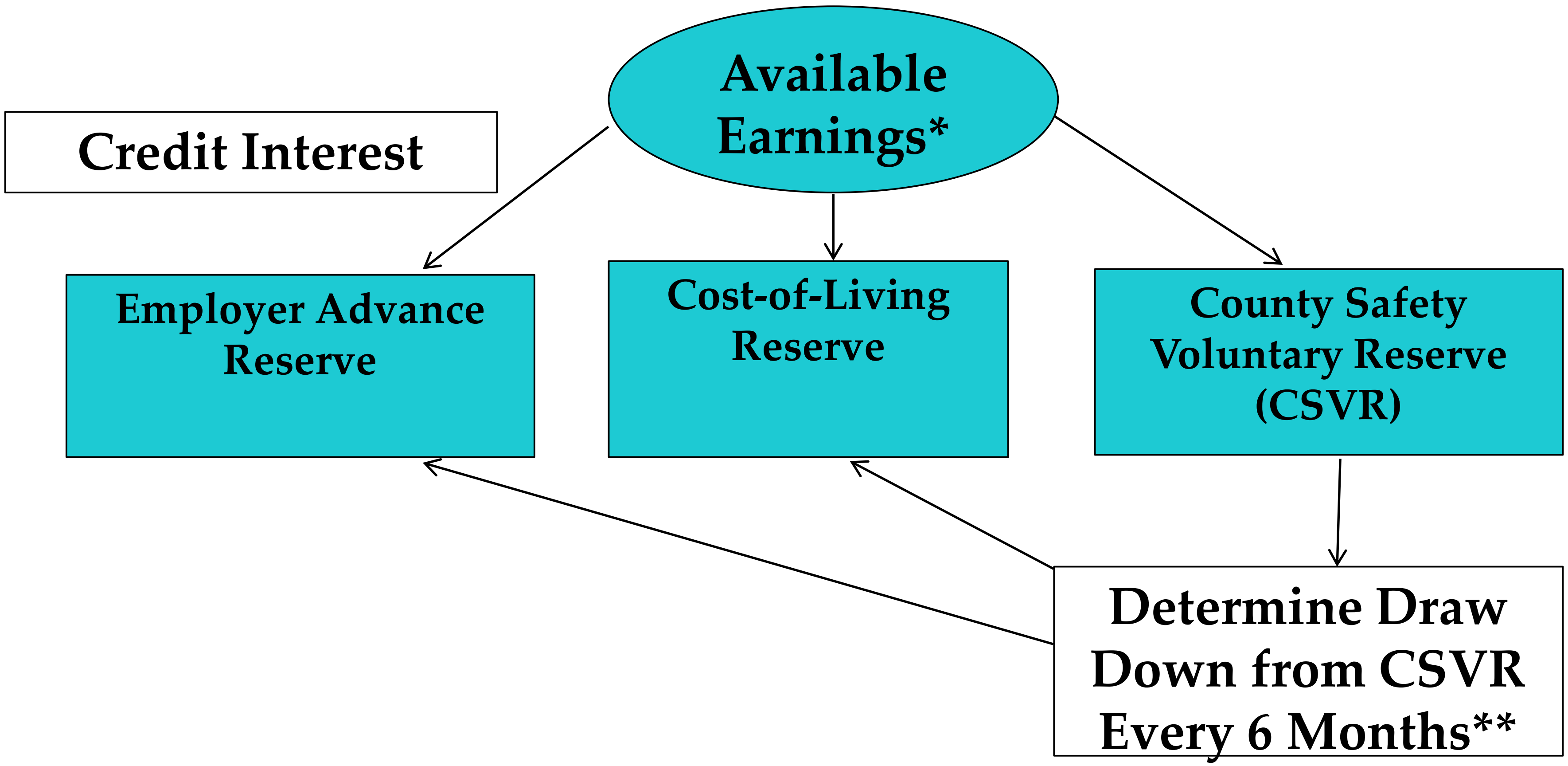
    On 12/31/21 through 12/31/25 crediting dates: earnings for County Safety Voluntary Contribution Reserve calculated without balances carried over from 6/30/21 Market Stabilization Reserve and CR
  - Could be positive but less than amount to credit interest
    - Could even be negative
- Determine earnings needed for interest credits
  - Interest on Valuation Reserves, 401(h) Account and SRBR
    - Use assumed interest rate
- If Available Earnings are enough, apply the credits
  - Restore CR to 1%
- Allocate one-half of any remaining earnings to each of:
  - Valuation Reserves and 401(h) Account
  - SRBR

ACERA Interest Crediting Policy – Before and After Establishing County Safety Voluntary Contribution Reserve



*On 12/31/21 through 12/31/25 crediting dates: earnings for County Safety Voluntary Contribution Reserve calculated without balances carried over from 6/30/21 Market Stabilization Reserve and CR

Employer Advance, Cost-of-Living and County Safety Voluntary Contribution Reserves



*On 12/31/21 through 12/31/25 crediting dates: earnings for CSVR calculated without balances carried over from 6/30/21 Market Stabilization Reserve and CR

** Over 13-year period starting 7/1/2021, CSVR is amortized to offset County's Safety UAAL contribution rate

Questions and Discussion

MEMORANDUM TO THE ACTUARIAL COMMITTEE

DATE:	June 17, 2021
TO:	Members of the Actuarial Committee
FROM:	Margo Allen, Fiscal Services Officer
SUBJECT:	Livermore Area Recreation & Park District Pension Obligation Bond Contribution and Revised 2021-2022 Employer Contribution Rates

Executive Summary

The Livermore Area Recreation & Park District (LARPD) anticipates contributing approx. $12.6 million to ACERA on or before June 30, 2021, to fund a substantial portion of its unfunded liability.

LARPD is issuing a Pension Obligation Bond (POB) to accelerate its funding. The acceptance of the additional contribution payment is subject to the Board of Retirement's approval. If approved, the Board of Retirement may also approve a corollary revision to the LARPD employer contribution rate determined in ACERA's valuation and reviewed as of December 31, 2020 (*Bandt v. Board of Retirement* (2006) 136 Cal.App.4th 140).

LARPD will amortize its contribution over a 16-year period, starting in September 2021, when the new contribution rates take effect. The $12.6 million will not be used to pay normal costs contributions. Attached for review and discussion is Segal's letter for the Livermore Area Recreation and Park District (LARPD) Employer Contribution Rates for FY 2021-2022 Before and After Reflecting a $12,611,250 Extraordinary Contribution.

The Board has discretion to approve the additional contribution and adopt the resulting revised general member contribution rate for LARPD, if it determines that doing so is in the interests of ACERA's members and beneficiaries (Cal. Const., art. XVI § 17(e)).

Lastly, similar to the County's extraordinary contribution to ACERA on the agenda today, staff and the actuary will recommend setting up a special reserve for the LARPD's extraordinary contribution. Further, staff and the actuary will recommend that such special reserve will be credited with interest on an asset smoothing cycle that excludes all known deferred investment gains as of June 30, 2021. These matters will be brought back to the Board at a future meeting.

Recommendation

1. Motion to recommend that the Board of Retirement approve ACERA's receipt of funds from the Livermore Area Recreation & Park District's anticipated Pension Obligation Bond (POB) contribution to fund up to $12.6 million in its unfunded liabilities.

2. Motion to recommend that the Board of Retirement adopt revised 2021-2022 contribution rates for LARPD if it makes a POB contribution to fund up to $12.6 million in its unfunded liabilities.

Attachment:

Livermore Area Recreation and Park District (LARPD) Employer Contribution Rates for FY 2021-2022 Before and After Reflecting a $12,611,250 Extraordinary Contribution

Segal

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June 10, 2021

Mr. David Nelsen
Chief Executive Officer
Alameda County Employees' Retirement Association
475 14th Street, Suite 1000
Oakland, CA 94612-1900

**Re: Alameda County Employees' Retirement Association (ACERA)
Livermore Area Recreation and Park District (LARPD) Employer Contribution Rates for FY 2021-2022 Before and After Reflecting a $12,611,250 Extraordinary Contribution**

Dear Dave:

LARPD is considering the payment of an extraordinary contribution of $12,611,250 to reduce the Unfunded Actuarial Accrued Liability (UAAL) for their membership group. As requested by the Association, we have provided in this letter the LARPD employer contribution rates before and after the payment of the $12,611,250 extraordinary contribution.

We understand that LARPD is targeting to make the extraordinary contribution on or before June 30, 2021. For purposes of the illustrations herein, we assumed that the extraordinary contribution will be made on June 29, 2021 and this amount is not adjusted with interest to July 1, 2021, as contributions that are deposited into ACERA would not earn any interest unless they are on deposit for at least six months prior to the June 30 or December 31 interest crediting dates in accordance with ACERA's interest crediting policy and CERL Section 31615. We also understand that LARPD requested that the extraordinary contribution would be amortized over 16 years[1] as a level percent of pay and would be used to reduce LARPD's UAAL contribution rate for their membership group starting FY 2021-2022.

LARPD EMPLOYER CONTRIBUTION RATES AFTER EXTRAORDINARY CONTRIBUTION

The resulting amortization credit for the extraordinary contribution is 28.08% of LARPD payroll.[2] The employer contribution rates for each LARPD tier are shown as follows:

[1] There are different UAAL amortization layers with periods that range from 12 to 20 years remaining to amortize the LARPD UAAL as of December 31, 2020. The annual amortization payment for these layers is roughly equivalent to the payment required under a single 15-year period to amortize the entire LARPD UAAL.

[2] The contribution credit for the first year is about $1.1 million based on a projected FY 2021-2022 LARPD payroll of $3.8 million.

- Exhibit 1 (LARPD Employer Contribution Rates Before $12,611,250 Extraordinary Contribution) – This exhibit provides the employer contribution rates for the LARPD membership group as determined in the December 31, 2020 actuarial valuation for FY 2021-2022. These rates are before any consideration of the $12,611,250 extraordinary contribution.

- Exhibit 2 (LARPD Employer Contribution Rates After $12,611,250 Extraordinary Contribution) – This exhibit provides the LARPD employer contribution rates for FY 2021-2022 that reflect the $12,611,250 extraordinary contribution amortized to reduce LARPD's UAAL payments over 16 years.

FUNDED STATUS

We are also providing the funded percentage of the total Plan (including all members in the General and Safety membership groups) as well as for just the LARPD membership group before and after reflecting the $12,611,250 extraordinary contribution. For purposes of determining the funded percentage after reflecting the extraordinary contribution, we assumed that the $12,611,250 is deposited on June 29, 2021 and we have discounted the amount to December 31, 2020 with the assumed 7.00% interest rate used in the actuarial valuation for the time value of money.

As of December 31, 2020, the funded percentage for the total Plan on the Valuation Value of Assets basis is 76.2%. After reflecting the deposit of $12,611,250 extraordinary contributions (discounted to December 31, 2020), the funded percentage as of December 31, 2020 is increased from 76.2% to 76.3%.

As of December 31, 2020, the Actuarial Accrued Liability for the LARPD membership group is $61.93 million and the Valuation Value of Assets for the LARPD membership group is $48.65 million for a funded percentage 78.6%. After reflecting the deposit of $12,611,250 (discounted to December 31, 2020), the funded percentage as of December 31, 2020 is increased from 78.6% to 98.3%.

ACTUARIAL ASSUMPTIONS

The actuarial assumptions used to develop the contribution rate credit from the $12,611,250 extraordinary contribution provided herein are based on the assumptions used to perform the December 31, 2020 funding valuation for ACERA's Retirement Plan. In particular, those assumptions include an annual interest rate of 7.00% and an annual payroll growth rate of 3.25% for an amortization that is a level percentage of payroll during the amortization period.

We assumed the FY 2021-2022 contribution rates would be effective July 1, 2021 even though in practice the contribution rate changes would take effect in September, 2021.

These calculations were completed under the supervision of Eva Yum, FSA, MAAA, Enrolled Actuary. We are members of the American Academy of Actuaries and meet the qualification requirements to render the actuarial opinion contained herein.

Please let us know if you have any questions.

Sincerely,

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

Eva Yum, FSA, MAAA, EA
Senior Actuary

JB/jl
Attachments

cc: Margo Allen
Jeff Rieger

Alameda County Employees' Retirement Association
LARPD Employer Contribution Rates for FY 2021-2022
Before $12,611,250 Extraordinary Contribution

	Basic	COLA	Total
General Tier 1 Members			
Normal Cost	8.17%	2.79%	10.96%
UAAL	22.82%	9.18%	32.00%
Total Contribution	**30.99%**	**11.97%**	**42.96%**
General Tier 3 Members			
Normal Cost	12.07%	3.95%	16.02%
UAAL	22.82%	9.18%	32.00%
Total Contribution	**34.89%**	**13.13%**	**48.02%**
General Tier 4 Members			
Normal Cost	7.47%	1.74%	9.21%
UAAL	22.82%	9.18%	32.00%
Total Contribution	**30.29%**	**10.92%**	**41.21%**
LARPD Combined			
Normal Cost	9.80%	2.92%	12.72%
UAAL	22.82%	9.18%	32.00%
Total Contribution	**32.62%**	**12.10%**	**44.72%**

Alameda County Employees' Retirement Association
LARPD Employer Contribution Rates for FY 2021-2022
After $12,611,250 Extraordinary Contribution

	Basic	COLA	Total
General Tier 1 Members			
Normal Cost	8.17%	2.79%	10.96%
UAAL	22.82%	9.18%	32.00%
Extraordinary Contribution Credit	-20.02%	-8.06%	-28.08%
Total Contribution	**10.97%**	**3.91%**	**14.88%**
General Tier 3 Members			
Normal Cost	12.07%	3.95%	16.02%
UAAL	22.82%	9.18%	32.00%
Extraordinary Contribution Credit	-20.02%	-8.06%	-28.08%
Total Contribution	**14.87%**	**5.07%**	**19.94%**
General Tier 4 Members			
Normal Cost	7.47%	1.74%	9.21%
UAAL	22.82%	9.18%	32.00%
Extraordinary Contribution Credit	-20.02%	-8.06%	-28.08%
Total Contribution	**10.27%**	**2.86%**	**13.13%**
LARPD Combined			
Normal Cost	9.80%	2.92%	12.72%
UAAL	22.82%	9.18%	32.00%
Extraordinary Contribution Credit	-20.02%	-8.06%	-28.08%
Total Contribution	**12.60%**	**4.04%**	**16.64%**

MEMORANDUM TO THE ACTUARIAL COMMITTEE

DATE:	June 17, 2021
TO:	Members of the Actuarial Committee
FROM:	Margo Allen, Fiscal Services Officer
SUBJECT:	Actuarial Standard of Practice No 51 (ASOP No. 51), Risk Assessment, Including Review of Funded Status of the Pension Plan as of December 31, 2020

Executive Summary
On June 17, 2021, staff and Segal will present the results of a deterministic scenario test used to evaluate and address the risk exposure related to ACERA's Actuarial Valuation and Review as of December 31, 2020. In February 2019, staff obtained board approval for Segal to provide risk reports that satisfy disclosure requirements for the (then) new ASOP No. 51, effective for a measurement date on or after November 1, 2018 and for ACERA's December 31, 2020, valuation.

Deterministic Scenario Test: Assesses the impact of one possible event or several events, for example, market return that is higher or lower than the assumed 7.00% in the next year.

Recommended Scenario Test for ACERA: Consider the impact of portfolio market return in 2021 at 0.00%, 7.00% or 14.00% in December 31, 2020, risk report.

Attachment:
ACERA Risk Assessment, Including Review of Funded Status of the Pension Plan as of December 31, 2020

Alameda County Employees' Retirement Association

Risk Assessment

Including Review of Funded Status of the Pension Plan as of December 31, 2020

June 8, 2021

Andy Yeung, ASA, MAAA, FCA, EA
Eva Yum, FSA, MAAA, EA

Segal

Table of Contents

Section 1: Introduction and Executive Summary

Introduction

The purpose of this report is to assist the Board of Retirement,[1] participating employers and members and other stakeholders to better understand and assess the risk profile of the Association, as well as the particular risks inherent in using a fixed set of actuarial assumptions in preparing the results in our December 31, 2020 funding valuation for the Pension Plan ("the Plan") of the Alameda County Employees' Retirement Association ("ACERA").

The results included in our December 31, 2020 funding valuation report for the Pension Plan were prepared based on a fixed set of economic and non-economic actuarial assumptions under the premise that future experience of ACERA would be consistent with those assumptions. While those assumptions are generally reviewed every three years (with the assumptions from the last triennial experience study adopted by the Board of Retirement for use starting with the December 31, 2020 valuation), there is a risk that emerging results may differ significantly as actual experience is fluid and will not completely track current assumptions.

It is important to note that this risk assessment is based on plan assets as of December 31, 2020. Due to the COVID-19 pandemic, market conditions have changed significantly since the onset of the Public Health Emergency. The Plan's funded status does not reflect short-term fluctuations of the market, but rather is based on the market values on the last day of the Plan Year. Moreover, this risk assessment does not include any possible short-term or long-term impacts on mortality of the covered population that may emerge after December 31, 2020. While it is impossible to determine how the pandemic will affect market conditions and other demographic experience of the plan in future valuations, the single year investment return scenario test included within this report provides an illustration of the impact of short term market fluctuations on the plan. Additionally, Segal is available to prepare other projections of selected potential outcome scenarios upon request.

The County is considering the payment of about $800 million in additional contribution in order to reduce its contribution requirement as determined in the December 31, 2020 valuation. Other than including some commentaries with respect to the additional contribution, we have not taken into account any such amount in preparing this report.

[1] This risk report has been prepared at the request of the Board of Retirement to assist in administering the Plan. This risk 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 risk report may not be applicable for other purposes.

Actuarial Standard of Practice on Risk Assessment

The Actuarial Standards Board approved the Actuarial Standard of Practice No. 51 (ASOP 51) regarding risk assessment when performing a funding valuation and it was effective with ACERA's December 31, 2018 actuarial valuation for benefits provided by the Pension Plan. 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 ACERA are asset/liability mismatch risk, investment risk, and longevity and other demographic risks. ASOP 51 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 risk assessment 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. This report incorporates a more detailed risk assessment as agreed upon with ACERA.

The Standard also requires disclosure of plan maturity measures and other historical information that are significant to understanding the risks associated with the Pension Plan and this information is included in this report. Besides information for the Pension Plan, we have included as part of the Plan design under Article 5.5 of the Statute the amount of "excess earnings" allocated from the Association's total investment portfolio to the Supplemental Retiree Benefit Reserve (SRBR) and the change in the sufficiency periods for benefits paid out of the SRBR. Based on our understanding of the statute which authorizes the SRBR, the investment return assumption used in the funding valuation has been developed without considering the impact of any future excess earnings allocation to the SRBR. However, for informational purposes, we have included in this report the same disclosure of such allocation that we have previously included in our funding valuation report.

Plan Risk Assessment

In Section 2, we start by discussing some of the historical factors that have caused changes in ACERA's funded status and employer contribution rates. It is important to understand how the combination of decisions and experience has led to the current financial status of the plan.

We follow this with a discussion of the most significant risk factors going forward. Even though we have not included a numerical analysis of all the risk factors, based on our discussions with ACERA we have illustrated the impact on the funded status and employer contribution rates using relevant economic scenario tests. These tests illustrate the effect of future investment returns on the portfolio coming in differently from the current 7.00% annual investment return assumption used in the December 31, 2020 valuation.

ASOP 51 also requires disclosure of plan maturity measures and other historical information that are significant to understanding the risks associated with the Pension Plan and this information is included in this report.

Executive Summary

Historical Funded Status and Employer Contribution Rates

The following table provides a summary of financial changes to the Plan over the last 10 valuations. The unfunded actuarial accrued liability (UAAL)[2] and contribution rates[3] increased primarily as a result of strengthening the actuarial assumptions used in preparing the valuations and unfavorable investment experience that were offset to some degree by favorable non-investment experience.

	Market Value Basis		Valuation Value Basis		Total (Aggregate) Employer Contribution Rate (% of Payroll)
Valuation Date	**Funded Status**	**UAAL**	**Funded Status**	**UAAL**	
December 31, 2011	70.9%	$1,850.0 M	76.6%	$1,490.8 M	21.5%
December 31, 2020	80.0%	$2,094.8 M	76.2%	$2,499.9 M	31.3%

Supplemental Retiree Benefit Reserve

In the 10 valuations from December 31, 2010 to 2019,[4] the assets available in the SRBR have increased from about $631 million to about $929 million. During this 10-year period, about $262 million in excess earnings were allocated to the SRBR. In the December 31, 2010 valuation, it was estimated that the assets in the SRBR would be sufficient to pay OPEB SRBR benefits for about 17 years (until around 2027) and non-OPEB SRBR benefits for about 21 years (until around 2031). In the December 31, 2019 valuation, it was estimated that the assets in the SRBR would be sufficient to pay OPEB SRBR benefits for about 21 years (until around 2040) and non-OPEB SRBR benefits for about 18 years (until around 2037).[5]

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2 For instance, as a result of the last three experience studies, the UAAL increased by $460 million, $396 million, and $322 million in the December 31, 2014, December 31, 2017, and December 31, 2020 valuations, respectively.

3 For instance, as a result of the last three experience studies, the employer's total rate (normal cost plus UAAL) increased by 3.44% of payroll, 3.49% of payroll, and 2.44% of payroll in the December 31, 2014, December 31, 2017, and December 31, 2020 valuations, respectively.

4 We have not included the results from the December 31, 2020 SRBR valuation as the finalized results from that valuation will not be available until later in 2021.

5 During the past 10 years, the Board took several actions to preserve the sufficiency period to pay benefits from the SRBR. For instance, the Board eliminated the Active Death Equity Benefit and froze the maximum Monthly Medical Allowance for several years.

Future Funded Status and Employer Contribution Rates

In this report, we highlight key factors besides assumption changes that may affect the financial profile of the Plan going forward. As investment experience in the past 10 years has had a significant impact on the funded status and employer contribution rates, we have also provided deterministic projections (using select scenarios for illustration) under hypothetical unfavorable and favorable future market experience so that the impact of market performance can be better understood.

The total (aggregate) employer contribution rate for the plan is 31.3% of total payroll in the December 31, 2020 valuation. Using a deterministic projection, this report shows the effect of either unfavorable (0.00%) or favorable (14.00%) hypothetical market returns for 2021 on key valuation results. In particular, the changes in the total employer contribution rate (relative to the December 31, 2020 valuation aggregate employer contribution rate of 31.3%) in the December 31, 2021 valuation and in the December 31, 2026 valuation (when all the investment gains or losses are fully recognized at the end of the five-year asset smoothing period) are as shown in the following table:

	2021 Single Plan-Year Investment Return		
Employer Contribution Rate Change	**0.00%**	**7.00% (Baseline)**	**14.00%**
December 31, 2021	-0.5% of payroll	-0.8% of payroll	-1.1% of payroll
December 31, 2026	-1.4% of payroll	-3.5% of payroll	-5.7% of payroll

Under the favorable (14.00%) hypothetical market return scenario for 2021, the Association would be expected to reach full funding by December 31, 2031 and the total employer contribution rate would be comprised of only normal cost contributions, resulting in a larger relative change from the baseline than the unfavorable (0.00%) hypothetical market return scenario. Furthermore, under all three hypothetical market return scenarios for 2021, the Association would be expected to reach full funding within 13 years and the total employer contribution rate would be expected to approach about 10% of payroll.[6] <u>This means that the Board's funding policy is very effective in achieving the general policy goal of achieving the long-term full funding of the costs of the benefits paid by ACERA.</u>

[6] Assuming no further assumption changes, method changes or experience that differs significantly from assumptions.

Plan Maturity Measures

During the past 10 valuations, the Association has become more mature as evidenced by an increase in the ratio of members in pay status (retirees and beneficiaries) to active members (as shown in *Section 2, Chart 12 on page 30)* and by an increase in the ratios of plan assets and liabilities to active member payroll (as shown in *Section 2, Chart 13 on page 31* and *Chart 14 on page 32,* respectively*)*. We expect these trends to continue going forward. This is significant for understanding the volatility of both historical and future employer contribution rates because any increase in UAAL due to unfavorable investment and non-investment experience for the relatively larger group of non-active members would have to be amortized and funded over the payroll of the relatively smaller group of only active members. Put another way, as a plan grows more mature, its contribution rate becomes more sensitive to investment volatility and liability changes. As ACERA continues to mature with time, its risk profile will continue to evolve in this way and contributions will grow more sensitive to plan experience.

Section 2: Key Plan Risks on Funded Status, Unfunded Actuarial Accrued Liabilities, and Employer Contribution Rates

Evaluation of Historical Trends

Funded Status and Change in Unfunded Actuarial Accrued Liabilities

One common measure of ACERA's financial status is the funded ratio. This ratio compares the valuation[7] and market value of assets to the actuarial accrued liabilities (AAL)[8] of ACERA. The overall level of funding of ACERA has declined as a result of strengthening of the economic and non-economic assumptions especially in the last three triennial experience studies. Those new actuarial assumptions were used starting in the December 31, 2014, 2017, and 2020 valuations. The unfavorable investment experience also has an impact. The funded ratios and the unfunded actuarial accrued liabilities[9] (UAAL) for the past 10 valuations from December 31, 2011 to 2020 measured using both actuarial and market value of assets bases are provided in *Chart 1*.

The factors that caused the changes in the UAAL for the past 10 valuations from December 31, 2011 to 2020 are specified in *Chart 2*. The results in *Chart 2* show the changes in the investment return assumption from 7.80% to 7.60% in the December 31, 2014 valuation, from 7.60% to 7.25% in the December 31, 2017 valuation, and from 7.25% to 7.00% in the December 31, 2020 valuation. These reductions together with the changes in the mortality tables and other assumptions from the last three triennial experience studies have by far the most impact on the UAAL for ACERA,[10] followed by the unfavorable investment experience during 2011 to 2020.

Chart 2 also shows that the unfavorable investment experience was offset to some extent by favorable non-investment experience. The non-investment experience included smaller salary increases received by active members and smaller cost-of-living-adjustment (COLA) increases received by retirees and beneficiaries than expected under the actuarial

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[7] The valuation value of assets is equal to the market value of assets excluding unrecognized returns from the last few years and any non-valuation reserves. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized over a five-year period.

[8] For the actives, the actuarial accrued liability is the value of the accumulated normal costs allocated to the years before the valuation date. For the pensioners, beneficiaries and inactive vested members, the actuarial accrued liability is the single-sum present value of the lifetime benefit expected to be paid to those members.

[9] The amount by which the actuarial accrued liability of the plan exceeds (or is exceeded by) the assets of the plan.

[10] For instance, as a result of the last three experience studies, the UAAL increased by $460 million, $396 million, and $322 million in the December 31, 2014, December 31, 2017, and December 31, 2020 valuations, respectively.

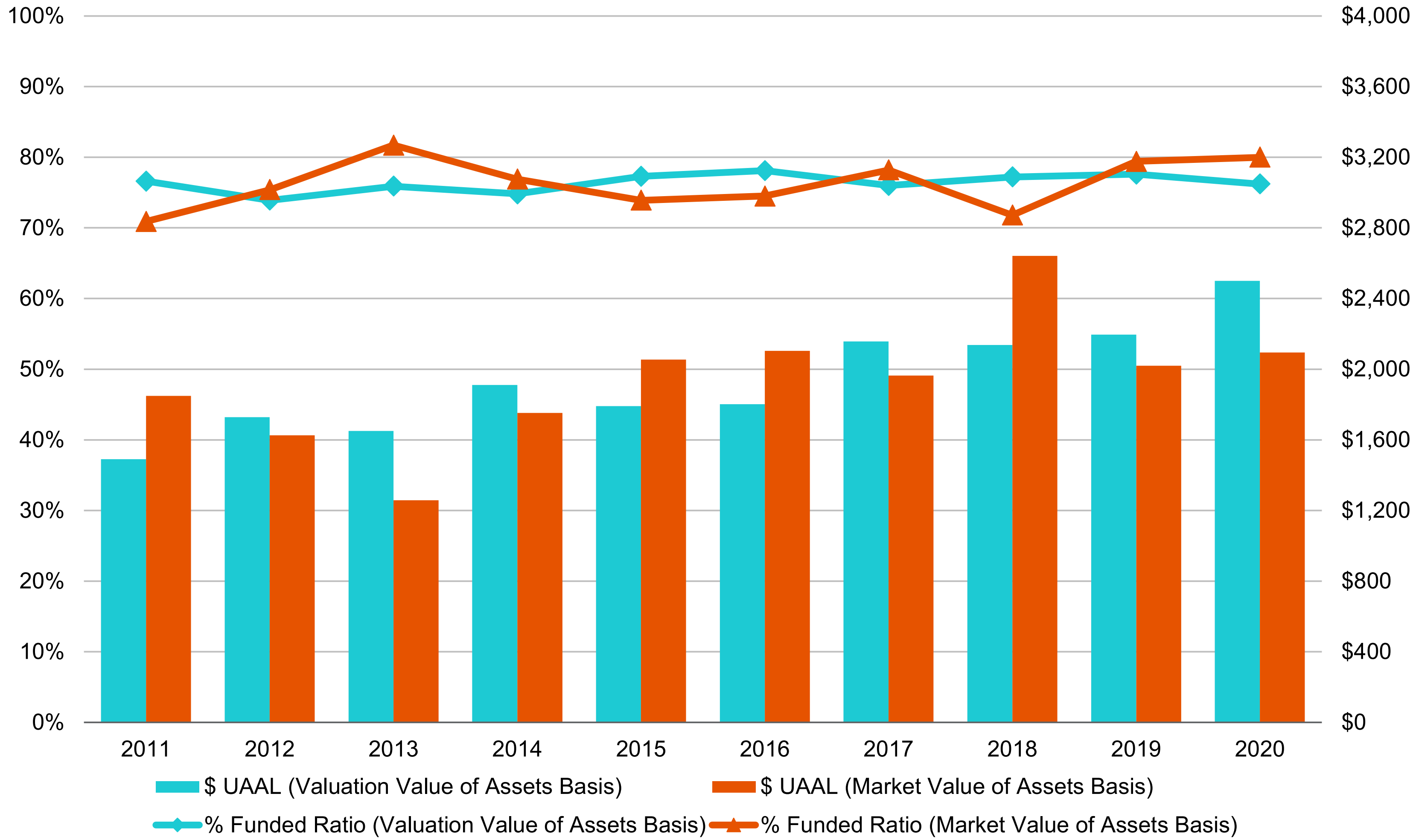
assumptions. The non-investment experience also included the scheduled delay in implementing the contribution rates determined in the annual valuation.

Finally, prior to 2014, *Chart 2* shows some “negative amortization” under the longer amortization periods used in these years. Current amortization policy generally will not entail negative amortization in the future.

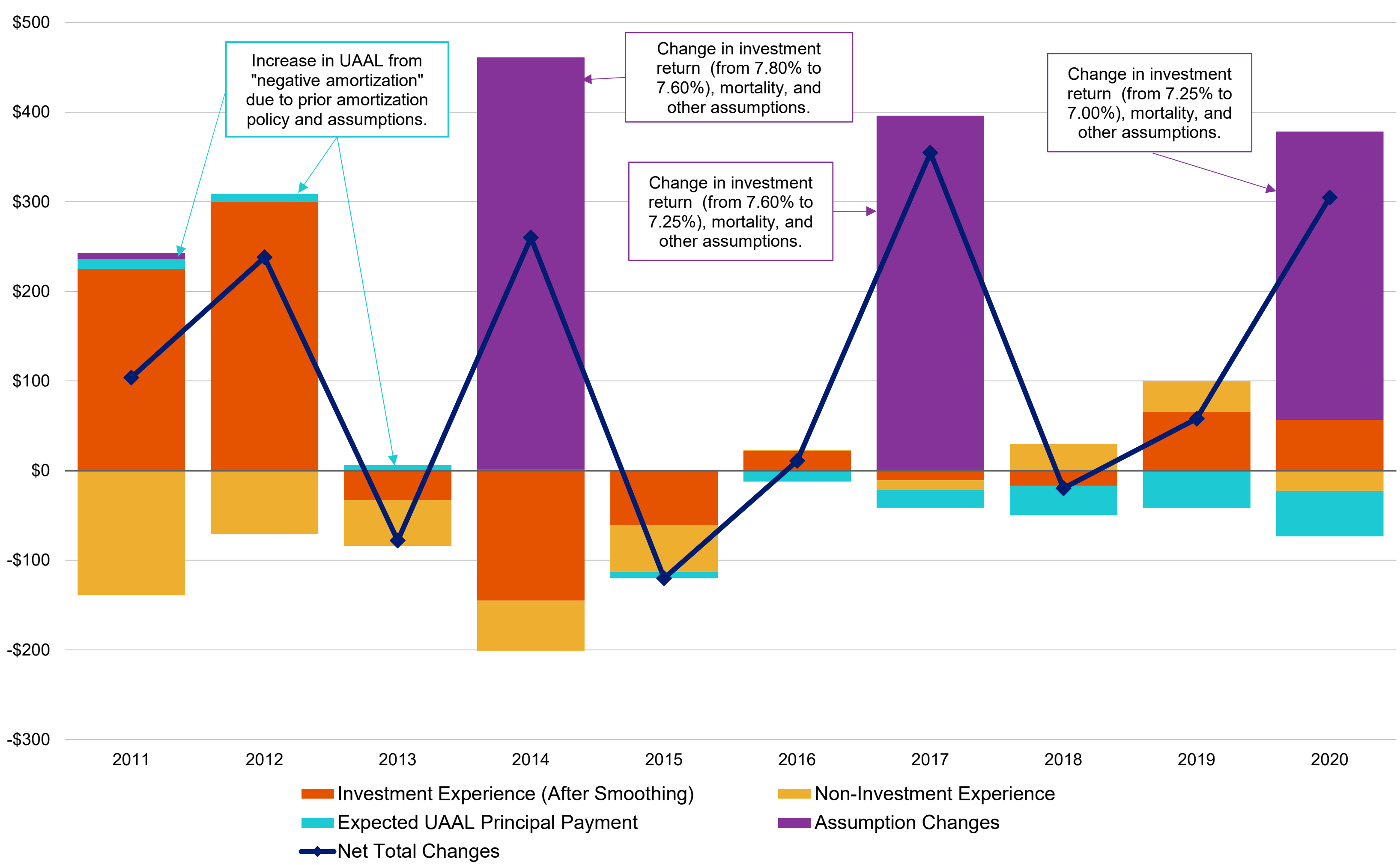
It is important to note that ACERA has taken strides in risk management and resulting long-term plan sustainability. This includes strengthening of assumptions, particularly the expected investment rate of return and mortality assumption (amount-weighted generational mortality tables for the Pension Plan), and adopting a funding policy that eliminates negative amortization and promotes intergenerational equity. Assumptions will continue to be reviewed in future experience studies to reflect the Plan’s experience as well as future expectations. Those changes may result in higher contributions in the short term, but in the medium to longer term <u>avoid</u> both deferring contributions and allowing unmanaged growth in the UAAL. We believe these actions are essential for ACERA’s fiscal health going forward.

Chart 1

Funded Ratio (Percentages) and Dollar UAAL ($ Millions) in December 31, 2011 to 2020 Valuations



Factors that Changed UAAL in December 31, 2011 to 2020 Valuations ($ Millions)



Note: The primary source of investment losses starting in the December 31, 2008 valuation is the Great Recession, which was recognized in the valuation value of assets over the five years ending December 31, 2012.

Employer Contribution Rates

The total (normal cost[11] plus UAAL payment) employer contribution rates determined in the December 31, 2011 to 2020 valuations are provided in *Chart 3* and the factors that caused the changes in the total aggregate employer rates[12] are provided in *Chart 4*.

The employer's aggregate normal cost rates in *Chart 3* has stayed relatively flat during the last 10 years. There had been increases in the employer's normal cost rates due to the changes in the actuarial assumptions. However, those increases were offset to some degree by the plan changes under the Public Employees' Pension Reform Act of 2013 (PEPRA) as new members have been enrolled in the lower cost PEPRA benefit tiers starting on January 1, 2013. *Chart 4* shows that the changes in the investment return (from 7.80% to 7.60% in the December 31, 2014 valuation, from 7.60% to 7.25% in the December 31, 2017 valuation, and from 7.25% to 7.00% in the December 31, 2020 valuation), mortality tables and other assumptions from the last three triennial experience studies have by far the most impact on increasing the UAAL contribution rates[13] for the employers. The next greatest impact was from the investment experience during 2011 to 2020.

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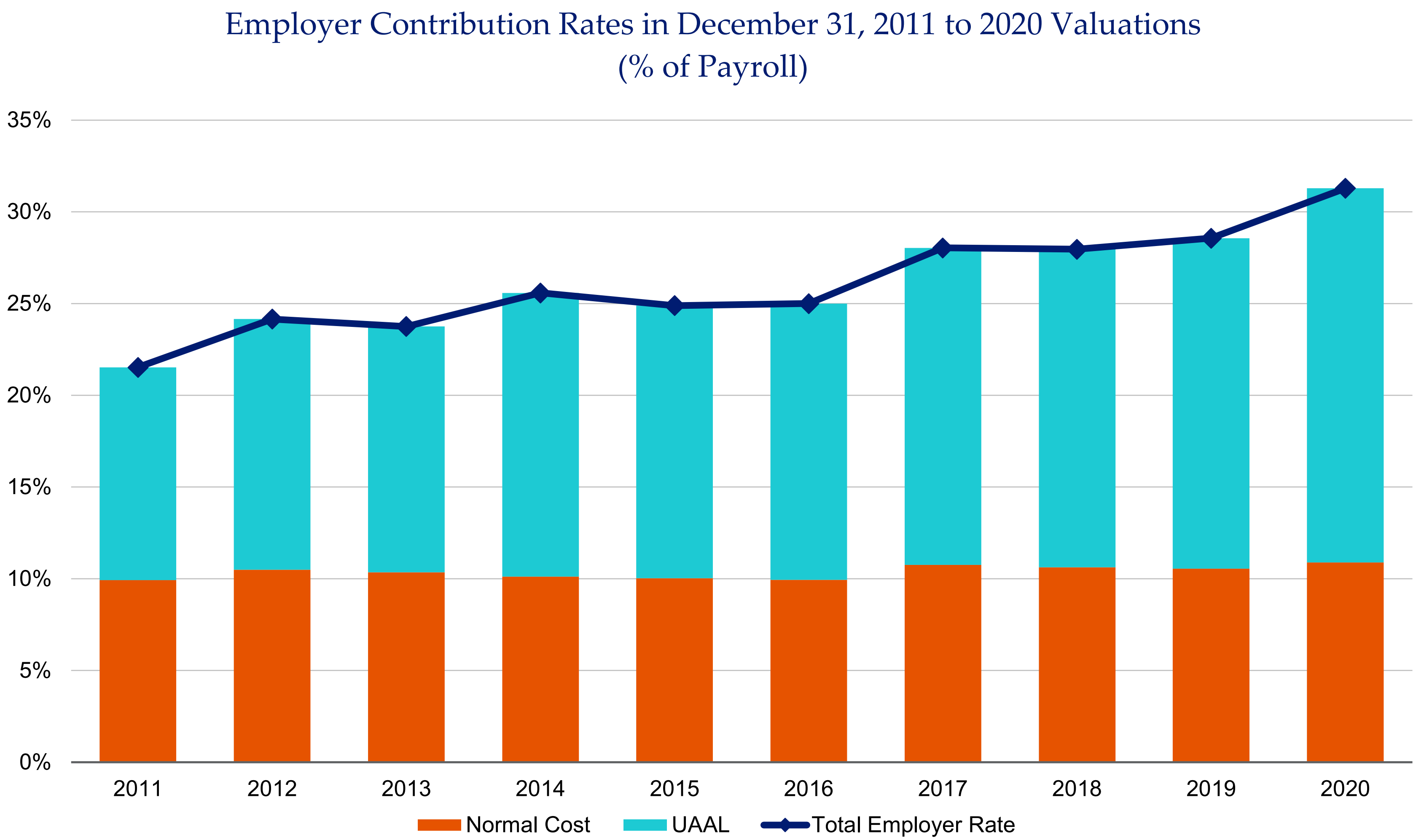
[11] The normal cost is the amount of contributions required to fund the portion of the level cost of the member's projected retirement benefit that is allocated to the current year of service.

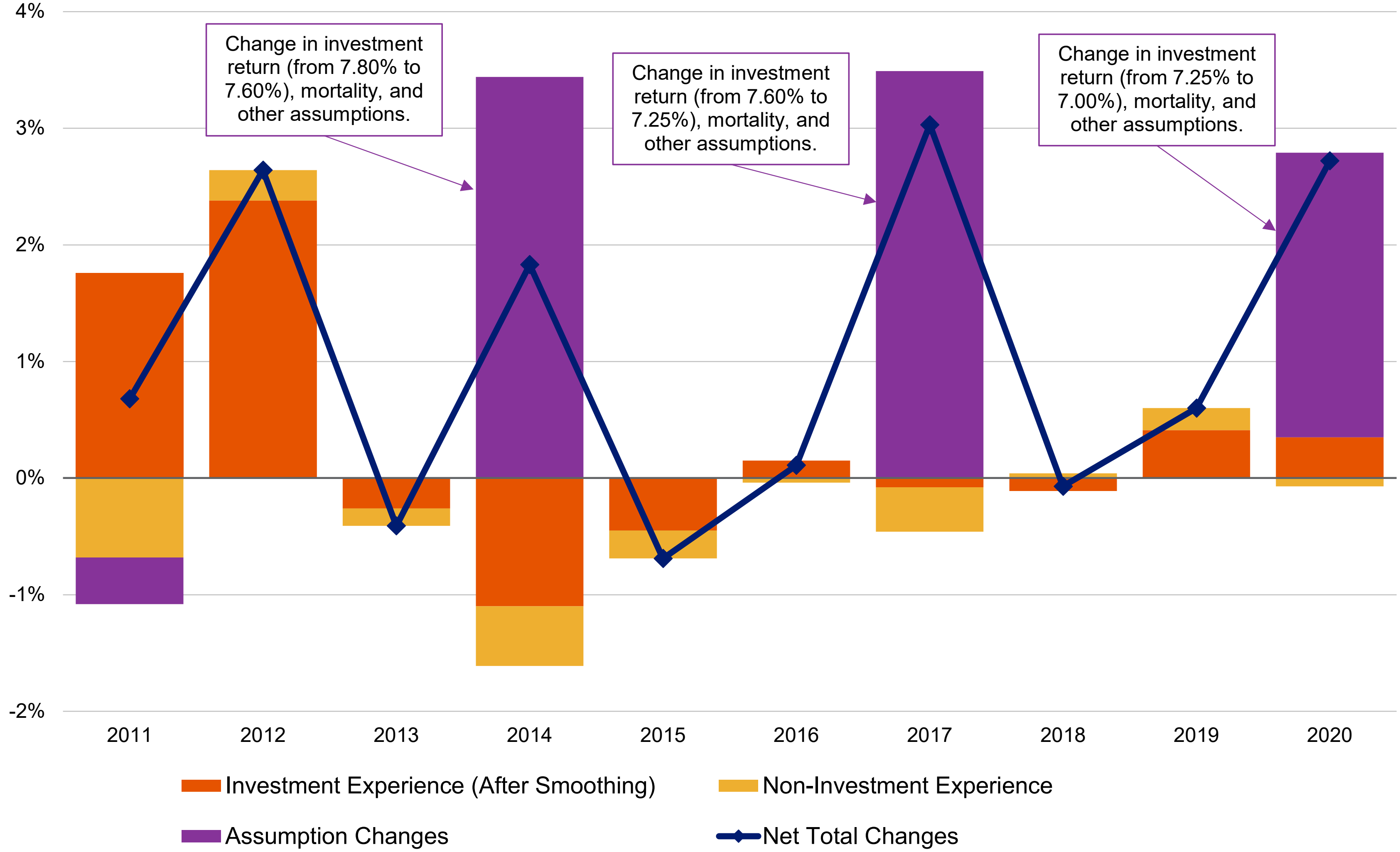
[12] There are separate contribution rates determined in the valuation for the General and Safety membership groups and for the different benefit tiers and employers. The aggregate contribution rates have been calculated based on an average of those rates weighted by the payrolls of the active members reported in those valuations.

[13] For instance, as a result of the last three experience studies, the employer's total rate (normal cost plus UAAL) increased by 3.44% of payroll, 3.49% of payroll, and 2.44% of payroll in the December 31, 2014, December 31, 2017, and December 31, 2020 valuations, respectively.

Chart 3


Employer Contribution Rates in December 31, 2011 to 2020 Valuations
(% of Payroll)
35%
30%
25%
20%
15%
10%
5%
0%
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
Normal Cost
UAAL
Total Employer Rate

Factors that Affected Employer Contribution Rates in December 31, 2011 to 2020 Valuations (% of Payroll)



Note: The primary source of investment losses starting in the December 31, 2008 valuation is the Great Recession, which was recognized in the valuation value of assets over the five years ending December 31, 2012.

Supplemental Retiree Benefit Reserve

As part of the Plan design, under Article 5.5 of the Statute, excess earnings[14] are allocated from the Association's total investment portfolio to the SRBR. As a result, besides paying benefits from the Pension Plan, ACERA also provides benefits using assets available in the SRBR. In most recent actuarial study for the SRBR as of December 31, 2019,[15] there was about $929 million in assets available at the Board's discretion to provide non-vested retiree health subsidies[16] (other postemployment benefits or OPEB) and pension benefits[17] (non-OPEB).

In the 10 valuations from December 31, 2010 to 2019, the assets available in the SRBR have increased from about $631 million to about $929 million. During this 10-year period, about $262 million in excess earnings were allocated to the SRBR. In the December 31, 2019 valuation, it was estimated that the assets in the SRBR would be sufficient to pay OPEB SRBR benefits for about 17 years (until around 2027) and non-OPEB SRBR benefits for about 21 years (until around 2031). In the December 31, 2019 valuation, it was estimated that the assets in the SRBR would be sufficient to pay OPEB SRBR benefits for about 21 years (until around 2040) and non-OPEB SRBR benefits for about 18 years (until around 2037).[18]

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[14] In general under the Board's interest crediting policy, earnings at one-half of the assumed annual valuation rate is credited every 6 months to reserves for the Pension Plan and the SRBR. After accumulating a 1% Contingency Reserve, any remaining earnings (excess earnings) is allocated on a 50/50 basis between the Pension Plan and the SRBR.

[15] We have not included the results from the December 31, 2020 SRBR valuation as the finalized results from that valuation will not be available until later in 2021.

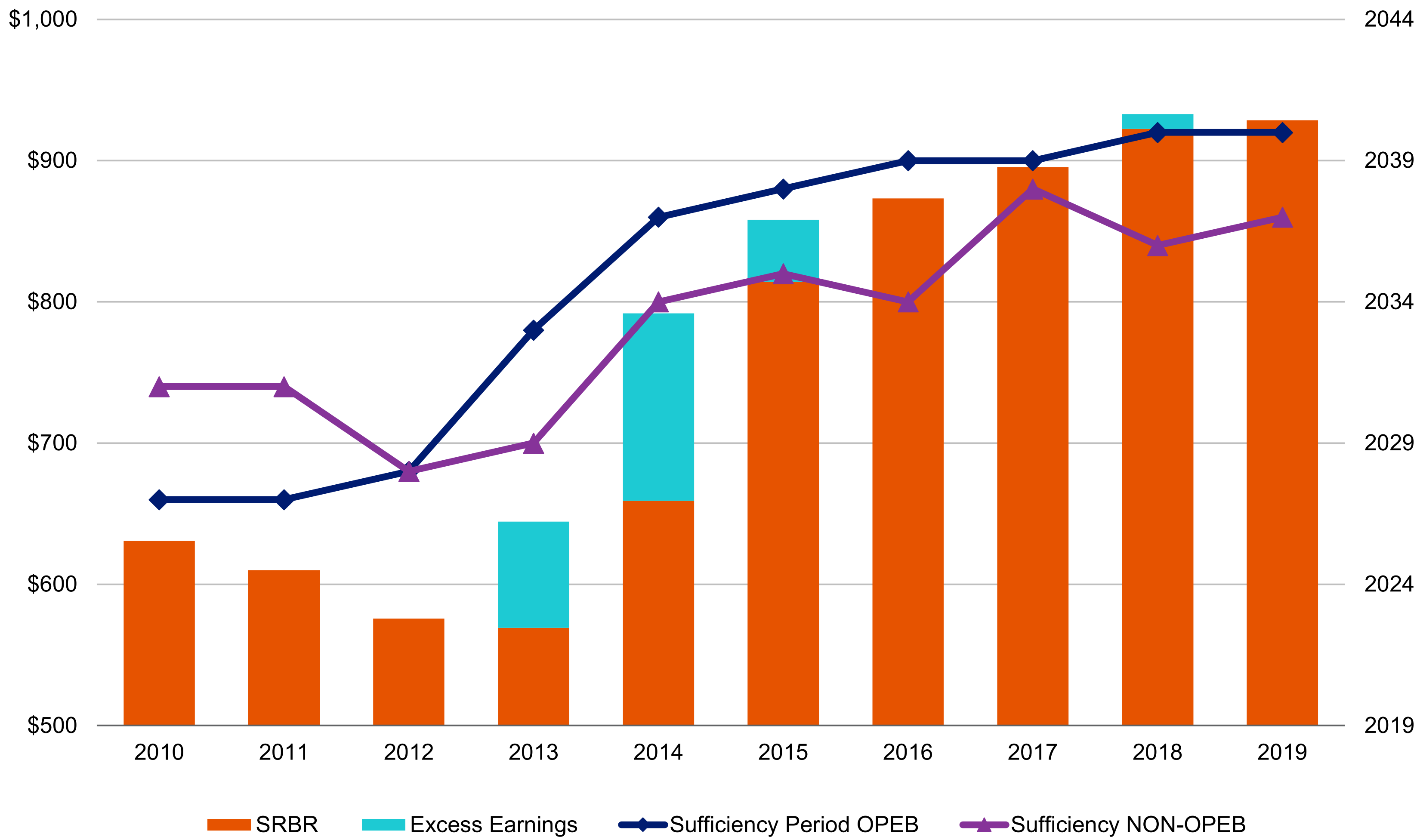
[16] The non-vested OPEB benefits include the Monthly Medical Allowance, reimbursement for premiums required for dental, vision and enrollment in Medicare Part B program.

[17] The non-vested pension benefits include supplemental COLAs and $1,000 lump sum retiree death benefits.

[18] During the past 10 years, the Board took several actions to preserve the sufficiency period to pay benefits from the SRBR. For instance, the Board eliminated the Active Death Equity Benefit and froze the maximum Monthly Medical Allowance for several years.

Chart 5

SRBR Assets ($ million) and Periods Benefits Can be Paid
In December 31, 2010 to 2019 Valuations



Assessment of Primary Risk Factors Going Forward

As discussed in the Evaluation of Historical Trends section, in the 2011 to 2020 valuations the funded ratios and the employer contribution rates have changed mainly as a result of changes in actuarial assumptions and investment experience.

In general, we anticipate the following risk factors to have an ongoing influence on those financial metrics in our future valuations:

- **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 ACERA is investment risk, as defined below. In fact, investment risk has the potential to impact asset/liability mismatch in two ways. The first mismatch is evident in annual valuations for the Pension Plan: when asset values deviate from assumptions, those changes are essentially 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 the experience of the asset values.

  Asset/liability mismatch can also be caused by longevity and other demographic assumption risks, which affect liabilities but have no impact on asset levels. These risks are also discussed below.

  It may be informative to use the asset volatility and liability volatility ratios and associated contribution rate impacts provided in the following Plan Maturity Measures section when discussing with the employers the effect of unfavorable or favorable actuarial experience on the assets and the liabilities of ACERA.

- **Investment risk** – the potential that future market returns will be different from the current expected 7.00% annual return assumption.

  The investment return assumption is a long-term, deterministic assumption for valuation purposes even though in reality market experience can be quite volatile in any given year. We have included deterministic scenario tests later in this section so that ACERA can better understand the risk associated with earning either more or less than the assumed rate.

- **Longevity and other demographic risks** – the potential that mortality or other demographic experience will be different than expected.

  The change to the amount-weighted mortality tables that reflect data from public sector retirement plans was the most major change to the non-economic assumptions in the last experience study. As can be observed from *Charts 2 and 4*, there had been relatively small impact on the UAAL and employer contribution rates due to non-investment related experience relative to the assumptions used in the last 10 valuations.

- **Plan design considerations** – the potential SRBR excess earnings allocations and the impact to investment return for the Pension Plan.

  As we have previously disclosed in the funding valuation report, the 7.00% investment return assumption used in the valuation for the Pension Plan has been developed without considering the impact of any future 50/50 excess earnings allocation to the SRBR. This is based on our understanding that Article 5.5 of the Statute, which authorizes the allocation of 50% of excess earnings to the SRBR, does not allow for the use of a different investment return for funding than is used for interest credit. This would appear in effect to preclude the prefunding of the SRBR through the use of an assumption lower than the market earnings assumption of 7.00%.

  Using a "stochastic" projection approach, we estimated that the 50/50 allocation of future excess earnings would have about the same impact as an "outflow" (i.e., assets not available to fund the benefits in the Pension Plan) that would average approximately 0.65% of assets over time. We note that the amount of deferred and unrecognized investment gains/losses as of the date of the valuation could have an impact on the measurement of the 50/50 allocation of excess earnings. For instance, if we were to take into consideration the $643 million in deferred investment gains as of December 31, 2020, there will be an increase in the average impact from 0.65% of assets to 0.7%-0.8% of assets over time. However, as the amount of deferred and unrecognized investment gains/losses has fluctuated over time[19], we have continued to disregard those deferred and unrecognized investment gains/losses in measuring the 0.65% of assets impact.

  For informational purposes only, when we applied the results of our stochastic model to the December 31, 2020 valuation, we have estimated the approximate 0.65% of assets annual outflow would increase the Actuarial Accrued Liability in that valuation using a 7.00% investment return assumption by $0.85 billion and would increase the employer's UAAL contribution rate by about 5% - 6% of payroll.

[19] For instance, there were deferred and unrecognized investment losses of $569 million as of December 31, 2018 and deferred and unrecognized gains of $261 million as of December 31, 2019.

- **Contribution risk** – the potential that actual future contributions will be different from expected future contributions.

  ASOP 51 does not require the actuary to evaluate the particular ability or willingness of the plan sponsor or other contributing entity to make contributions to the plan when due. However, it does require the actuary to consider the potential for and impact of actual contributions deviating from expected in the future. ACERA's employers have a well-established practice of making the actuarially determined contribution (ADC) determined in the annual actuarial valuations, based on the Board of Retirement's Actuarial Funding Policy. As a result, in practice ACERA has essentially no contribution risk.

  Furthermore, when ADCs determined in accordance with the ACERA Actuarial Funding Policy are made in the future by the employers (and contributions required by the statute are made by the employees), it is anticipated that the Association would have enough assets to provide all future benefits promised to the current members enrolled in the Association, if all of the actuarial assumptions used in the valuation are met.

ASOP 51 also lists interest rate risk as an example of a potential risk to consider. However, the valuations of the Plan's liabilities are not linked directly to market interest rates so the resulting interest rate risk exposure is minimal.

Scenario Tests: Deterministic Projections

Since the funded ratio, UAAL and the employer contribution rates have fluctuated as a result of deviation in investment experience in the last 10 valuations, we have examined the risk for ACERA associated with earning either lower or higher than the assumed rate of 7.00% in future valuations using projections under a deterministic approach.

To measure such risk, we have included scenario tests to study the change in the UAAL and contribution rates if ACERA were to earn a market return lower or higher than 7.00% in the next year following the December 31, 2020 valuation. In *Charts 6, 7* and 8, we show the aggregate employer contribution rates, funded ratios, and UAAL respectively assuming that the Association's portfolio market return in 2021 will be as follows:

Scenario 1: 0.00% (unfavorable)

Scenario 2: 7.00% (baseline)

Scenario 3: 14.00% (favorable)

The following table summarizes the resulting employer contribution changes (relative to the December 31, 2020 valuation aggregate employer contribution rate of 31.3%) in the next valuation (i.e., December 31, 2021) as well as in the December 31, 2026 valuation when all of the investment gains and losses are fully recognized in the (smoothed) valuation value of assets.

	2021 Single Plan-Year Investment Return		
Employer Contribution Rate Change	**0.00%**	**7.00% (Baseline)**	**14.00%**
December 31, 2021	-0.5% of payroll	-0.8% of payroll	-1.1% of payroll
December 31, 2026	-1.4% of payroll	-3.5% of payroll	-5.7% of payroll

Under the favorable (14.00%) hypothetical market return scenario for 2021, the Association would be expected to completely pay off the unfunded liability and reach full funding by December 31, 2031. At that time the total employer contribution rate would be comprised of only normal cost contributions, resulting in a larger relative change from the baseline than in the unfavorable (0.00%) hypothetical market return scenario. Furthermore, under all three hypothetical market return scenarios for 2021, the Association would be expected to reach full funding within 13 years and the total employer contribution rate would be expected to approach about 10% of payroll.[20] This means that the Board's funding

[20] Assuming no further assumption changes, method changes or experience that differs significantly from assumptions.

policy is very effective in achieving the general policy goal of achieving the long-term full funding of the costs of the benefits paid by ACERA.

While we have not assigned a probability on the 2021 market return coming in at these rates, the Board and other stakeholders monitoring ACERA can use these results to interpolate in order to estimate the funded status and employer contribution rates for the December 31, 2021 and next several valuations as the actual investment experience for the 2021 year becomes available throughout the year. Additionally, comparable experience in upcoming future years is likely to have a similar impact on the Association absent any significant plan or assumption changes.

SRBR Sufficiency Projection

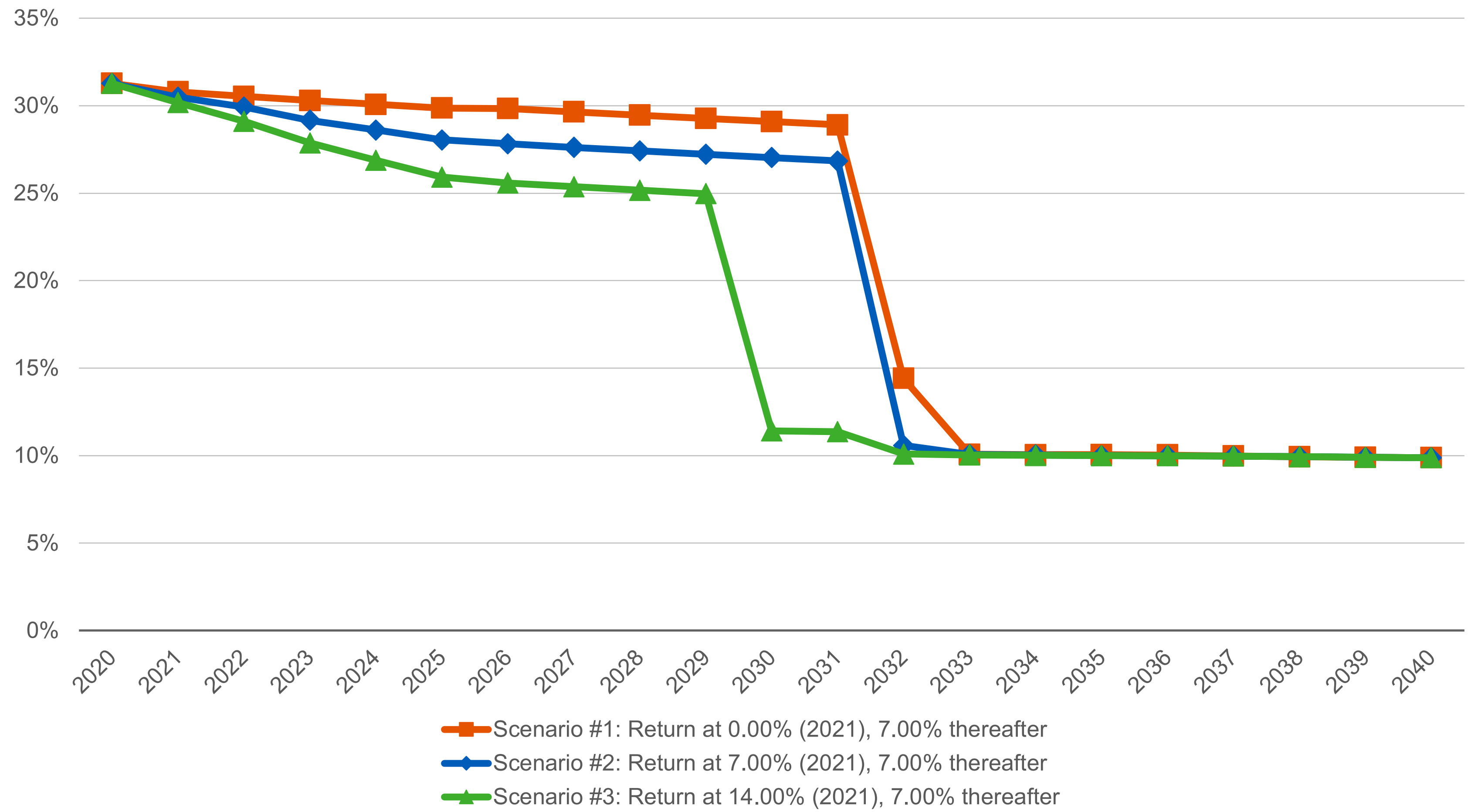
We also provided in Charts 9, 10 and 11 the projection of the SRBR assets as well as the sufficiency period under each of the hypothetical market return Scenarios 1, 2 and 3, respectively. These projections are based on the preliminary results of the SRBR preview letter as of December 31, 2020 which estimated that the assets in the SRBR would be sufficient to pay OPEB SRBR benefits for about 19 years (until around 2039) and non-OPEB SRBR benefits for about 24 years (until around 2044). Of note is that under Scenario 3 (assuming 14.00% market return in 2021), even with the approximately $740 million in excess earnings projected to be added to the SRBR through December 31, 2040, the non-OPEB SRBR would only be sufficient to pay benefits through December 31, 2053. This is in contrast to the OPEB SRBR, which would be sufficient to pay benefits through December 31, 2064.

This difference can be explained by two factors. First, the sharp increase in expected non-OPEB SRBR benefits over the 20-year projection period relative to a more modest increase in expected OPEB SRBR benefits over the same period. Second, the allocation of excess earnings between the non-OPEB and OPEB reserves proportional to those reserves. As the benefit levels expected to be paid from the non-OPEB SRBR rise relative to those expected to be paid from the OPEB SRBR, the value of the non-OPEB SRBR will fall relative to the value of the OPEB SRBR, and the share of excess earnings allocated to the non-OPEB SRBR will decrease.

For example, assets in the non-OPEB SRBR reserve represent just under 5% of SRBR reserves as of December 31, 2020. That means that the non-OPEB SRBR would be expected to receive about 5% of the excess earnings allocated to the SRBR in the near-term. However, by the end of the projection period non-OPEB benefits are expected to approach 10% of total SRBR benefits paid. Lower expected inflows (from excess earnings) and higher expected outflows result in less ability to pay non-OPEB benefits over the long term.

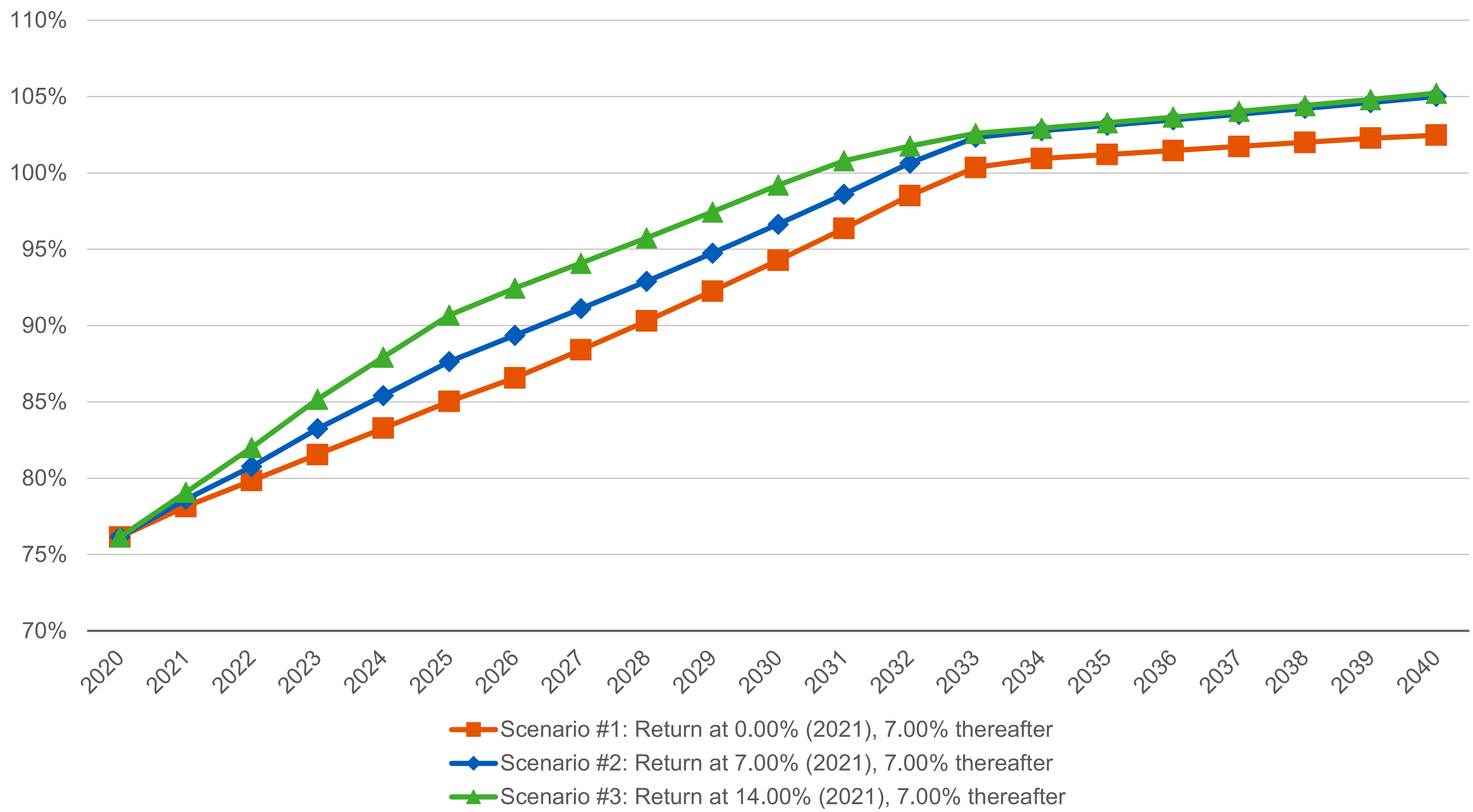
Since the $643 million deferred investment gain as of December 31, 2020 would be recognized in the next several years, there would be excess earnings projected under all three market return scenarios studied (including Scenario 1 assuming 0% return for 2021). However, for some other unfavorable market return scenarios that could result in even less excess earnings and absent any action taken by the Board to change benefits or the proportional allocation of excess earnings between the non-OPEB and OPEB reserves, the non-OPEB SRBR assets might become depleted sooner than what we have projected above.

Projected Employer Contribution Rates Under Three Hypothetical Market Return Scenarios for 2021 (% of Payroll)



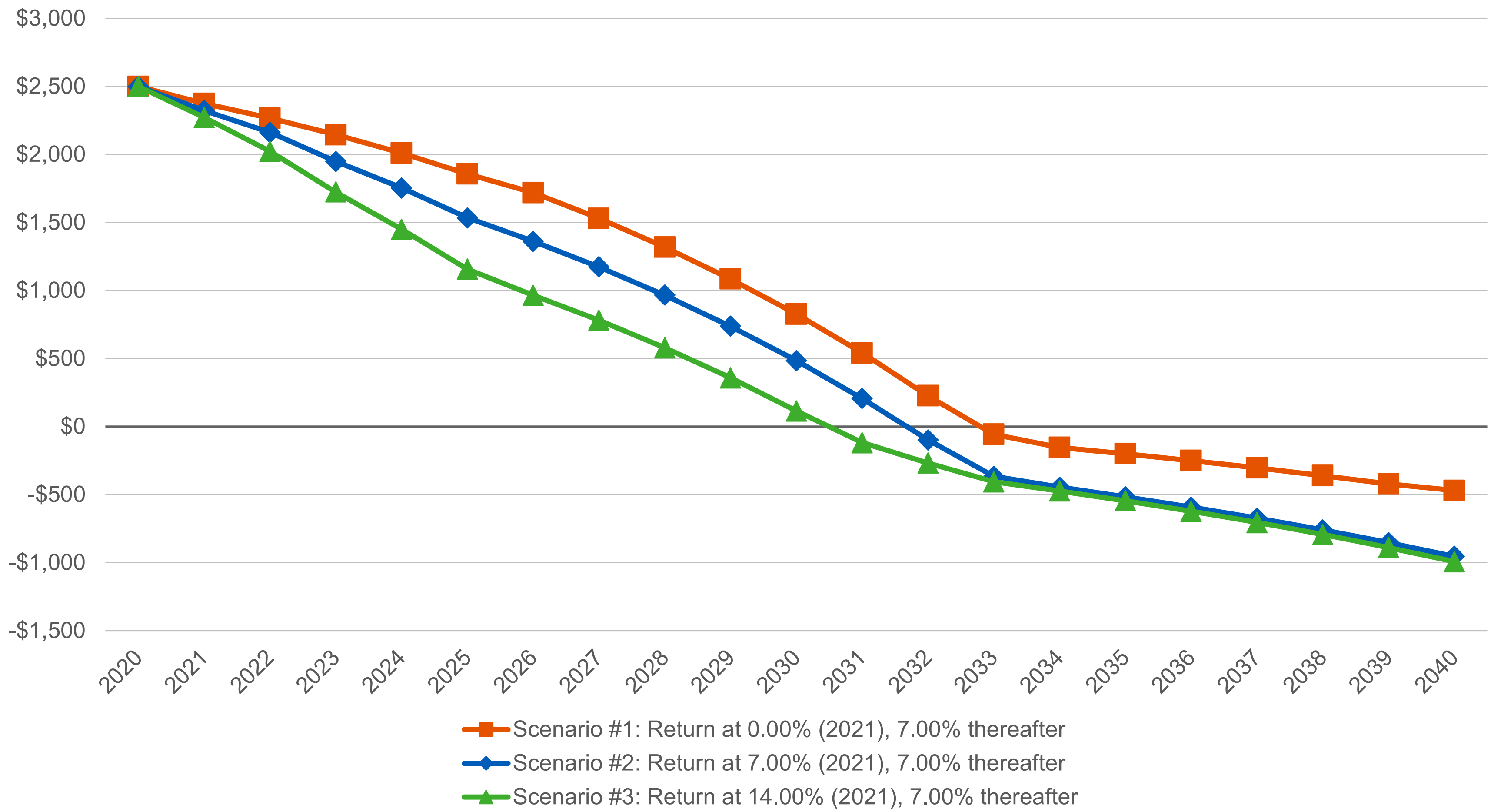
Note: The above projection does not reflect the potential additional contribution of about $800 million the County plans to make in 2021 to reduce the UAAL for the Safety membership group. Under the County's proposal, the $800 million additional contribution would be amortized over 13 years and would reduce the County's UAAL contribution rate by about 42.9% of Safety payroll. This is equivalent to a reduction in the aggregate employer's UAAL contribution rate of about 6.7% of all General and Safety payroll.

Projected Funded Ratios (on Valuation Value of Assets Basis) Under Three Hypothetical Market Return Scenarios for 2021



Note: The above projection does not reflect the potential additional contribution of about $800 million the County plans to make in 2021 to reduce the UAAL for the Safety membership group. After reflecting the deposit of $800 million additional contribution (discounted to December 31, 2020), the funded percentage for the total Pension Plan would change from 76.2% to 83.5% as of December 31, 2020.

Projected UAAL (on Valuation Value of Assets Basis) Under Three Hypothetical Market Return Scenarios for 2021 ($ Millions)



Note: The above projection does not reflect the potential additional contribution of about $800 million the County plans to make in 2021 to reduce the UAAL for the Safety membership group.

Chart 9

Projected SRBR Assets ($ Millions) Sufficiency Period Under Hypothetical Market Return Scenario #1 (Return at 0.00% for 2021)

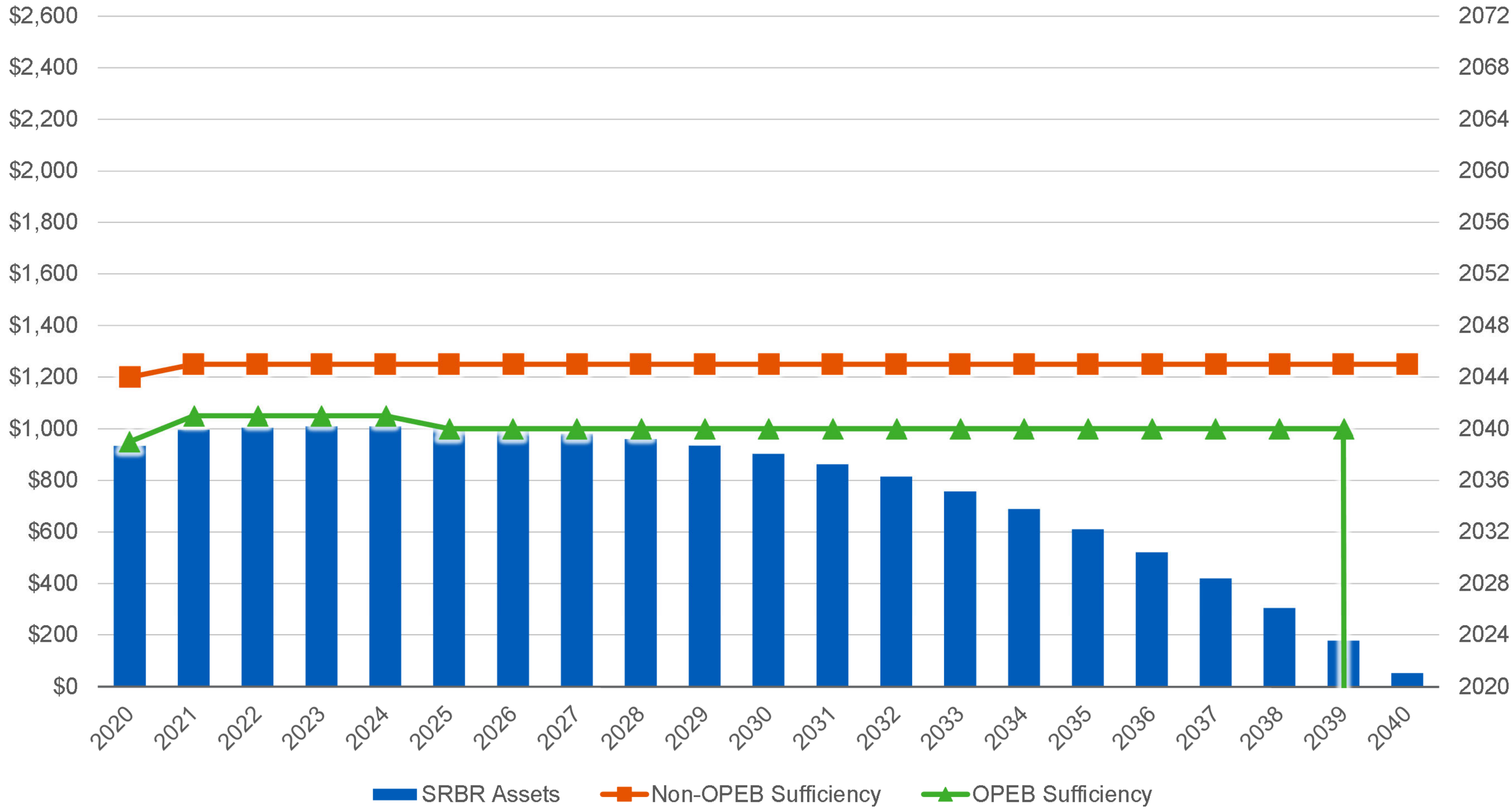


Chart 10

Projected SRBR Assets ($ Millions) Sufficiency Period Under Hypothetical Market Return Scenario #2 (Return at 7.00% for 2021)

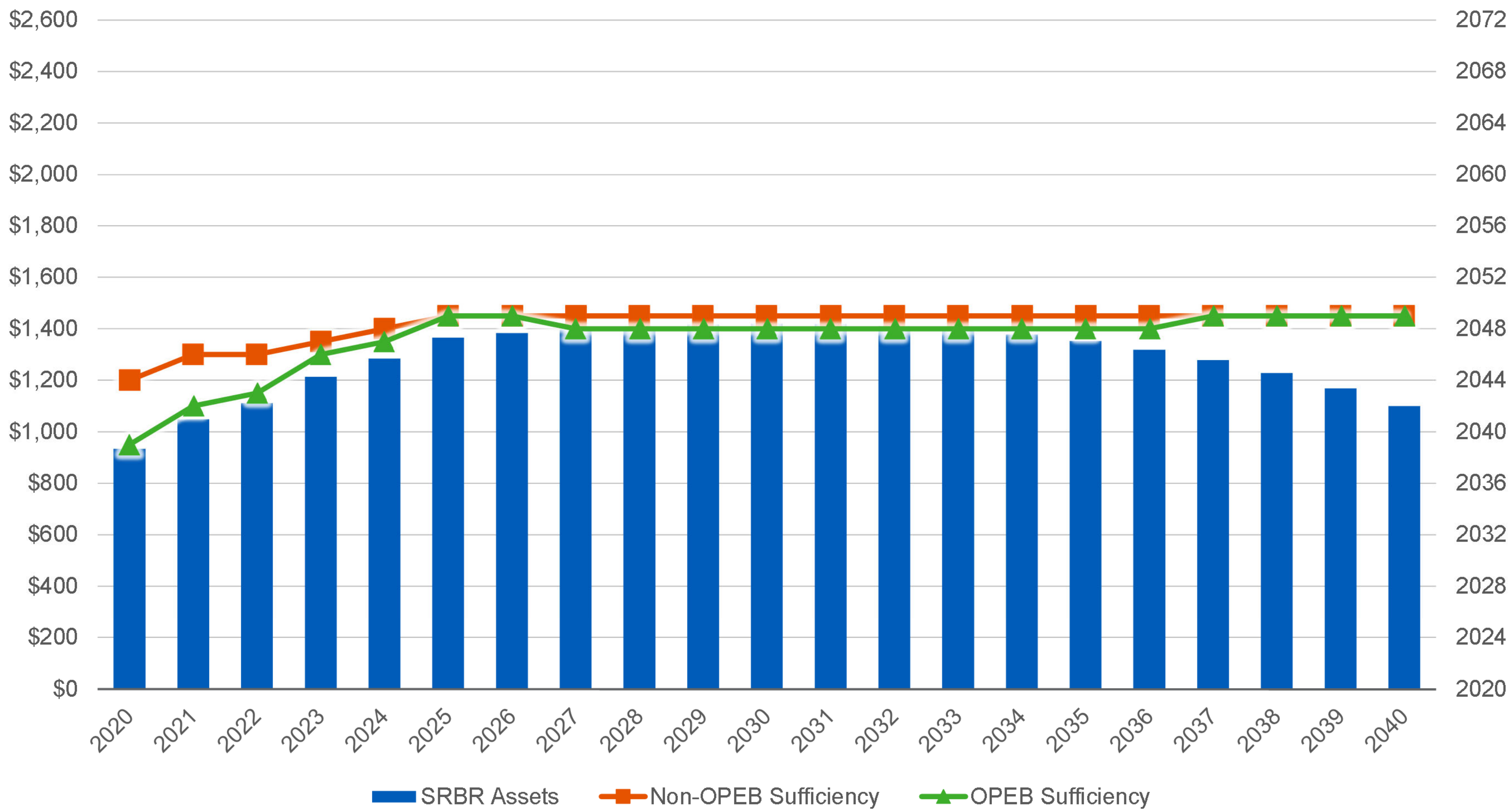
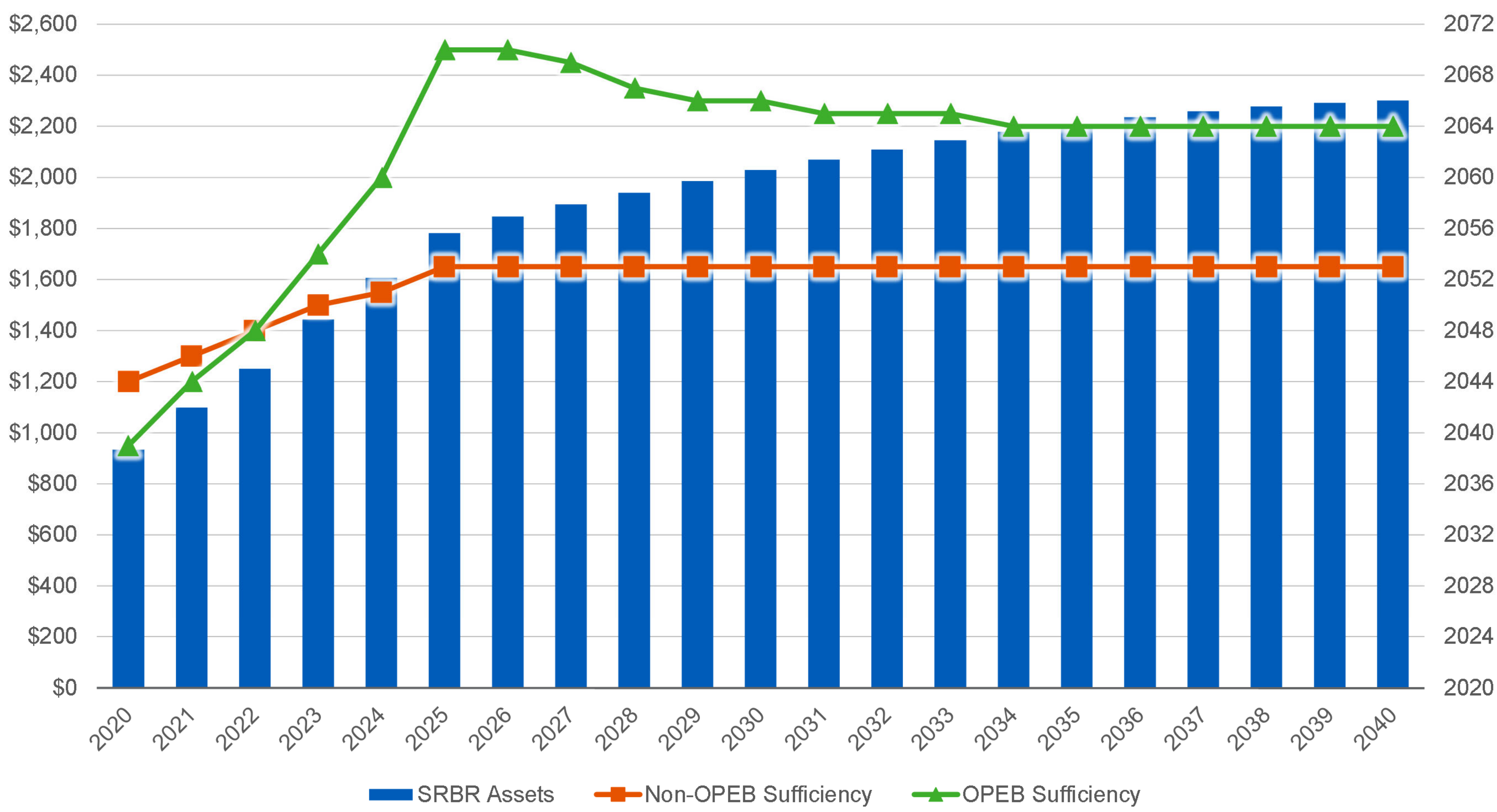


Chart 11

Projected SRBR Assets ($ Millions) Sufficiency Period Under Hypothetical Market Return Scenario #3 (Return at 14.00% for 2021)



Plan Maturity Measures that Affect Primary Risks

The annual actuarial valuation considers the number and demographic characteristics of covered members, including active members and non-active members (inactive vested, retirees and beneficiaries). In the past 10 valuations from December 31, 2011 to 2020, ACERA has become more mature, indicated by the continued increase in the ratio of non-active to active members covered by the Association as shown in *Chart 12*. The Chart also shows the ratio of members in pay status (retirees and beneficiaries) to active members. This ratio excludes the inactive vested members who have relatively smaller liabilities. The increase in the ratios is significant because any increase in UAAL due to unfavorable future investment and non-investment experience for a plan with a relatively larger group of non-active members would have to be amortized and funded using the payroll of a relatively smaller group of active members.

Besides the ratio of members in pay status to active members, another indicator of a more mature plan is relatively large amounts of assets and/or liabilities compared to active member payroll, which leads to increasing volatility in the level of required contributions. The **Asset Volatility Ratio (AVR)**, which is equal to the market value of assets divided by total payroll, provides an indication of contribution sensitivity to changes in the current level of assets and is detailed in *Chart 13*. The **Liability Volatility Ratio (LVR)**, which is equal to the actuarial accrued liability divided by payroll, provides an indication of the contribution sensitivity to changes in the current level of liability and is detailed in *Chart 14*. Over time, the AVR should approach the LVR because when a plan is fully funded the assets will equal the liabilities. As such, the LVR also indicates the long-term contribution sensitivity to the asset volatility, as the plan approaches full funding.

In particular, ACERA's AVR was 7.3 as of December 31, 2020. This means that a 1% asset gain or loss in 2021 (relative to the assumed investment return) would amount to 7.3% of one year's payroll. Similarly, ACERA's LVR was 9.1 as of December 31, 2020, so a 1% liability gain or loss in 2021 would amount to 9.1% of one year's payroll.[21] Based on ACERA's policy to amortize actuarial experience over a period of 20 years, there would be a 0.5% of payroll decrease or increase in the required contribution rate for each 1% asset gain or loss, respectively, and a 0.6% of payroll decrease or increase in the required contribution rate for each 1% liability gain or loss, respectively.

It is also informative to note that the AVR and LVR ratios for ACERA's Safety and General (LARPD) groups are higher than for the General (non-LARPD) groups. This means that both investment volatility and assumption changes will have a greater impact on the contribution rates of Safety and General (LARPD) groups than General (non-LARPD) groups. This is illustrated in the following table:

[21] The 7.3 and 9.1 are the AVR and LVR, respectively, for the entire Association. There are considerable differences in those ratios for the General and Safety membership groups.

	December 31, 2020			
Employee Group	**AVR**	**10% Loss Compares to**	**LVR**	**10% Change Compares to**
General (non-LARPD)	6.4	64% of payroll	7.7	77% of payroll
General (LARPD)	13.8	138% of payroll	16.8	168% of payroll
Safety	11.6	116% of payroll	16.2	162% of payroll
Combined	7.3	73% of payroll	9.1	91% of payroll

Chart 12

Ratios of Members in Pay-Status (Retirees and Beneficiaries) to Active Members & Non-Active Members (Inactive Vested, Retirees and Beneficiaries) to Active Members in December 31, 2011 to 2020 Valuations

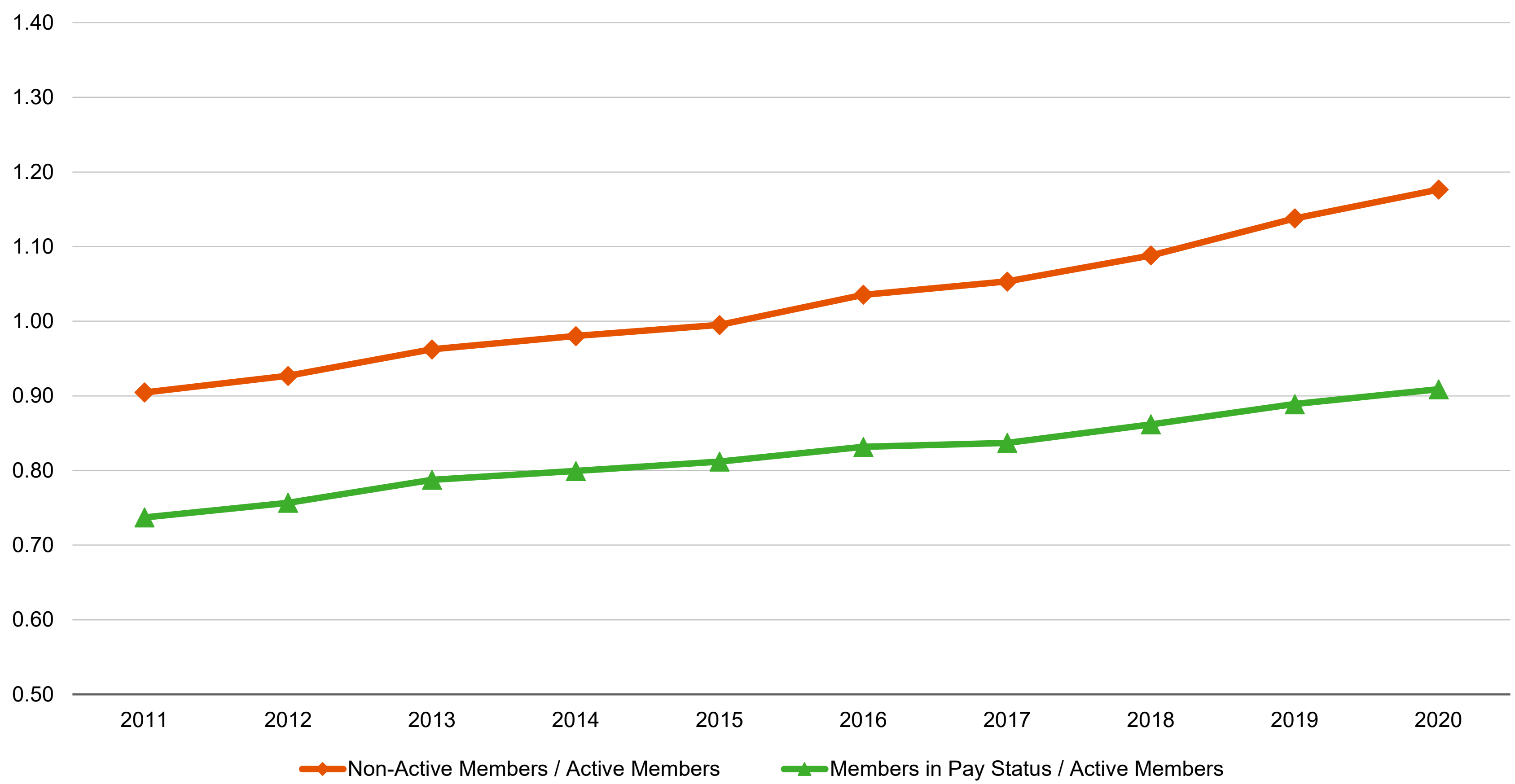


Chart 13

Asset Volatility Ratios in December 31, 2011 to 2020 Valuations

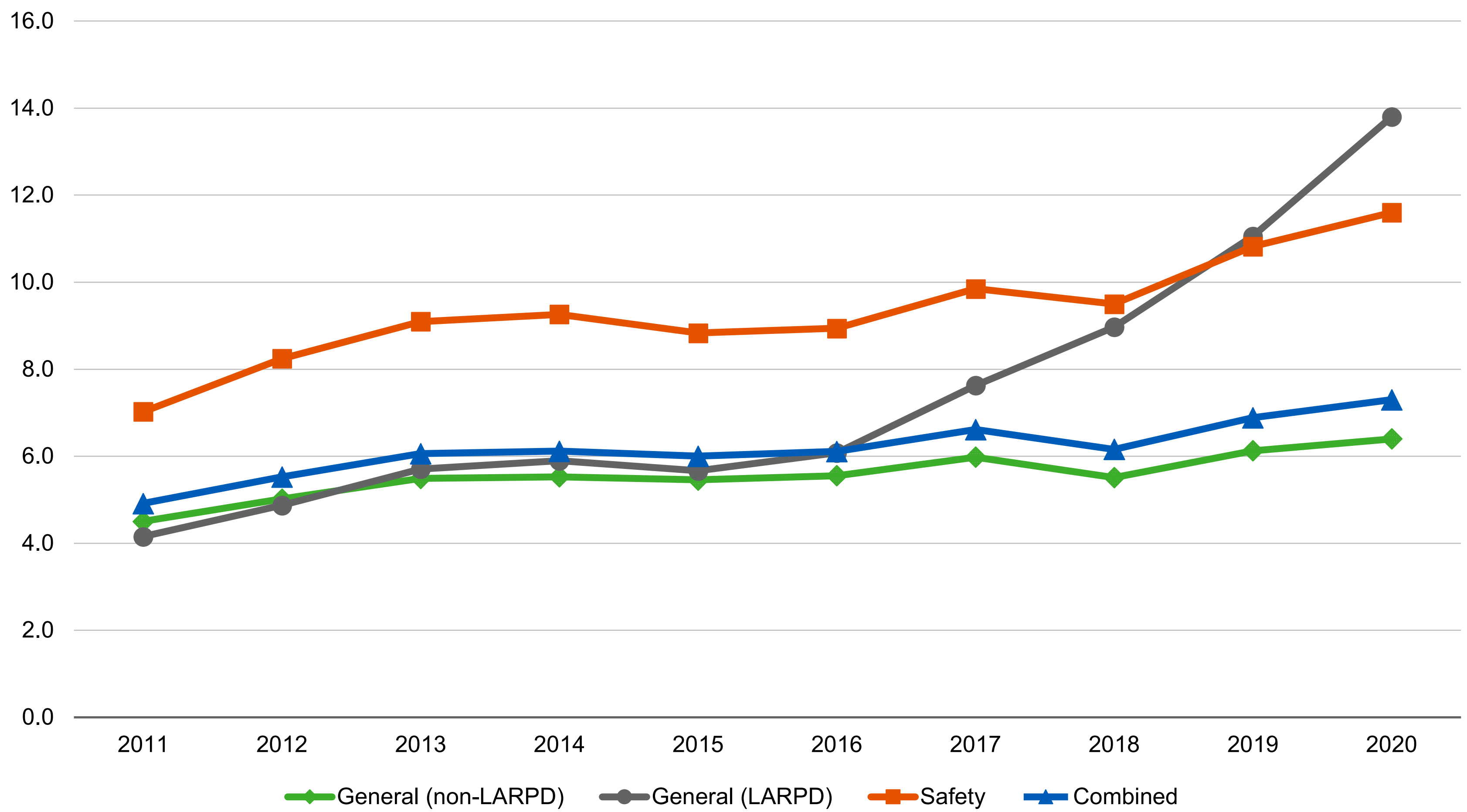
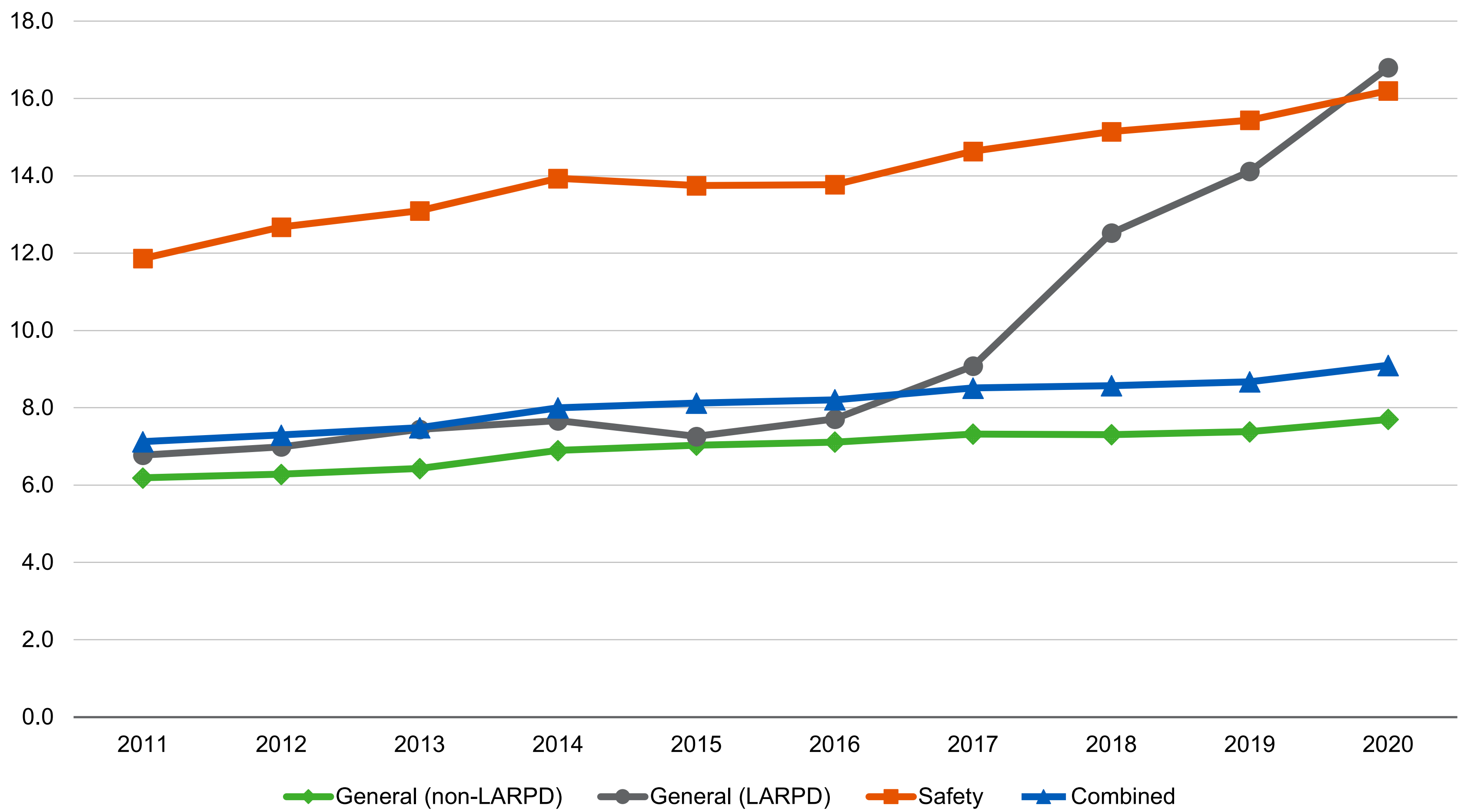


Chart 14

Liability Volatility Ratios in December 31, 2011 to 2020 Valuations



Appendix: Actuarial Assumptions & Methods and Actuarial Certification

Actuarial Assumptions & Methods

Unless otherwise noted, the results included in this report have been prepared based on the assumptions and methods used in preparing the December 31, 2020 valuation.

Segal valuation results are based on proprietary actuarial modeling software. The actuarial valuation models generate a comprehensive set of liability and cost calculations that are presented to meet regulatory, legislative and client requirements. Deterministic cost projections are based on a proprietary forecasting model. Our Actuarial Technology and Systems unit, comprised of both actuaries and programmers, is responsible for the initial development and maintenance of these models. The models have a modular structure that allows for a high degree of accuracy, flexibility and user control. The client team programs the assumptions and the plan provisions, validates the models, and reviews test lives and results, under the supervision of the responsible actuary.

Deterministic Projection

In addition, we have prepared the deterministic projection using the following assumptions and methods applied in the December 31, 2020 actuarial valuation:

- Non-economic assumptions will remain unchanged.
- Retirement benefit formulas will remain unchanged.
- 1937 Act and PEPRA statutes will remain unchanged.
- UAAL amortization method will remain unchanged (i.e., 20-year layers and level percent of pay).
- Economic assumptions will remain unchanged, including the annual 7.00% investment earnings and 3.25% active payroll growth assumptions.
- Deferred investment gains and losses will be recognized over a five-year period.
- All other actuarial assumptions used in the December 31, 2020 actuarial valuation will be realized.

Other Considerations

The results presented in this report are intended to provide insight into key plan risks that can inform financial preparation and future decision making. However, we emphasize that deterministic projections, by their nature, are not a guarantee of future results. The modeling projections are intended to serve as illustrations of future financial outcomes that are based on the information available to us at the time the modeling is undertaken and completed, and the agreed-upon assumptions and methodologies described herein. Emerging results may differ significantly if the actual experience proves to be different from these assumptions or if alternative methodologies are used. Actual experience may differ due to such variables as demographic experience, the economy, stock market performance and the regulatory environment.

Actuarial Certification

The actuarial calculations in this report were completed under the supervision of Eva Yum, FSA, MAAA, Enrolled Actuary.

The actuarial opinions expressed in this report were prepared by Andy Yeung, ASA, MAAA, FCA, Enrolled Actuary and Eva Yum, FSA, MAAA, Enrolled Actuary. We are members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

Andy Yeung

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

Eva Yum

Eva Yum, FSA, MAAA, EA
Senior Actuary