Contra Costa County Employees' Retirement Association

AGENDA

RETIREMENT BOARD MEETING

REGULAR MEETING	Board Conference Room
August 6, 2025	1200 Concord Avenue, Suite 350
9:00 a.m.	Concord, California

THE RETIREMENT BOARD MAY DISCUSS AND TAKE ACTION ON THE FOLLOWING:

1. Pledge of Allegiance.

2. Appoint committee members.

3. Public Comment (3 minutes/speaker).

4. Recognition of Ryan Lugtu for 5 years of service.

CONSENT ITEMS

5.A All Consent Items are to be approved by one action unless a Board Member requests separate action on a specific item. (Action Item)

I. Approve minutes from the June 25, 2025 and July 9, 2025 meetings.

II. Approve the following routine items:
   a. Certifications of membership.
   b. Service and disability allowances.
   c. Death benefits.
   d. Investment liquidity report.

III. Accept the following routine items:
   a. Disability applications and authorize subpoenas as required.
   b. Travel report.
   c. Investment asset allocation report.

The Retirement Board will provide reasonable accommodations for persons with disabilities planning to attend Board meetings who contact the Retirement Office at least 24 hours before a meeting.

IV. Authorize Scott Gordon, Dan Mierzwa and John Phillips to attend the Verus and Meketa due diligence meetings in Seattle, WA and Portland, OR, August 11-12 2025.

V. Authorize David MacDonald to attend the 22nd Annual Global ARC, Boston, MA, October 20-22, 2025.

VI. Receive the Business Continuity audit report as presented to the Audit Committee at the July 9, 2025 meeting.

5.B Consider and take possible action on Consent Items previously removed, if any. (Action Item)

DISCUSSION ITEMS

6. Consider and take possible action to issue a request for proposal for auditing services as recommended by the Audit Committee. (Action item)

7. Consider and take possible action to adopt the December 31, 2024 Valuation Report and contribution rates for the period July 1, 2026—June 30, 2027. (Action item)

8. Report from Audit Committee Chair on July 9, 2025 meeting.

9. Report from Investment Committee Chair on July 17, 2025 meeting.

10. Consider authorizing the attendance of Board: (Action Item)
    a. NCPERS NAF Conference, October 25-26, 2025, Fort Lauderdale, FL.
    b. NCPERS FALL Conference, October 26-29, 2025, Fort Lauderdale, FL.

11. Reports. (Presentation item)
    a. Trustee reports on meetings, seminars and conferences.
    b. Staff reports

CLOSED SESSION

12. The Board will go into closed session to review the status of the following disability retirement applications pursuant to govt. Code Section 54957:

<u>Member</u>
a. James Selover

13. The Board will continue in closed session pursuant to Govt. Code Section 54957 to consider recommendations from the medical advisor and/or staff regarding the following disability retirement applications:

Member	Type Sought	Recommendation
a. Jeffrey Davis	Service Connected	Service Connected
b. Matthew Mayette	Service Connected	Service Connected
c. Timothy Williams	Service Connected	Service Connected

14. The Board will continue closed session pursuant to Govt. Code Section 54956.9(d)(1) to confer with legal counsel regarding pending litigation:
Nowicki v. CCCERA, et al., Contra Costa County Superior Court, Case No. C17-01266

15. The Board will continue in closed session pursuant to Govt. Code Section 54956.9(d)(4) to confer with legal counsel regarding initiation of litigation (one potential case).

The next meeting is currently scheduled for August 20, 2025 at 9:00 a.m.

Adjourn

The Retirement Board will provide reasonable accommodations for persons with disabilities planning to attend Board meetings who contact the Retirement Office at least 24 hours before a meeting.

Contra Costa County Employees' Retirement Association

MEMORANDUM

Date: August 6, 2025

To: CCCERA Board of Retirement

From: Karen Levy, General Counsel

Subject: Appointment of Committee Members and Officers

Background

The Audit Committee and the Investment Committee charters provide that each committee consist of at least three and no more than four members of the Board. At the second regular meeting in July, as the second order of business, or as required to fill vacancies, the Board Chairperson is to appoint members of the Committee as provided in the CCCERA Regulations and designate one member to serve as the Committee Chairperson and another member to serve as the Committee Vice Chairperson."

The Audit Committee Charter provides: "Ideally, members should have expertise in accounting, auditing, financial reporting, and internal control. Although these desired traits are not mandatory, members should be sufficiently knowledgeable about these topics to make informed recommendations with the assistance of a financial expert." (Audit Committee Charter, Section III.)

The Investment Committee Charter provides: "Ideally, members should have an interest in investment management, investment due diligence processes, financial forecasting and investment performance against benchmarks. Although these desired traits are not mandatory, members should be sufficiently knowledgeable about these topics to make informed recommendations to the full Board when appropriate."
(Investment Committee Charter, Section III.)

Recommendation

The Board Chairperson is to announce the appointment of Audit Committee members, Investment Committee members, as well as a chairperson and vice-chairperson for each committee.

Meeting Date
08/06/2025
Agenda Item
#5.A-I

CCCERA
Contra Costa County Employees' Retirement Association

RETIREMENT BOARD MEETING MINUTES

REGULAR MEETING
June 25, 2025
9:00 a.m.

Board Conference Room
1200 Concord Avenue, Suite 350
Concord, California

Present: Dennis Chebotarev, Donald Finley, Scott Gordon, Jerry Holcombe, Louie Kroll, Jay Kwon, John Phillips, and Samson Wong

Absent: Candace Andersen, David MacDonald, Dan Mierzwa, and Mike Sloan

Staff: Christina Dunn, Chief Executive Officer; Colin Bishop, Deputy Chief Executive Officer; Schuyler Campbell, Deputy General Counsel; and Tim Price, Chief Investment Officer

Outside Professional Support:	Representing:
Brooke Baird	Brown Armstrong

1. **Pledge of Allegiance**
The Board, staff and audience joined in the *Pledge of Allegiance*.

2. **Accept comments from the public**
No member of the public offered comment.

3. **Approve minutes from the May 21, 2025 meeting**
It was **M/S/C** to approve the minutes from the May 21, 2025 meeting. (Yes: Chebotarev, Finley, Gordon, Holcombe, Kroll, Kwon, Phillips, and Wong)

4. **Presentation from Brown Armstrong on the audit of the December 31, 2024 Annual Comprehensive Financial Report**
Baird presented the audit of the December 31, 2024 Annual Comprehensive Financial Report.

5. Presentation of the investment annual funding plan

Price gave a presentation on the investment annual funding plan.

6. Report from Audit Committee Chair on June 4, 2025 meeting

Phillips reported on the June 4, 2025 Audit Committee meeting.

7. Reports

a. Trustee reports on meetings, seminars, and conferences – None.

b. Staff reports – Dunn noted the Member Benefit Statements were mailed out last week and members will start receiving them soon. At the July 9, 2025 Board meeting revised contribution rates for Contra Costa County Fire Protection District will be presented. Effective July 1, 2025 Rodeo-Hercules Fire Protection District annexed into Contra Costa County Fire Protection District.

   Price introduced the new Investment Officer, Brian Rowe.

The next meeting is currently scheduled for July 9, 2025 at 9:00 a.m.

It was **M/S/C** to adjourn the meeting. (Yes: Chebotarev, Finley, Gordon, Holcombe, Kroll, Kwon, Phillips, and Wong)

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Scott W. Gordon, Chairperson Jerry R. Holcombe, Secretary

Meeting Date
08/06/2025
Agenda Item
#5.A-I

Contra Costa County Employees' Retirement Association

RETIREMENT BOARD MEETING MINUTES

REGULAR MEETING	Board Conference Room
July 9, 2025	1200 Concord Avenue, Suite 350
9:00 a.m.	Concord, California

Present: Dennis Chebotarev, Donald Finley, Scott Gordon, Jerry Holcombe, Louie Kroll, Jay Kwon, David MacDonald, John Phillips, Mike Sloan, and Samson Wong

Absent: Candace Andersen and Dan Mierzwa

Staff: Christina Dunn, Chief Executive Officer; Colin Bishop, Deputy Chief Executive Officer; Karen Levy, General Counsel; Tim Price, Chief Investment Officer; and Ryan Luis, Retirement Services Manager

Outside Professional Support: Representing:
None

1. **Pledge of Allegiance**
The Board, staff and audience joined in the *Pledge of Allegiance*.

2. **Board Reorganization**
   a. It was **M/S/C** to nominate Scott Gordon as Chairperson (Yes: Chebotarev, Finley, Gordon, Holcombe, Kroll, Kwon, MacDonald, and Phillips)

Wong was present for subsequent discussion and voting.

   b. It was **M/S/C** to nominate David MacDonald as Vice-Chairperson. (Yes: Chebotarev, Gordon, Holcombe, Kroll, Kwon, MacDonald, Phillips, and Wong)

   c. It was **M/S/C** to nominate Jerry Holcombe as Secretary. (Yes: Chebotarev, Gordon, Holcombe, Kroll, Kwon, MacDonald, Phillips, and Wong)

3. **Accept comments from the Public**
No member of the public offered comment.

4A. Consider and take possible action on Consent Items

It was **M/S/C** to approve all consent items. (Yes: Chebotarev, Gordon, Holcombe, Kroll, Kwon, MacDonald, Phillips, and Wong)

4B. Consider and take possible action on Consent Items previously removed, if any

No action taken on this item.

5. Consider and take possible action to adopt Board of Retirement Resolution No. 2025-5, Investment Asset Allocation Targets and Ranges

It was **M/S/C** to adopt Board of Retirement Resolution No. 2025-5, Investment Asset Allocation Targets and Ranges**.** (Yes: Chebotarev, Gordon, Holcombe, Kroll, Kwon, MacDonald, Phillips, and Wong)

6. Consider and take possible action to adopt the contribution rates for the period July 1, 2025 – June 30, 2026 for the Contra Costa County Fire Protection District

It was **M/S/C** to adopt the contribution rates for the period July 1, 2025 – June 30, 2026 for the Contra Costa County Fire Protection District**.** (Yes: Chebotarev, Gordon, Holcombe, Kroll, Kwon, MacDonald, Phillips, and Wong)

7. Consider authorizing the attendance of Board:

a. It was **M/S/C** to approve one Board member at IDAC 4th Annual Global Summit on Talent Maximization, September 23-25, 2025, San Antonio, TX. (Yes: Chebotarev, Gordon, Holcombe, Kroll, Kwon, MacDonald, Phillips, and Wong)

b. It was **M/S/C** to approve one Board member at 2025 Pension Bridge Alternatives, October 28, 2025, New York, NY. (Yes: Chebotarev, Gordon, Holcombe, Kroll, Kwon, MacDonald, Phillips, and Wong)

c. There was no action taken on this item. 2025 Invesco Real Estate Global Client Conference, November 18-20, 2025, San Diego, CA.

8. Reports

a. Trustee reports on meetings, seminars, and conferences – None.

b. Staff reports – Dunn announced July 1st commemorated the 80th Anniversary of CCCERA, noting the first board meeting was held on July 11, 1945. She also noted there will be an Investment Committee meeting on July 17, 2025 at 9:30 a.m., to interview the general investment consultants. This meeting is open to the public. Lastly, she announced new microphones for the boardroom will be installed prior to the next board meeting.

CLOSED SESSION

The Board moved into closed session pursuant to Govt. Code Section 54957 to consider recommendations from the medical advisor and/or staff regarding disability retirement applications.

The Board moved into open session and reported the following:

9. There was no reportable action taken on this item.

10. Disability Applications:

It was **M/S/C** to accept the Medical Advisor's recommendation and grant the following disability benefits:

a. Tamara Gutierrez – Service Connected Yes: (Chebotarev, Finley, Gordon Holcombe, Kroll, Kwon, MacDonald, and Phillips)

The next meeting is currently scheduled for August 6, 2025 at 9:00 a.m.

It was **M/S/C** to adjourn the meeting (Yes: Chebotarev, Gordon, Holcombe, Kroll, Kwon, MacDonald, Phillips, and Wong)

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Scott W. Gordon, Chairperson Jerry R. Holcombe, Secretary

Meeting Date
08/06/2025
Agenda Item
#5.A-IIa.

CERTIFICATION OF MEMBERSHIPS

Name	Employee Number	Tier	Membership Date	Employer
Abdolcader, Jaynap	96468	P5.2	05/01/25	Contra Costa County
Aguirre, Eric	96450	P5.2	05/01/25	Contra Costa County
Aikens, Darius	96575	P5.2	05/01/25	Contra Costa County
Ali, Azar	96514	P5.2	05/01/25	Contra Costa County
Argueta, Miguel	96568	P5.2	05/01/25	Contra Costa County
Arias, Isabel	94271	P5.2	05/01/25	Contra Costa County
Ayala, Alyssa	D9500	P5.3	05/01/25	Contra Costa County Superior Court
Barnes, Samantha	96458	P5.2	05/01/25	Contra Costa County
Baskin, Liane	96496	P5.2	05/01/25	Contra Costa County
Bekele, Shaya	96621	P5.2	05/01/25	Contra Costa County
Belardo, Kevin	96546	P5.2	05/01/25	Contra Costa County
Bhardwaj, Swati	96554	P5.2	05/01/25	Contra Costa County
Binalinbing, Joe	D9500	P5.3	05/01/25	Contra Costa County Superior Court
Bolden, Timiera	54788	P5.2	05/01/25	Contra Costa County
Booth, Stephanie	96545	P5.2	05/01/25	Contra Costa County
Brumfield, Jason	96566	P5.2	05/01/25	Contra Costa County
Bruno, Peter	96646	P5.2	05/01/25	Contra Costa County
Busley, Mekia	96500	P5.2	05/01/25	Contra Costa County
Cachon, Paula	96559	P5.2	05/01/25	Contra Costa County
Camacho, Manuel	96605	P5.2	05/01/25	Contra Costa County
Camilli, Alexander	96665	P5.2	05/01/25	Contra Costa County
Candelario, Isabel	96520	P5.2	05/01/25	Contra Costa County
Caton Jr., Rodney	96491	P5.2	05/01/25	Contra Costa County
Chapman, Frederick	96449	P5.2	05/01/25	Contra Costa County
Colin, Daniel	96562	P5.2	05/01/25	Contra Costa County
Collins, Dawauntae	96640	P5.2	05/01/25	Contra Costa County
Condon, Rosemary	96612	P5.2	05/01/25	Contra Costa County
Constantino, Isabel	D9500	P5.3	05/01/25	Contra Costa County Superior Court
Corena Eduardo, Paola	96578	P5.2	05/01/25	Contra Costa County
Cruz, Homero	96584	P5.2	05/01/25	Contra Costa County
Dadi, Gosa	96558	P5.2	05/01/25	Contra Costa County
Davis, Michelle	96548	P5.2	05/01/25	Contra Costa County
Delost, Lindsey	96466	P5.2	05/01/25	Contra Costa County
DeOsuna, Miguel	94580	P5.2	05/01/25	Contra Costa County
Dominguez, Fatima	91360	P5.2	05/01/25	Contra Costa County
Dominguez, Matthew	D9500	P5.3	05/01/25	Contra Costa County Superior Court
Drake, Clancy	96592	P5.2	05/01/25	Contra Costa County

Key:

I = Tier I	P4.2 = PEPRA Tier 4 (2% COLA)	S/A = Safety Tier A
II = Tier II	P4.3 = PEPRA Tier 4 (3% COLA)	S/C = Safety Tier C
III = Tier III	P5.2 = PEPRA Tier 5 (2% COLA)	S/D = Safety Tier D
	P5.3 = PEPRA Tier 5 (3% COLA)	S/E = Safety Tier E

CERTIFICATION OF MEMBERSHIPS

Name	*Employee Number*	*Tier*	*Membership Date*	*Employer*
Duran, Karen	96657	P5.2	05/01/25	Contra Costa County
Edoka, Ijeoma	96614	P5.2	05/01/25	Contra Costa County
El-Khatib, Nazmeih	96501	P5.2	05/01/25	Contra Costa County
Emery, Kent	96506	P5.2	05/01/25	Contra Costa County
Falo, Melanie	96586	P5.2	05/01/25	Contra Costa County
Fifita, Taukeiaho	89979	P5.2	05/01/25	Contra Costa County
Flemming, Alonzo	96599	P5.2	05/01/25	Contra Costa County
Fuller, Fan	D9500	P5.3	05/01/25	Contra Costa County Superior Court
Gabino Franco, Patricia	96508	P5.2	05/01/25	Contra Costa County
Garcia, Daniela	96557	P5.2	05/01/25	Contra Costa County
Garcia, Nancy	86706	P5.2	05/01/25	Contra Costa County
Gilbrech, Kyle	D9500	P5.3	05/01/25	Contra Costa County Superior Court
Gingery, Chad	96613	P5.2	05/01/25	Contra Costa County
Glenn, Yvonne	96598	P5.2	05/01/25	Contra Costa County
Goff, Blair	96587	P5.2	05/01/25	Contra Costa County
Gorospe, Mhel William	96606	P5.2	05/01/25	Contra Costa County
Gotsill, Gina	D9500	P5.3	05/01/25	Contra Costa County Superior Court
Graves, Nathaniel	96664	P5.2	05/01/25	Contra Costa County
Green, Eboni	96600	P5.2	05/01/25	Contra Costa County
Green, Nicole	96576	P5.2	05/01/25	Contra Costa County
Gutierrez Quintero, Humberto	D9500	P5.3	05/01/25	Contra Costa County Superior Court
Gutierrez, Joselin	94354	P5.2	05/01/25	Contra Costa County
Guzman, Cesar	D7274	P4.3	05/01/25	Moraga-Orinda Fire District
Harris, Shelialanna	77904	III	05/01/25	Contra Costa County
Hattaway, Jared	96651	S/E	05/01/25	Contra Costa County
Hernandez, Diego	96662	P5.2	05/01/25	Contra Costa County
Herrera, Damen	96549	P5.2	05/01/25	Contra Costa County
Hu, Chris	96490	P5.2	05/01/25	Contra Costa County
Huang, Henry	96619	P5.2	05/01/25	Contra Costa County
Huerta, Francine	95176	P5.2	05/01/25	Contra Costa County
Huntsman, Clinton	96512	P5.2	05/01/25	Contra Costa County
Ines, Hector Albert	96421	P5.2	05/01/25	Contra Costa County
Irzyk, Dylan	96547	P5.2	05/01/25	Contra Costa County
Jagar, Chelsea	D9500	P5.3	05/01/25	Contra Costa County Superior Court
Janish, Jacob	96666	P5.2	05/01/25	Contra Costa County
Johnson Collins, Iyesha	96528	P5.2	05/01/25	Contra Costa County
Johnson, Kristopher	96588	P5.2	05/01/25	Contra Costa County

Key:

I = Tier I	**P4.2 = PEPRA Tier 4 (2% COLA)**	**S/A = Safety Tier A**
II = Tier II	**P4.3 = PEPRA Tier 4 (3% COLA)**	**S/C = Safety Tier C**
III = Tier III	**P5.2 = PEPRA Tier 5 (2% COLA)**	**S/D = Safety Tier D**
	P5.3 = PEPRA Tier 5 (3% COLA)	**S/E = Safety Tier E**

CERTIFICATION OF MEMBERSHIPS

Name	*Employee Number*	*Tier*	*Membership Date*	*Employer*
Johnson, Kylie	D9500	P5.3	05/01/25	Contra Costa County Superior Court
Jones, Steven	96526	P5.2	05/01/25	Contra Costa County
Joseph, Ciara	87271	P5.2	05/01/25	Contra Costa County
Kezar, Christina	D9500	P5.3	05/01/25	Contra Costa County Superior Court
King, Davon	96494	P5.2	05/01/25	Contra Costa County
Kok, Marco	96461	P5.2	05/01/25	Contra Costa County
Lau, Shirley	83376	P5.2	05/01/25	Contra Costa County
Leal, Amy	96596	P5.2	05/01/25	Contra Costa County
Leong, Narita	96556	P5.2	05/01/25	Contra Costa County
Lin, Shulin	96429	P5.2	05/01/25	Contra Costa County
Logan, Madison	96222	P5.2	05/01/25	Contra Costa County
Lozano, Marco	96636	P5.2	05/01/25	Contra Costa County
Lukacs, Samuel	96645	P5.2	05/01/25	Contra Costa County
Lumsden, Lijia	96593	P5.2	05/01/25	Contra Costa County
Luque, Vanessa	96538	P5.2	05/01/25	Contra Costa County
Luttrell, Jeffrey	96564	P5.2	05/01/25	Contra Costa County
Madrigal Mojica, Emmanuel	96597	P5.2	05/01/25	Contra Costa County
Maka, John	96642	P5.2	05/01/25	Contra Costa County
Marchenkov, Nikolai	96668	P5.2	05/01/25	Contra Costa County
Martinez, Anthony	96492	P5.2	05/01/25	Contra Costa County
Martinez, Leo	89154	P5.2	05/01/25	Contra Costa County
McCaffrey-Cabezas, Anna	96510	P5.2	05/01/25	Contra Costa County
McLaughlin, Maxwell	96634	P5.2	05/01/25	Contra Costa County
Meza, Pedro	96644	P5.2	05/01/25	Contra Costa County
Nacion, Wilfred	96594	P5.2	05/01/25	Contra Costa County
Nunez, Alex	96595	P5.2	05/01/25	Contra Costa County
Oropeza, Celestina	96585	P5.2	05/01/25	Contra Costa County
Paich Provost Baty, Brandon	96589	P5.2	05/01/25	Contra Costa County
Palomino, Maria	96515	P5.2	05/01/25	Contra Costa County
Pena-Garibay, Abigail	96641	P5.2	05/01/25	Contra Costa County
Quijada, Jocelyn	96469	P5.2	05/01/25	Contra Costa County
Racette, John	96649	S/E	05/01/25	Contra Costa County
Rai, Pratistha	96503	P5.2	05/01/25	Contra Costa County
Reed, Kwame	96489	P5.2	05/01/25	Contra Costa County
Ritter, Molly	96570	P5.2	05/01/25	Contra Costa County
Russell, Nia	96487	P5.2	05/01/25	Contra Costa County

Key:

I = Tier I	P4.2 = PEPRA Tier 4 (2% COLA)	S/A = Safety Tier A
II = Tier II	P4.3 = PEPRA Tier 4 (3% COLA)	S/C = Safety Tier C
III = Tier III	P5.2 = PEPRA Tier 5 (2% COLA)	S/D = Safety Tier D
	P5.3 = PEPRA Tier 5 (3% COLA)	S/E = Safety Tier E

CERTIFICATION OF MEMBERSHIPS

Name	*Employee Number*	*Tier*	*Membership Date*	*Employer*
Sadsad, Raymond	96602	P5.2	05/01/25	Contra Costa County
Salgado, Jovany	96608	P5.2	05/01/25	Contra Costa County
Sanchez, David	95186	P5.2	05/01/25	Contra Costa County
Sandoval, Alexander	D9500	P5.3	05/01/25	Contra Costa County Superior Court
Santis-Romero, Lucia	96471	P5.2	05/01/25	Contra Costa County
Saravia, Hugo	96459	P5.2	05/01/25	Contra Costa County
Seawright, Brandi	96419	P5.2	05/01/25	Contra Costa County
Serrano Archundia, Edwin	95266	P5.2	05/01/25	Contra Costa County
Smith, India	96601	P5.2	05/01/25	Contra Costa County
Solatan, Stephen	95555	P5.2	05/01/25	Contra Costa County
Solis Jr., Leobardo	D3406	P4.3	05/01/25	Central Contra Costa Sanitary District
Sta Ana, Dominique	91402	P5.2	05/01/25	Contra Costa County
Sun, Yongsheng	96643	P5.2	05/01/25	Contra Costa County
Takakuwa, Kevin	96355	P5.2	05/01/25	Contra Costa County
Tancioco, Brianna-Marie	96635	P5.2	05/01/25	Contra Costa County
Tardif, Matthew	D3406	P4.3	05/01/25	Central Contra Costa Sanitary District
Tarkington, Michael	D9500	P5.3	05/01/25	Contra Costa County Superior Court
Togonon, Ryan	96590	P5.2	05/01/25	Contra Costa County
Torres, Kyler	96663	P5.2	05/01/25	Contra Costa County
Tran, Dany	D9500	P5.3	05/01/25	Contra Costa County Superior Court
Tran, Pauline	96495	P5.2	05/01/25	Contra Costa County
Truong, Diane	96511	P5.2	05/01/25	Contra Costa County
Turner, Steven	96563	P5.2	05/01/25	Contra Costa County
Vaimaona Tauala, Amber	96678	P4.2	05/01/25	Contra Costa County Fire Protection District
VandenHeuvel, Wyatt	96574	P5.2	05/01/25	Contra Costa County
Vasquez, Sophie	96603	P5.2	05/01/25	Contra Costa County
Vela, Rebecca	96467	P5.2	05/01/25	Contra Costa County
Virruete, Alejandro	96639	P5.2	05/01/25	Contra Costa County
Volkov, Lyubov	96525	P5.2	05/01/25	Contra Costa County
Walls-Castaldi, Casey	96462	P5.2	05/01/25	Contra Costa County
Wasserfall, Brianne	95488	P5.2	05/01/25	Contra Costa County
Wheat, Adam	96591	P5.2	05/01/25	Contra Costa County
Wilson, Christopher	96451	P5.2	05/01/25	Contra Costa County
Woods, Thomas	93508	P5.2	05/01/25	Contra Costa County
Zhang, Ying	96509	P5.2	05/01/25	Contra Costa County
Zuniga, Melissa	D9500	P5.3	05/01/25	Contra Costa County Superior Court

Key:

I = Tier I	**P4.2 = PEPRA Tier 4 (2% COLA)**	**S/A = Safety Tier A**
II = Tier II	**P4.3 = PEPRA Tier 4 (3% COLA)**	**S/C = Safety Tier C**
III = Tier III	**P5.2 = PEPRA Tier 5 (2% COLA)**	**S/D = Safety Tier D**
	P5.3 = PEPRA Tier 5 (3% COLA)	**S/E = Safety Tier E**

Meeting Date
08/06/2025
Agenda Item
#5.A-IIb.

SERVICE & DISABILITY RETIREMENT ALLOWANCES

Name	*Number*	*Effective Date*	*Option Type*	*Tier*	*Selected*
Ackerman Miraflores, Lila	D9500	04/05/25	SR	III	Unmodified
Bennett, Eric	72839	05/09/25	SR	Safety A	Unmodified
Brown, Yvette	74472	05/01/25	SR	III	Unmodified
Butler, Diane	53480	06/06/25	SR	II and III	Unmodified
Calloway, Vernon	86402	05/31/25	SR	PEPRA 5.2	Unmodified
Cienfuegos, Rebecca	81164	05/12/25	SR	PEPRA 5.2	Unmodified
Githua, Josephine	71637	06/01/25	SR	III	Unmodified
Hare, Sandra	69599	06/01/25	SR	III	Unmodified
Klawuhn-Simmons, Melissa	65055	03/14/25	SR	I and Safety A	Unmodified
Mauricio, Sara	76529	06/13/25	SR	III	Unmodified
Nounou, Anne	88968	05/29/25	SR	PEPRA 5.2	Unmodified
Perrier-Morris, Maxine	64804	05/08/25	SR	I	Unmodified
Pliler, Shawna	63650	03/30/25	SR	Safety A	Unmodified
Serrano, Claudia	74987	05/31/25	SR	III	Unmodified
Shah, Santosh	D9500	05/06/25	SR	PEPRA 5.3	Unmodified
Taylor, James	87922	06/12/25	SR	PEPRA 5.2	Option 1
Teo, Suliana	64566	03/29/25	SR	II and III	Unmodified

Option Type
NSP = Non-Specified
SCD = Service Connected Disability
SR = Service Retirement
NSCD = Non-Service Connected Disability
* = County Advance Selected w/option

Tier
I = Tier I
II = Tier II
III = Tier III
S/A = Safety Tier A
S/C = safety Tier C
Pepra 4.2 = Pepra Tier 4 (2% COLA)
Pepra 4.3 = Pepra Tier 4 (3% COLA)
Pepra 5.2 = Pepra Tier 5 (2% COLA)
Pepra 5.3 = Pepra Tier 5 (3% COLA)
S/D = Pepra Safety Tier D
S/E = Pepra Safety Tier E

DEATHS

Name	Date of Death	Employer as of Date of Death
Abbey, William	07/21/25	Contra Costa County
Axelsen, Gene	06/18/25	Contra Costa County
Barrett, Winifred	05/19/25	Contra Costa County
Gerber, Darlyn	06/27/25	Contra Costa County
Martens, Irene	05/05/25	Contra Costa County
Porter, James	05/31/25	Contra Costa County
Shinault, Sandra	07/23/25	Contra Costa County
Shores, Lyle	06/26/25	Contra Costa County
Simmons, Arlene	05/28/25	Superior Court of California, County of Contra Costa
Simms, Alice	06/15/25	Contra Costa County
Sodja, Howard	05/26/25	Contra Costa County
Sorel, Lawrence	07/11/25	Contra Costa County
Taylor, Marjorie	06/11/25	Contra Costa County
Whisler, Gordon	05/11/25	Contra Costa County

Contra Costa County Employees' Retirement Association

Contra Costa County Employees' Retirement Association
Liquidity Report – June 2025

June 2025 Performance

	Cash Flow	Coverage Ratio
Benefit Cash Flow Projected by Model	$54,250,000	
Liquidity Sub-Portfolio Cash Flow	$54,250,000	**100%**
Actual Benefits Paid	$55,221,139	**98.2%**
Next Month's Projected Benefit Payment	*$54,500,000*	

Monthly Manager Positioning – June 2025

	Beginning Market Value	Liquidity Program Cash Flow	Market Value Change/Other Activity	Ending Market Value
DFA	$341,816,811	($12,000,000)	$1,639,869	$331,456,680
Insight	$562,206,907	($20,250,000)	$2,948,660	$544,905,567
Sit	$588,847,030	($22,000,000)	$6,459,817	$573,306,847
Liquidity	**$1,492,870,748**	**($54,250,000)**	**$11,048,346**	**$1,449,669,094**
Cash	$608,820,602	($971,139)	$29,069,836	$636,919,298
Liquidity + Cash	**$2,101,691,350**	**($55,221,139)**	**$40,118,182**	**$2,086,588,392**

Functional Roles

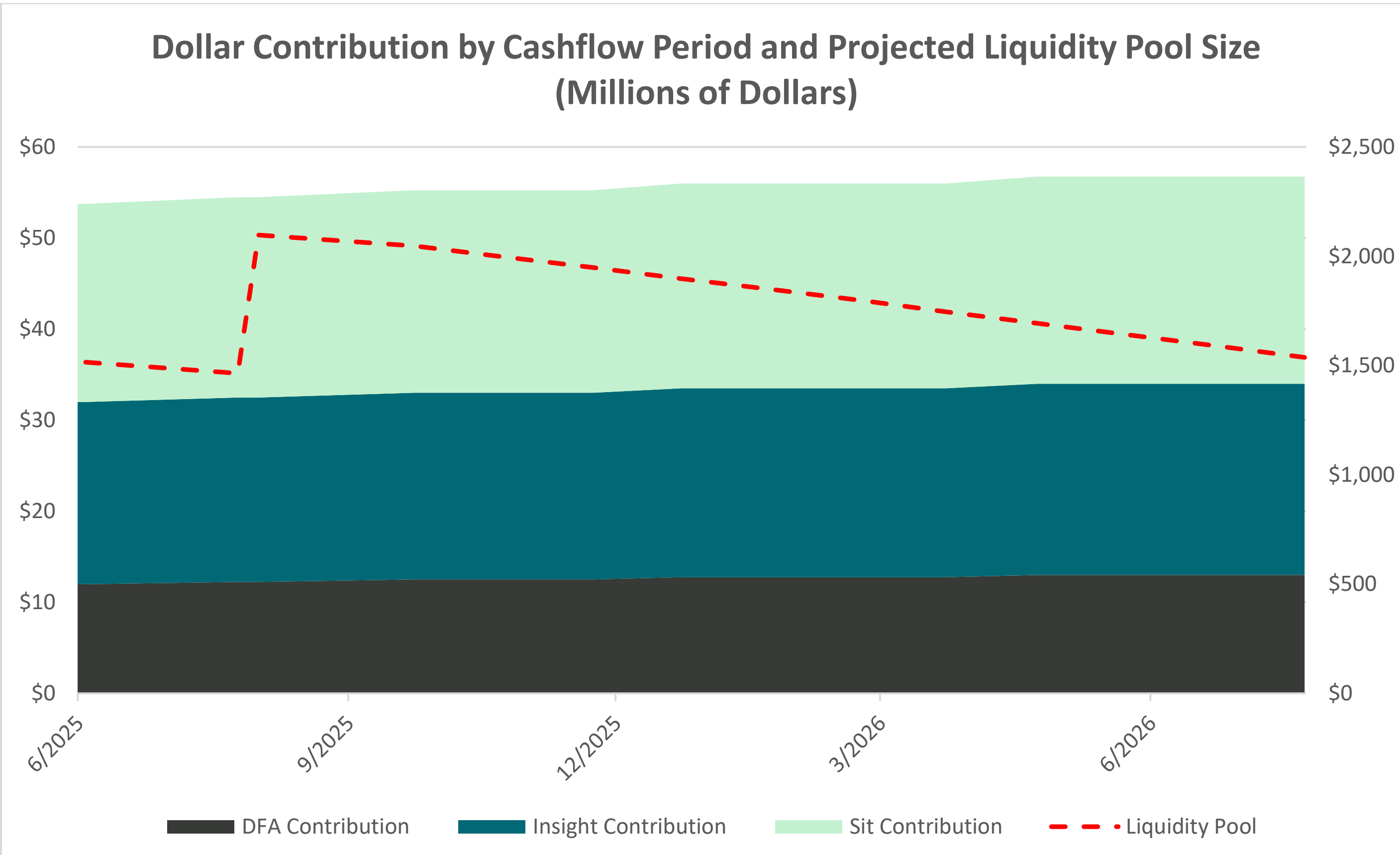
Manager	Portfolio Characteristics	Liquidity Contribution
Sit	High quality portfolio of small balance, government guaranteed mortgages with higher yields.	Pays out net income on monthly basis.
DFA	High quality, short duration portfolio of liquid, low volatility characteristics.	Pays out a pre-determined monthly amount. DFA sources liquidity from across their portfolio.
Insight	Buy and maintain (limited trading) portfolio of high quality, short duration, primarily corporates.	Completion portfolio makes a payment through net income and bond maturities that bridges the gap between other managers and projected payment.
Cash	STIF account at custodial bank.	Buffer in the event of any Liquidity shortfall/excess.

Notes

The sixth cash flow for 2025 from the liquidity program was completed on June 23rd. The actuarial model cash flow was lower than actual experience, producing $971 thousand less than the actual benefits paid.

Cash Flow Structure

The chart below shows the sources of cash flow for the next three years of CCCERA's projected benefit payments. This table will change slightly as the model is tweaked and as the portfolios receive new rounds of funding each July as part of the Annual Funding Plan.



Meeting Date
08/06/2025
Agenda Item
#5.A-IIIa.

DISABILITY RETIREMENT APPLICATIONS

The Board's Hearing Officer is hereby authorized to issue subpoenas in the following cases involving disability applications:

Name	*Number*	*Filed*	*Type*
De La Cruz, Allen	81663	06/23/25	SCD
Helmick, Brian	52792	07/15/25	SCD

Option Type
NSP = Non-Specified
SCD = Service Connected Disability
SR = Service Retirement
NSCD = Non-Service Connected Disability
* = County Advance Selected w/option

Tier
I = Tier I
II = Tier II
III = Tier III
S/A = Safety Tier A
S/C = safety Tier C

Pepra 4.2 = Pepra Tier 4 (2% COLA)
Pepra 4.3 = Pepra Tier 4 (3% COLA)
Pepra 5.2 = Pepra Tier 5 (2% COLA)
Pepra 5.3 = Pepra Tier 5 (3% COLA)
S/D = Pepra Safety Tier D
S/E = Pepra Safety Tier E

Meeting Date
08/06/2025
Agenda Item
#5.A-IIIb.

CCCERA Board of Trustees
Training & Educational Conference Expenses Paid During
Quarter 2 - 2025 (April to June)

Trustee:	Conference Name/Purpose:	Location:	Dates:	Total
Candace Andersen	NONE			
Dennis Chebotarev	SACRS UC Berkeley Program-PREPAID	Berkeley, CA	Jul 13-16, 2025	3,000.00
Donald Finley	NONE			
Scott Gordon	Institutional Investor Public Funds Roundtable	Los Angeles, CA	Apr 28-30, 2025	312.06
Jerry Holcombe	NONE			
Louie Kroll	SACRS Spring Conference 2025	Rancho Mirage, CA	May 13-16, 2025	1,402.76
	CALAPRS Virtual Trustees' Roundtable	Virtual	May 30, 2025	50.00
	SACRS UC Berkeley Program-PREPAID	Berkeley, CA	Jul 13-16, 2025	3,000.00
Jay Kwon	SACRS Spring Conference 2025	Rancho Mirage, CA	May 13-16, 2025	824.31
	CALAPRS Virtual Trustees' Roundtable	Virtual	May 30, 2025	50.00
David J. MacDonald	SACRS Spring Conference 2025	Rancho Mirage, CA	May 13-16, 2025	290.00
	IFEBP Legislative Update	Washington, DC	May 19-20, 2025	2,260.00
	IDAC 2025 Annual Global Summit-PREPAID	San Antonio, TX	Sep 23-25, 2025	2,500.00
Dan Mierzwa	NONE			
John Phillips	NONE			
Mike Sloan	CRCEA 2025 Conference	Ventura, CA	Apr 13-16, 2025	1,550.36
	SACRS Spring Conference 2025	Rancho Mirage, CA	May 13-16, 2025	2,159.69
Samson Wong	SACRS Spring Conference 2025	Rancho Mirage, CA	May 13-16, 2025	1,828.13
	SACRS UC Berkeley Program-PREPAID	Berkeley, CA	Jul 13-16, 2025	4,464.33

Meeting Date
08/06/2025
Agenda Item
#5.A-IIIc.

Contra Costa County Employees' Retirement Association
Asset Allocation as of June 30, 2025

Liquidity	Market Value	Percentage of Total Fund	Current Target* Percentage	Current Target Over/(Under)	Long Term Target	Long Term Over/(Under)
Dimensional Fund Advisors	331,456,680	2.7%	4.0%	-1.3%		
Insight	544,905,567	4.5%	6.5%	-2.0%		
Sit	573,306,847	4.7%	6.5%	-1.8%		
Total Liquidity	**1,449,669,094**	**11.9%**	**17.0%**	**-5.1%**	**14.0%**	**-2.1%**
		Range 10-20%				
Growth						
Domestic Equity						
Boston Partners	481,218,504	4.0%	3.0%	1.0%		
BlackRock Index Fund	1,372,761,131	11.3%	10.0%	1.3%		
Emerald Advisers	259,535,289	2.1%	1.5%	0.6%		
Ceredex	203,136,060	1.7%	1.5%	0.2%		
Total Domestic Equity	2,316,650,984	19.1%	16.0%	3.1%	11.0%	8.1%
Global & International Equity						
Pyrford (Columbia)	504,020,936	4.2%	3.5%	0.7%		
William Blair	478,471,464	3.9%	3.5%	0.4%		
First Eagle	727,191,999	6.0%	5.5%	0.5%		
Artisan Global Opportunities	693,421,161	5.7%	5.5%	0.2%		
PIMCO/RAE Emerging Markets	277,463,370	2.3%	2.0%	0.3%		
TT Emerging Markets	280,178,967	2.3%	2.0%	0.3%		
Total Global & International Equity	2,960,747,897	24.4%	22.0%	2.4%	17.0%	7.4%
Private Equity	1,218,269,037	10.0%	10.0%	1.6%	15.0%	-5.0%
Real Assets/Infrastructure	193,512,743	1.6%	2.0%		3.0%	-1.4%
Total Equity		**55.1%**	**50.0%**	5.1%		
Total Equity Range		**40-60%**				
Private Credit	1,134,323,332	9.3%	10.0%	-0.7%	13.0%	-3.7%
High Yield	175,943,107	1.4%	3.0%	-1.6%	0.0%	1.4%
Total Credit		**11.2%**	**13.0%**	-1.8%		
Total Credit Range		**8-16%**				
Real Estate - Value Add	305,979,862	2.5%	2.3%	0.2%	3.0%	-0.5%
Real Estate - Opportunistic & Distressed	303,766,143	2.5%	2.7%	-0.2%	4.0%	-1.5%
Real Estate - REIT			2.0%	-0.1%	0.0%	1.9%
Adelante	107,974,371	0.9%				
Invesco	122,294,945	1.0%				
Real Estate Debt	75,765,610	0.6%		0.6%	3.0%	-2.4%
Total Real Estate		**7.5%**	**7.0%**	0.5%		
Total Real Estate Range		**5-10%**				
Multi-Asset Credit		0.0%		0.0%	4.0%	-4.0%
Total Other Growth Assets (P.E. thru R.P.)	3,637,829,151	30.0%	32.0%	-2.0%	45.0%	-15.0%
Total Growth Assets	**8,915,228,032**	**73.8%**	**70.0%**	**3.4%**	**73.0%**	**0.8%**
		Range 60-80%				
Risk Diversifying						
AFL-CIO	274,572,152	2.3%	2.5%	-0.2%	2.5%	-0.2%
BH-DG Systematic	211,483,700	1.7%	2.0%	-0.3%	2.5%	
Sit LLCAR	487,634,444	4.0%	3.5%	0.5%	2.0%	2.0%
Total Risk Diversifying	**973,690,296**	**8.0%**	**8.0%**	0.0%	**10.0%**	**-2.0%**
		Range 0% - 12%				
Cash and Overlay						
Overlay (Parametric)	168,850,971	1.4%		1.4%		
Cash	636,919,298	5.2%	5.0%	0.2%		
Total Cash and Overlay	**805,770,269**	**6.6%**	**5.0%**	1.6%	**3.0%**	**3.6%**
Total Cash Range		**0-6%**				

Contra Costa County Employees' Retirement Association
Asset Allocation as of June 30, 2025

Total Fund	**12,144,357,691**	**100%**	**100%**		**100%**	

*Current targets and ranges reflect asset allocation targets accepted by the Board on May 1, 2025 (BOR Resolution 2025-4).

Private Market Investments
As of June 30, 2025

REAL ESTATE - Value Add	Inception Date	Target Termination	# of Extension	Discretion by GP/LP	New Target Termination	Funding Commitment	Market Value	% of Total Asset	Outstanding Commitment
Blackstone Strategic Partners Real Estate VIII	11/18/22	11/18/32				80,000,000	33,497,762	0.28%	52,158,815
EQT Exeter Industrial Value Fund VI	06/02/23	06/02/31				60,000,000	25,359,410	0.21%	36,000,000
Invesco IREF IV	12/01/14	12/01/21				35,000,000	98,223	0.00%	3,416,217
Invesco IREF V	09/11/18	09/11/25				75,000,000	58,157,036	0.48%	6,581,100
Invesco IREF VI	09/21/21	09/22/29				100,000,000	54,445,622	0.45%	38,275,303
Jadian Real Estate Fund II, LP	08/29/24	08/29/34				60,000,000	7,667,647	0.06%	53,342,101
Long Wharf FREG III	03/30/07	12/31/17				75,000,000	0	0.00%	
Long Wharf FREG IV	08/14/13	09/30/21				25,000,000	0	0.00%	
Long Wharf FREG V	10/31/16	09/30/24				50,000,000	22,395,994	0.18%	
Long Wharf LREP VI	02/05/20	02/05/28				50,000,000	33,149,980	0.27%	361,552
Long Wharf LREP VII	05/15/23	03/31/32				50,000,000	25,360,235	0.21%	20,668,181
LaSalle Income & Growth Fund VI	01/31/12	01/31/19				75,000,000	8,393,992	0.07%	3,946,000
LaSalle Income & Growth Fund VII	10/31/16	09/30/24				75,000,000	16,101,218	0.13%	87,245
Stockbridge Value Fund V	04/19/24	04/19/34				60,000,000	21,352,743	0.18%	37,007,052
						1,040,000,000	**305,979,862**	**2.52%**	**251,843,566**
	Outstanding Commitments						**251,843,566**		
	Total						**557,823,428**		

REAL ESTATE -Opportunistic & Distressed	Inception Date	Target Termination	# of Extension	Discretion by GP/LP	New Target Termination	Funding Commitment	Market Value	% of Total Asset	Outstanding Commitment
ARES US REAL ESTATE OPPORTUNITY FUND IV,L.P.	11/06/23	11/06/33				60,000,000	11,054,246	0.09%	38,970,756
Blackstone BREP X	06/30/22	06/30/32				100,000,000	39,786,855	0.33%	63,272,967
Cross Lake Real Estate Fund IV	04/11/23	04/11/33				60,000,000	8,528,287	0.07%	50,762,731
DLJ Real Estate Capital Partners, L.P. III	06/30/05	06/30/14	in full liq.			75,000,000	5,582,321	0.05%	4,031,338
DLJ Real Estate Capital Partners, L.P. IV	12/31/07	09/30/18				100,000,000	26,974,511	0.22%	0
DLJ Real Estate Capital Partners, L.P. V	07/31/13	12/31/22				75,000,000	5,669,022	0.05%	535,678
DLJ Real Estate Capital Partners, L.P. VI	02/28/19	01/31/29				50,000,000	14,787,343	0.12%	4,421,590
KSL Capital VI	10/24/23	10/24/33				50,000,000	13,192,850	0.11%	33,956,734
Oaktree Real Estate Opportunities Fund V	02/01/11	02/01/21				50,000,000	54,372	0.00%	25,750,000
Oaktree Real Estate Opportunities Fund VI	09/30/13	09/30/20				80,000,000	13,058,207	0.11%	18,400,000
Oaktree Real Estate Opportunities Fund VII	02/28/15	02/28/23				65,000,000	36,812,048	0.30%	16,120,000
PCCP Equity IX	04/11/22	04/01/30				75,000,000	79,631,964	0.66%	7,606,004
Siguler Guff Distressed Real Estate Opp. Fund	07/30/11	07/30/22				75,000,000	8,238,760	0.07%	5,625,000
Siguler Guff Distressed Real Estate Opp. Fund II	08/31/13	08/31/25				70,000,000	0	0.00%	8,015,000
Siguler Guff Distressed Real Estate Opp. II Co-Inv	01/31/16	10/31/25				25,000,000	8,110,784	0.07%	3,722,138
Paulson Real Estate Fund II	11/10/13	11/10/20				20,000,000	11,929,095	0.10%	654,377
Angelo Gordon Realty Fund VIII	12/31/11	12/31/18				80,000,000	7,653,651	0.06%	12,334,302
Angelo Gordon Realty Fund IX	10/10/14	10/10/22				65,000,000	12,701,827	0.10%	7,572,500
						1,175,000,000	**303,766,143**	**2.50%**	**301,751,115**
	Outstanding Commitments						**301,751,115**		
	Total						**605,517,258**		

PRIVATE CREDIT	Inception Date	Target Termination	# of Extension	Discretion by GP/LP	New Target Termination	Funding Commitment	Market Value	% of Total Asset	Outstanding Commitment
Torchlight Debt Opportunity Fund II	09/28/06	09/30/16	in full liq.			128,000,000		0.00%	
Torchlight Debt Opportunity Fund III	09/30/08	06/30/16	2nd 1 YR	LP	06/30/18	75,000,000	0	0.00%	0
Torchlight Debt Opportunity Fund IV	08/01/12	08/30/20				60,000,000	0	0.00%	0
Torchlight Debt Opportunity Fund V	12/31/14	09/17/22				75,000,000	3,737,930	0.03%	15,000,000
Angelo Gordon Energy Credit Opportunities	09/10/15	09/10/20				16,500,000	325,331	0.00%	2,319,783
CCCERA StepStone	12/01/17	11/30/27				1,720,000,000	1,130,260,071	9.31%	865,285,431
						2,074,500,000	**1,134,323,332**	**9.34%**	**882,605,214**
	Outstanding Commitments						**882,605,214**		
	Total						**2,016,928,546**		

Private Market Investments
As of June 30, 2025

PRIVATE EQUITY	Inception Date	Target Termination	# of Extension	Discretion by GP/LP	New Target Termination	Funding Commitment	Market Value	% of Total Asset	Outstanding Commitment
Adams Street Partners	12/22/95	12/22/25				269,565,614	88,173,268	0.73%	15,922,779
Adams Street Secondary II	12/31/08	12/31/20				30,000,000	2,783,847	0.02%	1,635,000
Adams Street Secondary V	10/31/12	10/31/22				40,000,000	7,064,969	0.06%	9,154,125
Adams Street Venture Innovation Fund	03/09/16	03/09/28				75,000,000	152,142,004	1.25%	5,719,749
AE Industrial Partners Fund II	05/18/18	05/18/28				35,000,000	37,822,013	0.31%	5,934,894
Altaris Health Partners VI	07/28/23	07/28/33				50,000,000	0	0.00%	50,000,000
Arbor Investments VI	07/01/24	07/01/34				50,000,000	10,497,182	0.09%	38,270,038
Bay Area Equity Fund	06/14/04	12/31/14	2nd 2 YR	LP	12/31/2017	10,000,000	0	0.00%	0
Bay Area Equity Fund II	2/29/09	12/31/19				10,000,000	18,669,912	0.15%	0
BlackFin Financial Services Fund IV	06/24/24	06/24/34				58,291,444	4,893,594	0.04%	53,038,643
Carpenter Community BancFund	10/31/09	10/31/19				30,000,000	0	0.00%	0
EPIC Fund III	06/25/24	06/25/34				58,220,607	4,478,272	0.04%	53,036,056
EQT X	11/17/22	11/17/32				100,000,000	37,085,571	0.31%	58,231,308
Genstar Capital Partners IX	02/18/19	02/18/29				50,000,000	70,398,395	0.58%	6,299,549
Genstar Capital Partners X	04/01/21	04/01/31				42,500,000	45,100,708	0.37%	1,275,701
Genstar Capital Partners XI	04/26/23	04/26/33				75,000,000	9,408,767	0.08%	65,882,946
GTCR XIII	10/27/20	12/31/36				50,000,000	45,828,584	0.38%	9,642,247
GTCR XIV	01/12/23	01/12/33				100,000,000	21,188,523	0.17%	83,770,000
Hellman & Friedman Capital Partners X	05/10/21	05/10/31				75,000,000	71,626,144	0.59%	10,158,458
Hellman & Friedman Capital Partners XI	12/16/22	12/16/32				100,000,000	0	0.00%	100,000,000
Leonard Green - Green Equity Investors IX	03/01/22	02/28/32				60,000,000	35,723,866	0.29%	28,329,388
Leonard Green - Jade Equity Investors II	03/01/22	02/28/32				15,000,000	6,144,350	0.05%	9,470,490
Oaktree Private Investment Fund 2009	02/28/10	12/15/19				40,000,000	275,932	0.00%	6,308,961
Ocean Avenue Fund II	05/07/14	05/07/24				30,000,000	13,102,443	0.11%	3,000,000
Ocean Avenue Fund III	12/09/15	12/09/25				50,000,000	53,061,074	0.44%	3,500,000
Paladin III	08/15/08	08/15/18				25,000,000	3,748,039	0.03%	387,482
Pathway	11/09/98	05/31/21				125,000,000	1,192,341	0.01%	10,312,294
Pathway 2008	12/26/08	12/26/23				30,000,000	8,284,952	0.07%	2,527,732
Pathway 6	05/24/11	05/24/26				40,000,000	17,045,531	0.14%	3,099,137
Pathway 7	02/07/13	02/07/23				70,000,000	41,997,861	0.35%	5,274,370
Pathway 8	11/23/15	11/23/25				50,000,000	53,822,212	0.44%	2,961,806
Siguler Guff CCCERA Opportunities	06/03/14	05/31/25				200,000,000	66,418,346	0.55%	28,197,500
Siguler Guff Secondary Opportunities	12/31/16	12/31/26				50,000,000	0	0.00%	0
Siris Partners IV	05/18/18	05/18/28				35,000,000	24,772,422	0.20%	3,347,992
Symphony Technology Group VII	12/21/22	12/21/32				50,000,000	4,581,427	0.04%	43,377,031
TA XIV	05/27/21	05/27/31				50,000,000	51,360,222	0.42%	5,125,000
TA XV	03/30/23	03/31/33				90,000,000	9,594,271	0.08%	79,200,000
TPG Healthcare Partners, L.P.	06/27/19	06/27/29				24,000,000	25,831,502	0.21%	2,755,479
TPG Healthcare Partners II	06/30/22	06/30/32				60,000,000	30,804,354	0.25%	34,759,376
TPG Partners IX	06/30/22	06/30/32				65,000,000	45,201,344	0.37%	25,783,073
Trident VIII, L.P.	05/24/19	05/24/29				40,000,000	48,888,603	0.40%	4,321,817
Trident IX, L.P.	09/17/21	09/17/31				50,000,000	49,256,194	0.41%	11,019,422
Trident X, L.P.	1/7/2025	1/7/2035				75,000,000	0	0.00%	75,000,000
Total: Private Equity						**2,602,577,665**	**1,218,269,037**	**10.03%**	**881,029,841**

Real Assets/Infrastructure	Inception Date	Target Termination	# of Extension	Discretion by GP/LP	New Target Termination	Funding Commitment	Market Value	% of Total Asset	Outstanding Commitment
Aether III & III Surplus	11/30/13	11/30/20				75,000,000	44,417,911	0.37%	966,346
Aether IV	01/01/16	01/01/28				50,000,000	47,193,788	0.39%	4,934,949
Altor ACT I	06/14/24	06/14/34				68,766,132	1,735,225	0.01%	63,434,489
Commonfund Capital Natural Resources IX	06/30/13	06/30/20				50,000,000	26,577,267	0.22%	1,750,007
EIF USPF II	06/15/05	06/15/15	3rd 1 YR	LP	06/15/18	50,000,000	43,944	0.00%	0
EIF USPF III	02/28/07	02/28/17	1st 1 YR	LP	02/28/18	65,000,000	206,917	0.00%	0

Private Market Investments
As of June 30, 2025

EIF USPF IV	06/28/10	06/28/20				50,000,000	15,159,031	0.12%	4
Ares EIF V	09/09/15	11/19/25				50,000,000	21,468,687	0.18%	3,888,697
EQT Infrastructure	11/15/23	11/15/35				125,000,000	36,149,873	0.30%	81,266,242
Wastewater Opportunity Fund	12/31/15	11/30/22				25,000,000	560,100	0.00%	521,541
Totall: Real Assets/Infrastructure						**608,766,132**	**193,512,743**	**1.59%**	**156,762,275**
Total: Private Equity and Real Assets/Infrastructure						**3,211,343,797**	**1,411,781,780**	**11.63%**	**1,037,792,116**

Outstanding Commitments	**1,037,792,116**
Total	**2,449,573,897**

Market value equals the most recent reported net asset value, plus capital calls after net asset value date, less distributions after net asset value date.

The Target Termination column is the beginning of liquidation of the fund, however, some funds may be extended for an additional two or three years.

Meeting Date
08/06/2025
Agenda Item
#5.A-V

GlobalARC

22nd Annual Global ARC

Where the Global Investor and Alpha-Driven Manager Communities Meet

Updated July 24th: see pages 6 to 19 for detailed program running order or visit www.garcboston.com

Professor Mark Blyth
The William R. Rhodes '57 Professor of International Economics
Brown University

Professor Cass R. Sunstein
The Robert Walmsley University Professor
Harvard Law School

Professor Vipin Narang
The Frank Stanton Professor of Nuclear Security
Massachusetts Institute of Technology

Professor Layna Mosley
Director, The Princeton Sovereign Finance Lab
Princeton University

Professor Harvey Whitehouse
Director, The Centre for the Study of Social Cohesion
University of Oxford, United Kingdom

Professor Rana Mitter
The S.T. Lee Chair in U.S.-China Relations
Harvard Kennedy School of Government

Nobel Laureate Professor Eric Maskin
The Adams University Professor of Economics and Mathematics
Harvard University

Professor Nicole Boyson
Chair of the Department of Economics and Finance
Northeastern University

Professor Jonathan Levy
Professor of History
Sciences Po, France

Professor Patrick J. Deneen
The David A. Potenziani Memorial Chair of Constitutional Studies
University of Notre Dame

Professor Pippa Norris
Founding Director, The Electoral Integrity Project
Harvard Kennedy School of Government

Professor Hal Brands
The Henry A. Kissinger Distinguished Professor of Global Affairs
Johns Hopkins University SAIS

Professor Richard Berner
Co-Director, The Stern Volatility and Risk Institute
NYU Stern School of Business

Dr. Zongyuan Zoe Liu
The Maurice R. Greenberg Senior Fellow for China Studies
The Council on Foreign Relations

Professor Andrew Metrick
The Janet L. Yellen Professor of Finance and Management
Yale School of Management

Plus, numerous institutional investor speakers, including:

• **Afore Invercap,** Mexico • **Alaska Permanent** • **Allstate Investments** • **Azim Premji Foundation,** India • **BPJS Ketenagakerjaan,** Indonesia • **Emirates Investment Authority,** U.A.E. • **Government of Alberta,** Canada • **Government Pension Fund of Thailand,** Thailand • **Maryland State Retirement and Pension System** • **Mass Mutual** • **MassPRIM** • **Nebraska Investment Council** • **New York City Retirement Systems** • **Norges Bank Investment Management,** USA/Norway • **ORIX Life Insurance Corp.,** Japan • **PFA Pension,** Denmark • **PGGM,** The Netherlands • **Phoenix Insurance Group,** U.K. • **Retraites Populaires,** Switzerland • **SBA Florida** • **South Carolina State Treasurer's** • **S.W.I.B.** • **Sura Investments,** Colombia • **U.N. Joint Staff Pension** • **Varma Mutual,** Finland • **Verizon Pension** • **Virginia Retirement System** .... and many more...

October 20th to 22nd 2025 • The InterContinental Boston, Massachusetts

36 SOUTH CAPITAL ADVISORS • 400 CAPITAL MANAGEMENT • ACADIAN • AGL • Allspring • Antares Capital • Audax Private Debt • BARINGS • BENEFIT STREET PARTNERS Alcentra • BRIGHTWOOD • CAMPBELL LUTYENS • CIFC Asset Management • GOLUB CAPITAL • HILDENE CAPITAL MANAGEMENT • MFS • MONROE CAPITAL • NEPHILA • nuveen A TIAA Company • ORCHARD GLOBAL • OWS Capital Management • Principal Asset Management • Roc 360° • Sculptor • SONA ASSET MANAGEMENT • THIRD POINT • WORLD GOLD COUNCIL

GlobalARC

2025 Overview

The 22nd Annual Global ARC Boston
October 20th – 22nd 2025 • The InterContinental Boston

"The dizzying shifts in the global economic narratives (have left) investors and policymakers struggling to keep pace with change... The White House's tariff-raising agenda, America-first foreign policy and all-round unpredictability has dramatically altered the economic assumptions underpinning long-held market narratives."

The Financial Times, March 24th 2025

Dear Executive,

Long-standing investment certainties are being upended on a near-daily basis.

In just three months, core pillars of our global economic system — from the dominance of the US dollar and the perceived safety of US Treasury bonds, to the viability of international free trade — have all come under serious question.

In this climate of rapid and profound financial disruption, it has never been more essential for institutional investors, both local and global, to come together to compare experiences and to learn from leading economic researchers from Harvard, Princeton, Yale, Oxford et al.

Only through such collaboration and shared insights can we begin to navigate markets that are increasingly volatile and in a state of deep transformation.

The stakes are higher than ever.

Those who fail to adapt swiftly to this new reality risk not just underperformance — but potentially devastating outcomes for their investors.

Join us at the 22nd Annual Global ARC Boston in October 2025 as we strive to chart a course through these paradigm upending markets.

Yours Faithfully

David Stewart
david@global-arc.net

Samantha Allwork
samantha@global-arc.net

Robert Bennett-Lovsey
robert@global-arc.net

Our Four Key Differentiators

We believe that Global ARC possesses four key characteristics that differentiate it from its conference competitors:

1) QUALITY of Investor Attendees

Global ARC attracts the key decision makers - predominantly the Chief Investment Officer or Head of Asset Allocation - from multi-billion-dollar investors.

2) RATIO of Investor Attendees

Unlike most conferences, where investors are outnumbered by managers, Global ARC ensures that investors outnumber managers. A strict code of conduct is enforced for all manager delegates, creating a more comfortable environment for investors. This leads to a notable shift in behaviour: investors can engage in thoughtful discussions with individual managers, who focus on education rather than hard sales tactics. As a result, the number and quality of manager-investor interactions grow significantly.

3) INTERNATIONAL BREADTH of Investor Attendees

Approximately half of Global ARC's institutional investor attendees are from outside the United States, providing managers with access to a diverse and global range of major investors that is rarely available at other conferences.

4) RETENTION RATE of Investor Attendees

Many of Global ARC's competitors lack high-level intellectual content, leading investors to attend only their own session before leaving for the golf course. In contrast, Global ARC's three-day event features over a dozen world-class academic speakers from top global universities. Furthermore, by strategically scheduling these thoughtleaders for the second and third days of the conference, we ensure that investors stay engaged throughout the entire event.

Recent Institutional Investor Attendees

Recent institutional investor attendees at Global ARC have included:

- **Abu Dhabi Investment Authority,** United Arab Emirates
- **AFAP ITAU Pension,** Uruguay
- **Afore Invercap Pension,** Mexico
- **AkademikerPension,** Denmark
- **Alaska Permanent Fund Corporation,** USA
- **Alberta Investment Management Co. (AIMCO),** Canada
- **Alfred P. Sloan Foundation,** USA
- **AP Pension Fund,** Denmark
- **AP2 (Second Swedish National Pension),** Sweden
- **Arabia Insurance,** Saudi Arabia
- **Australian Government Future Fund,** Australia
- **AustralianSuper Superannuation Scheme,** Australia
- **Aware Super Superannuation Scheme,** Australia
- **Azim Premji Foundation,** India
- **BCI Pension Plan,** USA
- **Boston Retirement Board,** USA
- **BPJS Ketenagakerjaan Pension Fund,** Indonesia
- **CAAT Pension Plan,** Canada
- **CalPERS,** USA
- **CalSTRS,** USA
- **Caltech Investment Office,** USA
- **Carnegie Mellon University Investment Office,** USA
- **Central Bank of Brazil,** Brazil
- **Central Bank of Colombia,** Colombia
- **Central Bank of Latvia (Latvijas Banka),** Latvia
- **Central Bank of the Philippines**, Philippines
- **CERN Pension Fund,** Switzerland
- **Children's Hospital of Philadelphia (CHOP),** USA
- **Church Commissioners of England Pension,** United Kingdom
- **City of Austin Employees Retirement System,** USA
- **City of Hartford,** USA
- **City of Stamford,** USA
- **CN Pension Fund (Canadian National Railways),** Canada
- **Colby College Endowment,** USA
- **Colorado Fire and Police Pension Association,** USA
- **CommonSpirit Health,** USA
- **Contra Costa County Employees Retirement Assoc.,** USA
- **CPP Investments,** Canada
- **CRICO Medical Liability Insurance,** USA
- **Dar Group,** Saudi Arabia
- **Delaware State Treasury,** USA
- **Delta Air Lines Pension Fund,** USA
- **Desjardins Group,** Canada
- **Deutsche Bundesstiftung Umwelt Foundation,** Germany
- **DuPont Capital Management Pension,** USA
- **DXC Technology Co. Pension,** USA
- **Electricity Supply Board Pensions,** Ireland
- **Emirates Investment Authority,** United Arab Emirates
- **Employees Retirement System of Texas,** USA
- **European Patent Office Reserve Funds,** Germany
- **Federal Court of Accounts,** Brazil
- **Fire and Police Pension Association of Colorado,** USA
- **FM Global Insurance,** USA
- **Folksam,** Sweden
- **Fonditel Pension,** Spain
- **Fonds de réserve pour les Retraites,** France
- **Fordham University Endowment,** USA
- **Fundação ELOS Pension Fund,** Brazil
- **Funpresp (The Brazilian Civil Service Pension),** Brazil
- **Gavi Alliance,** USA
- **G.E. Pension,** USA
- **Government of Alberta,** Canada
- **Government Pension Fund of Thailand,** Thailand
- **Greater London Authority Pension,** United Kingdom
- **Guardian Life Assurance,** USA
- **Harvard University Charitable Trusts,** USA
- **Healthcare of Ontario Pension Plan (HOOPP),** Canada
- **Helmsley Charitable Trust,** USA
- **Highmark Health,** USA
- **IG Insurance,** Jordan
- **Illinois State Treasury,** USA
- **Illinois State Universities Retirement System,** USA
- **Inter American Development Bank,** USA
- **Investment Management Corp. of Ontario (IMCO),** Canada
- **Irish Association of Pension Funds (IAPF),** Ireland
- **KAUST IMC,** USA/Saudi Arabia
- **Kern County Employees' Retirement Association,** USA
- **Keva Pension Fund,** Finland
- **Khazanah Americas Inc (SWF of Malaysia),** USA
- **Kumpulan Wang Persaraan Pension Fund (KWAP),** Malaysia
- **Latin-American Reserves Fund (FLAR),** Colombia
- **Liberty Mutual Investments,** USA
- **Lifeyrissjodur Verzlunarmannan Pension Fund,** Iceland
- **Lockheed Martin Investment Management Corp.,** USA

Recent Institutional Investor Attendees

- **LV=,** United Kingdom
- **M.J. Murdock Charitable Trust,** USA
- **Maryland State Retirement and Pension System,** USA
- **Mass Mutual,** USA
- **MassPRIM,** USA
- **Meketa Investment Group** USA
- **Merrimac Corporation,** USA
- **Ministry of Defence SAVER-Premium Fund,** Singapore
- **MN Pension Fund,** The Netherlands
- **National Electrical Benefit Fund,** USA
- **National Investment Corp. of Kazakhstan,** Kazakhstan
- **Navy Mutual Aid Association,** USA
- **NEBF Investments,** USA
- **Nebraska Investment Council,** USA
- **New York Common Retirement Fund,** USA
- **North Dakota Trust Lands,** USA
- **Northeastern University Endowment,** USA
- **Nova Scotia Pension Services Corporation,** Canada
- **Nucleos Instituto de Seguridade Social Pension,** Brazil
- **Office of the Illinois State Treasurer,** USA
- **Ontario Teachers' Pension Plan (OTPP),** Canada
- **Orange County Employees Retirement System,** USA
- **ORIX Life Insurance Corp.,** Japan
- **Pennsylvania Municipal Retirement System,** USA
- **Penn State University Endowment,** USA
- **Pensioenfonds Zorg & Welzijn (PFZW),** The Netherlands
- **Pension Fund of Japanese Corporations,** Japan
- **People's Partnership,** United Kingdom
- **Pepperdine University Endowment,** USA
- **PGGM Pension Fund,** The Netherlands
- **Phoenix Insurance Group,** United Kingdom
- **Pontificia Universidad Javeriana Endowment,** Colombia
- **Province of Alberta, Treasury,** Canada
- **PSP Investments,** Canada
- **Public Investment Corporation (P.I.C.),** South Africa
- **Qatar Investment Authority (Q.I.A.),** Qatar
- **Railpen,** United Kingdom
- **Real Grandeza Pension Fund**, Brazil
- **Retirement System Investment Commission,** USA
- **Retraites Populaires Pension Fund,** Switzerland
- **RGA Reinsurance Company,** USA
- **Sacramento County Employees' Retirement System,** USA
- **Saechsische Aufbaubank - Foerderbank,** Germany
- **School Employees Retirement System of Ohio,** USA
- **Social Security System of the Philippines,** The Philippines
- **South Carolina Retirement System,** USA
- **South Carolina Treasurer's Office,** USA
- **South Yorkshire Pensions Authority,** United Kingdom
- **State of Michigan Bureau of Investments,** USA
- **State of Tennessee Treasury,** USA
- **State of Wisconsin Investment Board,** USA
- **State Universities Retirement System of Illinois,** USA
- **Stony Brook Foundation,** USA
- **Storebrand Asset Management,** Norway
- **SURA Investments,** Colombia
- **Tennessee Valley Authority Retirement System,** USA
- **Texas Treasury Safekeeping Trust Company,** USA
- **The Broadway League,** USA
- **The J. Paul Getty Trust,** USA
- **The Rockefeller Foundation,** USA
- **The Southern Ute Indian Tribe Endowment,** USA
- **Toronto Transit Commission Pension Plan,** Canada
- **Trans-Canada Capital,** Canada
- **Tulane University Investment Management Office,** USA
- **UMass Foundation,** USA
- **UniónCapital AFAP Pension Fund,** Uruguay
- **U.K. Local Government Pension Scheme,** United Kingdom
- **United Nations Joint Staff Pension Fund,** USA
- **University of British Columbia Investment Mgmt.,** Canada
- **University of Michigan Investment Office,** USA
- **University of Minnesota Endowment,** USA
- **University of Missouri Investment Office,** USA
- **University of Nebraska Foundation,** USA
- **University Pension Plan of Ontario,** Canada
- **UTIMCO (University of Texas Investment Mgmt.),** USA
- **UVIMCO (University of Virginia Investment Mgmt.),** USA
- **Varma Mutual Pension Insurance Company,** Finland
- **Velliv, Pension & Livsforsikring Pension Fund,** Denmark
- **Verizon Investment Management Corp,** USA
- **Virginia Retirement System,** USA
- **Washington State Investment Board,** USA
- **William Penn Foundation,** USA
- **WorkSafe New Brunswick,** Canada
- **YMCA Retirement Fund,** USA

Sponsors, Institutional Investors and Pension Consultants ONLY

Global ARC's Monday morning Investor Education Forum is a **closed-door session open only to Global ARC's sponsors and to major pension funds, sovereign wealth funds, foundations and endowments and to pre-approved pension consultants.**

The Global ARC Investor Education Forum will provide institutional investors with the opportunity to choose meetings from amongst a range of leading alternative investment firms. The Forum will be structured around four customized twenty-minute small group roundtable meetings, covering the following high-alpha strategies: Alternative Credit, Equity Alternative, Foreign Exchange, Fixed Income, Global Macro, Gold, Multi-Asset, Private Credit, Private Equity, Private Markets, Public Credit, Public Equities, Quantitative/Systematic, Real Estate.

If you are interested in discovering how your firm can participate in Global ARC's 2025 Investor Education Forum, please contact either: David Stewart david@global-arc.net or Samantha Allwork via samantha@global-arc.net

Global ARC wishes to thank the following sponsor-presenters at our Global ARC 2025 Investor Education Forum for their commitment to investor education:

- 36 South Capital Advisors
- 400 Capital Management
- Acadian
- AGL
- Allspring
- Antares Capital
- Audax Private Debt
- Barings
- Benefit Street Partners Alcentra
- Brightwood
- Campbell Lutyens
- CIFC Asset Management
- Golub Capital
- Hildene Capital Management
- MFS
- Monroe Capital
- Nephila
- nuveen A TIAA Company
- Orchard Global
- OWS Capital Management
- Principal Asset Management
- Roc 360°
- Sculptor
- SONA Asset Management
- Third Point
- World Gold Council

2025 Agenda

Day One
Monday Oct. 20

General Sessions

9.05am Chair's opening remarks

Rethinking Economics

“ All the [currently. dominant economic models] are both limited and empirically dubious.... the Efficient-Market hypothesis says that investors, in aggregate, perfectly and promptly incorporate new information into asset prices. It is an appealing thought, though not a convincing one if you have observed a trading floor or a stock market bubble. Arbitrage Theory is more useful... but the replication strategies it prescribes can come badly unstuck if prices jump sharply. Models relating risk to returns—such as CAPM - usually make the maths tractable by assuming returns are distributed along a bell curve. Unfortunately, they are not.”

The Economist, June 4th 2025

9.10am Academic Keynote - Why our understanding of how economies operate requires a radical rethink.

What is the economy, really? Is it a “market sector,” a “general equilibrium,” or the “gross domestic product”?

Economics today has become so preoccupied with methods that economists risk losing sight of the economy itself. Meanwhile, other disciplines, although often intent on criticizing the methods of economics, have failed to articulate an alternative vision of the economy.

Drawing inspiration particularly from Thorstein Veblen and John Maynard Keynes, Professor Jonathan Levy, one of the world's foremost economic historians, proposes a new theory of the economy that is open to rich empirical and historical scrutiny, covering topics that include the emergence of capitalism, the notion of radical uncertainty, the meaning of demand, the primal desire for money, the history of corporations, and contemporary globalization.

(Chair) Professor Christopher Holt, Senior Advisor **Global ARC** and Associate Professor, **Conrad School of Business, University of Waterloo,** Canada

Professor Jonathan Levy
Author of *‘The Real Economy: History and Theory’*
Professor, Center for History
Science Po, France

Professor Jonathan Levy is Professor of History at Sciences Po in Paris, France's leading university in the social sciences. Prior to this he served as The James Westfall Thompson Professor of US History, Fundamentals and Social Thought at University of Chicago. He is a historian of economic life in the U.S., with interests in the relationships between business and economic history, political economy, and the history of ideas. He is the author of three widely praised books: *‘American Capitalism: A History of the United States’; ‘Risk in America’,* which won the Organization of American Historians' Frederick Jackson Turner Award, the Ellis W. Hawley Prize, and the Avery O. Craven Award; and, forthcoming in 2025 with Princeton University Press, *‘The Real Economy: History and Theory’*, which argues for a novel theory of the economy, its history, and its politics. Jonathan Levy holds a PhD. in History with Distinction from University of Chicago.

Outperformance

“The dizzying shifts in the global economic narrative [mean that] investors and policymakers are struggling to keep pace with change.”

The Financial Times, March 22nd 2025

9.50am How to outperform in rapidly shifting markets

Periods of deep economic transition bring not only significant investment risks but also unique investment opportunities. But capitalizing on these changes demands investment managers with the intellectual discipline and internal intellectual capacities to adroitly navigate complexity and uncertainty.

In this session, our panel of forward-thinking investment leaders will offer practical guidance on how investors and managers must rethink and recalibrate their strategies to thrive—not merely survive—in an era of rapidly shifting markets.

(Chair) Tim McCusker, Partner and Chief Investment Officer
NEPC

Steve Vaccaro, Chief Executive and Chief Investment Officer
CIFC Asset Management

Maksim Stavinsky, Co-Founder and Chief Executive Officer
Roc360

Ming Cen, Head of Markets, Asset Classes,
and Portfolio Strategy (MAPS) Americas
USSA International (the U.S subsidiary of The Public Investment Fund of Saudi Arabia

Additional panellists tba

Correlations

“ Having a spread of investment holdings that depend on different macroeconomic factors is a strategy at least as old as Wall Street. But it is all the more pertinent today, as so many investments get pulled into the tractor beam of huge benchmark indices, such as the United States S&P 500 “

The Financial Times, June 7th 2024

10.30am Given current market conditions, which investment strategies and asset classes are best suited to reducing portfolio correlation risk?

(Chair) TBC

Jessica Laird, Chief Investment Officer
Nephila Advisors

Steve Davis, Chief Investment Officer
Sacramento County Employees' Retirement System

Joseph Cavatoni, Market Strategist, Americas
World Gold Council

Additional panellist tba

2025 Agenda

Volatility

“ Wild market moves are normally unnerving because they reveal how quickly sober-minded investors can give in to terror…. As ever when prices swing wildly, a worry is that the swings will cause their own damage, which is when things can get really nasty.”

The Economist, April 7th 2025

11.20am How can institutional investors best leverage high-alpha strategies to build investment portfolios that are more resistant to, or even capitalize upon, periods of heightened volatility?

(Chair) TBC

Jack De la Fargue, Co-Chief Investment Officer
36 South Capital Advisors, United Kingdom

Speaker tba,
Acadian Asset Management

David Mihalick, Co-Head of Global Investments
Barings

Matt Winkler, Managing Director
Benefit Street Partners – Alcentra

Paul Horvath, Chief Executive Officer
Orchard Global

12.10pm Lunch

1.30pm Chair’s opening remarks

Latest Alts. Research

1.35pm Academic Keynote - A review of the most interesting alternative investment centred academic research of 2025

A perennial delegate favourite, Professor Nicole Boyson of Northeastern University D’Amore-McKim’s School of Business will return for her annual review of the most thought-provoking academic alternatives research of the last twelve months.

(Chair) Cameron Dawson, Chief Investment Officer
NewEdge Wealth

Professor Nicole Boyson
Chair of the Department of Economics and Finance
Professor of Finance
Northeastern University’s D’Amore-McKim School of Business

Professor Nicole Boyson’s is the Chair of the Department of Economics and Finance and Professor of Finance at Northeastern University’s D’Amore-McKim School of Business. Her research and teaching interests focus on hedge fund management, hedge fund activism and regulatory arbitrage. Her most recently published research includes: ‘Hostile Resistance to Hedge Fund Activism’ in The Review of Financial Studies, ‘Activism Mergers’ in The Journal of Financial Economics, and ‘Liquidity Shocks and Hedge Fund Contagion’ in The Journal of Investment Management. Nicole Boyson holds a PhD. in Finance from Ohio State University.

Private Markets

2.15pm Which private markets segments offer institutional investors the most compelling return and/or diversification premia?

(Chair) Francis Griffin, Senior Vice President, Alternatives Consulting
Callan

Taylor Boswell, Head of Private Credit
AGL Credit Management

Janelle Woodard, Senior Managing Director, Multi-Asset Group
Allstate Investments

Sengal Selassie, Chief Executive Officer
Brightwood Capital Advisors

Mick Solimene, Managing Director and Portfolio Manager
Monroe Capital

Rich Hill, Senior Managing Director and Global Head of Research and Strategy
Principal Asset Management

3.00pm Afternoon Coffee

3.30pm Chair’s opening remarks

Private Debt

“ Moody’s estimates that the private-credit industry will roughly double in size to USD 3 Trillion over the next three years.”

The Wall Steet Journal, May 16th 2025

3.35pm What skillsets should institutional investors prioritize, when evaluating private debt managers ability to perform in today's market?

(Chair) Russ Ivinjack, Global Chief Investment Officer
Aon Investments

Vivek Mathew, President of Antares Capital Advisers
Antares Capital

Kevin Magid, President, Private Debt
Audax Private Debt

Randy Schwimmer, Vice Chairman, Investor Solutions
Churchill Asset Management (Nuveen)

2025 Agenda

Jason Van Dussen, Senior Managing Director
and Co-Head of Capital Markets
Golub Capital

Owain Griffiths, Partner, Head of Capital Solutions
Sona Asset Management

“ Investors see asset-backed lending as a useful diversifier, with different collateral backing that complements existing private credit strategies ”
P&I, November 25th 2024

4.15pm **“Asset backed lending currently offers the most enticing investment opportunities in the private credit space.” Discuss**

(Chair) Russ Ivinjack, Global Chief Investment Officer
Aon Investments

Chris Hentemann, Managing Partner, Chief Investment Officer
400 Capital Management

Kevin McCormick, Managing Director
Campbell Lutyens

Dushyant Mehra, Co-Chief Investment Officer
Hildene Capital Management

David Sherr, Founder, Managing Partner
and Chief Investment Officer
One William Street Capital Management

Udai Bishnoi, Global Head of Asset Based Finance
Sculptor Capital

Rethinking *Ourselves*

5.05pm **Academic Keynote - The ancient inheritance that made us who we are and is now driving us to ruin.**

Each of us is endowed with an inheritance. A set of ancient biases, forged through countless millennia of natural and cultural selection, which shape every facet of our behaviour.

For generations, this inheritance has taken us to ever greater heights. But now, for the first time, it is failing us - with devastating implications for humanity.

Unveiling a pioneering new way of viewing our collective history, renowned anthropologist Harvey Whitehouse offers a sweeping account of how our evolved biases have shaped humanity's past and imperil its future.

(Chair) Professor Christopher Holt, Senior Advisor **Global ARC** and Associate Professor, **Conrad School of Business, University of Waterloo,** Canada

Professor Harvey Whitehouse
Author of *‘The Evolutionary Origins of the Modern World’*
Director of the Centre for the Study of Social Cohesion
University of Oxford, United Kingdom

Professor Harvey Whitehouse is one of the world’s leading experts on the evolutionary basis of human culture. He has spent four decades studying some of the most extreme groups on earth: from the battlefields of the Arab Spring, via millenarian cults on Pacific islands, to violent football fans in South America. Along the way, he has undertaken research at some of the world’s most important archaeological sites, brain-scanning facilities, and child psychology labs – all with a view to pioneering a new, scientific approach to the study of human society. He currently serves as Fellow of Magdalen College and Director of the Centre for the Study of Social Cohesion at University of Oxford. His most recent book ‘Inheritance: The Evolutionary Origins of the Modern World’, a sweeping account of how our evolved biases have shaped humanity’s past and imperil its future. was published by Harvard University Press in 2024 to widespread critical acclaim.

5.50pm **Networking drinks and canapés**

Day Two
Tuesday Oct. 21

7.30am **Chair’s opening remarks**

Depolarizing U.S. Politics

“ History shows that, if left untreated, extreme political divisions are a mortal threat to democracy.”
Bloomberg, November 9th 2024

7.35am **Academic Keynote - How can we begin to depolarise U.S. politics?**

Political polarization among American voters is reaching unprecedented levels, with both Republican and Democrat voters increasingly frustrated by the dysfunction of current political processes.

To prevent a serious erosion of the system’s legitimacy, urgent reform of the core mechanics of the U.S. electoral system is essential.

Professors Maskin and Norris will outline how a set of non-partisan nuts-and-bolts reforms could significantly reduce U.S. political polarization and dramatically enhance the quality of governance in the country.

(Chair) Professor Christopher Holt, Senior Advisor **Global ARC** and Associate Professor, **Conrad School of Business, University of Waterloo,** Canada

Nobel Laureate Professor Eric Maskin
2007 Nobel Prize Winner for Economics
Adams University Professor of Economics and Mathematics
Harvard University

2025 Agenda

Professor Eric Maskin is the Adams University Professor of Economics and Mathematics at Harvard University and the 2007 Nobel Laureate for Economics. He has made key contributions to a diverse range of economic areas including game theory, the economics of incentives, and contract theory. He is particularly known for his papers on mechanism design/implementation theory and dynamic games. research projects include comparing different electoral rules, examining the causes of inequality, and studying coalition formation. In 2007, Professor Maskin was awarded the Nobel Memorial Prize in Economics (with L. Hurwicz and R. Myerson) for laying the foundations of mechanism design theory, a specialized form of game theory that attempts to maximize gains for all parties within markets.. Eric Maskin received his Ph.D. in economics from Harvard University.

and

Professor Pippa Norris
Author of *'The Cultural Roots of Democratic Backsliding'*
Founding Director of the Electoral Integrity Project
Harvard Kennedy School of Government

Professor Norris's research compares public opinion and elections, political institutions and cultures, gender politics, and political communications in many countries worldwide. Such is the prominence of her research, that she is ranked the second-most cited political scientist worldwide, according to Google scholar. Major career honors include, the Skytte prize (known informally as the 'Nobel' prize in political science), IPSA's Karl Deutsch award, APSA's Charles Merriam award, Warren E. Miller award and the PSA's Sir Isaiah Berlin award. She has published around fifty books (many subsequently translated into dozens of languages). Her latest book is forthcoming with Oxford University Press on *The Cultural Roots of Democratic Backsliding*. She holds a PhD from London School of Economics.

Public Equities

8.35am Which geographically based and/or industry-based sectors of public equities markets are likely to outperform in 2026? Which types of public equity strategies and managers are best placed to leverage these opportunities?

(Chair) Tom Tull, Fellow
AIF Global Institution

Bryant VanCronkhite, Co-Head of Special Global Equity
Allspring Global Investments

Paul Marcussen, Lead Portfolio Manager for External Strategies and Head of Norges Bank Investment Management, New York
Norges Bank Investment Management USA/Norway

Additional panellist tba

Public Credit

" Trump's proposed corporate-tax cuts would be especially welcome for indebted firms, freeing up cash to meet interest payments. Fast, deficit-fuelled economic growth would also be a boon for such companies. Credit strategists describe the mood among junk-bond investors as near euphoric."

The Economist, November 28th 2024

9.20am Which public credit strategies are best positioned to thrive under current market conditions?

(Chair) Tom Tull, Fellow
AIF Global Institution

Alexander Mackey, Co-Chief Investment Officer, Fixed Income
MFS Investment Management

Tina Suo, Head of Alternative Credit
New York City Retirement Systems

Todd Ludgate, Senior Investment Officer, Fixed Income
State Board of Administration of Florida

Stephen Schatzman, Co-Head of Corporate Credit
Third Point Management

Additional panellist tba

10.05am Morning Coffee

10.40am Chair's opening remarks

(Chair) Michael Rosen, Chief Investment Officer
Angeles Investments

Sovereign Debt

" Countries are likely to default more frequently on their foreign currency debt in the coming decade than they did in the past, due to higher debt and an increase in borrowing costs, agency S&P Global Ratings has warned in a new report. " Reuters, October 14th 2024

10.45am Academic Keynote - The coming crises in sovereign debt?

Which regions of the world are currently most vulnerable to sovereign debt difficulties and why? Just how close is the U.S. federal government to a crisis of confidence in its creditworthiness? What might trigger such an upheaval in U.S. confidence, and what needs to be done to avert this from happening? What lessons can U.S. and European policy makers learn from recent non-U.S. Sovereign debt crisis around the world? What new multi-lateral initiatives should be initiated to reduce the incidence and severity of sovereign debt dislocations around the world?

(Chair) Michael Rosen, Chief Investment Officer
Angeles Investments

Professor Layna Mosley
Director, Princeton Sovereign Finance Lab
Professor of Politics and International Affairs
Princeton University

Professor Layna Mosley is Professor in the School of Public and International Affairs (SPIA) and the Department of Politics at Princeton University. She also serves as Director of the Princeton Sovereign Finance Lab. Her research focuses on the political economy of sovereign borrowing and debt. Exploring how governments, as borrowers, interact strategically with their creditors; how governments choose among creditors; how creditors evaluate government policies and political events; how governments structure the terms of their borrowing; and how governments market themselves to potential bond buyers. Professor Mosley is author of the book 'Global Capital and National Governments' (Cambridge University Press.) Prior to joining the faculty at Princeton University, Layna Mosley was Professor in the Department of Politics at the University of North Carolina at Chapel Hill. She holds a Ph.D., Political Science, Duke University

2025 Agenda

De-Globalization

“ The rich tapestry of global economic integration is now under threat. Financial fragmentation, defined as a reduction in international financial integration and the disruption of cross-border payments, threatens to untie the complex linkages that drive employment, business growth and countries development. ”

The Economist, January 4th 2025

11.30am **Institutional investor perspectives: how will de-globalization impact upon our asset allocation choices and portfolio construction?**

The process of deglobalization will pose profound challenges to current institutional investor portfolios.

Historical precedents suggest a more restrictive global trading environment risks reducing cross-border capital flows, heightening global interest rates, lowering productivity and economic growth, and increasing wage and price inflation.

Our globally diverse panel of institutional investors will discuss how deglobalisation is likely to impact upon their medium- and long-term investment processes, selection criteria and allocations.

(Chair) Michael Rosen, Chief Investment Officer
Angeles Investments

Marta Norton, Chief Investment Strategist
Empower Investments

Tine Choi Danielsen, Chief Strategist
and Director of Investment Strategy
PFA Pension, Denmark

Mauricio Gúzman, Head of Investment Strategy
SURA Investments, Colombia

Jarkko Soikkeli, Head of Strategy and Allocation
Varma Mutual Pension Insurance, Finland

Chung Ma, Managing Director, Portfolio Solutions Group
Virginia Retirement System

12.20pm **Lunch**

1.45pm **Chair’s opening remarks**

(Chair) David Stewart, Founder
Global ARC, Australia

Geopolitical Turmoil

“ [The current geopolitical situation] is disorientating, if not terrifying, for investors raised to predict the future with neat economic models. After all, in the neoliberal era those models typically excluded messy politics — and assumed that the rule of law was consistent, in the domestic and international sphere. The traditional world order, in which economics shaped politics, has been turned on its head....Politics [are] now driving economics. ”

The Financial Times, June 14th 2025

1.50pm **Academic Keynote – Given current trajectories, how is the geopolitical world order of January 20th, 2029, likely to differ from that of today?**

(Chair) David Stewart, Founder
Global ARC, Australia

Professor Rana Mitter
Author: *‘China’s Good War: How World War II is Shaping a New Nationalism’*
The S.T. Lee Chair in U.S.-China Relations
Harvard Kennedy School of Government

Professor Rana Mitter is ST Lee Chair in US-Asia Relations at the Harvard Kennedy School. Prior to which, he was the Director of The University of Oxford China Centre. Widely acknowledged as one of the world’s foremost sinologists, he is the author of several books, including *Forgotten Ally: China’s World War II*, which won the RUSI/Duke of Westminster’s Medal, and was named a Book of the Year in the Financial Times and Economist. His latest book is *China’s Good War: How World War II is Shaping a New Nationalism*. Rana Mitter’s recent documentary on contemporary Chinese politics *“Meanwhile in Beijing”* is available on BBC Sounds and his TV documentary *“The Longest War: China’s World War II”* was broadcast on the History Channel. He is co-author, with Sophia Gaston, of the report “Conceptualizing a UK-China Engagement Strategy for the British Foreign Policy Group. Rana was appointed Officer of the Order of the British Empire (OBE) in the Queen’s 2019 Birthday Honours. Rana Mitter holds a PhD in History from University of Cambridge.

and

Professor Hal Brands
Author of *‘Danger Zone: The Coming Conflict with China’*
The Henry A. Kissinger Distinguished Professor of Global Affairs
Johns Hopkins University SAIS

Professor Hal Brands is the Henry A. Kissinger Distinguished Professor of Global Affairs and a Senior Fellow at the Center for Strategic and Budgetary Assessments at the Johns Hopkins School of Advanced International Studies (SAIS.) He is the author or editor of several books, including ‘Danger Zone: The Coming Conflict with China,’ ‘American Grand Strategy in the Age of Trump,’ ‘Making the Unipolar Moment: U.S. Foreign Policy and the Rise of the PostCold War Order’ ‘What Good is Grand Strategy? Power and Purpose in American Statecraft’ and ‘From Berlin to Baghdad: America’s Search for Purpose in the Post- Cold War World.’ Hal Brands served as Special Assistant to the Secretary of Defense for Strategic Planning and as lead writer for the Commission on the National Defense Strategy for the United States. He earned a Ph.D. in history from Yale.

and

Dr. Zoe Liu
Author of *‘Sovereign Funds: How the Communist Party of China Finances its Global Ambitions’*
The Maurice Greenberg Senior Fellow for China Studies
The Council on Foreign Relations

Dr. Liu is The Maurice R. Greenberg Senior Fellow for China Studies at the Council of Foreign Relations and the author of two books: ‘Can BRICS De-dollarize the Global Financial System?’ (Cambridge University Press, 2021) and ‘Sovereign Funds: How the Communist Party of China Finances its Global Ambitions’ (Harvard University Press, 2023). ‘Sovereign Funds’ is the first in-depth account of the sudden growth of China’s sovereign wealth funds and offers a comprehensive and up-to date analysis of the evolution of the China Investment Corporation, the State Administration of Foreign Exchange, and Central Huijin Investment. She shows how these Chinese sovereign funds have become mechanisms not only for transforming low-reward foreign exchange reserves into investment capital but also for supercharging Chinese power projection and creating Chinese spheres of influence worldwide Dr. Liu holds a PhD in international relations from Johns Hopkins University.

3.05pm **Ten-minute interval**

2025 Agenda

Parallel Breakout Sessions

3.15pm

Delegates can customize Global ARC to their needs by choosing between several highly interactive parallel breakouts.

Some of these parallel breakouts are continuations of preceding plenary panel topics, whilst others provide delegates with the opportunity to explore fresh topics.

To allow for a more in-depth exploration of these subjects, each breakout session is approximately 90 minutes in length.

Parallel Breakout Session A

Given current market conditions, which investment strategies and asset classes are best suited to reducing portfolio correlation and volatility risk? …. continued

(Chair) Cameron Dawson, Chief Investment Officer
NewEdge Wealth

Panellists

Jack De la Fargue, Co-Chief Investment Officer
36 South Capital Advisors, United Kingdom

Speaker tba
Acadian Asset Management

Jessica Laird, Chief Investment Officer
Nephila Advisors

Steve Davis, Chief Investment Officer
Sacramento County Employees' Retirement System

Stephen Schatzman, Co-Head of Corporate Credit
Third Point

Ming Cen, Head of Markets, Asset Classes, and Portfolio Strategy (MAPS) Americas
USSA International (U.S subsidiary of the Public Investment Fund of Saudi Arabia)

Joseph Cavatoni, Market Strategist, Americas
World Gold Council

Institutional Investor Discussants

Marcelo Muniz, Head of Investments
AFAP Itaú, Uruguay

Aileen Mathieson, Group Chief Investment Officer
Aspen Insurance, United Kingdom

Vasilios Siokis Ph.D., Chief Risk Officer
Emirates Investment Authority, United Arab Emirates

Scott Simon, Chief Investment Officer
Fire and Police Pension Association of Colorado

Jeanne Shen, Chief Investment Officer
Gavi Alliance

Peter Needler, Head of Public Markets
Nova Scotia Pension Services Corporation, Canada

Tine Choi Danielsen, Chief Strategist and Director of Investment Strategy
PFA Pension, Denmark

Arjen Pasma, Chief Fiduciary Officer
PGGM Investments, The Netherlands

Farouki Majeed, Chief Investment Officer
School Employees Retirement System of Ohio

Xiaowei Han, Head of ALM
TIAA

Jarkko Soikkeli, Head of Strategy and Allocation
Varma Mutual Pension Insurance, Finland

Joy Xu, Vice President of Strategic Asset Allocation and Fixed Income
Verizon Investment Management Corp.

Parallel Breakout Session B

What skillsets should institutional investors prioritize, when evaluating private debt managers in today's market? ….. continued

(Chair) Tom Tull, Fellow
AIF Global Institution

Panellists

Taylor Boswell, Head of Private Credit
AGL Credit Management

Vivek Mathew, President of Antares Capital Advisers
Antares Capital

Kevin Magid, President, Private Debt
Audax Private Debt

Matt Winkler, Managing Director
Benefit Street Partners – Alcentra

Sengal Selassie, Chief Executive Officer
Brightwood Capital Advisors

Randy Schwimmer, Vice Chairman, Investor Solutions
Churchill Asset Management (Nuveen)

Steve Vaccaro, Chief Executive and Chief Investment Officer
CIFC Asset Management

Jason Van Dussen, Senior Managing Director
Golub Capital

Owain Griffiths, Partner, Head of Capital Solutions
Sona Asset Management

Institutional Investor Discussants

Janelle Woodward, Senior Managing Director, Multi-Asset Group
Allstate Investments

Markus Schaen, Senior Investment Manager
Brand New Day Retirement, The Netherlands

Peggy Huang Ph.D., Chief Investment Officer
CC Capital/Ceres Life

Jackie Wang, Investment Director
Mass Mutual

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Ellen Hung, State Investment Officer
Nebraska Investment Council

Tina Suo, Head of Alternative Credit
New York City Retirement Systems (NYCERS)

Michela Bariletti, Head of Global Investment Research and Chief Credit Officer
Phoenix Insurance Group, United Kingdom

Chung Ma, Managing Director, Portfolio Solutions Group
Virginia Retirement System

Parallel Breakout Session C

"Asset backed lending currently offers the most enticing investment opportunities in the private credit space." Discuss .....continued

(Chair) Francis Griffin, Senior Vice President, Alternatives Consulting
Callan

Panellists

Chris Hentemann, Managing Partner, Chief Investment Officer
400 Capital Management

Kevin McCormick, Managing Director
Campbell Lutyens

Dushyant Mehra, Co-Chief Investment Officer
Hildene Capital Management

David Sherr, Founder, Managing Partner and Chief Investment Officer
One William Street Capital Management

Philip Sbrocchi, Head of EMEA Lending
Orchard Global

Udai Bishnoi, Global Head of Asset Based Finance
Sculptor Capital

Institutional Investor Discussants

Johannes Lee, Vice President, Investments
Builders Vision

Corrado Pistarino, Chief Investment Officer
Foresters Friendly Society, United Kingdom

Leslie Lenzo, Chief Investment Officer
Hershey Trust Company

Paul Chai, Chief Investment Officer
Kansas State University Foundation

Mikyung Chung, General Manager, Investment Management Department
Shinhan Life Insurance, Republic of Korea

Ryan Johnston, Senior Analyst - Funds Alpha
State of Wisconsin Investment Board

Christopher Brockmeyer, Director of Employee Benefits
The Broadway League Inc

Dimitar Lambrev Ph.D., Senior Portfolio Manager – Private Markets
UNIQA Insurance Group AG, Austria

Lan Cai, Chief Investment Officer
The Pension Boards – United Church of Christ

Parallel Breakout Session D

Rethinking economics..... continued

(Chair) Jerry Moriarty, Independent Advisor
Moriarty & Associates, Ireland

Panellists

Professor Mark Blyth
William R. Rhodes '57 Professor of International Economics
Director of the William R. Rhodes Center for International Economics and Finance
Brown University

Professor Layna Mosley
Director, Princeton Sovereign Finance Lab
Professor of Politics and International Affairs
Princeton University

Institutional Investor Discussants

Ricardo da Costa Martinelli Ph.D., Deputy Head of the Foreign Reserves Department
Banco Central do Brasil, Brazil

Eric Newman, Treasury Manager
City of Stamford

Konstantinos Grigoriadis, Treasury Manager for Pension Investments
DXC Technology

Alexander Neszvecsko, Portfolio Manager
European Patent Organisation Reserve Funds, Germany

Rafael Judar Vicchini, Chief Investment Officer
Fundação ELOS Pension Fund, Brazil

Mamraj Chahar, Vice President, Investments
IG Insurance, Kingdom of Jordan

Adam Ruddle, Chief Investment Officer
LV=, United Kingdom

Moritz Zander, Head of Investments
New Reinsurance Company Ltd, Switzerland

Patrícia Queiroz, Chief Investment Officer
Real Grandeza Pension Fund, Brazil

Clemens Quast, Head of Treasury
Sächsische Aufbaubank – Förderbank, Germany

Joana Marfoh, Head of Treasury and Pension Fund Management
U.K. Local Authority Pension Fund, United Kingdom

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Parallel Breakout Session E

Given current trajectories, how is the geopolitical world order of January 20th, 2029, likely to differ from that of today? .... continued

(Chair) David Stewart, Founder
Global ARC, Australia

Panellists

Professor Rana Mitter
Author: *'China's Good War: How World War II is Shaping a New Nationalism'*
The S.T. Lee Chair in U.S.-China Relations
Harvard Kennedy School of Government

Professor Hal Brands
Author of 'Danger Zone: The Coming Conflict with China'
The Henry A. Kissinger Distinguished Professor
of Global Affairs
Johns Hopkins University SAIS

Dr. Zoe Liu
Author of '*Sovereign Funds: How the Communist Party of China Finances its Global Ambitions'*
The Maurice Greenberg Senior Fellow for China Studies
The Council on Foreign Relations

Institutional Investor Discussants

Sebastian Vadakumcherry, Chief Risk Officer
and Chief Compliance Officer
Alaska Permanent Fund Corporation

Lan Kollengode, Chief Endowment Officer
Azim Premji Foundation, India

Michael Dittrich, Vice Secretary General,
Head of Finance and Administration
Deutsche Bundesstiftung Umwelt (DBU), Germany

Steve Thompson, Assistant Deputy Minister,
Treasury and Risk Management
Government of Alberta, Canada

Patricia Alejo, Quantitative Strategist & Portfolio Manager
Inter-American Development Bank

Raivo Vanags, Head of Market Operations Department
Latvijas Banka (Central Bank of Latvia), Latvia

Paul Marcussen, Lead Portfolio Manager for External Strategies and Head of Norges Bank Investment Management, New York
Norges Bank Investment Management USA/Norway

Jean-Christophe Van Tilborgh, Chief Investment Officer
Retraites Populaires Pension Fund, Switzerland

Bridget Uku, Investment Officer
UK Local Authority Pension Fund, United Kingdom

Ju Hui, Chief, Financial and Performance Risk
United Nations Joint Staff Pension Fund

Parallel Breakout Session F

Which emerging or currently peripheral, alternatives strategies are likely to enter the mainstream in the next five years?

(Chair) Andy Greene, Chief Investment Officer
TTC Pension Plan, Canada

Panellists

Veronica Wong, Vice President and Senior Portfolio Manager
Bank of Hawaii Investment Management Services

Kevin Edwards, Managing Director
Carnegie Mellon University Investment Office

Mick Solimene, Managing Director and Portfolio Manager
Monroe Capital

Rich Hill, Senior Managing Director and Global Head of Research and Strategy
Principal Asset Management

Elmer Huh, Chief Investment Officer
The M.J. Murdock Charitable Trust

Institutional Investor Discussants

Santiago Hernández, Chief Investment Officer
AFAP SURA, Uruguay

Ramzi Bibi, Head of Investment and Treasury
Arabia Insurance

Howard Cooper, Founder
Cooper Family Office

Anin Nandanan, Head of Investments
Dar Group, Saudi Arabia

Khairat Makanjuola, Chief Operating Officer
Delaware Office of the State Treasurer

Clark Cheng, Chief Investment Officer
Merrimac Corp

Sohel Hussain, Vice President, Investments and Finance
Meyer Memorial Trust

Luiz Claudio Levy Cardoso, Chief Investment Officer
Nucleos-Instituto de Seguridade Social, Brazil

Noriko Hayashi, Managing Director, Head of Private Equity
ORIX Life Insurance Corp, Japan

Christine Knezevic, Senior Investment Analyst
University of Nebraska Foundation

Investment Consultant Discussant

Arlete Nese Ph.D., Partner and Executive Director
ON Valor, Brazil

4.50pm **Ten-minute interval**

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Stagflation

“ Tariffs could cause stagflation for the first time in decades. It may go on for a long, long time.... The grim fact about stagflation is that—once stumbled into—it is very hard to escape. Raise interest rates to curb the inflation, and the stagnation gets worse. Rev the economy to overcome stagnation, and the inflation gets worse. Policy makers find themselves in the predicament of a motorist trying to execute a three-point turn in a too-narrow roadway: they can never back up or advance far enough to make any progress. ”

The Atlantic, April 24th 2025

5.00pm **Why the Trump Administration's economic and trade policies risk an era of entrenched stagflation; and the urgent policy changes needed to avert this crippling economic outcome.**

(Chair) Jerry Moriarty, Independent Advisor
Moriarty & Associates, Ireland

Professor Mark Blyth
Co-author of *‘Inflation: A Guide for Users and Losers’*
Director of the William R. Rhodes Center for International Economics and Finance
William R. Rhodes ’57 Professor of International Economics
Brown University

Professor Mark Blyth is the William R. Rhodes ’57 Professor of International Economics at the Watson Institute for International and Public Affairs at Brown University and the Director of the Rhodes Centre for International Economics and Finance. Mark finished his PhD. in political science at Columbia University in 1999. He then joined the Johns Hopkins University before moving to Brown University in 2009. He is the author of many award-winning books including, ‘Austerity: The History of a Dangerous Idea’ (Oxford University Press 2015), ‘Angrynomics’ (Columbia University Press 2020), ‘Diminishing Returns: The New Politics of Growth and Stagnation’ (Oxford University Press 2022), and forthcoming with Norton in 2025, ‘Inflation: A Guide for Users and Losers’. He writes about the politics of growth, distribution and decarbonization and why people continue to believe dubious economic ideas despite buckets of evidence to the contrary.

5.45pm **Networking drinks and canapés**

Day Three
Wed. Oct. 22

7.30am **Chair’s opening remarks**

Asset Allocation: 2030

“ Wall Street’s ‘bear market in diversification’ is finally easing… the recent reshaping of the trading landscape represents a long-awaited reversion to normalcy for purveyors of diversification strategies.“

Bloomberg, March 22nd 2025

7.35am **How are the institutional investors asset allocation policies of 2030 likely to differ from those of 2025?**

(Chair) Luke Webster, Fellow and Bursar
Corpus Christi College, University of Oxford, United Kingdom

Patrick Adelsbach, Partner
Aksia

Russ Ivinjack, Global Chief Investment Officer
Aon Investments

Tim McCusker, Partner and Chief Investment Officer
NEPC

Additional panelist tba

Climate Justice

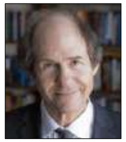
8.20am **Academic Keynote - Climate justice: what rich nations owe the world and the future.**

In his new book ‘*Climate Justice*’, a bracing challenge to status quo thinking on the ethics of climate change, renowned author and legal scholar Cass Sunstein clearly frames what's at stake and lays out the moral imperative: When it comes to climate change, everyone must be counted equally, regardless of when or where they live.

Which means that wealthy nations, which have disproportionately benefited from greenhouse gas emissions, are obligated to help future generations and people in poor nations that are particularly vulnerable.

(Chair) Bill Kelly, Advisor, **Global ARC**
and Founder **Educational Alpha**

Professor Cass R. Sunstein
Founder and Director of the Harvard Program on Behavioural Economics and Public Policy
The Robert Walmsley University Professor
Harvard Law School



Studies of legal publications have found Professor Cass R. Sunstein to be the most frequently cited American legal scholar by a wide margin. In 2018, he received the Holberg Prize from the government of Norway, often described as the equivalent of the Nobel Prize for law and the humanities. In 2020, the WHO appointed him as Chair of its technical advisory group on Behavioural Insights and Sciences for Health. From 2009 to 2012, he was Administrator of the Obama White House Office of Information and Regulatory Affairs, and after that, he served on the Pentagon’s Defense Innovation Board. Cass Sunstein has testified before congressional committees on many subjects, and he has advised officials at the U.N. and the World Bank. He is the author of dozens of books, including the NYT bestselling books ‘The World According to Star Wars’ and ‘Nudge Improving Decisions about Health, Wealth, and Happiness’ ‘Can It Happen Here? Authoritarianism in America’

“ U.S. asset owners and managers are changing the messaging but staying the course with sustainable investing.“

Pensions & Investments, March 7, 2025

9.05am **Panel - Is institutional investor commitment to ESG investing principles waning or merely evolving?**

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(Chair) Bill Kelly, Advisor, **Global ARC**
and Founder, **Educational Alpha**

Songpol Chevapanyaroj, Secretary General
Government of Thailand, Thailand

Michela Bariletti, Head of Global Investment Research
and Chief Credit Officer
Phoenix Insurance Group, United Kingdom

Jean-Christophe Van Tilborgh, Chief Investment Officer
Retraites Populaires Pension Fund, Switzerland

Curtis Loftis, State Treasurer
South Carolina State Treasurer's Office

9.50am **Morning Coffee**

Portfolio Risk

"They were careless people... they smashed up things and then retreated into their money or their vast carelessness... and let other people clean-up the mess they had made"

F. Scott Fitzgerald *'The Great Gatsby'*

10.15am **Academic Keynote - Which current forms of financial 'carelessness' are most likely to spark the next systemic financial crisis, and what policy measures should be taken to prevent it?**

(Chair) Michael Rosen, Chief Investment Officer
Angeles Investments

Professor Richard Berner
Co-Director, **NYU Stern Volatility and Risk Institute**
Inaugural Director of The Office of Financial Research,
U.S. Treasury Department (2013-2017)

Professor Richard Berner is Co-Director of the NYU Stern Volatility and Risk Institute. The Volatility and Risk Institute is an interdisciplinary center for research and analysis of financial and nonfinancial risks. Prior to joining NYU Stern School of Business, Professor Berner served as the inaugural Director of The Office of Financial Research (OFR) from 2013 until 2017, OFR is an independent government bureau based in Washington D.C., which monitors the financial environment for the emergence of new vulnerabilities and migration of financial activity that could threaten financial stability and reports to the United States Treasury Secretary. He also served as Counsellor to the Treasury Secretary from 2011 to 2013. Prior to this he was Co-Head of Global Economics at Morgan Stanley. Professor Berner has been a member of the Economic Advisory Panel of the Federal Reserve Bank of New York, a member of the Panel of Economic Advisers of the Congressional Budget Office and a member of the Executive Committee of the Board of Directors of the National Bureau of Economic Research. He received his bachelor's degree magna cum laude in Economics from Harvard and his PhD in Economics from the University of Pennsylvania.

and

Professor Andrew Metrick
Director of the Yale Program on Financial Stability
The Janet L. Yellen Professor of Finance and Management
Yale University

Professor Andrew Metrick is the Janet L. Yellen Professor of Finance and Management at the Yale School of Management (SOM) and the Director of the Yale Program on Financial Stability. Prior to joining the Yale faculty in 2008, he held positions in the finance department at Wharton and the economics department at Harvard. In academic year 2009-10, he was on leave at the Council of Economic Advisers in Washington. After his work with the CEA, Metrick established the Yale Program on Financial Stability, a research group with a mission "to create, disseminate, and preserve knowledge about financial crises." As part of his work for Yale, he has also overseen the creation of the first of its kind master's program in Systemic Risk at the Yale School of Management. Professor Metrick's current research and teaching is focused on financial stability, including the regulation of systemic risk, the activities of complex financial institutions, and the causes and consequences of the financial crisis of 2007-9. He earned a Ph.D. in economics from Harvard in 1994.

" Investors got a very good deal out of the post-1945 international order. But now the rule book is being torn up. It may turn out that stock markets are like the first-class passengers on the Titanic; toasting each other with champagne as the boat bears down on the iceberg. "

The Financial Times, December 28th 2024

11.15am **Where are the underappreciated or hidden risks in institutional investor portfolios and investment processes and how are they best mitigated?**

(Chair) Odi Lahav, Chief Operating Officer
bfinance, United Kingdom

Sebastian Vadakumcherry, Chief Risk Officer
and Chief Compliance Officer
Alaska Permanent Fund Corporation

Vasilios Siokis Ph.D., Chief Risk Officer
Emirates Investment Authority, United Arab Emirates

Arjen Pasma, Chief Fiduciary Officer
PGGM, The Netherlands

Ju Hui Lee**,** Chief, Financial and Performance Risk
United Nations Joint Staff Pension Fund

12.00pm **Champagne Brunch**

A Post-Liberal Future?

" In 'Regime Change', Professor Patrick Deneen argues for a "peaceful" revolution to replace liberalism with a "postliberal order," grounded in the promotion of conservative and religious values rather than the protection of individual rights.... Vice President J.D. Vance has publicly cited Deneen as a major intellectual influence. "

Politico, July 18th 2024

1.10pm **Academic Keynote – Building an intellectually compelling case for a post-liberal U.S. future**

Professor Deneen will present a provocative vision for replacing the current liberal elite and the ideology that both shaped and empowered them.

He argues that grassroots populist attempts to dismantle the ruling liberal class are misguided and ultimately ineffective. Instead, he calls for the deliberate cultivation of a new elite—one aligned with the interests of the broader populace.

In this session, Professor Deneen will outline how this emerging post-liberal elite can lead a top-down transformation of our political and cultural order, crafting a new governing philosophy, moral ethos, and

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leadership class—one that breaks from the dominance of meritocratic self-interest and seeks to serve the common good.

(Chair) Professor Christopher Holt, Senior Advisor **Global ARC** and Associate Professor, **Conrad School of Business, University of Waterloo,** Canada

Professor Patrick J. Deneen
Author of '*Why Liberalism Failed*' and '*Regime Change: Toward a Postliberal Future*'
The David A. Potenziani Memorial Chair of Constitutional Studies
University of Notre Dame

Professor Patrick Deneen is one of the most influential conservative scholars in the United States; Vice President J.D. Vance having cited Deneen as a major intellectual influence on his views. Deneen is the most prominent academic proponent of "post-liberalism," a political philosophy that eschews small-L liberalism's focus on the protection of individuals' rights and liberties in favour of promoting a "postliberal" order grounded in the promotion of conservative and religious values. His widely discussed 2018 book, *Why Liberalism Failed*, which argues that the principles of liberalism have caused societal fragmentation and the erosion of communal bonds, has been translated into over twenty languages and was praised by former President Barack Obama. Professor Deneen's most recent published books include *Regime Change: Toward a Postliberal Future* (Penguin, 2023) and *Why Liberalism Failed* (Yale University Press, 2018.)

1.50pm **Ten-minute interval**

Parallel Breakout Sessions

2.00pm

Delegates can customize Global ARC to their needs by choosing between several highly interactive parallel breakouts.

Some of these parallel breakouts are continuations of preceding plenary panel topics, whilst others provide delegates with the opportunity to explore fresh topics.

To allow for a more in-depth exploration of these subjects, each breakout session is approximately one and a half hours long.

Parallel Breakout Session A

" Wealth managers have experienced strong growth over the last five years, with assets under management climbing 20% globally. The outlook remains very positive, with expectations of an average wealth manager AUM increase of 13.7% in 2025."
The Asset, March 25th 2025

Wealth managers round table - In a world awash with investment products, how do we determine which high-alpha products to recommend to our clients?

(Chair) Scott Lavelle, Head of Manager Research
PNC

Wealth Manager Panellists

Peter Chiappinelli, Chief Investment Officer
Ballentine Partners

Carol Schleif, Chief Market Strategist
BMO Private Wealth

Ohm Srinivasan, Head of Manager Research and Alternative Investments
CIBC Private Wealth Management, US

Zach Ruchman, Director of Private Investments
Homrich Berg

Florence Narine, Head of Investment Solutions
IG Wealth Management, Canada

Laurie Goodman, Global Head of Investment & Wealth Solutions
Jefferies Private Wealth Management

John Simmons, Head of Portfolio Specialists
Morningstar Wealth

Cameron Dawson, Chief Investment Officer
NewEdge Wealth

Kevin O'Donnell, Executive Managing Director
Peakline Partners

Bradley Sussman, Vice President of Product Development and Research
Raymond James Global Wealth Solutions

Doug Butler, Senior Vice President and Director of Research
Rockland Trust

Jeffrey Heisler Ph.D., Partner and Managing Director, Investment Research
TwinFocus

Chris Maxey, Managing Director and Chief Market Strategist
Wealthspire Advisors, LLC

Institutional Investor Discussants

Marta Norton, Chief Investment Strategist
Empower Investments

Clark Cheng, Chief Investment Officer
Merrimac Corp

Parallel Breakout Session B

" Deglobalization has portfolio implications a new research report has shown....senior investment staff should consider option-based portfolio strategies to address idiosyncratic risks of a fragmenting global economy, rather than only leaning on portfolio diversification as a hedge against volatility.....The de-globalisation report also stressed that volatility driven by economic policy uncertainty could drive asset correlations higher, derailing portfolio diversification assumptions."
Chief Investment Officer Magazine, March 20th 2025

How is de-globalization likely to impact investor asset allocations and portfolio construction? .... continued

(Chair) Luke Webster, Fellow and Bursar
Corpus Christi College, University of Oxford, United Kingdom

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Panellists

Patrick Adelsbach, Partner
Aksia

Russ Ivinjack, Global Chief Investment Officer
Aon Investments

Francis Griffin, Senior Vice President, Alternatives Consulting
Callan

Regina Cho, Investment Director
Crewcial Partners

Tim McCusker, Partner and Chief Investment Officer
NEPC

Benjamin Patzik, Vice President, Global Portfolio Solutions
Segal Marco Advisors

Melissa Santaniello, Managing Director, Private Credit
StepStone Group

Ned McGuire, Managing Director
Wilshire Consulting

Institutional Investor Discussants

Marcelo Muniz, Head of Investments
AFAP Itaú Pension, Uruguay

Eric Newman, Treasury Manager
City of Stamford

Konstantinos Grigoriadis, Treasury Manager - Pension Investments
DXC Technology

Rafael Judar Vicchini, Chief Investment Officer
and Chief Financial Officer
Fundação ELOS Pension Fund, Brazil

Steve Thompson, Assistant Deputy Minister, Treasury
and Risk Management
Government of Alberta, Canada

Peter Needler, Head of Public Markets
Nova Scotia Pension Services Corporation, Canada

Noriko Hayashi, Managing Director, Head of Private Equity
ORIX Life Insurance Corp, Japan

Xiaowei Han, Head of ALM
TIAA

Joana Marfoh, Head of Treasury and Pension Fund Management
UK Local Authority Pension Fund, United Kingdom

Investment Consultant Discussant

Arlete Nese Ph.D., Partner and Executive Director
ON Valor, Brazil

Parallel Breakout Session C

“ It's become increasingly clear that we are living in a very fragile, extremely polarized, and highly unstable world. In this regard, it looks like Western civilization particularly, is suffering from a kind of instability known as anomie…. resulting in the fragmentation of social identity, the rejection of self-regulatory values, and the breakdown of social order.”
Psychology Today, March 18th 2025

Can the rising social fragmentation and anomie of modern society be reversed?

Are the growing trends of social isolation and division simply inevitable outcomes of our increasingly online and individualized lifestyles, or do they stem from deeper structural or cultural shifts? How do these modern social disruptions compare to similar periods of upheaval in history or across other cultures?

What insights can we draw from past societies — including earlier phases of our own Western culture — about the roles that families, governments, media, religious institutions, and other pillars of society can play in restoring a shared sense of purpose and belonging?

(Chair) Professor Christopher Holt, Senior Advisor **Global ARC** and Associate Professor **Conrad School of Business, University of Waterloo,** Canada

Panellists

Professor Patrick J. Deneen
The David A. Potenziani Memorial Chair of Constitutional Studies
University of Notre Dame

Professor Harvey Whitehouse
Director of the Centre for the Study of Social Cohesion
University of Oxford, United Kingdom

Institutional Investor Discussants

Santiago Hernández, Chief Investment Officer
AFAP SURA, Uruguay

Ramzi Bibi, Head of Investment and Treasury
Arabia Insurance

Khairat Makanjuola, Chief Operating Officer
Delaware Office of the State Treasurer

Michael Dittrich, Vice Secretary General,
Head of Finance and Administration
Deutsche Bundesstiftung Umwelt (DBU), Germany

Scott Simon, Chief Investment Officer
Fire and Police Pension Association of Colorado

Corrado Pistarino, Chief Investment Officer
Foresters Friendly Society, United Kingdom

Patricia Alejo, Quantitative Strategist and Portfolio Manager
Inter-American Development Bank

Paul Chai, Chief Investment Officer
Kansas State University Foundation

Moritz Zander, Head of Investments
New Reinsurance Company Ltd, Switzerland

Luiz Claudio Levy Cardoso, Chief Investment Officer
Nucleos-Instituto de Seguridade Social, Brazil

Patrícia Queiroz, Chief Investment Officer
Real Grandeza Pension Fund, Brazil

Clemens Quast, Head of Treasury
Sächsische Aufbaubank – Förderbank, Germany

Lan Cai, Chief Investment Officer
The Pension Boards – United Church of Christ

Parallel Breakout Session D

Selecting your alternatives managers: institutional investor perspectives

2025 Agenda

The significant dispersion in returns among alternative investment managers makes selecting the right manager within a given strategy even more critical than choosing the strategy itself.

How can you ensure that readily available quantitative selection metrics do not overshadow the importance of qualitative evaluation? What role, if any, should external consultants play in supporting your team's decision-making process?

Given the sharp rise in economic and geopolitical uncertainties, how has the perception of risk and reward evolved when allocating to well-established multi-manager firms—potentially offering lower risk but also lower returns—versus investing in smaller, more aggressive firms that may present higher risks but also greater upside potential?

(Chair) Leslie Lenzo, Chief Investment Officer
Hershey Trust Company

Panellists

Jackie Wang, Investment Director
Mass Mutual

Ellen Hung, State Investment Officer
Nebraska Investment Council

Farouki Majeed, Chief Investment Officer
School Employees Retirement System of Ohio

Mauricio Guzman, Head Investment Strategy
SURA Investments, Colombia

Joy Xu, Vice President of Strategic Asset Allocation and Fixed Income
Verizon Investment Management Corporation

Institutional Investor Discussants

Veronica Wong, Vice President and Senior Portfolio Manager
Bank of Hawaii Investment Management Services

Markus Schaen, Senior Investment Manager
Brand New Day Retirement, The Netherlands

Johannes Lee, Vice President, Investments
Builders Vision

Kevin Edwards, Managing Director
Carnegie Mellon University Investment Office

Anin Nandanan, Head of Investments
Dar Group, Saudi Arabia

Jeanne Shen, Chief Investment Officer
Gavi Alliance

Mamraj Chahar, Vice President, Investment
IG Insurance, Kingdom of Jordan

Sohel Hussain, Vice President, Investments and Finance
Meyer Memorial Trust

Mikyung Chung, General Manager Investment Management Dept.
Shinhan Life Insurance, Republic of Korea

Dimitar Lambrev Ph.D., Senior Portfolio Manager – Private Markets
UNIQA Insurance Group AG, Austria

Christine Knezevic, Senior Investment Analyst
University of Nebraska Foundation

Chung Ma, Managing Director, Portfolio Solutions Group
Virginia Retirement System

Parallel Breakout Session E

" Systemic risks have become a top concern for risk managers and business owners because they are, by nature, difficult to predict. Systemic risks aren't just about one company or industry; they spread across supply chains, economies, and entire markets. These are the risks you never see coming or assume will never happen. Many lie hidden within layers of interdependencies — such as vulnerabilities in a supply chain, overreliance on a single vendor, unmonitored cybersecurity gaps or geopolitical events "

Risk Strategies, March 4th 2025

Where are the underappreciated or hidden risks in institutional investor portfolios and investment processes, and how are they best mitigated? .... continued

(Chair) Odi Lahav, Chief Operating Officer
bfinance, United Kingdom

Panellists

Sebastian Vadakumcherry, Chief Risk Officer
and Chief Compliance Officer
Alaska Permanent Fund Corporation

Vasilios Siokis Ph.D., Chief Risk Officer
Emirates Investment Authority, United Arab Emirates

Professor Richard Berner
Co-Director, **NYU Stern Volatility and Risk Institute**
Inaugural Director of The Office of Financial Research,
U.S. Treasury Department (2013-2017)

Arjen Pasma, Chief Fiduciary Officer
PGGM, The Netherlands

Ju Hui Lee, Chief, Financial and Performance Risk
United Nations Joint Staff Pension Fund

Professor Andrew Metrick
Director of the Yale Program on Financial Stability
The Janet L. Yellen Professor of Finance and Management
Yale University

Institutional Investor Discussants

Edgar Sosa, Chief Risk Officer
Afore Invercap Pension, Mexico

Aileen Mathieson, Group Chief Investment Officer
Aspen Insurance, United Kingdom

Ricardo da Costa Martinelli Ph.D., Deputy Head of the Foreign Reserves Department
Banco Central do Brasil (The Central Bank of Brazil,) Brazil

Peggy Huang Ph.D., Chief Investment Officer
CC Capital/Ceres Life

Alexander Neszvecsko, Portfolio Manager
European Patent Organisation Reserve Funds, Germany

Raivo Vanags, Head of Market Operations Department
Latvijas Banka (The Central Bank of Latvia), Latvia

Adam Ruddle, Chief Investment Officer
LV=, United Kingdom

Paul Marcussen, Lead Portfolio Manager for External Strategies and Head of Norges Bank Investment Management, New York
Norges Bank Investment Management USA/Norway

Todd Ludgate, Senior Investment Officer - Fixed Income
State Board of Administration of Florida

2025 Agenda

Ryan Johnston, Senior Analyst - Funds Alpha
State of Wisconsin Investment Board

Andy Greene, Chief Investment Officer
TTC Pension Plan, Canada

Bridget Uku, Investment Officer
U.K. Local Authority Pension Fund, United Kingdom

3.20pm **Ten-minute interval**

Averting Nuclear War

" A post-American nuclear order might be even grimmer than we currently imagine. For the nuclear age has also been the age of American global leadership: humanity's encounter with history's most horrible weapons has come in a period in which international society was structured and stabilized by US power. We simply have no experience to teach us what a world of plentiful nuclear weapons and fading American leadership might look like. Perhaps the gravest danger of our new nuclear era is the chance that we might find out."
Bloomberg, May 18th 2025

3.30pm **Why the current risk of nuclear war is greater than it was at the height of the Cold War, and growing.**

(Chair) Professor Christopher Holt, Senior Advisor **Global ARC** and Associate Professor, **Conrad School of Business, University of Waterloo,** Canada

Professor Vipin Narang
Author of '*Seeking the Bomb: Strategies of Nuclear Proliferation'*
The Frank Stanton Professor of Nuclear Security
Massachusetts Institute of Technology

Professor Vipin Narang is the Frank Stanton Professor of Nuclear Security and Political Science at the Massachusetts Institute of Technology. From March 2022 through August 2024, he served in the U.S. Department of Defense as Principal Deputy Assistant Secretary of Defense and then Acting Assistant Secretary of Defense for Space Policy, a portfolio with oversight over the U.S. Department of Defense's strategic capabilities, including nuclear, space, missile defense, and cyber policy. For his service, he was awarded the Department of Defense Medal for Distinguished Public Service. His first book 'Nuclear Strategy in the Modern Era' (Princeton University Press, 2014) on the deterrence strategies of regional nuclear powers won the 2015 ISA International Security Studies Section Best Book Award. His second book 'Seeking the Bomb: Strategies of Nuclear Proliferation' was published with Princeton University Press in 2022. He was the recipient of the 2020 ISSS Emerging Scholar Award from the International Studies Association awarded to the scholar who "had made the most significant contribution to the field of security studies." He received his Ph.D. from the Department of Government, Harvard University in 2010.

Key 2025 Take-Outs

4.15pm **Reflecting on the key take-outs from Global ARC 2025**

(Chair) Luke Webster, Fellow and Bursar
Corpus Christi College, University of Oxford, United Kingdom

Leslie Lenzo, Chief Investment Officer
Hershey Trust Company

Cameron Dawson, Chief Investment Officer
NewEdge Wealth

Andy Greene, Chief Investment Officer
TTC Pension Plan, Canada

4.45pm **Close of Global ARC 2025**

GlobalARC

2025 Academic Speakers

Professor Mark Blyth
The William R. Rhodes '57 Professor of International Economics
Director of the William R. Rhodes Center for International Economics and Finance
Brown University

Mark Blyth is the William R. Rhodes '57 Professor of International Economics at the Watson Institute for International and Public Affairs at Brown University and the Director of the Rhodes Centre for International Economics and Finance. Mark finished his PhD. in political science at Columbia University in 1999. He then joined the Johns Hopkins University before moving to Brown University in 2009. He is the author of many award-winning books including, 'Austerity: The History of a Dangerous Idea' (Oxford University Press 2015), 'Angrynomics' (Columbia University Press 2020), 'Diminishing Returns: The New Politics of Growth and Stagnation' (Oxford University Press 2022), and forthcoming with Norton in 2025, 'Inflation: A Guide for Users and Losers'. He writes about the politics of growth, distribution and decarbonization and why people continue to believe dubious economic ideas despite buckets of evidence to the contrary.

Professor Pippa Norris
The Paul F. McGuire Lecturer in Comparative Politics
Founding Director of the Electoral Integrity Project
Harvard Kennedy School of Government

Professor Pippa Norris's research compares public opinion and elections, political institutions and cultures, gender politics, and political communications in many countries worldwide. She is ranked the 2nd most cited political scientist in the world, according to Google Scholar. Major career honors include, the Skytte prize - known informally as the 'Nobel' prize in political science,- IPSA's Karl Deutsch award, APSA's Charles Merriam award, the Warren E. Miller award and the PSA's Sir Isaiah Berlin award, as well as several honorary doctorates. She has published around fifty books, translated into dozens of languages. Professor Pippa Norris's most recent books include: *In Praise of Skepticism* (2022), *Cultural Backlash* (2019, with Inglehart), *Strengthening Electoral Integrity* (2017) and *Why Elections Fail* (2015.) She is Founding Director of the Electoral Integrity Project. Professor Norris holds a PhD from London School of Economics.

Professor Cass R. Sunstein
The Robert Walmsley University Professor
Founder and Director of the Harvard Program on Behavioral Economics and Public Policy
Harvard Law School

Studies of legal publications have found Professor Cass R. Sunstein to be the most frequently cited American legal scholar by a wide margin. In 2018, he received the Holberg Prize from the government of Norway, often described as the equivalent of the Nobel Prize for law and the humanities. In 2020, the WHO appointed him as Chair of its technical advisory group on Behavioural Insights and Sciences for Health. From 2009 to 2012, he was Administrator of the Obama White House Office of Information and Regulatory Affairs, and after that, he served on the Pentagon's Defense Innovation Board. He has testified before congressional committees on many subjects, and he has advised officials at the U.N. and the World Bank. He is the author of dozens of books, including the NYT bestselling books 'The World According to Star Wars' and 'Nudge Improving Decisions about Health, Wealth, and Happiness' 'Can It Happen Here? Authoritarianism in America'

Nobel Laureate Professor Eric Maskin
2007 Nobel Prize Winner for Economics
The Adams University Professor of Economics and Mathematics
Harvard University

Professor Eric Maskin is the Adams University Professor of Economics and Mathematics at Harvard University and the 2007 Nobel Laureate for Economics. He has made key contributions to a diverse range of economic areas including game theory, the economics of incentives, and contract theory. He is particularly known for his papers on mechanism design/implementation theory and dynamic games. research projects include comparing different electoral rules, examining the causes of inequality, and studying coalition formation. In 2007, Professor Maskin was awarded the Nobel Memorial Prize in Economics (with L. Hurwicz and R. Myerson) for laying the foundations of mechanism design theory, a specialized form of game theory that attempts to maximize gains for all parties within markets.. He received his Ph.D. in economics from Harvard University and was a postdoctoral fellow at Jesus College, Cambridge University.

Professor Rana Mitter, O.B.E.
Author: *'China's Good War: How World War II is Shaping a New Nationalism'*
The S.T. Lee Chair in U.S.-China Relations
Harvard Kennedy School of Government

Professor Rana Mitter is ST Lee Chair in US-Asia Relations at the Harvard Kennedy School. Prior to which, he was the Director of The University of Oxford China Centre. He is the author of several books, including Forgotten Ally: China's World War II, which won the RUSI/Duke of Westminster's Medal, and was named a Book of the Year in the Financial Times and Economist. His latest book is China's Good War: How World War II is Shaping a New Nationalism. Rana Mitter's recent documentary on contemporary Chinese politics "Meanwhile in Beijing" is available on BBC Sounds and his TV documentary "The Longest War: China's World War II" was broadcast on the History Channel. He is co-author, with Sophia Gaston, of the report "Conceptualizing a UK-China Engagement Strategy" for the British Foreign Policy Group. Rana was appointed Officer of the Order of the British Empire (OBE) in the Queen's 2019 Birthday Honours. He holds a PhD in History from University of Cambridge.

Professor Hal Brands
Author: *'Danger Zone: The Coming Conflict with China'*
The Henry A. Kissinger Distinguished Professor of Global Affairs
Johns Hopkins University SAIS

Professor Hal Brands is the Henry A. Kissinger Distinguished Professor of Global Affairs and a Senior Fellow at the Center for Strategic and Budgetary Assessments at the Johns Hopkins School of Advanced International Studies (SAIS.) He is the author or editor of several books, including 'Danger Zone: The Coming Conflict with China,' 'American Grand Strategy in the Age of Trump,' 'Making the Unipolar Moment: U.S. Foreign Policy and the Rise of the PostCold War Order' 'What Good is Grand Strategy? Power and Purpose in American Statecraft' and 'From Berlin to Baghdad: America's Search for Purpose in the Post- Cold War World.' Hal Brands served as Special Assistant to the Secretary of Defense for Strategic Planning and as lead writer for the Commission on the National Defense Strategy for the United States, and consulted with a range of government offices and agencies in the intelligence and national security communities. He earned a Ph.D. in history from Yale.

2025 Academic Speakers

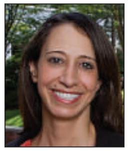
Professor Vipin Narang
Author of *'Seeking the Bomb: Strategies of Nuclear Proliferation'*
The Frank Stanton Professor of Nuclear Security
Massachusetts Institute of Technology

Professor Vipin Narang is the Frank Stanton Professor of Nuclear Security and Political Science at MIT. From March 2022 through August 2024, he served in the U.S. Department of Defense as Principal Deputy Assistant Secretary of Defense and then Acting Assistant Secretary of Defense for Space Policy, a portfolio with oversight over the U.S. Department of Defense's strategic capabilities, including nuclear, space, missile defense, and cyber policy. For his service, he was awarded the Department of Defense Medal for Distinguished Public Service. His first book 'Nuclear Strategy in the Modern Era' (Princeton University Press, 2014) on the deterrence strategies of regional nuclear powers won the 2015 ISA International Security Studies Section Best Book Award. His second book 'Seeking the Bomb: Strategies of Nuclear Proliferation' was published with Princeton University Press in 2022. He received his Ph.D. from the Department of Government, Harvard University in 2010.

Professor Layna Mosley
Director, Princeton Sovereign Finance Lab
Professor of Politics and International Affairs
Princeton University

Professor Layna Mosley is Professor in the School of Public and International Affairs (SPIA) and the Department of Politics at Princeton University. She also serves as Director of the Princeton Sovereign Finance Lab. Her research focuses on the political economy of sovereign borrowing and debt. Exploring how governments, as borrowers, interact strategically with their creditors; how governments choose among creditors; how creditors evaluate government policies and political events; how governments structure the terms of their borrowing; and how governments market themselves to potential bond buyers. Professor Mosley is author of the book 'Global Capital and National Governments' (Cambridge Univeristy Press.) Prior to joining the faculty at PrincetonUniversity, Layna Mosley was Professor in the Department of Politics at the University of North Carolina at Chapel Hill. She holds a Ph.D., Political Science, Duke University.

Professor Nicole Boyson
Chair of the Department of Economics and Finance
Professor of Finance
Northeastern University, D'Amore-McKim School of Business



Professor Nicole Boyson's research and teaching interests fall in the area of investments and corporate finance, with a particular focus on hedge fund management, hedge fund activism and regulatory arbitrage. Her most recently published research includes: 'Hostile Resistance to Hedge Fund Activism' in The Review of Financial Studies, 'Activism Mergers' in The Journal of Financial Economics, 'Thawing Frozen Capital Markets and Backdoor Bailouts, Evidence from the Fed's Liquidity Programs' in The Journal of Banking and Finance and 'Liquidity Shocks and Hedge Fund Contagion' in The Journal of Investment Management. Her previous work 'The Performance of Female Hedge Fund Managers' findings, that despite female hedge fund managers on average outperforming their male counterparts, female managers struggled to raise capital received widespread attention in the financial press. Nicole Boyson holds a PhD. in Finance from Ohio State University.

Professor Jonathan Levy
Author of *'The Real Economy: History and Theory'*
Professor of History
Sciences Po, France

Professor Jonathan Levy is Professor of History at Sciences Po in Paris, France's leading university in the social sciences. Prior to this he served as The James Westfall Thompson Professor of US History, Fundamentals and Social Thought at University of Chicago. He is a historian of economic life in the U.S., with interests in the relationships between business and economic history, political economy, and the history of ideas. He is the author of three widely praised books: '*American Capitalism: A History of the United States'; 'Risk in America'*, which won the Organization of American Historians' Frederick Jackson Turner Award, the Ellis W. Hawley Prize, and the Avery O. Craven Award; and, forthcoming in 2025 with Princeton University Press, *'The Real Economy: History and Theory',* which argues for a novel theory of the economy, its history, and its politics. Jonathan Levy holds a PhD. in History with Distinction from University of Chicago.

Professor Richard Berner
Co-Director, **NYU Stern Volatility and Risk Institute**
Inaugural Director, The Office of Financial Research
U.S. Treasury Department (2013-17)

Professor Richard Berner is Co-Director of the NYU Stern Volatility and Risk Institute, an interdisciplinary center for research and analysis of financial and nonfinancial risks. Prior to NYU, he served as the inaugural Director of The Office of Financial Research (OFR) from 2013 until 2017. OFR is an independent government bureau, which monitors the financial environment for the emergence of new vulnerabilities and migration of financial activity that could threaten financial stability, and which reports to the U.S. Treasury Secretary. He also served as Counsellor to the U.S. Treasury Secretary from 2011 to 2013. Before this he was Co-Head of Global Economics at Morgan Stanley. Professor Berner has been a member of the Economic Advisory Panel of the Federal Reserve Bank of New York and a member of the Panel of Economic Advisers of the Congressional Budget Office. He holds a PhD in Economics from the University of Pennsylvania.

Dr. Zongyuan Zoe Liu
Author: *'Sovereign Funds: How the Communist Party of China Finances Its Global Ambitions'*;
The Maurice R. Greenberg Senior Fellow for China Studies
The Council on Foreign Relations

Dr. Liu is The Maurice R. Greenberg Senior Fellow for China Studies at the Council of Foreign Relations and the author of two books: 'Can BRICS De-dollarize the Global Financial System?' (Cambridge U.P., 2021) and 'Sovereign Funds: How the Communist Party of China Finances its Global Ambitions' (Harvard U.P., 2023). 'Sovereign Funds' is the first in-depth account of the sudden growth of China's sovereign wealth funds and offers a comprehensive and up-to-date analysis of the evolution of the China Investment Corporation, the State Administration of Foreign Exchange, and Central Huijin Investment. She shows how these Chinese sovereign funds have become mechanisms not only for transforming low-reward foreign exchange reserves into investment capital but also for supercharging Chinese power projection and creating Chinese spheres of influence worldwide Dr. Liu holds a PhD in international relations from Johns Hopkins University.

Professor Patrick J. Deneen
Author of *'Why Liberalism Failed'*
The David A. Potenziani Memorial Chair of Constitutional Studies
University of Notre Dame

Professor Patrick Deneen is one of the most influential conservative scholars in the United States; Vice President J.D. Vance having cited Deneen as a major intellectual influence on his views. Deneen is the most prominent academic proponent of "postliberalism," a political philosophy that eschews small-L liberalism's focus on the protection of individuals' rights and liberties in favor of promoting a "postliberal" order grounded in the promotion of conservative and religious values. His widely discussed 2018 book, Why Liberalism Failed, which argues that the principles of liberalism have caused societal fragmentation and the erosion of communal bonds, has been translated into over twenty languages and was praised by former President Barack Obama. Professor Deneen's most recent published books include Regime Change: Toward a Postliberal Future (Penguin, 2023) and Why Liberalism Failed (Yale University Press, 2018.)

Professor Harvey Whitehouse
Author of *'The Evolutionary Origins of the Modern World'*
Director of the Centre for the Study of Social Cohesion
University of Oxford, United Kingdom

Professor Harvey Whitehouse is one of the world's leading experts on the evolutionary basis of human culture. He has spent four decades studying some of the most extreme groups on earth: from the battlefields of the Arab Spring, via millenarian cults on Pacific islands, to violent football fans in South America. Along the way, he has undertaken research at some of the world's most important archaeological sites, brain-scanning facilities, and child psychology labs – all with a view to pioneering a new, scientific approach to the study of human society. He currently serves as Fellow of Magdalen College and Director of the Centre for the Study of Social Cohesion at University of Oxford. His most recent book 'Inheritance: The Evolutionary Origins of the Modern World', a sweeping account of how our evolved biases have shaped humanity's past and imperil its future. was published by Harvard University Press in 2024 to widespread critical acclaim.

Professor Andrew Metrick
Director of the Yale Program on Financial Stability
The Janet L. Yellen Professor of Finance and Management
Yale School of Management

Professor Andrew Metrick is the Janet L. Yellen Professor of Finance and Management at the Yale School of Management and the Director of the Yale Program on Financial Stability. Prior to joining Yale in 2008, he held positions in the finance department at Wharton and the economics department at Harvard. In academic year 2009-10, he was on leave at the Council of Economic Advisers in Washington. After which, Professor Metrick established the Yale Program on Financial Stability, a research group with a mission "to create, disseminate, and preserve knowledge about financial crises." As part of his work for the Yale Program on Financial Stability, he has also overseen the creation of the first of its kind master's program in Systemic Risk at the Yale School of Management. Professor Metrick's current research and teaching is focused on financial stability, including the regulation of systemic risk and the causes and consequences of the financial crisis of 2007-9. He earned a Ph.D. in economics from Harvard in 1994.

This brochure and investor list was updated on **July 24th 2025.**

Additional Global ARC Boston 2025 institutional investor speakers are being confirmed every month. Please visit our website www.garcboston.com for the updated institutional investor and academic speaker list.

Marcelo Muniz, Head of Investments
AFAP Itaú, Uruguay

Marcelo Muniz is Head of Investments at AFAP Itaú. AFAP Itaú, one of the four pension funds in the Uruguayan pension system. AFAP Itaú manages USD 3.9bn on behalf of over 380,000 members. Prior to joining AFAP Itaú, Marcelo worked at Horizon Capital Management. Marcelo graduated with a degree in economics from Universidad de la Republica, Uruguay plus postgraduate studies in finance.

Santiago Hernández, Chief Investment Officer
AFAP SURA Pension Fund, Uruguay

Santiago Hernández is the Chief Investment Officer of AFAP SURA pension fund. Founded in 1996, AFAP SURA is the second largest pension fund manager in Uruguay, with approximately USD 4.3 Billion in assets under management. Based in Montevideo, AFAP SURA serves more than three hundred thousand members across Uruguay. AFAP SURA is owned by the multi-national company SURA Asset Management, a subsidiary of Grupo SURA.

Edgar Sosa, Chief Risk Officer
Afore Invercap Pension, Mexico

Edgar Sosa joined Afore InverCap (USD 10 Billion AUM) in 2014 and was promoted to Chief Risk Officer (CRO) in 2019. He serves on both the Risk and Investment Committees, providing expertise on asset allocation and risk tolerance. Previously he held positions at Citi and MSCI. He is also a lecturer at the Universidad de Monterrey. Edgar holds a BS in Economics from Tecnológico de Monterrey, an MBA from IPADE Business School, and is a CFA and FRM charterholder.

Sebastian Vadakumcherry, Chief Risk Officer and Chief Compliance Officer
Alaska Permanent Fund Corporation

Sebastian Vadakumcherry serves as the Chief Risk Officer and Chief Compliance Officer for the USD 83 Billion Alaska Permanent Fund Corporation, headquartered in Juneau, Alaska. Sebastian's international financial services career spans over two decades, including as the Head of Risk Management Division, he played a key role in setting up the risk management function and developing an overall ERM framework. Sebastian holds an MBA from Texas A&M University, Texas.

Janelle Woodward, Senior Managing Director, Multi-Asset Group
Allstate Investments

Janelle Woodward is a Senior Managing Director within Allstate Investments, with an AUM of approx. USD 70 Billion. She leads the capital allocation process and executing active investing strategies across asset classes. Prior to this, she served as President and Head of Investment Management at MacKay Shields, where she led the firm's investment teams representing USD160 billion in AUM. Janelle holds an MBA from the Kellogg School of Management and is a CFA Charter holder.

Ramzi Bibi, Head of Treasury and Investment
Arabia Insurance Company, United Arab Emirates

Ramzi Bibi is the Head of Treasury and Investment at Arabia Insurance Company (AIC). AIC operates in eight countries and has more than 80 years of experience in the Arab region. Ramzi previously held roles at Lucid Investment, Standard Chartered Bank, BankMed and Arab Finance Corporation. He holds a BA in Public Administration from the American University of Beirut and is currently pursuing a M.Sc. in Enterprise Risk Management program at Columbia University.

Aileen Mathieson, Group Chief Investment Officer
Aspen Insurance, United Kingdom

Aileen Mathieson joined Aspen in 2021, as the Group Chief Investment Officer and is based in the London office. She brings more than fifteen years of investment and financial experience, and previously served at Aberdeen Standard Investments where she was Global Head of Insurance. Prior to this, Aileen was Chief Investment Officer, U.K. Life for Zurich and held senior finance roles at Nucleus Financial Group plc, Standard Life Group, Diageo plc and EMI Music.

Lan Kollengode Ph.D., Chief Endowment Officer
Azim Premji Foundation, India

Lan Kollengode is the Chief Endowment Officer of Azim Premji Foundation, a USD 40 Billion fund set up by businessman and philanthropist Azim Premji focused on improving the quality of lives of some of the most underprivileged sections of society in India. The Azim Premji Foundation is India's first professionally managed Endowment Fund and one of the world's largest foundations. Lan Kollengode is an MBA and holds a PhD from Indian Institute of Management Lucknow.

Veronica Wong, Vice President and Senior Portfolio Manager
Bank of Hawaii Investment Management Services

As Vice President and Senior Portfolio Manager at Bank of Hawaii Investment Management Services, Veronica Wong is responsible for managing the investment assets of the bank's trust and private clients. Prior to Bank of Hawaii, she was director and associate general counsel for Moon Capital and a Vice President at Deutsche Bank. Veronica Wong holds a Bachelors in Economics from Harvard University, a JD from Columbia Law School and an MBA from INSEAD.

Edwin Ridwan, Investment Director
BPJS Ketenagakerjaan, Indonesia

Edwin Ridwan is the Investment Director for BPJS Ketenagakerjaan and manages over USD 45 billion across government-mandated social security programs for workers in Indonesia. He previously held various senior professional and consulting roles for some of the largest Indonesian corporates in various industries. Edwin holds a Bachelor's degree in Business and Accounting and a Master's in Management and Actuarial Science from the University of Indonesia. He holds both CFA and FRM charters.

Markus Schaen, Senior Investment Manager
Brand New Day Retirement, The Netherlands

Markus Schaen is Senior Investment Manager at Brand New Day, an investment and retirement platform with over USD 9 billion in assets. He oversees the firm's liquid and alternative return portfolio. Previously, he led public and private credit manager selection at MN, the Dutch pension fund manager. Markus holds a degree in economics and business administration from Maastricht University and is qualified as both a Chartered Accountant and Chartered Treasurer.

2025 Institutional Investor Speakers

Kevin Edwards, Managing Director
Carnegie Mellon University Investment Office

Kevin Edwards is a Managing Director in the Carnegie Mellon University Investment Office where the team invests endowment and other long-term assets totalling USD 4 billion in support of students, faculty, programs and research globally. Prior to which he worked at Hartford HealthCare and served as Chief Investment Officer and Chief Financial Officer at The University of Connecticut Foundation. Kevin Edwards is a CFA charterholder.

Peggy Huang Ph.D., Chief Investment Officer
CC Capital/Ceres Life

Peggy Huang is the Chief Investment Officer of CC Capital/Ceres Life. She has over two decades of experience spanning multi-asset portfolio management, capital optimization, and asset-liability management across public and private markets. Before joining, Peggy was CIO of SiriusPoint. Peggy holds a Ph.D. in Finance from Indiana University, an M.A. in Economics from the University of Virginia, and a B.S. in Finance from the Wharton School of the University of Pennsylvania. She is a CFA Charterholder.

Howard Cooper, Chief Executive Officer and Founder
Cooper Family Office

Howard Cooper established a single-family office to manage his family assets in 2006. Howard has since served as Chairman of the Board on Family Offices, Endowments and Foundations at Princeton University, Chairman of the Yale School of Management College of Family Offices and currently chairs the Family Office Council at the NYU Stern School of Business. Howard is an honors graduate of Princeton University and has guest lectured at Princeton, Yale and Brown Universities.

Luke Webster, Fellow and Bursar
Corpus Christi College, University of Oxford, United Kingdom

Luke Webster is the Bursar and Governing Body Fellow at Corpus Christi College, University of Oxford, where he oversees the College's finances, estates, and endowment. He previously served as the Chief Investment Officer at London Treasury Ltd, the regulated asset manager of the Greater London Authority. Luke graduated with a degree in Mathematics from the University of Cambridge, followed by an MSc in Applied Statistics from Birkbeck, University of London.

Anin Nandanan, Head of Investments
DAR Group, Saudi Arabia

Anin Nandanan is Head of Investments and Investment Manager at Dar Group, a large single-family office based in Saudi Arabia, and manages a broadly diversified portfolio of investments across asset classes and geographies. Anin Nandanan previously held a number senior positions in the investment and finance industry in India. He holds an MBA from Sri Sathya Sai Institute of Higher Learning. Anin is also a CAIA (Chartered Alternative Investment Analyst) charter holder.

Khairat Makanjuola, Chief Operating Officer
Delaware Office of the State Treasurer

Khairat Makanjuola is the Chief Operating Officer at the Delaware Office of the State Treasurer and advises the Treasurer on fund management, banking, treasury operations, and plan management. A CPA in Delaware, she previously held roles at Sallie Mae, Faw Casson, Grant Thornton, and PwC. Khairat is also an adjunct faculty member at Wilmington University. She has a B.Sc. in Accounting and an MBA, both summa cum laude, from Delaware State University.

Jonathan Glidden, Chief Investment Officer
Delta Airlines Pension

Jonathan Glidden is the Chief Investment Officer for Delta Airlines' USD 43 billion DB and DC pension plans and oversees asset allocation and plan level risk management. He works with outside consultants in the selection and oversight of active investment managers. Jonathan Glidden holds a master's degree in financial mathematics from the University of Chicago and a master's degree in business administration from Emory University's Goizueta Business School.

Michael Dittrich, Vice Secretary General and Chief Financial Officer
Deutsche Bundesstiftung Umwelt, Germany

Deutsche Bundesstiftung Umwelt (the German Federal Environmental Foundation) was established in 1990 and is one of Europe's largest foundations. Deutsche Bundesstiftung Umwelt's promotional and philanthropic activities concentrate on funding and supporting innovative environmental technological, educational and cultural assets. Since 1991, more than ten thousand environmental projects have received financial backing from Deutsche Bundesstiftung Umwelt.

Konstantinos Grigoriadis, Treasury Manager, Pension Investments
DXC Technology

Konstantinos manages the investment, operational activities, and compliance requirements of all DXC's Global Pension Investments (USD 15 billion) within the Corporate Treasury Department. He has over 25 years of experience as a senior investment professional across single and multi-family offices, private banks and global financial institutions. Konstantinos holds a B.Sc. in Finance from the American College of Greece and an MBA in International Finance from the American University.

Vasilios Siokis Ph.D., Chief Risk Officer
Emirates Investment Authority, U.A.E.

Vasilios Siokis is the Chief Risk Officer for the Emirates Investment Authority (EIA), the Sovereign Wealth Fund of the Federal Government of the United Arab Emirates. He has over twenty years of investment and risk management experience within the asset management, sovereign wealth fund and Endowment sectors. Prior to joining EIA, Vasilios held various roles at Cheyne Capital, Trafalgar Asset Managers and HSBC. Vasilios holds a Ph.D., from Bayes Business School, University of London.

Marta Norton, Chief Investment Strategist
Empower Investments

Marta Norton is Chief Investment Strategist for Empower Investments, the second-largest retirement plan provider in the US with more than USD 200 billion in assets under management. Previously, she served as the Chief Investment Officer for the Americas at Morningstar Investment Management. Marta holds a bachelor's degree in economics from Wheaton College in Illinois. She is a CFA charterholder and a member of CFA Society Chicago.

Alexander Neszvecsko, Portfolio Manager
European Patent Office, Reserve Funds, Germany

The European Patent Office is an intergovernmental organisation with thirty-nine member states and about seven thousand employees. The European Patent Office's Reserve Funds manage approximately USD 14 Billion in assets. Alex Neszvecsko is responsible for two asset class portfolios. Prior to joining the Reserve Funds, Alexander Neszvecsko worked in asset management functions at Siemens. He graduated in Business Administration and is a CFA charterholder.

2025 Institutional Investor Speakers

Scott Simon, Chief Investment Officer
Fire and Police Pension Association of Colorado

Scott Simon is the Chief Investment Officer for the Fire and Police Pension Association of Colorado (FPPA). He is responsible for the Association's USD 7 Billion defined benefit and defined contribution plans. Scott has thirty years of professional investment management experience. He holds a B.S. in Business Administration and M.S. in Finance from the University of Colorado and a J.D. from the University of Denver. Scott is also a Chartered Financial Analyst.

Corrado Pistarino, Chief Investment Officer
Foresters Friendly Society, United Kingdom

Corrado Pistarino is the Chief Investment Officer at Foresters Friendly Society. Established in 1834, Foresters Friendly Society is a mutual society that provides a range of financial services and has an increasing exposure to a broad range of alternatives including private debt, infrastructure and private equity. Corrado was previously Head of Insurance LDI at Aviva Investors. Corrado has a degree in Physics from Turin University and a Master in Finance from London Business School.

Rafael Judar Vicchini, Chief Investment Officer and Chief Financial Officer
Fundação Elos Pension Fund, Brazil

Rafael Judar Vicchini is Chief Investment Officer and Chief Financial Officer for Fundação Eletrosul de Previdencia Complementar – ELOS, the multi-billion-dollar pension fund sponsored by CGT Eletrosul. He holds bachelor degrees in Economics from University of São Paulo – USP and in Information Systems from Federal University of Santa Catarina – UFSC, and an Executive MBA from Fundação Dom Cabral. Board member certified from IBGC – Brazilian Institute of Corporate Governance.

Jeanne Shen, Chief Investment Officer
Gavi Alliance

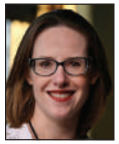
Jeanne Shen is Chief Investment Officer of Gavi Alliance (USD 1.4 bn) and is responsible for the strategic and operational planning of Gavi's investment portfolio. Jeanne has a Bachelor of Science in Economics from the Wharton School at the University of Pennsylvania, and a master's in public policy from the Harvard Kennedy School. She also has professional designations from the CFA Institute and the National Association of Corporate Directors.

Stephen J. Thompson, Assistant Deputy Minister, Treasury and Risk Management
Government of Alberta, Canada

Stephen Thompson is the Assistant Deputy Minister for Treasury and Risk Management in Alberta's Department of Treasury Board and Finance. Stephen oversees the investment strategy and investment policy for the Province's USD 19 billion Heritage Fund and other provincial endowments and pensions with assets under management of over USD 28 billion. Stephen is a Chartered Financial Analyst and holds degrees in Finance and Economics from Saint Mary's University in Halifax, Nova Scotia.

Songpol Chevapanyaroj, Secretary-General
Government Pension Fund of Thailand, Thailand

Songpol Chevapanyaroj is the Secretary-General of Thailand's Government Pension Fund (GPF), which manages approximately USD 38 billion in retirement savings for Royal Thai Government officials. Previously, Mr. Songpol served as the President of the Deposit Protection Agency and held various senior executive roles at Krung Thai Bank and Kasikorn Bank. He holds an MBA in Finance from the Weatherhead School of Management at Case Western Reserve University.



Leslie Lenzo, Chief Investment Officer
Hershey Trust Company

Leslie Lenzo is Chief Investment Officer of the Hershey Trust Company ("HTC"). The Trust supports the Milton Hershey School, which provides low-income children with a quality education, housing, and childcare at no cost to their families. Prior to HTC, Leslie served as CIO at Advocate Aurora Health. She holds a BA in Economics and Government from Georgetown University and an MBA in Finance from Boston University and is also a CFA charterholder.

Patricia Alejo, Quantitative Strategist and Portfolio Manager
Inter-American Development Bank

The Inter-American Development Bank is the largest source of development financing for Latin America and the Caribbean. Established in 1959, the Inter-American Development Bank supports Latin American and Caribbean economic development and social development by lending to governments and government agencies, including State corporations. Patricia Alejo currently serves as the Inter-American Development Bank Quantitative Strategist and Portfolio Manager.

Mamraj Chahar, Vice President of Investments
International General Insurance, Kingdom of Jordan

International General Insurance Holdings Ltd (IGI) is a Jordan-based commercial insurance and reinsurance company, with a diverse worldwide portfolio of investments. Mamraj Chahar has spent the last 20 years managing investments for (re)insurance companies. He has a postgraduate degree in commerce, majoring in accounting, and business statistics and financial management and a CFA charter-holder. Prior to joining IGI General insurance as CIO in 2021, Mamraj was CIO at Saudi Re.

Paul Chai, Chief Investment Officer
Kansas State University Foundation

Paul Chai is Chief Investment Officer of the Kansas State University Foundation, which manages approximately USD 1.2 billion in assets. He joined the Foundation in 2018 as Director of Investments, having previously held roles at Grandway Asset Management, Pratt & Whitney, and TSMC in engineering and consulting. Paul holds a BSc from MIT and an MBA from Carnegie Mellon University's Tepper School of Business. He is a CFA and CAIA charterholder.

Victor Bogachev, Managing Director of Investments
Kensington Investment Company, Inc.

Victor Bogachev is the Managing Director of Investments at Kensington Investment Company (KIC), the Lewis family office, where he oversees all non-real estate investments. He previously consulted for various family offices and mid-sized financial institutions. Earlier in his career, he worked in investment banking and founded a data analytics start-up. Victor earned his Bachelor of Arts, cum laude, in Political Science and History from George Washington University.

Raivo Vanags, Head of Market Operations Department
Latvijas Banka (The Central Bank of Latvia), Latvia

Raivo Vanags is the Head of Market Operations at Latvijas Banka, the central bank of Latvia. In this role Raivo Vanags is responsible for the management of Latvijas Banka's foreign reserves including portfolio management, risk management and back-office operations, and a part of domestic monetary policy operations, and national debt management. Raivo Vanags holds a B.Sc. from the Stockholm School of Economics and an M.Sc. from the University of Latvia.

2025 Institutional Investor Speakers

Adam Ruddle, Chief Investment Officer
LV=, United Kingdom

Adam Ruddle is the CIO at LV=. He is responsible for the investment management, allocation, and optimization of over USD 17 billion of aum under management. Adam has been with LV= for nearly 15 years, working in a wide range of roles, including Asset Liability Management, Financial Reporting and Valuation, Capital Management, and With-Profits oversight. He is a Fellow of the Institute and Faculty of Actuaries and holds the Chartered Enterprise Risk Actuary designation.

Mike Fang, Senior Portfolio Manager
Maryland State Retirement and Pension System

Based in Baltimore, Maryland, the Maryland State Retirement and Pension System manages approximately USD 68 Billion in assets on behalf of over four-hundred thousand pension system members and retirees. Prior to joining MSRPS in 2019, Mike Fang worked as Senior Fund Manager in ICMA-RC. Mike Fang holds an MBA from Yale School of Management an MS in Financial Mathematics from University of Chicago and MS in Computer Science from University of Illinois at Chicago.

Jackie Wang, Investment Director
Mass Mutual

Founded in 1851, Massachusetts Mutual Life Insurance Company, also known as MassMutual, manages USD 300 billion in assets. Jackie Wang is an Investment Director at MassMutual Investments and is a voting member of the MassMutual Investments Investment Committee and Valuation Committee. She has a core focus on Fixed Income and Private Credit opportunities alongside experience investing in multi-asset public equities and co-investments.

Bill Li, Director of Portfolio Completion
Massachusetts Pension Reserves Investment Management (MassPRIM)

Bill C. Li is Director of Portfolio Completion at the USD 110 Billion aum Massachusetts Pension Reserves Investment Management Board ('MassPRIM'.) Bill oversees investment activities for MassPRIM's Hedge Fund portfolio and Real Asset portfolio; he also designed the pension fund's innovative asset allocation framework. Bill is a CFA and CAIA; he also serves on the Board of CFA Society Boston. Bill has an MA degree from Brandeis University, and an MS degree from Cornell University.

Clark Cheng, Chief Investment Officer
Merrimac Corp

Merrimac Corporation is a large single-family office with investments in hedge funds, private equity, real estate and mutual funds. Prior to joining Merrimac Corporation, Clark Cheng was responsible for managing the hedge fund due diligence process in the Americas for HSBC's Alternative Investment Group. He holds an MBA from Duke University's Fuqua School of Business and a Bachelors of Arts Degree from UCLA. Clark Cheng also holds the CFA, FRM and CAIA designations.

Sohel Hussain, Vice President, Investments and Finance
Meyer Memorial Trust

Sohel Hussain is Vice President of Investments and Finance at the Meyer Memorial Trust (MMT) and is responsible for leading the overall investment activities of its multi-asset, diversified portfolio. Prior to joining MMT in 2021, Sohel held roles at PIMCO, SECOR Asset Management, QFR Capital, Taconic Capital and SS&C GlobeOp. Sohel holds a BBA in Accounting from Hofstra University and a Master of Liberal Arts in Finance from Harvard University.

Ellen Hung, State Investment Officer
Nebraska Investment Council

Ellen Hung is the State Investment Officer (CIO) of the Nebraska Investment Council and oversees over USD 43 billion in state assets. Ellen was previously the Deputy Chief Investment Officer of the State Universities Retirement System Illinois and the Deputy Chief Executive Officer of the Santa Barbara County Employees Retirement System. Ellen is a Chartered Financial Analyst charterholder and holds a BBA and an MBA from the Rensselaer Polytechnic Institute.

Moritz Zander, Head of Investments
New Reinsurance Company Ltd, Switzerland

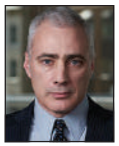
Moritz Zander is Head of Investments at New Reinsurance Company Ltd, which is headquartered in Zurich, Switzerland. He was previously Head of Origination, Capital Partners at New Re, and held various investment roles at Swiss Re and at MIGA, part of the World Bank Group. Moritz holds a master's degree in international policy studies from Stanford University and a Bachelor of Arts from the University of Geneva. He is also a CFA Charterholder.

Tina Suo, Head of Alternative Credit
New York City Retirement Systems (NYCERS)

New York City Retirement Systems ('NYCERS') manages USD 90 billion in assets and serves over 350,000 current NY City workers and retirees. As Head of Alternative Credit at NYCERS, Tina Suo oversees the entire alternative credit portfolio for the five New York City Retirement Systems. Prior to joining NYCERS, she served as Senior Director of Fixed Income Investments at New York Life She holds an M.B.A. degree from London Business School.

Paul Marcussen, Lead Portfolio Manager, External Strategies & Head of NBIM NY
Norges Bank Investment Management, USA/Norway

Paul Marcussen oversees NBIM's investment operations in New York, where USD 600 Billion of the fund's assets are invested across fixed income, equities and real estate in the Americas. He is also a Portfolio Manager within the external strategies team. After gaining a master's in finance degree from London Business School he worked for Morgan Stanley, Salomon Smith Barney and Gjensidige within various portfolio management and equity research functions. He is a CFA charter holder.



Peter Needler, Head of Public Markets
Nova Scotia Pension Services Corporation, Canada

Halifax-headquartered Nova Scotia Pension Services Corporation ('NS Pension') administers the pension benefits and investment assets of the Province of Novia Scotia's Teachers' Pension Plan and the Public Service Superannuation Plan. NS Pension manages approximately CAD 15 billion (USD 11 billion) in pension plan assets and has over seventy thousand members. Peter Needler is responsible for the oversight of all of NS Pension's public market investments.

Luiz Claudio Levy Cardoso, Chief Investment Officer
Nucleos Instituto de Seguridade Social Pension, Brazil

Luiz Claudio Levy Cardoso serves as the Chief Investment Officer of Nucleos Instituto de Seguridade Social, the pension fund for employees of the Brazilian nuclear industry. Before joining Nucleos Instituto de Seguridade Social Pension he served as commercial manager of Indústrias Nucleares do Brasil, the Brazilian nuclear fuel cycle company. Prior to Indústrias Nucleares do Brasil, Luiz Claudio Levy Cardoso was head of equities and fixed income of Aerus pension fund.

GlobalARC

2025 Institutional Investor Speakers

Noriko Hayashi, Managing Director

ORIX Life Insurance Corporation, Japan

Noriko Hayashi is a Managing Director, Head of Private Equity at ORIX Life Insurance Corp. At ORIX Life Insurance, she has been involved in framework building, implementing, portfolio construction and management of a global private markets program for institutional investors with primary focus on private equity. Prior to this, she worked for the Government Pension Investment Fund (GPIF) and at Sony Life Insurance. She received a B.A. in Law from Kyoto University.

Bradford Lo Gatto, Head of Private Credit & Alternative Assets

PartnerRe Asset Management Corporation

Bradford Lo Gatto is Head of Private Credit & Alternative Assets and a Senior Investment Analyst for Public Credit at PartnerRe. He previously held roles at UBS, White Peaks, Centaur Performance Group, and Argent Funds Group. Bradford holds an MBA with distinction in Finance and Corporate Strategy from the Cornell Johnson Graduate School of Management, and a BA in Economics from Cornell University. He is also a CFA Charterholder.

Tine Choi Danielsen, Chief Strategist and Director of Investment Strategy

PFA Pension, Denmark

Founded in 1917, PFA provides pension savings, insurance and health care products for both individual and companies. With approximately DKK 790 billion (approximately USD 110 billion) of assets under management, Danish pension fund PFA is one of the largest pension funds in Europe. Tina Choi Danielson joined PFA is 2018. Prior to joining PFA pension Tina Choi Danielson served as Global Chief Strategist at Danske Bank Wealth Management.

Arjen Pasma, Chief Fiduciary Investment Officer

PGGM Pension Fund, The Netherlands

PGGM manages approximately USD 300 billion in assets from 5 major Dutch pension funds. Arjen Pasma is responsible for PGGM's overall portfolio from the perspective of interest rates, currencies, ESG and balance sheet risk and with implementing the responsible investment policy. Prior to being promoted to Chief Fiduciary Investments, Arjen Pasma served as PGGM's Chief Risk Officer. He is a board member on PGGM's investment, allocation committee and ALM committees.

Michela Bariletti, Head of Global Investment Research and Chief Credit Officer

Phoenix Group, United Kingdom

Michela Bariletti is Head of Global Investment Research and Chief Credit Officer at Phoenix Group, the United Kingdom's leading retirement savings and income business, with over £290 Billion (USD 383 Billion) of assets under Administration, on behalf of about twelve million customers. Michela is a highly experienced Finance / Markets professional, having spent considerable part of her career as a senior credit professional and started her career with Goldman Sachs.

Patrícia Queiroz, Chief Investment Officer

Real Grandeza Pension Fund, Brazil

Patrícia Queiroz serves as the Chief Investment Officer at Real Grandeza Pension Fund, one of the largest pension funds in Brazil with assets under management of approximately USD 6 Billion. Real Grandeza runs the pension fund for employees of Eletrobras Furnas, the state-owned electrical power industry company which generates or transmits electricity to over fifty percent of households in Brazil. Patrícia graduated in Economics at the State University of Rio de Janeiro.

Jean-Christophe Van Tilborgh, Chief Investment Officer

Retraites Populaires Pension, Switzerland

With CHF 26 Billion in assets (USD 28 Billion) Retraites Populaires is one of Switzerland's largest public pension funds. It is a not-for-profit organisation that return all excess revenues to its clients. Jean-Christophe Van Tilborgh has served as Chief Investment Officer of Retraites Populaires since 2015, prior to which he was Retraites Populaires Head of Investment managers. JeanChristophe holds a master's in finance from the HEC Lausanne School of Business and the CAIAdesignation.

Clemens Quast, Head of Treasury

Sächsische Aufbaubank Förderbank, Germany

Clemens Quast is Head of Treasury at Sächsische Aufbaubank Förderbank, a AAA-rated bank fully owned by the Free State of Saxony. He has more than 30 years capital markets expertise, with focus on performance driving sustainability issues. Prior to Sächsische Aufbaubank Förderbank, Clemens worked for a large local bank in the cooperative banking sektor and for DZ BANK. He is a certified member of the German Association for Financial Analysis and Asset Management (DVFA e.V).

Steve Davis, Chief Investment Officer

Sacramento County Employees' Retirement System

Steve Davis is the Chief Investment Officer at the Sacramento County Employees' Retirement System (SCERS), a USD14 billion public pension plan. Steve is responsible for the oversight and implementation of SCERS' investment program. He has been with SCERS since 2010. Steve holds a Bachelor of Arts degree from the University of Arizona and an MBA from the University of Southern California and is a CFA and CAIA charter holder.

Farouki Majeed, Chief Investment Officer

School Employees Retirement System of Ohio

Founded in 1937, the Ohio School Employees Retirement System currently manages approximately USD 18 Billion in assets on behalf of over one hundred and twenty thousand active, contributing members and over seventy thousand benefit recipients. Farouki Majeed has served as Chief Investment Officer of the Ohio School Employees Retirement System since 2012. Prior to this he worked as Senior Investment Officer at CalPERS. He holds an MBA from Rutgers and is a CFA.

Mikyung Chung, General Manager, Investment Management Department

Shinhan Life Insurance, South Korea

Shinhan Life Insurance is one of South Korea's largest insurance companies and a subsidiary of the Shinhan Financial Group. The firm provides insurance, pension insurance, private health insurance and savings insurance to their client. Prior to this, Mikyung Chung was a fund manager for Korea Investment and Management's alternative asset funds as well as a senior manager of the investment screening team at Korea Development Bank Life Insurance. She is a CAIA charter holder.

Curtis Loftis Jr., State Treasurer

South Carolina State Treasurer's Office

Curtis Loftis is the State Treasurer of South Carolina's "state's banker," managing, investing and retaining custody of more than USD 75 Billion in South Carolinian public funds. Curtis Loftis has returned more than USD 390 million in unclaimed funds to South Carolinians and has overseen significant growth in the state's Future Scholar 529 College Savings Plan, with nearly 240,000 accounts and total assets under management over USD 6.8 Billion.

2025 Institutional Investor Speakers

Todd Ludgate, Senior Investment Officer – Fixed Income
State Board of Administration of Florida

Todd Ludgate is the Senior Investment Officer for Fixed Income at the State Board of Administration of Florida (USD 257 bn), overseeing a team of 16 investment professionals and managing USD 65 billion. Previously, Todd was Head of Global Extended Fixed Income Strategies at the State of Wisconsin Investment Board. Todd holds a Bachelor of Science in Economics from the University of Florida and an MBA in Finance from The University of Kansas.

Ryan Johnston, Senior Analyst – Alpha Funds
State of Wisconsin Investment Board (SWIB)

Ryan Johnston is a Senior Analyst, Funds Alpha at State of Wisconsin Investment Board (SWIB). SWIB is the USD 145 Billion state agency that administers the assets of the Wisconsin Retirement System, the State Investment Fund, and several smaller state funds. Ryan previously held roles at Alpha Investment Consulting Group and the City of Milwaukee Employees' Retirement System. Ryan holds both the Chartered Alternative Investment Analyst and Chartered Financial Analyst designations.

Mauricio Gúzman, Head of Investment Strategy
SURA Investments, Colombia

SURA Investments is a leader in Latin American pension fund administration, asset management and consulting, with more than USD 140 billion of AUM. Previously Mauricio Gúzman was Head of Allocation and Investing Strategy at Cordillera Capital. He holds a BA in Finance from Universidad Externado de Colombia, an MBA from Universidad de Los Andes, executive programs from Harvard Business School and Kellogg, and is both a CFA and CAIA Charterholder.

Christopher Brockmeyer, Director of Employee Benefit Funds
The Broadway League

Christopher Brockmeyer has been the Director of Employee Benefit Funds for The Broadway League, the national trade association for the Broadway theatre industry, since 2007. This includes eleven multi-employer pension funds, six health funds and six annuity/401(k) funds with approximately USD 9 Billion in assets, covering one hundred and forty thousand current or future retirees and providing health care coverage for thirty one thousand employees, plus dependents.

Johannes Lee, Vice President, Investments
The Builders Vision

Johannes Lee is Vice President, Investments, at Builders Asset Management, and works across private fund investments, public fund investments, and co-investments. He is responsible for aiding in capital allocation to best-in-class managers to drive long-term returns and advance the mission of providing for a more humane and healthier planet. He collaborates across the Builders Vision platform and with industry counterparts, seeking to identify outperforming, impactful opportunities.

Ricardo da Costa Martinelli, Ph.D., Deputy Head of the Foreign Reserves Department
The Central Bank of Brazil/Banco Central do Brasil, Brazil

Ricardo is Deputy Head of the Foreign Reserves Department at Banco Central do Brasil. He previously served as Head of the Investment Division in the Foreign Reserves Department. In 2020 he was appointed as representative for the BCB at the Network for Greening the Financial System subgroup on portfolio management. Ricardo also worked as a trader, strategist and portfolio manager at BCB. He holds a Ph.D. in Economics from the Universidade de Brasilia.

Eric Newman, Treasury Manager
The City of Stamford

Eric Newman is responsible for the treasury, investment management and pension fund functions at the City of Stamford. He is a is a member of the City of Stamford's Investment Advisory Committee and a Member of the AIF Global-Trustee Advisory Board, an independent economic think tank focusing on institutional investment policy. Prior to joining the City of Stamford, Eric Newman worked for Royal Bank of Scotland, IBM Global Financing, Price Waterhouse, and Soros Fund Management.

Elmer Huh, Chief Investment Officer
The M.J. Murdock Charitable Trust

Elmer leads the investment team and works with the Trustees in managing the M.J. Murdock Charitable Trust's investment portfolio. Previously he held capital markets roles at EY Capital Advisors, Lehman Brothers and Morgan Stanley. Elmer serves on the advisory committees of several alternative investment funds. He also participates as a board member focused on strategyand finance of several nonprofits, foundations and other organizations. He holds an MBA, MS, and BS from Columbia University.

Lan Cai, Chief Investment Officer
The Pension Boards – United Church of Christ

Lan Cai, CFA, is the Chief Investment Officer for The Pension Boards-United Church of Christ, Inc. Her team also serves as OCIO for United Church Funds. Lan joined the Pension Boards in 2015 from Millennium, where she was Managing Director and Portfolio Manager. Prior to Millennium, Lan was Partner and Head Portfolio Manager at PineBridge Investments. Lan received her MBA from the University of Chicago. She serves on the boards of non-for-profit organizations.

Xiaowei Han, Head of ALM
TIAA

Xiaowei Han joined TIAA as the Head of ALM in Feb 2019 where she leads the asset liability management function. Before joining TIAA, she had worked for Transamerica. Xiaowei holds a Master of Science degree in actuarial science from the University of Iowa, a Master of Science degree in physical chemistry from Nanjing University, and a Bachelor of Science degree in chemistry from Nanjing University. She is a CFA Charterholder and Member of American Academy of Actuaries.

Andy Greene, Chief Investment Officer
Toronto Transit Commission Pension Plan, Canada

Andy Greene has over 25 years' experience in the US and Canada and is currently the Chief Investment Officer for the Toronto Transit Commission Pension Plan, a USD 8 Billion plan with approximately 15,000 active members and 10,000 pensioners. Prior to this he was at OPTrust, Northern Trust, the University of Wisconsin Foundation and Willis Towers Watson. He also serves on the Investment Committees for the United Church of Canada and York University endowment.

Joana Marfoh, Head of Treasury and Pension Fund Management
UK Local Authority Pension Fund, United Kingdom

Joana Marfoh is the Head of Treasury and Pension Fund Management at the London Borough of Islington, where she is responsible for the treasury and pension investment fund. Prior to joining the London Borough of Islington, she worked at Ealing Borough Council for eight years on pension investments and treasury as well as holding various service accounting roles including capital, housing and regeneration. Joana Marfoh is a CIMA qualified accountant.

Bridget Uku, Investment Manager
UK Local Authority Pension Fund, United Kingdom

Bridget Uku is Group Treasury and Investments Manager at the United Kingdom Local Authority Pension Fund. Bridget Uku holds a law degree and is a Chartered PF Accountant with seventeen years of experience managing Treasury and Pension Fund investments within the United Kingdom's Local Government sector. Bridget Uku also currently serves as a member of the FTSE Europe, Middle East and Africa advisory committee.

Dimitar Lambrev Ph.D., Senior Portfolio Manager – Private Markets
UNIQA Insurance Group AG, Austria

Dimitar Lambrev is Senior Portfolio Manager of Private Markets at UNIQA Insurance Group AG, which manages approximately USD 25 billion in assets. He oversees global private market and infrastructure investments. Dimitar previously worked at Strabag, Firstier Bank, PB&T Bank, and Citywide Banks. He holds a BSc from the University of Plovdiv (Bulgaria), a master's from Vienna University of Applied Sciences (Austria), and a PhD in Finance from Juraj Dobrila University of Pula (Croatia).

Ju Hui Lee, Chief, Financial and Performance Risk
United Nations Joint Staff Pension Fund

The United Nations Joint Staff Pension Fund, which manages approximately USD 84 billion in assets on behalf of 227,000 members and beneficiaries. Ju Hui Lee previously held roles at CPP Investments, Scotiabank, KPMG, Mercer, and Manulife Financial. Ju Hui Lee holds a BSc in Mathematics, an MBA from Yonsei University and an MSc in Financial Mathematics from the University of Chicago. She also holds the CFA, CAIA, FSA, FCIA, CERA, and FRM designations.

Christine Knezevic, Senior Investment Analyst
University of Nebraska Foundation

Christine Knezevic is a Senior Investment Analyst at the University of Nebraska Foundation, where she helps manage a USD 3.4 billion endowment and conducts investment manager research across both public and private markets. Christine is a CFA Charterholder and CFP certificant, with a Master's in Finance and Management Information Systems from the University of Nebraska–Lincoln and a Bachelor's in Accounting and Finance from the University of Nebraska at Kearney.

Ming Cen, Head of Markets, Asset Classes, and Portfolio Strategy (MAPS) Americas
USSA International (the U.S. subsidiary of The Public Investment Fund of Saudi Arabia)

Ming Cen is Head of Markets, Asset Classes, and Portfolio Strategy (MAPS) Americas at USSA, the U.S. subsidiary of Saudi Arabia's Public Investment Fund sovereign wealth fund. She leads research on quantitative alpha strategies, asset allocation, and thematic investing. Ming previously held roles at Vassalou Capital, Perella Weinberg Partners, MIO Partners, SAC Capital, and Bloomberg. She holds an MA in Economics from Kent State University.

Jarkko Soikkeli, Head of Strategy and Allocation
Varma Mutual Pension Insurance, Finland

Jarkko Soikkeli is Head of Strategy and Allocation at the USD 65 billion Varma Mutual Pension Insurance Company. Before joining Varma Mutual Pension Insurance Company in 2017, Jarkko Soikkeli held roles at OP Group, Swedbank, eQ, FIM and the Federation of Finnish Enterprises. He holds an M.S. Econ from the Helsinki School of Economics, a CEFA from Hanken School of Economics and is an Advanced Studies Program (ASP) graduate from the Kiel Institute of World Economy.

Joy Xu, Vice President of Strategic Asset Allocation and Fixed Income
Verizon Investment Management Corporation

Joy Xu is a Senior Investments Director at VIMCO, where she oversees Defined Benefit, Defined Contribution, various Welfare Trusts, and Verizon Foundation with total assets over USD 40 billion. Joy is responsible for portfolio construction, strategic and tactical asset allocation, and asset-liability management. She also oversees risk management and manages external multi-asset managers. Joy earned an MS in finance from Carroll School of Management at Boston College, and is a CFA Charterholder.

Chung Ma, Managing Director, Portfolio Solutions Group
Virginia Retirement System

Chung Ma leads the Research, Risk Management, Portfolio Integration, and Portfolio Strategy teams (PSG) at the USD 100 Billion Virginia Retirement System (VRS). The PSG explores and builds solutions that are not yet mainstream in most pension funds. Chung Ma also serves as a member of the VRS Investment's Executive and Management Committees, which oversee all of the investment department's activities and is the chairperson of the Currency Management Team.

2025 Pension Consultant Speakers

Patrick Adelsbach, Partner
Aksia

Patrick Adelsbach is Partner and Head of Pan Alts Americas at Aksia (with USD 365bn in AUS). He was previously a Director and Head of Event Driven and Fixed Income Emerging Markets in the Alternative Capital Division at Credit Suisse. Patrick graduated from the University of Pennsylvania with a BS in Economics from the Wharton School and a BAS in Systems Engineering from the School of Engineering and Applied Science.

Michael Rosen, Chief Investment Officer
Angeles Investments

Michael Rosen has thirty-years of experience as an institutional portfolio manager, investment strategist, and chief investment officer. He co-founded Angeles Investments with Howard Perlow and Leslie Kautz in 2001. Michael was an Adjunct Professor of Finance at Pepperdine University from 1991- 2000 and at Loyola Marymount University. He holds a Master of Arts in Law and Diplomacy from The Fletcher School of Law and Diplomacy (Tufts University /Harvard University.)

Russ Ivinjack, Global Chief Investment Officer
Aon investments

As Global Chief Investment Officer of Aon Investments, Russ Ivinjack manages the investment manager research teams in equities, fixed income, liquid alternatives, private equity, infrastructure and private credit; the Global Asset Allocation and discretionary client portfolio management teams at Aon. Russ Ivinjack also serves as the lead strategist for several of the firm's largest retainer clients and has advised on over USD 1 Trillion in client assets over his career.

Odi Lahav, Chief Operating Officer
bfinance, United Kingdom

Odi is the Chief Operating Officer at bfinance. He has more than 25 years of leadership experience across financial services, technology, and institutional consulting. Odi oversees bfinance's Investment Research, Digital Solutions, and corporate activities. Previously Odi was the CEO of Allenbridge and the COO and Head of Consulting at MJ Hudson which was acquired by Apex Group. He has a BSc in Actuarial Science and Mathematical Statistics from the University of Witwatersrand.

Francis Griffin, Head of Private Credit, Alternatives Consulting
Callan

Francis Griffin is the Head of Private Credit in Callan's Alternatives Consulting group. Prior to joining Callan in October 2024, Francis held roles at Investcorp, Langschiff Capital, Angelo Gordon, Verus Investments, Avenue Capital, Moore Capital and Bank of America. He has a Bachelor of the Arts in History from the College of the Holy Cross and an MBA with a concentration in finance from the University of Minnesota.

Regina Cho, Investment Director
Crewcial Partners

Regina Cho is Investment Director at Crewcial Partners an independent investment advisory focused on providing customized investment advice to non-profit institutions. She also serves on Crewcial Partners Investment Committee and manages the investment team. Regina has been with Crewcial Partners since 2011 and has over ten years of investment experience. Regina works with clients to provide insights into asset allocation, manager selection, and performance.

Tim McCusker, Partner, and Chief Investment Officer
NEPC

NEPC, LLC is one of the industry's largest independent, full-service investment consulting firms, serving more than four hundred clients, and advising on USD 1.6 Trillion in assets. As Chief Investment Officer, Tim McCusker is responsible for overseeing Investment Research at NEPC, a group of sixty-nine professionals, including dedicated teams focusing on alternative investments, traditional strategies, and asset allocation. Tim McCusker is Fellow of the Society of Actuaries.

Arlete Nese, Ph.D., Partner and Executive Director
ON Valor, Brazil

ON Valor is an independent Brazilian consulting firm. Arlete Nese is focused on investment and governance training for Brazilian pension decision-makers representing over USD 200 billion of assets under management. Prior to which, she was responsible for asset allocation at Banesprev, a top ten Brazilian pension fund. Arlete holds an MBA from Ibmec SP, a Masters in Strategy from Insper Institute of Education and Research and a Ph.D. in Business from FEA, University of Sao Paulo.

Benjamin Patzik, Vice President, Global Portfolio Solutions
Segal Marco Advisors

Benjamin Patzik is a VP and Head of Portfolio Strategy & Solutions at Segal Marco Advisors. He oversees new product development initiatives, designs and structures investment optimization strategies for existing and prospective client portfolios. Benjamin received his BS in Accountancy from the University of Illinois and his MS in Accountancy with a concentration in Finance from the University of Illinois at Urbana-Champaign. He is a Registered Certified Public Accountant and a CFA Charterholder.

Melissa Santaniello, Managing Director, Private Credit
StepStone Group

Melissa Santaniello is a Managing Director in StepStone Group's Private Credit team. She previously led manager research at Tiedemann, focusing on hedge fund and private investment sourcing and due diligence. She also held roles at Plural Investments and Cadogan Management. Santaniello serves on the board of the Alignment of Interests Association, an LP-only think tank. She holds a Bachelor of Science degree from Cornell University.

Ned McGuire, Managing Director
Wilshire Consulting

Ned is a Managing Director at Wilshire and a member of the asset allocation team. He is responsible for researching and maintaining Wilshire's proprietary asset allocation models, conducting asset allocation studies and also serves as a consultant to plan sponsors. He earned a bachelor's degree in mathematics from St. Olaf College and holds a master's degree in operational research from the University of North Carolina, Chapel Hill. He has the CFA and FRM designations.

2025 Wealth Manager Speakers

Peter Chiappinelli, Chief Investment Officer
Ballentine Partners

Pete Chiappinelli is Chief Investment Officer at Ballentine Partners which manages approx. USD 10 billion AUM and USD 21 billion AUA for wealthy families. He is focused primarily on asset allocation and on setting strategic direction for client portfolios. Prior to Ballentine Partners, Pete Chiappinelli held roles at GMO, Fidelity Investments and Putnam Investments. He is a graduate of Carleton College and holds his MBA from The Wharton School. Pete also holds both the CFA and CAIA designations.

Carol Schleif, Chief Market Strategist
BMO Private Wealth

Carol Schleif is the Chief Market Strategist of BMO Private Wealth, an integrated wealth management provider that serves ultra-affluent individuals, families and family offices across their tax, estate, investment, philanthropic, risk and family capital needs. Carol has 40 years of experience in the industry. She earned her MBA from Hamline University and undergraduate degrees in both business administration and equestrian science from William Woods College. Carol also holds FSA and CFA designations.

Ohm Srinivasan, Head of Manager Research and Alternative Investments
CIBC Private Wealth Management, US

Ohm Srinivasan is the Head of Manager Research and Alternative Investments at CIBC Private Wealth Management, US; where he is responsible for the Multi-Manager Investment Program (MMIP,) the custom hedge fund portfolios (CAPS,) and an internal multi-strategy hedge fund of funds. Ohm Srinivasan earned a Bachelor of Science with a concentration in economics from the University of Michigan and holds the Chartered Financial Analyst designation.

Zach Ruchman, Director of Private Investments
Homrich Berg

Zach Ruchman is a Director of Private Investments at Homrich Berg (HB), a wealth management firm overseeing more than USD 24 billion in assets. Prior to HB, Zach held roles at WMS (which later merged with HB), RockCreek, BlackRock, and Alvarez & Marsal. Zach holds a Bachelor of Arts from Princeton University and an MBA from the University of Virginia Darden School of Business, where he was a Jefferson Fellow.

Florence Narine, Head of Investment Solutions
IG Private Wealth Management, Canada

Florence Narine is Head of Investment Solutions at IG Wealth Management, a Canadian wealth manager with over USD 100 billion in assets under advisement (AUA). Florence oversees IG's investment products and solutions. Previously, she held senior roles at Gluskin Sheff, AGF Investments, CIBC Wood Gundy, and Fidelity Canada. Florence earned a BA (Hons) from the University of Toronto and an MBA from the Rotman School of Management.

Laurie Goodman, Global Head of Investment and Wealth Solutions
Jefferies Private Wealth Management

Laurie Goodman is the Global Head of Investment and Wealth Solutions at USD 20 Billion aum Jefferies Private Wealth Management. Prior to joining Jefferies, Laurie spent over twelve-years at Bank of America Merrill Lynch as the Head of Equity Long/Short Hedge Fund Research. Laurie holds an MA in International Economics from Johns Hopkins University School of Advanced International Studies (SAIS) and a BA in Economics from Johns Hopkins University.

John Simmons, Head of Portfolio Specialists
Morningstar Wealth

John is Head of Portfolio Specialists within Morningstar's Investment Management group, supporting the firm's wealth management business with over USD 265 billion in assets. He brings more than 25 years of investment experience, most recently as Head of Investment Research and Due Diligence at Ameriprise. John holds a BA in English Literature (cum laude) and an MBA in Finance from Saint Xavier University. He is a CFA charterholder.

Cameron Dawson, Chief Investment Officer
NewEdge Wealth

As Chief Investment Officer, Cameron helps lead the development of NewEdge Wealth's investment themes, strategies, and market views, while also working closely with the firm's advisors and clients. Prior to this, Cameron worked at Fieldpoint Private Securities and at Bank of America. Throughout her career, she has developed extensive experience in macroeconomics and implementing forward-thinking investment themes and asset allocation strategies. Cameron is a CFA.

2025 Wealth Manager Speakers

Kevin O'Donnell, Executive Managing Director
Peakline Partners

Kevin O'Donnell is Executive Managing Director at Peakline Partners, co-leading its global private investing platform. He partners with leading private equity, credit, and venture capital managers on funds and co-investments. Previously, he was Head of Private Equity at Saudi Arabia's Public Investment Fund and led private investments at Kaiser Permanente. Kevin holds an MBA from Harvard Business School and a Bachelor of Commerce in Business and Economics from Queen's University.

Scott Lavelle, Head of Manager Research
PNC

Scott Lavelle is the Head of Manager Research at PNC. PNC's asset management group has approximately USD 367 billion of assets under management. Scott directly overseas over USD 70 billion in investments in external alternative and traditional investment managers. He has previously held roles at the Sage Financial Group and Wells Fargo Wealth Management. Scott Lavelle has a BS in Finance from Boston College and holds the CFA, FRM and CAIA designations.

Brad Sussman, Vice President, Global Wealth Solutions
Raymond James Global Wealth Solutions

Brad Sussman leads manager research and new product development for the Alternative Investment Group at Raymond James, which has over USD 1.38 Trillion AUA. Brad Sussman has over twenty years of experience sourcing, researching, selecting, and allocating to external managers across multiple strategies. Prior to joining Raymond James, he held roles at Cowen Investment Management, Merrill Lynch, and Ivy Asset Management. Brad Sussman is both a CFA and CAIA Charter Holder.

Douglas Butler, Senior Vice President and Director of Research
Rockland Trust

Douglas Butler is Senior Vice President and Director of Research at Rockland Trust and has been with Rockland Trust since 2004. Doug is responsible for developing Rockland Trust's asset allocation models and selecting external investment managers. In addition, Doug oversees Rockland Trust's research analyst team and equity research process. Doug received a BA in Economics from Trinity College and is a member of the CFA Institute and the Boston Security Analysts Society.

Jeffrey Heisler Ph.D., Partner and Managing Director, Investment Research
TwinFocus

Jeff leads macro research and manager due diligence across all asset classes and product types. He also leads a variety of investment strategy and policy committees. Jeff holds the designation of CFA and is a member of the CFA Institute and the Boston Security Analysts Society. He earned a PhD in finance from New York University, a Master of Business Administration from the University of Chicago and a B.S. in mechanical engineering from Union College.

Chris Maxey, Managing Director and Chief Market Strategist
Wealthspire Advisors, LLC

Chris Maxey is Managing Director and Chief Market Strategist at Wealthspire Advisors LLC, a USD 29 billion wealth management firm, where he manages investment research, portfolio construction, asset allocation, and manager selection and due diligence. He previously held investment roles at Steben & Company, Fortigent, and Trusco Capital Management. Chris holds a B.S. in Finance from American University and is a Chartered Alternative Investment Analyst (CAIA) charterholder.

2025 Industry Speakers

Jack de la Fargue, Co-Chief Investment Officer
36 South Capital Advisors, United Kingdom

Jack de la Fargue joined 36 South in 2017. As Co-CIO, Jack's main focus is on general oversight and monitoring of all portfolios. As an IMC member, Jack also contributes to the development of trade ideas, and analyses potential and existing investments and portfolio risks. Jack studied his Bachelor of Business Science at the University of Cape Town (UCT) in South Africa. Jack is a full CFA charter holder as well as holding the Investment Management Certificate (IMC).

Chris Hentemann, Managing Partner and Chief Investment Officer
400 Capital Management

400 Capital Management is a structured credit asset management firm offering access to a broad range of investment opportunities and innovative solutions across global structured credit markets. Chris Hentemann organized and launched 400 Capital Management in 2008 and Chair's 400 Capital Management's Operating and Investment Committees. Prior to joining 400 Capital Management, Chris Hentemann was the Head of Global Structured Products at Banc of America Securities.

Speaker tba
Acadian Asset Management

Acadian Asset Management ('Acadian') is a global, systematic investment manager. Founded in 1986, Acadian's edge is at the convergence of talented investors and economic insights; data-driven innovation and empirical research; and computational power and analytical clarity to tackle complex investment challenges for our client partners. It manages equity strategies intended to deliver active returns and alternative strategies designed to deliver absolute, uncorrelated results.

Taylor Boswell, Head of Private Credit
AGL Credit Management

Taylor Boswell is Head of Private Credit at AGL Credit Management LLC ("AGL"). Prior to joining AGL in 2023, Taylor was a Partner at Carlyle, serving as Head of Direct Lending and Chief Investment Officer, Direct Lending. In this role, he led the investing and business operations of Carlyle Direct Lending from 2019 until 2022, including origination, underwriting, portfolio management and investor relations. He has an AB in Political Economics from Princeton University.

Tom Tull, Fellow
AIF Global Institution

Tom Tull is a Fellow at AIF Global Institution, an independent economic think tank focusing on institutional investment policy. He also currently serves as a Trustee Board Member for Dallas Police and Fire Pension System and as an advisor to Star Mountain Capital and Strategic Value Partners. Prior to this, Tom spent over twelve years as CIO of the USD 36 Billion Employees Retirement System of Texas, where he was responsible for the staff of seventy-five employees.

Bryant VanCronkhite, Co-Head of Special Global Equity
Allspring Global Investments

Bryant VanCronkhite is a senior portfolio manager and co-head of the Special Global Equity team at Allspring Global Investments. He joined Allspring from its predecessor firm, Wells Fargo Asset Management. Bryant earned a bachelor's degree and a master's degree in professional accountancy from the University of Wisconsin, Whitewater, and is a certified public accountant. He holds the Chartered Financial Analyst® (CFA®) designation and is a member of CFA Society Milwaukee and the AICPA.

Vivek Mathew, President of Antares Capital Advisers
Antares Capital

Mr. Mathew is president of Antares Capital Advisers and is a member of the Antares Capital Advisers Investment Committee. He is also a member of the Antares Capital Executive Committee. Prior to joining Antares Capital, Mr. Mathew was a managing director at J.P. Morgan Securities LLC, where he led the Global Primary CLO Business. Mr. Mathew received an A.B. in Economics from Harvard University. He has 25 years of industry experience and joined Antares Capital in May 2016.

Kevin Magid, President, Private Debt
Audax Private Debt

Kevin Magid is President of Audax Private Debt. He joined Audax Group in 2000 and established and has led Audax Private Debt since its inception. Kevin is responsible for overseeing all facets of Audax' debt business, including origination, underwriting, and portfolio management as well as setting the business' strategic direction. Kevin received an M.B.A. from the Wharton School of the University of Pennsylvania and a B.A. in Economics from Tufts University.

David Mihalick, Co-Head of Global Investments
Barings

David Mihalick is Co-Head of Global Investments, responsible for the oversight of Barings' global investment platform spanning public and private markets in fixed income, real assets and capital solutions. Prior to his current role, David served as Head of Private Assets, managing Barings' global private markets businesses. David holds a B.S. from the United States Air Force Academy, an M.S. from the University of Washington and an M.B.A. from Wake Forest University.

Matthew Winkler, Managing Director
Benefit Street Partners – Alcentra

Matthew Winkler is a managing director with Benefit Street Partners ('BSP') and is based in BSP's New York office. BSP - Alcentra is a leading, credit focused alternative asset manager for both institutions and high-net-worth investors and manages approximately USD 77 billion of assets. Prior to joining BSP in 2015, Matthew Winkler was a vice president at Goldman Sachs in their special assets group. He received a Bachelor of Arts from Brown University.

Sengal Selassie, Co-Founder and Chief Executive Officer
Brightwood Capital Advisors

Sengal Selassie is the Chief Executive Officer and Founder of Brightwood Capital Advisors, a private credit focussed firm. He has been involved in all phases of the firm's development since its founding in 2010. Sengal Selassie is a member of the Executive Committee and serves on the Investment Committee of all Brightwood Managed Funds. He graduated with an A.B. in Economics, magna cum laude, from Harvard College and an M.B.A. and J.D., with honors from Harvard University.

Kevin McCormick, Managing Director
Campbell Lutyens

Kevin joined Campbell Lutyens in 2021 as a member of the US fund placement team, focusing on project management, advisory and origination activities and focusses on private credit. Prior to this, Kevin spent eight years in Barclays' Leveraged Finance group covering Financial Sponsor and Consumer Retail clients. He left Barclays in 2017 to serve as CFO of Brodo Broth Co, returning to Barclays in 2018. Kevin holds a BS in Finance and Marketing from Northeastern University.

2025 Industry Speakers

Randy Schwimmer, Vice Chairman, Investor Solutions
Churchill Asset Management (Nuveen)

Randy Schwimmer is Vice Chairman, Investor Solutions and oversees senior lending origination and capital markets for Churchill Asset Management, an investment specialist of Nuveen. He has broad experience in middle market finance and is widely credited with developing loan syndications for middle market companies. Prior to joining the firm, Randy served as head of capital markets and indirect origination at Churchill Financial and as head of leveraged finance syndication for BNP Paribas.

Steve Vaccaro, Chief Executive Officer and Chief Investment Officer
CIFC Asset Management

Steve Vaccaro joined legacy CIFC in 2006 and is CIFC's Chief Executive Officer and Chief Investment Officer. He previously served as legacy CIFC's Co-Chief Investment Officer and was named Chief Investment Officer of CIFC upon its merger with Deerfield Capital Corp. in 2011. Prior to this, he spent 25 years at JPMorgan Chase & Co. Steve has over 40 years of experience in corporate lending and asset management and holds a B.A. in Economics from Cornell University.

Christopher Holt, Ph.D., Senior Advisor, Global ARC and Associate Professor
Conrad School of Entrepreneurship and Business, University of Waterloo, Canada

Chris Holt has served Global ARC in various roles since 2006 and the Chartered Alternative Analyst Association ('CAIA') in various roles from 2009-2020. A former member of the editorial board of the Journal of Alternative Investments and editor of CAIA's widely-read research blog, he currently researches corporate entrepreneurship at the University of Waterloo. Chris holds an MBA from Duke University and a PhD from the University of Toronto.

William Kelly, Advisor, Global ARC
and Founder, **Educational Alpha, LLC**

William (Bill) J. Kelly, CAIA is the Founder and Managing Member of Educational Alpha, LLC where he writes, podcasts, and speaks on a variety of investment related topics, focused on investor education, transparency, and democratized access to differentiated risk premia. Previous to founding Educational Alpha, he was Chief Executive Officer of the CAIA Association from 2014 until his retirement in 2024. Bill began his career as an accountant with PwC where he earned his CPA.

David Stewart, Founder
Global ARC, Australia

Founded in 2002, Global ARC convenes a network of the world's foremost academics, institutional investors and asset managers to analyze macro-economic, capital market, and alternative investment developments and their implications for the institutional investor community. Global ARC is an independent organization, wholly owned by its founder David Stewart, and is not affiliated with any media company or investment industry supplier.

Jason Van Dussen, Senior Managing Director, Co-Head of Capital Markets
Golub Capital

Jason Van Dussen joined Golub Capital in 2010 and is a Senior Managing Director and Co-Head of the Capital Markets business for Direct Lending. He is a member of the Firm's Investment Committee and is responsible for structuring, pricing and syndicating transactions for the Firm. Prior to this, he was a Managing Director and Head of Loan Sales for CIT Group and Managing Director and Head of Capital Markets for FirstLight Financial Corporation. He received an MBA from Columbia Business School.

Dushyant Mehra, Co-Chief Investment Officer
Hildene Capital Management

Hildene Capital Management is an SEC-registered, multiple award-winning asset management firm, focused on distressed and event-driven opportunities within credit. Hildene manages over USD 14.5 billion for its investors. Dushyant Mehra joined Hildene as Co-Chief Investment Officer in 2016. Prior to which, he was a Portfolio Manager in the Structured Products group at Pine River Capital. Dushyant Mehra holds a MS in Financial Engineering from Columbia University.

Alexander Mackey, Co-Chief Investment Officer, Fixed Income
MFS Investment Management

Alexander M. Mackey is Co-Chief Investment Officer of Fixed Income at MFS Investment Management® (MFS®). As co-CIO, he has joint oversight of MFS' global fixed income team and works collaboratively with the firm's investment leadership team to ensure its fixed income investors have the tools and skill sets necessary to serve clients globally. Alexander joined MFS in 1998. He has a bachelor's degree from Trinity College and holds the Chartered Financial Analyst (CFA) designation.

Mick Solimene, Managing Director & Portfolio Manager
Monroe Capital

Mick Solimene is a Managing Director and Portfolio Manager for Monroe Capital's wealth management solutions vertical focusing on private credit direct lending. Monroe is a USD 19.5 billion asset manager across private credit markets. He is a member of the firm's investment committee and serves as the CIO and CFO of Monroe Capital's publicly traded and private BDC vehicles. He has over 40 years of experience in alternative investing, corporate finance, restructuring and special situations.

Jerry Moriarty, Independent Advisor
Moriarty & Associates, Ireland

Jerry Moriarty has over 30 years of experience in the pension industry. After 17 years, Jerry retired as CEO of the Irish Association Pension Fund which represents pension savers in Ireland. Its members are responsible for €119 billion (USD 130 billion) in retirement savings and aims to ensure people in Ireland can have pensions that are secure, fair and simple. Previously he was on the board of PensionsEurope and chaired its Future of Pensions Working Group.

Jessica Laird, Chief Investment Officer
Nephila Advisors

Jessica is the Head of the Property Team, responsible for the overall strategy and execution of all property catastrophe risk underwritten and the resulting portfolios constructed by Nephila. In her senior leadership position, she is also involved in capital raising and leading strategic initiatives to help grow and evolve the platform. Jessica joined Nephila in 2010 after working at Ernst & Young. She has a BBA from Wilfrid Laurier University and is a Chartered Accountant.

Paul Horvath, Chief Executive Officer
Orchard Global

Paul Horvath is the Chief Executive Officer of Orchard Global. Prior to co-founding Orchard Global, he held leadership roles in credit, structured credit, alternative assets, and derivatives at J.P Morgan and Merrill Lynch from 1994 to 2008. Earlier in his career, he held positions at Bear Stearns and the Federal Reserve Bank of New York. Paul Horvath holds a BS in Economics and International Relations from Georgetown University and has an MBA from Harvard Business School.

2025 Industry Speakers

David Sherr, Founder, Managing Partner and Chief Investment Officer
One William Street Capital Management

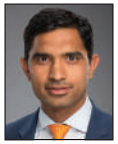
As Managing Partner and Chief Investment Officer, David Sherr is responsible for overseeing One William Street Capital Management's investment strategy and risk management. He has more than twenty-five years of experience investing in and managing origination businesses, fixed income markets, and global trading across a wide range of asset types and structured credit strategies. David Sherr founded One William Street Capital Management in 2008.

Rich Hill, Senior Managing Director, Global Head of Research & Strategy
Principal Asset Management

Richard Hill is a Senior Managing Director and Global Head of Research & Strategy for Principal Real Estate, the dedicated real estate group of Principal Asset Management. His role includes advising portfolio management teams across equity and debt, as well as public and private on investment strategies developed through a relative value framework. Richard previously worked at Cohen & Steers Capital Management. Richard received his Bachelor of Science in Business Administration from Georgetown University.

Maksim Stavinsky, Co-Founder and Chief Executive Officer
Roc360

Maksim Stavinsky is the Co-Founder and Chief Executive Officer of Roc360, a leading financial services and investment management platform focused on the US residential investment property sector. Maksim serves as Chairman of the Board of the Roc360 REIT, a residential mortgage REIT launched by Roc360 in 2023 with an anchor investment from Temasek. He received his B.A. in Finance and Information Systems from the Stern School of Business at New York University in 2002.



Udai Bishnoi, Global Head of Asset Based Finance
Sculptor Capital

Udai Bishnoi is the Global Head of Asset Based Finance for Sculptor Capital. He is also an Executive Managing Director and member of the Portfolio Committee. In this role, he oversees the Firm's investing activities in public and private credit markets across the residential, commercial, consumer, corporate and esoteric asset based finance markets. Udai holds a B.Tech. in Electrical Engineering from the IIT and a Master of Science in Financial Engineering from Columbia University.

Owain Griffiths, Partner, Head of Capital Solutions
Sona Asset Management, United Kingdom

Owain Griffiths is a Partner and the Head of Capital Solutions at Sona Asset Management. He has 23 years of credit market experience, joining Sona in September 2016, when it began investing. Prior to joining Sona, Owain was at Highbridge Capital. He joined Highbridge from Tricadia Capital in 2014, having worked there since 2009 as a Portfolio Manager. Owain holds a BSc in Economics from University College London and is a CFA Charterholder.

Stephen Schatzman, Co-Head of Corporate Credit
Third Point LLC

Stephen Schatzman joined Third Point in 2014. As Co-Head of Corporate Credit at Third Point, his focus is on performing and distressed investment opportunities in the liquid corporate credit. Prior to joining Third Point, Stephen Schatzman worked at Ziff Brothers Investments covering credit opportunities globally and at Miller Buckfire in the Restructuring Advisory group. Stephen Schatzman graduated from Johns Hopkins University with a B.A. in Economics.

Joseph Cavatoni, Senior Market Strategist, Americas
World Gold Council

Joe Cavatoni is Senior Market Strategist, Americas at World Gold Council. Previously he was the Managing Director and CEO of US operations. Prior to joining the World Gold Council in 2016, Joe was a managing director at BlackRock, where he was responsible for iShares Capital Markets – Americas. Joe has also held senior positions at UBS, Merrill Lynch and Bank of America. He holds an MBA jointly from Northwestern University's Kellogg School of Management and HKUST.

2025 Sponsors

36 South has a twenty-three-year track record, focused on the design and management of asymmetrical portfolios, with an emphasis on crisis protection. All of our strategies are long volatility, multi asset class, and invest in a combination of convex and risk premia option strategies. We aim to provide liquidity in a crisis, reduce portfolio drawdowns, and so improve compound growth over the long term. For further information please visit www.36south.com

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400 Capital Management LLC is an employee-owned alternative asset manager led by a management team with over 30 years average experience investing and trading in credit markets. Founded in 2008, the Firm is an established, process-oriented platform with a demonstrated ability to consistently generate competitive returns, develop capital markets businesses and create innovative solutions utilized throughout the market. The Firm offers investors a global platform that accesses differentiated credit investment opportunities through total and absolute return strategies in flagship funds or customized portfolio solutions. The team consists of 69 professionals across offices in New York and London, who collectively manage USD $6.7 billion of client capital. Our diversified platform includes our flagship Credit Opportunities Fund, our 5-7-year private credit Asset Based Term Funds and our managed account platform tailored to a clients' risk, return and liquidity requirements. Our flagship vehicle, the Credit Opportunities Fund, has achieved double-digit average annual returns with a high Sharpe Ratio and low correlation to traditional market indices with a 15 year track record. www.400capital.com

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Acadian is a global, systematic investment manager. Founded in 1986, Acadian is headquartered in Boston, with affiliates located in London, Singapore, and Sydney. Acadian's edge is at the convergence of talented investors and economic insights; data-driven innovation and empirical research; and computational power and analytical clarity to tackle complex investment challenges for our client partners. Building on the idea that markets are systematically mispriced, we were among the first firms in the world to apply data and technology to the systematic evaluation of global investments. We manage equity strategies intended to deliver active returns and alternative strategies designed to deliver absolute, uncorrelated results. www.acadian-asset.com

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AGL Credit Management LLC ("AGL") is a corporate credit specialist for investors and borrowers globally. AGL offers investment strategies and financing solutions including broadly syndicated loans (BSL) and Private Credit (PC). With over $20 billion in assets under management, AGL's highly experienced and client-focused team is dedicated to achieving the objectives of investors and borrowers through its differentiated approach to sourcing, creating and managing corporate credit. www.aglcredit.com

Allspring Global Investments™ is an independent asset management firm with more than $605 billion in assets under advisement*, over 20 offices globally, and investment teams supported by 400+ investment professionals. Allspring is committed to thoughtful investing, purposeful planning, and inspiring a new era of investing that pursues both financial returns and positive outcomes. For more information, please visit www.allspringglobal.com.

*As of December 31, 2024. Figures include discretionary and non-discretionary assets.

Founded in 1996, Antares has been a leader in private credit for nearly three decades. Today with approximately $81B+ of capital under management and administration as of December 31, 2024, Antares is an experienced and cycle-tested alternative credit manager. With one of the most seasoned teams in the industry, Antares is focused on delivering attractive risk-adjusted returns for investors and creating long term value for all of its partners. The firm maintains offices in Atlanta, Chicago, Los Angeles, New York, Toronto and London. Visit Antares at www.antares.com or follow the company on LinkedIn at www.linkedin.com/company/antares-capital-lp. Antares Capital is a subsidiary of Antares Holdings LP, (collectively, "Antares"). Antares Capital London Limited is an appointed representative of Langham Hall Fund Management LLP, an entity which is authorized and regulated by the Financial Conduct Authority of the UK.

Based in New York, Audax Private Debt is a leading debt capital partner for North American middle market companies. Since its inception in 2000, the firm has invested more than $42 billion in support of over 290 private equity sponsors. Audax Private Debt works collaboratively to build tailored financing solutions for its clients through a comprehensive range of offerings that includes first lien, stretch senior, unitranche, second lien, and subordinated debt, as well as equity co-investments. Audax Private Debt is an experienced and trusted partner with senior leadership averaging more than 26 years in private credit and 15 years working together at the firm through multiple economic cycles. For more information, please visit audaxprivatedebt.com

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Barings is a USD 431+ billion global asset management firm that partners with institutional, insurance, and intermediary clients, and supports leading businesses with flexible financing solutions. The firm, a subsidiary of MassMutual, seeks to deliver excess returns by leveraging its global scale and capabilities across public and private markets in fixed income, real assets and capital solutions. For further information please visit www.barings.com

2025 Sponsors

Benefit Street Partners ('BSP') - Alcentra platform is a leading, credit focused alternative asset manager for both institutions and high-net-worth investors. The combined BSP - Alcentra platform is one of the largest alternative credit managers globally, with a multi-strategy approach targeting attractive opportunities in the credit markets. The combined platform manages USD 77 billion of assets and has expertise in Senior Secured Loans, Private Credit, Structured Credit, Special Situations, High Yield Bonds, Multi-Strategy Credit, and Commercial Real Estate. For more information, please visit www.benefitstreetpartners.com

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Brightwood Capital Advisors, LLC is a private credit firm with a long-standing track record of investing in middle market businesses. Brightwood specializes in providing senior debt capital primarily to U.S. businesses with USD 5 - USD 75 million of EBITDA within five core industries: technology & telecommunications, healthcare, business services, transportation & logistics and franchising. Brightwood partners with non-sponsored businesses as well as private equity sponsors to provide customized financing solutions for directly originated investments. Founded in 2010, Brightwood is a minority-owned firm with a team of over 50 employees who manage more than USD 5 billion of assets on behalf of its primarily institutional investor base. Brightwood is headquartered in New York City. www.brightwoodlp.com

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Campbell Lutyens is a global and independent private markets advisor, providing fund placement, secondary advisory and GP capital advisory services to leading fund managers and investors. With specialist knowledge in private equity, infrastructure, private credit and sustainable investing, the firm has a team of over 260 operating from offices in London, Paris, Munich, New York, Chicago, Los Angeles, Charlotte, Hong Kong, Singapore, Seoul, Tokyo, Melbourne and Dubai. Please visit www.campbell-lutyens.com

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1 Managers ranked by total worldwide institutional assets as of December 31, 2023. Pensions & Investments, "Largest Money Managers," June 2024. **2** Principal Asset Management AUM as of December 31, 2024. **3** P&I, "The Best Places to Work in Money Management: among companies with 1,000 or more employees, December 2024.

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Meeting Date
08/06/2025
Agenda Item
#5.A-VI

Contra Costa County Employees' Retirement Association

MEMORANDUM

Date: July 9, 2025

To: CCCERA Audit Committee

From: Cherry Chang, Internal Auditor

Subject: Business Continuity Audit

PURPOSE

The purpose of the audit is to assess the adequacy of business continuity planning and disaster recovery and review the controls over the process. The National Institute of Standards and Technology (NIST) guidance was utilized as an industry standard for recommendations when evaluating CCCERA's process.

RESULTS

- CCCERA has business continuity documents in place that identify essential business processes, contingency roles and responsibilities, scenarios planning, restoration protocols, and continuous improvement. However, the COVID-19 pandemic and the ongoing pension administration system project have delayed the periodic disaster recovery testing and caused one server to be dropped from the regular backup schedule.

- The report contains 3 recommendations to improve business continuity planning, including updating business continuity documents, testing disaster recovery annually, and maintaining inventory of backup tapes.

RECOMMENDATIONS

- The Information Technology (IT) Department should update business continuity documents to reflect the current environment.
- The IT Department should coordinate the disaster recovery testing (full scale or selected elements) annually.
- The IT Department should improve its backup process to ensure all servers are backed up based on criticality and document the inventory of backup tapes. [This recommendation has been completed and closed.]

FOLLOW-UP

Internal Audit will follow up quarterly to determine the status of the audit recommendations.

Meeting Date
08/06/2025
Agenda Item
#6

Contra Costa County Employees' Retirement Association

MEMORANDUM

Date: August 6, 2025

To: CCCERA Board of Retirement

From: CCCERA Audit Committee

Subject: Consider and take possible action to issue a request for proposal for auditing services as recommended by the Audit Committee

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Background

On October 19, 2017, CCCERA issued a Request For Proposal (RFP) for Professional Auditing Services for the three fiscal years 2017-2019. On January 10, 2018, the Audit Committee recommended to the full Board that Brown Armstrong be selected as the External Auditor for the three-year period of 2017-2019 including an option to extend for another three years (2020-2022). On September 9, 2020 that option was exercised. After discussion by the Audit Committee at the September 13, 2023 meeting it was decided to contract with Brown Armstrong for another two-year period, ending with the 2024 audit work.

As we complete the 8th year in the current contract arrangement it seems prudent to issue an RFP for auditing services at this time.

Recommendation

Consider and take possible action to issue a request for proposal for auditing services as recommended by the Audit Committee.

Meeting Date
08/06/2025
Agenda Item
#7

Contra Costa County Employees' Retirement Association

MEMORANDUM

Date: August 6, 2025

To: CCCERA Board of Retirement

From: Christina Dunn, Chief Executive Officer

Subject: Consider and take possible action to adopt the December 31, 2024 Valuation Report and Contribution Rates for the period July 1, 2026—June 30, 2027.

Background

Segal Consulting has prepared the December 31, 2024 valuation report. The employer and member contribution rates shown in this report are effective July 1, 2026 to June 30, 2027.

Recommendation

Consider and take possible action to adopt the December 31, 2024 Valuation Report and Contribution Rates for the period July 1, 2026—June 30, 2027.

Meeting Date
08/06/2025
Agenda Item
#7

Contra Costa County Employees' Retirement Association

Actuarial Valuation and Review as of December 31, 2024

Segal

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

July 22, 2025

Board of Retirement
Contra Costa County Employees' Retirement Association
1200 Concord Avenue, Suite 300
Concord, CA 94520

Dear Board Members:

We are pleased to submit this Actuarial Valuation and Review as of December 31, 2024 for the Contra Costa County Employees' Retirement Association ("CCCERA" or "the Plan" or "the Association"). It summarizes the actuarial data used in the valuation, analyzes the preceding year's experience, and establishes the funding requirements for fiscal year 2026-2027.

This report has been prepared in accordance with generally accepted actuarial principles and practices for the exclusive use and benefit of the Board of Retirement, based upon information provided by the staff of CCCERA.

Segal does not audit the data provided. The accuracy and comprehensiveness of the data is the responsibility of those supplying the data. To the extent we can, however, Segal does review the data for reasonableness and consistency. Based on our review of the data, we have no reason to doubt the substantial accuracy of the information on which we have based this report and we have no reason to believe there are facts or circumstances that would affect the validity of these results.

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

The actuarial calculations were directed under the supervision of Andy Yeung, ASA, MAAA, FCA and Enrolled Actuary. We are members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate. The assumptions used in this actuarial valuation were selected by the Board of Retirement based upon our analysis and recommendations. In our opinion, the assumptions are reasonable and take into account the experience of CCCERA and reasonable expectations. In addition, in our opinion, the combined effect of these assumptions is expected to have no significant bias.

Segal makes no representation or warranty as to the future status of the Plan and does not guarantee any particular result. This document does not constitute legal, tax, accounting or investment advice or create or imply a fiduciary relationship. The Board is encouraged to discuss any issues raised in this report with the Plan's legal, tax and other advisors before taking, or refraining from taking, any action.

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

Sincerely,

Segal

Todd Tauzer, FSA, MAAA, FCA, CERA
Senior Vice President and Actuary

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

Eva Yum, FSA, MAAA, EA
Vice President and Actuary

BTS/jl

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Section 1: Actuarial Valuation Summary

Purpose and basis

This report has been prepared by Segal to present a valuation of the Contra Costa County Employees' Retirement Association ("CCCERA" or "the Plan" or "the Association") as of December 31, 2024. The valuation was performed to determine whether the assets and contribution rates are sufficient to provide the prescribed benefits.

The contribution requirements presented in this report are based on:

- The benefit provisions of the Plan, as administered by the Board of Retirement;
- The characteristics of covered active members,[1] inactive members and retired members and beneficiaries as of December 31, 2024, provided by the Retirement Association;
- The assets of the Plan as of December 31, 2024, provided by the Retirement Association;
- Economic assumptions regarding future salary increases and investment earnings adopted by the Board of Retirement for the December 31, 2024 valuation;
- Other actuarial assumptions regarding employee terminations, retirement, death, etc. adopted by the Board of Retirement for the December 31, 2024 valuation; and
- The funding policy adopted by the Board of Retirement.

Certain disclosure information required by Governmental Accounting Standards Board (GASB) Statements No. 67 and 68 as of December 31, 2024 for the Plan is provided in a separate report.

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

The contribution requirements are determined as a percentage of payroll. The Association's employer rates provide for both normal cost and a contribution to amortize any unfunded or overfunded actuarial accrued liabilities. In this valuation, we have applied the

[1] Similar to the disclosure we provided in our December 31, 2023 valuation report, the annual information for active members and, in particular, the service credit provided for active members was reported through November 30, 2024 instead of December 31, 2024. Based on prior discussions with CCCERA we understand that the Association is going to modify the data provided to Segal so as to report service through December 31. This change will first be reflected in the valuation following the modification in the data provided to Segal, and Segal will reflect the liability for that additional month of service at the same time.

funding policy adopted by the Board on February 26, 2014, updated on October 14, 2020 and September 13, 2023. Details of the funding policy are provided in *Section 4, Exhibit 1* starting on page 105.

The rates calculated in this report may be adopted by the Board of Retirement for the fiscal year that extends from July 1, 2026 through June 30, 2027.

Valuation highlights

Experience study and District consolidation

1. The results of this valuation reflect changes in the actuarial assumptions as recommended by Segal and adopted by the Board of Retirement for the December 31, 2024 valuation. These changes were documented in our January 1, 2021 through December 31, 2023 Actuarial Experience Study report dated April 30, 2025 and are also outlined in *Section 4, Exhibit 1* starting on page 105 of this report. These assumption changes resulted in a decrease in the average employer rate of 0.56% (which includes a decrease in normal cost rate of about 0.33% and a decrease in the UAAL rate of about 0.23% associated with a decrease in the UAAL by $46.9 million). This decrease is mainly due to demographic assumption changes that reduce cost (such as higher termination rate, lower disability rate and new mortality tables that predict lower life expectancies for payees at advance ages) that is offset somewhat by the increase in the merit and promotion salary increases assumption.

   There is an increase in the average member rate of 0.04% of payroll mainly due to the increase in the merit and promotion salary increases assumption. We note that the basic contribution rates for legacy members are not impacted by most of the demographic assumptions such as retirement rate, termination rate and disability rate. Therefore, the changes in those assumptions do not have an impact on the basic contribution rates for legacy members. Moreover, the reduction in the employer UAAL rate is also not shared by the members.

2. On April 9, 2025, Local Agency Formation Commissions (LAFCO) approved the annexation of Rodeo-Hercules Fire Protection District (RHFPD) into Contra Costa County Fire Protection District (CCCFPD) effective July 1, 2025. Prior to the consolidation, CCCFPD's and RHFPD's Safety members were in Cost Group 8 and Cost Group 12, respectively and they were the sole employer in each of those two cost groups. CCCFPD was the sole employer of the General members in Cost Group 5 while RHFPD's General members were a part of Cost Group 1, pooled with members from other employers in that Cost Group. After the annexation, RHFPD's Safety members became part of Cost Group 8 and RHFPD's General members became part of Cost Group 5.

   The transfers of assets and liabilities associated with these Cost Group reassignments for RHFPD and CCCFPD members have been reflected in this valuation. Because RHFPD was the sole employer in Cost Group 12, the assets in Cost Group 12 have been allocated to Cost Group 8. Because RHFPD's General members were part of Cost Group 1 and the unfunded actuarial accrued liability (the difference between the actuarial accrued liability and the valuation value of assets) contribution rate was pooled with other employers in Cost Group 1 and Cost Group 2, for their General members we have allocated to RHFPD a proportionate share of the UAAL based on their projected payroll to the total payroll for all employers in the two Cost Groups. These allocations were determined as of December 31, 2023 and the details of the allocations can be found in our June 24, 2025 letter.

As part of the consolidation, RHFPD made a prepayment of $7.5 million on June 20, 2025 towards their December 31, 2023 UAAL for their Safety members now as part of Cost Group 8. As requested by CCCERA, this prepayment has been used to reduce RHFPD's UAAL contribution rates effective July 1, 2025 for their Safety members. While we have reflected the prepayment when we display their UAAL rates in the current (December 31, 2024) and the prior (December 31, 2023) valuation results, the first actuarial valuation to reflect the prepayment in the Table of Amortization Bases in Cost Group 8 will be as of December 31, 2025, as that will be the first valuation in which the prepayment will be reflected in the assets provided for the valuation.

Funding measures

3. The funded ratio (the ratio of valuation value of assets to the actuarial accrued liability) remains unchanged at 91.0% (after rounding). This ratio is one measure of funding status, and its history is a measure of funding progress. Using the market value of assets, the funded ratio increased from 86.8% to 89.4%. These measurements are not necessarily appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the Plan's benefit obligation or the need for, or the amount of, future contributions. A history of the Association's funded ratios is provided in *Section 2, Subsection G* on pages 45 and 46.
4. The unfunded actuarial accrued liability (UAAL) increased from $1.12 billion to $1.17 billion. The increase in UAAL is primarily due to an investment return on the valuation value (after asset smoothing) less than the assumed rate of 6.75% and individual salary increases greater than expected by the assumptions used in the December 31, 2023 valuation, offset somewhat by the contributions made during the year to pay down the UAAL and changes in actuarial assumptions. A reconciliation of the Association's UAAL from the prior year is provided in *Section 2, Subsection E* on page 30.

   A schedule of the current UAAL amortization balances and payments may be found in *Section 3, Exhibit H* starting on page 83. A graphical projection of the UAAL amortization balances and payments is provided in *Section 3, Exhibit I starting* on page 103.

Actuarial experience

5. The net actuarial loss of $184.2 million, or 1.42% of actuarial accrued liability, is due to an investment loss (after asset smoothing) of $154.2 million, or 1.19% of actuarial accrued liability, a contribution gain of $61.7 million, or 0.48% of actuarial

accrued liability, and a net loss from sources other than investments and contributions of $91.8 million, or 0.71% of the actuarial accrued liability, prior to reflection of the assumption changes. The loss from sources other than investments and contributions was primarily due to individual salary increases greater than expected. For more details, see the complete reconciliation of the Association's UAAL from the prior year in *Section 2, Subsection E* on page 30.

6. The rate of return on the market value of assets was 8.62% for the year ending December 31, 2024. The return on the valuation value of assets was 5.38% for the same period after recognizing a portion of this year's investment gain and a portion of prior years' investment gains and losses. This resulted in an actuarial loss when measured against the assumed rate of return of 6.75% used in the December 31, 2023 valuation. This actuarial investment loss (after asset smoothing) increased the average employer contribution rate by 0.94% of payroll.

Contributions

7. The average employer rate calculated in this valuation has decreased from 28.52% to 28.02% of payroll. This decrease is primarily due to amortizing the prior year's UAAL over a larger than projected total payroll and changes in actuarial assumptions, partially offset by the investment return on the valuation value (after asset smoothing) less than the assumed rate of 6.75% and individual salary increases greater than expected by the assumptions used in the December 31, 2023 valuation. A complete reconciliation of the Association's aggregate employer rate is provided in *Section 2, Subsection F* on page 33.

   Separate employer contribution rates are shown for members with membership dates before January 1, 2013 (non-PEPRA or "legacy" members) and on or after January 1, 2013 (PEPRA members). However, the average employer contribution rates shown in *Section 1* are based on all members regardless of their membership date. A detailed schedule of the employer contribution rates is provided in *Section 2, Subsection F* starting on page 35.

   A schedule with the recommended employer contribution rates that will be used in preparing the contribution rate packet is provided in *Appendix E* starting on page 186.

8. The average member rate calculated in this valuation has decreased from 12.13% to 12.04% of payroll. A complete reconciliation of the Association's aggregate member rate is provided in *Section 2, Subsection F* on page 34.

   The detailed member rates by cost group are provided in *Section 4, Exhibit 3* starting on page 149.

9. Segal strongly recommends an actuarial funding method that targets 100% funding of the actuarial accrued liability. Generally, this implies payments that are ultimately at least enough to cover normal cost, interest on the UAAL and the principal balance. The funding policy adopted by the Board of Retirement meets this standard.

10. After we develop the total UAAL contribution rates for each cost group, we have to break down the total UAAL contribution rates between those required to amortize the shortfall in assets required to provide basic versus COLA benefits. While there are

definitive calculations of the actuarial accrued liabilities (AAL) based on the values of the basic versus COLA benefits for each cost group, we have to estimate to split the total assets between the amounts available to pay the basic versus COLA benefits. The method we have been using for CCCERA is as follows:

a. calculate the ratio of the Association-wide reserves maintained to provide basic benefits to the Association-wide reserves maintained to provide total (basic plus COLA) benefits;
b. apply the ratio calculated in a. for the entire Association to the total assets maintained for each cost group to get the basic assets for that cost group; and
c. assign the remaining assets maintained for each cost group as COLA assets by subtracting the basic assets from the total assets for that cost group.

While the method described above is only used for allocation purposes between basic and COLA benefits once the total UAAL contribution rates have been calculated for all cost groups, the method tends to allocate more assets as COLA for the General cost groups and more assets as basic for the Safety cost groups. Before the next valuation, we could discuss with CCCERA whether it might be more desirable to allocate basic versus COLA assets based on the split of the basic versus COLA AAL for each cost group so that the UAAL contribution rates would be more proportional to the underlying AAL.

Future expectations

11. The total unrecognized net investment **loss** as of December 31, 2024 is $212 million as compared to an unrecognized net investment **loss** of $532 million in the previous valuation. This net deferred loss of $212 million will be recognized in the determination of the actuarial value of assets for funding purposes in the next few years as shown in *Section 2, Subsection B* on page 23.

    The net deferred loss of $212 million represents about 1.8% of the market value of assets. Unless offset by future investment gains or other favorable experience, the recognition of the $212 million net market loss is expected to have an impact on the Association's future funded ratio and contribution rate requirements. This potential impact may be illustrated as follows:

    a. If the net deferred loss was recognized immediately in the valuation value of assets, the funded percentage would decrease from 91.0% to 89.4%.

       For comparison purposes, if the net deferred loss in the December 31, 2023 valuation had been recognized immediately in the December 31, 2023 valuation, the funded percentage would have decreased from 91.0% to 86.8%.
    b. If the net deferred loss was recognized immediately in the valuation value of assets, the average employer contribution rate would increase from 28.02% to 29.32% of payroll.

For comparison purposes, if the net deferred loss in the December 31, 2023 valuation had been recognized immediately in the December 31, 2023 valuation, the average employer contribution rate would have increased from 28.52% to 32.05% of payroll.

Risk

12. It is important to note that this actuarial valuation is based on plan assets as of December 31, 2024. 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. Segal is available to prepare projections of potential outcomes of market conditions and other demographic experience upon request.
13. Because the actuarial valuation results are dependent on a given set of assumptions, there is a risk that emerging results may differ significantly as actual experience proves to be different from the assumptions. We have not been engaged to perform a detailed analysis of the potential range of the impact of risk relative to the Plan's future financial condition, we have included a brief discussion of some risks that may affect the Plan in *Section 2, Subsection I*, beginning on page 48. A more detailed assessment would provide the Board of Retirement with a better understanding of the inherent risks.
14. The risk assessment in *Section 2, Subsection I* includes the disclosure of a "Low-Default-Risk Obligation Measure" (LDROM). This disclosure, along with commentary on the significance of the LDROM, is a requirement under Actuarial Standard of Practice No. 4 (ASOP 4) for all pension funding actuarial valuation reports and can be found starting on page 50.

GASB

This report constitutes an actuarial valuation for the purpose of determining the actuarially determined contribution (ADC) under the Plan's funding policy and measuring the progress of that funding policy. The Net Pension Liability and Pension Expense under GASB Statements No. 67 and No. 68, for inclusion in the Plan's and employer's financial statements as of December 31, 2024, will be provided separately. The accounting disclosures will utilize different methodologies from those employed in the funding valuation, as required by the GASB. However, the ADC in this valuation is expected to be used as the ADC for GASB financial reporting.

Summary of key valuation results

Average Employer Contribution[1] Calculated as of December 31
($ in '000s)

Cost Group and Employer	2024 Total Rate	2024 Estimated Amount[2]	2023 Total Rate	2023 Estimated Amount[2]
General				
• Cost Group 1 – County and Small Districts (Tiers 1 and 4)[3]	23.67%	$5,748	24.03%	$5,529
• Cost Group 2 – County and Small Districts (Tiers 3 and 5)	20.85%	191,495	21.41%	180,406
• Cost Group 3 – Central Contra Costa Sanitary District	18.98%	8,969	17.80%	7,504
• Cost Group 4 – Contra Costa Housing Authority	25.80%	2,122	27.50%	1,888
• Cost Group 5 – Contra Costa County Fire Protection District[3]	36.93%	4,108	39.40%	3,714
• Cost Group 6 – Small Districts (Non-Enhanced Tiers 1 and 4)	15.32%	223	15.13%	203
Safety				
• Cost Group 7 – County (Tiers A and D)	60.17%	$26,249	59.75%	$27,563
• Cost Group 8 – Contra Costa County Fire Protection District[3,4]	61.20%	47,936	60.67%	44,681
• Cost Group 9 – County (Tiers C and E)	49.71%	42,970	49.46%	37,202
• Cost Group 10 – Moraga-Orinda Fire District	93.92%	8,669	91.22%	8,292
• Cost Group 11 – San Ramon Valley Fire District	49.05%	13,210	48.58%	12,440
All Cost Groups combined	**28.02%**	**$351,700**	**28.52%**	**$329,423**

Note: Pages 178 and 179 contain a summary that shows which employers are in each cost group.

[1] These rates **do not** include any employer subvention of member contributions or any member subvention of employer contributions.
[2] Based on projected compensation for each valuation date shown.
[3] The rates as of December 31, 2023 and December 31, 2024 reflect the annexation of RHFPD into CCCFPD effective July 1, 2025.
[4] The rates as of December 31, 2023 and December 31, 2024 reflect the prepayment made by RHFPD of $7.5 million on June 20, 2025 towards the December 31, 2023 UAAL for their Safety members as part of the annexation of RHFPD into CCCFPD. This prepayment has been used to reduce the District's UAAL contribution rate effective July 1, 2025.

Average Member Contribution[1] Calculated as of December 31

($ in '000s)

Cost Group and Employer	2024 Total Rate	2024 Estimated Amount[2]	2023 Total Rate	2023 Estimated Amount[2]
General				
• Cost Group 1 – County and Small Districts (Tiers 1 and 4)[3]	11.65%	$2,829	11.62%	$2,674
• Cost Group 2 – County and Small Districts (Tiers 3 and 5)	10.55%	96,889	10.68%	89,994
• Cost Group 3 – Central Contra Costa Sanitary District	11.49%	5,431	11.55%	4,868
• Cost Group 4 – Contra Costa Housing Authority	11.58%	952	11.71%	804
• Cost Group 5 – Contra Costa County Fire Protection District[3]	11.80%	1,313	11.85%	1,117
• Cost Group 6 – Small Districts (Non-Enhanced Tiers 1 and 4)	13.78%	200	13.23%	178
Safety				
• Cost Group 7 – County (Tiers A and D)	18.97%	$8,276	18.66%	$8,608
• Cost Group 8 – Contra Costa County Fire Protection District[3]	17.80%	13,941	17.59%	12,954
• Cost Group 9 – County (Tiers C and E)	17.11%	14,791	17.06%	12,832
• Cost Group 10 – Moraga-Orinda Fire District	18.55%	1,712	18.19%	1,653
• Cost Group 11 – San Ramon Valley Fire District	17.64%	4,751	17.46%	4,471
All Cost Groups combined	**12.04%**	**$151,084**	**12.13%**	**$140,154**

Note: Pages 178 and 179 contain a summary that shows which employers are in each cost group.

[1] These rates **do not** include any employer subvention of member contributions or any member subvention of employer contributions.
[2] Based on projected compensation for each valuation date shown.
[3] The rates as of December 31, 2023 are re-composited to reflect the annexation of RHFPD into CCCFPD.

Valuation Results as of December 31

Line Description	2024	2023
Actuarial accrued liability		
• Total actuarial accrued liability	$12,982,890,011	$12,438,710,062
– Retired members and beneficiaries	8,281,524,721	8,100,537,061
– Inactive members[1]	401,377,405	369,447,362
– Active members	4,299,987,885	3,968,725,639
• Normal cost for plan year beginning December 31[2]	332,435,691	314,351,763
Assets		
• Market value of assets (MVA)	$11,620,426,442	$10,808,858,259
• Actuarial value of assets (AVA)	11,832,779,196	11,340,825,456
• Actuarial value of assets as a percentage of market value of assets	101.8%	104.9%
• Valuation value of assets (VVA)	$11,815,241,998	$11,323,476,654
Funded status		
• Unfunded Actuarial Accrued Liability on MVA basis[3]	$1,380,000,767	$1,647,200,605
• Funded percentage on MVA basis[3]	89.4%	86.8%
• Unfunded Actuarial Accrued Liability on VVA basis	$1,167,648,013	$1,115,233,408
• Funded percentage on VVA basis	91.0%	91.0%
Key assumptions		
• Net investment return	6.75%	6.75%
• Inflation rate	2.50%	2.50%
• Payroll growth	3.00%	3.00%
• Cost-of-living adjustments		
– Tiers with 3%/4% COLA	2.75%	2.75%
– Tiers with 2% COLA	2.00%	2.00%

1 Includes inactive members with member contributions on deposit.

2 Includes administrative expenses. The normal cost as of December 31, 2023 and December 31, 2024 reflect the annexation of RHFPD into CCCFPD effective July 1, 2025.

3 Both the UAAL and the funded percentage on MVA basis have been calculated by using the MVA reduced by non-valuation reserves in the amount of $17,537,198 as of 2024 and $17,348,802 as of 2023.

Demographic Data as of December 31

Demographic Data by Status	2024	2023	Change
Active members			
• Number of members	10,791	10,349	4.3%
• Average age	45.9	46.1	(0.2)
• Average service	9.8	9.9	(0.1)
• Total projected compensation	$1,255,279,090	$1,155,129,563	8.7%
• Average projected compensation	$116,326	$111,618	4.2%
Retired members and beneficiaries			
• Number of members	10,967	10,805	1.5%
– Service retired	8,562	8,407	1.8%
– Disability retired	871	872	(0.1%)
– Beneficiaries	1,534	1,526	0.5%
• Average age	71.6	71.3	0.3
• Average monthly benefit	$4,747	$4,606	3.1%
Inactive members			
• Number of members[1]	4,188	4,109	1.9%
• Average age	46.9	46.5	0.4
Total members	**25,946**	**25,263**	**2.7%**

[1] Includes 2,335 inactive non-vested members due a refund of member contributions as of 2024 and 1,987 as of 2023.

Important information about actuarial valuations

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

In order to prepare a valuation, Segal relies on a number of input items. These include:

Input Item	Description
Plan provisions	Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. Even where they appear precise, outside factors may change how they operate. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan summary included in our report to confirm that Segal has correctly interpreted the plan of benefits.
Member information	An actuarial valuation for a plan is based on data provided to the actuary by the Association. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
Financial information	Part of the cost of a plan will be paid from existing assets — the balance will need to come from future contributions and investment income. The valuation is based on the asset values as of the valuation date, typically reported by the Association. A snapshot as of a single date may not be an appropriate value for determining a single year's contribution requirement, especially in volatile markets. Plan sponsors often use an "actuarial value of assets" that differs from market value to gradually reflect year-to-year changes in the market value of assets in determining the contribution requirements.
Actuarial assumptions	In preparing an actuarial valuation, Segal starts by developing a forecast of the benefits to be paid to existing plan members for the rest of their lives and the lives of their beneficiaries. This requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of members in each year, as well as forecasts of the plan's benefits for each of those events. In addition, the benefits forecasted for each of those events in each future year reflect actuarial assumptions as to salary increases and cost-of-living adjustments (if applicable). The forecasted benefits are then discounted to a present value, typically based on an estimate of the rate of return that will be achieved on the plan's assets. All of these factors are uncertain and unknowable. Thus, there will be a range of reasonable assumptions, and the results may vary materially based on which assumptions are selected within that range. That is, there is no right answer (except with hindsight). It is important for any user of an actuarial valuation to understand and accept this constraint. The actuarial model may use approximations and estimates that will have an immaterial impact on our results. In addition, the actuarial assumptions may change over time, and while this can have a significant impact on the reported results, it does not mean that the previous assumptions or results were unreasonable or wrong.

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

- The actuarial valuation is prepared at the request of the Association. Segal is not responsible for the use or misuse of its report, particularly by any other party.
- An actuarial valuation is a measurement at a specific date — it is not a prediction of a plan's future financial condition. Accordingly, Segal did not perform an analysis of the potential range of financial measurements, except where otherwise noted.
- If CCCERA is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.
- Segal does not provide investment, legal, accounting or tax advice and is not acting as a fiduciary to the Plan. This valuation is based on Segal's understanding of applicable guidance in these areas and of the Plan's provisions, but they may be subject to alternative interpretations. The Association should look to their other advisors for expertise in these areas.
- While Segal maintains extensive quality assurance procedures, an actuarial valuation involves complex computer models and numerous inputs. In the event that an inaccuracy is discovered after presentation of Segal's valuation, Segal may revise that valuation or make an appropriate adjustment in the next valuation.
- Segal's report shall be deemed to be final and accepted by CCCERA upon delivery and review. CCCERA should notify Segal immediately of any questions or concerns about the final content.

Section 2: Actuarial Valuation Results

A. Member information

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

This section presents a summary of significant statistical data on these member groups. More detailed information for this valuation year and the preceding valuation can be found in *Section 3, Exhibits A, B, and C*.

Member Population

As of December 31	Active Members	Inactive Members[1]	Retired Members & Beneficiaries (Pay Status)	Total Non-Actives	Ratio of Non-Actives to Actives	Ratio of Pay Status to Actives
2015	9,642	2,790	9,068	11,858	1.23	0.94
2016	9,848	3,089	9,100	12,189	1.24	0.92
2017	10,038	3,327	9,267	12,594	1.25	0.92
2018	10,021	3,477	9,547	13,024	1.30	0.95
2019	10,075	3,638	9,737	13,375	1.33	0.97
2020	10,099	3,591	10,018	13,609	1.35	0.99
2021	10,005	3,812	10,278	14,090	1.41	1.03
2022	10,082	3,974	10,561	14,535	1.44	1.05
2023	10,349	4,109	10,805	14,914	1.44	1.04
2024	10,791	4,188	10,967	15,155	1.40	1.02

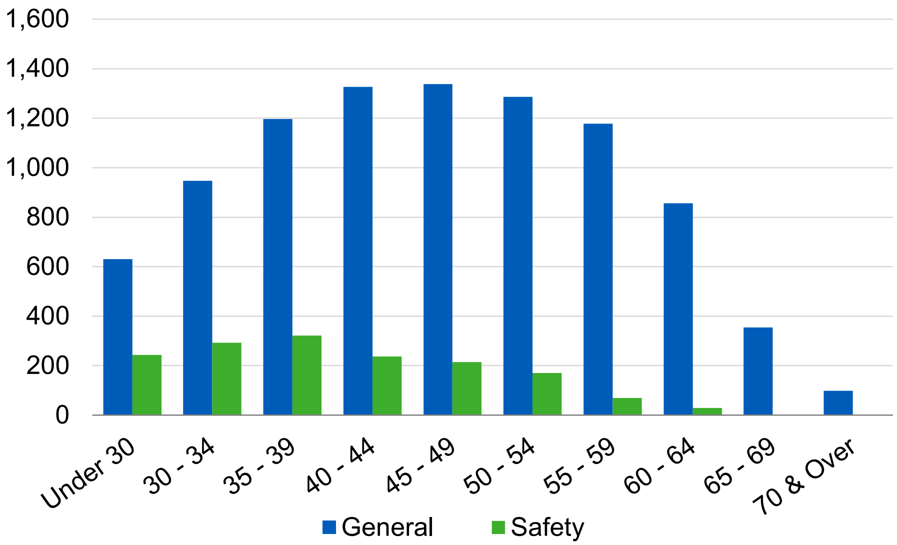
1 Includes inactive members with member contributions on deposit.

Active Members as of December 31

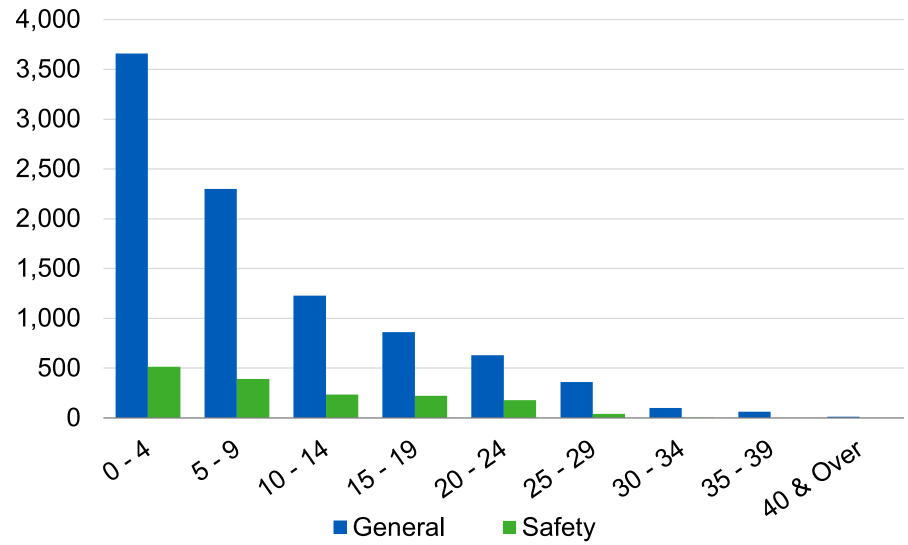
Line Description	2024	2023	Change
Active members	10,791	10,349	4.3%
Average age[1]	45.9	46.1	(0.2)
Average years of service	9.8	9.9	(0.1)
Average compensation	$116,326	$111,618	4.2%

Distribution of Active Members as of December 31, 2024

Actives by Age



Actives by Years of Service



Inactive Members as of December 31

Line Description	2024	2023	Change
Inactive members[2]	4,188	4,109	1.9%

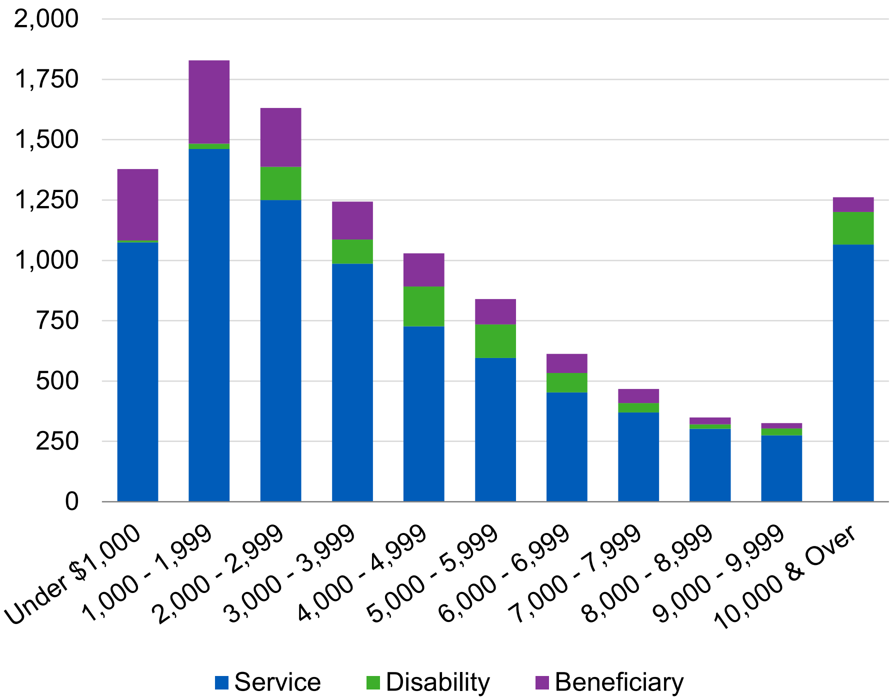
[1] Among the active members, there were none with unknown age information.
[2] Includes inactive members with member contributions on deposit.

Retired Members and Beneficiaries as of December 31

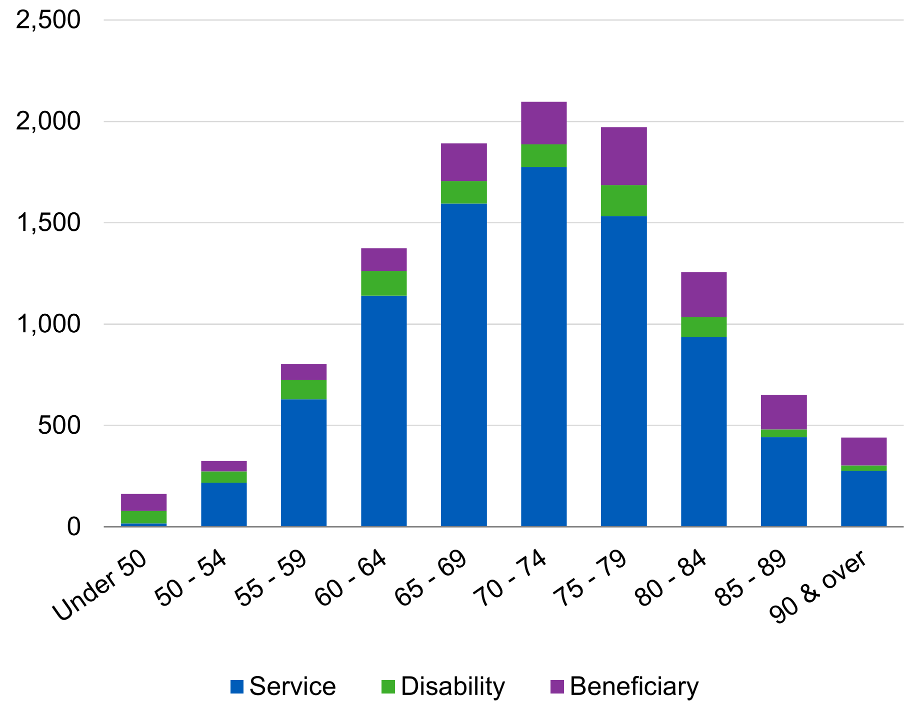
Line Description	2024	2023	Change
Retired members	9,433	9,279	1.7%
Beneficiaries	1,534	1,526	0.5%
Average age	71.6	71.3	0.3
Average monthly amount	$4,747	$4,606	3.1%
Total monthly amount	$52,066,431	$49,758,676	4.6%

Distribution of Retired Members and Beneficiaries as of December 31, 2024

By Type and Monthly Amount



By Type and Age



Historical plan population

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

Historical Member Data

Active Members versus Retired Members and Beneficiaries (Pay Status)

As of December 31	Active Count	Active Average Age	Active Average Service	Pay Status Count	Pay Status Average Age	Pay Status Monthly Amount
2015	9,642	45.9	9.9	9,068	69.9	$3,706
2016	9,848	45.9	9.9	9,100	70.0	3,799
2017	10,038	46.0	9.8	9,267	70.3	3,892
2018	10,021	46.2	9.9	9,547	70.4	3,986
2019	10,075	46.3	10.1	9,737	70.6	4,116
2020	10,099	46.3	10.2	10,018	70.8	4,219
2021	10,005	46.3	10.2	10,278	70.9	4,353
2022	10,082	46.1	10.1	10,561	71.1	4,466
2023	10,349	46.1	9.9	10,805	71.3	4,606
2024	10,791	45.9	9.8	10,967	71.6	4,747

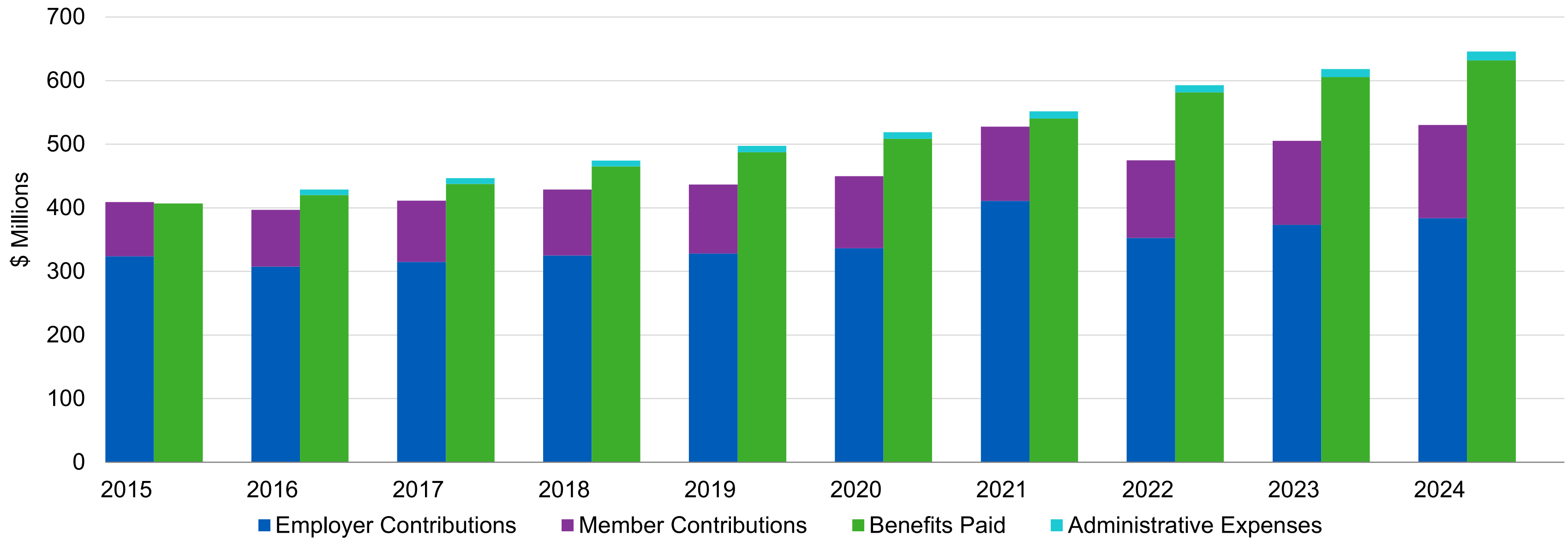
B. Financial information

Retirement plan funding anticipates that, over the long term, both contributions and investment earnings (less investment fees) will be needed to cover benefit payments and administrative expenses. Retirement plan assets change as a result of the net impact of these income and expense components.

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

It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board has approved an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the valuation asset value and the plan costs are more stable. The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

Comparison of Contributions Made with Benefits and Expenses[1] for Years Ended December 31



[1] Prior to 2016, administrative expenses were included as an offset to investment income and are not shown in the graph. Starting in 2016, the employer and member contributions shown in the graph include an administrative expense load.

Determination of Actuarial Value and Valuation Value of Assets for Year Ended December 31, 2024

Step		Actual Return	Expected Return	Investment Gain/(Loss)	Percent Deferred	Deferred Amount	Amount
1.	Market value of assets						$11,620,426,442
2.	**Calculation of deferred return**						
a.	Period ended December 31, 2019	$348,171,398	$307,217,326	$40,954,072	0%	$0	
b.	Period ended June 30, 2020	(302,015,927)	318,113,258	(620,129,184)	0%	0	
c.	Period ended December 31, 2020	1,184,409,986	306,509,032	877,900,954	10%	87,790,095	
d.	Period ended June 30, 2021	(254,319,434)	346,562,358	(600,881,792)	20%	(120,176,358)	
e.	Period ended December 31, 2021	1,661,663,047	337,995,697	1,323,667,350	30%	397,100,205	
f.	Period ended June 30, 2022	(1,235,218,785)	393,183,225	(1,628,402,011)	40%	(651,360,804)	
g.	Period ended December 31, 2022	(46,688,578)	336,398,943	(383,087,521)	50%	(191,543,760)	
h.	Period ended June 30, 2023	532,635,863	332,783,528	199,852,335	60%	119,911,401	
i.	Period ended December 31, 2023	335,615,067	348,467,744	(12,852,677)	70%	(8,996,874)	
j.	Period ended June 30, 2024	556,737,823	358,153,867	198,583,957	80%	158,867,165	
k.	Period ended December 31, 2024	370,313,928	374,695,955	(4,382,027)	90%	(3,943,824)	
l.	**Total deferred return**[1]						$(212,352,754)
3.	**Actuarial value of assets: 1 – 2l**						**$11,832,779,196**
4.	Ratio of actuarial to market value: **3 ÷ 1**						101.8%
5.	**Non-valuation reserves and designations**						
a.	Post Retirement Death Benefit						$17,537,198
b.	Statutory Contingency						0
c.	Additional One Percent Contingency						0
d.	Unrestricted Designation						0
e.	**Total**						**$17,537,198**
6.	**Valuation value of assets: 3 – 5e**						**$11,815,241,998**

Note: Results may be slightly off due to rounding.

[1] Total deferred return is equal to the **sum of 2a through 2k.** The total deferred return as of December 31, 2024 is recognized in each of the next five years as follows:

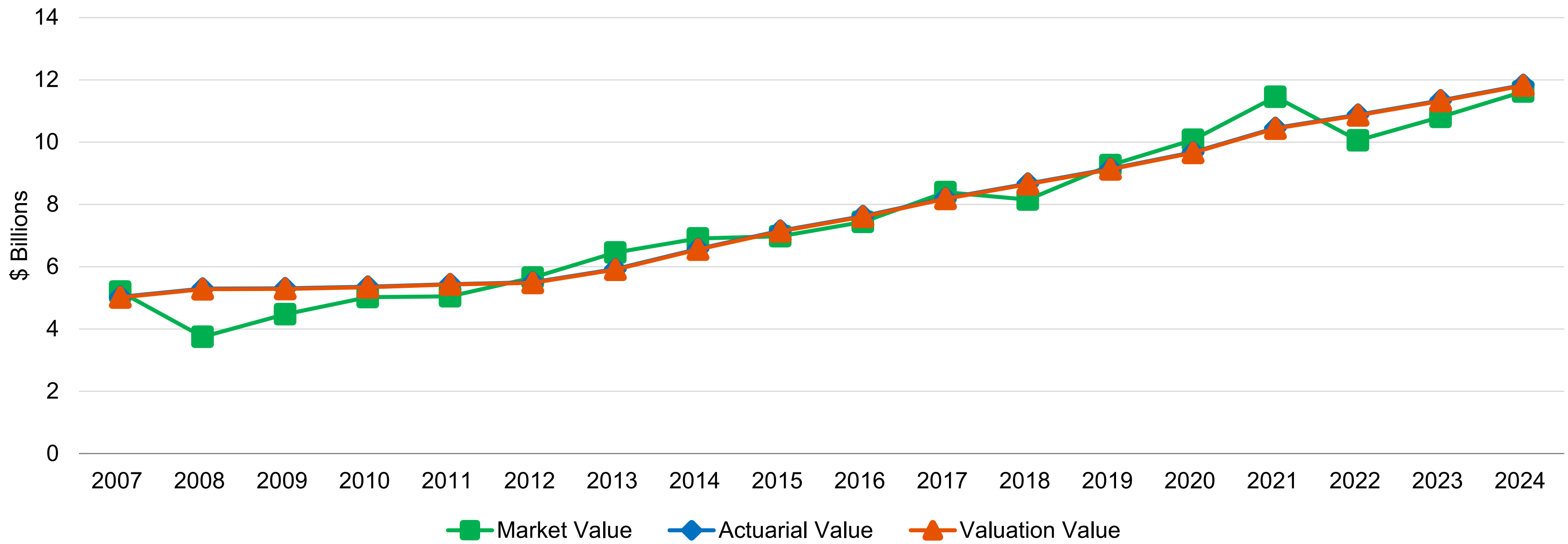
a.	Amount recognized on December 31, 2025	$(93,710,382)
b.	Amount recognized on December 31, 2026	(193,690,853)
c.	Amount recognized on December 31, 2027	37,931,566
d.	Amount recognized on December 31, 2028	37,555,118
e.	Amount recognized on December 31, 2029	(438,203)

Asset history

The market value, actuarial value and valuation value of assets are representations of the Plan’s financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets. The valuation value of assets is generally the actuarial value, excluding any non-valuation reserves.

The valuation value of assets is significant because the Plan’s liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the unfunded actuarial accrued liability is an important element in determining the contribution requirement.

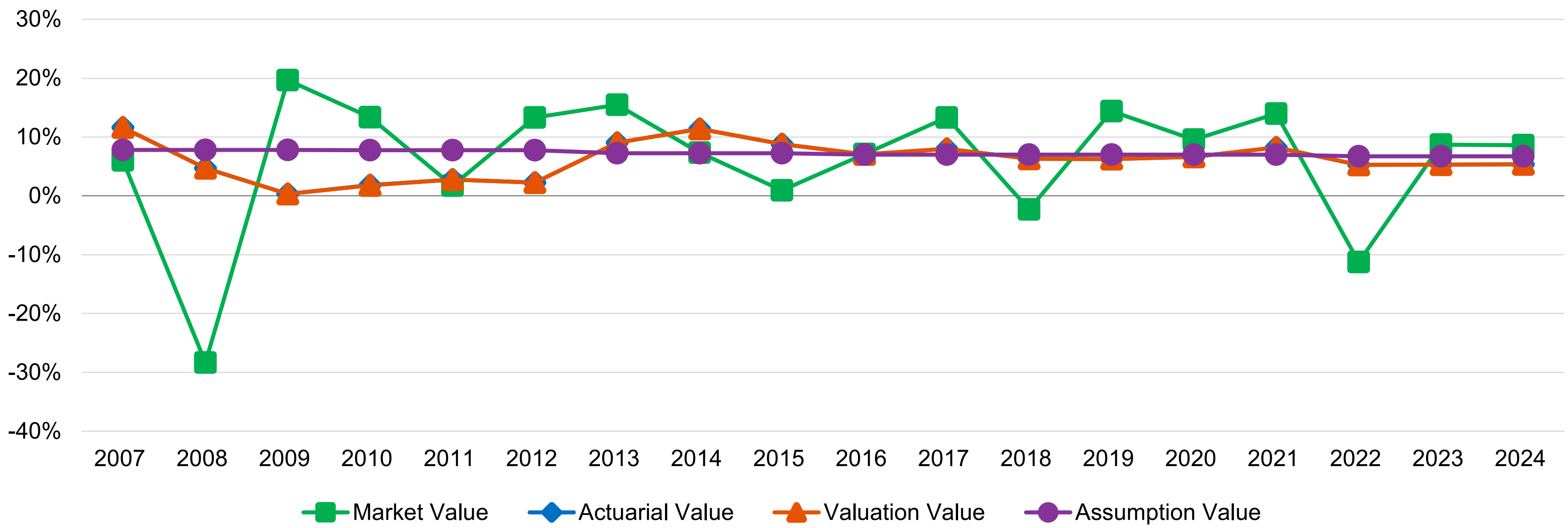
Market Value, Actuarial[1] Value, and Valuation Value of Assets as of December 31



[1] The actuarial value and the valuation value have been substantially the same over the time period shown, differing by no more than $20 million.

Historical investment returns

Market, Actuarial and Valuation Rates of Return for Years Ended December 31



Legend	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
■ Market rate	6.03%	(28.35%)	19.68%	13.35%	1.76%	13.31%	15.50%	7.35%	0.95%	7.10%	13.31%	(2.33%)	14.39%	9.57%	13.99%	(11.25%)	8.69%	8.62%
◆ Actuarial rate	11.63%	4.73%	0.34%	1.82%	2.78%	2.25%	9.01%	11.39%	8.78%	7.04%	8.00%	6.32%	6.24%	6.62%	8.24%	5.25%	5.31%	5.38%
▲ Valuation rate	11.64%	4.72%	0.32%	1.80%	2.77%	2.24%	9.02%	11.40%	8.79%	7.04%	8.00%	6.32%	6.24%	6.62%	8.24%	5.25%	5.31%	5.38%
● Assumed rate	7.80%	7.80%	7.80%	7.75%	7.75%	7.75%	7.25%	7.25%	7.25%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	6.75%	6.75%	6.75%

Average Rates of Return	Market Value	Actuarial Value	Valuation Value
Most recent five-year geometric average return	5.53%	6.15%	6.15%
Most recent 10-year geometric average return	6.00%	6.71%	6.71%
Most recent 15-year geometric average return	7.36%	6.26%	6.26%

C. Actuarial experience

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

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

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

The actuarial experience for the year can be found below and a discussion of the major components can be found on the following pages.

Actuarial Experience for Year Ended December 31, 2024

Source	Amount
1. Net (gain)/loss from investments[1]	$154,151,887
2. Net (gain)/loss from contribution experience[2]	(61,731,945)
3. Net (gain)/loss from other experience[3]	91,787,394
4. Net experience (gain)/loss	**$184,207,336**

[1] Details on next page.
[2] See *Section 2, Subsection E* for further details.
[3] See *Section 2, Subsection E* for further details. Does not include the effect of plan or assumption changes, if any.

Investment experience

A major component of projected asset growth is the assumed rate of return. The assumed return should represent the expected long-term rate of return, based on the Plan's investment policy.

For valuation purposes, the assumed rate of return on the valuation value of assets is 6.75% based on the December 31, 2023 valuation. The actual rate of return on a valuation basis for the 2024 plan year was 5.38% after recognizing a portion of this year's investment gains and a portion of prior years' investment gains and losses. Since the actual return for the year was less than the assumed return, the Plan experienced an actuarial loss during the year ended December 31, 2024 with regard to its investments.

Investment Experience for Year Ended December 31, 2024

Line Description	Market Value	Actuarial Value	Valuation Value
1. Net investment income	$927,051,751	$607,437,308	$606,314,162
2. Average value of assets	10,751,077,921	11,283,045,118	11,266,163,691
3. Rate of return: **1 ÷ 2**	8.62%	5.38%	5.38%
4. Assumed rate of return	6.75%	6.75%	6.75%
5. Expected investment income:[1] **2 × 4**	725,697,760	761,605,545	760,466,049
6. Investment gain/(loss): 1 − 5	**$201,353,991**	**$(154,168,237)**	**$(154,151,887)**

[1] The expected investment returns are based on January 1, 2024 asset values and, with the exception of special contributions, do not take into account the actual timing of cashflows during the year. Instead, normal contributions, benefit payments and expenses are assumed to occur in the middle of the year.

Contributions

Contributions (excluding additional UAAL contributions) for the year ended December 31, 2024 totaled $530.1 million, compared to the projected amount of $470.4 million. This resulted in a gain of $61.7 million for the year, when adjusted for timing.

Other experience

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

- Mortality experience (more or fewer than expected deaths)
- The extent of turnover among members
- Retirement experience (earlier or later than projected)
- The number of disability retirements (more or fewer than projected)
- Salary increases (greater or smaller than projected)
- Cost-of-living adjustments (COLAs) (higher or lower than assumed)
- Administrative expenses (higher or lower than assumed)

The net loss from this other experience for the year ended December 31, 2024 amounted to $91.8 million, which is 0.7% of the actuarial accrued liability. See *Section 2, Subsection E* for a detailed development of the unfunded actuarial accrued liability.

D. Other changes impacting the actuarial accrued liability

Actuarial assumptions

- The results of this valuation reflect changes in the actuarial assumptions as recommended by Segal and adopted by the Board of Retirement for the December 31, 2024 valuation. These assumption changes, including higher termination rate, lower disability rate and new mortality tables that predict lower life expectancies for payees at advance ages, resulted in a decrease in UAAL by $46.9 million and a reduction in the employer's UAAL rate by 0.23% of payroll.

Details on actuarial assumptions and methods are in *Section 4, Exhibit 1*.

Plan provisions

There were no changes in plan provisions since the prior valuation.

A summary of plan provisions is in *Section 4, Exhibit 2*.

E. Unfunded actuarial accrued liability

Reconciliation of Unfunded Actuarial Accrued Liability

Line Description		Amount
1.	Unfunded actuarial accrued liability as of December 31, 2023	$1,115,233,408
2.	Normal cost[1] at middle of year	302,350,044
3.	Expected administrative expenses	13,527,810
4.	Expected employer and member contributions	(470,384,468)
5.	Interest to end of year	69,616,273
6.	**Expected unfunded actuarial accrued liability as of December 31, 2024**	**$1,030,343,067**
7.	**Changes due to:**	
	a. Investment return lower than expected, after asset smoothing	$154,151,887
	b. Actual contributions greater than expected under funding policy[2]	(61,731,945)
	c. Individual salary increases greater than expected	75,526,147
	d. COLA increases lower than expected for April 1, 2025[3]	(12,035,062)
	e. Other net experience loss[4]	28,296,309
	f. Changes in actuarial assumptions	(46,902,390)
	g. Total changes	**$137,304,946**
8.	**Unfunded actuarial accrued liability as of December 31, 2024: 6 + 7g**	**$1,167,648,013**

Note: The sum of items 7c through 7e equals the "Net (gain)/loss from other experience" shown in *Section 2, Subsection C*.

[1] Excludes administrative expense load.
[2] The actual employer contributions were greater than expected due to the scheduled 18-month lag in implementing the lower contribution rates calculated in the December 31, 2023 valuation for Fiscal Year 2025-2026, as well as actual covered payroll for 2024 being greater than the projected compensation in the December 31, 2023 valuation.
[3] For tiers with a maximum 3% or 4% COLA, the actual COLA increase on April 1, 2025 is 2.5% for those retirees without a COLA bank versus 2.75% assumed in the last valuation.
[4] Includes other differences in actual versus expected experience including (but not limited to) mortality, retirement, disability, termination and leave cashout experience.

F. Recommended contribution

The recommended contribution is equal to the employer normal cost payment and a payment on the unfunded actuarial accrued liability. As of December 31, 2024, the average recommended employer contribution is 28.02% of payroll.

The Board sets the funding policy used to calculate the recommended contribution based on layered 18-year[1] amortization periods as a level percentage of payroll. See *Section 4, Exhibit 1* for further details on the funding policy. Based on this policy, there is no negative amortization and each amortization layer is fully funded in 18 years. As shown in the graphical projection of the UAAL amortization balances and payments found in *Section 3, Exhibit I*, before taking into consideration the deferred investment gains and/or losses that will be recognized in the next several valuations, the UAAL of the Plan is expected to be fully amortized by 2042,[2] assuming all assumptions are realized and contributions are made in accordance with the funding policy.

The current funding policy is intended to fully fund the cost of the benefits and to allocate the cost of benefits reasonably and equitably over time while minimizing the volatility of employer contributions. The recommended contribution is expected to remain level as a percent of payroll, except when any current amortization layer is fully amortized and assuming there are no future actuarial gains or losses. Furthermore, the funded ratio is expected to increase as the UAAL is methodically funded by employer contributions.

[1] Changes in UAAL due to actuarial gains or losses and changes in actuarial assumptions or methods for each valuation are amortized over separate 18-year periods, while changes in UAAL due to plan amendments are amortized over separate 10-year periods.

[2] Excludes withdrawn employers.

Average Recommended Employer Contribution Calculated as of December 31

Line Description	2024 Amount ($ in '000s)	2024 % of Projected Compensation	2023 Amount ($ in '000s)	2023 % of Projected Compensation
1. Total normal cost[1]	$332,436	26.49%	$314,376	27.21%[2,3]
2. Expected member contributions[1]	151,084	12.04%	140,154	12.13%[2,3]
3. Employer normal cost: [1] **1 – 2**	$181,352	14.45%	$174,222	15.08%[2,3]
4. Actuarial accrued liability	12,982,890		12,438,710	
5. Valuation value of assets	11,815,242		11,323,477	
6. Unfunded actuarial accrued liability: **4 – 5**	$1,167,648		$1,115,233	
7. Payment on UAAL	170,348	13.57%[4]	155,201	13.44%[2,4]
8. Average recommended employer contribution: 3 + 7	**$351,700**	**28.02%**	**$329,423**	**28.52%**
9. Projected compensation	$1,255,279		$1,155,130	

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

1 Includes administrative expense load.
2 Reflects the annexation of RHFPD into CCCFPD that was effective July 1, 2025.
3 Reflects RHFPD Safety legacy active members receiving Safety Tier A Enhanced benefit for future service only, as part of the annexation of RHFPD into CCCFPD effective July 1, 2025.
4 Reflects UAAL prepayment of $7.5 million made by RHFPD on June 20, 2025 for their Safety members.

Reconciliation of Average Recommended Employer Contribution Rate

Line Description	Contribution Rate[1]	Estimated Amount[2]
1. Average recommended employer contribution as of December 31, 2023 – after annexation[3]	28.52%	$329,422,549
2. Changes due to:		
a. Investment return less than expected after asset smoothing	0.94%	11,799,623
b. Actual contributions greater than expected under funding policy[4]	(0.35%)	(4,393,477)
c. Individual salary increases greater than expected	0.46%	5,774,284
d. Amortizing prior year's UAAL over a larger than expected total payroll	(0.75%)	(9,414,593)
e. COLA increases lower than expected for April 1, 2025[5]	(0.07%)	(878,695)
f. Change in active member demographics on normal cost[6]	(0.31%)	(3,891,365)
g. Other net experience gain[7]	0.14%	30,310,876
h. Changes in actuarial assumptions	(0.56%)	(7,029,563)
i. Total change	**(0.50%)**	**$22,277,090**
3. Average recommended employer contribution as of December 31, 2024[8]: 1 + 2i	**28.02%**	**$351,699,639**

[1] These rates **do not** include any employer subvention of member contributions, or member subvention of employer contributions.

[2] Based on projected compensation for each valuation date shown.

[3] The contribution rate and dollar amount shown as of December 31, 2023 has been recalculated since the prior valuation to reflect the annexation of RHFPD into CCCFPD effective July 1, 2025. It also reflects the UAAL prepayment made by RHFPD in the amount of $7.5 million on June 20, 2025.

[4] The actual employer contributions were greater than expected due to the scheduled 18-month lag in implementing the lower contribution rates calculated in the December 31, 2023 valuation for Fiscal Year 2025-2026, as well as actual covered payroll for 2024 being greater than the projected compensation in the December 31, 2023 valuation.

[5] For tiers with a maximum 3% or 4% COLA, the actual COLA increase on April 1, 2025 is 2.5% for those retirees without a COLA bank versus 2.75% assumed in the last valuation.

[6] This is the net impact of: a) reduction in normal cost rate due to the replacement of legacy members by PEPRA members, b) change in entry age and other demographic profiles, and c) the effect of legacy Safety members who for the first time reached 30 years of reported service as of December 31, 2024 and stopped making member basic contributions.

[7] Includes other differences in actual versus expected experience including (but not limited to) mortality, retirement, disability, termination and leave cashout experience. Estimated amount also reflects changes in payroll from prior valuation.

[8] The contribution rate and annual dollar amount shown as of December 31, 2024 has been calculated to reflect the UAAL prepayment made by RHFPD in the amount of $7.5 million on June 20, 2025.

Reconciliation of Average Recommended Member Contribution Rate

Line Description	Contribution Rate[1]	Estimated Amount[2]
1. Average recommended member contribution as of December 31, 2023 – after annexation[3]	12.13%	$140,154,053
2. Changes due to:		
a. Change in administrative expense load[4]	0.01%	$125,528
b. Change in active member demographics[5]	(0.14%)	10,302,552
c. Changes in actuarial assumptions	0.04%	502,112
d. Total change	(0.09%)	$10,930,192
3. Average recommended member contribution as of December 31, 2024: 1 + 2d	**12.04%**	**$151,084,245**

[1] These rates **do not** include any employer subvention of member contributions, or member subvention of employer contributions.

[2] Based on projected compensation for each valuation date shown.

[3] The contribution rate and dollar amount shown as of December 31, 2023 has been recalculated since the prior valuation to reflect the annexation of RHFPD into CCCFPD effective July 1, 2025.

[4] The calculation and the allocation of the administrative expense between employer and member can be found on page 107.

[5] This is the net impact of: a) reduction in normal cost rate due to the replacement of legacy members by PEPRA members, b) change in entry age and other demographic profiles, and c) the effect of legacy Safety members who for the first time reached 30 years of reported service as of December 31, 2024 and stopped making member basic contributions. Estimated amount also reflects changes in payroll from prior valuation.

Recommended employer contribution rate

Cost Group 1 — Recommended Employer Contribution Rates[1] Calculated as of December 31

Component by Plan and Employer	2024 Basic	2024 COLA[2]	2024 Total	2024 Estimated Amount	2023 Basic	2023 COLA	2023 Total	2023 Estimated Amount[3]
Tier 1 — Non-LAFCO								
Normal Cost	13.05%	3.60%	16.65%	$2,203,629	13.20%	3.68%	16.88%	$2,279,408
UAAL	9.99%	(1.08%)	8.91%	1,179,239	9.60%	(0.75%)	8.85%	1,195,069
Total Contribution	**23.04%**	**2.52%**	**25.56%**	**$3,382,868**	**22.80%**	**2.93%**	**25.73%**	**$3,474,477**
Tier 1 — LAFCO[4]								
Normal Cost	13.05%	3.60%	16.65%	$35,230	13.20%	3.68%	16.88%	$34,060
UAAL	5.39%	(1.08%)	4.31%	9,120	4.90%	(0.75%)	4.15%	8,374
Total Contribution	**18.44%**	**2.52%**	**20.96%**	**$44,350**	**18.10%**	**2.93%**	**21.03%**	**$42,434**
Tier 4 (3% COLA) — Non-LAFCO								
Normal Cost	9.45%	3.10%	12.55%	$1,349,083	9.59%	3.22%	12.81%	$1,182,304
UAAL	9.99%	(1.08%)	8.91%	957,795	9.60%	(0.75%)	8.85%	816,813
Total Contribution	**19.44%**	**2.02%**	**21.46%**	**$2,306,878**	**19.19%**	**2.47%**	**21.66%**	**$1,999,117**
Tier 4 (3% COLA) — LAFCO[3]								
Normal Cost	9.45%	3.10%	12.55%	$10,415	9.59%	3.22%	12.81%	$10,046
UAAL	5.39%	(1.08%)	4.31%	3,577	4.90%	(0.75%)	4.15%	3,255
Total Contribution	**14.84%**	**2.02%**	**16.86%**	**$13,992**	**14.49%**	**2.47%**	**16.96%**	**$13,301**
Tier 4 (2% COLA)								
Normal Cost	8.98%	2.03%	11.01%	$0	9.09%	2.09%	11.18%	$0
UAAL	9.99%	(1.08%)	8.91%	0	9.60%	(0.75%)	8.85%	0
Total Contribution	**18.97%**	**0.95%**	**19.92%**	**$0**	**18.69%**	**1.34%**	**20.03%**	**$0**

1 The Basic normal cost and UAAL rates shown for each tier include an explicit administrative expense load of 0.53% and 0.12% of payroll, respectively for 2024 and 0.52% and 0.13% of payroll, respectively for 2023.

2 The COLA rate in the December 31, 2024 valuation has become negative as a result of amortizing the bases established as of December 31, 2012 through December 31, 2018 over six years. While this does not impact the total recommended rate, we are available to discuss various options should CCCERA prefer not to have a negative COLA rate.

3 The annual dollar contribution amount shown for “Tier 4 (3% COLA) — Non-LAFCO” has been revised since the prior valuation to reflect the reduction in payroll due to the annexation of RHFPD into CCCFPD that was effective July 1, 2025.

4 LAFCO has made several UAAL prepayments in recent years. Those prepayments have been amortized over 18 years from the date they were made and allocated to provide Basic UAAL rate credits.

Cost Group 2 — Recommended Employer Contribution Rates[1] Calculated as of December 31

Component by Plan and Employer	2024 Basic	2024 COLA[2]	2024 Total	2024 Estimated Amount	2023 Basic	2023 COLA	2023 Total	2023 Estimated Amount
Tier 3 — Non-IHSS								
Normal Cost	11.25%	3.22%	14.47%	$52,411,012	11.87%	3.38%	15.25%	$55,635,754
UAAL	9.99%	(1.08%)	8.91%	32,272,434	9.60%	(0.75%)	8.85%	32,286,978
Total Contribution	**21.24%**	**2.14%**	**23.38%**	**$84,683,446**	**21.47%**	**2.63%**	**24.10%**	**$87,922,732**
Tier 3 — IHSS[3]								
Normal Cost	11.25%	3.22%	14.47%	$71,649	11.87%	3.38%	15.25%	$76,744
UAAL	9.54%	(1.23%)	8.31%	41,147	9.12%	(0.91%)	8.21%	41,316
Total Contribution	**20.79%**	**1.99%**	**22.78%**	**$112,796**	**20.99%**	**2.47%**	**23.46%**	**$118,060**
Tier 5 (3%/4% COLA) — Non-IHSS								
Normal Cost	8.36%	2.69%	11.05%	$7,297,642	8.48%	2.81%	11.29%	$7,205,564
UAAL	9.99%	(1.08%)	8.91%	5,884,343	9.60%	(0.75%)	8.85%	5,648,294
Total Contribution	**18.35%**	**1.61%**	**19.96%**	**$13,181,985**	**18.08%**	**2.06%**	**20.14%**	**$12,853,858**
Tier 5 (3%/4% COLA) — IHSS[3]								
Normal Cost	8.36%	2.69%	11.05%	$9,077	8.48%	2.81%	11.29%	$8,841
UAAL	9.54%	(1.23%)	8.31%	6,826	9.12%	(0.91%)	8.21%	6,429
Total Contribution	**17.90%**	**1.46%**	**19.36%**	**$15,903**	**17.60%**	**1.90%**	**19.50%**	**$15,270**
Tier 5 (2% COLA) — Non-IHSS								
Normal Cost	8.36%	1.83%	10.19%	$49,820,729	8.48%	1.90%	10.38%	$42,858,226
UAAL	9.99%	(1.08%)	8.91%	43,562,581	9.60%	(0.75%)	8.85%	36,540,973
Total Contribution	**18.35%**	**0.75%**	**19.10%**	**$93,383,310**	**18.08%**	**1.15%**	**19.23%**	**$79,399,199**

1 The Basic normal cost and UAAL rates shown for each tier include an explicit administrative expense load of 0.53% and 0.12% of payroll, respectively for 2024 and 0.52% and 0.13% of payroll, respectively for 2023.

2 The COLA rate in the December 31, 2024 valuation has become negative as a result of amortizing the bases established as of December 31, 2012 through December 31, 2018 over six years. While this does not impact the total recommended rate, we are available to discuss various options should CCCERA prefer not to have a negative COLA rate.

3 IHSS made UAAL prepayments in 2024. Those prepayments have been amortized over 18 years from December 31, 2024 and allocated to provide Basic and UAAL rate credits.

Cost Group 2 — Recommended Employer Contribution Rates[1] Calculated as of December 31

Component by Plan and Employer	2024 Basic	2024 COLA[2]	2024 Total	2024 Estimated Amount	2023 Basic	2023 COLA	2023 Total	2023 Estimated Amount
Tier 5 (2% COLA) — IHSS[3]								
Normal Cost	8.36%	1.83%	10.19%	$64,856	8.48%	1.90%	10.38%	$54,373
UAAL	9.54%	(1.23%)	8.31%	52,891	9.12%	(0.91%)	8.21%	43,006
Total Contribution	**17.90%**	**0.60%**	**18.50%**	**$117,747**	**17.60%**	**0.99%**	**18.59%**	**$97,379**

Cost Group 3 — Recommended Employer Contribution Rates[1] Calculated as of December 31

Component by Plan	2024 Basic	2024 COLA	2024 Total	2024 Estimated Amount	2023 Basic	2023 COLA	2023 Total	2023 Estimated Amount
Tier 1								
Normal Cost	13.08%	3.77%	16.85%	$4,712,940	13.49%	3.88%	17.37%	$4,609,936
UAAL[4]	2.55%	1.85%	4.40%	1,230,679	1.17%	1.43%	2.60%	690,031
Total Contribution	**15.63%**	**5.62%**	**21.25%**	**$5,943,619**	**14.66%**	**5.31%**	**19.97%**	**$5,299,967**
Tier 4 (3% COLA)								
Normal Cost	8.41%	2.87%	11.28%	$2,176,514	8.54%	2.98%	11.52%	$1,797,876
UAAL[4]	2.55%	1.85%	4.40%	848,995	1.17%	1.43%	2.60%	405,771
Total Contribution	**10.96%**	**4.72%**	**15.68%**	**$3,025,509**	**9.71%**	**4.41%**	**14.12%**	**$2,203,647**

[1] The Basic normal cost and UAAL rates shown for each tier include an explicit administrative expense load of 0.53% and 0.12% of payroll, respectively for 2024 and 0.52% and 0.13% of payroll, respectively for 2023.

[2] The COLA rate in the December 31, 2024 valuation has become negative as a result of amortizing the bases established as of December 31, 2012 through December 31, 2018 over six years. While this does not impact the total recommended rate, we are available to discuss various options should CCCERA prefer not to have a negative COLA rate.

[3] IHSS made UAAL prepayments in 2024. Those prepayments have been amortized over 18 years from December 31, 2024 and allocated to provide Basic and UAAL rate credits.

[4] The increase in UAAL rate for 2024 is primarily due to individual salary increase greater than expected and actual retirement greater than expected.

Cost Group 4 — Recommended Employer Contribution Rates[1] Calculated as of December 31

Component by Plan	2024 Basic	2024 COLA	2024 Total	2024 Estimated Amount	2023 Basic	2023 COLA	2023 Total	2023 Estimated Amount
Tier 1								
Normal Cost	12.31%	3.59%	15.90%	$576,335	12.75%	3.71%	16.46%	$553,410
UAAL	8.80%	3.37%	12.17%	441,132	9.08%	4.11%	13.19%	443,468
Total Contribution	**21.11%**	**6.96%**	**28.07%**	**$1,017,467**	**21.83%**	**7.82%**	**29.65%**	**$996,878**
Tier 4 (3% COLA)								
Normal Cost	8.92%	2.93%	11.85%	$545,127	9.17%	3.07%	12.24%	$428,735
UAAL	8.80%	3.37%	12.17%	559,848	9.08%	4.11%	13.19%	462,010
Total Contribution	**17.72%**	**6.30%**	**24.02%**	**$1,104,975**	**18.25%**	**7.18%**	**25.43%**	**$890,745**

1 The Basic normal cost and UAAL rates shown for each tier include an explicit administrative expense load of 0.53% and 0.12% of payroll, respectively for 2024 and 0.52% and 0.13% of payroll, respectively for 2023.

Cost Group 5 — Recommended Employer Contribution Rates[1] Calculated as of December 31

Component by Plan	2024 Basic	2024 COLA	2024 Total	2024 Estimated Amount	2023 Basic	2023 COLA	2023 Total	2023 Estimated Amount
Tier 1								
Normal Cost	15.94%	4.13%	20.07%	$958,927	15.70%	4.11%	19.81%	$855,131
UAAL	11.65%	9.72%	21.37%	1,021,039	12.76%	10.81%	23.57%	1,017,570
Total Contribution	**27.59%**	**13.85%**	**41.44%**	**$1,979,966**	**28.46%**	**14.92%**	**43.38%**	**$1,872,701**
Tier 4 (3% COLA)								
Normal Cost	10.46%	3.48%	13.94%	$46,990	10.18%	3.43%	13.61%	$43,854
UAAL	11.65%	9.72%	21.37%	72,035	12.76%	10.81%	23.57%	75,931
Total Contribution	**22.11%**	**13.20%**	**35.31%**	**$119,025**	**22.94%**	**14.24%**	**37.18%**	**$119,785**
Tier 4 (2% COLA)								
Normal Cost	9.83%	2.23%	12.06%	$724,866	10.08%	2.31%	12.39%	$593,013
UAAL	11.65%	9.72%	21.37%	1,284,443	12.76%	10.81%	23.57%	1,128,260
Total Contribution	**21.48%**	**11.95%**	**33.43%**	**$2,009,309**	**22.84%**	**13.12%**	**35.96%**	**$1,721,273**

[1] The Basic normal cost and UAAL rates shown for each tier include an explicit administrative expense load of 0.53% and 0.12% of payroll, respectively for 2024 and 0.52% and 0.13% of payroll, respectively for 2023. The contribution rates and the annual dollar contribution amounts shown for Cost Group 5 are after reflecting the annexation of RHFPD into CCCFPD that was effective July 1, 2025.

Cost Group 6 — Recommended Employer Contribution Rates[1] Calculated as of December 31

Component by Plan	2024 Basic	2024 COLA	2024 Total	2024 Estimated Amount	2023 Basic	2023 COLA	2023 Total	2023 Estimated Amount
Tier 1								
Normal Cost	12.53%	3.72%	16.25%	$101,791	12.65%	3.79%	16.44%	$109,461
UAAL	0.12%	0.00%	0.12%	752	0.13%	0.00%	0.13%	866
Total Contribution	**12.65%**	**3.72%**	**16.37%**	**$102,543**	**12.78%**	**3.79%**	**16.57%**	**$110,327**
Tier 4 (3% COLA)								
Normal Cost	10.86%	3.55%	14.41%	$118,969	10.18%	3.41%	13.59%	$91,896
UAAL	0.12%	0.00%	0.12%	991	0.13%	0.00%	0.13%	879
Total Contribution	**10.98%**	**3.55%**	**14.53%**	**$119,960**	**10.31%**	**3.41%**	**13.72%**	**$92,775**

Cost Group 7 — Recommended Employer Contribution Rates[1] Calculated as of December 31

Component by Plan	2024 Basic	2024 COLA	2024 Total	2024 Estimated Amount	2023 Basic	2023 COLA	2023 Total	2023 Estimated Amount
Tier A								
Normal Cost	23.05%	7.58%	30.63%	$12,176,432	23.09%	7.48%	30.57%	$12,986,468
UAAL[2]	10.22%	20.20%	30.42%	12,092,950	9.85%	20.11%	29.96%	12,727,334
Total Contribution	**33.27%**	**27.78%**	**61.05%**	**$24,269,382**	**32.94%**	**27.59%**	**60.53%**	**$25,713,802**
Tier D								
Normal Cost	14.63%	6.07%	20.70%	$801,763	14.61%	6.05%	20.66%	$754,551
UAAL[2]	10.22%	20.20%	30.42%	1,178,244	9.85%	20.11%	29.96%	1,094,209
Total Contribution	**24.85%**	**26.27%**	**51.12%**	**$1,980,007**	**24.46%**	**26.16%**	**50.62%**	**$1,848,760**

[1] The Basic normal cost and UAAL rates shown for each tier include an explicit administrative expense load of 0.53% and 0.12% of payroll, respectively for 2024 and 0.52% and 0.13% of payroll, respectively for 2023.

[2] The increase in UAAL rate for 2024 is primarily due to investment return less than expected after asset smoothing, offset by other actuarial gains/losses.

Cost Group 8 — Recommended Employer Contribution Rates[1] Calculated as of December 31

Component by Plan	2024 Basic	2024 COLA	2024 Total	2024 Estimated Amount	2023 Basic	2023 COLA	2023 Total	2023 Estimated Amount
Tier A								
Normal Cost	24.03%	7.86%	31.89%	$13,465,413	24.14%	7.83%	31.97%	$13,287,765
UAAL[2]	8.66%	27.65%	36.31%	15,331,738	7.99%	27.30%	35.29%	14,666,851
Total Contribution	**32.69%**	**35.51%**	**68.20%**	**$28,797,151**	**32.13%**	**35.13%**	**67.26%**	**$27,954,616**
Tier D								
Normal Cost	13.61%	5.67%	19.28%	$790,676	13.60%	5.65%	19.25%	$733,543
UAAL[2]	8.66%	27.65%	36.31%	1,489,080	7.99%	27.30%	35.29%	1,344,556
Total Contribution	**22.27%**	**33.32%**	**55.59%**	**$2,279,756**	**21.59%**	**32.95%**	**54.54%**	**$2,078,099**
Tier E								
Normal Cost	12.79%	3.59%	16.38%	$5,241,018	12.91%	3.61%	16.52%	$4,670,716
UAAL[2]	8.66%	27.65%	36.31%	11,617,910	7.99%	27.30%	35.29%	9,977,959
Total Contribution	**21.45%**	**31.24%**	**52.69%**	**$16,858,928**	**20.90%**	**30.91%**	**51.81%**	**$14,648,675**

[1] The Basic normal cost and UAAL rates shown for each tier include an explicit administrative expense load of 0.53% and 0.12% of payroll, respectively for 2024 and 0.52% and 0.13% of payroll, respectively for 2023. The contribution rates and the annual dollar contribution amounts shown for Cost Group 8 are after reflecting the annexation of RHFPD into CCCFPD that was effective July 1, 2025. We have also reflected the $7.5 million prepayment made by RHFPD on June 20, 2025 for the Safety group.

[2] The increase in UAAL rate for 2024 is primarily due to investment return less than expected after asset smoothing and mortality loss, offset by other actuarial gains/losses.

Cost Group 9 — Recommended Employer Contribution Rates[1] Calculated as of December 31

Component by Plan	2024 Basic	2024 COLA	2024 Total	2024 Estimated Amount	2023 Basic	2023 COLA	2023 Total	2023 Estimated Amount
Tier C								
Normal Cost	21.46%	4.71%	26.17%	$4,709,015	21.74%	4.71%	26.45%	$4,391,285
UAAL[2]	10.22%	20.20%	30.42%	5,473,758	9.85%	20.11%	29.96%	4,974,022
Total Contribution	**31.68%**	**24.91%**	**56.59%**	**$10,182,773**	**31.59%**	**24.82%**	**56.41%**	**$9,365,307**
Tier E								
Normal Cost	13.67%	3.81%	17.48%	$11,965,100	13.73%	3.80%	17.53%	$10,275,492
UAAL[2]	10.22%	20.20%	30.42%	20,822,559	9.85%	20.11%	29.96%	17,561,537
Total Contribution	**23.89%**	**24.01%**	**47.90%**	**$32,787,659**	**23.58%**	**23.91%**	**47.49%**	**$27,837,029**

Cost Group 10 — Recommended Employer Contribution Rates[1] Calculated as of December 31

Component by Plan	2024 Basic	2024 COLA	2024 Total	2024 Estimated Amount	2023 Basic	2023 COLA	2023 Total	2023 Estimated Amount
Tier A								
Normal Cost	21.20%	7.21%	28.41%	$1,827,647	21.91%	7.26%	29.17%	$1,954,502
UAAL[3]	16.58%	51.74%	68.32%	4,395,101	15.96%	48.81%	64.77%	4,339,839
Total Contribution	**37.78%**	**58.95%**	**96.73%**	**$6,222,748**	**37.87%**	**56.07%**	**93.94%**	**$6,294,341**
Tier D								
Normal Cost	13.43%	5.70%	19.13%	$535,031	13.25%	5.59%	18.84%	$450,125
UAAL[3]	16.58%	51.74%	68.32%	1,910,785	15.96%	48.81%	64.77%	1,547,484
Total Contribution	**30.01%**	**57.44%**	**87.45%**	**$2,445,816**	**29.21%**	**54.40%**	**83.61%**	**$1,997,609**

[1] The Basic normal cost and UAAL rates shown for each tier include an explicit administrative expense load of 0.53% and 0.12% of payroll, respectively for 2024 and 0.52% and 0.13% of payroll, respectively for 2023.

[2] The increase in UAAL rate for 2024 is primarily due to investment return less than expected after asset smoothing, offset by other actuarial gains/losses.

[3] The increase in UAAL rate for 2024 is primarily due to investment return less than expected after asset smoothing, disability experience greater than expected and amortizing prior year's UAAL over a less than expected payroll, as Cost Group 10 payroll increased by about 1.5% versus 3.0% assumed in the valuation.

Cost Group 11 — Recommended Employer Contribution Rates[1] Calculated as of December 31

Component by Plan	2024 Basic	2024 COLA	2024 Total	2024 Estimated Amount	2023 Basic	2023 COLA	2023 Total	2023 Estimated Amount
Tier A								
Normal Cost	24.08%	7.98%	32.06%	$4,426,019	23.98%	7.90%	31.88%	$4,272,273
UAAL[2]	10.35%	14.18%	24.53%	3,386,471	10.45%	13.57%	24.02%	3,218,946
Total Contribution	**34.43%**	**22.16%**	**56.59%**	**$7,812,490**	**34.43%**	**21.47%**	**55.90%**	**$7,491,219**
Tier D								
Normal Cost	11.64%	4.95%	16.59%	$2,177,551	11.61%	4.91%	16.52%	$2,016,779
UAAL[2]	10.35%	14.18%	24.53%	3,219,730	10.45%	13.57%	24.02%	2,932,388
Total Contribution	**21.99%**	**19.13%**	**41.12%**	**$5,397,281**	**22.06%**	**18.48%**	**40.54%**	**$4,949,167**

Total Plan (Average) — Recommended Employer Contribution Rates[1] Calculated as of December 31

Component	2024 Basic	2024 COLA	2024 Total	2024 Estimated Amount	2023 Basic	2023 COLA	2023 Total	2023 Estimated Amount
All Cost Groups Combined								
Normal Cost	11.32%	3.13%	14.45%	$181,351,446	11.79%	3.29%	15.08%	$174,222,131
UAAL	9.70%	3.87%	13.57%	170,348,193	9.30%	4.14%	13.44%	155,200,418
Total Contribution	**21.02%**	**7.00%**	**28.02%**	**$351,699,639**	**21.09%**	**7.43%**	**28.52%**	**$329,422,549**

[1] The Basic normal cost and UAAL rates shown for each tier include an explicit administrative expense load of 0.53% and 0.12% of payroll, respectively for 2024 and 0.52% and 0.13% of payroll, respectively for 2023.
The contribution rates and the annual dollar contribution amount shown for All Cost Groups Combined are after reflecting the annexation of RHFPD into CCCFPD that was effective July 1, 2025 as well as the $7.5 million prepayment made by RHFPD on June 20, 2025 for the Safety group.

[2] The increase in UAAL rate for 2024 is primarily due to investment return less than expected after asset smoothing, offset by other actuarial gains/losses.

Section 2: Actuarial Valuation Results

The projected compensation for the 2025 calendar year that is used to estimate the annual dollar amount shown on the prior pages as of December 31, 2024 are as follows:

Cost Group and Plan	Projected Compensation
Cost Group 1	
Tier 1 — Non-LAFCO	$13,235,008
Tier 1 — LAFCO	211,593
Tier 4 (3% COLA) — Non-LAFCO	10,749,662
Tier 4 (3% COLA) — LAFCO	82,991
Tier 4 (2% COLA)	0
Cost Group 2	
Tier 3 — Non-IHSS	$362,204,645
Tier 3 — IHSS	495,153
Tier 5 (3%/4% COLA) — Non-IHSS	66,042,011
Tier 5 (3%/4% COLA) — IHSS	82,144
Tier 5 (2% COLA) — Non-IHSS	488,917,854
Tier 5 (2% COLA) — IHSS	636,472
Cost Group 3	
Tier 1	$27,969,968
Tier 4 (3% COLA)	19,295,341
Cost Group 4	
Tier 1	$3,624,751
Tier 4 (3% COLA)	4,600,227
Cost Group 5	
Tier 1	$4,777,910
Tier 4 (3% COLA)	337,085
Tier 4 (2% COLA)	6,010,496

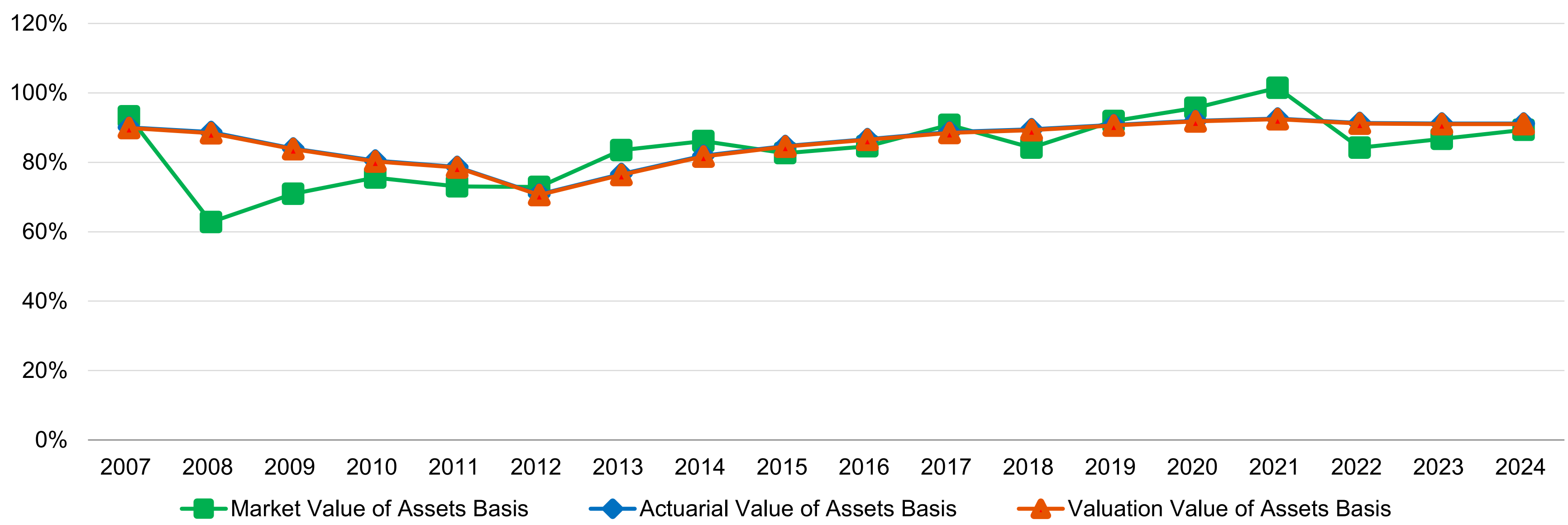
Cost Group and Plan	Projected Compensation
Cost Group 6	
Tier 1	$626,407
Tier 4 (3% COLA)	825,597
Cost Group 7	
Tier A	$39,753,288
Tier D	3,873,253
Cost Group 8	
Tier A	$42,224,562
Tier D	4,101,019
Tier E	31,996,448
Cost Group 9	
Tier C	$17,993,944
Tier E	68,450,227
Cost Group 10	
Tier A	$6,433,111
Tier D	2,796,816
Cost Group 11	
Tier A	$13,805,425
Tier D	13,125,682
Total Plan	**$1,255,279,090**

G. Funded status

A commonly reported piece of information regarding the Plan's financial status is the funded ratio. These ratios compare the market, actuarial and valuation value of assets to the actuarial accrued liability of the Plan. Higher ratios indicate a relatively well-funded plan while lower ratios may indicate recent changes to actuarial assumptions, funding of the plan below actuarial requirements, poor asset performance, or a variety of other causes.

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

Funded Ratio as of December 31



Note: The actuarial value of assets and the valuation value of assets have been substantially the same over the time period shown, differing by no more than $20 million.

Schedule of Funding Progress

As of December 31	Valuation Value of Assets[1] (a)	Actuarial Accrued Liability (AAL)[2] (b)	Unfunded AAL (UAAL) (b) − (a)	Funded Ratio (a) ÷ (b)	Projected Compensation (c)	UAAL as a % of Projected Compensation [(b) − (a)] ÷ (c)
2015	$7,136,801,380	$8,448,624,096	$1,311,822,716	84.5%	$746,352,663	175.8%
2016	7,606,997,530	8,794,434,139	1,187,436,609	86.5%	784,412,260	151.4%
2017	8,179,891,191	9,239,246,920	1,059,355,729	88.5%	860,624,613	123.1%
2018	8,650,178,226	9,682,143,750	1,031,965,524	89.3%	896,390,768	115.1%
2019	9,128,668,718	10,075,722,222	947,053,504	90.6%	937,531,262	101.0%
2020	9,662,282,926	10,521,628,175	859,345,249	91.8%	990,041,699	86.8%
2021	10,434,412,288	11,288,973,487	854,561,199	92.4%	1,015,755,387	84.1%
2022	10,861,822,062	11,912,228,880	1,050,406,818	91.2%	1,073,886,785	97.8%
2023	11,323,476,654	12,438,710,062	1,115,233,408	91.0%	1,155,129,564	96.5%
2024	11,815,241,998	12,982,890,011	1,167,648,013	91.0%	1,255,279,090	93.0%

[1] Excludes assets for non-valuation reserves.
[2] Excludes liabilities for non-valuation reserves.

H. Actuarial balance sheet

An overview of the Plan's funding is given by an actuarial balance sheet. In this approach, first the amount and timing of all future payments that will be made by the Plan for current members is determined. Then these payments are discounted at the valuation interest rate to the date of the valuation, thereby determining the present value, referred to as the "liability" of the Plan.

Second, this liability is compared to the assets. The "assets" for this purpose include the net amount of assets already accumulated by the Plan, the present value of future member contributions, the present value of future employer normal cost contributions, and the present value of future employer amortization payments for the unfunded actuarial accrued liability.

Actuarial Balance Sheet as of December 31, 2024

Line Description	Basic	COLA	Total
Liabilities			
Present value of benefits for retired members and beneficiaries	$4,530,842,842	$3,750,681,879	$8,281,524,721
Present value of benefits for inactive members[1]	304,457,339	96,920,066	401,377,405
Present value of benefits for active members	5,042,421,639	1,699,847,647	6,742,269,286
Total liabilities	**$9,877,721,820**	**$5,547,449,592**	**$15,425,171,412**
Current and Future Assets			
Total valuation value of assets	$7,267,885,728	$4,547,356,270	$11,815,241,998
Present value of future contributions by members	935,594,162	309,273,647	1,244,867,809
Present value of future employer contributions for:			
• Entry age normal cost	920,810,408	276,603,184	1,197,413,592
• Unfunded actuarial accrued liability	753,431,522	414,216,491	1,167,648,013
Total current and future assets	**$9,877,721,820**	**$5,547,449,592**	**$15,425,171,412**

[1] Includes inactive members with member contributions on deposit.

I. Risk

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

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

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

Risk assessments

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

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

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

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

  The investment return assumption is a long-term, static assumption for valuation purposes even though in reality market experience can be quite volatile in any given year. That volatility can cause significant changes in the financial condition of the Plan, affecting both funded status and contribution rates. The inherent year-to-year volatility is reduced by smoothing through the valuation value of assets, however investment experience can still have a sizable impact. As discussed in *Section 2, Subsection J, Volatility Ratios*, on page 52, a 1% asset gain or loss (relative to the assumed investment return) translates to about 9.2% of one-year's payroll. Since actuarial gains and losses are amortized over 18 years, there would be a 0.7% of payroll decrease/(increase) in the required contribution for each 1% asset gain/(loss).

The year-by-year market value rate of return over the last 10 years has ranged from a low of -11.25% to a high of 14.39%.

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

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

- **Other Risks**

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

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

Evaluation of historical trends

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

- The funded percentage on the valuation value of assets basis has increased from 84.5% to 91.0%. This is primarily due to contributions made to amortize the UAAL (i.e., amortizing each layer of UAAL over 18 years as a level percentage of pay). For a more detailed history see *Section 2, Subsection G, Funded status* starting on page 45.
- The average geometric investment return on the valuation value of assets over the last 10 years was 6.71%. This includes a high of 8.79% and a low of 5.25%. The average over the last five years is 6.15%. For more details see *Historical investment returns* in *Section 2, Subsection B,* on page 25.
- Beyond investment experience, the primary source of new UAAL was the strengthening of assumptions through multiple assumption changes. In particular, the assumption changes in 2015 changed the discount rate from 7.25% to 7.00% (as well as

various other changes) adding $114 million in unfunded liability. The assumption changes in 2021 changed the discount rate from 7.00% to 6.75% (as well as various other changes) adding $235 million in unfunded liability. The assumption changes in 2024 updated the mortality tables and reduced the unfunded liability by $47 million. For more details on unfunded liability changes see *Section 3, Exhibit H, Table of amortization bases* starting on page 83.

- The plan's funding policy effectively deals with these unfunded liabilities over time. This can be seen most clearly in *Section 3, Exhibit J, Projection of UAAL balances and payments* starting on page 103.

Maturity measures

In the last 10 years the ratio of members in pay status to active participants has increased from 0.94 to 1.02. An increased ratio indicates that the plan has grown in maturity over time. This is to be expected, but is also informative for understanding plan sensitivity to particular risks. For more details see *Section 2, Subsection A, Member information* on page 18.

As pension plans mature, the cash needed to fulfill benefit obligations will increase over time. Therefore, cash flow projections and analysis should be performed to assure that the Plan's asset allocation is aligned to meet emerging pension liabilities. Over the past year, benefits and expenses paid were $116 million more than contributions received. Plans with high levels of negative cash flows may have a need for a larger allocation to income generating assets, which can create a drag on investment return. However, the Plan currently has a low level of negative cash flow and is relatively well funded (at a 91.0% funded ratio). For more details on historical cash flows see *Section 2, Subsection B, Financial information* on page 22.

A further discussion of plan maturity measures and how they relate to changes in assets and liabilities is included in *Section 2, Subsection J, Volatility ratios* on page 52.

Low-Default-Risk Obligation Measure (LDROM)

Actuarial Standard of Practice No. 4 (ASOP 4) *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions* requires the disclosure of a Low-Default-Risk Obligation Measure (LDROM) when performing a funding valuation. The LDROM presented in this report is calculated using the same methodology and assumptions used to determine the AAL used for funding, except for the discount rate. The LDROM is required to be calculated using "a discount rate…derived from low-default-risk fixed income securities whose cash flows are reasonably consistent with the pattern of benefits expected to be paid in the future."

The LDROM is a calculation assuming a plan's assets are invested in an all-bond portfolio, generally lowering expected long-term investment returns. The discount rate selected and used for this purpose is the Bond Buyer General Obligation 20-year Municipal Bond Index Rate, published at the end of each week. The last published rate in December of the measurement period, by The Bond Buyer, is 4.08% for use effective December 31, 2024. This is the rate used to determine the discount rate for valuing reported public pension plan liabilities in accordance with Governmental Accounting Standards when plan assets are projected to be insufficient to make projected benefit payments, and the 20-year period reasonably approximates the duration of plan liabilities. The LDROM is not used to determine a plan's funded status or actuarially determined contribution rates. The plan's expected return on assets, currently 6.75%, is used for these calculations.

As of December 31, 2024, the LDROM for the Plan is $18.6 billion.[1] The difference between the Plan's AAL of $13.0 billion and the LDROM can be thought of as the increase in the AAL if the entire portfolio were invested in low-default-risk securities. Alternatively, this difference could also be viewed as representing the expected savings from investing in the Plan's diversified portfolio compared to investing only in low-default-risk securities.

ASOP 4 requires commentary to help the intended user understand the significance of the LDROM with respect to the funded status of the plan, plan contributions, and the security of member benefits. In general, if plan assets were invested exclusively in low-default-risk securities, the funded status would be lower and the actuarially determined contribution would be higher. While investing in a portfolio with low-default-risk securities may be more likely to reduce investment volatility and the volatility of employer contributions, it also may be more likely to result in higher employer contributions or lower benefits.

[1] For comparison purposes, as of December 31, 2023, the LDROM was $20.3 billion based on a discount rate of 3.26%, while the Plan's AAL was $12.4 billion.

J. Volatility ratios

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

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

The current AVR is about 9.2. This means that a 1% asset gain or loss (relative to the assumed investment return) translates to about 9.2% of one-year's payroll. Since actuarial gains and losses are amortized over 18 years, there would be a 0.7% of payroll decrease/(increase) in the required contribution for each 1% asset gain/(loss).

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

The LVR also indicates how volatile contributions will be in response to changes in the actuarial accrued liability due to actual experience or to changes in actuarial assumptions. The current total Plan LVR is about 10.3 but is 7.9 for General compared to 20.1 for Safety. This means, for example, that assumption changes will have a greater impact on employer contribution rates for Safety than for General. The total Plan LVR is about 12% higher than the AVR. Therefore, we would expect that contribution volatility will increase over the long term.

Volatility Ratios

Asset Volatility Ratio (AVR) versus Liability Volatility Ratio (LVR)

As of December 31	AVR General	AVR Safety	AVR Total	LVR General	LVR Safety	LVR Total
2015	7.1	18.7	9.3	8.4	23.3	11.3
2016	7.2	19.0	9.5	8.3	23.1	11.1
2017	7.4	19.6	9.7	8.0	22.2	10.7
2018	6.9	18.0	9.0	8.1	21.8	10.7
2019	7.5	19.4	9.8	8.1	21.5	10.7
2020	7.8	19.9	10.1	8.1	21.1	10.6
2021	8.7	21.6	11.2	8.4	21.9	11.1
2022	7.3	17.7	9.3	8.5	21.5	11.0
2023	7.3	17.5	9.3	8.3	20.6	10.7
2024	7.2	17.7	9.2	7.9	20.1	10.3

Section 3: Supplemental Information

Exhibit A: Plan demographics

Total Plan — Demographics as of December 31

Demographic Data by Status	2024	2023	Change
Active members			
• Number	10,791	10,349	4.3%
• Average age	45.9	46.1	(0.2)
• Average years of service	9.8	9.9	(0.1)
• Total projected compensation[1]	$1,255,279,090	$1,155,129,563	8.7%
• Average projected compensation	$116,326	$111,618	4.2%
• Account balances	$1,551,025,891	$1,441,357,620	7.6%
• Total active vested members	6,889	6,751	2.0%
Inactive members[2]			
• Number	4,188	4,109	1.9%
• Average age	46.9	46.5	0.4
Retired members[2]			
• Number	8,562	8,407	1.8%
• Average age	71.6	71.3	0.3
• Average monthly benefit	$4,853	$4,720	2.8%
Disabled members[2]			
• Number[3]	871	872	(0.1%)
• Average age	68.3	68.3	0.0
• Average monthly benefit	$6,119	$5,846	4.7%
Beneficiaries[2]			
• Number	1,534	1,526	0.5%
• Average age	73.5	73.1	0.4
• Average monthly benefit	$3,378	$3,266	3.4%

[1] Calculated by increasing actual calendar year compensation earnable (or pensionable compensation for PEPRA tiers) by the assumed salary scale.
[2] Includes members from withdrawn employers.
[3] For 2024, includes 738 members receiving a service-connected disability and 133 members receiving a non-service-connected disability.

General Tier 1 (Non-Enhanced and Enhanced) — Demographics as of December 31

Demographic Data by Status	2024	2023	Change
Active members			
• Number	310	325	(4.6%)
• Average age	52.1	51.8	0.3
• Average years of service	20.5	20.0	0.5
• Total projected compensation[1]	$50,445,638	$48,589,653	3.8%
• Average projected compensation	$162,728	$149,507	8.8%
• Account balances	$76,874,581	$74,501,950	3.2%
• Total active vested members	309	324	(4.6%)
Inactive members[2]			
• Number	176	181	(2.8%)
• Average age	54.0	53.8	0.2
Retired members[2]			
• Number	2,035	2,102	(3.2%)
• Average age	76.6	76.3	0.3
• Average monthly benefit	$5,345	$5,186	3.1%
Disabled members[2]			
• Number[3]	206	214	(3.7%)
• Average age	76.5	75.8	0.7
• Average monthly benefit	$3,718	$3,586	3.7%
Beneficiaries[2]			
• Number	597	610	(2.1%)
• Average age	78.6	78.1	0.5
• Average monthly benefit	$3,184	$3,064	3.9%

1 Calculated by increasing actual calendar year compensation earnable by the assumed salary scale.
2 Includes members from withdrawn employers.
3 For 2024, includes 155 members receiving a service-connected disability and 51 members receiving a non-service-connected disability.

General Tier 2 — Demographics as of December 31

Demographic Data by Status	2024	2023	Change
Active members			
• Number	0	0	N/A
• Average age	N/A	N/A	N/A
• Average years of service	N/A	N/A	N/A
• Total projected compensation[1]	N/A	N/A	N/A
• Average projected compensation	N/A	N/A	N/A
• Account balances	N/A	N/A	N/A
• Total active vested members	N/A	N/A	N/A
Inactive members[2]			
• Number	100	110	(9.1%)
• Average age	62.3	61.2	1.1
Retired members[2]			
• Number	378	387	(2.3%)
• Average age	77.6	77.2	0.4
• Average monthly benefit	$967	$960	0.7%
Disabled members[2]			
• Number[3]	26	29	(10.3%)
• Average age	76.8	76.0	0.8
• Average monthly benefit	$2,497	$2,438	2.4%
Beneficiaries[2]			
• Number	100	102	(2.0%)
• Average age	73.3	72.9	0.4
• Average monthly benefit	$1,095	$1,039	5.4%

1 Calculated by increasing actual calendar year compensation earnable by the assumed salary scale.
2 Includes members from withdrawn employers.
3 For 2024, includes 15 members receiving a service-connected disability and 11 members receiving a non-service-connected disability.

General Tier 3 (Enhanced) — Demographics as of December 31

Demographic Data by Status	2024	2023	Change
Active members			
• Number	2,753	2,961	(7.0%)
• Average age	53.8	53.4	0.4
• Average years of service	19.2	18.5	0.7
• Total projected compensation[1]	$362,699,798	$365,327,851	(0.7%)
• Average projected compensation	$131,747	$123,380	6.8%
• Account balances	$643,702,030	$627,192,533	2.6%
• Total active vested members	2,715	2,924	(7.1%)
Inactive members[2]			
• Number	1,428	1,488	(4.0%)
• Average age	52.0	51.3	0.7
Retired members[2]			
• Number	4,409	4,248	3.8%
• Average age	70.5	70.1	0.4
• Average monthly benefit	$3,684	$3,528	4.4%
Disabled members[2]			
• Number[3]	76	78	(2.6%)
• Average age	65.7	65.6	0.1
• Average monthly benefit	$3,176	$3,008	5.6%
Beneficiaries[2]			
• Number	343	323	6.2%
• Average age	66.9	66.0	0.9
• Average monthly benefit	$2,000	$1,939	3.1%

1 Calculated by increasing actual calendar year compensation earnable by the assumed salary scale.
2 Includes members from withdrawn employers.
3 For 2024, includes 25 members receiving a service-connected disability and 51 members receiving a non-service-connected disability.

General Tier 4 (2% COLA) — Demographics as of December 31

Demographic Data by Status	2024	2023	Change
Active members			
• Number	61	52	17.3%
• Average age	43.9	44.5	(0.6)
• Average years of service	3.9	3.6	0.3
• Total projected compensation[1]	$6,010,496	$4,786,225	25.6%
• Average projected compensation	$98,533	$92,043	7.1%
• Account balances	$2,436,057	$1,853,454	31.4%
• Total active vested members	22	17	29.4%
Inactive members			
• Number	19	13	46.2%
• Average age	46.7	43.5	3.2
Retired members			
• Number	3	3	0.0%
• Average age	67.9	66.9	1.0
• Average monthly benefit	$1,128	$1,106	2.0%
Disabled members			
• Number	0	0	N/A
• Average age	N/A	N/A	N/A
• Average monthly benefit	N/A	N/A	N/A
Beneficiaries			
• Number	0	0	N/A
• Average age	N/A	N/A	N/A
• Average monthly benefit	N/A	N/A	N/A

[1] Calculated by increasing actual calendar year pensionable compensation by the assumed salary scale.

General Tier 4 (3% COLA) — Demographics as of December 31

Demographic Data by Status	2024	2023	Change
Active members			
• Number	304	271	12.2%
• Average age	42.6	42.2	0.4
• Average years of service	5.0	4.7	0.3
• Total projected compensation[1]	$35,890,904	$29,415,571	22.0%
• Average projected compensation	$118,062	$108,545	8.8%
• Account balances	$17,538,845	$14,055,405	24.8%
• Total active vested members	146	124	17.7%
Inactive members			
• Number	91	78	16.7%
• Average age	41.2	40.4	0.8
Retired members			
• Number	6	5	20.0%
• Average age	66.3	66.0	0.3
• Average monthly benefit	$1,427	$1,557	(8.3%)
Disabled members			
• Number	0	0	N/A
• Average age	N/A	N/A	N/A
• Average monthly benefit	N/A	N/A	N/A
Beneficiaries			
• Number	1	0	N/A
• Average age	23.3	N/A	N/A
• Average monthly benefit	$586	N/A	N/A

[1] Calculated by increasing actual calendar year pensionable compensation by the assumed salary scale.

General Tier 5 (2% COLA) — Demographics as of December 31

Demographic Data by Status	2024	2023	Change
Active members			
• Number	5,129	4,525	13.3%
• Average age	43.2	43.1	0.1
• Average years of service	4.2	3.9	0.3
• Total projected compensation[1]	$489,554,324	$413,416,175	18.4%
• Average projected compensation	$95,448	$91,363	4.5%
• Account balances	$209,665,236	$162,382,441	29.1%
• Total active vested members	2,029	1,698	19.5%
Inactive members			
• Number	1,617	1,486	8.8%
• Average age	42.0	41.3	0.7
Retired members			
• Number	119	91	30.8%
• Average age	67.1	66.5	0.6
• Average monthly benefit	$873	$787	10.9%
Disabled members			
• Number	0	0	N/A
• Average age	N/A	N/A	N/A
• Average monthly benefit	N/A	N/A	N/A
Beneficiaries			
• Number	2	0	N/A
• Average age	70.3	N/A	N/A
• Average monthly benefit	$349	N/A	N/A

[1] Calculated by increasing actual calendar year pensionable compensation by the assumed salary scale.

General Tier 5 (3% COLA) — Demographics as of December 31

Demographic Data by Status	2024	2023	Change
Active members			
• Number	652	661	(1.4%)
• Average age	47.2	46.8	0.4
• Average years of service	8.5	8.0	0.5
• Total projected compensation[1]	$66,124,155	$63,900,841	3.5%
• Average projected compensation	$101,417	$96,673	4.9%
• Account balances	$65,272,648	$57,563,723	13.4%
• Total active vested members	527	535	(1.5%)
Inactive members			
• Number	378	362	4.4%
• Average age	45.5	45.0	0.5
Retired members			
• Number	76	67	13.4%
• Average age	67.2	66.5	0.7
• Average monthly benefit	$1,185	$1,104	7.3%
Disabled members			
• Number[2]	1	1	0.0%
• Average age	42.6	41.6	1.0
• Average monthly benefit	$3,191	$3,083	3.5%
Beneficiaries			
• Number	0	0	N/A
• Average age	N/A	N/A	N/A
• Average monthly benefit	N/A	N/A	N/A

[1] Calculated by increasing actual calendar year pensionable compensation by the assumed salary scale.
[2] For 2024, includes 1 member receiving a service-connected disability.

Safety Tier A (Enhanced) — Demographics as of December 31

Demographic Data by Status	2024	2023	Change
Active members			
• Number	533	582	(8.4%)
• Average age	48.1	47.6	0.5
• Average years of service	20.0	19.3	0.7
• Total projected compensation[1]	$102,216,386	$104,141,913	(1.8%)
• Average projected compensation	$191,776	$178,938	7.2%
• Account balances	$396,100,495	$391,827,316	1.1%
• Total active vested members	533	582	(8.4%)
Inactive members[2]			
• Number	182	202	(9.9%)
• Average age	49.5	48.9	0.6
Retired members[2]			
• Number	1,501	1,476	1.7%
• Average age	67.2	66.8	0.4
• Average monthly benefit	$9,185	$8,942	2.7%
Disabled members[2]			
• Number[3]	534	528	1.1%
• Average age	66.4	66.2	0.2
• Average monthly benefit	$7,738	$7,444	3.9%
Beneficiaries[2]			
• Number	489	489	0.0%
• Average age	72.2	71.7	0.5
• Average monthly benefit	$5,065	$4,858	4.3%

1 Calculated by increasing actual calendar year compensation earnable by the assumed salary scale.
2 Includes members from withdrawn employers.
3 For 2024, includes 516 members receiving a service-connected disability and 18 members receiving a non-service-connected disability.

Safety Tier C — Demographics as of December 31

Demographic Data by Status	2024	2023	Change
Active members			
• Number	108	108	0.0%
• Average age	43.3	42.5	0.8
• Average years of service	14.8	13.7	1.1
• Total projected compensation[1]	$17,993,944	$16,602,211	8.4%
• Average projected compensation	$166,611	$153,724	8.4%
• Account balances	$33,360,877	$29,136,186	14.5%
• Total active vested members	108	108	0.0%
Inactive members			
• Number	65	68	(4.4%)
• Average age	41.3	40.1	1.2
Retired members			
• Number	15	13	15.4%
• Average age	54.7	54.8	(0.1)
• Average monthly benefit	$2,544	$2,541	0.1%
Disabled members			
• Number[2]	14	14	0.0%
• Average age	47.9	46.9	1.0
• Average monthly benefit	$4,247	$4,164	2.0%
Beneficiaries			
• Number	1	1	0.0%
• Average age	54.1	53.1	1.0
• Average monthly benefit	$2,187	$2,144	2.0%

[1] Calculated by increasing actual calendar year compensation earnable by the assumed salary scale.
[2] For 2024, includes 12 members receiving a service-connected disability and 2 members receiving a non-service-connected disability.

Safety Tier D — Demographics as of December 31

Demographic Data by Status	2024	2023	Change
Active members			
• Number	160	157	1.9%
• Average age	37.0	36.0	1.0
• Average years of service	7.1	6.2	0.9
• Total projected compensation[1]	$23,896,770	$22,059,412	8.3%
• Average projected compensation	$149,355	$140,506	6.3%
• Account balances	$27,368,886	$21,975,759	24.5%
• Total active vested members	105	96	9.4%
Inactive members			
• Number	31	31	0.0%
• Average age	39.1	38.5	0.6
Retired members			
• Number	2	3	(33.3%)
• Average age	63.8	60.0	3.8
• Average monthly benefit	$2,430	$2,185	11.2%
Disabled members			
• Number[2]	5	4	25.0%
• Average age	51.9	49.9	2.0
• Average monthly benefit	$4,153	$3,692	12.5%
Beneficiaries			
• Number	0	0	N/A
• Average age	N/A	N/A	N/A
• Average monthly benefit	N/A	N/A	N/A

1 Calculated by increasing actual calendar year pensionable compensation by the assumed salary scale.
2 For 2024, includes 5 members receiving a service-connected disability.

Safety Tier E — Demographics as of December 31

Demographic Data by Status	2024	2023	Change
Active members			
• Number	781	707	10.5%
• Average age	34.7	34.6	0.1
• Average years of service	5.3	5.0	0.3
• Total projected compensation[1]	$100,446,675	$86,889,711	15.6%
• Average projected compensation	$128,613	$122,899	4.6%
• Account balances	$78,706,236	$60,868,853	29.3%
• Total active vested members	395	343	15.2%
Inactive members			
• Number	101	90	12.2%
• Average age	36.5	36.6	(0.1)
Retired members			
• Number	18	12	50.0%
• Average age	62.0	61.7	0.3
• Average monthly benefit	$1,926	$1,987	(3.1%)
Disabled members			
• Number[2]	9	4	125.0%
• Average age	38.3	34.3	4.0
• Average monthly benefit	$4,675	$4,460	4.8%
Beneficiaries			
• Number	1	1	0.0%
• Average age	36.9	35.9	1.0
• Average monthly benefit	$4,640	$4,549	2.0%

[1] Calculated by increasing actual calendar year pensionable compensation by the assumed salary scale.
[2] For 2024, includes 9 members receiving a service-connected disability.

Exhibit B: Distribution of active members

Total Plan
Active Counts & Average Projected Compensation by Age and Years of Service as of December 31, 2024

Age	Total	0–4 Years	5–9 Years	10–14 Years	15–19 Years	20–24 Years	25–29 Years	30–34 Years	35–39 Years	40 Years and Over
Under 25	151	151	—	—	—	—	—	—	—	—
	$74,189	$74,189	—	—	—	—	—	—	—	—
25–29	723	664	59	—	—	—	—	—	—	—
	$94,849	$93,100	$114,526	—	—	—	—	—	—	—
30–34	1,240	825	372	43	—	—	—	—	—	—
	$103,873	$96,385	$118,087	$124,578	—	—	—	—	—	—
35–39	1,518	712	535	240	31	—	—	—	—	—
	$112,849	$99,785	$118,383	$132,861	$162,471	—	—	—	—	—
40–44	1,563	550	445	298	235	35	—	—	—	—
	$121,391	$100,329	$117,544	$138,945	$151,778	$147,785	—	—	—	—
45–49	1,553	428	370	260	261	204	30	—	—	—
	$126,607	$103,867	$112,866	$136,623	$154,242	$148,790	$142,424	—	—	—
50–54	1,456	333	336	200	236	232	106	13	—	—
	$128,674	$99,435	$111,035	$131,676	$151,035	$164,218	$138,846	$164,150	—	—
55–59	1,246	272	267	184	153	173	138	38	21	—
	$120,046	$96,628	$105,613	$125,332	$133,336	$143,123	$139,802	$130,893	$124,181	—
60–64	885	169	189	137	112	123	94	35	23	3
	$115,427	$100,166	$104,453	$113,702	$124,094	$124,495	$133,003	$140,104	$131,052	$91,694
65–69	357	53	98	75	40	33	24	14	14	6
	$110,384	$93,649	$95,268	$114,329	$136,146	$114,961	$142,419	$103,825	$123,468	$115,509
70 and over	99	16	20	26	14	7	6	3	5	2
	$106,584	$100,267	$91,209	$118,887	$112,481	$113,162	$95,271	$138,935	$91,299	$110,276
Total	**10,791**	**4,173**	**2,691**	**1,463**	**1,082**	**807**	**398**	**103**	**63**	**11**
	$116,326	**$97,319**	**$113,153**	**$130,424**	**$145,957**	**$146,571**	**$137,625**	**$134,775**	**$123,921**	**$108,062**

General Tier 1 Non-Enhanced
Active Counts & Average Projected Compensation by Age and Years of Service as of December 31, 2024

Age	Total	0–4 Years	5–9 Years	10–14 Years	15–19 Years	20–24 Years	25–29 Years	30–34 Years	35–39 Years	40 Years and Over
Under 25	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
25–29	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
30–34	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
35–39	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
40–44	1	1	—	—	—	—	—	—	—	—
	$188,235	$188,235	—	—	—	—	—	—	—	—
45–49	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
50–54	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
55–59	1	—	—	—	—	1	—	—	—	—
	$291,154	—	—	—	—	$291,154	—	—	—	—
60–64	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
65–69	1	—	—	1	—	—	—	—	—	—
	$147,018	—	—	$147,018	—	—	—	—	—	—
70 and over	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
Total	**3**	**1**	**—**	**1**	**—**	**1**	**—**	**—**	**—**	**—**
	$208,802	**$188,235**	**—**	**$147,018**	**—**	**$291,154**	**—**	**—**	**—**	**—**

General Tier 1 Enhanced
Active Counts & Average Projected Compensation by Age and Years of Service as of December 31, 2024

Age	Total	0–4 Years	5–9 Years	10–14 Years	15–19 Years	20–24 Years	25–29 Years	30–34 Years	35–39 Years	40 Years and Over
Under 25	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
25–29	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
30–34	2	—	—	2	—	—	—	—	—	—
	$180,581	—	—	$180,581	—	—	—	—	—	—
35–39	16	3	—	12	1	—	—	—	—	—
	$156,774	$133,413	—	$161,232	$173,364	—	—	—	—	—
40–44	52	8	6	13	22	3	—	—	—	—
	$166,325	$159,379	$162,465	$166,677	$169,903	$164,813	—	—	—	—
45–49	58	5	10	13	12	15	3	—	—	—
	$161,198	$181,525	$186,056	$155,678	$161,904	$151,808	$112,496	—	—	—
50–54	64	6	6	11	12	21	7	1	—	—
	$170,176	$131,747	$186,306	$170,599	$183,976	$168,560	$162,437	$221,828	—	—
55–59	63	1	1	6	16	21	14	3	1	—
	$159,991	$350,000	$191,191	$158,096	$156,640	$167,478	$155,093	$99,388	$96,905	—
60–64	34	1	2	4	13	10	2	—	2	—
	$160,920	$278,204	$239,420	$165,604	$158,946	$145,195	$143,048	—	$123,744	—
65–69	14	—	1	2	4	1	3	3	—	—
	$140,627	—	$195,249	$139,024	$132,666	$115,071	$167,270	$115,981	—	—
70 and over	4	—	—	—	2	—	—	1	—	1
	$135,134	—	—	—	$172,430	—	—	$112,522	—	$83,154
Total	**307**	**24**	**26**	**63**	**82**	**71**	**29**	**8**	**3**	**1**
	$162,278	**$166,732**	**$185,326**	**$162,733**	**$164,754**	**$160,498**	**$152,888**	**$122,557**	**$114,798**	**$83,154**

General Tier 3 Enhanced
Active Counts & Average Projected Compensation by Age and Years of Service as of December 31, 2024

Age	Total	0–4 Years	5–9 Years	10–14 Years	15–19 Years	20–24 Years	25–29 Years	30–34 Years	35–39 Years	40 Years and Over
Under 25	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
25–29	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
30–34	4	—	—	4	—	—	—	—	—	—
	$94,085	—	—	$94,085	—	—	—	—	—	—
35–39	104	10	17	68	9	—	—	—	—	—
	$119,746	$118,691	$142,850	$115,814	$106,990	—	—	—	—	—
40–44	323	15	28	123	134	23	—	—	—	—
	$136,056	$128,275	$151,211	$140,317	$131,336	$127,384	—	—	—	—
45–49	495	22	32	128	182	111	20	—	—	—
	$137,138	$149,350	$156,562	$147,933	$139,760	$115,760	$118,323	—	—	—
50–54	579	20	33	107	182	146	82	9	—	—
	$138,506	$138,927	$135,511	$135,170	$140,205	$146,392	$127,024	$130,563	—	—
55–59	591	10	29	121	129	136	113	35	18	—
	$130,311	$132,113	$130,074	$128,651	$127,608	$133,644	$133,310	$133,593	$109,841	—
60–64	443	12	11	76	94	103	89	34	21	3
	$122,248	$178,962	$94,265	$115,704	$115,996	$116,993	$128,634	$139,228	$131,748	$91,694
65–69	162	4	4	36	36	32	20	10	14	6
	$128,583	$153,532	$124,212	$137,690	$136,532	$114,958	$136,145	$102,435	$123,468	$115,509
70 and over	52	2	3	15	11	7	6	2	5	1
	$112,410	$116,449	$100,912	$129,493	$100,489	$113,162	$95,271	$152,142	$91,299	$137,397
Total	**2,753**	**95**	**157**	**678**	**777**	**558**	**330**	**90**	**58**	**10**
	$131,747	**$142,010**	**$138,553**	**$132,993**	**$132,434**	**$128,762**	**$129,059**	**$132,369**	**$119,463**	**$110,553**

General Tier 4 (2% COLA)
Active Counts & Average Projected Compensation by Age and Years of Service as of December 31, 2024

Age	Total	0–4 Years	5–9 Years	10–14 Years	15–19 Years	20–24 Years	25–29 Years	30–34 Years	35–39 Years	40 Years and Over
Under 25	2	2	—	—	—	—	—	—	—	—
	$62,861	$62,861	—	—	—	—	—	—	—	—
25–29	7	7	—	—	—	—	—	—	—	—
	$86,270	$86,270	—	—	—	—	—	—	—	—
30–34	5	3	2	—	—	—	—	—	—	—
	$93,019	$93,332	$92,550	—	—	—	—	—	—	—
35–39	8	5	3	—	—	—	—	—	—	—
	$85,815	$82,460	$91,408	—	—	—	—	—	—	—
40–44	9	7	2	—	—	—	—	—	—	—
	$107,365	$112,003	$91,132	—	—	—	—	—	—	—
45–49	12	8	4	—	—	—	—	—	—	—
	$108,527	$113,575	$98,431	—	—	—	—	—	—	—
50–54	7	5	2	—	—	—	—	—	—	—
	$104,184	$106,299	$98,897	—	—	—	—	—	—	—
55–59	7	2	5	—	—	—	—	—	—	—
	$111,461	$98,546	$116,626	—	—	—	—	—	—	—
60–64	4	2	2	—	—	—	—	—	—	—
	$87,786	$97,111	$78,461	—	—	—	—	—	—	—
65–69	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
70 and over	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
Total	**61**	**41**	**20**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
	$98,533	**$98,472**	**$98,658**	**—**	**—**	**—**	**—**	**—**	**—**	**—**

General Tier 4 (3% COLA)
Active Counts & Average Projected Compensation by Age and Years of Service as of December 31, 2024

Age	Total	0–4 Years	5–9 Years	10–14 Years	15–19 Years	20–24 Years	25–29 Years	30–34 Years	35–39 Years	40 Years and Over
Under 25	5	5	—	—	—	—	—	—	—	—
	$103,941	$103,941	—	—	—	—	—	—	—	—
25–29	33	30	3	—	—	—	—	—	—	—
	$109,833	$109,622	$111,946	—	—	—	—	—	—	—
30–34	48	31	14	3	—	—	—	—	—	—
	$105,490	$92,090	$128,396	$137,057	—	—	—	—	—	—
35–39	55	34	19	2	—	—	—	—	—	—
	$120,618	$115,393	$127,417	$144,852	—	—	—	—	—	—
40–44	48	22	20	6	—	—	—	—	—	—
	$132,843	$126,903	$135,219	$146,705	—	—	—	—	—	—
45–49	36	15	20	1	—	—	—	—	—	—
	$121,546	$111,964	$131,673	$62,736	—	—	—	—	—	—
50–54	30	11	16	3	—	—	—	—	—	—
	$114,873	$107,529	$116,124	$135,131	—	—	—	—	—	—
55–59	26	14	8	4	—	—	—	—	—	—
	$122,049	$119,051	$121,458	$133,724	—	—	—	—	—	—
60–64	18	9	7	2	—	—	—	—	—	—
	$120,026	$119,102	$108,294	$165,246	—	—	—	—	—	—
65–69	5	3	2	—	—	—	—	—	—	—
	$103,426	$123,515	$73,294	—	—	—	—	—	—	—
70 and over	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
Total	**304**	**174**	**109**	**21**	**—**	**—**	**—**	**—**	**—**	**—**
	$118,062	**$111,206**	**$125,013**	**$138,791**	**—**	**—**	**—**	**—**	**—**	**—**

General Tier 5 (2% COLA)

Active Counts & Average Projected Compensation by Age and Years of Service as of December 31, 2024

Age	Total	0–4 Years	5–9 Years	10–14 Years	15–19 Years	20–24 Years	25–29 Years	30–34 Years	35–39 Years	40 Years and Over
Under 25	98	98	—	—	—	—	—	—	—	—
	$64,403	$64,403	—	—	—	—	—	—	—	—
25–29	456	431	25	—	—	—	—	—	—	—
	$82,888	$82,772	$84,892	—	—	—	—	—	—	—
30–34	841	635	198	8	—	—	—	—	—	—
	$93,634	$91,042	$101,442	$106,097	—	—	—	—	—	—
35–39	915	548	346	21	—	—	—	—	—	—
	$100,639	$95,439	$107,214	$128,000	—	—	—	—	—	—
40–44	771	450	298	23	—	—	—	—	—	—
	$99,733	$95,000	$104,899	$125,415	—	—	—	—	—	—
45–49	624	344	262	18	—	—	—	—	—	—
	$99,933	$98,313	$100,909	$116,687	—	—	—	—	—	—
50–54	523	262	245	15	1	—	—	—	—	—
	$97,555	$92,766	$102,121	$102,804	$155,081	—	—	—	—	—
55–59	429	228	193	8	—	—	—	—	—	—
	$92,532	$88,694	$96,373	$109,231	—	—	—	—	—	—
60–64	302	134	157	11	—	—	—	—	—	—
	$95,951	$89,121	$101,696	$97,149	—	—	—	—	—	—
65–69	139	46	86	7	—	—	—	—	—	—
	$91,311	$86,494	$93,642	$94,322	—	—	—	—	—	—
70 and over	31	13	15	3	—	—	—	—	—	—
	$95,976	$96,019	$93,078	$110,277	—	—	—	—	—	—
Total	**5,129**	**3,189**	**1,825**	**114**	**1**	**—**	**—**	**—**	**—**	**—**
	$95,448	**$91,052**	**$101,938**	**$114,012**	**$155,081**	**—**	**—**	**—**	**—**	**—**

General Tier 5 (3% COLA)
Active Counts & Average Projected Compensation by Age and Years of Service as of December 31, 2024

Age	Total	0–4 Years	5–9 Years	10–14 Years	15–19 Years	20–24 Years	25–29 Years	30–34 Years	35–39 Years	40 Years and Over
Under 25	9	9	—	—	—	—	—	—	—	—
	$55,330	$55,330	—	—	—	—	—	—	—	—
25–29	21	20	1	—	—	—	—	—	—	—
	$65,671	$64,862	$81,855	—	—	—	—	—	—	—
30–34	47	23	13	11	—	—	—	—	—	—
	$87,915	$76,697	$96,436	$101,299	—	—	—	—	—	—
35–39	98	23	27	47	1	—	—	—	—	—
	$101,294	$74,428	$114,500	$107,187	$85,651	—	—	—	—	—
40–44	122	17	42	63	—	—	—	—	—	—
	$109,071	$76,550	$125,255	$107,056	—	—	—	—	—	—
45–49	113	18	26	69	—	—	—	—	—	—
	$106,230	$87,411	$121,646	$105,330	—	—	—	—	—	—
50–54	83	13	22	47	1	—	—	—	—	—
	$106,735	$82,354	$118,362	$107,803	$117,740	—	—	—	—	—
55–59	60	3	19	38	—	—	—	—	—	—
	$106,112	$114,448	$114,698	$101,161	—	—	—	—	—	—
60–64	55	8	7	40	—	—	—	—	—	—
	$104,177	$107,665	$123,499	$100,098	—	—	—	—	—	—
65–69	33	—	4	29	—	—	—	—	—	—
	$86,547	—	$80,879	$87,329	—	—	—	—	—	—
70 and over	11	1	2	8	—	—	—	—	—	—
	$96,929	$123,131	$62,631	$102,228	—	—	—	—	—	—
Total	**652**	**135**	**163**	**352**	**2**	**—**	**—**	**—**	**—**	**—**
	$101,417	**$78,105**	**$116,240**	**$103,493**	**$101,695**	**—**	**—**	**—**	**—**	**—**

Safety Tier A Enhanced
Active Counts & Average Projected Compensation by Age and Years of Service as of December 31, 2024

Age	Total	0–4 Years	5–9 Years	10–14 Years	15–19 Years	20–24 Years	25–29 Years	30–34 Years	35–39 Years	40 Years and Over
Under 25	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
25–29	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
30–34	1	—	—	1	—	—	—	—	—	—
	$171,067	—	—	$171,067	—	—	—	—	—	—
35–39	55	5	14	24	12	—	—	—	—	—
	$183,394	$169,532	$191,708	$171,534	$203,192	—	—	—	—	—
40–44	120	6	9	30	66	9	—	—	—	—
	$182,951	$182,927	$192,693	$176,840	$182,862	$194,246	—	—	—	—
45–49	158	3	2	15	53	78	7	—	—	—
	$196,406	$209,388	$208,336	$185,420	$196,427	$195,213	$224,110	—	—	—
50–54	136	2	5	8	36	65	17	3	—	—
	$199,566	$224,521	$204,962	$202,889	$193,242	$202,856	$186,152	$245,684	—	—
55–59	37	1	1	2	5	15	11	—	2	—
	$191,011	$208,202	$172,325	$177,569	$192,815	$185,103	$187,032	—	$266,883	—
60–64	22	1	—	3	4	10	3	1	—	—
	$192,912	$109,897	—	$204,117	$193,384	$181,059	$255,926	$169,914	—	—
65–69	3	—	1	—	—	—	1	1	—	—
	$131,810	—	$120,821	—	—	—	$193,356	$81,253	—	—
70 and over	1	—	—	—	1	—	—	—	—	—
	$124,487	—	—	—	$124,487	—	—	—	—	—
Total	**533**	**18**	**32**	**83**	**177**	**177**	**39**	**5**	**2**	**—**
	$191,776	**$185,585**	**$192,274**	**$180,301**	**$190,603**	**$196,314**	**$198,765**	**$197,644**	**$266,883**	**—**

Safety Tier C

Active Counts & Average Projected Compensation by Age and Years of Service as of December 31, 2024

Age	Total	0–4 Years	5–9 Years	10–14 Years	15–19 Years	20–24 Years	25–29 Years	30–34 Years	35–39 Years	40 Years and Over
Under 25	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
25–29	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
30–34	3	—	—	3	—	—	—	—	—	—
	$166,833	—	—	$166,833	—	—	—	—	—	—
35–39	37	1	1	27	8	—	—	—	—	—
	$162,354	$156,760	$156,665	$159,900	$172,048	—	—	—	—	—
40–44	31	2	—	16	13	—	—	—	—	—
	$165,226	$140,232	—	$161,225	$173,996	—	—	—	—	—
45–49	23	2	—	7	14	—	—	—	—	—
	$166,383	$128,784	—	$157,408	$176,242	—	—	—	—	—
50–54	7	—	1	2	4	—	—	—	—	—
	$176,460	—	$157,660	$193,887	$172,447	—	—	—	—	—
55–59	6	—	—	3	3	—	—	—	—	—
	$191,207	—	—	$226,193	$156,221	—	—	—	—	—
60–64	1	—	—	—	1	—	—	—	—	—
	$155,076	—	—	—	$155,076	—	—	—	—	—
65–69	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
70 and over	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
Total	**108**	**5**	**2**	**58**	**43**	**—**	**—**	**—**	**—**	**—**
	$166,611	**$138,958**	**$157,163**	**$164,924**	**$172,540**	**—**	**—**	**—**	**—**	**—**

Safety Tier D

Active Counts & Average Projected Compensation by Age and Years of Service as of December 31, 2024

Age	Total	0–4 Years	5–9 Years	10–14 Years	15–19 Years	20–24 Years	25–29 Years	30–34 Years	35–39 Years	40 Years and Over
Under 25	3	3	—	—	—	—	—	—	—	—
	$124,006	$124,006	—	—	—	—	—	—	—	—
25–29	20	17	3	—	—	—	—	—	—	—
	$148,194	$143,339	$175,710	—	—	—	—	—	—	—
30–34	45	24	20	1	—	—	—	—	—	—
	$156,314	$146,595	$167,371	$168,437	—	—	—	—	—	—
35–39	43	9	18	16	—	—	—	—	—	—
	$143,997	$134,841	$148,896	$143,636	—	—	—	—	—	—
40–44	32	5	11	16	—	—	—	—	—	—
	$157,808	$142,158	$170,205	$154,177	—	—	—	—	—	—
45–49	9	1	2	6	—	—	—	—	—	—
	$135,221	$127,298	$134,565	$136,760	—	—	—	—	—	—
50–54	5	—	1	4	—	—	—	—	—	—
	$131,356	—	$106,036	$137,686	—	—	—	—	—	—
55–59	2	1	—	1	—	—	—	—	—	—
	$152,668	$186,096	—	$119,241	—	—	—	—	—	—
60–64	1	—	—	1	—	—	—	—	—	—
	$105,884	—	—	$105,884	—	—	—	—	—	—
65–69	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
70 and over	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
Total	**160**	**60**	**55**	**45**	**—**	**—**	**—**	**—**	**—**	**—**
	$149,355	**$142,747**	**$160,038**	**$145,108**	**—**	**—**	**—**	**—**	**—**	**—**

Safety Tier E
Active Counts & Average Projected Compensation by Age and Years of Service as of December 31, 2024

Age	Total	0–4 Years	5–9 Years	10–14 Years	15–19 Years	20–24 Years	25–29 Years	30–34 Years	35–39 Years	40 Years and Over
Under 25	34	34	—	—	—	—	—	—	—	—
	$99,284	$99,284	—	—	—	—	—	—	—	—
25–29	186	159	27	—	—	—	—	—	—	—
	$119,394	$116,462	$136,663	—	—	—	—	—	—	—
30–34	244	109	125	10	—	—	—	—	—	—
	$130,955	$121,914	$138,074	$140,511	—	—	—	—	—	—
35–39	187	74	90	23	—	—	—	—	—	—
	$132,221	$120,184	$138,923	$144,726	—	—	—	—	—	—
40–44	54	17	29	8	—	—	—	—	—	—
	$134,828	$122,192	$140,842	$139,880	—	—	—	—	—	—
45–49	25	10	12	3	—	—	—	—	—	—
	$130,854	$126,753	$131,314	$142,684	—	—	—	—	—	—
50–54	22	14	5	3	—	—	—	—	—	—
	$144,274	$143,155	$150,043	$139,880	—	—	—	—	—	—
55–59	24	12	11	1	—	—	—	—	—	—
	$152,354	$148,986	$157,163	$139,880	—	—	—	—	—	—
60–64	5	2	3	—	—	—	—	—	—	—
	$160,550	$161,345	$160,020	—	—	—	—	—	—	—
65–69	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
70 and over	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
Total	**781**	**431**	**302**	**48**	**—**	**—**	**—**	**—**	**—**	**—**
	$128,613	**$119,570**	**$139,309**	**$142,509**	**—**	**—**	**—**	**—**	**—**	**—**

Exhibit C: Reconciliation of member status

Reconciliation of Member Status

Line Description	Active Members	Inactive Members[1]	Retired Members	Disabled Members	Beneficiaries	Total
Number as of December 31, 2023	10,349	4,109	8,407	872	1,526	25,263
New members	1,102	140	0	0	97	1,339
Terminations with vested rights	(320)	320	0	0	0	0
Contribution refunds	(73)	(243)	0	0	0	(316)
Retirements	(292)	(78)	370	0	0	0
New disabilities	(17)	(2)	(9)	28	0	0
Return to work	52	(51)	(1)	0	0	0
Died with or without beneficiary	(10)	(5)	(206)	(29)	(83)	(333)
Data adjustments	0	(2)	1	0	(6)	(7)
Number as of December 31, 2024	**10,791**	**4,188**	**8,562**	**871**	**1,534**	**25,946**

[1] Includes inactive members with member contributions on deposit.

Exhibit D: Summary of income and expenses on a market value basis

Income and Expenses for Years Ended December 31

Line Description	2024	2023
Contribution income		
• Employer contributions	$383,818,407	$373,148,067
• Member contributions	146,314,426	132,103,613
• Less administrative expenses	(13,995,564)	(12,839,955)
– **Net contribution income**	**$516,137,269**	**$492,411,725**
Investment income		
• Investment, dividends and other income	$225,189,009	$195,660,493
• Asset appreciation	762,669,010	727,267,405
• Less investment and other fees	(60,806,268)	(54,676,968)
– **Net investment income**	**$927,051,751**	**$868,250,930**
Total income available for benefits	**$1,443,189,020**	**$1,360,662,655**
Less benefit payments		
• Benefits paid	$(619,738,157)	$(591,888,330)
• Refund of contributions	(9,472,286)	(10,062,502)
• Adjustments, transfers or other expenses	(2,410,394)	(3,522,376)
– **Net benefit payments**	**$(631,620,837)**	**$(605,473,208)**
Change in market value of assets	**$811,568,183**	**$755,189,447**
Net assets at market value at the beginning of the year	**$10,808,858,259**	**$10,053,668,812**
Net assets at market value at the end of the year	**$11,620,426,442**	**$10,808,858,259**

Note: Results may be slightly off due to rounding.

Exhibit E: Summary of plan assets

Statement of Plan Assets as of December 31

Line Description	2024	2023
Cash equivalents	**$1,171,399,164**	**$734,330,164**
Accounts receivable		
• Securities sold	$37,238,463	$7,191,876
• Accrued interest and dividends	24,677,136	23,756,052
• Employer contributions	14,059,901	12,769,540
• Other receivable	315,210	1,354,961
– **Total accounts receivable**	**$76,290,710**	**$45,072,429**
Investments		
• Domestic and international stocks	$5,165,209,633	$5,340,364,573
• Domestic and international bonds	2,504,561,111	2,165,938,729
• Real estate	597,601,608	516,925,736
• Alternative investments and real assets	2,667,837,425	2,496,664,218
– **Total investments at market value**	**$10,935,209,777**	**$10,519,893,256**
Other assets	**$7,145,001**	**$5,779,870**
Total assets	**$12,190,044,652**	**$11,305,075,719**
Accounts payable		
• Investment trades	$(38,532,851)	$(12,629,837)
• Securities lending liability	(292,741,374)	(229,840,189)
• Employer contributions unearned	(171,628,738)	(192,889,114)
• Other	(66,838,248)	(59,668,319)
– **Total accounts payable**	**$(569,741,211)**	**$(495,027,459)**
Deferred outflows of resources	**$1,568,000**	**$363,000**
Deferred inflows of resources	**$(1,445,000)**	**$(1,553,000)**
Net assets at market value	**$11,620,426,442**	**$10,808,858,259**
Net assets at actuarial value	**$11,832,779,196**	**$11,340,825,456**
Net assets at valuation value	**$11,815,241,998**	**$11,323,476,654**

Note: Results may be slightly off due to rounding.

Exhibit F: Summary of reported reserve information

Total Allocated Reserves as of December 31

Line Description	2024	2023
Member		
• Member Deposits[1]	$1,233,089,533	$1,144,000,073
• Member Cost of Living[1]	588,240,218	559,479,238
Employer		
• Employer Advance[1, 2]	3,642,561,855	3,523,101,672
• Employer Cost of Living[1, 2]	1,318,791,047	1,765,728,521
Retired		
• Retired Members[1, 2]	4,587,187,463	4,266,599,629
• Retired Cost of Living[1, 2]	3,892,206,813	3,159,992,858
• Dollar Power Cost of Living Supplement Pre-Funding[1]	(3,196,571)	(2,334,690)
• Post Retirement Death Benefit[3]	17,537,198	17,348,802
Contingency		
• Statutory Contingency (one percent)[3]	0	0
• Additional One Percent Contingency Designation[3]	0	0
• Contra Tracking Account[1]	(3,443,638,360)	(3,093,090,647)
Total Allocated Reserves	**$11,832,779,196**	**$11,340,825,456**
Total Deferred Return	(212,352,754)	(531,967,197)
Net Market Value	**$11,620,426,442**	**$10,808,858,259**

Note: Results may be slightly off due to rounding.

1 Included in valuation value of assets.
2 Both 2024 and 2023 information reflect a “true-up” of retired reserves as of January 1, 2024 and January 1, 2023, respectively.
3 Not included in valuation value of assets. See reference made on page 148 with respect to the payment of benefits out of the Post Retirement Death Benefit Reserve.

Exhibit G: Development of the Plan

Development of the Plan through December 31, 2024

Year Ended December 31	Employer Contributions[1]	Member Contributions[1]	Administrative Expenses[2]	Net Investment Return[3]	Benefit Payments	Market Value of Assets at Year End	Valuation Value of Assets at Year End	Valuation Value as a Percent of Market Value
2015	$323,720,270	$85,360,637	N/A	$65,495,657	$406,904,366	$6,976,582,428	$7,136,801,380	102.3%
2016	307,457,143	89,240,172	$8,486,463	493,874,242	420,148,018	7,438,519,504	7,606,997,530	102.3%
2017	314,836,561	96,466,906	9,146,115	987,415,981	437,511,788	8,390,581,049	8,179,891,191	97.5%
2018	325,117,103	103,541,529	9,337,053	(195,030,888)	464,885,947	8,149,985,793	8,650,178,226	106.1%
2019	327,982,796	108,487,711	10,200,473	1,168,171,586	487,414,734	9,257,012,679	9,128,668,718	98.6%
2020	336,356,723	113,494,191	10,749,625	882,394,059	508,270,165	10,070,237,862	9,662,282,926	95.9%
2021	410,759,608	117,016,915	11,237,383	1,407,343,614	540,354,863	11,453,765,753	10,434,412,288	91.1%
2022	352,383,785	122,303,823	11,537,709	(1,281,907,363)	581,339,475	10,053,668,812	10,861,822,062	108.0%
2023	373,148,067	132,103,613	12,839,955	868,250,930	605,473,208	10,808,858,259	11,323,476,654	104.8%
2024	383,818,407	146,314,426	13,995,564	927,051,751	631,620,837	11,620,426,442	11,815,241,998	101.7%

Note: Results may be slightly off due to rounding.

[1] Prior to 2017, employer contributions include “employer subvention of member contributions” and exclude “member subvention of employer contributions”.
[2] Prior to 2016, administrative expenses were shown as an offset to the net investment return.
[3] On a market basis, net of investment fees beginning with the year ended December 31, 2016. Prior to 2016, shown net of both investment fees and administrative expenses.

Exhibit H: Amortization bases

Total Plan — All Cost Groups Combined

Amortization Base Type	Established December 31	Initial Amount	Initial Period	Outstanding Balance	Years Remaining[1]	Annual Payment[2]
Actuarial Loss	2008	$127,228,371	18	$32,188,114	2	$16,970,882
Actuarial Loss	2009	267,892,376	18	95,915,638	3	34,312,839
Assumption Change	2009	60,965,491	18	21,827,959	3	7,808,729
Depooling Implementation	2009	(18,188,149)	18	(6,512,048)	3	(2,329,618)
Actuarial Loss	2010	265,289,245	18	119,518,353	4	32,633,714
Assumption Change[3]	2010	4,041,816	18	1,820,923	4	497,191
Actuarial Loss	2011	183,273,836	18	97,411,918	5	21,651,656
Actuarial Loss	2012	231,260,954	18	135,373,313	5	30,089,301
Assumption Change	2012	544,097,665	18	318,498,659	5	70,792,402
Actuarial Gain	2013	(202,325,285)	18	(128,209,726)	5	(28,497,057)
Assumption Change[4]	2013	(189,066,417)	18	(119,807,830)	5	(26,629,575)
Actuarial Gain	2014	(284,855,905)	18	(192,367,229)	5	(42,757,285)
Assumption Change[5]	2014	(51,701)	18	(34,914)	5	(7,760)
Actuarial Gain	2015	(202,620,622)	18	(144,033,638)	5	(32,014,222)
Assumption Change	2015	114,345,251	18	81,282,755	5	18,066,643
Actuarial Gain	2016	(46,362,239)	18	(34,528,884)	5	(7,674,703)

[1] Reflects the adjustment to UAAL amortization periods adopted by the Board in 2023 for amortization layers established between December 31, 2012 and December 31, 2018.
[2] As of middle of year.
[3] Effective with the December 31, 2010 valuation, leave cashout (terminal pay) assumptions are now based on cost groups.
[4] Effective with the December 31, 2013 valuation, the leave cashout assumptions were reduced to reflect AB 197.
[5] Effective with the December 31, 2014 valuation, leave cashout (terminal pay) assumptions were eliminated for Cost Group 9.

Amortization Base Type	Established December 31	Initial Amount	Initial Period	Outstanding Balance	Years Remaining[1]	Annual Payment[2]
San Ramon UAAL Prepayment	2017	$(303,806)	18	$(235,122)	5	$(52,260)
LAFCO UAAL Prepayment	2017	(30,817)	18	(23,850)	5	(5,301)
Actuarial Gain	2017	(38,341,514)	18	(29,673,368)	5	(6,595,471)
San Ramon UAAL Prepayment	2018	(261,501)	18	(208,867)	5	(46,425)
Actuarial Loss	2018	155,264,736	18	124,013,524	5	27,564,371
Assumption Change	2018	(90,889,139)	18	(72,595,251)	5	(16,135,680)
San Ramon UAAL Prepayment	2019	(1,267,559)	18	(1,156,538)	13	(113,204)
LAFCO UAAL Prepayment	2019	(31,680)	18	(28,905)	13	(2,829)
Actuarial Loss	2019	41,748,029	18	38,091,453	13	3,728,468
Method Change	2019	(17,427,203)	18	(15,900,810)	13	(1,556,402)
San Ramon UAAL Prepayment	2020	(267,529)	18	(250,455)	14	(23,141)
LAFCO UAAL Prepayment	2020	(31,963)	18	(29,923)	14	(2,765)
CCCFPD UAAL Prepayment[3]	2020	(3,021,672)	18	(2,828,821)	14	(261,376)
Actuarial Loss	2020	36,503,813	18	34,174,043	14	3,157,601
San Ramon UAAL Prepayment	2021	(270,666)	18	(258,692)	15	(22,677)
LAFCO UAAL Prepayment	2021	(31,804)	18	(30,397)	15	(2,665)
Actuarial Gain	2021	(28,564,305)	18	(27,300,613)	15	(2,393,136)
Assumption Change	2021	223,522,296	18	213,633,614	15	18,726,849
San Ramon UAAL Prepayment	2022	(286,847)	18	(279,344)	16	(23,332)
Actuarial Loss	2022	341,894,603	18	332,951,424	16	27,809,864

1 Reflects the adjustment to UAAL amortization periods adopted by the Board in 2023 for amortization layers established between December 31, 2012 and December 31, 2018.

2 As of middle of year.

3 As part of East Fire's annexation into CCCFPD, East Fire made a prepayment of $3,344,437 on June 30, 2022 towards their December 31, 2020 UAAL balance. As requested by East Fire, the prepayment has been used to reduce CCCFPD's UAAL contribution rates effective July 1, 2022. The amount shown as the initial amount of $3,021,672 is equal to $3,344,437 discounted with interest from June 30, 2022 to December 31, 2020.

Amortization Base Type	Established December 31	Initial Amount	Initial Period	Outstanding Balance	Years Remaining[1]	Annual Payment[2]
San Ramon UAAL Prepayment	2023	$(295,995)	18	$(292,589)	17	$(23,375)
IHSS UAAL Prepayment	2023	(92,497)	18	(91,433)	17	(7,305)
Actuarial Loss[3]	2023	154,058,919	18	152,286,400	17	12,166,237
Actuarial Loss[3]	2024	183,658,509	18	183,658,509	18	14,081,316
Assumption Change[4]	2024	(45,970,871)	18	(45,970,871)	18	(3,524,640)
Cost Group 6 — Actuarial Surplus	2024	(26,148)	N/A	(26,148)	N/A	0
Subtotal — All Cost Groups				**$1,159,970,335**		**$169,355,859**
Withdrawn Employers[5]				7,677,678		
Total CCCERA				**$1,167,648,013**		

Note: Results may be slightly off due to rounding.

[1] Reflects the adjustment to UAAL amortization periods adopted by the Board in 2023 for amortization layers established between December 31, 2012 and December 31, 2018.
[2] As of middle of year.
[3] Excludes the actuarial loss for Cost Group 6 and the withdrawn employers. Cost Group 6 was in surplus for both the December 31, 2023 and December 31, 2024 valuations.
[4] Excludes assumption change impact for Cost Group 6 and the withdrawn employers. Cost Group 6 was in surplus for both the December 31, 2023 and December 31, 2024 valuations.
[5] Effective with the December 31, 2016 valuation, the three withdrawn employers (i.e., Diablo Water District, Delta Diablo Sanitation District and City of Pittsburg) have been moved from Cost Groups 1, 2 and 7 into their own Withdrawn Employers Cost Group.

Cost Groups 1 and 2 – General County and Small Districts

Amortization Base Type	Established December 31	Initial Amount[1,2]	Initial Period	Outstanding Balance	Years Remaining[3]	Annual Payment[4]
Actuarial Loss	2008	$79,960,860	18	$20,229,681	2	$10,665,910
Actuarial Loss	2009	164,892,147	18	59,037,647	3	21,120,115
Assumption Change	2009	39,528,066	18	14,152,548	3	5,062,929
Depooling Implementation	2009	(74,634,392)	18	(26,721,945)	3	(9,559,503)
Actuarial Loss	2010	152,932,187	18	68,899,149	4	18,812,467
Actuarial Loss	2011	94,664,436	18	50,315,116	5	11,183,494
Actuarial Loss	2012	116,923,337	18	68,443,459	5	15,212,864
Assumption Change	2012	288,541,843	18	168,903,849	5	37,542,102
Actuarial Gain	2013	(134,688,262)	18	(85,349,417)	5	(18,970,536)
Assumption Change[5]	2013	(107,456,075)	18	(68,092,893)	5	(15,134,944)
Actuarial Gain	2014	(171,743,438)	18	(115,980,777)	5	(25,778,940)
Actuarial Gain	2015	(104,908,624)	18	(74,574,693)	5	(16,575,648)
Assumption Change	2015	39,778,897	18	28,276,980	5	6,285,098
Actuarial Gain	2016	(28,553,195)	18	(21,265,365)	5	(4,726,633)
Actuarial Gain	2017	(17,921,425)	18	(13,869,798)	5	(3,082,827)
Actuarial Loss	2018	75,196,018	18	60,060,793	5	13,349,657
Assumption Change	2018	(6,016,240)	18	(4,805,310)	5	(1,068,072)
Actuarial Loss	2019	8,867,784	18	8,091,083	13	791,971
Method Change	2019	(9,429,314)	18	(8,603,431)	13	(842,121)

1 Effective with the December 31, 2021 valuation, portions of all amortization bases from Cost Groups 1 and 2 established before December 31, 2021 were allocated to East Fire and moved into Cost Group 5 in conjunction with the annexation.
2 Effective with the December 31, 2024 valuation, portions of all amortization bases from Cost Groups 1 and 2 established before December 31, 2024 were allocated to RHFPD and moved into Cost Group 5 in conjunction with the annexation.
3 Reflects the adjustment to UAAL amortization periods adopted by the Board in 2023 for amortization layers established between December 31, 2012 and December 31, 2018.
4 As of middle of year.
5 Effective with the December 31, 2013 valuation, the leave cashout assumptions were reduced to reflect AB 197.

Amortization Base Type	Established December 31	Initial Amount[1,2]	Initial Period	Outstanding Balance	Years Remaining[3]	Annual Payment[4]
Actuarial Loss	2020	$34,707,764	18	$32,492,622	14	$3,002,243
Actuarial Gain	2021	(29,828,075)	18	(28,508,473)	15	(2,499,016)
Assumption Change	2021	114,934,356	18	109,849,631	15	9,629,278
Actuarial Loss	2022	200,460,079	18	195,216,503	16	16,305,516
Actuarial Loss	2023	88,625,180	18	87,605,507	17	6,998,848
Actuarial Loss	2024	106,000,472	18	106,000,472	18	8,127,182
Assumption Change	2024	(39,529,834)	18	(39,529,834)	18	(3,030,799)
Subtotal – Cost Groups 1 and 2				**$590,273,102**		**$82,820,635**

Note: Results may be slightly off due to rounding.

1 Effective with the December 31, 2021 valuation, portions of all amortization bases from Cost Groups 1 and 2 established before December 31, 2021 were allocated to East Fire and moved into Cost Group 5 in conjunction with their annexation into CCCFPD.
2 Effective with the December 31, 2024 valuation, portions of all amortization bases from Cost Groups 1 and 2 established before December 31, 2024 were allocated to RHFPD and moved into Cost Group 5 in conjunction with their annexation into CCCFPD.
3 Reflects the adjustment to UAAL amortization periods adopted by the Board in 2023 for amortization layers established between December 31, 2012 and December 31, 2018.
4 As of middle of year.

Cost Group 3 – Central Contra Costa Sanitary District

Amortization Base Type	Established December 31	Initial Amount	Initial Period	Outstanding Balance	Years Remaining	Annual Payment[1]
Actuarial Loss	2022	$4,915,384	18	$4,786,809	16	$399,820
Actuarial Loss[2]	2023	8,520,321	18	8,422,291	17	672,861
Actuarial Loss[3]	2024	13,725,164	18	13,725,164	18	1,052,325
Assumption Change	2024	(1,308,358)	18	(1,308,358)	18	(100,313)
Subtotal – Cost Group 3				**$25,625,905**		**$2,024,693**

[1] As of middle of year.

[2] The actuarial loss is primarily due to an investment return on the valuation value of assets (i.e. after asset smoothing) less than the 6.75% assumed rate for a loss of about $7 million and individual salary increases greater than expected for a loss of about $2 million.

[3] The actuarial loss is due to investment return on the valuation value of assets (i.e., after asset smoothing) less than the 6.75% assumed rate for a loss of about $7 million and individual salary increase greater than expected for a loss of about $8 million.

Cost Group 4 – Contra Costa Housing Authority

Amortization Base Type	Established December 31	Initial Amount	Initial Period	Outstanding Balance	Years Remaining[1]	Annual Payment[2]
Actuarial Loss	2008	$1,573,513	18	$398,091	2	$209,890
Actuarial Loss	2009	1,277,079	18	457,243	3	163,574
Assumption Change	2009	425,000	18	152,166	3	54,436
Depooling Implementation	2009	(189,275)	18	(67,768)	3	(24,243)
Actuarial Loss	2010	619,697	18	279,186	4	76,230
Assumption Change[3]	2010	(920,656)	18	(414,775)	4	(113,252)
Actuarial Loss	2011	1,059,328	18	563,044	5	125,147
Actuarial Loss	2012	1,912,999	18	1,119,813	5	248,900
Assumption Change	2012	3,722,862	18	2,179,253	5	484,381
Actuarial Gain	2013	(2,220,704)	18	(1,407,218)	5	(312,781)
Assumption Change[4]	2013	(1,077,289)	18	(682,658)	5	(151,734)
Actuarial Gain	2014	(1,360,021)	18	(918,441)	5	(204,141)
Actuarial Gain	2015	(875,294)	18	(622,206)	5	(138,297)
Assumption Change	2015	432,801	18	307,658	5	68,383
Actuarial Gain	2016	(297,092)	18	(221,263)	5	(49,180)
Actuarial Loss	2017	53,895	18	41,711	5	9,271
Actuarial Loss	2018	527,741	18	421,519	5	93,691
Assumption Change	2018	86,577	18	69,151	5	15,370
Actuarial Loss	2019	544,467	18	496,779	13	48,626
Method Change	2019	(103,353)	18	(94,301)	13	(9,230)

[1] Reflects the adjustment to UAAL amortization periods adopted by the Board in 2023 for amortization layers established between December 31, 2012 and December 31, 2018.
[2] As of middle of year.
[3] Effective with the December 31, 2010 valuation, leave cashout (terminal pay) assumptions are now based on cost groups.
[4] Effective with the December 31, 2013 valuation, the leave cashout assumptions were reduced to reflect AB 197.

Amortization Base Type	Established December 31	Initial Amount	Initial Period	Outstanding Balance	Years Remaining[1]	Annual Payment[2]
Actuarial Loss	2020	$80,685	18	$75,536	14	$6,979
Actuarial Gain	2021	(439,350)	18	(419,913)	15	(36,809)
Assumption Change	2021	1,519,858	18	1,452,619	15	127,335
Actuarial Loss	2022	2,604,379	18	2,536,255	16	211,841
Actuarial Loss	2023	237,770	18	235,034	17	18,777
Actuarial Loss	2024	1,355,576	18	1,355,576	18	103,934
Assumption Change	2024	(471,133)	18	(471,133)	18	(36,122)
Subtotal – Cost Group 4				**$6,820,957**		**$990,976**

Note: Results may be slightly off due to rounding.

[1] Reflects the adjustment to UAAL amortization periods adopted by the Board in 2023 for amortization layers established between December 31, 2012 and December 31, 2018.
[2] As of middle of year.

Cost Group 5 – Contra Costa County Fire Protection District

Amortization Base Type	Established December 31	Initial Amount[1,2]	Initial Period	Outstanding Balance	Years Remaining[3]	Annual Payment[4]
Actuarial Loss	2008	$118,302	18	$29,930	2	$15,780
Actuarial Loss	2009	1,763,355	18	631,348	3	225,858
Assumption Change	2009	371,760	18	133,104	3	47,617
Depooling Implementation	2009	2,075,017	18	742,935	3	265,777
Actuarial Loss	2010	2,860,662	18	1,288,788	4	351,895
Actuarial Loss	2011	1,436,261	18	763,388	5	169,677
Actuarial Loss	2012	1,893,205	18	1,108,226	5	246,324
Assumption Change	2012	3,445,211	18	2,016,725	5	448,256
Actuarial Gain	2013	(2,622,516)	18	(1,661,839)	5	(369,375)
Assumption Change[5]	2013	(1,082,867)	18	(686,192)	5	(152,519)
Actuarial Gain	2014	(2,371,131)	18	(1,601,259)	5	(355,910)
Actuarial Gain	2015	(851,460)	18	(605,264)	5	(134,531)
Assumption Change	2015	391,933	18	278,607	5	61,926
Actuarial Loss	2016	1,565,543	18	1,165,959	5	259,157
Actuarial Loss	2017	1,460,100	18	1,130,005	5	251,165
Actuarial Loss	2018	1,563,459	18	1,248,771	5	277,563
Assumption Change	2018	601,477	18	480,414	5	106,781
Actuarial Loss	2019	1,841,075	18	1,679,821	13	164,424
Method Change	2019	(875,272)	18	(798,609)	13	(78,169)

1 Effective with the December 31, 2021 valuation, portions of all amortization bases from Cost Groups 1 and 2 established before December 31, 2021 were allocated to East Fire and moved into Cost Group 5 in conjunction with the annexation.
2 Effective with the December 31, 2024 valuation, portions of all amortization bases from Cost Groups 1 and 2 established before December 31, 2024 were allocated to RHFPD and moved into Cost Group 5 in conjunction with the annexation.
3 Reflects the adjustment to UAAL amortization periods adopted by the Board in 2023 for amortization layers established between December 31, 2012 and December 31, 2018.
4 As of middle of year.
5 Effective with the December 31, 2013 valuation, the leave cashout assumptions were reduced to reflect AB 197.

Amortization Base Type	Established December 31	Initial Amount[1,2]	Initial Period	Outstanding Balance	Years Remaining[3]	Annual Payment[4]
UAAL Prepayment	2020	$(181,746)	18	$(170,146)	14	$(15,721)
Actuarial Loss	2020	2,604,286	18	2,438,073	14	225,272
Actuarial Gain	2021	(1,818,857)	18	(1,738,390)	15	(152,385)
Assumption Change	2021	1,514,421	18	1,447,423	15	126,879
Actuarial Loss	2022	2,590,656	18	2,522,890	16	210,725
Actuarial Loss	2023	1,010,402	18	998,776	17	79,793
Actuarial Loss	2024	1,799,715	18	1,799,715	18	137,986
Assumption Change	2024	(650,648)	18	(650,648)	18	(49,886)
Subtotal – Cost Group 5				**$13,992,551**		**$2,364,359**

Note: Results may be slightly off due to rounding.

[1] Effective with the December 31, 2021 valuation, portions of all amortization bases from Cost Groups 1 and 2 established before December 31, 2021 were allocated to East Fire and moved into Cost Group 5 in conjunction with the annexation.

[2] Effective with the December 31, 2024 valuation, portions of all amortization bases from Cost Groups 1 and 2 established before December 31, 2024 were allocated to RHFPD and moved into Cost Group 5 in conjunction with the annexation.

[3] Reflects the adjustment to UAAL amortization periods adopted by the Board in 2023 for amortization layers established between December 31, 2012 and December 31, 2018.

[4] As of middle of year.

Cost Group 6 – Small Districts (General Non-Enhanced)

Amortization Base Type	Established December 31	Initial Amount	Initial Period	Outstanding Balance	Years Remaining	Annual Payment[1]
Actuarial Surplus[2]	2024	$(26,148)		$(26,148)	N/A	$0
Subtotal – Cost Group 6				**$(26,148)**		**$0**

1 As of middle of year.
2 Consistent with CCCERA's Actuarial Funding Policy, all prior UAAL layers are considered fully amortized due to surplus.

Cost Groups 7 and 9 – County Safety

Amortization Base Type	Established December 31	Initial Amount	Initial Period	Outstanding Balance	Years Remaining[1]	Annual Payment[2]
Actuarial Loss	2008	$25,619,265	18	$6,481,540	2	$3,417,331
Actuarial Loss	2009	55,134,940	18	19,740,401	3	7,061,927
Assumption Change	2009	11,076,665	18	3,965,867	3	1,418,748
Depooling Implementation	2009	23,852,078	18	8,539,949	3	3,055,080
Actuarial Loss	2010	57,287,975	18	25,809,431	4	7,047,098
Actuarial Loss	2011	45,209,350	18	24,029,232	5	5,340,955
Actuarial Loss	2012	53,258,503	18	31,175,951	5	6,929,450
Assumption Change	2012	138,353,562	18	80,988,078	5	18,001,145
Actuarial Gain	2013	(35,024,912)	18	(22,194,628)	5	(4,933,179)
Assumption Change[3]	2013	(43,771,706)	18	(27,737,306)	5	(6,165,145)
Actuarial Gain	2014	(61,815,393)	18	(41,744,810)	5	(9,278,580)
Assumption Change[4]	2014	(51,701)	18	(34,914)	5	(7,760)
Actuarial Gain	2015	(58,489,966)	18	(41,577,814)	5	(9,241,462)
Assumption Change	2015	39,291,409	18	27,930,447	5	6,208,075
Actuarial Gain	2016	(13,557,811)	18	(10,097,357)	5	(2,244,330)
Actuarial Gain	2017	(8,178,240)	18	(6,329,326)	5	(1,406,813)
Actuarial Loss	2018	41,037,406	18	32,777,522	5	7,285,429
Assumption Change	2018	(47,713,599)	18	(38,109,952)	5	(8,470,664)
Actuarial Loss	2019	10,313,187	18	9,409,888	13	921,059
Method Change	2019	(1,626,137)	18	(1,483,709)	13	(145,228)

1 Reflects the adjustment to UAAL amortization periods adopted by the Board in 2023 for amortization layers established between December 31, 2012 and December 31, 2018.
2 As of middle of year.
3 Effective with the December 31, 2013 valuation, the leave cashout assumptions were reduced to reflect AB 197.
4 Effective with the December 31, 2014 valuation, leave cashout (terminal pay) assumptions were eliminated for Cost Group 9.

Amortization Base Type	Established December 31	Initial Amount	Initial Period	Outstanding Balance	Years Remaining[1]	Annual Payment[2]
Actuarial Loss	2020	$5,352,140	18	$5,010,552	14	$462,963
Actuarial Gain	2021	(9,006,255)	18	(8,607,816)	15	(754,550)
Assumption Change	2021	58,980,022	18	56,370,731	15	4,941,386
Actuarial Loss	2022	72,120,444	18	70,233,938	16	5,866,310
Actuarial Loss	2023	25,063,417	18	24,775,051	17	1,979,291
Actuarial Loss	2024	27,164,340	18	27,164,340	18	2,082,722
Assumption Change[3]	2024	503,540	18	503,540	18	38,607
Subtotal – Cost Groups 7 and 9				**$256,988,825**		**$39,409,865**

Note: Results may be slightly off due to rounding.

[1] Reflects the adjustment to UAAL amortization periods adopted by the Board in 2023 for amortization layers established between December 31, 2012 and December 31, 2018.
[2] As of middle of year.
[3] For Cost Groups 7 and 9, there is an increase in UAAL from all assumption changes combined mainly due to less savings available from the new mortality tables that predict lower life expectancies for payees at advanced ages. This is because the average age of retirees for these cost groups is younger than other Safety cost groups.

Cost Group 8 – Contra Costa County Fire Protection District

Amortization Base Type	Established December 31	Initial Amount[1,2]	Initial Period	Outstanding Balance	Years Remaining[3]	Annual Payment[4]
Actuarial Loss	2008	$7,737,586	18	$1,957,569	2	$1,032,110
Actuarial Loss	2009	29,891,066	18	10,702,136	3	3,828,580
Assumption Change	2009	6,099,000	18	2,183,673	3	781,187
Depooling Implementation	2009	46,009,292	18	16,473,073	3	5,893,074
Actuarial Loss	2010	39,667,948	18	17,871,240	4	4,879,627
Assumption Change[5]	2010	(936,966)	18	(422,123)	4	(115,258)
Actuarial Loss	2011	28,600,384	18	15,201,396	5	3,378,800
Actuarial Loss	2012	33,747,570	18	19,754,828	5	4,390,887
Assumption Change	2012	71,212,152	18	41,685,485	5	9,265,394
Actuarial Gain	2013	(22,248,552)	18	(14,098,489)	5	(3,133,658)
Assumption Change[6]	2013	(19,080,497)	18	(12,090,952)	5	(2,687,445)
Actuarial Gain	2014	(28,902,026)	18	(19,517,947)	5	(4,338,236)
Actuarial Gain	2015	(19,995,889)	18	(14,214,154)	5	(3,159,367)
Assumption Change	2015	25,072,720	18	17,823,038	5	3,961,510
Actuarial Gain	2016	(8,568,416)	18	(6,381,440)	5	(1,418,397)
Actuarial Gain	2017	(11,495,471)	18	(8,896,606)	5	(1,977,440)
Actuarial Loss	2018	19,229,328	18	15,358,907	5	3,413,810
Assumption Change	2018	(24,490,649)	18	(19,561,246)	5	(4,347,860)

1 Effective with the December 31, 2019 valuation, East Fire was depooled into Cost Group 13, previously East Fire was pooled with CCCFPD in Cost Group 8. All amortization bases established on or before December 31, 2018 were split between the two employers based on the ratios of actuarial accrued liability as of December 31, 2018.
Effective with the December 31, 2021 valuation, East Fire was annexed into CCCFPD, and all amortization bases from Cost Group 13 established before December 31, 2021 were moved into Cost Group 8.

2 Effective with the December 31, 2024 valuation, RHFPD was annexed into CCCFPD, and all amortization bases from Cost Group 12 established before December 31, 2024 were moved into Cost Group 8.

3 Reflects the adjustment to UAAL amortization periods adopted by the Board in 2023 for amortization layers established between December 31, 2012 and December 31, 2018.

4 As of middle of year.

5 Effective with the December 31, 2010 valuation, leave cashout (terminal pay) assumptions are now based on cost groups.

6 Effective with the December 31, 2013 valuation, the leave cashout assumptions were reduced to reflect AB 197.

Amortization Base Type	Established December 31	Initial Amount[1,2]	Initial Period	Outstanding Balance	Years Remaining[3]	Annual Payment[4]
Actuarial Loss	2019	$11,404,724	18	$10,405,820	13	$1,018,543
Method Change	2019	(3,298,664)	18	(3,009,745)	13	(294,600)
Actuarial Gain	2020	(5,315,698)	18	(4,976,436)	14	(459,811)
UAAL Prepayment	2020	(2,839,926)	18	(2,658,674)	14	(245,655)
Actuarial Loss	2021	7,760,441	18	7,417,117	15	650,175
Assumption Change	2021	27,363,187	18	26,152,633	15	2,292,506
Actuarial Loss	2022	34,809,237	18	33,898,707	16	2,831,399
Actuarial Loss	2023	22,056,531	18	21,802,760	17	1,741,833
Actuarial Loss	2024	25,942,278	18	25,942,278	18	1,989,025
Assumption Change	2024	(3,564,512)	18	(3,564,512)	18	(273,295)
Subtotal – Cost Group 8				**$175,238,337**		**$28,897,438**

Note: Results may be slightly off due to rounding.

[1] Effective with the December 31, 2019 valuation, East Fire was depooled into Cost Group 13, previously East Fire was pooled with CCCFPD in Cost Group 8. All amortization bases established on or before December 31, 2018 were split between the two employers based on the ratios of actuarial accrued liability as of December 31, 2018.
Effective with the December 31, 2021 valuation, East Fire was annexed into CCCFPD, and all amortization bases from Cost Group 13 established before December 31, 2021 were moved into Cost Group 8.

[2] Effective with the December 31, 2024 valuation, RHFPD was annexed into CCCFPD, and all amortization bases from Cost Group 12 established before December 31, 2024 were moved into Cost Group 8.

[3] Reflects the adjustment to UAAL amortization periods adopted by the Board in 2023 for amortization layers established between December 31, 2012 and December 31, 2018.

[4] As of middle of year.

Cost Group 10 – Moraga-Orinda Fire District

Amortization Base Type	Established December 31	Initial Amount	Initial Period	Outstanding Balance	Years Remaining[1]	Annual Payment[2]
Actuarial Loss	2008	$2,002,150	18	$506,534	2	$267,065
Actuarial Loss	2009	5,671,684	18	2,030,678	3	726,454
Assumption Change	2009	1,012,000	18	362,334	3	129,621
Depooling Implementation	2009	4,873,631	18	1,744,945	3	624,236
Actuarial Loss	2010	5,334,964	18	2,403,513	4	656,264
Assumption Change[3]	2010	806,018	18	363,128	4	99,150
Actuarial Loss	2011	6,791,005	18	3,609,489	5	802,278
Actuarial Loss	2012	8,924,598	18	5,224,196	5	1,161,177
Assumption Change	2012	12,149,892	18	7,112,187	5	1,580,819
Actuarial Gain	2013	(1,027,440)	18	(651,069)	5	(144,713)
Assumption Change[4]	2013	(3,613,981)	18	(2,290,112)	5	(509,021)
Actuarial Gain	2014	(4,813,045)	18	(3,250,317)	5	(722,445)
Actuarial Gain	2015	(8,490,806)	18	(6,035,722)	5	(1,341,554)
Assumption Change	2015	3,844,347	18	2,732,769	5	607,410
Actuarial Loss	2016	1,028,690	18	766,130	5	170,287
Actuarial Gain	2017	(422,995)	18	(327,365)	5	(72,763)
Actuarial Loss	2018	6,029,055	18	4,815,545	5	1,070,347
Assumption Change	2018	(4,116,542)	18	(3,287,977)	5	(730,816)
Actuarial Loss	2019	3,411,399	18	3,112,605	13	304,668
Method Change	2019	(471,164)	18	(429,896)	13	(42,079)

1 Reflects the adjustment to UAAL amortization periods adopted by the Board in 2023 for amortization layers established between December 31, 2012 and December 31, 2018.
2 As of middle of year.
3 Effective with the December 31, 2010 valuation, leave cashout (terminal pay) assumptions are now based on cost groups.
4 Effective with the December 31, 2013 valuation, the leave cashout assumptions were reduced to reflect AB 197.

Amortization Base Type	Established December 31	Initial Amount	Initial Period	Outstanding Balance	Years Remaining[1]	Annual Payment[2]
Actuarial Gain	2020	$(864,383)	18	$(809,216)	14	$(74,770)
Actuarial Loss	2021	2,537,586	18	2,425,322	15	212,601
Assumption Change	2021	5,301,507	18	5,066,967	15	444,164
Actuarial Loss	2022	7,121,589	18	6,935,305	16	579,273
Actuarial Loss	2023	3,220,166	18	3,183,117	17	254,301
Actuarial Loss	2024	3,716,653	18	3,716,653	18	284,960
Assumption Change	2024	(544,092)	18	(544,092)	18	(41,716)
Subtotal – Cost Group 10				**$38,485,649**		**$6,295,198**

Note: Results may be slightly off due to rounding.

[1] Reflects the adjustment to UAAL amortization periods adopted by the Board in 2023 for amortization layers established between December 31, 2012 and December 31, 2018.
[2] As of middle of year.

Cost Group 11 – San Ramon Valley Fire District

Amortization Base Type	Established December 31	Initial Amount	Initial Period	Outstanding Balance	Years Remaining[1]	Annual Payment[2]
Actuarial Loss	2008	$10,216,694	18	$2,584,770	2	$1,362,796
Actuarial Loss	2009	9,262,105	18	3,316,185	3	1,186,331
Assumption Change	2009	2,453,000	18	878,267	3	314,191
Depooling Implementation	2009	(20,174,500)	18	(7,223,237)	3	(2,584,039)
Actuarial Loss	2010	6,585,812	18	2,967,046	4	810,133
Assumption Change[3]	2010	5,093,420	18	2,294,692	4	626,551
Actuarial Loss	2011	5,513,071	18	2,930,254	5	651,305
Actuarial Loss	2012	14,600,741	18	8,546,842	5	1,899,699
Assumption Change	2012	26,672,143	18	15,613,083	5	3,470,305
Actuarial Gain	2013	(4,492,900)	18	(2,847,066)	5	(632,815)
Assumption Change[4]	2013	(12,984,002)	18	(8,227,718)	5	(1,828,767)
Actuarial Gain	2014	(13,850,852)	18	(9,353,677)	5	(2,079,033)
Actuarial Gain	2015	(9,008,582)	18	(6,403,785)	5	(1,423,363)
Assumption Change	2015	5,533,144	18	3,933,256	5	874,241
Actuarial Loss	2016	2,020,042	18	1,504,453	5	334,393
UAAL Prepayment	2017	(303,806)	18	(235,122)	5	(52,260)
Actuarial Gain	2017	(1,837,378)	18	(1,421,988)	5	(316,064)
UAAL Prepayment	2018	(261,501)	18	(208,867)	5	(46,425)
Actuarial Loss	2018	11,681,729	18	9,330,466	5	2,073,874
Assumption Change	2018	(9,240,163)	18	(7,380,331)	5	(1,640,419)

1 Reflects the adjustment to UAAL amortization periods adopted by the Board in 2023 for amortization layers established between December 31, 2012 and December 31, 2018.
2 As of middle of year.
3 Effective with the December 31, 2010 valuation, leave cashout (terminal pay) assumptions are now based on cost groups.
4 Effective with the December 31, 2013 valuation, the leave cashout assumptions were reduced to reflect AB 197.

Amortization Base Type	Established December 31	Initial Amount	Initial Period	Outstanding Balance	Years Remaining[1]	Annual Payment[2]
UAAL Prepayment	2019	$(1,267,559)	18	$(1,156,538)	13	$(113,204)
Actuarial Loss	2019	5,365,395	18	4,895,457	13	479,177
Method Change	2019	(1,623,299)	18	(1,481,119)	13	(144,975)
UAAL Prepayment	2020	(267,529)	18	(250,455)	14	(23,141)
Actuarial Gain	2020	(60,980)	18	(57,088)	14	(5,275)
UAAL Prepayment	2021	(270,666)	18	(258,692)	15	(22,677)
Actuarial Loss	2021	2,230,205	18	2,131,540	15	186,848
Assumption Change	2021	13,908,945	18	13,293,610	15	1,165,301
UAAL Prepayment	2022	(286,847)	18	(279,344)	16	(23,332)
Actuarial Loss	2022	17,272,835	18	16,821,017	16	1,404,980
UAAL Prepayment	2023	(295,995)	18	(292,589)	17	(23,375)
Actuarial Loss	2023	5,325,133	18	5,263,865	17	420,533
Actuarial Loss	2024	3,954,310	18	3,954,310	18	303,182
Assumption Change	2024	(405,834)	18	(405,834)	18	(31,116)
Subtotal – Cost Group 11				**$52,775,665**		**$6,573,560**

Note: Results may be slightly off due to rounding.

[1] Reflects the adjustment to UAAL amortization periods adopted by the Board in 2023 for amortization layers established between December 31, 2012 and December 31, 2018.
[2] As of middle of year.

Special Adjustments

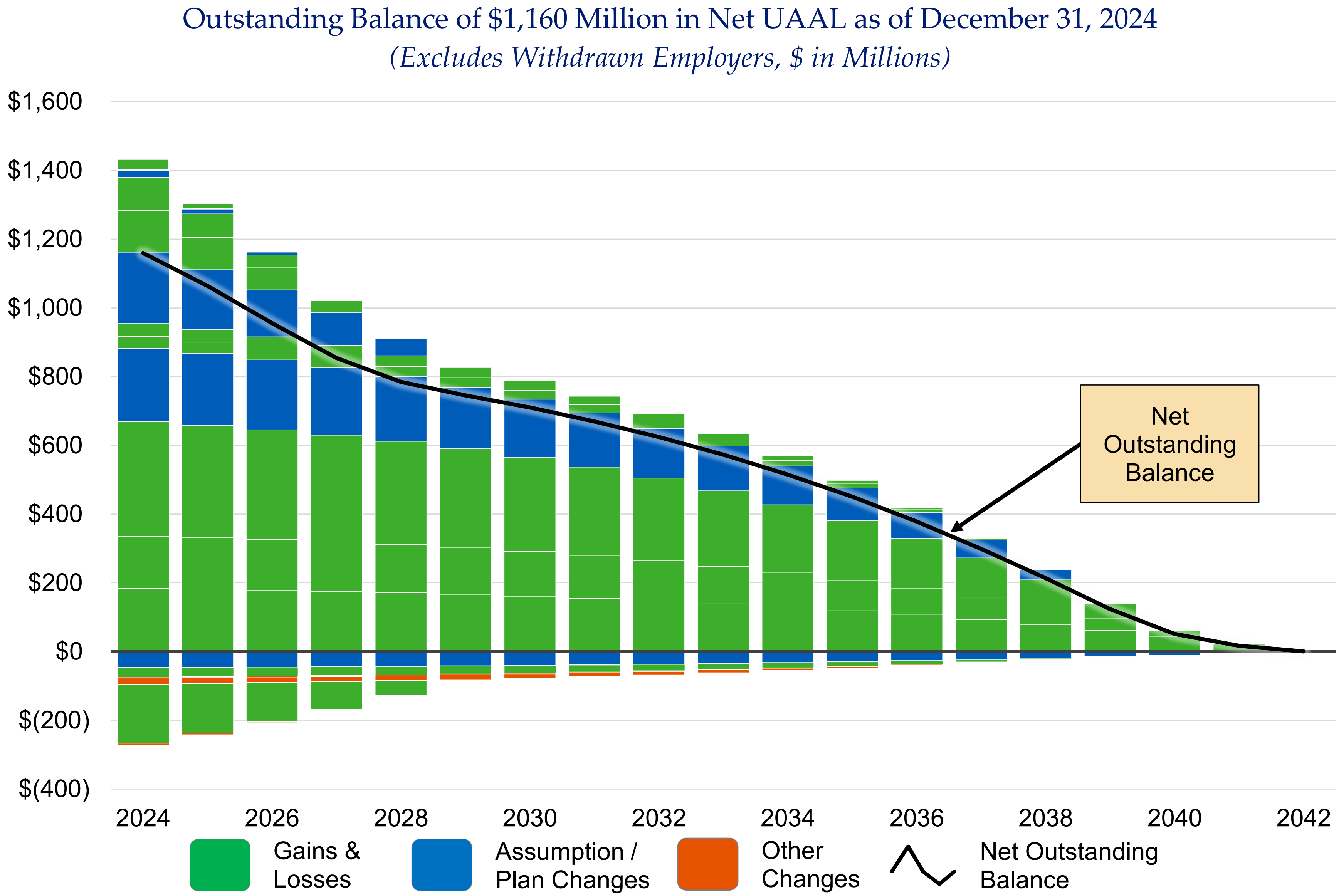
Amortization Base Type	Established December 31	Initial Amount	Initial Period	Outstanding Balance	Years Remaining[1]	Annual Payment[2]
LAFCO UAAL Prepayment	2017	$(30,817)	18	$(23,850)	5	$(5,301)
LAFCO UAAL Prepayment	2019	(31,680)	18	(28,905)	13	(2,829)
LAFCO UAAL Prepayment	2020	(31,963)	18	(29,923)	14	(2,765)
LAFCO UAAL Prepayment	2021	(31,804)	18	(30,397)	15	(2,665)
IHSS UAAL Prepayment	2023	(92,497)	18	(91,433)	17	(7,305)
Subtotal – Special Adjustments				**$(204,508)**		**$(20,865)**

Note: Results may be slightly off due to rounding.

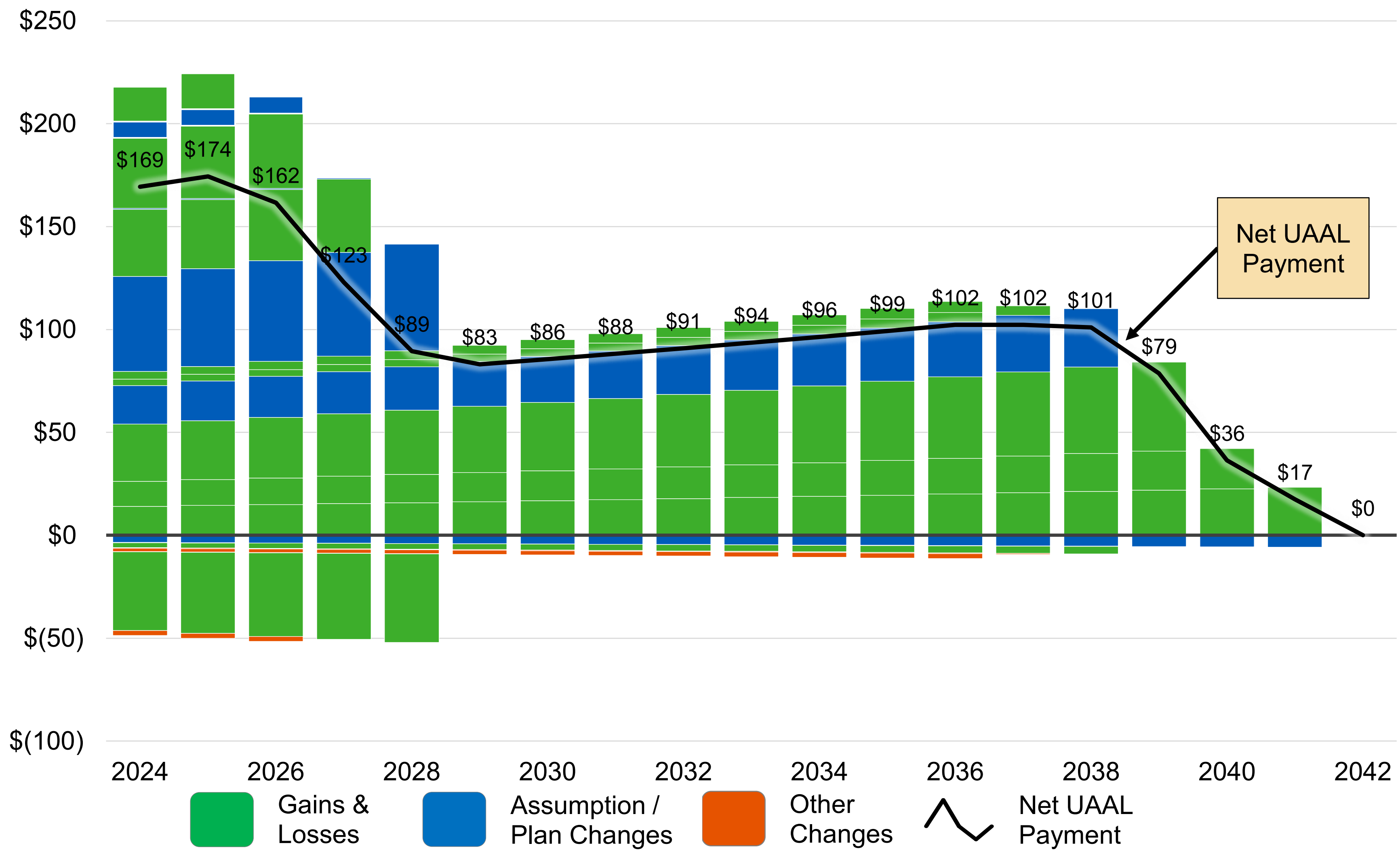
[1] Reflects the adjustment to UAAL amortization periods adopted by the Board in 2023 for amortization layers established between December 31, 2012 and December 31, 2018.

[2] As of middle of year. The annual payment amounts shown for the Special Adjustments represent the credit allocated to the employer to reflect special contributions. These adjustments serve to reduce the UAAL contribution rate for these employers.

Exhibit I: Projection of UAAL balances and payments



Annual Payments Required to Amortize $1,160 Million in Net UAAL as of December 31, 2024
(Excludes Withdrawn Employers, $ in Millions)



Section 4: Actuarial Valuation Basis

Exhibit 1: Actuarial assumptions, methods and models

Rationale for assumptions

The information and analysis used in selecting each assumption that has a significant effect on this actuarial valuation is shown in the January 1, 2021 through December 31, 2023 Actuarial Experience Study report dated April 30, 2025. Unless otherwise noted, all actuarial assumptions and methods shown below apply to all tiers. These assumptions were adopted by the Board.

Net investment return

6.75%; net of investment expenses.

Based on the Actuarial Experience Study referenced above, expected investment expenses (excluding investment manager fees) represent about 0.05% of the actuarial value of assets.

Administrative expenses

1.18% of payroll allocated between the employer and member based on normal cost (before expenses) for the employer and member. This assumption is subject to change each year based on the actual administrative expenses as a percent of actual covered payroll during the calendar year ending on the valuation date.

For the 2024 calendar year, actual administrative expenses were $13,995,564 and actual covered payroll was $1,189,383,959. This results in an administrative expense assumption of 1.18% of payroll, allocated between the employer and member as shown below:

Allocation of Administrative Expense Load Between Employer and Member

Line Description	Average Normal Cost Before Expenses	Weighting for Administrative Expense	Administrative Expense Load
Employer	13.92%	54.74%	0.65%
Member	11.51%	45.26%	0.53%
Total	**25.43%**	**100.00%**	**1.18%**

The basic member rate is increased by the administrative expense allocated to the member. The employer normal cost rate is increased by the same percent of payroll as the basic member rate, while the remaining administrative expense allocated to the employer is used to increase the employer UAAL rate. This methodology is used to maintain a 50:50 sharing of normal cost for those in the PEPRA tiers. The table below shows this allocation.

Allocation of Administrative Expense Load to Contribution Rate Components
(% of Payroll)

Contribution Rate Component	Administrative Expense Load
Employer basic normal cost rate	0.53%
Employer basic UAAL rate	0.12%
Member basic rate	0.53%
Total administrative expense load	**1.18%**

Member contribution crediting rate

6.75%, compounded semi-annually.

Inflation rate

Increases of 2.50% per year.

Cost of Living Adjustment (COLA)

Increases of 2.75% per year.

- The actual COLA granted by CCCERA on April 1, 2025 has been reflected for non-active members in the December 31, 2024 valuation.
- For members that have COLA banks, the COLA banks have been reflected in projected future COLAs.
- Benefits are subject to a maximum COLA per year, which varies based on the member's tier and retirement type.

Maximum COLA

General Membership Tier	Safety Membership Tier	Maximum COLA Per Year	COLA Valued (Before Application of COLA Banks)
• Tier 1 • Tier 3 (non-disability) • Tier 4 • Tier 5 (non-disability)	• Tier A • Tier D	3.00%	2.75%
• Tier 2 • Tier 3 (disability) • Tier 5 (disability)	• N/A	4.00%	2.75%
• Tier 4 and Tier 5 members covered under certain MOUs	• Tier C • Tier E	2.00%	2.00%

Payroll growth

Inflation of 2.50% per year plus “across-the-board” salary increase of 0.50% per year.

The payroll growth assumption is used to amortize the unfunded actuarial accrued liability as a level percentage of payroll.

Increase in Internal Revenue Code Section 401(a)(17) compensation limit

Increase of 2.50% per year from the valuation date.

Increase in Section 7522.10 compensation limit

Increase of 2.50% per year from the valuation date.

Salary increases

The annual rate of compensation increase includes:

- Inflation at 2.50%, plus
- “Across-the-board” salary increase of 0.50% per year, plus
- Merit and promotion increase based on years of service:

Merit and Promotion Increases (%)

Years of Service	General Legacy	General PEPRA	Safety Legacy	Safety PEPRA
Less than 1	11.00	9.00	12.00	10.00
1–2	6.50	6.00	8.50	8.50
2–3	4.75	4.50	5.50	5.50
3–4	3.50	3.25	5.00	5.00
4–5	2.50	2.50	4.00	4.25
5–6	2.00	2.00	3.00	3.25
6–7	1.75	1.70	2.25	2.25
7–8	1.65	1.60	1.75	1.75
8–9	1.65	1.65	1.75	1.75
9–10	1.70	1.70	1.75	1.75
10–11	1.70	1.70	1.60	1.60
11–12	1.25	1.25	1.60	1.60
12–13	1.10	1.10	1.60	1.60
13–14	1.20	1.20	1.70	1.70
14–15	1.30	1.30	1.80	1.80
15–16	1.30	1.30	1.80	1.80
16–17	1.00	1.00	1.50	1.50
17–18	0.90	0.90	1.50	1.50
18–19	0.80	0.80	1.50	1.50
19–20	0.75	0.75	1.75	1.75
20–21	0.75	0.75	1.75	1.75
21–22	0.60	0.60	1.40	1.40
22–23	0.60	0.60	1.30	1.30
23–24	0.60	0.60	1.25	1.25
24–25	0.60	0.60	1.15	1.15
25 and over	0.55	0.55	1.10	1.10

The average total assumed salary increase for active members in the December 31, 2024 actuarial valuation is 4.1%.

Post-retirement mortality rates

The Pub-2016 mortality tables and adjustments as shown below reasonably reflect the mortality experience as of the measurement date. These mortality tables were adjusted to future years using generational projection to reflect future mortality improvement between the measurement date and those years.

Healthy

- **General members**
  - Pub-2016 General Healthy Retiree Amount-Weighted Above-Median Mortality Table (separate tables for males and females) with rates increased by 5% for females, projected generationally with the two-dimensional mortality improvement scale MP-2021.
- **Safety members**
  - Pub-2016 Safety Healthy Retiree Amount-Weighted Above-Median Mortality Table (separate tables for males and females) with rates increased by 5% for males and decreased by 5% for females, projected generationally with the two-dimensional mortality improvement scale MP-2021.

Disabled

- **General members**
  - Pub-2016 Non-Safety Disabled Retiree Amount-Weighted Mortality Table (separate tables for males and females) with rates increased by 5% for males and females, projected generationally with the two-dimensional mortality improvement scale MP-2021.
- **Safety members**
  - Pub-2016 Safety Disabled Retiree Amount-Weighted Mortality Table (separate tables for males and females) with rates increased by 5% for males and decreased by 5% for females, projected generationally with the two-dimensional mortality improvement scale MP-2021.

Beneficiary

- **Beneficiaries not currently in pay status**
  - Pub-2016 General Healthy Retiree Amount-Weighted Above-Median Mortality Table (separate tables for males and females) with rates increased by 5% for females, projected generationally with the two-dimensional mortality improvement scale MP-2021.

- **Beneficiaries in pay status**
  – Pub-2016 Contingent Survivor Amount-Weighted Above-Median Mortality Table (separate tables for males and females) with rates increased by 5% for males and females, projected generationally with the two-dimensional mortality improvement scale MP-2021.

Pre-retirement mortality rates

- **General members**
  – Pub-2016 General Employee Amount-Weighted Above-Median Mortality Table (separate tables for males and females) with rates decreased by 5% for males and females, projected generationally with the two-dimensional mortality improvement scale MP-2021.
- **Safety members**
  – Pub-2016 Safety Employee Amount-Weighted Above-Median Mortality Table (separate tables for males and females), projected generationally with the two-dimensional mortality improvement scale MP-2021.

Pre-Retirement Mortality Rates (%) — Before Generational Projection from 2016

Age	General Male	General Female	Safety Male	Safety Female
20	0.02	0.01	0.02	0.01
25	0.03	0.01	0.03	0.01
30	0.03	0.01	0.04	0.02
35	0.04	0.02	0.04	0.03
40	0.05	0.04	0.05	0.04
45	0.08	0.05	0.07	0.06
50	0.12	0.08	0.10	0.09
55	0.18	0.12	0.16	0.13
60	0.28	0.18	0.27	0.20
65	0.42	0.28	0.45	0.32
70	0.65	0.43	0.84	0.50

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

Mortality rates for member contributions[1]

- **General Members**
  - Pub-2016 General Healthy Retiree Amount-Weighted Above-Median Mortality Table (separate tables for males and females) with rates increased by 5% for females, projected 30 years (from 2016) with the two-dimensional mortality improvement scale MP-2021, weighted 30% male and 70% female.
- **Safety Members**
  - Pub-2016 Safety Healthy Retiree Amount-Weighted Above-Median Mortality Table (separate tables for males and females) with rates increased by 5% for males and decreased by 5% for females, projected 30 years (from 2016) with the two-dimensional mortality improvement scale MP-2021, weighted 85% male and 15% female.

Disability

Disability Incidence Rates (%)

Age	General Tier 1 and Tier 4	General Tier 3 and Tier 5	Safety
22	0.00	0.00	0.10
27	0.00	0.00	0.10
32	0.03	0.02	0.40
37	0.06	0.04	0.55
42	0.20	0.07	0.65
47	0.40	0.09	1.10
52	0.60	0.14	3.75
57	0.60	0.14	3.75
62	0.60	0.14	4.25
67	0.60	0.14	5.00
70 and over	0.60	0.14	5.00

[1] These mortality rates are used for calculating the member basic contribution rates for General Tier 1, Tier 2 and Tier 3, as well as Safety Tier A and Tier C.

Assumed Percentage of Future Disabled Members Receiving a Service-Connected or Non-Service-Connected Disability

Membership Tier	Service-Connected Disabilities	Non-Service-Connected Disabilities
General Tier 1 and Tier 4	70%	30%
General Tier 3 and Tier 5	25%	75%
Safety	100%	0%

Termination

Termination Rates (%)

Years of Service	General	Safety
Less than 1	14.50	9.00
1–2	10.50	7.00
2–3	9.50	6.00
3–4	7.00	5.00
4–5	6.50	3.50
5–6	6.00	3.50
6–7	5.50	3.00
7–8	5.00	2.50
8–9	5.00	2.25
9–10	4.00	2.00
10–11	4.00	2.00
11–12	4.00	2.00
12–13	3.00	2.00
13–14	2.50	1.80
14–15	2.50	1.50
15–16	2.50	1.40
16–17	2.50	1.30
17–18	1.75	1.20
18–19	1.75	1.10
19–20	1.50	1.00
20 and over	1.50	0.25

The member is assumed to receive the greater of a refund of member contributions or the present value of a deferred retirement benefit.

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

Retirement rates

Retirement Rates (%) — General (Legacy)

Age	Tier 1 Enhanced: Less than 30 Years of Service	Tier 1 Enhanced: 30 or More Years of Service	Tier 3 Enhanced: Less than 30 Years of Service	Tier 3 Enhanced: 30 or More Years of Service	Tier 1 Non-Enhanced
49	0.00	0.00	0.00	25.00	0.00
50	4.00	8.00	4.00	10.00	3.00
51	4.00	10.00	3.00	5.00	3.00
52	4.00	10.00	3.25	5.00	3.00
53	4.00	10.00	3.50	5.00	3.00
54	8.00	16.00	5.75	11.00	3.00
55	12.00	30.00	8.00	15.00	10.00
56	12.00	24.00	8.00	10.00	10.00
57	14.00	22.00	8.00	10.00	10.00
58	15.00	22.00	8.50	15.00	10.00
59	18.00	22.00	10.00	20.00	10.00
60	20.00	20.00	11.00	15.00	25.00
61	20.00	20.00	16.00	18.00	15.00
62	22.00	25.00	20.00	25.00	40.00
63	22.00	30.00	20.00	25.00	35.00
64	22.00	30.00	20.00	25.00	30.00
65	30.00	30.00	30.00	32.00	40.00
66	40.00	30.00	32.00	32.00	35.00
67	40.00	30.00	32.00	30.00	35.00
68	40.00	30.00	30.00	30.00	35.00
69	40.00	30.00	30.00	30.00	35.00
70	40.00	30.00	35.00	30.00	35.00
71	35.00	35.00	30.00	30.00	35.00
72	35.00	35.00	30.00	30.00	35.00
73	35.00	35.00	30.00	30.00	35.00
74	35.00	35.00	30.00	30.00	35.00
75 and over	100.00	100.00	100.00	100.00	100.00

Retirement Rates (%) — General (PEPRA)

Age	Tier 4 and Tier 5: Less than 30 Years of Service	Tier 4 and Tier 5: 30 or More Years of Service
52	2.00	2.00
53	2.00	3.00
54	2.00	3.00
55	2.00	4.00
56	3.00	5.00
57	6.00	6.00
58	6.00	6.00
59	6.00	8.00
60	7.00	8.00
61	10.00	12.00
62	12.00	15.00
63	14.00	17.00
64	16.00	20.00
65	20.00	25.00
66	25.00	25.00
67	25.00	25.00
68	25.00	25.00
69	25.00	25.00
70	25.00	30.00
71	30.00	30.00
72	30.00	30.00
73	30.00	30.00
74	30.00	30.00
75 and over	100.00	100.00

Retirement Rates (%) — Safety

Age	Tier A Enhanced: Less than 30 Years of Service	Tier A Enhanced: 30 or More Years of Service	Tier C Enhanced	Tier A Non-Enhanced[1] and Tier D and Tier E
43	5.00	0.00	0.00	0.00
44	5.00	0.00	0.00	0.00
45	5.00	0.00	2.00	0.00
46	5.00	0.00	1.00	0.00
47	5.00	0.00	4.00	0.00
48	10.00	30.00	4.00	0.00
49	20.00	30.00	20.00	0.00
50	22.00	30.00	20.00	5.00
51	20.00	20.00	12.00	4.00
52	16.00	20.00	12.00	4.00
53	16.00	20.00	12.00	6.00
54	16.00	24.00	18.00	8.00
55	16.00	30.00	18.00	20.00
56	18.00	30.00	15.00	20.00
57	18.00	30.00	15.00	15.00
58	18.00	30.00	15.00	15.00
59	18.00	35.00	25.00	22.00
60	18.00	35.00	25.00	25.00
61	20.00	35.00	25.00	25.00
62	20.00	35.00	25.00	35.00
63	20.00	35.00	30.00	40.00
64	35.00	35.00	35.00	40.00
65	35.00	100.00	100.00	100.00
66	50.00	100.00	100.00	100.00
67	50.00	100.00	100.00	100.00
68	50.00	100.00	100.00	100.00
69	50.00	100.00	100.00	100.00
70 and over	100.00	100.00	100.00	100.00

1 There is no longer any Tier A non-enhanced active members after RHFPD was annexed into CCCFPD effective July 1, 2025.

Inactive members

Current and Future Inactive Member Assumptions

Category	% of Future[1] Inactive Members	Annual Salary Increases from Separation Date	Retirement Age
General with reciprocity	20%	3.55%	61
General without reciprocity	80%	N/A	60
Safety with reciprocity	50%	4.10%	53
Safety without reciprocity	50%	N/A	50

Inactive member benefit

Inactive members are assumed to receive the greater of an immediate refund of their member contributions or the present value of a deferred retirement benefit.

Future benefit accruals

1.0 year of service per year for full-time employees. Continuation of current partial service accrual for part-time employees.

Unknown data for members

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

Definition of active members

All active members of CCCERA as of the valuation date.

Form of payment

- All active and inactive members are assumed to elect the unmodified option at retirement.
- There is no explicit assumption for children's benefits.

[1] CCCERA provides the reciprocity status for current deferred vested members in the valuation census data.

Survivor assumptions

Current Active and Inactive Member Eligible Survivor Assumptions

Member Gender	% with Eligible Survivor at Retirement or Pre-Retirement Death	Eligible Survivor Age	Eligible Survivor Gender
Male member	70%	3 years younger than member	Female
Female member	55%	2 years older than member	Male

Active death optional form election

All active members with five or more years of service are assumed to elect the optional settlement 2 allowance that leaves a 100% continuance to their beneficiary upon the member's non-service connected pre-retirement death. For those who are assumed to be not married at pre-retirement death:

Active Death Optional Form Election Assumptions

BeneficiaryType	Percentage %	Age Difference with Active Member
Child	30%	30 years younger
Parent	30%	30 years older
Sibling and other	40%	Same age

Offsets by other plans of the employer for disability benefits

The Plan requires members who retire because of disability from General Tier 3 and General Tier 5 to offset the Plan's disability benefits with other Plans of the employer. We have not assumed any offsets in this valuation.

Leave cashout

General Tier 1, Tier 2 and Tier 3 & Safety Tier A and Tier C

Leave Cashout as Percentage of Final Average Pay

Cost Group	Leave Cashout
Cost Group 1	1.25%
Cost Group 2	0.60% for Tier 2 0.75% for Tier 3
Cost Group 3	5.50%
Cost Group 4	1.75%
Cost Group 5	0.75%
Cost Group 6	0.00%
Cost Group 7	0.50%
Cost Group 8	0.20%
Cost Group 9	0.00%
Cost Group 10	0.00%
Cost Group 11	3.00%
Withdrawn Employers	0.00%

General Tier 4 and Tier 5 & Safety Tier D and Tier E

None.

Service from accumulated sick leave

Additional Service Converted from Accumulated Sick Leave

Retirement Type and Membership Group	Converted Sick Leave as % of Service at Retirement
Service Retirements	
General	1.00%
Safety	1.70%
Disability Retirements	
General	0.08%
Safety	0.90%

Pursuant to Section 31641.01, the cost of this benefit for the non-PEPRA tiers will be charged only to employers and will not affect member contribution rates.

Actuarial cost method

Entry Age Actuarial Cost Method.

Entry age is the age on the valuation date minus the lesser of years of employment or benefit service. Normal cost and actuarial accrued liability are calculated on an individual basis and are based on costs allocated as a level percentage of compensation. The normal cost rate is calculated assuming their entry age is the date they entered service with CCCERA.

Actuarial value of assets

Market value of assets less unrecognized returns in each of the last nine semi-annual accounting periods. Unrecognized returns are equal to the difference between the actual market return and the expected return on the market value and are recognized semi-annually over a five-year period.

Valuation value of assets

The actuarial value of assets reduced by the value of the non-valuation reserves and designations.

Amortization policy

The UAAL as of December 31, 2014 is amortized over separate amortization layers based on the valuations during which each separate layer was previously established.

- Any new UAAL as a result of actuarial gains or losses identified in the annual valuation as of December 31 will be amortized over a period of 18 years.[1]
- Any new UAAL as a result of change in actuarial assumptions or methods will be amortized over a period of 18 years.
- Unless the Board adopts an alternative amortization period after receiving an actuarial analysis:
  - With the exception noted below, the increase in UAAL as a result of any plan amendments will be amortized over a period of 10 years;
  - The entire increase in UAAL resulting from a temporary retirement incentive will be funded in full upon adoption of the incentive. If the increase in UAAL is due to the impact of benefits resulting from additional service permitted in Section 31641.04 of the 1937 CERL (Golden Handshake), the entire increase in UAAL will be funded in full upon adoption of the Golden Handshake.

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

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

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

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

These amortization policy components will generally apply separately to each of CCCERA's UAAL cost groups with the exception that the conditions of Section 7522.52 apply to the total plan.

[1] Starting with the December 31, 2023 valuation, the Board approved an adjustment to the remaining amortization periods for certain amortization layers in order to minimize the contribution rate tail volatility associated with the UAAL layers established as of December 31, 2012 through December 31, 2018. This is done by setting the remaining amortization period for those UAAL layers to six years in the 2023 valuation.

Employer contributions

The recommended employer contributions are provided in *Section 2, Subsection F*. Employer contributions consist of two components:

Normal Cost

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

The contribution rate is expressed as a level percentage of the member's compensation.

Contribution to the UAAL

The annual contribution rate that, if paid annually over the UAAL amortization period, would accumulate to the amount necessary to fully fund the UAAL. Accumulation includes annual crediting of interest at the assumed investment earning rate.

The contribution (or rate credit in the case of a negative UAAL) is calculated to remain as a level percentage of future active member payroll (including payroll for new members as they enter the Association) assuming a constant number of active members. In order to remain as a level percentage of payroll, amortization payments (or credits) are scheduled to increase at the current payroll growth assumption.

The amortization policy is described under the "Amortization policy" noted above.

The General Tier 4 (2% COLA) membership tier in Cost Group 1 continues to not have any actual members as of December 31, 2024. The contribution rates for this cost group have been developed in this valuation assuming that the demographic profiles (e.g., entry age, composition of male versus female, etc.) for this cost group can be approximated by the data profiles of current active members within the PEPRA tiers.

Member contributions

The member contribution rates for all members are provided in *Section 4, Exhibit 3*.

Non-PEPRA Members

Articles 6 and 6.8 of the 1937 Act define the methodology to be used in the calculation of member basic contribution rates for non-PEPRA General and Safety members, respectively. The member's basic contribution rate is determined so that, if paid annually from a member's first year of membership through the prescribed retirement age, would accumulate to the amount necessary to fund an annuity that is equal to:

- 1/120 of one year Final Average Salary per year of service at age 55 for General Tier 1 and Tier 3 Non-Enhanced members
- 1/100 of one year Final Average Salary per year of service at age 50 for Safety Tier A Non-Enhanced members
- 1/120 of one year Final Average Salary per year of service at age 60 for General Tier 1 and Tier 3 Enhanced members
- 1/100 of one year Final Average Salary per year of service at age 50 for Safety Tier A Enhanced members
- 1/100 of three year Final Average Salary per year of service at age 50 for Safety Tier C Enhanced members

Members also pay 50% of the cost-of-living benefit and all member contributions are accumulated at an annual interest rate adopted annually by the Board.

- Note that recently negotiated MOU's for County General members no longer include the 50% employer subvention of the members' basic contributions.
- Districts pay varying portions of the members' basic contributions on a nonrefundable basis.
- For most Safety Tier A employers, Safety members also subvent a portion of the employer rate, currently up to 9% of compensation (depending on their MOU).

Effective with the December 31, 2014 valuation, for determining the cost of the total benefit (i.e., basic and COLA components), the leave cashout assumptions are recognized in the valuation as an employer and member cost. Prior to the December 31, 2014 valuation, for determining the cost of the basic benefit (i.e., non-COLA component), the leave cashout assumptions were recognized in the valuation only as an employer cost and did not affect member contribution rates. In other words, the leave cashout assumptions were only used in establishing COLA member contribution rates.

As a result of including the leave cashout assumptions in the basic member rates for the members of each specific cost group, the COLA member rates are no longer pooled across all members of the same tier. This results in eleven different sets of member contribution rates for each specific cost group.

PEPRA Members

Pursuant to Section 7522.30(a) of the Government Code, PEPRA members are required to contribute at least 50% of the normal cost rate. We have assumed that exactly 50% of the normal cost would be paid by PEPRA members. In addition, we have calculated the total normal cost rate for the PEPRA tiers to the nearest one fiftieth of one percent (i.e., the nearest even one-hundredth) as that will allow the normal cost rate to be shared exactly 50:50 without going beyond two decimal places.

The member contribution rates for all members are provided in *Section 4, Exhibit 3*.

Cost sharing adjustments

Starting with the December 31, 2009 Actuarial Valuation, the Board took action to depool CCCERA's assets, liabilities and normal cost by employer when determining employer contribution rates. The Board action included a review of experience back to December 31, 2002. This did not involve recalculation of any employer rates prior to December 31, 2009. However, it did involve reflecting the separate experience of the employers in each individual cost group back from December 31, 2002 through December 31, 2009. The cost groups are detailed in *Appendix C*. In addition, the Board action called for a discontinuation of certain cost sharing adjustments for both member and employer contribution rates for General Tier 1 and Safety Tier A. Even under the depooling structure, there are a few remaining cost sharing arrangements. Here is a summary of the cost sharing arrangements that were implemented in the December 31, 2009 Actuarial Valuation:

- Smaller employers (less than 50 active members as of December 31, 2009) were pooled with the applicable County tier.
  - For the December 31, 2009 through December 31, 2018 valuations, Safety members from the East Contra Costa Fire Protection District were pooled with Safety members of the Contra Costa County Fire Protection District.
  - Starting with the December 31, 2019 valuation the Safety members from the East Contra Costa Fire Protection District were depooled from the Safety members of the Contra Costa County Fire Protection District based on AAL.
  - Starting with the December 31, 2021 valuation the General and Safety members from the East Contra Costa Fire Protection District have become General and Safety members of Contra Costa County Fire Protection District, effective with the July 1, 2022 annexation of East Contra Costa Fire Protection District into Contra Costa County Fire Protection District.
  - Effective July 1, 2025, Rodeo-Hercules Fire Protection District was annexed into Contra Costa County Fire Protection District. Consistent with the annexation, starting with the December 31, 2024 valuation, the General and Safety members from the

Rodeo-Hercules Fire Protection District have become General and Safety members of Contra Costa County Fire Protection District.

- Due to a statutory requirement, the Superior Court was pooled with the County regardless of how many members the Court has.
- UAAL costs are pooled between Cost Group 1 and Cost Group 2 which represent General County and Small Districts.
- UAAL costs are pooled between Cost Group 7 and Cost Group 9 which represent Safety County.

Additional contribution rate adjustments

Adjustments are made to the UAAL amounts for Local Agency Formation Commission (LAFCO) and In-Home Supportive Services Authority (IHSS) to account for special contributions that have previously been made. These adjustments serve to reduce the UAAL contribution rate for these employers.

The outstanding balances of these adjustments as of December 31, 2024 are as follows:

Contribution Component	LAFCO General[1]	IHSS General
Basic	$113,075	$68,575
COLA	0	22,858

Internal Revenue Code Section 415

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

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

In particular, Section 415(b) of the IRC limits the maximum annual benefit payable at the Normal Retirement Age to a dollar limit of $160,000 indexed for inflation. That limit is $280,000 for 2025. Normal Retirement Age for these purposes is age 62. These are the

[1] LAFCO made several UAAL prepayments in past valuations. Those prepayments have been amortized over 18 years from the date they were made and allocated to provide Basic and COLA rate credits based on the then current Basic and COLA UAAL rates before the prepayments. Effective with the December 31, 2022 valuation, we re-allocated the outstanding balance of those prepayment credits so that the COLA UAAL rate for LAFCO would be the same as the other employers in Cost Group 1.

limits in simplified terms. They must be adjusted based on each participant's circumstances, for such things as age at retirement, form of benefits chosen and after tax contributions.

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

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

Contribution rates determined in this valuation have not been reduced for the Section 415 limitations. However, it is anticipated that PEPRA members will not be limited in the future due to the PEPRA compensation limit applied in the determination of their benefit. Actual limitations will result in actuarial gains as they occur.

Models

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. 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.

Justification for change in actuarial assumptions, methods or models

Based on past experience and future expectations, the following assumptions have changed since the prior valuation. Previously these assumptions were as follows:

Administrative expenses (prior assumption)

1.17% of payroll allocated between the employer and member based on normal cost (before expenses) for the employer and member. This assumption is subject to change each year based on the actual administrative expenses as a percent of actual covered payroll during the calendar year ending on the valuation date.

Salary increases (prior assumption)

The annual rate of compensation increase includes:

- Inflation at 2.50%, plus
- “Across-the-board” salary increase of 0.50% per year, plus
- Merit and promotion increase based on years of service:

Merit and Promotion Increases (%)

Years of Service	General	Safety
Less than 1	11.00	12.00
1–2	6.50	8.50
2–3	4.75	5.50
3–4	3.50	5.00
4–5	2.50	4.00
5–6	2.00	3.00
6–7	1.75	2.25
7–8	1.65	1.75
8–9	1.45	1.50
9–10	1.35	1.45
10–11	1.30	1.40
11–12	1.10	1.35
12–13	1.00	1.30
13–14	0.90	1.25
14–15	0.80	1.25
15–16	0.75	1.25
16–17	0.70	1.25
17–18	0.65	1.25
18–19	0.60	1.25
19–20	0.55	1.25
20 and over	0.50	1.00

Post-retirement mortality rates (prior assumption)

The Pub-2010 mortality tables and adjustments as shown below reasonably reflect the mortality experience as of the measurement date. These mortality tables were adjusted to future years using the generational projection to reflect future mortality improvement between the measurement date and those years.

Healthy

- **General members**
  - Pub-2010 General Healthy Retiree Amount-Weighted Above-Median Mortality Table (separate tables for males and females), projected generationally with the two-dimensional mortality improvement scale MP-2021.
- **Safety members**
  - Pub-2010 Safety Healthy Retiree Amount-Weighted Above-Median Mortality Table (separate tables for males and females) increased by 5% for males and decreased by 5% for females, projected generationally with the two-dimensional mortality improvement scale MP-2021.

Disabled

- **General members**
  - Pub-2010 Non-Safety Disabled Retiree Amount-Weighted Mortality Table (separate tables for males and females) increased by 5% for males and unadjusted for females, projected generationally with the two-dimensional mortality improvement scale MP-2021.
- **Safety members**
  - Pub-2010 Safety Disabled Retiree Amount-Weighted Mortality Table (separate tables for males and females) increased by 5% for males and unadjusted for females, projected generationally with the two-dimensional mortality improvement scale MP-2021.

Beneficiary

- **Beneficiaries not currently in pay status**
  - Pub-2010 General Healthy Retiree Amount-Weighted Above-Median Mortality Table (separate tables for males and females), projected generationally with the two-dimensional mortality improvement scale MP-2021.

- **Beneficiaries in pay status**
  - Pub-2010 Contingent Survivor Amount-Weighted Above-Median Mortality Table (separate tables for males and females) increased by 5% for males and females, projected generationally with the two-dimensional mortality improvement scale MP-2021.

Pre-retirement mortality rates (prior assumption)

- **General members**
  - Pub-2010 General Employee Amount-Weighted Above-Median Mortality Table (separate tables for males and females), projected generationally with the two-dimensional mortality improvement scale MP-2021.
- **Safety members**
  - Pub-2010 Safety Employee Amount-Weighted Above-Median Mortality Table (separate tables for males and females), projected generationally with the two-dimensional mortality improvement scale MP-2021.

Pre-Retirement Mortality Rates (%) — Before Generational Projection from 2010

Age	General Male	General Female	Safety Male	Safety Female
20	0.04	0.01	0.04	0.02
25	0.02	0.01	0.03	0.02
30	0.03	0.01	0.04	0.02
35	0.04	0.02	0.04	0.03
40	0.06	0.03	0.05	0.04
45	0.09	0.05	0.07	0.06
50	0.13	0.08	0.10	0.08
55	0.19	0.11	0.15	0.11
60	0.28	0.17	0.23	0.14
65	0.41	0.27	0.35	0.20
70	0.61	0.44	0.66	0.39

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

Mortality rates for member contributions[1] (prior assumption)

- **General Members**
  - Pub-2010 General Healthy Retiree Amount-Weighted Above-Median Mortality Table (separate tables for males and females), projected 30 years with the two-dimensional mortality improvement scale MP-2021, weighted 30% male and 70% female.
- **Safety Members**
  - Pub-2010 Safety Healthy Retiree Amount-Weighted Above-Median Mortality Table (separate tables for males and females) increased by 5% for males and decreased by 5% for females, projected 30 years with the two-dimensional mortality improvement scale MP-2021, weighted 85% male and 15% female.

Disability (prior assumption)

Disability Incidence Rates (%)

Age	General Tier 1 and Tier 4	General Tier 3 and Tier 5	Safety
20	0.01	0.01	0.06
25	0.02	0.02	0.16
30	0.04	0.03	0.32
35	0.08	0.05	0.46
40	0.22	0.07	0.56
45	0.36	0.09	0.96
50	0.52	0.12	2.88
55	0.60	0.16	4.00
60	0.60	0.18	4.30
65	0.60	0.18	4.50
70	0.60	0.18	4.50

[1] These mortality rates are used for calculating the member basic contribution rates for General Tier 1, Tier 2 and Tier 3, as well as Safety Tier A and Tier C.

Assumed Percentage of Future Disabled Members Receiving a Service-Connected or Non-Service-Connected Disability

Membership Tier	Service-Connected Disabilities	Non-Service-Connected Disabilities
General Tier 1 and Tier 4	65%	35%
General Tier 3 and Tier 5	25%	75%
Safety	100%	0%

Termination (prior assumption)

Termination Rates (%)

Years of Service	General	Safety
Less than 1	14.00	11.00
1–2	9.50	9.00
2–3	9.00	7.00
3–4	6.25	5.00
4–5	6.25	4.00
5–6	5.00	3.50
6–7	4.50	3.00
7–8	4.00	2.50
8–9	3.75	2.50
9–10	3.75	2.00
10–11	3.50	2.00
11–12	3.25	2.00
12–13	2.75	2.00
13–14	2.50	1.80
14–15	2.50	1.60
15–16	2.25	1.50
16–17	2.25	1.40
17–18	2.00	1.30
18–19	2.00	1.20
19–20	1.50	1.00
20 and over	1.50	0.50

The member is assumed to receive the greater of a refund of member contributions or the present value of a deferred retirement benefit.

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

Retirement rates (prior assumption)

Retirement Rates (%) — General

Age	Tier 1 Enhanced: Less than 30 Years of Service	Tier 1 Enhanced: 30 or More Years of Service	Tier 3 Enhanced: Less than 30 Years of Service	Tier 3 Enhanced: 30 or More Years of Service	Tier 1 Non-Enhanced	Tier 4 and Tier 5
49	0.00	0.00	0.00	25.00	0.00	0.00
50	4.00	10.00	4.00	10.00	3.00	0.00
51	4.00	10.00	3.00	5.00	3.00	0.00
52	4.00	10.00	3.00	5.00	3.00	2.00
53	4.00	10.00	4.00	5.00	3.00	3.00
54	10.00	16.00	6.00	11.00	3.00	3.00
55	15.00	24.00	8.00	15.00	10.00	4.00
56	15.00	24.00	8.00	10.00	10.00	5.00
57	15.00	24.00	8.00	10.00	10.00	6.00
58	15.00	22.00	9.00	15.00	10.00	6.00
59	18.00	22.00	10.00	15.00	10.00	8.00
60	20.00	20.00	12.00	15.00	25.00	8.00
61	20.00	20.00	16.00	20.00	15.00	12.00
62	25.00	30.00	20.00	25.00	40.00	15.00
63	25.00	30.00	20.00	25.00	35.00	17.00
64	25.00	30.00	25.00	28.00	30.00	20.00
65	35.00	35.00	30.00	32.00	40.00	25.00
66	40.00	40.00	32.00	32.00	35.00	25.00
67	40.00	40.00	30.00	30.00	35.00	25.00
68	40.00	40.00	30.00	30.00	35.00	25.00
69	40.00	40.00	30.00	30.00	35.00	25.00
70	40.00	40.00	35.00	35.00	40.00	35.00
71	35.00	35.00	35.00	35.00	40.00	35.00
72	35.00	35.00	35.00	35.00	40.00	35.00
73	35.00	35.00	35.00	35.00	50.00	35.00
74	35.00	35.00	35.00	35.00	50.00	35.00
75 and over	100.00	100.00	100.00	100.00	100.00	100.00

Retirement Rates (%) — Safety

Age	Tier A Enhanced: Less than 30 Years of Service	Tier A Enhanced: 30 or More Years of Service	Tier C Enhanced	Tier A Non-Enhanced and Tier D and Tier E
45	7.00	7.00	2.00	0.00
46	5.00	5.00	1.00	0.00
47	7.00	7.00	4.00	0.00
48	10.00	30.00	4.00	0.00
49	22.00	30.00	12.00	0.00
50	22.00	30.00	20.00	5.00
51	22.00	22.00	18.00	4.00
52	16.00	20.00	15.00	4.00
53	16.00	22.00	15.00	5.00
54	16.00	24.00	18.00	6.00
55	16.00	30.00	18.00	15.00
56	18.00	30.00	15.00	15.00
57	18.00	30.00	15.00	15.00
58	20.00	35.00	25.00	15.00
59	20.00	35.00	25.00	20.00
60	20.00	35.00	25.00	20.00
61	20.00	35.00	25.00	20.00
62	20.00	35.00	25.00	20.00
63	25.00	35.00	30.00	20.00
64	35.00	35.00	35.00	25.00
65 and over	100.00	100.00	100.00	100.00

Inactive members (prior assumption)

Current and Future Inactive Member Assumptions

Category	% of Future[1] Deferred Vested Members	Annual Salary Increases from Separation Date	Retirement Age
General with reciprocity	40%	3.50%	60
General without reciprocity	60%	N/A	60
Safety with reciprocity	70%	4.00%	53
Safety without reciprocity	30%	N/A	51

Unknown data for members (prior assumption)

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

Spousal assumptions (prior assumption)

Current Active and Inactive Member Spousal Assumptions

Member Gender	% with Spouse at Retirement or Pre-Retirement Death	Spouse Age	Spouse Gender
Male member	65%	3 years younger than member	Female
Female member	50%	2 years older than member	Male

[1] CCCERA provides the reciprocity status for current deferred vested members in the valuation census data.

Leave cashout (prior assumption)

General Tier 1, Tier 2 and Tier 3 & Safety Tier A and Tier C

Leave Cashout as Percentage of Final Average Pay

Cost Group	Leave Cashout
Cost Group 1	1.00%
Cost Group 2	0.50% for Tier 2 0.75% for Tier 3
Cost Group 3	5.25%
Cost Group 4	1.00%
Cost Group 5	1.00%
Cost Group 6	0.00%
Cost Group 7	0.50%
Cost Group 8	0.25%
Cost Group 9	0.00%
Cost Group 10	0.25%
Cost Group 11	3.00%
Cost Group 12	1.75%
Withdrawn Employers	0.00%

General Tier 4 and Tier 5 & Safety Tier D and Tier E

None.

Service from accumulated sick leave (prior assumption)

Additional Service Converted from Accumulated Sick Leave

Retirement Type and Membership Group	Converted Sick Leave as % of Service at Retirement
Service Retirements	
General	1.00%
Safety	1.70%
Disability Retirements	
General	0.06%
Safety	1.00%

Pursuant to Section 31641.01, the cost of this benefit for the non-PEPRA tiers will be charged only to employers and will not affect member contribution rates.

Exhibit 2: Summary of Plan provisions

This exhibit summarizes the major provisions of the Plan included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions. If the Association should find the plan summary not in accordance with the actual provisions, the Association should alert the actuary so they can both be sure the proper provisions are valued.

Plan year

January 1 through December 31

Membership eligibility

Membership with CCCERA begins on the first day of the month following your employment in an eligible position by the County or a participating employer.

Membership Tier	Plan Provision
General Tier 1	• General members hired before July 1, 1980 who elected not to transfer to Tier 2. • Certain General members with membership dates before January 1, 2013 hired by specific employers who did not adopt Tier 2 are placed in Tier 1.
General Tier 2	• Most General members hired on or after August 1, 1980 and all General members hired before July 1, 1980 and elected to transfer to Tier 2. • Effective October 1, 2002, for the County, Tier 2 was eliminated and all County employees (excluding CNA employees) in Tier 2 were placed in Tier 3. • Effective January 1, 2005, all CNA employees in Tier 2 were placed in Tier 3.
General Tier 3	• General members with membership dates before January 1, 2013 who were not placed in Tier 1 are placed in Tier 3.
General Tier 4 and Tier 5	• General members with membership dates on or after January 1, 2013 hired by specific employers who did not adopt Tier 2 are placed in Tier 4. • All other General members with membership dates on or after January 1, 2013 are placed in Tier 5. • These members are designated as PEPRA members and are subject to the provisions of California Government Code 7522 et. seq.
Safety Tier A and Tier C	• Safety members with membership dates before January 1, 2013. • County Sheriff's Department Safety members hired on or after January 1, 2007, but before January 1, 2013 are placed in Safety Tier C Enhanced.

Safety Tier D and Tier E	• Safety members with membership dates on or after January 1, 2013. • Safety members from certain bargaining units are placed in Safety Tier E. • These members are designated as PEPRA members and are subject to the provisions of California Government Code 7522 et. seq.

Final average compensation and service for benefit determination

Final Compensation and Service	Plan Provision
Final average compensation	
General Tier 1 and Tier 3 (non-disability) & Safety Tier A	Highest consecutive 12 months of compensation earnable. (§31462.1) (FAS1)
General Tier 2 and Tier 3 (disability) & Safety Tier C	Highest consecutive 36 months of compensation earnable. (§31462) (FAS3)
General Tier 4 and Tier 5 & Safety Tier D and Tier E	Highest consecutive 36 months of pensionable compensation. (§7522.10(c), §7522.32 and §7522.34) (FAS3)
Compensation limit	
General Tier 1, Tier 2 and Tier 3 & Safety Tier A and Tier C	For members with membership dates on or after January 1, 1996, compensation earnable is limited to Internal Revenue Code Section 401(a)(17). The limit is $350,000 for calendar year 2025 and is indexed for inflation on an annual basis.
General Tier 4 and Tier 5 & Safety Tier D and Tier E	For members with membership dates on or after January 1, 2013, pensionable compensation is limited to California Government Code 7522.10(c). The limit is $155,081 for calendar year 2025 ($186,096, if not enrolled in Social Security) and is indexed for inflation on an annual basis.
Social Security primary insurance amount	
General Tier 2	Estimated Social Security award at age 62 assuming level future earnings. (PIA)
Service	
All members	Years of service are generally based on a member's employment during a period of time for which deductions are made from their compensation. Includes accumulated sick leave as of the date of retirement. (§31641.01) (Yrs) A maximum of 30 years of service (Yrs30) is used in the Social Security offset portion of the General Tier 2 benefit formula.

Service retirement benefits

Provision by Tier	Service Retirement Plan Provision
Eligibility	
General Tier 1, Tier 2, and Tier 3	Age 50 with 10 years of service, or age 70 regardless of service or after 30 years of service regardless of age. (§31672)
General Tier 4 and Tier 5	Age 52 with 5 years of service or age 70 regardless of service. (§7522.20(a) and §31672.3)
Safety Tier A and Tier C	Age 50 with 10 years of service, or age 70 regardless of service or after 20 years of service regardless of age. (§31663.25)
Safety Tier D and Tier E	Age 50 with 5 years of service or age 70 regardless of service. (§7522.25(a)) and §31672.3)
Benefit amount	
All members	The benefit formula for all members varies by membership tier and retirement age. See the tables below and on the following pages for a selection of benefit formulas at various ages for each membership tier.
Maximum benefit	
General Tier 1 and Tier 3 & Safety Tier A and Tier C	100% of final compensation. (§31676.11, §31676.16, §31664, §31664.1)
General Tier 2, Tier 4 and Tier 5 & Safety Tier D and Tier E	None.

Service retirement benefit formula (sample ages)

The offsets shown in all benefit formulas only apply to members integrated with Social Security.

Tier and Retirement Age	Service Retirement Benefit Formula by Tier
General Tier 1 (Non-Enhanced) (§31676.11)	
50	1.24% × (FAS1 – $1,400) × Yrs
55	1.67% × (FAS1 – $1,400) × Yrs
60	2.18% × (FAS1 – $1,400) × Yrs
62	2.35% × (FAS1 – $1,400) × Yrs
65 and over	2.61% × (FAS1 – $1,400) × Yrs

Tier and Retirement Age	Service Retirement Benefit Formula by Tier
General Tier 1 and Tier 3 (Enhanced) (§31676.16)	
50	1.43% × (FAS1 – $1,400) × Yrs
55	2.00% × (FAS1 – $1,400) × Yrs
60	2.26% × (FAS1 – $1,400) × Yrs
62	2.37% × (FAS1 – $1,400) × Yrs
65 and over	2.42% × (FAS1 – $1,400) × Yrs
General Tier 2 (§31752)	
50	0.83% × FAS3 × Yrs – 0.57% × Yrs30 × PIA
55	1.13% × FAS3 × Yrs – 0.87% × Yrs30 × PIA
60	1.43% × FAS3 × Yrs – 1.37% × Yrs30 × PIA
62	1.55% × FAS3 × Yrs – 1.67% × Yrs30 × PIA
65 and over	1.73% × FAS3 × Yrs – 1.67% × Yrs30 × PIA
General Tier 4 and Tier 5 (§7522.20(a))	
52	1.00% × FAS3 × Yrs
55	1.30% × FAS3 × Yrs
60	1.80% × FAS3 × Yrs
62	2.00% × FAS3 × Yrs
65	2.30% × FAS3 × Yrs
67 and over	2.50% × FAS3 × Yrs
Safety Tier A (Non-Enhanced) (§31664)	
50	2.00% × FAS1 × Yrs
55 and over	2.62% × FAS1 × Yrs
Safety Tier A (Enhanced) (§31664.1)	
50 and over	3.00% × FAS1 × Yrs
Safety Tier C (Enhanced) (§31664.1)	
50 and over	3.00% × FAS3 × Yrs

Tier and Retirement Age	Service Retirement Benefit Formula by Tier
Safety Tier D and Tier E (§7522.25(d))	
50	2.00% × FAS3 × Yrs
55	2.50% × FAS3 × Yrs
57 and over	2.70% × FAS3 × Yrs

Disability benefits

Non-service connected disability

Provision by Membership	Non-Service Connected Disability Plan Provision
Eligibility	
General Tier 1 and Tier 4 & Safety	Five years of service. (§31720)
General Tier 2, Tier 3 and Tier 5	Ten years of service. (§31720.1)
Benefit amount	
General Tier 1 and Tier 4	1.5% per year of service. If the benefit does not exceed one-third of final compensation, the service is projected to age 65, but the total projected benefit cannot be more than one-third of final compensation. (§31727) If the member is eligible to receive a service retirement benefit, 100% of the service retirement benefit will be paid if greater than the above.
General Tier 2, Tier 3 and Tier 5	40% of final compensation plus 10% of final compensation used in the benefit determination for each minor child (maximum of three). (§31727.01) If the member is eligible to receive a service retirement benefit, 100% of the service retirement benefit will be paid if greater than the above.
Safety	1.8% per year of service. If the benefit does not exceed one-third of final compensation, the service is projected to age 55, but the total projected benefit cannot be more than one-third of final compensation. (§31727.2) If the member is eligible to receive a service retirement benefit, 100% of the service retirement benefit will be paid if greater than the above.
Offset	
General Tier 1 and Tier 4 & Safety	None.

General Tier 2, Tier 3 and Tier 5	Disability benefits are offset by other plans of the employer except Workers Compensation and Social Security.

Service connected disability

Provision by Membership	Service Connected Disability Plan Provision
Eligibility	
All members	No age or service requirements. (§31720)
Benefit amount	
General Tier 1 and Tier 4 & Safety	50% of the final compensation. (§31727.4) If the member is eligible to receive a service retirement benefit, 100% of the service retirement benefit will be paid if greater than the above.
General Tier 2, Tier 3 and Tier 5	40% of final compensation plus 10% of final compensation for each minor child (maximum of three). (§31727.01) If the member is eligible to receive a service retirement benefit, 100% of the service retirement benefit will be paid if greater than the above.
Offset	
General Tier 1 and Tier 4 & Safety	None.
General Tier 2, Tier 3 and Tier 5	Disability benefits are offset by other plans of the Employer except Workers Compensation and Social Security.

Pre-retirement death benefits

Basic death benefit

Provision by Tier	Basic Death Benefit Plan Provision
Eligibility	
All members	None.
Benefit amount	
General Tier 1, Tier 3, Tier 4 and Tier 5 & Safety	Refund of employee contributions with interest, plus one month's compensation for each year of service, to a maximum of six month's compensation. (§31781)

General Tier 2	Refund of employee contributions with interest, plus $2,000 lump sum benefit offset by any Social Security payment. (§31781.01)

Optional death allowance

Provision by Tier	Optional Death Allowance Plan Provision
Eligibility	
General Tier 1 and Tier 4 & Safety	Five years of service.
General Tier 2, Tier 3 and Tier 5	Ten years of service.
Benefit amount (non-service connected death)	
All members	Option 2 (100% continuance) of non-service connected disability benefit (or service retirement benefit, if eligible) payable to designated beneficiary.
Benefit amount (service-connected death)	
General Tier 1, Tier 3, Tier 4 and Tier 5 & Safety	50% of final compensation payable to spouse. (§31787) If the member is eligible to receive a service retirement benefit, 100% of the service retirement benefit will be paid if greater than the above.
General Tier 2	60% of service or disability retirement benefit (minimum benefit is 24% of final compensation) plus, for each minor child, 10% of the allowance otherwise paid to the member. Family benefit has a minimum of 60% of the member's allowance and a maximum of 100% of member's allowance.

Post-retirement death benefits

Service retirement or non-service connected disability retirement

Provision by Tier	Post-Retirement Death (Service Retirement or Non-Service Connected Disability Retirement) Benefit Plan Provision
General Tier 1, Tier 3, Tier 4 and Tier 5 & Safety	• Unless another option was selected at retirement, 60% of member's unmodified allowance continues to eligible spouse. – An eligible spouse is a surviving spouse who was married to the member at least one year prior to the member's retirement or at least two years prior to the date of death and has attained age 55 on or prior to the date of death. (§31760.2)

	– An additional lump sum benefit of $5,000 is payable to the member's beneficiary. (§31789.5)
General Tier 2	• Unless another option was selected at retirement, 60% of member's unmodified allowance continues to eligible spouse plus 20% of allowance to each minor child. (§31789.11) – Maximum benefit is 100% of allowance. – An additional lump sum benefit of $5,000 (§31789.5) plus $2,000 less any Social Security lump sum payment (§31789.01) are payable to the member's beneficiary.

Service connected disability

Provision by Tier	Post-Retirement Death (Service Connected Disability Retirement) Benefit Plan Provision
General Tier 1, Tier 3, Tier 4 and Tier 5 & Safety	• Unless another option was selected at retirement, 100% of member's allowance continued to eligible spouse. (§31786) – An additional lump sum benefit of $5,000 is payable to the member's beneficiary. (§31789.5)
General Tier 2	• Unless another option was selected at retirement, 60% of member's unmodified allowance continues to eligible spouse plus 20% of allowance to each minor child. (§31789.11) – Maximum benefit is 100% of allowance. – An additional lump sum benefit of $5,000 (§31789.5) plus $2,000 less any Social Security lump sum payment (§31789.01) are payable to the member's beneficiary.

Withdrawal benefits

Provision by Tier	Withdrawal Benefit Plan Provision
Eligibility	
All members	No age or service requirements.
Vested members	Five years of service
Benefit amount	
All members	Refund of accumulated employee contributions with interest or earned benefit at age 70. (§31628)
Vested members	If contributions left on deposit, entitled to earned benefits commencing at any time after eligible to retire. (§31700)

Post-retirement cost-of-living adjustments

Provision by Tier	Post-Retirement Cost-of-Living Adjustment Plan Provision
General Tier 1, Tier 3 (non-disability), Tier 4 and Tier 5 (non-disability) & Safety Tier A and Tier D	Future changes based on Consumer Price Index to a maximum of 3% per year, excess “banked”.
General Tier 2, Tier 3 (disability) and Tier 5 (disability)	Future changes based on Consumer Price Index to a maximum of 4% per year, excess “banked”.
General Tier 4 and Tier 5 (under certain MOUs) & Safety Tier C and Tier E	Future changes based on Consumer Price Index to a maximum of 2% per year, excess “banked”.

Member contributions

Please refer to *Section 4, Exhibit 3* for specific rates.

Provision by Tier	Member Contribution Plan Provision
General Tier 1 and Tier 3 (Non-Enhanced)	
Basic contributions	Entry-age based rates that provide for one-half of the §31676.11 benefit payable at age 55.
Cost-of-living contributions	Entry-age based rates that provide for one-half of future cost-of-living costs.
General Tier 1 and Tier 3 (Enhanced)	
Basic contributions	Entry-age based rates that provide for an annuity at age 60 equal to 1/120 of FAS1.
Cost-of-living contributions	Entry-age based rates that provide for one-half of future cost-of-living costs.
General Tier 4 and Tier 5	
Contributions	50% of the total normal cost rate.
Safety Tier A (Non-Enhanced)	
Basic contributions	Entry-age based rates that provide for one-half of the §31664 benefit payable at age 50.
Cost-of-living contributions	Entry-age based rates that provide for one-half of future cost-of-living costs.
Safety Tier A (Enhanced)	
Basic contributions	Entry-age based rates that provide for an annuity at age 50 equal to 1/100 of FAS1.
Cost-of-living contributions	Entry-age based rates that provide for one-half of future cost-of-living costs.
Safety Tier C (Enhanced)	
Basic contributions	Entry-age based rates that provide for an annuity at age 50 equal to 1/100 of FAS3.

Cost-of-living contributions	Entry-age based rates that provide for one-half of future cost-of-living costs.
Safety Tier D and Tier E	
Contributions	50% of the total normal cost rate.

Other information

- Transfers from Tier 1 to Tier 2 were made on an individual voluntary irrevocable basis.
  - Credit is given under Tier 2 for future service only.
  - The cost-of-living adjustment maximum is 4% only for the credit under Tier 2.
  - Transferred Tier 2 members keep the five-year requirement for non-service connected disability.
- Those who were members on or before March 7, 1973 and Safety members with membership dates on or before January 1, 2013 will be exempt from paying member contributions after 30 years of service.

Plan provisions not valued

- Additional $5,000 lump sum post-retirement death benefit (except for $2,000 for General Tier 2 members paid out of the valuation value of assets) payable to a member's beneficiary.
  - This benefit is paid from a reserve that is not included in the valuation value of assets and is subject at all times to the availability of funds.

Changes in Plan provisions

The following change in Plan Provisions has been reflected in the current valuation.

As part of the annexation of Rodeo-Hercules Fire Protection District (RHFPD) into Contra Costa County Fire Protection District (CCCFPD), RHFPD members covered under Safety Tier A Non-enhanced have been moved to CCCFPD Safety Tier A Enhanced and receive Tier A enhanced benefit for future service only effective July 1, 2025.

Also, we understand that RHFPD's members will be governed by CCCFPD's employment rules after the annexation and some members in the PEPRA 3% COLA tier may be changed to the PEPRA 2% COLA tier based on their membership dates. The actual PEPRA tier assignments for the RHFPD PEPRA members will be reflected in the December 31, 2025 valuation when the actual tier assignments are provided.

Exhibit 3: Member contribution rates

Cost Group 1 (General) — Member Contribution Rates (Membership before January 1, 2013)

(% of Monthly Payroll)

Entry Age	Basic First $350	Basic Over $350	COLA First $350	COLA Over $350	Total First $350	Total Over $350
15	3.88%	5.55%	1.82%	2.73%	5.70%	8.28%
16	3.96%	5.68%	1.87%	2.80%	5.83%	8.48%
17	4.05%	5.81%	1.91%	2.87%	5.96%	8.68%
18	4.14%	5.94%	1.96%	2.94%	6.10%	8.88%
19	4.20%	6.04%	2.00%	3.00%	6.20%	9.04%
20	4.28%	6.15%	2.04%	3.06%	6.32%	9.21%
21	4.34%	6.25%	2.07%	3.11%	6.41%	9.36%
22	4.42%	6.37%	2.12%	3.18%	6.54%	9.55%
23	4.50%	6.48%	2.16%	3.24%	6.66%	9.72%
24	4.57%	6.59%	2.20%	3.30%	6.77%	9.89%
25	4.65%	6.71%	2.24%	3.36%	6.89%	10.07%
26	4.73%	6.83%	2.29%	3.43%	7.02%	10.26%
27	4.81%	6.95%	2.33%	3.49%	7.14%	10.44%
28	4.89%	7.07%	2.37%	3.56%	7.26%	10.63%
29	4.98%	7.20%	2.42%	3.63%	7.40%	10.83%
30	5.06%	7.33%	2.47%	3.70%	7.53%	11.03%
31	5.15%	7.46%	2.51%	3.77%	7.66%	11.23%
32	5.24%	7.59%	2.56%	3.84%	7.80%	11.43%
33	5.33%	7.73%	2.61%	3.92%	7.94%	11.65%
34	5.42%	7.87%	2.66%	3.99%	8.08%	11.86%
35	5.52%	8.01%	2.71%	4.07%	8.23%	12.08%
36	5.61%	8.15%	2.76%	4.14%	8.37%	12.29%
37	5.71%	8.30%	2.82%	4.23%	8.53%	12.53%
38	5.82%	8.46%	2.87%	4.31%	8.69%	12.77%
39	5.91%	8.60%	2.93%	4.39%	8.84%	12.99%
40	6.01%	8.75%	2.98%	4.47%	8.99%	13.22%

Entry Age	Basic First $350	Basic Over $350	COLA First $350	COLA Over $350	Total First $350	Total Over $350
41	6.12%	8.91%	3.04%	4.56%	9.16%	13.47%
42	6.21%	9.05%	3.09%	4.63%	9.30%	13.68%
43	6.31%	9.20%	3.14%	4.71%	9.45%	13.91%
44	6.39%	9.32%	3.19%	4.78%	9.58%	14.10%
45	6.48%	9.45%	3.23%	4.85%	9.71%	14.30%
46	6.57%	9.59%	3.29%	4.93%	9.86%	14.52%
47	6.68%	9.75%	3.34%	5.01%	10.02%	14.76%
48	6.78%	9.90%	3.40%	5.10%	10.18%	15.00%
49	6.85%	10.01%	3.44%	5.16%	10.29%	15.17%
50	6.94%	10.15%	3.49%	5.23%	10.43%	15.38%
51	7.03%	10.28%	3.53%	5.30%	10.56%	15.58%
52	7.14%	10.44%	3.59%	5.39%	10.73%	15.83%
53	7.23%	10.58%	3.65%	5.47%	10.88%	16.05%
54	7.34%	10.75%	3.71%	5.56%	11.05%	16.31%
55	7.45%	10.91%	3.76%	5.64%	11.21%	16.55%
56	7.49%	10.97%	3.79%	5.68%	11.28%	16.65%
57	7.48%	10.95%	3.78%	5.67%	11.26%	16.62%
58	7.44%	10.89%	3.75%	5.63%	11.19%	16.52%
59 and over	7.27%	10.64%	3.67%	5.50%	10.94%	16.14%

Interest:	6.75% per annum
Mortality:	See *Section 4, Exhibit 1*
Salary increase:	Inflation (2.50%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit 1*)
Administrative expense:	0.53% of payroll added to Basic rates
Leave cashout:	1.25%
COLA loading factor:	54.38%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

Cost Group 2 (General) — Member Contribution Rates (Membership before January 1, 2013)

(% of Monthly Payroll)

Entry Age	Basic First $350	Basic Over $350	COLA First $350	COLA Over $350	Total First $350	Total Over $350
15	3.86%	5.53%	1.56%	2.34%	5.42%	7.87%
16	3.94%	5.65%	1.60%	2.40%	5.54%	8.05%
17	4.03%	5.78%	1.64%	2.46%	5.67%	8.24%
18	4.12%	5.91%	1.68%	2.52%	5.80%	8.43%
19	4.18%	6.01%	1.71%	2.57%	5.89%	8.58%
20	4.26%	6.12%	1.75%	2.62%	6.01%	8.74%
21	4.33%	6.23%	1.78%	2.67%	6.11%	8.90%
22	4.40%	6.34%	1.81%	2.72%	6.21%	9.06%
23	4.48%	6.45%	1.85%	2.77%	6.33%	9.22%
24	4.55%	6.56%	1.88%	2.82%	6.43%	9.38%
25	4.63%	6.68%	1.92%	2.88%	6.55%	9.56%
26	4.71%	6.80%	1.96%	2.94%	6.67%	9.74%
27	4.79%	6.92%	1.99%	2.99%	6.78%	9.91%
28	4.87%	7.04%	2.03%	3.05%	6.90%	10.09%
29	4.96%	7.17%	2.07%	3.11%	7.03%	10.28%
30	5.04%	7.29%	2.11%	3.17%	7.15%	10.46%
31	5.12%	7.42%	2.15%	3.23%	7.27%	10.65%
32	5.22%	7.56%	2.19%	3.29%	7.41%	10.85%
33	5.30%	7.69%	2.23%	3.35%	7.53%	11.04%
34	5.40%	7.84%	2.28%	3.42%	7.68%	11.26%
35	5.50%	7.98%	2.33%	3.49%	7.83%	11.47%
36	5.59%	8.12%	2.37%	3.56%	7.96%	11.68%
37	5.69%	8.27%	2.42%	3.63%	8.11%	11.90%
38	5.79%	8.42%	2.47%	3.70%	8.26%	12.12%
39	5.89%	8.57%	2.51%	3.77%	8.40%	12.34%
40	5.99%	8.72%	2.56%	3.84%	8.55%	12.56%

Entry Age	Basic First $350	Basic Over $350	COLA First $350	COLA Over $350	Total First $350	Total Over $350
41	6.09%	8.87%	2.61%	3.91%	8.70%	12.78%
42	6.18%	9.01%	2.65%	3.97%	8.83%	12.98%
43	6.28%	9.16%	2.69%	4.04%	8.97%	13.20%
44	6.36%	9.28%	2.73%	4.10%	9.09%	13.38%
45	6.45%	9.41%	2.77%	4.16%	9.22%	13.57%
46	6.54%	9.55%	2.81%	4.22%	9.35%	13.77%
47	6.64%	9.70%	2.87%	4.30%	9.51%	14.00%
48	6.75%	9.86%	2.91%	4.37%	9.66%	14.23%
49	6.83%	9.98%	2.95%	4.43%	9.78%	14.41%
50	6.91%	10.10%	2.99%	4.48%	9.90%	14.58%
51	7.00%	10.24%	3.03%	4.55%	10.03%	14.79%
52	7.11%	10.40%	3.08%	4.62%	10.19%	15.02%
53	7.22%	10.56%	3.13%	4.70%	10.35%	15.26%
54	7.30%	10.69%	3.17%	4.76%	10.47%	15.45%
55	7.40%	10.83%	3.21%	4.82%	10.61%	15.65%
56	7.46%	10.92%	3.25%	4.87%	10.71%	15.79%
57	7.49%	10.97%	3.26%	4.89%	10.75%	15.86%
58	7.46%	10.92%	3.25%	4.87%	10.71%	15.79%
59 and over	7.09%	10.37%	3.07%	4.61%	10.16%	14.98%

Interest:	6.75% per annum
Mortality:	See *Section 4, Exhibit 1*
Salary increase:	Inflation (2.50%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit 1*)
Administrative expense:	0.53% of payroll added to Basic rates
Leave cashout:	0.75%
COLA loading factor:	46.84%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

Cost Group 3 (General) — Member Contribution Rates (Membership before January 1, 2013)

(% of Monthly Payroll)

Entry Age	Basic	COLA	Total
15	5.76%	2.77%	8.53%
16	5.89%	2.84%	8.73%
17	6.02%	2.91%	8.93%
18	6.16%	2.99%	9.15%
19	6.27%	3.04%	9.31%
20	6.38%	3.10%	9.48%
21	6.49%	3.16%	9.65%
22	6.61%	3.22%	9.83%
23	6.72%	3.28%	10.00%
24	6.84%	3.35%	10.19%
25	6.96%	3.41%	10.37%
26	7.09%	3.48%	10.57%
27	7.21%	3.54%	10.75%
28	7.34%	3.61%	10.95%
29	7.47%	3.68%	11.15%
30	7.60%	3.75%	11.35%
31	7.74%	3.82%	11.56%
32	7.88%	3.90%	11.78%
33	8.02%	3.97%	11.99%
34	8.17%	4.05%	12.22%
35	8.32%	4.13%	12.45%
36	8.47%	4.21%	12.68%
37	8.62%	4.29%	12.91%
38	8.78%	4.38%	13.16%
39	8.93%	4.46%	13.39%
40	9.08%	4.53%	13.61%

Entry Age	Basic	COLA	Total
41	9.24%	4.62%	13.86%
42	9.39%	4.70%	14.09%
43	9.54%	4.78%	14.32%
44	9.67%	4.85%	14.52%
45	9.80%	4.92%	14.72%
46	9.95%	5.00%	14.95%
47	10.11%	5.08%	15.19%
48	10.26%	5.16%	15.42%
49	10.38%	5.22%	15.60%
50	10.51%	5.29%	15.80%
51	10.64%	5.36%	16.00%
52	10.79%	5.44%	16.23%
53	10.95%	5.53%	16.48%
54	11.11%	5.61%	16.72%
55	11.23%	5.68%	16.91%
56	11.28%	5.70%	16.98%
57	11.24%	5.68%	16.92%
58	11.10%	5.61%	16.71%
59 and over	10.53%	5.30%	15.83%

Interest:	6.75% per annum
Mortality:	See *Section 4, Exhibit 1*
Salary increase:	Inflation (2.50%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit 1*)
Administrative expense:	0.53% of payroll added to Basic rates
Leave cashout:	5.50%
COLA loading factor:	53.04%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

Cost Group 4 (General) — Member Contribution Rates (Membership before January 1, 2013)

(% of Monthly Payroll)

Entry Age	Basic First $350	Basic Over $350	COLA First $350	COLA Over $350	Total First $350	Total Over $350
15	3.90%	5.58%	1.76%	2.64%	5.66%	8.22%
16	3.98%	5.70%	1.81%	2.71%	5.79%	8.41%
17	4.06%	5.83%	1.85%	2.77%	5.91%	8.60%
18	4.15%	5.96%	1.89%	2.84%	6.04%	8.80%
19	4.22%	6.07%	1.93%	2.90%	6.15%	8.97%
20	4.29%	6.17%	1.97%	2.95%	6.26%	9.12%
21	4.36%	6.28%	2.01%	3.01%	6.37%	9.29%
22	4.44%	6.39%	2.05%	3.07%	6.49%	9.46%
23	4.52%	6.51%	2.09%	3.13%	6.61%	9.64%
24	4.59%	6.62%	2.13%	3.19%	6.72%	9.81%
25	4.67%	6.74%	2.17%	3.25%	6.84%	9.99%
26	4.75%	6.86%	2.21%	3.31%	6.96%	10.17%
27	4.83%	6.98%	2.25%	3.38%	7.08%	10.36%
28	4.91%	7.10%	2.29%	3.44%	7.20%	10.54%
29	5.00%	7.23%	2.34%	3.51%	7.34%	10.74%
30	5.08%	7.36%	2.38%	3.57%	7.46%	10.93%
31	5.17%	7.49%	2.43%	3.64%	7.60%	11.13%
32	5.26%	7.63%	2.48%	3.72%	7.74%	11.35%
33	5.35%	7.76%	2.52%	3.78%	7.87%	11.54%
34	5.44%	7.90%	2.57%	3.86%	8.01%	11.76%
35	5.54%	8.05%	2.63%	3.94%	8.17%	11.99%
36	5.64%	8.19%	2.67%	4.01%	8.31%	12.20%
37	5.74%	8.34%	2.73%	4.09%	8.47%	12.43%
38	5.84%	8.49%	2.78%	4.17%	8.62%	12.66%
39	5.94%	8.64%	2.83%	4.24%	8.77%	12.88%
40	6.04%	8.79%	2.88%	4.32%	8.92%	13.11%

Entry Age	Basic First $350	Basic Over $350	COLA First $350	COLA Over $350	Total First $350	Total Over $350
41	6.14%	8.94%	2.93%	4.40%	9.07%	13.34%
42	6.24%	9.09%	2.99%	4.48%	9.23%	13.57%
43	6.34%	9.24%	3.04%	4.56%	9.38%	13.80%
44	6.42%	9.36%	3.08%	4.62%	9.50%	13.98%
45	6.50%	9.49%	3.13%	4.69%	9.63%	14.18%
46	6.60%	9.63%	3.17%	4.76%	9.77%	14.39%
47	6.70%	9.79%	3.23%	4.85%	9.93%	14.64%
48	6.80%	9.94%	3.29%	4.93%	10.09%	14.87%
49	6.89%	10.07%	3.33%	4.99%	10.22%	15.06%
50	6.97%	10.19%	3.37%	5.06%	10.34%	15.25%
51	7.06%	10.33%	3.42%	5.13%	10.48%	15.46%
52	7.16%	10.48%	3.47%	5.21%	10.63%	15.69%
53	7.26%	10.63%	3.53%	5.29%	10.79%	15.92%
54	7.36%	10.78%	3.57%	5.36%	10.93%	16.14%
55	7.48%	10.95%	3.63%	5.45%	11.11%	16.40%
56	7.52%	11.01%	3.66%	5.49%	11.18%	16.50%
57	7.52%	11.02%	3.66%	5.49%	11.18%	16.51%
58	7.42%	10.87%	3.61%	5.41%	11.03%	16.28%
59 and over	7.24%	10.59%	3.51%	5.27%	10.75%	15.86%

Interest:	6.75% per annum
Mortality:	See *Section 4, Exhibit 1*
Salary increase:	Inflation (2.50%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit 1*)
Administrative expense:	0.53% of payroll added to Basic rates
Leave cashout:	1.75%
COLA loading factor:	52.34%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

Cost Group 5 (General) — Member Contribution Rates (Membership before January 1, 2013)

(% of Monthly Payroll)

Entry Age	Basic	COLA	Total
15	5.53%	3.09%	8.62%
16	5.65%	3.17%	8.82%
17	5.78%	3.25%	9.03%
18	5.91%	3.33%	9.24%
19	6.01%	3.39%	9.40%
20	6.12%	3.46%	9.58%
21	6.23%	3.53%	9.76%
22	6.34%	3.60%	9.94%
23	6.45%	3.66%	10.11%
24	6.56%	3.73%	10.29%
25	6.68%	3.81%	10.49%
26	6.80%	3.88%	10.68%
27	6.92%	3.95%	10.87%
28	7.04%	4.03%	11.07%
29	7.17%	4.11%	11.28%
30	7.29%	4.18%	11.47%
31	7.42%	4.26%	11.68%
32	7.56%	4.35%	11.91%
33	7.69%	4.43%	12.12%
34	7.84%	4.52%	12.36%
35	7.98%	4.61%	12.59%
36	8.12%	4.70%	12.82%
37	8.27%	4.79%	13.06%
38	8.42%	4.88%	13.30%
39	8.57%	4.98%	13.55%
40	8.72%	5.07%	13.79%

Entry Age	Basic	COLA	Total
41	8.87%	5.16%	14.03%
42	9.01%	5.25%	14.26%
43	9.16%	5.34%	14.50%
44	9.28%	5.42%	14.70%
45	9.41%	5.50%	14.91%
46	9.55%	5.58%	15.13%
47	9.70%	5.68%	15.38%
48	9.86%	5.77%	15.63%
49	9.98%	5.85%	15.83%
50	10.10%	5.92%	16.02%
51	10.24%	6.01%	16.25%
52	10.40%	6.11%	16.51%
53	10.56%	6.21%	16.77%
54	10.69%	6.29%	16.98%
55	10.83%	6.37%	17.20%
56	10.92%	6.43%	17.35%
57	10.97%	6.46%	17.43%
58	10.92%	6.43%	17.35%
59 and over	10.37%	6.09%	16.46%

Interest:	6.75% per annum
Mortality:	See *Section 4, Exhibit 1*
Salary increase:	Inflation (2.50%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit 1*)
Administrative expense:	0.53% of payroll added to Basic rates
Leave cashout:	0.75%
COLA loading factor:	61.89%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

Cost Group 6 (General) — Member Contribution Rates (Membership before January 1, 2013)

(% of Monthly Payroll)

Entry Age	Basic First $350	Basic Over $350	COLA First $350	COLA Over $350	Total First $350	Total Over $350
15	4.44%	6.39%	1.73%	2.59%	6.17%	8.98%
16	4.51%	6.50%	1.76%	2.64%	6.27%	9.14%
17	4.58%	6.61%	1.79%	2.68%	6.37%	9.29%
18	4.66%	6.73%	1.83%	2.74%	6.49%	9.47%
19	4.74%	6.85%	1.86%	2.79%	6.60%	9.64%
20	4.82%	6.97%	1.89%	2.84%	6.71%	9.81%
21	4.90%	7.09%	1.93%	2.90%	6.83%	9.99%
22	4.99%	7.22%	1.97%	2.95%	6.96%	10.17%
23	5.08%	7.35%	2.01%	3.01%	7.09%	10.36%
24	5.16%	7.48%	2.05%	3.07%	7.21%	10.55%
25	5.26%	7.62%	2.09%	3.13%	7.35%	10.75%
26	5.34%	7.75%	2.13%	3.19%	7.47%	10.94%
27	5.44%	7.89%	2.17%	3.25%	7.61%	11.14%
28	5.54%	8.04%	2.21%	3.31%	7.75%	11.35%
29	5.63%	8.18%	2.25%	3.38%	7.88%	11.56%
30	5.73%	8.33%	2.29%	3.44%	8.02%	11.77%
31	5.83%	8.48%	2.34%	3.51%	8.17%	11.99%
32	5.94%	8.64%	2.39%	3.58%	8.33%	12.22%
33	6.04%	8.80%	2.43%	3.65%	8.47%	12.45%
34	6.14%	8.95%	2.48%	3.72%	8.62%	12.67%
35	6.25%	9.11%	2.53%	3.79%	8.78%	12.90%
36	6.35%	9.26%	2.57%	3.85%	8.92%	13.11%
37	6.46%	9.42%	2.61%	3.92%	9.07%	13.34%
38	6.56%	9.57%	2.66%	3.99%	9.22%	13.56%
39	6.64%	9.70%	2.70%	4.05%	9.34%	13.75%
40	6.74%	9.84%	2.74%	4.11%	9.48%	13.95%

Entry Age	Basic First $350	Basic Over $350	COLA First $350	COLA Over $350	Total First $350	Total Over $350
41	6.83%	9.98%	2.78%	4.17%	9.61%	14.15%
42	6.94%	10.14%	2.83%	4.24%	9.77%	14.38%
43	7.04%	10.30%	2.87%	4.31%	9.91%	14.61%
44	7.13%	10.43%	2.91%	4.37%	10.04%	14.80%
45	7.22%	10.57%	2.95%	4.43%	10.17%	15.00%
46	7.31%	10.70%	2.99%	4.49%	10.30%	15.19%
47	7.43%	10.88%	3.05%	4.57%	10.48%	15.45%
48	7.53%	11.03%	3.09%	4.63%	10.62%	15.66%
49	7.64%	11.19%	3.14%	4.71%	10.78%	15.90%
50	7.76%	11.37%	3.19%	4.78%	10.95%	16.15%
51	7.81%	11.45%	3.21%	4.82%	11.02%	16.27%
52	7.83%	11.48%	3.22%	4.83%	11.05%	16.31%
53	7.76%	11.38%	3.19%	4.79%	10.95%	16.17%
54 and over	7.50%	10.99%	3.08%	4.62%	10.58%	15.61%

Interest:	6.75% per annum
Mortality:	See *Section 4, Exhibit 1*
Salary increase:	Inflation (2.50%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit 1*)
Administrative expense:	0.53% of payroll added to Basic rates
Leave cashout:	0.00%
COLA loading factor:	44.14%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

Cost Group 7 (Safety) — Member Contribution Rates (Membership before January 1, 2013)

(% of Monthly Payroll)

Entry Age	Basic	COLA	Total
15	10.39%	6.77%	17.16%
16	10.39%	6.77%	17.16%
17	10.39%	6.77%	17.16%
18	10.39%	6.77%	17.16%
19	10.39%	6.77%	17.16%
20	10.39%	6.77%	17.16%
21	10.39%	6.77%	17.16%
22	10.56%	6.89%	17.45%
23	10.72%	7.00%	17.72%
24	10.89%	7.11%	18.00%
25	11.06%	7.23%	18.29%
26	11.22%	7.34%	18.56%
27	11.38%	7.45%	18.83%
28	11.54%	7.56%	19.10%
29	11.66%	7.64%	19.30%
30	11.78%	7.73%	19.51%
31	11.94%	7.84%	19.78%
32	12.09%	7.94%	20.03%
33	12.26%	8.05%	20.31%
34	12.40%	8.15%	20.55%
35	12.53%	8.24%	20.77%
36	12.69%	8.35%	21.04%
37	12.87%	8.47%	21.34%
38	13.05%	8.60%	21.65%
39	13.26%	8.74%	22.00%
40	13.46%	8.88%	22.34%

Entry Age	Basic	COLA	Total
41	13.66%	9.02%	22.68%
42	13.92%	9.19%	23.11%
43	14.14%	9.35%	23.49%
44	14.31%	9.46%	23.77%
45	14.38%	9.51%	23.89%
46	14.42%	9.54%	23.96%
47	14.41%	9.53%	23.94%
48	14.23%	9.41%	23.64%
49 and over	13.76%	9.09%	22.85%

Interest:	6.75 % per annum
Mortality:	See *Section 4, Exhibit 1*
Salary increase:	Inflation (2.50%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit 1*)
Administrative expense:	0.53% of payroll added to Basic rates
Leave cashout:	0.50%
COLA loading factor:	68.67%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

Cost Group 8 (Safety) — Member Contribution Rates (Membership before January 1, 2013)

(% of Monthly Payroll)

Entry Age	Basic	COLA	Total
15	10.37%	7.00%	17.37%
16	10.37%	7.00%	17.37%
17	10.37%	7.00%	17.37%
18	10.37%	7.00%	17.37%
19	10.37%	7.00%	17.37%
20	10.37%	7.00%	17.37%
21	10.37%	7.00%	17.37%
22	10.53%	7.11%	17.64%
23	10.69%	7.23%	17.92%
24	10.86%	7.35%	18.21%
25	11.03%	7.47%	18.50%
26	11.19%	7.58%	18.77%
27	11.35%	7.70%	19.05%
28	11.50%	7.80%	19.30%
29	11.63%	7.89%	19.52%
30	11.75%	7.98%	19.73%
31	11.90%	8.09%	19.99%
32	12.07%	8.21%	20.28%
33	12.23%	8.32%	20.55%
34	12.36%	8.41%	20.77%
35	12.50%	8.51%	21.01%
36	12.66%	8.63%	21.29%
37	12.84%	8.75%	21.59%
38	13.02%	8.88%	21.90%
39	13.22%	9.03%	22.25%
40	13.42%	9.17%	22.59%

Entry Age	Basic	COLA	Total
41	13.62%	9.31%	22.93%
42	13.87%	9.49%	23.36%
43	14.09%	9.64%	23.73%
44	14.24%	9.75%	23.99%
45	14.34%	9.82%	24.16%
46	14.36%	9.84%	24.20%
47	14.43%	9.89%	24.32%
48	14.09%	9.64%	23.73%
49 and over	13.80%	9.44%	23.24%

Interest:	6.75% per annum
Mortality:	See *Section 4, Exhibit 1*
Salary increase:	Inflation (2.50%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit 1*)
Administrative expense:	0.53% of payroll added to Basic rates
Leave cashout:	0.20%
COLA loading factor:	71.12%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

Cost Group 9 (Safety) — Member Contribution Rates (Membership before January 1, 2013)

(% of Monthly Payroll)

Entry Age	Basic	COLA	Total
15	9.97%	4.25%	14.22%
16	9.97%	4.25%	14.22%
17	9.97%	4.25%	14.22%
18	9.97%	4.25%	14.22%
19	9.97%	4.25%	14.22%
20	9.97%	4.25%	14.22%
21	9.97%	4.25%	14.22%
22	10.12%	4.31%	14.43%
23	10.28%	4.38%	14.66%
24	10.43%	4.45%	14.88%
25	10.58%	4.52%	15.10%
26	10.73%	4.59%	15.32%
27	10.87%	4.65%	15.52%
28	11.00%	4.71%	15.71%
29	11.12%	4.76%	15.88%
30	11.26%	4.83%	16.09%
31	11.40%	4.89%	16.29%
32	11.54%	4.95%	16.49%
33	11.68%	5.01%	16.69%
34	11.81%	5.07%	16.88%
35	11.95%	5.14%	17.09%
36	12.11%	5.21%	17.32%
37	12.28%	5.28%	17.56%
38	12.45%	5.36%	17.81%
39	12.62%	5.44%	18.06%
40	12.82%	5.53%	18.35%

Entry Age	Basic	COLA	Total
41	13.01%	5.61%	18.62%
42	13.18%	5.69%	18.87%
43	13.27%	5.73%	19.00%
44	13.34%	5.76%	19.10%
45	13.31%	5.75%	19.06%
46	13.18%	5.69%	18.87%
47	12.90%	5.56%	18.46%
48	13.32%	5.75%	19.07%
49 and over	13.83%	5.98%	19.81%

Interest:	6.75% per annum
Mortality:	See *Section 4, Exhibit 1*
Salary increase:	Inflation (2.50%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit 1*)
Administrative expense:	0.53% of payroll added to Basic rates
Leave cashout:	0.00%
COLA loading factor:	44.97%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.00% assumed COLA.

Cost Group 10 (Safety) — Member Contribution Rates (Membership before January 1, 2013)

(% of Monthly Payroll)

Entry Age	Basic	COLA	Total
15	10.35%	6.67%	17.02%
16	10.35%	6.67%	17.02%
17	10.35%	6.67%	17.02%
18	10.35%	6.67%	17.02%
19	10.35%	6.67%	17.02%
20	10.35%	6.67%	17.02%
21	10.35%	6.67%	17.02%
22	10.51%	6.78%	17.29%
23	10.67%	6.89%	17.56%
24	10.84%	7.01%	17.85%
25	11.01%	7.12%	18.13%
26	11.17%	7.23%	18.40%
27	11.33%	7.34%	18.67%
28	11.49%	7.45%	18.94%
29	11.61%	7.53%	19.14%
30	11.73%	7.61%	19.34%
31	11.88%	7.71%	19.59%
32	12.04%	7.82%	19.86%
33	12.21%	7.94%	20.15%
34	12.34%	8.03%	20.37%
35	12.48%	8.12%	20.60%
36	12.64%	8.23%	20.87%
37	12.82%	8.35%	21.17%
38	12.99%	8.47%	21.46%
39	13.19%	8.61%	21.80%
40	13.39%	8.74%	22.13%

Entry Age	Basic	COLA	Total
41	13.61%	8.89%	22.50%
42	13.85%	9.05%	22.90%
43	14.06%	9.20%	23.26%
44	14.25%	9.33%	23.58%
45	14.34%	9.39%	23.73%
46	14.37%	9.41%	23.78%
47	14.34%	9.39%	23.73%
48	14.11%	9.23%	23.34%
49 and over	13.83%	9.04%	22.87%

Interest:	6.75% per annum
Mortality:	See *Section 4, Exhibit 1*
Salary increase:	Inflation (2.50%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit 1*)
Administrative expense:	0.53% of payroll added to Basic rates
Leave cashout:	0.00%
COLA loading factor:	67.97%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

Cost Group 11 (Safety) — Member Contribution Rates (Membership before January 1, 2013)

(% of Monthly Payroll)

Entry Age	Basic	COLA	Total
15	10.63%	7.18%	17.81%
16	10.63%	7.18%	17.81%
17	10.63%	7.18%	17.81%
18	10.63%	7.18%	17.81%
19	10.63%	7.18%	17.81%
20	10.63%	7.18%	17.81%
21	10.63%	7.18%	17.81%
22	10.80%	7.30%	18.10%
23	10.97%	7.42%	18.39%
24	11.14%	7.54%	18.68%
25	11.31%	7.66%	18.97%
26	11.48%	7.78%	19.26%
27	11.64%	7.90%	19.54%
28	11.80%	8.01%	19.81%
29	11.93%	8.10%	20.03%
30	12.05%	8.19%	20.24%
31	12.21%	8.30%	20.51%
32	12.37%	8.41%	20.78%
33	12.53%	8.53%	21.06%
34	12.67%	8.63%	21.30%
35	12.81%	8.73%	21.54%
36	12.98%	8.85%	21.83%
37	13.16%	8.98%	22.14%
38	13.33%	9.10%	22.43%
39	13.54%	9.25%	22.79%
40	13.74%	9.39%	23.13%

Entry Age	Basic	COLA	Total
41	13.95%	9.54%	23.49%
42	14.19%	9.71%	23.90%
43	14.42%	9.87%	24.29%
44	14.59%	9.99%	24.58%
45	14.65%	10.04%	24.69%
46	14.65%	10.04%	24.69%
47	14.67%	10.05%	24.72%
48	14.36%	9.83%	24.19%
49 and over	13.78%	9.42%	23.20%

Interest:	6.75% per annum
Mortality:	See *Section 4, Exhibit 1*
Salary increase:	Inflation (2.50%) + Across-the-Board Increase (0.50%) + Merit (See *Section 4, Exhibit 1*)
Administrative expense:	0.53% of payroll added to Basic rates
Leave cashout:	3.00%
COLA loading factor:	71.07%, applied to Basic rates prior to adjustment for administrative expenses, based on 2.75% assumed COLA.

Cost Groups 1 through 6 (General) — Member Contribution Rates
(Membership on or After January 1, 2013)
(% of Monthly Payroll)

Cost Group	Basic	COLA	Total
Cost Group 1 — PEPRA Tier 4 (3% COLA)	9.45%	3.10%	12.55%
Cost Group 1 — PEPRA Tier 4 (2% COLA)	8.98%	2.03%	11.01%
Cost Group 2 — PEPRA Tier 5 (3%/4% COLA)	8.36%	2.69%	11.05%
Cost Group 2 — PEPRA Tier 5 (2% COLA)	8.36%	1.83%	10.19%
Cost Group 3 — PEPRA Tier 4 (3% COLA)	8.41%	2.87%	11.28%
Cost Group 4 — PEPRA Tier 4 (3% COLA)	8.92%	2.93%	11.85%
Cost Group 5 — PEPRA Tier 4 (3% COLA)	10.46%	3.48%	13.94%
Cost Group 5 — PEPRA Tier 4 (2% COLA)	9.83%	2.23%	12.06%
Cost Group 6 — PEPRA Tier 4 (3% COLA)	10.86%	3.55%	14.41%

The PEPRA member contribution rates are 50% of the normal cost rate. The Basic rates shown above include an administrative expense load of 0.53% of payroll.

Note: It is our understanding that in the determination of pension benefits under the PEPRA formulas, the maximum compensation that can be taken into account should be limited by the compensation limit as noted in *Section 4, Exhibit 2* on page 140 (§7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers for future years (§7522.10(d)).

Cost Groups 7 through 12 (Safety) — Member Contribution Rates
(Membership on or After January 1, 2013)
(% of Monthly Payroll)

Cost Group	Basic	COLA	Total
Cost Group 7 — PEPRA Tier D	14.63%	6.07%	20.70%
Cost Group 8 — PEPRA Tier D	13.61%	5.67%	19.28%
Cost Group 8 — PEPRA Tier E	12.79%	3.59%	16.38%
Cost Group 9 — PEPRA Tier E	13.67%	3.81%	17.48%
Cost Group 10 — PEPRA Tier D	13.43%	5.70%	19.13%
Cost Group 11 — PEPRA Tier D	11.64%	4.95%	16.59%

The PEPRA member contribution rates are 50% of the normal cost rate. The Basic rates shown above include an administrative expense load of 0.53% of payroll.

Note: It is our understanding that in the determination of pension benefits under the PEPRA formulas, the maximum compensation that can be taken into account should be limited by the compensation limit as noted in *Section 4, Exhibit 2* on page 140 (§7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers for future years (§7522.10(d)).

Appendix A: Definition of Pension Terms

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

Term	Definition
Actuarial accrued liability for actives	The equivalent of the accumulated normal costs allocated to the years before the valuation date.
Actuarial accrued liability for retirees and beneficiaries	Actuarial present value of lifetime benefits to existing retirees and beneficiaries. This sum takes account of life expectancies appropriate to the ages of the annuitants and the interest that the sum is expected to earn before it is entirely paid out in benefits.
Actuarial cost method	A procedure allocating the actuarial present value of future benefits to various time periods; a method used to determine the normal cost and the actuarial accrued liability that are used to determine the actuarially determined contribution.
Actuarial gain or loss	A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates. To the extent that actual experience differs from that assumed, actuarial accrued liabilities emerge which may be the same as forecasted or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., assets earn more than projected, salary increases are less than assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results yield actuarial liabilities that are larger than projected.
Actuarially equivalent	Of equal actuarial present value, determined as of a given date and based on a given set of actuarial assumptions.
Actuarial present value	The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of actuarial assumptions. Each such amount or series of amounts is: Adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.) Multiplied by the probability of the occurrence of an event (such as survival, death, disability, withdrawal, etc.) on which the payment is conditioned, and Discounted according to an assumed rate (or rates) of return to reflect the time value of money.

Appendix A: Definition of Pension Terms

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

Appendix A: Definition of Pension Terms

Term	Definition
Assumptions or actuarial assumptions	The estimates upon which the cost of the Plan is calculated, including: **Investment return** — the rate of investment yield that the Plan will earn over the long-term future; **Mortality rates** — the rate or probability of death at a given age for employees and retirees; **Retirement rates** — the rate or probability of retirement at a given age or service; **Disability rates** — the rate or probability of disability retirement at a given age; **Withdrawal rates** — the rate or probability at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement; **Salary increase rates** — the rates of salary increase due to inflation, real wage growth and merit and promotion increases.
Closed amortization period	A specific number of years that is counted down by one each year, and therefore declines to zero with the passage of time. For example, if the amortization period is initially set at 20 years, it is 19 years at the end of one year, 18 years at the end of two years, etc. See “open amortization period.”
Decrements	Those causes/events due to which a member’s status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or withdrawal.
Defined benefit plan	A retirement plan in which benefits are defined by a formula based on the member’s compensation, age and/or years of service.
Defined contribution plan	A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, the plan’s earnings are allocated to each account, and each member’s benefits are a direct function of the account balance.
Employer normal cost	The portion of the normal cost to be paid by the employer. This is equal to the normal cost less expected member contributions.
Experience study	A periodic review and analysis of the actual experience of the Plan that may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified based on recommendations from the Actuary.
Funded ratio	The ratio of the valuation value of assets to the actuarial accrued liability. Plans sometimes also calculate a market funded ratio, using the market value of assets, rather than the valuation value of assets.
GASB 67 and GASB 68	Governmental Accounting Standards Board (GASB) Statements No. 67 and No. 68. These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. Statement No. 68 sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 67 sets the rules for the systems themselves.

Appendix A: Definition of Pension Terms

Term	Definition
Investment return	The rate of earnings of the Plan from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next.
Negative amortization	Negative amortization is a result of an increase in the unfunded actuarial accrued liability when the amortization payment is less than the interest accrued on the unfunded actuarial accrued liability.
Net pension liability	The net pension liability is equal to the total pension liability minus the plan fiduciary net position.
Normal cost	The portion of the actuarial present value of future benefits and expenses, if applicable, allocated to a valuation year by the actuarial cost method. Any payment with respect to an unfunded actuarial accrued liability is not part of the normal cost (see "amortization payment"). For pension plan benefits that are provided in part by employee contributions, normal cost refers to the total of member contributions and employer normal cost unless otherwise specifically stated.
Open amortization period	An open amortization period is one which is used to determine the amortization payment but which does not change over time. If the initial period is set as 30 years, the same 30-year period is used in each future year in determining the amortization period.
Plan fiduciary net position	Market value of assets.
Service costs	The portions of the actuarial present value of projected benefit payments that are attributed to valuation years.
Total pension liability	The actuarial accrued liability under the entry age normal cost method and based on the blended discount rate as described in GASB 67 and 68.
Unfunded actuarial accrued liability	The excess of the actuarial accrued liability over the valuation value of assets. This value may be negative, in which case it may be expressed as a negative unfunded actuarial accrued liability, also called the funding surplus or an overfunded actuarial accrued liability.
Valuation date or actuarial valuation date	The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Benefits is determined. The expected benefits to be paid in the future are discounted to this date.
Valuation value of assets	The actuarial value of assets reduced by the value of non-valuation reserves.

Appendix B: Non-Refundability Factors

Non-Refundability Factors as of December 31

Cost Group and Plan	2024 Legacy Tiers	2024 PEPRA Tiers	2023 Legacy Tiers	2023 PEPRA Tiers
General				
Cost Group 1 – County and Small Districts (Tier 1)	0.9650		0.9680	
• PEPRA Tier 4 (3% COLA)		0.9563		0.9610
• PEPRA Tier 4 (2% COLA)		0.9507		0.9558
Cost Group 2 – County and Small Districts (Tier 3)	0.9496		0.9558	
• PEPRA Tier 5 (3%/4% COLA)		0.9555		0.9605
• PEPRA Tier 5 (2% COLA)		0.9509		0.9558
Cost Group 3 – Central Contra Costa Sanitary District	0.9592	0.9638	0.9631	0.9678
Cost Group 4 – Contra Costa Housing Authority	0.9561	0.9571	0.9605	0.9614
Cost Group 5 – Contra Costa County Fire Protection District	0.9819		0.9834	
• PEPRA Tier 4 (3% COLA)		0.9579		0.9582
• PEPRA Tier 4 (2% COLA)		0.9545		0.9581
Cost Group 6 – Small Districts (Non-Enhanced Tiers 1 and 4)	0.9597	0.9469	0.9624	0.9532
Safety				
Cost Group 7 – County (Tiers A and D)	0.9746	0.9793	0.9717	0.9773
Cost Group 8 – Contra Costa County Fire Protection District	0.9790		0.9774	
• PEPRA Tier D (3% COLA)		0.9789		0.9793
• PEPRA Tier E (2% COLA)		0.9816		0.9799
Cost Group 9 – County (Tiers C and E)	0.9743	0.9774	0.9712	0.9753
Cost Group 10 – Moraga-Orinda Fire District	0.9740	0.9799	0.9726	0.9780
Cost Group 11 – San Ramon Valley Fire District	0.9788	0.9824	0.9774	0.9808

Appendix C: Summary of Cost Groups

General Cost Groups and Employers

Cost Group	Employer Name	Benefit Structure	Special Adjustment
1	County General	Tier 1 Enhanced/PEPRA Tier 4	
	Local Agency Formation Commission (LAFCO)	Tier 1 Enhanced/PEPRA Tier 4	Yes
	Contra Costa Mosquito and Vector Control District	Tier 1 Enhanced/PEPRA Tier 4	
	Bethel Island Municipal District (Non-Integrated)	Tier 1 Enhanced/PEPRA Tier 4	
	First 5-Children & Families Commission	Tier 1 Enhanced/PEPRA Tier 4	
	Contra Costa County Employees’ Retirement Association	Tier 1 Enhanced/PEPRA Tier 4	
	Superior Court	Tier 1 Enhanced/PEPRA Tier 4	
	Moraga-Orinda Fire District (Non-Integrated)	Tier 1 Enhanced/PEPRA Tier 4	
	San Ramon Valley Fire District (Non-Integrated)	Tier 1 Enhanced/PEPRA Tier 4	
2	County General	Tier 3 Enhanced/PEPRA Tier 5	
	In-Home Supportive Services Authority (IHSS)	Tier 3 Enhanced/PEPRA Tier 5	Yes
	Contra Costa Mosquito and Vector Control District	Tier 3 Enhanced/PEPRA Tier 5	
	Superior Court	Tier 3 Enhanced/PEPRA Tier 5	
3	Central Contra Costa Sanitary District (Non-Integrated) (CCCSD)	Tier 1 Enhanced/PEPRA Tier 4	
4	Contra Costa Housing Authority	Tier 1 Enhanced/PEPRA Tier 4	
5	Contra Costa County Fire Protection District (Non-Integrated) (CCCFPD)[1]	Tier 1 Enhanced/PEPRA Tier 4	
6	Rodeo Sanitary District	Tier 1 Non-Enhanced/PEPRA Tier 4	
	Byron Brentwood Cemetery	Tier 1 Non-Enhanced/PEPRA Tier 4	

[1] Rodeo-Hercules Fire Protection District will be annexed into Contra Costa County Fire Protection District effective July 1, 2025.

Appendix C: Summary of Cost Groups

Safety Cost Groups and Employers

Cost Group	Employer Name	Benefit Structure	Special Adjustment
7	County Safety	Tier A Enhanced/PEPRA Tier D	
8	Contra Costa County Fire Protection District (CCCFPD)[1]	Tier A Enhanced/PEPRA Tier D/E	
9	County Safety[2]	Tier C Enhanced/PEPRA Tier E	
10	Moraga-Orinda Fire District	Tier A Enhanced/PEPRA Tier D	
11	San Ramon Valley Fire District	Tier A Enhanced/PEPRA Tier D	

Note: A special adjustment is made for employers that have a remaining balance of special contributions as described on page 126.

[1] Rodeo-Hercules Fire Protection District will be annexed into Contra Costa County Fire Protection District effective July 1, 2025.
[2] Members hired on or after January 1, 2007.

Appendix D: Allocation of Valuation Assets

Cost Groups 1 through 5 — Cashflow for January 1, 2024 to December 31, 2024
Before reflecting Transfer of Assets for RHFPD to CCCFPD

Line Description	Cost Groups 1 & 2	Cost Group 3	Cost Group 4	Cost Group 5
1. Allocated VVA as of beginning of year	$6,400,213,657	$504,154,086	$74,052,380	$65,564,108
2. Asset transfer[1]	(1,447,541)	829,616	89,537	74,229
3. Allocated VVA after asset transfer 1 + 2	$6,398,766,116	$504,983,702	$74,141,917	$65,638,337
4. Total contributions[2] January – June	166,794,577	5,704,661	1,859,949	2,388,678
a. Member contributions	*48,127,689*	*2,464,441*	*401,294*	*599,699*
b. Employer normal contributions	*118,666,888*	*3,240,220*	*1,458,655*	*1,788,979*
c. Employer special contributions	*0*	*0*	*0*	*0*
5. Total benefit payments[3] January – June	173,887,004	13,307,405	2,062,421	2,099,786
6. Administrative expenses[4] January – June	5,804,468	282,533	46,020	61,768
7. Subtotal 3 + 4 − 5 − 6	**$6,385,869,221**	**$497,098,425**	**$73,893,425**	**$65,865,461**
8. Earnings allocated in proportion to **3**	172,294,497	13,597,295	1,996,361	1,767,391
9. Allocated VVA as of middle of year 7 + 8	**$6,558,163,718**	**$510,695,720**	**$75,889,786**	**$67,632,852**
10. Total contributions[2] July – December	147,787,805	6,002,919	1,651,262	2,712,652
a. Member contributions	*49,012,902*	*2,508,093*	*486,091*	*638,328*
b. Employer normal contributions	*98,774,904*	*3,494,825*	*1,165,171*	*2,074,323*
c. Employer special contributions	*0*	*0*	*0*	*0*
11. Total benefit payments[3] July – December	174,902,111	13,432,841	2,066,052	2,149,744
12. Administrative expenses[4] July – December	5,643,886	274,717	44,747	60,060
13. Subtotal 9 + 10 − 11 − 12	**$6,525,405,525**	**$502,991,081**	**$75,430,249**	**$68,135,700**
14. Earnings allocated in proportion to **9**	170,715,565	13,293,921	1,975,487	1,760,551
15. Allocated VVA as of end of year 13 + 14	**$6,696,121,090**	**$516,285,002**	**$77,405,736**	**$69,896,251**

Note: Results may be slightly off due to rounding.

[1] Starting with the December 31, 2023 valuation, an asset amount equal to the actuarial accrued liability has been transferred for members who have moved between cost groups.
[2] Employer contributions include “member subvention of employer contributions” and exclude “employer subvention of member contributions”.
[3] Excludes post-retirement death benefits.
[4] Allocated based on expected administrative expenses from the prior valuation.

Cost Groups 6 through 10 — Cashflow for January 1, 2024 to December 31, 2024
Before reflecting Transfer of Assets for RHFPD to CCCFPD

Line Description	Cost Group 6	Cost Groups 7 & 9	Cost Group 8	Cost Group 10
1. Allocated VVA as of beginning of year	$9,366,535	$2,319,431,763	$1,129,317,644	$198,529,837
2. Asset transfer[1]	0	475,452	(21,293)	0
3. Allocated VVA after asset transfer 1 + 2	**$9,366,535**	**$2,319,907,215**	**$1,129,296,351**	**$198,529,837**
4. Total contributions[2] January – June	196,736	52,239,048	29,233,261	4,308,914
a. Member contributions	*89,935*	*10,935,414*	*6,130,153*	*815,343*
b. Employer normal contributions	*106,801*	*41,303,634*	*23,103,108*	*3,493,571*
c. Employer special contributions	*0*	*0*	*0*	*0*
5. Total benefit payments[3] January – June	219,166	62,065,433	34,210,888	6,200,847
6. Administrative expenses[4] January – June	8,996	813,500	473,876	60,933
7. Subtotal 3 + 4 − 5 − 6	**$9,335,109**	**$2,309,267,330**	**$1,123,844,848**	**$196,576,971**
8. Earnings allocated in proportion to **3**	252,205	62,466,300	30,407,666	5,345,655
9. Allocated VVA as of middle of year 7 + 8	**$9,587,314**	**$2,371,733,630**	**$1,154,252,514**	**$201,922,626**
10. Total contributions[2] July – December	226,971	47,817,621	31,159,955	4,979,459
a. Member contributions	*106,137*	*11,593,404*	*6,593,658*	*857,119*
b. Employer normal contributions	*120,835*	*36,224,217*	*24,566,296*	*4,122,340*
c. Employer special contributions	*0*	*0*	*0*	*0*
11. Total benefit payments[3] July – December	210,337	64,046,153	35,141,600	6,199,621
12. Administrative expenses[4] July – December	8,748	790,995	460,767	59,248
13. Subtotal 9 + 10 − 11 – 12	**$9,595,200**	**$2,354,714,103**	**$1,149,810,102**	**$200,643,216**
14. Earnings allocated in proportion to **9**	249,567	61,738,600	30,046,348	5,256,248
15. Allocated VVA as of end of year 13 + 14	**$9,844,767**	**$2,416,452,703**	**$1,179,856,450**	**$205,899,464**

Note: Results may be slightly off due to rounding.

[1] Starting with the December 31, 2023 valuation, an asset amount equal to the actuarial accrued liability has been transferred for members who have moved between cost groups.
[2] Employer contributions include “member subvention of employer contributions” and exclude “employer subvention of member contributions”.
[3] Excludes post-retirement death benefits.
[4] Allocated based on expected administrative expenses from the prior valuation.

Cost Groups 11 and 12, Withdrawn Employers and Total Plan — Cashflow for January 1, 2024 to December 31, 2024 Before reflecting Transfer of Assets for RHFPD to CCCFPD

Line Description	Cost Group 11	Cost Group 12	Withdrawn Employers	Total Plan
1. Allocated VVA as of beginning of year	$524,639,406	$48,114,317	$50,092,921	$11,323,476,654
2. Asset transfer[1]	0	0	0	0
3. Allocated VVA after asset transfer 1 + 2	**$524,639,406**	**$48,114,317**	**$50,092,921**	**$11,323,476,654**
4. Total contributions[2] January – June	12,416,015	1,556,832	711,103	277,409,773
a. Member contributions	*2,210,301*	*218,078*	*0*	*71,992,347*
b. Employer normal contributions	*10,205,714*	*1,338,753*	*0*	*204,706,323*
c. Employer special contributions	*0*	*0*	*711,103*	*711,103*
5. Total benefit payments[3] January – June	14,719,178	1,438,057	2,618,198	312,828,383
6. Administrative expenses[4] January – June	171,675	19,795	0	7,743,564
7. Subtotal 3 + 4 − 5 − 6	$522,164,567	$48,213,297	$48,185,826	$11,280,314,480
8. Earnings allocated in proportion to **3**	14,126,549	1,295,536	1,348,812	304,898,267
9. Allocated VVA as of middle of year 7 + 8	**$536,291,116**	**$49,508,833**	**$49,534,638**	**$11,585,212,747**
10. Total contributions[2] July – December	8,817,046	1,470,606	96,763	252,723,059
a. Member contributions	*2,298,824*	*227,523*	*0*	*74,322,079*
b. Employer normal contributions	*6,518,222*	*1,243,083*	*0*	*178,304,218*
c. Employer special contributions	*0*	*0*	*96,763*	*96,763*
11. Total benefit payments[3] July – December	14,300,139	1,506,428	2,625,335	316,580,362
12. Administrative expenses[4] July – December	166,926	19,247	0	7,529,341
13. Subtotal 9 + 10 − 11 – 12	**$530,641,097**	**$49,453,764**	**$47,006,066**	**$11,513,826,103**
14. Earnings allocated in proportion to **9**	13,960,194	1,288,764	1,130,650	301,415,895
15. Allocated VVA as of end of year 13 + 14	**$544,601,291**	**$50,742,528**	**$48,136,716**	**$11,815,241,998**

Note: Results may be slightly off due to rounding.

[1] Starting with the December 31, 2023 valuation, an asset amount equal to the actuarial accrued liability has been transferred for members who have moved between cost groups.
[2] Employer contributions include “member subvention of employer contributions” and exclude “employer subvention of member contributions”.
[3] Excludes post-retirement death benefits.
[4] Allocated based on expected administrative expenses from the prior valuation.

Cost Groups 1 through 5 — Cashflow for January 1, 2024 to December 31, 2024
After reflecting Transfer of Assets for RHFPD to CCCFPD

Line Description	Cost Groups 1 & 2	Cost Group 3	Cost Group 4	Cost Group 5
1. Allocated VVA as of beginning of year	$6,398,742,833	$504,154,086	$74,052,380	$67,034,932
2. Asset transfer[1]	(1,447,541)	829,616	89,537	74,229
3. Allocated VVA after asset transfer 1 + 2	$6,397,295,292	$504,983,702	$74,141,917	$67,109,161
4. Total contributions[2] January – June	166,746,168	5,704,661	1,859,949	2,437,087
a. Member contributions	*48,115,031*	*2,464,441*	*401,294*	*612,357*
b. Employer normal contributions	*118,631,137*	*3,240,220*	*1,458,655*	*1,824,730*
c. Employer special contributions	*0*	*0*	*0*	*0*
5. Total benefit payments[3] January – June	173,838,693	13,307,405	2,062,421	2,148,097
6. Administrative expenses[4] January – June	5,803,054	282,533	46,020	63,182
7. Subtotal 3 + 4 − 5 − 6	**$6,384,399,713**	**$497,098,425**	**$73,893,425**	**$67,334,969**
8. Earnings allocated in proportion to **3**	172,254,893	13,597,295	1,996,361	1,806,995
9. Allocated VVA as of middle of year 7 + 8	**$6,556,654,606**	**$510,695,720**	**$75,889,786**	**$69,141,964**
10. Total contributions[2] July – December	147,750,489	6,002,919	1,651,262	2,749,968
a. Member contributions	*48,999,390*	*2,508,093*	*486,091*	*651,840*
b. Employer normal contributions	*98,751,099*	*3,494,825*	*1,165,171*	*2,098,128*
c. Employer special contributions	*0*	*0*	*0*	*0*
11. Total benefit payments[3] July – December	174,852,604	13,432,841	2,066,052	2,199,251
12. Administrative expenses[4] July – December	5,642,511	274,717	44,747	61,435
13. Subtotal 9 + 10 − 11 − 12	**$6,523,909,979**	**$502,991,081**	**$75,430,249**	**$69,631,246**
14. Earnings allocated in proportion to **9**	170,676,281	13,293,921	1,975,487	1,799,835
15. Allocated VVA as of end of year 13 + 14	**$6,694,586,260**	**$516,285,002**	**$77,405,736**	**$71,431,081**

Note: Results may be slightly off due to rounding.

[1] Starting with the December 31, 2023 valuation, an asset amount equal to the actuarial accrued liability has been transferred for members who have moved between cost groups.
[2] Employer contributions include "member subvention of employer contributions" and exclude "employer subvention of member contributions".
[3] Excludes post-retirement death benefits.
[4] Allocated based on expected administrative expenses from the prior valuation.

Cost Groups 6 through 10 — Cashflow for January 1, 2024 to December 31, 2024
After reflecting Transfer of Assets for RHFPD to CCCFPD

Line Description	Cost Group 6	Cost Groups 7 & 9	Cost Group 8	Cost Group 10
1. Allocated VVA as of beginning of year	$9,366,535	$2,319,431,763	$1,177,431,961	$198,529,837
2. Asset transfer[1]	0	475,452	(21,293)	0
3. Allocated VVA after asset transfer 1 + 2	**$9,366,535**	**$2,319,907,215**	**$1,177,410,668**	**$198,529,837**
4. Total contributions[2] January – June	196,736	52,239,048	30,790,093	4,308,914
a. Member contributions	*89,935*	*10,935,414*	*6,348,231*	*815,343*
b. Employer normal contributions	*106,801*	*41,303,634*	*24,441,861*	*3,493,571*
c. Employer special contributions	*0*	*0*	*0*	*0*
5. Total benefit payments[3] January – June	219,166	62,065,433	35,648,944	6,200,847
6. Administrative expenses[4] January – June	8,996	813,500	493,671	60,933
7. Subtotal 3 + 4 − 5 − 6	**$9,335,109**	**$2,309,267,330**	**$1,172,058,145**	**$196,576,971**
8. Earnings allocated in proportion to **3**	252,205	62,466,300	31,703,202	5,345,655
9. Allocated VVA as of middle of year 7 + 8	**$9,587,314**	**$2,371,733,630**	**$1,203,761,347**	**$201,922,626**
10. Total contributions[2] July – December	226,971	47,817,621	32,630,561	4,979,459
a. Member contributions	*106,137*	*11,593,404*	*6,821,182*	*857,119*
b. Employer normal contributions	*120,835*	*36,224,217*	*25,809,380*	*4,122,340*
c. Employer special contributions	*0*	*0*	*0*	*0*
11. Total benefit payments[3] July – December	210,337	64,046,153	36,648,028	6,199,621
12. Administrative expenses[4] July – December	8,748	790,995	480,014	59,248
13. Subtotal 9 + 10 − 11 – 12	**$9,595,200**	**$2,354,714,103**	**$1,199,263,866**	**$200,643,216**
14. Earnings allocated in proportion to **9**	249,567	61,738,600	31,335,112	5,256,248
15. Allocated VVA as of end of year 13 + 14	**$9,844,767**	**$2,416,452,703**	**$1,230,598,978**	**$205,899,464**

Note: Results may be slightly off due to rounding.

[1] Starting with the December 31, 2023 valuation, an asset amount equal to the actuarial accrued liability has been transferred for members who have moved between cost groups.
[2] Employer contributions include “member subvention of employer contributions” and exclude “employer subvention of member contributions”.
[3] Excludes post-retirement death benefits.
[4] Allocated based on expected administrative expenses from the prior valuation.

Cost Group 11, Withdrawn Employers and Total Plan — Cashflow for January 1, 2024 to December 31, 2024 After reflecting Transfer of Assets for RHFPD to CCCFPD

Line Description	Cost Group 11	Withdrawn Employers	Total Plan
1. Allocated VVA as of beginning of year	$524,639,406	$50,092,921	$11,323,476,654
2. Asset transfer[1]	0	0	0
3. Allocated VVA after asset transfer 1 + 2	**$524,639,406**	**$50,092,921**	**$11,323,476,654**
4. Total contributions[2] January – June	12,416,015	711,103	277,409,773
a. Member contributions	*2,210,301*	*0*	*71,992,347*
b. Employer normal contributions	*10,205,714*	*0*	*204,706,323*
c. Employer special contributions	*0*	*711,103*	*711,103*
5. Total benefit payments[3] January – June	14,719,178	2,618,198	312,828,383
6. Administrative expenses[4] January – June	171,675	0	7,743,564
7. Subtotal 3 + 4 − 5 − 6	$522,164,567	$48,185,826	$11,280,314,480
8. Earnings allocated in proportion to **3**	14,126,549	1,348,812	304,898,267
9. Allocated VVA as of middle of year 7 + 8	**$536,291,116**	**$49,534,638**	**$11,585,212,747**
10. Total contributions[2] July – December	8,817,046	96,763	252,723,059
a. Member contributions	*2,298,824*	*0*	*74,322,079*
b. Employer normal contributions	*6,518,222*	*0*	*178,304,218*
c. Employer special contributions	*0*	*96,763*	*96,763*
11. Total benefit payments[3] July – December	14,300,139	2,625,335	316,580,362
12. Administrative expenses[4] July – December	166,926	0	7,529,341
13. Subtotal 9 + 10 − 11 – 12	**$530,641,097**	**$47,006,066**	**$11,513,826,103**
14. Earnings allocated in proportion to **9**	13,960,194	1,130,650	301,415,895
15. Allocated VVA as of end of year 13 + 14	**$544,601,291**	**$48,136,716**	**$11,815,241,998**

Note: Results may be slightly off due to rounding.

[1] Starting with the December 31, 2023 valuation, an asset amount equal to the actuarial accrued liability has been transferred for members who have moved between cost groups.
[2] Employer contributions include “member subvention of employer contributions” and exclude “employer subvention of member contributions”.
[3] Excludes post-retirement death benefits.
[4] Allocated based on expected administrative expenses from the prior valuation.

Appendix E: Recommended Employer Rates

The recommended employer contribution rates found on pages 35 through 43 have been shown on an aggregate basis. For purposes of preparing the contribution rate packet, we have included in this Appendix the recommended legacy tier employer contribution rates as of December 31, 2024 for employers who are in Social Security and for employers who are not in Social Security. For completeness, we have also included the PEPRA tier employer contribution rates.

Recommended Employer Contribution Rates – For use in Preparing the Contribution Rate Packet

Cost Group and Tier	Basic First $350 Monthly[1]	Basic Excess of $350 Monthly[1]	Basic All Eligible Pay[2]	COLA First $350 Monthly[1]	COLA Excess of $350 Monthly[1]	COLA All Eligible Pay[2]	Total First $350 Monthly[1]	Total Excess of $350 Monthly[1]	Total All Eligible Pay[2]	All Aggregate Pay
Cost Group 1										
Tier 1 Non-LAFCO	15.51%	23.26%	23.04%	1.70%	2.55%	2.52%	17.21%	25.81%	25.56%	25.56%
Tier 1 LAFCO	12.40%	18.60%	N/A	1.70%	2.55%	N/A	14.10%	21.15%	N/A	20.96%
Tier 4 (3% COLA) Non-LAFCO	N/A	N/A	19.44%	N/A	N/A	2.02%	N/A	N/A	21.46%	21.46%
Tier 4 (3% COLA) LAFCO	N/A	N/A	14.84%	N/A	N/A	2.02%	N/A	N/A	16.86%	16.86%
Tier 4 (2% COLA)	N/A	N/A	18.97%	N/A	N/A	0.95%	N/A	N/A	19.92%	19.92%
Cost Group 2										
Tier 3 Non-IHSS	14.31%	21.47%	N/A	1.45%	2.17%	N/A	15.76%	23.64%	N/A	23.38%
Tier 3 IHSS	14.03%	21.05%	N/A	1.34%	2.01%	N/A	15.37%	23.06%	N/A	22.78%
Tier 5 (3%/4% COLA) Non-IHSS	N/A	N/A	18.35%	N/A	N/A	1.61%	N/A	N/A	19.96%	19.96%
Tier 5 (3%/4% COLA) IHSS	N/A	N/A	17.90%	N/A	N/A	1.46%	N/A	N/A	19.36%	19.36%
Tier 5 (2% COLA) Non-IHSS	N/A	N/A	18.35%	N/A	N/A	0.75%	N/A	N/A	19.10%	19.10%
Tier 5 (2% COLA) IHSS	N/A	N/A	17.90%	N/A	N/A	0.60%	N/A	N/A	18.50%	18.50%

[1] If employer is in Social Security.
[2] For legacy tier, applies to employer who is not in Social Security. For PEPRA tier, applies to all employers.

Appendix E: Recommended Employer Rates

Cost Group and Tier	Basic First $350 Monthly[1]	Basic Excess of $350 Monthly[1]	Basic All Eligible Pay[2]	COLA First $350 Monthly[1]	COLA Excess of $350 Monthly[1]	COLA All Eligible Pay[2]	Total First $350 Monthly[1]	Total Excess of $350 Monthly[1]	Total All Eligible Pay[2]	All Aggregate Pay
Cost Group 3										
CCCSD Tier 1	N/A	N/A	15.63%	N/A	N/A	5.62%	N/A	N/A	21.25%	21.25%
CCCSD Tier 4 (3% COLA)	N/A	N/A	10.96%	N/A	N/A	4.72%	N/A	N/A	15.68%	15.68%
Cost Group 4										
Contra Costa Housing Authority Tier 1	14.25%	21.38%	N/A	4.71%	7.06%	N/A	18.96%	28.44%	N/A	28.07%
Contra Costa Housing Authority Tier 4 (3% COLA)	N/A	N/A	17.72%	N/A	N/A	6.30%	N/A	N/A	24.02%	24.02%
Cost Group 5										
CCCFPD Tier 1	N/A	N/A	27.59%	N/A	N/A	13.85%	N/A	N/A	41.44%	41.44%
CCCFPD Tier 4 (3% COLA)	N/A	N/A	22.11%	N/A	N/A	13.20%	N/A	N/A	35.31%	35.31%
CCCFPD Tier 4 (2% COLA)	N/A	N/A	21.48%	N/A	N/A	11.95%	N/A	N/A	33.43%	33.43%
Cost Group 6										
Non-Enhanced District Tier 1	8.49%	12.73%	N/A	2.50%	3.75%	N/A	10.99%	16.48%	N/A	16.37%
Non-Enhanced District Tier 4 (3% COLA)	N/A	N/A	10.98%	N/A	N/A	3.55%	N/A	N/A	14.53%	14.53%
Cost Group 7										
County Tier A	N/A	N/A	33.27%	N/A	N/A	27.78%	N/A	N/A	61.05%	61.05%
County Tier D	N/A	N/A	24.85%	N/A	N/A	26.27%	N/A	N/A	51.12%	51.12%
Cost Group 8										
CCCFPD Tier A	N/A	N/A	32.69%	N/A	N/A	35.51%	N/A	N/A	68.20%	68.20%
CCCFPD Tier D	N/A	N/A	22.27%	N/A	N/A	33.32%	N/A	N/A	55.59%	55.59%
CCCFPD Tier E	N/A	N/A	21.45%	N/A	N/A	31.24%	N/A	N/A	52.69%	52.69%

[1] If employer is in Social Security.
[2] For legacy tier, applies to employer who is not in Social Security. For PEPRA tier, applies to all employers.

Appendix E: Recommended Employer Rates

Cost Group and Tier	Basic First $350 Monthly[1]	Basic Excess of $350 Monthly[1]	Basic All Eligible Pay[2]	COLA First $350 Monthly[1]	COLA Excess of $350 Monthly[1]	COLA All Eligible Pay[2]	Total First $350 Monthly[1]	Total Excess of $350 Monthly[1]	Total All Eligible Pay[2]	All Aggregate Pay
Cost Group 9										
County Tier C	N/A	N/A	31.68%	N/A	N/A	24.91%	N/A	N/A	56.59%	56.59%
County Tier E	N/A	N/A	23.89%	N/A	N/A	24.01%	N/A	N/A	47.90%	47.90%
Cost Group 10										
Moraga-Orinda FD Tier A	N/A	N/A	37.78%	N/A	N/A	58.95%	N/A	N/A	96.73%	96.73%
Moraga-Orinda FD Tier D	N/A	N/A	30.01%	N/A	N/A	57.44%	N/A	N/A	87.45%	87.45%
Cost Group 11										
San Ramon FD Tier A	N/A	N/A	34.43%	N/A	N/A	22.16%	N/A	N/A	56.59%	56.59%
San Ramon FD Tier D	N/A	N/A	21.99%	N/A	N/A	19.13%	N/A	N/A	41.12%	41.12%

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[1] If employer is in Social Security.
[2] For legacy tier, applies to employer who is not in Social Security. For PEPRA tier, applies to all employers.

Segal

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July 18, 2025

Ms. Christina Dunn
Chief Executive Officer
Contra Costa County Employees' Retirement Association
1200 Concord Avenue, Suite 300
Concord, CA 94520

Re: Contra Costa County Employees' Retirement Association (CCCERA)
Contribution Rate Packet for the Period from July 1, 2026 through June 30, 2027

Dear Christina:

As requested, we have prepared the enclosed contribution rate packet that contains the employer and member contribution rates for the period from July 1, 2026 through June 30, 2027.

The following documents are enclosed:

- Contribution Rate Packet Cover Page
- Contribution Rate Packet Table of Contents
- Contribution Rate Packet Cover Memo
- Board of Supervisors Resolution
- Employer Contribution Rates (Exhibits 1 through 11)
- Member Contribution Rates (Exhibits A through L)
- Examples for Subvention and Employee Cost Sharing
- Prepayment Discount Factor for 2026-2027

The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

Please let us know if you have any questions.

Sincerely,

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

Eva Yum, FSA, MAAA, EA
Vice President and Actuary

AW/bbf
Enclosures (5953130)

cc: Henry Gudino

Disclaimer

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CONTRA COSTA COUNTY
EMPLOYEES’ RETIREMENT ASSOCIATION

CONTRIBUTION RATE PACKET FOR
July 1, 2026 through June 30, 2027

1200 Concord Avenue Suite 300 Concord CA 94520 925.521.3960
FAX: 925.521.3969 www.cccera.gov

CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

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CCCERA

Contra Costa County Employees' Retirement Association

MEMORANDUM

Date: August 6, 2025

To: Interested Parties and Participating Employers

From: Christina Dunn, Chief Executive Officer

Subject: Contribution Rates Effective July 1, 2026

At its August 6, 2025 meeting, the Retirement Board reviewed the actuary's valuation report for the year ending December 31, 2024 and adopted the recommended employer and employee contribution rates, which will become effective on July 1, 2026. A copy of the December 31, 2024 Actuarial Valuation can be found on CCCERA's website at www.cccera.gov under the Actuarial Valuations link.

Enclosed are the employer and employee contribution rates to be used effective July 1, 2026 through June 30, 2027.

Please note the following:

- ✓ **The rates are effective July 1, 2026 through June 30, 2027 and have not yet been adopted by the County Board of Supervisors.**
- ✓ **The rates are BEFORE ANY EMPLOYER SUBVENTION of the employee contribution.** The rates quoted here are the employer required rates without taking into consideration any employer subvention of employee contributions. A convenient methodology for adding subvention is included for your use on page 28. Note that subvention is not always permitted for PEPRA members.
- ✓ **The rates are BEFORE ANY INCREASE IN EMPLOYEE RATE to pay a portion of the employer contribution.**
  If an employee's rate needs to be increased to pay a portion of the employer contribution, both employee and employer rates would need to be adjusted accordingly. A convenient methodology for adding subvention is included for your use on page 28.

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THE BOARD OF SUPERVISORS OF CONTRA COSTA COUNTY, CALIFORNIA

Adopted this Order on ____________________________________, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

- -

SUBJECT: Approving Contribution Rates to be charged by the Contra Costa County Employees' Retirement Association.

Resolution No.______

Pursuant to Government Code Section 31454 and on recommendation of the Board of the Contra Costa County Employees' Retirement Association, BE IT RESOLVED that the following contribution rates are approved to be effective for the period July 1, 2026 through June 30, 2027.

I. Employer Contribution Rates for Basic and Cost-of-Living Components and Non-refundability Discount Factors

   A. For General Members (Sec. 31676.11, Sec. 31676.16 and Sec. 7522.20(a)) See attached Exhibits 1 through 6

   B. For Safety Members (Sec. 31664, Sec. 31664.1 and Sec. 7522.25(d)) See attached Exhibits 7 through 11

II. Employee Contribution Rates for Basic and Cost-of-Living Components

   See attached Exhibits A through L

The following employers made UAAL prepayments and their Unfunded Actuarial Accrued Liability (UAAL) contribution rates reflect those UAAL prepayments:

- Central Contra Costa Sanitary District made a UAAL prepayment in 2013, 2014, 2015 and 2021 which affected contribution rates for that employer.
- Local Agency Formation Commission (LAFCO) made a UAAL prepayment in 2017, 2019, 2020 and 2021 which affected contribution rates for that employer.
- In-Home Supportive Services Authority (IHSS) made a UAAL prepayment in 2023 which affected contribution rates for that employer.
- San Ramon Valley Fire Protection District made a UAAL prepayment in 2017, 2018, 2019, 2020, 2021, 2022 and 2023 which affected contribution rates for the Safety members of that employer.

Effective July 1, 2025, Rodeo-Hercules Fire Protection District was annexed into Contra Costa County Fire Protection District. Consistent with the consolidation, starting with the December 31, 2024 valuation, the prior General and Safety members from the Rodeo-Hercules Fire Protection District have become General and Safety members of Contra Costa County Fire Protection District in Cost Group #5 and Cost Group #8, respectively. As part of the consolidation, Rodeo-Hercules Fire Protection District made a UAAL prepayment in 2025 which affected contribution rates for the Safety members of Contra Costa County Fire Protection District (after consolidation).

Exhibit 1

Contra Costa County Employees' Retirement Association

Employer Contribution Rates Effective for July 1, 2026 through June 30, 2027 for Cost Group #1

Cost Group #1	Basic		COLA		Non-Refundability Factor
	In Social Security[1]	Not In Social Security[2]	In Social Security[1]	Not In Social Security[2]	
General Tier 1 Non-LAFCO (in Social Security)	23.26%	N/A	2.55%	N/A	0.9650
General Tier 1 Non-LAFCO (not in Social Security)	N/A	23.04%	N/A	2.52%	0.9650
General Tier 1 LAFCO	18.60%	N/A	2.55%	N/A	0.9650
General Tier 4 (3% COLA) Non-LAFCO	19.44%		2.02%		0.9563
General Tier 4 (3% COLA) LAFCO	14.84%		2.02%		0.9563
General Tier 4 (2% COLA)	18.97%		0.95%		0.9507

Basic rates shown include an administrative expense load of 0.65% of payroll.

Employers:

- County General
- Local Agency Formation Commission (LAFCO)
- CC Mosquito & Vector Control District
- Bethel Island Municipal Improvement District
- First 5 - Children and Families Commission
- Contra Costa County Employees' Retirement Association
- Superior Court
- Moraga-Orinda Fire Protection District
- San Ramon Valley Fire Protection District

Tiers:

- Tier 1 Enhanced (2% @ 55)
- Tier 4 (2.5% @ 67)

[1] If employer is in Social Security, the rate should only be applied to monthly compensation in excess of $116.67. The rate should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

[2] For legacy tier, applies to employer who is not in Social Security and the rate should be applied to all compensation up to the annual IRC 401(a)(17) compensation limit. For PEPRA tier, applies to all employers and the rate should be applied to all compensation up to the applicable annual Gov. Code 7522.10(d) compensation limit.

Exhibit 2

Contra Costa County Employees' Retirement Association

Employer Contribution Rates Effective for July 1, 2026 through June 30, 2027 for Cost Group #2

Cost Group #2	Basic		COLA		Non-Refundability Factor
	In Social Security[1]	Not In Social Security[2]	In Social Security[1]	Not In Social Security[2]	
General Tier 3 Non-IHSS	21.47%	N/A	2.17%	N/A	0.9496
General Tier 3 IHSS	21.05%	N/A	2.01%	N/A	0.9496
General Tier 5 (3%/4% COLA) Non-IHSS	18.35%		1.61%		0.9555
General Tier 5 (3%/4% COLA) IHSS	17.90%		1.46%		0.9555
General Tier 5 (2% COLA) Non-IHSS	18.35%		0.75%		0.9509
General Tier 5 (2% COLA) IHSS	17.90%		0.60%		0.9509

Basic rates shown include an administrative expense load of 0.65% of payroll.

Employers:

- County General
- In-Home Supportive Services Authority
- CC Mosquito & Vector Control District
- Superior Court

Tiers:

- Tier 3 Enhanced (2% @ 55)
- Tier 5 (2.5% @ 67)

[1] If employer is in Social Security, the rate should only be applied to monthly compensation in excess of $116.67. The rate should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

[2] For legacy tier, applies to employer who is not in Social Security and the rate should be applied to all compensation up to the annual IRC 401(a)(17) compensation limit. For PEPRA tier, applies to all employers and the rate should be applied to all compensation up to the applicable annual Gov. Code 7522.10(d) compensation limit.

Exhibit 3

Contra Costa County Employees' Retirement Association

<u>Employer Contribution Rates Effective for July 1, 2026 through June 30, 2027 for Cost Group #3</u>

Cost Group #3	Basic		COLA		Non-Refundability Factor
	In Social Security[1]	Not In Social Security[2]	In Social Security[1]	Not In Social Security[2]	
Central Contra Costa Sanitary District General Tier 1	N/A	15.63%	N/A	5.62%	0.9592
Central Contra Costa Sanitary District General Tier 4 (3% COLA)	10.96%		4.72%		0.9638

Basic rates shown include an administrative expense load of 0.65% of payroll.

Employers:

- Central Contra Costa Sanitary District

Tiers:

- Tier 1 Enhanced (2% @ 55)
- Tier 4 (2.5% @ 67)

[1] If employer is in Social Security, the rate should only be applied to monthly compensation in excess of $116.67. The rate should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

[2] For legacy tier, applies to employer who is not in Social Security and the rate should be applied to all compensation up to the annual IRC 401(a)(17) compensation limit. For PEPRA tier, applies to all employers and the rate should be applied to all compensation up to the applicable annual Gov. Code 7522.10(d) compensation limit.

Exhibit 4

Contra Costa County Employees' Retirement Association

Employer Contribution Rates Effective for July 1, 2026 through June 30, 2027 for Cost Group #4

Cost Group #4	Basic: In Social Security[1]	Basic: Not In Social Security[2]	COLA: In Social Security[1]	COLA: Not In Social Security[2]	Non-Refundability Factor
Contra Costa Housing Authority General Tier 1	21.38%	N/A	7.06%	N/A	0.9561
Contra Costa Housing Authority General Tier 4 (3% COLA)	17.72%		6.30%		0.9571

Basic rates shown include an administrative expense load of 0.65% of payroll.

Employers:

- Contra Costa Housing Authority

Tiers:

- Tier 1 Enhanced (2% @ 55)
- Tier 4 (2.5% @ 67)

[1] If employer is in Social Security, the rate should only be applied to monthly compensation in excess of $116.67. The rate should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

[2] For legacy tier, applies to employer who is not in Social Security and the rate should be applied to all compensation up to the annual IRC 401(a)(17) compensation limit. For PEPRA tier, applies to all employers and the rate should be applied to all compensation up to the applicable annual Gov. Code 7522.10(d) compensation limit.

Exhibit 5

Contra Costa County Employees' Retirement Association

Employer Contribution Rates Effective for July 1, 2026 through June 30, 2027 for Cost Group #5

Cost Group #5	Basic In Social Security[1]	Basic Not In Social Security[2]	COLA In Social Security[1]	COLA Not In Social Security[2]	Non-Refundability Factor
Contra Costa County Fire Protection District General Tier 1	N/A	27.59%	N/A	13.85%	0.9819
Contra Costa County Fire Protection District General Tier 4 (3% COLA)	22.11%		13.20%		0.9579
Contra Costa County Fire Protection District General Tier 4 (2% COLA)	21.48%		11.95%		0.9545

Basic rates shown include an administrative expense load of 0.65% of payroll.

Employers:

- Contra Costa County Fire Protection District

Tiers:

- Tier 1 Enhanced (2% @ 55)
- Tier 4 (2.5% @ 67)

[1] If employer is in Social Security, the rate should only be applied to monthly compensation in excess of $116.67. The rate should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

[2] For legacy tier, applies to employer who is not in Social Security and the rate should be applied to all compensation up to the annual IRC 401(a)(17) compensation limit. For PEPRA tier, applies to all employers and the rate should be applied to all compensation up to the applicable annual Gov. Code 7522.10(d) compensation limit.

Exhibit 6

Contra Costa County Employees' Retirement Association

Employer Contribution Rates Effective for July 1, 2026 through June 30, 2027 for Cost Group #6

Cost Group #6	Basic: In Social Security[1]	Basic: Not In Social Security[2]	COLA: In Social Security[1]	COLA: Not In Social Security[2]	Non-Refundability Factor
Non-Enhanced District General Tier 1	12.73%	N/A	3.75%	N/A	0.9597
Non-Enhanced District General Tier 4 (3% COLA)	10.98%		3.55%		0.9469

Basic rates shown include an administrative expense load of 0.65% of payroll.

Employers:

- Rodeo Sanitary District
- Byron Brentwood Cemetery District

Tiers:

- Tier 1 Non-Enhanced (1.67% @ 55)
- Tier 4 (2.5% @ 67)

[1] If employer is in Social Security, the rate should only be applied to monthly compensation in excess of $116.67. The rate should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

[2] For legacy tier, applies to employer who is not in Social Security and the rate should be applied to all compensation up to the annual IRC 401(a)(17) compensation limit. For PEPRA tier, applies to all employers and the rate should be applied to all compensation up to the applicable annual Gov. Code 7522.10(d) compensation limit.

Exhibit 7

Contra Costa County Employees' Retirement Association

Employer Contribution Rates Effective for July 1, 2026 through June 30, 2027 for Cost Group #7

Cost Group #7	Basic		COLA		Non-Refundability Factor
	In Social Security[1]	Not In Social Security[2]	In Social Security[1]	Not In Social Security[2]	
County Safety Tier A	N/A	33.27%	N/A	27.78%	0.9746
County Safety Tier D	24.85%		26.27%		0.9793

Basic rates shown include an administrative expense load of 0.65% of payroll.

Employers:

- County Safety

Tiers:

- Tier A Enhanced (3% @ 50)
- Tier D (2.7% @ 57)

[1] If employer is in Social Security, the rate should only be applied to monthly compensation in excess of $116.67. The rate should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

[2] For legacy tier, applies to employer who is not in Social Security and the rate should be applied to all compensation up to the annual IRC 401(a)(17) compensation limit. For PEPRA tier, applies to all employers and the rate should be applied to all compensation up to the applicable annual Gov. Code 7522.10(d) compensation limit.

Exhibit 8

Contra Costa County Employees' Retirement Association

Employer Contribution Rates Effective for July 1, 2026 through June 30, 2027 for Cost Group #8

Cost Group #8	Basic		COLA		Non-Refundability Factor
	In Social Security[1]	Not In Social Security[2]	In Social Security[1]	Not In Social Security[2]	
Contra Costa County Fire Protection District Safety Tier A	N/A	32.69%	N/A	35.51%	0.9790
Contra Costa County Fire Protection District Safety Tier D	22.27%		33.32%		0.9789
Contra Costa County Fire Protection District Safety Tier E	21.45%		31.24%		0.9816

Basic rates shown include an administrative expense load of 0.65% of payroll.

Employers:

- Contra Costa County Fire Protection District

Tiers:

- Tier A Enhanced (3% @ 50)
- Tier D (2.7% @ 57)
- Tier E (2.7% @ 57)

[1] If employer is in Social Security, the rate should only be applied to monthly compensation in excess of $116.67. The rate should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

[2] For legacy tier, applies to employer who is not in Social Security and the rate should be applied to all compensation up to the annual IRC 401(a)(17) compensation limit. For PEPRA tier, applies to all employers and the rate should be applied to all compensation up to the applicable annual Gov. Code 7522.10(d) compensation limit.

Exhibit 9

Contra Costa County Employees' Retirement Association

Employer Contribution Rates Effective for July 1, 2026 through June 30, 2027 for Cost Group #9

Cost Group #9	Basic		COLA		Non-Refundability Factor
	In Social Security[1]	Not In Social Security[2]	In Social Security[1]	Not In Social Security[2]	
County Safety Tier C	N/A	31.68%	N/A	24.91%	0.9743
County Safety Tier E	23.89%		24.01%		0.9774

Basic rates shown include an administrative expense load of 0.65% of payroll.

Employers:

- County Safety (Members hired on or after January 1, 2007)

Tiers:

- Tier C Enhanced (3% @ 50)
- Tier E (2.7% @ 57)

[1] If employer is in Social Security, the rate should only be applied to monthly compensation in excess of $116.67. The rate should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

[2] For legacy tier, applies to employer who is not in Social Security and the rate should be applied to all compensation up to the annual IRC 401(a)(17) compensation limit. For PEPRA tier, applies to all employers and the rate should be applied to all compensation up to the applicable annual Gov. Code 7522.10(d) compensation limit.

Exhibit 10

Contra Costa County Employees' Retirement Association

Employer Contribution Rates Effective for July 1, 2026 through June 30, 2027 for Cost Group #10

Cost Group #10	Basic		COLA		Non-Refundability Factor
	In Social Security[1]	Not In Social Security[2]	In Social Security[1]	Not In Social Security[2]	
Moraga-Orinda Fire Protection District Safety Tier A	N/A	37.78%	N/A	58.95%	0.9740
Moraga-Orinda Fire Protection District Safety Tier D	30.01%		57.44%		0.9799

Basic rates shown include an administrative expense load of 0.65% of payroll.

Employers:

- Moraga-Orinda Fire Protection District

Tiers:

- Tier A Enhanced (3% @ 50)
- Tier D (2.7% @ 57)

1 If employer is in Social Security, the rate should only be applied to monthly compensation in excess of $116.67. The rate should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

2 For legacy tier, applies to employer who is not in Social Security and the rate should be applied to all compensation up to the annual IRC 401(a)(17) compensation limit. For PEPRA tier, applies to all employers and the rate should be applied to all compensation up to the applicable annual Gov. Code 7522.10(d) compensation limit.

Exhibit 11

Contra Costa County Employees' Retirement Association

Employer Contribution Rates Effective for July 1, 2026 through June 30, 2027 for Cost Group #11

Cost Group #11	Basic		COLA		Non-Refundability Factor
	In Social Security[1]	Not In Social Security[2]	In Social Security[1]	Not In Social Security[2]	
San Ramon Valley Fire Protection District Safety Tier A	N/A	34.43%	N/A	22.16%	0.9788
San Ramon Valley Fire Protection District Safety Tier D	21.99%		19.13%		0.9824

Basic rates shown include an administrative expense load of 0.65% of payroll.

Employers:

- San Ramon Valley Fire Protection District

Tiers:

- Tier A Enhanced (3% @ 50)
- Tier D (2.7% @ 57)

---

1 If employer is in Social Security, the rate should only be applied to monthly compensation in excess of $116.67. The rate should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

2 For legacy tier, applies to employer who is not in Social Security and the rate should be applied to all compensation up to the annual IRC 401(a)(17) compensation limit. For PEPRA tier, applies to all employers and the rate should be applied to all compensation up to the applicable annual Gov. Code 7522.10(d) compensation limit.

Exhibit A

General Cost Group #1 Non-PEPRA Member Contribution Rates

Effective for July 1, 2026 through June 30, 2027

Expressed as a Percentage of Monthly Payroll[1]

Entry Age	Basic[2] In Social Security	Basic[2] Not In Social Security	COLA	Total In Social Security	Total Not In Social Security
15	5.56%	5.55%	2.73%	8.29%	8.28%
16	5.69%	5.68%	2.80%	8.49%	8.48%
17	5.82%	5.81%	2.87%	8.69%	8.68%
18	5.95%	5.94%	2.94%	8.89%	8.88%
19	6.05%	6.04%	3.00%	9.05%	9.04%
20	6.16%	6.15%	3.06%	9.22%	9.21%
21	6.26%	6.25%	3.11%	9.37%	9.36%
22	6.38%	6.37%	3.18%	9.56%	9.55%
23	6.49%	6.48%	3.24%	9.73%	9.72%
24	6.60%	6.59%	3.30%	9.90%	9.89%
25	6.72%	6.71%	3.36%	10.08%	10.07%
26	6.84%	6.83%	3.43%	10.27%	10.26%
27	6.96%	6.95%	3.49%	10.45%	10.44%
28	7.08%	7.07%	3.56%	10.64%	10.63%
29	7.21%	7.20%	3.63%	10.84%	10.83%
30	7.34%	7.33%	3.70%	11.04%	11.03%
31	7.47%	7.46%	3.77%	11.24%	11.23%
32	7.60%	7.59%	3.84%	11.44%	11.43%
33	7.74%	7.73%	3.92%	11.66%	11.65%
34	7.88%	7.87%	3.99%	11.87%	11.86%
35	8.02%	8.01%	4.07%	12.09%	12.08%
36	8.16%	8.15%	4.14%	12.30%	12.29%
37	8.31%	8.30%	4.23%	12.54%	12.53%
38	8.47%	8.46%	4.31%	12.78%	12.77%
39	8.61%	8.60%	4.39%	13.00%	12.99%
40	8.76%	8.75%	4.47%	13.23%	13.22%
41	8.92%	8.91%	4.56%	13.48%	13.47%
42	9.06%	9.05%	4.63%	13.69%	13.68%
43	9.21%	9.20%	4.71%	13.92%	13.91%
44	9.33%	9.32%	4.78%	14.11%	14.10%
45	9.46%	9.45%	4.85%	14.31%	14.30%
46	9.60%	9.59%	4.93%	14.53%	14.52%
47	9.76%	9.75%	5.01%	14.77%	14.76%
48	9.91%	9.90%	5.10%	15.01%	15.00%
49	10.02%	10.01%	5.16%	15.18%	15.17%
50	10.16%	10.15%	5.23%	15.39%	15.38%
51	10.29%	10.28%	5.30%	15.59%	15.58%
52	10.45%	10.44%	5.39%	15.84%	15.83%
53	10.59%	10.58%	5.47%	16.06%	16.05%
54	10.76%	10.75%	5.56%	16.32%	16.31%
55	10.92%	10.91%	5.64%	16.56%	16.55%
56	10.98%	10.97%	5.68%	16.66%	16.65%
57	10.96%	10.95%	5.67%	16.63%	16.62%
58	10.90%	10.89%	5.63%	16.53%	16.52%
59 & Over	10.65%	10.64%	5.50%	16.15%	16.14%

Administrative Expense: 0.53% of payroll added to Basic Rates

COLA Loading: 54.38% applied to Basic Rates prior to adjustment for administrative expenses

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1 For members in Social Security, the "In Social Security" rate should only be applied to monthly compensation in excess of $116.67. All rates should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

2 The Basic Rate for members in Social Security is increased by 0.01% to account for the administrative expense rate of 0.53% that is applicable to the first $116.67 of compensation.

Exhibit A

Employers:

- County General
- LAFCO
- CC Mosquito & Vector Control District
- Bethel Island Municipal Improvement District
- First 5 - Children and Families Commission
- Contra Costa County Employees' Retirement Association
- Superior Court
- Moraga-Orinda Fire Protection District
- San Ramon Valley Fire Protection District

Tier:

- Tier 1 Enhanced (2% @ 55)

Exhibit B

General Cost Group #2 Non-PEPRA Member Contribution Rates

Effective for July 1, 2026 through June 30, 2027

Expressed as a Percentage of Monthly Payroll[1]

	Basic[2]			Total	
Entry Age	In Social Security	Not In Social Security	COLA	In Social Security	Not In Social Security
15	5.54%	5.53%	2.34%	7.88%	7.87%
16	5.66%	5.65%	2.40%	8.06%	8.05%
17	5.79%	5.78%	2.46%	8.25%	8.24%
18	5.92%	5.91%	2.52%	8.44%	8.43%
19	6.02%	6.01%	2.57%	8.59%	8.58%
20	6.13%	6.12%	2.62%	8.75%	8.74%
21	6.24%	6.23%	2.67%	8.91%	8.90%
22	6.35%	6.34%	2.72%	9.07%	9.06%
23	6.46%	6.45%	2.77%	9.23%	9.22%
24	6.57%	6.56%	2.82%	9.39%	9.38%
25	6.69%	6.68%	2.88%	9.57%	9.56%
26	6.81%	6.80%	2.94%	9.75%	9.74%
27	6.93%	6.92%	2.99%	9.92%	9.91%
28	7.05%	7.04%	3.05%	10.10%	10.09%
29	7.18%	7.17%	3.11%	10.29%	10.28%
30	7.30%	7.29%	3.17%	10.47%	10.46%
31	7.43%	7.42%	3.23%	10.66%	10.65%
32	7.57%	7.56%	3.29%	10.86%	10.85%
33	7.70%	7.69%	3.35%	11.05%	11.04%
34	7.85%	7.84%	3.42%	11.27%	11.26%
35	7.99%	7.98%	3.49%	11.48%	11.47%
36	8.13%	8.12%	3.56%	11.69%	11.68%
37	8.28%	8.27%	3.63%	11.91%	11.90%
38	8.43%	8.42%	3.70%	12.13%	12.12%
39	8.58%	8.57%	3.77%	12.35%	12.34%
40	8.73%	8.72%	3.84%	12.57%	12.56%
41	8.88%	8.87%	3.91%	12.79%	12.78%
42	9.02%	9.01%	3.97%	12.99%	12.98%
43	9.17%	9.16%	4.04%	13.21%	13.20%
44	9.29%	9.28%	4.10%	13.39%	13.38%
45	9.42%	9.41%	4.16%	13.58%	13.57%
46	9.56%	9.55%	4.22%	13.78%	13.77%
47	9.71%	9.70%	4.30%	14.01%	14.00%
48	9.87%	9.86%	4.37%	14.24%	14.23%
49	9.99%	9.98%	4.43%	14.42%	14.41%
50	10.11%	10.10%	4.48%	14.59%	14.58%
51	10.25%	10.24%	4.55%	14.80%	14.79%
52	10.41%	10.40%	4.62%	15.03%	15.02%
53	10.57%	10.56%	4.70%	15.27%	15.26%
54	10.70%	10.69%	4.76%	15.46%	15.45%
55	10.84%	10.83%	4.82%	15.66%	15.65%
56	10.93%	10.92%	4.87%	15.80%	15.79%
57	10.98%	10.97%	4.89%	15.87%	15.86%
58	10.93%	10.92%	4.87%	15.80%	15.79%
59 & Over	10.38%	10.37%	4.61%	14.99%	14.98%

Administrative Expense: 0.53% of payroll added to Basic Rates

COLA Loading: 46.84% applied to Basic Rates prior to adjustment for administrative expenses

[1] For members in Social Security, the "In Social Security" rate should only be applied to monthly compensation in excess of $116.67. All rates should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

[2] The Basic Rate for members in Social Security is increased by 0.01% to account for the administrative expense rate of 0.53% that is applicable to the first $116.67 of compensation.

Exhibit B

Employers:

- County General
- In-Home Supportive Services Authority
- CC Mosquito & Vector Control District
- Superior Court

Tier:

- Tier 3 Enhanced (2% @ 55)

Exhibit C

General Cost Group #3 Non-PEPRA Member Contribution Rates

Effective for July 1, 2026 through June 30, 2027

Expressed as a Percentage of Monthly Payroll[1]

Entry Age	Basic	COLA	Total
15	5.76%	2.77%	8.53%
16	5.89%	2.84%	8.73%
17	6.02%	2.91%	8.93%
18	6.16%	2.99%	9.15%
19	6.27%	3.04%	9.31%
20	6.38%	3.10%	9.48%
21	6.49%	3.16%	9.65%
22	6.61%	3.22%	9.83%
23	6.72%	3.28%	10.00%
24	6.84%	3.35%	10.19%
25	6.96%	3.41%	10.37%
26	7.09%	3.48%	10.57%
27	7.21%	3.54%	10.75%
28	7.34%	3.61%	10.95%
29	7.47%	3.68%	11.15%
30	7.60%	3.75%	11.35%
31	7.74%	3.82%	11.56%
32	7.88%	3.90%	11.78%
33	8.02%	3.97%	11.99%
34	8.17%	4.05%	12.22%
35	8.32%	4.13%	12.45%
36	8.47%	4.21%	12.68%
37	8.62%	4.29%	12.91%
38	8.78%	4.38%	13.16%
39	8.93%	4.46%	13.39%
40	9.08%	4.53%	13.61%
41	9.24%	4.62%	13.86%
42	9.39%	4.70%	14.09%
43	9.54%	4.78%	14.32%
44	9.67%	4.85%	14.52%
45	9.80%	4.92%	14.72%
46	9.95%	5.00%	14.95%
47	10.11%	5.08%	15.19%
48	10.26%	5.16%	15.42%
49	10.38%	5.22%	15.60%
50	10.51%	5.29%	15.80%
51	10.64%	5.36%	16.00%
52	10.79%	5.44%	16.23%
53	10.95%	5.53%	16.48%
54	11.11%	5.61%	16.72%
55	11.23%	5.68%	16.91%
56	11.28%	5.70%	16.98%
57	11.24%	5.68%	16.92%
58	11.10%	5.61%	16.71%
59 & Over	10.53%	5.30%	15.83%

Administrative Expense: 0.53% of payroll added to Basic Rates

COLA Loading: 53.04% applied to Basic Rates prior to adjustment for administrative expenses

Employers:

- Central Contra Costa Sanitary District

Tier:

- Tier 1 Enhanced (2% @ 55)

[1] All rates should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

Exhibit D

General Cost Group #4 Non-PEPRA Member Contribution Rates

Effective for July 1, 2026 through June 30, 2027

Expressed as a Percentage of Monthly Payroll[1]

	Basic[2]			Total	
Entry Age	In Social Security	Not In Social Security	COLA	In Social Security	Not In Social Security
15	5.59%	5.58%	2.64%	8.23%	8.22%
16	5.71%	5.70%	2.71%	8.42%	8.41%
17	5.84%	5.83%	2.77%	8.61%	8.60%
18	5.97%	5.96%	2.84%	8.81%	8.80%
19	6.08%	6.07%	2.90%	8.98%	8.97%
20	6.18%	6.17%	2.95%	9.13%	9.12%
21	6.29%	6.28%	3.01%	9.30%	9.29%
22	6.40%	6.39%	3.07%	9.47%	9.46%
23	6.52%	6.51%	3.13%	9.65%	9.64%
24	6.63%	6.62%	3.19%	9.82%	9.81%
25	6.75%	6.74%	3.25%	10.00%	9.99%
26	6.87%	6.86%	3.31%	10.18%	10.17%
27	6.99%	6.98%	3.38%	10.37%	10.36%
28	7.11%	7.10%	3.44%	10.55%	10.54%
29	7.24%	7.23%	3.51%	10.75%	10.74%
30	7.37%	7.36%	3.57%	10.94%	10.93%
31	7.50%	7.49%	3.64%	11.14%	11.13%
32	7.64%	7.63%	3.72%	11.36%	11.35%
33	7.77%	7.76%	3.78%	11.55%	11.54%
34	7.91%	7.90%	3.86%	11.77%	11.76%
35	8.06%	8.05%	3.94%	12.00%	11.99%
36	8.20%	8.19%	4.01%	12.21%	12.20%
37	8.35%	8.34%	4.09%	12.44%	12.43%
38	8.50%	8.49%	4.17%	12.67%	12.66%
39	8.65%	8.64%	4.24%	12.89%	12.88%
40	8.80%	8.79%	4.32%	13.12%	13.11%
41	8.95%	8.94%	4.40%	13.35%	13.34%
42	9.10%	9.09%	4.48%	13.58%	13.57%
43	9.25%	9.24%	4.56%	13.81%	13.80%
44	9.37%	9.36%	4.62%	13.99%	13.98%
45	9.50%	9.49%	4.69%	14.19%	14.18%
46	9.64%	9.63%	4.76%	14.40%	14.39%
47	9.80%	9.79%	4.85%	14.65%	14.64%
48	9.95%	9.94%	4.93%	14.88%	14.87%
49	10.08%	10.07%	4.99%	15.07%	15.06%
50	10.20%	10.19%	5.06%	15.26%	15.25%
51	10.34%	10.33%	5.13%	15.47%	15.46%
52	10.49%	10.48%	5.21%	15.70%	15.69%
53	10.64%	10.63%	5.29%	15.93%	15.92%
54	10.79%	10.78%	5.36%	16.15%	16.14%
55	10.96%	10.95%	5.45%	16.41%	16.40%
56	11.02%	11.01%	5.49%	16.51%	16.50%
57	11.03%	11.02%	5.49%	16.52%	16.51%
58	10.88%	10.87%	5.41%	16.29%	16.28%
59 & Over	10.60%	10.59%	5.27%	15.87%	15.86%

Administrative Expense: 0.53% of payroll added to Basic Rates

COLA Loading: 52.34% applied to Basic Rates prior to adjustment for administrative expenses

[1] For members in Social Security, the "In Social Security" rate should only be applied to monthly compensation in excess of $116.67. All rates should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

[2] The Basic Rate for members in Social Security is increased by 0.01% to account for the administrative expense rate of 0.53% that is applicable to the first $116.67 of compensation.

Exhibit D

Employers:

- Contra Costa Housing Authority

Tier:

- Tier 1 Enhanced (2% @ 55)

Exhibit E

General Cost Group #5 Non-PEPRA Member Contribution Rates

Effective for July 1, 2026 through June 30, 2027

Expressed as a Percentage of Monthly Payroll[1]

Entry Age	Basic	COLA	Total
15	5.53%	3.09%	8.62%
16	5.65%	3.17%	8.82%
17	5.78%	3.25%	9.03%
18	5.91%	3.33%	9.24%
19	6.01%	3.39%	9.40%
20	6.12%	3.46%	9.58%
21	6.23%	3.53%	9.76%
22	6.34%	3.60%	9.94%
23	6.45%	3.66%	10.11%
24	6.56%	3.73%	10.29%
25	6.68%	3.81%	10.49%
26	6.80%	3.88%	10.68%
27	6.92%	3.95%	10.87%
28	7.04%	4.03%	11.07%
29	7.17%	4.11%	11.28%
30	7.29%	4.18%	11.47%
31	7.42%	4.26%	11.68%
32	7.56%	4.35%	11.91%
33	7.69%	4.43%	12.12%
34	7.84%	4.52%	12.36%
35	7.98%	4.61%	12.59%
36	8.12%	4.70%	12.82%
37	8.27%	4.79%	13.06%
38	8.42%	4.88%	13.30%
39	8.57%	4.98%	13.55%
40	8.72%	5.07%	13.79%
41	8.87%	5.16%	14.03%
42	9.01%	5.25%	14.26%
43	9.16%	5.34%	14.50%
44	9.28%	5.42%	14.70%
45	9.41%	5.50%	14.91%
46	9.55%	5.58%	15.13%
47	9.70%	5.68%	15.38%
48	9.86%	5.77%	15.63%
49	9.98%	5.85%	15.83%
50	10.10%	5.92%	16.02%
51	10.24%	6.01%	16.25%
52	10.40%	6.11%	16.51%
53	10.56%	6.21%	16.77%
54	10.69%	6.29%	16.98%
55	10.83%	6.37%	17.20%
56	10.92%	6.43%	17.35%
57	10.97%	6.46%	17.43%
58	10.92%	6.43%	17.35%
59 & Over	10.37%	6.09%	16.46%

Administrative Expense: 0.53% of payroll added to Basic Rates
COLA Loading: 61.89% applied to Basic Rates prior to adjustment for administrative expenses

Employers:
- Contra Costa County Fire Protection District

Tier:
- Tier 1 Enhanced (2% @ 55)

[1] All rates should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

Exhibit F

General Cost Group #6 Non-PEPRA Member Contribution Rates

Effective for July 1, 2026 through June 30, 2027

Expressed as a Percentage of Monthly Payroll[1]

	Basic[2]			Total	
Entry Age	In Social Security	Not In Social Security	COLA	In Social Security	Not In Social Security
15	6.40%	6.39%	2.59%	8.99%	8.98%
16	6.51%	6.50%	2.64%	9.15%	9.14%
17	6.62%	6.61%	2.68%	9.30%	9.29%
18	6.74%	6.73%	2.74%	9.48%	9.47%
19	6.86%	6.85%	2.79%	9.65%	9.64%
20	6.98%	6.97%	2.84%	9.82%	9.81%
21	7.10%	7.09%	2.90%	10.00%	9.99%
22	7.23%	7.22%	2.95%	10.18%	10.17%
23	7.36%	7.35%	3.01%	10.37%	10.36%
24	7.49%	7.48%	3.07%	10.56%	10.55%
25	7.63%	7.62%	3.13%	10.76%	10.75%
26	7.76%	7.75%	3.19%	10.95%	10.94%
27	7.90%	7.89%	3.25%	11.15%	11.14%
28	8.05%	8.04%	3.31%	11.36%	11.35%
29	8.19%	8.18%	3.38%	11.57%	11.56%
30	8.34%	8.33%	3.44%	11.78%	11.77%
31	8.49%	8.48%	3.51%	12.00%	11.99%
32	8.65%	8.64%	3.58%	12.23%	12.22%
33	8.81%	8.80%	3.65%	12.46%	12.45%
34	8.96%	8.95%	3.72%	12.68%	12.67%
35	9.12%	9.11%	3.79%	12.91%	12.90%
36	9.27%	9.26%	3.85%	13.12%	13.11%
37	9.43%	9.42%	3.92%	13.35%	13.34%
38	9.58%	9.57%	3.99%	13.57%	13.56%
39	9.71%	9.70%	4.05%	13.76%	13.75%
40	9.85%	9.84%	4.11%	13.96%	13.95%
41	9.99%	9.98%	4.17%	14.16%	14.15%
42	10.15%	10.14%	4.24%	14.39%	14.38%
43	10.31%	10.30%	4.31%	14.62%	14.61%
44	10.44%	10.43%	4.37%	14.81%	14.80%
45	10.58%	10.57%	4.43%	15.01%	15.00%
46	10.71%	10.70%	4.49%	15.20%	15.19%
47	10.89%	10.88%	4.57%	15.46%	15.45%
48	11.04%	11.03%	4.63%	15.67%	15.66%
49	11.20%	11.19%	4.71%	15.91%	15.90%
50	11.38%	11.37%	4.78%	16.16%	16.15%
51	11.46%	11.45%	4.82%	16.28%	16.27%
52	11.49%	11.48%	4.83%	16.32%	16.31%
53	11.39%	11.38%	4.79%	16.18%	16.17%
54 & Over	11.00%	10.99%	4.62%	15.62%	15.61%

Administrative Expense: 0.53% of payroll added to Basic Rates

COLA Loading: 44.14% applied to Basic Rates prior to adjustment for administrative expenses

Employers:

- Rodeo Sanitary District
- Byron Brentwood Cemetery District

Tier:

- Tier 1 Non-Enhanced (1.67% @ 55)

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[1] For members in Social Security, the "In Social Security" rate should only be applied to monthly compensation in excess of $116.67. All rates should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

[2] The Basic Rate for members in Social Security is increased by 0.01% to account for the administrative expense rate of 0.53% that is applicable to the first $116.67 of compensation.

Exhibit G

Safety Cost Group #7 Non-PEPRA Member Contribution Rates

Effective for July 1, 2026 through June 30, 2027

Expressed as a Percentage of Monthly Payroll[1]

Entry Age	Basic	COLA	Total
15	10.39%	6.77%	17.16%
16	10.39%	6.77%	17.16%
17	10.39%	6.77%	17.16%
18	10.39%	6.77%	17.16%
19	10.39%	6.77%	17.16%
20	10.39%	6.77%	17.16%
21	10.39%	6.77%	17.16%
22	10.56%	6.89%	17.45%
23	10.72%	7.00%	17.72%
24	10.89%	7.11%	18.00%
25	11.06%	7.23%	18.29%
26	11.22%	7.34%	18.56%
27	11.38%	7.45%	18.83%
28	11.54%	7.56%	19.10%
29	11.66%	7.64%	19.30%
30	11.78%	7.73%	19.51%
31	11.94%	7.84%	19.78%
32	12.09%	7.94%	20.03%
33	12.26%	8.05%	20.31%
34	12.40%	8.15%	20.55%
35	12.53%	8.24%	20.77%
36	12.69%	8.35%	21.04%
37	12.87%	8.47%	21.34%
38	13.05%	8.60%	21.65%
39	13.26%	8.74%	22.00%
40	13.46%	8.88%	22.34%
41	13.66%	9.02%	22.68%
42	13.92%	9.19%	23.11%
43	14.14%	9.35%	23.49%
44	14.31%	9.46%	23.77%
45	14.38%	9.51%	23.89%
46	14.42%	9.54%	23.96%
47	14.41%	9.53%	23.94%
48	14.23%	9.41%	23.64%
49 & Over	13.76%	9.09%	22.85%

Administrative Expense: 0.53% of payroll added to Basic Rates

COLA Loading: 68.67% applied to Basic Rates prior to adjustment for administrative expenses

Employers:

- County Safety

Tier:

- Tier A Enhanced (3% @ 50)

[1] All rates should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

Exhibit H

Safety Cost Group #8 Non-PEPRA Member Contribution Rates

Effective for July 1, 2026 through June 30, 2027

Expressed as a Percentage of Monthly Payroll[1]

Entry Age	Basic	COLA	Total
15	10.37%	7.00%	17.37%
16	10.37%	7.00%	17.37%
17	10.37%	7.00%	17.37%
18	10.37%	7.00%	17.37%
19	10.37%	7.00%	17.37%
20	10.37%	7.00%	17.37%
21	10.37%	7.00%	17.37%
22	10.53%	7.11%	17.64%
23	10.69%	7.23%	17.92%
24	10.86%	7.35%	18.21%
25	11.03%	7.47%	18.50%
26	11.19%	7.58%	18.77%
27	11.35%	7.70%	19.05%
28	11.50%	7.80%	19.30%
29	11.63%	7.89%	19.52%
30	11.75%	7.98%	19.73%
31	11.90%	8.09%	19.99%
32	12.07%	8.21%	20.28%
33	12.23%	8.32%	20.55%
34	12.36%	8.41%	20.77%
35	12.50%	8.51%	21.01%
36	12.66%	8.63%	21.29%
37	12.84%	8.75%	21.59%
38	13.02%	8.88%	21.90%
39	13.22%	9.03%	22.25%
40	13.42%	9.17%	22.59%
41	13.62%	9.31%	22.93%
42	13.87%	9.49%	23.36%
43	14.09%	9.64%	23.73%
44	14.24%	9.75%	23.99%
45	14.34%	9.82%	24.16%
46	14.36%	9.84%	24.20%
47	14.43%	9.89%	24.32%
48	14.09%	9.64%	23.73%
49 & Over	13.80%	9.44%	23.24%

Administrative Expense: 0.53% of payroll added to Basic Rates
COLA Loading: 71.12% applied to Basic Rates prior to adjustment for administrative expenses

Employers:
- Contra Costa County Fire Protection District

Tier:
- Tier A Enhanced (3% @ 50)

[1] All rates should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

Exhibit I

Safety Cost Group #9 Non-PEPRA Member Contribution Rates

Effective for July 1, 2026 through June 30, 2027

Expressed as a Percentage of Monthly Payroll[1]

Entry Age	Basic	COLA	Total
15	9.97%	4.25%	14.22%
16	9.97%	4.25%	14.22%
17	9.97%	4.25%	14.22%
18	9.97%	4.25%	14.22%
19	9.97%	4.25%	14.22%
20	9.97%	4.25%	14.22%
21	9.97%	4.25%	14.22%
22	10.12%	4.31%	14.43%
23	10.28%	4.38%	14.66%
24	10.43%	4.45%	14.88%
25	10.58%	4.52%	15.10%
26	10.73%	4.59%	15.32%
27	10.87%	4.65%	15.52%
28	11.00%	4.71%	15.71%
29	11.12%	4.76%	15.88%
30	11.26%	4.83%	16.09%
31	11.40%	4.89%	16.29%
32	11.54%	4.95%	16.49%
33	11.68%	5.01%	16.69%
34	11.81%	5.07%	16.88%
35	11.95%	5.14%	17.09%
36	12.11%	5.21%	17.32%
37	12.28%	5.28%	17.56%
38	12.45%	5.36%	17.81%
39	12.62%	5.44%	18.06%
40	12.82%	5.53%	18.35%
41	13.01%	5.61%	18.62%
42	13.18%	5.69%	18.87%
43	13.27%	5.73%	19.00%
44	13.34%	5.76%	19.10%
45	13.31%	5.75%	19.06%
46	13.18%	5.69%	18.87%
47	12.90%	5.56%	18.46%
48	13.32%	5.75%	19.07%
49 & Over	13.83%	5.98%	19.81%

Administrative Expense: 0.53% of payroll added to Basic Rates

COLA Loading: 44.97% applied to Basic Rates prior to adjustment for administrative expenses

Employers:

- County Safety
  (Members hired on or after January 1, 2007)

Tier:

- Tier C Enhanced (3% @ 50)

[1] All rates should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

Exhibit J

Safety Cost Group #10 Non-PEPRA Member Contribution Rates

Effective for July 1, 2026 through June 30, 2027

Expressed as a Percentage of Monthly Payroll[1]

Entry Age	Basic	COLA	Total
15	10.35%	6.67%	17.02%
16	10.35%	6.67%	17.02%
17	10.35%	6.67%	17.02%
18	10.35%	6.67%	17.02%
19	10.35%	6.67%	17.02%
20	10.35%	6.67%	17.02%
21	10.35%	6.67%	17.02%
22	10.51%	6.78%	17.29%
23	10.67%	6.89%	17.56%
24	10.84%	7.01%	17.85%
25	11.01%	7.12%	18.13%
26	11.17%	7.23%	18.40%
27	11.33%	7.34%	18.67%
28	11.49%	7.45%	18.94%
29	11.61%	7.53%	19.14%
30	11.73%	7.61%	19.34%
31	11.88%	7.71%	19.59%
32	12.04%	7.82%	19.86%
33	12.21%	7.94%	20.15%
34	12.34%	8.03%	20.37%
35	12.48%	8.12%	20.60%
36	12.64%	8.23%	20.87%
37	12.82%	8.35%	21.17%
38	12.99%	8.47%	21.46%
39	13.19%	8.61%	21.80%
40	13.39%	8.74%	22.13%
41	13.61%	8.89%	22.50%
42	13.85%	9.05%	22.90%
43	14.06%	9.20%	23.26%
44	14.25%	9.33%	23.58%
45	14.34%	9.39%	23.73%
46	14.37%	9.41%	23.78%
47	14.34%	9.39%	23.73%
48	14.11%	9.23%	23.34%
49 & Over	13.83%	9.04%	22.87%

Administrative Expense: 0.53% of payroll added to Basic Rates
COLA Loading: 67.97% applied to Basic Rates prior to adjustment for administrative expenses

Employers:
- Moraga-Orinda Fire Protection District

Tier:
- Tier A Enhanced (3% @ 50)

[1] All rates should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

Exhibit K

Safety Cost Group #11 Non-PEPRA Member Contribution Rates

Effective for July 1, 2026 through June 30, 2027

Expressed as a Percentage of Monthly Payroll[1]

Entry Age	Basic	COLA	Total
15	10.63%	7.18%	17.81%
16	10.63%	7.18%	17.81%
17	10.63%	7.18%	17.81%
18	10.63%	7.18%	17.81%
19	10.63%	7.18%	17.81%
20	10.63%	7.18%	17.81%
21	10.63%	7.18%	17.81%
22	10.80%	7.30%	18.10%
23	10.97%	7.42%	18.39%
24	11.14%	7.54%	18.68%
25	11.31%	7.66%	18.97%
26	11.48%	7.78%	19.26%
27	11.64%	7.90%	19.54%
28	11.80%	8.01%	19.81%
29	11.93%	8.10%	20.03%
30	12.05%	8.19%	20.24%
31	12.21%	8.30%	20.51%
32	12.37%	8.41%	20.78%
33	12.53%	8.53%	21.06%
34	12.67%	8.63%	21.30%
35	12.81%	8.73%	21.54%
36	12.98%	8.85%	21.83%
37	13.16%	8.98%	22.14%
38	13.33%	9.10%	22.43%
39	13.54%	9.25%	22.79%
40	13.74%	9.39%	23.13%
41	13.95%	9.54%	23.49%
42	14.19%	9.71%	23.90%
43	14.42%	9.87%	24.29%
44	14.59%	9.99%	24.58%
45	14.65%	10.04%	24.69%
46	14.65%	10.04%	24.69%
47	14.67%	10.05%	24.72%
48	14.36%	9.83%	24.19%
49 & Over	13.78%	9.42%	23.20%

Administrative Expense: 0.53% of payroll added to Basic Rates
COLA Loading: 71.07% applied to Basic Rates prior to adjustment for administrative expenses

Employers:
- San Ramon Valley Fire Protection District

Tier:
- Tier A Enhanced (3% @ 50)

[1] All rates should be applied to compensation up to the annual IRC 401(a)(17) compensation limit, if applicable.

Exhibit L

General and Safety PEPRA Tier Member Contribution Rates

Effective for July 1, 2026 through June 30, 2027

Expressed as a Percentage of Monthly Payroll[1]

General Tiers	Basic	COLA	Total
Cost Group #1 – PEPRA Tier 4 (3% COLA)	9.45%	3.10%	12.55%
Cost Group #1 – PEPRA Tier 4 (2% COLA)	8.98%	2.03%	11.01%
Cost Group #2 – PEPRA Tier 5 (3%/4% COLA)	8.36%	2.69%	11.05%
Cost Group #2 – PEPRA Tier 5 (2% COLA)	8.36%	1.83%	10.19%
Cost Group #3 – PEPRA Tier 4 (3% COLA)	8.41%	2.87%	11.28%
Cost Group #4 – PEPRA Tier 4 (3% COLA)	8.92%	2.93%	11.85%
Cost Group #5 – PEPRA Tier 4 (3% COLA)	10.46%	3.48%	13.94%
Cost Group #5 – PEPRA Tier 4 (2% COLA)	9.83%	2.23%	12.06%
Cost Group #6 – PEPRA Tier 4 (3% COLA)	10.86%	3.55%	14.41%

Safety Tiers	Basic	COLA	Total
Cost Group #7 – PEPRA Tier D	14.63%	6.07%	20.70%
Cost Group #8 – PEPRA Tier D	13.61%	5.67%	19.28%
Cost Group #8 – PEPRA Tier E	12.79%	3.59%	16.38%
Cost Group #9 – PEPRA Tier E	13.67%	3.81%	17.48%
Cost Group #10 – PEPRA Tier D	13.43%	5.70%	19.13%
Cost Group #11 – PEPRA Tier D	11.64%	4.95%	16.59%

Administrative Expense: 0.53% of payroll added to Basic Rates

Cost Group	Employers	Tiers
1	County General	Tier 4 (2.5% @ 67)
	Local Agency Formation Commission (LAFCO)	Tier 4 (2.5% @ 67)
	Contra Costa Mosquito and Vector Control District	Tier 4 (2.5% @ 67)
	Bethel Island Municipal Improvement District	Tier 4 (2.5% @ 67)
	First 5 - Children & Families Commission	Tier 4 (2.5% @ 67)
	Contra Costa County Employees' Retirement Association	Tier 4 (2.5% @ 67)
	Superior Court	Tier 4 (2.5% @ 67)
	Moraga-Orinda Fire Protection District	Tier 4 (2.5% @ 67)
	San Ramon Valley Fire Protection District	Tier 4 (2.5% @ 67)
2	County General	Tier 5 (2.5% @ 67)
	In-Home Supportive Services Authority (IHSS)	Tier 5 (2.5% @ 67)
	Contra Costa Mosquito and Vector Control District	Tier 5 (2.5% @ 67)
	Superior Court	Tier 5 (2.5% @ 67)
3	Central Contra Costa Sanitary District (CCCSD)	Tier 4 (2.5% @ 67)
4	Contra Costa Housing Authority	Tier 4 (2.5% @ 67)
5	Contra Costa County Fire Protection District (CCCFPD)	Tier 4 (2.5% @ 67)
6	Rodeo Sanitary District	Tier 4 (2.5% @ 67)
	Byron Brentwood Cemetery District	Tier 4 (2.5% @ 67)
7	County Safety	Tier D (2.7% @ 57)
8	Contra Costa County Fire Protection District (CCCFPD)	Tier D (2.7% @ 57)
		Tier E (2.7% @ 57)
9	County Safety (Members hired on or after January 1, 2007)	Tier E (2.7% @ 57)
10	Moraga-Orinda Fire Protection District	Tier D (2.7% @ 57)
11	San Ramon Valley Fire Protection District	Tier D (2.7% @ 57)

[1] All rates should be applied to all compensation (whether or not in Social Security) up to the applicable annual Gov. Code 7522.10(d) compensation limit.

SUBVENTION

All rates are shown as a percent of payroll.

Employee contribution rates vary depending upon their tier and age at entry. To compute the exact subvention percent for each employee, do the following:

Employee rate: Decrease the employee's rate by the subvention percent (i.e. 25%, 50%, etc.).

Employer rate: Increase the employer's rate by a percent of the employee's decrease using the applicable non-refundability factor (found on Exhibits 1 through 11).

EXAMPLE FOR COST GROUP #3 LEGACY MEMBERS:

If the subvention percent is 25%, and the employee's rate is 6.00%,

Employee rates should be decreased by 1.50% (25% × 6.00%)
Employer rate should be increased by 1.44% (1.50% × 0.9592)

Please note that for PEPRA members, subvention is generally not permitted. The standard under Gov. Code §7522.30(a) is that employees pay at least 50 percent of normal costs and that employers not pay any of the required employee contribution, but there are some exceptions. Gov. Code §7522.30(f) allows the terms (regarding the employee's required contribution) of a contract, including a memorandum of understanding, that is in effect on January 1, 2013, to continue through the length of a contract. This means that it is possible that an employer will subvent a portion of a PEPRA member's required contribution until the expiration date of the current contract, so long as it has been determined that the contract has been impaired.

CAUTION – these rates are for employer subvention of up to one-half the member contribution under Gov. Code §31581.1, NOT employer pick-up of employee contribution rates. When an employer subvents, the contribution subvented is not placed in the member's account and is therefore not available to the member as a refund. For this reason, the employer pays the contribution at a discount (i.e. "Non-Refundability Factor").

Employer pick-ups of employee contributions are those made under Gov. Code §31581.2 and Internal Revenue Code §414 (h)(2) for the sole purpose of deferring income tax. These contributions are added to the member's account, are available to the member as a refund and are considered by CCCERA as part of the member's compensation for retirement purposes.

EMPLOYEE PAYMENT OF EMPLOYER COST

There are several reasons why the attached contribution rates may need to be adjusted to increase the employee portion including the following:

Gov. Code §31631 allows for members to pay all or part of the employer contributions.

Gov. Code §31639.95 allows for Safety members to pay a portion of the employer cost for the "3% at 50" enhanced benefit.

Gov. Code §7522.30(c) requires that an employee's contribution rate be at least equal to that of similarly situated employees.

Gov. Code §7522.30(e) allows the employee contributions to be more than one-half of the normal cost rate if the increase has been agreed to through the collective bargaining process.

If you need to increase the employee contribution rate for any reason, you will need to adjust both employee and employer rates as follows:

Employee rate: Increase the employee's rate by the desired percent of payroll.

Employer rate: Decrease the employer's rate by a percent of the cost-sharing percent of payroll using the applicable non-refundability factor.

EXAMPLE FOR COST GROUP #11 LEGACY MEMBERS:

If the required increase in the employee rate is 8.00%,

Employee rates should be increased by 8.00%.
Employer rate should be decreased by 7.83% (8.00% × 0.9788)

PREPAYMENT DISCOUNT FACTOR FOR 2026-2027

Employer Contribution Prepayment Program & Discount Factor for 2026-2027 is **0.9707**

If you are currently participating in the prepayment program and wish to continue, you do not need to do anything other than prepay the July 1, 2026 through June 30, 2027 contributions on or before July 31, 2026. If you wish to start participating, please contact the Accounting Department at CCCERA by March 31, 2026.

The discount factor is calculated assuming the prepayment will be received on July 31 in accordance with Gov. Code §31582(b) in lieu of 12 equal payments due at the end of each month in accordance with Gov. Code §31582(a). The discount factor for the fiscal year July 1, 2026 through June 30, 2027 will be **0.9707** based on the interest assumption of 6.75% per annum. It is calculated by discounting each of the 12 equal payments back to the date that the prepayment is made and is the sum of the discount factors shown in the table below divided by 12. Each of the discount factors below is based on how many months early the payment is made.

Payment Number	Number of Months Payment is Made Early	Discount Factor
1	0	1.0000
2	1	0.9946
3	2	0.9892
4	3	0.9838
5	4	0.9785
6	5	0.9732
7	6	0.9679
8	7	0.9626
9	8	0.9574
10	9	0.9522
11	10	0.9470
12	11	0.9419
Sum of Discount Factors Divided by 12:		**0.9707**

NCPERS 2025 UNIVERSITY PROGRAMMING REGISTRATION FORM

October 25–26 | Fort Lauderdale, Florida

Meeting Date
08/06/2025
Agenda Item
#10a.

ATTENDEE REGISTRATION

Is this your first time attending an NCPERS University Program? ☐ YES ☐ NO

Registration will close on October 17 for University programs.

University Programs	Early-Bird Registration Fee By October 10	Registration Fee After October 10
☐ *Program for Advanced Trustee Studies (PATS)*	*$900/person*	*$1,100/person*
☐ *NCPERS Accredited Fiduciary (NAF) Program 1&2: Governance & Finance*	*$900/person*	*$1,100/person*
☐ *NCPERS Accredited Fiduciary (NAF) Program 3&4: Risk Management & Human Capital*	*$900/person*	*$1,100/person*

These NCPERS pre-conference programs will run concurrently. Attendees should only register for one of the programs.

(Please print clearly)

Organization Name: ____________________

First Name: ____________________ Last Name: ____________________

Role/Position/Professional Title: ____________________

Preferred Mailing Address: ____________________

City: ____________________ State: ____________________ Zip Code: ____________________

Phone: ____________________ *E-mail Address: ____________________

**Please provide your e-mail address for conference updates and registration confirmation.*

PAYMENT METHODS

All payments must be in U.S. funds. Electronic payment is strongly encouraged. Check, ACH, Wire Transfer and Credit Card are accepted.

ONLINE: You'll need your username and password to login.

E-MAIL completed registration to *registration@ncpers.org*.

FAX completed registration to 202-688-2387.

MAIL to NCPERS:
1201 New York Avenue, NW,
Suite 850, Washington, DC 20005

PAYMENTS VIA ACH

UPIC Account No: 82242567
UPIC Routing No: 021052053

CANCELLATION POLICY: All registration cancellations must be received in writing by October 10 to receive a refund and will be subject to a processing fee. No refunds will be given after October 10. Please email your cancellation request to registration@ncpers.org.

REGISTRATION SUMMARY

PATS Registration	$____________________
NAF 1&2 Registration	$____________________
NAF 3&4 Registration	$____________________
GRAND TOTAL *(U.S. funds)*	**$____________________**

CREDIT CARD

AMERICAN EXPRESS ☐ *American Express*   VISA ☐ *Visa*   MasterCard ☐ *MasterCard*

Credit Card #: ____________________

Expiration Date: ____________________ CC Verification Code: ____________________

Name On the Card: ____________________

Billing Address: ____________________

City: ____________________

State: ____________________ Zip: ____________________

Authorized Amount to Charge: $ ____________________

By signing this form, I certify I have read and understand the terms of this registration. If paying by credit card, I authorize NCPERS to charge my card for the total amount indicated.

Signature: ____________________

HEALTH AND SAFETY POLICY: NCPERS prioritizes the well-being of attendees and staff. We encourage respect for personal choices regarding masks and physical contact, adherence to any local or venue guidelines, and staying home if unwell. Thank you for helping us create a safe and welcoming environment.
COMPLAINT RESOLUTION POLICY: NCPERS is dedicated to providing a positive, engaging, and valuable experience for all attendees of our educational programs. We welcome feedback and take all complaints seriously as part of our ongoing commitment to improving our programs and services.

In **Module 1 – Governance**, participants explore the foundational responsibilities, accountabilities, and governance models that guide a public pension board. This module emphasizes the importance of a high-functioning board culture and addresses key questions about the proper level of board activity, the board's role in setting strategy and direction, and best practices for attracting and retaining top board talent. By clarifying how board culture directly impacts governance outcomes, Module 1 empowers participants to navigate complex oversight challenges while steering their organizations toward long-term success.

Building on these governance principles, **Module 2 – Finance** focuses on the financial expertise required for prudent fund management. Attendees learn how to access and interpret the essential information needed to make informed financial decisions, ensuring their funds remain compliant with investment policies, performance benchmarks, and disclosure standards. Participants also delve into the board's responsibilities for setting investment policies, allocating assets, mitigating risk, and overseeing transparent financial reporting. Through these two modules, attendees develop a holistic view of how strong governance structures and strategic financial oversight work hand in hand, enabling them to serve confidently, protect stakeholders' interests, and foster the growth and stability of their public pension funds.

Learning Objectives

- Understanding the roles, responsibilities and accountabilities of your public pension board as well as the differing governance models and principles that exist.
- Learn how to become a "high functioning board".
- Understand what you as a director need to know and how to access the required information to make informed financial decisions.
- Learn about proper administration of your fund's investments, ensuring compliance with investment policies, performance management, and adequate reporting.

Answers the Questions

- How active should your board be?
- How does your board culture impact your effectiveness to govern?
- What is your board's role in setting strategy and direction?
- How do you attract and retain top talent to your Board?
- What is the board's administration and management roles in establishing an investment policy, allocating assets, and mitigating investment risk?
- What is the board's role in ensuring compliance with financial/investment policies?
- How do you maintain compliance in your fund's financial reporting and disclosure?

MODULE 3 & 4: RISK MANAGEMENT & HUMAN CAPITAL

Modules 3 & 4: Risk Management & Human Capital offer a robust exploration of two critical areas for pension trustees and staff. In **Module 3: Risk Management**, participants deepen their understanding of the legal and risk oversight duties expected of both their board and themselves as individual trustees. This module examines the board’s fiduciary responsibilities, including how to detect and protect against fraudulent behavior, manage relationships with external parties, and effectively communicate with a diverse range of stakeholders such as management, pensioners, and employees. Additionally, it highlights the audit committee’s essential roles and provides strategies for responding to media inquiries while preserving your organization’s corporate reputation.

In **Module 4: Human Capital**, the focus shifts to building and sustaining leadership through sound compensation practices and strategic human resource management. This module guides participants through the fundamentals of total executive compensation design, including the creation of defensible compensation programs and the establishment of a pay-for-performance culture that maximizes fund performance. Participants will learn how to craft executive employment contracts and personal service agreements that avoid pitfalls and support positive growth transitions. Moreover, Module 4 offers insights into developing and maintaining a skilled executive pipeline, ensuring that your board is well-equipped to lead the organization into the future.

Together, Modules 3 & 4 provide the tools and knowledge necessary to manage risk effectively and cultivate human capital, reinforcing your board’s ability to oversee and drive the strategic direction of your organization.

Learning Objectives

- Understand the legal and risk oversight duties of your board as well as your own as an individual trustee.
- Understand the roles and responsibilities of the audit committee.
- Learn about responding to media and the importance of your corporate reputation.
- Learn how to engage in effective stakeholder communication.
- Understand the fundamentals of total executive compensation design.
- Learn about the use of compensation strategies and performance management plans to guide behavior and maximize fund performance.
- Learn how to ensure that employment contracts and service agreements avoid pitfalls and facilitate positive growth transitions.

Answers the Questions

- What are you and your board’s fiduciary duties related to legal and risk oversight?
- How does your board spot and guard against fraudulent behavior?
- How should your board manage relationships with external parties?
- How can your board effectively communicate with stakeholders (management, pensioners, employees)?
- How does a board establish a defensible compensation program?
- What is your board’s role in establishing a pay-for-performance culture?
- What are the key elements within executive employment contracts and personal service agreements?
- How can your board develop and maintain a skilled executive pipeline for the future?

For more information on obtaining your accredited fiduciary (AF) designation, **CLICK HERE**.

FUND/STAKEHOLDER REGISTRATION FORM

NCPERS 2025 FALL Conference   October 26–29 | Fort Lauderdale, Florida

Meeting Date
08/06/2025
Agenda Item
#10b.

ATTENDEE REGISTRATION

Is this your first time attending NCPERS FALL Conference? ☐ *YES* ☐ *NO*

Early-Bird Registration Fee By October 10	Registration Fee After October 10
☐ ***Fund/Stakeholder: $850/person***	☐ ***Fund/Stakeholder: $1,050/person***

(Please print clearly)

Organization Name: ______________________________

First Name: ______________________________ Last Name: ______________________________

Role/Position/Professional Title: ______________________________

Preferred Mailing Address: ______________________________

City: ______________________________ State: ______________ Zip Code: ______________

Phone: ______________________________ *E-mail Address: ______________________________

**Please provide your e-mail address for conference updates and registration confirmation.*

GUEST REGISTRATION

A guest refers to a spouse or personal friend, not a business associate, staff member, or colleague. All guests must be registered to attend NCPERS events. No admittance will be given to guests without a registration name badge.

Early-Bird Registration Fee By October 10	Registration Fee After October 10
☐ ***Guest: $110/person***	☐ ***Guest: $160/person***

First Name: ______________________________ Last Name: ______________________________

First Name: ______________________________ Last Name: ______________________________

PAYMENT METHODS

All payments must be in U.S. funds. Electronic payment is strongly encouraged. Check, ACH, Wire Transfer and Credit Card are accepted.

ONLINE: You'll need your username and password to login.

E-MAIL completed registration to registration@ncpers.org.

FAX completed registration to 202-688-2387.

MAIL to NCPERS:
1201 New York Avenue, NW,
Suite 850, Washington, DC 20005

PAYMENTS VIA ACH

UPIC Account No: 82242567
UPIC Routing No: 021052053

CANCELLATION POLICY: All registration cancellations must be received in writing by September to receive a refund and will be subject to a processing fee. No refunds will be given after October 10. Please email your cancelation request to registration@ncpers.org.

REGISTRATION SUMMARY

Fund/Stakeholder Registration	$______________________
Guest Registration	$______________________
GRAND TOTAL *(U.S. funds)*	$______________________

CREDIT CARD

☐ ***American Express*** ☐ ***Visa*** ☐ ***MasterCard***

Credit Card #: ______________________________

Expiration Date: ______________ CC Verification Code: ______________

Name On the Card: ______________________________

Billing Address: ______________________________

City: ______________________________

State: ______________________________ Zip: ______________________________

Authorized Amount to Charge: $ ______________________________

By signing this form, I certify I have read and understand the terms of this registration. If paying by credit card, I authorize NCPERS to charge my card for the total amount indicated.

Signature: ______________________________

HEALTH AND SAFETY POLICY: NCPERS prioritizes the well-being of attendees and staff. We encourage respect for personal choices regarding masks and physical contact, adherence to any local or venue guidelines, and staying home if unwell. Thank you for helping us create a safe and welcoming environment.
COMPLAINT RESOLUTION POLICY: NCPERS is dedicated to providing a positive, engaging, and valuable experience for all attendees of our educational programs. We welcome feedback and take all complaints seriously as part of our ongoing commitment to improving our programs and services.

National Conference on Public Employee Retirement Systems
The Voice for Public Pensions

FALL Agenda

SCHEDULE OF EVENTS

(as of 5/29/25)

Our agenda is currently in development—check back soon for program highlights, session topics, and speaker announcements.

SUNDAY, OCTOBER 26

7:00 AM – 6:30 PM	REGISTRATION
4:00 PM – 5:00 PM	OPENING GENERAL SESSION I
5:00 PM – 6:30 PM	EXHIBITION & WELCOME RECEPTION

MONDAY, OCTOBER 27

6:00 AM - 6:45 AM	WELLNESS CLASS
7:00 AM – 1:00 PM	REGISTRATION
7:00 AM – 8:00 AM	BREAKFAST
9:00 AM – 1:00 PM	EXHIBITION
8:00 AM – 11:00 AM	GENERAL SESSION II
10:15 AM – 10:45 AM	EXHIBIT HALL NETWORKING BREAK
10:45 AM – 1:00 PM	GENERAL SESSION II (cont'd)
5:00 PM – 6:00 PM	NETWORKING RECEPTION

TUESDAY, OCTOBER 28

6:00 AM – 6:45 AM	WELLNESS CLASS
7:00 AM – 8:00 AM	REGISTRATION
7:00 AM – 1:00 PM	BREAKFAST
9:00 AM – 1:00 PM	EXHIBITION
8:00 AM – 1:30 PM	GENERAL SESSION III
10:15 AM – 10:45 AM	EXHIBIT HALL NETWORKING BREAK
10:45 AM – 1:15 PM	GENERAL SESSION III (cont'd)
5:00 PM – 6:00 PM	NETWORKING RECEPTION

WEDNESDAY, OCTOBER 29

7:00 AM – 11:00 AM	REGISTRATION
7:00 AM – 8:00 AM	BREAKFAST
8:00 AM – 11:00 AM	GENERAL SESSION IV
9:00 AM – 9:15 AM	NETWORKING BREAK
11:00 AM	CLOSING REMARKS *Hank Kim, NCPERS*

CONTINUING EDUCATION

By attending the FALL Conference, you can earn up to **13** continuing education hours towards your *Accredited Fiduciary* (AF) recertification and/or state mandated continuing education requirements.

State Pension Review Board of Texas
NCPERS is accredited by the State Pension Review Board as a Minimum Educational Training (MET) sponsor for Texas public retirement systems. This accreditation does not constitute an endorsement by the Board as to the quality of our MET program.

CONFERENCE HIGHLIGHTS

Education

This conference offers premium education delivered to you in tracks that focus on key topics affecting the pension industry: Finance, Actuarial Science, Legislative and Legal. These sessions will enhance your knowledge and provide you with the skills you need to better serve your fund or union and move forward in your professional development.

Exhibit Hall

Check out our exhibitors and learn more about the service providers that support our industry and your pension plan.

Networking

Connect, share ideas and best practices with your colleagues and or clients at the conference.

National Conference on Public Employee Retirement Systems
1201 New York Avenue, NW, Suite 850, Washington, DC 20005
202-601-2445 202-688-2387
info@ncpers.org

National Conference on Public Employee Retirement Systems

The Voice for Public Pensions

About the FALL Conference

FINANCIAL ACTUARIAL LEGISLATIVE LEGAL

Held in odd-numbered years, the NCPERS FALL *(Financial, Actuarial, Legislative & Legal)* Conference offers a unique opportunity to build your knowledge of key governance and policy issues in a focused, discussion-driven setting. Designed for trustees, administrators, and pension staff at all experience levels, this program is ideal whether you're exploring NCPERS for the first time or looking to expand on prior learning. With a smaller group setting than our flagship events, FALL fosters deeper engagement and practical insights you can apply right away.

Following NCPERS Accredited Fiduciary (NAF) Program and Program for Advanced Trustee Studies (PATS), the FALL Conference blends core public pension topics with space for deeper dialogue and peer exchange. You'll hear expert insights, examine emerging challenges, and explore solutions in a collaborative environment that encourage real-time engagement with fellow professionals. Whether you're new to public pensions or seeking to deepen your expertise, the FALL Conference offers practical tools and fresh strategies to help you navigate today's evolving pension landscape.

EXHIBIT HALL

At the FALL Conference, service providers play a key role in enriching the educational experience by introducing tools, technologies, and solutions tailored to public pension systems. The exhibition floor facilitates direct engagement with providers offering resources to address today's operational and strategic challenges. Pension professionals can explore innovations designed to enhance plan performance and support informed decision-making.

WHO SHOULD ATTEND?

The FALL Conference is designed for professionals involved in the financial, actuarial, and legislative management of public pension systems, including:

- **Pension Trustees** seeking strategic guidance to support sound decision-making and fiduciary responsibilities.
- **Administrators and Staff** aiming to strengthen plan performance and maintain regulatory compliance.
- **Legal Experts and State/Local Officials** navigating complex policy, legal, and governance challenges.
- **Service Providers** looking to connect with decision-makers and showcase solutions tailored to public pension needs.
- **Professionals in need of continuing education credits** before the year ends, looking to fulfill requirements through high-quality, relevant content.

NCPERS UNIVERSITY

Education is a cornerstone of NCPERS, and our NCPERS University programs—offered just before the FALL Conference—are designed for pension professionals at every level. They provide a valuable foundation for the in-depth discussions and peer learning that take place during the conference.

- NCPERS Accredited Fiduciary (NAF) Program: For those ready to advance their expertise, the NAF Program delivers specialized training in pension governance. The program is divided into two parts—Modules 1 & 2: Governance & Finance and Modules 3 & 4: Risk Management & Human Capital—and provides a clear path to earning the prestigious Accredited Fiduciary (AF) designation.
- Program for Advanced Trustee Studies (PATS): Ideal for public pension trustees, administrators, and staff, PATS offers an in-depth look at the core principles and best practices of pension management. Whether

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