



## **AGENDA**

### **RETIREMENT BOARD MEETING**

REGULAR MEETING  
February 26, 2025  
9:00 a.m.

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

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

1. Pledge of Allegiance.
2. Public Comment (3 minutes/speaker).

#### ***CONSENT ITEMS***

- 3.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 January 15, 2025 meeting.
  - II. Authorize Vice-Chair MacDonald to attend the Meketa, Cambridge, and NEPC due diligence meetings, March 5-7, 2025, Boston, MA.
  - III. Receive the annual statement of compliance with Board investment resolutions.
- 3.B Consider and take possible action on Consent Items previously removed, if any. (Action Item)

#### ***DISCUSSION ITEMS***

4. Review of total portfolio performance for period ending December 31, 2024. (Presentation Item)
  - a. Presentation from Verus
  - b. Presentation from staff

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.



5. Strategic Planning Workshop. (Presentation Item)
6. Consider and take possible action to adopt Board of Retirement Resolution 2025-1 to increase the salary ranges by 6% for all unrepresented classifications effective April 1, 2025, with the exception of the Chief Executive Officer. (Action Item)
7. Report from Investment Committee Chair on January 15, 2025 meeting. (Presentation Item)
8. Report from Audit Committee Chair on February 5, 2025 meeting. (Presentation Item)
9. Consider authorizing the attendance of Board: (Action Item)
  - a. Siguler Guff & Company 2025 Annual Conference, May 7-8, 2025, New York, NY (Note: Conflict with Board Meeting)
10. Reports. (Presentation item)
  - a. Trustee reports on meetings, seminars and conferences.
  - b. Staff reports

***CLOSED SESSION***

11. The Board will go in to closed session pursuant to Govt. Code Section 54957 to evaluate the performance of the following public employee:

Title: Chief Executive Officer

***OPEN SESSION***

The next meeting is currently scheduled for March 19, 2025 at 9:00 a.m.

Adjourn





## **RETIREMENT BOARD MEETING MINUTES**

REGULAR MEETING  
January 15, 2025  
9:00 a.m.

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

Present: Candace Andersen, Dennis Chebotarev, Donald Finley, Scott Gordon, Jerry Holcombe, Louie Kroll, Jay Kwon, David MacDonald, John Phillips, Samson Wong, and Belinda Zhu

Absent: Dan Mierzwa and Mike Sloan

Staff: Christina Dunn, Chief Executive Officer; Colin Bishop, Deputy Chief Executive Officer; Karen Levy, General Counsel; Tim Price, Chief Investment Officer; and Erica Grant, Human Resources Manager

Outside Professional Support:  
Lisa Charbonneaux  
Morin Jacob

Representing:  
Liebert Cassidy Whitmore (LCW)  
Liebert Cassidy Whitmore (LCW)

### **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. Recognition of Elise Diliberto for 10 years of service**

Gordon recognized Elise Diliberto for 10 years of service.

### **4A. Consider and take possible action on Consent Items**

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

### **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 amend CCCERA's Travel Expense Reimbursement Policy**

It was **M/S/C** to amend CCCERA's Travel Expense Reimbursement Policy. (Yes: Andersen, Chebotarev, Gordon, Holcombe, Kroll, MacDonald, Phillips, Wong, and Zhu).

6. **Consider and take possible action to authorize the CEO to execute a contract with Liebert Cassidy Whitmore (LCW) to provide labor relations consultant services and labor and employment law consultant services**

It was **M/S/C** to authorize the CEO to execute a contract with Liebert Cassidy Whitmore (LCW) to provide labor relations consultant services and labor and employment law consultant services. (Yes: Andersen, Chebotarev, Gordon, Holcombe, Kroll, MacDonald, Phillips, Wong, and Zhu).

7. **Consider authorizing the attendance of Board:**

- a. It was **M/S/C** to authorize the attendance of 1 Board member at the Sit Investment Associates 43<sup>rd</sup> Annual Client Workshop, February 13-16, 2025, Dana Point, CA. (Yes: Andersen, Chebotarev, Gordon, Holcombe, Kroll, MacDonald, Phillips, Wong, and Zhu).
- b. There was no action taken on this item. Commonfund Forum 2025, March 9-11, 2025, Orlando, FL.
- c. There was no action taken on this item. Pension Bridge The Annual 2025, March 24-26, 2025, Half Moon Bay, CA.
- d. There was no action taken on this item. DFA Annual Institutional Symposium, April 1-3, Austin, TX.
- e. There was no action taken on this item. P&I Private Markets, April 16-17, 2025, Chicago, IL.
- f. It was **M/S/C** to authorize the attendance of 1 Board member at the Institutional Investor Public Funds Roundtable, April 29-May 1, 2025, Los Angeles, CA. (Yes: Andersen, Chebotarev, Gordon, Holcombe, Kroll, MacDonald, Phillips, Wong, and Zhu).
- g. It was **M/S/C** to authorize the attendance of 1 Board member at the IFEBP Investments Institute, April 30 – May 1, 2025, Fort Meyers, FL. (Yes: Andersen, Chebotarev, Gordon, Holcombe, Kroll, MacDonald, Phillips, Wong, and Zhu).



## 8. Reports

- a. Trustee reports on meetings, seminars, and conferences – None
- b. Staff reports – Dunn stated the CPI is being released today. The next board meeting will have the official letter from the actuaries stating the new COLA for retirees.

Price gave an update on the consultant RFP process currently in place. He reported that Insight, one of CCCERA's liquidity managers, announced the retirement of their CEO. This will not have an impact on CCCERA.

## 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. Disability Applications:

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

- a. Steven Avery – Service Connected (Yes: Andersen, Chebotarev, Gordon, Holcombe, Kroll, MacDonald, Phillips, Wong and Zhu).
- b. Luis Cardona – Serviced Connected (Yes: Andersen, Chebotarev, Finley, Gordon, Holcombe, Kroll, MacDonald, Phillips, and Zhu).

Holcombe recused himself from Item 10 and was not present for subsequent discussion and voting.

- 10. The Board continued in closed session pursuant to Govt. Code Section 54957 to consider the Hearing Officer's recommendation regarding the disability application for Paul Mulligan.

It was **M/S/C** to accept the Hearing Officer's recommendation regarding the disability application for Paul Mulligan. (Yes: Andersen, Gordon, Phillips, Kwon, and Zhu. No: Chebotarev, Kroll, MacDonald, and Finley).

Holcombe was present for subsequent discussion and voting.



11. The Board continued in closed session pursuant to Govt. Code Section 54956.9(d)(1) to confer with legal counsel regarding pending litigation:

- a. CPPIB Credit Investments II Inc., *et al.* v. Lions Gate Entertainment Corporation, *et al.*, Supreme Court of the State of New York, County of New York, No. 654398/2024

It was **M/S/C** to authorize the engagement of Paul Weiss, Rifkind, Wharton and Garrison LLP Law Firm to represent CCCERA. (Yes: Andersen, Chebotarev, Gordon, Holcombe, Kroll, MacDonald, Phillips, Wong, and Zhu).

- b. CCCERA, et al. v. Valeant Pharms. Int'l, Inc., et al., United States District Court, New Jersey (3:17-cv-12088)

There was no reportable action on this item.

The next meeting is currently scheduled for February 5, 2025, at 9:00 a.m.

It was **M/S/C** to adjourn the meeting in recognition of the first responders assisting with the Los Angeles Fires. The Board also adjourned in the memory of CCCERA's past Board member, Jerry Telles. He will be greatly missed.

(Yes: Andersen, Chebotarev, Gordon, Holcombe, Kroll, MacDonald, Phillips, Wong, and Zhu)

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Scott W. Gordon, Chairperson

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Jerry R. Holcombe, Secretary





## MEMORANDUM

Date: February 26, 2025  
To: CCCERA Board of Retirement  
From: Timothy Price, Chief Investment Officer  
Subject: Annual Statement of Compliance with Board Investment Resolutions

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### Overview

As part of the CCCERA investment procedures, staff is required to report annually on compliance with all Board Resolutions in effect for the prior year. These Board Resolutions can encompass a variety of topics, but in 2024 were limited to asset allocation targets and ranges related to the phased implementation of the new asset allocation program.

The Board adopted two investment-related resolution over the course of 2024 and one resolution from 2023 remained in effect at the beginning of 2024. These resolutions are noted below and included with the memo as Appendix 1.

| RESOLUTION    | CONTENT                             | DATE ADOPTED |
|---------------|-------------------------------------|--------------|
| <b>2023-3</b> | Asset Allocation Targets and Ranges | 7/12/23      |
| <b>2024-3</b> | Asset Allocation Targets and Ranges | 4/24/24      |
| <b>2024-4</b> | Asset Allocation Targets and Ranges | 8/28/24      |

### Compliance

CCCERA Investment staff provided a monthly report to the Board as part of the consent items showing month-end allocation for each sub-portfolio and investment manager. All allocations remained near their targets over the course of the year and the three sub-portfolios (liquidity, growth and diversifying) remained within their mandated ranges at all times. These reports are included with this memo as Appendix 2.

Please note that Resolutions 2023-3 and 2024-4 did not have specific cash allocation targets or ranges as this is overlaid (securitized) by Parametric and therefore had a similar economic exposure as the total fund. Resolution 2024-4 introduced asset class targets for equity, credit, real estate and cash and that information is included on the following page.



**Asset Allocation Summary: Calendar Year 2024**

|           | <b>Liquidity</b> |        | <b>Growth</b> |        | <b>Diversifying</b> |       | <b>Cash &amp; Overlay</b> |
|-----------|------------------|--------|---------------|--------|---------------------|-------|---------------------------|
|           | Allocation       | Range  | Allocation    | Range  | Allocation          | Range | Allocation                |
| January   | 14.4%            | 11-22% | 76.2%         | 65-85% | 6.9%                | 0-10% | 2.5%                      |
| February  | 13.7             | 11-22  | 77.0          | 65-85  | 6.8                 | 0-10  | 2.5                       |
| March     | 13.2             | 11-22  | 77.4          | 65-85  | 6.7                 | 0-10  | 2.7                       |
| April     | 15.2             | 11-22  | 75.2          | 65-85  | 7.3                 | 0-10  | 2.4                       |
| May       | 14.6             | 11-22  | 75.9          | 65-85  | 6.3                 | 0-10  | 3.4                       |
| June      | 14.1             | 11-22  | 76.7          | 65-85  | 7.0                 | 0-10  | 2.1                       |
| July      | 13.3             | 11-22  | 74.9          | 65-85  | 6.8                 | 0-10  | 5.0                       |
| August    | 16.3             | 11-22  | 74.8          | 65-85  | 6.7                 | 0-10  | 2.2                       |
| September | 15.8             | 10-20  | 72.4          | 60-80  | 6.8                 | 0-12  | 5.1                       |
| October   | 15.4             | 10-20  | 70.9          | 60-80  | 6.6                 | 0-12  | 7.1                       |
| November  | 14.8             | 10-20  | 71.1          | 60-80  | 8.0                 | 0-12  | 6.0                       |
| December  | 14.7             | 10-20  |               | 60-80  |                     | 0-12  | 2.4                       |

**Asset Class Allocation Summary: October-December 2024**

|          | <b>Total Equity</b> |       | <b>Total Credit</b> |       | <b>Total Real Estate</b> |       | <b>Cash</b> |       |
|----------|---------------------|-------|---------------------|-------|--------------------------|-------|-------------|-------|
|          | Allocation          | Range | Allocation          | Range | Allocation               | Range | Allocation  | Range |
| October  | 52.2                | 40-60 | 11.6                | 8-16  | 7.0                      | 5-10  | 5.0         | 0-6   |
| November | 53.0                | 40-60 | 11.2                | 8-16  | 6.9                      | 5-10  | 4.7         | 0-6   |
| December | 52.7                | 40-60 | 11.2                | 8-16  | 7.1                      | 5-10  | 4.9         | 0-6   |



# *Appendix 1*



**RESOLUTION OF THE BOARD OF RETIREMENT  
CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**

**INVESTMENT ASSET ALLOCATION TARGETS AND RANGES**

WHEREAS, Article XVI, §17 of the Constitution of the State of California vests the Board of Retirement (Board) with "plenary authority and fiduciary responsibility for the investment of moneys and the administration of the system"; and

WHEREAS, the Board has exclusive control of the investment of CCCERA and may, in its discretion and subject to applicable law, invest, or delegate the authority to invest, the assets of the fund through the purchase, holding or sale or any form or type of investment, financial instrument, or financial transaction when prudent in the informed decision of the board, pursuant to the County Employees Retirement Law of 1937 (CERL), Government Code Section 31595; and

WHEREAS, the Board has adopted an Investment Policy Statement ("IPS"), pursuant to which the Board is to periodically set, review and revise its asset allocation targets.

NOW, THEREFORE BE IT RESOLVED that it shall be the policy of CCCERA to invest assets in the following manner:

**Asset Allocation**

Section 6.B of the Investment Policy Statement ("IPS"), adopted March 24, 2021, provides that "annually the Board shall review the relative size and composition of [the] sub-portfolios and revise them as necessary through Investment Resolutions." During this annual review, the CIO will recommend the targets, weightings, and the rationale for any deviation to an under-weight or over-weight across the asset allocation. The Board will consider and take action to adopt or revise asset allocation targets. Under the direction of the Board of Retirement, investment staff will administer the asset allocation per the Board's action.

As of 2023-3 the long-term asset allocation targets determined by the Board are as follows:

|               | Long Term | Current Target |
|---------------|-----------|----------------|
| Liquidity:    | 17%       | 17%            |
| Growth:       | 76%       | 76%            |
| Diversifying: | 7%        | 7%             |

Over the course of the following 12 months, the Liquidity sub-portfolio will be used to pay benefits and expenses. As a result, and aside from market fluctuations, the funds in the



Liquidity sub-portfolio will decline from the targeted allocation and, therefore, the relative allocations to the Growth and Diversifying sub-portfolios will increase proportionately.

### Current Targets

| <b><u>Sub-Portfolio Strategy</u></b> | <b><u>Current Target</u></b> | <b><u>Range</u></b> |
|--------------------------------------|------------------------------|---------------------|
| <b>Growth</b>                        | <b>76.0%</b>                 | <b>65-85%</b>       |
| BlackRock Index Fund                 | 10.0%                        |                     |
| Boston Partners                      | 3.0%                         |                     |
| Emerald                              | 1.5%                         |                     |
| Ceredex                              | 1.5%                         |                     |
| Pyrford                              | 4.0%                         |                     |
| William Blair                        | 4.0%                         |                     |
| Artisan                              | 5.0%                         |                     |
| First Eagle                          | 5.0%                         |                     |
| TT Emerging Markets                  | 2.0%                         |                     |
| PIMCO/RAE Emerging Markets           | 2.0%                         |                     |
| Voya                                 | 2.0%                         |                     |
| Adelante REIT                        | 1.0%                         |                     |
| INVESCO REIT                         | 1.0%                         |                     |
| Private Real Estate                  | 8.0%                         |                     |
| Private Equity                       | 13.0%                        |                     |
| Private Credit                       | 10.0%                        |                     |
| Risk Parity                          | 3.0%                         |                     |
| <b>Liquidity</b>                     | <b>17.0%</b>                 | <b>11-22%</b>       |
| Insight                              | 6.5%                         |                     |
| DFA                                  | 4.0%                         |                     |
| Sit                                  | 6.5%                         |                     |
| <b>Risk Diversifying</b>             | <b>7.0%</b>                  | <b>0-10%</b>        |
| AFL-CIO HIT                          | 2.5%                         |                     |
| Acadian MAARS                        | 2.0%                         |                     |
| Sit LLCAR                            | 2.5%                         |                     |
| <b>Total</b>                         | <b>100.0%</b>                |                     |



THIS RESOLUTION WAS ADOPTED BY THE AFFIRMATIVE VOTE OF THE BOARD OF  
RETIREMENT OF THE CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT  
ASSOCIATION THIS 12TH DAY OF JULY, 2023.

AYES: Andersen, Chebotarev, Gordon, Holcombe, Kroll, MacDonald, Phillips, Watts, and Wong

NOES: None

ABSTAIN: None

ABSENT: None

A blue ink signature of Scott W. Gordon, written in a cursive style, positioned above a horizontal line.

Scott W. Gordon  
Chairperson of the Board of Retirement

A blue ink signature of Jerry R. Holcombe, written in a cursive style, positioned above a horizontal line. Below the line, the word "Attest:" is printed.

Jerry R. Holcombe  
Secretary of the Board of Retirement



**RESOLUTION OF THE BOARD OF RETIREMENT  
CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**

**INVESTMENT ASSET ALLOCATION TARGETS AND RANGES**

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WHEREAS, the Board has exclusive control of the investment of CCCERA and may, in its discretion and subject to applicable law, invest, or delegate the authority to invest, the assets of the fund through the purchase, holding or sale or any form or type of investment, financial instrument, or financial transaction when prudent in the informed decision of the board, pursuant to the County Employees Retirement Law of 1937 (CERL), Government Code Section 31595; and

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|               | Long Term | Current Target |
|---------------|-----------|----------------|
| Liquidity:    | 17%       | 17%            |
| Growth:       | 76%       | 76%            |
| Diversifying: | 7%        | 7%             |

Over the course of the following 12 months, the Liquidity sub-portfolio will be used to pay benefits and expenses. As a result, and aside from market fluctuations, the funds in the Liquidity sub-portfolio will decline from the targeted allocation and, therefore, the relative allocations to the Growth and Diversifying sub-portfolios will increase proportionately.



**Current Targets**

| <b><u>Sub-Portfolio Strategy</u></b> | <b><u>Benchmark</u></b>                         | <b><u>Current Target</u></b> | <b><u>Range</u></b> |
|--------------------------------------|---|------------------------------|---------------------|
| <b>Growth</b>                        |   | <b>76.0%</b>                 | <b>65-85%</b>       |
| BlackRock Index Fund                 | Russell 1000                                    | 10.0%                        |                     |
| Boston Partners                      | Russell 1000 Value                              | 3.0%                         |                     |
| Emerald                              | Russell 2000 Growth                             | 1.5%                         |                     |
| Ceredex                              | Russell 2000 Value                              | 1.5%                         |                     |
| Pyrford                              | MSCI ACWI ex-US Value                           | 4.0%                         |                     |
| William Blair                        | MSCI ACWI ex-US Growth                          | 4.0%                         |                     |
| Artisan                              | MSCI ACWI Growth                                | 5.0%                         |                     |
| First Eagle                          | MSCI ACWI Value                                 | 5.0%                         |                     |
| TT Emerging Markets                  | MSCI Emerging Markets                           | 2.0%                         |                     |
| PIMCO/RAE Emerging Markets           | MSCI Emerging Markets Value                     | 2.0%                         |                     |
| Voya                                 | ICE BofA High Yield Master II                   | 2.0%                         |                     |
| Adelante REIT                        | Wilshire REIT                                   | 1.0%                         |                     |
| INVESCO REIT                         | Wilshire REIT                                   | 1.0%                         |                     |
| Private Real Estate                  | Private RE Composite                            | 8.0%                         |                     |
| Private Equity                       | Private Equity Composite                        | 13.0%                        |                     |
| Private Credit                       | Private Credit Composite                        | 10.0%                        |                     |
| Risk Parity                          | 60% MSCI ACWI/40%<br>Bloomberg Global Aggregate | 3.0%                         |                     |
| <b>Liquidity</b>                     |   | <b>17.0%</b>                 | <b>11-22%</b>       |
| Insight                              | Bloomberg 1-3 Yr Gov/Credit                     | 6.5%                         |                     |
| DFA                                  | ICE BofA 1-5 US Corp/Gov                        | 4.0%                         |                     |
| Sit                                  | Bloomberg 1-3 Yr Gov                            | 6.5%                         |                     |
| <b>Risk Diversifying</b>             |   | <b>7.0%</b>                  | <b>0-10%</b>        |
| AFL-CIO HIT                          | Bloomberg US Aggregate                          | 2.5%                         |                     |
| BH-DG Systematic Trend               | SG CTA Index                                    | 2.0%                         |                     |
| Sit LLCAR                            | Bloomberg US Aggregate + 1%                     | 2.5%                         |                     |
| <b>Total</b>                         |   | <b>100.0%</b>                |                     |



THIS RESOLUTION WAS ADOPTED BY THE AFFIRMATIVE VOTE OF THE BOARD OF RETIREMENT OF THE CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION THIS 24<sup>TH</sup> DAY OF APRIL, 2024.

AYES: Andersen, Chebotarev, Gordon, Kroll, MacDonald, Mierzwa, Wong, and Kwon

NOES: None

ABSTAIN: None

ABSENT: Holcombe, Phillips



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Scott Gordon

Chairperson of the Board of Retirement

Attest:



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Jerry R. Holcombe

Secretary of the Board of Retirement



**RESOLUTION OF THE BOARD OF RETIREMENT  
CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**

**INVESTMENT ASSET ALLOCATION TARGETS AND RANGES**

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WHEREAS, the Board has exclusive control of the investment of CCCERA and may, in its discretion and subject to applicable law, invest, or delegate the authority to invest, the assets of the fund through the purchase, holding or sale or any form or type of investment, financial instrument, or financial transaction when prudent in the informed decision of the board, pursuant to the County Employees Retirement Law of 1937 (CERL), Government Code Section 31595; and

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As of 2024-4 the long-term asset allocation targets determined by the Board are as follows:

|               | Long Term | Current Target |
|---------------|-----------|----------------|
| Growth:       | 73%       | 70%            |
| Diversifying: | 10%       | 8%             |
| Liquidity:    | 14%       | 17%            |
| Cash:         | 3%        | 5%             |

Over the course of the following 12 months, the Liquidity sub-portfolio will be used to pay benefits and expenses. As a result, and aside from market fluctuations, the funds in the



Liquidity sub-portfolio will decline from the targeted allocation and, therefore, the relative allocations to the Growth and Diversifying sub-portfolios will increase proportionately.

#### Current Targets

| <u>Sub-Portfolio Strategy</u> | <u>Benchmark</u>              | <u>Current Target</u> | <u>Range</u>  |
|-------------------------------|-------------------------------|-----------------------|---------------|
| <b>Growth</b>                 |                               | <b>70.0%</b>          | <b>60-80%</b> |
| BlackRock Index Fund          | Russell 1000                  | 10.0%                 |               |
| Boston Partners               | Russell 1000 Value            | 3.0%                  |               |
| Emerald                       | Russell 2000 Growth           | 1.5%                  |               |
| Ceredex                       | Russell 2000 Value            | 1.5%                  |               |
| Pyrford                       | MSCI ACWI ex-US Value         | 3.5%                  |               |
| William Blair                 | MSCI ACWI ex-US Growth        | 3.5%                  |               |
| Artisan                       | MSCI ACWI Growth              | 5.5%                  |               |
| First Eagle                   | MSCI ACWI Value               | 5.5%                  |               |
| TT Emerging Markets           | MSCI Emerging Markets         | 2.0%                  |               |
| PIMCO/RAE Emerging Markets    | MSCI Emerging Markets Value   | 2.0%                  |               |
| Private Equity                | Private Equity Composite      | 10.0%                 |               |
| Infrastructure                | Infrastructure Composite      | 2.0%                  |               |
| <b>Total Equity</b>           |                               | <b>50.0%</b>          | <b>40-60%</b> |
| Voya                          | ICE BofA High Yield Master II | 3.0%                  |               |
| Private Credit                | Private Credit Composite      | 10.0%                 |               |
| <b>Total Credit</b>           |                               | <b>13.0%</b>          | <b>8-16%</b>  |
| Adelante REIT                 | Wilshire REIT                 | 1.0%                  |               |
| INVESCO REIT                  | Wilshire REIT                 | 1.0%                  |               |
| Private Real Estate           | Private RE Composite          | 5.0%                  |               |
| <b>Total Real Estate</b>      |                               | <b>7.0%</b>           | <b>5-10%</b>  |
| <b>Liquidity</b>              |                               | <b>17.0%</b>          | <b>10-20%</b> |
| Insight                       | Bloomberg 1-3 Yr Gov/Credit   | 6.5%                  |               |
| DFA                           | ICE BofA 1-5 US Corp/Gov      | 4.0%                  |               |
| Sit                           | Bloomberg 1-3 Yr Gov          | 6.5%                  |               |
| <b>Risk Diversifying</b>      |                               | <b>8.0%</b>           | <b>0-12%</b>  |
| AFL-CIO HIT                   | Bloomberg US Aggregate        | 2.5%                  |               |
| BH-DG Systematic Trend        | SG CTA Index                  | 2.0%                  |               |
| Sit LLCAR                     | Bloomberg US Aggregate + 1%   | 3.5%                  |               |
| Cash                          | 3-month T-Bill                | 5.0%                  | 0-6%          |
| <b>Total</b>                  |                               | <b>100.0%</b>         |               |



THIS RESOLUTION WAS ADOPTED BY THE AFFIRMATIVE VOTE OF THE BOARD OF RETIREMENT OF THE CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION THIS 28<sup>th</sup> DAY OF AUGUST, 2024.

AYES: Andersen, Chebotarev, Gordon, Holcombe, MacDonald, Mierzwa, Phillips, Finley and Sloan

NOES: None

ABSTAIN: None

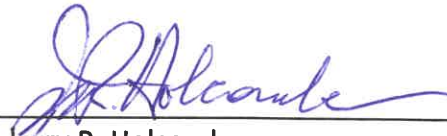
ABSENT: Kroll, Wong



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Scott W. Gordon  
Chairperson of the Board of Retirement

Attest:



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Jerry R. Holcombe  
Secretary of the Board of Retirement



# *Appendix 2*



**Contra Costa County Employees' Retirement Association**  
**Asset Allocation as of January 31, 2024**

|  | Market Value   | Percentage of Total Fund | Current Target* Percentage | Current Target Over/(Under) | Long Term Target | Long Term Over/(Under) |
|--|----------------|--------------------------|----------------------------|-----------------------------|------------------|------------------------|
| Liquidity                                |                |                          |                            |                             |                  |                        |
| Dimensional Fund Advisors                | 356,415,194    | 3.2%                     | 4.0%                       | -0.8%                       |                  |                        |
| Insight                                  | 585,291,478    | 5.3%                     | 6.5%                       | -1.2%                       |                  |                        |
| Sit                                      | 638,245,549    | 5.8%                     | 6.5%                       | -0.7%                       |                  |                        |
| Total Liquidity                          | 1,579,952,222  | 14.4%                    | 17.0%                      | -2.6%                       | 17.0%            | -2.6%                  |
|  |                | Range 11-22%             |                            |                             |                  |                        |
| Growth                                   |                |                          |                            |                             |                  |                        |
| Domestic Equity                          |                |                          |                            |                             |                  |                        |
| Boston Partners                          | 409,187,010    | 3.7%                     | 3.0%                       | 0.7%                        |                  |                        |
| BlackRock Index Fund                     | 1,226,164,283  | 11.2%                    | 10.0%                      | 1.2%                        |                  |                        |
| Emerald Advisers                         | 224,907,769    | 2.0%                     | 1.5%                       | 0.5%                        |                  |                        |
| Ceredex                                  | 217,281,158    | 2.0%                     | 1.5%                       | 0.5%                        |                  |                        |
| Total Domestic Equity                    | 2,077,540,221  | 18.9%                    | 16.0%                      | 2.9%                        | 13.0%            | 5.9%                   |
| Global & International Equity            |                |                          |                            |                             |                  |                        |
| x Pyrford (Columbia)                     | 501,081,691    | 4.6%                     | 4.0%                       | 0.6%                        |                  |                        |
| x William Blair                          | 471,074,877    | 4.3%                     | 4.0%                       | 0.3%                        |                  |                        |
| First Eagle                              | 564,096,679    | 5.1%                     | 5.0%                       | 0.1%                        |                  |                        |
| x Artisan Global Opportunities           | 615,674,283    | 5.6%                     | 5.0%                       | 0.6%                        |                  |                        |
| x PIMCO/RAE Emerging Markets             | 248,656,794    | 2.3%                     | 2.0%                       | 0.3%                        |                  |                        |
| x TT Emerging Markets                    | 224,391,262    | 2.0%                     | 2.0%                       | 0.0%                        |                  |                        |
| Total Global & International Equity      | 2,624,975,586  | 23.9%                    | 22.0%                      | 1.9%                        | 19.0%            | 4.9%                   |
| Private Equity**                         |                |                          |                            |                             |                  |                        |
| Private Credit                           | 1,302,212,780  | 11.9%                    | 13.0%                      | -1.1%                       | 18.0%            | -6.1%                  |
| Real Estate - Value Add                  | 1,105,621,501  | 10.1%                    | 10.0%                      | 0.1%                        | 13.0%            | -2.9%                  |
| Real Estate - Opportunistic & Distressed | 233,420,246    | 2.1%                     | 4.0%                       | -1.9%                       | 5.0%             | -2.9%                  |
| Real Estate - REIT                       | 332,238,274    | 3.0%                     | 4.0%                       | -1.0%                       | 5.0%             | -2.0%                  |
| Adelante                                 | 94,180,523     | 0.9%                     | 2.0%                       | -0.1%                       | 0.0%             | 1.9%                   |
| Invesco                                  | 111,121,722    | 1.0%                     |                            |                             |                  |                        |
| High Yield                               | 157,593,669    | 1.4%                     | 2.0%                       | -0.6%                       | 0.0%             | 1.4%                   |
| Risk Parity                              |                |                          | 3.0%                       | 0.1%                        | 3.0%             | 0.1%                   |
| AQR GRP EL                               | 176,453,104    | 1.6%                     |                            |                             |                  |                        |
| PanAgora                                 | 160,628,928    | 1.5%                     |                            |                             |                  |                        |
| Total Other Growth Assets                | 3,673,470,747  | 33.4%                    | 38.0%                      | -4.6%                       | 44.0%            | -10.6%                 |
| Total Growth Assets                      | 8,375,986,554  | 76.2%                    | 76.0%                      | 0.2%                        | 76.0%            | 0.2%                   |
|  |                | Range 65-85%             |                            |                             |                  |                        |
| Risk Diversifying                        |                |                          |                            |                             |                  |                        |
| AFL-CIO                                  | 223,334,022    | 2.0%                     | 2.5%                       | -0.5%                       | 2.5%             | -0.5%                  |
| Acadian MAARS                            | 162,435,361    | 1.5%                     | 2.0%                       | -0.5%                       | 2.5%             | -1.0%                  |
| Sit LLCAR                                | 368,004,565    | 3.3%                     | 2.5%                       | 0.8%                        | 2.0%             | 1.3%                   |
| Total Risk Diversifying                  | 753,773,948    | 6.9%                     | 7.0%                       | -0.1%                       | 7.0%             | -0.1%                  |
|  |                | Range 0% - 10%           |                            |                             |                  |                        |
| Cash and Overlay                         |                |                          |                            |                             |                  |                        |
| Overlay (Parametric)                     | 120,676,018    | 1.1%                     |                            | 1.1%                        |                  |                        |
| Cash                                     | 157,052,282    | 1.4%                     |                            | 1.4%                        |                  |                        |
| Total Cash and Overlay                   | 277,728,300    | 2.5%                     | 0.0%                       | 2.5%                        | 0.0%             | 2.5%                   |
| Total Fund                               | 10,987,441,024 | 100%                     | 100%                       |                             | 100%             |                        |

\*Current targets and ranges reflect asset allocation targets accepted by the Board on July 12, 2023 (BOR Resolution 2023-3).

\*\*Private Equity long-term target includes Real Assets/Infrastructure (see Asset Allocation Mix 5 adopted December 9, 2020).



**Contra Costa County Employees' Retirement Association**  
**Asset Allocation as of February 29, 2024**

|  | Market Value   | Percentage of Total Fund | Current Target* Percentage | Current Target Over/(Under) | Long Term Target | Long Term Over/(Under) |
|--|----------------|--------------------------|----------------------------|-----------------------------|------------------|------------------------|
| Liquidity                                |                |                          |                            |                             |                  |                        |
| Dimensional Fund Advisors                | 346,503,210    | 3.1%                     | 4.0%                       | -0.9%                       |                  |                        |
| Insight                                  | 566,263,230    | 5.1%                     | 6.5%                       | -1.4%                       |                  |                        |
| Sit                                      | 613,235,567    | 5.5%                     | 6.5%                       | -1.0%                       |                  |                        |
| Total Liquidity                          | 1,526,002,007  | 13.7%                    | 17.0%                      | -3.3%                       | 17.0%            | -3.3%                  |
|  |                | Range 11-22%             |                            |                             |                  |                        |
| Growth                                   |                |                          |                            |                             |                  |                        |
| Domestic Equity                          |                |                          |                            |                             |                  |                        |
| Boston Partners                          | 426,940,017    | 3.8%                     | 3.0%                       | 0.8%                        |                  |                        |
| BlackRock Index Fund                     | 1,292,339,135  | 11.6%                    | 10.0%                      | 1.6%                        |                  |                        |
| Emerald Advisers                         | 242,950,684    | 2.2%                     | 1.5%                       | 0.7%                        |                  |                        |
| Ceredex                                  | 222,858,261    | 2.0%                     | 1.5%                       | 0.5%                        |                  |                        |
| Total Domestic Equity                    | 2,185,088,098  | 19.6%                    | 16.0%                      | 3.6%                        | 13.0%            | 6.6%                   |
| Global & International Equity            |                |                          |                            |                             |                  |                        |
| Pyrford (Columbia)                       | 502,199,405    | 4.5%                     | 4.0%                       | 0.5%                        |                  |                        |
| William Blair                            | 491,694,762    | 4.4%                     | 4.0%                       | 0.4%                        |                  |                        |
| First Eagle                              | 572,108,666    | 5.1%                     | 5.0%                       | 0.1%                        |                  |                        |
| Artisan Global Opportunities             | 643,121,588    | 5.8%                     | 5.0%                       | 0.8%                        |                  |                        |
| PIMCO/RAE Emerging Markets               | 257,035,624    | 2.3%                     | 2.0%                       | 0.3%                        |                  |                        |
| TT Emerging Markets                      | 236,238,977    | 2.1%                     | 2.0%                       | 0.1%                        |                  |                        |
| Total Global & International Equity      | 2,702,399,022  | 24.3%                    | 22.0%                      | 2.3%                        | 19.0%            | 5.3%                   |
| Private Equity**                         |                |                          |                            |                             |                  |                        |
| Private Credit                           | 1,315,493,980  | 11.8%                    | 13.0%                      | -1.2%                       | 18.0%            | -6.2%                  |
| Real Estate - Value Add                  | 1,105,621,501  | 9.9%                     | 10.0%                      | -0.1%                       | 13.0%            | -3.1%                  |
| Real Estate - Opportunistic & Distressed | 226,727,275    | 2.0%                     | 4.0%                       | -2.0%                       | 5.0%             | -3.0%                  |
| Real Estate - REIT                       | 335,613,274    | 3.0%                     | 4.0%                       | -1.0%                       | 5.0%             | -2.0%                  |
| Adelante                                 |                |                          | 2.0%                       | -0.1%                       | 0.0%             | 1.9%                   |
| Invesco                                  | 96,755,706     | 0.9%                     |                            |                             |                  |                        |
| High Yield                               | 112,176,855    | 1.0%                     |                            |                             |                  |                        |
| Risk Parity                              | 157,333,856    | 1.4%                     | 2.0%                       | -0.6%                       | 0.0%             | 1.4%                   |
| AQR GRP EL                               |                |                          | 3.0%                       | 0.0%                        | 3.0%             | 0.0%                   |
| PanAgora                                 | 176,695,025    | 1.6%                     |                            |                             |                  |                        |
|  | 160,461,378    | 1.4%                     |                            |                             |                  |                        |
| Total Other Growth Assets                | 3,686,878,851  | 33.1%                    | 38.0%                      | -4.9%                       | 44.0%            | -10.9%                 |
| Total Growth Assets                      | 8,574,365,971  | 77.0%                    | 76.0%                      | 1.0%                        | 76.0%            | 1.0%                   |
|  |                | Range 65-85%             |                            |                             |                  |                        |
| Risk Diversifying                        |                |                          |                            |                             |                  |                        |
| AFL-CIO                                  | 220,378,222    | 2.0%                     | 2.5%                       | -0.5%                       | 2.5%             | -0.5%                  |
| Acadian MAARS                            | 164,692,449    | 1.5%                     | 2.0%                       | -0.5%                       | 2.5%             | -1.0%                  |
| Sit LLCAR                                | 367,171,951    | 3.3%                     | 2.5%                       | 0.8%                        | 2.0%             | 1.3%                   |
| Total Risk Diversifying                  | 752,242,623    | 6.8%                     | 7.0%                       | -0.2%                       | 7.0%             | -0.2%                  |
|  |                | Range 0% - 10%           |                            |                             |                  |                        |
| Cash and Overlay                         |                |                          |                            |                             |                  |                        |
| Overlay (Parametric)                     | 125,526,324    | 1.1%                     |                            | 1.1%                        |                  |                        |
| Cash                                     | 157,993,014    | 1.4%                     |                            | 1.4%                        |                  |                        |
| Total Cash and Overlay                   | 283,519,338    | 2.5%                     | 0.0%                       | 2.5%                        | 0.0%             | 2.5%                   |
| Total Fund                               | 11,136,129,938 | 100%                     | 100%                       |                             | 100%             |                        |

\*Current targets and ranges reflect asset allocation targets accepted by the Board on July 12, 2023 (BOR Resolution 2023-3).

\*\*Private Equity long-term target includes Real Assets/Infrastructure (see Asset Allocation Mix 5 adopted December 9, 2020).



**Contra Costa County Employees' Retirement Association**  
**Asset Allocation as of March 31, 2024**

|  | Market Value   | Percentage of Total Fund | Current Target* Percentage | Current Target Over/(Under) | Long Term Target | Long Term Over/(Under) |
|--|----------------|--------------------------|----------------------------|-----------------------------|------------------|------------------------|
| Liquidity                                |                |                          |                            |                             |                  |                        |
| Dimensional Fund Advisors                | 336,917,694    | 3.0%                     | 4.0%                       | -1.0%                       |                  |                        |
| Insight                                  | 549,439,086    | 4.9%                     | 6.5%                       | -1.6%                       |                  |                        |
| Sit                                      | 596,616,105    | 5.3%                     | 6.5%                       | -1.2%                       |                  |                        |
| Total Liquidity                          | 1,482,972,885  | 13.2%                    | 17.0%                      | -3.8%                       | 17.0%            | -3.8%                  |
|  |                | Range 11-22%             |                            |                             |                  |                        |
| Growth                                   |                |                          |                            |                             |                  |                        |
| Domestic Equity                          |                |                          |                            |                             |                  |                        |
| Boston Partners                          | 452,730,687    | 4.0%                     | 3.0%                       | 1.0%                        |                  |                        |
| BlackRock Index Fund                     | 1,333,773,694  | 11.8%                    | 10.0%                      | 1.8%                        |                  |                        |
| Emerald Advisers                         | 246,394,831    | 2.2%                     | 1.5%                       | 0.7%                        |                  |                        |
| Ceredex                                  | 233,230,453    | 2.1%                     | 1.5%                       | 0.6%                        |                  |                        |
| Total Domestic Equity                    | 2,266,129,665  | 20.1%                    | 16.0%                      | 4.1%                        | 13.0%            | 7.1%                   |
| Global & International Equity            |                |                          |                            |                             |                  |                        |
| Pyrford (Columbia)                       | 511,125,103    | 4.5%                     | 4.0%                       | 0.5%                        |                  |                        |
| William Blair                            | 504,471,490    | 4.5%                     | 4.0%                       | 0.5%                        |                  |                        |
| First Eagle                              | 597,959,112    | 5.3%                     | 5.0%                       | 0.3%                        |                  |                        |
| Artisan Global Opportunities             | 665,966,949    | 5.9%                     | 5.0%                       | 0.9%                        |                  |                        |
| PIMCO/RAE Emerging Markets               | 259,484,680    | 2.3%                     | 2.0%                       | 0.3%                        |                  |                        |
| TT Emerging Markets                      | 247,527,838    | 2.2%                     | 2.0%                       | 0.2%                        |                  |                        |
| Total Global & International Equity      | 2,786,535,173  | 24.7%                    | 22.0%                      | 2.7%                        | 19.0%            | 5.7%                   |
| Private Equity**                         |                |                          |                            |                             |                  |                        |
| Private Credit                           | 1,312,911,959  | 11.6%                    | 13.0%                      | -1.4%                       | 18.0%            | -6.4%                  |
| Real Estate - Value Add                  | 1,105,621,501  | 9.8%                     | 10.0%                      | -0.2%                       | 13.0%            | -3.2%                  |
| Real Estate - Opportunistic & Distressed | 223,556,256    | 2.0%                     | 4.0%                       | -2.0%                       | 5.0%             | -3.0%                  |
| Real Estate - REIT                       | 308,197,460    | 2.7%                     | 4.0%                       | -1.3%                       | 5.0%             | -2.3%                  |
| Adelante                                 |                |                          | 2.0%                       | -0.1%                       | 0.0%             | 1.9%                   |
| Invesco                                  | 98,152,536     | 0.9%                     |                            |                             |                  |                        |
| High Yield                               | 114,931,558    | 1.0%                     |                            |                             |                  |                        |
| Risk Parity                              | 159,409,366    | 1.4%                     | 2.0%                       | -0.6%                       | 0.0%             | 1.4%                   |
| AQR GRP EL                               |                |                          | 3.0%                       | 0.1%                        | 3.0%             | 0.1%                   |
| PanAgora                                 | 182,826,494    | 1.6%                     |                            |                             |                  |                        |
|  | 167,177,979    | 1.5%                     |                            |                             |                  |                        |
| Total Other Growth Assets                | 3,672,785,109  | 32.6%                    | 38.0%                      | -5.4%                       | 44.0%            | -11.4%                 |
| Total Growth Assets                      | 8,725,449,947  | 77.4%                    | 76.0%                      | 1.4%                        | 76.0%            | 1.4%                   |
|  |                | Range 65-85%             |                            |                             |                  |                        |
| Risk Diversifying                        |                |                          |                            |                             |                  |                        |
| AFL-CIO                                  | 221,307,577    | 2.0%                     | 2.5%                       | -0.5%                       | 2.5%             | -0.5%                  |
| Acadian MAARS                            | 163,606,331    | 1.5%                     | 2.0%                       | -0.5%                       | 2.5%             | -1.0%                  |
| Sit LLCAR                                | 372,229,605    | 3.3%                     | 2.5%                       | 0.8%                        | 2.0%             | 1.3%                   |
| Total Risk Diversifying                  | 757,143,513    | 6.7%                     | 7.0%                       | -0.3%                       | 7.0%             | -0.3%                  |
|  |                | Range 0% - 10%           |                            |                             |                  |                        |
| Cash and Overlay                         |                |                          |                            |                             |                  |                        |
| Overlay (Parametric)                     | 131,628,297    | 1.2%                     |                            | 1.2%                        |                  |                        |
| Cash                                     | 174,029,827    | 1.5%                     |                            | 1.5%                        |                  |                        |
| Total Cash and Overlay                   | 305,658,124    | 2.7%                     | 0.0%                       | 2.7%                        | 0.0%             | 2.7%                   |
| Total Fund                               | 11,271,224,469 | 100%                     | 100%                       |                             | 100%             |                        |

\*Current targets and ranges reflect asset allocation targets accepted by the Board on July 12, 2023 (BOR Resolution 2023-3).

\*\*Private Equity long-term target includes Real Assets/Infrastructure (see Asset Allocation Mix 5 adopted December 9, 2020).



**Contra Costa County Employees' Retirement Association**  
**Asset Allocation as of April 30, 2024**

|   | Market Value          | Percentage of Total Fund | Current Target* Percentage | Current Target Over/(Under) | Long Term Target | Long Term Over/(Under) |
|---|-----------------------|--------------------------|----------------------------|-----------------------------|------------------|------------------------|
| <b>Liquidity</b>                                    |                       |                          |                            |                             |                  |                        |
| Dimensional Fund Advisors                           | 386,996,156           | 3.5%                     | 4.0%                       | -0.5%                       |                  |                        |
| Insight   | 631,043,518           | 5.7%                     | 6.5%                       | -0.8%                       |                  |                        |
| Sit   | 658,599,992           | 6.0%                     | 6.5%                       | -0.5%                       |                  |                        |
| <b>Total Liquidity</b>                              | <b>1,676,639,666</b>  | <b>15.2%</b>             | <b>17.0%</b>               | <b>-1.8%</b>                | <b>17.0%</b>     | <b>-1.8%</b>           |
|   |                       | <b>Range 11-22%</b>      |                            |                             |                  |                        |
| <b>Growth</b>                                       |                       |                          |                            |                             |                  |                        |
| <b>Domestic Equity</b>                              |                       |                          |                            |                             |                  |                        |
| Boston Partners                                     | 415,242,534           | 3.8%                     | 3.0%                       | 0.8%                        |                  |                        |
| BlackRock Index Fund                                | 1,189,296,237         | 10.8%                    | 10.0%                      | 0.8%                        |                  |                        |
| Emerald Advisers                                    | 204,817,610           | 1.9%                     | 1.5%                       | 0.4%                        |                  |                        |
| Ceredex   | 194,574,180           | 1.8%                     | 1.5%                       | 0.3%                        |                  |                        |
| <b>Total Domestic Equity</b>                        | <b>2,003,930,561</b>  | <b>18.2%</b>             | <b>16.0%</b>               | <b>2.2%</b>                 | <b>13.0%</b>     | <b>5.2%</b>            |
| <b>Global &amp; International Equity</b>            |                       |                          |                            |                             |                  |                        |
| Pyrford (Columbia)                                  | 481,964,094           | 4.4%                     | 4.0%                       | 0.4%                        |                  |                        |
| William Blair                                       | 460,555,310           | 4.2%                     | 4.0%                       | 0.2%                        |                  |                        |
| First Eagle   | 588,049,016           | 5.3%                     | 5.0%                       | 0.3%                        |                  |                        |
| Artisan Global Opportunities                        | 606,492,612           | 5.5%                     | 5.0%                       | 0.5%                        |                  |                        |
| PIMCO/RAE Emerging Markets                          | 264,088,616           | 2.4%                     | 2.0%                       | 0.4%                        |                  |                        |
| TT Emerging Markets                                 | 245,963,046           | 2.2%                     | 2.0%                       | 0.2%                        |                  |                        |
| <b>Total Global &amp; International Equity</b>      | <b>2,647,112,695</b>  | <b>24.0%</b>             | <b>22.0%</b>               | <b>2.0%</b>                 | <b>19.0%</b>     | <b>5.0%</b>            |
| <b>Private Equity**</b>                             |                       |                          |                            |                             |                  |                        |
| <b>Real Assets/Infrastructure**</b>                 | 210,755,815           | 1.9%                     | 0.0%                       |                             | 3.0%             | -1.1%                  |
| <b>Private Credit</b>                               | 1,108,381,180         | 10.1%                    | 10.0%                      | 0.1%                        | 13.0%            | -2.9%                  |
| <b>Real Estate - Value Add</b>                      | 226,529,949           | 2.1%                     | 4.0%                       | -1.9%                       | 5.0%             | -2.9%                  |
| <b>Real Estate - Opportunistic &amp; Distressed</b> | 301,974,124           | 2.7%                     | 4.0%                       | -1.3%                       | 5.0%             | -2.3%                  |
| <b>Real Estate - REIT</b>                           |                       |                          | 2.0%                       | -0.2%                       | 0.0%             | 1.8%                   |
| Adelante  | 90,354,199            | 0.8%                     |                            |                             |                  |                        |
| Invesco   | 107,102,738           | 1.0%                     |                            |                             |                  |                        |
| <b>High Yield</b>                                   | 158,308,340           | 1.4%                     | 2.0%                       | -0.6%                       | 0.0%             | 1.4%                   |
| <b>Risk Parity</b>                                  |                       |                          | 3.0%                       | 0.1%                        | 3.0%             | 0.1%                   |
| AQR GRP EL  | 177,888,469           | 1.6%                     |                            |                             |                  |                        |
| PanAgora  | 162,762,344           | 1.5%                     |                            |                             |                  |                        |
| <b>Total Other Growth Assets</b>                    | <b>3,640,699,571</b>  | <b>33.0%</b>             | <b>38.0%</b>               | <b>-5.0%</b>                | <b>44.0%</b>     | <b>-11.0%</b>          |
| <b>Total Growth Assets</b>                          | <b>8,291,742,826</b>  | <b>75.2%</b>             | <b>76.0%</b>               | <b>-0.8%</b>                | <b>76.0%</b>     | <b>-0.8%</b>           |
|   |                       | <b>Range 65-85%</b>      |                            |                             |                  |                        |
| <b>Risk Diversifying</b>                            |                       |                          |                            |                             |                  |                        |
| AFL-CIO   | 215,559,868           | 2.0%                     | 2.5%                       | -0.5%                       | 2.5%             | -0.5%                  |
| Acadian MAARS                                       | 111,720,104           | 1.0%                     | 0.0%                       | 1.0%                        | 0.0%             | 1.0%                   |
| BH-DG Systematic                                    | 101,840,911           | 1.0%                     | 2.0%                       |                             | 2.5%             |                        |
| Sit LLCAR   | 365,348,282           | 3.3%                     | 2.5%                       | 0.8%                        | 2.0%             | 1.3%                   |
| <b>Total Risk Diversifying</b>                      | <b>794,469,165</b>    | <b>7.3%</b>              | <b>7.0%</b>                | <b>0.3%</b>                 | <b>7.0%</b>      | <b>0.3%</b>            |
|   |                       | <b>Range 0% - 10%</b>    |                            |                             |                  |                        |
| <b>Cash and Overlay</b>                             |                       |                          |                            |                             |                  |                        |
| Overlay (Parametric)                                | 119,527,032           | 1.1%                     |                            | 1.1%                        |                  |                        |
| Cash  | 140,042,770           | 1.3%                     |                            | 1.3%                        |                  |                        |
| <b>Total Cash and Overlay</b>                       | <b>259,569,802</b>    | <b>2.4%</b>              | <b>0.0%</b>                | <b>2.4%</b>                 | <b>0.0%</b>      | <b>2.4%</b>            |
| <b>Total Fund</b>                                   | <b>11,022,421,458</b> | <b>100%</b>              | <b>100%</b>                |                             | <b>100%</b>      |                        |

\*Current targets and ranges reflect asset allocation targets accepted by the Board on April 24, 2024 (BOR Resolution 2024-3).

\*\*Private Equity long-term target includes Real Assets/Infrastructure (see Asset Allocation Mix 5 adopted December 9, 2020).



**Contra Costa County Employees' Retirement Association**  
**Asset Allocation as of May 31, 2024**

|  | Market Value          | Percentage of Total Fund | Current Target* Percentage | Current Target Over/(Under) | Long Term Target | Long Term Over/(Under) |
|--|-----------------------|--------------------------|----------------------------|-----------------------------|------------------|------------------------|
| <b>Liquidity</b>                               |                       |                          |                            |                             |                  |                        |
| Dimensional Fund Advisors                      | 377,549,573           | 3.4%                     | 4.0%                       | -0.6%                       |                  |                        |
| Insight  | 615,878,007           | 5.5%                     | 6.5%                       | -1.0%                       |                  |                        |
| Sit  | 645,511,098           | 5.7%                     | 6.5%                       | -0.8%                       |                  |                        |
| <b>Total Liquidity</b>                         | <b>1,638,938,678</b>  | <b>14.6%</b>             | <b>17.0%</b>               | <b>-2.4%</b>                | <b>17.0%</b>     | <b>-2.4%</b>           |
|  |                       | <b>Range 11-22%</b>      |                            |                             |                  |                        |
| <b>Growth</b>                                  |                       |                          |                            |                             |                  |                        |
| <b>Domestic Equity</b>                         |                       |                          |                            |                             |                  |                        |
| Boston Partners                                | 428,941,262           | 3.8%                     | 3.0%                       | 0.8%                        |                  |                        |
| BlackRock Index Fund                           | 1,245,294,761         | 11.1%                    | 10.0%                      | 1.1%                        |                  |                        |
| Emerald Advisers                               | 219,503,091           | 2.0%                     | 1.5%                       | 0.5%                        |                  |                        |
| Ceredex  | 203,687,649           | 1.8%                     | 1.5%                       | 0.3%                        |                  |                        |
| <b>Total Domestic Equity</b>                   | <b>2,097,426,763</b>  | <b>18.7%</b>             | <b>16.0%</b>               | <b>2.7%</b>                 | <b>13.0%</b>     | <b>5.7%</b>            |
| <b>Global &amp; International Equity</b>       |                       |                          |                            |                             |                  |                        |
| Pyrford (Columbia)                             | 498,080,096           | 4.4%                     | 4.0%                       | 0.4%                        |                  |                        |
| William Blair                                  | 473,348,736           | 4.2%                     | 4.0%                       | 0.2%                        |                  |                        |
| First Eagle                                    | 606,273,737           | 5.4%                     | 5.0%                       | 0.4%                        |                  |                        |
| Artisan Global Opportunities                   | 617,146,378           | 5.5%                     | 5.0%                       | 0.5%                        |                  |                        |
| PIMCO/RAE Emerging Markets                     | 274,332,579           | 2.4%                     | 2.0%                       | 0.4%                        |                  |                        |
| TT Emerging Markets                            | 251,663,362           | 2.2%                     | 2.0%                       | 0.2%                        |                  |                        |
| <b>Total Global &amp; International Equity</b> | <b>2,720,844,888</b>  | <b>24.2%</b>             | <b>22.0%</b>               | <b>2.2%</b>                 | <b>19.0%</b>     | <b>5.2%</b>            |
| <b>Private Equity**</b>                        |                       |                          |                            |                             |                  |                        |
| Real Assets/Infrastructure**                   | 1,117,909,242         | 9.9%                     | 13.0%                      | -1.2%                       | 15.0%            | -5.1%                  |
| Private Credit                                 | 213,030,508           | 1.9%                     | 0.0%                       |                             | 3.0%             | -1.1%                  |
| Real Estate - Value Add                        | 1,138,900,847         | 10.1%                    | 10.0%                      | 0.1%                        | 13.0%            | -2.9%                  |
| Real Estate - Opportunistic & Distressed       | 225,827,116           | 2.0%                     | 4.0%                       | -2.0%                       | 5.0%             | -3.0%                  |
| Real Estate - REIT                             | 296,243,934           | 2.6%                     | 4.0%                       | -1.4%                       | 5.0%             | -2.4%                  |
| Adelante                                       |                       |                          | 2.0%                       | -0.2%                       | 0.0%             | 1.8%                   |
| Invesco  | 94,868,610            | 0.8%                     |                            |                             |                  |                        |
| High Yield                                     | 112,161,340           | 1.0%                     |                            |                             |                  |                        |
| Risk Parity                                    | 160,240,002           | 1.4%                     | 2.0%                       | -0.6%                       | 0.0%             | 1.4%                   |
| AQR GRP EL                                     |                       |                          | 3.0%                       | 0.1%                        | 3.0%             | 0.1%                   |
| PanAgora                                       | 181,619,364           | 1.6%                     |                            |                             |                  |                        |
| <b>Total Other Growth Assets</b>               | <b>166,638,889</b>    | <b>1.5%</b>              |                            |                             |                  |                        |
| <b>Total Growth Assets</b>                     | <b>3,707,439,852</b>  | <b>33.0%</b>             | <b>38.0%</b>               | <b>-5.0%</b>                | <b>44.0%</b>     | <b>-11.0%</b>          |
|  |                       | <b>Range 65-85%</b>      |                            |                             |                  |                        |
| <b>Risk Diversifying</b>                       |                       |                          |                            |                             |                  |                        |
| AFL-CIO  | 218,502,184           | 1.9%                     | 2.5%                       | -0.6%                       | 2.5%             | -0.6%                  |
| Acadian MAARS                                  | 0                     | 0.0%                     | 0.0%                       | 0.0%                        | 0.0%             | 0.0%                   |
| BH-DG Systematic                               | 99,726,423            | 1.0%                     | 2.0%                       |                             | 2.5%             |                        |
| Sit LLCAR                                      | 371,487,593           | 3.3%                     | 2.5%                       | 0.8%                        | 2.0%             | 1.3%                   |
| <b>Total Risk Diversifying</b>                 | <b>689,716,200</b>    | <b>6.3%</b>              | <b>7.0%</b>                | <b>-0.7%</b>                | <b>7.0%</b>      | <b>-0.7%</b>           |
|  |                       | <b>Range 0% - 10%</b>    |                            |                             |                  |                        |
| <b>Cash and Overlay</b>                        |                       |                          |                            |                             |                  |                        |
| Overlay (Parametric)                           | 127,163,281           | 1.1%                     |                            | 1.1%                        |                  |                        |
| Cash   | 256,204,418           | 2.3%                     |                            | 2.3%                        |                  |                        |
| <b>Total Cash and Overlay</b>                  | <b>383,367,699</b>    | <b>3.4%</b>              | <b>0.0%</b>                | <b>3.4%</b>                 | <b>0.0%</b>      | <b>3.4%</b>            |
| <b>Total Fund</b>                              | <b>11,237,734,080</b> | <b>100%</b>              | <b>100%</b>                |                             | <b>100%</b>      |                        |

\*Current targets and ranges reflect asset allocation targets accepted by the Board on April 24, 2024 (BOR Resolution 2024-3).

\*\*Private Equity long-term target includes Real Assets/Infrastructure (see Asset Allocation Mix 5 adopted December 9, 2020).



**Contra Costa County Employees' Retirement Association**  
**Asset Allocation as of June 30, 2024**

|   | Market Value          | Percentage of Total Fund | Current Target* Percentage | Current Target Over/(Under) | Long Term Target | Long Term Over/(Under) |
|---|-----------------------|--------------------------|----------------------------|-----------------------------|------------------|------------------------|
| <b>Liquidity</b>                                    |                       |                          |                            |                             |                  |                        |
| Dimensional Fund Advisors                           | 367,733,492           | 3.3%                     | 4.0%                       | -0.7%                       |                  |                        |
| Insight   | 599,621,524           | 5.3%                     | 6.5%                       | -1.2%                       |                  |                        |
| Sit   | 630,005,024           | 5.6%                     | 6.5%                       | -0.9%                       |                  |                        |
| <b>Total Liquidity</b>                              | <b>1,597,360,040</b>  | <b>14.1%</b>             | <b>17.0%</b>               | <b>-2.9%</b>                | <b>17.0%</b>     | <b>-2.9%</b>           |
|   |                       | <b>Range 11-22%</b>      |                            |                             |                  |                        |
| <b>Growth</b>                                       |                       |                          |                            |                             |                  |                        |
| <b>Domestic Equity</b>                              |                       |                          |                            |                             |                  |                        |
| Boston Partners                                     | 426,935,345           | 3.8%                     | 3.0%                       | 0.8%                        |                  |                        |
| BlackRock Index Fund                                | 1,286,476,562         | 11.4%                    | 10.0%                      | 1.4%                        |                  |                        |
| Emerald Advisers                                    | 223,153,822           | 2.0%                     | 1.5%                       | 0.5%                        |                  |                        |
| Ceredex   | 199,977,061           | 1.8%                     | 1.5%                       | 0.3%                        |                  |                        |
| <b>Total Domestic Equity</b>                        | <b>2,136,542,791</b>  | <b>18.9%</b>             | <b>16.0%</b>               | <b>2.9%</b>                 | <b>13.0%</b>     | <b>5.9%</b>            |
| <b>Global &amp; International Equity</b>            |                       |                          |                            |                             |                  |                        |
| Pyrford (Columbia)                                  | 492,099,248           | 4.4%                     | 4.0%                       | 0.4%                        |                  |                        |
| William Blair                                       | 476,778,846           | 4.2%                     | 4.0%                       | 0.2%                        |                  |                        |
| First Eagle   | 606,164,236           | 5.4%                     | 5.0%                       | 0.4%                        |                  |                        |
| Artisan Global Opportunities                        | 634,593,848           | 5.6%                     | 5.0%                       | 0.6%                        |                  |                        |
| PIMCO/RAE Emerging Markets                          | 273,873,447           | 2.4%                     | 2.0%                       | 0.4%                        |                  |                        |
| TT Emerging Markets                                 | 262,281,597           | 2.3%                     | 2.0%                       | 0.3%                        |                  |                        |
| <b>Total Global &amp; International Equity</b>      | <b>2,745,791,223</b>  | <b>24.3%</b>             | <b>22.0%</b>               | <b>2.3%</b>                 | <b>19.0%</b>     | <b>5.3%</b>            |
| <b>Private Equity**</b>                             |                       |                          |                            |                             |                  |                        |
| <b>Real Assets/Infrastructure**</b>                 | 206,091,653           | 1.8%                     | 0.0%                       |                             | 3.0%             | -1.2%                  |
| <b>Private Credit</b>                               | 1,169,881,339         | 10.3%                    | 10.0%                      | 0.3%                        | 13.0%            | -2.7%                  |
| <b>Real Estate - Value Add</b>                      | 258,061,042           | 2.3%                     | 4.0%                       | -1.7%                       | 5.0%             | -2.7%                  |
| <b>Real Estate - Opportunistic &amp; Distressed</b> | 317,817,643           | 2.8%                     | 4.0%                       | -1.2%                       | 5.0%             | -2.2%                  |
| <b>Real Estate - REIT</b>                           |                       |                          | 2.0%                       | -0.1%                       | 0.0%             | 1.9%                   |
| Adelante  | 97,762,527            | 0.9%                     |                            |                             |                  |                        |
| Invesco   | 114,553,525           | 1.0%                     |                            |                             |                  |                        |
| <b>High Yield</b>                                   | 161,940,512           | 1.4%                     | 2.0%                       | -0.6%                       | 0.0%             | 1.4%                   |
| <b>Risk Parity</b>                                  |                       |                          | 3.0%                       | 0.1%                        | 3.0%             | 0.1%                   |
| AQR GRP EL  | 183,416,932           | 1.6%                     |                            |                             |                  |                        |
| PanAgora  | 167,447,805           | 1.5%                     |                            |                             |                  |                        |
| <b>Total Other Growth Assets</b>                    | <b>3,793,883,574</b>  | <b>33.5%</b>             | <b>38.0%</b>               | <b>-4.5%</b>                | <b>44.0%</b>     | <b>-10.5%</b>          |
| <b>Total Growth Assets</b>                          | <b>8,676,217,588</b>  | <b>76.7%</b>             | <b>76.0%</b>               | <b>0.7%</b>                 | <b>76.0%</b>     | <b>0.7%</b>            |
|   |                       | <b>Range 65-85%</b>      |                            |                             |                  |                        |
| <b>Risk Diversifying</b>                            |                       |                          |                            |                             |                  |                        |
| AFL-CIO   | 220,541,901           | 2.0%                     | 2.5%                       | -0.5%                       | 2.5%             | -0.5%                  |
| BH-DG Systematic                                    | 197,038,650           | 1.7%                     | 2.0%                       |                             | 2.5%             |                        |
| Sit LLCAR   | 376,486,828           | 3.3%                     | 2.5%                       | 0.8%                        | 2.0%             | 1.3%                   |
| <b>Total Risk Diversifying</b>                      | <b>794,067,380</b>    | <b>7.0%</b>              | <b>7.0%</b>                | <b>0.0%</b>                 | <b>7.0%</b>      | <b>0.0%</b>            |
|   |                       | <b>Range 0% - 10%</b>    |                            |                             |                  |                        |
| <b>Cash and Overlay</b>                             |                       |                          |                            |                             |                  |                        |
| Overlay (Parametric)                                | 130,998,950           | 1.2%                     |                            | 1.2%                        |                  |                        |
| Cash  | 111,020,415           | 1.0%                     |                            | 1.0%                        |                  |                        |
| <b>Total Cash and Overlay</b>                       | <b>242,019,365</b>    | <b>2.1%</b>              | <b>0.0%</b>                | <b>2.1%</b>                 | <b>0.0%</b>      | <b>2.1%</b>            |
| <b>Total Fund</b>                                   | <b>11,309,664,372</b> | <b>100%</b>              | <b>100%</b>                |                             | <b>100%</b>      |                        |

\*Current targets and ranges reflect asset allocation targets accepted by the Board on April 24, 2024 (BOR Resolution 2024-3).

\*\*Private Equity long-term target includes Real Assets/Infrastructure (see Asset Allocation Mix 5 adopted December 9, 2020).



**Contra Costa County Employees' Retirement Association**  
**Asset Allocation as of July 31, 2024**

|   | Market Value          | Percentage of Total Fund | Current Target* Percentage | Current Target Over/(Under) | Long Term Target | Long Term Over/(Under) |
|---|-----------------------|--------------------------|----------------------------|-----------------------------|------------------|------------------------|
| <b>Liquidity</b>                                    |                       |                          |                            |                             |                  |                        |
| Dimensional Fund Advisors                           | 358,340,832           | 3.0%                     | 4.0%                       | -1.0%                       |                  |                        |
| Insight   | 585,709,851           | 5.0%                     | 6.5%                       | -1.5%                       |                  |                        |
| Sit   | 619,749,941           | 5.3%                     | 6.5%                       | -1.2%                       |                  |                        |
| <b>Total Liquidity</b>                              | <b>1,563,800,624</b>  | <b>13.3%</b>             | <b>17.0%</b>               | <b>-3.7%</b>                | <b>17.0%</b>     | <b>-3.7%</b>           |
|   |                       | <b>Range 11-22%</b>      |                            |                             |                  |                        |
| <b>Growth</b>                                       |                       |                          |                            |                             |                  |                        |
| <b>Domestic Equity</b>                              |                       |                          |                            |                             |                  |                        |
| Boston Partners                                     | 443,120,564           | 3.8%                     | 3.0%                       | 0.8%                        |                  |                        |
| BlackRock Index Fund                                | 1,305,202,423         | 11.1%                    | 10.0%                      | 1.1%                        |                  |                        |
| Emerald Advisers                                    | 235,355,493           | 2.0%                     | 1.5%                       | 0.5%                        |                  |                        |
| Ceredex   | 218,287,072           | 1.9%                     | 1.5%                       | 0.4%                        |                  |                        |
| <b>Total Domestic Equity</b>                        | <b>2,201,965,552</b>  | <b>18.7%</b>             | <b>16.0%</b>               | <b>2.7%</b>                 | <b>13.0%</b>     | <b>5.7%</b>            |
| <b>Global &amp; International Equity</b>            |                       |                          |                            |                             |                  |                        |
| Pyrford (Columbia)                                  | 515,801,241           | 4.4%                     | 4.0%                       | 0.4%                        |                  |                        |
| William Blair                                       | 485,791,922           | 4.1%                     | 4.0%                       | 0.1%                        |                  |                        |
| First Eagle   | 631,001,409           | 5.4%                     | 5.0%                       | 0.4%                        |                  |                        |
| Artisan Global Opportunities                        | 628,880,960           | 5.3%                     | 5.0%                       | 0.3%                        |                  |                        |
| PIMCO/RAE Emerging Markets                          | 274,983,019           | 2.3%                     | 2.0%                       | 0.3%                        |                  |                        |
| TT Emerging Markets                                 | 258,146,074           | 2.2%                     | 2.0%                       | 0.2%                        |                  |                        |
| <b>Total Global &amp; International Equity</b>      | <b>2,794,604,625</b>  | <b>23.8%</b>             | <b>22.0%</b>               | <b>1.8%</b>                 | <b>19.0%</b>     | <b>4.8%</b>            |
| <b>Private Equity**</b>                             |                       |                          |                            |                             |                  |                        |
| <b>Real Assets/Infrastructure**</b>                 | 201,302,759           | 1.7%                     | 0.0%                       |                             | 3.0%             | -1.3%                  |
| <b>Private Credit</b>                               | 1,171,789,299         | 10.0%                    | 10.0%                      | -0.0%                       | 13.0%            | -3.0%                  |
| <b>Real Estate - Value Add</b>                      | 260,366,424           | 2.2%                     | 4.0%                       | -1.8%                       | 5.0%             | -2.8%                  |
| <b>Real Estate - Opportunistic &amp; Distressed</b> | 316,334,597           | 2.7%                     | 4.0%                       | -1.3%                       | 5.0%             | -2.3%                  |
| <b>Real Estate - REIT</b>                           |                       |                          | 2.0%                       | -0.1%                       | 0.0%             | 1.9%                   |
| Adelante  | 102,683,207           | 0.9%                     |                            |                             |                  |                        |
| Invesco   | 123,187,772           | 1.0%                     |                            |                             |                  |                        |
| <b>High Yield</b>                                   | 164,455,420           | 1.4%                     | 2.0%                       | -0.6%                       | 0.0%             | 1.4%                   |
| <b>Risk Parity</b>                                  |                       |                          | 3.0%                       | 0.0%                        | 3.0%             | 0.0%                   |
| AQR GRP EL  | 187,774,867           | 1.6%                     |                            |                             |                  |                        |
| PanAgora  | 170,819,225           | 1.5%                     |                            |                             |                  |                        |
| <b>Total Other Growth Assets</b>                    | <b>3,814,437,734</b>  | <b>32.4%</b>             | <b>38.0%</b>               | <b>-5.6%</b>                | <b>44.0%</b>     | <b>-11.6%</b>          |
| <b>Total Growth Assets</b>                          | <b>8,811,007,911</b>  | <b>74.9%</b>             | <b>76.0%</b>               | <b>-1.1%</b>                | <b>76.0%</b>     | <b>-1.1%</b>           |
|   |                       | <b>Range 65-85%</b>      |                            |                             |                  |                        |
| <b>Risk Diversifying</b>                            |                       |                          |                            |                             |                  |                        |
| AFL-CIO   | 224,728,193           | 1.9%                     | 2.5%                       | -0.6%                       | 2.5%             | -0.6%                  |
| BH-DG Systematic                                    | 189,138,660           | 1.6%                     | 2.0%                       |                             | 2.5%             |                        |
| Sit LLCAR   | 383,617,798           | 3.3%                     | 2.5%                       | 0.8%                        | 2.0%             | 1.3%                   |
| <b>Total Risk Diversifying</b>                      | <b>797,484,651</b>    | <b>6.8%</b>              | <b>7.0%</b>                | <b>-0.2%</b>                | <b>7.0%</b>      | <b>-0.2%</b>           |
|   |                       | <b>Range 0% - 10%</b>    |                            |                             |                  |                        |
| <b>Cash and Overlay</b>                             |                       |                          |                            |                             |                  |                        |
| Overlay (Parametric)                                | 136,655,380           | 1.2%                     |                            | 1.2%                        |                  |                        |
| Cash  | 457,126,069           | 3.9%                     |                            | 3.9%                        |                  |                        |
| <b>Total Cash and Overlay</b>                       | <b>593,781,450</b>    | <b>5.0%</b>              | <b>0.0%</b>                | <b>5.0%</b>                 | <b>0.0%</b>      | <b>5.0%</b>            |
| <b>Total Fund</b>                                   | <b>11,766,074,636</b> | <b>100%</b>              | <b>100%</b>                |                             | <b>100%</b>      |                        |

\*Current targets and ranges reflect asset allocation targets accepted by the Board on April 24, 2024 (BOR Resolution 2024-3).

\*\*Private Equity long-term target includes Real Assets/Infrastructure (see Asset Allocation Mix 5 adopted December 9, 2020).



**Contra Costa County Employees' Retirement Association**  
**Asset Allocation as of August 31, 2024**

|   | Market Value          | Percentage of Total Fund | Current Target* Percentage | Current Target Over/(Under) | Long Term Target | Long Term Over/(Under) |
|---|-----------------------|--------------------------|----------------------------|-----------------------------|------------------|------------------------|
| <b>Liquidity</b>                                    |                       |                          |                            |                             |                  |                        |
| Dimensional Fund Advisors                           | 433,841,714           | 3.7%                     | 4.0%                       | -0.3%                       |                  |                        |
| Insight   | 721,487,689           | 6.1%                     | 6.5%                       | -0.4%                       |                  |                        |
| Sit   | 764,414,959           | 6.5%                     | 6.5%                       | -0.0%                       |                  |                        |
| <b>Total Liquidity</b>                              | <b>1,919,744,363</b>  | <b>16.3%</b>             | <b>17.0%</b>               | <b>-0.7%</b>                | <b>17.0%</b>     | <b>-0.7%</b>           |
|   |                       | <b>Range 11-22%</b>      |                            |                             |                  |                        |
| <b>Growth</b>                                       |                       |                          |                            |                             |                  |                        |
| <b>Domestic Equity</b>                              |                       |                          |                            |                             |                  |                        |
| Boston Partners                                     | 449,656,998           | 3.8%                     | 3.0%                       | 0.8%                        |                  |                        |
| BlackRock Index Fund                                | 1,336,121,391         | 11.3%                    | 10.0%                      | 1.3%                        |                  |                        |
| Emerald Advisers                                    | 236,813,303           | 2.0%                     | 1.5%                       | 0.5%                        |                  |                        |
| Ceredex   | 218,415,797           | 1.8%                     | 1.5%                       | 0.3%                        |                  |                        |
| <b>Total Domestic Equity</b>                        | <b>2,241,007,488</b>  | <b>19.0%</b>             | <b>16.0%</b>               | <b>3.0%</b>                 | <b>13.0%</b>     | <b>6.0%</b>            |
| <b>Global &amp; International Equity</b>            |                       |                          |                            |                             |                  |                        |
| Pyrford (Columbia)                                  | 538,968,186           | 4.6%                     | 4.0%                       | 0.6%                        |                  |                        |
| William Blair                                       | 497,157,072           | 4.2%                     | 4.0%                       | 0.2%                        |                  |                        |
| First Eagle   | 649,655,826           | 5.5%                     | 5.0%                       | 0.5%                        |                  |                        |
| Artisan Global Opportunities                        | 650,034,088           | 5.5%                     | 5.0%                       | 0.5%                        |                  |                        |
| PIMCO/RAE Emerging Markets                          | 279,155,239           | 2.4%                     | 2.0%                       | 0.4%                        |                  |                        |
| TT Emerging Markets                                 | 264,315,828           | 2.2%                     | 2.0%                       | 0.2%                        |                  |                        |
| <b>Total Global &amp; International Equity</b>      | <b>2,879,286,240</b>  | <b>24.4%</b>             | <b>22.0%</b>               | <b>2.4%</b>                 | <b>19.0%</b>     | <b>5.4%</b>            |
| <b>Private Equity**</b>                             |                       |                          |                            |                             |                  |                        |
| <b>Real Assets/Infrastructure**</b>                 | 1,055,234,352         | 8.9%                     | 13.0%                      | -2.3%                       | 15.0%            | -6.1%                  |
| <b>Private Credit</b>                               | 205,127,260           | 1.7%                     | 0.0%                       |                             | 3.0%             | -1.3%                  |
| <b>Real Estate - Value Add</b>                      | 1,171,895,744         | 9.9%                     | 10.0%                      | -0.1%                       | 13.0%            | -3.1%                  |
| <b>Real Estate - Opportunistic &amp; Distressed</b> | 253,187,017           | 2.1%                     | 4.0%                       | -1.9%                       | 5.0%             | -2.9%                  |
| <b>Real Estate - REIT</b>                           | 304,313,794           | 2.6%                     | 4.0%                       | -1.4%                       | 5.0%             | -2.4%                  |
|   |                       |                          | 2.0%                       | 0.0%                        | 0.0%             | 2.0%                   |
| Adelante  | 109,608,642           | 0.9%                     |                            |                             |                  |                        |
| Invesco   | 129,383,855           | 1.1%                     |                            |                             |                  |                        |
| <b>High Yield</b>                                   | 166,709,777           | 1.4%                     | 2.0%                       | -0.6%                       | 0.0%             | 1.4%                   |
| <b>Risk Parity</b>                                  |                       |                          | 3.0%                       | -0.3%                       | 3.0%             | -0.3%                  |
| AQR GRP EL  | 148,826,431           | 1.3%                     |                            |                             |                  |                        |
| PanAgora  | 172,897,905           | 1.5%                     |                            |                             |                  |                        |
| <b>Total Other Growth Assets</b>                    | <b>3,717,184,775</b>  | <b>31.5%</b>             | <b>38.0%</b>               | <b>-6.5%</b>                | <b>44.0%</b>     | <b>-12.5%</b>          |
| <b>Total Growth Assets</b>                          | <b>8,837,478,503</b>  | <b>74.8%</b>             | <b>76.0%</b>               | <b>-1.2%</b>                | <b>76.0%</b>     | <b>-1.2%</b>           |
|   |                       | <b>Range 65-85%</b>      |                            |                             |                  |                        |
| <b>Risk Diversifying</b>                            |                       |                          |                            |                             |                  |                        |
| AFL-CIO   | 227,096,870           | 1.9%                     | 2.5%                       | -0.6%                       | 2.5%             | -0.6%                  |
| BH-DG Systematic                                    | 179,398,008           | 1.5%                     | 2.0%                       |                             | 2.5%             |                        |
| Sit LLCAR   | 387,829,839           | 3.3%                     | 2.5%                       | 0.8%                        | 2.0%             | 1.3%                   |
| <b>Total Risk Diversifying</b>                      | <b>794,324,716</b>    | <b>6.7%</b>              | <b>7.0%</b>                | <b>-0.3%</b>                | <b>7.0%</b>      | <b>-0.3%</b>           |
|   |                       | <b>Range 0% - 10%</b>    |                            |                             |                  |                        |
| <b>Cash and Overlay</b>                             |                       |                          |                            |                             |                  |                        |
| Overlay (Parametric)                                | 141,565,423           | 1.2%                     |                            | 1.2%                        |                  |                        |
| Cash  | 116,013,924           | 1.0%                     |                            | 1.0%                        |                  |                        |
| <b>Total Cash and Overlay</b>                       | <b>257,579,346</b>    | <b>2.2%</b>              | <b>0.0%</b>                | <b>2.2%</b>                 | <b>0.0%</b>      | <b>2.2%</b>            |
| <b>Total Fund</b>                                   | <b>11,809,126,929</b> | <b>100%</b>              | <b>100%</b>                |                             | <b>100%</b>      |                        |

\*Current targets and ranges reflect asset allocation targets accepted by the Board on April 24, 2024 (BOR Resolution 2024-3).

\*\*Private Equity long-term target includes Real Assets/Infrastructure (see Asset Allocation Mix 5 adopted December 9, 2020).



**Contra Costa County Employees' Retirement Association**  
**Asset Allocation as of September 30, 2024**

|   | Market Value          | Percentage of Total Fund | Current Target* Percentage | Current Target Over/(Under) | Long Term Target | Long Term Over/(Under) |
|---|-----------------------|--------------------------|----------------------------|-----------------------------|------------------|------------------------|
| <b>Liquidity</b>                                    |                       |                          |                            |                             |                  |                        |
| Dimensional Fund Advisors                           | 424,432,380           | 3.6%                     | 4.0%                       | -0.4%                       |                  |                        |
| Insight   | 707,127,703           | 5.9%                     | 6.5%                       | -0.6%                       |                  |                        |
| Sit   | 749,733,267           | 6.3%                     | 6.5%                       | -0.2%                       |                  |                        |
| <b>Total Liquidity</b>                              | <b>1,881,293,350</b>  | <b>15.8%</b>             | <b>17.0%</b>               | <b>-1.2%</b>                | <b>17.0%</b>     | <b>-1.2%</b>           |
|   |                       | <b>Range 11-22%</b>      |                            |                             |                  |                        |
| <b>Growth</b>                                       |                       |                          |                            |                             |                  |                        |
| <b>Domestic Equity</b>                              |                       |                          |                            |                             |                  |                        |
| Boston Partners                                     | 452,859,069           | 3.8%                     | 3.0%                       | 0.8%                        |                  |                        |
| BlackRock Index Fund                                | 1,259,173,538         | 10.5%                    | 10.0%                      | 0.5%                        |                  |                        |
| Emerald Advisers                                    | 237,270,219           | 2.0%                     | 1.5%                       | 0.5%                        |                  |                        |
| Ceredex   | 218,068,297           | 1.8%                     | 1.5%                       | 0.3%                        |                  |                        |
| <b>Total Domestic Equity</b>                        | <b>2,167,371,124</b>  | <b>18.2%</b>             | <b>16.0%</b>               | <b>2.2%</b>                 | <b>13.0%</b>     | <b>5.2%</b>            |
| <b>Global &amp; International Equity</b>            |                       |                          |                            |                             |                  |                        |
| Pyrford (Columbia)                                  | 474,014,109           | 4.0%                     | 4.0%                       | -0.0%                       |                  |                        |
| William Blair                                       | 448,918,377           | 3.8%                     | 4.0%                       | -0.2%                       |                  |                        |
| First Eagle   | 666,600,627           | 5.6%                     | 5.0%                       | 0.6%                        |                  |                        |
| Artisan Global Opportunities                        | 661,459,865           | 5.5%                     | 5.0%                       | 0.5%                        |                  |                        |
| PIMCO/RAE Emerging Markets                          | 291,269,074           | 2.4%                     | 2.0%                       | 0.4%                        |                  |                        |
| TT Emerging Markets                                 | 273,101,021           | 2.3%                     | 2.0%                       | 0.3%                        |                  |                        |
| <b>Total Global &amp; International Equity</b>      | <b>2,815,363,073</b>  | <b>23.6%</b>             | <b>22.0%</b>               | <b>1.6%</b>                 | <b>19.0%</b>     | <b>4.6%</b>            |
| <b>Private Equity**</b>                             |                       |                          |                            |                             |                  |                        |
| <b>Real Assets/Infrastructure**</b>                 | 204,303,678           | 1.7%                     | 0.0%                       |                             | 3.0%             | -1.3%                  |
| <b>Private Credit</b>                               | 1,205,699,680         | 10.1%                    | 10.0%                      | 0.1%                        | 13.0%            | -2.9%                  |
| <b>Real Estate - Value Add</b>                      | 262,220,686           | 2.2%                     | 4.0%                       | -1.8%                       | 5.0%             | -2.8%                  |
| <b>Real Estate - Opportunistic &amp; Distressed</b> | 309,020,703           | 2.6%                     | 4.0%                       | -1.4%                       | 5.0%             | -2.4%                  |
| <b>Real Estate - REIT</b>                           |                       |                          | 2.0%                       | 0.1%                        | 0.0%             | 2.1%                   |
| Adelante  | 112,810,672           | 0.9%                     |                            |                             |                  |                        |
| Invesco   | 133,284,299           | 1.1%                     |                            |                             |                  |                        |
| <b>High Yield</b>                                   | 168,307,571           | 1.4%                     | 2.0%                       | -0.6%                       | 0.0%             | 1.4%                   |
| <b>Risk Parity</b>                                  |                       |                          | 3.0%                       | -1.1%                       | 3.0%             | -1.1%                  |
| AQR GRP EL  | 49,989,010            | 0.4%                     |                            |                             |                  |                        |
| PanAgora  | 177,896,397           | 1.5%                     |                            |                             |                  |                        |
| <b>Total Other Growth Assets</b>                    | <b>3,655,985,548</b>  | <b>30.6%</b>             | <b>38.0%</b>               | <b>-7.4%</b>                | <b>44.0%</b>     | <b>-13.4%</b>          |
| <b>Total Growth Assets</b>                          | <b>8,638,719,745</b>  | <b>72.4%</b>             | <b>76.0%</b>               | <b>-3.6%</b>                | <b>76.0%</b>     | <b>-3.6%</b>           |
|   |                       | <b>Range 65-85%</b>      |                            |                             |                  |                        |
| <b>Risk Diversifying</b>                            |                       |                          |                            |                             |                  |                        |
| AFL-CIO   | 229,180,560           | 1.9%                     | 2.5%                       | -0.6%                       | 2.5%             | -0.6%                  |
| BH-DG Systematic                                    | 187,711,246           | 1.6%                     | 2.0%                       |                             | 2.5%             |                        |
| Sit LLCAR   | 392,268,768           | 3.3%                     | 2.5%                       | 0.8%                        | 2.0%             | 1.3%                   |
| <b>Total Risk Diversifying</b>                      | <b>809,160,574</b>    | <b>6.8%</b>              | <b>7.0%</b>                | <b>-0.2%</b>                | <b>7.0%</b>      | <b>-0.2%</b>           |
|   |                       | <b>Range 0% - 10%</b>    |                            |                             |                  |                        |
| <b>Cash and Overlay</b>                             |                       |                          |                            |                             |                  |                        |
| Overlay (Parametric)                                | 145,796,414           | 1.2%                     |                            | 1.2%                        |                  |                        |
| Cash  | 463,763,278           | 3.9%                     |                            | 3.9%                        |                  |                        |
| <b>Total Cash and Overlay</b>                       | <b>609,559,692</b>    | <b>5.1%</b>              | <b>0.0%</b>                | <b>5.1%</b>                 | <b>0.0%</b>      | <b>5.1%</b>            |
| <b>Total Fund</b>                                   | <b>11,938,733,361</b> | <b>100%</b>              | <b>100%</b>                |                             | <b>100%</b>      |                        |

\*Current targets and ranges reflect asset allocation targets accepted by the Board on April 24, 2024 (BOR Resolution 2024-3).

\*\*Private Equity long-term target includes Real Assets/Infrastructure (see Asset Allocation Mix 5 adopted December 9, 2020).



**Contra Costa County Employees' Retirement Association**  
**Asset Allocation as of October 31, 2024**

|   | Market Value          | Percentage of Total Fund | Current Target* Percentage | Current Target Over/(Under) | Long Term Target | Long Term Over/(Under) |
|---|-----------------------|--------------------------|----------------------------|-----------------------------|------------------|------------------------|
| <b>Liquidity</b>                                    |                       |                          |                            |                             |                  |                        |
| Dimensional Fund Advisors                           | 414,179,619           | 3.5%                     | 4.0%                       | -0.5%                       |                  |                        |
| Insight   | 685,620,755           | 5.8%                     | 6.5%                       | -0.7%                       |                  |                        |
| Sit   | 719,290,099           | 6.1%                     | 6.5%                       | -0.4%                       |                  |                        |
| <b>Total Liquidity</b>                              | <b>1,819,090,474</b>  | <b>15.4%</b>             | <b>17.0%</b>               | <b>-1.6%</b>                | <b>14.0%</b>     | <b>1.4%</b>            |
|   |                       | <b>Range 11-22%</b>      |                            |                             |                  |                        |
| <b>Growth</b>                                       |                       |                          |                            |                             |                  |                        |
| <b>Domestic Equity</b>                              |                       |                          |                            |                             |                  |                        |
| Boston Partners                                     | 453,018,466           | 3.8%                     | 3.0%                       | 0.8%                        |                  |                        |
| BlackRock Index Fund                                | 1,250,357,165         | 10.6%                    | 10.0%                      | 0.6%                        |                  |                        |
| Emerald Advisers                                    | 235,756,860           | 2.0%                     | 1.5%                       | 0.5%                        |                  |                        |
| Ceredex   | 213,902,209           | 1.8%                     | 1.5%                       | 0.3%                        |                  |                        |
| <b>Total Domestic Equity</b>                        | <b>2,153,034,700</b>  | <b>18.2%</b>             | <b>16.0%</b>               | <b>2.2%</b>                 | <b>11.0%</b>     | <b>7.2%</b>            |
| <b>Global &amp; International Equity</b>            |                       |                          |                            |                             |                  |                        |
| Pyrford (Columbia)                                  | 446,364,809           | 3.8%                     | 3.5%                       | 0.3%                        |                  |                        |
| William Blair                                       | 429,772,709           | 3.6%                     | 3.5%                       | 0.1%                        |                  |                        |
| First Eagle   | 653,992,669           | 5.5%                     | 5.5%                       | 0.0%                        |                  |                        |
| Artisan Global Opportunities                        | 649,416,478           | 5.5%                     | 5.5%                       | -0.0%                       |                  |                        |
| PIMCO/RAE Emerging Markets                          | 250,899,582           | 2.1%                     | 2.0%                       | 0.1%                        |                  |                        |
| TT Emerging Markets                                 | 251,216,367           | 2.1%                     | 2.0%                       | 0.1%                        |                  |                        |
| <b>Total Global &amp; International Equity</b>      | <b>2,681,662,615</b>  | <b>22.7%</b>             | <b>22.0%</b>               | <b>0.7%</b>                 | <b>17.0%</b>     | <b>5.7%</b>            |
| <b>Private Equity</b>                               |                       |                          |                            |                             |                  |                        |
| <b>Real Assets/Infrastructure</b>                   | 1,120,499,953         | 9.5%                     | 10.0%                      | 1.3%                        | 15.0%            | -5.5%                  |
| <b>Private Credit</b>                               | 211,213,503           | 1.8%                     | 2.0%                       |                             | 3.0%             | -1.2%                  |
| <b>Real Estate - Value Add</b>                      | 1,204,830,744         | 10.2%                    | 10.0%                      | 0.2%                        | 13.0%            | -2.8%                  |
| <b>Real Estate - Opportunistic &amp; Distressed</b> | 267,681,711           | 2.3%                     | 2.3%                       | -0.0%                       | 3.0%             | -0.7%                  |
| <b>Real Estate - REIT</b>                           | 316,606,073           | 2.7%                     | 2.7%                       | -0.0%                       | 4.0%             | -1.3%                  |
|   |                       |                          | 2.0%                       | 0.0%                        | 0.0%             | 2.0%                   |
| Adelante  | 110,489,658           | 0.9%                     |                            |                             |                  |                        |
| Invesco   | 128,668,356           | 1.1%                     |                            |                             |                  |                        |
| <b>Real Estate Debt</b>                             |                       |                          |                            |                             | 3.0%             |                        |
| <b>High Yield</b>                                   | 167,103,500           | 1.4%                     | 3.0%                       | -1.6%                       | 0.0%             | 1.4%                   |
| <b>Multi-Asset Credit</b>                           |                       | 0.0%                     |                            | 0.0%                        | 4.0%             | -4.0%                  |
| <b>Risk Parity</b>                                  |                       |                          | 0.0%                       | 0.1%                        | 0.0%             | 0.1%                   |
| AQR GRP EL  | 3,809,190             | 0.0%                     |                            |                             |                  |                        |
| PanAgora  | 8,894,820             | 0.1%                     |                            |                             |                  |                        |
| <b>Total Other Growth Assets</b>                    | <b>3,539,797,507</b>  | <b>30.0%</b>             | <b>32.0%</b>               | <b>-2.0%</b>                | <b>45.0%</b>     | <b>-15.0%</b>          |
| <b>Total Growth Assets</b>                          | <b>8,374,494,822</b>  | <b>70.9%</b>             | <b>70.0%</b>               | <b>0.9%</b>                 | <b>73.0%</b>     | <b>-2.1%</b>           |
|   |                       | <b>Range 65-85%</b>      |                            |                             |                  |                        |
| <b>Risk Diversifying</b>                            |                       |                          |                            |                             |                  |                        |
| AFL-CIO   | 222,795,626           | 1.9%                     | 2.5%                       | -0.6%                       | 2.5%             | -0.6%                  |
| BH-DG Systematic                                    | 169,073,308           | 1.4%                     | 2.0%                       |                             | 2.5%             |                        |
| Sit LLCAR   | 386,962,064           | 3.3%                     | 3.5%                       | -0.2%                       | 2.0%             | 1.3%                   |
| <b>Total Risk Diversifying</b>                      | <b>778,830,997</b>    | <b>6.6%</b>              | <b>8.0%</b>                | <b>-1.4%</b>                | <b>10.0%</b>     | <b>-3.4%</b>           |
|   |                       | <b>Range 0% - 10%</b>    |                            |                             |                  |                        |
| <b>Cash and Overlay</b>                             |                       |                          |                            |                             |                  |                        |
| Overlay (Parametric)                                | 132,930,858           | 1.1%                     |                            | 1.1%                        |                  |                        |
| Cash  | 711,772,999           | 6.0%                     | 5.0%                       | 1.0%                        |                  |                        |
| <b>Total Cash and Overlay</b>                       | <b>844,703,857</b>    | <b>7.1%</b>              | <b>5.0%</b>                | <b>2.1%</b>                 | <b>3.0%</b>      | <b>4.1%</b>            |
| <b>Total Fund</b>                                   | <b>11,817,120,149</b> | <b>100%</b>              | <b>100%</b>                |                             | <b>100%</b>      |                        |

\*Current targets and ranges reflect asset allocation targets accepted by the Board on April 24, 2024 (BOR Resolution 2024-3).

\*\*Private Equity long-term target includes Real Assets/Infrastructure (see Asset Allocation Mix 5 adopted December 9, 2020).



Contra Costa County Employees' Retirement Association  
Asset Allocation as of November 30, 2024

|  | Market Value   | Percentage of Total Fund | Current Target* Percentage | Current Target Over/(Under) | Long Term Target | Long Term Over/(Under) |
|--|----------------|--------------------------|----------------------------|-----------------------------|------------------|------------------------|
| Liquidity                                |                |                          |                            |                             |                  |                        |
| Dimensional Fund Advisors                | 404,232,027    | 3.4%                     | 4.0%                       | -0.6%                       |                  |                        |
| Insight                                  | 668,430,491    | 5.6%                     | 6.5%                       | -0.9%                       |                  |                        |
| Sit                                      | 703,352,704    | 5.9%                     | 6.5%                       | -0.6%                       |                  |                        |
| Total Liquidity                          | 1,776,015,222  | 14.8%                    | 17.0%                      | -2.2%                       | 14.0%            | 0.8%                   |
|  |                | Range 10-20%             |                            |                             |                  |                        |
| Growth                                   |                |                          |                            |                             |                  |                        |
| Domestic Equity                          |                |                          |                            |                             |                  |                        |
| Boston Partners                          | 482,440,955    | 4.0%                     | 3.0%                       | 1.0%                        |                  |                        |
| BlackRock Index Fund                     | 1,330,825,539  | 11.1%                    | 10.0%                      | 1.1%                        |                  |                        |
| Emerald Advisers                         | 262,902,796    | 2.2%                     | 1.5%                       | 0.7%                        |                  |                        |
| Ceredex                                  | 232,079,533    | 1.9%                     | 1.5%                       | 0.4%                        |                  |                        |
| Total Domestic Equity                    | 2,308,248,823  | 19.2%                    | 16.0%                      | 3.2%                        | 11.0%            | 8.2%                   |
| Global & International Equity            |                |                          |                            |                             |                  |                        |
| Pyrford (Columbia)                       | 442,852,357    | 3.7%                     | 3.5%                       | 0.2%                        |                  |                        |
| William Blair                            | 430,382,959    | 3.6%                     | 3.5%                       | 0.1%                        |                  |                        |
| First Eagle                              | 657,695,290    | 5.5%                     | 5.5%                       | -0.0%                       |                  |                        |
| Artisan Global Opportunities             | 674,275,264    | 5.6%                     | 5.5%                       | 0.1%                        |                  |                        |
| PIMCO/RAE Emerging Markets               | 247,908,633    | 2.1%                     | 2.0%                       | 0.1%                        |                  |                        |
| TT Emerging Markets                      | 248,626,721    | 2.1%                     | 2.0%                       | 0.1%                        |                  |                        |
| Total Global & International Equity      | 2,701,741,224  | 22.5%                    | 22.0%                      | 0.5%                        | 17.0%            | 5.5%                   |
| Private Equity                           |                |                          |                            |                             |                  |                        |
| Private Equity                           | 1,136,533,466  | 9.5%                     | 10.0%                      | 1.3%                        | 15.0%            | -5.5%                  |
| Real Assets/Infrastructure               | 214,711,670    | 1.8%                     | 2.0%                       |                             | 3.0%             | -1.2%                  |
| Total Equity                             |                | 53.0%                    | 50.0%                      | 3.0%                        |                  |                        |
| Total Equity Range                       |                | 40-60%                   |                            |                             |                  |                        |
| Private Credit                           | 1,172,373,006  | 9.8%                     | 10.0%                      | -0.2%                       | 13.0%            | -3.2%                  |
| High Yield                               | 168,997,583    | 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                  | 273,434,725    | 2.3%                     | 2.3%                       | -0.0%                       | 3.0%             | -0.7%                  |
| Real Estate - Opportunistic & Distressed | 308,110,384    | 2.6%                     | 2.7%                       | -0.1%                       | 4.0%             | -1.4%                  |
| Real Estate - REIT                       |                |                          | 2.0%                       | 0.1%                        | 0.0%             | 2.1%                   |
| Adelante                                 | 116,215,189    | 1.0%                     |                            |                             |                  |                        |
| Invesco                                  | 132,837,286    | 1.1%                     |                            |                             |                  |                        |
| Real Estate Debt                         |                |                          |                            |                             | 3.0%             |                        |
| Total Real Estate                        |                | 6.9%                     | 7.0%                       | -0.1%                       |                  |                        |
| Total Real Estate Range                  |                | 5-10%                    |                            |                             |                  |                        |
| Multi-Asset Credit                       |                | 0.0%                     |                            | 0.0%                        | 4.0%             | -4.0%                  |
| Risk Parity                              |                |                          | 0.0%                       | 0.1%                        | 0.0%             | 0.1%                   |
| AQR GRP EL                               | 3,809,190      | 0.0%                     |                            |                             |                  |                        |
| PanAgora                                 | 8,894,820      | 0.1%                     |                            |                             |                  |                        |
| Total Other Growth Assets                | 3,535,917,319  | 29.5%                    | 32.0%                      | -2.5%                       | 45.0%            | -15.5%                 |
| Total Growth Assets                      | 8,545,907,366  | 71.1%                    | 70.0%                      | 1.2%                        | 73.0%            | -1.9%                  |
|  |                | Range 60-80%             |                            |                             |                  |                        |
| Risk Diversifying                        |                |                          |                            |                             |                  |                        |
| AFL-CIO                                  | 274,831,326    | 2.3%                     | 2.5%                       | -0.2%                       | 2.5%             | -0.2%                  |
| BH-DG Systematic                         | 219,073,308    | 1.8%                     | 2.0%                       |                             | 2.5%             |                        |
| Sit LLCAR                                | 469,085,027    | 3.9%                     | 3.5%                       | 0.4%                        | 2.0%             | 1.9%                   |
| Total Risk Diversifying                  | 962,989,661    | 8.0%                     | 8.0%                       | 0.0%                        | 10.0%            | -2.0%                  |
|  |                | Range 0% - 12%           |                            |                             |                  |                        |
| Cash and Overlay                         |                |                          |                            |                             |                  |                        |
| Overlay (Parametric)                     | 147,800,057    | 1.2%                     |                            | 1.2%                        |                  |                        |
| Cash                                     | 566,225,158    | 4.7%                     | 5.0%                       | -0.3%                       |                  |                        |
| Total Cash and Overlay                   | 714,025,216    | 6.0%                     | 5.0%                       | 1.0%                        | 3.0%             | 3.0%                   |
| Total Cash Range                         |                | 0-6%                     |                            |                             |                  |                        |
| Total Fund                               | 11,998,937,464 | 100%                     | 100%                       |                             | 100%             |                        |

\*Current targets and ranges reflect asset allocation targets accepted by the Board on August 28, 2024 (BOR Resolution 2024-4).



**Contra Costa County Employees' Retirement Association**  
**Asset Allocation as of December 31, 2024**

|  | Market Value          | Percentage of Total Fund | Current Target* Percentage | Current Target Over/(Under) | Long Term Target | Long Term Over/(Under) |
|--|-----------------------|--------------------------|----------------------------|-----------------------------|------------------|------------------------|
| <b>Liquidity</b>                           |                       |                          |                            |                             |                  |                        |
| Dimensional Fund Advisors                  | 394,089,041           | 3.4%                     | 4.0%                       | -0.6%                       |                  |                        |
| Insight                                    | 650,402,897           | 5.5%                     | 6.5%                       | -1.0%                       |                  |                        |
| Sit  | 679,017,047           | 5.8%                     | 6.5%                       | -0.7%                       |                  |                        |
| <b>Total Liquidity</b>                     | <b>1,723,508,986</b>  | <b>14.7%</b>             | <b>17.0%</b>               | <b>-2.3%</b>                | <b>14.0%</b>     | <b>0.7%</b>            |
|  |                       | <b>Range 10-20%</b>      |                            |                             |                  |                        |
| <b>Growth</b>                              |                       |                          |                            |                             |                  |                        |
| Domestic Equity                            |                       |                          |                            |                             |                  |                        |
| Boston Partners                            | 449,226,677           | 3.8%                     | 3.0%                       | 0.8%                        |                  |                        |
| BlackRock Index Fund                       | 1,293,693,550         | 11.0%                    | 10.0%                      | 1.0%                        |                  |                        |
| Emerald Advisers                           | 244,106,491           | 2.1%                     | 1.5%                       | 0.6%                        |                  |                        |
| Ceredex                                    | 213,962,108           | 1.8%                     | 1.5%                       | 0.3%                        |                  |                        |
| Total Domestic Equity                      | 2,200,988,826         | 18.7%                    | 16.0%                      | 2.7%                        | 11.0%            | 7.7%                   |
|  |                       |                          |                            |                             |                  |                        |
| Global & International Equity              |                       |                          |                            |                             |                  |                        |
| Pyrford (Columbia)                         | 431,793,167           | 3.7%                     | 3.5%                       | 0.2%                        |                  |                        |
| William Blair                              | 421,050,329           | 3.6%                     | 3.5%                       | 0.1%                        |                  |                        |
| First Eagle                                | 633,751,670           | 5.4%                     | 5.5%                       | -0.1%                       |                  |                        |
| Artisan Global Opportunities               | 651,114,905           | 5.5%                     | 5.5%                       | 0.0%                        |                  |                        |
| PIMCO/RAE Emerging Markets                 | 244,065,554           | 2.1%                     | 2.0%                       | 0.1%                        |                  |                        |
| TT Emerging Markets                        | 255,691,275           | 2.2%                     | 2.0%                       | 0.2%                        |                  |                        |
| Total Global & International Equity        | 2,637,466,900         | 22.5%                    | 22.0%                      | 0.5%                        | 17.0%            | 5.5%                   |
|  |                       |                          |                            |                             |                  |                        |
| Private Equity                             | 1,136,513,199         | 9.7%                     | 10.0%                      | 1.5%                        | 15.0%            | -5.3%                  |
| Real Assets/Infrastructure                 | 218,663,120           | 1.9%                     | 2.0%                       |                             | 3.0%             | -1.1%                  |
| <b>Total Equity</b>                        |                       | <b>52.7%</b>             | <b>50.0%</b>               | <b>2.7%</b>                 |                  |                        |
| <b>Total Equity Range</b>                  |                       | <b>40-60%</b>            |                            |                             |                  |                        |
| Private Credit                             | 1,161,201,460         | 9.9%                     | 10.0%                      | -0.1%                       | 13.0%            | -3.1%                  |
| High Yield                                 | 168,216,052           | 1.4%                     | 3.0%                       | -1.6%                       | 0.0%             | 1.4%                   |
| <b>Total Credit</b>                        |                       | <b>11.2%</b>             | <b>13.0%</b>               | <b>-1.8%</b>                |                  |                        |
| <b>Total Credit Range</b>                  |                       | <b>8-16%</b>             |                            |                             |                  |                        |
| Real Estate - Value Add                    | 287,039,159           | 2.4%                     | 2.3%                       | 0.1%                        | 3.0%             | -0.6%                  |
| Real Estate - Opportunistic & Distressed   | 311,573,669           | 2.7%                     | 2.7%                       | -0.0%                       | 4.0%             | -1.3%                  |
| Real Estate - REIT                         |                       |                          | 2.0%                       | -0.0%                       | 0.0%             | 2.0%                   |
| Adelante                                   | 107,717,700           | 0.9%                     |                            |                             |                  |                        |
| Invesco                                    | 123,079,023           | 1.0%                     |                            |                             |                  |                        |
| Real Estate Debt                           |                       |                          |                            |                             | 3.0%             |                        |
| <b>Total Real Estate</b>                   |                       | <b>7.1%</b>              | <b>7.0%</b>                | <b>0.1%</b>                 |                  |                        |
| <b>Total Real Estate Range</b>             |                       | <b>5-10%</b>             |                            |                             |                  |                        |
| Multi-Asset Credit                         |                       | 0.0%                     |                            | 0.0%                        | 4.0%             | -4.0%                  |
| Risk Parity                                |                       |                          | 0.0%                       | 0.1%                        | 0.0%             | 0.1%                   |
| PanAgora                                   | 8,894,820             | 0.1%                     |                            |                             |                  |                        |
| Total Other Growth Assets (P.E. thru R.P.) | 3,522,898,204         | 30.0%                    | 32.0%                      | -2.0%                       | 45.0%            | -15.0%                 |
|  |                       |                          |                            |                             |                  |                        |
| <b>Total Growth Assets</b>                 | <b>8,361,353,930</b>  | <b>71.0%</b>             | <b>70.0%</b>               | <b>1.2%</b>                 | <b>73.0%</b>     | <b>-2.0%</b>           |
|  |                       | <b>Range 60-80%</b>      |                            |                             |                  |                        |
| <b>Risk Diversifying</b>                   |                       |                          |                            |                             |                  |                        |
| AFL-CIO                                    | 270,229,626           | 2.3%                     | 2.5%                       | -0.2%                       | 2.5%             | -0.2%                  |
| BH-DG Systematic                           | 225,520,038           | 1.9%                     | 2.0%                       |                             | 2.5%             |                        |
| Sit LLCAR                                  | 463,062,627           | 3.9%                     | 3.5%                       | 0.4%                        | 2.0%             | 1.9%                   |
| <b>Total Risk Diversifying</b>             | <b>958,812,291</b>    | <b>8.2%</b>              | <b>8.0%</b>                | <b>0.2%</b>                 | <b>10.0%</b>     | <b>-1.8%</b>           |
|  |                       | <b>Range 0% - 12%</b>    |                            |                             |                  |                        |
| <b>Cash and Overlay</b>                    |                       |                          |                            |                             |                  |                        |
| Overlay (Parametric)                       | 131,035,932           | 1.1%                     |                            | 1.1%                        |                  |                        |
| Cash                                       | 571,532,826           | 4.9%                     | 5.0%                       | -0.1%                       |                  |                        |
| <b>Total Cash and Overlay</b>              | <b>702,568,758</b>    | <b>6.0%</b>              | <b>5.0%</b>                | <b>1.0%</b>                 | <b>3.0%</b>      | <b>3.0%</b>            |
| <b>Total Cash Range</b>                    |                       | <b>0-6%</b>              |                            |                             |                  |                        |
| <b>Total Fund</b>                          | <b>11,746,243,965</b> | <b>100%</b>              | <b>100%</b>                |                             | <b>100%</b>      |                        |

\*Current targets and ranges reflect asset allocation targets accepted by the Board on August 28, 2024 (BOR Resolution 2024-4).



Meeting Date  
**02/26/2025**  
Agenda Item  
**#4a.**



# PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS



PERIOD ENDING: DECEMBER 31, 2024

Investment Performance Review for

**Contra Costa County Employees' Retirement Association**



# Table of Contents



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Investment Landscape **TAB I**

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Investment Performance  
Review **TAB II**



A large, semi-transparent geometric pattern of triangles and lines in shades of blue and gold covers the left side of the slide. A small white triangle is positioned to the left of the main title text.

# **PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS**

**1<sup>ST</sup> QUARTER 2025  
Investment Landscape**



# Verus business update

## Since our last Investment Landscape webinar:

- Verus hired Aimee Hauff as a Senior Performance Analyst, Mallory Wallace as Senior Operations Analyst, Chloe Vo as a Performance Analyst, and Mouhamed Diop as an Accounting Specialist in our Seattle office.
- Palmer Pederson was promoted to Consulting Associate on the Not-For-Profit team.
- Ian Toner, CFA, had an in-depth interview with The Journal of Portfolio Management: “CIO Perspectives”.
- 2025 Verus Capital Market Assumptions were released.
- Recent research, found at [verusinvestments.com/research](https://verusinvestments.com/research):
  - ***Top 10 ideas for 2025: Back to the 90s?***
  - ***Examining the Case for Private Credit***
  - ***Selecting Exceptional Private Markets Managers: Strategies for Success in a Complex Arena***
  - ***Using Fixed Income to Avoid Downside Risk***



# Table of contents



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Economic environment 9

---

Fixed income rates & credit 22

---

Equity 27

---

Other assets 37

---

Appendix 39



# Recent Verus research

Visit: [verusinvestments.com/research](https://verusinvestments.com/research)

## Thought leadership

### TOP 10 IDEAS FOR 2025: BACK TO THE 90S?

Every year Verus identifies a series of topics that we believe will be important for investors to consider during the coming year. Some of those tend to be economics or markets focused, while others tend to focus on geopolitics or other broader issues.

### SELECTING EXCEPTIONAL PRIVATE MARKETS MANAGERS: STRATEGIES FOR SUCCESS IN A COMPLEX ARENA

We examine the curated due diligence that Verus uses to select exceptional private markets managers, how our private market team identifies top-tier private markets managers, and the expertise required to do so.

### EXAMINING THE CASE FOR PRIVATE CREDIT

We discuss the benefits of including private credit within an investment program. We also highlight the drawbacks and risks facing the asset class as we look to assist investors in answering the question of where to look for credit exposure.

### USING FIXED INCOME TO AVOID DOWNSIDE RISK

Downside risk is the undesirable risk of market volatility. We explore how negative correlation of traditional fixed income to equities may mitigate equity drawdown risk and how these characteristics relate to the more active role that fixed income may play in broader portfolio risk management.



# 4<sup>th</sup> quarter summary

## THE ECONOMY

- The election of Donald Trump and news of a unified government appears to have positively impacted household and business sentiment. The news has generally been perceived as implying easier business conditions, firmer economic growth, fewer interest rate cuts, and mildly higher inflation.
- U.S. inflation drifted upward during Q4, from 2.4% YoY in September to 2.9% in December. Core inflation (ex-food & energy) was fairly stable at 3.2%. Investors now expect the Fed to cut rates once or twice over the next year. Further increases in the rate of inflation could possibly push the Federal Reserve towards a rate hike—an outcome that would likely spook markets.

## EQUITY

- The U.S. (S&P 500 +2.4%) provided a strong quarter while non-U.S. markets lagged. Emerging markets (MSCI EM -8.0%) and international developed (MSCI EAFE -8.1%) both delivered sharp losses, though these losses were caused by currency movements rather than equity weakness. For investors with hedged currency exposure, the MSCI EAFE index produced a +0.1% return.
- Small cap and value both continued to underperform. Small cap trailed large cap by -2.4% in Q4, while value trailed growth by -9.1%. This capped off a year of poor returns for both style factors, underperforming by -13% and -19%, respectively.

## FIXED INCOME

- The 10-year U.S. Treasury yield jumped from 3.79% to 4.55% during the quarter, amid growing evidence that the economy may remain hotter than previously believed, and expectations around pro-growth policies of the Trump Administration, as well as the possibility that a tariff spat with trade partners could push inflation upwards.
- Default activity remained low, as the economy was strong and chances of recession have fallen. However, 'distressed exchanges', a renegotiation of debt that does not count as a technical default, have been rising substantially. During the quarter, total distressed credit volume was roughly \$19.4 billion, which marked the second largest quarterly total on record since Q4 2008.

## ASSET ALLOCATION ISSUES

- U.S. election results triggered large market movements in early November. Equities rallied along with most risk assets, while treasury yields jumped materially. Although investors have interpreted this news as generally positive for the future, volatility along the way is also likely.
- Implied bond market volatility continued to moderate, following record highs that were achieved during the recent U.S. inflation scare. However, volatility levels remain materially above the longer-term average. We suspect that volatility will be elevated on an ongoing basis as investors are fixated on Federal Reserve actions and communications.

Evidence of a strong U.S. economy, and news of an incoming Trump Administration, have led to shifting expectations around growth, interest rates, and inflation



# What drove the market in Q4?

## "Donald Trump wins 2024 U.S. election in historic comeback"

### Swing State Margin of Victory

| Arizona | Georgia | Michigan | Nevada | NC    | Pennsylvania | Wisconsin |
|---------|---------|----------|--------|-------|--------------|-----------|
| +5.5%   | +2.2%   | +1.4%    | +3.1%  | +3.2% | +1.7%        | +0.9%     |

Article Source: BBC, November 7<sup>th</sup>, 2024

## "Fed cuts by a quarter point, indicates fewer reductions ahead"

### Futures Implied Fed Funds Rate

| Jan 25 | March 25 | May 25 | June 25 | July 25 | Sep 25 |
|--------|----------|--------|---------|---------|--------|
| 4.32%  | 4.26%    | 4.19%  | 4.09%   | 4.05%   | 3.98%  |

Article Source: CNBC, December 18<sup>th</sup>, 2024

## "U.S. inflation gauge ticks higher with consumer prices on the rise"

### Personal Consumption Expenditures Price Index, Year-over-Year

| June 24 | July 24 | Aug 24 | Sep 24 | Oct 24 | Nov 24 |
|---------|---------|--------|--------|--------|--------|
| 2.4%    | 2.5%    | 2.3%   | 2.1%   | 2.3%   | 2.4%   |

Article Source: PBS, November 27<sup>th</sup>, 2024

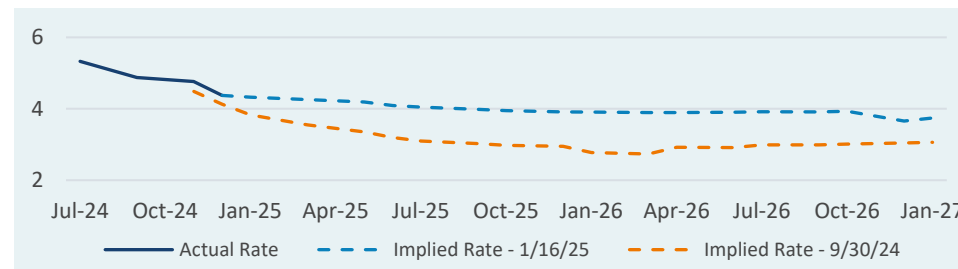
## "Dollar hits one-year high as Trump clinches election victory"

### ICE U.S. Dollar Index

| July 24 | Aug 24 | Sep 24 | Oct 24 | Nov 24 | Dec 24 |
|---------|--------|--------|--------|--------|--------|
| 104.1   | 101.7  | 100.8  | 104.0  | 105.7  | 108.5  |

Article Source: Bloomberg, November 6<sup>th</sup>, 2024

## U.S. MARKET IMPLIED FUTURE INTEREST RATES



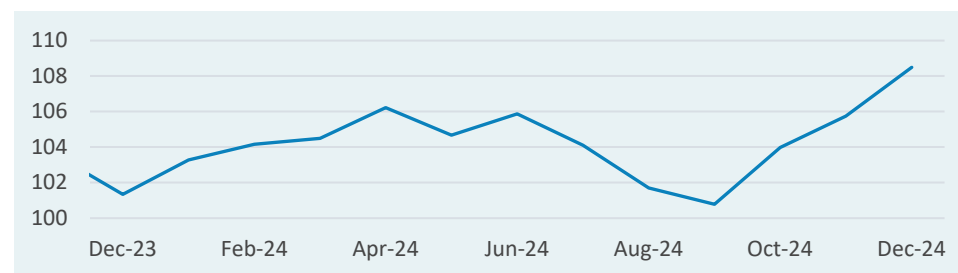
Source: CME Group, as of 1/16/25

## PCE INFLATION, YEAR-OVER-YEAR



Source: BEA, as of 11/30/24

## ICE U.S. DOLLAR INDEX



Source: ICE, as of 12/31/24



# Economic environment



# U.S. economics summary

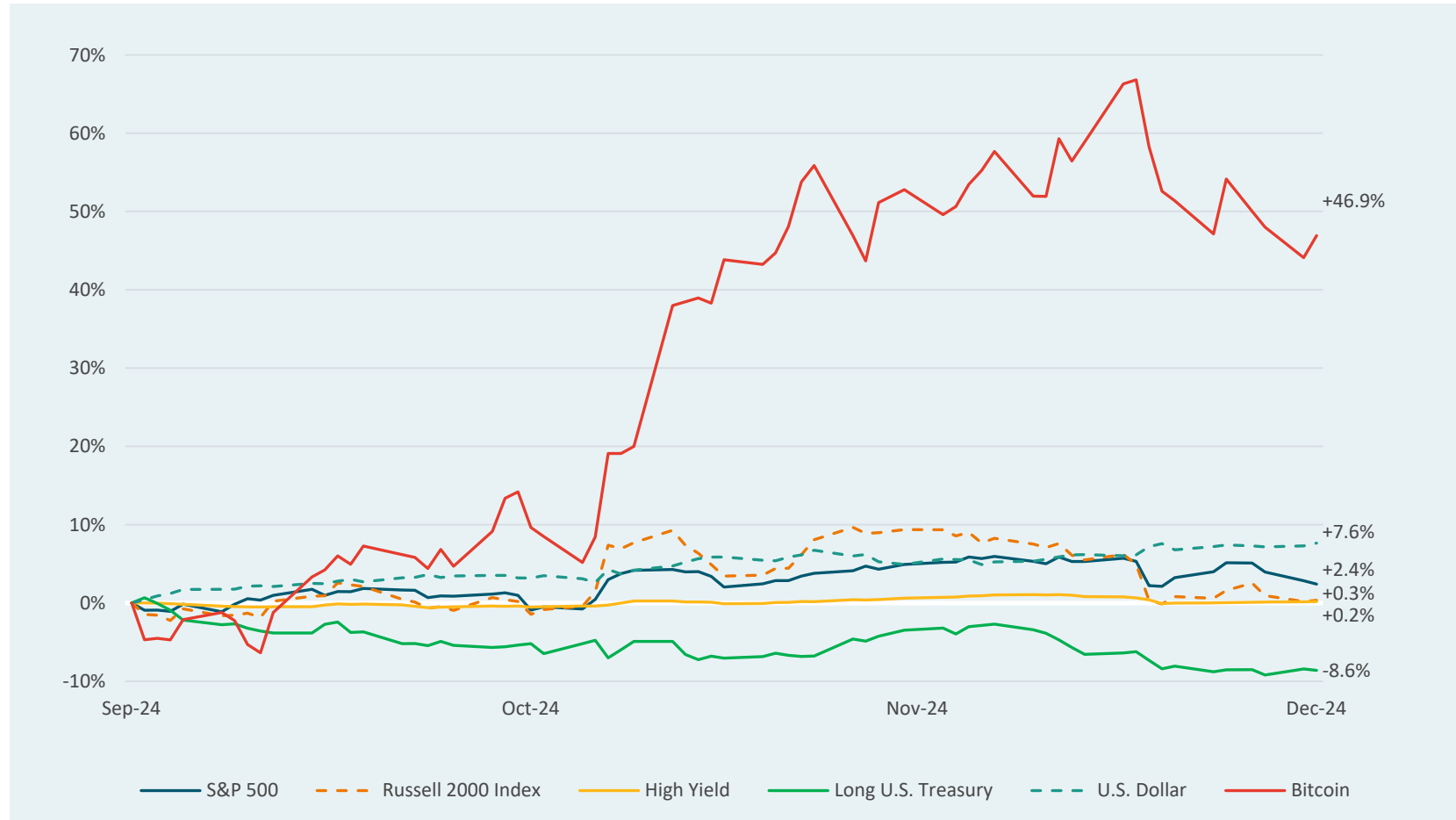
- In early November, U.S. election results were announced, confirming the election of Donald Trump and a unified government as Republicans took the House and Senate. Household surveys and market movements suggest that the coming years may be characterized by easier business conditions, firmer economic growth, fewer interest rate cuts, and perhaps mildly higher inflation.
- Real GDP growth slowed during Q4, from 3.1% to 2.3% quarter-over-quarter annualized (2.5% year-over-year), but remained fairly robust. Economic growth continues to be supported largely by consumer purchases, with increases in government spending also providing notable support. Investment fell and was the largest drag on the economy.
- The Federal Reserve cut interest rates once in November and again in December—each time by a quarter point. This brought the Fed’s target rate from 4.75-5.00% down to 4.25-4.50%.
- U.S. inflation drifted upward during Q4, from 2.4% YoY in September to 2.9% in December. Core inflation (ex-food & energy) was fairly stable at 3.2%. Investors now expect the Fed to cut rates once or twice over the next full year. Further increases in the rate of inflation could potentially push the Federal Reserve towards a rate hike—an outcome that would likely spook markets.
- The labor market was broadly stable during the quarter. Unemployment remained at 4.1%, while the labor participation rate moved slightly lower. December nonfarm payrolls exceeded expectations, coming in at 256,000, which was 91,000 higher than forecast. Moderate, but stable, labor conditions further eased fears that the rise in unemployment of late-2023 might have indicated a trend towards recession.
- Consumer sentiment has improved materially since the results of the U.S. election became known. In November, small business optimism showed the largest monthly jump since 1980. Significant improvements in sentiment should bode well for household and business spending in the near-term.

|   | Most Recent            | 12 Months Prior        |
|---|------------------------|------------------------|
| Real GDP (YoY)                          | 2.5%<br>12/31/24       | 3.2%<br>12/31/23       |
| Inflation<br>(CPI YoY, Core)            | 3.2%<br>12/31/24       | 3.3%<br>12/31/23       |
| Expected Inflation<br>(5yr-5yr forward) | 2.3%<br>12/31/24       | 2.5%<br>12/31/23       |
| Fed Funds Target Range                  | 4.25–4.50%<br>12/31/24 | 5.25–5.50%<br>12/31/23 |
| 10-Year Rate                            | 4.55%<br>12/31/24      | 3.88%<br>12/31/23      |
| U-3<br>Unemployment                     | 4.1%<br>12/31/24       | 3.7%<br>12/31/23       |
| U-6<br>Unemployment                     | 7.5%<br>12/31/24       | 7.1%<br>12/31/23       |



# Examining notable movements of Q4

*Conditions shifted in Q4, fueled by economic surprises & U.S. election results*



Source: S&P, FTSE Russell, Bloomberg, ICE, as of 12/31/24



# Inflation

U.S. inflation (CPI) drifted upward during the quarter, from 2.4% year-over-year in September to 2.9% in December. Meanwhile, core inflation (excluding food & energy) was fairly stable year-over-year, at 3.2% in December. Investors now expect the Fed to cut rates perhaps once or twice over the next year, but the outcome, as always, will depend on the strength of the labor market and the trend of inflation. Further inflation pressures could potentially push the Federal Reserve towards a rate hike—an outcome that would likely spook markets. This is certainly not our expectation, but it is a risk worth watching.

In prior quarters we discussed topics such as deflationary trends in certain goods and services prices, as well as the

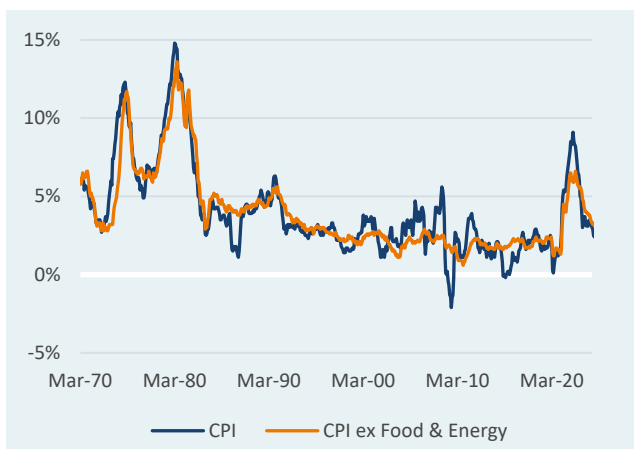
gradual decline of inflation (albeit slow) towards the Fed's 2% target. Based on recent gains in consumer sentiment and very large gains in business sentiment, as well as positivity around the business and economic effects of a second Trump presidency, we are not as optimistic that inflation will move materially lower from this point. Instead, inflation appears to have stabilized around 3%, with more risks to the upside than to the downside.

Investors will likely remain focused intently on monthly economic data and how the Federal Reserve reacts to data surprises. Also, the *good news is bad news* market dynamics may continue, as strong economic data reduces the chance of rate cuts and therefore may be interpreted negatively.

Certain goods & services prices have been softening, but other areas have been rising at a concerning pace

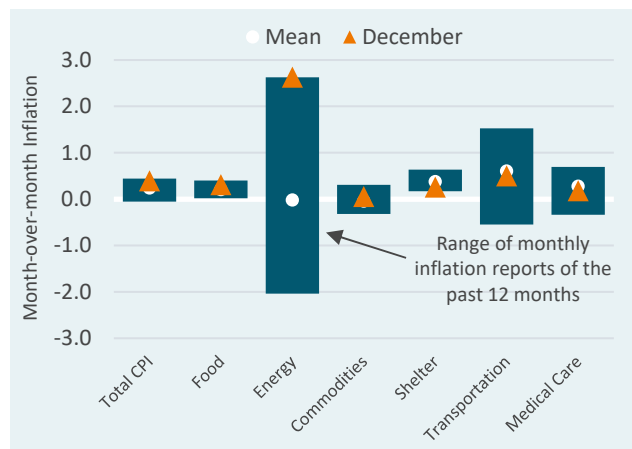
Energy prices fueled a hot December figure

U.S. CPI (YOY)



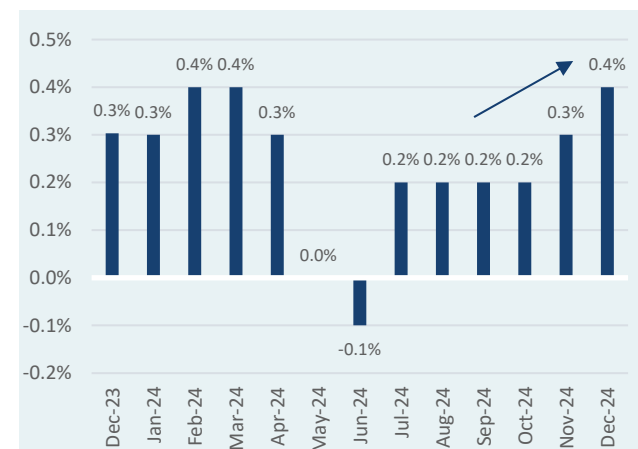
Source: BLS, as of 12/31/24

DECEMBER INFLATION REPORT



Source: BLS, Verus, of 12/31/24. Commodities exclude food and energy

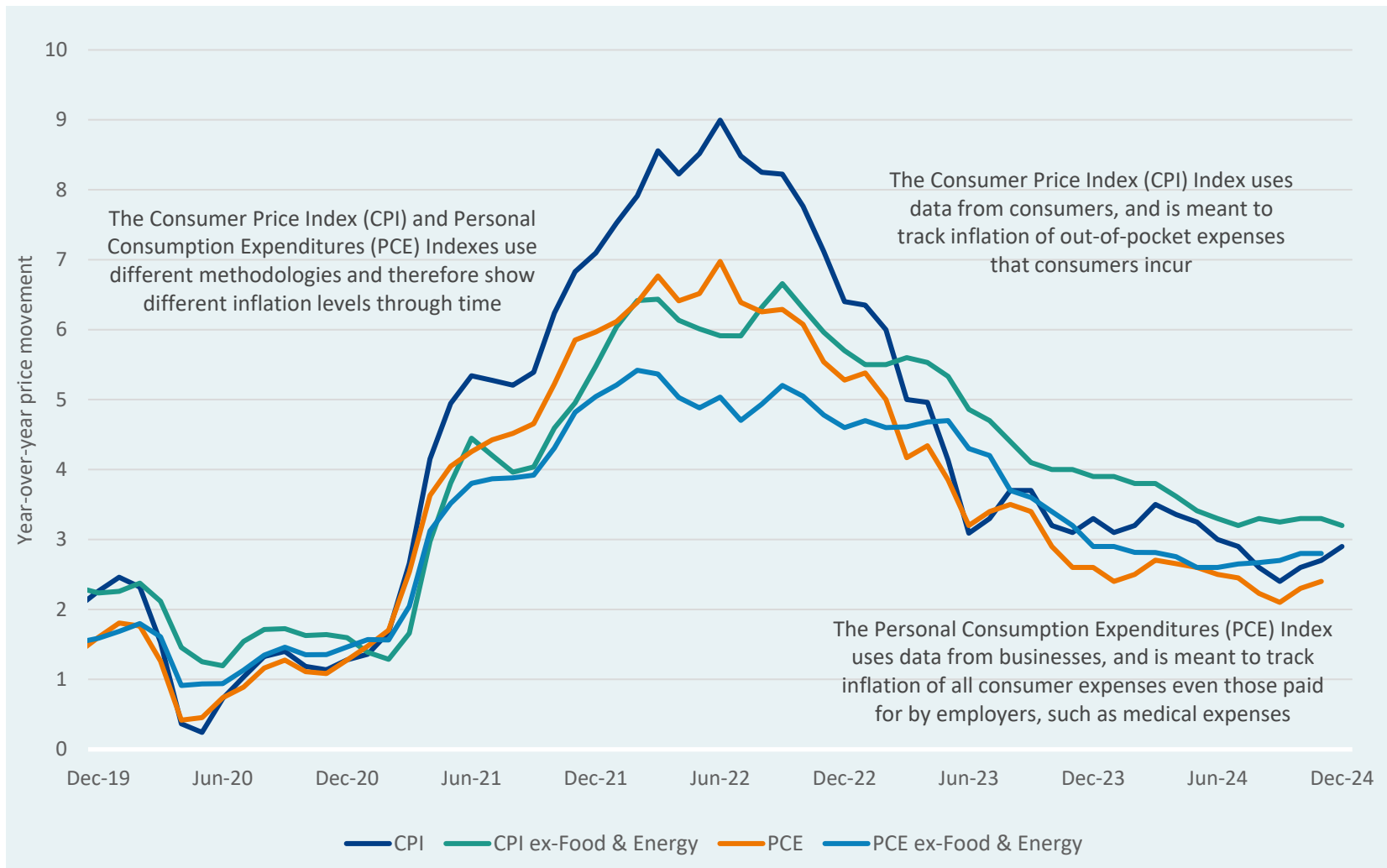
MONTHLY PRICE MOVEMENT (CPI)



Source: BLS, as of 12/31/24



# Inflation stabilizing above Fed's target



The rate of inflation appears to be stabilizing *above* the Fed's target of 2%

A surprisingly strong economy and ongoing price pressures have led investors to expect fewer interest rate cuts in 2025

Source: FRED, Verus, as of 12/31/24 – or most recent release



# GDP growth

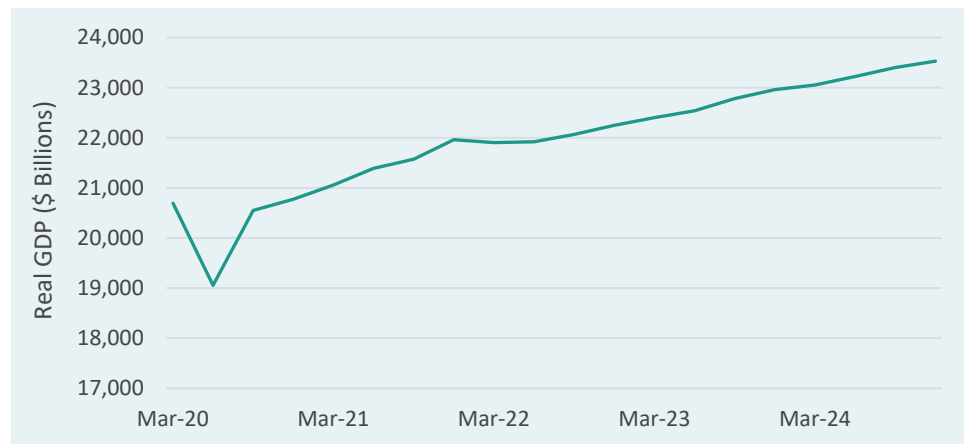
Real GDP growth slowed during Q4, from 3.1% to 2.3% quarter-over-quarter annualized (2.5% year-over-year), but remained fairly robust. Economic growth continues to be supported largely by consumer spending, with increases in government expenditures also providing notable support. Investment fell, and was the largest drag on the economy, followed by fewer imports. Spending gains were broad across goods and services—increases in healthcare spending acted as the largest change. Goods spending was boosted most notably by recreational goods and vehicles. The acceleration of government expenditures was fueled by employee compensation increases.

Economists and investors expect U.S. economic growth to slow

during 2025, reflecting more modest consumer spending as households face higher costs and lower savings rates. The U.S. economy is likely headed towards a more moderate growth phase after many quarters of surprisingly hot growth and spending. Unlike past periods of economic weakening, many trends today could reasonably be summarized as a return to normalcy. For example, following the pandemic, the domestic labor market was experiencing a historic mismatch between the number of jobs available and the number of workers available. Resolving that mismatch required a material weakening of the labor market from extreme tightness to relatively strong, but not a move towards something that suggests recession.

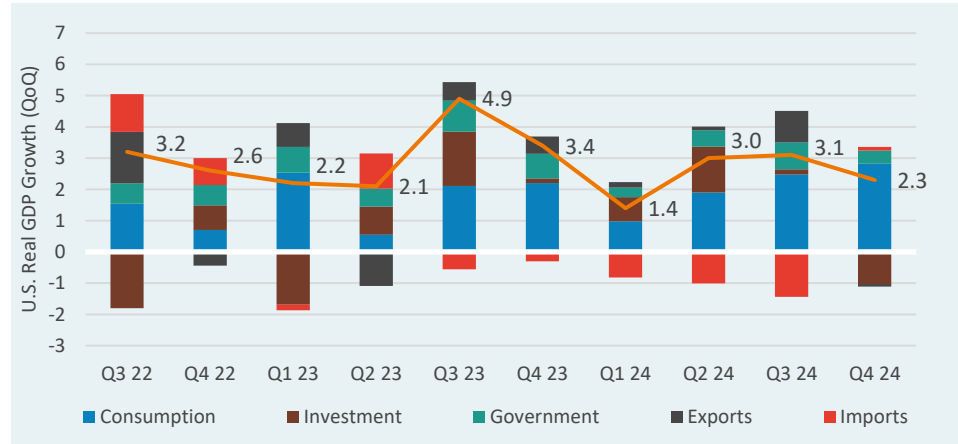
U.S. real GDP growth slowed during Q4, reflecting strong consumer spending but lower levels of private investment

## U.S. REAL GROSS DOMESTIC PRODUCT



Source: FRED, as of 12/31/24

## U.S. REAL GDP COMPONENTS (QOQ)



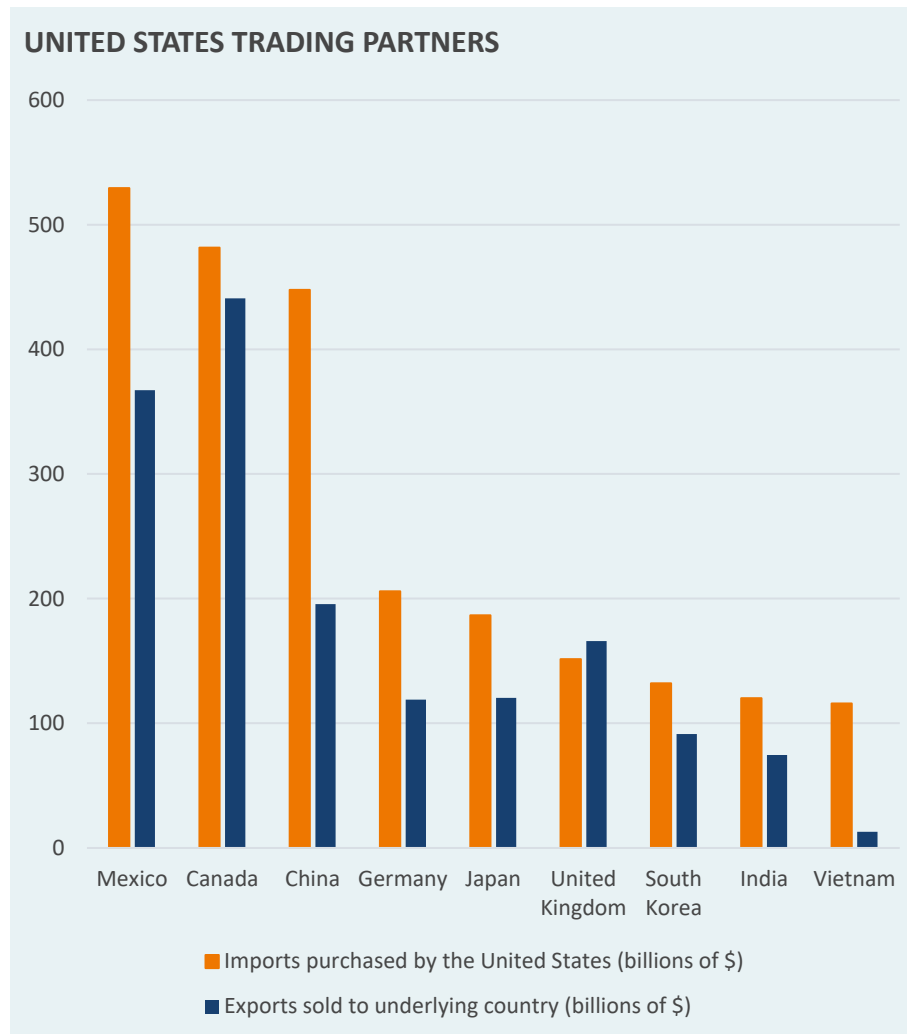
Source: FRED, as of 12/31/24



# Trade negotiations: possible areas of focus

Since the re-election of Donald Trump, the topic of U.S. trade has been thrust back into the spotlight. While the President has publicly threatened large, across-the-board tariffs, lessons learned from the first Trump Administration suggest this may be a negotiation tactic. It is more likely that tariffs will be used tactically, without broad and large increases as some investors fear.

Here we provide an overview of the United States' largest trading partners, through two lenses: the total amount of goods and services that the U.S. purchases from each of our largest trading partners, and the total amount of goods and services that these trading partners purchase from the United States. The countries that sell a significant amount of goods and services to the U.S., but do not purchase nearly as much, may become targets for trade negotiation in the near future.



Source: Bureau of Economic Analysis, as of 2023

Countries which sell a significant amount of goods and services to the U.S., but do not purchase nearly as much, may become targets for trade negotiation



# Labor market

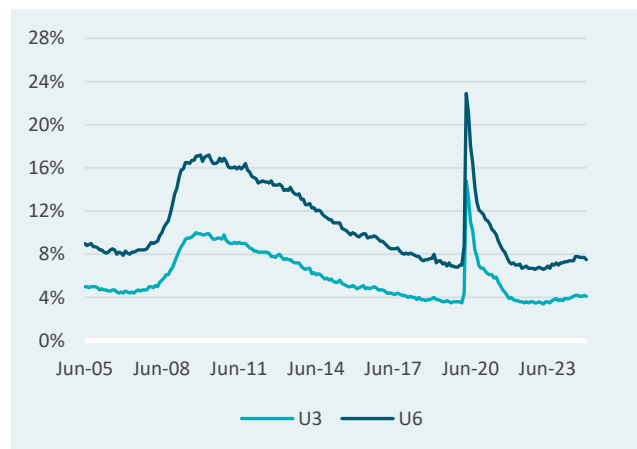
The labor market was broadly stable during the quarter. Unemployment remained at 4.1%, while the labor participation rate moved slightly from 62.7% to 62.5%. Labor data surprised to the upside in December with nonfarm payrolls exceeding expectations, coming in at 256,000, which was 91,000 higher than expectations for 165,000. Layoffs have been moving higher and are now back to pre-pandemic levels. Moderate, but stable, labor conditions have further eased fears that the rise in unemployment of late-2023 might have indicated a trend towards recession.

In recent editions of this document, we have explained that immigration, and specifically the difficulties of quantifying

unlawful immigration, have made certain labor statistics very difficult to interpret. Determining between a weak or strong job market, or whether the market is trending towards slack or tightness, requires data that is accurate and granular in nature. Relatively small changes in the size, or changes in trend, of the labor market can have real impacts on wage levels, the strength of the economy, and spending, for example. With the new administration coming into office, and many changes to border enforcement and overall immigration policy likely forthcoming, it will be important to closely monitor how these changes incrementally impact the size, trend, and nature of the U.S. job market.

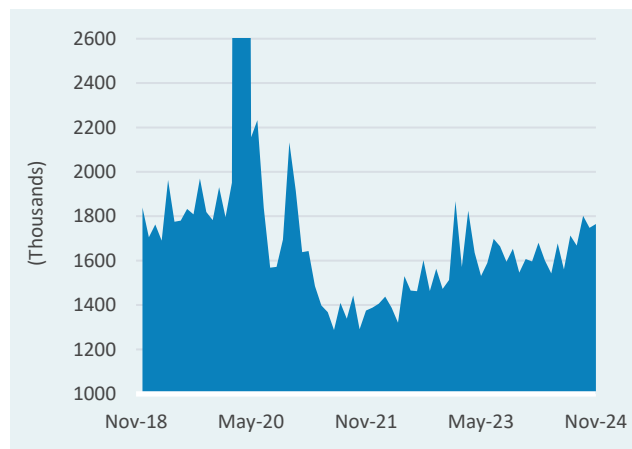
The job market appears to have shifted from *extremely tight* to *fairly balanced*, and is now showing greater stability

## U.S. UNEMPLOYMENT



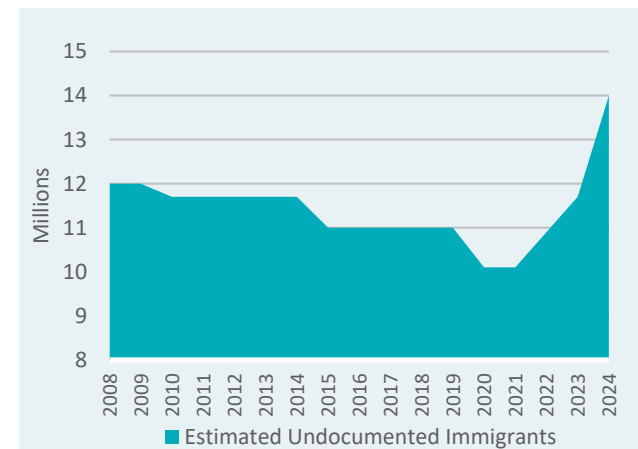
Source: FRED, as of 12/31/24

## LAYOFFS



Source: FRED, as of 11/30/24

## U.S. UNDOCUMENTED IMMIGRANTS



Source: Center for Immigration Studies



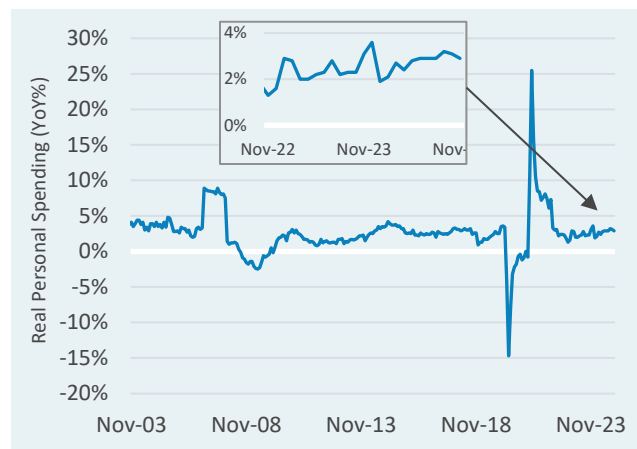
# The consumer

Inflation adjusted personal spending growth was 2.9% year-over-year in November, remaining in a robust range. It is expected that consumer spending will slow in 2025, leading to a more moderate pace of overall economic growth.

The average cost of household debt payments has been rising in recent years, moving towards pre-pandemic levels. A helpful way to gauge the average household *debt burden* is to examine average monthly debt payments as a percentage of average monthly disposable income. This metric shows an important aspect of rising interest rate environments—higher interest rates gradually feed through to household costs over

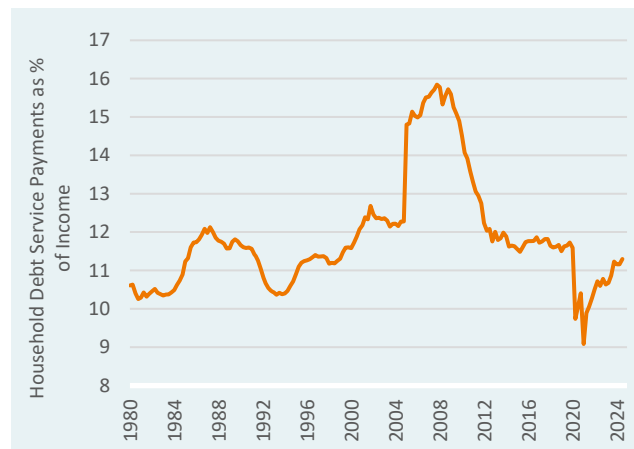
time, rather than all at once. This is due to fixed rate borrowing—most Americans who own a home or a car, for example, are not as impacted by higher interest rates for those items until they purchase a new home or purchase a new car and are then exposed to higher rates. As time goes by, more households must eventually make large purchases and therefore must borrow at higher rates. As this occurs, the higher costs of debt continues to eat into budgets. This hurts economic growth, as households must either reduce overall spending, or save less money—as observed recently. We expect that, although the economy is strong, this effect will act as an incremental drag on spending for years to come.

**REAL PERSONAL SPENDING**



Source: FRED, as of 11/30/24

**HOUSEHOLD DEBT PAYMENTS AS % OF DISPOSABLE INCOME**



Source: FRED, as of 12/31/24

**PERSONAL SAVINGS RATE**



Source: FRED, as of 11/30/24



# Sentiment

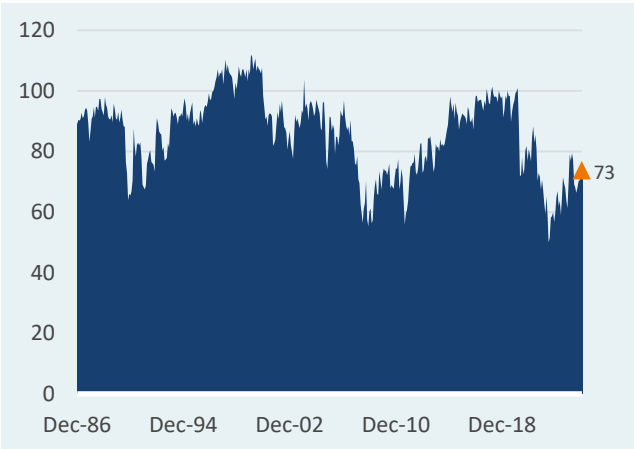
Consumer sentiment has improved materially since the results of the U.S. election became known. In November with small business optimism showing the largest monthly jump since 1980. Significant improvements in sentiment should bode well for household and business spending in the near-term.

According to the University of Michigan Consumer Sentiment survey, households expressed more optimism around the economy in December. Year-ahead inflation expectations changed, rising substantially to 3.3%, while long-run inflation expectations were more stable. We suspect ongoing news coverage and fear around tariffs has impacted expectations.

Throughout 2022, small business optimism had declined as companies grappled with high materials prices and labor shortages. Optimism remained very poor in the following years, until November showed the largest single-month increase in sentiment since 1980. As explained by NFIB Chief Economist Bill Dunkelberg, “Main Street also became more certain about future business conditions following the election, breaking a nearly three-year streak of record high uncertainty. Owners are particularly hopeful for tax and regulation policies that favor strong economic growth as well as relief from inflationary pressures.”

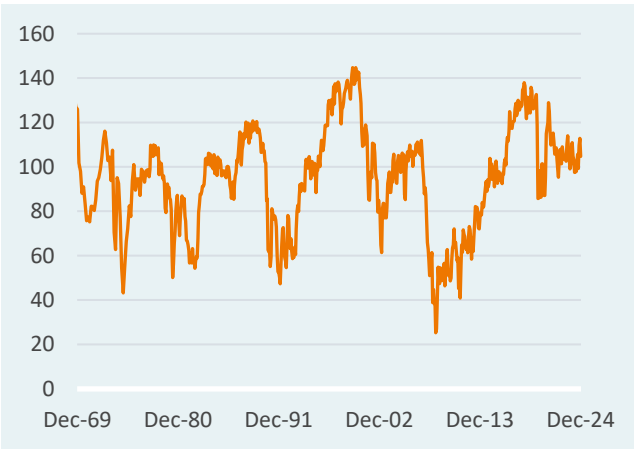
Consumer sentiment improved in Q4, while small business sentiment showed the largest monthly gain since 1980

CONSUMER SENTIMENT (UNIV. OF MICHIGAN)



Source: University of Michigan, as of 12/31/24

CONSUMER CONFIDENCE (CONFERENCE BOARD)



Source: Conference Board, as of 12/31/24

NFIB SMALL BUSINESS SENTIMENT



Source: NFIB, as of 12/31/24



# Housing

The average 30-year mortgage rate jumped materially during the quarter, from 6.1% to 6.9%, alongside broader rises across the yield curve. Meanwhile, home prices have increased 3.4% year-over-year as of October, according to CoreLogic. These conditions have led to sustained extreme difficulties in affordability for many Americans. However, some aspects of the market have moved in a more favorable direction, such as total housing inventory, at 953,000 in November, closer to the level of 1,143,000 in November 2019 (pre-pandemic). Inventory reached a low of 346,000 in February 2022. The *average days on the market* of homes for sale has also risen to 62 days in November, which compares to 67 days in November 2019—suggesting that more power resides with homebuyers. This metric reached a low of 30 in April 2022. Overall, it appears that the market will

likely remain incredibly expensive, but perhaps with a more normal supply/demand balance. If inventory continues increasing and homes sit longer on the market, this may pressure sellers to reduce prices in the future in order to incentivize buyers who have more inventory to choose from.

While home purchase affordability remains dire, the average cost of rent continues to fall nationwide. According to Redfin, in November rent costs were down -0.7% year-over-year and rents are now back to March 2022 levels. Substantial increases in multifamily supply have reportedly contributed to downward rent pressure, with the median asking rent price falling to \$1.79 per square foot for the first time since November 2021.

**30-YEAR MORTGAGE RATE (%)**



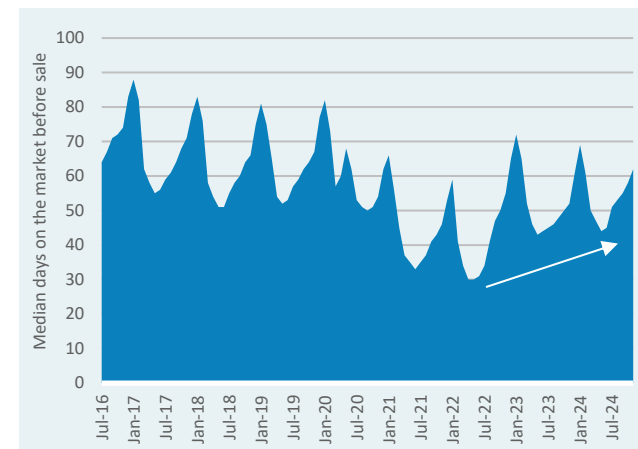
Source: Freddie Mac, as of 12/31/24

**EXISTING HOME SALES**



Source: National Association of Realtors, as of 11/30/24

**AVERAGE DAYS ON THE MARKET**



Source: FRED, as of 11/30/24



# International economics summary

— The Eurozone grew only 0.9% YoY Q3. The region is also expected to show slow growth in 2025, with a +1.2% consensus estimate for the Euro Area. High energy prices have negatively impacted manufacturing and other business activities, while competition from China has also had dire impacts. Once the industrial heart of Europe, Germany's manufacturing sector faces an uncertain future.

— Inflation has moderated across most global economies, with the European Central Bank (ECB) rounding out the year with its fourth interest rate cut. The ECB has shown a shift in concern away from inflation and towards growth—removing official language regarding keeping rates “sufficiently restrictive.” Economists now expect 4-5 rate cuts during 2025, to a rate level that is believed to be neutral to growth or slightly stimulative.

— After slipping into contractionary territory last quarter, the Japanese economy rebounded in Q3, delivering

growth of +0.5%. This coincided with a slight uptick in inflation, now at 3%. Growth has been assisted by a weak Yen, which makes exports cheaper for other countries to purchase. Domestic consumer demand has also provided a tailwind for growth and led to expectations of a more normal interest rate environment, with the Bank of Japan now expected to increase interest rates to 0.50% by March.

— China was reportedly able to achieve the official GDP growth target in 2024, claiming growth of 5.4% year-over-year, though the economy still faces deep structural issues. China is heavily reliant on exports, which may be interrupted by U.S. tariffs in the case of a trade spat. Home prices continue to fall alongside oversupply and weaker economic conditions. Deflation fears are weighing on consumer spending. Alongside these near-term issues, a declining population poses a multitude of problems to the overall economy, spending, and the housing market.

| Area          | GDP<br>(Real, YoY) | Inflation<br>(CPI,<br>YoY) | Unemployment     |
|---------------|--------------------|----------------------------|------------------|
| United States | 2.7%<br>9/30/24    | 2.9%<br>12/31/24           | 4.1%<br>12/31/24 |
| Eurozone      | 0.9%<br>9/30/24    | 2.4%<br>12/31/24           | 6.3%<br>11/30/24 |
| Japan         | 0.5%<br>9/30/24    | 3.0%<br>12/31/24           | 2.4%<br>11/30/24 |
| BRICS Nations | 4.5%<br>9/30/24    | 2.1%<br>12/31/24           | 5.2%<br>12/31/24 |
| Brazil        | 4.0%<br>9/30/24    | 4.8%<br>12/31/24           | 6.1%<br>11/30/24 |
| Russia        | 3.1%<br>9/30/24    | 9.5%<br>12/31/24           | 2.3%<br>11/30/24 |
| India         | 5.4%<br>9/30/24    | 5.2%<br>12/31/24           | 7.1%<br>12/31/24 |
| China         | 5.4%<br>12/31/24   | 0.1%<br>12/31/24           | 5.1%<br>12/31/24 |

NOTE: India lacks reliable government unemployment data. Unemployment rate shown above is estimated from the Centre for Monitoring Indian Economy. The Chinese unemployment rate represents the monthly surveyed urban unemployment rate in China.



# International economics

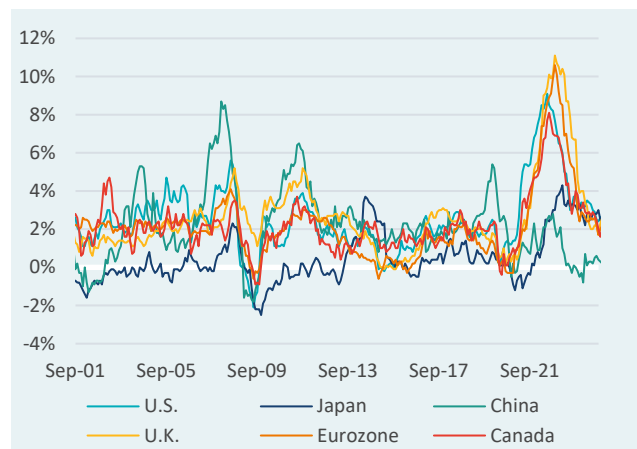
The Eurozone grew only 0.9% YoY Q3. The region is expected to show slow growth in 2025 of +1.2%. The ECB has communicated 4-5 rate cuts during the year, as low growth remains a concern, and the 2% inflation target has nearly been achieved. Although growth rates have ticked up slightly, strong headwinds remain. Many countries face high energy costs, greater competition from China, and deep side effects from a languishing Chinese economy. Europe's largest industrial power, Germany, has taken the brunt of these effects, with manufacturing activity contracting for many quarters.

The U.K. faces economic headwinds of its own, as tax increases introduced by the Labour Party, and uncertainty surrounding potential shifts in global trade due to a second Trump presidency, have made growth difficult for local companies. While inflation dropped in December to 2.5%, price

growth remains at levels that are too high for comfort. Despite the threat of inflation, economists expect four rate cuts in 2025.

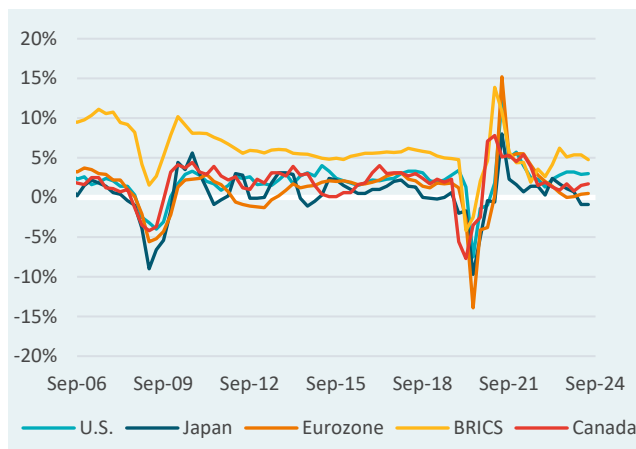
The Japanese economy has recently seen increasing costs, most notably in energy and food. An uptick in inflation following the pandemic and union wage negotiations led the Bank of Japan to reverse their negative interest rate policy in July, as they seek normalization and consistent growth. The BoJ is expected to hike interest rates to 0.5% in late January or March to the highest level in 17 years. Broad wage hikes were recently agreed upon between labor unions and employers, which were a prerequisite for the continued hiking of interest rates, which are expected to eventually reach 1%.

**INFLATION (CPI YEAR-OVER-YEAR)**



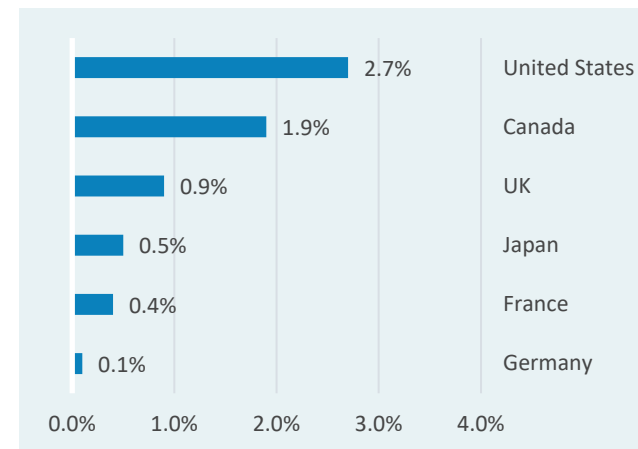
Source: BLS, Verus, as of 12/31/24

**REAL GDP GROWTH (YEAR-OVER-YEAR)**



Source: BLS, Verus, as of 9/30/24

**Q3 REAL GDP GROWTH (YOY)**



Source: BLS, Verus, as of Q3 2024



# Fixed income rates & credit



# Fixed income environment

- The Federal Reserve cut interest rates once in November and again in December—each time by a quarter point. This brought the target rate from 4.75-5.00% to 4.25-4.50%. Rate expectations for 2025 have shifted, as better economic growth expectations and firmer inflation will likely lead the Fed towards fewer rate cuts.
- The 10-year U.S. Treasury yield jumped from 3.79% to 4.55% during the quarter, amid growing evidence that the economy may remain hotter than expected, expectations around pro-growth policies of the Trump Administration, as well as the possibility that a tariff spat with trade partners could push inflation upwards.
- Most credit indices delivered negative to slightly positive returns, with rising interest rates impacting duration-sensitive assets. Bank loans, which are much less sensitive to rate movements, returned +2.3%. High yield delivered slightly positive returns of +0.2% while investment grade lost -2.7%.
- Credit spreads were broadly tighter, a reflection of continued strength in the U.S. corporate sector. Lower-quality high yield bond spreads fell by -30bps to 2.7%, while investment grade spreads tightened slightly to 0.8%. Credit spreads across all ratings remain well below long-term historical averages, suggesting investors are confident in the ability of businesses to service debt.
- High yield default activity remained low, falling to 1.1%—down from 2.6% one-year prior. This compares to the long-term annual average of 3.4%. However, distressed exchange activity, particularly among LMEs, has continued to expand. Total distressed credit volume reached \$19.4 billion in Q4, far surpassing the previous quarter of \$13.5 billion. The level of Q4 was the second largest quarterly total on record since Q4 2008, with Q3 of 2024 being the third highest total on record.

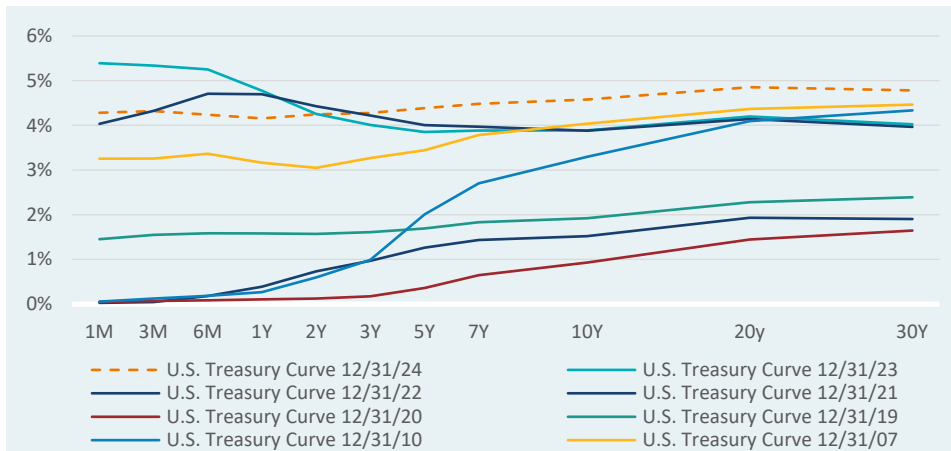
|   | QTD<br>Total Return | 1 Year<br>Total Return |
|---|---------------------|------------------------|
| Core Fixed Income<br>(Bloomberg U.S. Aggregate)               | (3.1%)              | 1.3%                   |
| Core Plus Fixed Income<br>(Bloomberg U.S. Universal)          | (2.7%)              | 2.0%                   |
| U.S. Treasuries<br>(Bloomberg U.S. Treasury)                  | (3.1%)              | 0.6%                   |
| U.S. Treasuries: Long<br>(Bloomberg U.S. Treasury 20+)        | (9.4%)              | (8.0%)                 |
| U.S. High Yield<br>(Bloomberg U.S. Corporate HY)              | 0.2%                | 8.2%                   |
| Bank Loans<br>(S&P/LSTA Leveraged Loan)                       | 2.3%                | 9.0%                   |
| Emerging Market Debt Local<br>(JPM GBI-EM Global Diversified) | (7.0%)              | (2.4%)                 |
| Emerging Market Debt Hard<br>(JPM EMBI Global Diversified)    | (1.9%)              | 6.5%                   |
| Mortgage-Backed Securities<br>(Bloomberg MBS)                 | (3.2%)              | 1.2%                   |

Source: Standard & Poor's, J.P. Morgan, Bloomberg, as of 12/31/24

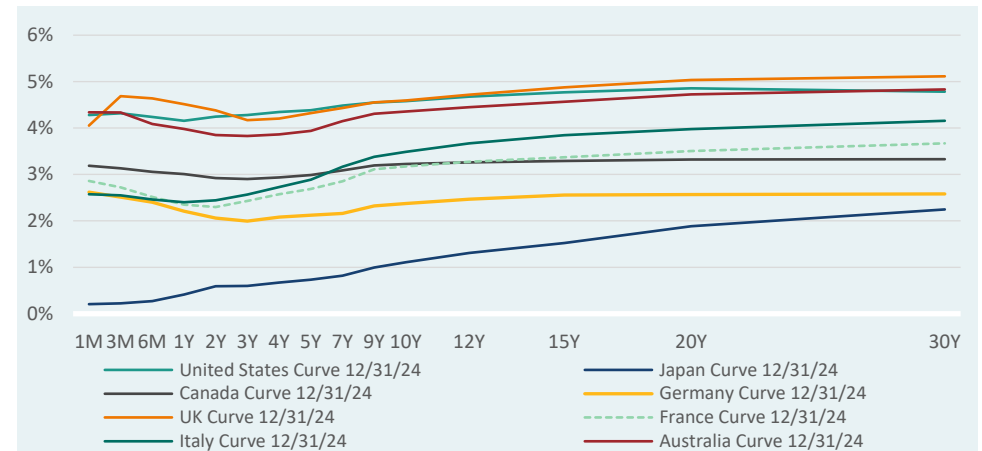


# Yield environment

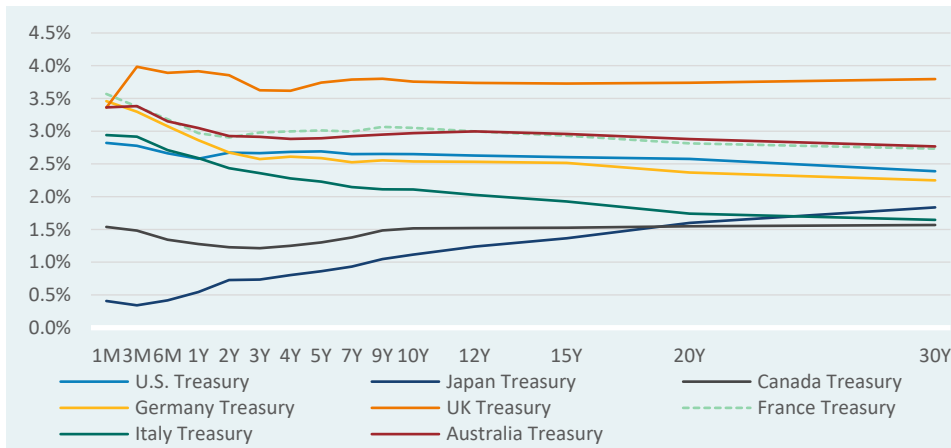
U.S. YIELD CURVE



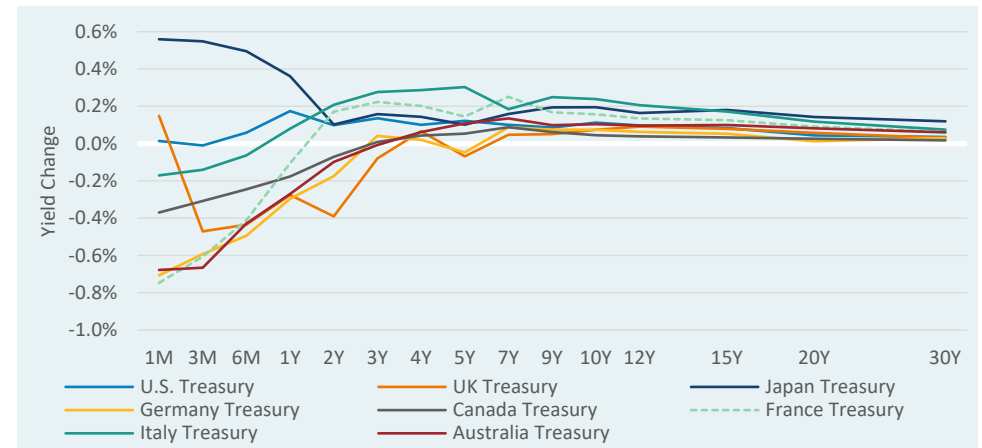
GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 12/31/24



# Credit environment

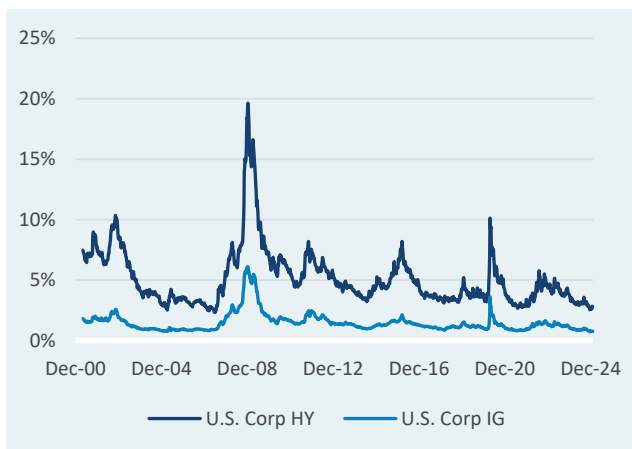
During the fourth quarter, longer duration credit underperformed shorter duration despite a 50bps rate cut by the Federal Reserve. Stronger economic growth expectations, sticky inflation, and a general repricing of the future Federal Funds Rate path, contributed to a rapid rise in the long end of the yield curve. Long duration investment grade corporate bonds (Bloomberg U.S. Long Corporate Credit) lost -6.3%. Bank loans added +2.3% (CS Leveraged Loans) while high yield returned +0.2% (Bloomberg U.S. Corporate High Yield).

Returns within the high yield bond market were mixed, with lower quality credits experiencing the best performance. Bonds rated CCC, which include distressed credit, returned +2.5%, compared to non-

distressed CCC-rated bonds which gained only +1.6%. Bonds rated B produced slightly positive returns of +0.3%, while BB-rated bonds lost -0.5% over the same period. Similarly, lower quality bank loans outperformed higher quality. CCC-rated loans returned +2.7%, compared to +2.6% and +2.1% for B- and BB-rated loans, respectively.

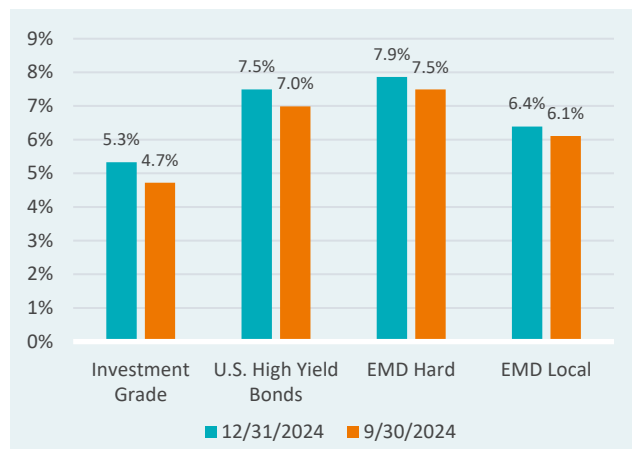
Credit spreads were broadly tighter, a reflection of continued strength in the U.S. corporate sector. Lower-quality high yield bond spreads fell by -30bps, to 2.7%, while investment grade spreads tightened slightly to 0.8%. Credit spreads across all ratings remain well below long-term historical averages, suggesting investors are confident in the ability of businesses to service debt.

## SPREADS



Source: Barclays, Bloomberg, as of 12/31/24

## YIELD TO MATURITY



Source: Bloomberg, J.P. Morgan as of 12/31/24

## CREDIT SPREAD (OAS)

| Market              | 12/31/24 | 12/31/23 |
|---------------------|----------|----------|
| Long U.S. Corp      | 1.0%     | 1.2%     |
| U.S. Inv Grade Corp | 0.8%     | 1.0%     |
| U.S. High Yield     | 2.7%     | 3.2%     |
| U.S. Bank Loans*    | 4.5%     | 5.0%     |

Source: Barclays, Credit Suisse, Bloomberg, as of 12/31/24

\*Discount margin (4-year life)



# Default & issuance

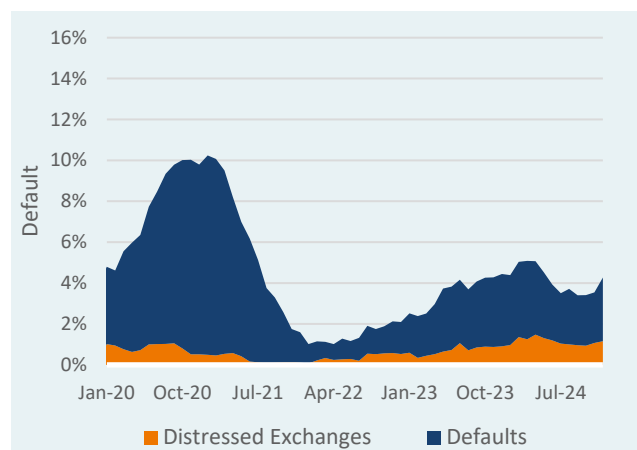
Default activity remained low during Q4, as economic data was strong and trends overall suggested a lower chance of near-term recession. During the period, \$27.9 billion of bank loans and high yield bonds were affected by default or distressed exchanges, well over double the \$11.0 billion in the prior quarter. Year-to-date, 38 companies defaulted, totaling more than \$4.8 billion in bonds and \$23.8 billion in loans.

While defaults have remained subdued, distressed exchange activity has increased rapidly. During the quarter, total distressed credit volume was roughly \$19.4 billion, surpassing the \$13.5 billion pace in Q2. This marked the second largest quarterly total on record since Q4 2008. However, the year-to-date combination of defaults and distressed exchanges of \$83.6 billion was still 3% less than the total of 2023.

High yield bond default rates continued their decline, falling to 1.1%, down from 2.6% one year ago. The current figures remain well below the long-term annual average of 3.4%. Recovery rates hit record lows in Q4, but ended the quarter at 24.8%, depressed relative to earlier quarters and 32.8% experienced during 2023.

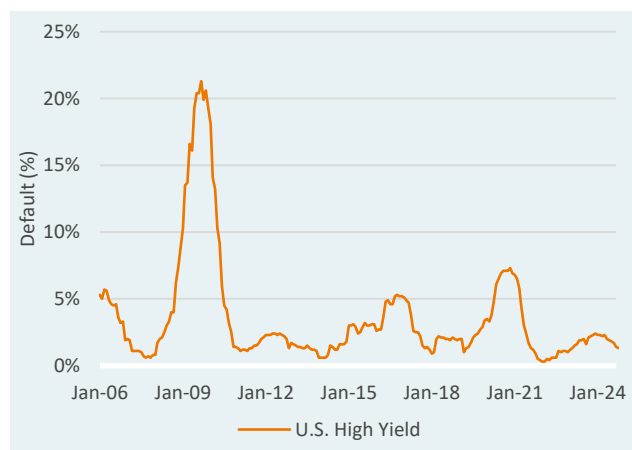
New issuance volume for high yield bonds was lower for the quarter, totaling \$49 billion, compared to \$74 billion in Q3. Bank loans saw record levels of issuance, reaching a record \$515 billion, up from \$204 billion. A further reduction in lending rates and credit spreads likely acted as a catalyst for higher issuance in bank loans as companies are able to issue and refinance their debt at more competitive rates.

**U.S. BANK LOAN DEFAULTS (LAST 12 MONTHS)**



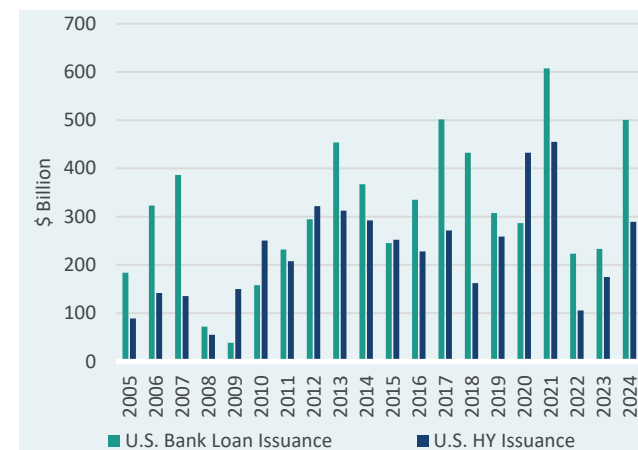
Source: BofA Merrill Lynch, Verus, as of 12/31/24 – par weighted

**U.S. HY SECTOR DEFAULTS (LAST 12 MONTHS)**



Source: BofA Merrill Lynch, as of 12/31/24 – par weighted

**U.S. ISSUANCE (\$ BILLIONS)**



Source: BofA Merrill Lynch, as of 12/31/24



# Equity



# Equity environment

- Global equities were mixed during Q4. Emerging markets (MSCI EM -8.0%) and international developed (MSCI EAFE -8.1%) delivered poor returns to U.S. investors with unhedged currency exposure, though most of those losses were driven by currency movement. During 2024, large currency moves created a wide gap between U.S. and non-U.S. returns. For example, currency hedged Japanese equities slightly outperformed U.S. (S&P 500 +25.0%, TOPIX +25.8%) but returned only +8.0% on an unhedged basis
  - Expectations for interest rate cuts lessened after economic strength and stubborn inflation led the Fed to emphasize that they would not budge on their 2% inflation target. The *higher for longer* interest rate narrative likely contributed to U.S. dollar strength during the quarter.
  - S&P 500 earnings growth is expected to be +11.9% for Q4,
- which would mark the highest growth rate of the past three years. Financials (+39.5%) led the way, followed by Communication Services (+20.7%), while Energy (-24.6%) was a drag on the index.
- Small cap and value both continued to underperform. Small cap trailed large cap by -2.4% (Russell 2000 +0.3% vs. Russell 1000 +2.7%) in Q4, while growth outperformed value by +9.1% (Russell 1000 Growth +7.1% vs. Russell 1000 Value -2.0%). This capped off a year of poor performance for both of these size and style factors, underperforming by -13% and -19%, respectively.
  - Market-priced volatility (Cboe VIX Index) was stable during Q4, beginning the quarter at 16.7% and ending at 17.4%. While the level of volatility has been far less than what was experienced during the spike in August, a few bouts of volatility occurred throughout the quarter.

|  | QTD TOTAL RETURN |          | 1 YEAR TOTAL RETURN |          |
|--|------------------|----------|---------------------|----------|
|  | (unhedged)       | (hedged) | (unhedged)          | (hedged) |
| U.S. Large Cap (S&P 500)                 | 2.4%             |          | 25.0%               |          |
| U.S. Small Cap (Russell 2000)            | 0.3%             |          | 11.5%               |          |
| U.S. Equity (Russell 3000)               | 2.6%             |          | 23.8%               |          |
| U.S. Large Value (Russell 1000 Value)    | (2.0%)           |          | 14.4%               |          |
| U.S. Large Growth (Russell 1000 Growth)  | 7.1%             |          | 33.4%               |          |
| Global Equity (MSCI ACWI)                | (1.0%)           | 1.4%     | 17.5%               | 21.0%    |
| International Large (MSCI EAFE)          | (8.1%)           | 0.1%     | 3.8%                | 14.1%    |
| Eurozone (EURO STOXX 50)                 | (8.9%)           | (1.4%)   | 4.1%                | 12.9%    |
| U.K. (FTSE 100)                          | (6.8%)           | (0.1%)   | 7.7%                | 9.9%     |
| Japan (TOPIX)                            | 5.4%             | 6.7%     | 8.0%                | 25.8%    |
| Emerging Markets (MSCI Emerging Markets) | (8.0%)           | (4.3%)   | 7.5%                | 13.3%    |

Source: Standard & Poor's, FTSE, MSCI, STOXX, JPX, as of 12/31/24



# Domestic equity

U.S. equities outperformed both international and emerging markets, with the S&P 500 ending Q4 up +2.4%. The market rallied in early November following the re-election of President Trump, which seems to have provided an animal spirits boost to sentiment, with markets pricing in firmer growth, a bit higher inflation, and elevated interest rates. Later in December, comments from Fed Chair Jerome Powell led markets to expect fewer rate cuts in 2025, which was received poorly by investors.

Earnings came in above expectations. The S&P 500 delivered year-over-year earnings growth of +5.9% in Q3, greater than the +4.2% growth that was expected going into the quarter. Growth expectations are very bullish for the final quarter of the year, with the S&P 500 forecast to

deliver growth of +11.9%. Financials (+39.5%) are expected to deliver the highest growth, with expectations also lofty for Communication Services (+20.7%) and Information Technology (+12.9%).

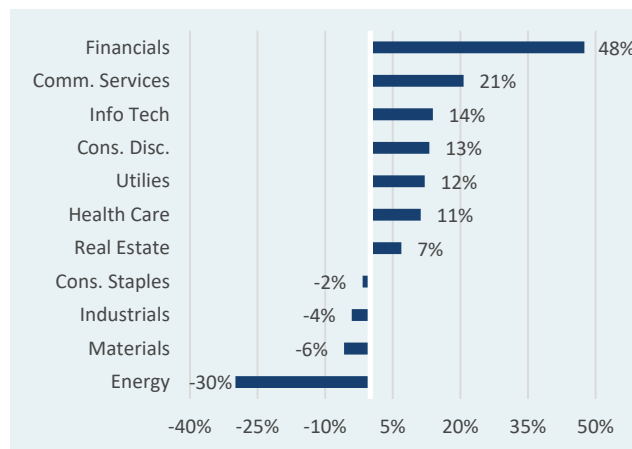
While valuations have been rising throughout the year, they remained at a consistent level over the course of Q4. On top of elevated valuations, U.S. equities are expected to deliver strong earnings growth of 14.8% and 13.6% in 2025 and 2026, respectively. If the U.S. market fails to achieve these estimates, it would place further upward pressure on valuation levels.

**S&P 500 PRICE INDEX**



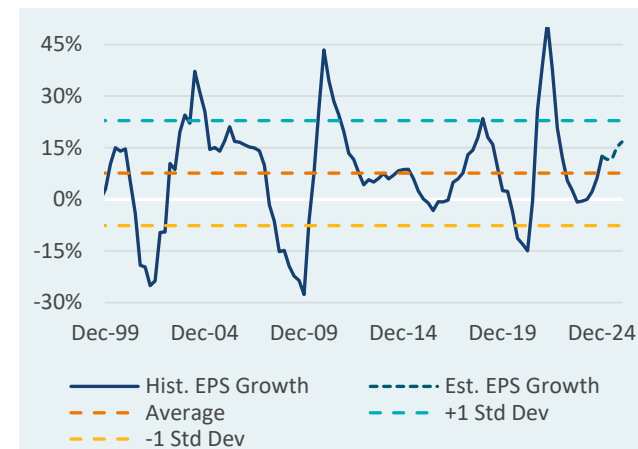
Source: Standard & Poor's, as of 12/31/24

**S&P 500 BLENDED EPS GROWTH (YOY)**



Source: Factset, as of 12/31/24

**S&P 500 EPS GROWTH (YEAR-OVER-YEAR)**



Source: Factset, Verus, as of 1/17/25



# Domestic equity size & style

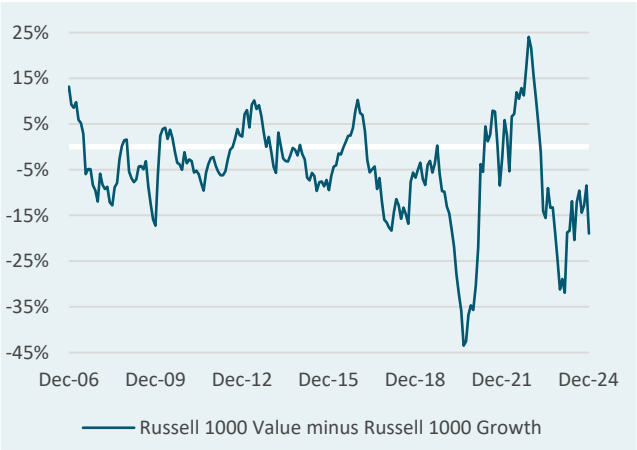
Small cap and value both continued to underperform. Small cap trailed large cap by -2.4% (Russell 2000 +0.3% vs. Russell 1000 +2.7%) in Q4, while growth outperformed value by +9.1% (Russell 1000 Growth +7.1% vs. Russell 1000 Value -2.0%). This capped off a year of poor performance for both of those size and style factors, underperforming by -13% and -19%, respectively.

The Magnificent 7 stocks delivered an exceptional +67.3% during 2024, substantially outperforming the index. However, recent years have shown investors that mega-cap

growth stocks can both act as a big boost to overall index returns or lead the index lower with large losses. The Magnificent 7 stocks delivered 21.7% earnings growth year-over-year in Q4, while the rest of the index reported 9.7% growth, per FactSet. But forecasts are for Magnificent 7 earnings growth to begin to converge with the broader index during 2025 (20.3% year-over-year in Q4 2025 relative to 15.4% overall for the index). If these stocks begin to stand out less from the rest of the S&P 500 in terms of growth, performance may become less differentiated, which could have a notable impact on size and style factor performance.

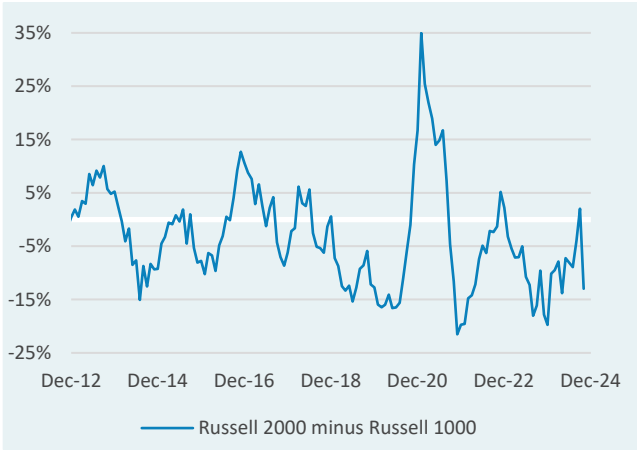
Small cap & value lagged in Q4, lagging in 2024 by -13% and -19%, respectively

VALUE VS. GROWTH 1-YR ROLLING RELATIVE PERFORMANCE



Source: FTSE, as of 12/31/24

SMALL VS. LARGE 1-YR ROLLING RELATIVE PERFORMANCE



Source: FTSE Russell, as of 12/31/24

1-YEAR SIZE & STYLE PERFORMANCE

|           | Value | Core  | Growth |
|-----------|-------|-------|--------|
| Large Cap | 14.4% | 24.5% | 33.4%  |
| Mid Cap   | 13.1% | 15.3% | 22.1%  |
| Small Cap | 8.1%  | 11.5% | 15.2%  |

Source: FTSE Russell, as of 12/31/24



# International developed equity

International developed shares (MSCI EAFE -8.1%) underperformed both the U.S. market (S&P 500 +2.4%) and emerging market equities (MSCI EM -8.0%). Most of this underperformance was due to currency movements rather than equity market behavior. On a hedged basis, international developed markets delivered slightly positive returns (+0.1%), with currency contributing losses of -8.2%.

European equities performed very poorly over the course of the quarter, falling -9.7% (MSCI Europe, -2.4% on a hedged basis), and acting as a drag on the overall index. European economies face turmoil due to political instability and a fairly bleak macroeconomic picture. Europe's largest economy, Germany, experienced a second consecutive year of contracting growth. Germany faces high energy costs, weak global demand for its

exports, and risks that its automobile manufacturers are left behind as electric vehicle competition heats up from Chinese and American manufacturers. In early December, the French government fell apart after Prime Minister Michel Barnier was ousted in a no-confidence vote. This followed Mr. Barnier's controversial move to use special powers to force through his budget without a vote.

Currency moves also played a major role during the past year. Domestic investors without a currency hedging program lost -10.3% from currency volatility regarding their international equities (MSCI EAFE). The impact from unhedged Japanese asset exposure was particularly extreme—investors without a currency hedging program lost -17.8% from currency moves over the past year (TOPIX Index).

## INTERNATIONAL DEVELOPED EQUITY



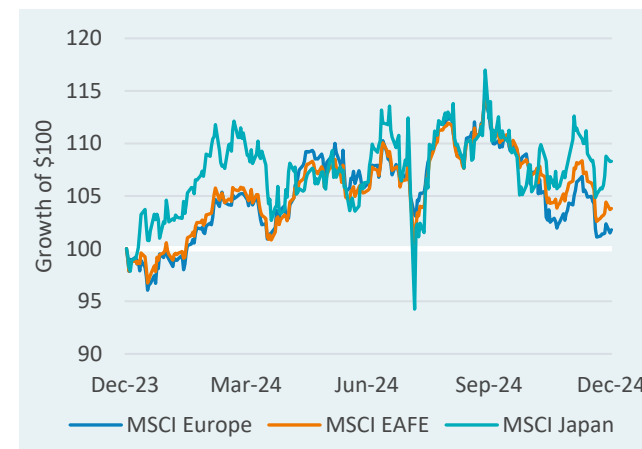
Source: MSCI, as of 12/31/24

## MSCI EAFE HEDGED VS UNHEDGED



Source: MSCI, as of 12/31/24

## REGIONAL RETURNS OF INTL. DEVELOPED



Source: MSCI, as of 12/31/24



# Emerging market equity

Emerging market equities (MSCI EM -8.0%) underperformed U.S. markets (S&P 500 +2.4%) during the quarter, and narrowly outperformed international developed equities (MSCI EAFE -8.1%). While not as drastic as seen across international developed equities, currency movements were also a drag on performance, with the hedged index returning -4.3%.

During 2024, Chinese equities clawed back some of the losses of prior years, gaining +19.4% (MSCI China) relative to the broader index return of +7.5%. The Chinese Communist Party (CCP) has struggled to instill confidence in its citizens to look

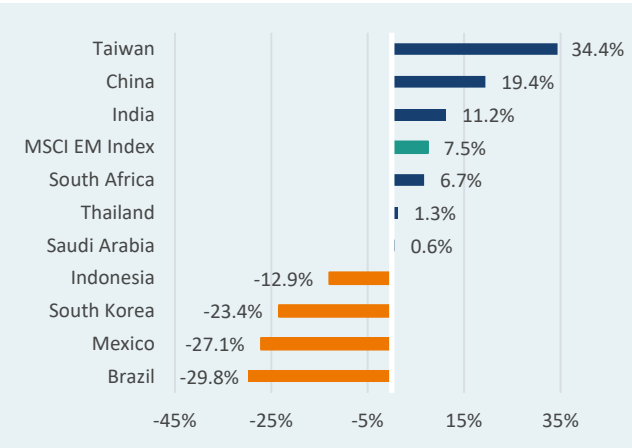
past China’s various structural problems, and to have faith in the country’s economic future and therefore to spend more freely. A severe drop in residential property prices has had a large impact on confidence, as the average citizen has most of their wealth and retirement savings in home equity. Much of that wealth has disappeared. Investors continue to wait for some sort of aggressive policy response or stimulus from the CCP. In September, major government announcements were made regarding market and economic stimulus, which sent the MSCI China Index up nearly +50%. However, the finer details of those plans were seen as lackluster by investors, and index prices had headed back down towards prior levels.

EMERGING MARKET EQUITY



Source: MSCI, as of 12/31/24

MSCI EM 2024 COUNTRY RETURNS (USD)



Source: MSCI, J.P. Morgan, as of 12/31/24

CHINA’S RALLY HAS PARTIALLY REVERSED



Source: MSCI, as of 12/31/24



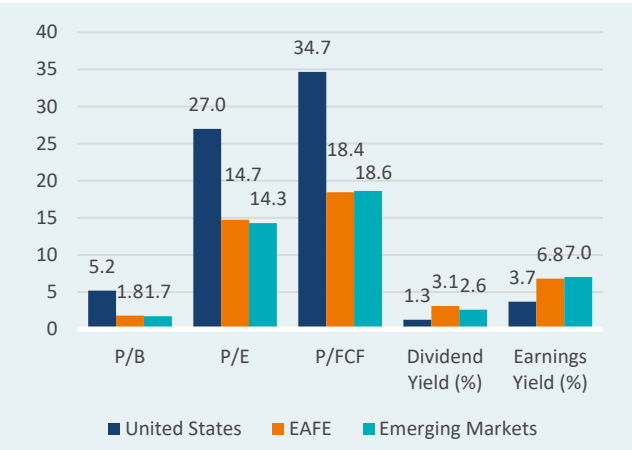
# Equity valuations

Domestic equity valuations remained very elevated but were unchanged in Q4. A moderate return of +2.4%, combined with slightly higher expected earnings over the next 12 months, led the S&P 500 to continue to trade at a forward price-to-earnings of 22 during the quarter.

A historically wide gap between U.S. equity valuations and international equity valuations has drawn much attention in recent years. Domestic equities (S&P 500) trade at a 60% premium to international developed equity (MSCI EAFE Index) on a forward price-to-earnings bases, as of the end of the quarter. At first glance this may suggest that international

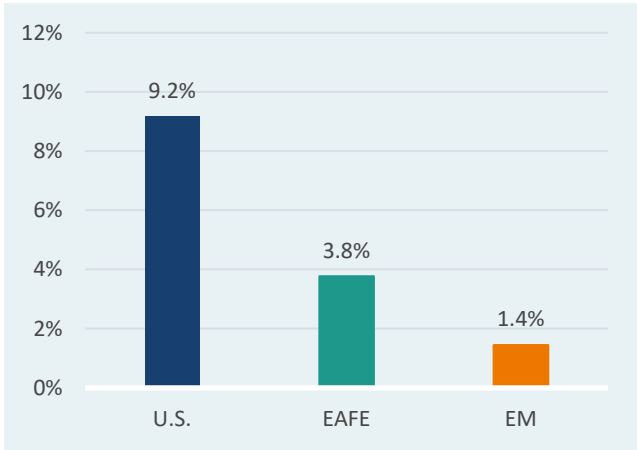
equities provide a particularly attractive opportunity for investors. However, these markets, specifically in Europe, face relatively sluggish growth—much of this due to China’s structural problems and economic slowdown. Europe has also faced a fairly severe lack of business innovation and entrepreneurialism—much of that driven by weak venture capital funding activity—lagging the U.S. in terms of earnings growth and new business formation. Additionally, changes in marketplace characteristics within the U.S. index help describe some of the valuation “gap”, with a greater proportion of the index being comprised of high growth companies that tend to command higher valuation multiples.

MSCI VALUATION METRICS (3-MONTH AVG)



Source: MSCI, Verus, as of 12/31/24 – trailing P/E

FORWARD P/E PERCENTAGE CHANGE IN 2024



Source: MSCI, Verus, as of 12/31/24

S&P 500 HISTORICAL DIVIDEND YIELD



Source: Standard & Poor’s, Verus, as of 12/31/24



# Quant equity hedge funds outperform

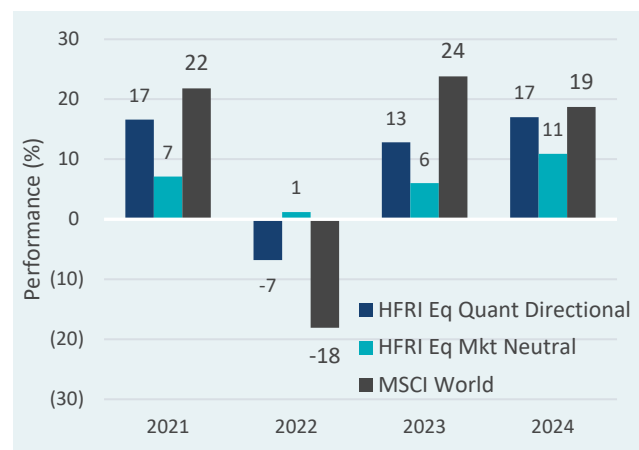
Quantitative equity hedge funds in 2024 had their best year in at least 20 years, as measured by the HFRI Equity Market Neutral and Quantitative Directional indices. Equity Market Neutral returned 10.9% and Quantitative Directional gained 17.0%, the highest annual returns for each since 2000 and 2003, respectively.

These strategies have outpaced their fundamental peers in the last few years while keeping up with global equity indices over the same time. We think this quantitative outperformance and the success of Equity Market Neutral

funds are related, as both strategies typically use similar techniques such as statistical arbitrage or factor investing.

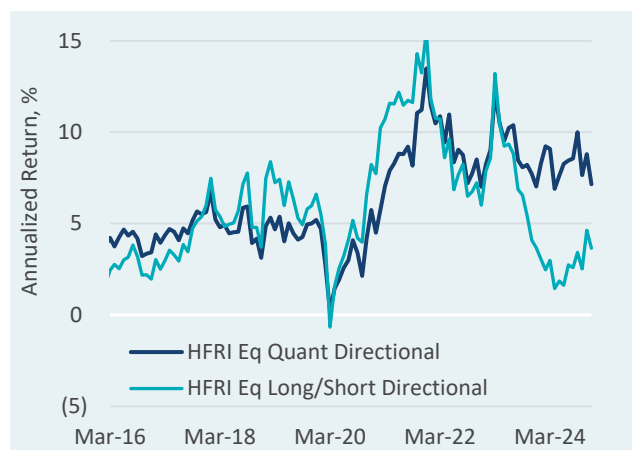
One of the market factors that may be contributing to quantitative strategies' success is the increase in single stock dispersion, which measures the variance in index constituent returns vs. the overall index. Higher dispersion, along with lower intra-stock correlation, theoretically should support strong potential returns for quant programs, which typically hold large numbers of stocks and take a relative value approach.

**CALENDAR YEAR RETURNS (%)**



Source: MPI, Morningstar, MSCI, HFR

**3-YEAR ROLLING RETURN**



Source: HFR, MPI, as of 12/31/24

**AVERAGE IMPLIED STOCK DISPERSION – S&P 500**



Source: S&P DowJones, CBOE S&P 500 Dispersion Index (DSPX)



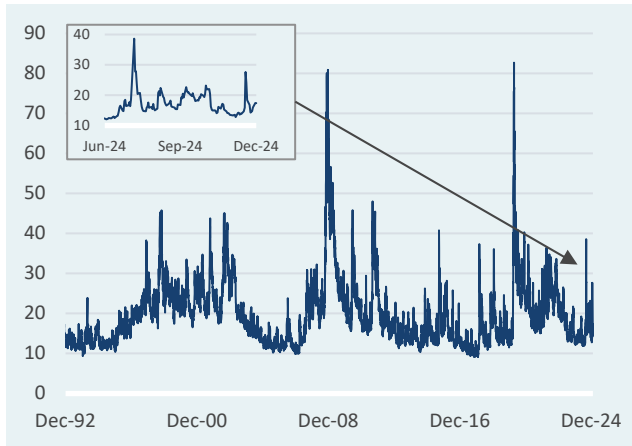
# Market volatility

Market-priced volatility (Cboe VIX Index) rose slightly during Q4, beginning the quarter at 16.7% and ending at 17.4%. While the level of volatility was much less than what was experienced during the historic spike in August, a few bouts of volatility did occur throughout the quarter. Implied volatility was above average in the immediate lead-up to the presidential election, reaching 23.4%, while settling back down to below 17% after the results were known. Market volatility increased to its highest level of the quarter in mid-December, after Fed Chair Jerome Powell reiterated the Fed's 2% inflation target, which led markets to expect fewer interest rate cuts.

Implied bond market volatility continued to moderate, following the record highs that were experienced during the recent U.S. inflation scare. However, volatility levels remain materially above the longer-term average. We suspect that volatility will continue to be elevated as investors remain fixated on Federal Reserve actions and communications.

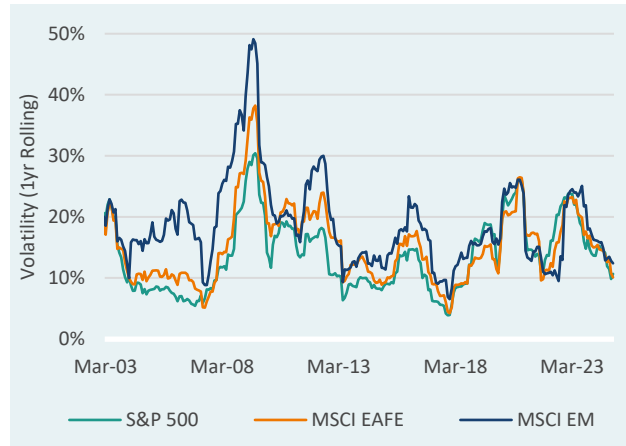
Recent realized one-year volatility drifted further lower, alongside positive equity performance and some easing of fears around recession or an inflation resurgence.

## U.S. IMPLIED VOLATILITY (VIX)



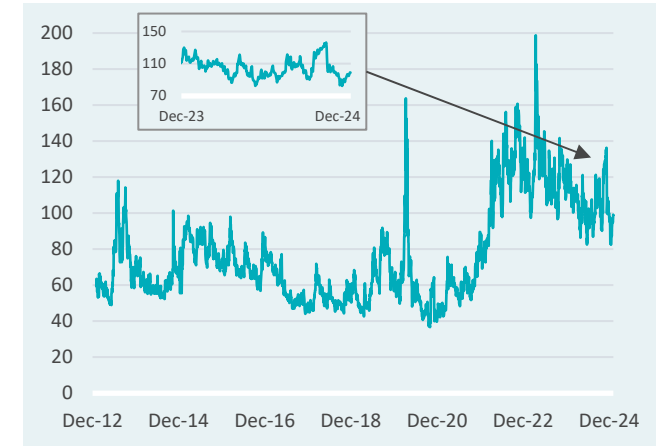
Source: Cboe, as of 12/31/24

## REALIZED VOLATILITY



Source: Standard & Poor's, MSCI, Verus, as of 12/31/24

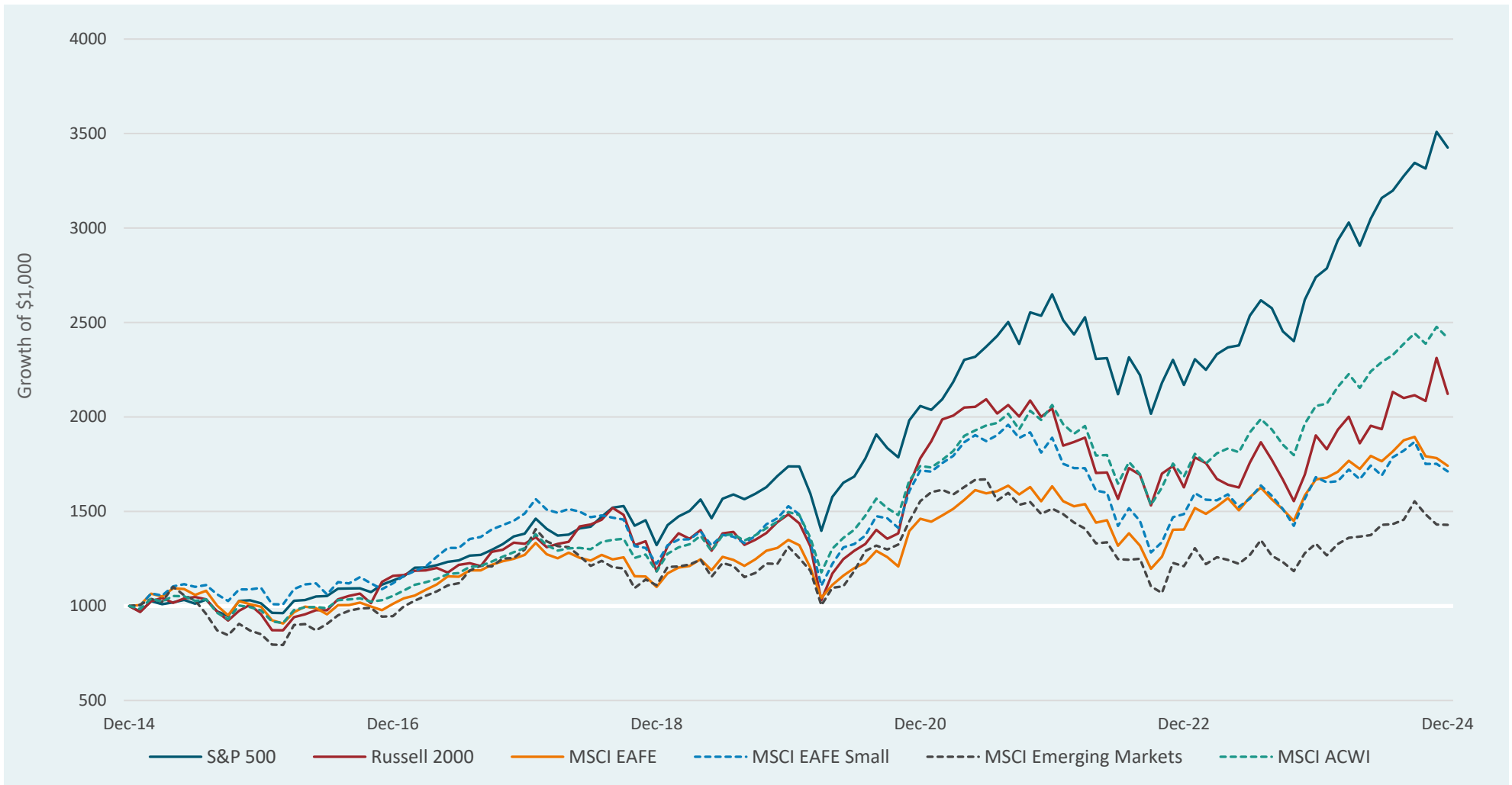
## U.S. TREASURY IMPLIED VOL ("MOVE" INDEX)



Source: BofA, as of 12/31/24



# Long-term equity performance



Source: Standard & Poor's, FTSE, MSCI, Verus, as of 12/31/24



# Other assets



# Currency

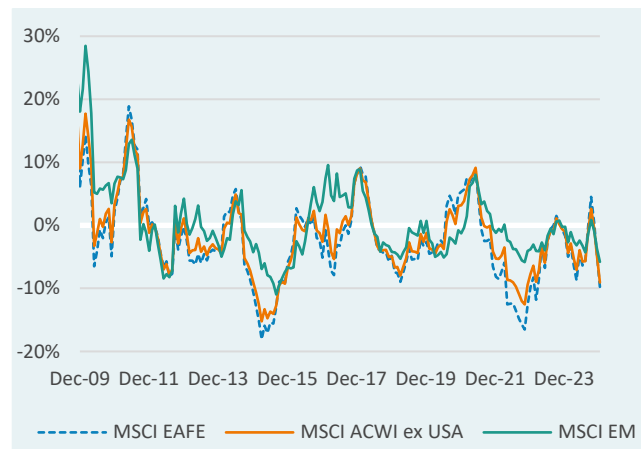
The U.S. dollar gained sharply in value during Q4—the DXY Index rising from 100.8 to 108.5. Strong economic data and evidence of sticky inflation led investors to reassess the number of upcoming Fed rate cuts and helped push up bond yields. Next, ongoing weak economic data in many international markets, as well as central bank rate cuts, created a bleaker outlook for foreign currency strength. Lastly, the U.S. election resulted in a rerating of expectations around the potential strength of the economy and led to some fears of higher inflation, which contributed to higher interest rates (lifting the U.S. dollar).

Dollar strength resulted in losses for investors with unhedged foreign asset exposure. Those without a currency hedging program lost -8.2% from international equities (MSCI EAFE) during Q4, and -10.3% over the past year. The impact from unhedged Japanese asset exposure was particularly

extreme. Investors without a currency hedging program lost -1.3% during the quarter from currency movements, and -17.8% over the past year (TOPIX Index).

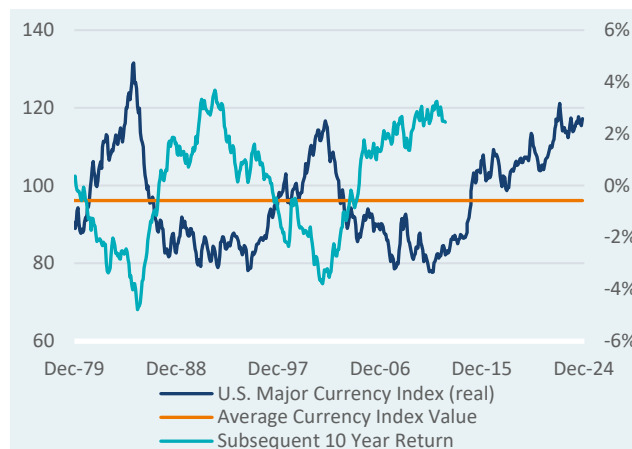
A more thoughtful portfolio approach to currency exposure has provided lower portfolio volatility and higher returns—a rare proposition. This approach involves reducing the uncompensated risk of unhedged foreign currency exposure, and instead of unhedged exposure, making a passive investment in the currency market by investing in currencies with higher interest rates, undervalued currencies, and currencies showing positive price momentum. This approach, represented by the MSCI Currency Factor Mix Index, has offered a positive one-year rolling return over most periods with far lower volatility than an unhedged approach. The past year of intense currency volatility is testament to this approach.

## EFFECT OF CURRENCY (1-YEAR ROLLING)



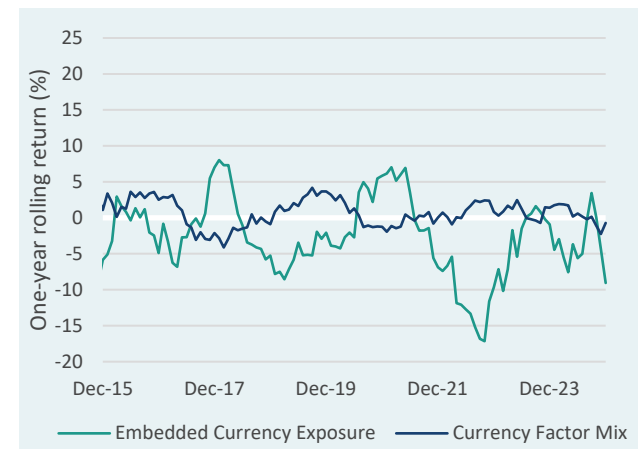
Source: MSCI, Verus, as of 12/31/24

## U.S. DOLLAR MAJOR CURRENCY INDEX



Source: FRED, Verus, as of 12/31/24

## EMBEDDED CURRENCY VS CURRENCY FACTORS



Source: MSCI, Verus, as of 12/31/24 “Embedded Currency Exposure” is the currency return impact from not hedging currency risk



# Appendix



# Periodic table of returns

|                         | 2004 | 2005 | 2006 | 2007 | 2008  | 2009  | 2010 | 2011  | 2012 | 2013 | 2014  | 2015  | 2016 | 2017 | 2018  | 2019 | 2020 | 2021 | 2022  | 2023 | YTD  | 5-Year | 10-Year |
|-------------------------|------|------|------|------|-------|-------|------|-------|------|------|-------|-------|------|------|-------|------|------|------|-------|------|------|--------|---------|
| Large Cap Growth        | 26.0 | 34.5 | 32.6 | 39.8 | 5.2   | 79.0  | 29.1 | 14.3  | 18.6 | 43.3 | 13.5  | 13.3  | 31.7 | 37.3 | 6.7   | 36.4 | 38.5 | 28.3 | 16.1  | 42.7 | 33.4 | 19.0   | 16.8    |
| Large Cap Equity        | 22.2 | 21.4 | 26.9 | 16.2 | 1.4   | 37.2  | 26.9 | 7.8   | 18.1 | 38.8 | 13.2  | 5.7   | 21.3 | 30.2 | 1.9   | 31.4 | 34.6 | 27.6 | 9.4   | 26.5 | 24.5 | 14.3   | 12.9    |
| Large Cap Value         | 20.7 | 20.1 | 23.5 | 15.8 | -6.5  | 34.5  | 24.5 | 2.6   | 17.9 | 34.5 | 13.0  | 0.9   | 17.3 | 25.0 | 0.0   | 28.5 | 21.0 | 27.1 | 1.5   | 18.7 | 15.2 | 8.7    | 8.5     |
| Small Cap Growth        | 18.3 | 14.0 | 22.2 | 11.8 | -21.4 | 32.5  | 19.2 | 1.5   | 17.5 | 33.5 | 11.8  | 0.6   | 12.1 | 22.2 | -1.5  | 26.5 | 20.0 | 26.5 | -4.7  | 18.2 | 14.4 | 7.4    | 8.1     |
| Emerging Markets Equity | 16.5 | 7.5  | 18.4 | 11.6 | -25.9 | 28.4  | 16.8 | 0.4   | 16.4 | 33.1 | 6.0   | 0.0   | 11.8 | 21.7 | -3.5  | 25.5 | 18.3 | 25.2 | -7.5  | 16.9 | 11.5 | 7.3    | 7.8     |
| Small Cap Equity        | 14.5 | 7.1  | 16.6 | 10.9 | -28.9 | 27.2  | 16.7 | 0.1   | 16.3 | 32.5 | 5.6   | -0.4  | 11.3 | 17.1 | -4.8  | 22.4 | 14.0 | 17.7 | -13.0 | 15.4 | 9.9  | 6.9    | 7.1     |
| 60/40 Global Portfolio  | 14.3 | 6.3  | 15.5 | 10.3 | -33.8 | 23.3  | 16.1 | -2.1  | 15.3 | 23.3 | 4.9   | -0.8  | 11.2 | 14.6 | -6.0  | 22.0 | 10.3 | 14.8 | -14.5 | 14.6 | 9.5  | 6.8    | 5.9     |
| Small Cap Value         | 12.9 | 5.3  | 15.1 | 7.0  | -35.6 | 20.6  | 15.5 | -2.9  | 14.6 | 12.1 | 4.2   | -1.4  | 8.0  | 13.7 | -8.3  | 18.6 | 7.8  | 11.3 | -14.5 | 11.5 | 8.1  | 5.4    | 5.7     |
| International Equity    | 11.4 | 4.7  | 13.3 | 7.0  | -36.8 | 19.7  | 13.1 | -4.2  | 11.5 | 11.0 | 3.4   | -2.5  | 7.1  | 7.8  | -9.3  | 18.4 | 7.5  | 8.9  | -17.3 | 9.8  | 7.5  | 5.4    | 5.2     |
| Hedge Funds of Funds    | 9.1  | 4.6  | 10.4 | 5.8  | -37.6 | 18.9  | 10.2 | -5.5  | 10.5 | 9.0  | 2.8   | -3.8  | 5.7  | 7.7  | -11.0 | 8.7  | 4.6  | 6.5  | -19.1 | 6.3  | 5.4  | 4.7    | 3.9     |
| Cash                    | 6.9  | 4.6  | 9.1  | 4.4  | -38.4 | 11.5  | 8.2  | -5.7  | 4.8  | 0.1  | 0.0   | -4.4  | 2.6  | 7.0  | -11.2 | 7.8  | 2.8  | 2.8  | -20.1 | 5.5  | 5.3  | 3.3    | 3.6     |
| Commodities             | 6.3  | 4.2  | 4.8  | -0.2 | -38.5 | 5.9   | 6.5  | -11.7 | 4.2  | -2.0 | -1.8  | -7.5  | 1.0  | 3.5  | -12.9 | 7.7  | 0.5  | 0.0  | -20.4 | 5.0  | 3.8  | 2.4    | 1.7     |
| US Bonds                | 4.3  | 3.2  | 4.3  | -1.6 | -43.1 | 0.2   | 5.7  | -13.3 | 0.1  | -2.3 | -4.5  | -14.9 | 0.5  | 1.7  | -13.8 | 6.4  | 0.5  | -1.5 | -26.4 | -7.9 | 1.3  | 1.7    | 1.3     |
| Real Estate             | 1.4  | 2.4  | 2.1  | -9.8 | -53.2 | -16.9 | 0.1  | -18.2 | -1.1 | -9.5 | -17.0 | -24.7 | 0.3  | 0.9  | -14.6 | 2.1  | -3.1 | -2.5 | -29.1 | -7.9 | -0.5 | -0.3   | 1.3     |

Large Cap Equity

Large Cap Value

Large Cap Growth

Small Cap Equity

Small Cap Value

Small Cap Growth

International Equity

Emerging Markets Equity

US Bonds

Cash

Commodities

Real Estate

Hedge Funds of Funds

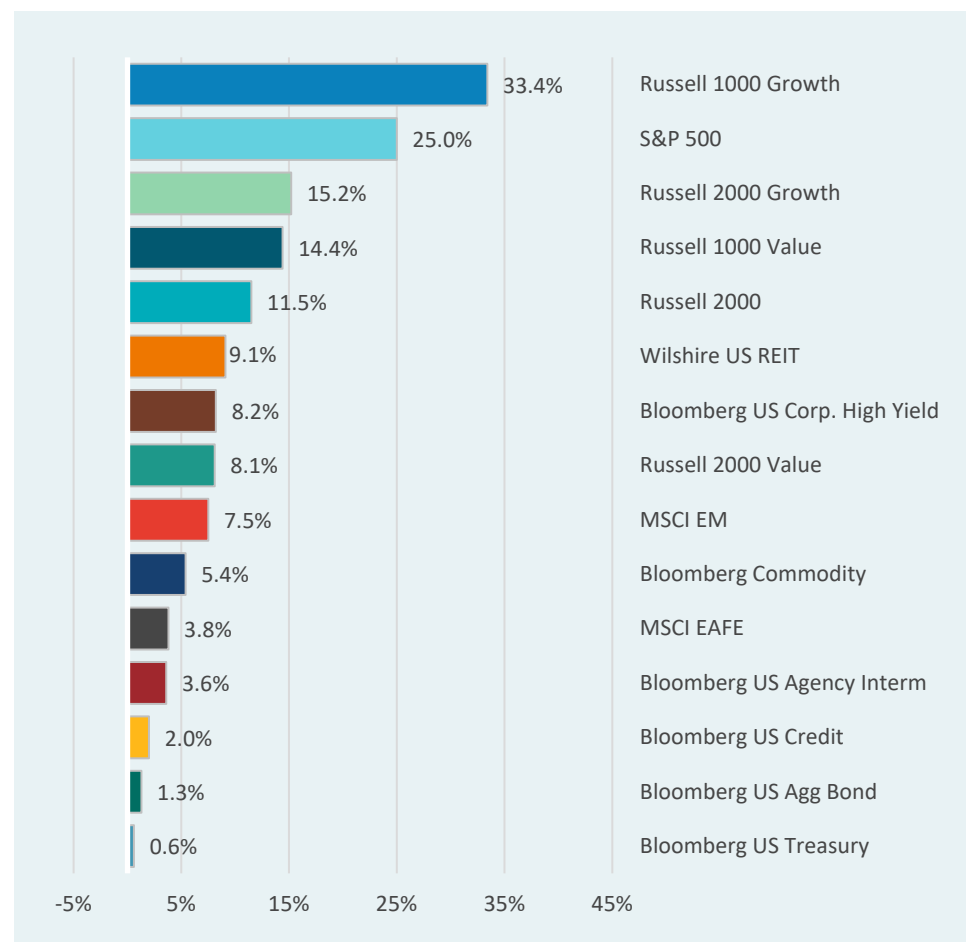
60% MSCI ACWI/40% Bloomberg Global Bond

Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, Bloomberg US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, Bloomberg Global Bond. NCREIF Property Index performance data as of 9/30/24.

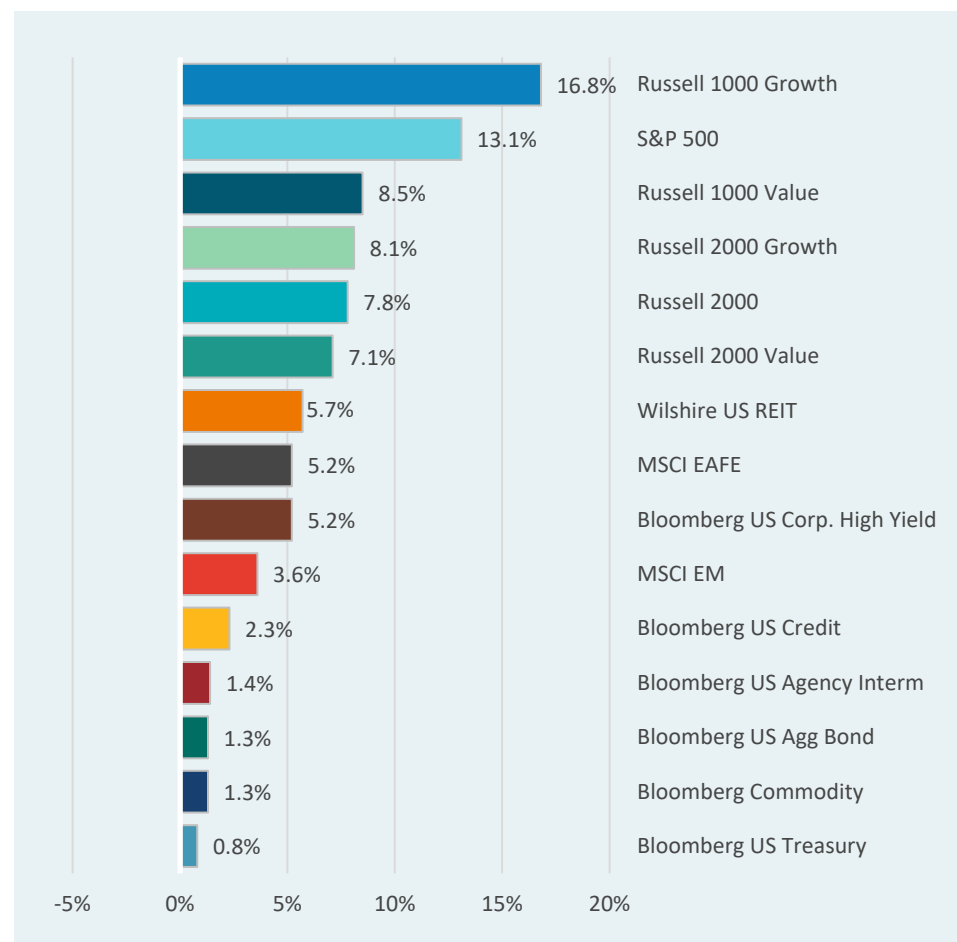


# Major asset class returns

ONE YEAR ENDING DECEMBER



TEN YEARS ENDING DECEMBER



\*Only publicly traded asset performance is shown here. Performance of private assets is typically released with a 3- to 6-month delay.

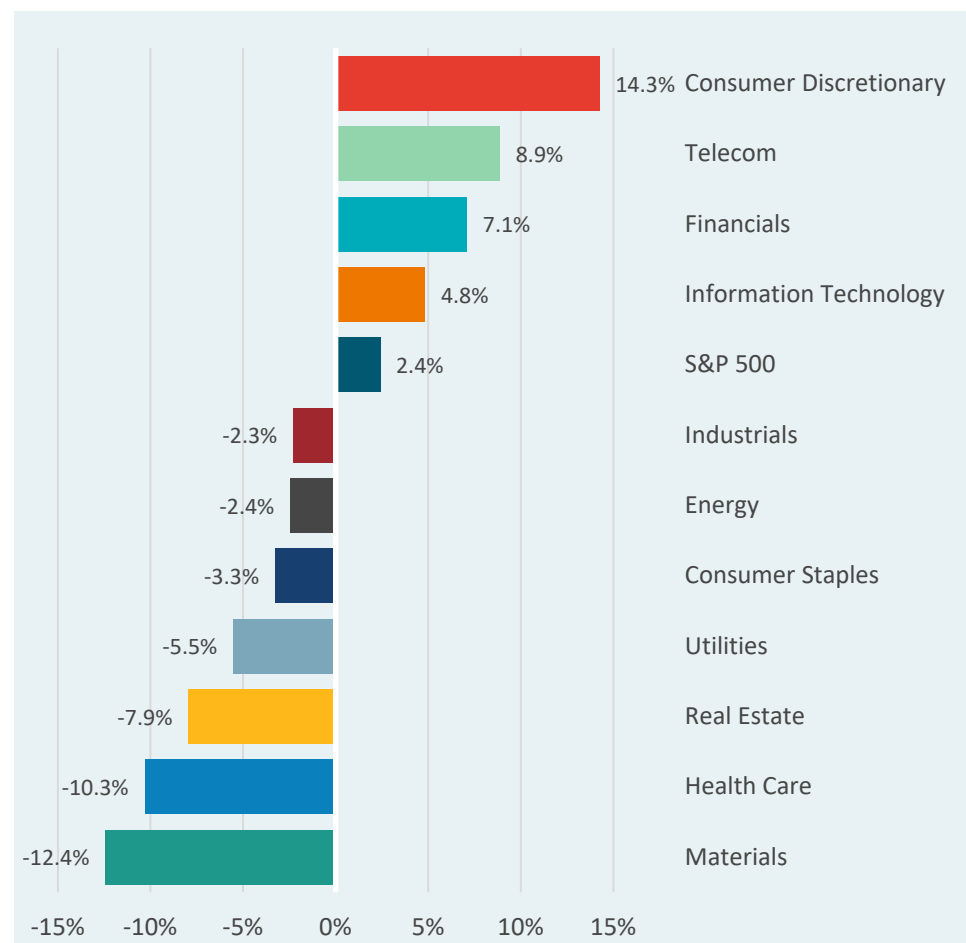
Source: Morningstar, as of 12/31/24

Source: Morningstar, as of 12/31/24



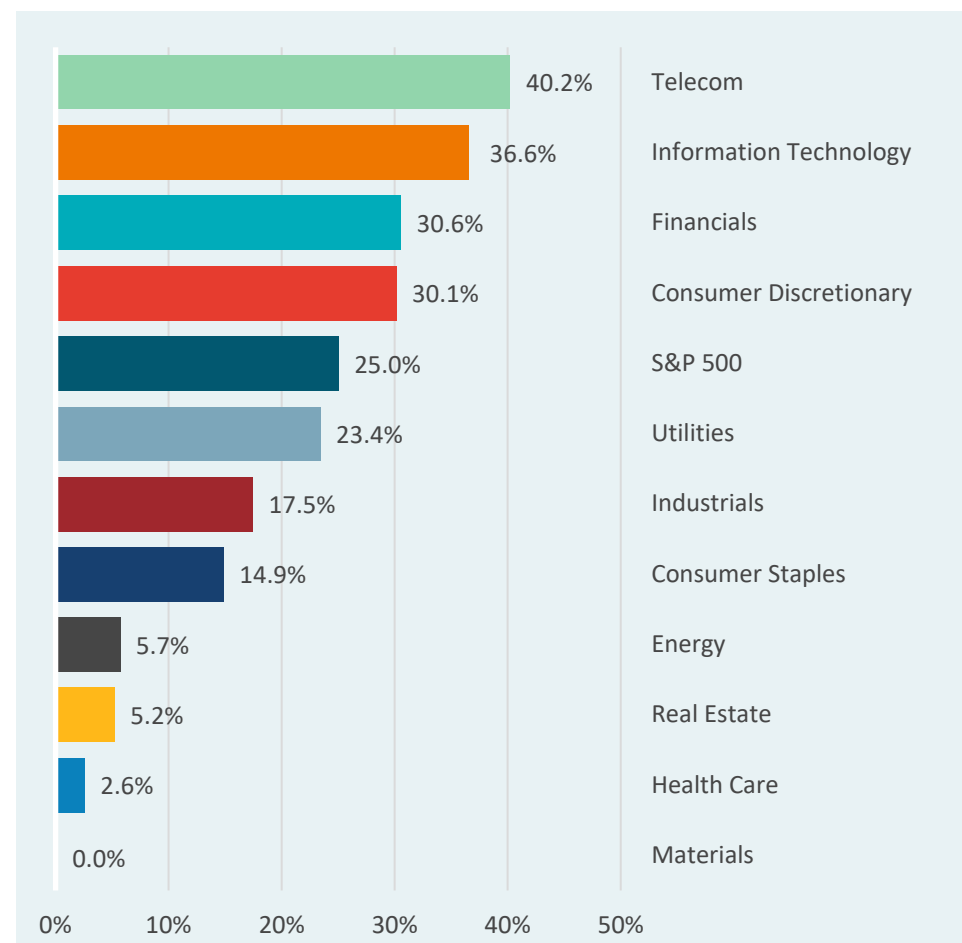
# S&P 500 sector returns

QTD



Source: Morningstar, as of 12/31/24

ONE YEAR ENDING DECEMBER

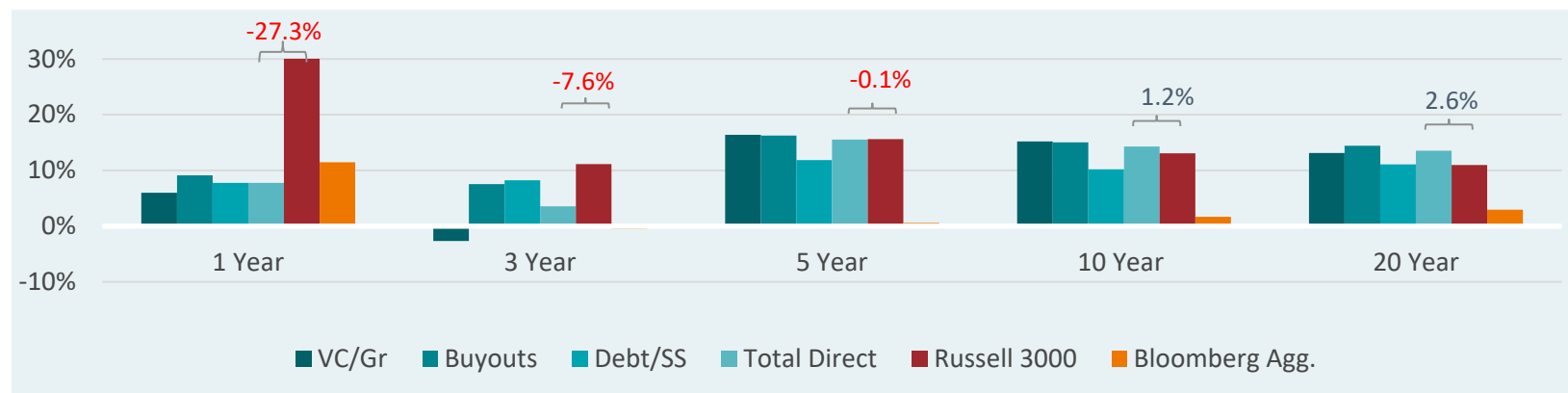


Source: Morningstar, as of 12/31/24



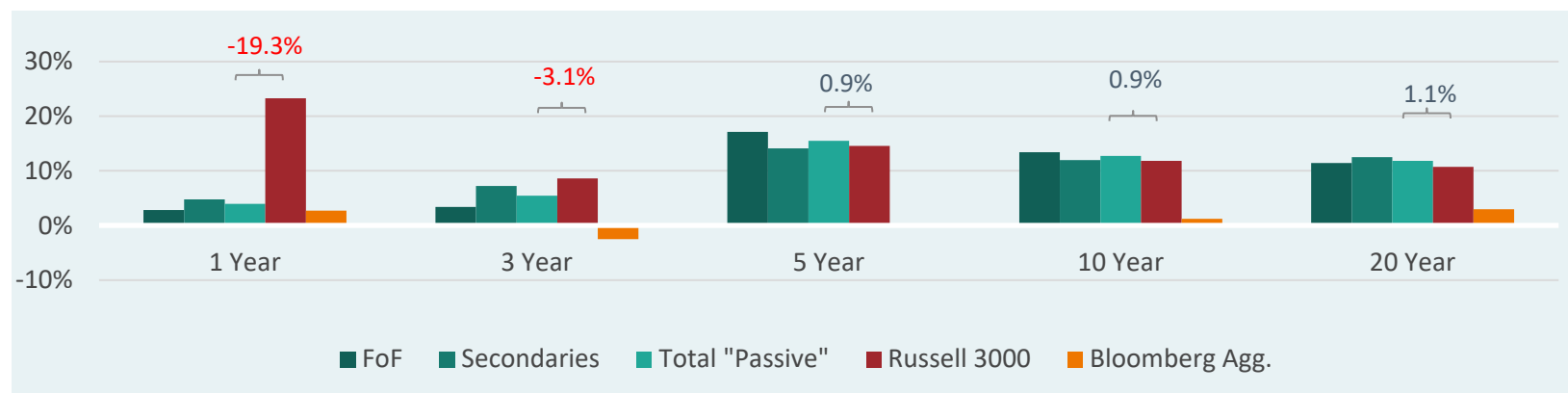
# Private equity vs. traditional assets performance

## DIRECT PRIVATE EQUITY FUND INVESTMENTS



Direct P.E fund performance vs. public equities has been mixed

## "PASSIVE" STRATEGIES



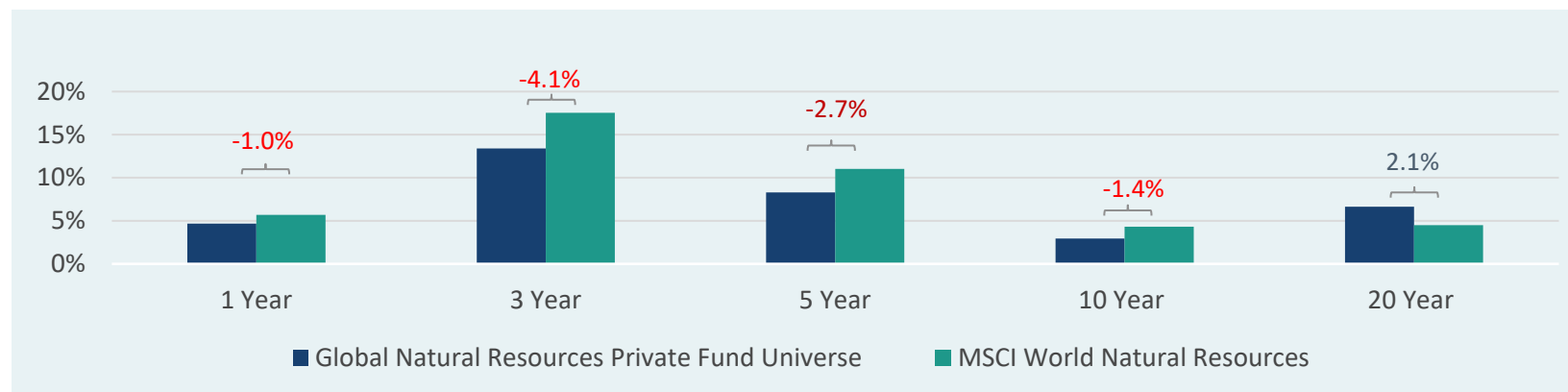
"Passive" strategy performance vs. public equities has been mixed

Sources: FTSE PME: U.S. Direct Private Equity returns are as of September 30, 2024, whereas "Passive" strategies as of June 30, 2024. Public Market Equivalent returns resulted from "Total Passive" and Total Direct's identical cash flows invested into and distributed from respective traditional asset comparable.



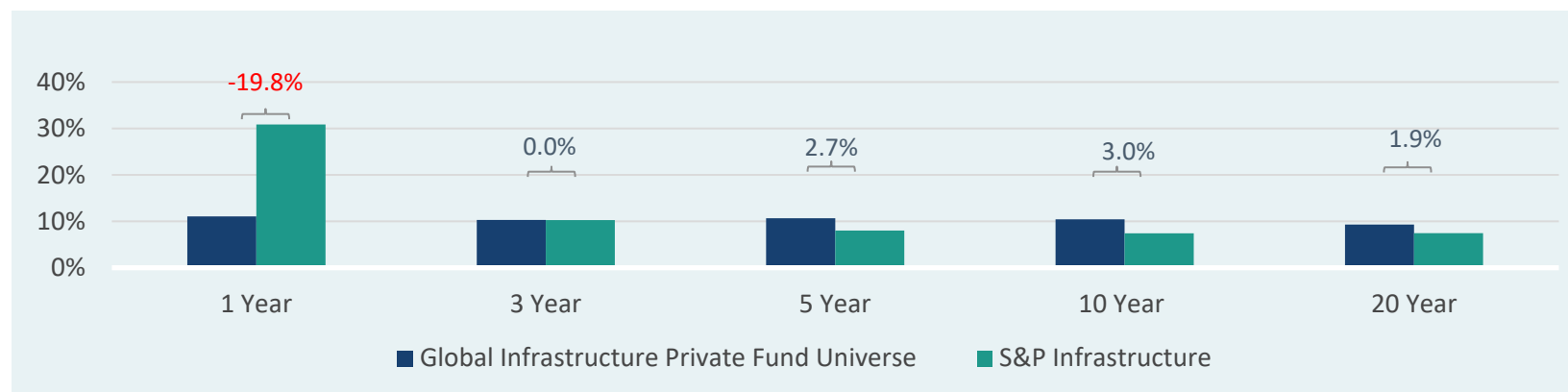
# Private vs. liquid real assets performance

## GLOBAL NATURAL RESOURCES FUNDS



N.R. funds underperformed the MSCI World Natural Resources benchmark across most periods

## GLOBAL INFRASTRUCTURE FUNDS



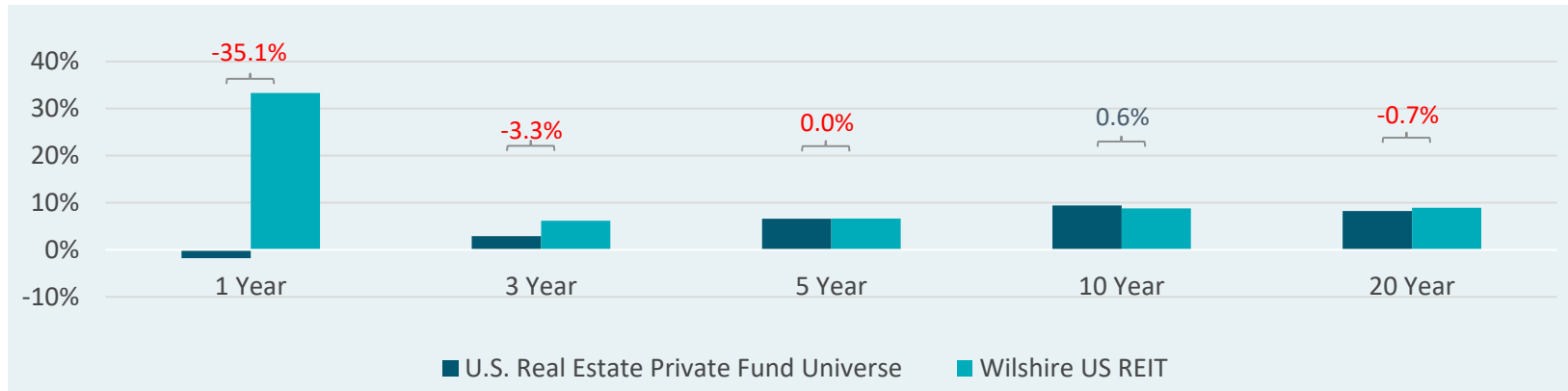
Infra. fund performance relative to the S&P Infra. was mixed

Sources: FTSE PME: Global Natural Resources (vintage 1999 and later, inception of MSCI World Natural Resources benchmark) and Global Infrastructure (vintage 2002 and later, inception of S&P Infrastructure benchmark) universes as of September 30, 2024. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real assets universes.



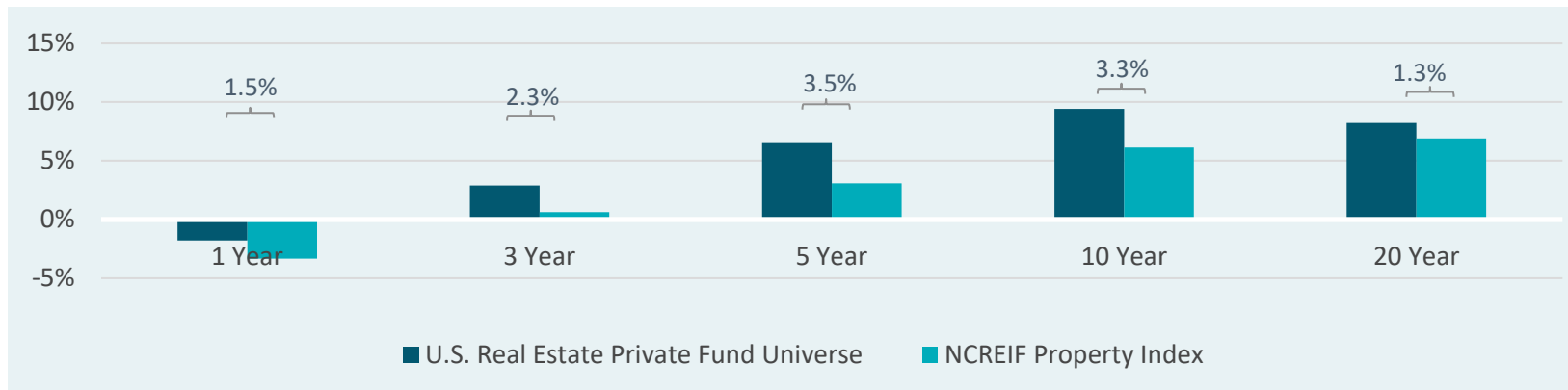
# Private vs. liquid and core real estate performance

## U.S. PRIVATE REAL ESTATE FUNDS VS. LIQUID UNIVERSE



U.S. Private R.E. funds underperformed the Wilshire U.S. REIT Index across most time periods.

## U.S. PRIVATE REAL ESTATE FUNDS VS. CORE FUNDS



U.S. Private R.E. Funds outperformed the NCREIF Property Index across all time periods.

Sources: FTSE PME: U.S. Real Estate universes as of September 30, 2024. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real estate universes.



# Detailed index returns

## DOMESTIC EQUITY

|                        | Month | QTD   | YTD  | 1 Year | 3 Year | 5 Year | 10 Year |
|------------------------|-------|-------|------|--------|--------|--------|---------|
| <b>Core Index</b>      |       |       |      |        |        |        |         |
| S&P 500                | (2.4) | 2.4   | 25.0 | 25.0   | 8.9    | 14.5   | 13.1    |
| S&P 500 Equal Weighted | (6.3) | (1.9) | 13.0 | 13.0   | 4.5    | 10.8   | 10.3    |
| DJ Industrial Average  | (5.1) | 0.9   | 15.0 | 15.0   | 7.6    | 10.6   | 11.6    |
| Russell Top 200        | (1.5) | 3.4   | 27.4 | 27.4   | 9.9    | 15.8   | 14.0    |
| Russell 1000           | (2.8) | 2.7   | 24.5 | 24.5   | 8.4    | 14.3   | 12.9    |
| Russell 2000           | (8.3) | 0.3   | 11.5 | 11.5   | 1.2    | 7.4    | 7.8     |
| Russell 3000           | (3.1) | 2.6   | 23.8 | 23.8   | 8.0    | 13.9   | 12.5    |
| Russell Mid Cap        | (7.0) | 0.6   | 15.3 | 15.3   | 3.8    | 9.9    | 9.6     |
| <b>Style Index</b>     |       |       |      |        |        |        |         |
| Russell 1000 Growth    | 0.9   | 7.1   | 33.4 | 33.4   | 10.5   | 19.0   | 16.8    |
| Russell 1000 Value     | (6.8) | (2.0) | 14.4 | 14.4   | 5.6    | 8.7    | 8.5     |
| Russell 2000 Growth    | (8.2) | 1.7   | 15.2 | 15.2   | 0.2    | 6.9    | 8.1     |
| Russell 2000 Value     | (8.3) | (1.1) | 8.1  | 8.1    | 1.9    | 7.3    | 7.1     |

## INTERNATIONAL EQUITY

|                        |       |        |        |        |       |       |     |
|------------------------|-------|--------|--------|--------|-------|-------|-----|
| <b>Broad Index</b>     |       |        |        |        |       |       |     |
| MSCI ACWI              | (2.4) | (1.0)  | 17.5   | 17.5   | 5.4   | 10.1  | 9.2 |
| MSCI ACWI ex US        | (1.9) | (7.6)  | 5.5    | 5.5    | 0.8   | 4.1   | 4.8 |
| MSCI EAFE              | (2.3) | (8.1)  | 3.8    | 3.8    | 1.6   | 4.7   | 5.2 |
| MSCI EM                | (0.1) | (8.0)  | 7.5    | 7.5    | (1.9) | 1.7   | 3.6 |
| MSCI EAFE Small Cap    | (2.3) | (8.4)  | 1.8    | 1.8    | (3.2) | 2.3   | 5.5 |
| <b>Style Index</b>     |       |        |        |        |       |       |     |
| MSCI EAFE Growth       | (2.8) | (9.1)  | 2.0    | 2.0    | (2.6) | 4.0   | 5.8 |
| MSCI EAFE Value        | (1.8) | (7.1)  | 5.7    | 5.7    | 5.9   | 5.1   | 4.3 |
| <b>Regional Index</b>  |       |        |        |        |       |       |     |
| MSCI UK                | (2.8) | (6.8)  | 7.5    | 7.5    | 5.3   | 4.4   | 3.8 |
| MSCI Japan             | (0.3) | (3.6)  | 8.3    | 8.3    | 2.8   | 4.8   | 6.2 |
| MSCI Euro              | (0.4) | (9.4)  | 2.1    | 2.1    | 1.9   | 5.3   | 5.2 |
| MSCI EM Asia           | 0.2   | (7.9)  | 12.0   | 12.0   | (1.6) | 3.0   | 4.8 |
| MSCI EM Latin American | (6.1) | (15.8) | (26.4) | (26.4) | 2.1   | (3.4) | 0.3 |

## FIXED INCOME

|                               | Month | QTD   | YTD   | 1 Year | 3 Year | 5 Year | 10 Year |
|-------------------------------|-------|-------|-------|--------|--------|--------|---------|
| <b>Broad Index</b>            |       |       |       |        |        |        |         |
| Bloomberg US TIPS             | (1.6) | (2.9) | 1.8   | 1.8    | (2.3)  | 1.9    | 2.2     |
| Bloomberg US Treasury Bills   | 0.4   | 1.2   | 5.3   | 5.3    | 3.9    | 2.5    | 1.8     |
| Bloomberg US Agg Bond         | (1.6) | (3.1) | 1.3   | 1.3    | (2.4)  | (0.3)  | 1.3     |
| Bloomberg US Universal        | (1.5) | (2.7) | 2.0   | 2.0    | (2.0)  | 0.1    | 1.7     |
| <b>Duration</b>               |       |       |       |        |        |        |         |
| Bloomberg US Treasury 1-3 Yr  | 0.2   | (0.1) | 4.0   | 4.0    | 1.4    | 1.4    | 1.4     |
| Bloomberg US Treasury Long    | (5.3) | (8.6) | (6.4) | (6.4)  | (12.0) | (5.2)  | (0.6)   |
| Bloomberg US Treasury         | (1.5) | (3.1) | 0.6   | 0.6    | (2.9)  | (0.7)  | 0.8     |
| <b>Issuer</b>                 |       |       |       |        |        |        |         |
| Bloomberg US MBS              | (1.6) | (3.2) | 1.2   | 1.2    | (2.1)  | (0.7)  | 0.9     |
| Bloomberg US Corp. High Yield | (0.4) | 0.2   | 8.2   | 8.2    | 2.9    | 4.2    | 5.2     |
| Bloomberg US Agency Interm    | (0.2) | (0.6) | 3.6   | 3.6    | 0.5    | 0.9    | 1.4     |
| Bloomberg US Credit           | (1.9) | (3.0) | 2.0   | 2.0    | (2.2)  | 0.2    | 2.3     |

## OTHER

|                           |       |       |        |        |       |       |       |
|---------------------------|-------|-------|--------|--------|-------|-------|-------|
| <b>Index</b>              |       |       |        |        |       |       |       |
| Bloomberg Commodity       | 1.0   | (0.4) | 5.4    | 5.4    | 4.1   | 6.8   | 1.3   |
| Wilshire US REIT          | (7.3) | (5.0) | 9.1    | 9.1    | (2.5) | 4.5   | 5.7   |
| CS Leveraged Loans        | 0.6   | 2.3   | 9.1    | 9.1    | 6.8   | 5.7   | 5.1   |
| S&P Global Infrastructure | (4.5) | (2.5) | 15.1   | 15.1   | 7.1   | 5.3   | 5.9   |
| Alerian MLP               | (7.2) | 5.6   | 26.7   | 26.7   | 27.2  | 14.8  | 3.3   |
| <b>Regional Index</b>     |       |       |        |        |       |       |       |
| JPM EMBI Global Div       | (1.4) | (1.9) | 6.5    | 6.5    | (0.9) | 0.1   | 3.1   |
| JPM GBI-EM Global Div     | (1.9) | (7.0) | (2.4)  | (2.4)  | (1.0) | (1.9) | 0.4   |
| <b>Hedge Funds</b>        |       |       |        |        |       |       |       |
| HFRI Composite            | (0.2) | 1.5   | 8.8    | 8.8    | 4.1   | 6.8   | 5.2   |
| HFRI FOF Composite        | 0.5   | 2.7   | 9.9    | 9.9    | 3.3   | 5.4   | 3.9   |
| <b>Currency (Spot)</b>    |       |       |        |        |       |       |       |
| Euro                      | (2.0) | (7.2) | (6.3)  | (6.3)  | (3.1) | (1.6) | (1.5) |
| Pound Sterling            | (1.5) | (6.6) | (1.8)  | (1.8)  | (2.6) | (1.1) | (2.2) |
| Yen                       | (4.4) | (9.0) | (10.3) | (10.3) | (9.8) | (7.1) | (2.7) |

Source: Morningstar, HFRI, as of 12/31/24



# Definitions

**Bloomberg US Weekly Consumer Comfort Index** - tracks the public's economic attitudes each week, providing a high-frequency read on consumer sentiment. The index, based on cell and landline telephone interviews with a random, representative national sample of U.S. adults, tracks Americans' ratings of the national economy, their personal finances and the buying climate on a weekly basis, with views of the economy's direction measured separately each month. ([www.langerresearch.com](http://www.langerresearch.com))

**University of Michigan Consumer Sentiment Index** - A survey of consumer attitudes concerning both the present situation as well as expectations regarding economic conditions conducted by the University of Michigan. For the preliminary release approximately three hundred consumers are surveyed while five hundred are interviewed for the final figure. The level of consumer sentiment is related to the strength of consumer spending. ([www.Bloomberg.com](http://www.Bloomberg.com))

**NFIB Small Business Outlook** - Small Business Economic Trends (SBET) is a monthly assessment of the U.S. small-business economy and its near-term prospects. Its data are collected through mail surveys to random samples of the National Federal of Independent Business (NFIB) membership. The survey contains three broad question types: recent performance, near-term forecasts, and demographics. The topics addressed include: outlook, sales, earnings, employment, employee compensation, investment, inventories, credit conditions, and single most important problem. (<http://www.nfib-sbet.org/about/>)

**NAHB Housing Market Index** - the housing market index is a weighted average of separate diffusion indices for three key single-family indices: market conditions for the sale of new homes at the present time, market conditions for the sale of new homes in the next six months, and the traffic of prospective buyers of new homes. The first two series are rated on a scale of Good, Fair, and Poor and the last is rated on a scale of High/Very High, Average, and Low/Very Low. A diffusion index is calculated for each series by applying the formula  $(\text{Good-Poor} + 100)/2$  to the present and future sales series and  $(\text{High/Very High-Low/Very Low} + 100)/2$  to the traffic series. Each resulting index is then seasonally adjusted and weighted to produce the HMI. Based on this calculation, the HMI can range between 0 and 100.

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# Contra Costa County Employees Retirement Association

Investment Performance Review  
Period Ending: December 31, 2024



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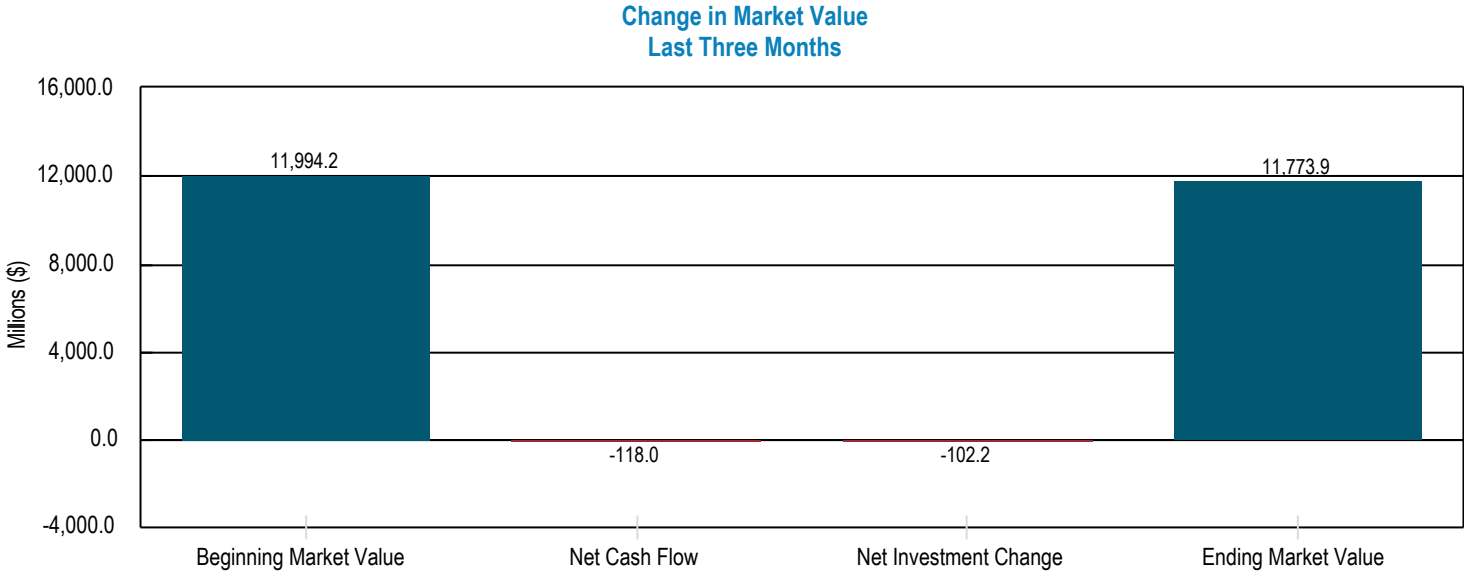
SAN FRANCISCO 415.362.3484



Total Fund  
Portfolio Reconciliation

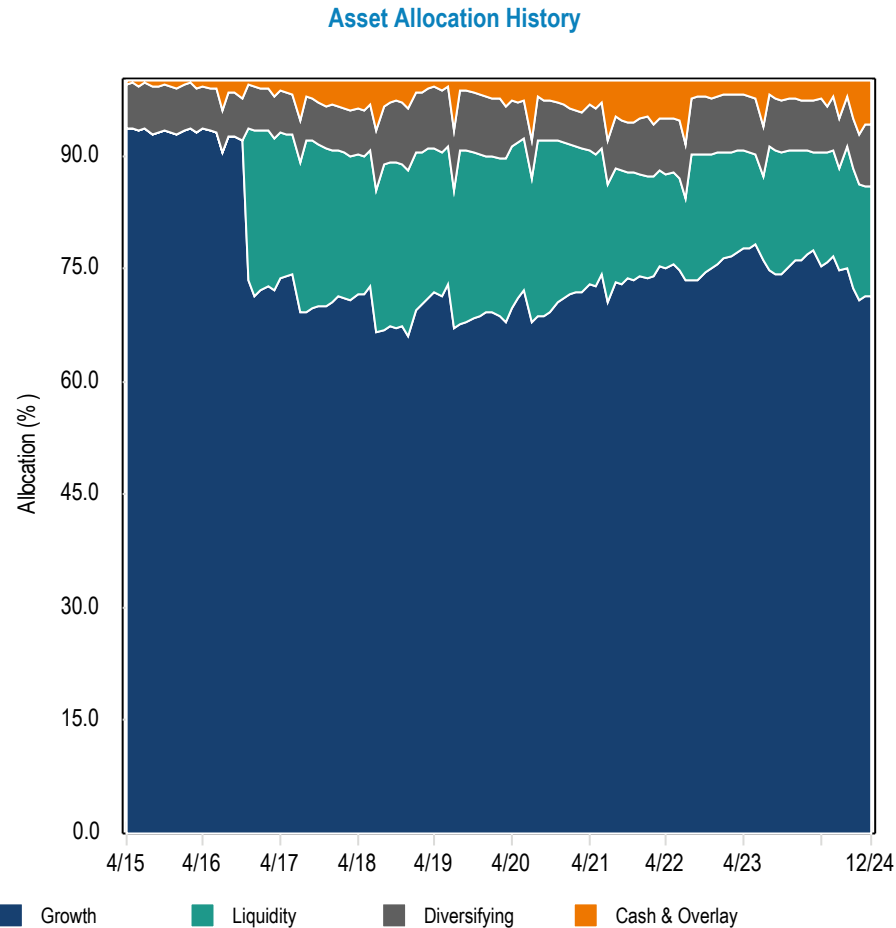
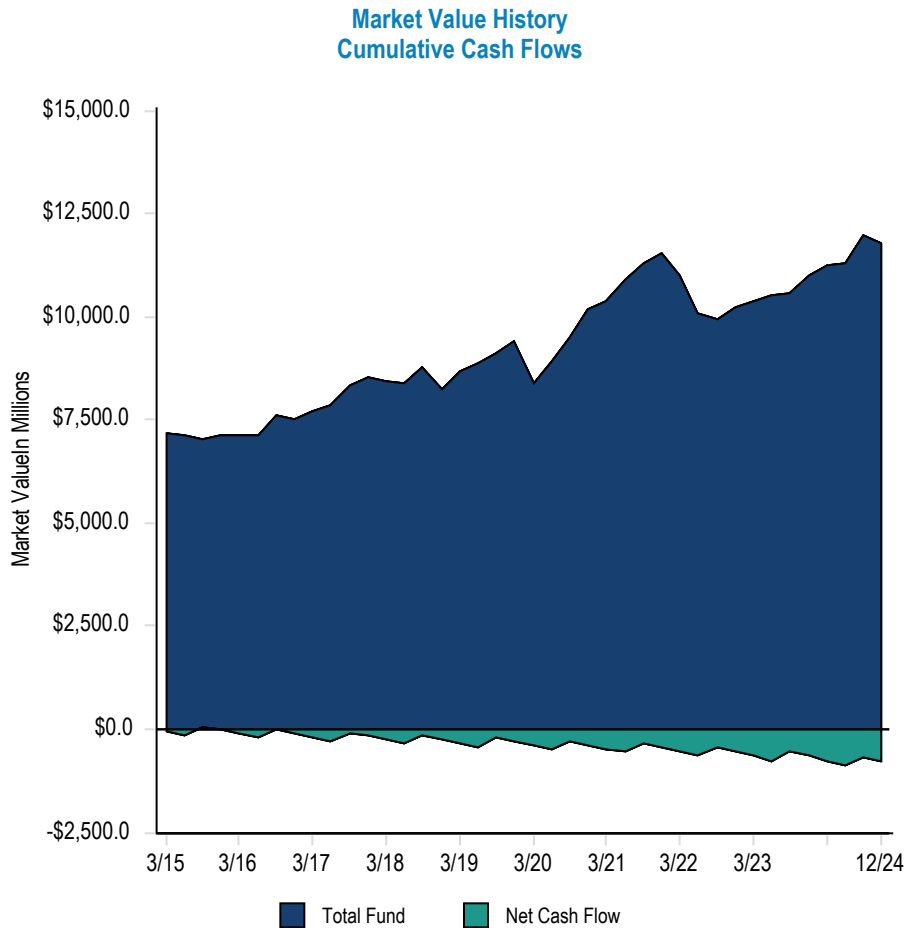
Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024

| Portfolio Reconciliation |                   |                  |
|--------------------------|-------------------|------------------|
|                          | Last Three Months | YTD              |
| Beginning Market Value   | \$11,994,163,809  | \$11,026,398,894 |
| Net Cash Flow            | -\$118,047,730    | -\$154,163,013   |
| Net Investment Change    | -\$102,191,373    | \$901,688,826    |
| Ending Market Value      | \$11,773,924,707  | \$11,773,924,707 |



Contributions and withdrawals may include intra-account transfers between managers/funds.

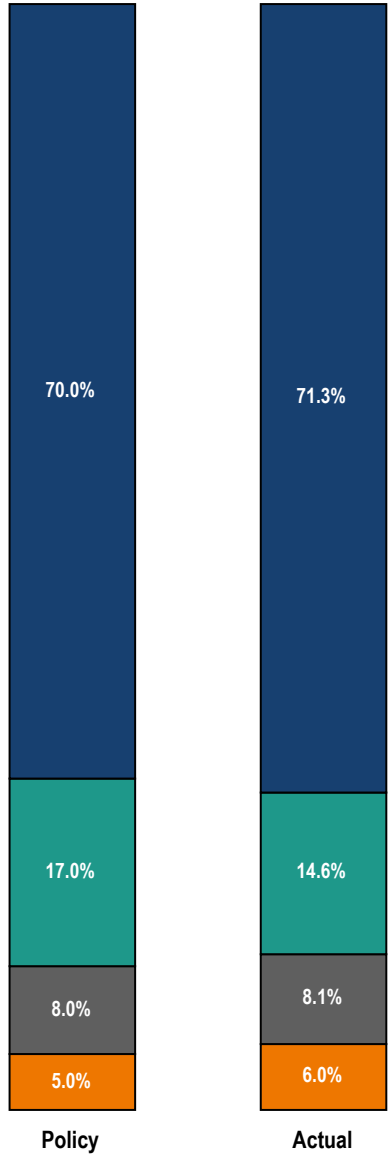






Total Fund  
Asset Allocation vs. Policy Target

Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024



|                | Allocation vs. Policy Target |                    |               |                |
|----------------|------------------------------|--------------------|---------------|----------------|
|                | Current Balance              | Current Allocation | Policy Target | Difference     |
| Growth         | \$8,389,870,693              | 71.3               | 70.0          | \$148,123,398  |
| Liquidity      | \$1,723,469,978              | 14.6               | 17.0          | -\$278,097,222 |
| Diversifying   | \$958,015,277                | 8.1                | 8.0           | \$16,101,300   |
| Cash & Overlay | \$702,568,759                | 6.0                | 5.0           | \$113,872,524  |
| Total          | \$11,773,924,707             | 100.0              | 100.0         |                |

Policy Targets as of 10/1/2024.



Total Fund  
Executive Summary (Net of Fees)

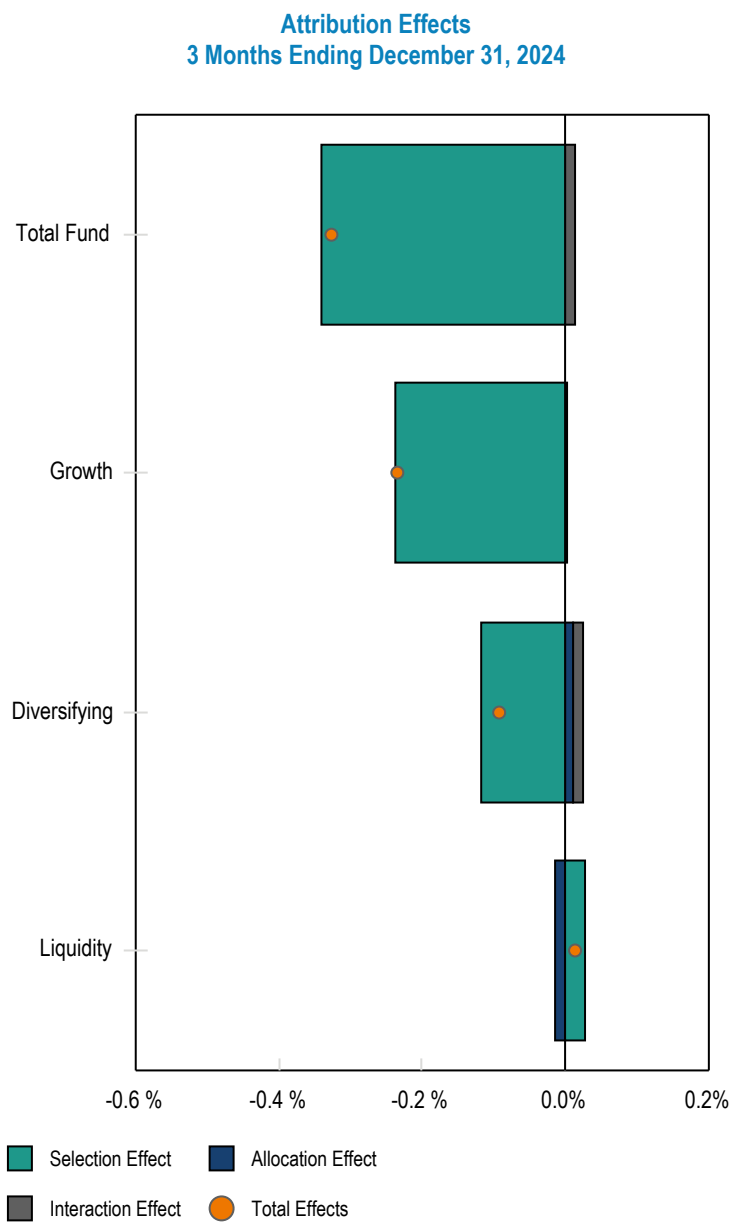
Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024

|  | % of Portfolio | QTD         | 1 Yr        | 3 Yrs       | 5 Yrs       | 10 Yrs     | 2023        | 2022         | 2021        | 2020        | 2019        |
|--|----------------|-------------|-------------|-------------|-------------|------------|-------------|--------------|-------------|-------------|-------------|
| <b>Total Fund</b>                        | <b>100.0</b>   | <b>-0.9</b> | <b>8.3</b>  | <b>1.8</b>  | <b>5.6</b>  | <b>6.2</b> | <b>9.0</b>  | <b>-10.6</b> | <b>13.9</b> | <b>9.2</b>  | <b>14.6</b> |
| Policy Index                             |                | -0.6        | 7.8         | 2.7         | 6.7         | 7.0        | 9.9         | -8.4         | 15.3        | 10.8        | 14.6        |
| Implementation Benchmark                 |                | -0.6        | 7.8         | 2.3         | 5.9         | 6.4        | 9.0         | -8.7         | 14.2        | 8.7         | 13.6        |
| <b>Growth</b>                            | <b>71.3</b>    | <b>-0.9</b> | <b>9.7</b>  | <b>2.2</b>  | <b>7.3</b>  | <b>7.8</b> | <b>10.1</b> | <b>-11.7</b> | <b>19.2</b> | <b>12.0</b> | <b>18.3</b> |
| Custom Growth Benchmark                  |                | -0.6        | 9.2         | 2.9         | 8.6         | 8.8        | 11.2        | -10.3        | 21.6        | 13.8        | 19.3        |
| <b>Diversifying</b>                      | <b>8.1</b>     | <b>-2.9</b> | <b>-0.4</b> | <b>-1.4</b> | <b>-0.8</b> | <b>0.2</b> | <b>2.2</b>  | <b>-5.7</b>  | <b>1.7</b>  | <b>-1.7</b> | <b>6.8</b>  |
| Custom Diversifying Benchmark            |                | -1.4        | 4.3         | 1.8         | 2.4         | 3.1        | 7.4         | -5.7         | 1.6         | 4.7         | 6.1         |
| <b>Liquidity</b>                         | <b>14.6</b>    | <b>0.2</b>  | <b>5.0</b>  | <b>2.2</b>  | <b>1.9</b>  | <b>-</b>   | <b>5.4</b>  | <b>-3.5</b>  | <b>-0.3</b> | <b>3.4</b>  | <b>4.8</b>  |
| Bloomberg U.S. Gov/Credit 1-3 Year Index |                | 0.0         | 4.4         | 1.7         | 1.6         | -          | 4.6         | -3.7         | -0.5        | 3.3         | 4.0         |

*\*Correlation between the Growth and Diversifying composites is .65, .61, and .68 over the previous 1, 3, and 5 year periods respectively.*

As of 1/1/2024, the Policy Index matches the Implementation Benchmark. The Implementation Benchmark weights can be found in the Data Sources and Methodology pages.





| Performance Attribution |  | 3 Mo  |
|-------------------------|--|-------|
| Wtd. Actual Return      |  | -0.90 |
| Wtd. Index Return       |  | -0.62 |
| Excess Return           |  | -0.28 |
| Selection Effect        |  | -0.28 |
| Allocation Effect       |  | 0.00  |
| Interaction Effect      |  | 0.00  |

| Attribution Summary<br>Last 3 Months |                       |                      |                  |                     |                      |                        |                  |
|--------------------------------------|-----------------------|----------------------|------------------|---------------------|----------------------|------------------------|------------------|
|                                      | Wtd. Actual<br>Return | Wtd. Index<br>Return | Excess<br>Return | Selection<br>Effect | Allocation<br>Effect | Interaction<br>Effects | Total<br>Effects |
| Growth                               | -0.9                  | -0.7                 | -0.3             | -0.3                | 0.0                  | 0.0                    | -0.2             |
| Diversifying                         | -2.9                  | -2.2                 | -0.6             | -0.1                | 0.0                  | 0.0                    | 0.0              |
| Liquidity                            | 0.2                   | -0.2                 | 0.3              | 0.0                 | 0.0                  | 0.0                    | 0.1              |
| Cash                                 | 1.3                   | 1.2                  | 0.0              | 0.0                 | 0.0                  | 0.0                    | 0.0              |
| Total Fund                           | -0.9                  | -0.6                 | -0.3             | -0.3                | 0.0                  | 0.0                    | -0.3             |



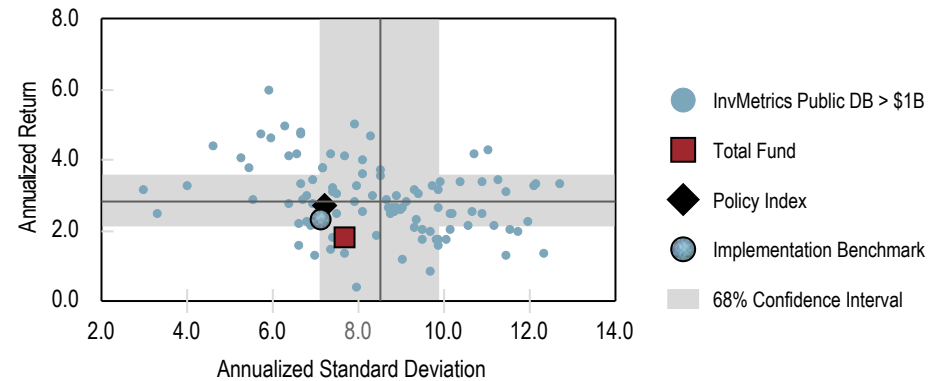
# Total Fund Executive Summary (Net of Fees)

## Contra Costa County Employees' Retirement Association Period Ending: December 31, 2024

3 Years

|            | Anlzd Return | Ann Excess Performance | Anlzd Standard Deviation | Anlzd Alpha | Beta | Tracking Error | R-Squared | Sharpe Ratio | Information Ratio | Up Capture | Down Capture |
|------------|--------------|------------------------|--------------------------|-------------|------|----------------|-----------|--------------|-------------------|------------|--------------|
| Total Fund | 1.80         | -0.55                  | 7.66                     | -0.67       | 1.07 | 1.04           | 0.99      | -0.25        | -0.48             | 103.61     | 115.36       |

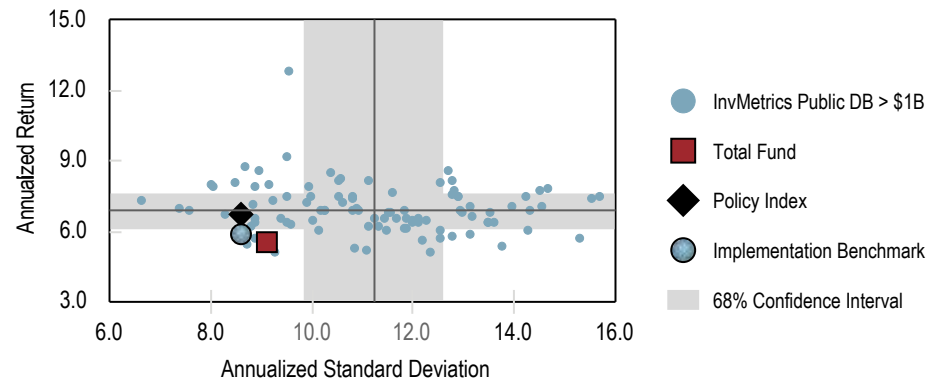
Risk vs. Return



5 Years

|            | Anlzd Return | Ann Excess Performance | Standard Deviation | Anlzd Alpha | Beta | Tracking Error | R-Squared | Sharpe Ratio | Information Ratio | Up Capture | Down Capture |
|------------|--------------|------------------------|--------------------|-------------|------|----------------|-----------|--------------|-------------------|------------|--------------|
| Total Fund | 5.59         | -0.28                  | 9.12               | -0.55       | 1.05 | 1.11           | 0.99      | 0.38         | -0.20             | 103.03     | 111.39       |

Risk vs. Return





Total Fund  
Performance Summary (Gross of Fees)

Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024

|   | Market Value          | % of Portfolio | 3 Mo        | 1 Yr        | 3 Yrs      | 5 Yrs       | 10 Yrs      | 2023        | 2022         | 2021        | 2020        | 2019        | Inception | Inception Date |
|---|-----------------------|----------------|-------------|-------------|------------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|-----------|----------------|
| <b>Total Fund</b>                       | <b>11,773,924,707</b> | <b>100.0</b>   | <b>-0.9</b> | <b>8.5</b>  | <b>2.0</b> | <b>5.8</b>  | <b>6.5</b>  | <b>9.2</b>  | <b>-10.4</b> | <b>14.2</b> | <b>9.5</b>  | <b>14.9</b> |           |                |
| Policy Index                            |                       |                | -0.6        | 7.8         | 2.7        | 6.7         | 7.0         | 9.9         | -8.4         | 15.3        | 10.8        | 14.6        |           |                |
| Implementation Benchmark                |                       |                | -0.6        | 7.8         | 2.3        | 5.9         | 6.4         | 9.0         | -8.7         | 14.2        | 8.7         | 13.6        |           |                |
| InvMetrics Public DB > \$1B Rank        |                       |                | 55          | 67          | 79         | 89          | 77          | 87          | 50           | 65          | 81          | 87          |           |                |
| <b>Total Fund ex Overlay &amp; Cash</b> | <b>11,071,355,948</b> | <b>94.0</b>    | <b>-0.8</b> | <b>8.5</b>  | <b>2.2</b> | <b>6.1</b>  | <b>6.6</b>  | <b>9.1</b>  | <b>-9.9</b>  | <b>14.6</b> | <b>9.7</b>  | <b>14.7</b> |           |                |
| Policy Index                            |                       |                | -0.6        | 7.8         | 2.7        | 6.7         | 7.0         | 9.9         | -8.4         | 15.3        | 10.8        | 14.6        |           |                |
| Implementation Benchmark                |                       |                | -0.6        | 7.8         | 2.3        | 5.9         | 6.4         | 9.0         | -8.7         | 14.2        | 8.7         | 13.6        |           |                |
| InvMetrics Public DB > \$1B Rank        |                       |                | 55          | 67          | 77         | 84          | 72          | 87          | 45           | 60          | 77          | 88          |           |                |
| <b>Growth</b>                           | <b>8,389,870,693</b>  | <b>71.3</b>    | <b>-0.9</b> | <b>9.9</b>  | <b>2.4</b> | <b>7.6</b>  | <b>8.2</b>  | <b>10.3</b> | <b>-11.4</b> | <b>19.6</b> | <b>12.4</b> | <b>18.7</b> |           |                |
| Custom Growth Benchmark                 |                       |                | -0.6        | 9.2         | 2.9        | 8.6         | 8.8         | 11.2        | -10.3        | 21.6        | 13.8        | 19.3        |           |                |
| <b>Total Domestic Equity</b>            | <b>2,200,988,827</b>  | <b>18.7</b>    | <b>1.6</b>  | <b>20.7</b> | <b>6.3</b> | <b>12.1</b> | <b>11.2</b> | <b>21.6</b> | <b>-18.3</b> | <b>20.6</b> | <b>22.2</b> | <b>26.7</b> |           |                |
| Russell 3000 Index                      |                       |                | 2.6         | 23.8        | 8.0        | 13.9        | 12.5        | 26.0        | -19.2        | 25.7        | 20.9        | 31.0        |           |                |
| InvMetrics Public DB US Equity Rank     |                       |                | 68          | 57          | 80         | 78          | 72          | 78          | 62           | 99          | 12          | 99          |           |                |
| BlackRock Russell 1000 Index            | 1,293,693,551         | 11.0           | 2.7         | 24.5        | 8.4        | 14.3        | -           | 26.6        | -19.1        | 26.5        | 21.0        | 31.4        | 14.2      | May-17         |
| Russell 1000 Index                      |                       |                | 2.7         | 24.5        | 8.4        | 14.3        | -           | 26.5        | -19.1        | 26.5        | 21.0        | 31.4        | 14.2      |                |
| eV US Large Cap Equity Rank             |                       |                | 30          | 33          | 41         | 36          | -           | 34          | 70           | 56          | 35          | 40          | 39        |                |
| Boston Partners                         | 449,226,677           | 3.8            | -0.8        | 16.4        | 8.7        | 11.7        | 10.1        | 14.7        | -3.8         | 31.3        | 3.0         | 24.3        | 10.9      | Jun-95         |
| Russell 1000 Value Index                |                       |                | -2.0        | 14.4        | 5.6        | 8.7         | 8.5         | 11.5        | -7.5         | 25.2        | 2.8         | 26.5        | 9.4       |                |
| eV US Large Cap Value Equity Rank       |                       |                | 38          | 42          | 26         | 30          | 40          | 39          | 36           | 19          | 64          | 79          | 24        |                |
| Emerald Advisers                        | 244,106,491           | 2.1            | 2.9         | 19.7        | 2.8        | 9.8         | 10.7        | 19.2        | -23.8        | 5.5         | 39.0        | 30.3        | 12.7      | Apr-03         |
| Russell 2000 Growth Index               |                       |                | 1.7         | 15.2        | 0.2        | 6.9         | 8.1         | 18.7        | -26.4        | 2.8         | 34.6        | 28.5        | 10.5      |                |
| eV US Small Cap Growth Equity Rank      |                       |                | 33          | 28          | 19         | 43          | 50          | 41          | 27           | 77          | 57          | 48          | 35        |                |
| Ceredex                                 | 213,962,108           | 1.8            | -1.9        | 10.2        | 5.4        | 9.0         | 8.3         | 16.0        | -8.5         | 28.4        | 2.3         | 18.4        | 10.4      | Nov-11         |
| Russell 2000 Value Index                |                       |                | -1.1        | 8.1         | 1.9        | 7.3         | 7.1         | 14.6        | -14.5        | 28.3        | 4.6         | 22.4        | 9.6       |                |
| eV US Small Cap Value Equity Rank       |                       |                | 84          | 59          | 44         | 68          | 66          | 62          | 28           | 59          | 70          | 88          | 79        |                |

Individual closed end funds are not shown in performance summary table.



Total Fund  
Performance Summary (Gross of Fees)

Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024

|   | Market Value         | % of Portfolio | 3 Mo        | 1 Yr        | 3 Yrs       | 5 Yrs      | 10 Yrs     | 2023        | 2022         | 2021        | 2020        | 2019        | Inception  | Inception Date |
|---|----------------------|----------------|-------------|-------------|-------------|------------|------------|-------------|--------------|-------------|-------------|-------------|------------|----------------|
| <b>Total International Equity</b>                 | <b>1,352,603,095</b> | <b>11.5</b>    | <b>-6.2</b> | <b>7.0</b>  | <b>0.3</b>  | <b>4.8</b> | <b>5.3</b> | <b>15.4</b> | <b>-18.2</b> | <b>8.3</b>  | <b>15.8</b> | <b>23.7</b> |            |                |
| MSCI AC World ex USA Index                        |                      |                | -7.5        | 6.1         | 1.3         | 4.6        | 5.3        | 16.2        | -15.6        | 8.3         | 11.1        | 22.1        |            |                |
| MSCI EAFE Index                                   |                      |                | -8.1        | 4.3         | 2.2         | 5.2        | 5.7        | 18.9        | -14.0        | 11.8        | 8.3         | 22.7        |            |                |
| InvMetrics Public DB Global ex-US Equity Rank     |                      |                | 17          | 25          | 50          | 30         | 58         | 74          | 63           | 50          | 30          | 39          |            |                |
| <b>International Equity</b>                       | <b>852,843,496</b>   | <b>7.2</b>     | <b>-7.6</b> | <b>3.7</b>  | <b>-0.6</b> | <b>5.0</b> | <b>5.8</b> | <b>15.6</b> | <b>-18.1</b> | <b>9.0</b>  | <b>19.0</b> | <b>27.0</b> | <b>6.1</b> | <b>Oct-10</b>  |
| MSCI AC World ex USA Index                        |                      |                | -7.5        | 6.1         | 1.3         | 4.6        | 5.3        | 16.2        | -15.6        | 8.3         | 11.1        | 22.1        | 4.9        |                |
| InvMetrics Public DB Global ex-US Equity Rank     |                      |                | 63          | 78          | 69          | 28         | 36         | 68          | 59           | 36          | 14          | 16          |            |                |
| Pyrford   | 431,793,167          | 3.7            | -8.9        | 4.0         | 3.7         | 4.6        | 5.2        | 15.2        | -7.0         | 7.6         | 4.7         | 22.1        | 4.5        | May-14         |
| MSCI AC World ex USA Value                        |                      |                | -7.3        | 6.0         | 4.4         | 4.5        | 4.1        | 17.3        | -8.6         | 10.5        | -0.8        | 15.7        | 3.1        |                |
| eV ACWI ex-US Value Equity Rank                   |                      |                | 83          | 60          | 59          | 76         | 64         | 82          | 24           | 84          | 47          | 36          |            |                |
| William Blair                                     | 421,050,329          | 3.6            | -6.2        | 3.4         | -4.6        | 5.0        | 6.2        | 16.2        | -27.7        | 10.5        | 33.3        | 32.0        | 6.4        | Nov-10         |
| MSCI AC World ex USA Growth                       |                      |                | -7.9        | 5.1         | -2.7        | 3.4        | 5.3        | 14.0        | -23.1        | 5.1         | 22.2        | 27.3        | 5.0        |                |
| eV ACWI ex-US Growth Equity Rank                  |                      |                | 44          | 61          | 70          | 56         | 81         | 59          | 57           | 41          | 35          | 37          |            |                |
| <b>Emerging Markets Equity</b>                    | <b>499,759,599</b>   | <b>4.2</b>     | <b>-3.8</b> | <b>13.1</b> | <b>1.8</b>  | <b>4.8</b> | <b>-</b>   | <b>14.4</b> | <b>-18.4</b> | <b>7.6</b>  | <b>11.4</b> | <b>19.4</b> | <b>5.4</b> | <b>Feb-17</b>  |
| MSCI Emerging Markets                             |                      |                | -8.0        | 7.5         | -1.9        | 1.7        | -          | 9.8         | -20.1        | -2.5        | 18.3        | 18.4        | 4.2        |                |
| InvMetrics Public DB Emerging Markets Equity Rank |                      |                | 1           | 1           | 14          | 9          | -          | 50          | 39           | 16          | 82          | 34          |            |                |
| PIMCO RAE Emerging Markets                        | 244,065,554          | 2.1            | -8.3        | 7.5         | 6.1         | 7.4        | -          | 23.1        | -9.7         | 17.1        | 2.1         | 14.6        | 6.8        | Mar-17         |
| MSCI Emerging Markets Value                       |                      |                | -9.2        | 4.5         | 0.2         | 2.0        | -          | 14.2        | -15.8        | 4.0         | 5.5         | 12.0        | 3.4        |                |
| eV Emg Mkts All Cap Value Equity Rank             |                      |                | 56          | 41          | 6           | 10         | -          | 11          | 33           | 8           | 85          | 78          |            |                |
| TT Emerging Markets                               | 255,694,045          | 2.2            | 1.0         | 19.1        | -2.5        | 2.3        | -          | 5.8         | -26.4        | -0.2        | 20.8        | 24.8        | 3.4        | Aug-17         |
| MSCI Emerging Markets                             |                      |                | -8.0        | 7.5         | -1.9        | 1.7        | -          | 9.8         | -20.1        | -2.5        | 18.3        | 18.4        | 2.5        |                |
| eV Emg Mkts Equity Rank                           |                      |                | 1           | 2           | 72          | 65         | -          | 91          | 90           | 59          | 39          | 23          |            |                |
| <b>Total Global Equity</b>                        | <b>1,284,866,575</b> | <b>10.9</b>    | <b>-3.2</b> | <b>14.7</b> | <b>3.5</b>  | <b>9.6</b> | <b>9.9</b> | <b>19.0</b> | <b>-18.8</b> | <b>14.1</b> | <b>25.3</b> | <b>28.9</b> | <b>-</b>   | <b>Dec-03</b>  |
| MSCI AC World Index                               |                      |                | -1.0        | 17.5        | 5.4         | 10.1       | 9.2        | 22.2        | -18.4        | 18.5        | 16.3        | 26.6        | 8.0        |                |
| InvMetrics Public DB Global Equity Rank           |                      |                | 34          | 18          | 85          | 14         | 1          | 80          | 81           | 84          | 2           | 5           |            |                |
| Artisan Partners                                  | 651,114,905          | 5.5            | -1.4        | 16.3        | 0.7         | 10.7       | 12.4       | 24.5        | -29.6        | 15.0        | 41.7        | 37.0        | 12.5       | Oct-12         |
| MSCI ACWI Growth NR USD                           |                      |                | 2.6         | 24.2        | 5.7         | 13.1       | 11.9       | 33.2        | -28.6        | 17.1        | 33.6        | 32.7        | 12.2       |                |
| eV Global Growth Equity Rank                      |                      |                | 42          | 34          | 49          | 31         | 17         | 38          | 60           | 56          | 33          | 12          |            |                |
| First Eagle                                       | 633,751,670          | 5.4            | -4.9        | 13.0        | 6.7         | 8.2        | 7.9        | 13.7        | -5.6         | 13.0        | 8.5         | 21.0        | 8.3        | Jan-11         |
| MSCI ACWI Value NR USD                            |                      |                | -4.7        | 10.8        | 4.6         | 6.4        | 6.2        | 11.8        | -7.5         | 19.6        | -0.3        | 20.6        | 6.7        |                |
| eV Global Value Equity Rank                       |                      |                | 60          | 16          | 17          | 27         | 25         | 66          | 23           | 87          | 33          | 64          |            |                |

Individual closed end funds are not shown in performance summary table.



Total Fund  
Performance Summary (Gross of Fees)

Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024

|   | Market Value         | % of Portfolio | 3 Mo        | 1 Yr         | 3 Yrs        | 5 Yrs       | 10 Yrs      | 2023         | 2022         | 2021        | 2020        | 2019        | Inception | Inception Date |
|---|----------------------|----------------|-------------|--------------|--------------|-------------|-------------|--------------|--------------|-------------|-------------|-------------|-----------|----------------|
| <b>Private Credit</b>                         | <b>1,187,220,409</b> | <b>10.1</b>    | <b>2.8</b>  | <b>11.9</b>  | <b>10.5</b>  | <b>9.1</b>  | <b>9.3</b>  | <b>9.1</b>   | <b>10.5</b>  | <b>10.0</b> | <b>4.0</b>  | <b>7.7</b>  |           |                |
| <b>Total High Yield</b>                       | <b>168,216,052</b>   | <b>1.4</b>     | <b>-0.1</b> | <b>7.0</b>   | <b>2.4</b>   | <b>3.5</b>  | <b>4.5</b>  | <b>12.4</b>  | <b>-10.6</b> | <b>5.3</b>  | <b>5.2</b>  | <b>15.3</b> |           |                |
| ICE BofA U.S. High Yield Index                |                      |                | 0.2         | 8.2          | 2.9          | 4.0         | 5.1         | 13.5         | -11.2        | 5.4         | 6.2         | 14.4        |           |                |
| eV US High Yield Fixed Inc Rank               |                      |                | 82          | 83           | 89           | 91          | 87          | 63           | 74           | 55          | 74          | 35          |           |                |
| Voya Global Investors                         | 168,216,052          | 1.4            | -0.1        | 7.0          | 2.4          | 3.5         | 4.5         | 12.4         | -10.6        | 5.3         | 5.2         | 15.3        | 6.3       | May-00         |
| ICE BofA U.S. High Yield Index                |                      |                | 0.2         | 8.2          | 2.9          | 4.0         | 5.1         | 13.5         | -11.2        | 5.4         | 6.2         | 14.4        | 6.6       |                |
| eV US High Yield Fixed Inc Rank               |                      |                | 82          | 83           | 89           | 91          | 87          | 63           | 74           | 55          | 74          | 35          |           |                |
| <b>Total Real Estate</b>                      | <b>831,924,148</b>   | <b>7.1</b>     | <b>-3.1</b> | <b>-9.1</b>  | <b>-8.4</b>  | <b>-2.9</b> | <b>2.9</b>  | <b>-10.6</b> | <b>-5.2</b>  | <b>19.2</b> | <b>-5.9</b> | <b>8.1</b>  |           |                |
| Real Estate Benchmark                         |                      |                | -2.4        | -10.5        | -8.8         | -1.9        | 2.6         | -11.3        | -4.5         | 19.3        | 0.6         | 7.5         |           |                |
| NCREIF-ODCE                                   |                      |                | 1.2         | -1.4         | -2.3         | 2.9         | 5.9         | -12.0        | 7.5          | 22.2        | 1.2         | 5.3         |           |                |
| NCREIF Property Index                         |                      |                | 0.9         | 0.4          | -0.8         | 3.1         | 5.7         | -7.9         | 5.5          | 17.7        | 1.6         | 6.4         |           |                |
| <b>Total Core Real Estate</b>                 | <b>230,796,724</b>   | <b>2.0</b>     | <b>-6.2</b> | <b>7.8</b>   | <b>-2.9</b>  | <b>5.3</b>  | <b>6.3</b>  | <b>12.8</b>  | <b>-24.8</b> | <b>48.3</b> | <b>-4.6</b> | <b>28.2</b> |           |                |
| Adelante                                      | 107,717,700          | 0.9            | -4.5        | 10.6         | -1.7         | 6.1         | 6.8         | 17.2         | -26.7        | 48.3        | -4.6        | 28.2        | 9.7       | Oct-01         |
| Wilshire U.S. REIT Index                      |                      |                | -5.0        | 9.1          | -2.4         | 4.6         | 5.7         | 16.2         | -26.8        | 46.2        | -7.9        | 25.8        | 9.1       |                |
| Invesco US Fundamental Beta                   | 123,079,023          | 1.0            | -7.7        | 5.5          | -            | -           | -           | 9.4          | -            | -           | -           | -           | -0.6      | Mar-22         |
| Wilshire U.S. REIT Index                      |                      |                | -5.0        | 9.1          | -            | -           | -           | 16.2         | -            | -           | -           | -           | 1.1       |                |
| <b>Total Private Real Estate</b>              | <b>601,127,424</b>   | <b>5.1</b>     | <b>-1.8</b> | <b>-15.1</b> | <b>-10.8</b> | <b>-5.2</b> | <b>1.9</b>  | <b>-17.6</b> | <b>1.3</b>   | <b>15.3</b> | <b>-6.1</b> | <b>6.2</b>  |           |                |
| <b>Private Equity</b>                         | <b>1,265,379,946</b> | <b>10.7</b>    | <b>1.1</b>  | <b>2.8</b>   | <b>0.4</b>   | <b>12.1</b> | <b>11.4</b> | <b>-1.0</b>  | <b>-0.5</b>  | <b>60.4</b> | <b>8.7</b>  | <b>8.4</b>  |           |                |
| <b>Private Infrastructure</b>                 | <b>89,776,822</b>    | <b>0.8</b>     | <b>3.0</b>  | <b>-</b>     | <b>-</b>     | <b>-</b>    | <b>-</b>    | <b>-</b>     | <b>-</b>     | <b>-</b>    | <b>-</b>    | <b>-</b>    |           |                |
| <b>Risk Parity</b>                            | <b>8,894,820</b>     | <b>0.1</b>     | <b>0.7</b>  | <b>10.6</b>  | <b>-3.1</b>  | <b>1.9</b>  | <b>-</b>    | <b>4.9</b>   | <b>-21.5</b> | <b>9.7</b>  | <b>10.0</b> | <b>18.1</b> |           |                |
| 60% MSCI ACWI Net/40% Blmbg. Global Aggregate |                      |                | -2.6        | 9.5          | 1.5          | 5.3         | -           | 15.4         | -17.3        | 8.8         | 14.0        | 18.6        |           |                |
| PanAgora Risk Parity Multi Asset              | 8,894,820            | 0.1            | 0.1         | 9.5          | -6.0         | 0.6         | -           | 2.8          | -26.1        | 8.7         | 14.0        | -           | 2.7       | Mar-19         |
| HFR Risk Parity Vol 10 Index                  |                      |                | -3.8        | 5.9          | -1.5         | 1.1         | -           | 10.5         | -18.3        | 6.8         | 3.6         | -           | 2.9       |                |

Individual closed end funds are not shown in performance summary table. AQR Global Risk Premium-EL was liquidated of 11/6/2024.



Total Fund  
Performance Summary (Gross of Fees)

Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024

|   | Market Value         | % of Portfolio | 3 Mo        | 1 Yr        | 3 Yrs       | 5 Yrs       | 10 Yrs     | 2023       | 2022         | 2021        | 2020        | 2019       | Inception | Inception Date |
|---|----------------------|----------------|-------------|-------------|-------------|-------------|------------|------------|--------------|-------------|-------------|------------|-----------|----------------|
| <b>Diversifying</b>                       | <b>958,015,277</b>   | <b>8.1</b>     | <b>-2.8</b> | <b>-0.1</b> | <b>-1.0</b> | <b>-0.5</b> | <b>0.5</b> | <b>2.6</b> | <b>-5.4</b>  | <b>2.0</b>  | <b>-1.3</b> | <b>7.1</b> |           |                |
| Custom Diversifying Benchmark             |                      |                | -1.4        | 4.3         | 1.8         | 2.4         | 3.1        | 7.4        | -5.7         | 1.6         | 4.7         | 6.1        |           |                |
| <b>Diversifying Fixed Income</b>          | <b>269,432,512</b>   | <b>2.3</b>     | <b>-2.7</b> | <b>2.6</b>  | <b>-2.1</b> | <b>-1.1</b> | <b>0.8</b> | <b>5.5</b> | <b>-13.3</b> | <b>-0.7</b> | <b>1.6</b>  | <b>8.6</b> |           |                |
| Blmbg. U.S. Aggregate Index               |                      |                | -3.1        | 1.3         | -2.4        | -0.3        | 1.3        | 5.5        | -13.0        | -1.5        | 7.5         | 8.7        |           |                |
| eV US Core Fixed Inc Rank                 |                      |                | 25          | 25          | 69          | 100         | 100        | 85         | 74           | 32          | 100         | 79         |           |                |
| AFL-CIO                                   | 269,385,437          | 2.3            | -2.7        | 2.6         | -2.1        | -0.1        | 1.5        | 5.5        | -13.3        | -0.7        | 6.6         | 8.2        | 5.1       | Jul-91         |
| Blmbg. U.S. Aggregate Index               |                      |                | -3.1        | 1.3         | -2.4        | -0.3        | 1.3        | 5.5        | -13.0        | -1.5        | 7.5         | 8.7        | 4.8       |                |
| eV US Core Fixed Inc Rank                 |                      |                | 25          | 25          | 70          | 90          | 92         | 86         | 74           | 33          | 94          | 87         | 80        |                |
| <b>Diversifying Multi-Asset</b>           | <b>688,582,765</b>   | <b>5.8</b>     | <b>-2.9</b> | <b>-1.1</b> | <b>-0.6</b> | <b>-</b>    | <b>-</b>   | <b>1.4</b> | <b>-1.9</b>  | <b>2.8</b>  | <b>-</b>    | <b>-</b>   |           |                |
| Custom Diversifying Multi-Asset Benchmark |                      |                | -0.2        | 6.5         | 3.9         | -           | -          | 8.7        | -3.1         | 4.1         | -           | -          |           |                |
| Sit LLCAR                                 | 463,062,627          | 3.9            | -1.1        | 6.1         | 3.1         | -           | -          | 6.9        | -3.3         | -           | -           | -          | 3.7       | Apr-21         |
| Blmbg. U.S. Aggregate Index +1%           |                      |                | -2.8        | 2.3         | -1.4        | -           | -          | 6.6        | -12.1        | -           | -           | -          | -0.4      |                |
| BH-DG Systematic                          | 225,520,138          | 1.9            | -6.6        | -           | -           | -           | -          | -          | -            | -           | -           | -          | -13.7     | Apr-24         |
| SG Trend Index                            |                      |                | -0.2        | -           | -           | -           | -          | -          | -            | -           | -           | -          | -9.6      |                |
| <b>Liquidity</b>                          | <b>1,723,469,978</b> | <b>14.6</b>    | <b>0.2</b>  | <b>5.1</b>  | <b>2.3</b>  | <b>2.0</b>  | <b>-</b>   | <b>5.5</b> | <b>-3.4</b>  | <b>-0.2</b> | <b>3.5</b>  | <b>4.9</b> |           |                |
| Blmbg. 1-3 Year Gov/Credit Index          |                      |                | 0.0         | 4.4         | 1.7         | 1.6         | -          | 4.6        | -3.7         | -0.5        | 3.3         | 4.0        |           |                |
| eV US Short Duration Fixed Inc Rank       |                      |                | 42          | 46          | 46          | 59          | -          | 45         | 48           | 47          | 74          | 40         |           |                |
| DFA Short Credit                          | 394,050,033          | 3.3            | 1.2         | 5.8         | 1.8         | 1.6         | -          | 5.4        | -5.3         | -0.4        | 2.9         | 5.2        | 2.0       | Dec-16         |
| ICE BofA 1-5 Year U.S. Corp/Govt Index    |                      |                | -0.7        | 3.9         | 1.0         | 1.3         | -          | 4.9        | -5.5         | -0.9        | 4.6         | 5.1        | 1.8       |                |
| eV US Short Duration Fixed Inc Rank       |                      |                | 5           | 19          | 73          | 86          | -          | 48         | 90           | 69          | 88          | 27         |           |                |
| Insight Short Duration                    | 650,402,897          | 5.5            | 0.5         | 5.4         | 3.3         | 2.6         | -          | 5.7        | -1.1         | 0.1         | 3.2         | 4.7        | 2.6       | Dec-16         |
| Bloomberg U.S. Gov/Credit 1-3 Year Index  |                      |                | 0.0         | 4.4         | 1.7         | 1.6         | -          | 4.6        | -3.7         | -0.5        | 3.3         | 4.0        | 1.8       |                |
| eV US Short Duration Fixed Inc Rank       |                      |                | 15          | 32          | 12          | 20          | -          | 34         | 6            | 34          | 85          | 49         |           |                |
| Sit Short Duration                        | 679,017,047          | 5.8            | -0.7        | 4.4         | 1.5         | 1.8         | -          | 5.4        | -4.8         | -0.3        | 4.6         | 4.9        | 2.1       | Dec-16         |
| Blmbg. 1-3 Year Govt Index                |                      |                | -0.1        | 4.0         | 1.4         | 1.4         | -          | 4.3        | -3.8         | -0.6        | 3.1         | 3.6        | 1.5       |                |
| eV US Short Duration Fixed Inc Rank       |                      |                | 96          | 77          | 84          | 78          | -          | 51         | 79           | 60          | 31          | 41         |           |                |
| <b>Total Cash</b>                         | <b>571,532,827</b>   | <b>4.9</b>     | <b>1.3</b>  | <b>5.6</b>  | <b>4.5</b>  | <b>3.0</b>  | <b>2.2</b> | <b>5.5</b> | <b>2.4</b>   | <b>0.4</b>  | <b>1.3</b>  | <b>3.3</b> |           |                |
| 90 Day U.S. Treasury Bill                 |                      |                | 1.2         | 5.3         | 3.9         | 2.5         | 1.8        | 5.0        | 1.5          | 0.0         | 0.7         | 2.3        |           |                |
| Cash                                      | 571,532,826          | 4.9            | 1.3         | 5.6         | 4.6         | 3.1         | 2.2        | 6.1        | 2.2          | 0.4         | 1.3         | 3.4        |           |                |
| Northern Trust Transition                 | 1                    | 0.0            | 0.4         | 7.8         | -80.2       | -56.9       | -          | -99.2      | -4.8         | -6.1        | 104.1       | -          |           |                |

Individual closed end funds are not shown in performance summary table. Effective 3/1/2019 the custodian of record switched from State Street to Northern Trust. Wellington Real Total Return was liquidated 4/30/2020. BH-DG Systematic funded on 4/19/2024. Acadian Multi-Asset Absolute Return Fund liquidated on 5/15/2024. \$47,075.25 in residual value is reflected in the Diversifying Fixed Income composite.



Total Fund  
Performance Summary (Net of Fees)

Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024

|   | Market Value          | % of Portfolio | 3 Mo        | 1 Yr        | 3 Yrs       | 5 Yrs       | 10 Yrs      | 2023        | 2022         | 2021        | 2020        | 2019        | Inception | Inception Date |
|---|-----------------------|----------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|-----------|----------------|
| <b>Total Fund</b>                       | <b>11,773,924,707</b> | <b>100.0</b>   | <b>-0.9</b> | <b>8.3</b>  | <b>1.8</b>  | <b>5.6</b>  | <b>6.2</b>  | <b>9.0</b>  | <b>-10.6</b> | <b>13.9</b> | <b>9.2</b>  | <b>14.6</b> |           |                |
| Policy Index                            |                       |                | -0.6        | 7.8         | 2.7         | 6.7         | 7.0         | 9.9         | -8.4         | 15.3        | 10.8        | 14.6        |           |                |
| Implementation Benchmark                |                       |                | -0.6        | 7.8         | 2.3         | 5.9         | 6.4         | 9.0         | -8.7         | 14.2        | 8.7         | 13.6        |           |                |
| <b>Total Fund ex Overlay &amp; Cash</b> | <b>11,071,355,948</b> | <b>94.0</b>    | <b>-0.9</b> | <b>8.3</b>  | <b>2.0</b>  | <b>5.8</b>  | <b>6.3</b>  | <b>8.9</b>  | <b>-10.1</b> | <b>14.3</b> | <b>9.4</b>  | <b>14.3</b> |           |                |
| Policy Index                            |                       |                | -0.6        | 7.8         | 2.7         | 6.7         | 7.0         | 9.9         | -8.4         | 15.3        | 10.8        | 14.6        |           |                |
| Implementation Benchmark                |                       |                | -0.6        | 7.8         | 2.3         | 5.9         | 6.4         | 9.0         | -8.7         | 14.2        | 8.7         | 13.6        |           |                |
| <b>Growth</b>                           | <b>8,389,870,693</b>  | <b>71.3</b>    | <b>-0.9</b> | <b>9.7</b>  | <b>2.2</b>  | <b>7.3</b>  | <b>7.8</b>  | <b>10.1</b> | <b>-11.7</b> | <b>19.2</b> | <b>12.0</b> | <b>18.3</b> |           |                |
| Custom Growth Benchmark                 |                       |                | -0.6        | 9.2         | 2.9         | 8.6         | 8.8         | 11.2        | -10.3        | 21.6        | 13.8        | 19.3        |           |                |
| <b>Total Domestic Equity</b>            | <b>2,200,988,827</b>  | <b>18.7</b>    | <b>1.5</b>  | <b>20.5</b> | <b>6.0</b>  | <b>11.8</b> | <b>10.9</b> | <b>21.4</b> | <b>-18.5</b> | <b>20.2</b> | <b>21.8</b> | <b>26.1</b> |           |                |
| Russell 3000 Index                      |                       |                | 2.6         | 23.8        | 8.0         | 13.9        | 12.5        | 26.0        | -19.2        | 25.7        | 20.9        | 31.0        | 12.0      |                |
| BlackRock Russell 1000 Index            | 1,293,693,551         | 11.0           | 2.7         | 24.5        | 8.4         | 14.3        | -           | 26.6        | -19.1        | 26.5        | 20.9        | 31.4        | 14.2      | May-17         |
| Russell 1000 Index                      |                       |                | 2.7         | 24.5        | 8.4         | 14.3        | -           | 26.5        | -19.1        | 26.5        | 21.0        | 31.4        | 14.2      |                |
| Boston Partners                         | 449,226,677           | 3.8            | -0.9        | 16.0        | 8.3         | 11.3        | 9.7         | 14.3        | -4.1         | 31.0        | 2.6         | 23.8        | 10.8      | Jun-95         |
| Russell 1000 Value Index                |                       |                | -2.0        | 14.4        | 5.6         | 8.7         | 8.5         | 11.5        | -7.5         | 25.2        | 2.8         | 26.5        | 9.4       |                |
| Emerald Advisers                        | 244,106,491           | 2.1            | 2.7         | 18.9        | 2.2         | 9.1         | 10.0        | 18.6        | -24.2        | 4.9         | 38.2        | 29.4        | 12.3      | Apr-03         |
| Russell 2000 Growth Index               |                       |                | 1.7         | 15.2        | 0.2         | 6.9         | 8.1         | 18.7        | -26.4        | 2.8         | 34.6        | 28.5        | 10.4      |                |
| Ceredex                                 | 213,962,108           | 1.8            | -1.9        | 9.7         | 4.9         | 8.4         | 7.8         | 15.5        | -9.0         | 27.7        | 1.7         | 17.7        | 9.9       | Nov-11         |
| Russell 2000 Value Index                |                       |                | -1.1        | 8.1         | 1.9         | 7.3         | 7.1         | 14.6        | -14.5        | 28.3        | 4.6         | 22.4        | 9.6       |                |
| <b>Total International Equity</b>       | <b>1,352,603,095</b>  | <b>11.5</b>    | <b>-6.3</b> | <b>6.8</b>  | <b>0.0</b>  | <b>4.4</b>  | <b>4.9</b>  | <b>15.1</b> | <b>-18.6</b> | <b>7.8</b>  | <b>15.2</b> | <b>23.2</b> |           |                |
| MSCI AC World ex USA Index              |                       |                | -7.5        | 6.1         | 1.3         | 4.6         | 5.3         | 16.2        | -15.6        | 8.3         | 11.1        | 22.1        |           |                |
| MSCI EAFE Index                         |                       |                | -8.1        | 4.3         | 2.2         | 5.2         | 5.7         | 18.9        | -14.0        | 11.8        | 8.3         | 22.7        |           |                |
| <b>International Equity</b>             | <b>852,843,496</b>    | <b>7.2</b>     | <b>-7.7</b> | <b>3.4</b>  | <b>-0.9</b> | <b>4.6</b>  | <b>5.4</b>  | <b>15.2</b> | <b>-18.4</b> | <b>8.6</b>  | <b>18.5</b> | <b>26.5</b> |           |                |
| MSCI AC World ex USA Index              |                       |                | -7.5        | 6.1         | 1.3         | 4.6         | 5.3         | 16.2        | -15.6        | 8.3         | 11.1        | 22.1        |           |                |
| Pyrford                                 | 431,793,167           | 3.7            | -9.0        | 3.7         | 3.3         | 4.2         | 4.8         | 14.7        | -7.4         | 7.1         | 4.2         | 21.6        | 4.1       | May-14         |
| MSCI AC World ex USA Value              |                       |                | -7.3        | 6.0         | 4.4         | 4.5         | 4.1         | 17.3        | -8.6         | 10.5        | -0.8        | 15.7        | 3.1       |                |
| William Blair                           | 421,050,329           | 3.6            | -6.3        | 3.1         | -4.9        | 4.6         | 5.8         | 15.8        | -28.0        | 10.1        | 32.8        | 31.5        | 6.1       | Nov-10         |
| MSCI AC World ex USA Growth             |                       |                | -7.9        | 5.1         | -2.7        | 3.4         | 5.3         | 14.0        | -23.1        | 5.1         | 22.2        | 27.3        | 5.0       |                |
| <b>Emerging Markets Equity</b>          | <b>499,759,599</b>    | <b>4.2</b>     | <b>-3.8</b> | <b>13.1</b> | <b>1.6</b>  | <b>4.4</b>  | <b>-</b>    | <b>14.4</b> | <b>-18.9</b> | <b>7.0</b>  | <b>10.7</b> | <b>18.7</b> |           |                |
| MSCI Emerging Markets                   |                       |                | -8.0        | 7.5         | -1.9        | 1.7         | -           | 9.8         | -20.1        | -2.5        | 18.3        | 18.4        |           |                |
| PIMCO RAE Emerging Markets              | 244,065,554           | 2.1            | -8.3        | 7.5         | 5.9         | 7.0         | -           | 23.0        | -10.1        | 16.5        | 1.6         | 14.0        | 6.4       | Mar-17         |
| MSCI Emerging Markets Value             |                       |                | -9.2        | 4.5         | 0.2         | 2.0         | -           | 14.2        | -15.8        | 4.0         | 5.5         | 12.0        | 3.4       |                |
| TT Emerging Markets                     | 255,694,045           | 2.2            | 1.0         | 19.1        | -2.7        | 1.9         | -           | 5.8         | -26.8        | -0.9        | 20.0        | 24.0        | 2.9       | Aug-17         |
| MSCI Emerging Markets                   |                       |                | -8.0        | 7.5         | -1.9        | 1.7         | -           | 9.8         | -20.1        | -2.5        | 18.3        | 18.4        | 2.5       |                |

Individual closed end funds are not shown in performance summary table.



Total Fund  
Performance Summary (Net of Fees)

Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024

|   | Market Value         | % of Portfolio | 3 Mo        | 1 Yr         | 3 Yrs        | 5 Yrs       | 10 Yrs      | 2023         | 2022         | 2021        | 2020        | 2019        | Inception | Inception Date |
|---|----------------------|----------------|-------------|--------------|--------------|-------------|-------------|--------------|--------------|-------------|-------------|-------------|-----------|----------------|
| <b>Total Global Equity</b>                    | <b>1,284,866,575</b> | <b>10.9</b>    | <b>-3.3</b> | <b>13.9</b>  | <b>2.7</b>   | <b>8.8</b>  | <b>9.1</b>  | <b>18.2</b>  | <b>-19.4</b> | <b>13.2</b> | <b>24.4</b> | <b>27.9</b> |           |                |
| MSCI AC World Index                           |                      |                | -1.0        | 17.5         | 5.4          | 10.1        | 9.2         | 22.2         | -18.4        | 18.5        | 16.3        | 26.6        |           |                |
| Artisan Partners                              | 651,114,905          | 5.5            | -1.6        | 15.4         | -0.1         | 9.9         | 11.5        | 23.6         | -30.1        | 14.1        | 40.6        | 36.0        | 11.7      | Oct-12         |
| MSCI ACWI Growth NR USD                       |                      |                | 2.6         | 24.2         | 5.7          | 13.1        | 11.9        | 33.2         | -28.6        | 17.1        | 33.6        | 32.7        | 12.2      |                |
| First Eagle                                   | 633,751,670          | 5.4            | -5.1        | 12.2         | 5.9          | 7.5         | 7.1         | 12.9         | -6.3         | 12.1        | 7.7         | 20.1        | 7.6       | Jan-11         |
| MSCI ACWI Value NR USD                        |                      |                | -4.7        | 10.8         | 4.6          | 6.4         | 6.2         | 11.8         | -7.5         | 19.6        | -0.3        | 20.6        | 6.7       |                |
| <b>Private Credit</b>                         | <b>1,187,220,409</b> | <b>10.1</b>    | <b>2.8</b>  | <b>11.9</b>  | <b>10.5</b>  | <b>9.1</b>  | <b>9.0</b>  | <b>9.1</b>   | <b>10.5</b>  | <b>10.0</b> | <b>4.0</b>  | <b>7.7</b>  |           |                |
| <b>Total High Yield</b>                       | <b>168,216,052</b>   | <b>1.4</b>     | <b>-0.2</b> | <b>6.5</b>   | <b>2.0</b>   | <b>3.1</b>  | <b>4.1</b>  | <b>11.8</b>  | <b>-10.9</b> | <b>4.9</b>  | <b>4.7</b>  | <b>14.7</b> |           |                |
| ICE BofA US High Yield Master II              |                      |                | 0.2         | 8.2          | 2.9          | 4.0         | 5.1         | 13.5         | -11.2        | 5.3         | 6.1         | 14.4        | 6.5       |                |
| Voya Global Investors                         | 168,216,052          | 1.4            | -0.2        | 6.5          | 2.0          | 3.1         | 4.1         | 11.8         | -10.9        | 4.9         | 4.7         | 14.7        | 6.1       | May-00         |
| ICE BofA US High Yield Master II              |                      |                | 0.2         | 8.2          | 2.9          | 4.0         | 5.1         | 13.5         | -11.2        | 5.3         | 6.1         | 14.4        | 6.6       |                |
| <b>Total Real Estate</b>                      | <b>831,924,148</b>   | <b>7.1</b>     | <b>-3.1</b> | <b>-9.4</b>  | <b>-8.5</b>  | <b>-3.0</b> | <b>2.7</b>  | <b>-10.7</b> | <b>-5.3</b>  | <b>19.2</b> | <b>-6.0</b> | <b>8.1</b>  |           |                |
| Real Estate Benchmark                         |                      |                | -2.4        | -10.5        | -8.8         | -1.9        | 2.6         | -11.3        | -4.5         | 19.3        | 0.6         | 7.5         |           |                |
| NCREIF-ODCE                                   |                      |                | 1.2         | -1.4         | -2.3         | 2.9         | 5.9         | -12.0        | 7.5          | 22.2        | 1.2         | 5.3         |           |                |
| NCREIF Property Index                         |                      |                | 0.9         | 0.4          | -0.8         | 3.1         | 5.7         | -7.9         | 5.5          | 17.7        | 1.6         | 6.4         |           |                |
| <b>Total Core Real Estate</b>                 | <b>230,796,724</b>   | <b>2.0</b>     | <b>-6.3</b> | <b>7.5</b>   | <b>-3.3</b>  | <b>4.8</b>  | <b>5.9</b>  | <b>12.4</b>  | <b>-25.1</b> | <b>47.5</b> | <b>-5.2</b> | <b>27.5</b> |           |                |
| Adelante                                      | 107,717,700          | 0.9            | -4.6        | 10.0         | -2.3         | 5.5         | 6.2         | 16.5         | -27.2        | 47.5        | -5.2        | 27.5        | 9.4       | Oct-01         |
| Wilshire U.S. REIT Index                      |                      |                | -5.0        | 9.1          | -2.4         | 4.6         | 5.7         | 16.2         | -26.8        | 46.2        | -7.9        | 25.8        | 9.1       |                |
| Invesco US Fundamental Beta                   | 123,079,023          | 1.0            | -7.7        | 5.4          | -            | -           | -           | 9.2          | -            | -           | -           | -           | -0.8      | Mar-22         |
| Wilshire U.S. REIT Index                      |                      |                | -5.0        | 9.1          | -            | -           | -           | 16.2         | -            | -           | -           | -           | 1.1       |                |
| <b>Total Private Real Estate</b>              | <b>601,127,424</b>   | <b>5.1</b>     | <b>-1.8</b> | <b>-15.4</b> | <b>-10.9</b> | <b>-5.2</b> | <b>1.7</b>  | <b>-17.6</b> | <b>1.3</b>   | <b>15.3</b> | <b>-6.1</b> | <b>6.2</b>  |           |                |
| <b>Private Equity</b>                         | <b>1,265,379,946</b> | <b>10.7</b>    | <b>1.1</b>  | <b>2.8</b>   | <b>0.4</b>   | <b>12.1</b> | <b>11.1</b> | <b>-1.0</b>  | <b>-0.5</b>  | <b>60.4</b> | <b>8.7</b>  | <b>8.4</b>  |           |                |
| <b>Private Infrastructure</b>                 | <b>89,776,822</b>    | <b>0.8</b>     | <b>3.0</b>  | <b>-</b>     | <b>-</b>     | <b>-</b>    | <b>-</b>    | <b>-</b>     | <b>-</b>     | <b>-</b>    | <b>-</b>    | <b>-</b>    |           |                |
| <b>Risk Parity</b>                            | <b>8,894,820</b>     | <b>0.1</b>     | <b>0.6</b>  | <b>10.3</b>  | <b>-3.3</b>  | <b>1.6</b>  | <b>-</b>    | <b>4.7</b>   | <b>-21.8</b> | <b>9.3</b>  | <b>9.6</b>  | <b>17.7</b> |           |                |
| 60% MSCI ACWI Net/40% Blmbg. Global Aggregate |                      |                | -2.6        | 9.5          | 1.5          | 5.3         | -           | 15.4         | -17.3        | 8.8         | 14.0        | 18.6        | 7.4       |                |
| PanAgora Risk Parity Multi Asset              | 8,894,820            | 0.1            | 0.0         | 9.1          | -6.3         | 0.2         | -           | 2.4          | -26.3        | 8.3         | 13.6        | -           | 2.4       | Mar-19         |
| HFR Risk Parity Vol 10 Index                  |                      |                | -3.8        | 5.9          | -1.5         | 1.1         | -           | 10.5         | -18.3        | 6.8         | 3.6         | -           | 2.9       |                |

Individual closed end funds are not shown in performance summary table. AQR Global Risk Premium-EL was liquidated of 11/6/2024.



Total Fund  
Performance Summary (Net of Fees)

Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024

|   | Market Value         | % of Portfolio | 3 Mo        | 1 Yr        | 3 Yrs       | 5 Yrs       | 10 Yrs     | 2023       | 2022         | 2021        | 2020        | 2019       | Inception | Inception Date |
|---|----------------------|----------------|-------------|-------------|-------------|-------------|------------|------------|--------------|-------------|-------------|------------|-----------|----------------|
| <b>Diversifying</b>                       | <b>958,015,277</b>   | <b>8.1</b>     | <b>-2.9</b> | <b>-0.4</b> | <b>-1.4</b> | <b>-0.8</b> | <b>0.2</b> | <b>2.2</b> | <b>-5.7</b>  | <b>1.7</b>  | <b>-1.7</b> | <b>6.8</b> |           |                |
| Custom Diversifying Benchmark             |                      |                | -1.4        | 4.3         | 1.8         | 2.4         | 3.1        | 7.4        | -5.7         | 1.6         | 4.7         | 6.1        |           |                |
| <b>Diversifying Fixed Income</b>          | <b>269,432,512</b>   | <b>2.3</b>     | <b>-2.8</b> | <b>2.3</b>  | <b>-2.4</b> | <b>-1.4</b> | <b>0.5</b> | <b>5.2</b> | <b>-13.5</b> | <b>-1.0</b> | <b>1.2</b>  | <b>8.3</b> |           |                |
| Blmbg. U.S. Aggregate Index               |                      |                | -3.1        | 1.3         | -2.4        | -0.3        | 1.3        | 5.5        | -13.0        | -1.5        | 7.5         | 8.7        |           |                |
| AFL-CIO                                   | 269,385,437          | 2.3            | -2.8        | 2.3         | -2.4        | -0.5        | 1.2        | 5.2        | -13.6        | -1.0        | 6.2         | 7.8        | 4.8       | Jul-91         |
| Blmbg. U.S. Aggregate Index               |                      |                | -3.1        | 1.3         | -2.4        | -0.3        | 1.3        | 5.5        | -13.0        | -1.5        | 7.5         | 8.7        | 4.8       |                |
| <b>Diversifying Multi-Asset</b>           | <b>688,582,765</b>   | <b>5.8</b>     | <b>-2.9</b> | <b>-1.4</b> | <b>-0.9</b> | <b>-</b>    | <b>-</b>   | <b>0.9</b> | <b>-2.3</b>  | <b>2.4</b>  | <b>-</b>    | <b>-</b>   |           |                |
| Custom Diversifying Multi-Asset Benchmark |                      |                | -0.2        | 6.5         | 3.9         | -           | -          | 8.7        | -3.1         | 4.1         | -           | -          |           |                |
| Sit LLCAR                                 | 463,062,627          | 3.9            | -1.1        | 5.8         | 2.8         | -           | -          | 6.5        | -3.7         | -           | -           | -          | 3.4       | Apr-21         |
| Blmbg. U.S. Aggregate +1%                 |                      |                | -2.8        | 2.3         | -1.4        | -           | -          | 6.6        | -12.1        | -           | -           | -          | -0.4      |                |
| BH-DG Systematic                          | 225,520,138          | 1.9            | -6.6        | -           | -           | -           | -          | -          | -            | -           | -           | -          | -13.7     | Apr-24         |
| SG Trend Index                            |                      |                | -0.2        | -           | -           | -           | -          | -          | -            | -           | -           | -          | -9.6      |                |
| <b>Liquidity</b>                          | <b>1,723,469,978</b> | <b>14.6</b>    | <b>0.2</b>  | <b>5.0</b>  | <b>2.2</b>  | <b>1.9</b>  | <b>-</b>   | <b>5.4</b> | <b>-3.5</b>  | <b>-0.3</b> | <b>3.4</b>  | <b>4.8</b> |           |                |
| Blmbg. 1-3 Year Gov/Credit Index          |                      |                | 0.0         | 4.4         | 1.7         | 1.6         | -          | 4.6        | -3.7         | -0.5        | 3.3         | 4.0        |           |                |
| DFA Short Credit                          | 394,050,033          | 3.3            | 1.2         | 5.7         | 1.7         | 1.5         | -          | 5.3        | -5.4         | -0.5        | 2.8         | 5.2        | 1.9       | Dec-16         |
| ICE BofA 1-5 Year U.S. Corp/Govt          |                      |                | -0.7        | 3.9         | 1.0         | 1.3         | -          | 4.9        | -5.5         | -0.9        | 4.6         | 5.1        | 1.8       |                |
| Insight Short Duration                    | 650,402,897          | 5.5            | 0.5         | 5.3         | 3.2         | 2.6         | -          | 5.7        | -1.2         | 0.0         | 3.1         | 4.6        | 2.5       | Dec-16         |
| Bloomberg U.S. Gov/Credit 1-3 Year Index  |                      |                | 0.0         | 4.4         | 1.7         | 1.6         | -          | 4.6        | -3.7         | -0.5        | 3.3         | 4.0        | 1.8       |                |
| Sit Short Duration                        | 679,017,047          | 5.8            | -0.7        | 4.3         | 1.4         | 1.6         | -          | 5.2        | -5.0         | -0.5        | 4.4         | 4.7        | 2.0       | Dec-16         |
| Blmbg. 1-3 Year Govt Index                |                      |                | -0.1        | 4.0         | 1.4         | 1.4         | -          | 4.3        | -3.8         | -0.6        | 3.1         | 3.6        | 1.5       |                |
| <b>Total Cash</b>                         | <b>571,532,827</b>   | <b>4.9</b>     | <b>1.3</b>  | <b>5.6</b>  | <b>4.5</b>  | <b>3.0</b>  | <b>2.2</b> | <b>5.5</b> | <b>2.4</b>   | <b>0.4</b>  | <b>1.3</b>  | <b>3.3</b> |           |                |
| 90 Day U.S. Treasury Bill                 |                      |                | 1.2         | 5.3         | 3.9         | 2.5         | 1.8        | 5.0        | 1.5          | 0.0         | 0.7         | 2.3        |           |                |
| Cash                                      | 571,532,826          | 4.9            | 1.3         | 5.6         | 4.6         | 3.1         | 2.2        | 6.1        | 2.2          | 0.4         | 1.3         | 3.4        |           |                |
| Northern Trust Transition                 | 1                    | 0.0            | 0.4         | 7.8         | -80.2       | -56.9       | -          | -99.2      | -4.8         | -6.1        | 104.1       | -          |           |                |

Individual closed end funds are not shown in performance summary table. Effective 3/1/2019 the custodian of record switched from State Street to Northern Trust. Wellington Real Total Return was liquidated 4/30/2020. BH-DG Systematic funded on 4/19/2024. Acadian Multi-Asset Absolute Return Fund liquidated on 5/15/2024. \$47,075.25 in residual value is reflected in the Diversified Fixed Income composite.



# Total Fund Closed End Funds - Investment Summary

# Contra Costa County Employees' Retirement Association Period Ending: December 31, 2024

|                                  |  |  | StepStone Group Analysis (*) |                |                     |  |  |                     |                      |                                      |   |                  |  |
|----------------------------------|--|--|------------------------------|----------------|---------------------|--|--|---------------------|----------------------|--------------------------------------|---|------------------|--|
| Closing Date                     | Manager Name/Fund Name   | Estimated Market Value as of 12/31/2024 <sup>1</sup> | Total Commitment             | Total % Called | Contributed Capital | Current Qtr. Change in Contributed Capital | Current Qtr. Change in Distributed Capital | Total Distributions | Remaining Commitment | Distrib./ Paid-In (DPI) <sup>2</sup> | Tot. Value/ Paid-In (TVPI) <sup>3</sup> | Latest Valuation |  |
| Private Equity & Venture Capital |  |  |                              |                |                     |  |  |                     |                      |                                      |   |                  |  |
| 2/11/2004                        | Adams Street 2007 Direct Fund  | \$65,751   | \$4,000,000                  | 97%            | \$3,896,000         | \$0  | \$597,354                                  | \$9,437,169         | \$104,000            | 2.42                                 | 2.44                                    | 9/30/2024        |  |
| 2/11/2004                        | Adams Street 2009 Direct Fund  | \$920,513  | \$5,000,000                  | 98%            | \$4,901,000         | \$0  | \$207,138                                  | \$8,800,733         | \$99,000             | 1.80                                 | 1.98                                    | 9/30/2024        |  |
| 2/11/2004                        | Adams Street 2012 Global Fund  | \$27,257,190   | \$40,000,000                 | 93%            | \$37,155,172        | \$0  | \$1,300,763                                | \$50,537,265        | \$2,844,828          | 1.36                                 | 2.09                                    | 9/30/2024        |  |
| 2/11/2004                        | Adams Street 2014 Global Fund  | \$50,105,885   | \$50,000,000                 | 92%            | \$46,193,610        | \$0  | \$1,362,049                                | \$52,259,949        | \$3,806,390          | 1.13                                 | 2.22                                    | 9/30/2024        |  |
| 1/15/2009                        | Adams Street Partners II   | \$3,166,419  | \$30,000,000                 | 95%            | \$28,365,000        | \$0  | \$0  | \$45,661,555        | \$1,635,000          | 1.61                                 | 1.72                                    | 9/30/2024        |  |
| 9/21/2012                        | Adams Street Partners - Fund 5                                       | \$8,646,261  | \$40,000,000                 | 77%            | \$30,845,875        | \$0  | \$0  | \$33,808,389        | \$9,154,125          | 1.10                                 | 1.38                                    | 9/30/2024        |  |
| 2/11/2004                        | Adams Street Partnership Fund - 2004 Non-U.S. Fund                   | \$154,646  | \$3,750,000                  | 95%            | \$3,574,125         | \$0  | \$0  | \$4,905,442         | \$175,875            | 1.37                                 | 1.42                                    | 9/30/2024        |  |
| 2/11/2004                        | Adams Street Partnership Fund - 2004 U.S. Fund                       | \$74,483   | \$11,250,000                 | 95%            | \$10,687,500        | \$0  | \$0  | \$16,786,638        | \$562,500            | 1.57                                 | 1.58                                    | 9/30/2024        |  |
| 2/11/2004                        | Adams Street Partnership Fund - 2005 Non-U.S. Fund                   | \$18,350   | \$4,500,000                  | 95%            | \$4,277,250         | \$0  | \$115,440                                  | \$5,759,701         | \$222,750            | 1.35                                 | 1.35                                    | 9/30/2024        |  |
| 2/11/2004                        | Adams Street Partnership Fund - 2005 U.S. Fund                       | \$138,890  | \$10,500,000                 | 95%            | \$9,969,750         | \$0  | \$0  | \$15,815,927        | \$530,250            | 1.59                                 | 1.60                                    | 9/30/2024        |  |
| 2/11/2004                        | Adams Street Partnership Fund - 2007 Non-U.S. Fund                   | \$85,504   | \$14,000,000                 | 95%            | \$13,307,000        | \$0  | \$1,383,380                                | \$21,643,375        | \$693,000            | 1.63                                 | 1.63                                    | 9/30/2024        |  |
| 2/11/2004                        | Adams Street Partnership Fund - 2007 U.S. Fund                       | \$447,085  | \$22,000,000                 | 95%            | \$20,977,000        | \$0  | \$1,771,924                                | \$42,068,438        | \$1,023,000          | 2.01                                 | 2.03                                    | 9/30/2024        |  |
| 2/11/2004                        | Adams Street Partnership Fund - 2009 Non-U.S. Developed Markets Fund | \$3,491,630  | \$15,000,000                 | 89%            | \$13,342,500        | \$0  | \$1,533,268                                | \$22,467,838        | \$1,657,500          | 1.68                                 | 1.95                                    | 9/30/2024        |  |
| 2/11/2004                        | Adams Street Partnership Fund - 2009 Non-U.S. Emerging Markets Fund  | \$2,428,174  | \$5,000,000                  | 92%            | \$4,592,500         | \$0  | \$136,864                                  | \$6,041,574         | \$407,500            | 1.32                                 | 1.84                                    | 9/30/2024        |  |
| 2/11/2004                        | Adams Street Partnership Fund - 2009 U.S. Fund                       | \$8,782,824  | \$25,000,000                 | 92%            | \$22,950,000        | \$0  | \$1,813,953                                | \$45,554,121        | \$2,050,000          | 1.98                                 | 2.37                                    | 9/30/2024        |  |
| 3/31/2016                        | Adams Street Venture Innovation                                      | \$146,762,936  | \$75,000,000                 | 92%            | \$69,280,251        | \$0  | \$1,900,254                                | \$47,882,482        | \$5,719,749          | 0.69                                 | 2.81                                    | 9/30/2024        |  |
| 5/18/2018                        | AE Industrial Partners Fund II, LP                                   | \$34,587,295   | \$35,000,000                 | 110%           | \$38,562,875        | \$1,913,755                                | \$3,382,093                                | \$27,996,731        | \$5,934,894          | 0.73                                 | 1.62                                    | 9/30/2024        |  |
| 11/27/2013                       | Aether Real Assets III   | \$14,926,657   | \$25,000,000                 | 107%           | \$26,776,453        | \$0  | \$0  | \$8,965,250         | \$771,568            | 0.33                                 | 0.89                                    | 9/30/2024        |  |
| 11/30/2013                       | Aether Real Assets III Surplus                                       | \$36,458,749   | \$50,000,000                 | 107%           | \$53,550,511        | \$0  | \$0  | \$15,779,909        | \$353,806            | 0.29                                 | 0.98                                    | 9/30/2024        |  |
| 1/30/2016                        | Aether Real Assets IV  | \$46,125,926   | \$50,000,000                 | 103%           | \$51,661,818        | \$483,291                                  | \$1,525,538                                | \$14,109,837        | \$5,475,801          | 0.27                                 | 1.17                                    | 9/30/2024        |  |
| 6/30/2024                        | Altaris Health Partners VI, L.P.                                     | \$0  | \$50,000,000                 | 0%             | \$0                 | \$0  | \$0  | \$0                 | \$50,000,000         | N/A                                  | N/A                                     | N/A              |  |
| 6/30/2024                        | Arbor Investments VI, L.P.   | \$0  | \$50,000,000                 | 0%             | \$0                 | \$0  | \$0  | \$0                 | \$50,000,000         | N/A                                  | N/A                                     | N/A              |  |
| 6/29/2009                        | Bay Area Equity Fund II <sup>4</sup>                                 | \$13,160,644   | \$10,000,000                 | 100%           | \$10,000,000        | \$0  | \$0  | \$5,011,170         | \$0                  | 0.50                                 | 1.82                                    | 9/30/2024        |  |
| 12/17/2024                       | BlackFin Financial Services Fund IV                                  | \$3,284,050  | \$51,827,733                 | 10%            | \$5,252,802         | \$5,252,802                                | \$0  | \$0                 | \$46,574,931         | N/A                                  | N/A                                     | N/A              |  |
| 1/18/1996                        | Brinson 1998 Primary.Secondary Int                                   | \$20,051   | \$7,269,204                  | 99%            | \$7,229,851         | \$0  | \$0  | \$11,149,671        | \$39,353             | 1.54                                 | 1.54                                    | 9/30/2024        |  |
| 1/18/1996                        | Brinson 1999 Primary   | \$53,385   | \$6,665,276                  | 96%            | \$6,387,427         | \$0  | \$0  | \$8,255,606         | \$277,849            | 1.29                                 | 1.30                                    | 9/30/2024        |  |
| 1/18/1996                        | Brinson 2000 Primary   | \$24,616   | \$5,304,515                  | 95%            | \$5,044,010         | \$0  | \$0  | \$7,787,951         | \$260,505            | 1.54                                 | 1.55                                    | 9/30/2024        |  |
| 1/18/1996                        | Brinson 2001 Primary   | \$58,540   | \$5,946,438                  | 96%            | \$5,690,829         | \$0  | \$0  | \$9,112,676         | \$255,609            | 1.60                                 | 1.61                                    | 9/30/2024        |  |
| 1/18/1996                        | Brinson 2002 Primary   | \$49,073   | \$6,778,776                  | 97%            | \$6,565,328         | \$0  | \$0  | \$12,093,845        | \$213,448            | 1.84                                 | 1.85                                    | 9/30/2024        |  |
| 1/18/1996                        | Brinson 2003 Primary   | \$110,714  | \$6,808,039                  | 95%            | \$6,456,626         | \$0  | \$0  | \$11,045,056        | \$351,413            | 1.71                                 | 1.73                                    | 9/30/2024        |  |
| 1/18/1996                        | Brinson Partnership Fund Trust - 2002 Secondary Fund                 | \$37,933   | \$1,204,071                  | 96%            | \$1,153,197         | \$0  | \$0  | \$2,176,033         | \$50,874             | 1.89                                 | 1.92                                    | 9/30/2024        |  |
| 1/18/1996                        | Brinson Partnership Fund Trust - 2004 Primary Fund                   | \$82,233   | \$3,785,244                  | 94%            | \$3,573,896         | \$0  | \$0  | \$6,441,146         | \$211,348            | 1.80                                 | 1.83                                    | 9/30/2024        |  |
| 6/30/2013                        | Commonfund   | \$30,025,895   | \$50,000,000                 | 96%            | \$47,949,993        | \$200,000                                  | \$997,986                                  | \$42,024,133        | \$2,050,007          | 0.88                                 | 1.50                                    | 9/30/2024        |  |
| 12/11/2024                       | EPIC Fund III, SLP   | \$3,594,673  | \$51,757,211                 | 10%            | \$5,184,551         | \$5,184,551                                | \$0  | \$0                 | \$46,572,660         | N/A                                  | 0.69                                    | 9/30/2024        |  |
| 3/31/2023                        | EQT X, L.P.  | \$14,888,728   | \$100,000,000                | 19%            | \$18,737,788        | \$0  | \$0  | \$2,471,665         | \$83,603,094         | 0.13                                 | 0.93                                    | 9/30/2024        |  |
| 2/21/2019                        | Genstar Capital Partners IX, L.P.                                    | \$69,489,063   | \$50,000,000                 | 100%           | \$50,185,125        | \$908,092                                  | \$574,615                                  | \$37,378,298        | \$6,281,446          | 0.74                                 | 2.13                                    | 9/30/2024        |  |
| 4/1/2021                         | Genstar Capital Partners X, L.P.                                     | \$43,937,714   | \$42,500,000                 | 98%            | \$41,814,577        | \$1,397,266                                | \$1,315,035                                | \$1,496,318         | \$866,706            | 0.04                                 | 1.09                                    | 9/30/2024        |  |
| 6/30/2023                        | Genstar Capital Partners XI, L.P.                                    | \$6,436,459  | \$75,000,000                 | 8%             | \$6,217,161         | \$4,096,524                                | \$0  | \$276,405           | \$69,059,245         | 0.04                                 | 1.08                                    | 9/30/2024        |  |
| 6/30/2023                        | Green Equity Investors IX  | \$24,752,844   | \$60,000,000                 | 38%            | \$22,748,349        | \$4,881,937                                | \$203,237                                  | \$843,456           | \$38,095,107         | 0.04                                 | 1.13                                    | 9/30/2024        |  |
| 10/27/2020                       | GTCR Fund XIII, L.P.   | \$45,545,702   | \$50,000,000                 | 82%            | \$41,179,902        | \$4,467,149                                | \$1,199,517                                | \$6,755,774         | \$9,642,247          | 0.16                                 | 1.27                                    | 9/30/2024        |  |
| 6/30/2023                        | GTCR Fund XIV  | \$10,178,373   | \$100,000,000                | 10%            | \$10,480,000        | \$10,480,000                               | \$0  | \$0                 | \$89,520,000         | N/A                                  | 0.97                                    | 9/30/2024        |  |

\* All Data provided by StepStone Group

<sup>1</sup>Latest valuation + capital calls - distributions

<sup>2</sup>(DPI) is equal to (capital returned / capital called)

<sup>3</sup>(TVPI) is equal to (market value + capital returned) / capital called

<sup>4</sup>Capital has been fully called and fund is in redemption.



# Total Fund Closed End Funds - Investment Summary

# Contra Costa County Employees' Retirement Association Period Ending: December 31, 2024

| StepStone Group Analysis (*) |                      |                        |   |   |                        |                         |  |   |                     |  |
|------------------------------|----------------------|------------------------|---|---|------------------------|-------------------------|--|---|---------------------|--|
|                              |                      |                        | Current Qtr.<br>Change in<br>Contributed<br>Capital | Current Qtr.<br>Change in<br>Distributed<br>Capital |                        |                         | Distrib./<br>Paid-In<br>(DPI) <sup>2</sup> | Tot. Value/<br>Paid-In<br>(TVPI) <sup>3</sup> |                     |  |
| Total<br>Commitment          | Total<br>%<br>Called | Contributed<br>Capital |   |   | Total<br>Distributions | Remaining<br>Commitment |  |   | Latest<br>Valuation |  |
|                              |                      |                        |   |   |                        |                         |  |   |                     |  |
| \$75,000,000                 | 86%                  | \$64,194,881           | \$6,087,380   | \$2,073,227   | \$7,406,543            | \$15,191,999            | 0.12                                       | 1.19  | 9/30/2024           |  |
| \$100,000,000                | 0%                   | \$0                    | \$0   | \$0   | \$0                    | \$100,000,000           | N/A  | N/A   | N/A                 |  |
| \$15,000,000                 | 25%                  | \$3,754,727            | \$3,612,095   | \$0   | \$0                    | \$11,245,273            | 0.00                                       | 0.99  | 9/30/2024           |  |
| \$40,000,000                 | 87%                  | \$34,812,560           | \$0   | \$0   | \$47,032,470           | \$6,308,961             | 1.35                                       | 1.36  | 9/30/2024           |  |
| \$30,000,000                 | 90%                  | \$27,000,000           | \$0   | \$277,500   | \$50,123,249           | \$3,000,000             | 1.86                                       | 2.37  | 12/31/2024          |  |
| \$50,000,000                 | 93%                  | \$46,500,000           | \$0   | \$0   | \$59,459,752           | \$3,500,000             | 1.28                                       | 2.39  | 12/31/2024          |  |
| \$25,000,000                 | 140%                 | \$35,078,514           | \$0   | \$0   | \$72,045,990           | \$387,482               | 2.05                                       | 2.19  | 9/30/2024           |  |
| \$40,000,000                 | 99%                  | \$39,778,254           | \$36,000  | \$1,914,235   | \$61,896,244           | \$3,773,356             | 1.56                                       | 2.07  | 9/30/2024           |  |
| \$70,000,000                 | 100%                 | \$70,109,536           | \$189,000   | \$3,493,007   | \$101,183,009          | \$5,279,018             | 1.44                                       | 2.15  | 9/30/2024           |  |
| \$50,000,000                 | 99%                  | \$49,632,078           | \$78,888  | \$3,469,877   | \$52,331,181           | \$3,049,307             | 1.05                                       | 2.21  | 6/30/2024           |  |
| \$125,000,000                | 102%                 | \$126,954,525          | \$259,586   | \$368,577   | \$191,180,347          | \$10,326,704            | 1.51                                       | 1.52  | 9/30/2024           |  |
| \$30,000,000                 | 101%                 | \$30,422,308           | \$31,579  | \$322,572   | \$54,704,253           | \$2,526,019             | 1.80                                       | 2.08  | 6/30/2024           |  |
| \$200,000,000                | 88%                  | \$175,083,208          | \$0   | \$2,217,975   | \$269,922,227          | \$28,597,500            | 1.54                                       | 1.94  | 12/31/2024          |  |
| \$35,000,000                 | 113%                 | \$39,704,843           | \$819,309   | \$2,932,580   | \$13,831,958           | \$4,077,813             | 0.35                                       | 1.33  | 9/30/2024           |  |
| \$50,000,000                 | 12%                  | \$6,068,399            | \$0   | \$0   | \$0                    | \$43,931,601            | 0.00                                       | 0.75  | 9/30/2024           |  |
| \$50,000,000                 | 100%                 | \$49,989,130           | \$2,239,130   | \$1,364,130   | \$2,864,130            | \$2,625,000             | 0.06                                       | 1.03  | 12/31/2024          |  |
| \$90,000,000                 | 0%                   | \$0                    | \$0   | \$0   | \$0                    | \$90,000,000            | N/A  | N/A   | 12/31/2024          |  |
| \$24,000,000                 | 99%                  | \$23,770,861           | \$58,572  | \$49,502  | \$6,695,016            | \$2,980,876             | 0.28                                       | 1.35  | 9/30/2024           |  |
| \$60,000,000                 | 36%                  | \$21,350,017           | \$4,551,351   | \$0   | \$8,201                | \$38,673,935            | 0.00                                       | 1.04  | 9/30/2024           |  |
| \$65,000,000                 | 53%                  | \$34,329,853           | \$8,259,421   | \$0   | \$26,805               | \$30,671,303            | 0.00                                       | 1.03  | 9/30/2024           |  |
| \$50,000,000                 | 69%                  | \$34,389,202           | \$1,289,370   | \$3,652,527   | \$4,133,277            | \$19,744,074            | 0.12                                       | 1.24  | 9/30/2024           |  |
| \$40,000,000                 | 99%                  | \$39,535,362           | \$668,638   | \$971,546   | \$8,116,102            | \$4,370,727             | 0.21                                       | 1.51  | 9/30/2024           |  |
| \$2,613,846,507              | 67%                  | \$1,749,175,858        | \$67,445,685  | \$44,427,664  | \$1,663,562,279        | \$967,408,327           | 0.95                                       | 1.67  |                     |  |

\* All Data provided by StepStone Group

<sup>1</sup>Latest valuation + capital calls - distributions

<sup>2</sup>(DPI) is equal to (capital returned / capital called)

<sup>3</sup>(TVPI) is equal to (market value + capital returned) / capital called

<sup>4</sup>Capital has been fully called and fund is in redemption.



# Total Fund Closed End Funds - Investment Summary

Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024

|                               |                                    |  | StepStone Group Analysis (*) |                |                     |  |  |                     |                      |                                      |   |                  |  |
|-------------------------------|------------------------------------|--|------------------------------|----------------|---------------------|--|--|---------------------|----------------------|--------------------------------------|---|------------------|--|
| Closing Date                  | Manager Name/Fund Name             | Estimated Market Value as of 12/31/2024 <sup>1</sup> | Total Commitment             | Total % Called | Contributed Capital | Current Qtr. Change in Contributed Capital | Current Qtr. Change in Distributed Capital | Total Distributions | Remaining Commitment | Distrib./ Paid-In (DPI) <sup>2</sup> | Tot. Value/ Paid-In (TVPI) <sup>3</sup> | Latest Valuation |  |
| Infrastructure                |                                    |  |                              |                |                     |  |  |                     |                      |                                      |   |                  |  |
| 10/31/2024                    | Altor ACT I                        | -\$1,349,072   | \$67,291,427                 | 2%             | \$1,565,511         | \$1,565,511                                | \$0  | \$0                 | \$65,782,658         | N/A                                  | N/A                                     | N/A              |  |
| 7/15/2005                     | EIF US Power Fund II <sup>4</sup>  | \$14,312   | \$50,000,000                 | 130%           | \$65,029,556        | \$0  | \$0  | \$76,092,655        | \$0                  | 1.17                                 | 1.17                                    | 6/30/2024        |  |
| 5/31/2007                     | EIF US Power Fund III <sup>4</sup> | \$3,131,663  | \$65,000,000                 | 110%           | \$71,409,097        | \$0  | \$0  | \$93,077,887        | \$0                  | 1.30                                 | 1.35                                    | 9/30/2024        |  |
| 11/28/2011                    | EIF US Power Fund IV               | \$19,365,546   | \$50,000,000                 | 130%           | \$64,917,547        | \$0  | \$128,526                                  | \$50,721,848        | \$4                  | 0.78                                 | 1.08                                    | 9/30/2024        |  |
| 11/28/2016                    | EIF US Power Fund V                | \$35,564,375   | \$50,000,000                 | 143%           | \$71,633,870        | \$0  | \$0  | \$68,212,887        | \$3,888,697          | 0.95                                 | 1.45                                    | 9/30/2024        |  |
| 12/31/2023                    | EQT Infrastructure VI              | \$32,072,866   | \$125,000,000                | 29%            | \$36,361,718        | \$11,504,758                               | \$917                                      | \$972,221           | \$89,320,329         | 0.03                                 | 0.91                                    | 9/30/2024        |  |
| 12/8/2015                     | Wastewater Opportunity Fund        | \$977,131  | \$25,000,000                 | 126%           | \$31,579,656        | \$0  | \$73,865                                   | \$31,553,869        | \$521,541            | 1.00                                 | 1.03                                    | 9/30/2024        |  |
| Total Infrastructure          |                                    | \$89,776,822   | \$432,291,427                | 79%            | \$342,496,955       | \$13,070,269                               | \$203,307                                  | \$320,631,366       | \$159,513,229        | 0.94                                 | 1.20                                    |                  |  |
| % of Portfolio (Market Value) |                                    | 0.8%   |                              |                |                     |  |  |                     |                      |                                      |   |                  |  |

\* All Data provided by StepStone Group

<sup>1</sup>Latest valuation + capital calls - distributions

<sup>2</sup>(DPI) is equal to (capital returned / capital called)

<sup>3</sup>(TVPI) is equal to (market value + capital returned) / capital called

<sup>4</sup>Capital has been fully called and fund is in redemption.



Total Fund  
Closed End Funds - IRR Summary

Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024

| Private Equity & Venture Capital                  | Closing Date | Fund Level (G) <sup>2</sup> | CCCERA (G) | Fund Level (N) <sup>2,3</sup> | CCCERA (N) <sup>3</sup> | IRR Date   |
|---|--------------|-----------------------------|------------|-------------------------------|-------------------------|------------|
| Adams Street Partners                             | 2/11/2004    | -                           | 13.2%      | -                             | 11.2%                   | 9/30/2024  |
| Adams Street Partners II                          | 12/31/2008   | -                           | 16.2%      | -                             | 13.7%                   | 9/30/2024  |
| Adams Street Partners - Fund 5                    | 12/31/2008   | -                           | 8.9%       | -                             | 6.7%                    | 9/30/2024  |
| Adams Street Partners Venture                     | 1/18/1996    | -                           | 27.2%      | -                             | 25.4%                   | 9/30/2024  |
| Adams Street Partners - BPF                       | 3/31/2016    | -                           | 14.2%      | -                             | 11.6%                   | 9/30/2024  |
| AE Industrial Partners Fund II, LP                | 5/18/2018    | 22.9%                       | -          | 20.0%                         | -                       | 9/30/2024  |
| Aether Real Assets III                            | 11/27/2013   | -0.3%                       | -          | -1.9%                         | -                       | 9/30/2024  |
| Aether Real Assets III Surplus                    | 11/30/2013   | 0.7%                        | -          | -0.4%                         | -                       | 9/30/2024  |
| Aether Real Assets IV                             | 1/30/2016    | 4.6%                        | -          | 3.1%                          | -                       | 9/30/2024  |
| Bay Area Equity Fund II <sup>9</sup>              | 11/26/2003   | 9.6%                        | 9.5%       | 5.9%                          | 5.9%                    | 9/30/2024  |
| CommonFund <sup>1</sup>                           | 6/30/2013    | -                           | -          | -                             | 6.7%                    | 12/31/2023 |
| Energy Investor Fund II <sup>9</sup>              | 7/15/2005    | 5.6%                        | 5.3%       | 2.9%                          | 2.6%                    | 9/30/2024  |
| Energy Investor Fund V                            | 11/28/2016   | 18.8%                       | 16.5%      | 15.8%                         | 13.4%                   | 9/30/2024  |
| Genstar Capital Partners IX, L.P.                 | 2/21/2019    | 39.0%                       | -          | 31.7%                         | -                       | 9/30/2024  |
| Oaktree PIF 2009                                  | 2/28/2010    | 7.0%                        | -          | 3.0%                          | -                       | 9/30/2024  |
| Ocean Avenue II                                   | 8/15/2013    | -                           | -          | 17.9%                         | -                       | 3/31/2024  |
| Ocean Avenue III                                  | 4/15/2016    | -                           | -          | 23.2%                         | -                       | 3/31/2024  |
| Paladin III                                       | 11/30/2007   | 19.7%                       | -          | -                             | -                       | 9/30/2024  |
| Pathway 6   | 8/22/2011    | 16.3%                       | 16.3%      | 13.5%                         | 13.5%                   | 9/30/2024  |
| Benchmark <sup>4</sup>                            |              | 14.2%                       | -          | -                             | -                       | 3/31/2024  |
| Pathway 7   | 7/10/2013    | 17.8%                       | 17.8%      | 15.2%                         | 15.2%                   | 9/30/2024  |
| Benchmark <sup>5</sup>                            |              | 14.7%                       | -          | -                             | -                       | 3/31/2024  |
| Pathway 8   | 11/23/2015   | 19.3%                       | 19.3%      | 17.4%                         | 17.4%                   | 9/30/2024  |
| Benchmark <sup>6</sup>                            |              | 15.6%                       | -          | -                             | -                       | 3/31/2024  |
| Pathway Private Equity Fund                       | 1/19/1999    | 10.8%                       | 10.8%      | 8.3%                          | 8.3%                    | 9/30/2024  |
| Benchmark <sup>7</sup>                            |              | 10.3%                       | -          | -                             | -                       | 3/31/2024  |
| Pathway Private Equity Fund 2008                  | 7/31/2009    | 16.8%                       | 16.8%      | 13.7%                         | 13.7%                   | 9/30/2024  |
| Benchmark <sup>8</sup>                            |              | 13.2%                       | -          | -                             | -                       | 3/31/2024  |
| Siguler Guff CCCERA Opportunities                 | 6/3/2014     | -                           | -          | -                             | 15.4%                   | 9/30/2024  |
| Siguler Guff Secondary Opportunities <sup>9</sup> | 8/31/2013    | 55.3%                       | 118.4%     | 49.5%                         | 69.0%                   | 9/30/2020  |
| Siris Partners IV, L.P. <sup>1</sup>              | 5/18/2018    | 14.7%                       | -          | 10.7%                         | -                       | 6/30/2024  |
| TPG Healthcare Partners, L.P.                     | 6/28/2019    | -                           | -          | -                             | 11.0%                   | 9/30/2024  |
| Trident VIII, L.P.                                | 5/24/2019    | 14.0%                       | -          | -                             | 12.8%                   | 12/31/2023 |
| Wastewater Opportunity Fund <sup>1</sup>          | 12/8/2015    | -                           | -          | 3.7%                          | -                       | 9/30/2023  |

<sup>1</sup>Manager has yet to report IRR figure.

<sup>2</sup>Fund level data includes CCCERA and all other fund investors.

<sup>3</sup>Net IRR calculated after deductions of management fees and carried interest to the General Partner.

<sup>4</sup>Private iQ global all private equity median pooled return for vintage years 2011-2014, as of September 30, 2022.

<sup>5</sup>Private iQ global all private equity median pooled return for vintage years 2012-2016, as of September 30, 2022.

<sup>6</sup>Private iQ global all private equity median pooled return for vintage years 2015-2018, as of September 30, 2022.

<sup>7</sup>Private iQ global all private equity median pooled return for vintage years 1999-2011, as of September 30, 2022.

<sup>8</sup>Private iQ global all private equity median pooled return for vintage years 2008-2014, as of September 30, 2022.

<sup>9</sup>Capital has been fully called and fund is in redemption.



# Total Fund Closed End Funds - Investment Summary

Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024

| StepStone Group Analysis (*)         |   |  |                        |            |                        |  |  |                      |                      |                                      |   |                  |
|--------------------------------------|---|--|------------------------|------------|------------------------|--|--|----------------------|----------------------|--------------------------------------|---|------------------|
| Closing Date                         | Manager Name/Fund Name                          | Estimated Market Value as of 12/31/2024 <sup>1</sup> | Total Commitment       | % Called   | Contributed Capital    | Current Qtr. Change in Contributed Capital | Current Qtr. Change in Distributed Capital | Total Distributions  | Remaining Commitment | Distrib./ Paid-In (DPI) <sup>2</sup> | Tot. Value/ Paid-In (TVPI) <sup>3</sup> | Latest Valuation |
| <b>Private Credit</b>                |   |  |                        |            |                        |  |  |                      |                      |                                      |   |                  |
| 8/31/2015                            | Angelo Gordon Energy Credit Opp. <sup>4</sup>   | \$224,629  | \$16,500,000           | 114%       | \$18,750,000           | \$0  | \$214,458                                  | \$22,874,616         | \$2,319,783          | 1.22                                 | 1.23                                    | 9/30/2024        |
| 12/18/2017                           | StepStone CC Opportunities Fund, LLC - Series A | \$238,662,949  | \$320,000,000          | 109%       | \$349,621,508          | \$6,522,896                                | \$7,421,467                                | \$190,192,134        | \$454,630            | 0.54                                 | 1.23                                    | 9/30/2024        |
| 12/18/2017                           | StepStone CC Opportunities Fund, LLC - Series B | \$412,382,943  | \$350,000,000          | 72%        | \$253,453,186          | -\$14,947,132                              | \$0  | \$20,017,732         | \$116,546,814        | 0.08                                 | 1.71                                    | 9/30/2024        |
| 12/18/2017                           | StepStone CC Opportunities Fund, LLC - Series C | \$196,070,016  | \$200,000,000          | 91%        | \$182,349,797          | \$32,341                                   | \$32,500,000                               | \$92,000,716         | \$77,150,203         | 0.50                                 | 1.58                                    | 9/30/2024        |
| 12/18/2017                           | StepStone CC Opportunities Fund, LLC - Series D | \$223,429,935  | \$200,000,000          | 74%        | \$147,793,242          | \$0  | \$0  | \$5,768              | \$52,206,758         | 0.00                                 | 1.51                                    | 9/30/2024        |
| 12/18/2017                           | StepStone CC Opportunities Fund, LLC - Series E | \$106,350,204  | \$150,000,000          | 55%        | \$82,689,286           | \$0  | \$0  | \$920,000            | \$67,310,714         | 0.01                                 | 1.30                                    | 9/30/2024        |
| 8/1/2012                             | Torchlight IV                                   | \$2,507,284  | \$60,000,000           | 141%       | \$84,866,971           | \$0  | \$0  | \$109,589,365        | \$0                  | 1.29                                 | 1.32                                    | 12/31/2024       |
| 3/12/2015                            | Torchlight V                                    | \$7,592,449  | \$75,000,000           | 80%        | \$60,000,000           | \$0  | \$0  | \$71,460,214         | \$15,000,000         | 1.19                                 | 1.32                                    | 9/30/2024        |
| <b>Total Private Credit</b>          |   | <b>\$1,187,220,409</b>                               | <b>\$1,371,500,000</b> | <b>86%</b> | <b>\$1,179,523,989</b> | <b>-\$8,391,895</b>                        | <b>\$40,135,925</b>                        | <b>\$507,060,545</b> | <b>\$330,988,903</b> | <b>0.43</b>                          | <b>1.44</b>                             |                  |
| <b>% of Portfolio (Market Value)</b> |   | <b>10.1%</b>   |                        |            |                        |  |  |                      |                      |                                      |   |                  |

\*All Data provided by StepStone Group

<sup>1</sup>Latest valuation + capital calls - distributions

<sup>2</sup>(DPI) is equal to (capital returned / capital called)

<sup>3</sup>(TVPI) is equal to (market value + capital returned) / capital called

<sup>4</sup>Capital has been fully called and fund is in redemption.



# Total Fund Closed End Funds - Investment Summary

# Contra Costa County Employees' Retirement Association Period Ending: December 31, 2024

| Verus Internal Analysis              |  |  |                        |                |                        |                             |                            |                                  |                      |                                     |  |                  |
|--------------------------------------|--|--|------------------------|----------------|------------------------|-----------------------------|----------------------------|----------------------------------|----------------------|-------------------------------------|--|------------------|
| Inception Date                       | Manager Name/Fund Name                         | Estimated Market Value as of 12/31/2024 <sup>1</sup> | Total Commitment       | Total % Called | Capital Called         | Current Qtr. Capital Called | Current Qtr. Distributions | Total Distributions <sup>8</sup> | Remaining Commitment | Distrib./Paid-In (DPI) <sup>2</sup> | Tot. Value/Paid-In (TVPI) <sup>3</sup> | Latest Valuation |
| <b>Real Estate</b>                   |  |  |                        |                |                        |                             |                            |                                  |                      |                                     |  |                  |
| 1/23/2012                            | Angelo Gordon Realty Fund VIII <sup>4</sup>    | \$7,574,687  | \$80,000,000           | 94%            | \$75,401,855           | \$0                         | \$0                        | \$101,711,550                    | \$12,334,302         | 1.35                                | 1.45                                   | 9/30/2024        |
| 12/8/2014                            | Angelo Gordon Realty Fund IX                   | \$14,251,348   | \$65,000,000           | 93%            | \$60,125,000           | \$0                         | \$0                        | \$59,312,501                     | \$7,572,500          | 0.99                                | 1.22                                   | 9/30/2024        |
| 10/10/2024                           | Ares US Real Estate Opportunity Fund IV        | \$5,963,314  | \$60,000,000           | 10%            | \$5,963,314            | \$5,963,314                 | \$0                        | \$0                              | \$54,036,686         | N/A                                 | N/A                                    | 9/30/2024        |
| 3/24/2023                            | BlackStone Strategic Partners Real Estate VIII | \$28,939,732   | \$80,000,000           | 32%            | \$25,932,103           | \$8,049,999                 | \$0                        | \$0                              | \$54,067,897         | 0.00                                | 1.12                                   | 9/30/2024        |
| 3/24/2023                            | Blackstone Real Estate Partners X              | \$31,322,169   | \$100,000,000          | 30%            | \$30,119,554           | \$3,949,005                 | \$1,065,383                | \$2,028,554                      | \$69,880,446         | 0.07                                | 1.11                                   | 9/30/2024        |
| 12/14/2023                           | Cross Lake RE IV                               | \$1,302,329  | \$60,000,000           | 5%             | \$3,259,574            | \$0                         | \$0                        | \$0                              | \$56,740,426         | 0.00                                | 0.40                                   | 9/30/2024        |
| 3/18/2024                            | Cross Lake RE IV SRO AIV                       | \$58,680   | \$8,975,352            | 17%            | \$1,495,894            | \$0                         | \$1,721,991                | \$1,721,991                      | \$7,479,458          | 1.15                                | 1.19                                   | 9/30/2024        |
| 6/23/2005                            | DLJ RECP III                                   | \$8,377,693  | \$75,000,000           | 95%            | \$70,968,662           | \$0                         | \$0                        | \$77,985,055                     | \$4,031,338          | 1.10                                | 1.22                                   | 9/30/2024        |
| 2/11/2008                            | DLJ RECP IV                                    | \$28,078,500   | \$100,000,000          | 119%           | \$118,992,879          | \$0                         | \$0                        | \$99,841,735                     | \$1,876,084          | 0.84                                | 1.08                                   | 9/30/2024        |
| 7/1/2014                             | DLJ RECP V                                     | \$5,994,402  | \$75,000,000           | 146%           | \$109,459,298          | \$32,901                    | \$0                        | \$100,933,448                    | \$2,155,507          | 0.92                                | 0.98                                   | 9/30/2024        |
| 3/19/2019                            | DLJ RECP VI                                    | \$12,912,717   | \$50,000,000           | 94%            | \$47,142,849           | \$3,191,341                 | \$0                        | \$11,369,099                     | \$7,165,056          | 0.24                                | 0.52                                   | 9/30/2024        |
| 12/14/2023                           | EQT Exeter Industrial Value Fund VI            | \$22,706,684   | \$60,000,000           | 40%            | \$24,000,000           | \$9,000,000                 | \$0                        | \$0                              | \$36,000,000         | 0.00                                | 0.95                                   | 9/30/2024        |
| N/A                                  | EQT Multifamily Value II                       | \$0  | \$40,000,000           | 0%             | \$0                    | \$0                         | \$0                        | \$0                              | \$40,000,000         | N/A                                 | N/A                                    | N/A              |
| 6/30/2014                            | Invesco Real Estate IV <sup>4</sup>            | \$102,826  | \$35,000,000           | 87%            | \$30,546,401           | \$0                         | \$0                        | \$39,986,504                     | \$4,453,599          | 1.31                                | 1.31                                   | 9/30/2024        |
| 2/20/2019                            | Invesco Real Estate V                          | \$57,091,749   | \$75,000,000           | 97%            | \$73,118,800           | \$0                         | \$0                        | \$9,319,462                      | \$6,581,101          | 0.13                                | 0.91                                   | 12/31/2024       |
| 9/27/2022                            | Invesco Real Estate VI                         | \$49,394,736   | \$100,000,000          | 62%            | \$61,724,697           | \$2,579,437                 | \$0                        | \$2,230,131                      | \$38,275,303         | 0.04                                | 0.84                                   | 9/30/2024        |
| 9/27/2024                            | Jadian Real Estate II                          | \$7,106,454  | \$60,000,000           | 12%            | \$7,106,454            | \$3,335,779                 | \$0                        | \$0                              | \$52,893,546         | 0.00                                | 1.00                                   | 9/30/2024        |
| 11/10/2023                           | KSL Capital Partners VI, L.P.                  | \$13,358,796   | \$50,000,000           | 37%            | \$18,551,583           | \$5,318,019                 | \$462,180                  | \$0                              | \$31,448,417         | 0.00                                | 0.72                                   | 9/30/2024        |
| 7/16/2013                            | LaSalle Income & Growth VI <sup>4</sup>        | \$8,388,191  | \$75,000,000           | 95%            | \$71,428,571           | \$0                         | \$0                        | \$84,541,423                     | \$0                  | 1.18                                | 1.30                                   | 9/30/2024        |
| 2/28/2017                            | LaSalle Income & Growth VII                    | \$18,861,806   | \$75,000,000           | 114%           | \$85,708,742           | \$0                         | \$1,257,939                | \$62,880,996                     | \$2,845,685          | 0.73                                | 0.95                                   | 9/30/2024        |
| 7/3/2013                             | Long Wharf Fund IV <sup>4</sup>                | \$0  | \$25,000,000           | 100%           | \$25,000,000           | \$0                         | \$99,527                   | \$35,047,614                     | \$0                  | 1.40                                | 1.40                                   | 12/31/2024       |
| 9/30/2016                            | Long Wharf Fund V <sup>4</sup>                 | \$23,497,661   | \$50,000,000           | 100%           | \$50,000,000           | \$0                         | \$0                        | \$37,701,359                     | \$0                  | 0.75                                | 1.22                                   | 12/31/2024       |
| 6/27/2019                            | Long Wharf Fund VI                             | \$32,906,083   | \$50,000,000           | 100%           | \$49,999,998           | \$0                         | \$495,540                  | \$28,543,110                     | \$2                  | 0.57                                | 1.23                                   | 12/31/2024       |
| 5/30/2023                            | Long Wharf Fund VII                            | \$26,791,459   | \$50,000,000           | 62%            | \$30,814,084           | \$8,281,048                 | \$1,885,881                | \$1,885,881                      | \$19,185,916         | 0.06                                | 0.93                                   | 12/31/2024       |
| 12/31/2011                           | Oaktree REOF V <sup>4</sup>                    | \$58,418   | \$50,000,000           | 101%           | \$50,315,673           | \$0                         | \$139,345                  | \$79,059,424                     | \$5,000,000          | 1.57                                | 1.57                                   | 12/31/2024       |
| 9/30/2013                            | Oaktree REOF VI <sup>4</sup>                   | \$14,303,004   | \$80,000,000           | 100%           | \$80,000,000           | \$0                         | \$800,000                  | \$85,610,175                     | \$18,400,000         | 1.07                                | 1.25                                   | 12/31/2024       |
| 4/1/2015                             | Oaktree REOF VII                               | \$37,237,996   | \$65,000,000           | 100%           | \$65,000,000           | \$0                         | \$0                        | \$47,054,688                     | \$18,915,000         | 0.72                                | 1.30                                   | 12/31/2024       |
| 11/10/2013                           | Paulson Real Estate Fund II <sup>4</sup>       | \$12,645,179   | \$20,000,000           | 97%            | \$19,345,623           | \$0                         | \$0                        | \$25,449,660                     | \$654,377            | 1.32                                | 1.97                                   | 9/30/2024        |
| 4/28/2022                            | PCCP IX  | \$75,708,478   | \$75,000,000           | 89%            | \$66,926,564           | \$2,625,000                 | \$0                        | \$0                              | \$8,073,436          | 0.00                                | 1.13                                   | 9/30/2024        |
| 1/25/2012                            | Siguler Guff DREOF                             | \$8,916,953  | \$75,000,000           | 93%            | \$69,375,000           | \$0                         | \$973,450                  | \$104,744,561                    | \$5,625,000          | 1.51                                | 1.64                                   | 9/30/2024        |
| 8/31/2013                            | Siguler Guff DREOF II                          | \$23,783,334   | \$70,000,000           | 89%            | \$61,985,000           | \$0                         | \$10,486                   | \$55,702,272                     | \$8,015,000          | 0.90                                | 1.28                                   | 9/30/2024        |
| 1/27/2016                            | Siguler Guff DREOF II Co-Inv                   | \$10,663,716   | \$25,000,000           | 85%            | \$21,277,862           | \$0                         | \$0                        | \$14,336,421                     | \$3,722,138          | 0.67                                | 1.17                                   | 9/30/2024        |
| 6/26/2024                            | Stockbridge Value Fund I                       | \$12,828,332   | \$60,000,000           | 24%            | \$14,459,322           | \$14,459,322                | \$256,554                  | \$256,554                        | \$45,540,678         | 0.02                                | 0.90                                   | 9/30/2024        |
| <b>Total Closed End Real Estate</b>  |  | <b>\$601,127,424</b>                                 | <b>\$1,978,975,352</b> | <b>75%</b>     | <b>\$1,487,086,035</b> | <b>\$66,785,165</b>         | <b>\$9,168,275</b>         | <b>\$1,169,254,167</b>           | <b>\$582,968,898</b> | <b>0.79</b>                         | <b>1.19</b>                            |                  |
| <b>% of Portfolio (Market Value)</b> |  | <b>5.1%</b>  |                        |                |                        |                             |                            |                                  |                      |                                     |  |                  |

<sup>1</sup>Latest valuation + capital calls - distributions

<sup>2</sup>(DPI) is equal to (capital returned / capital called)

<sup>3</sup>(TVPI) is equal to (market value + capital returned) / capital called

<sup>4</sup>Capital has been fully called and fund is in redemption.

<sup>5</sup>Total distributions may include recallable distributions

<sup>6</sup>Remianing commitment includes recallable distributions



Total Fund  
Closed End Funds - IRR Summary

Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024

| Private Credit  | Inception  | Fund Level (G) <sup>2</sup> | CCCERA (G) | Fund Level (N) <sup>2,3</sup> | CCCERA (N) <sup>3</sup> | IRR Date   |
|---|------------|-----------------------------|------------|-------------------------------|-------------------------|------------|
| Angelo Gordon Energy Cred Opp. <sup>4</sup>                 | 9/24/2015  | -                           | -          | -                             | 7.7%                    | 9/30/2024  |
| Stepstone CC Opportunities Fund <sup>1</sup>                | 2/2/2018   | -                           | 9.9%       | -                             | 9.2%                    | 12/31/2023 |
| Torchlight IV   | 8/1/2012   | -                           | -          | 8.6%                          | 9.6%                    | 12/31/2024 |
| Torchlight V  | 3/12/2015  | 13.9%                       | 14.0%      | 10.0%                         | 10.0%                   | 9/30/2024  |
| Real Estate   | Inception  | Fund Level (G) <sup>2</sup> | CCCERA (G) | Fund Level (N) <sup>2,3</sup> | CCCERA (N) <sup>3</sup> | IRR Date   |
| Angelo Gordon VIII <sup>4</sup>                             | 1/23/2012  | -                           | -          | -                             | 11.6%                   | 9/30/2024  |
| Angelo Gordon IX  | 12/8/2014  | -                           | -          | -                             | 4.9%                    | 9/30/2024  |
| Ares US RE Opportunities IV                                 | 10/10/2024 | -                           | -          | -                             | -                       | N/A        |
| Blackstone Real Estate Partners X <sup>1</sup>              | 3/24/2023  | -                           | -          | -                             | -                       | N/A        |
| BlackStone Strategic Partners Real Estate VIII <sup>1</sup> | 3/25/2022  | -                           | -          | -                             | -                       | N/A        |
| Cross Lake RE IV <sup>1</sup>                               | 12/14/2023 | -                           | -          | -                             | -                       | N/A        |
| DLJ RECP III  | 6/23/2005  | -1.0%                       | -1.0%      | -3.0%                         | -3.0%                   | 9/30/2023  |
| DLJ RECP IV   | 2/11/2008  | 4.0%                        | 4.0%       | 1.0%                          | 2.0%                    | 9/30/2023  |
| DLJ RECP V  | 7/1/2014   | 11.0%                       | 11.0%      | 5.0%                          | 5.0%                    | 9/30/2023  |
| DLJ RECP VI   | 3/19/2019  | 11.0%                       | 11.0%      | 2.0%                          | 3.0%                    | 9/30/2023  |
| EQT Exeter Industrial Value Fund VI <sup>1</sup>            | 12/14/2023 | 19.3%                       | -          | -                             | -                       | 9/30/2024  |
| EQT Industrial Value VI <sup>1</sup>                        | 12/31/2023 | -                           | -          | -                             | -                       | N/A        |
| EQT Multifamily Value II <sup>1</sup>                       | N/A        | -                           | -          | -                             | -                       | N/A        |
| Invesco Fund IV <sup>4</sup>                                | 6/30/2014  | 12.6%                       | -          | 10.1%                         | -                       | 6/30/2024  |
| Invesco Fund V  | 2/20/2019  | 0.4%                        | -          | -2.7%                         | -                       | 9/30/2024  |
| Invesco Fund VI   | 9/27/2022  | -                           | -          | -                             | -                       | N/A        |
| Jadian Real Estate Fund II                                  | 9/27/2024  | -                           | -          | -                             | -                       | N/A        |
| KSL Capital Partners VI <sup>1</sup>                        | 11/10/2023 | -                           | -          | -                             | -                       | N/A        |
| LaSalle Income & Growth VI <sup>4</sup>                     | 7/16/2013  | 9.6%                        | 9.6%       | 7.5%                          | 7.6%                    | 9/30/2024  |
| LaSalle Income & Growth VII                                 | 2/28/2017  | 0.8%                        | 0.6%       | -1.3%                         | -1.5%                   | 9/30/2024  |
| Long Wharf IV <sup>4</sup>                                  | 7/3/2013   | 14.4%                       | 14.3%      | 11.0%                         | 11.0%                   | 12/31/2024 |
| Long Wharf V <sup>4</sup>                                   | 9/30/2016  | 7.5%                        | 7.7%       | 4.9%                          | 5.0%                    | 12/31/2024 |
| Long Wharf VI   | 6/27/2019  | 19.7%                       | 20.5%      | 11.9%                         | 12.3%                   | 12/31/2024 |
| Long Wharf VII  | 5/1/2023   | 6.7%                        | 5.0%       | -7.8%                         | -5.8%                   | 12/31/2024 |
| Oaktree REOF V <sup>4</sup>                                 | 12/31/2011 | 16.6%                       | -          | 12.2%                         | -                       | 12/31/2024 |
| Oaktree REOF VI <sup>4</sup>                                | 9/30/2013  | 9.9%                        | -          | 6.0%                          | -                       | 12/31/2024 |
| Oaktree REOF VII  | 4/1/2015   | 13.1%                       | -          | 8.5%                          | -                       | 12/31/2024 |
| Paulson <sup>4</sup>  | 11/10/2013 | -                           | -          | 12.0%                         | -                       | 12/31/2023 |
| PCCP IX   | 5/27/2021  | 11.0%                       | -          | 8.5%                          | -                       | 9/30/2024  |
| Siguler Guff I  | 1/25/2012  | -                           | -          | -                             | 11.1%                   | 12/31/2024 |
| Siguler Guff II   | 8/31/2013  | -                           | -          | -                             | 6.3%                    | 9/30/2024  |
| Siguler Guff DREOF II Co-Inv                                | 1/27/2016  | -                           | -          | -                             | 3.3%                    | 9/30/2024  |
| Stockbridge Value Fund I                                    | 6/26/2024  | -                           | -          | -                             | -                       | N/A        |

<sup>1</sup>Manager has yet to report IRR figure.

<sup>2</sup>Fund level data includes CCCERA and all other fund investors.

<sup>3</sup>Net IRR calculated after deductions of management fees and carried interest to the General Partner.

<sup>4</sup>Capital has been fully called and fund is in redemption.



Total Fund  
Risk Analysis - 3 Years (Net of Fees)

Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024

3 Years

|                                  | Anlzd<br>Return | Anlzd<br>Excess<br>Performance | Anlzd<br>Standard<br>Deviation | Anlzd Alpha | Beta | Tracking<br>Error | R-Squared | Sharpe<br>Ratio | Information<br>Ratio | Up<br>Capture | Down<br>Capture |
|----------------------------------|-----------------|--------------------------------|--------------------------------|-------------|------|-------------------|-----------|-----------------|----------------------|---------------|-----------------|
| BlackRock Russell 1000 Index     | 8.40            | -0.01                          | 17.41                          | -0.01       | 1.00 | 0.02              | 1.00      | 0.34            | -0.38                | 99.99         | 100.01          |
| Boston Partners                  | 8.34            | 2.71                           | 16.18                          | 2.83        | 0.95 | 3.27              | 0.96      | 0.34            | 0.75                 | 97.98         | 85.92           |
| Emerald Advisers                 | 2.24            | 2.04                           | 23.16                          | 2.00        | 0.95 | 4.68              | 0.96      | 0.05            | 0.39                 | 98.46         | 92.63           |
| Ceredex                          | 4.89            | 2.95                           | 20.58                          | 3.00        | 0.85 | 6.64              | 0.93      | 0.15            | 0.34                 | 89.80         | 81.45           |
| Pyrford                          | 3.29            | -1.09                          | 13.81                          | -0.48       | 0.86 | 4.98              | 0.89      | 0.03            | -0.25                | 89.01         | 92.66           |
| William Blair                    | -4.95           | -2.27                          | 18.70                          | -2.13       | 1.01 | 5.44              | 0.92      | -0.39           | -0.40                | 99.53         | 108.04          |
| PIMCO RAE Emerging Markets       | 5.92            | 5.76                           | 16.58                          | 5.96        | 0.95 | 6.81              | 0.83      | 0.20            | 0.84                 | 110.74        | 83.34           |
| TT Emerging Markets              | -2.67           | -0.75                          | 18.79                          | -0.52       | 1.01 | 6.30              | 0.89      | -0.26           | -0.08                | 102.36        | 104.56          |
| Artisan Partners                 | -0.09           | -5.81                          | 19.12                          | -5.21       | 0.95 | 5.18              | 0.93      | -0.11           | -1.10                | 81.45         | 98.97           |
| First Eagle                      | 5.87            | 1.26                           | 12.74                          | 1.92        | 0.82 | 4.31              | 0.93      | 0.21            | 0.21                 | 83.54         | 74.24           |
| Voya Global Investors            | 1.98            | -0.93                          | 8.42                           | -0.86       | 0.99 | 1.20              | 0.98      | -0.18           | -0.76                | 93.35         | 100.58          |
| Adelante                         | -2.27           | 0.17                           | 20.49                          | 0.01        | 0.96 | 1.55              | 1.00      | -0.20           | 0.01                 | 96.17         | 96.14           |
| PanAgora Risk Parity Multi Asset | -6.28           | -4.79                          | 14.76                          | -4.33       | 1.18 | 5.49              | 0.88      | -0.63           | -0.83                | 100.04        | 125.31          |
| Sit LLCAR                        | 2.77            | 5.18                           | 5.34                           | 4.11        | 0.54 | 4.88              | 0.61      | -0.18           | 1.03                 | 68.87         | 34.06           |
| AFL-CIO                          | -2.39           | 0.01                           | 7.45                           | -0.10       | 0.96 | 1.00              | 0.98      | -0.82           | -0.01                | 95.47         | 96.30           |
| DFA Short Credit                 | 1.73            | 0.75                           | 2.77                           | 1.06        | 0.68 | 1.90              | 0.69      | -0.84           | 0.38                 | 77.85         | 56.78           |
| Insight Short Duration           | 3.21            | 1.52                           | 1.89                           | 2.23        | 0.57 | 1.66              | 0.54      | -0.40           | 0.89                 | 79.72         | 16.53           |
| Sit Short Duration               | 1.40            | -0.04                          | 3.91                           | -0.70       | 1.48 | 1.98              | 0.83      | -0.63           | 0.00                 | 139.72        | 159.58          |

Performance Analysis excludes closed end funds and those funds without 3 years of performance.



Total Fund  
Risk Analysis - 5 Years (Net of Fees)

Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024

5 Years

|                                  | Anlzd<br>Return | Anlzd<br>Excess<br>Performance | Standard<br>Deviation | Alpha | Beta | Tracking<br>Error | R-Squared | Sharpe<br>Ratio | Information<br>Ratio | Up<br>Capture | Down<br>Capture |
|----------------------------------|-----------------|--------------------------------|-----------------------|-------|------|-------------------|-----------|-----------------|----------------------|---------------|-----------------|
| BlackRock Russell 1000 Index     | 14.27           | -0.01                          | 18.48                 | -0.01 | 1.00 | 0.02              | 1.00      | 0.69            | -0.55                | 99.98         | 100.00          |
| Boston Partners                  | 11.32           | 2.63                           | 19.19                 | 2.42  | 1.01 | 3.17              | 0.97      | 0.53            | 0.79                 | 102.35        | 91.80           |
| Emerald Advisers                 | 9.15            | 2.29                           | 23.69                 | 2.54  | 0.94 | 5.29              | 0.95      | 0.39            | 0.36                 | 99.16         | 92.23           |
| Ceredex                          | 8.43            | 1.14                           | 22.46                 | 1.93  | 0.85 | 7.00              | 0.93      | 0.37            | 0.05                 | 87.28         | 81.70           |
| Pyrford                          | 4.23            | -0.27                          | 14.89                 | 0.58  | 0.77 | 6.59              | 0.89      | 0.19            | -0.13                | 85.62         | 85.43           |
| William Blair                    | 4.65            | 1.21                           | 18.90                 | 1.24  | 1.05 | 5.24              | 0.93      | 0.21            | 0.28                 | 109.03        | 104.31          |
| PIMCO RAE Emerging Markets       | 7.04            | 5.08                           | 20.09                 | 5.24  | 1.05 | 6.50              | 0.90      | 0.32            | 0.82                 | 114.67        | 92.30           |
| TT Emerging Markets              | 1.87            | 0.17                           | 21.42                 | 0.42  | 1.12 | 6.68              | 0.91      | 0.08            | 0.12                 | 113.81        | 112.32          |
| Artisan Partners                 | 9.86            | -3.21                          | 18.58                 | -2.04 | 0.93 | 5.37              | 0.92      | 0.47            | -0.56                | 87.34         | 93.17           |
| First Eagle                      | 7.45            | 1.03                           | 13.83                 | 2.27  | 0.76 | 5.57              | 0.93      | 0.41            | 0.07                 | 82.95         | 74.69           |
| Voya Global Investors            | 3.11            | -0.93                          | 8.69                  | -0.59 | 0.91 | 1.67              | 0.97      | 0.12            | -0.58                | 89.51         | 95.19           |
| Adelante                         | 5.48            | 0.91                           | 20.65                 | 0.98  | 0.95 | 1.66              | 1.00      | 0.25            | 0.40                 | 98.18         | 95.34           |
| PanAgora Risk Parity Multi Asset | 0.25            | -0.88                          | 13.63                 | -0.83 | 1.16 | 4.74              | 0.90      | -0.09           | -0.12                | 111.90        | 116.94          |
| AFL-CIO                          | -0.46           | -0.13                          | 6.02                  | -0.16 | 0.93 | 1.07              | 0.97      | -0.46           | -0.15                | 90.02         | 91.93           |
| DFA Short Credit                 | 1.49            | 0.17                           | 2.48                  | 0.57  | 0.70 | 1.76              | 0.61      | -0.39           | 0.09                 | 75.68         | 59.75           |
| Insight Short Duration           | 2.55            | 0.98                           | 2.09                  | 1.59  | 0.61 | 1.88              | 0.33      | 0.05            | 0.51                 | 83.65         | 19.62           |
| Sit Short Duration               | 1.61            | 0.25                           | 3.18                  | -0.30 | 1.41 | 1.65              | 0.80      | -0.26           | 0.16                 | 142.91        | 159.37          |

Performance Analysis excludes closed end funds and those funds without 5 years of performance.



# Total Fund Investment Fund Fee Analysis

## Contra Costa County Employees' Retirement Association Period Ending: December 31, 2024

| Name                         | Asset Class | Fee Schedule  | Market Value    | Estimated Fee Value | Expense Fee (%) |
|------------------------------|-------------|---|-----------------|---------------------|-----------------|
| BlackRock Russell 1000 Index | Growth      | 0.03 % of Assets  | \$1,293,693,551 | \$388,108           | 0.03            |
| Boston Partners              | Growth      | 0.50 % of First \$25 M<br>0.30 % Thereafter   | \$449,226,677   | \$1,397,680         | 0.31            |
| Emerald Advisers             | Growth      | 0.75 % of First \$10 M<br>0.60 % Thereafter   | \$244,106,491   | \$1,479,639         | 0.61            |
| Ceredex                      | Growth      | 0.85 % of First \$10 M<br>0.68 % of Next \$40 M<br>0.51 % Thereafter  | \$213,962,108   | \$1,193,207         | 0.56            |
| Pyrford                      | Growth      | 0.70 % of First \$50 M<br>0.50 % of Next \$50 M<br>0.35 % Thereafter  | \$431,793,167   | \$1,761,276         | 0.41            |
| William Blair                | Growth      | 0.80 % of First \$20 M<br>0.60 % of Next \$30 M<br>0.50 % of Next \$50 M<br>0.45 % of Next \$50 M<br>0.40 % of Next \$50 M<br>0.30 % Thereafter | \$421,050,329   | \$1,678,151         | 0.40            |
| PIMCO RAE Emerging Markets   | Growth      | 0.75 % of First \$50 M<br>0.68 % of Next \$50 M<br>0.50 % of Next \$100 M<br>0.45 % Thereafter  | \$244,065,554   | \$1,410,795         | 0.58            |
| TT Emerging Markets          | Growth      | 0.70 % of First \$100 M<br>0.65 % of Next \$100 M<br>0.60 % Thereafter  | \$255,694,045   | \$1,684,164         | 0.66            |
| Artisan Partners             | Growth      | 0.75 % of Assets  | \$651,114,905   | \$4,883,362         | 0.75            |
| First Eagle                  | Growth      | 0.75 % of Assets  | \$633,751,670   | \$4,753,138         | 0.75            |
| Voya Global Investors        | Growth      | 0.50 % of First \$50 M<br>0.40 % of Next \$50 M<br>0.35 % Thereafter  | \$168,216,052   | \$688,756           | 0.41            |
| Invesco US Fundamental Beta  | Growth      | 0.15 % of Assets  | \$123,079,023   | \$184,619           | 0.15            |

Mutual fund fees shown are sourced from Morningstar and are as of the most current prospectus.



# Total Fund Investment Fund Fee Analysis

## Contra Costa County Employees' Retirement Association Period Ending: December 31, 2024

| Name                             | Asset Class  | Fee Schedule   | Market Value  | Estimated Fee Value | Expense Fee (%) |
|----------------------------------|--------------|--|---------------|---------------------|-----------------|
| PanAgora Risk Parity Multi Asset | Growth       | 0.35 % of Assets   | \$8,894,820   | \$31,132            | 0.35            |
| AFL-CIO                          | Diversifying | 0.32 % of Assets   | \$269,385,437 | \$862,033           | 0.32            |
| Sit LLCAR                        | Diversifying | 0.39 % of First \$200 M<br>0.35 % Thereafter                           | \$463,062,627 | \$1,759,638         | 0.38            |
| DFA Short Credit                 | Liquidity    | 0.20 % of First \$25 M<br>0.10 % Thereafter                            | \$394,050,033 | \$419,050           | 0.11            |
| Insight Short Duration           | Liquidity    | 0.06 % of First \$500 M<br>0.05 % of Next \$500 M<br>0.04 % Thereafter | \$650,402,897 | \$375,201           | 0.06            |
| Sit Short Duration               | Liquidity    | 0.15 % of Assets   | \$679,017,047 | \$1,018,526         | 0.15            |

Mutual fund fees shown are sourced from Morningstar and are as of the most current prospectus.



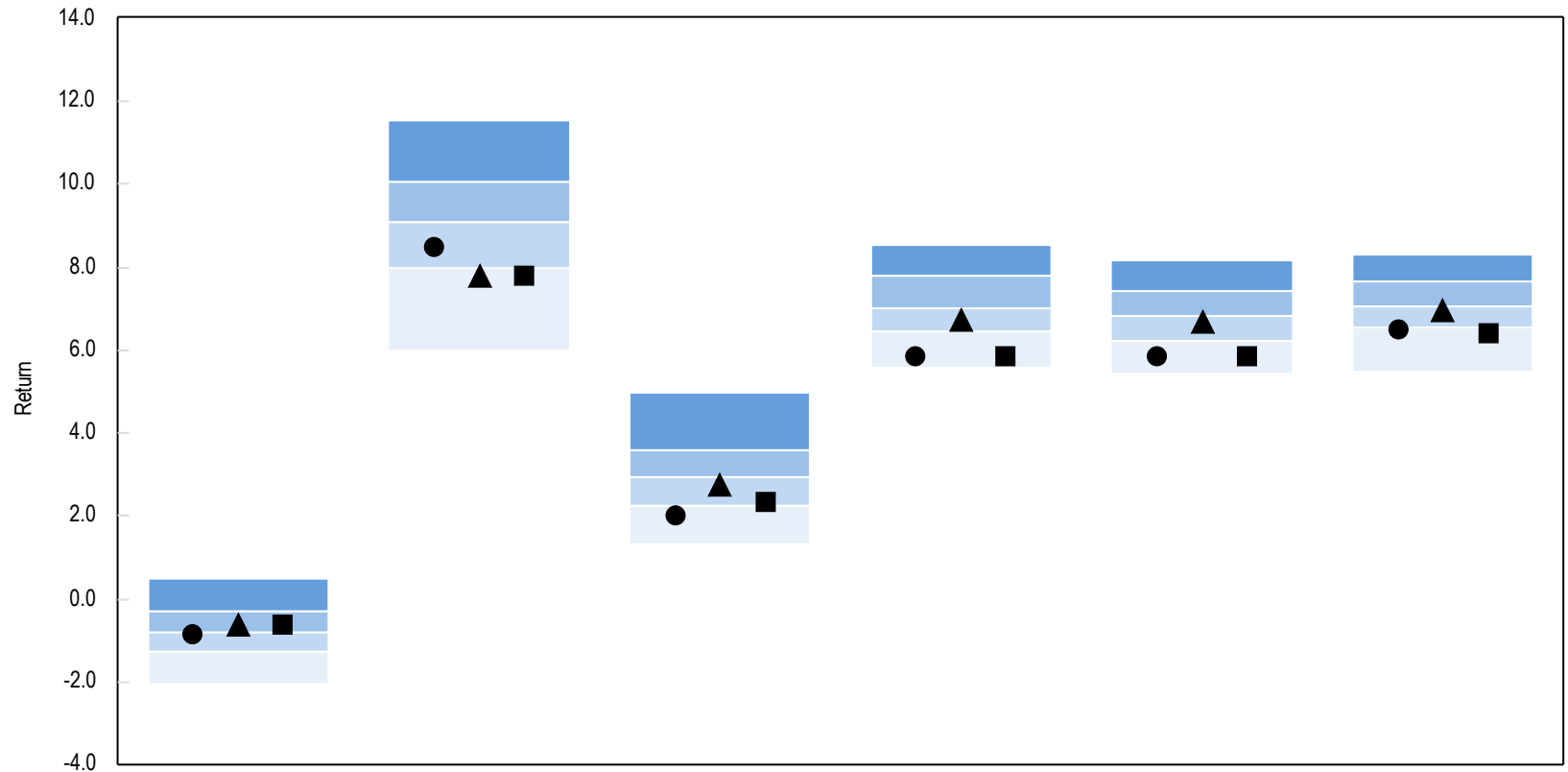
# Total Fund

# Contra Costa County Employees' Retirement Association

## Peer Universe Comparison: Cumulative Performance (Gross of Fees)

Period Ending: December 31, 2024

Total Fund Cumulative Performance vs. InvMetrics Public DB >\$1B Gross



- Total Fund
- ▲ Policy Index
- Implementation Benchmark

|                          | 3 Mo       | 1 Yr      | 3 Yrs     | 5 Yrs     | 7 Yrs     | 10 Yrs    |
|--------------------------|------------|-----------|-----------|-----------|-----------|-----------|
| Total Fund               | -0.86 (55) | 8.50 (67) | 2.03 (79) | 5.84 (89) | 5.85 (86) | 6.49 (77) |
| Policy Index             | -0.62 (35) | 7.78 (80) | 2.75 (60) | 6.74 (60) | 6.68 (58) | 6.96 (57) |
| Implementation Benchmark | -0.61 (34) | 7.79 (80) | 2.35 (72) | 5.87 (89) | 5.84 (87) | 6.40 (81) |
| 5th Percentile           | 0.50       | 11.55     | 4.97      | 8.52      | 8.17      | 8.33      |
| 1st Quartile             | -0.28      | 10.08     | 3.61      | 7.80      | 7.43      | 7.64      |
| Median                   | -0.82      | 9.12      | 2.93      | 7.01      | 6.85      | 7.05      |
| 3rd Quartile             | -1.27      | 8.00      | 2.26      | 6.44      | 6.23      | 6.55      |
| 95th Percentile          | -2.04      | 6.01      | 1.32      | 5.56      | 5.43      | 5.48      |
| Population               | 110        | 109       | 106       | 105       | 103       | 102       |

Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.



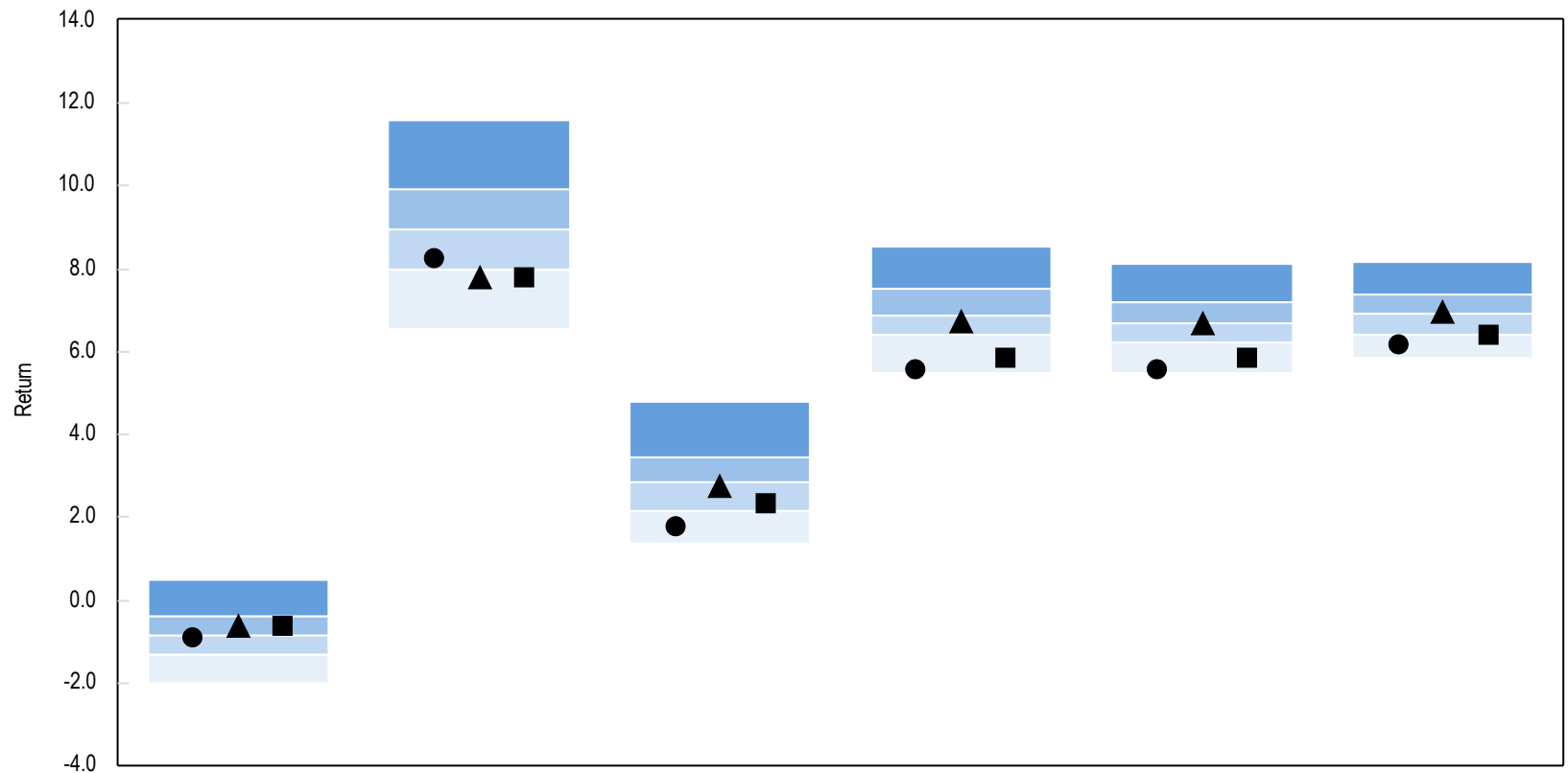
# Total Fund

# Contra Costa County Employees' Retirement Association

## Peer Universe Comparison: Cumulative Performance (Net of Fees)

Period Ending: December 31, 2024

Total Fund Cumulative Performance vs. InvMetrics Public DB >\$1B Net

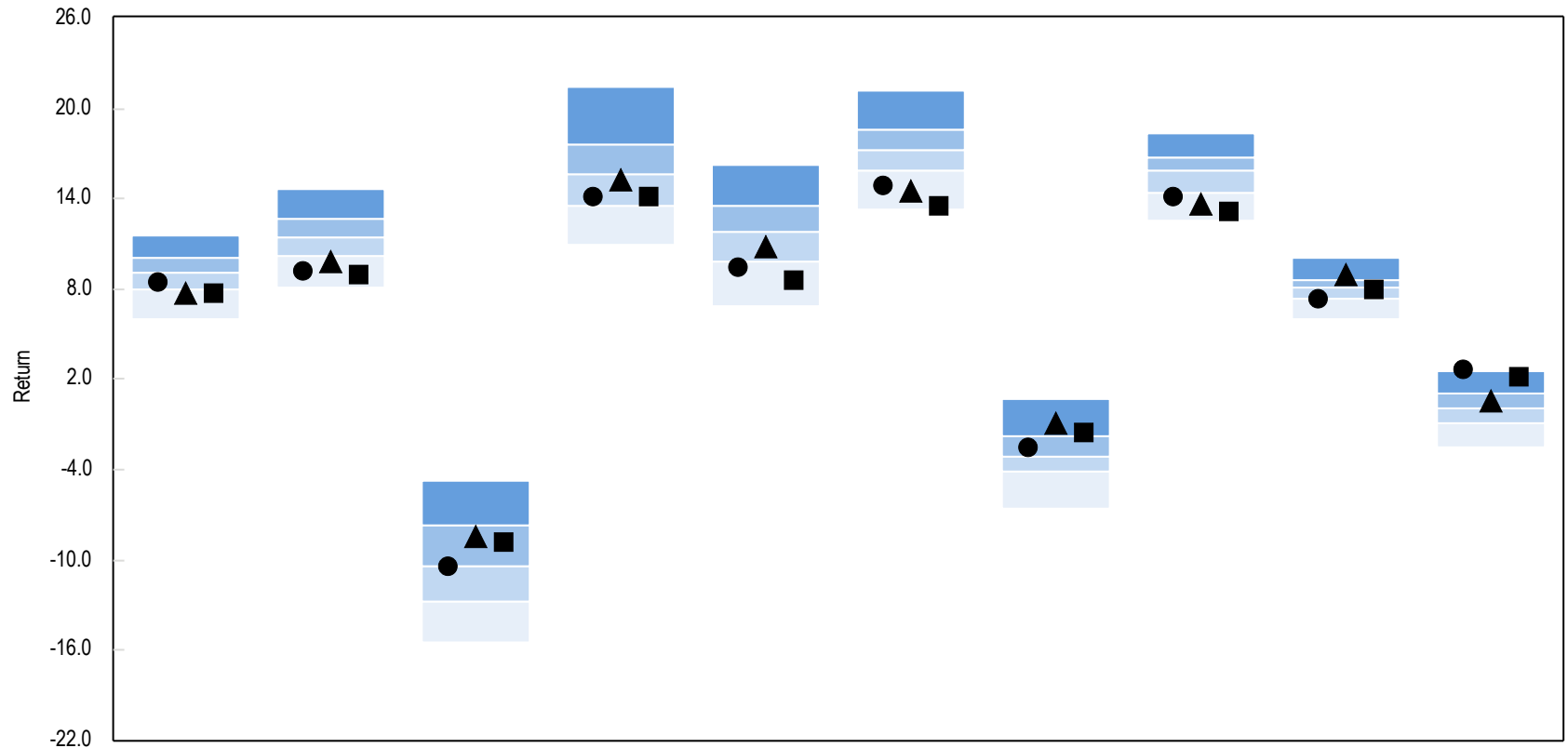


- Total Fund
- ▲ Policy Index
- Implementation Benchmark

|                          | 3 Mo       | 1 Yr      | 3 Yrs     | 5 Yrs     | 7 Yrs     | 10 Yrs    |
|--------------------------|------------|-----------|-----------|-----------|-----------|-----------|
| Total Fund               | -0.90 (58) | 8.28 (68) | 1.80 (85) | 5.59 (94) | 5.59 (91) | 6.17 (88) |
| Policy Index             | -0.62 (36) | 7.78 (80) | 2.75 (54) | 6.74 (58) | 6.68 (51) | 6.96 (47) |
| Implementation Benchmark | -0.61 (36) | 7.79 (80) | 2.35 (71) | 5.87 (88) | 5.84 (84) | 6.40 (75) |
| 5th Percentile           | 0.48       | 11.61     | 4.77      | 8.56      | 8.13      | 8.17      |
| 1st Quartile             | -0.37      | 9.92      | 3.44      | 7.53      | 7.21      | 7.38      |
| Median                   | -0.85      | 8.98      | 2.85      | 6.89      | 6.69      | 6.91      |
| 3rd Quartile             | -1.34      | 7.99      | 2.17      | 6.40      | 6.21      | 6.40      |
| 95th Percentile          | -1.99      | 6.56      | 1.36      | 5.47      | 5.49      | 5.85      |
| Population               | 104        | 103       | 99        | 97        | 95        | 92        |



Total Fund Consecutive Periods vs. InvMetrics Public DB &gt;\$1B Gross

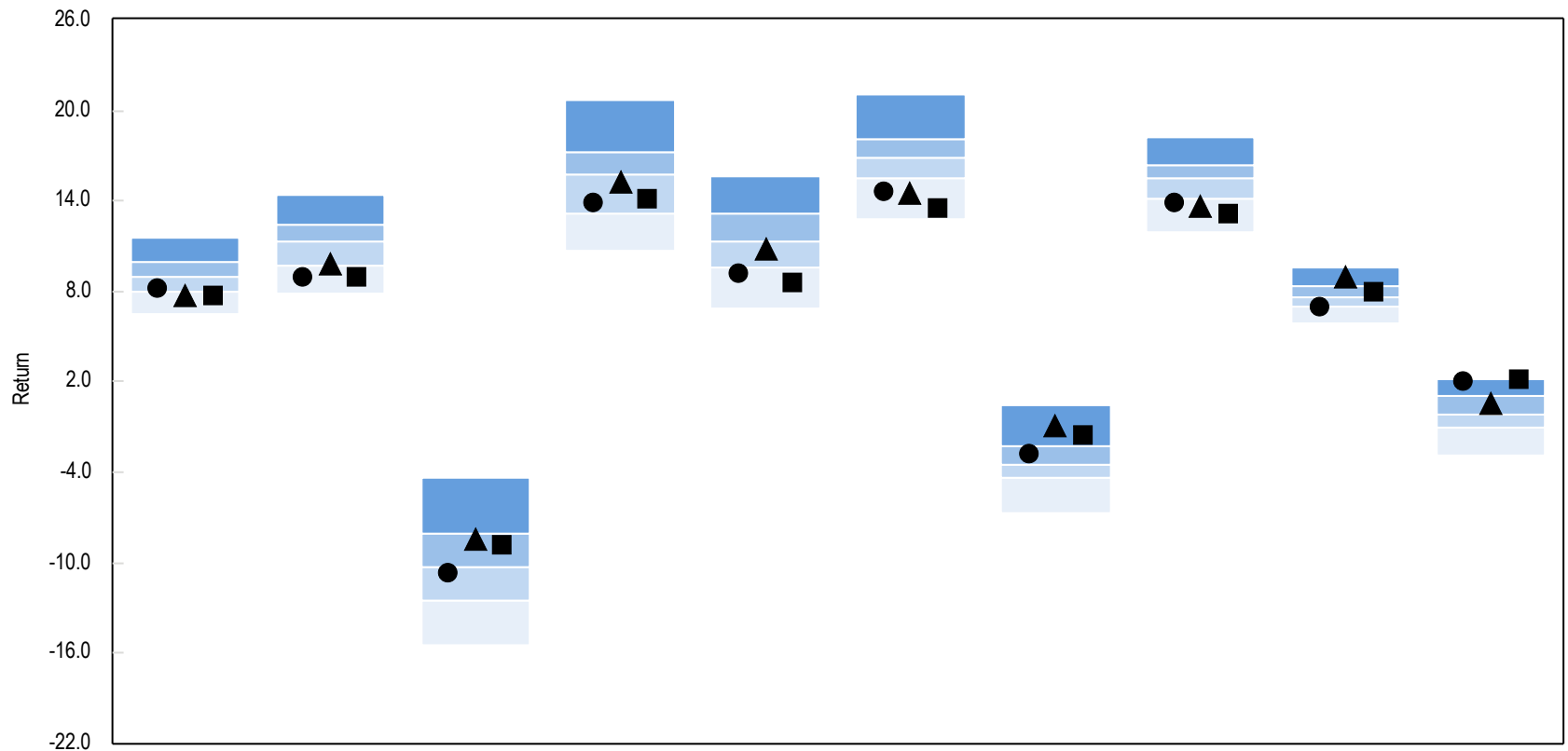


|                            | YTD       | 2023      | 2022        | 2021       | 2020       | 2019       | 2018       | 2017       | 2016      | 2015      |
|----------------------------|-----------|-----------|-------------|------------|------------|------------|------------|------------|-----------|-----------|
| ● Total Fund               | 8.50 (67) | 9.23 (87) | -10.39 (50) | 14.21 (65) | 9.52 (81)  | 14.92 (87) | -2.46 (34) | 14.18 (79) | 7.43 (71) | 2.70 (3)  |
| ▲ Policy Index             | 7.78 (80) | 9.85 (80) | -8.38 (30)  | 15.29 (55) | 10.81 (65) | 14.58 (88) | -0.94 (13) | 13.69 (88) | 8.93 (16) | 0.58 (32) |
| ■ Implementation Benchmark | 7.79 (80) | 8.99 (88) | -8.74 (33)  | 14.17 (66) | 8.66 (90)  | 13.59 (95) | -1.52 (17) | 13.21 (91) | 8.00 (55) | 2.18 (11) |
| 5th Percentile             | 11.55     | 14.60     | -4.70       | 21.39      | 16.27      | 21.15      | 0.69       | 18.39      | 10.03     | 2.53      |
| 1st Quartile               | 10.08     | 12.70     | -7.71       | 17.59      | 13.53      | 18.61      | -1.82      | 16.78      | 8.58      | 1.06      |
| Median                     | 9.12      | 11.43     | -10.39      | 15.66      | 11.83      | 17.30      | -3.17      | 15.91      | 8.08      | 0.10      |
| 3rd Quartile               | 8.00      | 10.25     | -12.71      | 13.51      | 9.85       | 15.90      | -4.14      | 14.36      | 7.35      | -0.89     |
| 95th Percentile            | 6.01      | 8.11      | -15.45      | 10.94      | 6.83       | 13.33      | -6.55      | 12.56      | 5.98      | -2.53     |
| Population                 | 109       | 188       | 195         | 228        | 238        | 198        | 175        | 184        | 181       | 176       |

Effective 1/01/2017, only traditional asset class (public equity, fixed income, REITs) investment management fees will be included in the gross of fee return calculation.



Total Fund Consecutive Periods vs. InvMetrics Public DB &gt;\$1B Net



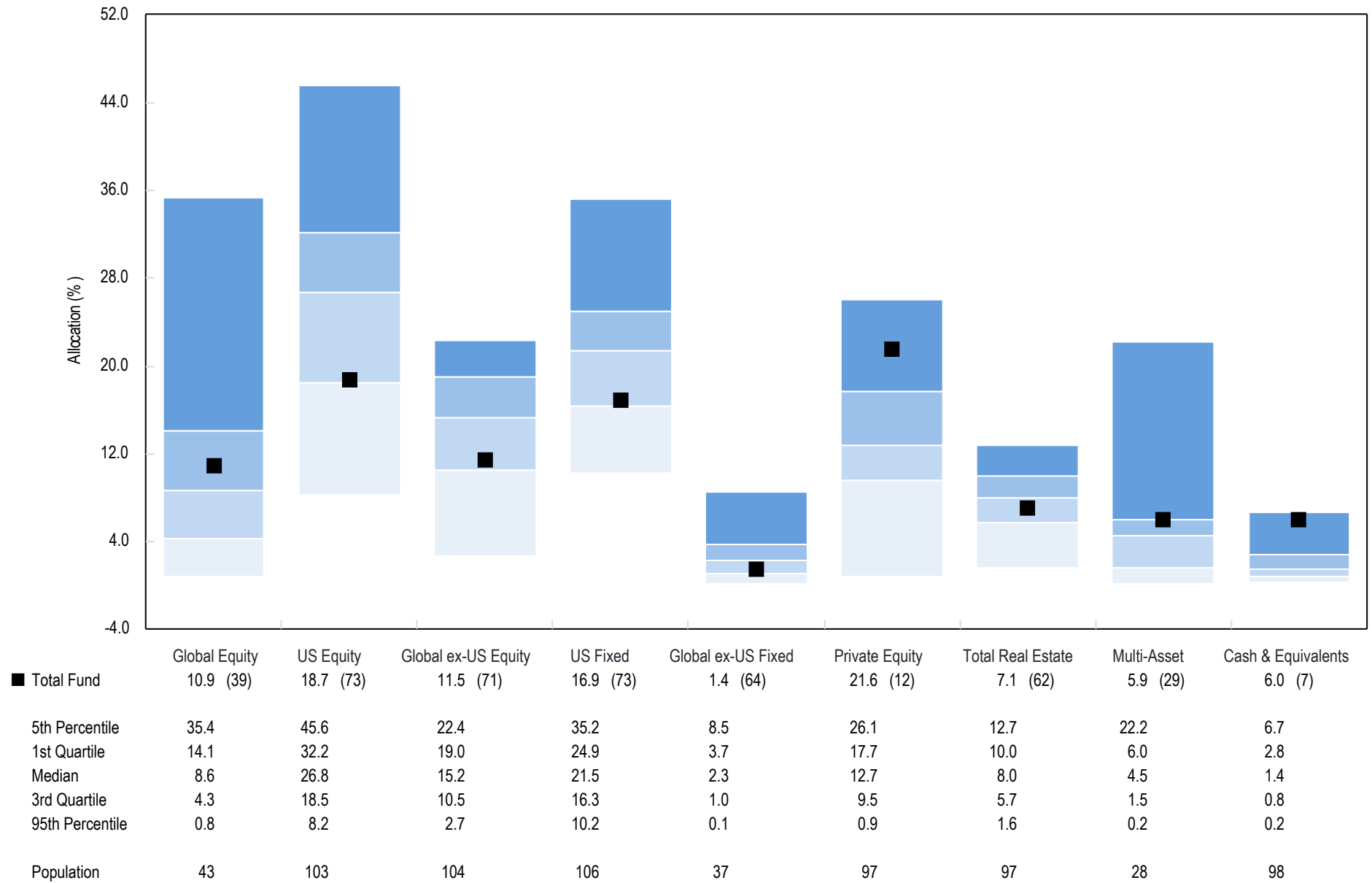
|                            | YTD       | 2023      | 2022        | 2021       | 2020       | 2019       | 2018       | 2017       | 2016      | 2015      |
|----------------------------|-----------|-----------|-------------|------------|------------|------------|------------|------------|-----------|-----------|
| ● Total Fund               | 8.28 (68) | 9.01 (85) | -10.61 (55) | 13.90 (66) | 9.23 (78)  | 14.61 (88) | -2.72 (34) | 13.86 (81) | 6.94 (77) | 2.09 (8)  |
| ▲ Policy Index             | 7.78 (80) | 9.85 (75) | -8.38 (30)  | 15.29 (53) | 10.81 (61) | 14.58 (88) | -0.94 (9)  | 13.69 (85) | 8.93 (11) | 0.58 (30) |
| ■ Implementation Benchmark | 7.79 (80) | 8.99 (85) | -8.74 (31)  | 14.17 (63) | 8.66 (87)  | 13.59 (93) | -1.52 (14) | 13.21 (90) | 8.00 (38) | 2.18 (5)  |
| 5th Percentile             | 11.61     | 14.37     | -4.32       | 20.71      | 15.59      | 21.06      | 0.46       | 18.19      | 9.53      | 2.14      |
| 1st Quartile               | 9.92      | 12.46     | -8.01       | 17.22      | 13.14      | 18.11      | -2.31      | 16.42      | 8.30      | 1.03      |
| Median                     | 8.98      | 11.26     | -10.33      | 15.71      | 11.31      | 16.83      | -3.52      | 15.53      | 7.67      | -0.12     |
| 3rd Quartile               | 7.99      | 9.70      | -12.50      | 13.20      | 9.58       | 15.55      | -4.40      | 14.17      | 7.03      | -1.06     |
| 95th Percentile            | 6.56      | 7.84      | -15.52      | 10.66      | 6.91       | 12.83      | -6.66      | 11.94      | 5.91      | -2.87     |
| Population                 | 103       | 189       | 189         | 219        | 229        | 205        | 182        | 191        | 186       | 181       |



Total Fund  
Peer Universe Comparison: Asset Allocation

Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024

Total Fund vs. InvMetrics Public DB > \$1B





## Domestic Equity Managers

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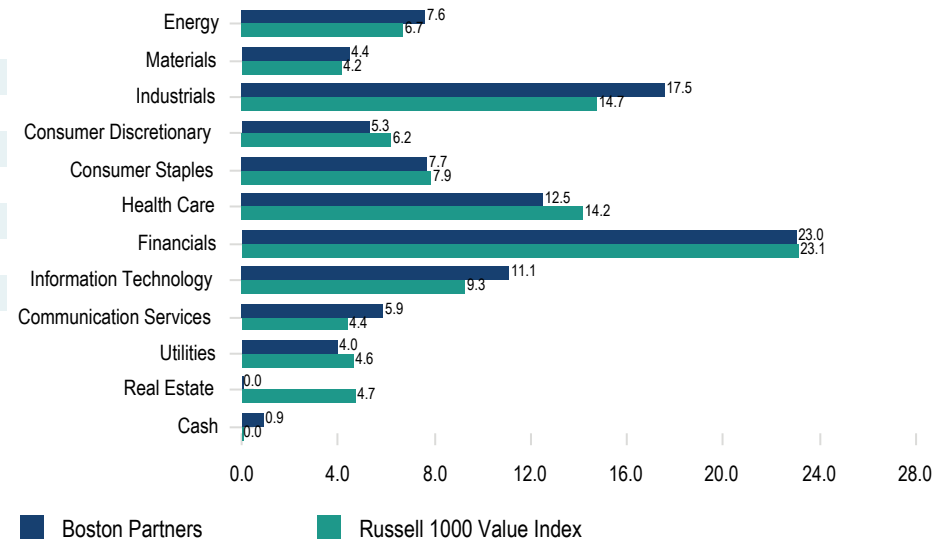
# Boston Partners Manager Portfolio Overview

# Contra Costa County Employees' Retirement Association Period Ending: December 31, 2024

## Characteristics

|                         | Portfolio  | Benchmark  |
|-------------------------|------------|------------|
| Number of Stocks        | 88         | 869        |
| Wtd. Avg. Mkt. Cap \$M  | 189,084.75 | 171,890.98 |
| Median Mkt. Cap \$M     | 46,226.76  | 14,079.63  |
| Price/Earnings ratio    | 20.03      | 19.87      |
| Price/Book ratio        | 3.11       | 2.75       |
| Return on Equity (%)    | 3.59       | 3.02       |
| Current Yield (%)       | 1.83       | 2.12       |
| Beta (5 Years, Monthly) | 1.01       | 1.00       |

## Sector Allocation (%) vs. Russell 1000 Value Index



## Largest Holdings

|                                 | End Weight (%) | Quarterly Return (%) |
|---------------------------------|----------------|----------------------|
| JPMorgan Chase & Co             | 4.92           | 14.36                |
| Alphabet Inc                    | 2.85           | 14.27                |
| Oracle Corp                     | 2.43           | -1.98                |
| Philip Morris International Inc | 2.27           | 0.23                 |
| Honeywell International Inc     | 2.21           | 9.82                 |
| AbbVie Inc                      | 2.19           | -9.29                |
| UnitedHealth Group              | 2.09           | -13.16               |
| Sysco Corporation               | 1.94           | -1.39                |
| LPL Financial Holdings Inc      | 1.87           | 40.49                |
| CRH PLC                         | 1.76           | 0.11                 |

## Top Contributors

|                             | Portfolio Weight (%) | Quarterly Return (%) | Contribution to Return (%) |
|-----------------------------|----------------------|----------------------|----------------------------|
| JPMorgan Chase & Co         | 4.40                 | 14.36                | 0.63                       |
| Morgan Stanley              | 1.93                 | 21.57                | 0.42                       |
| LPL Financial Holdings Inc  | 0.89                 | 40.49                | 0.36                       |
| Alphabet Inc                | 2.48                 | 14.27                | 0.35                       |
| Discover Financial Services | 1.36                 | 23.97                | 0.33                       |
| Wells Fargo & Co            | 1.29                 | 25.05                | 0.32                       |
| Blue Owl Capital Inc        | 0.99                 | 21.09                | 0.21                       |
| Flex Ltd                    | 1.18                 | 14.84                | 0.18                       |
| McKesson Corp               | 1.12                 | 15.40                | 0.17                       |
| Walmart Inc                 | 1.41                 | 12.14                | 0.17                       |

## Top Detractors

|                             | Portfolio Weight (%) | Quarterly Return (%) | Contribution to Return (%) |
|-----------------------------|----------------------|----------------------|----------------------------|
| Microchip Technology Inc    | 1.28                 | -28.08               | -0.36                      |
| Lennar Corp                 | 1.22                 | -27.06               | -0.33                      |
| Advanced Micro Devices Inc  | 1.24                 | -26.38               | -0.33                      |
| Builders FirstSource Inc    | 1.18                 | -26.27               | -0.31                      |
| UnitedHealth Group          | 2.16                 | -13.16               | -0.28                      |
| Micron Technology Inc.      | 1.48                 | -18.65               | -0.28                      |
| Teck Resources Ltd          | 1.23                 | -22.26               | -0.27                      |
| ICON Public Limited Company | 0.97                 | -27.01               | -0.26                      |
| Amgen Inc                   | 1.40                 | -18.46               | -0.26                      |
| The Cigna Group             | 1.27                 | -19.95               | -0.25                      |

% of Portfolio

17.05

3.14

% of Portfolio

13.43

-2.94

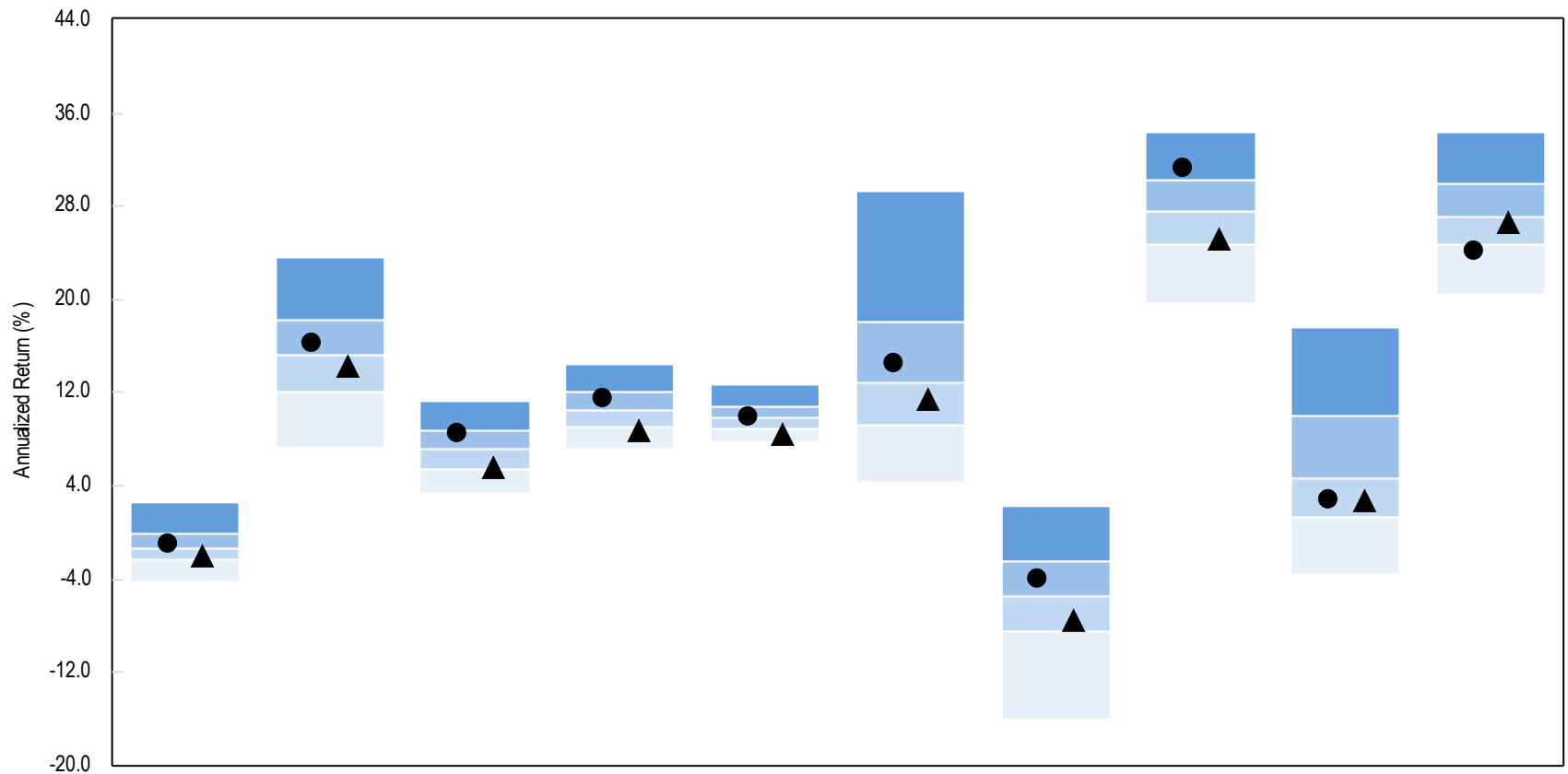
Domestic equity large cap value portfolio exhibiting low turnover in companies with low valuations relative to intrinsic value. Primary personnel include Mark Donovan and David Pyle.



Boston Partners  
Manager Performance Comparisons (Gross of Fees)

Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024

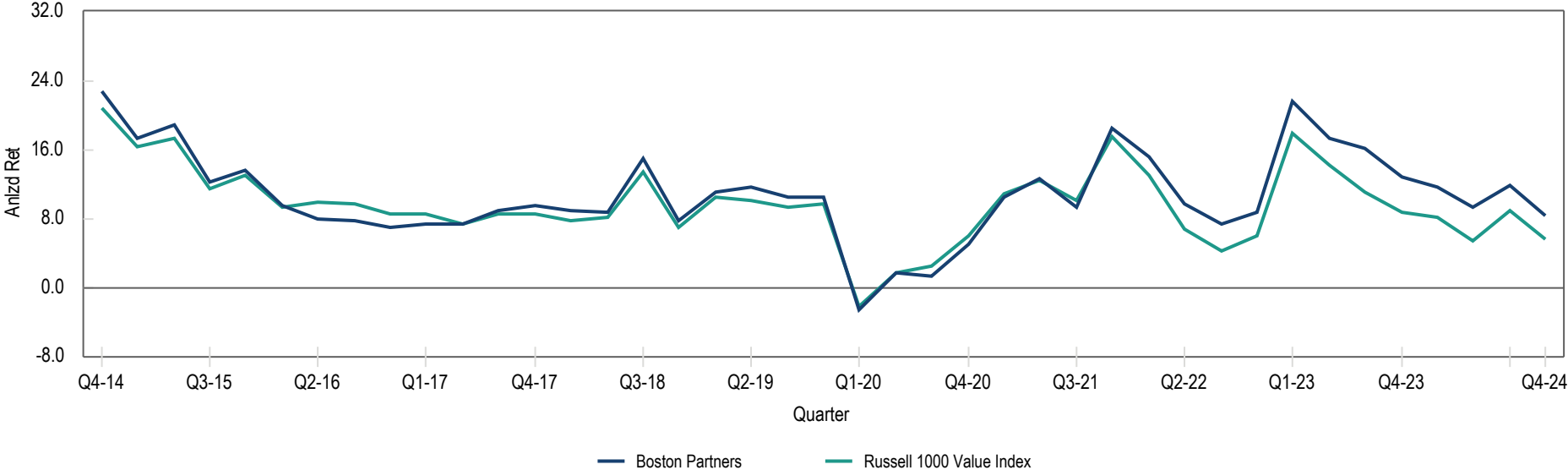
Boston Partners vs. eV US Large Cap Value Equity Gross Universe



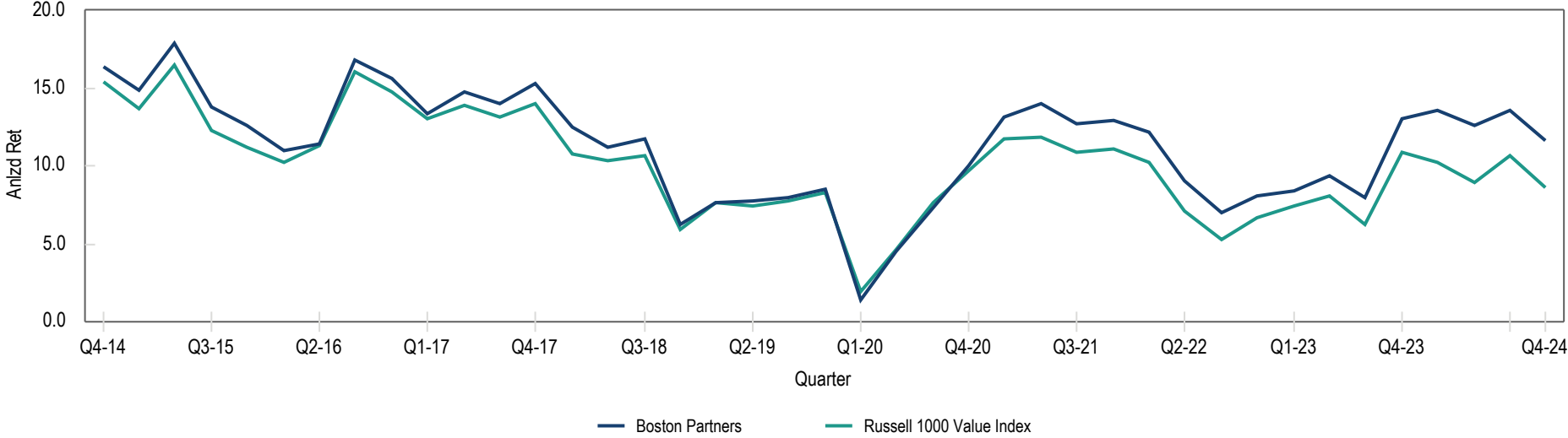
|                            | Quarter    | 1 Year     | 3 Years   | 5 Years    | 10 Years   | 2023       | 2022       | 2021       | 2020      | 2019       |
|----------------------------|------------|------------|-----------|------------|------------|------------|------------|------------|-----------|------------|
| ● Boston Partners          | -0.80 (38) | 16.37 (42) | 8.67 (26) | 11.66 (30) | 10.09 (40) | 14.67 (39) | -3.82 (36) | 31.34 (19) | 2.96 (64) | 24.26 (79) |
| ▲ Russell 1000 Value Index | -1.98 (66) | 14.37 (56) | 5.63 (73) | 8.68 (81)  | 8.49 (87)  | 11.46 (62) | -7.54 (68) | 25.16 (72) | 2.80 (65) | 26.54 (57) |
| 5th Percentile             | 2.53       | 23.61      | 11.32     | 14.45      | 12.72      | 29.33      | 2.35       | 34.34      | 17.56     | 34.33      |
| 1st Quartile               | -0.13      | 18.23      | 8.72      | 12.16      | 10.84      | 18.06      | -2.41      | 30.18      | 10.06     | 29.92      |
| Median                     | -1.41      | 15.30      | 7.12      | 10.47      | 9.80       | 12.94      | -5.43      | 27.61      | 4.71      | 27.17      |
| 3rd Quartile               | -2.38      | 12.06      | 5.41      | 9.09       | 8.94       | 9.26       | -8.51      | 24.70      | 1.30      | 24.74      |
| 95th Percentile            | -4.26      | 7.31       | 3.37      | 7.23       | 7.79       | 4.29       | -16.00     | 19.62      | -3.51     | 20.40      |
| Population                 | 373        | 372        | 366       | 351        | 316        | 411        | 421        | 426        | 433       | 459        |



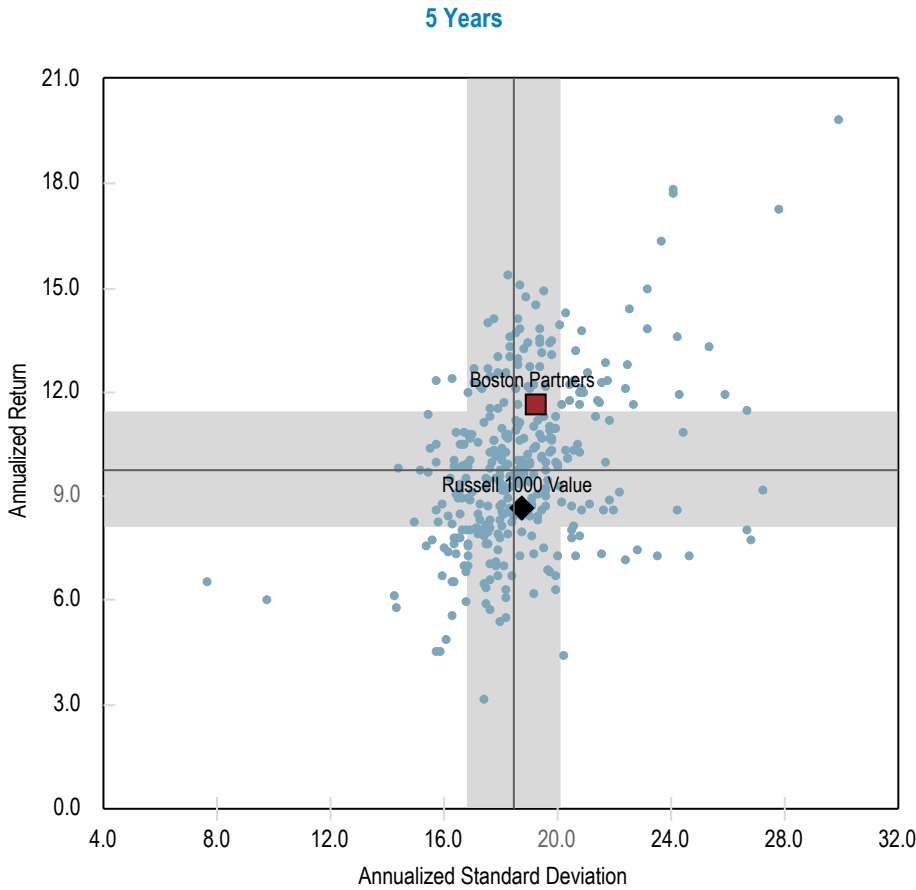
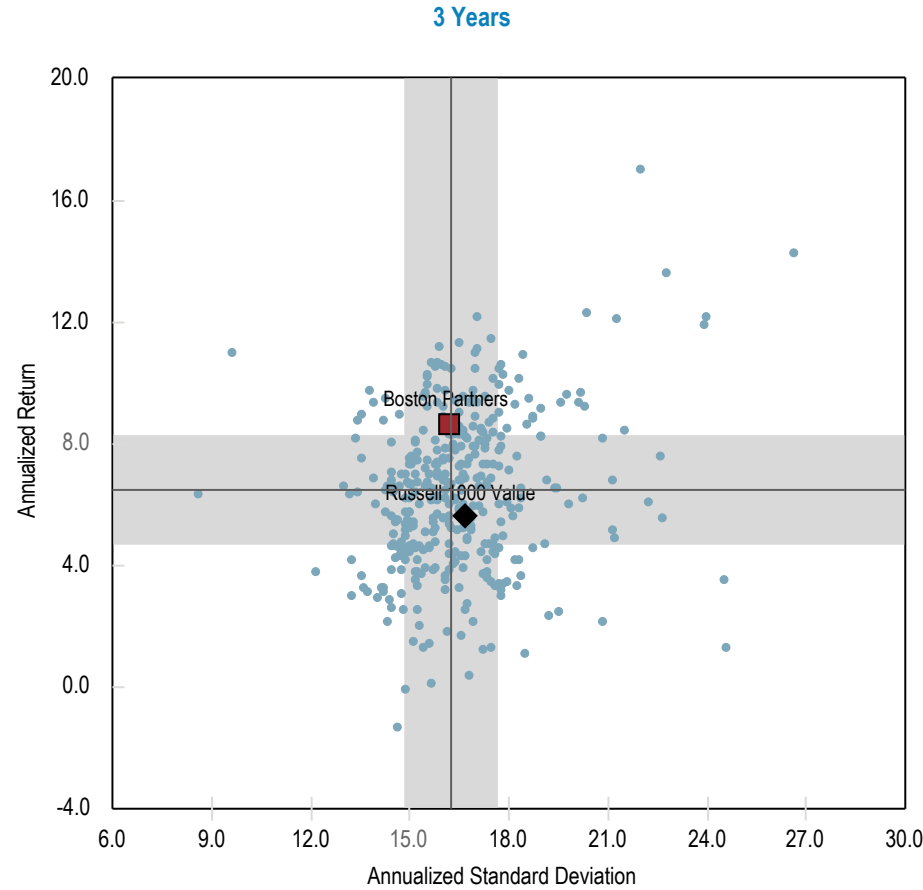
Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)







|                                     | 3 Years          |                              |              |
|-------------------------------------|------------------|------------------------------|--------------|
|                                     | Anlzd Return (%) | Anlzd Standard Deviation (%) | Sharpe Ratio |
| Boston Partners                     | 8.7              | 16.2                         | 0.4          |
| Russell 1000 Value Index            | 5.6              | 16.7                         | 0.2          |
| eV US Large Cap Value Equity Median | 7.1              | 16.3                         | 0.3          |
| Population                          | 366              | 366                          | 366          |

|                                     | 5 Years          |                              |              |
|-------------------------------------|------------------|------------------------------|--------------|
|                                     | Anlzd Return (%) | Anlzd Standard Deviation (%) | Sharpe Ratio |
| Boston Partners                     | 11.7             | 19.2                         | 0.5          |
| Russell 1000 Value Index            | 8.7              | 18.7                         | 0.4          |
| eV US Large Cap Value Equity Median | 10.5             | 18.5                         | 0.5          |
| Population                          | 351              | 351                          | 351          |



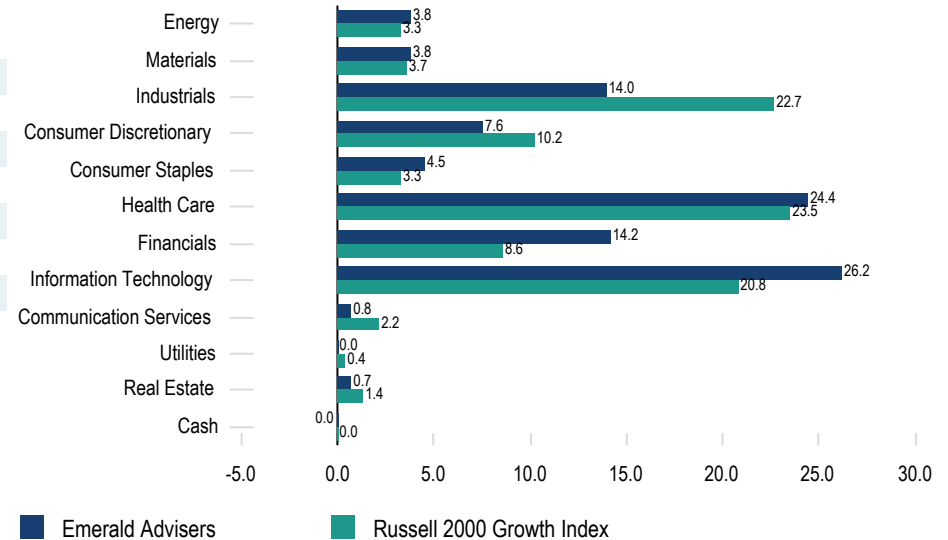
# Emerald Advisers Manager Portfolio Overview

## Contra Costa County Employees' Retirement Association Period Ending: December 31, 2024

### Characteristics

|                         | Portfolio | Benchmark |
|-------------------------|-----------|-----------|
| Number of Stocks        | 114       | 1,117     |
| Wtd. Avg. Mkt. Cap \$M  | 4,865.76  | 4,306.44  |
| Median Mkt. Cap \$M     | 3,224.39  | 1,152.98  |
| Price/Earnings ratio    | 27.03     | 24.01     |
| Price/Book ratio        | 4.35      | 4.22      |
| Return on Equity (%)    | 18.13     | 2.77      |
| Current Yield (%)       | 0.41      | 0.57      |
| Beta (5 Years, Monthly) | 0.94      | 1.00      |

### Sector Allocation (%) vs. Russell 2000 Growth Index



### Largest Holdings

|                                       | End Weight (%) | Quarterly Return (%) |
|---------------------------------------|----------------|----------------------|
| Credo Technology Group Holding Ltd    | 3.77           | 18.21                |
| FTAI Aviation Ltd                     | 3.63           | 8.59                 |
| Freshpet Inc                          | 2.90           | 8.29                 |
| Palomar Holdings Inc                  | 2.00           | 11.54                |
| Q2 Holdings Inc                       | 1.99           | 26.17                |
| Insmmed Inc                           | 1.85           | -5.43                |
| RadNet Inc                            | 1.77           | 0.65                 |
| Chart Industries Inc                  | 1.74           | 53.73                |
| Kratos Defense & Security Solutions   | 1.70           | 13.22                |
| Skyward Specialty Insurance Group Inc | 1.70           | 24.08                |

### Top Contributors

|                                       | Portfolio Weight (%) | Quarterly Return (%) | Contribution to Return (%) |
|---------------------------------------|----------------------|----------------------|----------------------------|
| Credo Technology Group Holding Ltd    | 1.96                 | 118.21               | 2.32                       |
| Chart Industries Inc                  | 1.16                 | 53.73                | 0.62                       |
| Q2 Holdings Inc                       | 2.14                 | 26.17                | 0.56                       |
| Applied Optoelectronics Inc           | 0.33                 | 157.58               | 0.52                       |
| Wave Life Sciences Ltd                | 0.91                 | 50.85                | 0.46                       |
| InterDigital Inc                      | 1.03                 | 37.20                | 0.38                       |
| Skyward Specialty Insurance Group Inc | 1.39                 | 24.08                | 0.34                       |
| Lumentum Holdings Inc                 | 0.95                 | 32.46                | 0.31                       |
| FTAI Aviation Ltd                     | 3.42                 | 8.59                 | 0.29                       |
| Traverse Therapeutics Inc             | 1.13                 | 24.52                | 0.28                       |

### Top Detractors

|                                   | Portfolio Weight (%) | Quarterly Return (%) | Contribution to Return (%) |
|-----------------------------------|----------------------|----------------------|----------------------------|
| TransMedics Group Inc             | 1.01                 | -60.29               | -0.61                      |
| Impinj Inc                        | 1.63                 | -32.91               | -0.54                      |
| Varonis Systems Inc               | 2.17                 | -21.36               | -0.46                      |
| AeroVironment Inc                 | 1.75                 | -23.25               | -0.41                      |
| Baldwin Insurance Group Inc (The) | 1.76                 | -22.17               | -0.39                      |
| Collegium Pharmaceutical Inc      | 1.28                 | -25.85               | -0.33                      |
| Ultragenyx Pharmaceutical Inc     | 1.31                 | -24.27               | -0.32                      |
| Viking Therapeutics Inc           | 0.86                 | -36.44               | -0.31                      |
| ATI Inc                           | 1.72                 | -17.74               | -0.30                      |
| LendingTree Inc                   | 0.85                 | -33.22               | -0.28                      |

% of Portfolio

14.42

6.09

% of Portfolio

14.34

-3.95

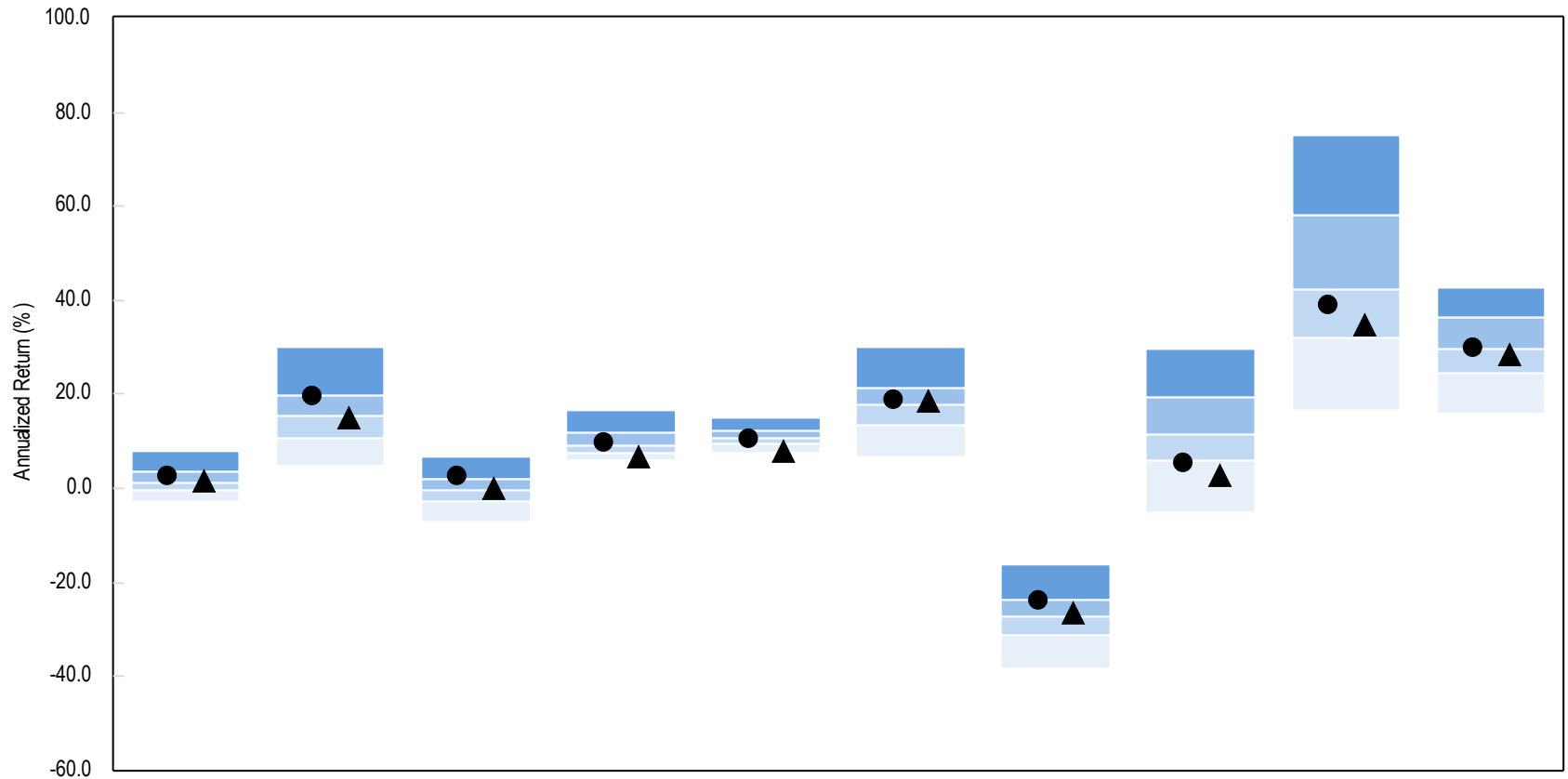
Domestic equity small cap growth portfolio of companies with significantly high growth rates. Primary personnel include Kenneth Mertz, Joseph Garner, and Stacey Sears.



Emerald Advisers  
Manager Performance Comparisons (Gross of Fees)

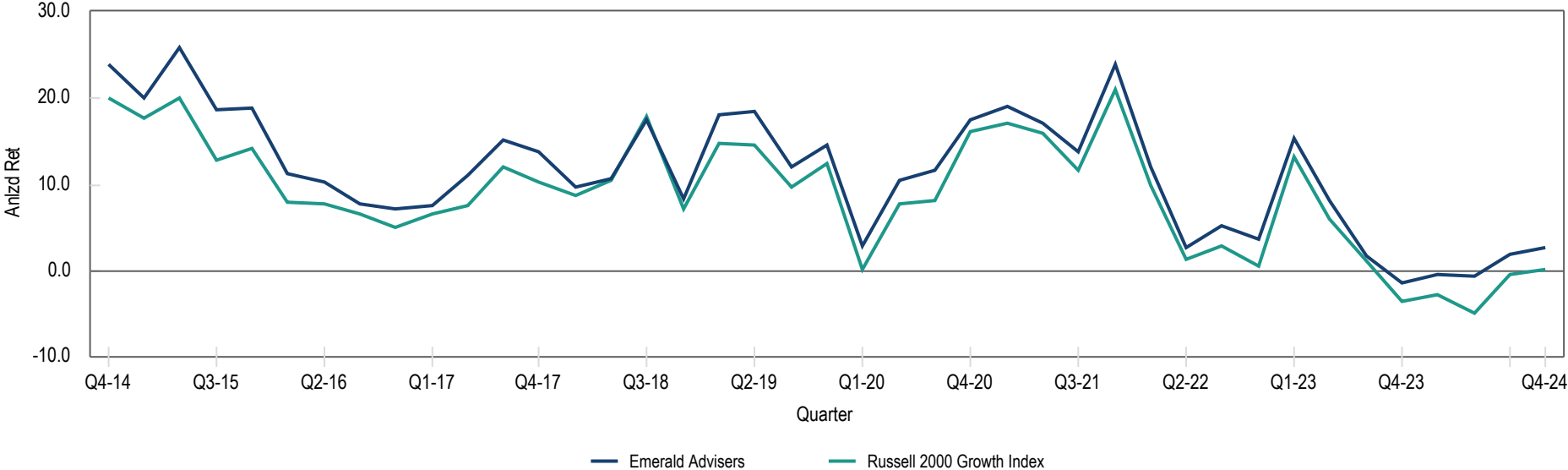
Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024

Emerald Advisers vs. eV US Small Cap Growth Equity Gross Universe

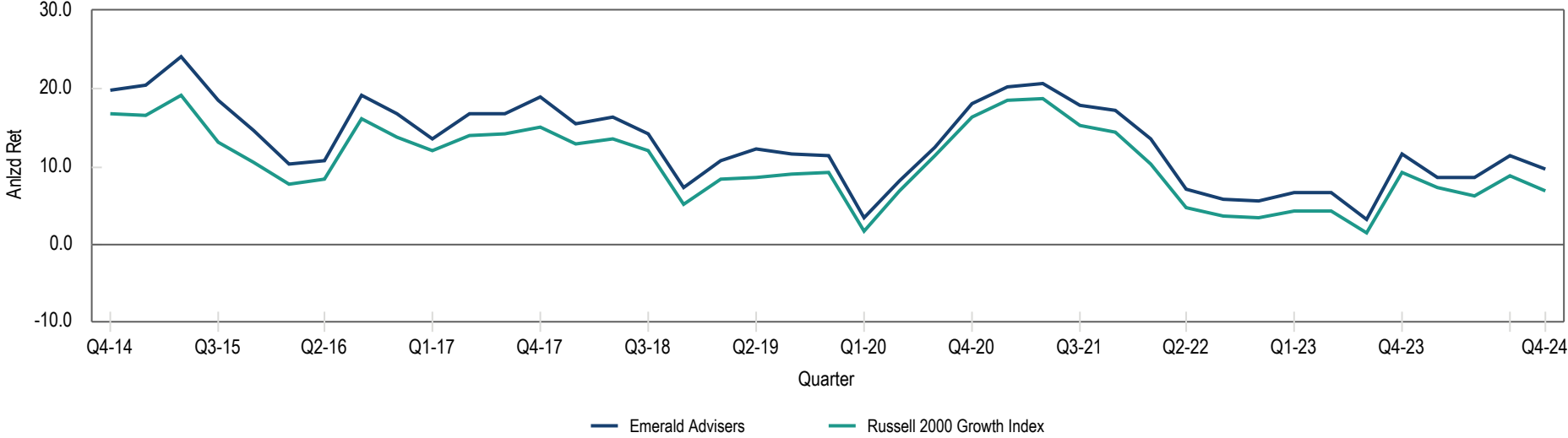




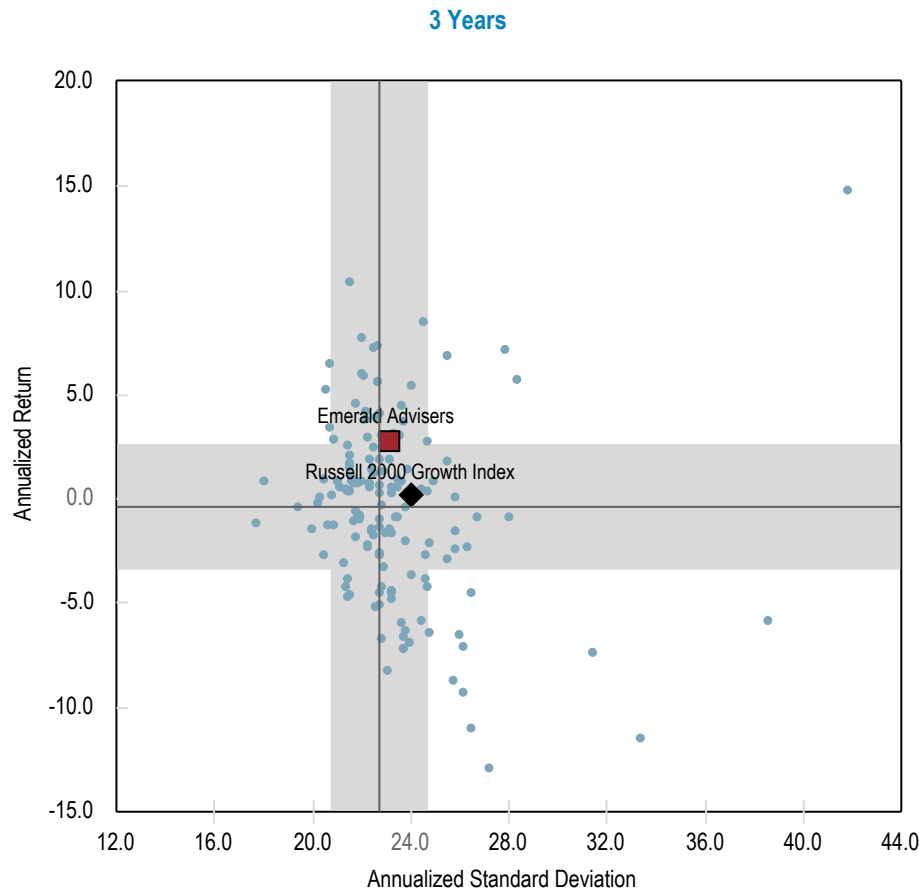
Rolling 3 Year Annualized Return (%)



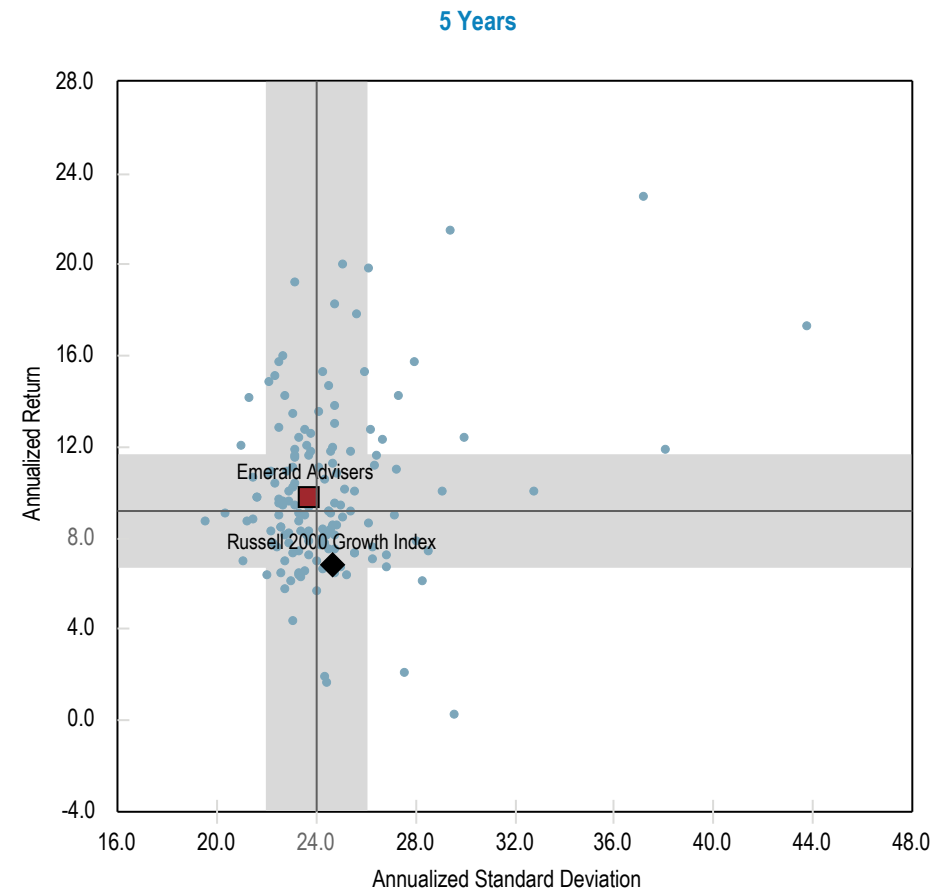
Rolling 5 Year Annualized Return (%)







|                                      | 3 Years          |                              |              |
|--------------------------------------|------------------|------------------------------|--------------|
|                                      | Anlzd Return (%) | Anlzd Standard Deviation (%) | Sharpe Ratio |
| Emerald Advisers                     | 2.8              | 23.1                         | 0.1          |
| Russell 2000 Growth Index            | 0.2              | 24.0                         | 0.0          |
| eV US Small Cap Growth Equity Median | -0.3             | 22.7                         | -0.1         |
| Population                           | 152              | 152                          | 152          |



|                                      | 5 Years          |                              |              |
|--------------------------------------|------------------|------------------------------|--------------|
|                                      | Anlzd Return (%) | Anlzd Standard Deviation (%) | Sharpe Ratio |
| Emerald Advisers                     | 9.8              | 23.7                         | 0.4          |
| Russell 2000 Growth Index            | 6.9              | 24.7                         | 0.3          |
| eV US Small Cap Growth Equity Median | 9.2              | 24.0                         | 0.4          |
| Population                           | 149              | 149                          | 149          |



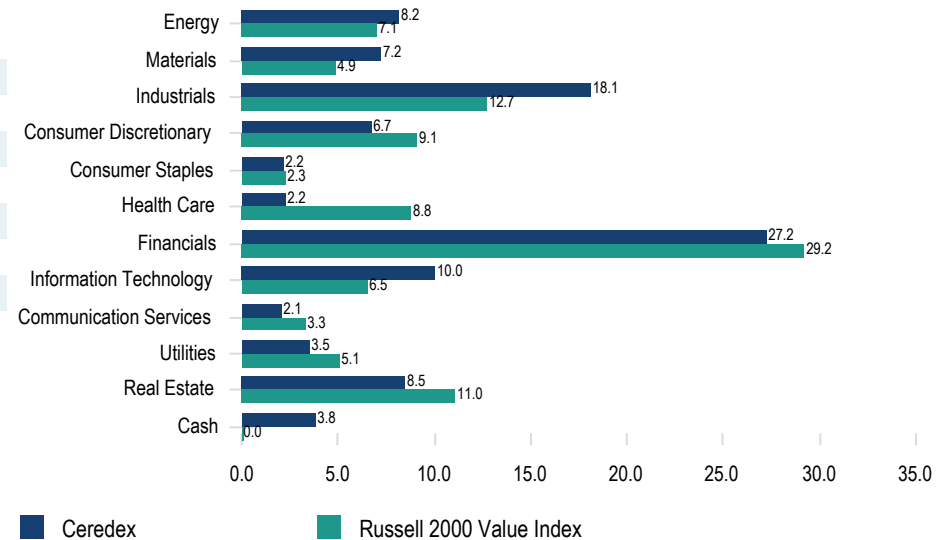
# Ceredex Manager Portfolio Overview

## Contra Costa County Employees' Retirement Association Period Ending: December 31, 2024

### Characteristics

|                         | Portfolio | Benchmark |
|-------------------------|-----------|-----------|
| Number of Stocks        | 81        | 1,434     |
| Wtd. Avg. Mkt. Cap \$M  | 5,542.32  | 2,831.40  |
| Median Mkt. Cap \$M     | 5,665.64  | 786.66    |
| Price/Earnings ratio    | 18.38     | 14.39     |
| Price/Book ratio        | 2.08      | 1.60      |
| Return on Equity (%)    | 1.61      | 5.43      |
| Current Yield (%)       | 2.41      | 2.13      |
| Beta (5 Years, Monthly) | 0.85      | 1.00      |

### Sector Allocation (%) vs. Russell 2000 Value Index



### Largest Holdings

|                                  | End Weight (%) | Quarterly Return (%) |
|----------------------------------|----------------|----------------------|
| Hexcel Corp                      | 2.07           | 1.67                 |
| IDACORP Inc.                     | 1.90           | 6.84                 |
| Matador Resources Co             | 1.85           | 14.34                |
| Range Resources Corp.            | 1.69           | 17.23                |
| OGE Energy Corp                  | 1.64           | 1.63                 |
| TD SYNNEX Corporation            | 1.59           | -2.00                |
| Kulicke and Soffa Industries Inc | 1.59           | 3.84                 |
| Amkor Technology Inc             | 1.59           | -14.50               |
| Vail Resorts Inc.                | 1.57           | 10.22                |
| MKS Instruments Inc              | 1.54           | -3.79                |

% of Portfolio

### Top Contributors

|                                 | Portfolio Weight (%) | Quarterly Return (%) | Contribution to Return (%) |
|---------------------------------|----------------------|----------------------|----------------------------|
| Cullen/Frost Bankers Inc        | 1.36                 | 20.83                | 0.28                       |
| Herc Holdings Inc               | 1.45                 | 19.15                | 0.28                       |
| Range Resources Corp.           | 1.54                 | 17.23                | 0.27                       |
| Pinnacle Financial Partners Inc | 1.47                 | 17.01                | 0.25                       |
| Matador Resources Co            | 1.60                 | 14.34                | 0.23                       |
| Wintrust Financial Corp.        | 1.48                 | 15.32                | 0.23                       |
| Glacier Bancorp Inc             | 1.46                 | 11.36                | 0.17                       |
| Perella Weinberg Partners       | 0.68                 | 23.80                | 0.16                       |
| Vail Resorts Inc.               | 1.46                 | 10.22                | 0.15                       |
| AXIS Capital Holdings Ltd       | 1.14                 | 11.87                | 0.14                       |

13.64

2.14

### Top Detractors

|   | Portfolio Weight (%) | Quarterly Return (%) | Contribution to Return (%) |
|---|----------------------|----------------------|----------------------------|
| Huntington Ingalls Industries Inc       | 1.48                 | -28.04               | -0.42                      |
| Teleflex Inc                            | 1.12                 | -27.91               | -0.31                      |
| Fortune Brands Innovations Inc          | 1.32                 | -23.44               | -0.31                      |
| Avient Corp                             | 1.44                 | -18.34               | -0.26                      |
| MSC Industrial Direct Co Inc.           | 1.93                 | -12.37               | -0.24                      |
| Amkor Technology Inc                    | 1.55                 | -14.50               | -0.22                      |
| Scorpio Tankers Inc                     | 0.75                 | -29.78               | -0.22                      |
| Timken Co (The)                         | 1.49                 | -14.94               | -0.22                      |
| NNN REIT Inc                            | 1.48                 | -14.63               | -0.22                      |
| Science Applications International Corp | 1.10                 | -19.53               | -0.21                      |

% of Portfolio

13.66

-2.64

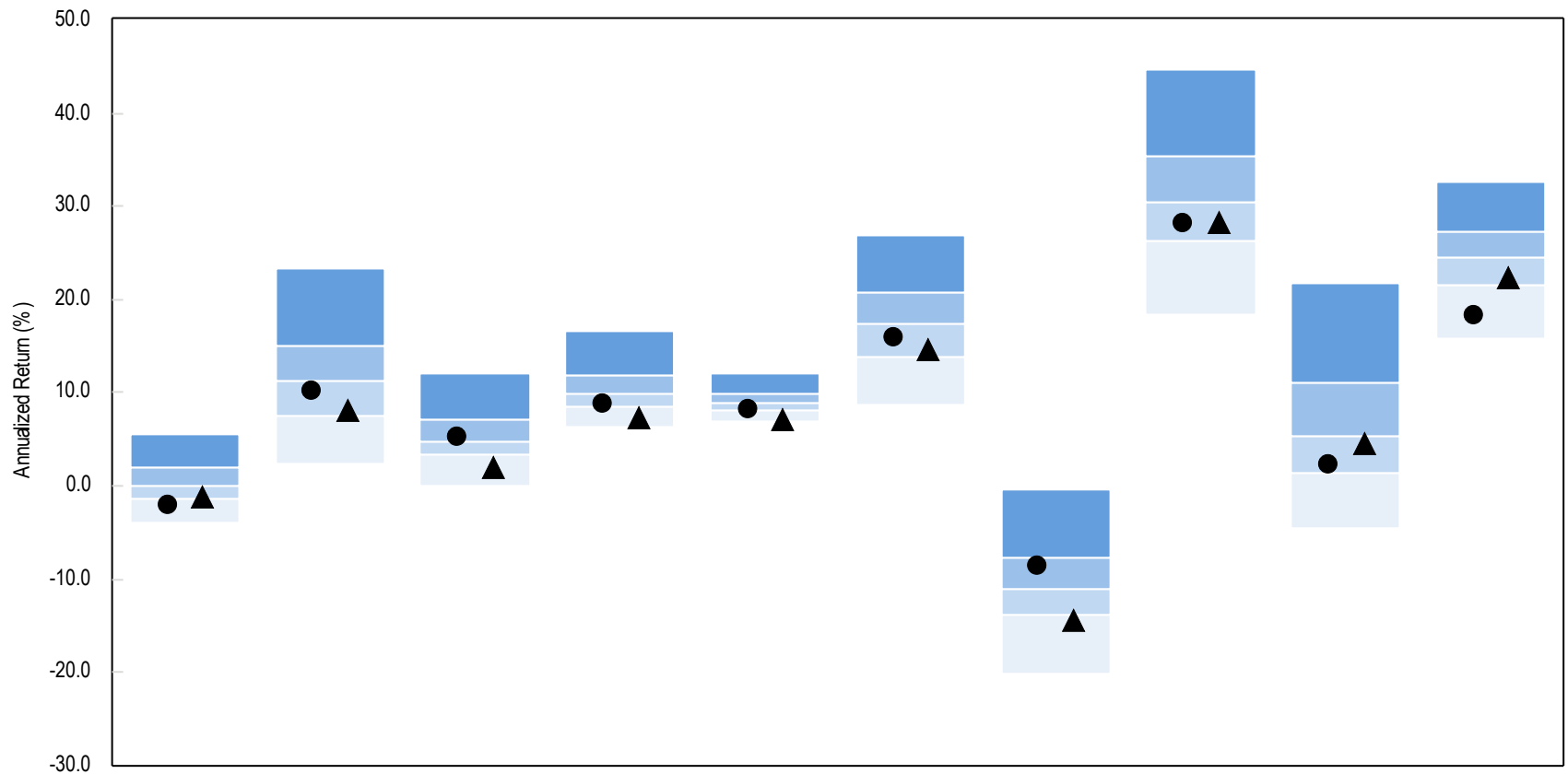
Domestic equity small cap value portfolio of companies with dividend yields and low valuations. Primary personnel include Brett Barner and David Maynard.



Ceredex  
Manager Performance Comparisons (Gross of Fees)

Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024

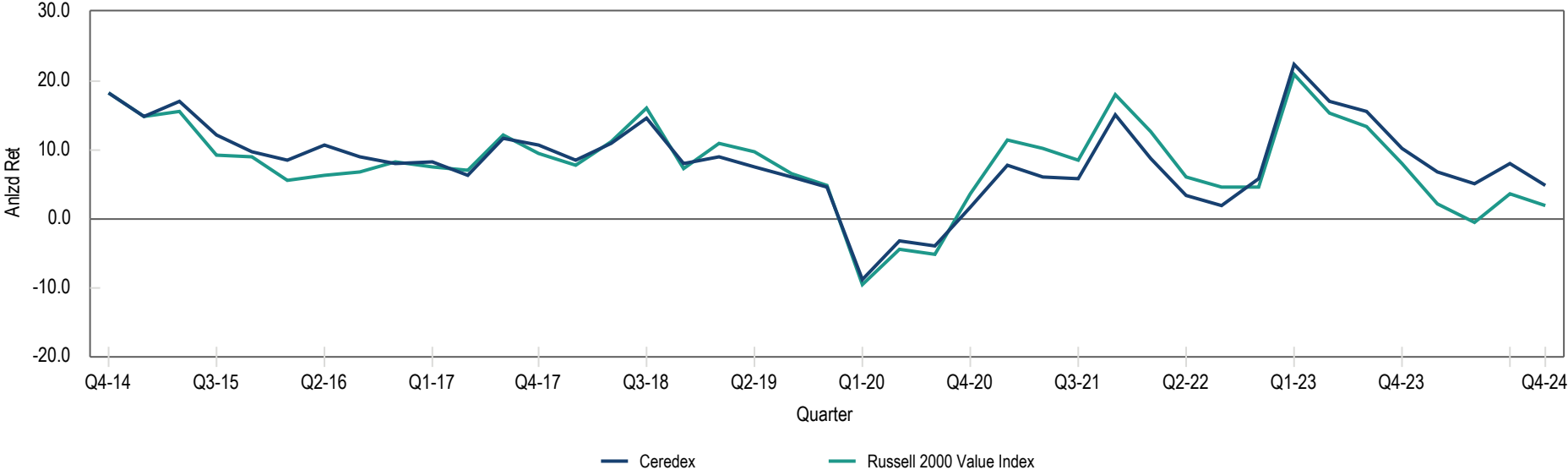
Ceredex vs. eV US Small Cap Value Equity Gross Universe



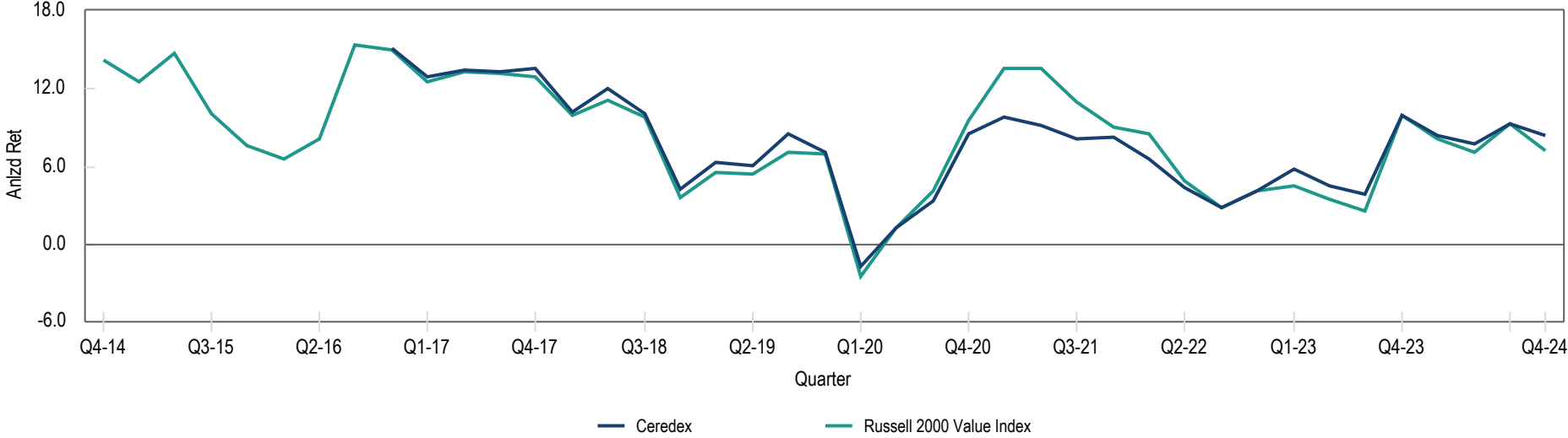
|                            | Quarter    | 1 Year     | 3 Years   | 5 Years   | 10 Years  | 2023       | 2022        | 2021       | 2020      | 2019       |
|----------------------------|------------|------------|-----------|-----------|-----------|------------|-------------|------------|-----------|------------|
| ● Ceredex                  | -1.88 (84) | 10.21 (59) | 5.39 (44) | 8.98 (68) | 8.34 (66) | 16.02 (62) | -8.46 (28)  | 28.37 (59) | 2.32 (70) | 18.36 (88) |
| ▲ Russell 2000 Value Index | -1.06 (73) | 8.05 (74)  | 1.94 (89) | 7.29 (89) | 7.14 (94) | 14.65 (71) | -14.48 (79) | 28.27 (59) | 4.63 (55) | 22.39 (70) |
| 5th Percentile             | 5.52       | 23.36      | 12.16     | 16.59     | 12.08     | 26.83      | -0.41       | 44.60      | 21.68     | 32.72      |
| 1st Quartile               | 2.06       | 14.99      | 7.08      | 11.92     | 9.94      | 20.71      | -7.73       | 35.35      | 11.03     | 27.36      |
| Median                     | -0.05      | 11.34      | 4.73      | 9.85      | 8.86      | 17.34      | -10.95      | 30.48      | 5.40      | 24.42      |
| 3rd Quartile               | -1.27      | 7.57       | 3.40      | 8.48      | 8.06      | 13.94      | -13.88      | 26.22      | 1.38      | 21.58      |
| 95th Percentile            | -3.96      | 2.34       | -0.04     | 6.44      | 6.84      | 8.80       | -20.05      | 18.39      | -4.57     | 15.75      |
| Population                 | 197        | 195        | 193       | 191       | 165       | 213        | 221         | 233        | 248       | 256        |



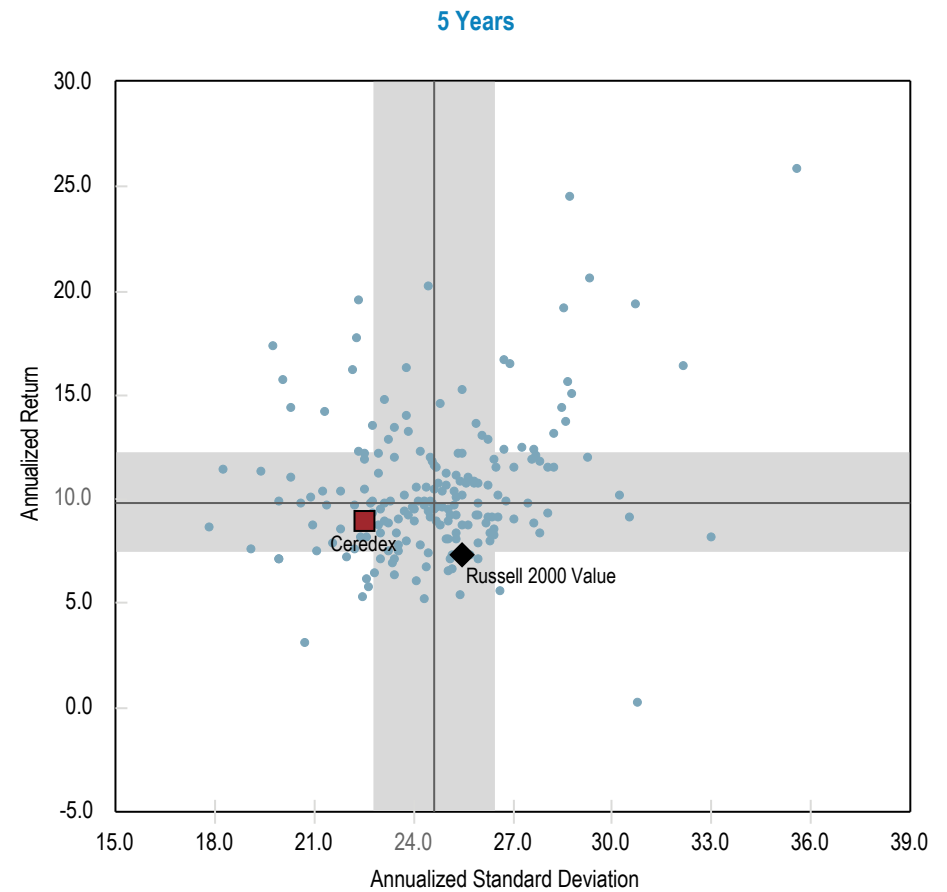
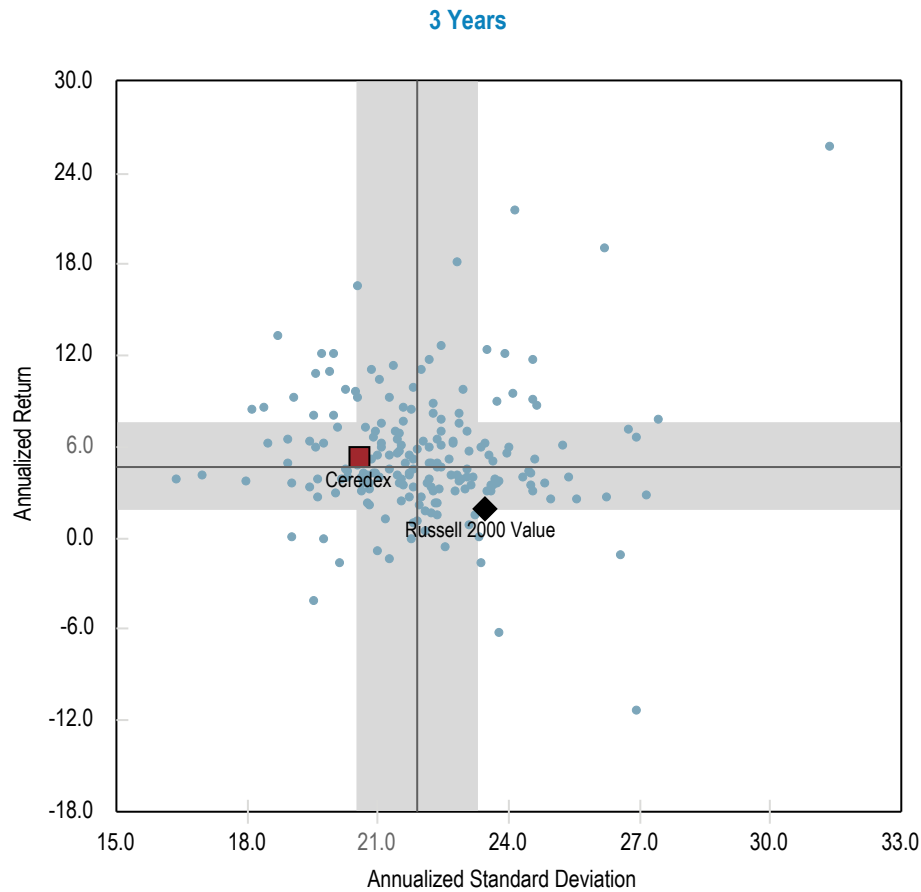
Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)







|                                     | <b>3 Years</b>   |                              |              |
|-------------------------------------|------------------|------------------------------|--------------|
|                                     | Anlzd Return (%) | Anlzd Standard Deviation (%) | Sharpe Ratio |
| Ceredex                             | 5.4              | 20.6                         | 0.2          |
| Russell 2000 Value Index            | 1.9              | 23.4                         | 0.0          |
| eV US Small Cap Value Equity Median | 4.7              | 21.9                         | 0.1          |
| Population                          | 193              | 193                          | 193          |

|                                     | <b>5 Years</b>   |                              |              |
|-------------------------------------|------------------|------------------------------|--------------|
|                                     | Anlzd Return (%) | Anlzd Standard Deviation (%) | Sharpe Ratio |
| Ceredex                             | 9.0              | 22.5                         | 0.4          |
| Russell 2000 Value Index            | 7.3              | 25.4                         | 0.3          |
| eV US Small Cap Value Equity Median | 9.9              | 24.6                         | 0.4          |
| Population                          | 191              | 191                          | 191          |



# International Equity Managers

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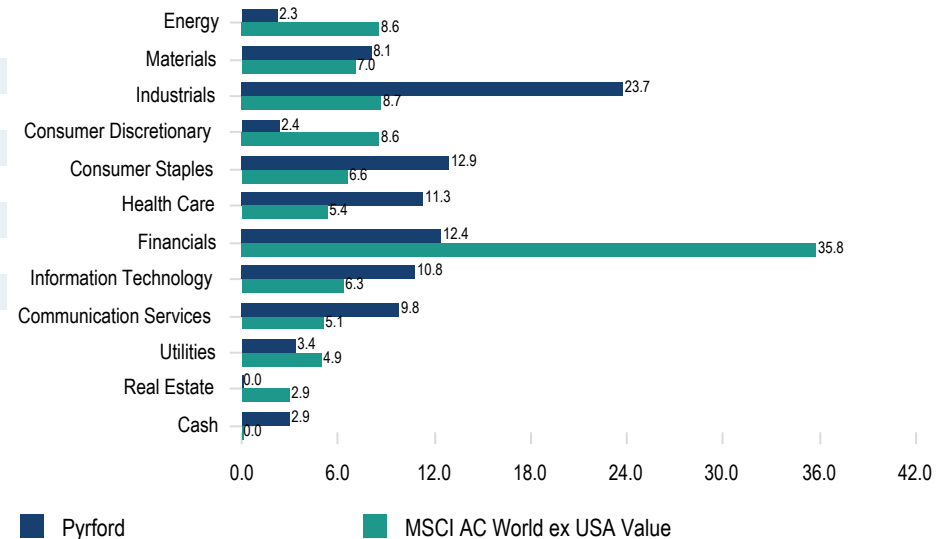
# Pyrford Manager Portfolio Overview

## Contra Costa County Employees' Retirement Association Period Ending: December 31, 2024

### Characteristics

|                         | Portfolio | Benchmark |
|-------------------------|-----------|-----------|
| Number of Stocks        | 77        | 1,201     |
| Wtd. Avg. Mkt. Cap \$M  | 64,583.27 | 72,708.42 |
| Median Mkt. Cap \$M     | 22,055.94 | 9,747.66  |
| Price/Earnings ratio    | 18.72     | 11.68     |
| Price/Book ratio        | 2.46      | 1.73      |
| Return on Equity (%)    | 4.82      | 3.68      |
| Current Yield (%)       | 3.78      | 4.37      |
| Beta (5 Years, Monthly) | 0.77      | 1.00      |

### Sector Allocation (%) vs. MSCI AC World ex USA Value



### Largest Holdings

|                           | End Weight (%) | Quarterly Return (%) |
|---------------------------|----------------|----------------------|
| SAP SE                    | 2.56           | 7.26                 |
| Japan Tobacco Inc         | 2.53           | -9.03                |
| United Overseas Bank Ltd  | 2.50           | 6.13                 |
| Nestle SA, Cham Und Vevey | 2.41           | -17.96               |
| Mitsubishi Electric Corp  | 2.39           | 6.17                 |
| KDDI Corp                 | 2.39           | -0.11                |
| Roche Holding AG          | 2.39           | -12.11               |
| Brambles Ltd              | 2.29           | -9.77                |
| Unilever PLC              | 2.11           | -11.84               |
| AIA Group Ltd             | 2.06           | -19.17               |

### Top Contributors

|                                | Portfolio Weight (%) | Quarterly Return (%) | Contribution to Return (%) |
|--------------------------------|----------------------|----------------------|----------------------------|
| Computershare Ltd              | 1.78                 | 19.90                | 0.35                       |
| SAP SE                         | 2.17                 | 7.26                 | 0.16                       |
| United Overseas Bank Ltd       | 2.45                 | 6.13                 | 0.15                       |
| Mitsubishi Electric Corp       | 2.24                 | 6.17                 | 0.14                       |
| Taiwan Semiconductor Man.      | 1.42                 | 8.84                 | 0.13                       |
| Power Assets Holdings Ltd      | 1.21                 | 8.83                 | 0.11                       |
| Nabtesco Corp                  | 1.66                 | 4.99                 | 0.08                       |
| QBE Insurance Group Limited    | 1.46                 | 3.60                 | 0.05                       |
| Sumitomo Rubber Industries Ltd | 0.80                 | 5.25                 | 0.04                       |
| Advantech Co Ltd               | 0.56                 | 4.04                 | 0.02                       |

% of Portfolio 15.75 1.23

### Top Detractors

|  | Portfolio Weight (%) | Quarterly Return (%) | Contribution to Return (%) |
|--|----------------------|----------------------|----------------------------|
| Nestle SA, Cham Und Vevey              | 2.67                 | -17.96               | -0.48                      |
| Deutsche Post AG                       | 1.98                 | -21.24               | -0.42                      |
| AIA Group Ltd                          | 2.12                 | -19.17               | -0.41                      |
| L'Air Liquide SA                       | 2.22                 | -15.97               | -0.35                      |
| Brenntag SE                            | 1.70                 | -19.82               | -0.34                      |
| Woolworths Group Ltd                   | 1.81                 | -18.28               | -0.33                      |
| Novartis AG                            | 2.15                 | -15.01               | -0.32                      |
| Roche Holding AG                       | 2.46                 | -12.11               | -0.30                      |
| Merck KGaA                             | 1.60                 | -17.85               | -0.29                      |
| PT Bank Rakyat Indonesia (Persero) Tbk | 1.40                 | -19.91               | -0.28                      |

% of Portfolio 20.11 -3.51

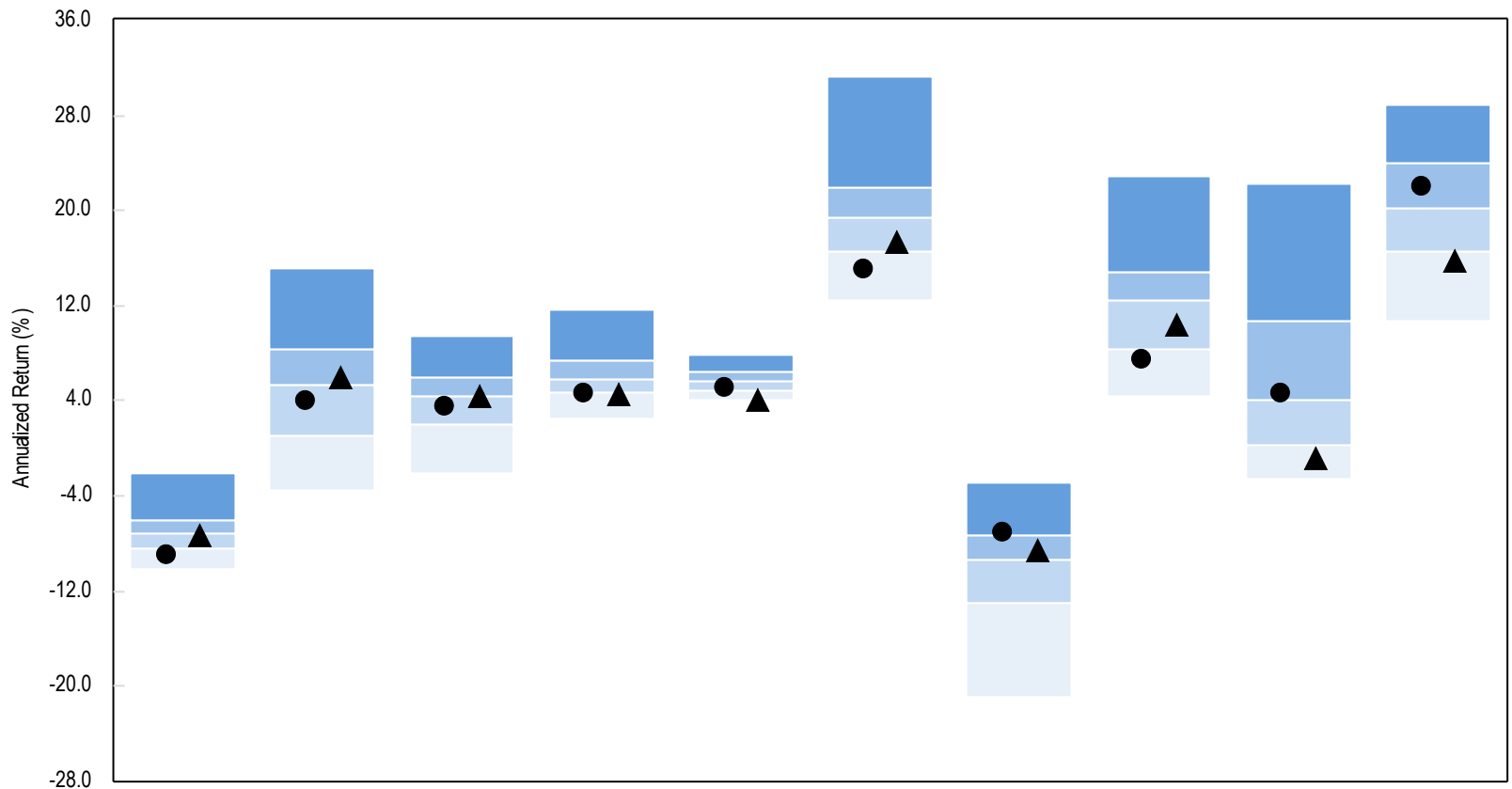
International equity value portfolio of non-US companies with low valuations at the country and stock level. Primary personnel include Tony Cousins, Daniel McDonagh, and Paul Simons.



Pyrford  
Manager Performance Comparisons (Gross of Fees)

Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024

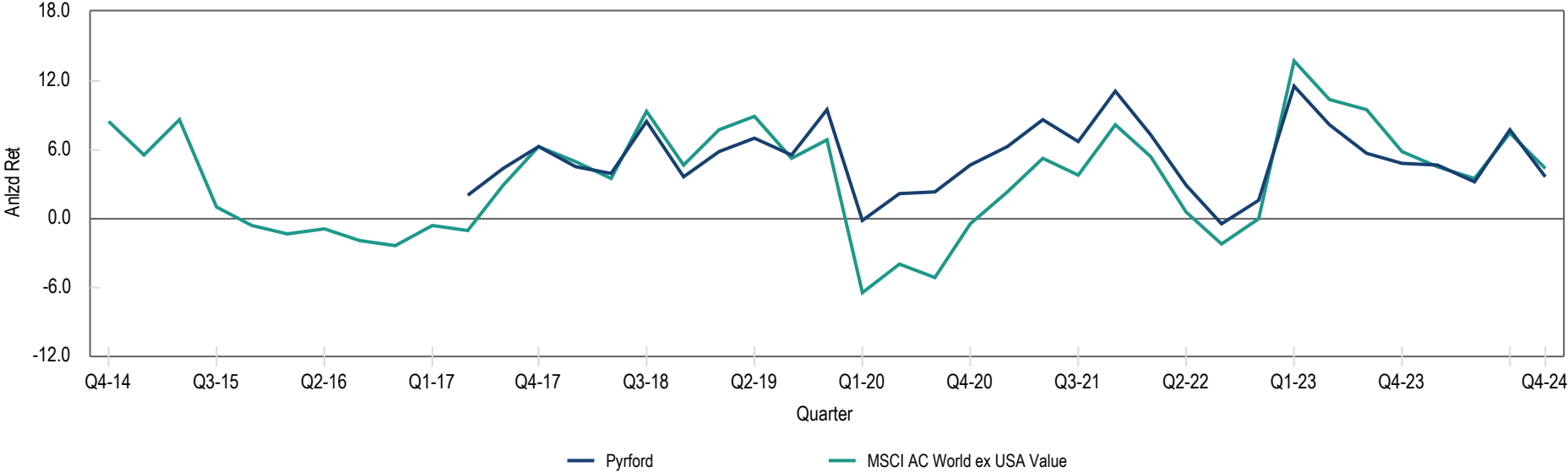
Pyrford vs. eV ACWI ex-US Value Equity Gross Universe



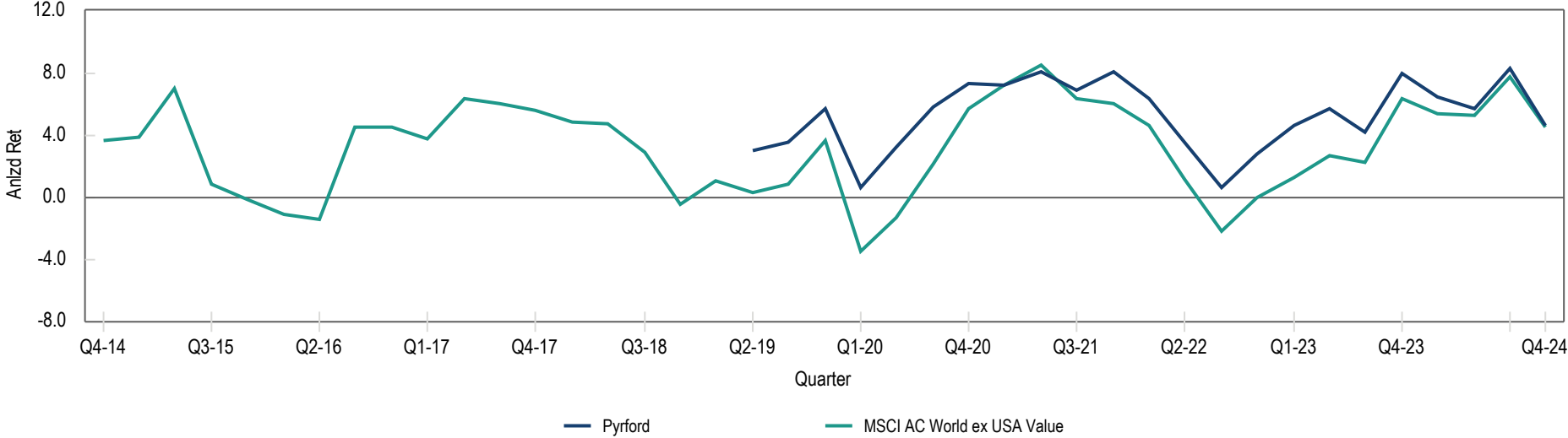
|                                    | Quarter    | 1 Year    | 3 Years   | 5 Years   | 10 Years  | 2023       | 2022       | 2021       | 2020       | 2019       |
|------------------------------------|------------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|
| ● Pyrford                          | -8.91 (83) | 4.01 (60) | 3.68 (59) | 4.64 (76) | 5.17 (64) | 15.17 (82) | -6.97 (24) | 7.57 (84)  | 4.66 (47)  | 22.07 (36) |
| ▲ MSCI AC World ex USA Value (Net) | -7.31 (53) | 6.04 (43) | 4.37 (51) | 4.50 (77) | 4.07 (96) | 17.30 (66) | -8.59 (42) | 10.46 (66) | -0.77 (80) | 15.72 (77) |
| 5th Percentile                     | -2.07      | 15.12     | 9.52      | 11.64     | 7.83      | 31.21      | -2.92      | 22.89      | 22.18      | 28.94      |
| 1st Quartile                       | -6.07      | 8.29      | 5.95      | 7.47      | 6.49      | 21.96      | -7.29      | 14.88      | 10.71      | 23.93      |
| Median                             | -7.18      | 5.30      | 4.40      | 5.88      | 5.71      | 19.44      | -9.35      | 12.53      | 4.15       | 20.23      |
| 3rd Quartile                       | -8.46      | 1.04      | 1.97      | 4.66      | 4.90      | 16.54      | -12.97     | 8.35       | 0.31       | 16.60      |
| 95th Percentile                    | -10.21     | -3.45     | -2.04     | 2.51      | 4.13      | 12.48      | -20.94     | 4.34       | -2.63      | 10.68      |
| Population                         | 66         | 65        | 60        | 57        | 39        | 65         | 67         | 69         | 71         | 69         |



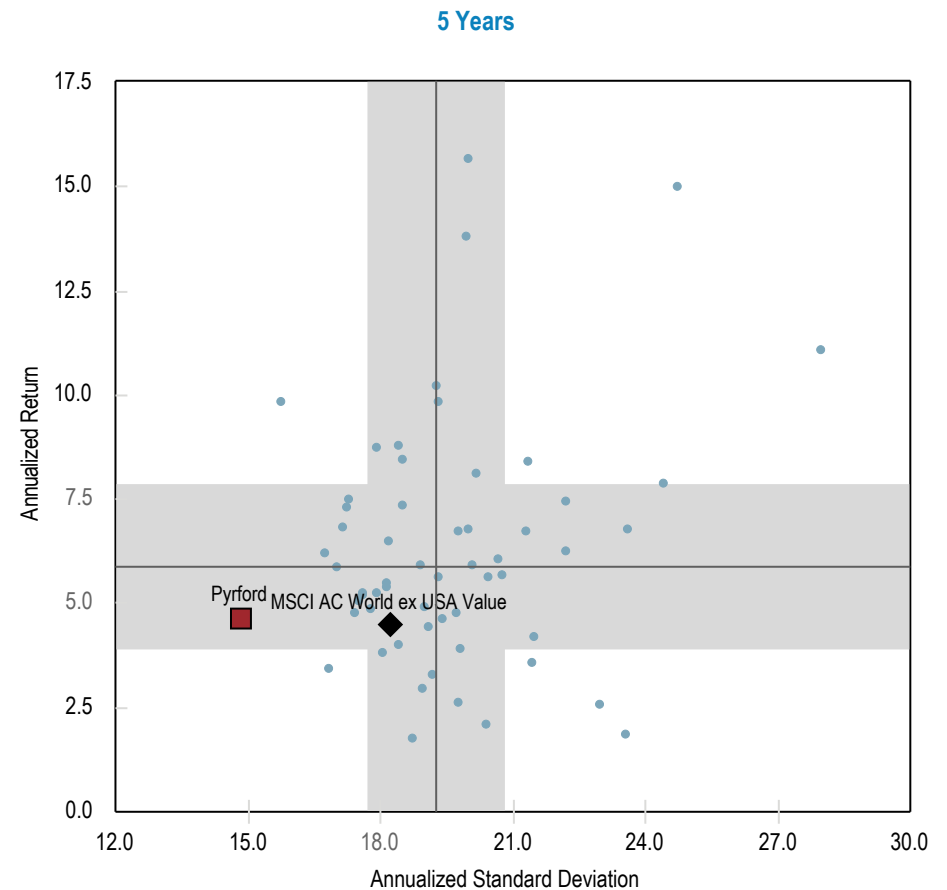
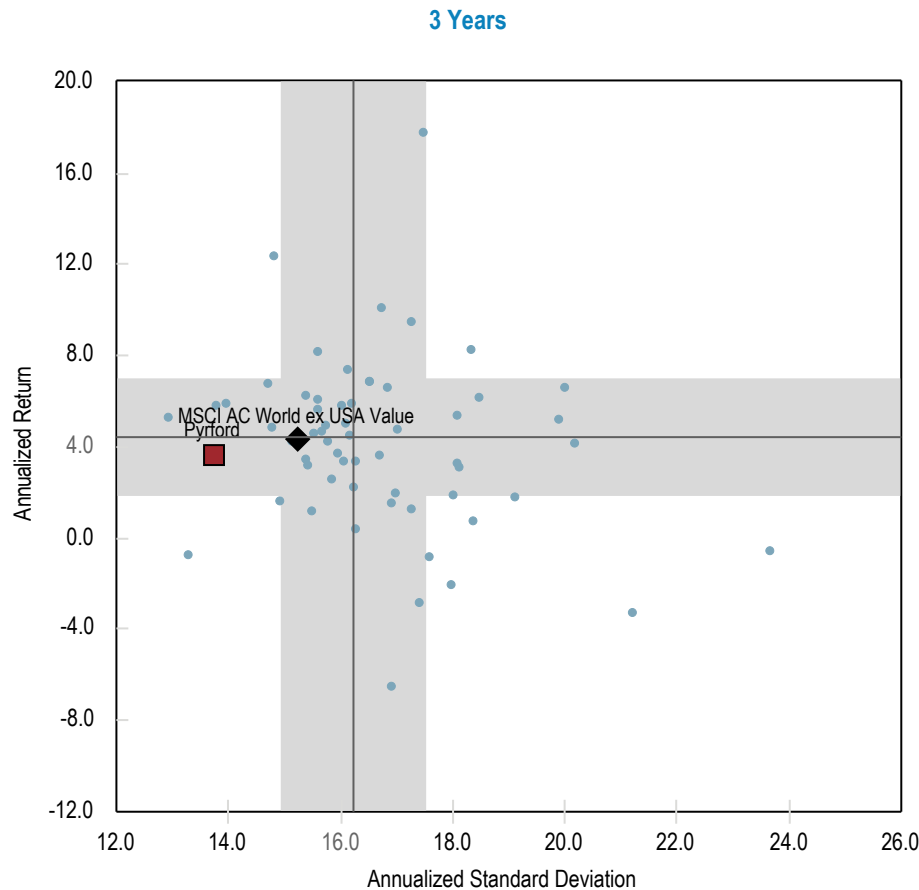
Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)







|                                   | <b>3 Years</b>   |                              |              |
|-----------------------------------|------------------|------------------------------|--------------|
|                                   | Anlzd Return (%) | Anlzd Standard Deviation (%) | Sharpe Ratio |
| Pyrford                           | 3.7              | 13.7                         | 0.1          |
| MSCI AC World ex USA Value (Net)  | 4.4              | 15.2                         | 0.1          |
| eV ACWI ex-US Value Equity Median | 4.4              | 16.2                         | 0.1          |
| Population                        | 60               | 60                           | 60           |

|                                   | <b>5 Years</b>   |                              |              |
|-----------------------------------|------------------|------------------------------|--------------|
|                                   | Anlzd Return (%) | Anlzd Standard Deviation (%) | Sharpe Ratio |
| Pyrford                           | 4.6              | 14.9                         | 0.2          |
| MSCI AC World ex USA Value (Net)  | 4.5              | 18.2                         | 0.2          |
| eV ACWI ex-US Value Equity Median | 5.9              | 19.2                         | 0.3          |
| Population                        | 57               | 57                           | 57           |



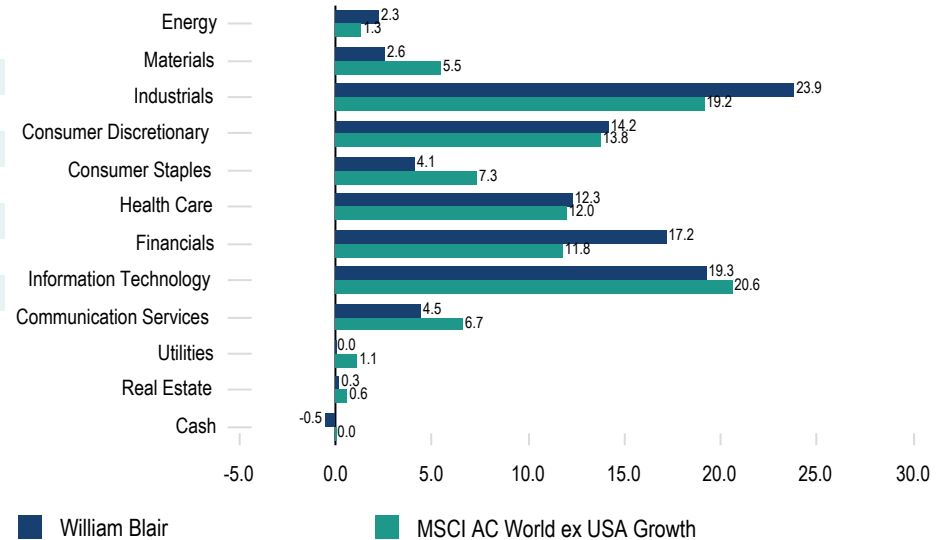
# William Blair Manager Portfolio Overview

## Contra Costa County Employees' Retirement Association Period Ending: December 31, 2024

### Characteristics

|                         | Portfolio  | Benchmark  |
|-------------------------|------------|------------|
| Number of Stocks        | 185        | 1,121      |
| Wtd. Avg. Mkt. Cap \$M  | 116,152.41 | 142,050.10 |
| Median Mkt. Cap \$M     | 19,555.60  | 9,880.64   |
| Price/Earnings ratio    | 24.75      | 24.00      |
| Price/Book ratio        | 4.24       | 3.93       |
| Return on Equity (%)    | 5.81       | 5.45       |
| Current Yield (%)       | 1.55       | 1.60       |
| Beta (5 Years, Monthly) | 1.05       | 1.00       |

### Sector Allocation (%) vs. MSCI AC World ex USA Growth



### Largest Holdings

|                             | End Weight (%) | Quarterly Return (%) |
|-----------------------------|----------------|----------------------|
| Taiwan Semiconductor Man.   | 3.99           | 14.08                |
| SAP SE                      | 2.16           | 7.26                 |
| Tencent Holdings LTD        | 2.12           | -6.21                |
| London Stock Exchange Group | 1.71           | 3.10                 |
| Novo Nordisk A/S            | 1.67           | -26.42               |
| 3I Group PLC                | 1.65           | 1.52                 |
| Hermes International SA     | 1.35           | -2.34                |
| Safran SA                   | 1.34           | -6.78                |
| Astrazeneca PLC             | 1.30           | -15.66               |
| LONZA GROUP AG              | 1.28           | -6.71                |

### Top Contributors

|                                    | Portfolio Weight (%) | Quarterly Return (%) | Contribution to Return (%) |
|------------------------------------|----------------------|----------------------|----------------------------|
| Taiwan Semiconductor Man.          | 3.27                 | 14.08                | 0.46                       |
| Shopify Inc                        | 0.59                 | 32.68                | 0.19                       |
| Teva Pharmaceutical Industries Ltd | 0.78                 | 22.31                | 0.17                       |
| Advantest Corp                     | 0.64                 | 24.19                | 0.15                       |
| Pro Medicus Ltd                    | 0.57                 | 25.23                | 0.14                       |
| SAP SE                             | 1.87                 | 7.26                 | 0.14                       |
| Alchip Technologies Inc            | 0.17                 | 60.31                | 0.10                       |
| Brookfield Asset Management Ltd    | 0.65                 | 15.35                | 0.10                       |
| Sumitomo Mitsui                    | 0.78                 | 12.51                | 0.10                       |
| Mediatek Incorporation             | 0.54                 | 16.25                | 0.09                       |

% of Portfolio 9.86 1.65

### Top Detractors

|                            | Portfolio Weight (%) | Quarterly Return (%) | Contribution to Return (%) |
|----------------------------|----------------------|----------------------|----------------------------|
| Novo Nordisk A/S           | 2.11                 | -26.42               | -0.56                      |
| Reliance Industries Ltd    | 1.63                 | -19.43               | -0.32                      |
| Astrazeneca PLC            | 1.44                 | -15.66               | -0.23                      |
| Sika AG, Baar              | 0.79                 | -28.29               | -0.22                      |
| MercadoLibre Inc           | 1.14                 | -17.13               | -0.20                      |
| ASML Holding NV            | 1.20                 | -15.35               | -0.18                      |
| Kingspan Group PLC         | 0.82                 | -22.51               | -0.18                      |
| Keyence Corp               | 1.28                 | -13.95               | -0.18                      |
| Samsung Electronics Co Ltd | 0.77                 | -23.16               | -0.18                      |
| LVMH Moet Hennessy Louis V | 1.28                 | -13.58               | -0.17                      |

% of Portfolio 12.46 -2.42

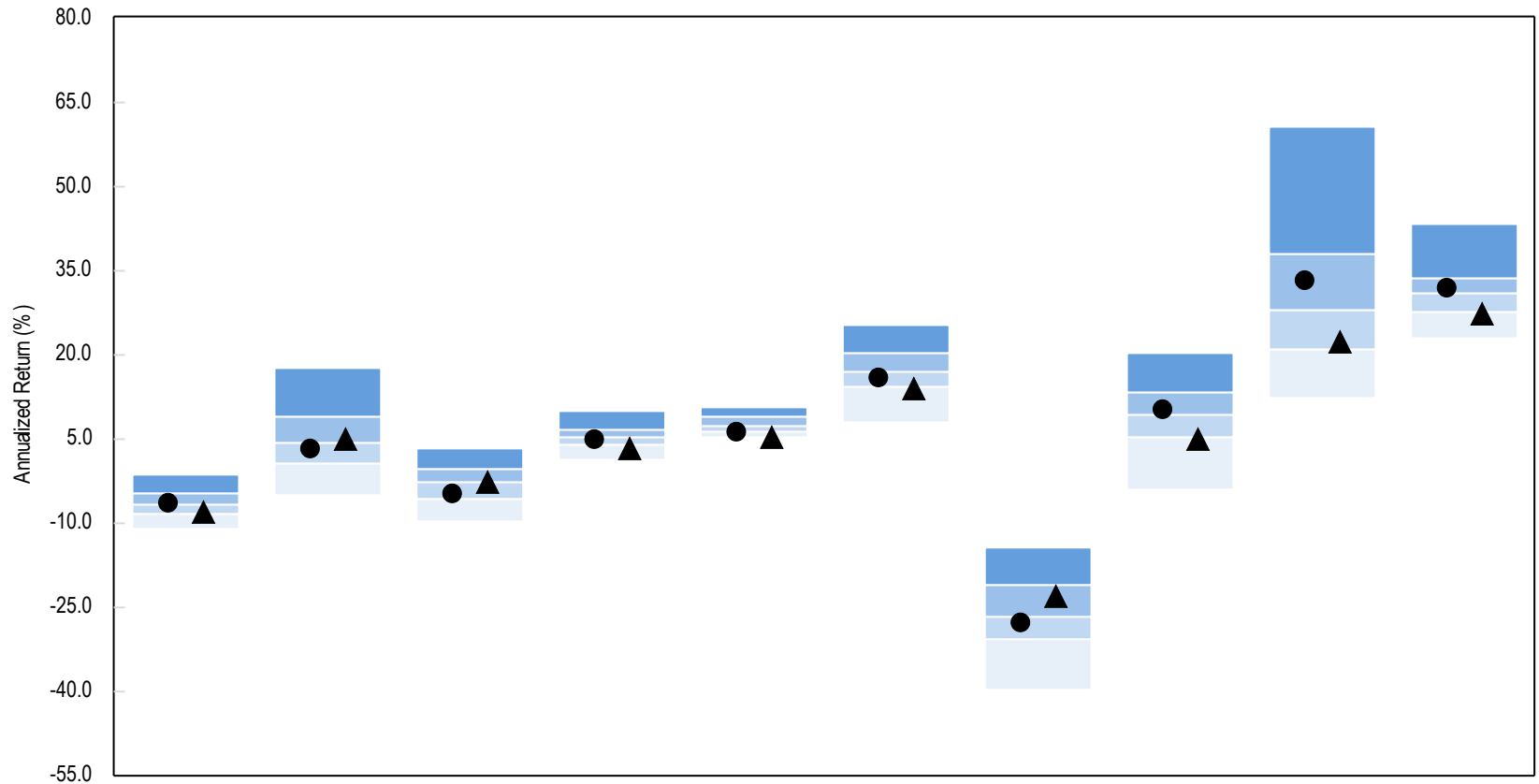
International equity growth portfolio of non-US companies with high growth rates constructed from the security level. Primary personnel include Simon Fennell and Kenneth McAtamney.



William Blair  
Manager Performance Comparisons (Gross of Fees)

Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024

William Blair vs. eV ACWI ex-US Growth Equity Gross Universe

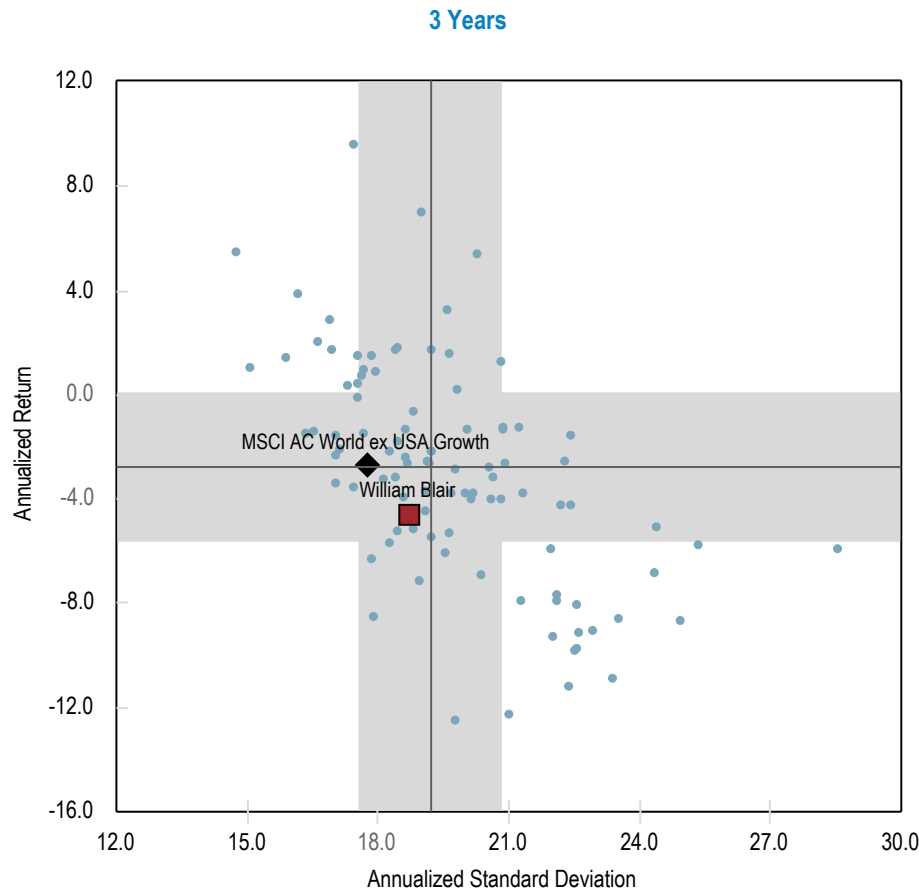


|                               | Quarter    | 1 Year    | 3 Years    | 5 Years   | 10 Years  | 2023       | 2022        | 2021       | 2020       | 2019       |
|-------------------------------|------------|-----------|------------|-----------|-----------|------------|-------------|------------|------------|------------|
| ● William Blair               | -6.21 (44) | 3.39 (61) | -4.62 (70) | 5.02 (56) | 6.17 (81) | 16.15 (59) | -27.75 (57) | 10.48 (41) | 33.25 (35) | 32.01 (37) |
| ▲ MSCI AC World ex USA Growth | -7.88 (67) | 5.07 (47) | -2.67 (50) | 3.44 (79) | 5.35 (96) | 14.03 (77) | -23.05 (31) | 5.09 (76)  | 22.20 (73) | 27.34 (77) |
| 5th Percentile                | -1.40      | 17.75     | 3.30       | 9.90      | 10.68     | 25.47      | -14.29      | 20.35      | 60.75      | 43.23      |
| 1st Quartile                  | -4.76      | 8.96      | -0.37      | 6.77      | 8.97      | 20.18      | -20.98      | 13.39      | 37.97      | 33.53      |
| Median                        | -6.82      | 4.47      | -2.79      | 5.30      | 7.22      | 17.08      | -26.60      | 9.33       | 28.06      | 30.90      |
| 3rd Quartile                  | -8.22      | 0.52      | -5.54      | 3.90      | 6.27      | 14.18      | -30.77      | 5.17       | 21.13      | 27.76      |
| 95th Percentile               | -10.90     | -5.17     | -9.73      | 1.34      | 5.44      | 7.96       | -39.81      | -3.97      | 12.38      | 23.07      |
| Population                    | 100        | 100       | 99         | 95        | 72        | 111        | 115         | 118        | 113        | 111        |

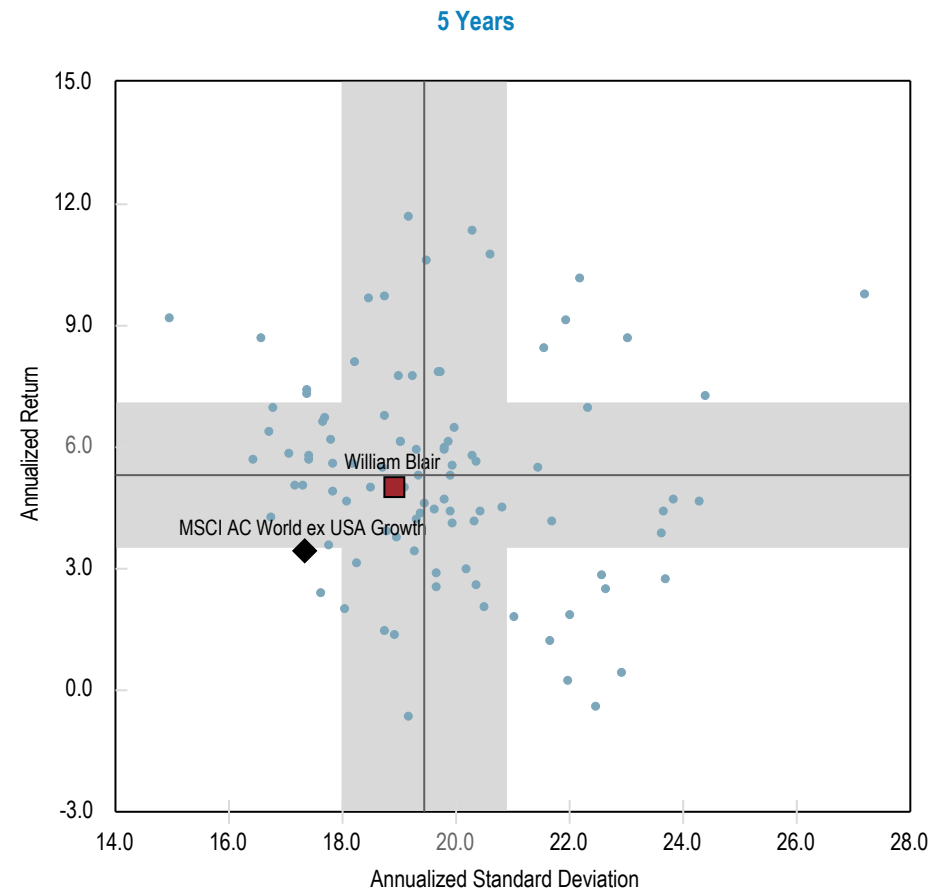








|                                    | 3 Years          |                              |              |
|------------------------------------|------------------|------------------------------|--------------|
|                                    | Anlzd Return (%) | Anlzd Standard Deviation (%) | Sharpe Ratio |
| William Blair                      | -4.6             | 18.7                         | -0.4         |
| MSCI AC World ex USA Growth (Net)  | -2.7             | 17.7                         | -0.3         |
| eV ACWI ex-US Growth Equity Median | -2.8             | 19.2                         | -0.2         |
| Population                         | 99               | 99                           | 99           |



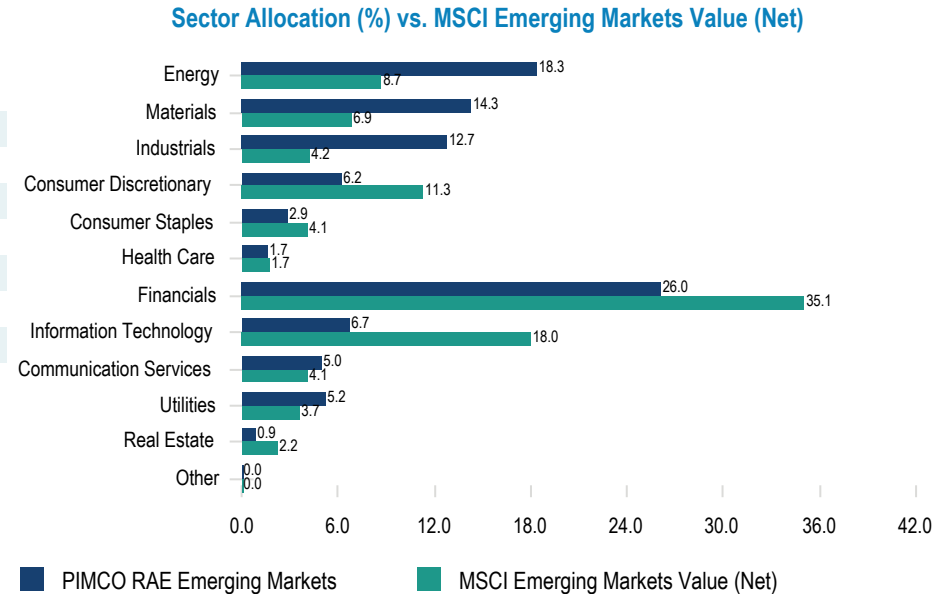
|                                    | 5 Years          |                              |              |
|------------------------------------|------------------|------------------------------|--------------|
|                                    | Anlzd Return (%) | Anlzd Standard Deviation (%) | Sharpe Ratio |
| William Blair                      | 5.0              | 18.9                         | 0.2          |
| MSCI AC World ex USA Growth (Net)  | 3.4              | 17.3                         | 0.1          |
| eV ACWI ex-US Growth Equity Median | 5.3              | 19.4                         | 0.2          |
| Population                         | 95               | 95                           | 95           |



# PIMCO RAE Emerging Markets Manager Portfolio Overview

# Contra Costa County Employees' Retirement Association Period Ending: December 31, 2024

| Characteristics         |           |           |
|-------------------------|-----------|-----------|
|                         | Portfolio | Benchmark |
| Number of Stocks        | 357       | 713       |
| Wtd. Avg. Mkt. Cap \$M  | 23,164.39 | 75,219.14 |
| Median Mkt. Cap \$M     | 4,227.50  | 7,585.67  |
| Price/Earnings ratio    | 7.28      | 10.28     |
| Price/Book ratio        | 1.62      | 1.93      |
| Return on Equity (%)    | 6.44      | 4.31      |
| Current Yield (%)       | 6.24      | 4.10      |
| Beta (5 Years, Monthly) | 1.05      | 1.00      |



| Largest Holdings                        |                |                      | Top Contributors                 |                      |                      | Top Detractors             |                            |                      |                      |                            |
|---|----------------|----------------------|----------------------------------|----------------------|----------------------|----------------------------|----------------------------|----------------------|----------------------|----------------------------|
|   | End Weight (%) | Quarterly Return (%) |                                  | Portfolio Weight (%) | Quarterly Return (%) | Contribution to Return (%) |                            | Portfolio Weight (%) | Quarterly Return (%) | Contribution to Return (%) |
| Petroleo Brasileiro S.A                 | 4.41           | -4.40                | China Construction Bank Corp     | 3.86                 | 10.20                | 0.39                       | Vale SA                    | 4.58                 | -23.59               | -1.08                      |
|   |                |                      | POSCO Holdings Inc               | 1.92                 |                      | -41.51                     | -0.80                      |                      |                      |                            |
|   |                |                      | Kasikornbank Public Co Ltd       | 1.11                 |                      | -38.66                     | -0.43                      |                      |                      |                            |
| China Petroleum & Chemical              | 3.92           | -8.06                | Bank of China Ltd                | 2.53                 | 8.17                 | 0.21                       | Indian Oil Corp Ltd        | 1.62                 | -25.88               | -0.42                      |
| Vale SA                                 | 3.86           | 23.59                | Industrial & Comm. Bank of China | 1.30                 | 12.28                | 0.16                       | Vedanta Ltd                | 2.28                 | -13.58               | -0.31                      |
| China Construction Bank Corp            | 3.83           | 10.20                | IS Yatirim Menkul Degerler A.S.  | 0.41                 | 34.97                | 0.14                       | Oil & Natural Gas Corp Ltd | 1.45                 | -19.41               | -0.28                      |
| Evergreen Marine Corp (Taiwan) Ltd      | 3.73           | 8.06                 | Mediatek Incorporation           | 0.85                 | 16.25                | 0.14                       | China Petroleum & Chemical | 3.45                 | -8.06                | -0.28                      |
| Bank of China Ltd                       | 3.05           | 8.17                 | Doosan Corp                      | 0.30                 | 33.64                | 0.10                       | Lg Electronics Inc         | 0.90                 | -28.89               | -0.26                      |
| PetroChina Company Limited              | 2.87           | -3.63                | AAC Technologies Holdings Inc    | 0.46                 | 17.55                | 0.08                       | Vipshop Holdings Limited   | 1.61                 | -14.37               | -0.23                      |
| Ping An Insurance Group Co of China Ltd | 2.56           | -8.18                | Compal Electronics Inc           | 0.84                 | 9.14                 | 0.08                       | Bharat Petroleum Co Ltd    | 0.84                 | -22.62               | -0.19                      |
| Vedanta Ltd                             | 2.13           | 13.58                | Yang Ming Marine Transport Corp  | 1.14                 | 5.90                 | 0.07                       |                            |                      |                      |                            |
| SCB X PCL                               | 1.82           | 1.30                 |                                  |                      |                      |                            |                            |                      |                      |                            |
|   |                |                      | % of Portfolio                   | 14.45                |                      | 1.59                       | % of Portfolio             | 19.76                |                      | -4.28                      |

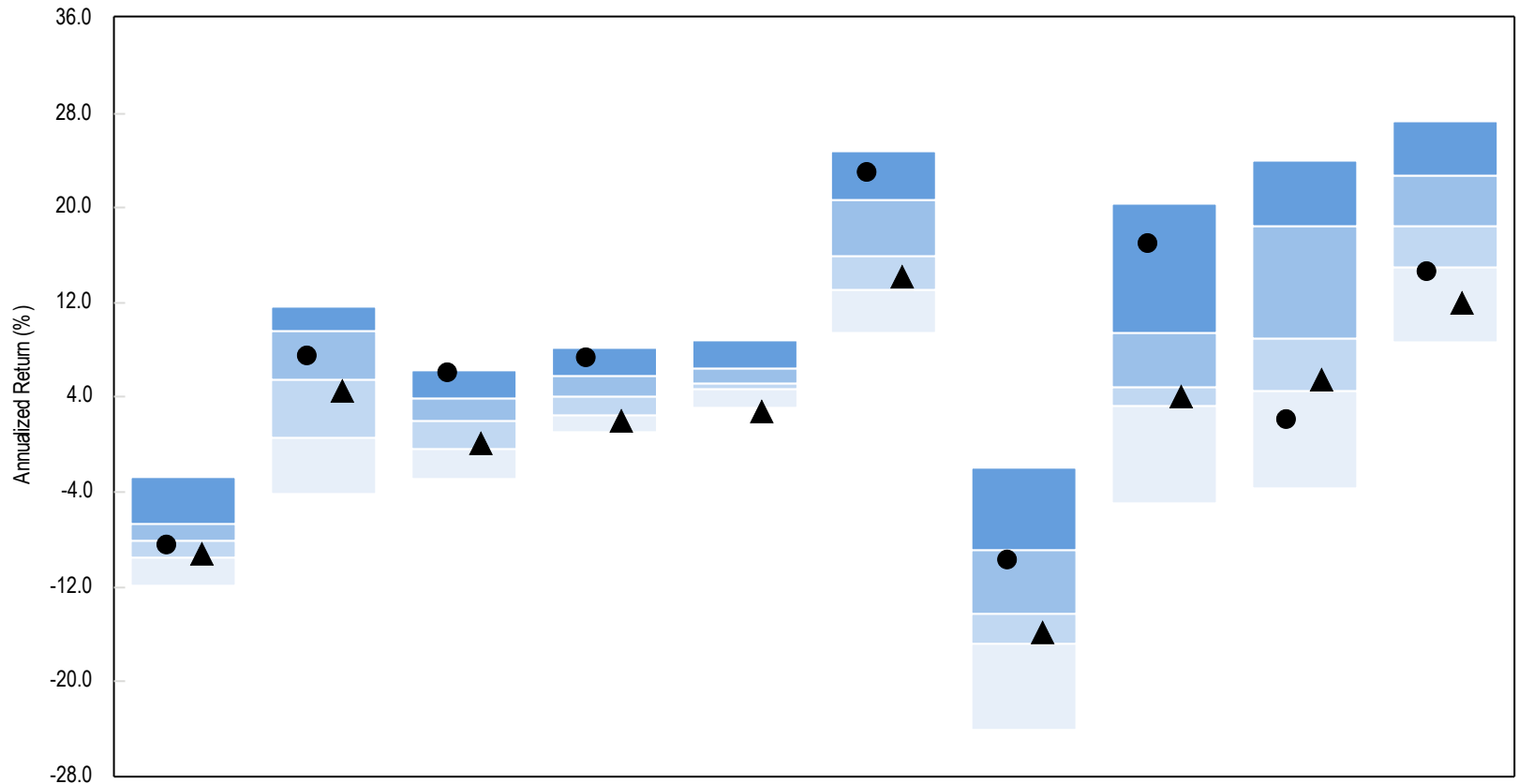
The PIMCO RAE Emerging Markets seeks to invest 80% of its assets in investments that are economically tied to emerging market countries. The portfolio is sub-advised by Research Affiliates, LLC.



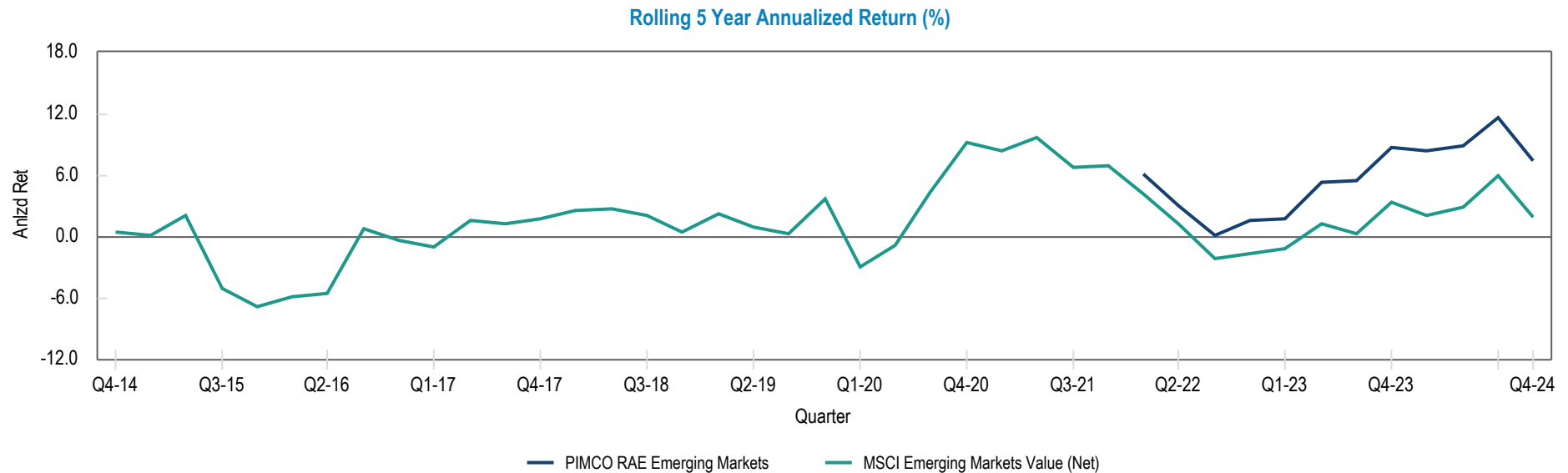
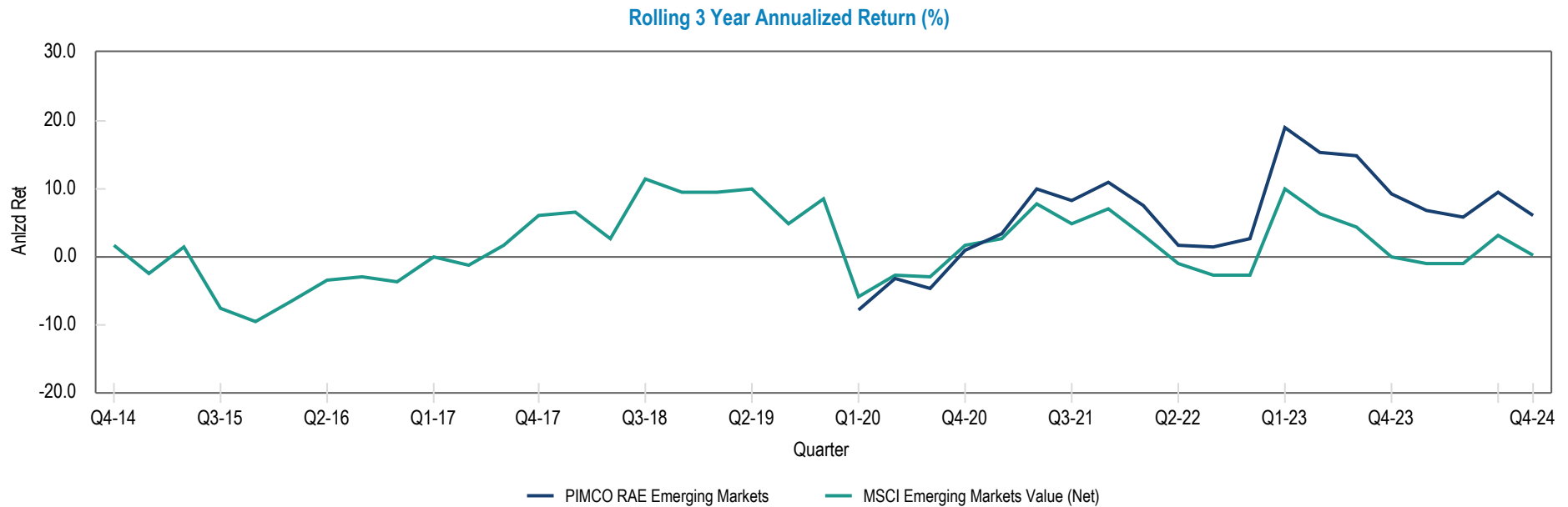
PIMCO RAE Emerging Markets  
Manager Performance Comparisons (Gross of Fees)

Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024

PIMCO RAE Emerging Markets vs. eV Emg Mkts All Cap Value Equity Gross Universe



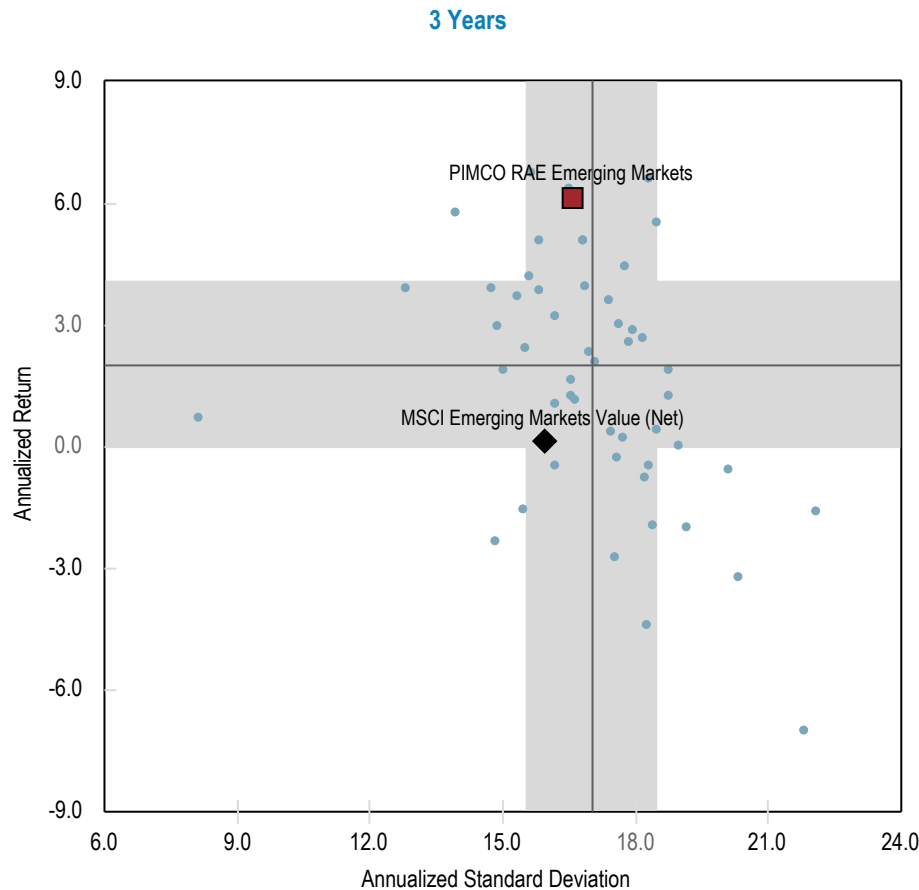




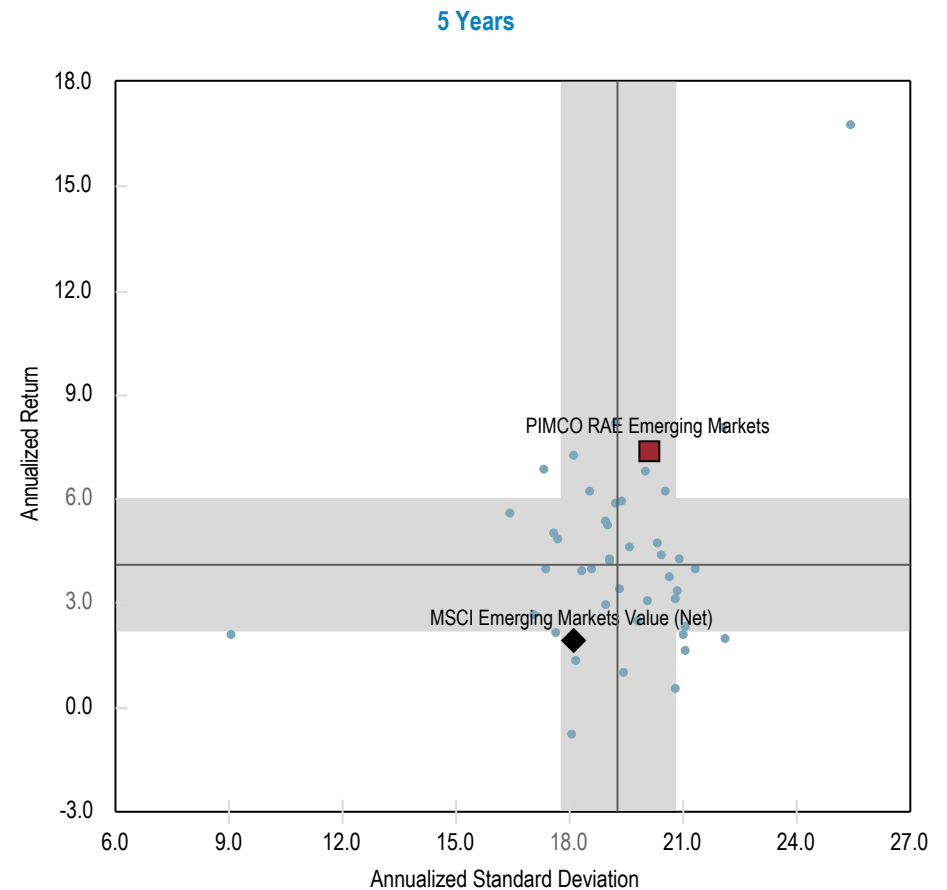


PIMCO RAE Emerging Markets  
Risk vs. Return 3 & 5 Year (Gross of Fees)

Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024



|   | 3 Years          |                              |              |
|---|------------------|------------------------------|--------------|
|   | Anlzd Return (%) | Anlzd Standard Deviation (%) | Sharpe Ratio |
| PIMCO RAE Emerging Markets              | 6.1              | 16.6                         | 0.2          |
| MSCI Emerging Markets Value (Net)       | 0.2              | 16.0                         | -0.2         |
| eV Emg Mkts All Cap Value Equity Median | 2.0              | 17.0                         | 0.0          |
| Population                              | 52               | 52                           | 52           |



|   | 5 Years          |                              |              |
|---|------------------|------------------------------|--------------|
|   | Anlzd Return (%) | Anlzd Standard Deviation (%) | Sharpe Ratio |
| PIMCO RAE Emerging Markets              | 7.4              | 20.1                         | 0.3          |
| MSCI Emerging Markets Value (Net)       | 2.0              | 18.1                         | 0.1          |
| eV Emg Mkts All Cap Value Equity Median | 4.1              | 19.3                         | 0.2          |
| Population                              | 46               | 46                           | 46           |



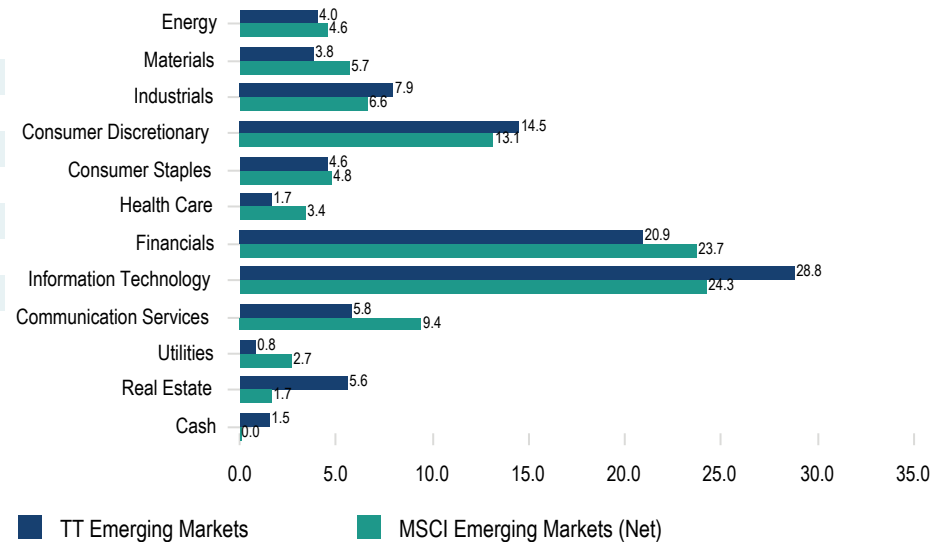
# TT Emerging Markets Manager Portfolio Overview

# Contra Costa County Employees' Retirement Association Period Ending: December 31, 2024

## Characteristics

|                         | Portfolio  | Benchmark  |
|-------------------------|------------|------------|
| Number of Stocks        | 65         | 1,252      |
| Wtd. Avg. Mkt. Cap \$M  | 160,706.74 | 165,630.41 |
| Median Mkt. Cap \$M     | 15,938.43  | 7,596.54   |
| Price/Earnings ratio    | 16.19      | 14.04      |
| Price/Book ratio        | 3.04       | 2.79       |
| Return on Equity (%)    | 5.42       | 5.15       |
| Current Yield (%)       | 1.98       | 2.68       |
| Beta (5 Years, Monthly) | 1.12       | 1.00       |

## Sector Allocation (%) vs. MSCI Emerging Markets (Net)



## Largest Holdings

|                            | End Weight (%) | Quarterly Return (%) |
|----------------------------|----------------|----------------------|
| Taiwan Semiconductor Man.  | 11.97          | 8.84                 |
| Tencent Holdings LTD       | 5.75           | -6.21                |
| Akbank T A S               | 3.60           | 1.78                 |
| Nova Ljubljanska Banka d.d | 3.59           | 2.85                 |
| Mediatek Incorporation     | 3.58           | 16.25                |
| Emaar Properties           | 3.48           | 47.36                |
| MercadoLibre Inc           | 3.33           | -17.13               |
| Alchip Technologies Inc    | 2.78           | 60.31                |
| Alibaba Group Holding Ltd  | 2.54           | -25.09               |
| Ase Technology Holdings Co | 2.44           | 3.56                 |

## Top Contributors

|   | Portfolio Weight (%) | Quarterly Return (%) | Contribution to Return (%) |
|---|----------------------|----------------------|----------------------------|
| Ypf Sociedad Anonima                      | 3.09                 | 100.43               | 3.11                       |
| Grupo Financiero Galicia Sa, Buenos Aires | 2.42                 | 48.06                | 1.16                       |
| Taiwan Semiconductor Man.                 | 8.99                 | 8.84                 | 0.79                       |
| Emaar Properties                          | 1.51                 | 47.36                | 0.71                       |
| Alchip Technologies Inc                   | 0.96                 | 60.31                | 0.58                       |
| Vista Energy SAB de CV                    | 2.57                 | 22.48                | 0.58                       |
| Banco Macro SA                            | 1.04                 | 52.38                | 0.54                       |
| CarTrade Tech Limited                     | 1.03                 | 50.78                | 0.52                       |
| Mediatek Incorporation                    | 0.95                 | 16.25                | 0.15                       |
| Qifu Technology Inc                       | 0.50                 | 28.75                | 0.14                       |

## Top Detractors

|  | Portfolio Weight (%) | Quarterly Return (%) | Contribution to Return (%) |
|--|----------------------|----------------------|----------------------------|
| Alibaba Group Holding Ltd              | 2.80                 | -25.09               | -0.70                      |
| Hapvida Participacoes                  | 1.36                 | -50.86               | -0.69                      |
| PDD Holdings Inc                       | 2.29                 | -28.05               | -0.64                      |
| Capstone Copper Corp                   | 2.48                 | -21.00               | -0.52                      |
| Banco BTG Pactual SA                   | 1.18                 | -27.17               | -0.32                      |
| Samsung Electronics Co Ltd             | 1.39                 | -22.86               | -0.32                      |
| Luzhou Laojiao Co Ltd                  | 1.58                 | -19.61               | -0.31                      |
| AngloGold Ashanti plc                  | 2.20                 | -13.33               | -0.29                      |
| SK Hynix Inc                           | 2.34                 | -11.53               | -0.27                      |
| PT Bank Rakyat Indonesia (Persero) Tbk | 1.32                 | -19.91               | -0.26                      |

% of Portfolio

23.06

8.30

% of Portfolio

18.94

-4.33

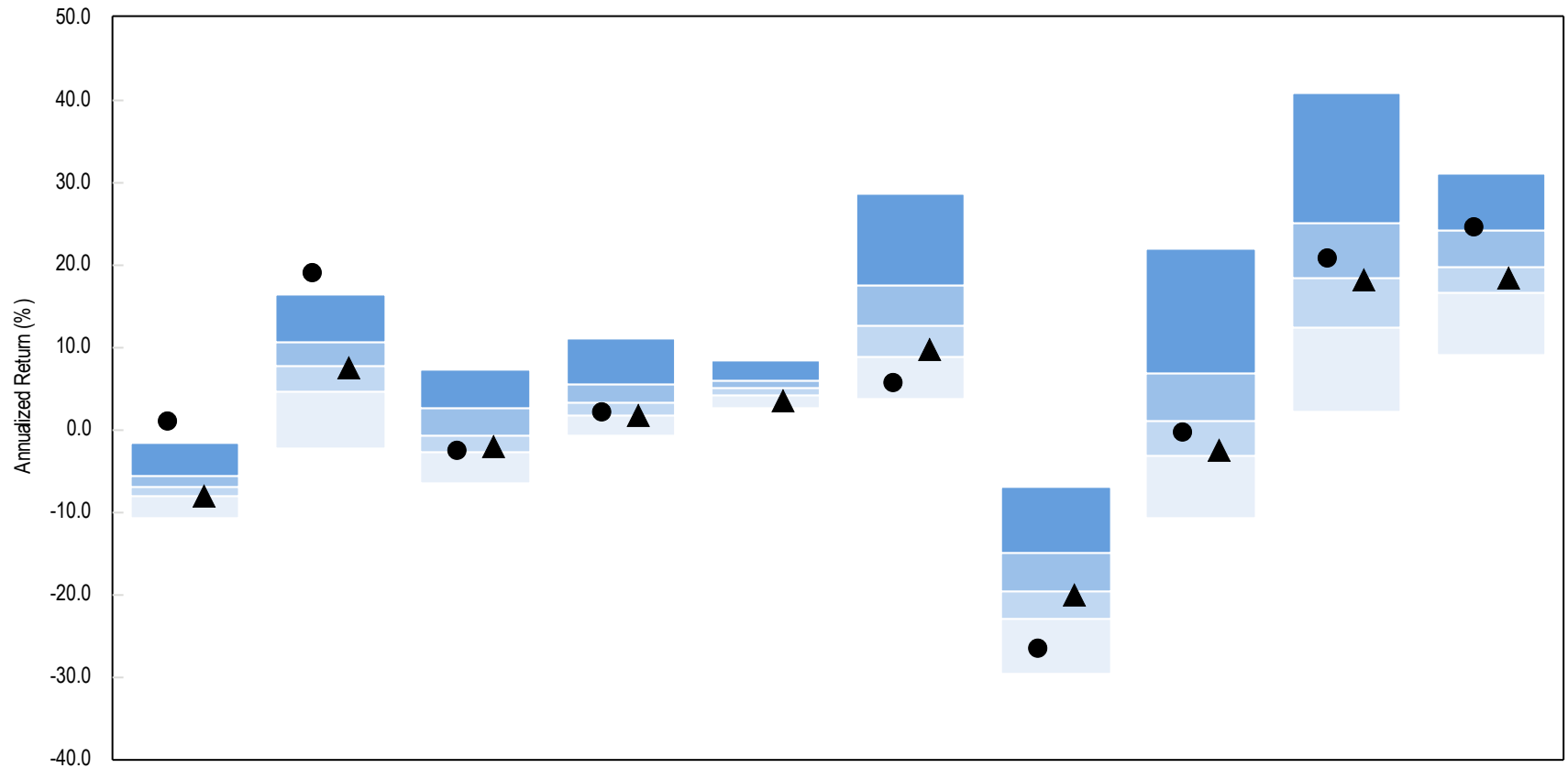
The Emerging Markets Unconstrained strategy aims to outperform its benchmark, MSCI Emerging Markets Index by 5% per annum over a three-year rolling period. It targets high returns and long term capital growth by investing in a focused portfolio of primarily equity and equity-related securities traded in the Emerging Markets.



TT Emerging Markets  
Manager Performance Comparisons (Gross of Fees)

Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024

TT Emerging Markets vs. eV Emg Mkts Equity Gross Universe



|                         | Quarter    | 1 Year    | 3 Years    | 5 Years   | 10 Years  | 2023      | 2022        | 2021       | 2020       | 2019       |
|-------------------------|------------|-----------|------------|-----------|-----------|-----------|-------------|------------|------------|------------|
| ● TT Emerging Markets   | 1.02 (1)   | 19.10 (2) | -2.46 (72) | 2.26 (65) | -         | 5.80 (91) | -26.36 (90) | -0.23 (59) | 20.79 (39) | 24.77 (23) |
| ▲ MSCI Emerging Markets | -8.01 (76) | 7.50 (54) | -1.92 (62) | 1.70 (75) | 3.64 (85) | 9.83 (66) | -20.09 (57) | -2.54 (72) | 18.31 (51) | 18.42 (62) |
| 5th Percentile          | -1.57      | 16.44     | 7.23       | 11.12     | 8.39      | 28.67     | -6.84       | 22.07      | 40.94      | 31.04      |
| 1st Quartile            | -5.45      | 10.77     | 2.59       | 5.65      | 6.11      | 17.63     | -14.88      | 6.85       | 25.11      | 24.26      |
| Median                  | -6.94      | 7.84      | -0.56      | 3.40      | 5.01      | 12.59     | -19.50      | 1.03       | 18.35      | 19.71      |
| 3rd Quartile            | -8.00      | 4.71      | -2.72      | 1.67      | 4.13      | 8.97      | -22.86      | -3.02      | 12.37      | 16.56      |
| 95th Percentile         | -10.56     | -2.21     | -6.45      | -0.70     | 2.56      | 3.74      | -29.66      | -10.70     | 2.14       | 9.03       |
| Population              | 529        | 528       | 497        | 446       | 316       | 553       | 581         | 589        | 586        | 607        |



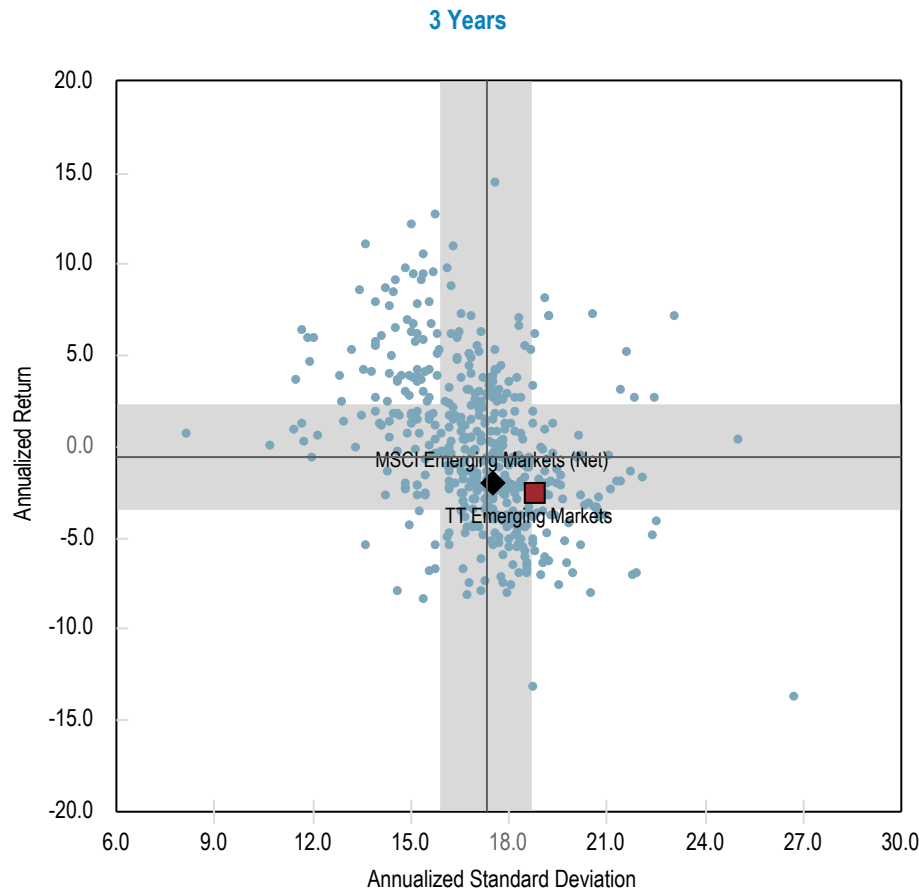




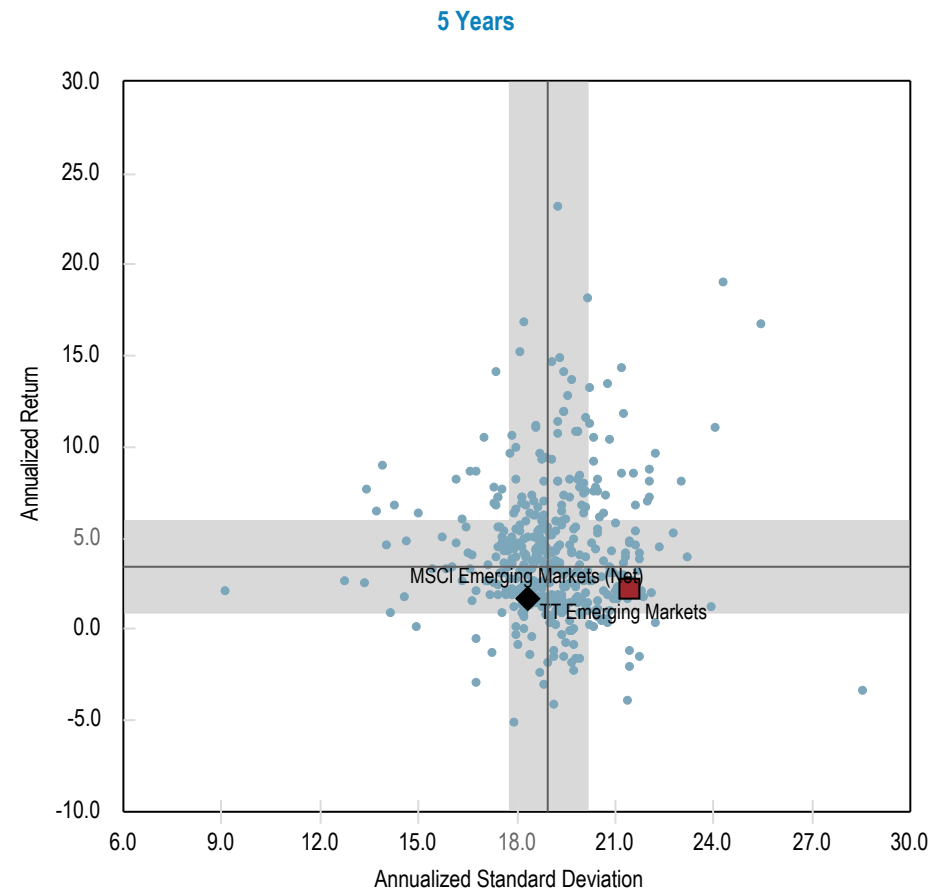
# TT Emerging Markets

## Risk vs. Return 3 & 5 Year (Gross of Fees)

Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024



|                             | <b>3 Years</b>   |                              |              |
|-----------------------------|------------------|------------------------------|--------------|
|                             | Anlzd Return (%) | Anlzd Standard Deviation (%) | Sharpe Ratio |
| TT Emerging Markets         | -2.5             | 18.8                         | -0.2         |
| MSCI Emerging Markets (Net) | -1.9             | 17.5                         | -0.2         |
| eV Emg Mkts Equity Median   | -0.6             | 17.3                         | -0.2         |
| Population                  | 497              | 497                          | 497          |



|                             | <b>5 Years</b>   |                              |              |
|-----------------------------|------------------|------------------------------|--------------|
|                             | Anlzd Return (%) | Anlzd Standard Deviation (%) | Sharpe Ratio |
| TT Emerging Markets         | 2.3              | 21.4                         | 0.1          |
| MSCI Emerging Markets (Net) | 1.7              | 18.3                         | 0.1          |
| eV Emg Mkts Equity Median   | 3.4              | 18.9                         | 0.1          |
| Population                  | 446              | 446                          | 446          |



## Global Equity Managers

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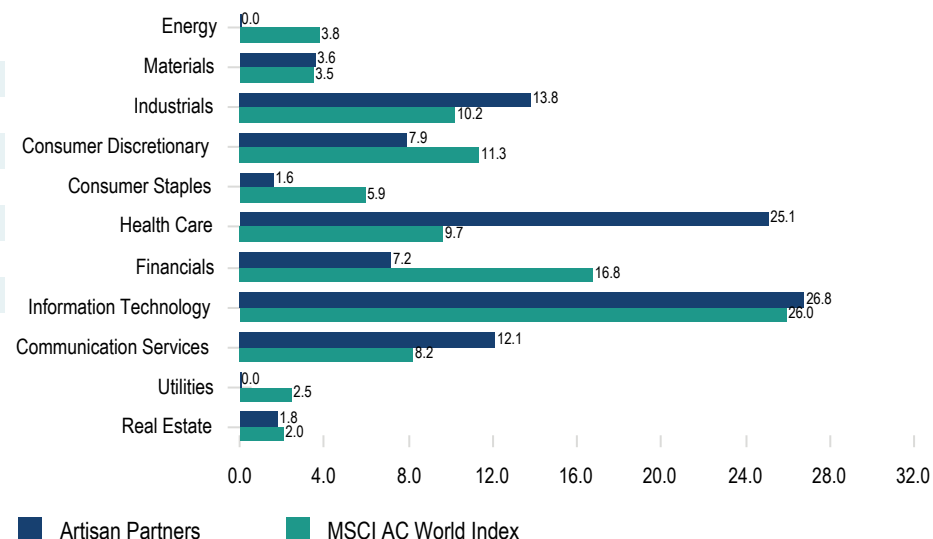
# Artisan Partners Manager Portfolio Overview

## Contra Costa County Employees' Retirement Association Period Ending: December 31, 2024

### Characteristics

|                         | Portfolio  | Benchmark  |
|-------------------------|------------|------------|
| Number of Stocks        | 46         | 2,647      |
| Wtd. Avg. Mkt. Cap \$M  | 399,939.99 | 740,869.68 |
| Median Mkt. Cap \$M     | 93,121.46  | 12,789.71  |
| Price/Earnings ratio    | 39.83      | 22.27      |
| Price/Book ratio        | 6.09       | 3.94       |
| Return on Equity (%)    | 6.69       | 7.84       |
| Current Yield (%)       | 0.65       | 1.85       |
| Beta (5 Years, Monthly) | 0.99       | 1.00       |

### Sector Allocation (%) vs. MSCI AC World Index



### Largest Holdings

|                             | End Weight (%) | Quarterly Return (%) |
|-----------------------------|----------------|----------------------|
| Netflix Inc                 | 5.33           | 25.67                |
| Boston Scientific Corp      | 5.23           | 6.59                 |
| Taiwan Semiconductor Man.   | 4.72           | 14.08                |
| arGEN-X SE                  | 4.21           | 13.45                |
| Advanced Micro Devices Inc  | 3.81           | -26.38               |
| London Stock Exchange Group | 3.80           | 3.10                 |
| Tencent Holdings LTD        | 3.36           | -6.21                |
| LONZA GROUP AG              | 3.32           | -6.71                |
| Amazon.com Inc              | 3.23           | 17.74                |
| Apple Inc                   | 3.08           | 7.60                 |

### Top Contributors

|                           | Portfolio Weight (%) | Quarterly Return (%) | Contribution to Return (%) |
|---------------------------|----------------------|----------------------|----------------------------|
| Netflix Inc               | 4.19                 | 25.67                | 1.07                       |
| Shopify Inc               | 1.85                 | 32.68                | 0.61                       |
| Taiwan Semiconductor Man. | 4.09                 | 14.08                | 0.58                       |
| Atlassian Corp            | 1.02                 | 53.25                | 0.54                       |
| Amazon.com Inc            | 2.71                 | 17.74                | 0.48                       |
| arGEN-X SE                | 3.46                 | 13.45                | 0.47                       |
| Boston Scientific Corp    | 5.06                 | 6.59                 | 0.33                       |
| Alphabet Inc              | 2.30                 | 14.27                | 0.33                       |
| Arista Networks Inc       | 1.70                 | 15.19                | 0.26                       |
| Apple Inc                 | 2.62                 | 7.60                 | 0.20                       |

### Top Detractors

|                              | Portfolio Weight (%) | Quarterly Return (%) | Contribution to Return (%) |
|------------------------------|----------------------|----------------------|----------------------------|
| Advanced Micro Devices Inc   | 5.12                 | -26.38               | -1.35                      |
| Novo Nordisk A/S             | 3.79                 | -26.42               | -1.00                      |
| Danaher Corp                 | 2.91                 | -17.34               | -0.50                      |
| Techtronic Industries Co Ltd | 3.78                 | -13.21               | -0.50                      |
| Keyence Corp                 | 2.42                 | -13.95               | -0.34                      |
| Astrazeneca PLC              | 2.09                 | -15.66               | -0.33                      |
| Nu Holdings Ltd              | 1.13                 | -24.10               | -0.27                      |
| Linde Plc                    | 2.27                 | -11.94               | -0.27                      |
| BAE Systems PLC              | 2.07                 | -12.52               | -0.26                      |
| Adidas AG                    | 3.04                 | -7.65                | -0.23                      |

% of Portfolio

29.00

4.86

% of Portfolio

28.62

-5.05

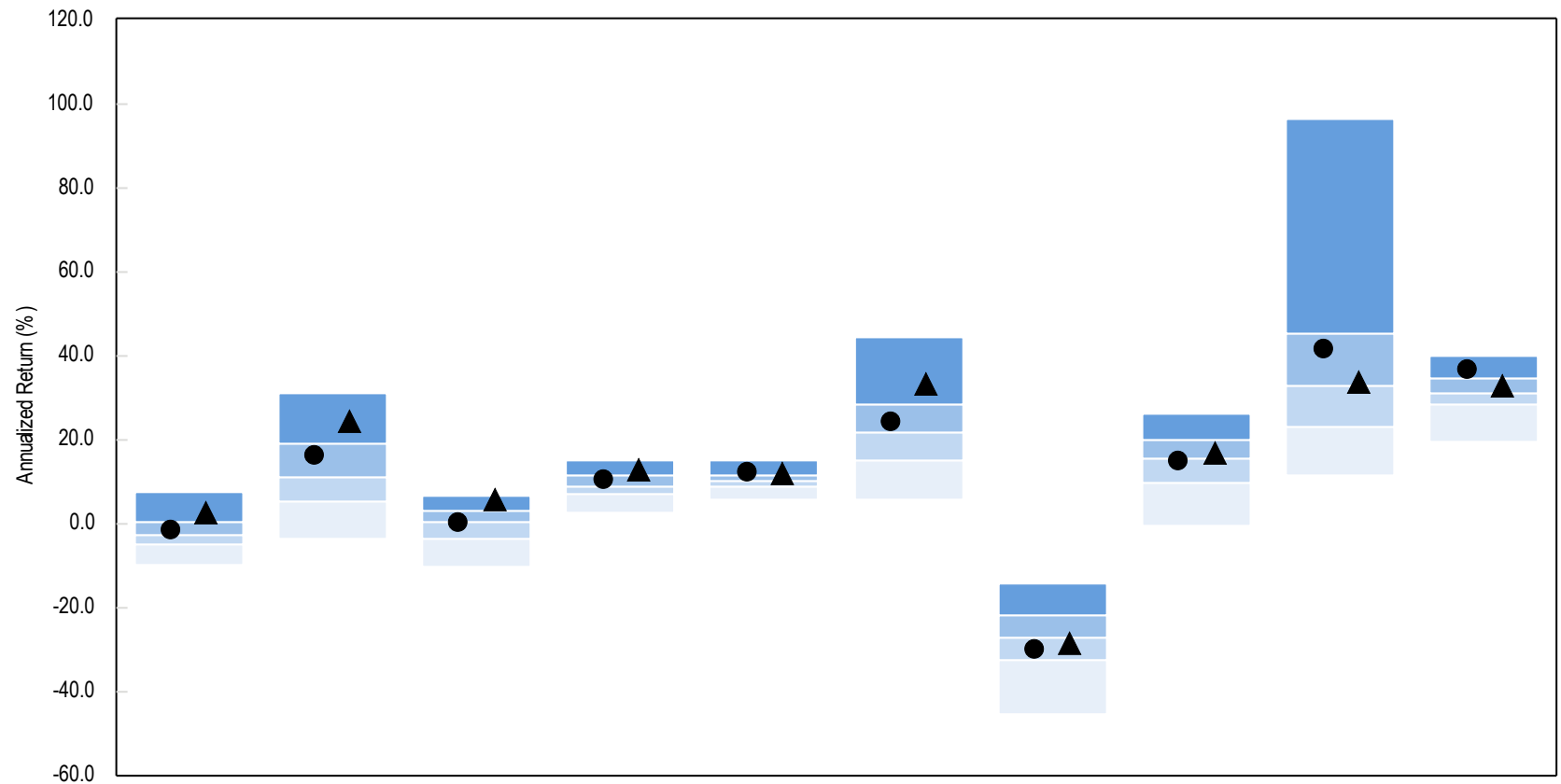
Global equity portfolio of companies that is benchmark agnostic with accelerating profit cycles and a focus on capital allocation. Primary personnel include James Hamel, Craigh Cepukenas, and Matthew Kamm.



Artisan Partners  
Manager Performance Comparisons (Gross of Fees)

Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024

Artisan Partners vs. eV Global Growth Equity Gross Universe



|                           | Quarter    | 1 Year     | 3 Years   | 5 Years    | 10 Years   | 2023       | 2022        | 2021       | 2020       | 2019       |
|---------------------------|------------|------------|-----------|------------|------------|------------|-------------|------------|------------|------------|
| ● Artisan Partners        | -1.38 (42) | 16.30 (34) | 0.65 (49) | 10.68 (31) | 12.37 (17) | 24.54 (38) | -29.59 (60) | 14.99 (56) | 41.66 (33) | 37.00 (12) |
| ▲ MSCI ACWI Growth NR USD | 2.64 (15)  | 24.23 (15) | 5.72 (8)  | 13.07 (15) | 11.88 (23) | 33.22 (18) | -28.61 (56) | 17.10 (43) | 33.60 (49) | 32.72 (37) |
| 5th Percentile            | 7.45       | 30.99      | 6.76      | 15.31      | 15.03      | 44.61      | -14.17      | 26.08      | 96.26      | 39.99      |
| 1st Quartile              | 0.66       | 19.07      | 3.02      | 11.41      | 11.67      | 28.53      | -21.87      | 19.82      | 45.27      | 34.66      |
| Median                    | -2.54      | 11.25      | 0.48      | 8.82       | 10.04      | 21.98      | -27.10      | 15.66      | 33.01      | 31.31      |
| 3rd Quartile              | -5.07      | 5.55       | -3.50     | 7.24       | 8.86       | 15.31      | -32.28      | 9.93       | 23.21      | 28.29      |
| 95th Percentile           | -9.99      | -3.70      | -10.34    | 2.84       | 5.73       | 5.76       | -45.27      | -0.57      | 11.56      | 19.45      |
| Population                | 285        | 285        | 264       | 227        | 136        | 301        | 304         | 289        | 269        | 252        |

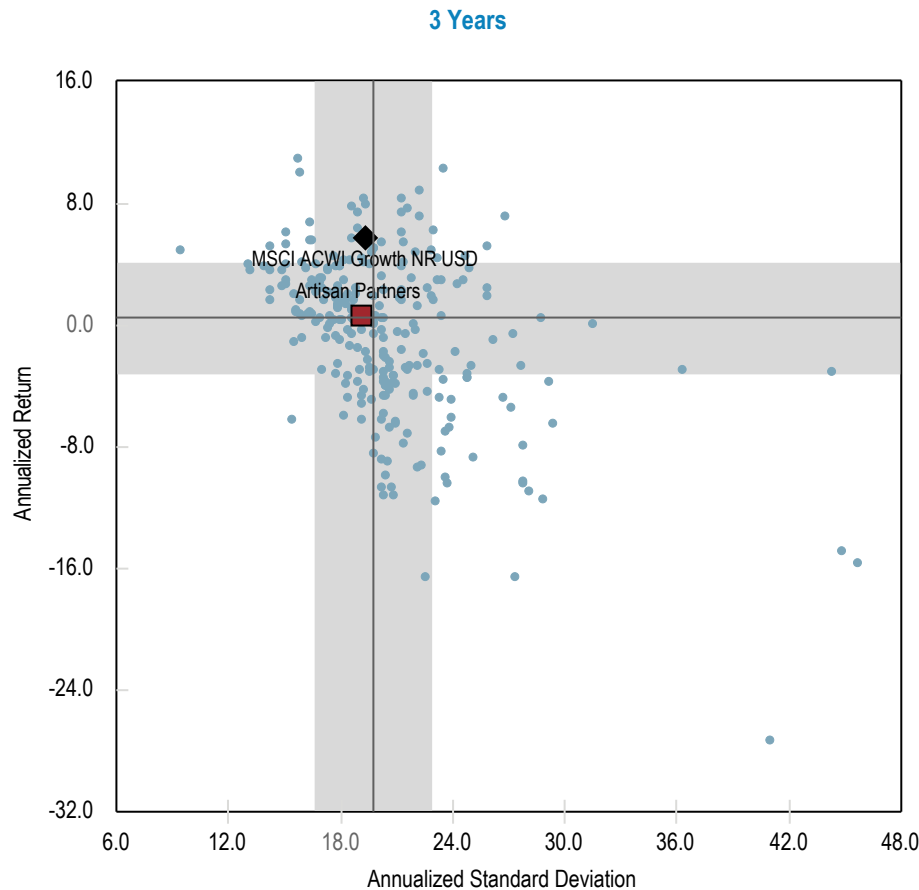




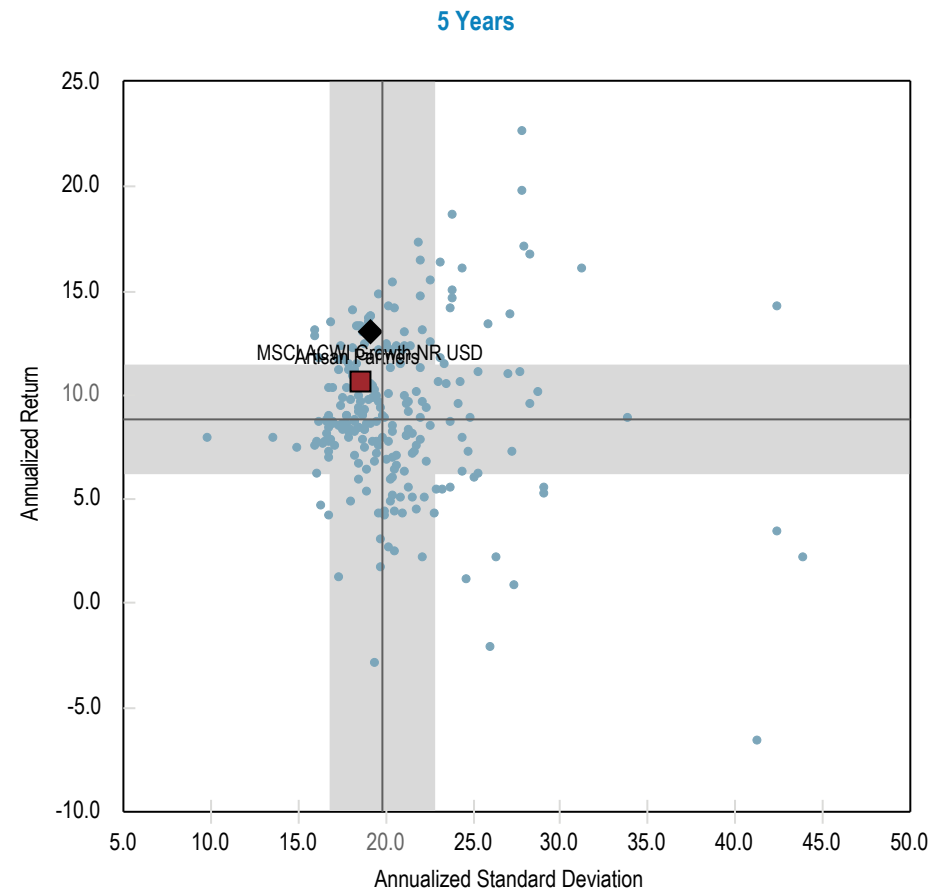


Artisan Partners  
Risk vs. Return 3 & 5 Year (Gross of Fees)

Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024



|                                | 3 Years          |                              |              |
|--------------------------------|------------------|------------------------------|--------------|
|                                | Anlzd Return (%) | Anlzd Standard Deviation (%) | Sharpe Ratio |
| Artisan Partners               | 0.7              | 19.1                         | -0.1         |
| MSCI ACWI Growth NR USD        | 5.7              | 19.4                         | 0.2          |
| eV Global Growth Equity Median | 0.5              | 19.8                         | -0.1         |
| Population                     | 264              | 264                          | 264          |



|                                | 5 Years          |                              |              |
|--------------------------------|------------------|------------------------------|--------------|
|                                | Anlzd Return (%) | Anlzd Standard Deviation (%) | Sharpe Ratio |
| Artisan Partners               | 10.7             | 18.6                         | 0.5          |
| MSCI ACWI Growth NR USD        | 13.1             | 19.1                         | 0.6          |
| eV Global Growth Equity Median | 8.8              | 19.8                         | 0.4          |
| Population                     | 227              | 227                          | 227          |



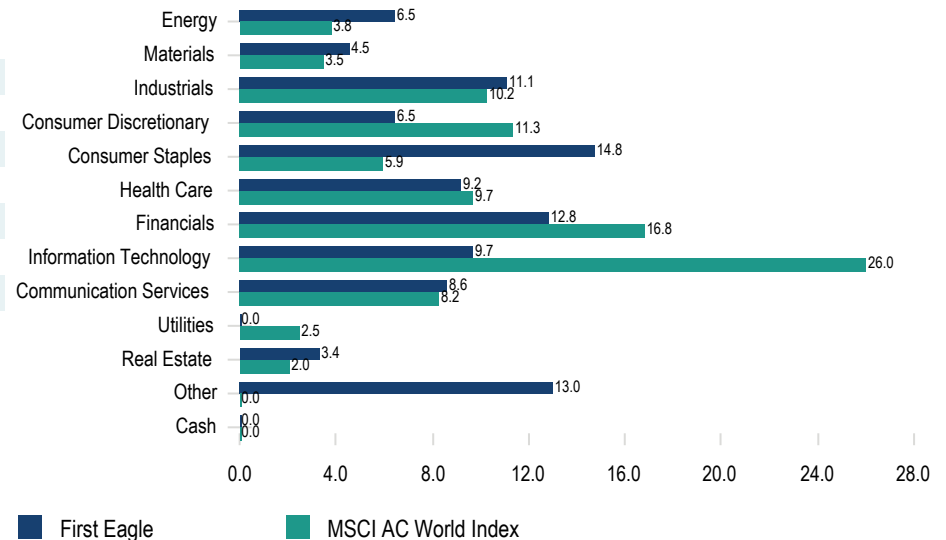
# First Eagle Manager Portfolio Overview

## Contra Costa County Employees' Retirement Association Period Ending: December 31, 2024

### Characteristics

|                         | Portfolio  | Benchmark  |
|-------------------------|------------|------------|
| Number of Stocks        | 125        | 2,647      |
| Wtd. Avg. Mkt. Cap \$M  | 209,303.59 | 740,869.68 |
| Median Mkt. Cap \$M     | 29,569.28  | 12,789.71  |
| Price/Earnings ratio    | 17.15      | 22.27      |
| Price/Book ratio        | 2.43       | 3.94       |
| Return on Equity (%)    | 4.17       | 7.84       |
| Current Yield (%)       | 2.18       | 1.85       |
| Beta (5 Years, Monthly) | 0.75       | 1.00       |

### Sector Allocation (%) vs. MSCI AC World Index



### Largest Holdings

|                                 | End Weight (%) | Quarterly Return (%) |
|---------------------------------|----------------|----------------------|
| SPDR Gold Trust                 | 12.98          | -0.38                |
| Oracle Corp                     | 2.99           | -1.98                |
| Meta Platforms Inc              | 2.98           | 2.36                 |
| Alphabet Inc                    | 2.06           | 14.04                |
| HCA Healthcare Inc              | 1.94           | -25.99               |
| Comcast Corp                    | 1.81           | -9.48                |
| Philip Morris International Inc | 1.72           | 0.23                 |
| Elevance Health Inc             | 1.72           | -28.76               |
| Schlumberger Ltd                | 1.63           | -8.02                |
| Willis Towers Watson plc        | 1.60           | 6.65                 |

### Top Contributors

|                                    | Portfolio Weight (%) | Quarterly Return (%) | Contribution to Return (%) |
|------------------------------------|----------------------|----------------------|----------------------------|
| Alphabet Inc                       | 1.74                 | 14.04                | 0.24                       |
| SALESFORCE INC                     | 0.99                 | 22.29                | 0.22                       |
| Taiwan Semiconductor Man.          | 1.00                 | 14.08                | 0.14                       |
| Sompo Holdings Inc                 | 0.74                 | 17.12                | 0.13                       |
| Bank of New York Mellon Corp (The) | 1.46                 | 7.58                 | 0.11                       |
| Willis Towers Watson plc           | 1.55                 | 6.65                 | 0.10                       |
| American Express Co                | 1.00                 | 9.71                 | 0.10                       |
| Walt Disney Co (The)               | 0.52                 | 16.28                | 0.09                       |
| Flowserve Corp.                    | 0.72                 | 11.68                | 0.08                       |
| Alphabet Inc                       | 0.56                 | 14.27                | 0.08                       |
| % of Portfolio                     | 10.28                |                      | 1.29                       |

### Top Detractors

|                             | Portfolio Weight (%) | Quarterly Return (%) | Contribution to Return (%) |
|-----------------------------|----------------------|----------------------|----------------------------|
| HCA Healthcare Inc          | 2.23                 | -25.99               | -0.58                      |
| Elevance Health Inc         | 1.54                 | -28.76               | -0.44                      |
| Universal Health Services   | 1.36                 | -21.58               | -0.29                      |
| Alibaba Group Holding Ltd   | 1.00                 | -25.09               | -0.25                      |
| Newmont Corporation         | 0.84                 | -29.95               | -0.25                      |
| Shimano Inc                 | 0.87                 | -27.83               | -0.24                      |
| Barrick Gold Corp           | 0.94                 | -21.63               | -0.20                      |
| Unilever PLC                | 1.56                 | -11.84               | -0.19                      |
| Berkeley Group Holdings PLC | 0.76                 | -22.85               | -0.17                      |
| Imperial Oil Ltd            | 1.42                 | -12.03               | -0.17                      |
| % of Portfolio              | 12.52                |                      | -2.80                      |

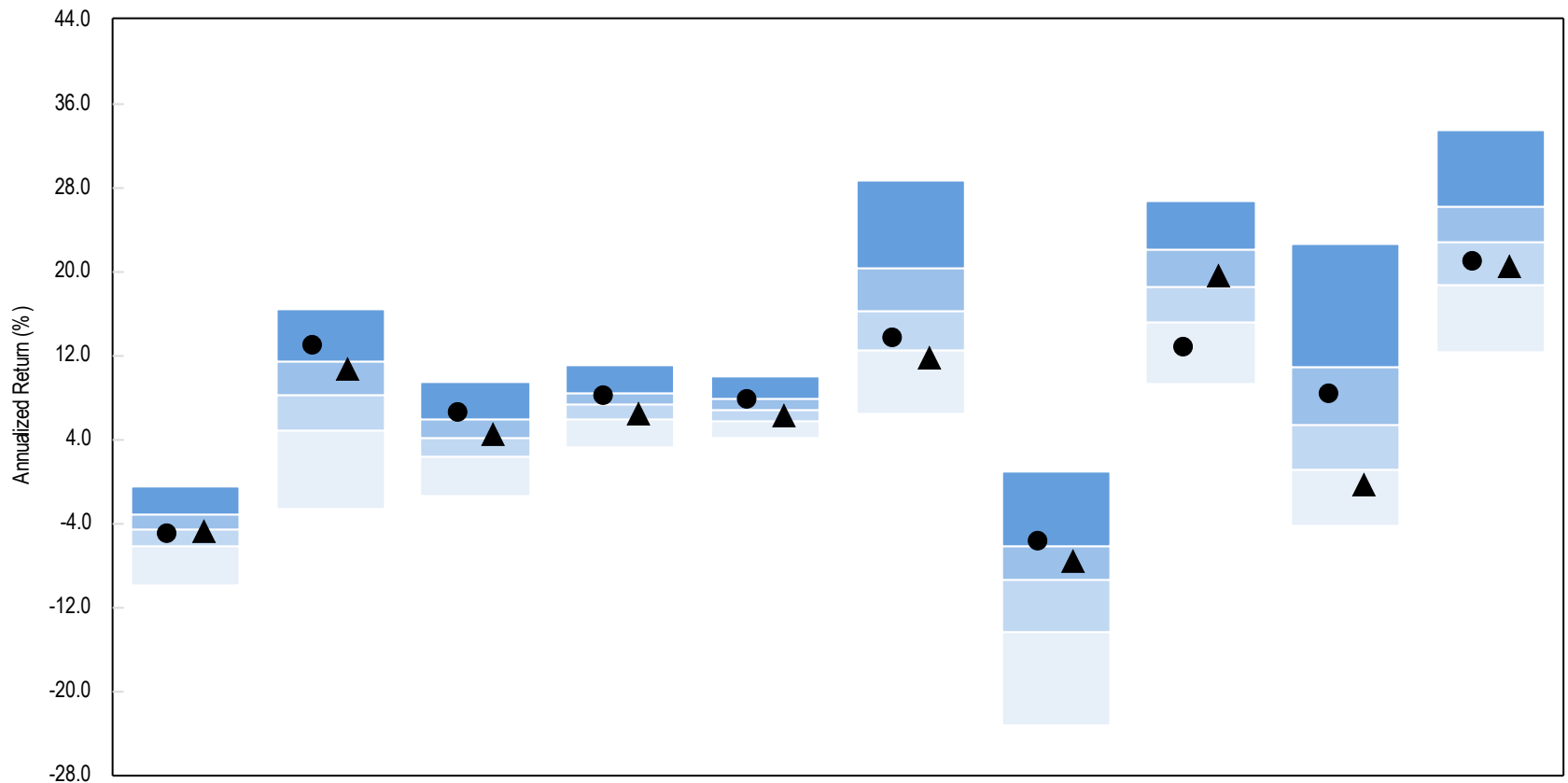
Global equity portfolio that is benchmark agnostic comprised of companies with low valuations. Primary personnel include Matt McLennan and Kimball Brooker.



First Eagle  
Manager Performance Comparisons (Gross of Fees)

Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024

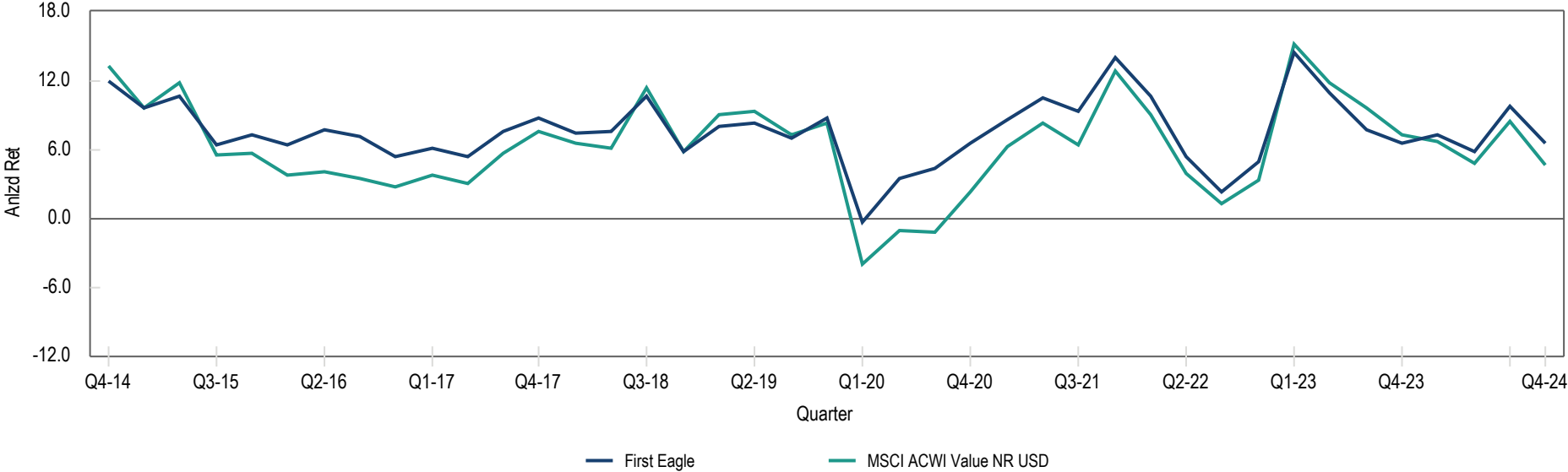
First Eagle vs. eV Global Value Equity Gross Universe



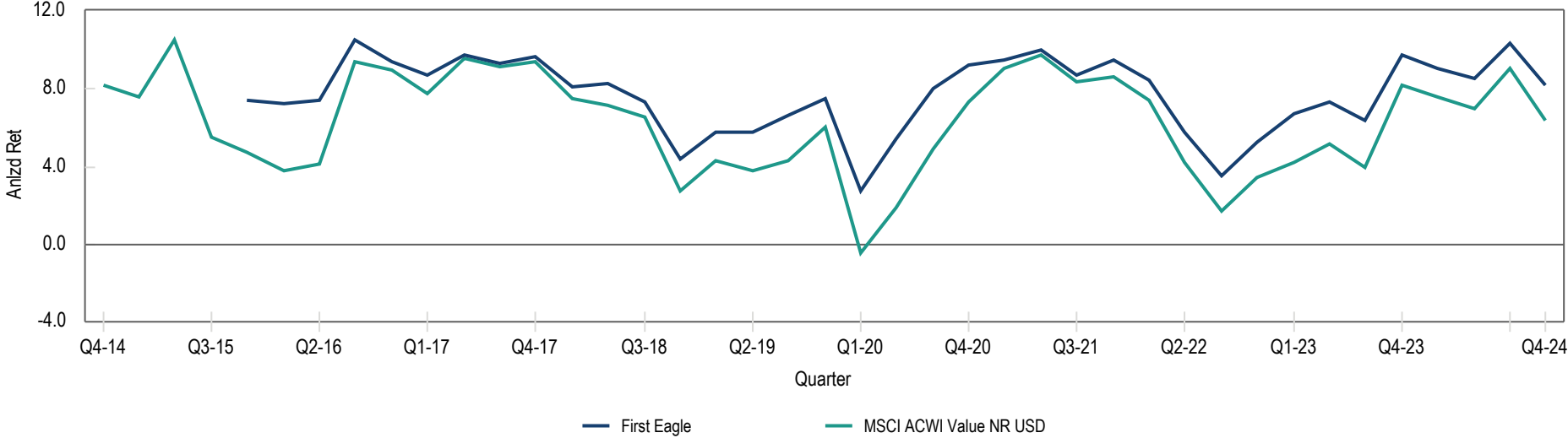
|                          | Quarter    | 1 Year     | 3 Years   | 5 Years   | 10 Years  | 2023       | 2022       | 2021       | 2020       | 2019       |
|--------------------------|------------|------------|-----------|-----------|-----------|------------|------------|------------|------------|------------|
| ● First Eagle            | -4.93 (60) | 12.98 (16) | 6.65 (17) | 8.25 (27) | 7.90 (25) | 13.75 (66) | -5.61 (23) | 12.95 (87) | 8.47 (33)  | 21.01 (64) |
| ▲ MSCI ACWI Value NR USD | -4.71 (55) | 10.76 (31) | 4.61 (46) | 6.42 (68) | 6.24 (70) | 11.81 (80) | -7.55 (36) | 19.62 (41) | -0.33 (80) | 20.59 (66) |
| 5th Percentile           | -0.38      | 16.44      | 9.49      | 11.10     | 9.97      | 28.73      | 1.03       | 26.72      | 22.59      | 33.51      |
| 1st Quartile             | -3.05      | 11.55      | 6.03      | 8.49      | 7.89      | 20.33      | -6.15      | 22.05      | 11.00      | 26.20      |
| Median                   | -4.57      | 8.23       | 4.22      | 7.31      | 6.83      | 16.27      | -9.34      | 18.60      | 5.41       | 22.80      |
| 3rd Quartile             | -6.18      | 4.82       | 2.38      | 5.96      | 5.83      | 12.53      | -14.32     | 15.16      | 1.08       | 18.81      |
| 95th Percentile          | -9.88      | -2.51      | -1.35     | 3.22      | 4.19      | 6.53       | -23.13     | 9.28       | -4.25      | 12.27      |
| Population               | 229        | 229        | 212       | 189       | 141       | 235        | 235        | 235        | 241        | 236        |



Rolling 3 Year Annualized Return (%)



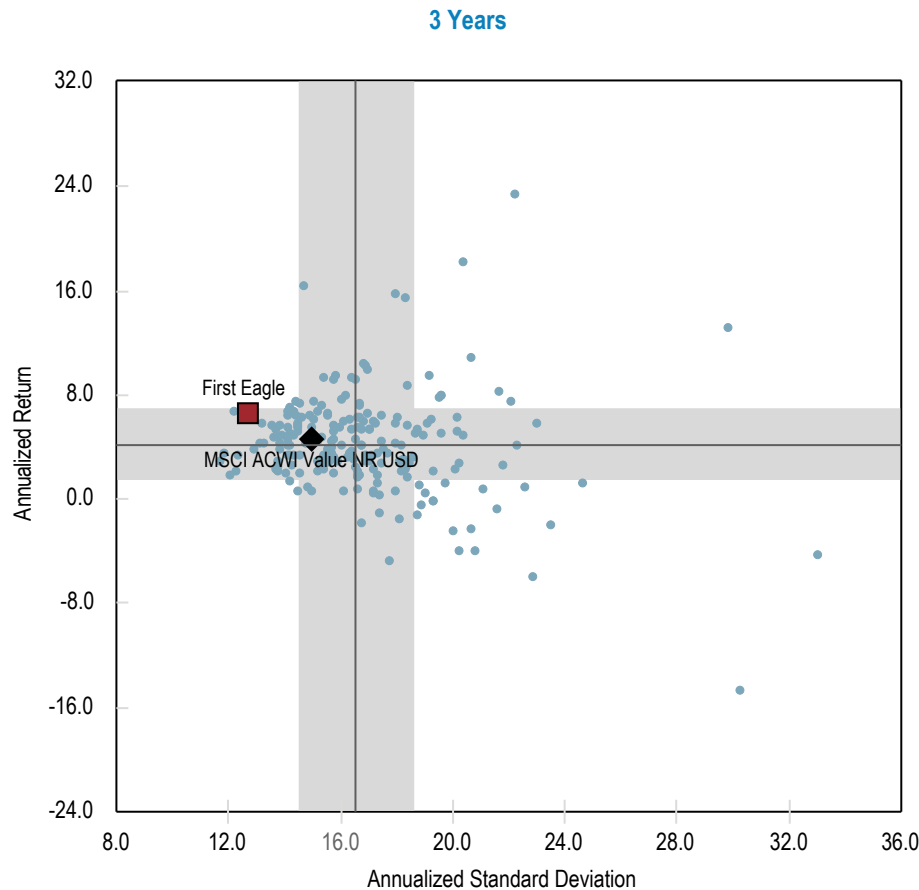
Rolling 5 Year Annualized Return (%)



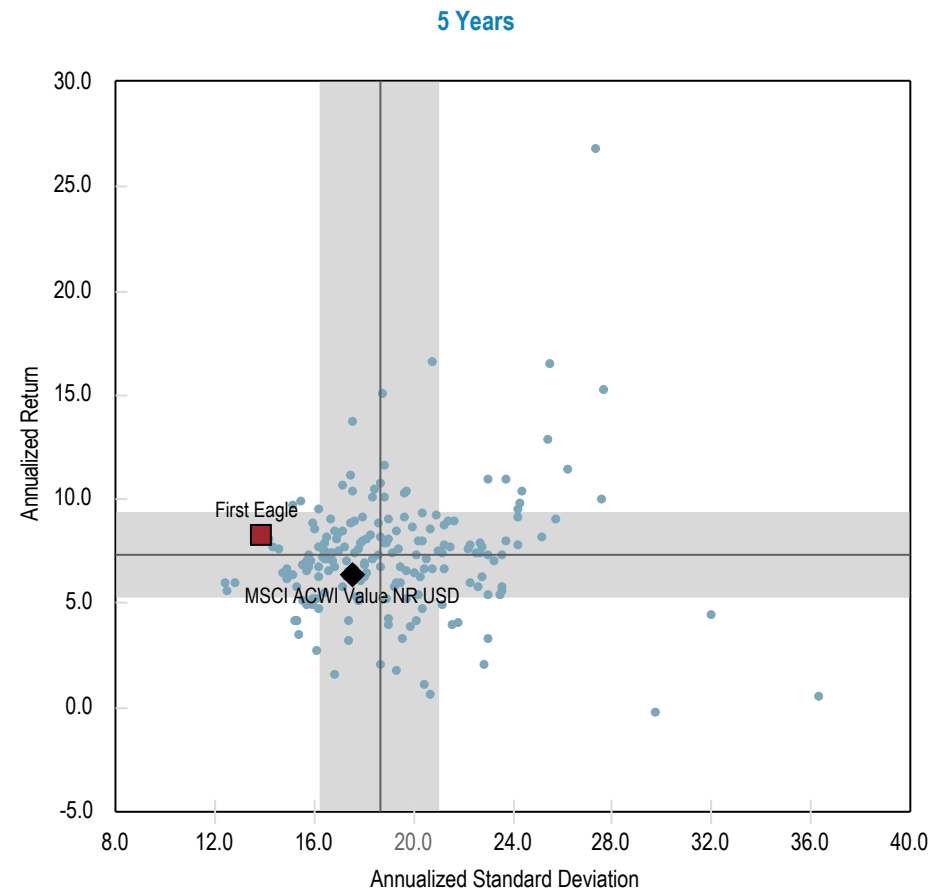


First Eagle  
Risk vs. Return 3 & 5 Year (Gross of Fees)

Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024



|                               | 3 Years          |                              |              |
|-------------------------------|------------------|------------------------------|--------------|
|                               | Anlzd Return (%) | Anlzd Standard Deviation (%) | Sharpe Ratio |
| First Eagle                   | 6.7              | 12.7                         | 0.3          |
| MSCI ACWI Value NR USD        | 4.6              | 15.0                         | 0.1          |
| eV Global Value Equity Median | 4.2              | 16.5                         | 0.1          |
| Population                    | 212              | 212                          | 212          |



|                               | 5 Years          |                              |              |
|-------------------------------|------------------|------------------------------|--------------|
|                               | Anlzd Return (%) | Anlzd Standard Deviation (%) | Sharpe Ratio |
| First Eagle                   | 8.2              | 13.8                         | 0.5          |
| MSCI ACWI Value NR USD        | 6.4              | 17.6                         | 0.3          |
| eV Global Value Equity Median | 7.3              | 18.6                         | 0.3          |
| Population                    | 189              | 189                          | 189          |



## High Yield Managers

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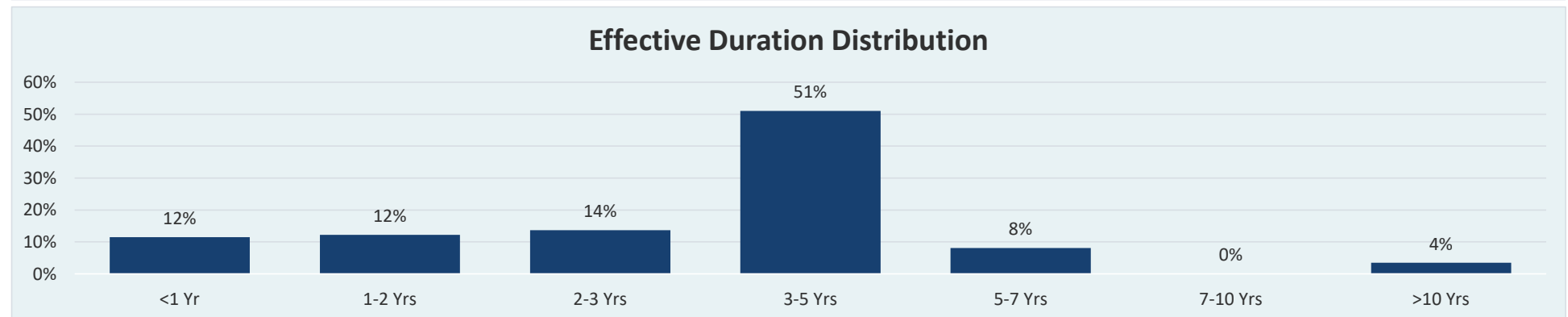
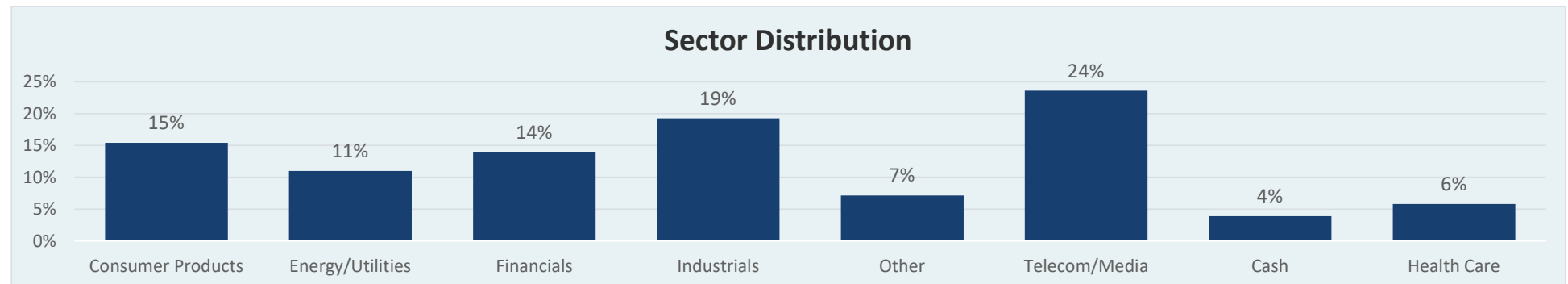
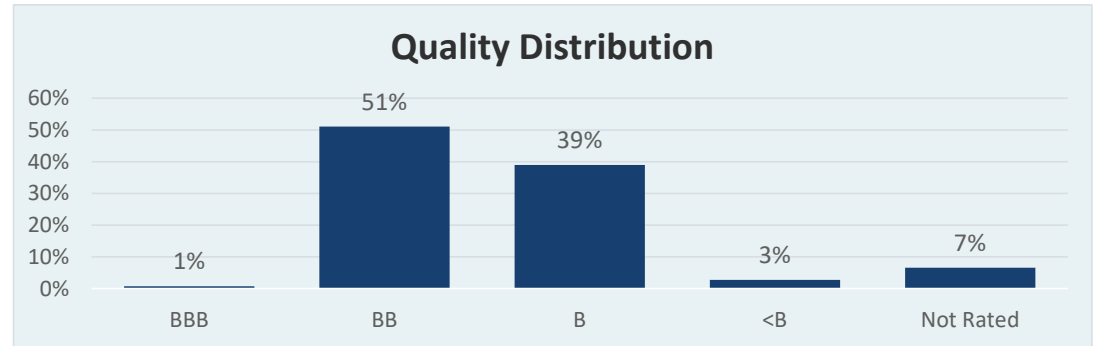


# Voya Global Investors Manager Portfolio Overview

# Contra Costa County Employees' Retirement Association Period Ending: December 31, 2024

Domestic high yield fixed income portfolio with a focus on security selection. Primary personnel include Douglas Forsyth, Justin Kass, William Stickney, and Michael Yee.

|                    | Voya | ICE BofAML HY Master II |
|--------------------|------|-------------------------|
| Effective Duration | 3.10 | 3.20                    |
| Yield to Maturity  | 6.8% | 7.7%                    |
| Average Quality    | B1   | B1                      |
| Average Coupon     | 6.9% | 6.4%                    |

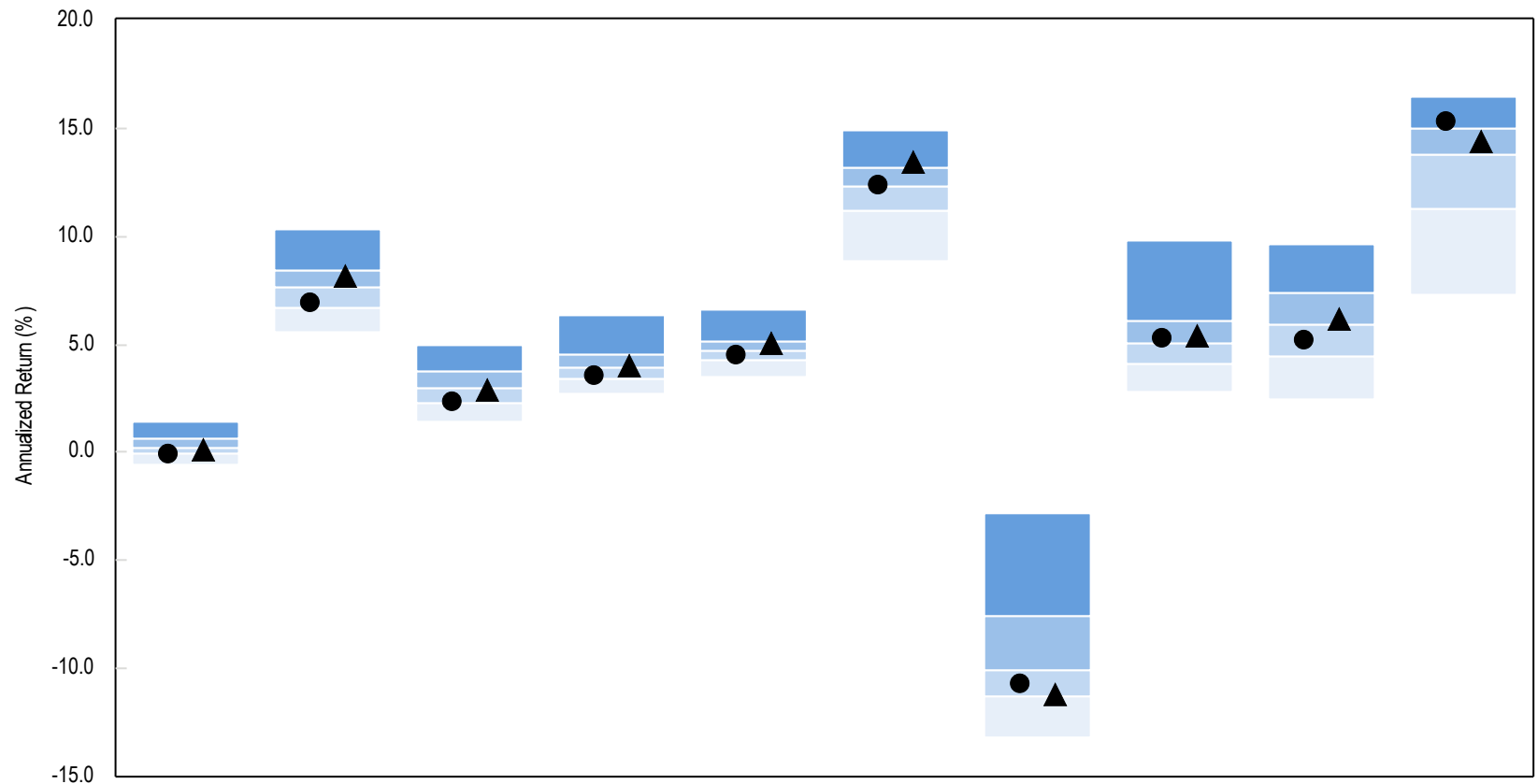




Voya Global Investors  
Manager Performance Comparisons (Gross of Fees)

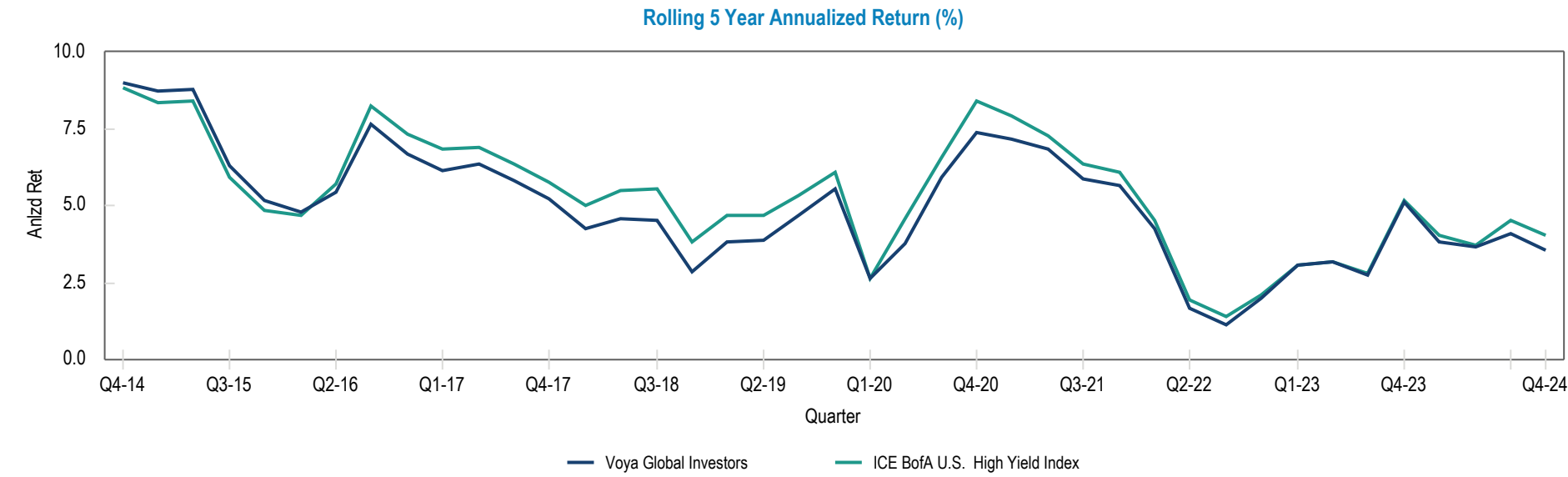
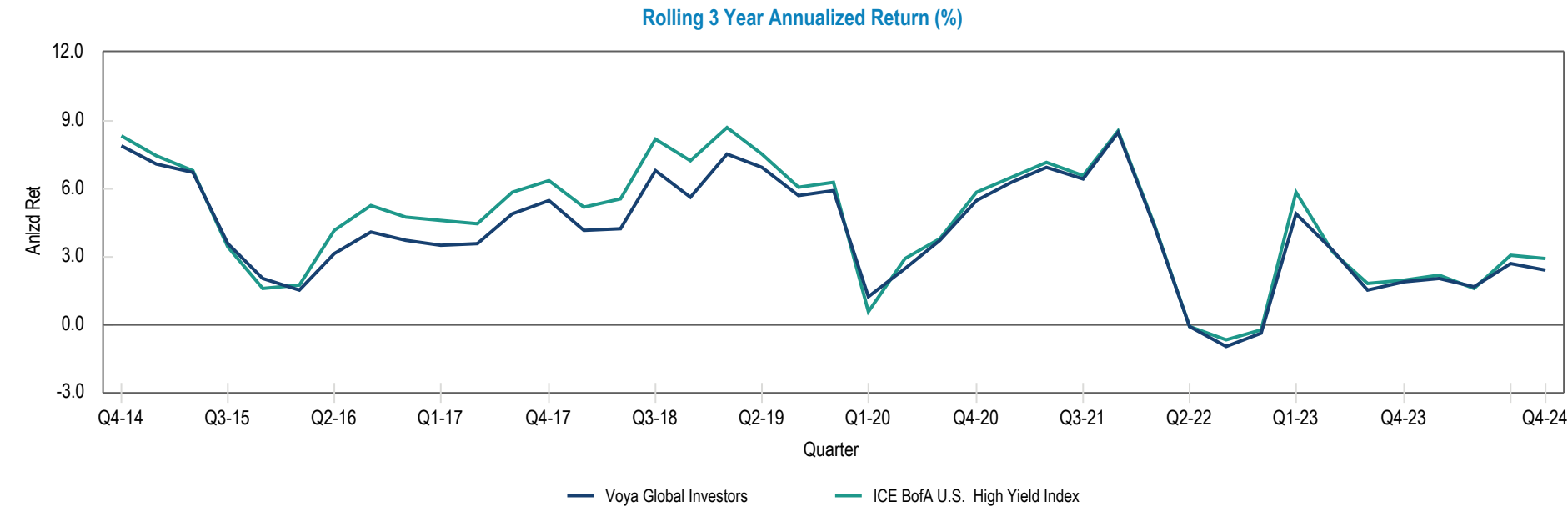
Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024

Voya Global Investors vs. eV US High Yield Fixed Inc Gross Universe



|                                  | Quarter    | 1 Year    | 3 Years   | 5 Years   | 10 Years  | 2023       | 2022        | 2021      | 2020      | 2019       |
|----------------------------------|------------|-----------|-----------|-----------|-----------|------------|-------------|-----------|-----------|------------|
| ● Voya Global Investors          | -0.05 (75) | 6.95 (69) | 2.41 (73) | 3.54 (72) | 4.55 (62) | 12.39 (48) | -10.64 (63) | 5.34 (42) | 5.18 (67) | 15.32 (19) |
| ▲ ICE BofA U.S. High Yield Index | 0.16 (59)  | 8.20 (32) | 2.91 (52) | 4.04 (44) | 5.08 (28) | 13.46 (19) | -11.22 (75) | 5.36 (42) | 6.17 (43) | 14.41 (37) |
| 5th Percentile                   | 1.41       | 10.31     | 4.99      | 6.37      | 6.58      | 14.94      | -2.82       | 9.79      | 9.67      | 16.50      |
| 1st Quartile                     | 0.62       | 8.42      | 3.77      | 4.57      | 5.16      | 13.18      | -7.61       | 6.11      | 7.40      | 14.98      |
| Median                           | 0.23       | 7.65      | 2.99      | 3.90      | 4.74      | 12.29      | -10.05      | 5.05      | 5.88      | 13.80      |
| 3rd Quartile                     | -0.06      | 6.72      | 2.32      | 3.41      | 4.26      | 11.17      | -11.29      | 4.07      | 4.47      | 11.25      |
| 95th Percentile                  | -0.59      | 5.61      | 1.42      | 2.74      | 3.49      | 8.84       | -13.14      | 2.84      | 2.43      | 7.30       |
| Population                       | 240        | 236       | 228       | 214       | 183       | 254        | 268         | 262       | 265       | 270        |

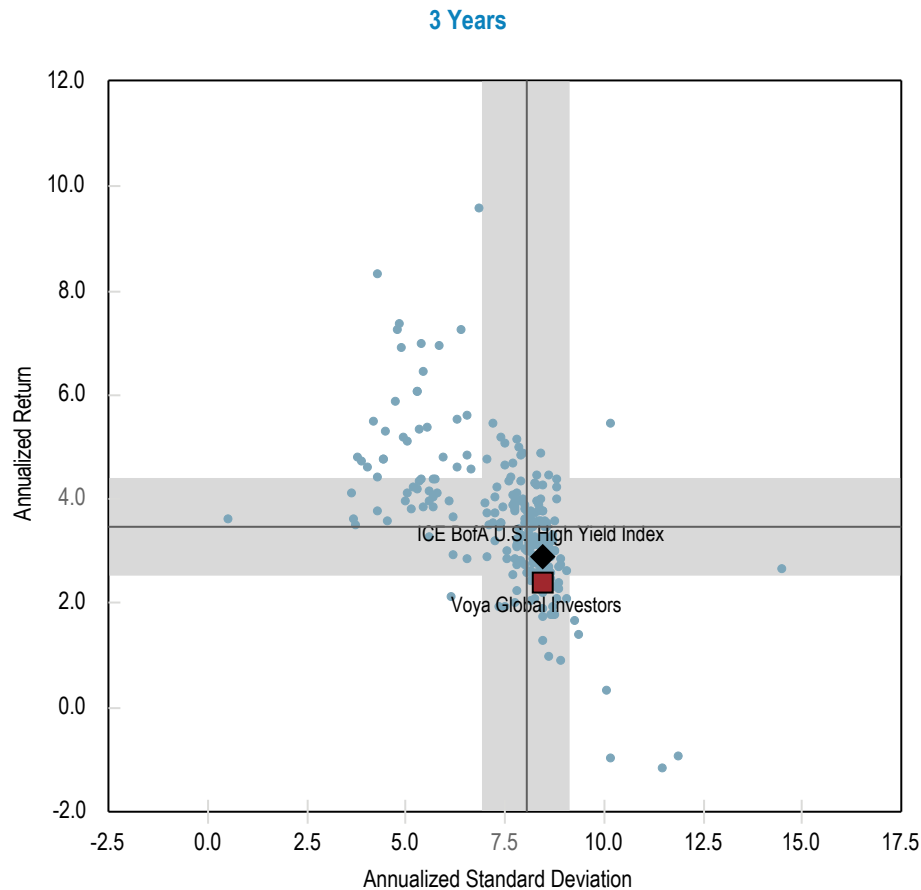




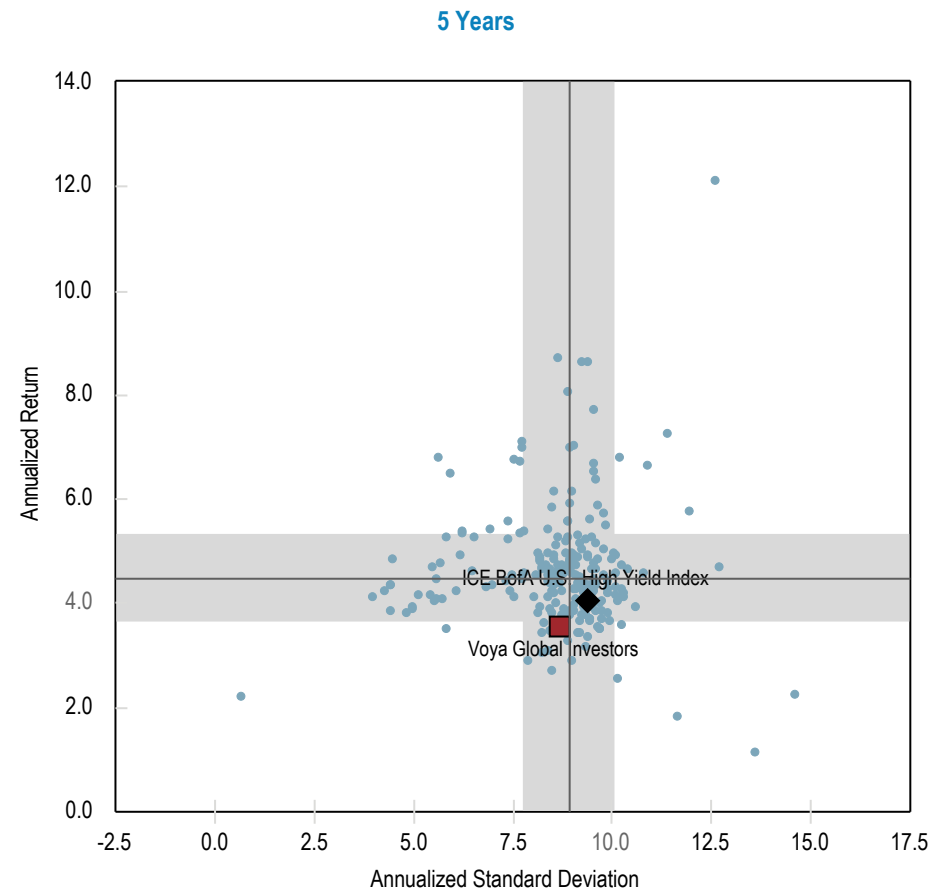


Voya Global Investors  
Risk vs. Return 3 & 5 Year (Gross of Fees)

Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024



|                                   | 3 Years          |                              |              |
|-----------------------------------|------------------|------------------------------|--------------|
|                                   | Anlzd Return (%) | Anlzd Standard Deviation (%) | Sharpe Ratio |
| Voya Global Investors             | 2.4              | 8.4                          | -0.1         |
| ICE BofA U.S. High Yield Index    | 2.9              | 8.4                          | -0.1         |
| eV US High Yield Fixed Inc Median | 3.5              | 8.0                          | 0.0          |
| Population                        | 235              | 235                          | 235          |



|                                   | 5 Years          |                              |              |
|-----------------------------------|------------------|------------------------------|--------------|
|                                   | Anlzd Return (%) | Anlzd Standard Deviation (%) | Sharpe Ratio |
| Voya Global Investors             | 3.5              | 8.7                          | 0.2          |
| ICE BofA U.S. High Yield Index    | 4.0              | 9.4                          | 0.2          |
| eV US High Yield Fixed Inc Median | 4.5              | 8.9                          | 0.3          |
| Population                        | 220              | 220                          | 220          |



## Real Estate Managers

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# Adelante Manager Portfolio Overview

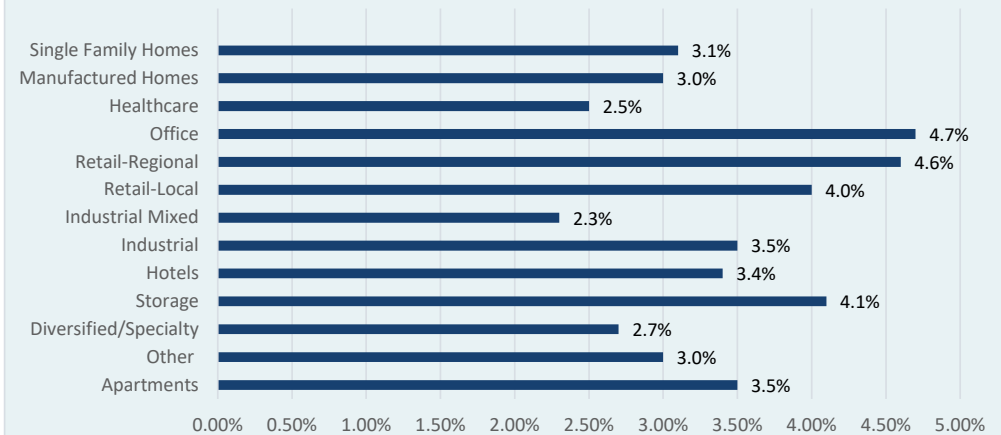
Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024

Diversified portfolio of U.S. REITs with a focus on the underlying real estate assets

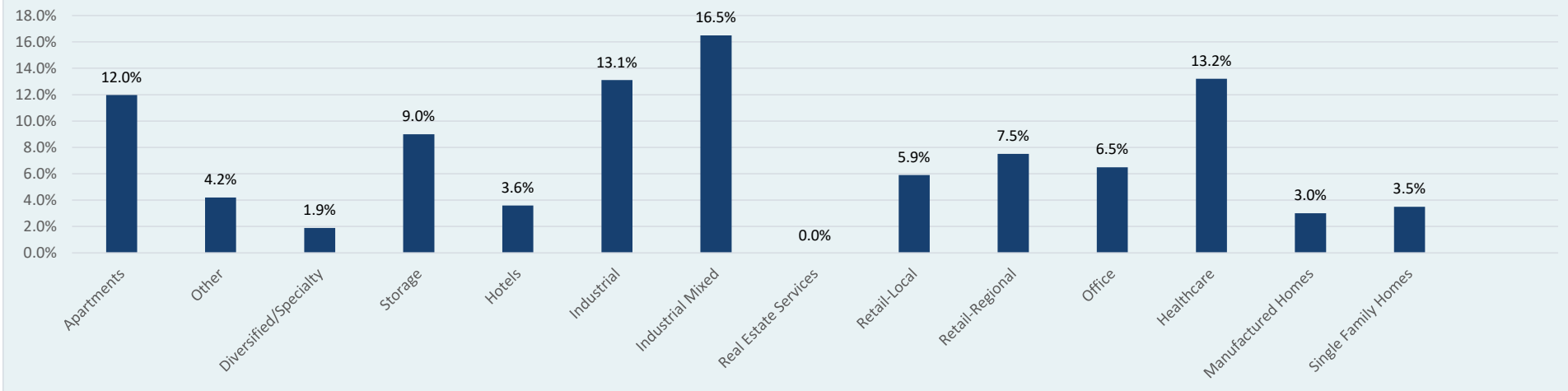
## Top Five Holdings

| Company                    | Property Type    | Allocation |
|----------------------------|------------------|------------|
| ProLogis Inc.              | Industrial       | 9.8%       |
| Welltower Inc.             | Healthcare       | 9.7%       |
| Equinix, Inc.              | Industrial Mixed | 9.4%       |
| Simon Property Group, Inc. | Retail- Regional | 6.2%       |
| Digital Realty Trust       | Industrial Mixed | 6.1%       |

## Dividend Yield by Property Type



## Property Type Allocation





## Diversifying Fixed Income Managers

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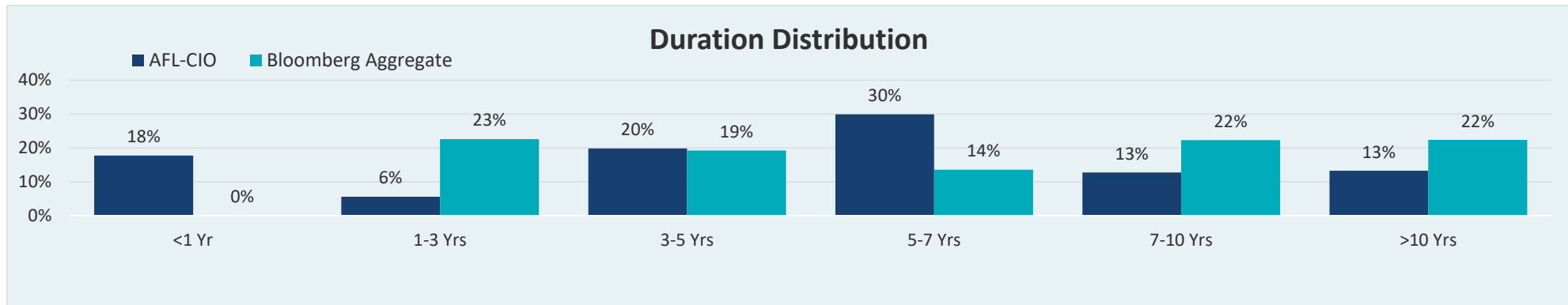
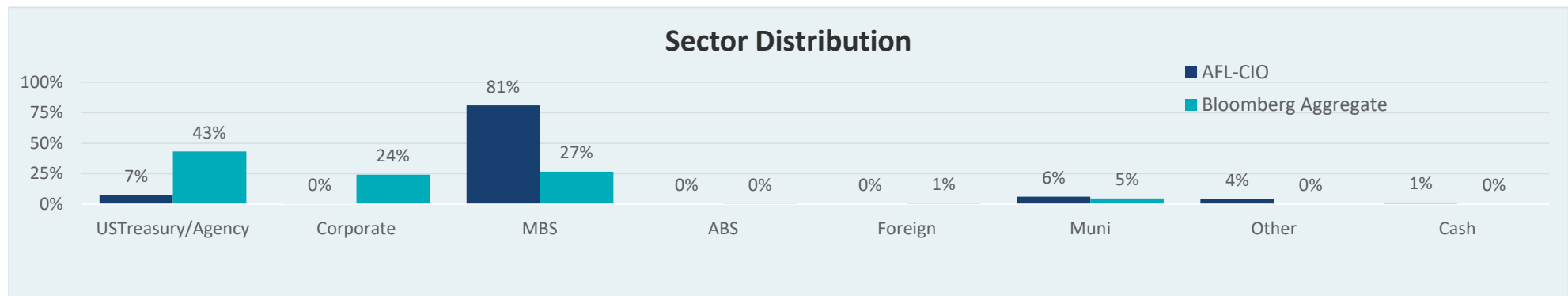
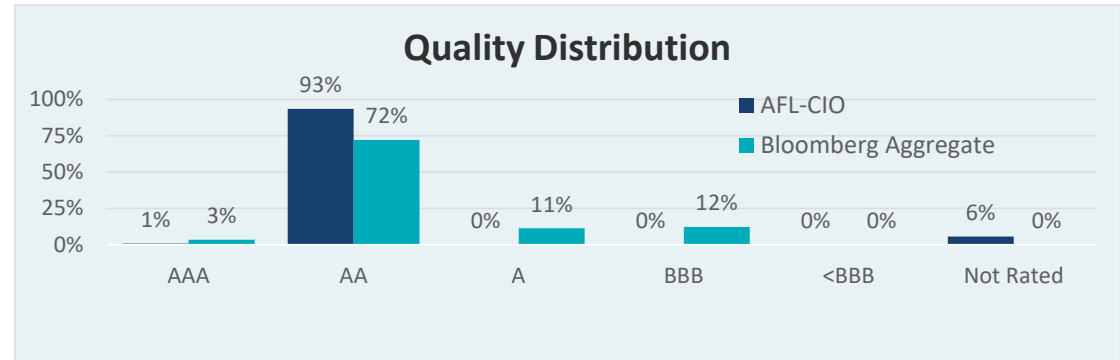


# AFL-CIO Manager Portfolio Overview

## Contra Costa County Employees' Retirement Association Period Ending: December 31, 2024

Domestic core fixed income portfolio with an exclusive focus on mortgage-related securities. Primary personnel include Stephen Coyle and Chang Su.

|                    | AFL-CIO | Bloomberg Aggregate |
|--------------------|---------|---------------------|
| Effective Duration | 5.93    | 5.93                |
| Yield to Maturity  | 4.1%    | 3.8%                |
| Average Quality    | Aa1     | Aa2                 |
| Average Coupon     | 3.7%    | 3.5%                |



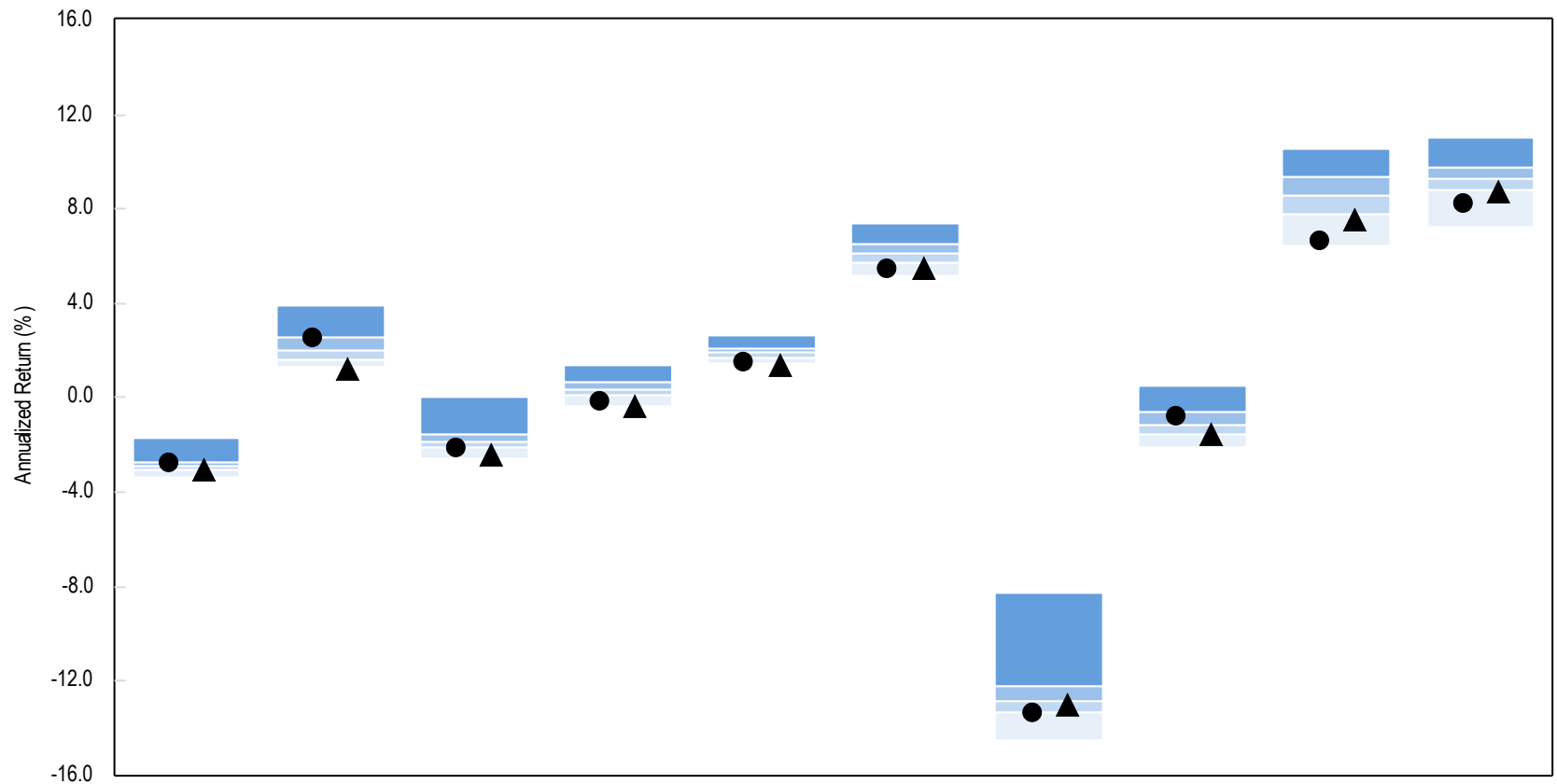
Duration and Quality distributions exclude cash.



AFL-CIO  
Manager Performance Comparisons (Gross of Fees)

Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024

AFL-CIO vs. eV US Core Fixed Inc Gross Universe

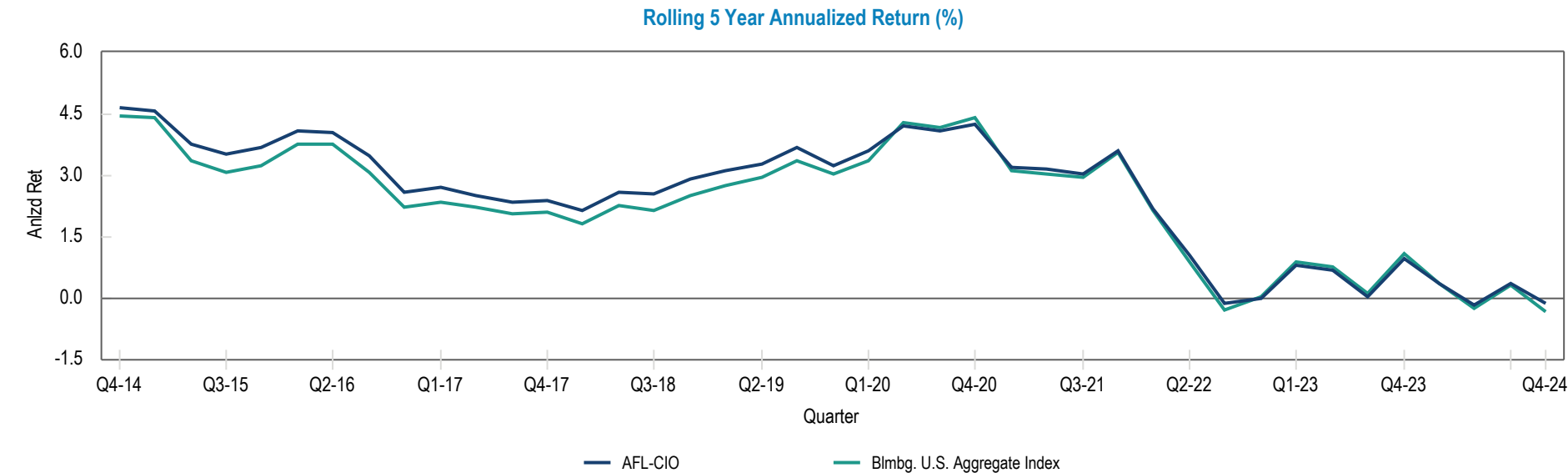
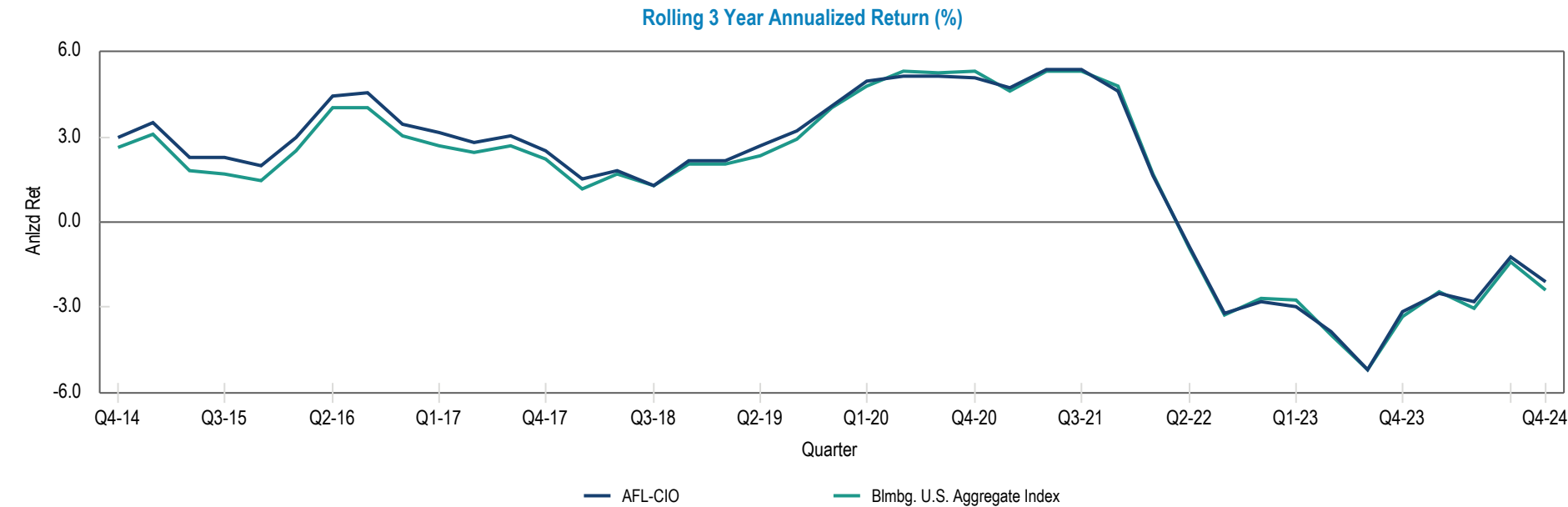


|                               | Quarter    | 1 Year    | 3 Years    | 5 Years    | 10 Years  | 2023      | 2022        | 2021       | 2020      | 2019      |
|-------------------------------|------------|-----------|------------|------------|-----------|-----------|-------------|------------|-----------|-----------|
| ● AFL-CIO                     | -2.70 (25) | 2.60 (25) | -2.08 (70) | -0.12 (90) | 1.55 (92) | 5.51 (86) | -13.27 (74) | -0.73 (33) | 6.65 (94) | 8.25 (87) |
| ▲ Blmbg. U.S. Aggregate Index | -3.06 (77) | 1.25 (96) | -2.41 (91) | -0.33 (96) | 1.35 (99) | 5.53 (85) | -13.01 (63) | -1.55 (77) | 7.51 (83) | 8.72 (77) |
| 5th Percentile                | -1.73      | 3.88      | 0.01       | 1.42       | 2.66      | 7.42      | -8.28       | 0.50       | 10.57     | 11.01     |
| 1st Quartile                  | -2.70      | 2.59      | -1.53      | 0.66       | 2.09      | 6.55      | -12.19      | -0.61      | 9.34      | 9.76      |
| Median                        | -2.89      | 2.03      | -1.88      | 0.35       | 1.91      | 6.15      | -12.83      | -1.11      | 8.54      | 9.31      |
| 3rd Quartile                  | -3.06      | 1.65      | -2.13      | 0.14       | 1.70      | 5.73      | -13.29      | -1.51      | 7.75      | 8.77      |
| 95th Percentile               | -3.34      | 1.27      | -2.55      | -0.32      | 1.48      | 5.18      | -14.50      | -2.11      | 6.42      | 7.22      |
| Population                    | 235        | 235       | 233        | 222        | 207       | 250       | 269         | 276        | 280       | 284       |



AFL-CIO  
Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

Contra Costa County Employees' Retirement Association  
Period Ending: December 31, 2024



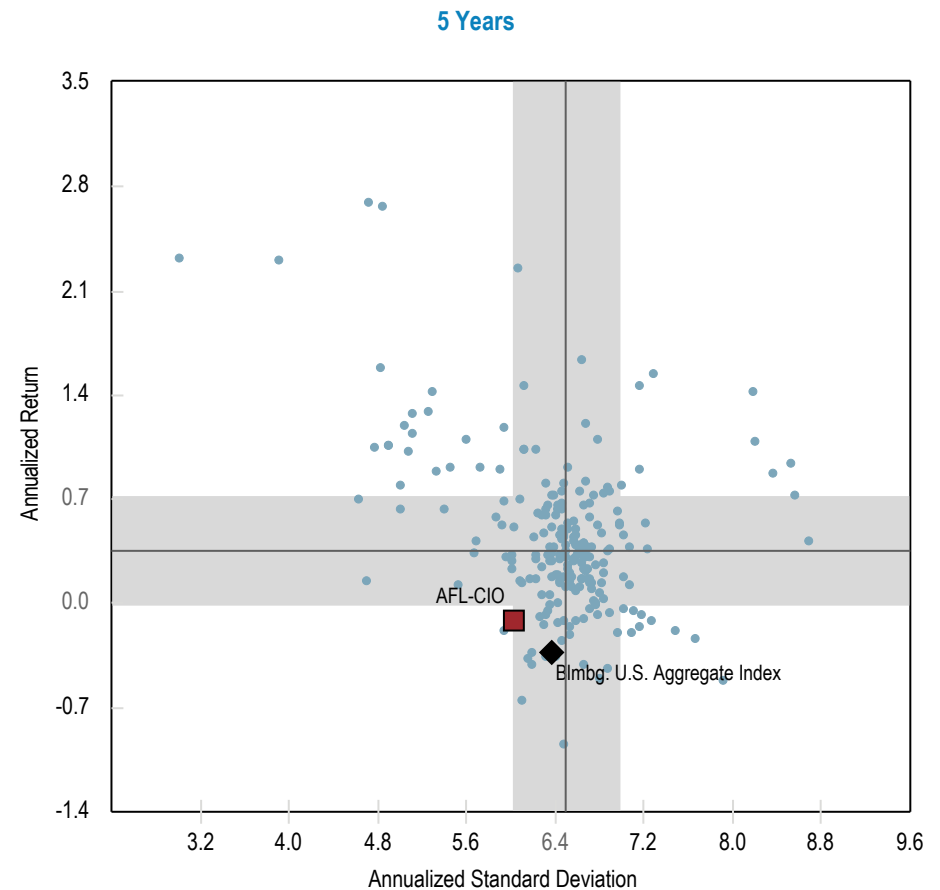
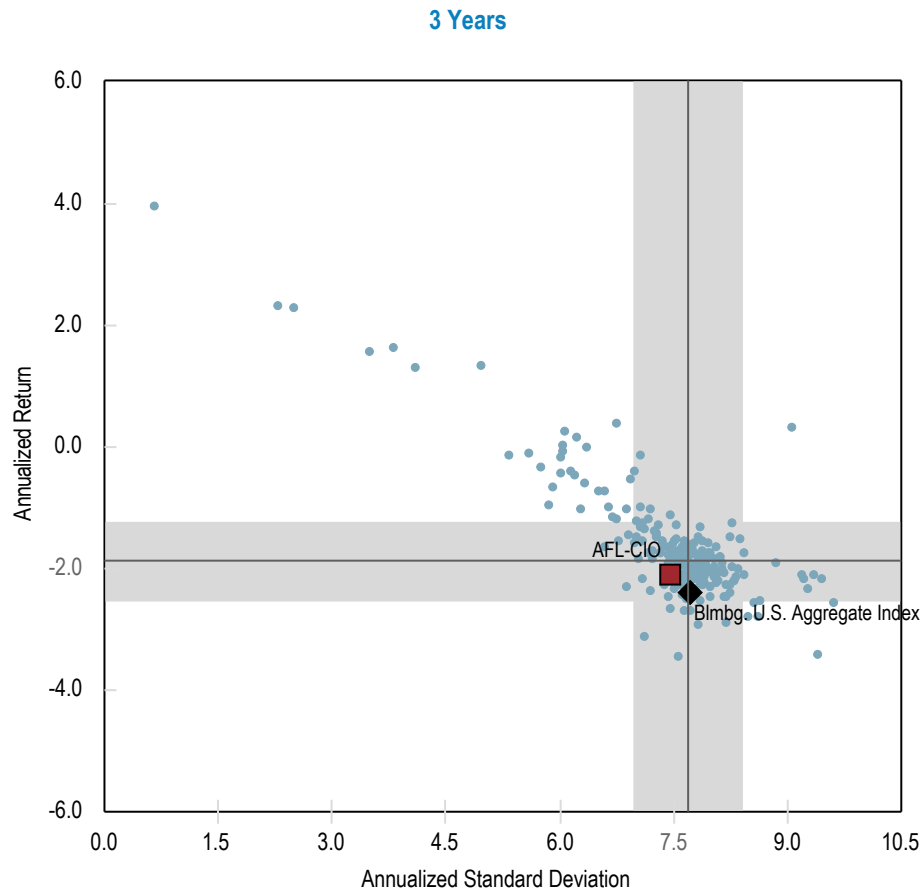


# AFL-CIO

## Risk vs. Return 3 & 5 Year (Gross of Fees)

# Contra Costa County Employees' Retirement Association

## Period Ending: December 31, 2024



|                             | 3 Years          |                              |              |
|-----------------------------|------------------|------------------------------|--------------|
|                             | Anlzd Return (%) | Anlzd Standard Deviation (%) | Sharpe Ratio |
| AFL-CIO                     | -2.1             | 7.4                          | -0.8         |
| Blmbg. U.S. Aggregate Index | -2.4             | 7.7                          | -0.8         |
| eV US Core Fixed Inc Median | -1.9             | 7.7                          | -0.7         |
| Population                  | 233              | 233                          | 233          |

|                             | 5 Years          |                              |              |
|-----------------------------|------------------|------------------------------|--------------|
|                             | Anlzd Return (%) | Anlzd Standard Deviation (%) | Sharpe Ratio |
| AFL-CIO                     | -0.1             | 6.0                          | -0.4         |
| Blmbg. U.S. Aggregate Index | -0.3             | 6.4                          | -0.4         |
| eV US Core Fixed Inc Median | 0.4              | 6.5                          | -0.3         |
| Population                  | 222              | 222                          | 222          |



# Liquidity Managers

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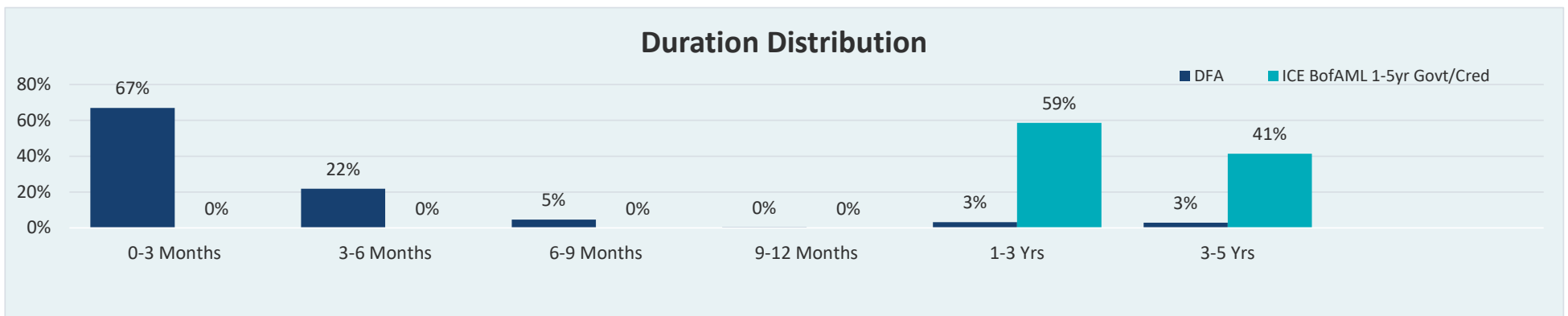
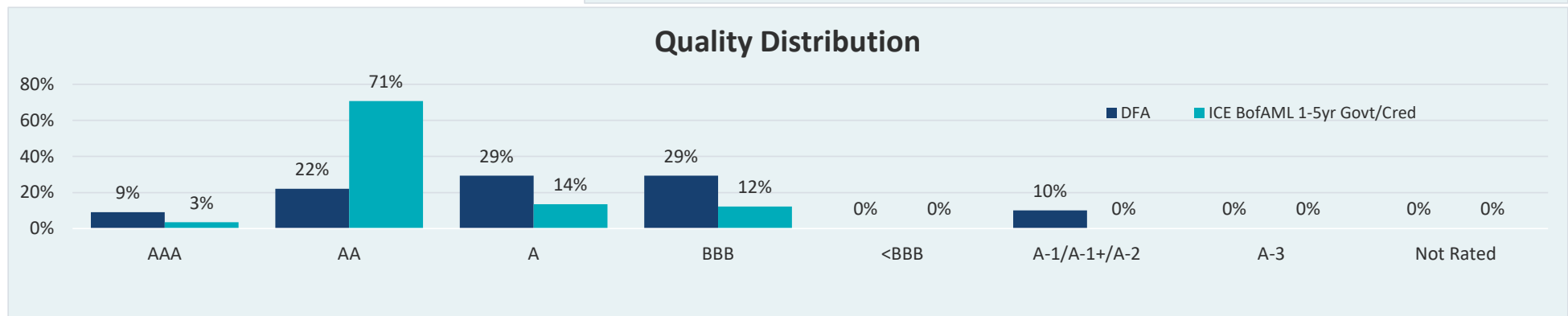
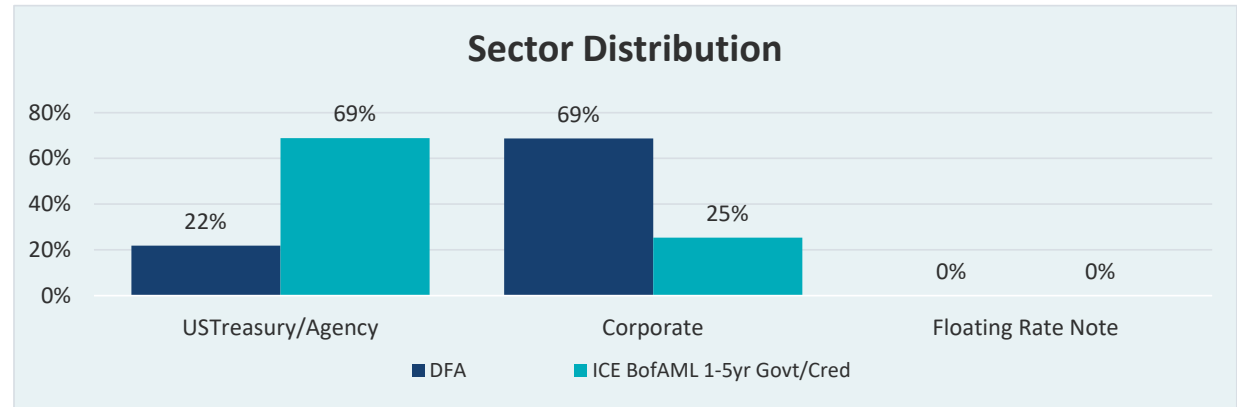


# DFA Short Credit Manager Portfolio Overview

## Contra Costa County Employees' Retirement Association Period Ending: December 31, 2024

Domestic short term US credit fixed income portfolio that maximizes total return through income and capital appreciation. Primary personnel include Dave Plecha and Joseph Kolerich.

|                    | DFA   | ICE BofAML 1-5yr Govt/Cred |
|--------------------|-------|----------------------------|
| Effective Duration | 0.30  | 2.54                       |
| Yield to Maturity  | 5.16  | 4.51                       |
| Average Quality    | A+    | Aa2                        |
| Average Coupon     | 3.70% | 3.23%                      |



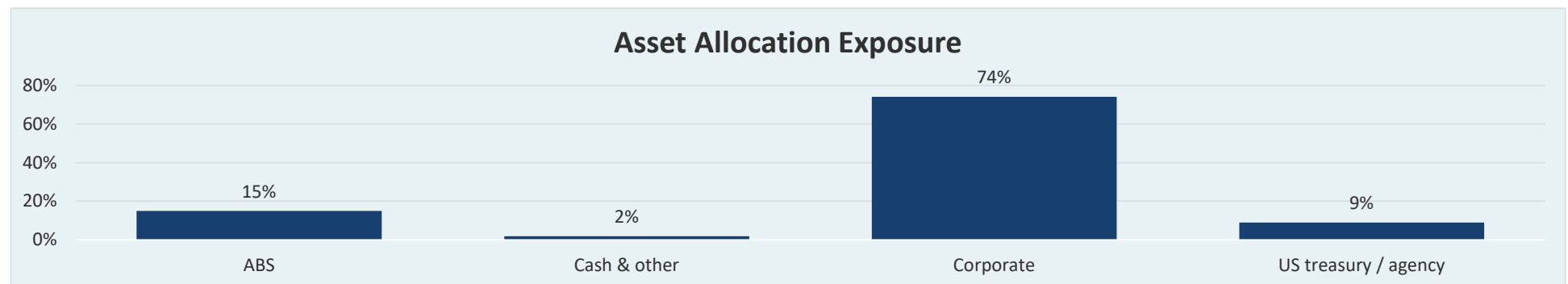
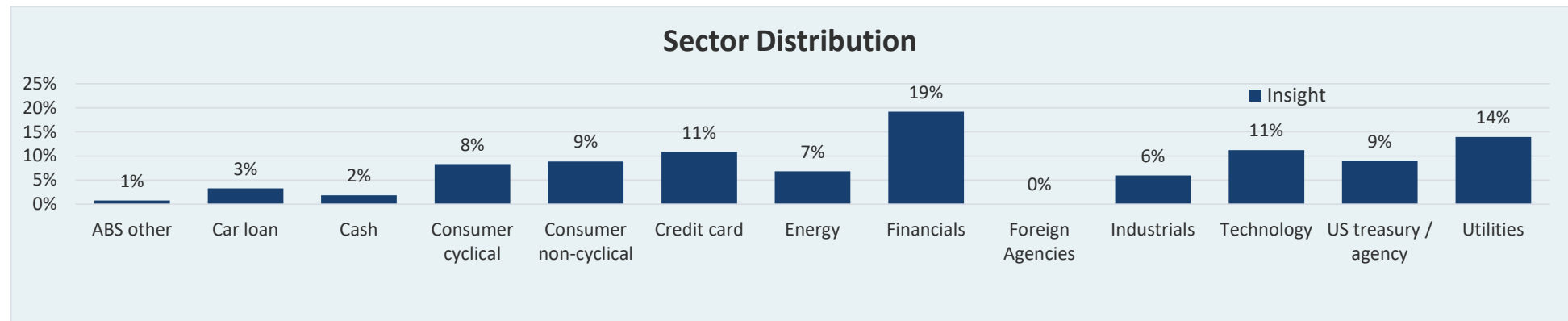
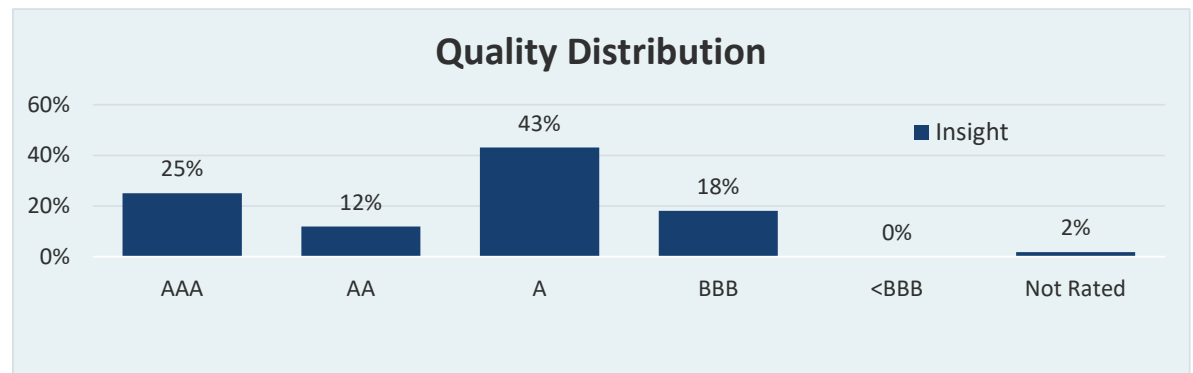


## Insight Short Duration Manager Portfolio Overview

## Contra Costa County Employees' Retirement Association Period Ending: December 31, 2024

High quality, short duration multi-sector fixed income portfolio comprised of Treasuries, Agencies, investment grade corporates, and ABS designed specifically to meet CCCERA's liabilities. Key personnel include Gerard Berrigan and Jesse Fogarty.

|                    | Insight | Bloomberg 1-3yr Govt |
|--------------------|---------|----------------------|
| Effective Duration | 1.25    | 1.90                 |
| Yield to Maturity  | 4.78    | N/A                  |
| Average Quality    | A+      | AGY/AGY              |
| Average Coupon     | 3.70%   | 2.90%                |



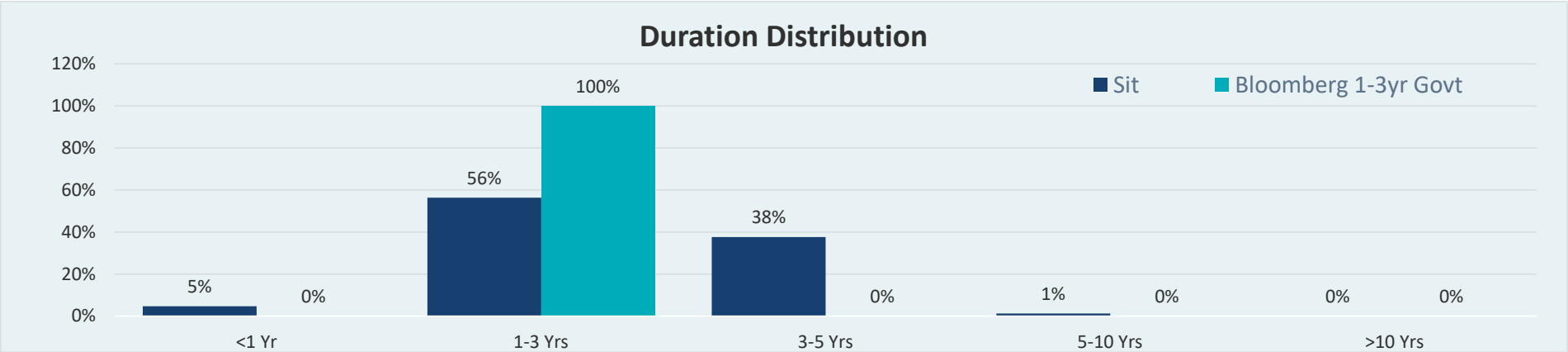
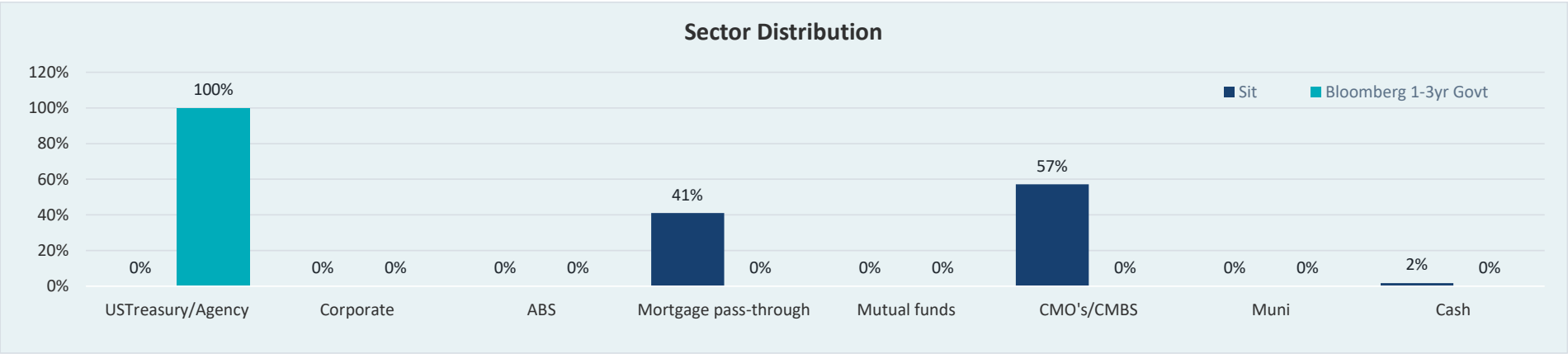


# Sit Short Duration Manager Portfolio Overview

# Contra Costa County Employees' Retirement Association Period Ending: December 31, 2024

Short duration fixed income portfolio with a focus on earning high levels of interest income. Primary personnel include Bryce Doty, Paul Jungquist and Michael Brilley.

|                   | Sit     | Bloomberg<br>1-3yr Govt |
|-------------------|---------|-------------------------|
| Modified Duration | 2.70    | 1.90                    |
| Yield to Maturity | 5.80    | N/A                     |
| Average Quality   | AGY/AGY | AGY/AGY                 |
| Average Coupon    | 5.90%   | 2.90%                   |





#### Performance Return Calculations

Performance is calculated using Modified Dietz and for time periods with large cash flow (generally greater than 10% of portfolio value), Time Weighted Rates of Return (TWRR) methodologies. Monthly returns are geometrically linked and annualized for periods longer than one year.

#### Data Source

Verus is an independent third party consulting firm and calculates returns from best source book of record data. Returns calculated by Verus may deviate from those shown by the manager in part, but not limited to, differences in prices and market values reported by the custodian and manager, as well as significant cash flows into or out of an account. It is the responsibility of the manager and custodian to provide insight into the pricing methodologies and any difference in valuation.

#### Illiquid Alternatives

Due to the inability to receive final valuation prior to report production, closed end funds (including but are not limited to Real Estate, Hedge Funds, Private Equity, and Private Credit) performance is typically reported at a one-quarter lag. Valuation is reported at a one-quarter lag, adjusted for current quarter flow (cash flows are captured real time). Closed end fund performance is calculated using a time-weighted return methodology consistent with all portfolio and total fund performance calculations. For Private Markets, performance reports also include Verus-calculated multiples based on flows and valuations (e.g. DPI and TVPI) and manager-provided IRRs.

#### Policy & Custom Index Composition

|                                      |  |
|--------------------------------------|--|
| Policy Index (1/1/2024 - present)    | The Policy Index now matches the Implementation Benchmark stated below.  |
| Policy Index (8/1/2023 - 1/1/2024)   | 16% Russell 3000, 12% MSCI ACWI ex-US (Gross), 10% MSCI ACWI (Net), 2% Wilshire REIT, 8% Private Real Estate composite returns, 2% FTSE 3-month T-bill +5%, 13% Private Equity composite returns, 10% Private Credit composite returns, 2% ICE BofAML High Yield Master II, 17% Bloomberg 1-3 Yr Gov/Credit, 2.5% Bloomberg US Aggregate, 3% 60% MSCI ACWI Net/40% Bloomberg Global Aggregate, 2.5% Bloomberg US Aggregate TR +1%.   |
| Policy Index (7/1/2022 - present)    | 16% Russell 3000, 15% MSCI ACWI ex-US (Gross), 9% MSCI ACWI (Net), 2% Wilshire REIT, 8% Private Real Estate composite returns, 2.5% FTSE 3-month T-bill +5%, 13% Private Equity composite returns, 8% Private Credit composite returns, 1.5% ICE BofAML High Yield Master II, 17% Bloomberg 1-3 Yr Gov/Credit, 2.5% Bloomberg US Aggregate, 3% 60% MSCI ACWI Net/40% Bloomberg Global Aggregate, 2.5% Bloomberg US Aggregate TR +1%. |
| Policy Index (7/1/2021 - 6/30/2022)  | 16% Russell 3000, 16% MSCI ACWI ex-US (Gross), 9% MSCI ACWI (Net), 2% Wilshire REIT, 8% Private Real Estate composite returns, 3% CPI + 4%, 11% Private Equity composite returns, 8% Private Credit composite returns, 2% ICE BofAML High Yield Master II, 18% Bloomberg 1-3 Yr Gov/Credit, 2.5% Bloomberg US Aggregate, 3% 60% MSCI ACWI Net/40% Bloomberg Global Aggregate, 1.5% HFRI EH Equity Market Neutral.                    |
| Policy Index (1/1/2021 - 6/30/2021)  | 9% Russell 3000, 18% MSCI ACWI ex-US (Gross), 11% MSCI ACWI (Net), 1% Wilshire REIT, 8% Private Real Estate composite returns, 1.5% CPI + 4%, 11% Private Equity composite returns, 7% Private Credit composite returns, 1.5% ICE BofAML High Yield Master II, 25% Bloomberg 1-3 Yr Gov/Credit, 3% Bloomberg US Aggregate, 2% Bloomberg Global Aggregate, 2% HFRI EH Equity Market Neutral.  |
| Policy Index (7/1/2020 - 12/31/2020) | 9% Russell 3000, 18% MSCI ACWI ex-US (Gross), 11% MSCI ACWI (Net), 1% Wilshire REIT, 1.6% NCREIF Property Index, 6.4% NCREIF ODCE Index, 1.5% CPI + 4%, 11% S&P 500 +4% (Lagged), 7% ICE BofAML High Yield Master II +2%, 1.5% ICE BofAML High Yield Master II, 25% Bloomberg 1-3 Yr Gov/Credit, 3% Bloomberg US Aggregate, 2% Bloomberg Global Aggregate, 2% HFRI EH Equity Market Neutral.   |
| Policy Index (7/1/2019 - 6/30/2020)  | 10% Russell 3000, 18% MSCI ACWI ex-US (Gross), 11% MSCI ACWI (Net), 1% Wilshire REIT, 1.6% NCREIF Property Index, 6.4% NCREIF ODCE Index, 2% CPI + 4%, 11% S&P 500 +4% (Lagged), 5% ICE BofAML High Yield Master II +2%, 2% ICE BofAML High Yield Master II, 24% Bloomberg 1-3 Yr Gov/Credit, 3.5% Bloomberg US Aggregate, 2% Bloomberg Global Aggregate, 2.5% HFRI EH Equity Market Neutral.  |
| Policy Index (7/1/2018 - 6/30/2019)  | 11% Russell 3000, 19% MSCI ACWI ex-US (Gross), 11% MSCI ACWI (Net), 1% Wilshire REIT, 1.8% NCREIF Property Index, 7.2% NCREIF ODCE Index, 2% CPI + 4%, 10% S&P 500 +4% (Lagged), 4% ICE BofAML High Yield Master II +2%, 2% ICE BofAML High Yield Master II, 23% Bloomberg 1-3 Yr Gov/Credit, 3.5% Bloomberg US Aggregate, 2% Bloomberg Global Aggregate, 2.5% HFRI EH Equity Market Neutral.  |
| Policy Index (10/1/2017 - 6/30/2018) | 16.3% Russell 3000, 18.8% MSCI ACWI ex-US (Gross), 8.6% MSCI ACWI (Net), 1% Wilshire REIT, 1.6% NCREIF Property Index, 6.4% NCREIF ODCE Index, 2.5% CPI + 4%, 10.1% S&P 500 +4% (Lagged), 1.9% ICE BofAML High Yield Master II +2%, 4.3% ICE BofAML High Yield Master II, 25% Bloomberg 1-3 Yr Gov/Credit, 3.5% Bloomberg US Aggregate.  |
| Policy Index (1/1/2017 - 9/30/2017)  | 22.9% Russell 3000, 11% MSCI ACWI ex-US (Gross), 10.9% MSCI ACWI (Net), 1% Wilshire REIT, 1.7% NCREIF Property Index, 6.8% NCREIF ODCE Index, 3.6% CPI + 4%, 8.1% S&P 500 +4% (Lagged), 1.7% ICE BofAML High Yield Master II +2%, 5.1% ICE BofAML High Yield Master II, 22.4% Bloomberg 1-3 Yr Gov/Credit, 3.2% Bloomberg US Aggregate, 1.6% 91-Day T-Bills.   |
| Policy Index (4/1/2012-12/31/2016)   | 27.7% Russell 3000, 10.6% MSCI ACWI ex-US (Gross), 12.3% MSCI ACWI (Net), 19.6% Bloomberg U.S. Aggregate, 5% ICE BofAML High Yield Master II, 4% Bloomberg Global Aggregate, 13.5% Real Estate Benchmark, 6.8% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills.  |



# Data Sources and Methodology

Period Ending: December 31, 2024

## Policy & Custom Index Composition (continued)

|   |   |
|---|---|
| Policy Index (4/1/2011-3/31/2012)                     | 31% Russell 3000, 10.4% MSCI EAFE (Gross), 9.6% MSCI ACWI (Net), 25% Bloomberg U.S. Aggregate, 3% ICE BofAML High Yield Master II, 4% Bloomberg Global Aggregate, 8.4% DJ Wilshire REIT, 3.1% NCREIF, 5% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills.   |
| Policy Index (4/1/2010-3/31/2011)                     | 35.6% Russell 3000, 10.4% MSCI EAFE (Gross), 5% MSCI ACWI (Net), 25% Bloomberg U.S. Aggregate, 3% ICE BofAML High Yield Master II, 4% Bloomberg Global Aggregate, 8.4% DJ Wilshire REIT, 3.1% NCREIF, 5% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills.   |
| Policy Index (7/1/2009-3/31/2010)                     | 40.6% Russell 3000, 10.4% MSCI EAFE (Gross), 25% Bloomberg U.S. Aggregate, 3% ICE BofAML High Yield Master II, 4% Bloomberg Global Aggregate, 8.4% DJ Wilshire REIT, 3.1% NCREIF, 5% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills.   |
| Custom Growth Benchmark (7/1/2021 - present)          | 21.33% Russell 3000, 21.33% MSCI ACWI ex-US (Gross), 12% MSCI ACWI (Net), 2.67% Wilshire REIT, 10.67% Private Real Estate composite returns, 14.67% Private Equity composite returns, 10.67% Private Credit composite returns, 2.67% ICE BofAML High Yield Master II, 4% 60% MSCI ACWI Net/40% Bloomberg Global Aggregate |
| Custom Growth Benchmark (1/1/2021 - 6/30/2021)        | 13.14% Russell 3000, 26.28% MSCI ACWI ex-US (Gross), 16.06% MSCI ACWI (Net), 1.46% Wilshire REIT, 11.68 Private Real Estate composite returns, 16.06% Private Equity composite returns, 10.22% Private Credit composite returns, 2.19% ICE BofAML High Yield Master II, 2.92% Bloomberg Global Bond                       |
| Custom Growth Benchmark (7/1/2020 - 12/31/2020)       | 13.14% Russell 3000, 26.28% MSCI ACWI ex-US (Gross), 16.06% MSCI ACWI (Net), 1.46% Wilshire REIT, 2.34% NCREIF Property Index, 9.33% NCREIF ODCE Index, 16.06% S&P 500 +4% (Lagged), 10.22% ICE BofAML High Yield Master II +2%, 2.19% ICE BofAML High Yield Master II, 2.92% Bloomberg Global Bond                       |
| Custom Growth Benchmark (7/1/2019 - 6/30/20)          | 14.7% Russell 3000, 26.4% MSCI ACWI ex-US (Gross), 16.2% MSCI ACWI (Net), 1.5% Wilshire REIT, 2.4% NCREIF Property Index, 9.4% NCREIF ODCE Index, 16.2% S&P 500 +4% (Lagged), 7.4% ICE BofAML High Yield Master II +2%, 2.9% ICE BofAML High Yield Master II, 2.9% Bloomberg Global Bond                                  |
| Custom Growth Benchmark (7/1/2018 - 6/30/2019)        | 16.0% Russell 3000, 27.5% MSCI ACWI ex-US (Gross), 15.9% MSCI ACWI (Net), 1.5% Wilshire REIT, 2.6% NCREIF Property Index, 10.4% NCREIF ODCE Index, 14.5% S&P 500 +4% (Lagged), 5.8% ICE BofAML High Yield Master II +2%, 2.9% ICE BofAML High Yield Master II, 2.9% Bloomberg Global Bond                                 |
| Custom Growth Benchmark (9/30/2017- 6/30/2018)        | 23.6% Russell 3000, 27.2% MSCI ACWI ex-US (Gross), 12.5% MSCI ACWI (Net), 1.5% Wilshire REIT, 2.3% NCREIF Property Index, 9.3% NCREIF ODCE Index, 14.6% S&P 500 +4% (Lagged), 2.8% ICE BofAML High Yield Master II +2%, 6.2% ICE BofAML High Yield Master II  |
| Custom Growth Benchmark (1/1/2017-9/30/2017)          | 32.6% Russell 3000, 15.7% MSCI ACWI ex-US (Gross), 15.5% MSCI ACWI (Net), 1.4% Wilshire REIT, 2.4% NCREIF Property Index, 9.6% NCREIF ODCE Index, 1.6% CPI +4%, 11.5% S&P 500 +4% (Lagged), 2.4% ICE BofAML High Yield Master II +2%, 7.3% ICE BofAML High Yield Master II  |
| Custom Growth Benchmark (Prior to 1/1/2017)           | Weighted-average of the benchmarks of the sub-composites that make up the composite.  |
| Custom Diversifying Benchmark (7/1/2021-present)      | 35.71% Bloomberg US Aggregate, 21.43% FTSE 3-Month T-bill +4%, 21.43 FTSE 3-Month T-bill +5%, 21.43% Bloomberg Barclays US Aggregate +1%  |
| Custom Diversifying Benchmark (8/1/2020 - 6/30/2021)  | 46.15% Bloomberg US Aggregate, 30.77 FTSE 3-Month T-bill +4%, 23.08 FTSE 3-Month T-bill +5%.  |
| Custom Diversifying Benchmark (7/1/2018 - 7/31/2020)  | 43.75% Bloomberg US Aggregate, 25% CPI + 4%, 31.25% HFRI EH Equity Market Neutral.  |
| Custom Diversifying Benchmark (10/1/2017 - 6/30/2018) | 58.33% Bloomberg US Aggregate, 41.67% CPI + 4%.   |
| Custom Diversifying Benchmark (1/1/2017 - 9/30/2017)  | 56.1% Bloomberg US Aggregate, 43.9% CPI + 4%.   |
| Custom Diversifying Benchmark (Prior to 1/1/2017)     | Weighted-average of the benchmarks of the sub-composites that make up the composite.  |
| Custom Diversifying Multi-Asset Benchmark (current)   | 50% FTSE 3-Month T-bill +5%, 50% Bloomberg Barclays US Aggregate +1%  |
| Real Estate Benchmark (current)                       | 20% Wilshire REIT, 80% Private Real Estate composite returns.   |
| Real Estate Benchmark (4/1/2012-11/30/2016)           | 40% Wilshire REIT, 50% NCREIF Property Index, 10% FTSE/EPRA NAREIT Developed ex-US.   |



# Contra Costa County Employees' Retirement Association

## Data Sources and Methodology

Period Ending: December 31, 2024

| IMPLEMENTATION BENCHMARK WEIGHTS BY INVESTMENT ALLOCATION RESOLUTION (7/1/18 TO CURRENT) |  |                         |                        |                     |                        |                        |                        |                        |                       |
|--|--|-------------------------|------------------------|---------------------|------------------------|------------------------|------------------------|------------------------|-----------------------|
| Manager  | Benchmark  | 10/1/1017-<br>6/30-2018 | 7/1/2018-<br>6/30/2019 | 7/1/19-<br>6/30/202 | 7/1/2020-<br>6/30/2021 | 7/1/2021-<br>6/30/2022 | 7/1/2022-<br>7/31/2023 | 8/1/2023-<br>9/30/2024 | 10/1/2024-<br>Present |
| BlackRock Index Fund   | Russell 1000   | 1.00%                   | 1.00%                  | 2.00%               | 2.00%                  | 5.00%                  | 9.00%                  | 10.00%                 | 10.00%                |
| Boston Partners  | Russell 1000 Value                                       | 4.50%                   | 3.00%                  | 2.50%               | 2.00%                  | 4.00%                  | 4.00%                  | 3.00%                  | 3.00%                 |
| Jackson Square   | Russell 100 Growth                                       | 4.50%                   | 3.00%                  | 2.50%               | 2.00%                  | 4.00%                  | 0.00%                  | 0.00%                  | 0.00%                 |
| Emerald  | Russell 2000 Growth                                      | 3.30%                   | 2.00%                  | 1.50%               | 1.50%                  | 1.50%                  | 1.50%                  | 1.50%                  | 1.50%                 |
| Ceredex  | Russell 2000 Value                                       | 3.30%                   | 2.00%                  | 1.50%               | 1.50%                  | 1.50%                  | 1.50%                  | 1.50%                  | 1.50%                 |
| Pyrford  | MSCI ACWI ex-US Value                                    | 5.40%                   | 5.50%                  | 5.00%               | 5.00%                  | 4.00%                  | 4.00%                  | 4.00%                  | 3.50%                 |
| William Blair  | MSCI ACWI ex-US Growth                                   | 5.40%                   | 5.50%                  | 5.00%               | 5.00%                  | 4.00%                  | 4.00%                  | 4.00%                  | 3.50%                 |
| Artisan  | MSCI ACWI Growth   | 4.30%                   | 4.00%                  | 4.00%               | 4.00%                  | 4.50%                  | 4.50%                  | 5.00%                  | 5.50%                 |
| First Eagle  | MSCI ACWI Value  | 4.30%                   | 4.00%                  | 4.00%               | 4.00%                  | 4.50%                  | 4.50%                  | 5.00%                  | 5.50%                 |
| IT Emerging Markets  | MSCI Emerging Markets                                    | 4.20%                   | 4.00%                  | 4.00%               | 4.00%                  | 4.00%                  | 3.50%                  | 2.00%                  | 2.00%                 |
| PIMCO RAE Emerging Markets   | MSCI Emerging Markets Value                              | 4.20%                   | 4.00%                  | 4.00%               | 4.00%                  | 4.00%                  | 3.50%                  | 2.00%                  | 2.00%                 |
| Torchlight   | Private Equity Composite                                 | 1.90%                   | 0.00%                  | 0.00%               | 0.00%                  | 0.00%                  | 0.00%                  | 0.00%                  | 0.00%                 |
| Opportunistic  | Private Equity Composite                                 | 0.50%                   | 0.00%                  | 0.00%               | 0.00%                  | 0.00%                  | 0.00%                  | 0.00%                  | 0.00%                 |
| Private Equity   | Private Equity Composite                                 | 8.20%                   | 10.00%                 | 11.00%              | 11.00%                 | 11.00%                 | 13.00%                 | 13.00%                 | 10.00%                |
| Infrastructure   | Infrastructure Composite                                 | 0.00%                   | 0.00%                  | 0.00%               | 0.00%                  | 0.00%                  | 0.00%                  | 0.00%                  | 2.00%                 |
| Voya   | ICE BofA High Yield Master II                            | 5.00%                   | 2.00%                  | 2.00%               | 1.50%                  | 2.00%                  | 1.50%                  | 2.00%                  | 3.00%                 |
| Private Credit   | Private Credit Composite                                 | 0.00%                   | 4.00%                  | 5.00%               | 7.00%                  | 8.00%                  | 8.00%                  | 10.00%                 | 10.00%                |
| Adelante REIT  | Wilshire REIT  | 1.00%                   | 1.00%                  | 1.00%               | 1.00%                  | 2.00%                  | 1.00%                  | 1.00%                  | 1.00%                 |
| INVESCO REIT   | Wilshire REIT  | 0.00%                   | 0.00%                  | 0.00%               | 0.00%                  | 0.00%                  | 1.00%                  | 1.00%                  | 1.00%                 |
| Private RE (NPI)   | Private RE Composite                                     | 1.40%                   | 1.80%                  | 1.60%               | 1.60%                  | 0.00%                  | 0.00%                  | 0.00%                  | 0.00%                 |
| Private RE (ODCE)  | Private RE Composite                                     | 8.20%                   | 7.20%                  | 6.40%               | 6.40%                  | 0.00%                  | 0.00%                  | 0.00%                  | 0.00%                 |
| Private RE   | Private RE Composite                                     | 0.00%                   | 0.00%                  | 0.00%               | 0.00%                  | 8.00%                  | 8.00%                  | 8.00%                  | 5.00%                 |
| Risk Parity  | 60% MSCI ACWI (Net) / 40% Bloomberg<br>Globale Aggregate | 0.00%                   | 5.00%                  | 5.00%               | 5.00%                  | 3.00%                  | 3.00%                  | 3.00%                  | 0.00%                 |
| Insight  | Bloomberg 1-3 Yr Gov/Credit                              | 10.70%                  | 12.00%                 | 12.00%              | 13.00%                 | 7.00%                  | 6.50%                  | 6.50%                  | 6.50%                 |
| DFA  | ICE BofA 1-5 US Corp/Gov                                 | 5.30%                   | 5.50%                  | 6.00%               | 6.00%                  | 4.00%                  | 4.00%                  | 4.00%                  | 4.00%                 |
| Sit  | Bloomberg 1-3 Yr Gov                                     | 6.00%                   | 5.50%                  | 6.00%               | 6.00%                  | 7.00%                  | 6.50%                  | 6.50%                  | 6.50%                 |
| AFL-CIO HIT  | Bloomberg US Aggregate                                   | 3.50%                   | 3.50%                  | 3.50%               | 3.00%                  | 2.50%                  | 2.50%                  | 2.50%                  | 2.50%                 |
| Parametric Defensive Equity  | CPI + 4%   | 0.00%                   | 2.50%                  | 2.50%               | 0.00%                  | 1.50%                  | 0.00%                  | 0.00%                  | 0.00%                 |
| BH-DG Systematic   | SG CTA Index   | 0.00%                   | 0.00%                  | 0.00%               | 0.00%                  | 0.00%                  | 0.00%                  | 0.00%                  | 2.00%                 |
| Wellington Real TR   | Bloomberg Global Aggregate                               | 2.50%                   | 2.00%                  | 2.00%               | 0.00%                  | 0.00%                  | 0.00%                  | 0.00%                  | 0.00%                 |
| Acadian MAARS  | FTSE 3-month T-Bill +5%                                  | 0.00%                   | 0.00%                  | 0.00%               | 1.50%                  | 1.50%                  | 2.50%                  | 2.00%                  | 0.00%                 |
| SitAR  | Bloomberg US Aggregate + 1%                              | 0.00%                   | 0.00%                  | 0.00%               | 2.00%                  | 1.50%                  | 2.50%                  | 2.50%                  | 3.50%                 |
| Cash   | 3-month T-Bill   | 1.40%                   | 0.00%                  | 0.00%               | 0.00%                  | 0.00%                  | 0.00%                  | 0.00%                  | 5.00%                 |



# Data Sources and Methodology

Period Ending: December 31, 2024

| Manager Line Up                               |                |                 |                                    |                |                 |
|---|----------------|-----------------|------------------------------------|----------------|-----------------|
| Manager                                       | Inception Date | Data Source     | Manager                            | Inception Date | Data Source     |
| BlackRock Russell 1000 Index                  | 4/20/2017      | BlackRock       | Invesco Real Estate V              | 9/27/2022      | Invesco         |
| Boston Partners                               | 6/1/1995       | Northern Trust  | Oaktree REOF V                     | 12/31/2011     | Oaktree         |
| Emerald Advisors                              | 4/7/2003       | Northern Trust  | Oaktree REOF VI                    | 9/30/2013      | Oaktree         |
| Ceredex                                       | 11/6/2011      | Northern Trust  | Oaktree REOF VII                   | 4/1/2015       | Oaktree         |
| Pyrford                                       | 4/25/2014      | State Street    | PCCI IX                            | 4/28/222       | PCCP            |
| William Blair                                 | 10/29/2010     | William Blair   | Siguler Guff DREOF                 | 1/25/2012      | Siguler Guff    |
| PIMCO RAE Emerging Markets                    | 2/28/2017      | State Street    | Siguler Guff DREOF II              | 8/31/2013      | Siguler Guff    |
| TT Emerging Markets                           | 7/27/2017      | TT              | Siguler Guff DREOF II Co-Inv       | 1/27/2016      | Siguler Guff    |
| Artisan Partners                              | 10/1/2012      | SEI Trust       | Paulson Real Estate Fund II        | 11/10/2013     | Paulson         |
| First Eagle                                   | 1/18/2011      | Northern Trust  | AE Industrial Partners Fund II     | 4/8/2019       | StepStone Group |
| Voya  | 4/25/2000      | Northern Trust  | Adams Street Partners              | 3/18/1996      | StepStone Group |
| Adelante                                      | 9/30/2001      | Northern Trust  | Adams Street Partners II           | 1/16/2009      | StepStone Group |
| Panagora Risk Parity Multi Asset              | 3/15/2019      | Panagora        | Adams Street Partners Venture      | 4/28/2017      | StepStone Group |
| AFL-CIO                                       | 6/30/1991      | AFL-CIO         | Adams Street Partners - BFP        | 1/18/1996      | StepStone Group |
| Wellington Real Total Return (in Liquidation) | 2/26/2013      | Wellington      | Adams Street Partners - Fund 5     | 9/21/2012      | StepStone Group |
| BH-DG Systematic Trading Fund L.P., - I       | 4/19/2024      | BH-DG           | Aether Real Assets IV              | 3/16/2016      | StepStone Group |
| Sit LLCAR                                     | 4/15/2021      | Northern Trust  | Aether Real Assets III             | 11/27/2013     | StepStone Group |
| Sit Short Duration                            | 1/12/2016      | Northern Trust  | Aether Real Assets III Surplus     | 11/30/2013     | StepStone Group |
| DFA Short Credit                              | 11/21/2016     | Northern Trust  | Bay Area Equity Fund               | 6/14/2004      | StepStone Group |
| Insight Short Duration                        | 11/18/2016     | Northern Trust  | Bay Area Equity Fund II            | 12/7/2009      | StepStone Group |
| Parametric Overlay                            | 3/29/2017      | Northern Trust  | Commonfund                         | 6/28/2013      | StepStone Group |
| Cash  | -              | Northern Trust  | EIF US Power Fund II               | 8/16/2005      | StepStone Group |
| Angelo Gordon Energy Credit Opp               | 9/24/2015      | StepStone Group | EIF US Power Fund III              | 5/30/2007      | StepStone Group |
| StepStone CC Opportunities Fund               | 2/1/2018       | StepStone Group | EIF US Power Fund IV               | 11/28/2011     | StepStone Group |
| Torchlight II                                 | 9/30/2006      | StepStone Group | EIF US Power Fund V                | 11/28/2016     | StepStone Group |
| Torchlight IV                                 | 7/1/2012       | StepStone Group | Genstar Capital Partners IX, L.P.  | 2/21/2019      | StepStone Group |
| Torchlight V                                  | 7/1/2012       | StepStone Group | Oaktree PIF 2009                   | 2/28/2010      | StepStone Group |
| Angelo Gordon Realty Fund VIII                | 1/23/2012      | Angelo Gordon   | Paladin III                        | 11/30/2007     | StepStone Group |
| Angelo Gordon Realty Fund IX                  | 12/8/2014      | Angelo Gordon   | Ocean Avenue Fund II               | 6/11/2014      | StepStone Group |
| Blackstone Real Estate Partners VIII          | 3/24/2023      | Blackstone      | Ocean Avenue Fund III              | 4/15/2016      | StepStone Group |
| DLJ RECP III                                  | 6/23/2005      | DLJ             | Pathway 6                          | 5/24/2011      | StepStone Group |
| DLJ RECP IV                                   | 2/11/2008      | DLJ             | Pathway 7                          | 2/7/2013       | StepStone Group |
| DLJ RECP V                                    | 7/1/2014       | DLJ             | Pathway 8                          | 11/23/2015     | StepStone Group |
| DLJ RECP VI                                   | 3/19/2019      | DLJ             | Pathway                            | 11/9/1998      | StepStone Group |
| LaSalle Income & Growth VI                    | 7/16/2013      | LaSalle         | Pathway 2008                       | 12/26/2008     | StepStone Group |
| LaSalle Income & Growth VII                   | 2/28/2017      | LaSalle         | Siguler Guff CCCERA Opps           | 6/3/2014       | StepStone Group |
| Hearthstone II                                | 6/17/1998      | Hearthstone     | Siguler Guff Secondary Opps        | 11/30/2016     | StepStone Group |
| Long Wharf Fund IV                            | 7/3/2013       | Long Wharf      | Siris Partners IV                  | 3/15/2019      | StepStone Group |
| Long Wharf Fund V                             | 9/30/2016      | Long Wharf      | TPG Healthcare Partners, L.P.      | 6/28/2019      | StepStone Group |
| Long Wharf Fund VI                            | 2/5/2020       | Long Wharf      | Trident VIII, L.P.                 | 5/24/2019      | StepStone Group |
| Long Wharf Fund VII                           | 5/30/2023      | Long Wharf      | Wastewater Opp. Fund               | 12/8/2015      | StepStone Group |
| Invesco Real Estate IV                        | 6/30/2014      | Invesco         | Cross Lake RE IV                   | 12/14/2023     | Cross Lake      |
| Invesco Real Estate V                         | 2/20/2019      | Invesco         | KSL Capital Partners VI, L.P.      | 11/10/2023     | KSL             |
| Stockbridge Value Fund I                      | 6/26/2024      | Stockbridge     | EQT Infrastructure VI              | 12/31/2023     | StepStone Group |
| Jadian Real Estate Fund II GP, LLC            | 9/27/2024      | Citco           | Altaris Health Partners VI, L.P.   | 6/30/2024      | StepStone Group |
| Blackfin Financial Services Fund IV           | 9/30/2024      | StepStone Group | Arbor Investments VI, L.P          | 6/30/2024      | StepStone Group |
| EPIC Fund II, SLP                             | 9/30/2024      | StepStone Group | Altor ACT I                        | 9/30/2024      | StepStone Group |
|   |                |                 | Ares US Real Estate Opp. Fund IVV= | 9/30/2024      | StepStone Group |

## Other Disclosures

All data prior to 12/31/2014 was provided by previous consultant.  
As of 7/1/2018 all Private Equity and Private Credit data is provided by StepStone Group.



# Glossary

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**Allocation Effect:** An attribution effect that describes the amount attributable to the managers' asset allocation decisions, relative to the benchmark.

**Alpha:** The excess return of a portfolio after adjusting for market risk. This excess return is attributable to the selection skill of the portfolio manager. Alpha is calculated as:  $\text{Portfolio Return} - [\text{Risk free Rate} + \text{Portfolio Beta} \times (\text{Market Return} - \text{Risk free Rate})]$ .

**Benchmark R squared:** Measures how well the Benchmark return series fits the manager's return series. The higher the Benchmark R squared, the more appropriate the benchmark is for the manager.

**Beta:** A measure of systematic, or market risk; the part of risk in a portfolio or security that is attributable to general market movements. Beta is calculated by dividing the covariance of a security by the variance of the market.

**Book to Market:** The ratio of book value per share to market price per share. Growth managers typically have low book to market ratios while value managers typically have high book to market ratios.

**Capture Ratio:** A statistical measure of an investment manager's overall performance in up or down markets. The capture ratio is used to evaluate how well an investment manager performed relative to an index during periods when that index has risen (up market) or fallen (down market). The capture ratio is calculated by dividing the manager's returns by the returns of the index during the up/down market, and multiplying that factor by 100.

**Correlation:** A measure of the relative movement of returns of one security or asset class relative to another over time. A correlation of 1 means the returns of two securities move in lock step, a correlation of -1 means the returns of two securities move in the exact opposite direction over time. Correlation is used as a measure to help maximize the benefits of diversification when constructing an investment portfolio.

**Excess Return:** A measure of the difference in appreciation or depreciation in the price of an investment compared to its benchmark, over a given time period. This is usually expressed as a percentage and may be annualized over a number of years or represent a single period.

**Information Ratio:** A measure of a manager's ability to earn excess return without incurring additional risk. Information ratio is calculated as: excess return divided by tracking error.

**Interaction Effect:** An attribution effect that describes the portion of active management that is contributable to the cross interaction between the allocation and selection effect. This can also be explained as an effect that cannot be easily traced to a source.

**Portfolio Turnover:** The percentage of a portfolio that is sold and replaced (turned over) during a given time period. Low portfolio turnover is indicative of a buy and hold strategy while high portfolio turnover implies a more active form of management.

**Price to Earnings Ratio (P/E):** Also called the earnings multiplier, it is calculated by dividing the price of a company's stock into earnings per share. Growth managers typically hold stocks with high price to earnings ratios whereas value managers hold stocks with low price to earnings ratios.

**R Squared:** Also called the coefficient of determination, it measures the amount of variation in one variable explained by variations in another, i.e., the goodness of fit to a benchmark. In the case of investments, the term is used to explain the amount of variation in a security or portfolio explained by movements in the market or the portfolio's benchmark.

**Selection Effect:** An attribution effect that describes the amount attributable to the managers' stock selection decisions, relative to the benchmark.

**Sharpe Ratio:** A measure of portfolio efficiency. The Sharpe Ratio indicates excess portfolio return for each unit of risk associated with achieving the excess return. The higher the Sharpe Ratio, the more efficient the portfolio. Sharpe ratio is calculated as:  $\text{Portfolio Excess Return} / \text{Portfolio Standard Deviation}$ .

**Sortino Ratio:** Measures the risk adjusted return of an investment, portfolio, or strategy. It is a modification of the Sharpe Ratio, but penalizes only those returns falling below a specified benchmark. The Sortino Ratio uses downside deviation in the denominator rather than standard deviation, like the Sharpe Ratio.

**Standard Deviation:** A measure of volatility, or risk, inherent in a security or portfolio. The standard deviation of a series is a measure of the extent to which observations in the series differ from the arithmetic mean of the series. For example, if a security has an average annual rate of return of 10% and a standard deviation of 5%, then two thirds of the time, one would expect to receive an annual rate of return between 5% and 15%.

**Style Analysis:** A return based analysis designed to identify combinations of passive investments to closely replicate the performance of funds

**Style Map:** A specialized form or scatter plot chart typically used to show where a Manager lies in relation to a set of style indices on a two dimensional plane. This is simply a way of viewing the asset loadings in a different context. The coordinates are calculated by rescaling the asset loadings to range from -1 to 1 on each axis and are dependent on the Style Indices comprising the Map.



## Disclosure

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## **Memorandum**

Date: February 26, 2025

To: CCCERA Board of Retirement Trustees

From: Timothy Price, Chief Investment Officer

Subject: Investment Staff Report – Q4 2024

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### **Overview**

On a quarterly basis CCCERA's Board receives a report which details critical elements of CCCERA's Functionally Focused Portfolio's sub-portfolios. The purpose of the report is to highlight elements of the sub-portfolios which are good indicators to the Board of the program's efficient and effective operation.

### **Summary**

CCCERA's Total Fund is largely performing as expected, exhibiting returns above expectations for the amount of risk taken over the long term. This is measured by the Sharpe Ratio (risk-adjusted return), and a comparison to the Simple Target Index. The Simple Target Index is the most basic index which could replicate CCCERA's Total Fund, and is made up of 73% MSCI ACWI, 17% Bloomberg 1-3 Year Gov/Credit, and 10% 3-Month Treasury Bills (please see the Total Fund pages in the appendix for additional details). CCCERA's portfolio is much more complex, especially as it relates to allocations to private equity, private credit, and real estate. Over shorter periods, there are aspects of the implementation that have fallen short of expectations, which are discussed in the Growth and Risk Diversifying sub-portfolio reviews.

CCCERA has experienced lower risk and return levels than the Simple Target Index over trailing periods. This has led to underperformance vs the STI over more recent periods, but has exceeded the STI on a risk-adjusted basis over the past ten years. Details on performance relative to this index are included in the appendix. It is worth noting that CCCERA's Total Fund return is an aggregate of the performance of the Liquidity, Growth, and Risk Diversifying sub-portfolios.

The Board has recently adopted a new long-term asset allocation that will result in several changes to the fund over the upcoming year, including eliminating risk parity and high yield while adding multi-asset credit and real estate debt. Implementation of the new targets began in the third quarter of 2024 and will continue throughout 2025.



### **1) Liquidity**

The purpose of the liquidity program is to match three years of benefit payments with high credit quality, low duration assets. The liquidity sub-portfolio is made up of three fixed income managers, all of whom pursue a high quality, low duration investment approach. In the fourth quarter of 2024, all managers held high quality (as measured by credit ratings), low duration portfolios. The average credit quality for the entire liquidity program is AA (AAA is the highest rating), and the duration is 1.6 years, which is considered short. Importantly, the current yield of the Liquidity Sub-portfolio is above 5%.

### **2) Growth**

The Growth portfolio is designed to take advantage of capital appreciation and income opportunities globally. To achieve this, the Growth portfolio includes a variety of assets, from stocks and growth-oriented bonds to private equity, real estate, and private credit.

For the trailing five-year period December 31, 2024, the Growth portfolio returned 7.3% relative to the index return of 10.1%, for a relative underperformance of -2.7%. Over this period, the Growth program produced a superior Sharpe Ratio of 0.42, relative to the index's 0.39. During the fourth quarter of 2024, CCCERA's Growth sub-portfolio returned -0.9% relative to MSCI ACWI Index return of -1.0%. We expect underperformance relative to the public equity markets during sharp rallies such as we experienced during much of the past five year period.

The past five years have been exceptionally strong for public equities, both on the basis of earnings growth and mostly benign monetary policy. This growth has been concentrated in the US tech sector and even more so in the "Magnificent 7" mega cap stocks. Given this environment, underperformance of a diversified portfolio should be expected.

### **3) Risk Diversifying**

The Risk Diversifying mandate holds assets that are expected to diversify the growth portfolio's volatility while offering moderate growth. The mandate as a whole seeks to be highly liquid, have a low beta to the growth market, and produce positive real returns. In the fourth quarter, the Risk Diversifying mandate fulfilled two of these goals. The entire mandate can be liquidated within 90 days, meeting the requirement of high liquidity. The 5-year correlation of the mandate to growth markets is 0.7. The trailing real (net of inflation) return over the past five years is -5.0%, decreasing slightly in the last quarter from -4.4% and remaining below expectations.

CCCERA's Total Fund in aggregate is performing in line with expectations over the past ten years, having a similar or higher risk-adjusted return but a lower level of volatility compared to the Simple Target Index. Enclosed are additional details on CCCERA's Total Fund, sub-portfolios, and individual investment strategies.



### **CCCERA Portfolio Report Card**

Below we have itemized those elements of each of CCCERA's sub-portfolios and Total Fund which we believe the Board should pay particular attention to. Additional details on each of the sub-portfolios are available in the appendix. All CCCERA performance is stated on a net of fees basis.

#### **Liquidity**

| Objective           | Measurement                         | Current Period Data | Status               |
|---------------------|-------------------------------------|---------------------|----------------------|
| High Quality        | Credit Quality                      | AA                  | Meeting Expectations |
| Low Risk            | Duration                            | 1.6 years           | Meeting Expectations |
| Appropriately Sized | Months of Benefit Payments Invested | 31 Months           | Meeting Expectations |

#### **Growth**

| Objective                    | Measurement                | Current Period Data                                   | Status               |
|------------------------------|----------------------------|---|----------------------|
| Growth of Plan Assets        | Absolute Returns           | Trailing 5 yr return: 7.3%                            | Meeting Expectations |
|                              | Benchmark Relative Returns | -2.7% relative to ACWI over trailing 5 years          | Below Expectations   |
| Efficient Capital Deployment | Sharpe Ratio               | CCCERA: 0.42<br>MSCI ACWI: 0.39 over trailing 5 years | Meeting Expectations |

#### **Risk Diversifying**

| Objective                             | Measurement  | Current Period Data                                   | Status               |
|---------------------------------------|--|---|----------------------|
| Offset Volatility in Growth Portfolio | Correlation  | 0.7 over trailing 5 years                             | Below Expectations   |
| Positive Real Returns                 | Returns  | 5 yr real return: -5.0%<br>5 yr nominal return: -0.9% | Below Expectations   |
| High Liquidity                        | % of Portfolio that can be liquidated within 90 days | 100%  | Meeting Expectations |

#### **Total Fund**

| Objective                              | Component/Measurement           | Status               |
|--|---------------------------------|----------------------|
| Store 3 Years of Benefit Payments      | Liquidity Sub-portfolio         | Meeting Expectations |
| Participate in Growth Opportunities    | Growth Sub-portfolio            | Meeting Expectations |
| Provide an offset to Growth volatility | Risk Diversifying Sub-portfolio | Below Expectations   |
| Produce superior risk adjusted returns | Total Fund Sharpe Ratio         | Meeting Expectations |



## Appendix – Liquidity Sub-Portfolio

### Manager Reviews

#### Organizational Stability

|         | Portfolio Management Assessment | 1 Year Product Asset Growth | 1 Year Firm Asset Growth | Regulatory Action in Last Year? |
|---------|---------------------------------|-----------------------------|--------------------------|---------------------------------|
| Insight | Good                            | 11%                         | -5%                      | N                               |
| Sit     | Good                            | -7%                         | 5%                       | N                               |
| DFA     | Good                            | 19%                         | 15%                      | N                               |

#### Performance

|         | Portfolio Average Credit Quality | Portfolio Average Duration | Portfolio Average Yield | 1 Year Total Return |
|---------|----------------------------------|----------------------------|-------------------------|---------------------|
| Insight | A+                               | 1.3                        | 4.8                     | 5.3%                |
| Sit     | AAA                              | 2.7                        | 5.8                     | 4.3%                |
| DFA     | A+                               | 0.3                        | 5.2                     | 5.7%                |

### Manager Notes:

Fixed income yields have moderated on the growing consensus that the Federal Reserve is done raising rates for this cycle and has priced in a “higher for longer” baseline with 1-2 rate cuts in 2025. The shorter duration of CCCERA’s mandates have provided relative protection during the rate hikes, as has the buy and maintain bias of the portfolio.

### Manager Theses:

The Liquidity Portfolio is a combination of three managers which work together to match three years of CCCERA’s liabilities. The portfolio is refreshed every year during the annual funding plan.

Insight: Insight plays a completion role in the liquidity program, matching out liabilities with short duration government and corporate fixed income securities.

DFA: Dimensional Fund Advisors runs a strategy that focuses on obtaining fixed income exposures via the most liquid securities available. DFA contributes to the Liquidity Program by selling securities at regular intervals to pay a portion of CCCERA’s monthly benefit payment.

Sit: Sit invests in higher yielding government backed mortgages. The cash flow from these securities is harvested monthly to make up a portion of CCCERA’s monthly benefit payment.



## Appendix – Growth Sub-Portfolio

### Manager Reviews

#### Organizational Stability

|                      | Portfolio<br>Management<br>Assessment | 1 Year<br>Product<br>Asset Growth | 1 Year Firm<br>Asset<br>Growth | Regulatory<br>Action in Last<br>Year? |
|----------------------|---------------------------------------|-----------------------------------|--------------------------------|---------------------------------------|
| Boston Partners      | Good                                  | 18%                               | 11%                            | N                                     |
| BlackRock Index Fund | Good                                  | 11%                               | 15%                            | N                                     |
| Emerald Advisors     | Good                                  | -1%                               | 0%                             | N                                     |
| Ceredex              | Good                                  | 13%                               | -17%                           | N                                     |
| Pyrford              | Good                                  | 59%                               | -20%                           | N                                     |
| William Blair        | Good                                  | -5%                               | 7%                             | N                                     |
| First Eagle          | Good                                  | 9%                                | 7%                             | N                                     |
| Artisan Global       | Good                                  | -3%                               | 7%                             | N                                     |
| PIMCO/RAE EM         | Good                                  | 23%                               | 4%                             | N                                     |
| TT EM                | Good                                  | -26%                              | -18%                           | N                                     |
| Adelante             | Good                                  | 7%                                | -3%                            | N                                     |
| Invesco REIT         | Good                                  | 7%                                | 16%                            | N                                     |
| Voya                 | Good                                  | 6%                                | 6%                             | N                                     |
| Private Equity       | Good                                  | --                                | --                             | N                                     |
| Private Credit       | Good                                  | --                                | --                             | N                                     |
| Real Estate          | Good                                  | --                                | --                             | N                                     |



### Performance

|                                   | Trailing 1-Yr<br>Return | Trailing 5-yr<br>Return | Trailing 10-yr<br>Return | Performance in<br>Line with<br>Expectations? | Inception<br>Date |
|-----------------------------------|-------------------------|-------------------------|--------------------------|--|-------------------|
| MSCI ACWI-ND                      | 17%                     | 10%                     | 9%                       |  |                   |
| Boston Partners                   | 16%                     | 11%                     | 10%                      | Y  | 04/30/1995        |
| BlackRock Index Fund              | 24%                     | 14%                     | 13%                      | Y  | 03/31/2017        |
| Emerald Advisors                  | 19%                     | 9%                      | 10%                      | Y  | 03/31/2003        |
| Ceredex                           | 10%                     | 8%                      | 8%                       | Y  | 09/30/2011        |
| <b>Total Domestic Equity</b>      | <b>20%</b>              | <b>12%</b>              | <b>11%</b>               | <b>Y</b>                                     |                   |
| Pyrford                           | 3%                      | 4%                      | 5%                       | Y  | 03/31/2014        |
| William Blair                     | 3%                      | 5%                      | 6%                       | Y  | 09/30/2010        |
| PIMCO/RAE EM                      | 8%                      | 7%                      | 6%                       | Y  | 01/31/2017        |
| TT EM                             | 19%                     | 2%                      | 5%                       | Y  | 06/30/2017        |
| <b>Total International Equity</b> | <b>7%</b>               | <b>4%</b>               | <b>5%</b>                | <b>Y</b>                                     |                   |
| First Eagle                       | 12%                     | 7%                      | 7%                       | Y  | 12/31/2010        |
| Artisan Global                    | 15%                     | 10%                     | 11%                      | Y  | 11/30/2012        |
| <b>Total Global Equity</b>        | <b>14%</b>              | <b>9%</b>               | <b>9%</b>                | <b>Y</b>                                     |                   |
| Adelante                          | 10%                     | 5%                      | 6%                       | Y  | 07/31/2001        |
| Invesco REIT                      | 5%                      | N/A                     | N/A                      | Y  | 02/28/2022        |
| Voya                              | 6%                      | 3%                      | 4%                       | N  | 04/30/2000        |
| Private Equity                    | 3%                      | 12%                     | 11%                      | Y  |                   |
| Private Credit                    | 12%                     | 9%                      | 9%                       | Y  |                   |
| Real Estate                       | -9%                     | -3%                     | -3%                      | N  |                   |

For periods longer than inception date within CCCERA's Total Fund, the return is from a representative composite account.



**Manager Notes:**

As we have noted in prior quarters, Niall Paul, lead portfolio and architect of the TT International Global Emerging Market strategy, has retired from the firm. Rob James, who had been a co-PM on the strategy, continues in that role along with Diego Mauro, who joined the firm in 2020. We have conducted on-site reviews with James and Mauro to vet the team's capacity to manage the strategy effectively on a go forward basis. We continue to closely monitor this strategy, but recent performance has been well above benchmark.

**Manager Theses:**

The growth portfolio includes all managers in public and private equity, real estate, and private credit. These managers grow CCCERA's assets for future benefit payments (beyond the three years already covered by the Liquidity program).

**Boston Partners:** Large cap domestic equity which follows a value discipline. Boston Partners will buy out of favor companies and sell them when their intrinsic values are reflected in the market. Expected to outperform in flat to falling markets.

**BlackRock Index Fund:** Large cap domestic equity portfolio which should follow the Russell 1000 Index.

**Emerald Advisors:** Small cap growth equity seeking companies with high growth rates. Expected to produce strong returns in rising markets, and weak returns in falling markets.

**Ceredex:** Domestic equity small cap value portfolio of companies with dividend yields and low valuations. This portfolio should outperform flat markets.

**Pyrford (Columbia):** International equity value portfolio of non-US companies with low valuations at the country and stock level. This portfolio should outperform in flat markets.

**William Blair:** International equity growth portfolio of non-US companies with high growth rates constructed from the security level. This portfolio should outperform in rapidly rising markets.

**First Eagle:** Global equity portfolio that is benchmark agnostic comprised of companies with low valuations.

**Artisan Global Opportunities:** Global equity portfolio of companies that is benchmark agnostic with accelerating profit cycles and a focus on capital allocation.

**PIMCO/RAE Emerging Markets:** Quantitative equity with a value orientation. This portfolio follows the fundamental indexing approach (ranking companies by metrics other than market capitalization), resulting in a diversified, low turnover portfolio. This portfolio underperforms in momentum driven markets.

**TT International Emerging Markets:** Concentrated, growth-oriented manager which invests in small and mid-cap emerging market companies. TT employs both a top-down and a bottom-up research approach and seeks to outperform by identifying companies that have a catalyst to drive future growth.

**Adelante:** Diversified portfolio of U.S. REITs with a focus on the underlying real estate assets. Adelante is a public market proxy of the core real estate market.



**INVESCO Fundamental Beta REIT:** Invesco invests in US REITs following a sector neutral strategy that allocates to the securities that INVESCO believes have the strongest financial conditions.

**Voya High Yield Fixed Income:** Domestic high yield fixed income portfolio with a focus on security selection. Voya will focus on the higher quality segment of the high yield universe. Voya should provide a steady income stream and provide downside protection in falling markets.

**Private Equity:** CCCERA invests in private equity to generate returns above those available in the public equity markets.

**Private Credit:** CCCERA invests in private credit to generate cash flow streams above those available in the public debt markets.

**Real Estate:** CCCERA invests in value-add, distressed, and opportunistic real estate to generate returns from the capital appreciation and cash flow associated with commercial real estate investment.

**Risk Parity:** Multi-asset approach that strives for balanced contributions to total portfolio risk from multiple asset classes.



## Appendix – Risk Diversifying Sub-Portfolio

### Organizational Stability

|           | Portfolio Management Assessment | 1 Year Product Asset Growth | 1 Year Firm Asset Growth | Regulatory Action in Last Year? |
|-----------|---------------------------------|-----------------------------|--------------------------|---------------------------------|
| AFL-CIO   | Good                            | 5%                          | 5%                       | N                               |
| BH-DG     | Good                            | 22%                         | -13%                     | N                               |
| Sit LLCAR | Good                            | 46%                         | 5%                       | N                               |

### Performance

|           | Trailing 1 Year Correlation to Growth | Trailing 3 Year Correlation to Growth | 1 Year Return | 5 Year Return | % of Portfolio Liquid in 90 Days |
|-----------|---------------------------------------|---------------------------------------|---------------|---------------|----------------------------------|
| AFL-CIO   | 0.6                                   | 0.8                                   | 2%            | 0%            | 100%                             |
| BH-DG     | 0.8                                   | -0.6                                  | -12%          | 7%            | 100%                             |
| Sit LLCAR | 0.4                                   | 0.5                                   | 6%            | N/A           | 100%                             |

### Manager Notes:

We are currently underwriting an additional strategy to complement AFL-CIO for the Treasury exposure and expect to make a recommendation in the second quarter of 2025.

### Manager Theses:

Managers in the risk diversifying allocation seek to have a low correlation with the growth portfolio, positive returns in flat and falling equity markets, and a high degree of liquidity. These managers work together to offset some of the risks in the growth portfolio.

**AFL-CIO:** Portfolio of domestic, high quality fixed income securities which are backed by commercial and residential mortgages.

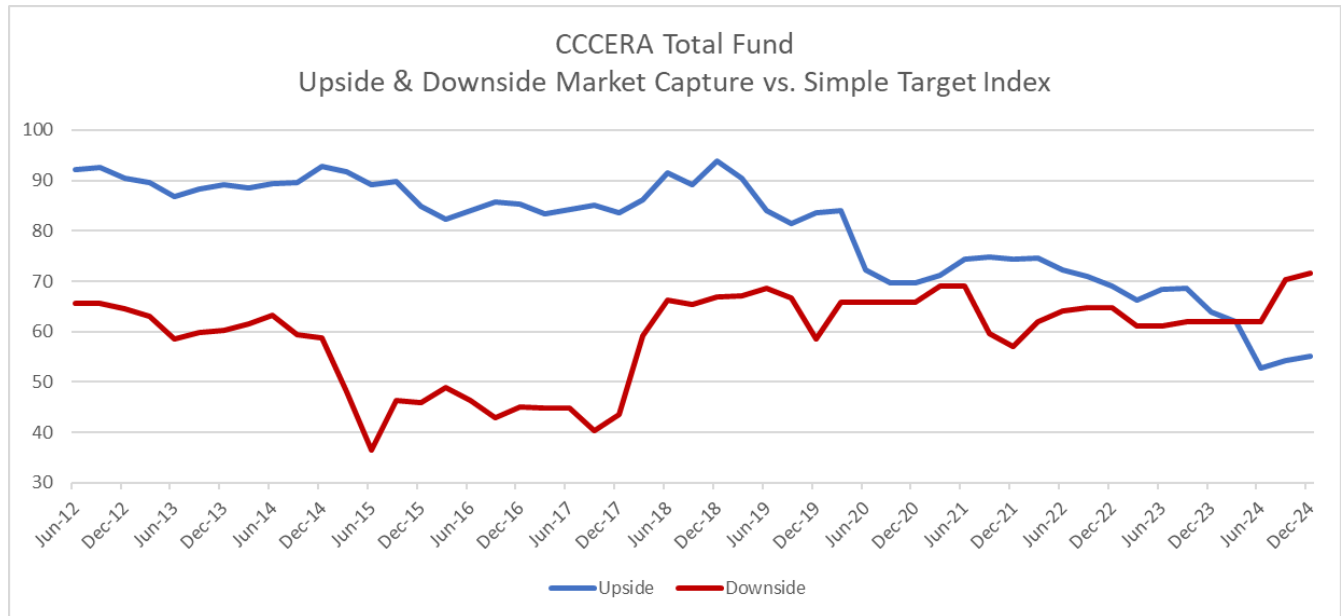
**BH-DG:** Quantitative multi-asset strategy that uses various models to capture both increasing and decreasing price trends across markets and timelines.

**Sit LLCAR:** Multiple fixed income strategies (closed end funds, mortgages, Treasuries) actively managed to target a modest positive return in most market environments.



## Appendix Data – Total Fund

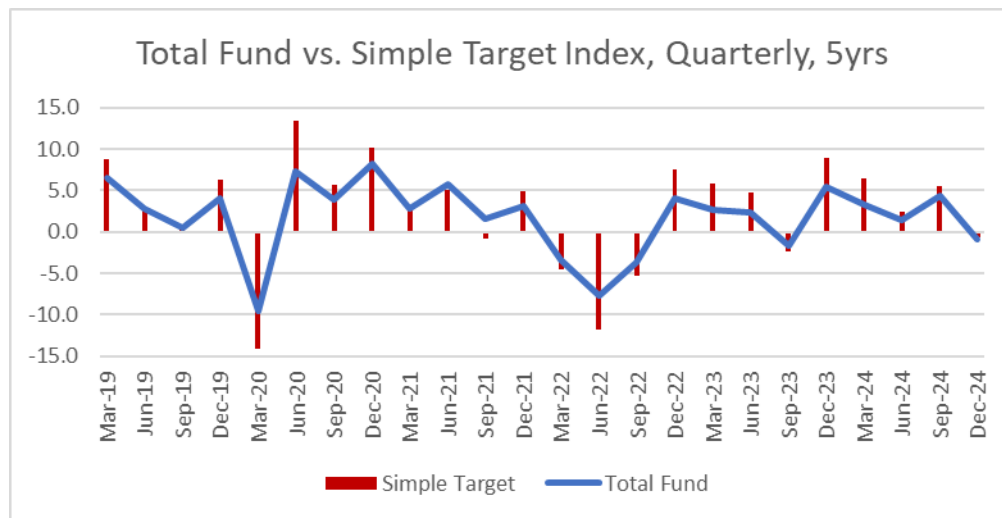
### Rolling 3-Year Total Fund Upside/Downside Market Capture



\*The composition of the Simple Target Index has mirrored changes in CCCERA's asset allocation over time: from 2008 to 2012 the benchmark was 73% MSCI ACWI, 23% Bloomberg 1-3 Year Gov/Credit, and 4% 3-Month Treasury Bills. From 2012 to 2016 the composition was 74% MSCI ACWI, 18% Bloomberg 1-3 Year Gov/Credit, and 9% 3-Month Treasury Bills. From 2016 to 2017 the composition was 63% MSCI ACWI, 25% Bloomberg 1-3 Year Gov/Credit, and 12% 3-Month Treasury Bills, from 2017 to June 2018 the composition was 61% MSCI ACWI, 27% Bloomberg 1-3 Year Gov/Credit, and 12% 3-Month Treasury Bills, from July 2018 to June 2019 the composition is 69% MSCI ACWI, 23% Bloomberg 1-3 Year Gov/Credit, and 8% 3-Month Treasury Bills, from July 2019 to June 2020 the composition is 68% MSCI ACWI, 24% Bloomberg 1-3 Year Gov/Credit, and 8% 3-Month Treasury Bills, from July 2020 to June 2021 the composition is 68.5% MSCI ACWI, 25% Bloomberg 1-3 Year Gov/Credit, and 6.5% 3-Month Treasury Bills; from July 2021 to June 2022 the composition is 75% MSCI ACWI, 18% Bloomberg 1-3 Year Gov/Credit, and 7% 3-Month Treasury Bills; from July 2022 to present the composition is 75.5% MSCI ACWI, 17% Bloomberg 1-3 Year Gov/Credit, and 7.5% 3-Month Treasury Bills; from July 2023 to present the composition is 76% MSCI ACWI, 17% Bloomberg 1-3 Year Gov/Credit, and 7% 3-Month Treasury Bills; from July 2024 to present the composition is 73% MSCI ACWI, 17% Bloomberg 1-3 Year Gov/Credit, and 10% 3-Month Treasury Bills



To represent better how the Total Fund behaves in real time, below is a chart showing its quarterly returns in relation to the Simple Target Index since 2019:





## Total Fund Quarterly Attribution

|                   | CCCERA Total Fund |        |                     | Simple Target Index |        |                     | Analysis              |                   |              |
|-------------------|-------------------|--------|---------------------|---------------------|--------|---------------------|-----------------------|-------------------|--------------|
|                   | Allocation        | Return | Return Contribution | Allocation          | Return | Return Contribution | Allocation Difference | Return Difference | Total Effect |
| Liquidity         | 19.6%             | 0.2%   | 0.0%                | 17.0%               | 0.0%   | 0.0%                | 2.6%                  | 0.2%              | 0.0%         |
| Growth            | 72.4%             | -0.9%  | -0.7%               | 73.0%               | -1.0%  | -0.7%               | -0.6%                 | 0.1%              | 0.0%         |
| Risk Diversifying | 6.8%              | -2.9%  | -0.2%               | 10.0%               | 1.2%   | 0.1%                | -3.2%                 | -4.0%             | -0.3%        |
| Overlay           | 1.2%              | -10.2% | -0.1%               | 0%                  | 0%     | 0%                  | 1.2%                  | -10.2%            | -0.1%        |
| Total Fund        | 100%              |        | -1.0%               | 100%                |        | -0.6%               | -0.1%                 |                   | -0.4%        |

## CCCERA Total Fund Performance vs. Simple Target Index

|            | One Year |      | Three Years |      | Five Years |      | Ten Years |      |
|------------|----------|------|-------------|------|------------|------|-----------|------|
|            | CCCERA   | STI  | CCCERA      | STI  | CCCERA     | STI  | CCCERA    | STI  |
| Return     | 8.3      | 14.2 | 1.8         | 4.9  | 5.6        | 8.1  | 6.2       | 7.0  |
| Volatility | 4.6      | 6.3  | 8.0         | 12.7 | 9.4        | 14.1 | 7.6       | 11.2 |
| Sharpe     | 0.8      | 1.5  | -0.2        | 0.1  | 0.3        | 0.4  | 0.6       | 0.5  |

The Simple Target Index is made up of 73% MSCI ACWI, 17% Bloomberg 1-3 Year Gov/Credit, and 10% 3-Month Treasury Bill. The purpose of this index is to examine whether CCCERA is being rewarded for pursuing a more nuanced portfolio versus a very simple representative portfolio.

CCCERA's Total Fund has produced good risk adjusted returns over all trailing time periods, but has lagged the absolute return of the Simple Target Index. This primarily reflects the exceptionally strong performance of the global equity markets in recent years relative to more modest private equity and credit returns and significant challenges in real estate.

The Sharpe ratio is a measure of risk adjusted returns which shows the amount of return a portfolio earns above the risk-free rate per unit of volatility. The Total Fund has matched or exceeded the Sharpe ratio relative to the Simple Target Index over all trailing time periods longer than one year, indicating that CCCERA is being favorably rewarded for the level of risk taken in the portfolio.





# Contra Costa County Employees' Retirement Association — Board Strategic Planning Workshop

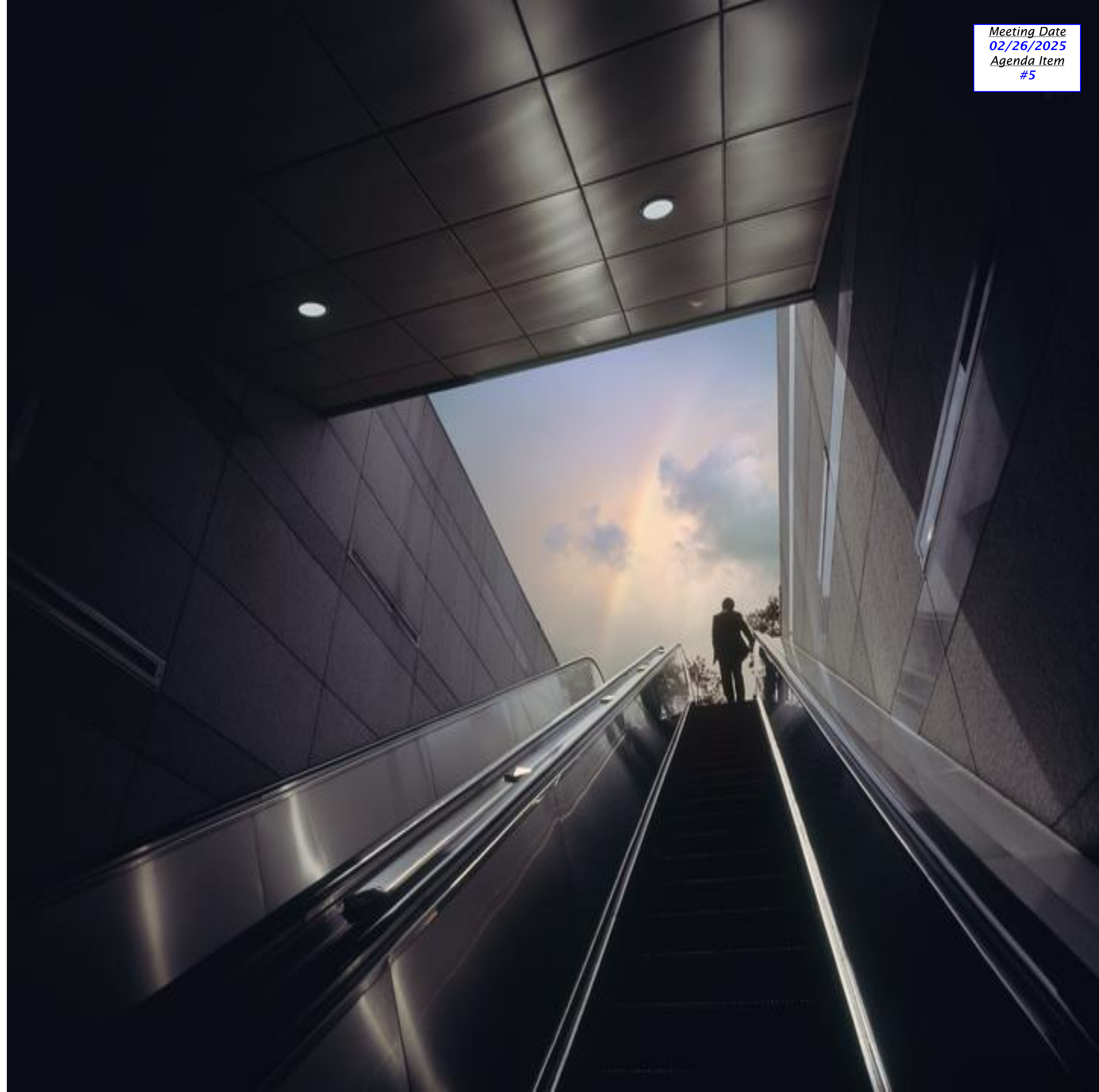
Julie Becker, Partner

Benita Falls Harper, Associate Partner

February 26, 2025

Fiduciary services provided by Aon Consulting, Inc

Meeting Date  
02/26/2025  
Agenda Item  
#5





# Table of Contents

**1** Strategic Planning Process

**2** Mission and Vision

**3** Key Themes from Surveys, Interviews and Staff Workshop

**4** Strategic Goals Discussion

**5** Next Steps



1

## Strategic Planning Process



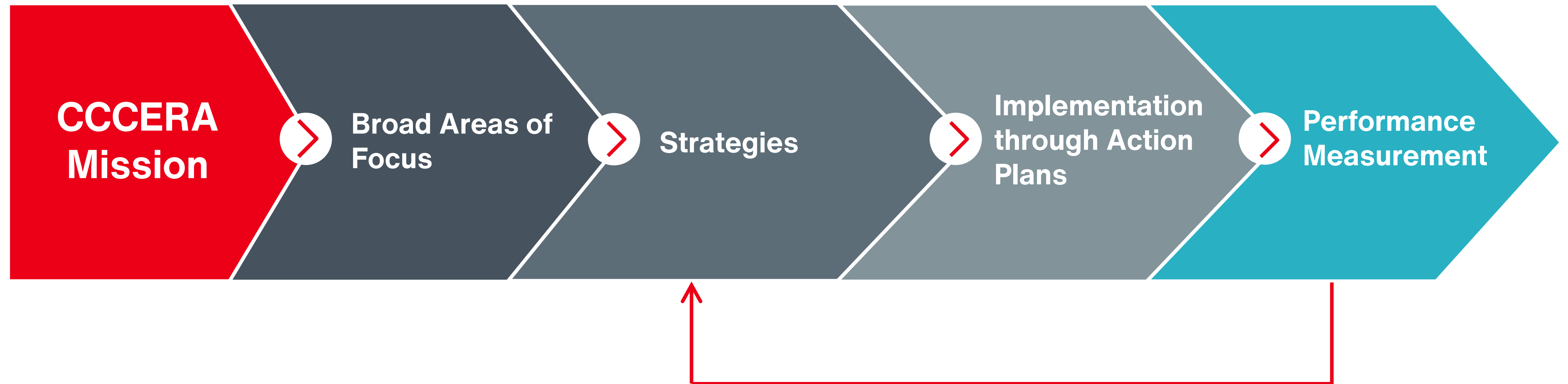


# Why Engage in Strategic Planning?

- 1 Allows all ideas to be heard and given due consideration
- 2 Creates a structure to recognize opportunities and avoid mistakes
- 3 Makes planning a process-driven, rather than personality-driven, effort
- 4 Promotes the efficient use of Board time, staff resources, and the budget
- 5 Inspires collaboration between Board and staff
- 6 Provides focus and a clear path for all to follow
- 7 Establishes guidelines for measuring success



# Strategic Planning: A Continual Process



All the strategies and action plans in the strategic plan should support CCCERA's mission.



# Strategic Planning Terminology

## Mission

- Who are we?
- Why do we exist?

## Strategies

- What do we want to achieve?
- What are our priorities?

## Action Plans

- What measurable steps do we need to take to achieve our goals?
- How will we allocate our time, talent, and budget to reach our goals and objectives?

## Implementation

- Who is responsible for doing what?
- When are the deadlines?

## Performance Measurement

- How successful have we been?
- What changes do we need to make?



# Strategic Planning Principles

Seek input from all Trustees and Key Staff.

Appraise the organization's strengths and weaknesses.

Identify external opportunities and risks.

Engage in candid discussions regarding identified issues.

Exercise reasonableness and a practical mindset when setting priorities.

Commit to following the plan, work cooperatively and meet target dates.

Evaluate progress, milestones, successes and setbacks.

Maintain the strategic plan as a rolling 3–5-year road map.



# CCCERA: Progress to Date

In accordance with the Strategic Planning Principles, completed items include:

- Trustees and Key Staff participation in one-on-one interviews
- Key Staff Strategic Planning Workshop held
- Conversations conducted regarding strengths, weaknesses, opportunities, threats
- Member, Employer, Culture Surveys distributed, and results reviewed



# Today's Purpose and Objectives

Provide an update on progress made.

Gain insight regarding CCCERA's vision for the future and organizational goals over the next 3-5 years.

Provide key themes and potential action points from both the strategic planning interviews and surveys, as well as the Leadership Staff's Strategic Planning Workshop.

Develop goals which will assist in formulating a beneficial strategic planning document.



# 2

## Mission and Vision





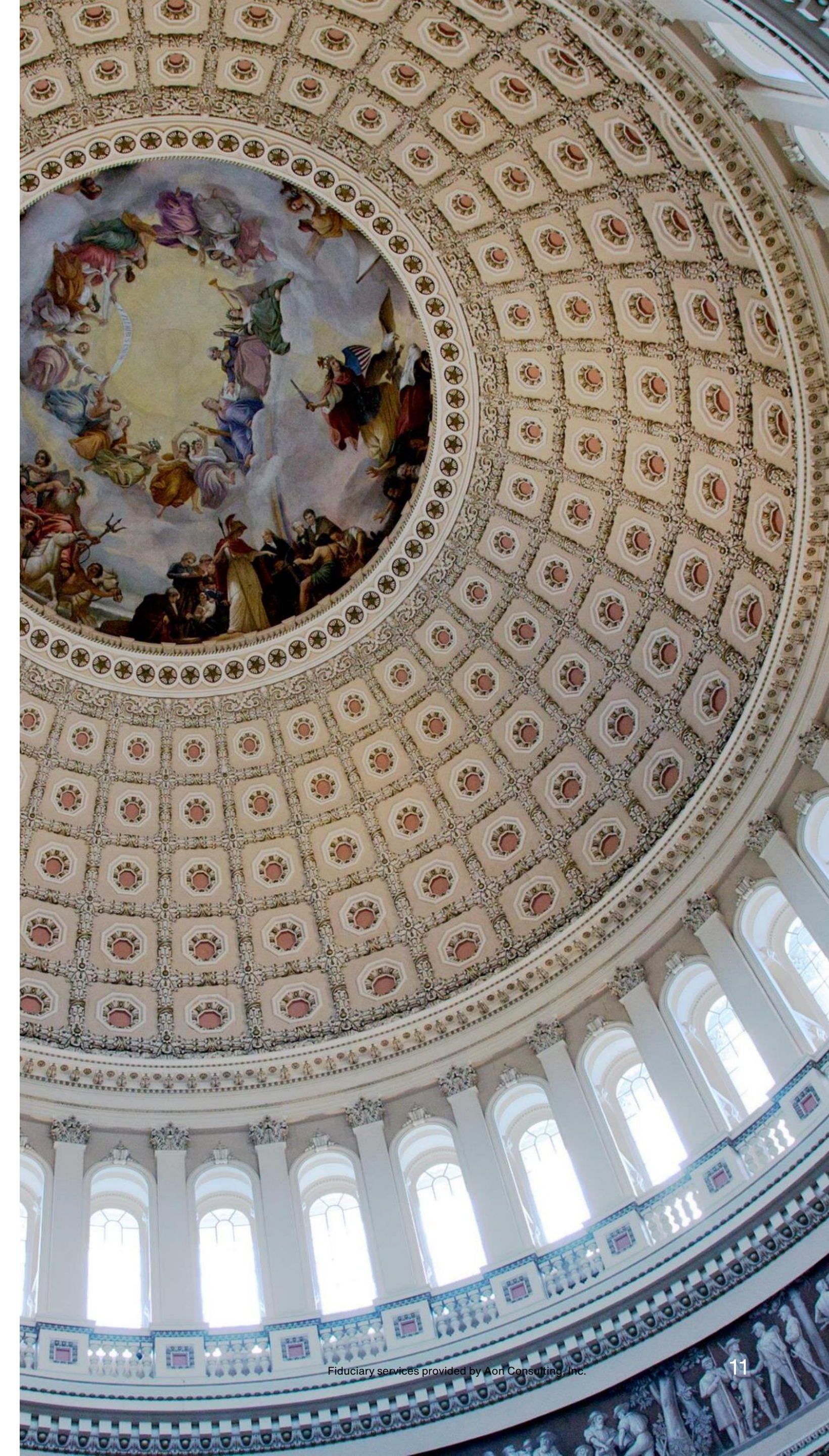
# Mission Statement

Mission Statement: provides the purpose and objectives in the present and describes what CCCERA does, who it does it for, and the benefit that it provides.

CCCERA's mission is to effectively and accurately administer pension benefits earned by our members and to be prudent stewards of plan assets.

Suggested revisions after Staff Workshop for the Board's consideration:

*CCCERA's mission is to be prudent stewards of plan assets in service to our public employees and their beneficiaries.*





# Vision Statements

Vision Statement: describes future direction and provides a vivid description of what CCCERA seeks to create in the future. It is aspirational and inspirational.

Example Vision Statements from other public pension systems:

- To be the model for pension fund excellence and exceptional customer service.
- To be your trusted retirement partner delivering responsive, high-quality service.
- Trusted by our Members and partners for excellence, innovation, professionalism, and transparency.
- To be a Leader in Public Pension Fund Management on behalf of our Members and Stakeholders.



# 3

## Key Themes from Surveys, Interviews, and Staff Workshop





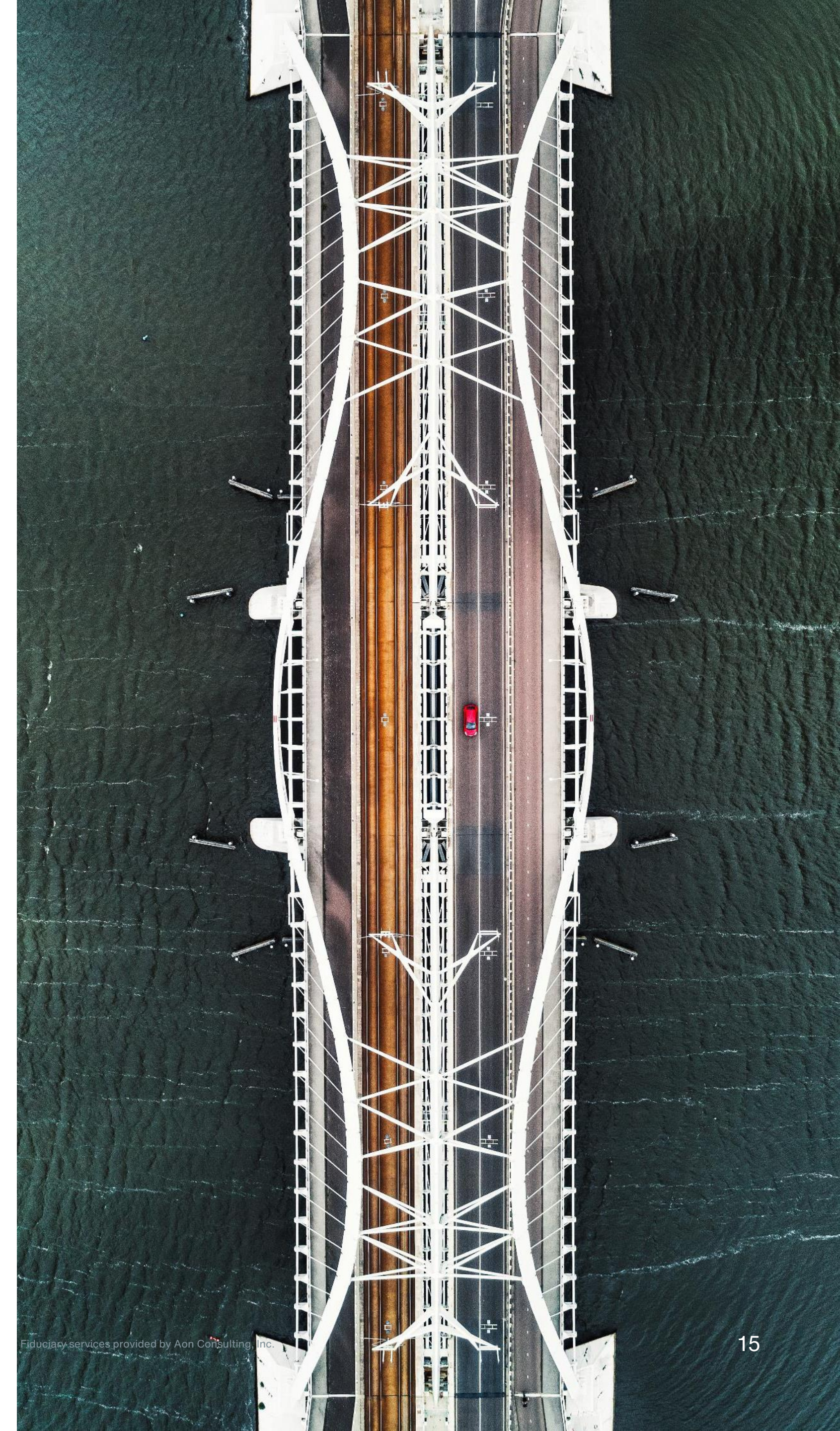
# Strategic Planning Themes

1. Governance
2. Investments
3. Member Service



# Strategic Planning Themes (Con't)

- 4. Technology
- 5. Employer Service
- 6. Workforce Development





# 4

## Strategic Goals Discussion





# Identified Themes Translated to Goals

## For each theme—what are the goals?

- state what you seek to accomplish
- state what you want to change

## Example:

Member Service Delivery–

Goal: To provide accurate and timely benefit processing and payments.



# 1. Governance

## Goal

Ensure strong governance framework with prudent oversight, delegation, monitoring, transparency and accountability.

## Objectives

- Board Education on elements of good governance
- Implement written procedures documents
- Build out Key Performance Indicator (KPI) process—create milestones/dashboard



## 2. Investments

### Goal

Maintain strong investment governance structure

### Objectives

- Portfolio Analytics Report
- Ongoing Board Education on Investment metrics



# 3. Member Service

## Goal

To roll out the new PAS system in an effective, efficient and transparent manner in service to our members.

## Objectives

- Ongoing education as PAS goes live: training program, FAQs, standardized communications
- Communicate improved members services



# 4. Technology

## Goals

- Strengthen cyber security
- Modernize and improve internal technology

## Objectives

- Increase cyber security testing
- Stay on top of AI current trends/risks
- Improve system integration across departments



# 5. Employer Service

## Goal

Enhance employer experience with CCCERA through collaboration, education and communication.

## Objectives

- Education/training on PAS rollout
- Employer workshops for new hires



# 6. Workforce Development

## Goal

To be an employer of choice that attracts and retains its employees.

## Objectives

- Professional Development opportunities for staff
- Recognition Program
- Create cross training opportunities
- Growth



5

Next Steps





# Next Steps After Strategic Planning Discussion

- 1 Staff discusses the Board's goals and priorities to further develop action plans
- 2 Aon and Staff update the strategic plan
- 3 Staff suggests performance measurements
- 4 Board approves the strategic plan along with the appropriate budget
- 5 Implementation begins as soon as possible
- 6 Board and staff review progress regularly
- 7 The plan rolls forward through annual reviews of progress and updates



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## MEMORANDUM

Date: February 26, 2025  
To: CCCERA Board of Retirement  
From: Christina Dunn, Chief Executive Officer  
Subject: Consider and take possible action to adopt Board of Retirement Resolution 2025-1 to increase the salary ranges by 6% for all unrepresented classifications effective April 1, 2025, with the exception of the Chief Executive Officer.

---

### Background

The successor Memorandum of Understanding between CCCERA and AFSCME, Local 2700 “MOU” was approved by the Board on January 10, 2024. That MOU included a 6% salary increase for represented positions effective January 1, 2025. By approving a 6% increase to the salary ranges of the unrepresented classifications it will keep the salary ranges for the represented classifications and the unrepresented classifications in alignment.

Enclosed is Board of Retirement Resolution 2025-1 which reflects a 6% increase to the salary ranges in Attachment A, an updated publicly available pay schedule. A publicly available pay schedule is required under the Public Employees’ Pension Reform Act of 2013 (PEPRA), Government Code Section 7522.34 and CCCERA’s Policy on Determining “Pensionable Compensation” under PEPRA For Purposes of Calculating Retirement Benefits.

### Recommendation

Consider and take possible action to adopt Board of Retirement Resolution 2025-1 with an increase to the salary ranges by 6% for all unrepresented classifications effective April 1, 2025, with the exception of the Chief Executive Officer.



**RESOLUTION OF THE BOARD OF RETIREMENT  
CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**

**CCCERA RESOLUTION FOR SALARY AND BENEFITS  
FOR UNREPRESENTED EMPLOYEES**

**AMENDED FEBRUARY 26, 2025**



## Contents

|   |    |
|---|----|
| 1. Paid Holidays:.....  | 2  |
| 2. Personal Holidays:.....  | 3  |
| 3. Vacation: .....  | 3  |
| Vacation Buy Back:.....   | 4  |
| 4. Sick Leave:.....   | 5  |
| 5. Sick Leave Incentive Plan: .....   | 5  |
| 6. Management Administrative Leave.....   | 6  |
| 7. Other Unpaid Leaves:.....  | 6  |
| A. Leave of Absence (Non-Statutory).....  | 6  |
| B. Leaves Pursuant to Family and Medical Leave Act (FMLA), California Family Rights Act (CFRA) and<br>Pregnancy Disability Leave Act (PDL)..... | 7  |
| C. Medical Certification.....   | 8  |
| D. Intermittent Use of Leave .....  | 8  |
| E. Aggregate Use for Spouses for FMLA Leave Only .....  | 8  |
| F. Definitions.....   | 9  |
| 8. Health, Dental, and Related Benefits.....  | 10 |
| 9. Long-Term and Short-Term Disability Insurance .....  | 13 |
| 10. State Disability Insurance.....   | 13 |
| 11. Life Insurance .....  | 13 |
| 12. Workers Compensation Insurance.....   | 13 |
| 13. Health Care Spending Account .....  | 15 |
| 14. Dependent Care Assistance Program .....   | 15 |
| 15. Premium Conversion Plan.....  | 15 |
| 16. Vision Insurance .....  | 15 |
| 17. Retirement: .....   | 15 |
| CCCERA Membership: .....  | 15 |
| Deferred Compensation: .....  | 16 |
| 18. General Training.....   | 17 |
| 19. Other Job-Related Training .....  | 17 |
| 20. Professional Development Reimbursement .....  | 17 |
| 21. Salary.....   | 18 |
| 22. Overtime .....  | 18 |
| 23. Differential Pay .....  | 18 |
| A. Longevity .....  | 18 |
| B. Certificate Differentials.....   | 19 |



WHEREAS, the Contra Costa County Employees' Retirement Association ("CCCERA") is a public agency established by virtue of, and governed by the County Employees' Retirement Law of 1937, Government Code sections 31450, *et seq.*, ("CERL") and Article XVI, section 17 of the California Constitution.

WHEREAS, CCCERA administers a retirement system for the County of Contra Costa and for other participating employers located within the County, including CCCERA, by and through its Board of Retirement ("Board"), and as the Board delegates to its employees who are appointed by CCCERA pursuant to CERL section 31529.9 ("CCCERA Employees.")

NOW THEREFORE IT IS HEREBY RESOLVED that employees of CCCERA in the job classifications identified on Attachment A hereto shall receive the following salary and benefits, until further notice:

**1. Paid Holidays:**

CCCERA observes the following paid holidays during the term covered by this Resolution:

|                            |                        |
|----------------------------|------------------------|
| New Year's Day             | Labor Day              |
| Martin Luther King Jr. Day | Veterans' Day          |
| Presidents' Day            | Thanksgiving Day       |
| Memorial Day               | Day after Thanksgiving |
| Juneteenth                 | Christmas Day          |
| Independence Day           |                        |

Any paid holiday observed by CCCERA that falls on a Saturday is observed on the preceding Friday and any paid holiday that falls on a Sunday is observed on the following Monday.

Eligibility for Paid Holidays: Regular full-time employees are entitled to a paid day off in recognition of the holiday without a reduction in monthly base pay for CCCERA-observed holidays listed above.

Part-time employees [*who are regularly scheduled to work a minimum of 20 hours per week*] are entitled to the listed paid holidays on a pro rata basis. For example, a part time employee whose position hours are 24 per week is entitled to 4.8 hours off work on a holiday ( $24/40 \times 8 = 4.8$ ).

When a paid holiday falls on a part-time employee's normally scheduled work day and the part-time paid holiday hours are more than the normally scheduled work hours the employee is entitled to receive flexible compensation hours or pay at the rate of one times the employees' base rate of pay for the difference between the employee's normally scheduled work hours and the paid part-time holiday hours.

When a paid holiday falls on a part-time employee's normally scheduled work day and the



part-time paid holiday hours are less than the normally scheduled work hours the employee must use non-sick leave accruals for the difference between the employee's normally scheduled work hours and the part-time paid holiday hours. If the employee does not have any non-sick leave accrual balances, leave without pay will be authorized.

Flexible Compensation: Flexible Compensation may not be accumulated in excess of 288 hours. After 288 hours are accrued by an employee, the employee will receive flexible pay at the rate of 1.0 times the employee's base rate of pay. Flexible compensation may be taken on those dates and times determined by mutual agreement of the employee and their supervisor.

## 2. Personal Holidays:

Regular employees subject to this Resolution are entitled to accrue up to two hours of personal holiday credit each month.

Part-time employees [*who are regularly scheduled to work a minimum of 20 hours per week*] accrue personal holiday hours on a pro rata basis.

No employee may accrue more than forty hours of personal holiday credit at any time. Once the employee reaches forty hours of personal holiday, the employee will cease accruing such paid time off until he/she uses sufficient such time to reduce his/her bank below the forty-hour maximum, after at which time the employee may begin to accrue additional hours up to the forty-hour maximum.

On separation from CCCERA service, employees shall be paid for any accrued and unused personal holiday hours at the employee's then-current rate of pay.

## 3. Vacation:

Regular full-time employees subject to this Resolution are entitled to accrue paid vacation as follows:

| <u>Length of Service*</u> | <u>Monthly<br/>Accrual<br/>Hours</u> | <u>Maximum<br/>Cumulative<br/>Hours</u> |
|---------------------------|--------------------------------------|---|
| Fewer than 11 years       | 10                                   | 240                                     |
| 11 years                  | 10-2/3                               | 256                                     |
| 12 years                  | 11-1/3                               | 272                                     |
| 13 years                  | 12                                   | 288                                     |
| 14 years                  | 12-2/3                               | 304                                     |
| 15 through 19 years       | 13-1/3                               | 320                                     |
| 20 through 24 years       | 16-2/3                               | 400                                     |
| 25 through 29 years       | 20                                   | 480                                     |



| <u>Length of Service*</u> | <u>Monthly<br/>Accrual<br/>Hours</u> | <u>Maximum<br/>Cumulative<br/>Hours</u> |
|---------------------------|--------------------------------------|---|
| 30 years and up           | 23-1/3                               | 560                                     |

\* Includes County service if employed at CCCERA before January 1, 2015.

Part-time employees [*who are regularly scheduled to work a minimum of 20 hours per week*] are entitled to the listed paid vacation on a pro rata basis.

Employees may accrue paid vacation time up to a maximum of twice their annual vacation accrual. That is, for a full-time employee with 8 years of service, the employee may accrue up to a maximum of 240 hours (120 hours maximum annual accrual x 2 = 240 hours). Once the employee reaches this maximum cumulative hours, she/he will cease accruing paid vacation time until he/she uses sufficient vacation to drop below the maximum cumulative hours after which time the employee may begin to accrue additional hours up to the maximum cumulative hours.

On separation from CCCERA service, employees shall be paid for any accrued and unused vacation hours at the employee's then-current rate of pay.

#### **Vacation Buy Back:**

- A. Employees may elect payment of up to one-third (1/3) of their annual vacation accrual, subject to the following conditions:
  - (1) the choice can be made only once every thirteen (13) months and there must be at least twelve (12) full months between each election;
  - (2) payment is based on an hourly rate determined by dividing the employee's current salary by 173.33; and
  - (3) the maximum number of vacation hours that may be paid in any one sale is one-third (1/3) of the annual accrual.
- B. The vacation buy back election must be made in the calendar year preceding the year of the vacation sale. Hours that an employee elects to cash out are not available for the employee to use as vacation. If a vacation buy back election is not made in the preceding calendar year, it will be considered a declination of the vacation sale for the year.

**NOTE:** Where a lump-sum payment is made to employees as a retroactive general salary adjustment for a portion of a calendar year that is subsequent to the exercise by an employee of the vacation buy-back provision herein, that employee's vacation buy-back will be adjusted to reflect the percentage difference in base pay rates upon which the lump-sum payment was computed, provided that the period covered by the lump-sum payment includes the effective date of the vacation buy-back. *For example: In May a salary increase is approved with an effective date of January 1<sup>st</sup> and the employee completed a vacation buy-*



*back in March, a lump sum payment for the difference in base pay of the vacation buy-back would be calculated.*

#### 4. **Sick Leave:**

Regular full-time employees subject to this Resolution shall earn paid sick leave benefits at the rate of eight (8) hours per month. Regular part-time employees [*who are regularly scheduled to work a minimum of 20 hours per week*] are entitled to sick leave benefits on a pro rata basis.

Unused sick leave hours accumulate from year to year. When an employee is separated, other than through retirement, accumulated sick leave hours shall be cancelled, unless the separation results from layoff, in which case the accumulated hours shall be restored if reemployed in a regular position within the period of layoff eligibility. At retirement, employees are credited, at the rate of one day for each one day earned, with sick leave accumulated as of the day of retirement and that sick leave credit counts as additional retirement service credit.

For more information on sick leave benefits please refer to the CCCERA Personnel Policies.

#### 5. **Sick Leave Incentive Plan:**

Employees may be eligible for a payoff of a part of unused sick leave accruals at separation. The sick leave incentive plan is an incentive for employees to safeguard sick leave accruals as protection against wage loss due to time lost for injury or illness. Payoff must be approved by the Chief Executive Officer, and is subject to the following conditions:

- The employee must have resigned in good standing
- Payout is not available if the employee is eligible to retire
- The balance of sick leave at resignation must be at least 70% of accruals earned in the preceding continuous period of employment excluding any sick leave use covered by the Family and Medical Leave Act (FMLA), the California Family Rights Act (CFRA) or the California Pregnancy Disability Act (PDL).
- Payout is by the following schedule:

| <u>Years of Payment<br/>Continuous Service</u> | <u>Payment of<br/>Unused Sick Leave<br/>Payable</u> |
|--|---|
| 3 – 5 years                                    | 30%   |
| 5 – 7 years                                    | 40%   |
| 7 plus years                                   | 50%   |

- No payoff will be made pursuant to this section unless CCCERA certifies that an



employee requesting as sick leave payoff has terminated membership in, and has withdrawn their contributions from CCCERA.

- It is the intent of the Board of Retirement that payments made pursuant to this section are in lieu of CCCERA retirement benefits resulting from employment with any of the employers in the CCCERA retirement plan.

## 6. **Management Administrative Leave**

Management Administrative Leave is authorized time away from the job for any personal activities and needs which are not charged to sick leave or vacation hours. Unrepresented employees who are exempt from the payment of overtime are eligible for this benefit.

Use of Management Administrative Leave may be requested whenever desired by the employee; however, approval of request shall be subject to the same department process as used for vacation requests.

All unused Management Administrative Leave will be cancelled at 11:59 p.m. on December 31<sup>st</sup> of each year.

- A. On January 1<sup>st</sup> of each year, all full-time unrepresented employees, who are exempt from the payment of overtime and in paid status, will be credited with ninety four (94) hours of paid Management Administrative Leave. All Management Administrative Leave is non-accruable and all balances will be zeroed out on December 31<sup>st</sup> of each year.
- B. Regular part-time employees [*who are regularly scheduled to work a minimum of 20 hours per week*] are eligible for Management Administrative Leave on a prorated basis, based upon their position hours.
- C. Employees appointed (hired or promoted) to a management position are eligible for Management Administrative Leave on the first day of the month following their appointment date and will receive Management Administrative Leave on a prorated basis for that first year.

## 7. **Other Unpaid Leaves:**

Requests for leave without pay shall be made upon forms prescribed by Human Resources and shall state specifically the reason for the request, the date when it is desired to begin the leave, and the probable date of return.

### **A. Leave of Absence (Non-Statutory)**

Leave without pay may be granted by the Appointing Authority for any of the following



reasons that are not otherwise covered by FMLA, CFRA, and PDL:

1. Employee's own illness, disability, or serious health condition;
2. Pregnancy or pregnancy disability;
3. To bond with the employee's newborn or with a child placed in an employee's family for adoption or foster care;
4. Family care to care for a spouse, child, parent, or domestic partner who has a serious health condition;
5. To take a course of study such as will increase the employee's work-related knowledge or skills on return to the position;
6. For other reasons or circumstances acceptable to the Appointing Authority.

An employee must request a leave of absence at least thirty (30) days before the leave is to begin if the need for the leave is foreseeable. If the need is not foreseeable, the employee must provide written notice to the employer of the need for leave as soon as possible and practical.

A leave without pay may be for a period not to exceed one (1) year, provided the Appointing Authority may extend such leave for additional periods. The procedure in granting extensions shall be the same as that in granting the original leave, provided that the request for extension must be made not later than thirty (30) calendar days before the expiration of the original leave.

Whenever an employee who has been granted a leave without any pay desires to return before the expiration of such leave, the employee shall submit a request to the Appointing Authority in writing at least fifteen (15) days in advance of the proposed return. Early return is subject to prior approval by the appointing authority. The Human Resources Department shall be notified promptly of such return.

The decision of the Appointing Authority on granting or denying non-statutory leave or early return from non-statutory leave shall be subject to appeal to the Human Resources Manager and not subject to appeal through the grievance procedure set forth in this MOU.

**B. Leaves Pursuant to Family and Medical Leave Act (FMLA), California Family Rights Act (CFRA) and Pregnancy Disability Leave Act (PDL)**

FMLA: Upon request to CCCERA Human Resources, any employee who meets the legal eligibility requirements for FMLA shall be entitled to at least twelve (12) weeks of FMLA, measured backward from the date an employee uses any FMLA leave (less if so requested by



the employee), for a qualifying reason in accordance with federal laws. FMLA leave will run concurrently with CFRA and PDL leaves to the extent permitted by law. CCCERA will grant an additional six (6) weeks of leave with the same FMLA protections, for a total of eighteen (18) weeks during a rolling twelve (12) month period.

CFRA: Upon request to CCCERA Human Resources, any employee who meets the legal eligibility requirements for CFRA shall be entitled to at least twelve (12) weeks of CFRA leave, measured backward from the date an employee uses any CFRA leave (less if so requested by the employee), for a qualifying reason in accordance with state law. CFRA leave will run concurrently with FMLA leave to the extent permitted by law, except that CFRA leave will not run concurrently with pregnancy disability leave under the PDL. CCCERA will grant an additional six (6) weeks of leave with the same CFRA protections, for a total of eighteen (18) weeks during a rolling twelve (12) month period.

PDL: Upon request to CCCERA Human Resources, any employee who meets the legal eligibility requirements for PDL shall be entitled to up to four (4) months of PDL as provided in state law.

### **C. Medical Certification**

The employee must provide medical certification of the need for non-statutory family care, pregnancy disability, or medical leave, or for FMLA, CFRA and/or PDL. Leave for periods that exceed the leave allowed under the FMLA, CFRA, and/or PDL, may be granted at the discretion of the Appointing Authority. No medical certification is required for baby/child bonding.

### **D. Intermittent Use of Leave**

The FMLA/CFRA/PDL entitlement, and the additional six (6) weeks that CCCERA grants, may be used in broken periods, intermittently on a regular or irregular basis, or may include reduced work schedules depending on the specific circumstances and situations surrounding the request for leave. The leave may include use of appropriate available paid leave accruals when accruals are used to maintain pay status, but use of such accruals is not required. When paid leave accruals are used for FMLA, CFRA, and/or PDL, such time shall be counted as a part of the leave entitlement.

### **E. Aggregate Use for Spouses for FMLA Leave Only**

In the situation where husband and wife are both employed by CCCERA, the family care of medical leave entitlement based on the birth, adoption or foster care of a child is limited to an aggregate for both employees together of eighteen (18) weeks during a “rolling” twelve (12) month period measured backward from the date the employee uses his/her FMLA leave. Employees requesting family care leave are required to advise their appointing authority(ies) when their spouse is also employed by CCCERA.



## F. Definitions

For leaves of absence under this section, the following definitions apply:

- a) Child: A biological, adopted, or foster child, stepchild, legal ward, conservatee or a child who is under eighteen (18) years of age for whom an employee stands in loco parentis or for whom the employee is the guardian or conservator, or an adult dependent child of the employee.
- b) Parent: A biological, foster, or adoptive parent, a step-parent, legal guardian, conservator, or other person standing in loco parentis to a child.
- c) Spouse: A partner in marriage as defined in California Civil Code Section 4100.
- d) Domestic Partner: An unmarried person, eighteen (18) years or older, to whom the employee is not related and with whom the employee resides and shares the common necessities of life.
- e) Serious Health Condition: An illness, injury, impairment, or physical or mental condition and involves either inpatient care in a hospital, hospice or residential health care facility or continuing treatment or continuing supervision by a health care provider (e.g. physician or surgeon) as defined by state and federal law.
- f) Certification for Medical Leave: A written communication to the employer from a health care provider of a person for whose care the leave is being taken which need not identify the serious health condition involved, but shall contain:
  - 1. the date, if known, on which the serious health condition commenced;
  - 2. the probable duration of the condition;
  - 3. for family care, an estimate of the frequency and duration of the leave required to render care or supervision for the family member;
  - 4. for the employee's serious health condition, a statement whether the employee is able to work, or is unable to perform one or more of the essential functions of their position;
  - 5. for intermittent leave or a reduced work schedule leave, the certification should indicate that the intermittent leave or reduced leave schedule is needed for the employee's serious health condition or for the care of the employee's family member, and its expected duration.

## G. Military Leave



Federal and state mandated-military leaves of absence are granted without pay to members of the United States Uniformed Services, the California National Guard, or the reserves. To be eligible, an employee must submit written verification from the appropriate military authority. Such leaves will be granted in accordance with state and federal law.

When an employee goes on Military Leave for more than 30 days, any applicable group insurance (existing provisions will apply) continues for 90 days following the commencement of unpaid Military Leave. Beyond the 90 days, the employee may elect to continue the same group health care coverage, including dependent coverage, if applicable, for up to 24 months at his/her own expense.

An employee may elect to use accrued personal holidays, vacation, and/or management administrative leave at the beginning of unpaid military service or may retain earned and accrued vacation for use upon return from the leave. The employee must provide this request/election in writing to Administrative/HR Manager prior to the start of the military leave.

At the conclusion of military service, an employee will be reinstated upon giving notice of his/her intent to return to work by either (1) reporting to work or (2) submitting a timely oral or written request to CCCERA for reinstatement within 90 days of days after their release from active duty or any extended period required by law. The Military Leave will expire upon the employee's failure to request reinstatement or return to work in a timely manner after conclusion of service.

## **8. Health, Dental, and Related Benefits**

Regular full-time and part-time employees [*who are regularly scheduled to work a minimum of 20 hours per week*] and their eligible dependents may be entitled to receive medical and dental insurance coverage through CCCERA Plans.

Effective January 1, 2016, CCCERA shall offer an Internal Revenue Code Section 125 Flexible Benefits Plan that offers (i) CalPERS health plan coverages for each eligible employee and the employee's eligible family members and (ii) at least one other nontaxable benefit. CCCERA shall make monthly contributions under the plan for each eligible employee and their dependents (if applicable). Such contributions shall consist of (i) the Minimum Employer Contribution (MEC) established by the Public Employees' Medical and Hospital Care Act, and designated by CCCERA as the MEC, and (ii) the additional amount of such contributions in excess of the MEC.

Any eligible employee who enrolls in health coverage with a higher total premium than CCCERA's contributions with respect to the eligible employee, will pay the difference via pre-tax payroll deductions under the plan to the extent permitted by Internal Revenue Code Section 125.

For the plan year that begins on January 1, 2024, CCCERA will pay ninety percent (90%) of the total medical plan premium for each tier. Employees will pay the remaining ten (10%) of the



total plan premium.

For the plan year that begins on January 1, 2024, CCCERA will pay ninety percent (90%) of the total dental plan premium for each tier of the dental plan. Employees will pay the remaining ten (10%) of the total plan premium.

Dual Coverage: Each employee, eligible dependent and retiree may be covered by only a single CCCERA health or dental plan.

Please refer any questions about medical/dental benefits to Human Resources.

**Health and Dental Coverage Upon Retirement**

1. Any CCCERA retiree or their eligible dependent who becomes age 65 on or after January 1, 2009 and who is eligible for Medicare must immediately enroll in Medicare Parts A and B.
2. For employees hired by Contra Costa County or CCCERA on or after January 1, 2009 and their eligible dependents, upon completion of five (5) years of CCCERA service, an eligible employee who retires from CCCERA may retain continuous coverage of a CCCERA health and/or dental plan provided that:
  - i. he or she begins to receive a monthly retirement allowance from CCCERA within 120 days of separation from CCCERA employment and
  - ii. he or she pays the difference between the Public Employees' Medical and Hospital Care Act (PEMHCA) minimum contribution and the premium cost of the health plan. He or she pays the full premium of the dental plan without any CCCERA premium subsidy.
3. For employees hired by Contra Costa County before January 1, 2009 and their eligible dependents, upon completion of five (5) years of CCCERA service, an eligible employee who retires from CCCERA may retain continuous coverage of a CCCERA health and/or dental plan provided that they meet the requirements listed below:
  - i. he or she begins to receive a monthly retirement allowance from CCCERA within 120 days of separation from CCCERA employment and
  - ii. he or she pays the difference between the monthly premium subsidy established by the Board of Retirement for eligible employees and their eligible dependents and the premium cost of the health/dental plan.<sup>1</sup>



<sup>1</sup> CCCERA will pay the health/dental plan monthly premium subsidy established by the Board of Retirement for eligible retirees and their eligible dependents.

4. All periods of benefit eligible employment will be included in the five (5) years of service calculation for purposes of health and dental coverage upon retirement.
5. Employees who were on an authorized leave of absence without pay prior to retiring must have maintained coverage through CCCERA and paid the applicable premiums during their authorized leave of absence in order to be eligible for coverage under this Section.
6. Employees, who resign and file for a deferred retirement and their eligible dependents, may continue in their CCCERA group health and/or dental plan under the following conditions and limitations:
  - i. Health and dental coverage during the deferred retirement period is totally at the expense of the employee, without any CCCERA contributions.
  - ii. Life insurance coverage is not included.
  - iii. To continue health and dental coverage, the employee must:
    - a. be qualified for a deferred retirement under the 1937 Retirement Act provisions;
    - b. be an active member of a CCCERA group health and/or dental plan at the time of filing their deferred retirement application and elect to continue plan benefits;
    - c. be eligible for a monthly allowance from the Retirement System and direct receipt of a monthly allowance within one hundred twenty (120) days of application for deferred retirement; and
    - d. file an election to defer retirement and to continue health benefits hereunder with CCCERA within thirty (30) days before separation from CCCERA service.
  - iv. Deferred retirees who elect continued health benefits hereunder and their eligible dependents may maintain continuous membership in their CCCERA health and/or dental plan group during the period of deferred retirement by paying the full premium for health and dental coverage on or before the 10<sup>th</sup> of each month, to CCCERA. When the deferred retirees begin to receive retirement benefits, they will qualify for the same health and/or dental coverage listed above, as similarly situated retirees who did not defer retirement.
  - v. Deferred retirees may elect retiree health benefits hereunder without electing to maintain participation in their CCCERA health and/or dental plan during their deferred retirement period. When they begin to receive retirement benefits, they will qualify for the same health and/or dental coverage as listed above, as similarly situated retirees who did not defer retirement.
  - vi. Employees who elect deferred retirement will not be eligible in any event for CCCERA health and/or dental premium subsidies unless the member draws



a monthly retirement allowance within one hundred twenty days (120) after separation from CCCERA employment.

vii. Deferred retirees and their eligible dependents are required to meet the same eligibility provisions for retiree health/dental coverage as similarly situated retirees who did not defer retirement.

7. For employees who retire and are eligible to receive a medical premium subsidy that is greater than the PEMHCA minimum contribution, each month during which such retiree medical coverage continues, CCCERA will provide each such retiree with a medical expense reimbursement plan (MERP), also known as a health reimbursement arrangement (HRA), subject to Internal Revenue Code Section 105, with a monthly credit equal to the excess of (i) the relevant medical coverage monthly premium subsidy set forth in Attachment B for such eligible retiree and his or her eligible family members over (ii) the then current MEC.

#### **9. Long-Term and Short-Term Disability Insurance**

CCCERA will provide Long-Term and Short-Term Disability Insurance.

#### **10. State Disability Insurance**

Unrepresented employees do not contribute towards State Disability Insurance.

#### **11. Life Insurance**

For employees who are enrolled in CCCERA's program of medical or dental coverage as either the primary or the dependent, term life insurance in the amount of ten thousand dollars (\$10,000) will be provided by CCCERA.

Management employees, with the exception of the Chief Executive Officer will also receive fifty-seven thousand dollars (\$57,000) in addition to the life insurance provided above. The Chief Executive Officer will receive an additional sixty thousand dollars (\$60,000) in addition to the ten thousand dollars (\$10,000) insurance provided above.

In addition to the life insurance benefits provided by CCCERA, employees may subscribe voluntarily and at their own expense for supplemental life insurance. Please refer to Human Resources for additional information.

#### **12. Workers Compensation Insurance**

CCCERA provides workers' compensation benefits to employees who sustain a work-related injury or illness, and claims are processed through an adjusting agent/insurance carrier as designated by CCCERA, which administers workers' compensation claims and provides



benefits and services to injured employees. A worker's compensation injury is any injury or illness that arises out of and in the course of employment (AOE/COE) (Labor Code section 3600).

1. Waiting Period: There is a three (3) calendar day waiting period before workers' compensation benefits commence. If the injured worker loses any time on the date of injury, that day counts as day one (1) of the waiting period. If the injured worker does not lose time on the date of the injury, the waiting period is the first three (3) days following the date of the injury. The time the employee is scheduled to work during this waiting period will be charged to the employee's sick leave and/or vacation accruals. In order to qualify for workers' compensation the employee must be under the care of a physician. Temporary compensation is payable on the first three (3) days of disability when the injury necessitates hospitalization, or when the disability exceeds fourteen (14) days.
2. Continuing Pay: Permanent employees shall continue to receive the appropriate percent as per Labor Code section 4650 et. seq. of their regular monthly salary during any period of compensable temporary disability not to exceed one year. Payment of continuing pay and/or temporary disability compensation is made in accordance with Part 2, Article 3 of the Workers' Compensation Laws of California. "Compensable temporary disability absence" for the purpose of this Section, is any absence due to work connected disability which qualifies for temporary disability compensation as set forth in Part 2, Article 3 of the Workers' Compensation Laws of California.

When any disability becomes medically permanent and stationary and/or reaches maximum medical improvement, the salary provided in this Section shall terminate. No charge shall be made against sick leave or vacation for these payments. Sick leave and vacation rights shall not accrue for those periods during which continuing pay is received.

Employees shall be entitled to a maximum of one (1) year of continuing pay benefits for any one injury or illness.

Continuing pay begins at the same time that temporary workers' compensation benefits commence and continues until either the member is declared medically permanent/stationary, or until one (1) year of continuing pay, whichever comes first, provided the employee remains in an active employed status. Continuing pay is automatically terminated on the date an employee is separated from CCCERA by resignation, retirement, layoff, or the employee is no longer employed by CCCERA. In these instances, employees will be paid workers' compensation benefits as prescribed by workers' compensation laws. All continuing pay must be cleared through CCCERA.

3. Physician Visits: Whenever an employee who has been injured on the job and has returned to work is required by an attending physician to leave work for treatment during working hours, the employee is allowed time off, up to three (3) hours for such treatment, without loss of pay or benefits. Said visits are to be scheduled contiguous to either the beginning or end of the scheduled workday whenever possible. This provision



applies only to injuries/illnesses that have been accepted by CCCERA as work related.

### **13. Health Care Spending Account**

After six (6) months of regular employment, full time and part time (20/40 or greater) employees may elect to participate in a Health Care Spending Account (HCSA) Program designated to qualify for tax savings under Section 125 of the Internal Revenue Code, but such savings are not guaranteed. The HCSA Program allows employees to set aside a predetermined amount of money from their pay, before taxes, for health care expenses not reimbursed by any other health benefit plans. HCSA dollars may be expended on any eligible medical expenses allowed by Internal Revenue Code Section 125. Any unused balance over six hundred-ten dollars (\$610) is forfeited and cannot be recovered by the employee. Please refer to Human Resources for more information on the HCSA Program.

### **14. Dependent Care Assistance Program**

Full time and part time (20/40 or greater) employees may elect to participate in a Dependent Care Assistance Program (DCAP) designed to qualify for tax savings under Section 129 of the Internal Revenue Code, but such savings are not guaranteed. The program allows employees to set aside up to five thousand (\$5,000) of annual salary (before taxes) per calendar year to pay for eligible dependent care (child and elder care) expenses. According to IRS regulations, any unused balance is forfeited and may not be recovered by the employee. Please refer to Human Resources for more information on DCAP.

### **15. Premium Conversion Plan**

CCCERA offers the Premium Conversion Plan (PCP) designed to qualify for tax savings under Section 125 of the Internal Revenue Code, but tax savings are not guaranteed. The program allows employees to use pre-tax salary to pay health and dental premiums. Please refer to Human Resources for more information on the PCP.

### **16. Vision Insurance**

CCCERA will pay 100% of the premium, including spouse and dependent coverage, for EyeMed Option 2 vision coverage and up to two hours of CCCERA paid time for exam and to obtain glasses.

### **17. Retirement:**

#### **CCCERA Membership:**

*Contributions:* Employees are responsible for the payment of one hundred percent of the employees' basic retirement benefit contributions determined annually by the Board. Employees are also responsible for the payment of the employee's contributions to the retirement cost-of-living program as determined annually by the Board. CCCERA is



responsible for payment of one hundred percent of the employer's retirement contributions as determined annually by the Board.

- A. Employees who are not classified as new members under PEPRA will be enrolled in Retirement Tier 1 enhanced. For more information on retirement tiers please refer to the CCCERA member handbooks.
- B. Employees who are classified as new members under PEPRA will be enrolled in Retirement IV (3% COLA). For more information on retirement tiers please refer to the CCCERA member handbooks.
- C. CCCERA will implement Section 414(h) (2) of the Internal Revenue Code which allows CCCERA to reduce the gross monthly pay of employees by an amount equal to the employee's total contribution to the CCCERA Retirement Plan before Federal and State income taxes are withheld, and forward that amount to the CCCERA Retirement Plan. This program of deferred retirement contribution will be universal and non-voluntary as required by statute.

**Deferred Compensation:**

- A. CCCERA will contribute eighty-five dollars (\$85) per month to each employee who participates in CCCERA's Deferred Compensation Plan. To be eligible for this Deferred Compensation Incentive, the employee must contribute to the deferred compensation plan as indicated below:

| Employees with Current Monthly Salary of: | Qualifying Base Contribution Amount | Monthly Contribution Required to Maintain Incentive Program Eligibility |
|---|-------------------------------------|---|
| \$2,500 and below                         | \$250                               | \$50  |
| \$2,501 – 3,334                           | \$500                               | \$50  |
| \$3,335 – 4,167                           | \$750                               | \$50  |
| \$4,168 – 5,000                           | \$1,000                             | \$50  |
| \$5,001 – 5,834                           | \$1,500                             | \$100   |
| \$5,835 – 6,667                           | \$2,000                             | \$100   |
| \$6,668 and above                         | \$2,500                             | \$100   |

Employees who discontinue contributions or who contribute less than the required amount per month for a period of one (1) month or more will no longer be eligible for the eighty-five dollars (\$85) Deferred Compensation Incentive. To reestablish eligibility, employees must again make a Base Contribution Amounts as set forth above based on current monthly salary. Employees with a break in deferred compensation contributions either because of an approved medical leave or an approved financial hardship withdrawal will not be required to reestablish eligibility. Further, employees who lose eligibility due to displacement by layoff, but maintain contributions at the required level and are later employed in an eligible position, will not be required to reestablish eligibility.

- B. Regular employees hired on and after January 1, 2009 will receive one hundred and fifty dollars (\$150) per month to an employee's account in the Contra Costa County Deferred



Compensation Plan or other tax-qualified savings program designated by CCCERA, for employees who meet all of the following conditions:

1. The employee must be hired by CCCERA on or after January 1, 2009.
2. The employee is not eligible for a monthly premium subsidy for health and/or dental upon retirement as set forth in Section 8.
3. The employee must be appointed to a regular position. The position may be either full time or part time (designated at a minimum of 20 hours per week).
4. The employee must have been employed by CCCERA or Contra Costa County for at least 90 calendar days.
5. The employee must contribute a minimum of twenty-five dollars (\$25) per month to the Contra Costa County Deferred Compensation Plan, or other tax-qualified savings program designated by CCCERA.
6. The employee must complete and sign the required enrollment form(s) for his/her deferred compensation account and submit those forms to Human Resources.
7. The employee may not exceed the annual maximum contribution amount allowable by the United States Internal Revenue Code.
8. Employees are eligible to apply for loans from the Contra Costa County Deferred Compensation Plan loan program. For more information on the loan program refer to Human Resources.

#### **18. General Training**

CCCERA periodically provides training to employees on its harassment prevention and equal opportunity/discrimination policies. The purpose of these training sessions is to inform and remind employees of CCCERA's policies on these matters. These training sessions are mandatory.

Employees also receive safety training as part of CCCERA's Injury and Illness Prevention program.

#### **19. Other Job-Related Training**

Employees may request to attend training sessions on topics that are directly related to the employee's current job and that are likely to improve the employee's job knowledge and skills. Requests to attend training must be submitted to the employee's department manager. It is within the sole discretion of CCCERA whether or not to grant a training request.

#### **20. Professional Development Reimbursement**

To encourage personal and professional growth which is beneficial to both CCCERA and the employee, CCCERA reimburses for certain expenses incurred by employees which are related to an employee's current work assignment.

Expenses that may be eligible for reimbursement include certification programs and courses offered through accredited colleges, universities and technical schools.



Guidelines: Prior to registering for a course, the employee must provide appropriate information to Human Resources to begin the approval process.

If granted, reimbursement may be used to defray actual costs of tuition, registration, testing materials, testing fees and books only and is limited to \$2,000 per year.

Course attendance, study, class assignments and exams must be accomplished outside of the employee's regular working hours.

Reimbursement: Reimbursement will only be provided for course work in which the employee achieves a grade of C or better. Reimbursement will be provided only to employees who are employed by CCCERA at the time CCCERA receives evidence of satisfactory completion of the course or certification exam.

If the employee does not successfully complete the course or certification exam, no reimbursement will be provided.

Exceptions: For classifications which require a certification or technical license, CCCERA will reimburse the entire cost of certification fees and membership dues without reducing the maximum annual Professional Development Reimbursement amount.

**21. Salary**

Attached hereto as Attachment A, is the salary schedule for all classifications of unrepresented employees.

**22. Overtime**

Unrepresented employees who are exempt from the payment of overtime are not entitled to receive overtime pay, flexible compensatory, or overtime compensatory time. Unrepresented employees who are non-exempt from the payment of overtime will receive overtime for hours worked in excess of 40 hours in the workweek and paid at a rate of time and one-half their hourly rate of pay.

**23. Differential Pay**

**A. Longevity**

Ten Years of Service:

Employees who have completed ten (10) years of service for CCCERA\* are eligible to receive a two and one-half percent (2.5%) longevity differential effective on the first day of the month following the month in which the employee qualifies for the ten (10) year service award.

Fifteen Years of Service:

Employees who have completed fifteen (15) years of service for CCCERA\* are eligible to receive an additional two and one-half percent (2.5%) longevity differential effective on the first day of the month following the month in which the employee qualifies for the fifteen (15) year service award.



**Twenty Years of Service:**

Employees who have completed twenty (20) years of service for CCCERA\* will receive an additional two percent (2%) longevity differential effective on the first day of the month following the month in which the employee qualifies for the twenty (20) year service award.

\*For employees hired prior to January 1, 2019 upon completion of required years of service for Contra Costa County and/or CCCERA will qualify.

**B. Certificate Differentials**

**NOTE:** No employee may receive more than one certificate differential at one time, regardless of the number of certificates held by that employee.

➤ **Accounting Certificate Differential**

Incumbents of unrepresented professional accounting, auditing or fiscal officer positions who possess one of the following active certifications will receive a differential of five percent (5%) of base monthly salary:

- (1) a Certified Public Accountant (CPA) license issued by the State of California, Department of Consumer Affairs, Board of Accountancy;
- (2) a Certified Internal Auditor (CIA) certification issued by the Institute of Internal Auditors;
- (3) a Certified Management Accountant (CMA) certification issued by the Institute of Management Accountants; or
- (4) a Certified Government Financial Manager (CGFM) certification issued by the Association of Government Accountants.

➤ **Associate of the Society of Actuaries (ASA)**

Employees who possess an active ASA certification will receive a differential of five percent (5%) of base monthly salary. Verification of eligibility for any such differential must be provided to Human Resources.



|  |            |          |          |          |          |          | Eligible for Differential* |                   |                   |                     |     |
|--|------------|----------|----------|----------|----------|----------|----------------------------|-------------------|-------------------|---------------------|-----|
|  |            |          |          |          |          |          | 10 year Longevity          | 15 year Longevity | 20 year Longevity | CPA, CGFM, CIA, CMA | ASA |
| Hourly (Non-Exempt)  | Step 1     | Step 2   | Step 3   | Step 4   | Step 5   | Step 6   | 2.50%                      | 2.50%             | 2.00%             | 5%                  | 5%  |
| Executive Assistant  | \$46.21    | \$48.52  | \$50.94  | \$53.49  | \$56.16  |          | Yes                        | Yes               | Yes               | No                  | Yes |
| Information Technology Coordinator   | \$48.52    | \$50.94  | \$53.49  | \$56.16  | \$58.97  |          | Yes                        | Yes               | Yes               | No                  | Yes |
| Member Services Supervisor   | \$56.16    | \$58.97  | \$61.92  | \$65.02  | \$68.27  |          | Yes                        | Yes               | Yes               | No                  | Yes |
| Retirement Services Supervisor   | \$56.16    | \$58.97  | \$61.92  | \$65.02  | \$68.27  |          | Yes                        | Yes               | Yes               | No                  | Yes |
| Monthly (Exempt)   |            |          |          |          |          |          |                            |                   |                   |                     |     |
| Accountant   | \$7,628    | \$8,009  | \$8,409  | \$8,830  | \$9,271  |          | Yes                        | Yes               | Yes               | Yes                 | Yes |
| Accounting Manager   | \$13,046   | \$13,698 | \$14,383 | \$15,102 | \$15,857 |          | Yes                        | Yes               | Yes               | Yes                 | Yes |
| Accounting Supervisor  | \$9,735    | \$10,222 | \$10,733 | \$11,269 | \$11,833 |          | Yes                        | Yes               | Yes               | Yes                 | Yes |
| Administrative Services Manager  | \$12,735   | \$13,372 | \$14,040 | \$14,743 | \$15,480 |          | Yes                        | Yes               | Yes               | No                  | Yes |
| Chief Investment Officer   | \$25,590   | \$26,870 | \$28,213 | \$29,624 | \$31,105 | \$32,660 | Yes                        | Yes               | Yes               | No                  | Yes |
| Communications Coordinator   | \$9,051    | \$9,503  | \$9,978  | \$10,477 | \$11,001 |          | Yes                        | Yes               | Yes               | No                  | Yes |
| Compliance Business Analyst  | \$9,978    | \$10,477 | \$11,001 | \$11,551 | \$12,129 |          | Yes                        | Yes               | Yes               | No                  | Yes |
| Compliance Officer   | \$13,226   | \$13,887 | \$14,581 | \$15,310 | \$16,075 | \$16,879 | Yes                        | Yes               | Yes               | No                  | Yes |
| Deputy Chief Executive Officer   | \$20,515   | \$21,541 | \$22,618 | \$23,749 | \$24,936 | \$26,183 | Yes                        | Yes               | Yes               | No                  | Yes |
| Deputy General Counsel   | \$18,357   | \$19,275 | \$20,238 | \$21,250 | \$22,313 |          | Yes                        | Yes               | Yes               | No                  | Yes |
| General Counsel  | \$22,617   | \$23,748 | \$24,935 | \$26,182 | \$27,491 | \$28,866 | Yes                        | Yes               | Yes               | No                  | Yes |
| Human Resources Manager  | \$12,735   | \$13,372 | \$14,040 | \$14,743 | \$15,480 |          | Yes                        | Yes               | Yes               | No                  | Yes |
| Human Resources Coordinator  | \$9,735    | \$10,222 | \$10,733 | \$11,270 | \$11,833 |          | Yes                        | Yes               | Yes               | No                  | Yes |
| Information System Programmer/Analyst  | \$9,271    | \$9,735  | \$10,222 | \$10,733 | \$11,269 |          | Yes                        | Yes               | Yes               | No                  | Yes |
| Internal Auditor   | \$13,226   | \$13,887 | \$14,581 | \$15,310 | \$16,075 | \$16,879 | Yes                        | Yes               | Yes               | Yes                 | Yes |
| Information Technology Manager   | \$15,480   | \$16,254 | \$17,066 | \$17,920 | \$18,816 |          | Yes                        | Yes               | Yes               | No                  | Yes |
| Investment Analyst   | \$13,372   | \$14,040 | \$14,743 | \$15,480 | \$16,254 |          | Yes                        | Yes               | Yes               | No                  | Yes |
| Investment Officer   | \$18,816   | \$19,756 | \$20,744 | \$21,781 | \$22,870 |          | Yes                        | Yes               | Yes               | No                  | Yes |
| Member Services Manager  | \$12,735   | \$13,372 | \$14,040 | \$14,743 | \$15,480 |          | Yes                        | Yes               | Yes               | No                  | Yes |
| Network Security Engineer  | \$10,733   | \$11,269 | \$11,833 | \$12,425 | \$13,046 |          | Yes                        | Yes               | Yes               | No                  | Yes |
| Retirement Services Manager  | \$12,735   | \$13,372 | \$14,040 | \$14,743 | \$15,480 |          | Yes                        | Yes               | Yes               | No                  | Yes |
| Senior Investment Analyst  | \$14,743   | \$15,480 | \$16,254 | \$17,066 | \$17,920 |          | Yes                        | Yes               | Yes               | No                  | Yes |
| Senior Investment Officer  | \$20,744   | \$21,781 | \$22,870 | \$24,014 | \$25,215 |          | Yes                        | Yes               | Yes               | No                  | Yes |
| Chief Executive Officer  | \$25,000** |          |          |          |          |          | Yes                        | Yes               | Yes               | No                  | Yes |
| *NOTE: Certificate Differentials cannot be combined with other certificate differentials |            |          |          |          |          |          |                            |                   |                   |                     |     |
| **Effective 3/16/2024  |            |          |          |          |          |          |                            |                   |                   |                     |     |



# SIGULER GUFF



## SAVE THE DATE

### **Siguler Guff & Company** **2025 Annual Conference**

#### **Rainbow Room**

30 Rockefeller Plaza  
New York, NY 10112

#### **Wednesday, May 7, 2025**

##### **Advisory Board Meetings**

Details will be shared with Advisory Board Members.

##### **Cocktail Reception**

##### **Seated Dinner Reception with Keynote Speaker**

All Limited Partners and their Advisors are invited to attend.

#### **Thursday, May 8, 2025**

##### **Breakfast Buffet**

##### **Morning Portfolio Presentations**

##### **Lunch with Keynote Speaker**

##### **Afternoon Portfolio Presentations**

All Limited Partners and their Advisors are invited to attend.

Siguler Guff is pleased to offer a virtual livestream and recordings  
of the presentations for those who cannot join in person.