



AGENDA

RETIREMENT BOARD MEETING

REGULAR MEETING
August 28, 2024
9:00 a.m.

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

NOTICE OF TELECONFERENCE MEETING:

ONE OR MORE MEMBERS OF THE BOARD OF RETIREMENT FOR THE CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION MAY PARTICIPATE IN THE BOARD MEETING, SCHEDULED FOR AUGUST 28, 2024, VIA TELECONFERENCE AT THE LOCATION LISTED BELOW, WHICH IS OPEN TO THE PUBLIC.

TELECONFERENCE LOCATION:
1516 Kamole Street
Honolulu, Hawaii 96821

THE LOCATION LISTED ABOVE IS ACCESSIBLE TO THE PUBLIC, INCLUDING THOSE WITH DISABILITIES.

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

1. Pledge of Allegiance.
2. Public Comment (3 minutes/speaker).
3. Approve minutes from the July 24, 2024 meeting. (Action Item)
4. Presentation of asset allocation implementation plan. (Presentation Item)
5. Consider and take possible action to adopt Board of Retirement Resolution No. 2024-4, Investment Asset Allocation Targets and Ranges. (Action Item)
6. Review of total portfolio performance for period ending June 30, 2024. (Presentation Item)
 - a. Presentation from Verus

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.

b. Presentation from staff

7. Review of report on Risk Diversifying Sub-portfolio. (Presentation Item)
8. Consider and take possible action to issue a request for proposals for investment consultant services. (Action Item)
9. Consider and take possible action to establish an investment committee and adopt an investment committee charter. (Action Item)
10. Consider and take possible action to approve pay code lists. (Action Item)
11. Consider and take possible action on SACRS voting proxy form. (Action Item)
12. Report from Audit Committee Chair on the August 14, 2024 Audit Committee meeting. (Presentation Item)
13. Miscellaneous
 - a. Staff Report
 - b. Outside Professionals' Report
 - c. Trustees' comments

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.



RETIREMENT BOARD MEETING MINUTES

REGULAR MEETING

July 24, 2024
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, Jay Kwon, David MacDonald, Dan Mierzwa, John Phillips, and Mike Sloan

Absent: Louis Kroll and Samson Wong

Staff: Christina Dunn, Chief Executive Officer; Karen Levy, General Counsel; and Tim Price, Chief Investment Officer

Outside Professional Support:
Susan Kunz
Aaron Mucha
Jesse Rivera
Scott Whalen

Representing:
Sagitec
Sagitec
Segal Company
Verus

1. Pledge of Allegiance

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

3. Accept comments from the Public

No member of the public offered comment.

2. Appoint audit committee members

Gordon appointed John Phillips as the Chairperson, Jerry Holcombe as the Vice Chairperson, and David MacDonald and Dan Mierzwa as members of the Audit Committee.

4. Approval of minutes

It was **M/S/C** to approve the minutes of the June 26, 2024, meeting. (Yes: Andersen, Chebotarev, Finley, Gordon, Holcombe, MacDonald, Mierzwa, Phillips, and Sloan).

CLOSED SESSION

5. The Board moved into Closed Session pursuant to Govt. Code Section 549569(d)(1) to confer with legal counsel regarding pending litigation:

- a. *Stewart v CCCERA Board of Retirement, et al.*, Contra Costa County Superior Court, Case No. T23-1589.

MacDonald recused himself from Item 5 and was not present during the discussion of this item.

The Board moved into open session.

There was no reportable action related to Govt. Code Section 549569(d)(1).

6. Asset Liability Study Discussion and Recommendations

It was **M/S/C** to approve the Asset Liability Recommendations with a provision for a formal check-in every two years. (Yes: Andersen, Chebotarev, Finley, Gordon, Holcombe, MacDonald, Mierzwa, Phillips, and Sloan).

7. Pension administration system project update:

- a. Update from Staff - Dunn gave an update on the pension administration system project.
b. Presentation from Segal – Rivera gave an update on the project.
c. Presentation from Sagitec – Kunz and Mucha presented an update on the project.

8. Consider and take possible action to oppose Assembly Bill 2284 defining “grade” in Government Code Section 31461(a)

- a. It was **M/S/C** to provide a letter in opposition to Assembly Bill 2284 defining “grade” in Government Code Section 31461(a). (Yes: Andersen, Chebotarev, Finley, Gordon, Holcombe, Mierzwa, Phillips, and Sloan. Abstain: MacDonald).

9. Consider authorizing attendance of the Board:

- a. It was **M/S/C** to authorize the attendance of 3 Board members at the Nossaman’s 2024 Pensions, Benefits & Investments Fiduciaries’ Forum, October 17-18, 2024, Berkeley, CA. (Yes: Andersen, Chebotarev, Finley, Gordon, Holcombe, MacDonald, Mierzwa, Phillips, and Sloan).

- b. It was **M/S/C** to authorize the attendance of 4 Board members at the NCPERS 2024 Public Safety Conference, October 27-30, 2024, Palm Springs, CA. (Yes: Andersen, Chebotarev, Finley, Gordon, Holcombe, MacDonald, Mierzwa, Phillips, and Sloan).

10. Miscellaneous:

- a. Staff Report – Dunn reported on the Annual Staff Development Day. She also announced that the first Employer Workshop would be held on August 6, 2024. She went on to mention that at the September 11, 2024, board meeting, Segal will be presenting the actuarial valuation report and Cheiron will be presenting the actuarial audit.
- b. Outside Professionals’ Report – None
- c. Trustees’ Comments – MacDonald and Mierzwa reported on the UC Berkeley SACRS Program, stating there was great turnout and was highly educational.

It was **M/S/C** to adjourn the meeting. (Yes: Andersen, Chebotarev, Finley, Gordon, Holcombe, MacDonald, Mierzwa, Phillips, and Sloan)

Scott W. Gordon, Chairperson

Jerry R. Holcombe, Secretary



Memorandum

Date: August 28, 2024
To: CCCERA Board of Retirement
From: Timothy Price, Chief Investment Officer
Subject: Asset allocation implementation plan

Overview

At the July 24, 2024 Board meeting, the Board approved new long-term asset allocation targets. In order to fully implement those long term targets, several searches and projects will need to be launched over the upcoming year and the private market allocations will continue to be built out over several years. This memo outlines a three phase approach to implement the new targets. Phase 1 reallocates within pre-existing liquid market mandates and assigns liquid proxies to all illiquid asset classes. Phase 2 entails any mandates that require a search process or need further study in order to fully implement. Phase 3 covers all longer-term allocations in private markets and anything that might take more than a year to implement.

Updated Asset Allocation Targets

The allocations as of June 30, 2024 and the newly adopted long-term targets differ in a number of areas. The new allocation calls for a reduction in the equity allocation, the elimination of risk parity and high yield and the introduction of real estate debt and multi-asset credit. The private market allocations continue to be above their current allocations.

Proxies for Unfunded Private Market Allocations

The CCCERA Investment Policy statement provides specific guidance on how to allocate any unfunded private market allocations. For each illiquid asset class, a liquid asset class will be assigned to function as a holding place while the corresponding illiquid strategies are being invested. This implementation plan uses the following proxies for unfunded illiquid allocations:

- | | |
|------------------------|--|
| Private equity | Blend of US equities |
| Private credit | High yield initially, will shift to multi-asset credit when funded |
| Private real estate | REITs |
| Private infrastructure | Global equities |

Phase 1

The proposed initial allocations are noted below. This involves reallocating within existing liquid strategies as well as a terminating the risk parity mandates. Please note that the multi-asset credit and real estate debt allocations are not included initially because searches will need to be launched for these mandates. The allocations below can be adopted by the Board in an updated investment resolution and the rebalancing can take place over several weeks.

	7/31/2024 Allocation	Newly Adopted Asset Allocation	Private market proxy allocation	Initial allocation
GROWTH				
US Large	14.9	9.0	4.0	13.0
US Small	3.9	2.0	1.0	3.0
International Developed	8.5	5.0		7.0
Emerging Markets	4.5	2.0		4.0
Global Equity	10.7	10.0	1.0	11.0
Risk Parity	3.1	-		-
Private Equity	9.5	15.0	(5.0)	10.0
Infrastructure	1.7	3.0	(1.0)	2.0
Private Credit	9.9	13.0	(3.0)	10.0
Real Estate Debt	-	3.0		-
Value Add Real Estate	2.2	3.0	(1.0)	2.0
Opportunistic Real Estate	2.7	4.0	(1.0)	3.0
REITs	1.9	-	2.0	2.0
Multi-asset credit	-	4.0		-
High Yield Corp. Credit	1.4		3.0	3.0
DIVERSIFYING				
Core Fixed Income	1.9	-		2.5
US Treasury	-	3.5		-
Hedge Fund	4.9	6.5		5.5
LIQUIDITY				
Short-Term Gov't/Credit	13.3	14.0		17.0
Cash	5.1	3.0		5.0
Total Allocation	100.0	100.0	-	100.0

Phase 2

Phase 2 covers projects that will require additional study or a search process. The areas of need are noted below along with estimated time frames for completion of each process. Once new managers have been identified and approved, we will ask the Board to approve an updated investment resolution to reflect the new target allocations.

Project	Estimated Timeframe	Target Allocation
US Treasury	2 months for review and recommendation	3.5%
Hedge funds	4-6 months for structural review and recommendation	6.5%
Multi-asset credit	6-9 months	4%
Real estate debt	6-12 months	3%

CCCERA investment staff intend to launch these projects once Phase 1 is complete and involve the services of our consultants as needed to support this research.

Phase 3

The final phase will be to update pricing analyses for each private market mandate over the course of the coming year and continue our methodical funding of each illiquid asset class to ensure vintage year diversification.



MEMORANDUM

Date: August 28, 2024

To: CCCERA Board of Retirement

From: Timothy Price, Chief Investment Officer

Subject: Investment Asset Allocation Resolution 2024-4

Overview

In the Investment Policy Statement adopted by the Board on March 24, 2021, a process is outlined to make annual adjustments to the target asset allocation and express these in investment resolutions adopted by the Board. In the most recent amendment to the Investment Policy Statement, the Board approved reducing the target size of the Liquidity sub-portfolio from four to three years of projected benefit payments.

At the July 24, 2024 Board meeting, the Board approved new long-term asset allocation targets. These changes include a reduction in overall public equity and new allocations to multi-asset credit and real estate debt. It will take several months to implement the new liquid market allocations. This investment resolution represents the first step in that process by reallocating current liquid market mandates and redeeming the risk parity allocation.

Implementation of BOR Resolution 2024-4 will occur over the next several weeks. The policy benchmark will be adjusted to the new targets as of October 1, 2024.

Recommendation

Consider and take possible action to adopt BOR Resolution 2024-4 Investment Asset Allocation Targets and Ranges.

**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 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>
Growth		70.0%	60-80%
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%	
Total Equity		50.0%	40-60%
Voya	ICE BofA High Yield Master II	3.0%	
Private Credit	Private Credit Composite	10.0%	
Total Credit		13.0%	8-16%
Adelante REIT	Wilshire REIT	1.0%	
INVESCO REIT	Wilshire REIT	1.0%	
Private Real Estate	Private RE Composite	5.0%	
Total Real Estate		7.0%	5-10%
Liquidity		17.0%	10-20%
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%	
Risk Diversifying		8.0%	0-12%
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%
Total		100.0%	

THIS RESOLUTION WAS ADOPTED BY THE AFFIRMATIVE VOTE OF THE BOARD OF
RETIREMENT OF THE CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT
ASSOCIATION THIS ____ DAY OF _____, 2024.

AYES:

NOES:

ABSTAIN:

ABSENT:

Scott W. Gordon
Chairperson of the Board of Retirement

Attest:
Jerry R. Holcombe
Secretary of the Board of Retirement

Meeting Date
08/28/2024
Agenda Item
#6a.

Memorandum

To: Board of Trustees, Contra Costa County Employees’ Retirement Association

Cc: Timothy Price, CFA, Chief Investment Officer

From: Danny Sullivan, FRM, CAIA, Consultant

Date: August 28, 2024

Re: Performance calculation revision

The purpose of this memorandum is to make you aware of a mistake that was made when calculating first quarter 2024 total plan performance. This error had no financial impact to the Plan as the actuaries did not rely on this data in compiling any of their reports.

Each quarter Verus receives a file from CCCERA’s private markets consultant that provides individual fund net asset values (NAVs), contributions, and distributions. One of the funds in this file (Adams Street Partners – BPF) has several underlying funds and Verus aggregates this data in our reporting. During this aggregation, the cumulative distributions of the fund (\$103M) were mistakenly input as the NAV (\$468k). This mistake caused the first quarter total fund returns to be reported as 4.3% and have now been revised to 3.3%.

We are implementing an additional data review procedure to ensure this does not happen in the future. The changes are also summarized below:

	1Q	1 Yr.	3 Yrs.	5 Yrs.	10 Yrs.	2023	2022	2021	2020
Total Fund - as reported	4.3	10.7	4.0	6.4	6.3	9.0	-10.6	13.9	9.2
Total Fund - corrected	3.3	9.7	3.7	6.2	6.2	9.0	-10.6	13.9	9.2
Policy Index - as reported	3.6	10.3	5.2	7.8	7.2	9.9	-8.4	15.3	10.8
Policy Index - corrected	2.6	9.2	4.9	7.6	7.0	9.9	-8.4	15.3	10.8
Implementation Benchmark - as reported	3.4	9.7	4.4	6.4	6.5	9.0	-8.7	14.2	8.7
Implementation Benchmark - corrected	2.3	8.6	4.0	6.2	6.4	9.0	-8.7	14.2	8.7
Total Private Equity - as reported	8.0	8.0	15.6	14.7	12.6	-1.0	-0.5	60.4	8.7
Total Private Equity - corrected	0.2	0.2	12.7	13.0	11.7	-1.0	-0.5	60.4	8.7

Past performance is no guarantee of future results. This document is provided for informational purposes only and is directed to institutional clients and eligible institutional counterparties only and is not intended for retail investors. Nothing herein constitutes investment, legal, accounting or tax investment vehicle or any trading strategy. This document may include or imply estimates, outlooks, projections and other “forward-looking statements.” No assurance can be given that future results described or implied by any forward-looking information will be achieved. Investing entails risks, including possible loss of principal.
Verus – also known as Verus Advisory™

Meeting Date
08/28/2024
Agenda Item
#6a.



**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**



PERIOD ENDING: JUNE 30, 2024

Investment Performance Review for

Contra Costa County Employees' Retirement Association

Table of contents



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Investment Landscape

TAB I

Investment Performance
Review

TAB II

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A decorative overlay consisting of a grid of interconnected triangles in various shades of blue and green, with some triangles filled with solid colors and others as outlines. A prominent white triangle is positioned to the left of the main text.

**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**

**3RD QUARTER 2024
Investment Landscape**

Verus business update

Since our last Investment Landscape webinar:

- Verus hired Dillon Kuk, Kacey Franich, Nico Caballero, and Sarah Khan as Performance Analysts, and Margie Lane as a Marketing Associate, in our Seattle office.
- The Los Angeles office relocated to N. Continental Blvd., 2 miles from our prior location.
- Verus hired Dawit Ewnetu as a Summer Intern in our Seattle office, in partnership with Rainier Scholars.
- Recent research, found at verusinvestments.com/research:
 - ***2024 Real Assets Outlook***
 - ***Mid-year Capital Markets Update***
 - ***Is the U.S. heading for a recession?***

Table of contents



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Economic environment 7

Fixed income rates & credit 19

Equity 25

Other assets 35

Appendix 37

Recent Verus research

Visit: verusinvestments.com/research

Thought leadership

REAL ASSETS OUTLOOK

As inflation has moderated and interest rates have stabilized, the market has been eager for the Fed to pivot towards a looser monetary policy. Asset prices are broadly rich, pricing in an economic soft landing and a couple rate cuts by year-end. While we are less bearish this year across real assets, given more positive signs of a soft landing, rich asset valuations temper our enthusiasm.

MID-YEAR CAPITAL MARKETS UPDATE

Equity forecasts fell across U.S., International, and Emerging markets. The cash forecast decreased slightly. High cash rates have mixed impacts, while model changes mitigated some effects. Falling yields and spread compression lowered fixed income forecasts, especially U.S. Treasury and emerging market debt. Real Estate forecasts increased due to rising capitalization rates and higher U.S. real GDP expectations.

IS THE U.S. HEADING FOR A RECESSION?

Many market strategies have been predicting a U.S. recession since the start of 2023. This short video presents our team's analysis of key indicators to determine whether a recession is likely in the coming year.

2nd quarter summary

THE ECONOMY

- U.S. inflation (CPI) fell to 3.0% YoY in June, following two consecutive months of flat prices (0.0% in May and -0.1% in June). The report reflected a slowing in shelter costs, which have been a primary hurdle for inflation reaching the 2% Federal Reserve target. If the slowing of shelter prices persists, inflation could fall rather quickly. Core inflation (ex-Food & Energy) was 3.3% year-over-year in June. **p. 9**
- The U.S. labor market remains strong, but recently some cracks of weakness have appeared. Unemployment jumped unexpectedly to 4.1% in June—a level not seen since 2021. Jobless claims have also been rising. This negative data could prove to be a continuation of the trend towards a more balanced labor market, though it will be important to monitor conditions closely. **p. 12**

EQUITY

- Emerging market equities outperformed during Q2, up +5.0%, despite significant ongoing underperformance of China. U.S. equities were close behind (S&P 500 +4.3%), setting a new all-time-high price level. In contrast, international developed equities were flat. **p. 27**
- Small cap and value style investing underperformed. Small cap lagged large cap by -6.9% while value underperformed growth by -10.5%. The style premia performance gap was even wider over the past year, as small cap underperformed large cap by -13.8% and value underperformed growth by -20.4%. **p. 29**

FIXED INCOME

- The 10-year U.S. Treasury yield increased slightly from 4.20% to 4.36% during Q2, resulting in near-zero or negative performance for high quality fixed income of a longer duration profile. **p. 21**
- Default activity in loans and credit reached a one-year low at the end of Q2. However, the gap between bank loan and high yield default activity has increased to a 10-year high, with total volume of distressed or defaults comprised of loans (80%) to bonds (20%) on pace for a record high. **p. 20**

ASSET ALLOCATION ISSUES

- Many goods and services prices have been falling in areas such as autos, energy, and transportation. This trend has occurred alongside signs of weakness in the job market and consumer spending, and has reignited hopes for lower inflation, which would ease pressures on household budgets and allow for interest rate cuts. It is possible that an economic *soft landing* may be occurring, which would suggest lower rates and further gains for risk assets. **p. 9**
- Market-priced volatility (Cboe VIX Index) remained very low, ending at 12.4% in June. This has raised eyebrows, given a variety of risks that domestic equities face, but low volatility is typical of strongly up trending equity environments. Markets continue to present a unique environment of low equity volatility but high fixed income volatility. This gap has closed somewhat, as bond market implied volatility has receded. **p. 34**

Risk assets delivered moderate returns in Q2, while fixed income was flat to mildly positive, depending on duration profile.

A *soft landing* appears possible for the U.S. economy.

What drove the market in Q2?

“The US Economy is showing clear signs of a slowdown”

Employment change, Non-farm payrolls

January	February	March	April	May	June
256k	236k	240k	108k	218k	206k

Article Source: Bloomberg, July 8th, 2024

“Earnings bolster US stocks, but crucial inflation report looms”

S&P 500 EPS Growth, Year-over-year

Q4 2022	Q1 2023	Q2 2023	Q3 2023	Q4 2023	Q1 2024
+4.3%	-1.5%	-2.0%	-5.0%	+4.1%	+6.9%

Article Source: Reuters, May 14th, 2024

“Slowing U.S. inflation fuels expectations of interest rate cuts”

Consumer Price Index, Year-over-year change

Jan 23	Feb 24	March 24	April 24	May 24	June 24
3.1%	3.2%	3.5%	3.4%	3.3%	3.0%

Article Source: Wall Street Journal, June 28th, 2024

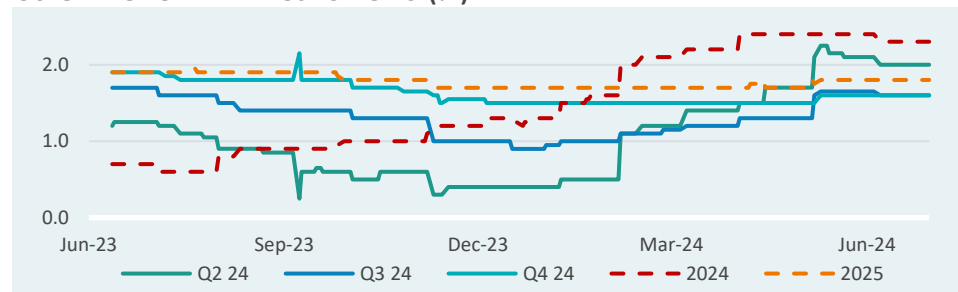
“European Central Bank cuts interest rates for first time in 5 years”

ECB Overnight Rate, Actual and Implied

March 24	June 24	Sep 24 (E)	Dec 24 (E)	March 25 (E)	June 25 (E)
4.0%	3.75%	3.45%	3.20%	2.98%	2.75%

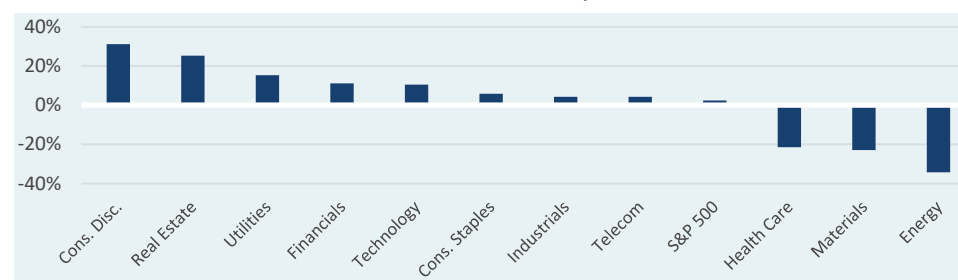
Article Source: Financial Times, June 6th, 2024

US GDP GROWTH PROJECTIONS (%)



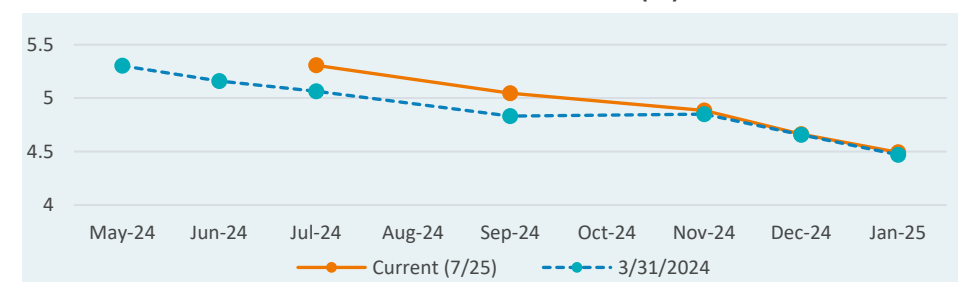
Source: Bloomberg, as of 6/30/24

S&P 500 TRAILING 12M EARNINGS GROWTH, YOY



Source: Bloomberg, as of 6/30/24

U.S. MARKET IMPLIED FUTURE INTEREST RATES (%)



Source: Bloomberg, as of 7/25/24

Economic environment

U.S. economics summary

- Real GDP growth was substantially higher than expected in Q2, rising 2.8% quarter-over-quarter (3.1% year-over-year), beating economist forecasts of a 2.0% increase on the quarter. The GDP release reflected an increase in consumer spending, as well as increased investment in inventories and capital goods. Residential fixed investment detracted from GDP growth, as did the trade deficit.
- U.S. inflation (CPI) fell to 3.0% YoY in June, following two consecutive months of flat prices (0.0% in May and -0.1% in June). The report reflected a slowing in shelter costs, which have been a primary hurdle for inflation reaching the 2% Federal Reserve target. If a slowing of shelter prices persists, inflation could fall rather quickly. Core inflation (e.g., Food & Energy) was 3.3% year-over-year in June.
- Inflation adjusted personal spending growth was 2.6% year-over-year in June, remaining in a 2-3% range for the past two years and suggesting more

moderate economic expansion in line with pre-pandemic conditions. Purchases of goods have been weaker than services, perhaps partly a reflection of higher interest rates, which impact the affordability of big-ticket items such as autos and homes.

- The U.S. labor market remains strong, but in recent months some cracks of weakness have appeared. Unemployment jumped unexpectedly to 4.1% in June—a level not seen since 2021. Jobless claims have also been rising. This negative data could prove to be a continuation of the trend towards a more balanced labor market.
- Consumer sentiment deteriorated in Q2, moving back towards the lows of 2022. The University of Michigan Consumer Sentiment survey dropped from 79.4 to 66.4 on concerns over high goods and services prices and the impacts of inflation on personal income. Household expectations for lower interest rates in the future helped to buoy the index somewhat.

	Most Recent	12 Months Prior
Real GDP (YoY)	3.1% 6/30/24	2.4% 6/30/23
Inflation (CPI YoY, Core)	3.3% 6/30/24	3.1% 6/30/23
Expected Inflation (5yr-5yr forward)	2.3% 6/30/24	2.3% 6/30/23
Fed Funds Target Range	5.25–5.50% 6/30/24	5.00–5.25% 6/30/23
10-Year Rate	4.20% 6/30/24	3.80% 6/30/23
U-3 Unemployment	4.1% 6/30/24	3.6% 6/30/23
U-6 Unemployment	7.4% 6/30/24	6.9% 6/30/23

Inflation

U.S. inflation (CPI) fell to 3.0% year-over-year in June, following two consecutive months of flat prices (0.0% in May and -0.1% in June). The June report was the first which reflected slower shelter cost increases, which have been a large hurdle for inflation falling to the Fed's 2% target. If this slowing in shelter prices persists, inflation could fall much more quickly to the Fed's 2% target. Core inflation (ex-Food & Energy) dropped to 3.3% year-over-year in June. Many goods and services prices have been *falling* in recent months in areas such as automobiles, energy, and transportation services. This trend has occurred alongside

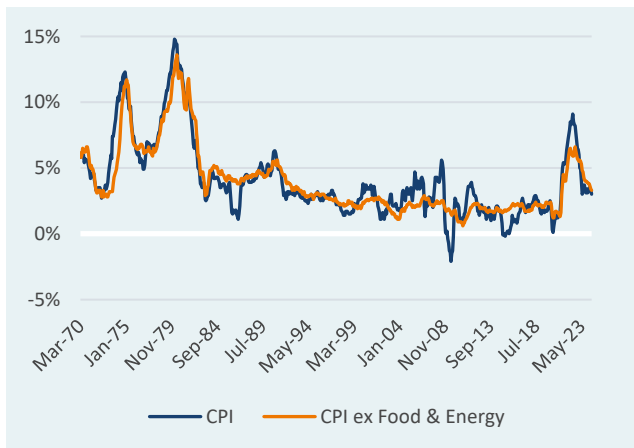
signs of weakness in the job market and other areas of the economy, and has reignited hopes for inflation to normalize, easing pressures on household budgets and allowing for interest rate cuts.

Investors have been watching monthly inflation reports very closely for potential signs of the future inflation path. If monthly inflation reports come in at a 0.2% to 0.3%, we can expect inflation to remain around today's level. However, if additional inflation reports come in at 0.1% or lower, inflation would fall rather quickly to 2%.

Inflation has fluctuated between 3-3.5% over the past year.

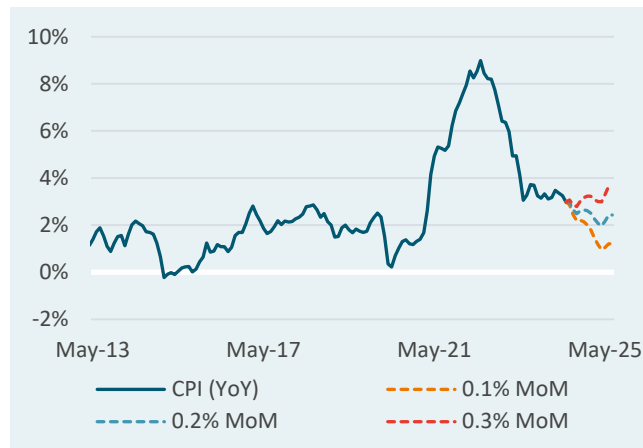
Shelter will likely need to slow further for inflation to reach 2%.

U.S. CPI (YOY)



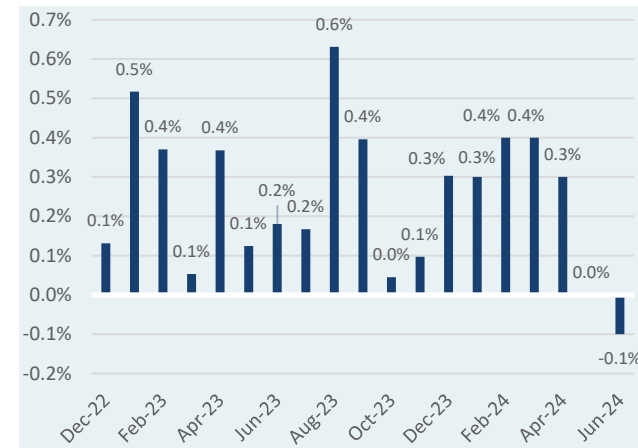
Source: BLS, as of 6/30/24

POTENTIAL INFLATION PATHS



Source: FRED, Verus, of 6/30/24

MONTHLY PRICE MOVEMENT (CPI)



Source: BLS, as of 6/30/24

GDP growth

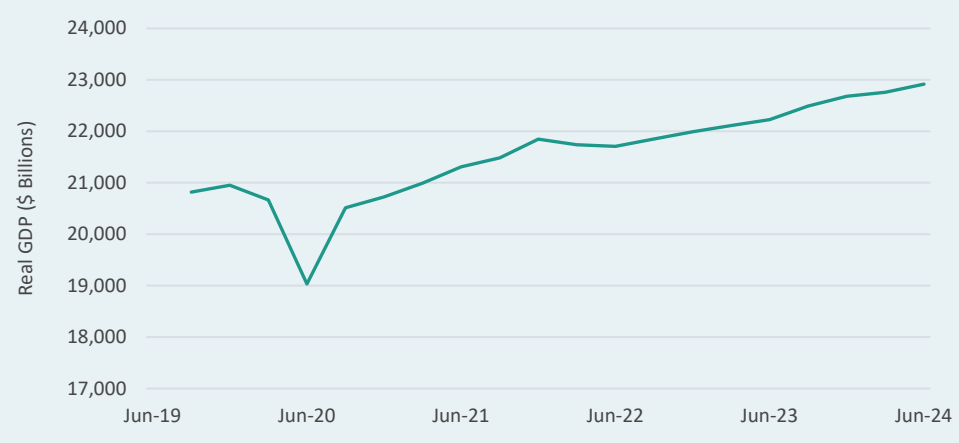
Real GDP growth was substantially higher than expected in Q2, rising 2.8% quarter-over-quarter (3.1% year-over-year), beating economist forecasts of a 2.0% increase on the quarter. The GDP release reflected an increase in consumer spending, as well as increased investment in inventories and capital goods. Residential fixed investment detracted from GDP growth, as did the trade deficit.

While consumption increased this quarter, economists are wary of the sustainability of consumer spending growth. Much of the increase in spending was concentrated in necessities, and with a cooling labor market and low savings rate, consumer spending could slow if these issues persist.

Recent economic data seems to reaffirm the idea that the U.S. economy is moving 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 in the labor market from *extreme tightness* to *relatively strong*, but not a move (yet) towards anything that suggests recession.

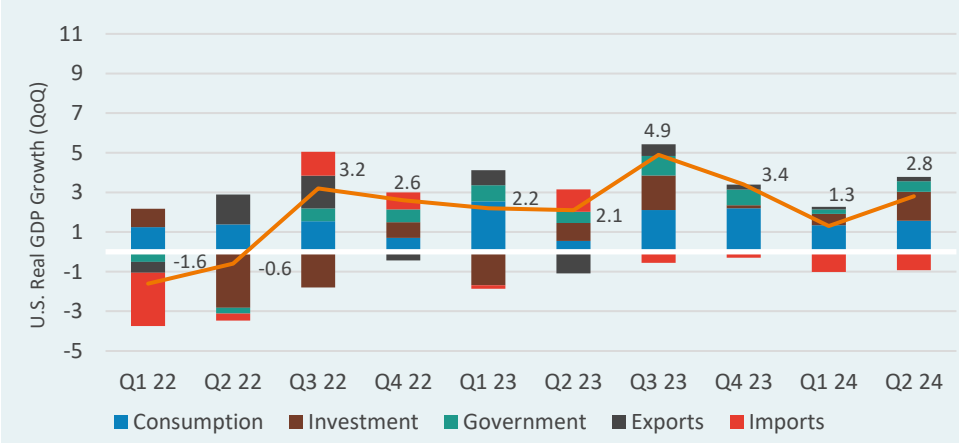
U.S. growth picked up in Q2, but concerns remain regarding the strength of the consumer.

U.S. REAL GROSS DOMESTIC PRODUCT



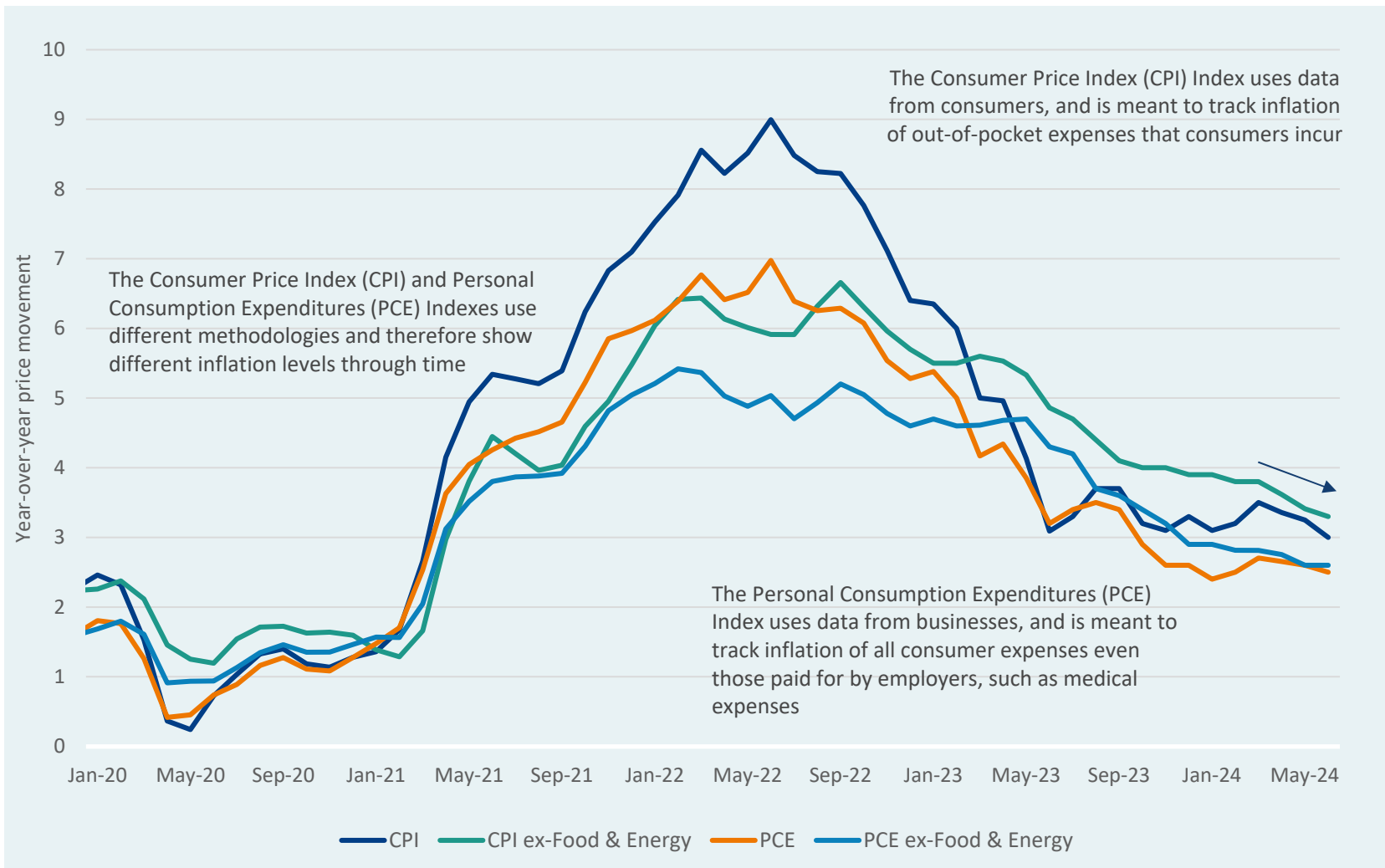
Source: FRED, as of 6/30/24

U.S. REAL GDP COMPONENTS (QOQ)



Source: FRED, as of 6/30/24

Inflation conditions are normalizing



Moderating price pressures in recent months have helped to push year-over-year CPI inflation to 3.0%.

Source: FRED, Verus, as of 6/30/24

Labor market

The U.S. labor market remains strong relative to history, but in recent months some cracks of weakness have appeared. The rate of unemployment jumped unexpectedly to 4.1% in June—a level not seen since 2021. Jobless claims have also been rising throughout the year. This negative data could prove to be a continuation of the trend towards a more balanced labor market, though it will be important to monitor conditions closely.

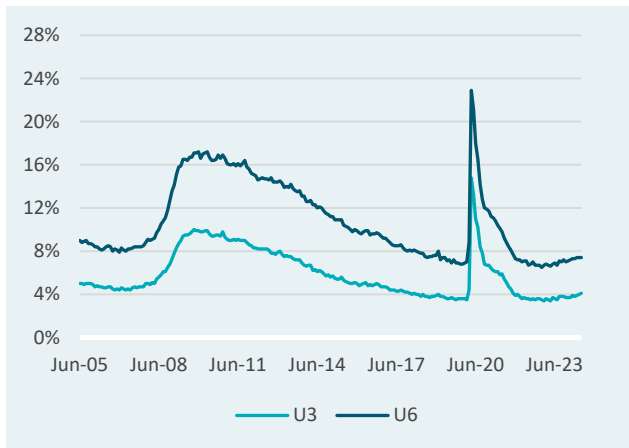
Average hourly earnings growth was 3.9% year-over-year in June, slightly outpacing the rate of inflation. As inflation has fallen, wage growth has also slowed, likely a reflection of a

more normal balance between jobs available and workers available, as well as less urgency for cost-of-living adjustments.

In many past instances of increasing unemployment, job losses were quick and accelerating, which often preceded recession. In contrast, more recently the rate of unemployment has more gradually moved up. Recessions have rarely occurred without a sharper downtrend in employment, which given current conditions might suggest we are seeing a moderation of economic growth rather than a move towards something worse.

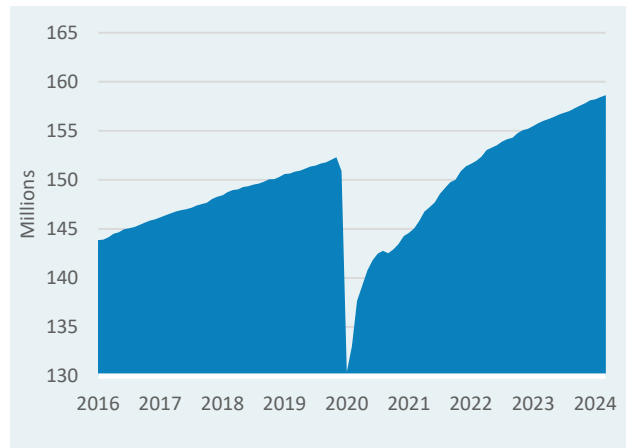
The labor market remains strong by historical standards, though conditions have moved in a weaker direction.

U.S. UNEMPLOYMENT



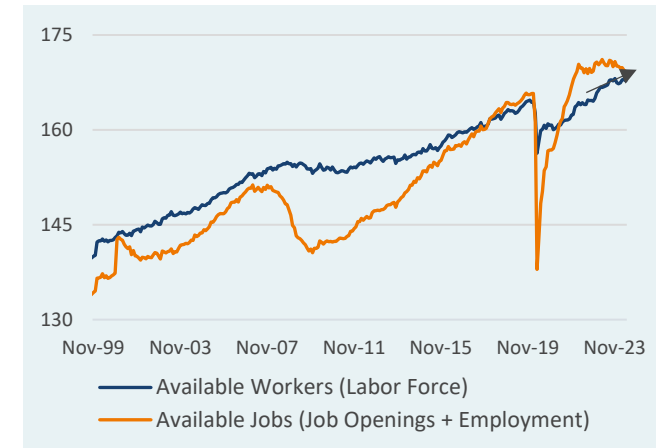
Source: FRED, as of 6/30/24

TOTAL U.S. EMPLOYMENT



Source: FRED, as of 6/30/24

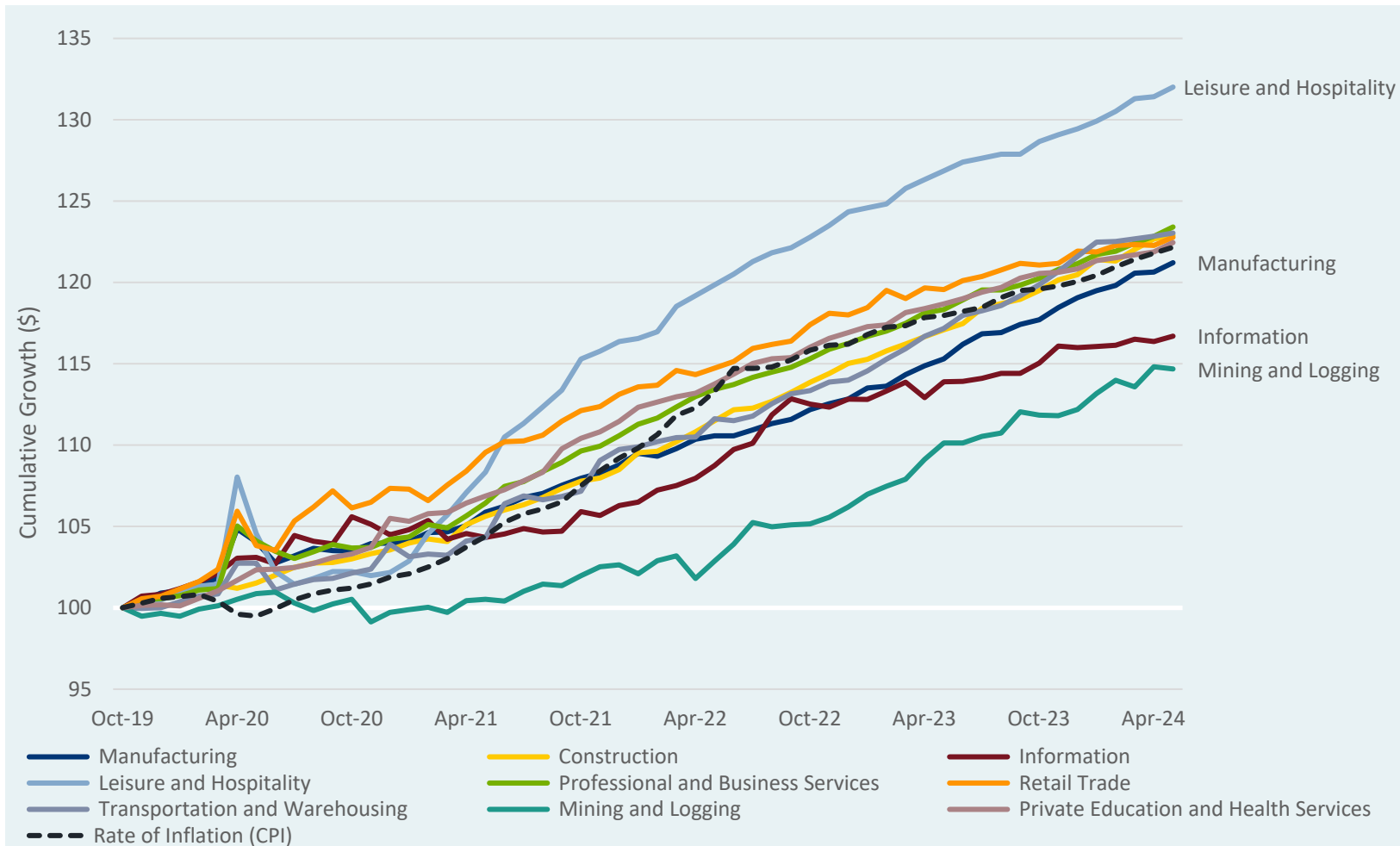
WORKERS AVAILABLE VS. AVAILABLE JOBS



Source: BLS, Verus, as of 5/31/24

Wage gains vs. rate of inflation

AVERAGE HOURLY EARNINGS



Over the past few years, inflation has eaten into wallets and resulted in shrinking pay for many types of work.

If inflation were to move higher, many households do not have much room to maneuver financially.

Source: FRED, Verus, as of 6/30/24

The consumer

Inflation adjusted personal spending growth was 2.6% year-over-year in June, and has remained in a 2-3% range for the past two years. This rate indicates moderate economic expansion in line with pre-pandemic rates of growth. Purchases of goods have been much weaker than purchases of services, perhaps partly a reflection of higher interest rates which have impacted the affordability of big ticket items such as automobiles and homes.

Many Americans continue to spend rather freely despite higher costs of goods and services taking up a greater portion of take-home income,

and extreme discontent around inflation. However, certain non-essential spending such as for vacations has been robust. Total traveler volumes at U.S. airports in late June reached a record level.

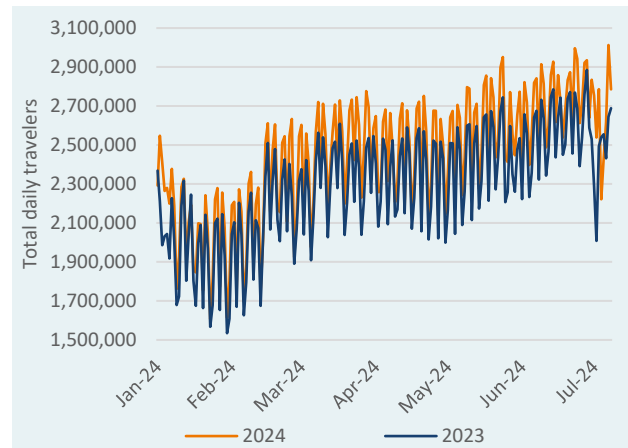
Personal savings rates improved slightly over the quarter, from 3.5% to 3.9%. It seems reasonable to assume that savings rates should improve if wage gains continue to outpace the rate of inflation, all else equal.

REAL PERSONAL SPENDING



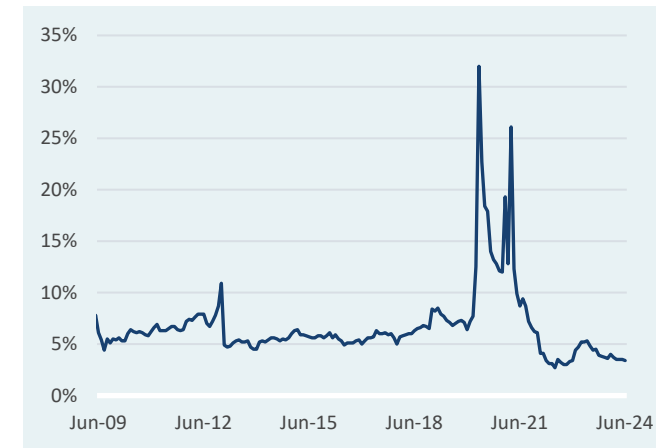
Source: FRED, as of 6/30/24

U.S. TSA AIRPORT ACTIVITY



Source: FRED, as of 7/8/24

PERSONAL SAVINGS RATE



Source: FRED, as of 6/30/24

Sentiment

Consumer sentiment deteriorated over the quarter, moving back towards the lows of 2022. The University of Michigan Consumer Sentiment survey dropped from 79.4 to 66.4 on concerns over high goods and services prices and impacts of inflation on personal income. Household expectations for lower interest rates in the future helped to buoy the index somewhat.

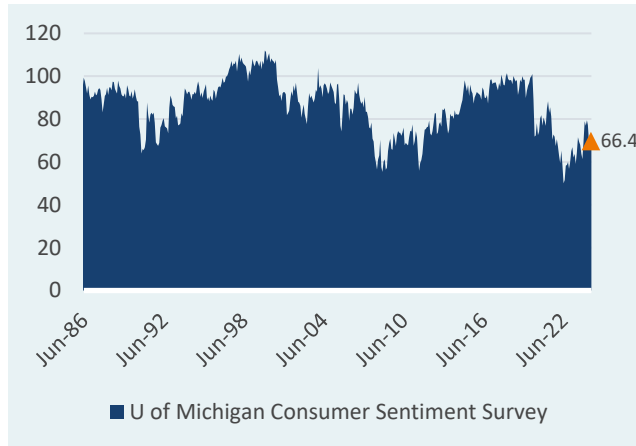
Poor consumer sentiment and the discontent around higher prices can only be partially captured by the rate of inflation. Higher prices of goods and services make life more difficult, but the jump in interest rates further exacerbated the problem, in some cases substantially. The total monthly loan cost of a car or a home has rocketed upward with increased prices for those items

and much higher interest costs baked into payments. For example, if a family had purchased an average home in 2021, the monthly payment would have been \$1,206. In early 2024, if the same family purchased an average home, the monthly payment for that home would be \$2,209 – an 83% increase!

The NFIB Small Business Optimism index was flat during the quarter, continuing to show an extremely poor reading. Inflation remains the top business concern. NFIB Chief Economist Bill Dunkelberg explained that “Increasing compensation costs has led to higher prices all around. Meanwhile, no relief from inflation is in sight for small business owners as they prepare for the uncertain months ahead.”

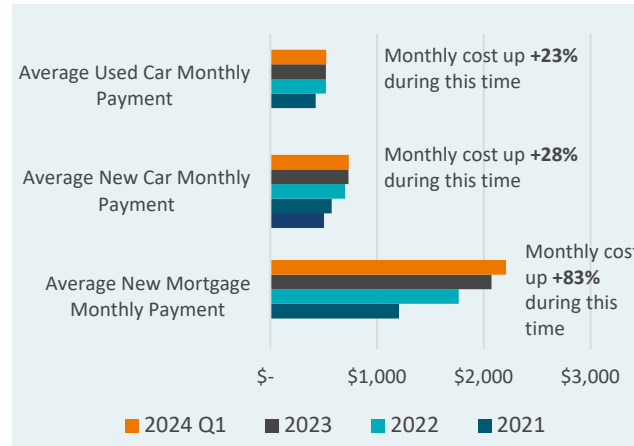
Consumer sentiment weakened during Q2, while small business optimism remained depressed.

CONSUMER SENTIMENT



Source: University of Michigan, as of 6/30/24

INFLATION EATING UP BUDGETS



Source: Edmunds, Verus, as of April 2024

NFIB SMALL BUSINESS SENTIMENT



Source: NFIB, as of 6/30/24

Housing

Imbalances in the U.S. housing market appear to be here to stay, at least for a while, as sharply lower home prices and/or lower mortgage rates (the conditions needed for reasonable affordability) seem unlikely. Affordability is extremely difficult for new homebuyers, currently near record lows, and has worsened as the average home price was up +5.8% year-over-year in May. The other saving grace for potential homebuyers would be lower mortgage rates, but Federal Reserve rate cuts are expected to be moderate and may not have a large impact on the longer end of the yield curve. A driver of ultra-low mortgage rates during the pandemic was government quantitative easing, much of which was focused on mortgage debt and therefore pushed mortgage interest rate spreads to unusually low levels. In short, mortgage rates may fall in the next few years but perhaps only mildly.

Fortunately, rent price growth has slowed considerably, up only 0.8% year-over-year in May, according to Redfin. As the cost of renting versus owning has dramatically shifted, a strong surge in activity towards renting and away from homeownership would not be surprising in the near future.

Depressed home sales activity reflects extreme unaffordability. Monthly home sales are at levels similar to that which followed the 2008-2009 housing bubble. Prior to that crisis, the mid-1990s were the most recent time that compares to this level of sales activity. On the other hand, *new home sales* activity has been fairly robust, which may provide some incremental easing to home prices through increased supply.

30-YEAR MORTGAGE RATE (%)



Source: Freddie Mac, as of 6/30/24

EXISTING HOME SALES



Source: FRED, as of 6/30/24

HOUSING AFFORDABILITY



Source: FRED, as of 3/31/24 – Housing affordability is calculated as the cost of a median priced single-family home at the current mortgage rate, as a percentage of the median family income

International economics summary

- Global economic data continues to paint a picture of slower but positive growth—a move back to pre-pandemic rates of expansion in the United States and across emerging markets, but with concerning weakness in Europe and Japan. Moderating conditions have allowed for rate cut signaling from central banks, which will likely provide an incremental boost to activity in the near-term.
- Inflation has fallen to a 2-3% range for most developed countries. Big inflation trends have tended historically to rhyme across the developed world, as crises often impact prices of global goods and services in similar ways. Recently, pandemic effects such as global supply chain issues, government stimulus, and higher energy prices had resulted in a similar ebb and flow to prices across marketplaces.
- India’s economy continues to face uncertainty for this upcoming quarter.

In the last five out of six years, India’s real GDP growth rate has fallen short of the Economic Survey projections, but they have seen growth in private investments and infrastructure spending. Annual retail inflation rose to 5.1% in June compared to 4.8% from the previous month, primarily due to food prices. The Reserve Bank of India paused rate hikes, with the goal of not obstructing growth, and bringing inflation to its target rate of 4%.

- China year-over-year inflation was just 0.2% in June, as the country struggles with deflationary pressures, given a real estate slump, a weak job market, and generally poor economic conditions. According to some reports, excess manufacturing capacity and government incentives for overinvestment have created a situation where supply is outstripping demand. A declining population significantly adds to uncertainty around these issues.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	3.1% 6/30/24	3.0% 6/30/24	4.1% 6/30/24
Eurozone	0.4% 3/31/24	2.5% 6/30/24	6.4% 5/31/24
Japan	(0.7%) 3/31/24	2.3% 6/30/24	2.8% 5/31/24
BRICS Nations	5.3% 3/31/24	1.9% 6/30/24	4.8% 12/31/22
Brazil	2.5% 3/31/24	4.2% 6/30/24	7.1% 5/31/24
Russia	5.4% 3/31/24	8.6% 6/30/24	2.6% 5/31/24
India	7.8% 3/31/24	5.1% 6/30/24	9.2% 6/30/24
China	4.7% 6/30/24	0.2% 6/30/24	5.0% 6/30/24

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

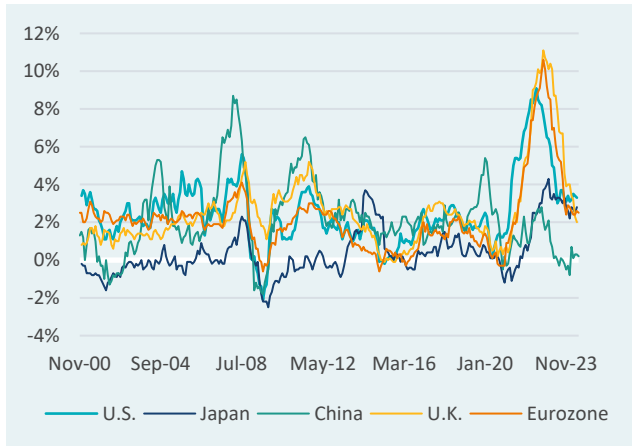
The global narrative appears to remain intact—that many economies are set to slow in 2024 but will likely avoid recession. The United States leads the developed world in growth with a 3.1% YoY real rate of GDP expansion. Europe and Japan have demonstrated anemic economic growth.

Inflation moderation continues, and in much of the world has normalized. Big inflation trends have tended historically to rhyme across developed countries, as crises often impact prices of global goods and services in similar ways. This seems to be at least partially the case recently, as pandemic effects such as global supply chain issues, government stimulus, and higher energy prices have followed global growth outpacing

expectations. This resulted in a similar ebb and flow in prices across most economies. If history is a guide, normal rates of inflation elsewhere may be a good sign for domestic inflation issues.

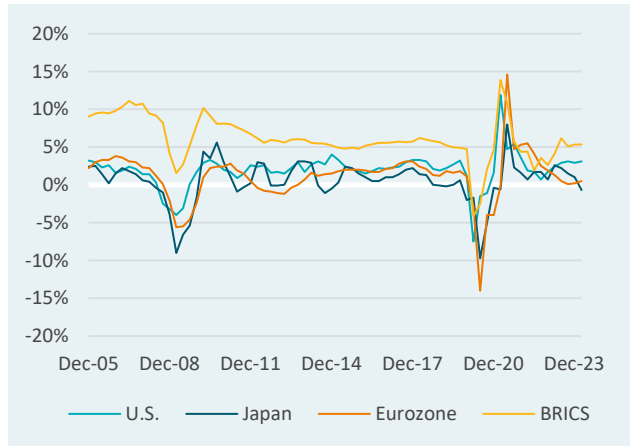
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INFLATION (CPI YEAR-OVER-YEAR)



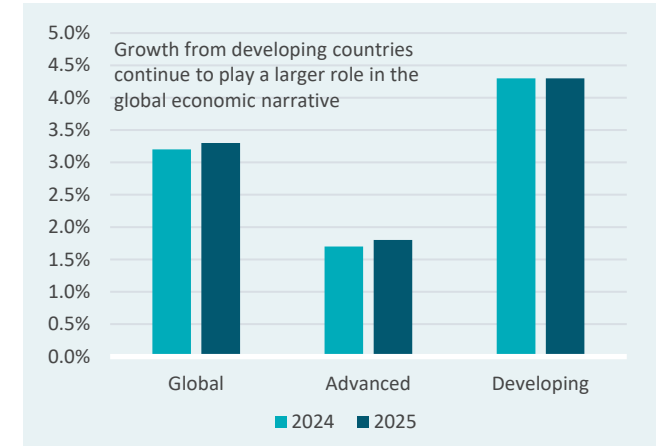
Source: Bloomberg, as of 6/30/24

REAL GDP GROWTH (YEAR-OVER-YEAR)



Source: Bloomberg, as of 6/30/24 – or most recent release

IMF JULY 2024 GDP FORECASTS



Source: IMF April World Economic Outlook, as of 7/17/24

Fixed income rates & credit

Fixed income environment

— The 10-year U.S. Treasury yield initially increased in Q2, rising from 4.20% to a peak of 4.70% before gradually falling to 4.36%, resulting in an overall increase in yields with a downward trend going into Q3. These movements resulted in near-zero performance for short to intermediate duration high quality fixed income and negative performance for longer duration.

— By comparison, most credit indices saw positive returns. High yield gained +1.1% (Bbg U.S. Corporate High Yield), while bank loans rose +1.9% (S&P/LSTA Leveraged Loan). Longer duration investment grade corporate bonds declined by -1.6% (Bloomberg U.S. Long Corporate Credit) as sensitivity to rising yields in April overwhelmed gradual returns in the latter half of the quarter. This reflects a continued concern in the market over inflation and higher-for-longer Fed policy.

— The U.S. yield curve, indicated by the 10-year minus the 2-year Treasury

yield, continues to remain inverted, marking over two years of continuous yield curve inversion (June 6th, 2022). The curve ended the quarter inverted by -35bps. While an inverted yield curve has been a common metric for predicting recessions, the recent continued economic resilience has increased public optimism of a potential soft-landing.

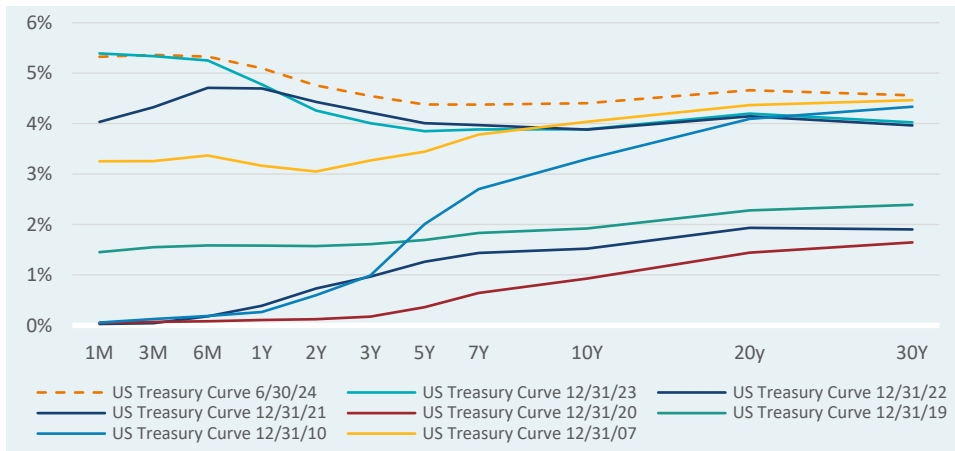
— Default activity in loans and credit reached a one-year low at the end of Q2. However, the gap between bank loan and high yield default activity has increased to a 10-year high, with total volume of distressed or defaults comprised of loans (80%) to bonds (20%) is on pace to be a record high proportion. During the period, a total of \$15.2 billion of bank loan and high yield bonds were impacted by default or distressed exchanges, down from \$20.6 billion in the prior quarter. Notably, default/distressed exchange volume averaged \$17.9 billion quarterly since 2020 and \$14 billion quarterly over the last 17.5 years.

	QTD Total Return	1 Year Total Return
Core Fixed Income (Bloomberg U.S. Aggregate)	0.1%	2.6%
Core Plus Fixed Income (Bloomberg U.S. Universal)	0.2%	3.5%
U.S. Treasuries (Bloomberg U.S. Treasury)	0.1%	1.5%
U.S. Treasuries: Long (Bloomberg U.S. Treasury 20+)	(2.2%)	(7.2%)
U.S. High Yield (Bloomberg U.S. Corporate HY)	1.1%	10.4%
Bank Loans (S&P/LSTA Leveraged Loan)	1.9%	11.1%
Emerging Market Debt Local (JPM GBI-EM Global Diversified)	-1.6%	0.7%
Emerging Market Debt Hard (JPM EMBI Global Diversified)	0.3%	9.2%
Mortgage-Backed Securities (Bloomberg MBS)	0.1%	2.1%

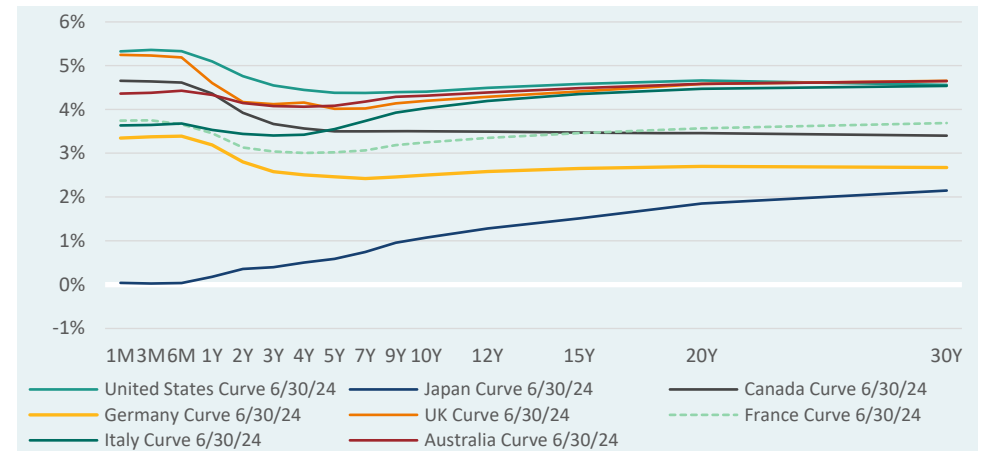
Source: Bloomberg, as of 6/30/24

Yield environment

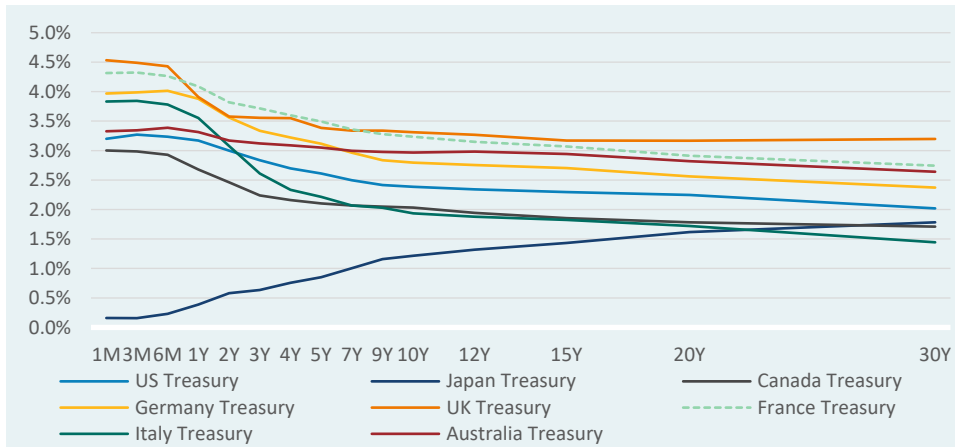
U.S. YIELD CURVE



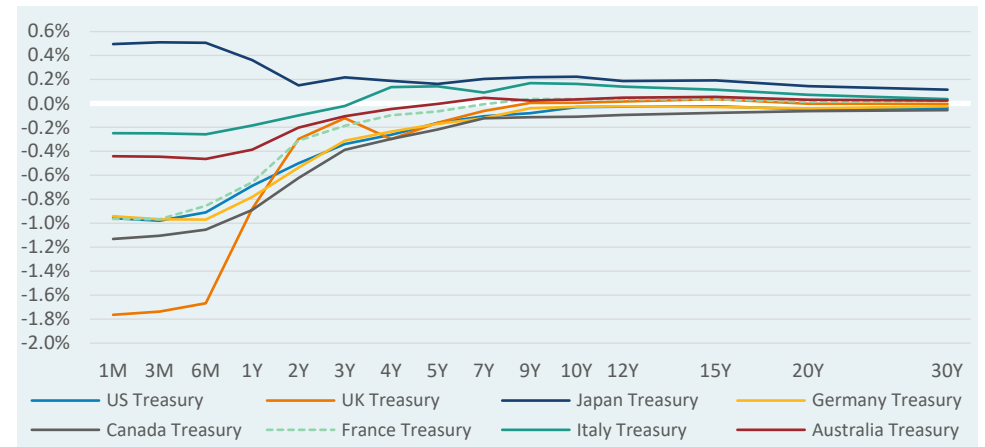
GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 6/30/24

Credit environment

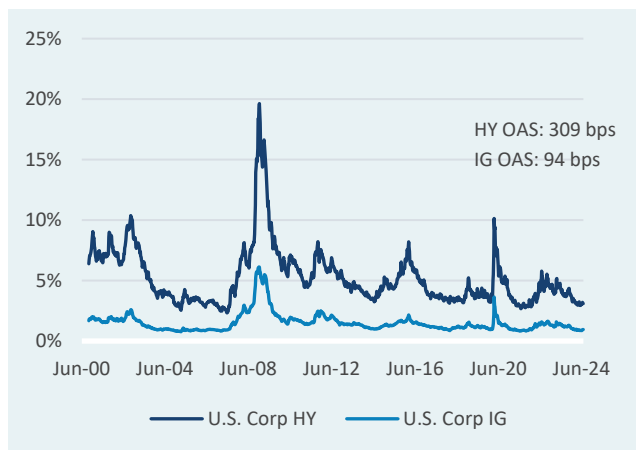
During the second quarter, credit markets delivered mostly positive returns with lower-quality credit such as high yield bonds and bank loans leading. Bank loans rose +1.9% (CS Leveraged Loans), while high yield bonds increased by +1.1% (Bbg U.S. Corporate High Yield). Longer duration investment grade corporate bonds (Bloomberg U.S. Long Corporate Credit) fell by -1.6% as concerns over rising interest rates and higher expected inflation acted as a headwind to performance.

Returns across credit ratings were broadly positive during Q2. Higher-quality BB-rated bonds returned +1.4% compared to +1.1% for B-rated, while non-distressed CCC's led with +2.0% returns. CCC-rated bonds including distressed lagged other credits with +0.2% returns. Higher-quality bank loans outperformed lower quality, with BB- and B- rated

loans returning +1.88% and +2.13%, while CCC-rated loans only returned +0.14%.

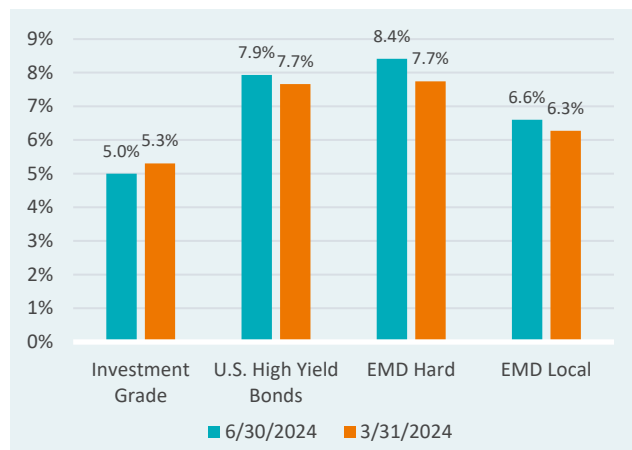
High quality credit spreads declined during the quarter while high yield spreads were mixed as recession concerns contended with further resilience in the corporate sector. Lower-quality high yield bond spreads rose by roughly 0.1% to 3.2%, while investment grade spreads continued to tighten by 0.3% to 0.9%. These trends continue to show spreads below long-term historical averages, suggesting that investors remain confident in the ability of most businesses to service debt. However, widening spreads and lower returns in CCC and distressed suggest that the highest risk credit sectors are beginning to show strain under the continued pressure of higher lending rates.

SPREADS



Source: Barclays, Bloomberg, as of 6/30/24

YIELD TO MATURITY



Source: Bloomberg, J.P. Morgan as of 6/30/24

CREDIT SPREAD (OAS)

Market	6/30/24	6/30/23
Long U.S. Corp	1.2%	1.5%
U.S. Inv Grade Corp	0.9%	1.2%
U.S. High Yield	3.1%	3.9%
U.S. Bank Loans*	3.9%	3.8%

Source: Barclays, Credit Suisse, Bloomberg, as of 6/30/24
*Discount margin (4-year life)

Default & issuance

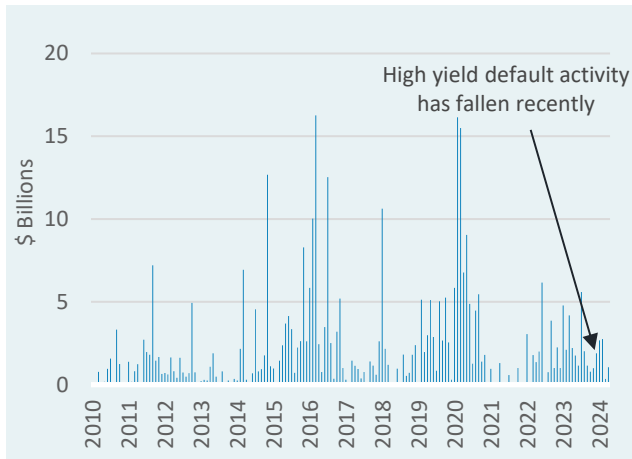
Default activity declined during the quarter as concerns around slowing economic growth abated. During the period, \$15 billion of bank loans and high yield bonds were affected by default or distressed exchanges, down from \$22 billion in the prior quarter. Year-to-date, 19 defaults and 23 distressed exchanges have occurred totaling more than \$37 billion, down roughly -14% from the same period last year.

The bank loan market has shown notable weakness compared to high yield bonds. Year-to-date, roughly 80%, or \$29.6 billion of loans, have either defaulted or resulted in distressed exchanges compared to \$7.5 billion for high yield bonds.

High yield bond default rates declined to roughly 1.8%, down from 2.7% a year ago, and are well below the long-term annual average of roughly 3.4%. High-yield default recovery rates ended the quarter at 38.8%, up significantly from 17.4% at the same time last year.

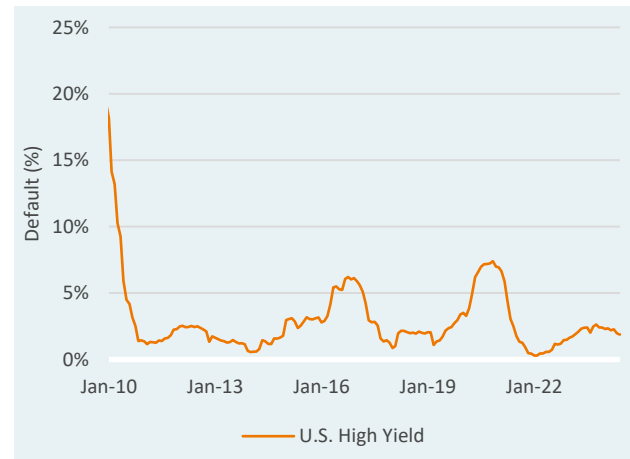
The issuance of investment grade credit declined significantly from the prior quarter, \$343 billion versus \$531 billion. Year-to-date issuance stands at \$874 billion, up 23% compared to last year at the same time. High yield bond issuance declined slightly to \$79.4 billion, down from \$86.6 billion during the previous quarter. Broadly, credit spreads remain near their recent lows, which despite the higher yield environment, allows companies to issue at more competitive rates.

U.S. HY MONTHLY DEFAULTS (PAR WEIGHTED)



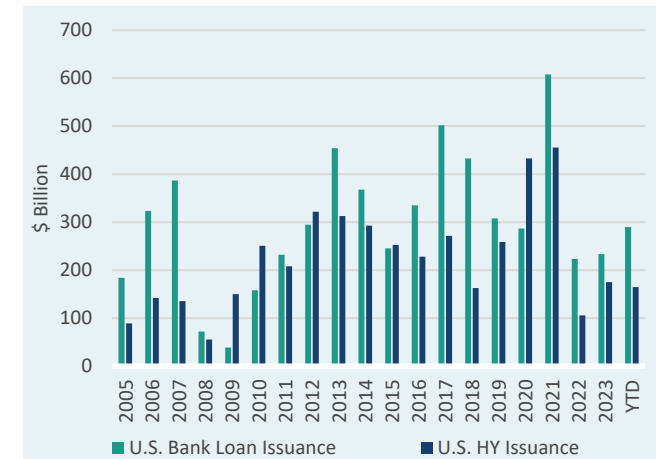
Source: BofA Merrill Lynch, as of 6/30/24

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



Source: BofA Merrill Lynch, as of 6/30/24 – par weighted

DEVELOPED MARKET ISSUANCE (\$ BILLIONS)



Source: BofA Merrill Lynch, all developed markets, as of 6/30/24

Credit hedge funds

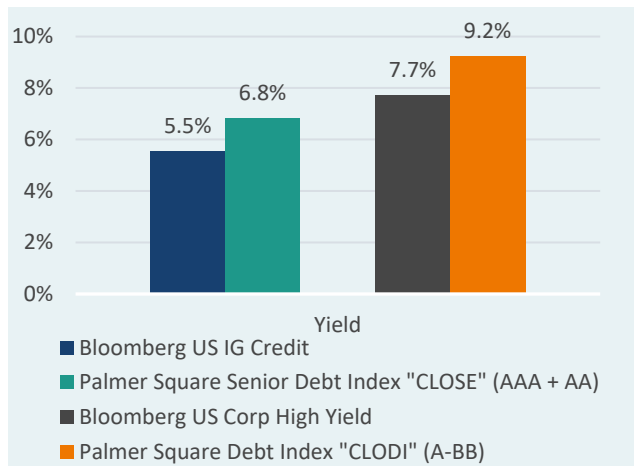
Credit hedge funds have outperformed high yield and leveraged loans through 2Q 2024, benefiting from high total yields and low duration.

Even though headline default numbers imply a benign opportunity set, according to JP Morgan, although default volume is lower year over year, the volume of distressed exchanges is already the third highest annual total since at least 2008. Additionally, the volume of Loan distressed transactions YTD is already the largest annual total on record for loans. Credit hedge funds are a natural participant in these types of transactions and are finding no shortage of actionable ideas even as broad markets are at or near highs.

Hedge funds focused on structured credit continue to take advantage of excess yield in CLO and other securitized markets. In the CLO market, an index of AAA and AA tranches (as proxied by the Palmer Square Indexes) are offering 1.3% excess yield over US Investment Grade Credit and A, BBB, and BB tranches are yielding 1.5% more than the Bloomberg US High Yield index.

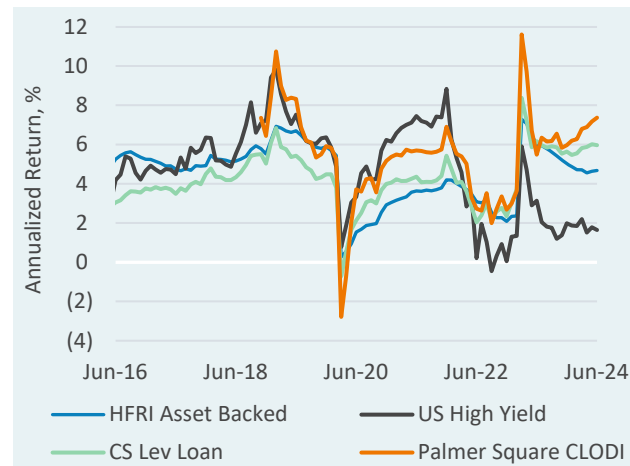
Distressed funds should continue to benefit from elevated levels of capital market activity in credit markets, with strong issuance in both HY and Loan markets set against a backdrop of tight credit spreads and low defaults.

CLO VS CORPORATE BOND YIELDS AS OF JUNE 30



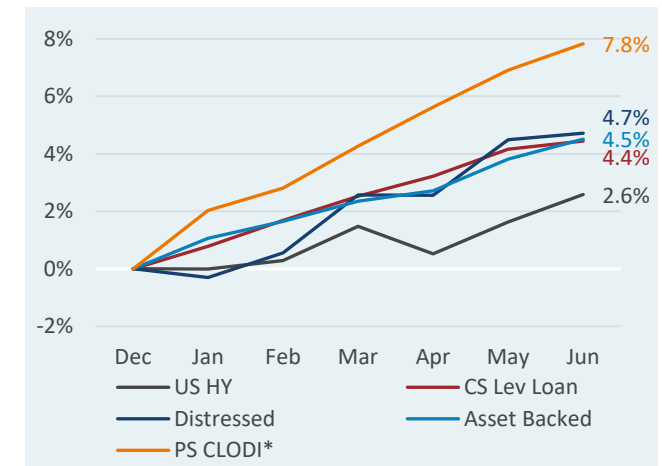
Source: MPI, Bloomberg, Palmer Square. As of 6/30/2024

3 YEAR ROLLING RETURN



Source: CS, HFR, Bloomberg, Palmer Square, MPI

YTD RETURN



Source: Bloomberg, Palmer Square, HFR, MPI

Equity

Equity environment

- Emerging market equities outperformed during Q2, up +5.0% (MSCI Emerging Markets), despite ongoing poor returns from China. U.S. equities were close behind (S&P 500 +4.3%), setting a new all-time-high price level. In contrast, international developed equities were relatively rangebound (MSCI EAFE -0.4%).
- Blended S&P 500 year-over-year Q2 earnings growth was +9.3% as of July 12th. If total reported earnings growth ends at this +9.3% rate, it would mark the largest year-over-year earnings growth rate since Q1 of 2022.
- The U.S. dollar rose moderately in value during Q2, resulting in losses for U.S. investors with unhedged foreign currency exposure. Given that the Federal Reserve is expected to engage in similar rate cuts as other developed economies, it is unclear the extent to which the global rate cutting path will impact relative currency

valuations. Unexpected central bank actions will likely have the greatest directional impact in the future.

- Small cap and value style investing drastically underperformed during Q1. Small cap lagged large cap by -6.9% (Russell 2000 -3.3% vs. Russell 1000 +3.6%), while value underperformed growth by -10.5% (Russell 1000 Value -2.2% vs. Russell 1000 Growth +8.3%). The style premia performance gap was even wider over the last year, as small cap underperformed large cap by -13.8% and value underperformed growth by -20.4%.
- Markets continue to present a unique environment of low equity volatility but high fixed income volatility. This gap has closed somewhat, as bond market implied volatility has moved a bit back towards normal levels since reaching a nearly all-time high 2023.

	QTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)
U.S. Large Cap (S&P 500)	4.3%		24.6%	
U.S. Small Cap (Russell 2000)	(3.3%)		10.1%	
U.S. Equity (Russell 3000)	3.2%		23.1%	
U.S. Large Value (Russell 1000 Value)	(2.2%)		13.1%	
US Large Growth (Russell 1000 Growth)	8.3%		33.5%	
Global Equity (MSCI ACWI)	2.9%	3.5%	19.4%	21.6%
International Large (MSCI EAFE)	(0.4%)	1.7%	11.5%	18.5%
Eurozone (EURO STOXX 50)	(2.8%)	(1.7%)	12.0%	16.3%
U.K. (FTSE 100)	3.8%	3.8%	12.1%	13.2%
Japan (TOPIX)	(4.3%)	3.0%	12.7%	32.5%
Emerging Markets (MSCI Emerging Markets)	5.0%	6.3%	12.5%	15.8%

Source: Russell Investments, MSCI, STOXX, FTSE, JPX, as of 6/30/24

Domestic equity

U.S. equities further outperformed international developed equities, but lagged emerging market shares, with the S&P 500 finishing up +4.3% during the quarter. The artificial intelligence boom provided a tailwind to earnings of chip manufacturers and has likely helped to lift valuations more broadly. Signs of cooling in the labor market, as well as surprisingly weak inflation figures, helped reignite investor hopes for an economic *soft landing* and interest rate cuts.

Blended S&P 500 year-over-year Q2 earnings growth was +9.3% as of July 12th. If total reported earnings growth ends at this +9.3% rate, it would mark the largest year-over-year earnings growth rate since Q1 of 2022. Communication Services (+18.4%) and Information Technology

(+16.4%) were the earnings leaders, while Materials (-11.8%) and Industrials (-3.7%) lagged.

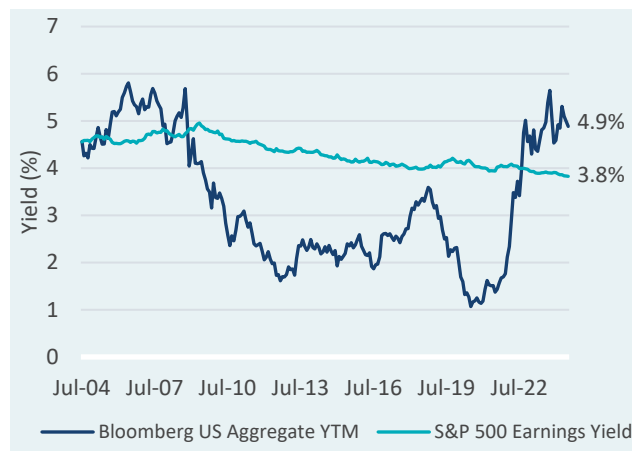
Strong price gains have moved valuations towards the richer side of the historical range. This effect, alongside higher interest rates and more attractive bond yields, has resulted in a regime shift regarding the attractiveness of equity and fixed income. Expensive equity prices have pushed total U.S. equity yield to below 4%, at a time when holding cash yields materially more than 5% and core fixed income yields 5%. This new regime is captured in institutional capital market assumptions which now tend to reflect mild future domestic equity returns and robust fixed income returns.

S&P 500 PRICE INDEX



Source: Bloomberg, as of 6/30/24

RELATIVE YIELD: EQUITY VS FIXED INCOME



Source: Bloomberg, Standard & Poor's, Verus, as of 6/30/24

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



Source: Bloomberg, Factset, Verus, as of 7/19/24

Domestic equity size & style

Small cap and value style investing drastically underperformed during Q1. Small cap lagged large cap by -6.9% (Russell 2000 -3.3% vs. Russell 1000 +3.6%), while value underperformed growth by -10.5% (Russell 1000 Value -2.2% vs. Russell 1000 Growth +8.3%). The style premia performance gap was even wider over the last year, as small cap underperformed large cap by -13.8% and value underperformed growth by -20.4%.

Much of the difference in style performance is driven by sector differences. Growth has a much greater exposure to mega cap technology companies, which continued to overshadow all other sectors in the second quarter. Nvidia extended its historic run, while Apple and Tesla bounced back from a poor first quarter. Technology and Communication companies led earnings

growth and this is expected to persist going forward. Per Factset, Communication Services and Technology companies within the S&P 500 are expected to provide earnings growth of 21% and 18.7%, respectively, leading all other sectors. This has translated into volatility between sectors, where Technology (+13.8%) and Communications (+9.4%) led the S&P 500 in Q2, while six out of eleven sectors declined in value over the quarter.

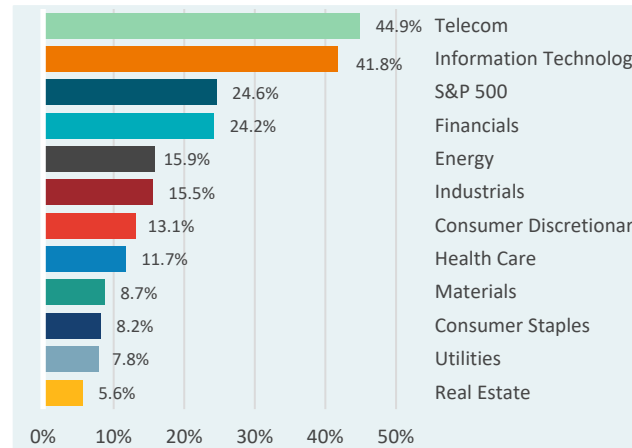
Unusually large disparities in style performance has been apparent, driven by sector trends and mega cap stock dominance. Market behavior continues to support our stance that short-term factor timing decisions should in most circumstances be pursued only in the rare occasion of obvious market mispricing and with a clear catalyst for price correction.

VALUE VS. GROWTH 1-YR ROLLING



Source: FTSE, Bloomberg, as of 6/30/24

S&P 500 SECTOR RETURNS (1 YEAR ROLLING)



Source: FTSE, Bloomberg, as of 6/30/24

1-YEAR SIZE & STYLE PERFORMANCE

	Value	Core	Growth
Large Cap	13.1%	23.9%	33.5%
Mid Cap	12.0%	12.9%	15.1%
Small Cap	10.9%	10.1%	9.1%

Source: FTSE, Bloomberg, as of 6/30/24

International developed equity

International developed shares had a weak second quarter, trailing domestic and emerging markets equities. The MSCI EAFE Index returned +1.7% in U.S. dollar terms, while losing value (-0.4%) if the exposure remained unhedged. The ECB cut rates for the first time in five years in June, with the intention of stimulating a set of economies that had been otherwise stagnant, especially in comparison to the U.S. economy. The dollar's advance was likely fueled by this ECB rate cut, which increased the interest rate differential between the U.S. dollar and the Euro, providing a headwind for unhedged investors.

Some of the discrepancy in performance between U.S. and international developed equities can be attributed to sector

differences. U.S. equities are heavily concentrated in technology companies, while developed markets have a more diversified sector breakdown, with Financials and Industrials – two sectors that tilt towards value – more heavily weighted in developed markets. This lower exposure to technology companies has not helped developed equity performance over the past couple of years, but if richly valued U.S. tech companies have a pullback, it would provide a material boost.

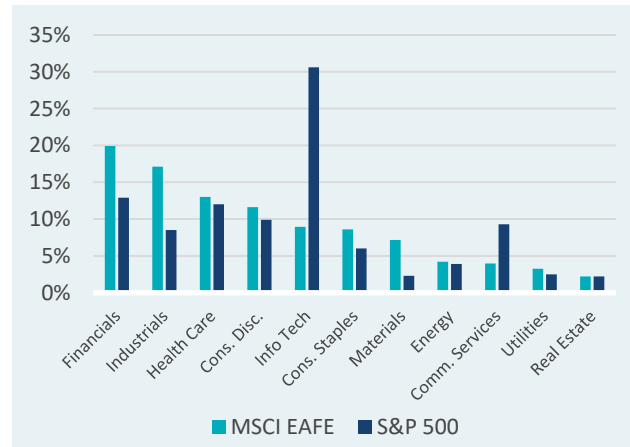
Markets will continue to watch the effect of adjustments to rate cut expectations, as European economies attempt to stimulate growth that has been lackluster this year without reigniting inflation.

INTERNATIONAL DEVELOPED EQUITY



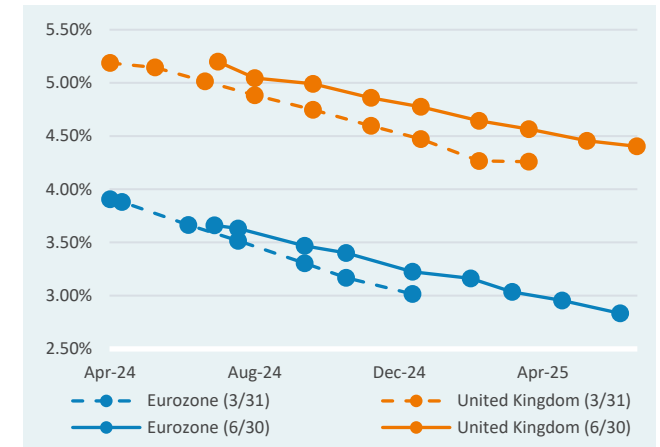
Source: MSCI, as of 6/30/24

MSCI EAFE VS. S&P 500 SECTOR DISTRIBUTION



Source: MSCI, S&P, as of 5/31/24

ECB & BOE RATE EXPECTATIONS VS Q1



Source: Bloomberg, as of 6/30/24

Emerging market equity

Emerging market equities were the highest performing equity market in portfolios (MSCI EM +5.0%), outpacing the domestic market (S&P 500 +4.3%) and international developed equities (MSCI EAFE -0.4%).

Sector differences played out in Emerging Markets, much as they did in the U.S., with Info Tech (+11.9%) being the best performing sector in the MSCI EM Index. This growth was bolstered by Taiwan Semiconductor Manufacturing Company (TSMC), who reported earnings growth of +36% in Q2. TSMC works directly with several domestic mega cap tech companies and makes up nearly 10% of the MSCI EM index.

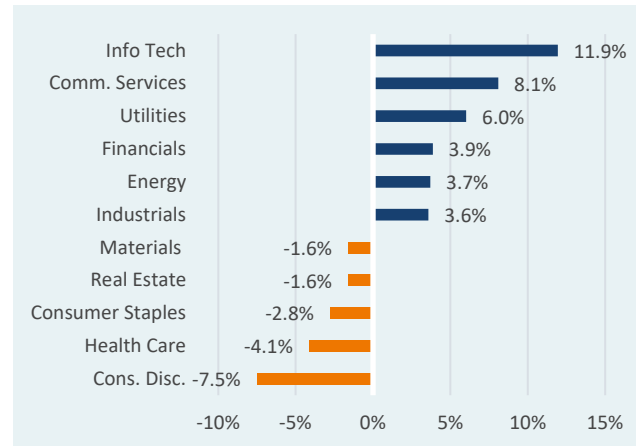
Chinese equities continue to be cheap from a valuation perspective but face serious structural issues which could further act as a drag on performance. Real estate market shakiness has come back to the forefront of many investors' minds. A large inventory of real estate sits empty, China's population is in decline and that decline is expected to accelerate, and a large portion of the economic boom has only been possible through ongoing real estate construction. It is difficult to imagine how these woes are resolved without a serious downward resetting of prices which would be incredibly painful for Chinese citizens who, on average, hold a large portion of their wealth in real estate.

EMERGING MARKET EQUITY



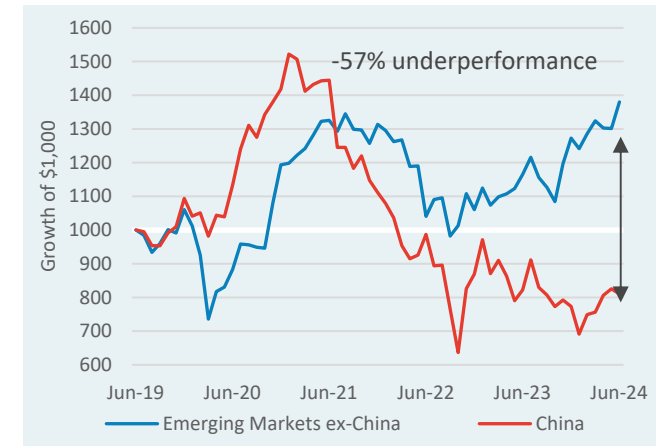
Source: MSCI, as of 6/30/24

MSCI EM Q2 2024 SECTOR RETURNS (USD)



Source: MSCI, J.P. Morgan, as of 6/30/24

SUBSTANTIAL CHINA UNDERPERFORMANCE



Source: MSCI, as of 6/30/24

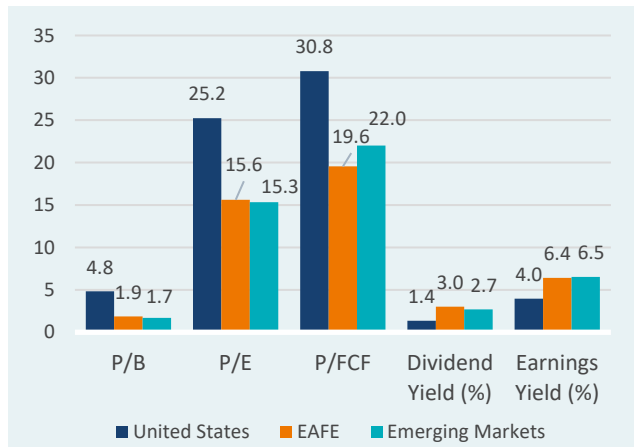
Equity valuations

Valuations moved higher in Q2 across each market. The S&P 500 traded at a Forward P/E of 21.4 at the end of June and a Trailing P/E of 25.2. High valuations have pushed the U.S. dividend yield to a nearly all-time historic low of 1.4%.

Lofty prices, along with a much more attractive environment for fixed income, suggest to us that the next decade may look much different than the past decade of unusually strong U.S. equity performance. The past decade was made possible by a very low equity valuation starting point, the impressive rise of mega cap tech / social media / online

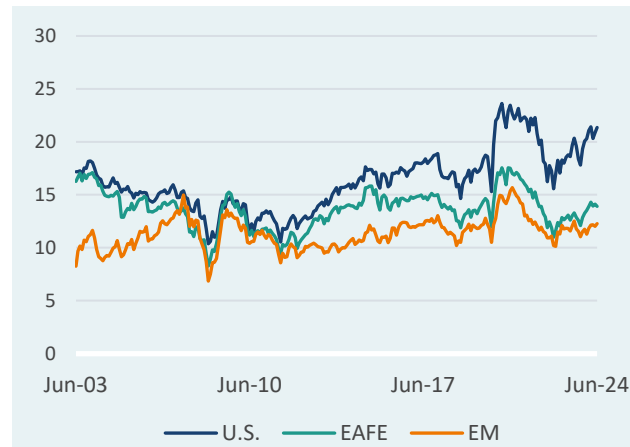
retailing businesses, extreme government stimulus pumped into the system, corporate tax cuts, and financial engineering following ultra low interest rates which contributed to a very large gain in corporate profit margins. Now, looking at the next 10 years, we are starting with high valuations, already high corporate profit margins, large debt burdens across many segments of the economy, and arguably a lower chance of future debt-driven stimulus. Fixed income may be very competitive with equity in terms of yields and prospective return over the next ten years. We believe this change in regime is noteworthy and may reasonably act as a theme for institutional asset allocation.

MSCI VALUATION METRICS (3-MONTH AVG)



Source: Bloomberg, as of 6/30/24 – Trailing P/E

FORWARD PRICE/EARNINGS RATIO



Source: MSCI, Bloomberg, as of 6/30/24

S&P 500 HISTORICAL DIVIDEND YIELD



Source: S&P, Bloomberg, as of 6/30/24

U.S. valuations & expected earnings



If projected earnings growth rates hold over the next two years, and the market increases in price at a more moderate rate, then valuations will come down toward historical averages.

Source: Bloomberg, Verus, as of 7/19/24 – here we assume that both: a) the S&P 500 delivers earnings growth over the next two years in line with current estimates (11% in 2024 and 14.7% in 2025), and b) The S&P 500 delivers a total return in those years equivalent to the Verus 2024 CMA return estimate. If both of things occur, the S&P 500 Price/Earnings ratio will move back towards the historical average.

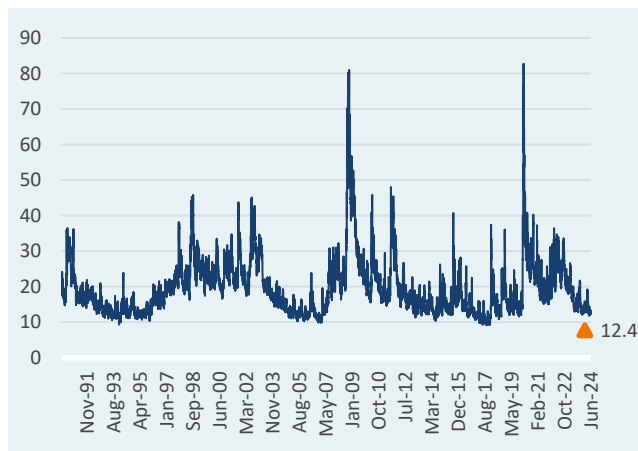
Market volatility

Market-priced volatility (Cboe VIX Index) remained very low during the second quarter, ending at 12.4% in June. This has reasonably raised eyebrows, given a variety of risks that domestic equities face, but low volatility is typical of strongly up trending equity environments.

Recent realized one-year volatility has also been fairly mild across global markets, relative to history. Domestic, international developed, and emerging market equities have all delivered between 14.6% and 15.8% volatility during that time, with emerging markets marking the upper end of the range.

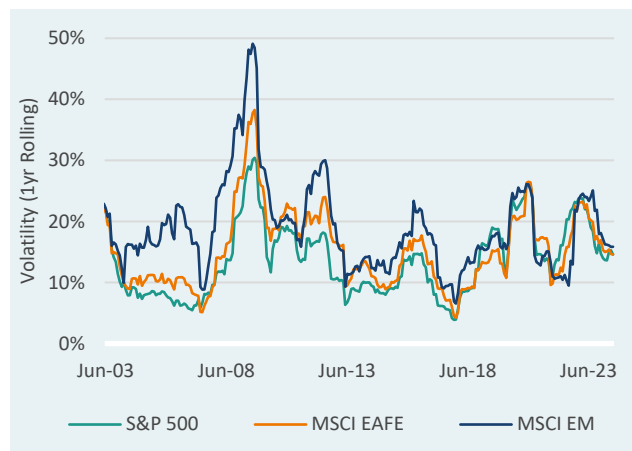
This asset allocation environment is unique in terms of low equity volatility but high fixed income volatility. This gap has closed somewhat, as bond market implied volatility has moved a bit back towards normal levels since reaching a nearly all time high in 2023. Bond characteristics are captured by the “MOVE” Index—which calculates the implied volatility of U.S. Treasury securities. As further clarity is gained around the path of the Federal Reserve, we would expect that bond volatility will further moderate.

U.S. IMPLIED VOLATILITY (VIX)



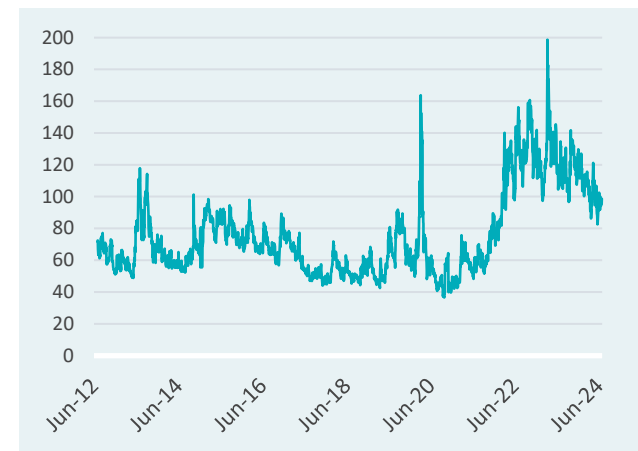
Source: Cboe, as of 6/30/24

REALIZED VOLATILITY



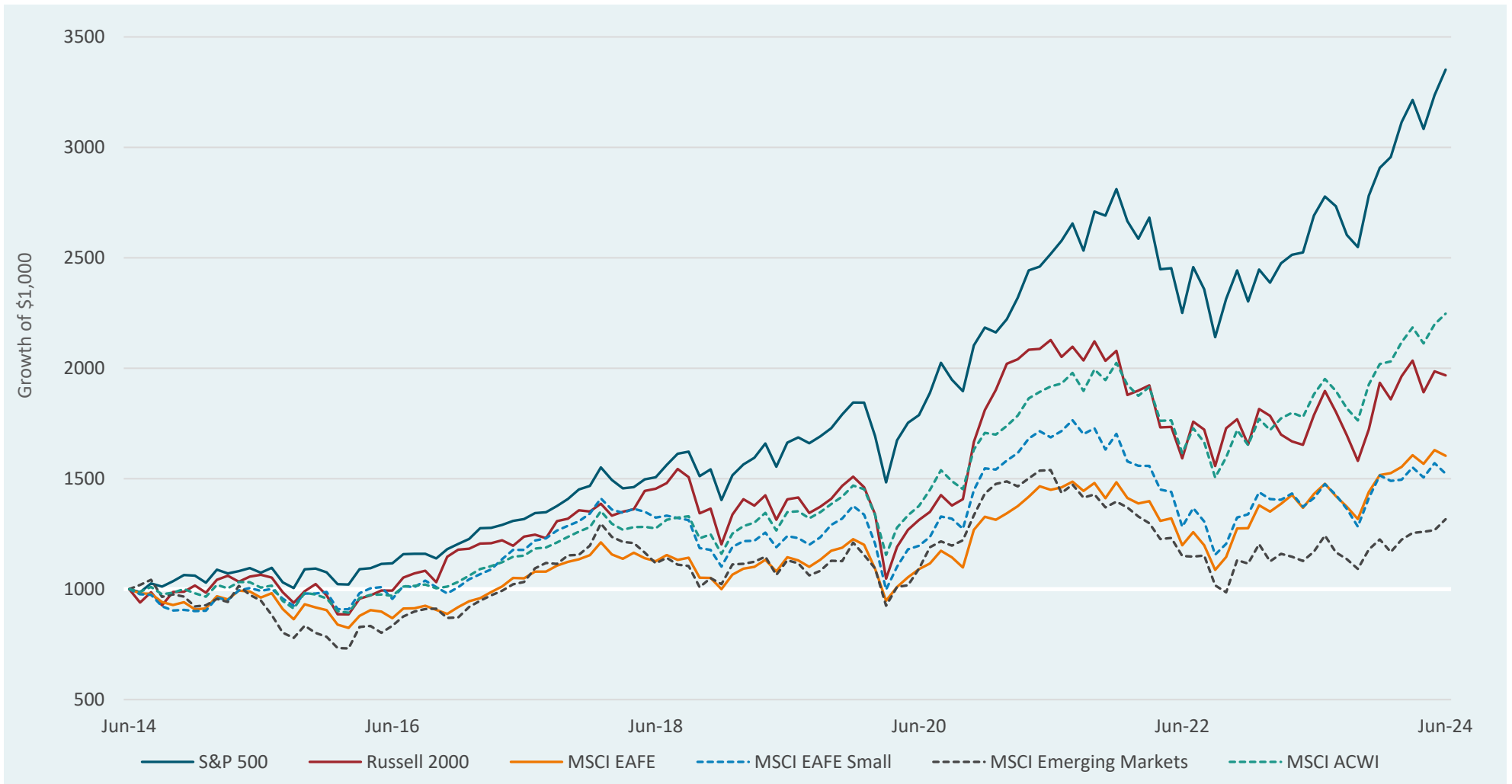
Source: S&P, MSCI, as of 6/30/24

U.S. TREASURY IMPLIED VOL (“MOVE” INDEX)



Source: Bloomberg, as of 6/30/24

Long-term equity performance



Source: MPI, as of 6/30/24

Other assets

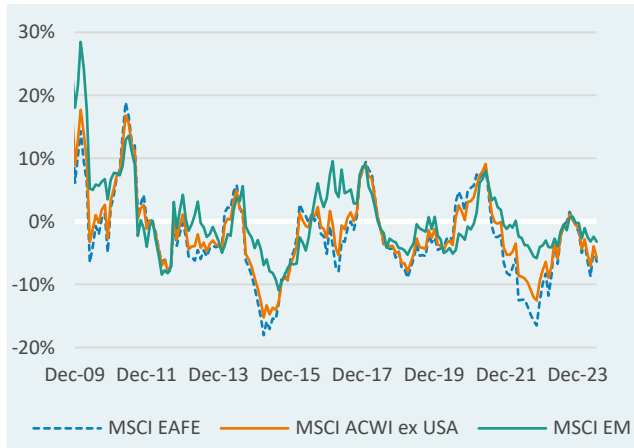
Currency

The U.S. dollar rose modestly in value during Q2, resulting in losses for investors with unhedged foreign currency exposure. Given that the Federal Reserve is expected to engage in similar sized rate cuts as other developed central banks, it is unclear the extent to which the *rate cutting path* will impact relative currency valuations. Unexpected central bank actions will likely have the greatest directional impact in the future.

Investors without a currency hedging program lost -1.2% from their international developed equity exposure (MSCI EAFE) during Q2 due to currency movements and -7.0% over the past year. Losses from unhedged Japanese currency exposure have once again been extreme (-7.3% over the quarter, -19.8% over the past year, based on the TOPIX Index), while unhedged European equity exposure losses due to currency were milder (-1.1% over the quarter, -4.3% over the past year, EURO Stoxx 50 Index).

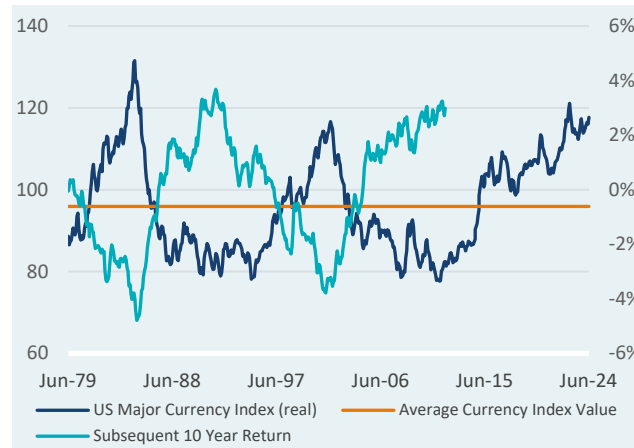
A more thoughtful portfolio approach to currency exposure has provided the dual benefit of lower portfolio volatility and also higher returns—a rare proposition in markets. This approach involves reducing the uncompensated risk of unhedged foreign currency exposure, and instead of unhedged exposure, making a passive investment in the currency market by investing in currencies with higher interest rates, currencies that are undervalued, and currencies that are 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 the unhedged currency exposure that many investors hold. The past year is testament to this approach, this program would have far outperformed unhedged currency exposure, and with much less volatility.

EFFECT OF CURRENCY (1-YEAR ROLLING)



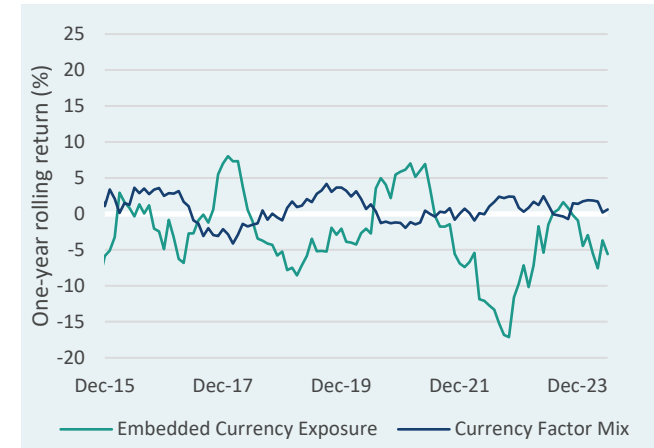
Source: MSCI, as of 6/30/24

U.S. DOLLAR MAJOR CURRENCY INDEX



Source: Bloomberg, as of 6/30/24

EMBEDDED CURRENCY VS CURRENCY FACTORS



Source: Bloomberg, MSCI, as of 6/30/24

Appendix

Periodic table of returns

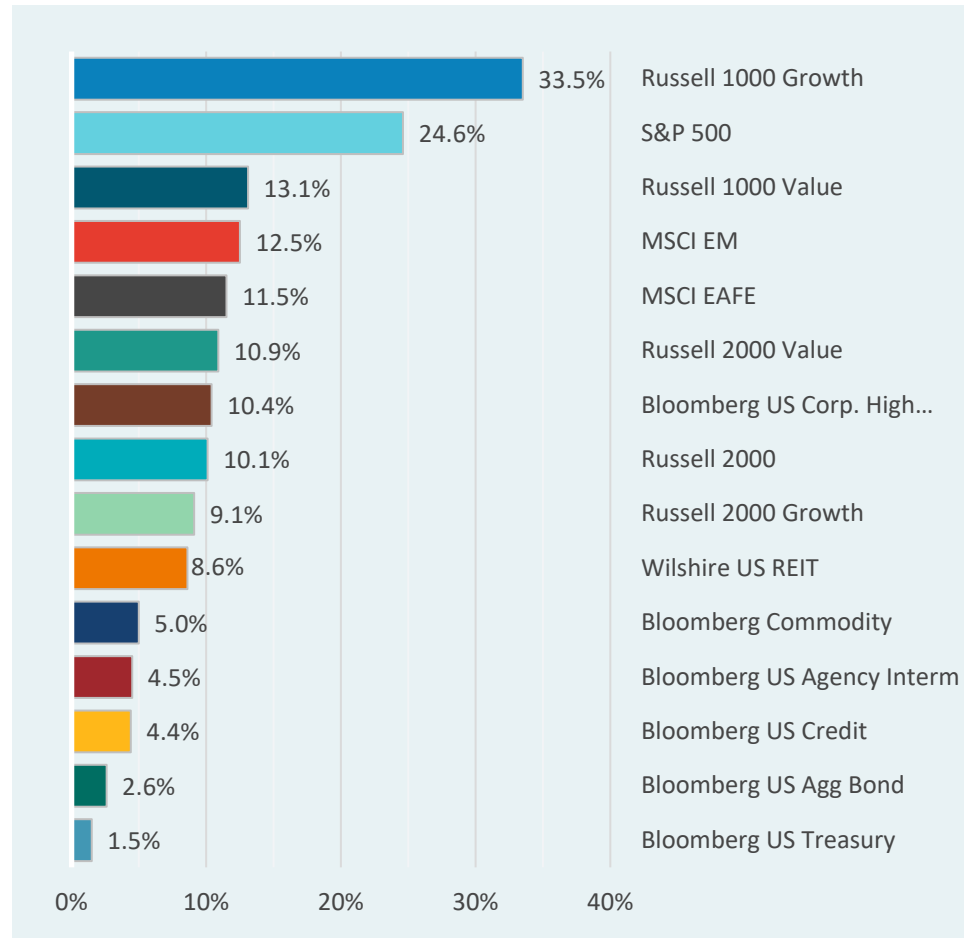
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	YTD	5-Year	10-Year
Large Cap Growth	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	13.3	31.7	37.3	6.7	36.4	38.5	28.3	16.1	42.7	20.7	19.3	16.3
Large Cap Equity	22.2	21.4	26.9	16.2	1.4	37.2	26.9	7.8	18.1	38.8	13.2	5.7	21.3	30.2	1.9	31.4	34.6	27.6	9.4	26.5	14.2	14.6	12.5
Emerging Markets Equity	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	7.5	9.0	8.2
Large Cap Value	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	6.6	7.2	7.4
International 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	5.3	7.1	7.0
60/40 Global Portfolio	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	5.3	6.9	6.4
Commodities	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	5.1	6.5	6.2
Hedge Funds of Funds	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	4.6	6.2	5.0
Small Cap Growth	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	4.4	5.7	4.3
Cash	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	2.6	4.8	3.5
Small Cap Equity	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	1.7	3.8	2.8
US Bonds	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	-0.7	3.1	1.5
Small Cap Value	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	-0.8	2.1	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	-1.0	-0.2	-1.3



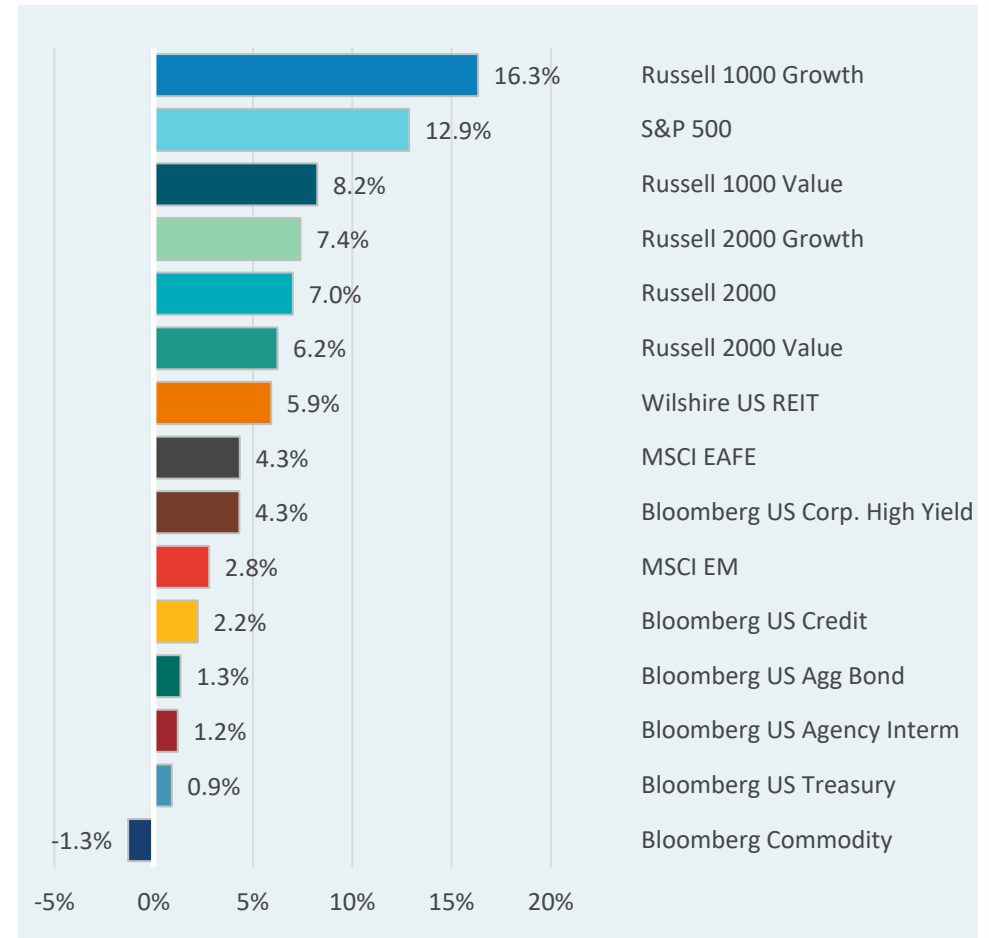
Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, Bloomberg US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, Bloomberg Global Bond. NCREIF Property Index performance data as of 12/31/23.

Major asset class returns

ONE YEAR ENDING JUNE



TEN YEARS ENDING JUNE



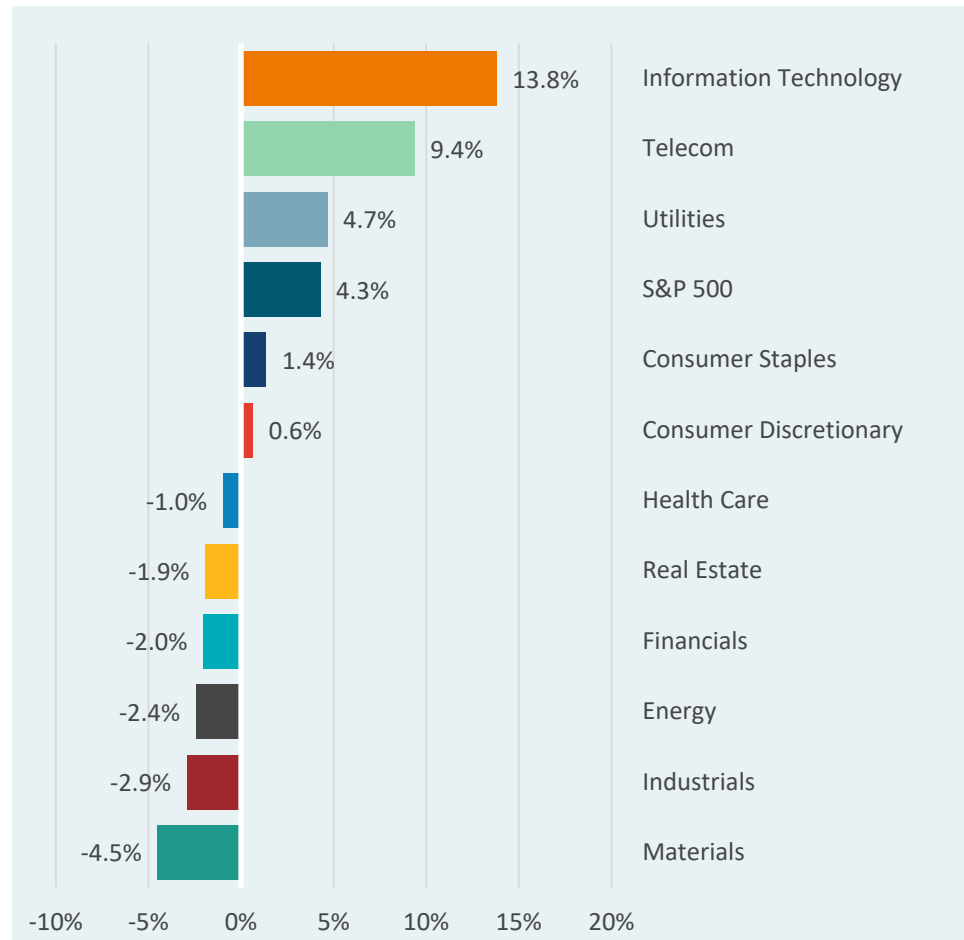
*Only publicly traded asset performance is shown here. Performance of private assets is typically released with a 3- to 6-month delay.

Source: Morningstar, as of 6/30/24

Source: Morningstar, as of 6/30/24

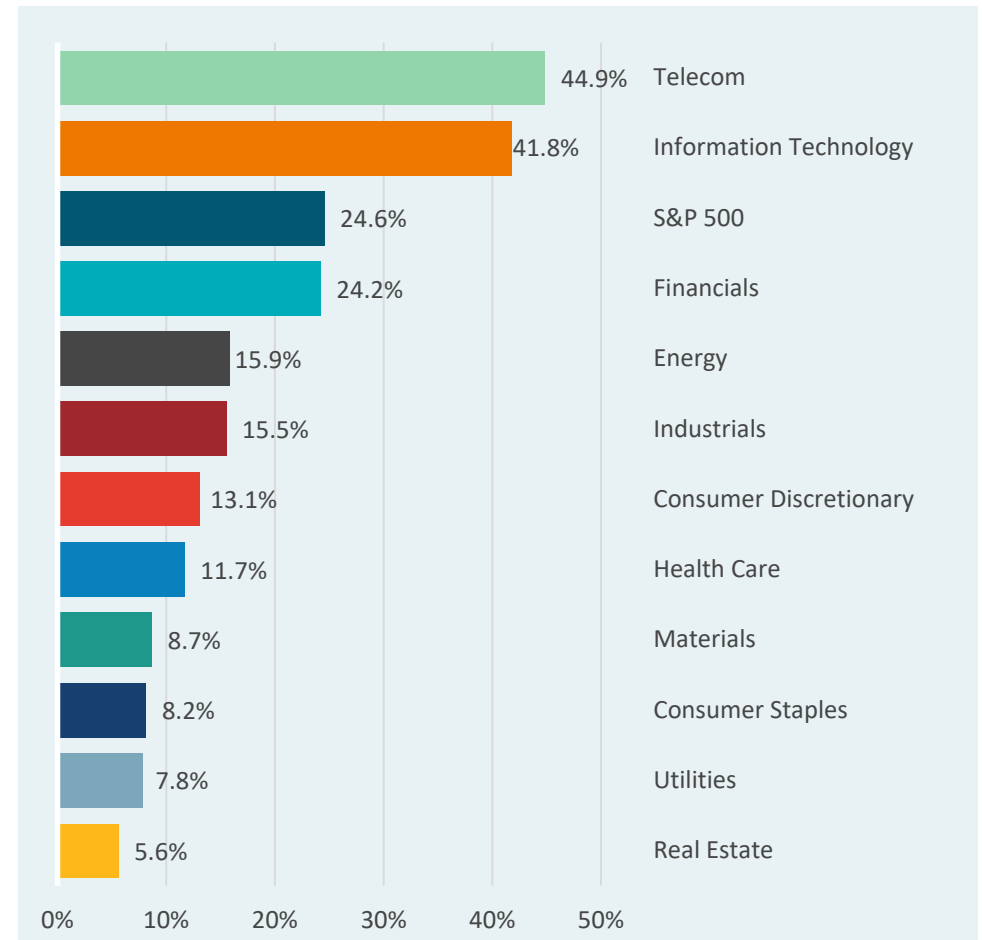
S&P 500 sector returns

QTD



Source: Morningstar, as of 6/30/24

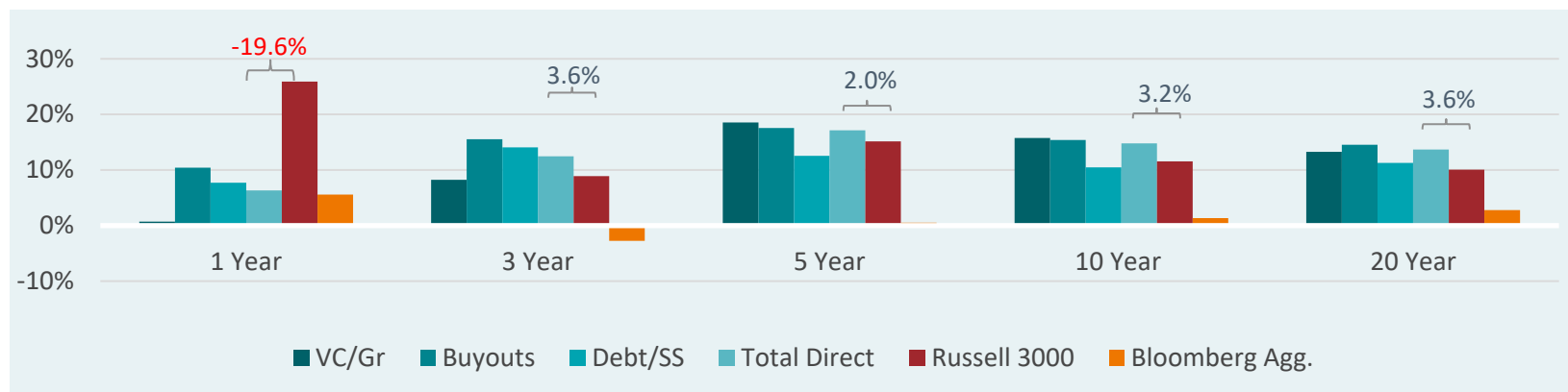
ONE YEAR ENDING JUNE



Source: Morningstar, as of 6/30/24

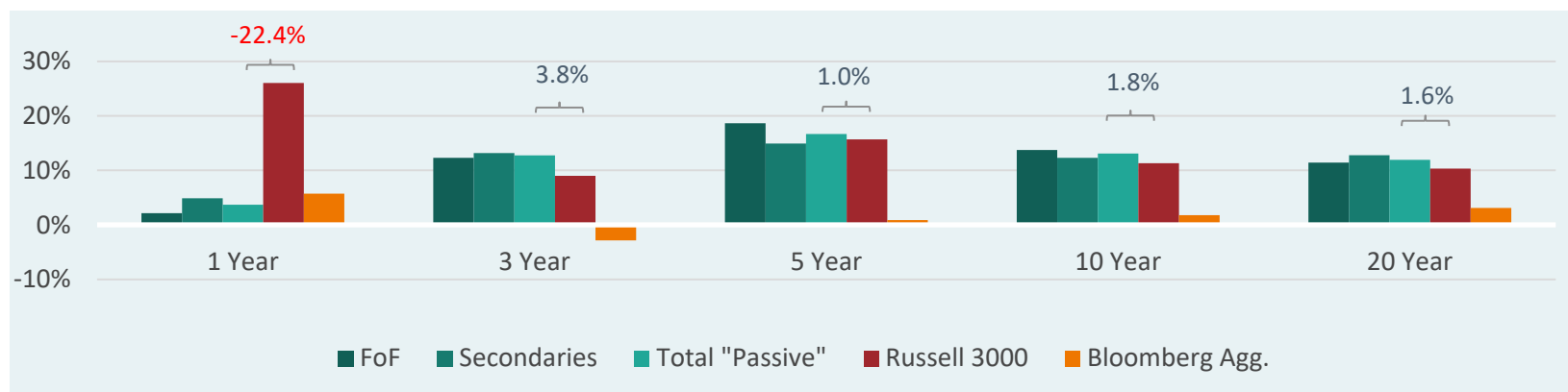
Private equity vs. traditional assets performance

DIRECT PRIVATE EQUITY FUND INVESTMENTS



Direct P.E Fund Investments outperformed comparable public equities across all time periods, aside from the 1-year.

"PASSIVE" STRATEGIES

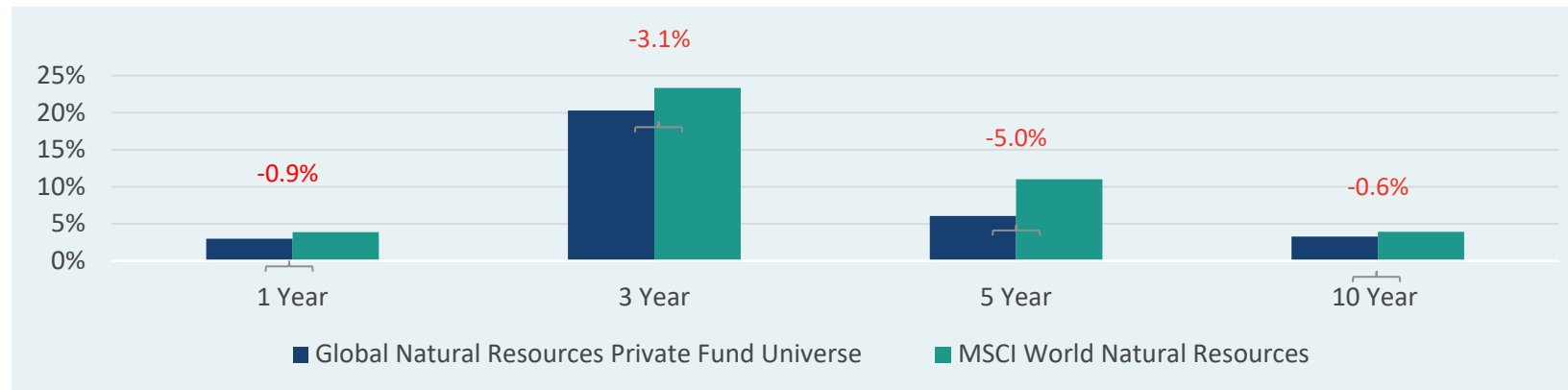


"Passive" strategies outperformed comparable public equities across all time periods, aside from the 1-year.

Sources: Refinitiv PME: U.S. Private Equity Funds sub asset classes as of September 30, 2023. Public Market Equivalent returns resulted from "Total Passive" and Total Direct's identical cash flows invested into and distributed from respective traditional asset comparable.

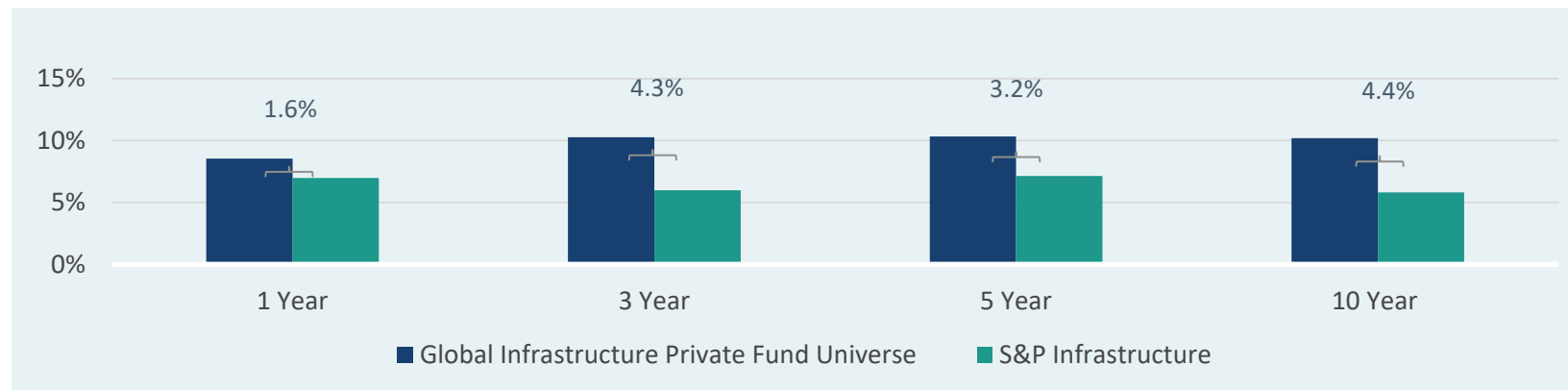
Private vs. liquid real assets performance

GLOBAL NATURAL RESOURCES FUNDS



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

GLOBAL INFRASTRUCTURE FUNDS

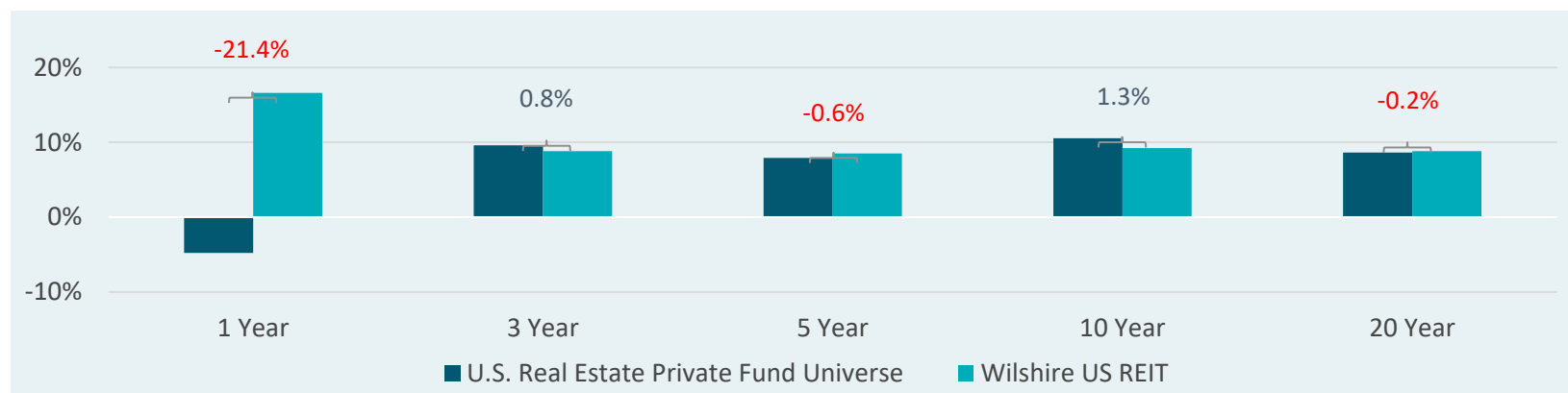


Infra. funds outperformed the S&P Infra. across all periods.

Sources: Refinitiv 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, 2023. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real assets universes.

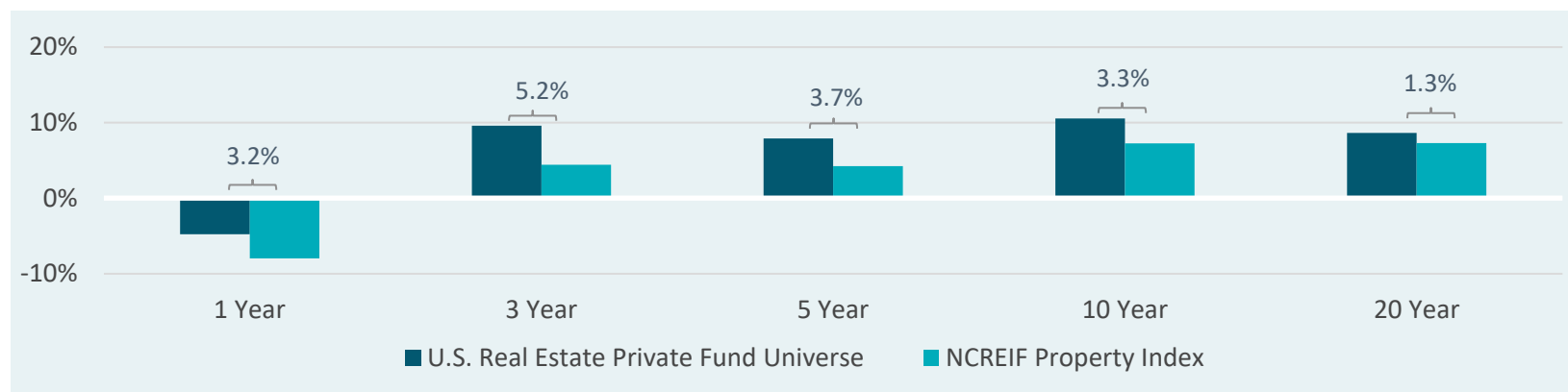
Private vs. liquid and core real estate performance

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



U.S. Private R.E. fund performance vs. the Wilshire U.S. REIT Index has been mixed.

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: Refinitiv PME: U.S. Real Estate universes as of September 30, 2023. 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
Core Index							
S&P 500	3.6	4.3	15.3	24.6	10.0	15.0	12.9
S&P 500 Equal Weighted	(0.5)	(2.6)	5.1	11.8	4.8	10.9	10.0
DJ Industrial Average	1.2	(1.3)	4.8	16.0	6.4	10.3	11.3
Russell Top 200	4.5	5.7	17.2	27.4	10.9	16.4	13.8
Russell 1000	3.3	3.6	14.2	23.9	8.7	14.6	12.5
Russell 2000	(0.9)	(3.3)	1.7	10.1	(2.6)	6.9	7.0
Russell 3000	3.1	3.2	13.6	23.1	8.1	14.1	12.1
Russell Mid Cap	(0.7)	(3.3)	5.0	12.9	2.4	9.5	9.0
Style Index							
Russell 1000 Growth	6.7	8.3	20.7	33.5	11.3	19.3	16.3
Russell 1000 Value	(0.9)	(2.2)	6.6	13.1	5.5	9.0	8.2
Russell 2000 Growth	(0.2)	(2.9)	4.4	9.1	(4.9)	6.2	7.4
Russell 2000 Value	(1.7)	(3.6)	(3.6)	10.9	(0.5)	7.1	6.2

INTERNATIONAL EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
MSCI ACWI	2.2	2.9	11.3	19.4	5.4	10.8	8.4
MSCI ACWI ex US	(0.1)	1.0	5.7	11.6	0.5	5.5	3.8
MSCI EAFE	(1.6)	(0.4)	5.3	11.5	2.9	6.5	4.3
MSCI EM	3.9	5.0	7.5	12.5	(5.1)	3.1	2.8
MSCI EAFE Small Cap	(3.0)	(1.8)	0.5	7.8	(3.4)	4.2	4.3
Style Index							
MSCI EAFE Growth	(0.4)	(0.8)	6.2	9.4	0.1	6.5	5.4
MSCI EAFE Value	(2.8)	0.0	4.5	13.7	5.5	6.1	3.0
Regional Index							
MSCI UK	(1.8)	3.7	6.9	12.5	6.9	5.7	2.7
MSCI Japan	(0.7)	(4.3)	6.3	13.1	2.3	6.6	5.5
MSCI Euro	(3.3)	(2.8)	5.4	10.1	3.6	7.2	4.1
MSCI EM Asia	5.0	7.4	11.0	15.1	(5.5)	4.6	4.5
MSCI EM Latin American	(6.1)	(12.2)	(15.7)	(5.6)	0.9	0.1	(0.3)

FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
Bloomberg US TIPS	0.8	0.8	0.7	2.7	(1.3)	2.1	1.9
Bloomberg US Treasury Bills	0.4	1.3	2.6	5.5	3.0	2.2	1.5
Bloomberg US Agg Bond	0.9	0.1	(0.7)	2.6	(3.0)	(0.2)	1.3
Bloomberg US Universal	0.9	0.2	(0.3)	3.5	(2.7)	0.1	1.6
Duration							
Bloomberg US Treasury 1-3 Yr	0.6	0.9	1.2	4.5	0.3	1.0	1.1
Bloomberg US Treasury Long	1.7	(1.8)	(5.0)	(5.6)	(10.5)	(4.3)	0.6
Bloomberg US Treasury	1.0	0.1	(0.9)	1.5	(3.3)	(0.7)	0.9
Issuer							
Bloomberg US MBS	1.2	0.1	(1.0)	2.1	(2.9)	(0.8)	0.9
Bloomberg US Corp. High Yield	0.9	1.1	2.6	10.4	1.6	3.9	4.3
Bloomberg US Agency Interim	0.7	0.8	1.0	4.5	(0.5)	0.6	1.2
Bloomberg US Credit	0.7	(0.0)	(0.5)	4.4	(2.9)	0.5	2.2

OTHER

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Index							
Bloomberg Commodity	(1.5)	2.9	5.1	5.0	5.7	7.2	(1.3)
Wilshire US REIT	3.0	(0.2)	(0.3)	8.6	0.3	4.0	5.9
CS Leveraged Loans	0.3	1.9	4.4	11.0	6.0	5.4	4.6
S&P Global Infrastructure	(2.9)	2.7	4.0	7.0	5.6	4.3	4.6
Alerian MLP	4.7	3.8	19.2	34.2	22.3	11.1	1.9
Regional Index							
JPM EMBI Global Div	0.6	0.3	2.3	9.2	(3.5)	0.6	3.2
JPM GBI-EM Global Div	(1.1)	(1.6)	0.7	0.7	(3.3)	(1.3)	(0.9)
Hedge Funds							
HFRI Composite	(0.2)	0.4	4.8	9.6	2.8	6.6	4.8
HFRI FOF Composite	0.1	0.4	4.6	8.4	2.0	4.8	3.5
Currency (Spot)							
Euro	(1.3)	(1.8)	(3.0)	(1.8)	(3.3)	(1.2)	(2.4)
Pound Sterling	(0.7)	0.3	(0.8)	(0.6)	(2.9)	(0.1)	(3.0)
Yen	(2.3)	(10.1)	(12.4)	(10.2)	(11.6)	(7.7)	(4.5)

Source: Morningstar, HFRI, as of 6/30/24

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.lanqerresearch.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)

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: June 30, 2024



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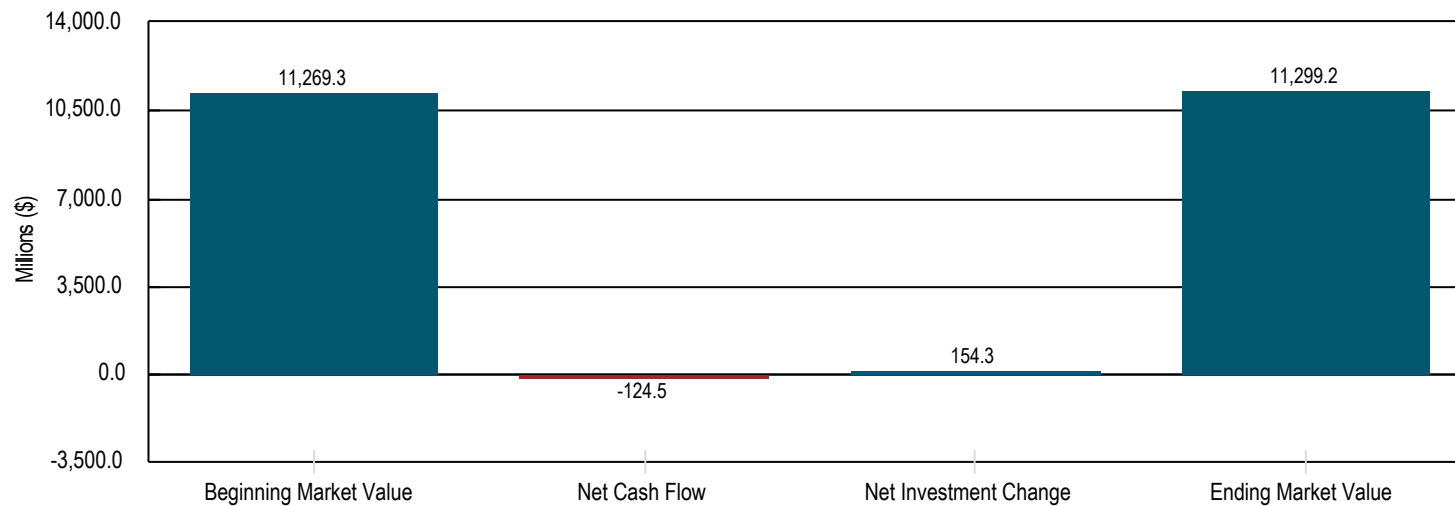
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Portfolio Reconciliation

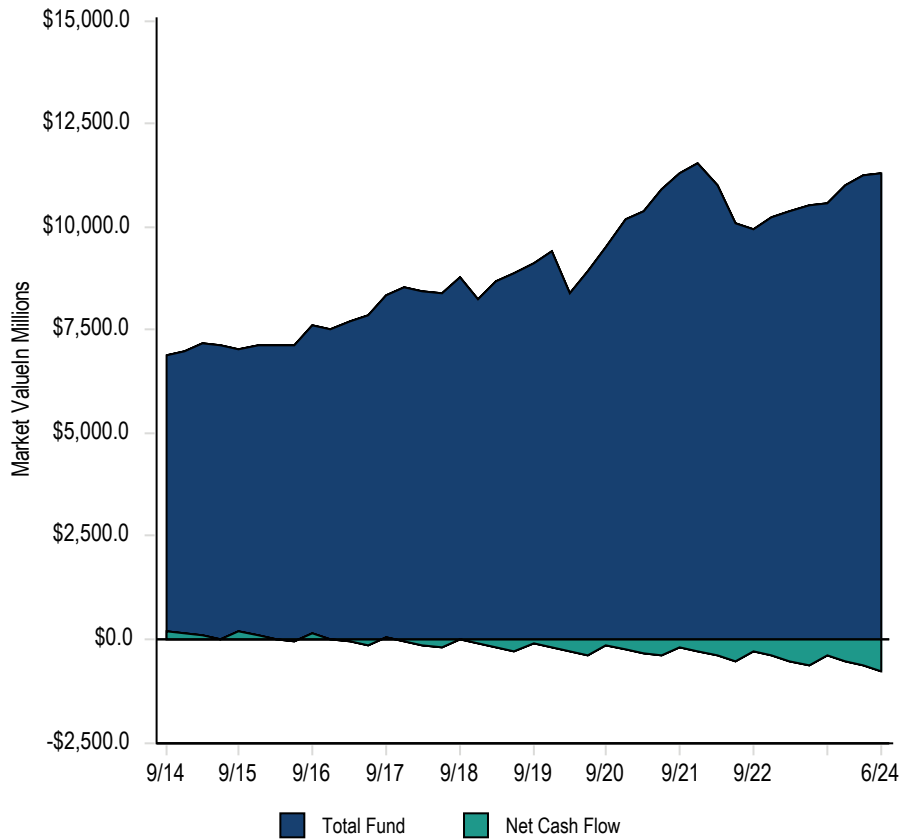
	Last Three Months	YTD
Beginning Market Value	\$11,269,310,629	\$11,026,356,498
Net Cash Flow	-\$124,457,589	-\$244,923,950
Net Investment Change	\$154,347,027	\$517,767,519
Ending Market Value	\$11,299,200,066	\$11,299,200,066

Change in Market Value
Last Three Months

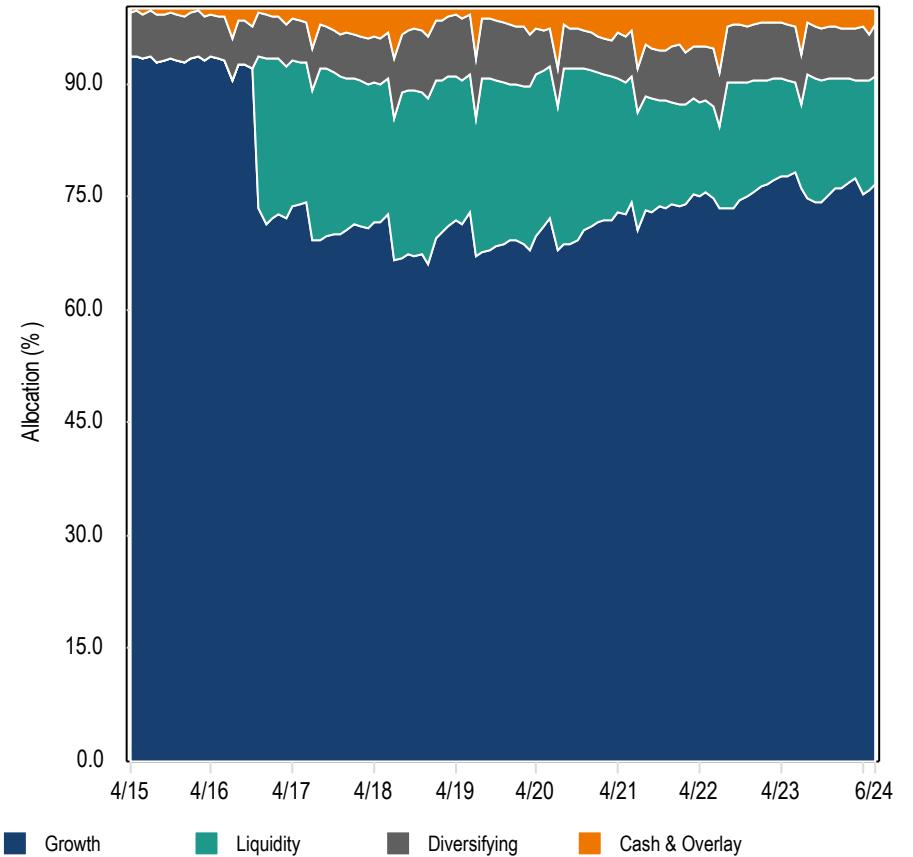


Contributions and withdrawals may include intra-account transfers between managers/funds.

Market Value History
Cumulative Cash Flows

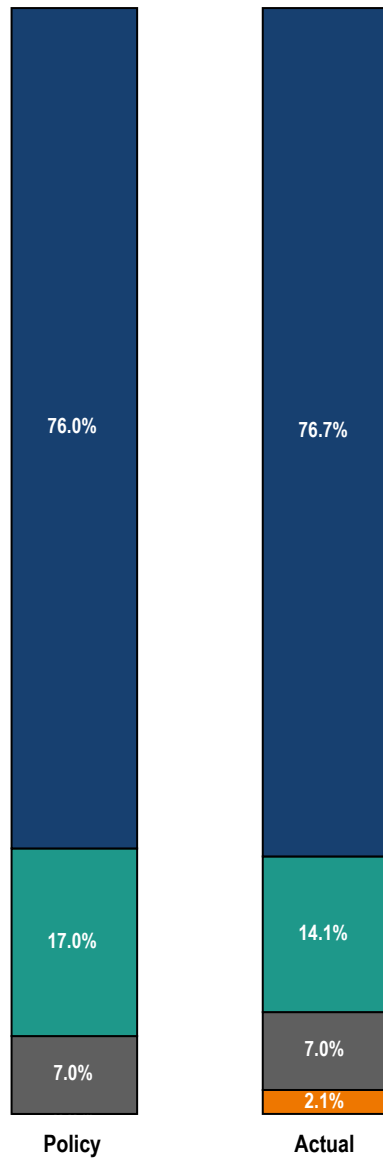


Asset Allocation History



Total Fund
Asset Allocation vs. Policy Target

Contra Costa County Employees' Retirement Association
Period Ending: June 30, 2024



	Current Balance	Current Allocation	Policy Target	Difference
Growth	\$8,670,043,057	76.7	76.0	\$82,651,006
Liquidity	\$1,597,360,040	14.1	17.0	-\$323,503,972
Diversifying	\$789,772,989	7.0	7.0	-\$1,171,016
Cash & Overlay	\$242,023,982	2.1	0.0	\$242,023,982
Total	\$11,299,200,066	100.0	100.0	

Policy Targets approved July 2023.

Total Fund
Executive Summary (Net of Fees)

Contra Costa County Employees' Retirement Association
Period Ending: June 30, 2024

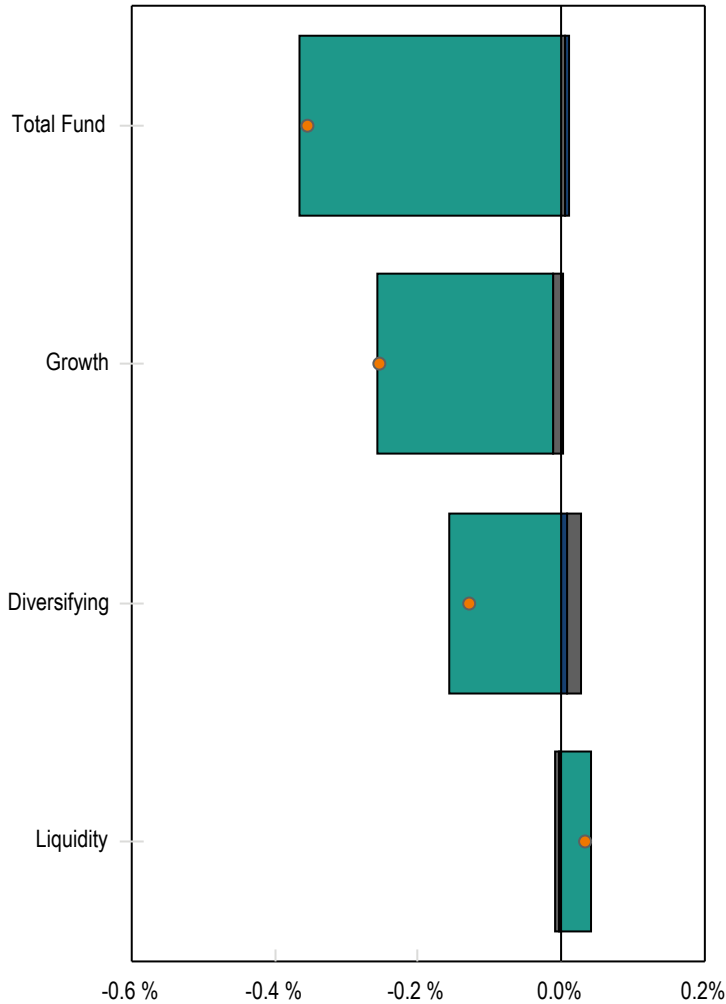
	% of Portfolio	QTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2023	2022	2021	2020	2019
Total Fund	100.0	1.4	4.7	8.6	2.2	5.8	6.0	9.0	-10.6	13.9	9.2	14.6
Policy Index		1.7	4.3	8.4	3.8	7.2	6.8	9.9	-8.4	15.3	10.8	14.6
Implementation Benchmark		1.6	3.9	8.0	3.0	6.0	6.1	9.0	-8.7	14.2	8.7	13.6
Growth	76.7	1.6	5.7	9.7	3.1	7.7	7.6	10.1	-11.7	19.2	12.0	18.3
Custom Growth Benchmark		2.0	5.3	9.4	4.5	9.3	8.5	11.2	-10.3	21.6	13.8	19.3
Diversifying	7.0	-1.1	0.0	1.1	-1.2	-0.3	0.0	2.2	-5.7	1.7	-1.7	6.8
Custom Diversifying Benchmark		0.9	1.2	5.4	1.2	2.1	2.9	7.4	-5.7	1.6	4.7	6.1
Liquidity	14.1	1.2	2.0	5.6	1.1	1.6	-	5.4	-3.5	-0.3	3.4	4.8
Bloomberg U.S. Gov/Credit 1-3 Year Index		1.0	1.4	4.9	0.6	1.2	-	4.6	-3.7	-0.5	3.3	4.0

*Correlation between the Growth and Diversifying composites is .82, .62, and .64 over the previous 1, 3, and 5 year periods respectively.

Total Fund
 Attribution Analysis - Asset Class Level (Net of Fees)

Contra Costa County Employees' Retirement Association
 Period Ending: June 30, 2024

Attribution Effects
 3 Months Ending June 30, 2024



■ Selection Effect ■ Allocation Effect
■ Interaction Effect ● Total Effects

Performance Attribution

	3 Mo
Wtd. Actual Return	1.4
Wtd. Index Return	1.7
Excess Return	-0.4
Selection Effect	-0.4
Allocation Effect	0.0
Interaction Effect	0.0

Attribution Summary
 Last 3 Months

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Growth	1.6	2.0	-0.3	-0.2	0.0	0.0	-0.3
Diversifying	-1.1	0.9	-1.9	-0.2	0.0	0.0	-0.1
Liquidity	1.2	1.0	0.3	0.0	0.0	0.0	0.0
Total Fund	1.4	1.7	-0.4	-0.4	0.0	0.0	-0.4

Performance attribution calculated from benchmark returns and weightings of each component.

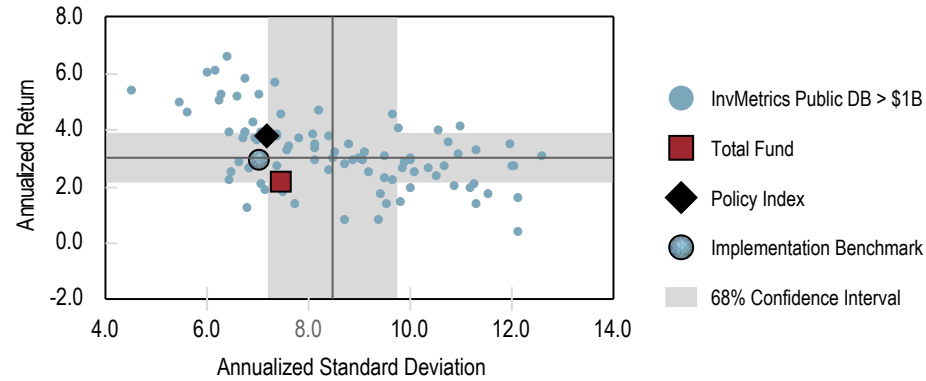
Total Fund
Executive Summary (Net of Fees)

Contra Costa County Employees' Retirement Association
Period Ending: June 30, 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	2.21	-0.76	7.46	-0.87	1.05	1.10	0.98	-0.08	-0.65	99.53	113.99

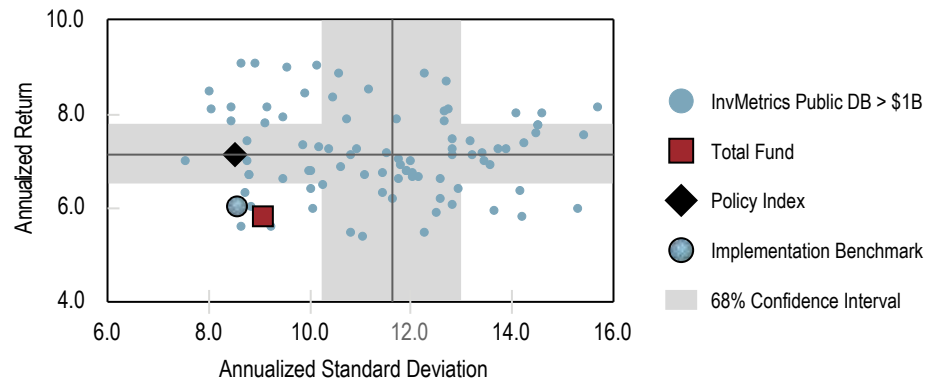
Risk vs. Return



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	5.85	-0.20	9.06	-0.47	1.05	1.12	0.99	0.44	-0.13	103.14	110.45

Risk vs. Return



Total Fund
Performance Summary (Gross of Fees)

Contra Costa County Employees' Retirement Association
Period Ending: June 30, 2024

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2023	2022	2021	2020	2019	Inception	Inception Date
Total Fund	11,299,200,066	100.0	1.4	4.8	8.8	2.5	6.1	6.3	9.2	-10.4	14.2	9.5	14.9		
Policy Index			1.7	4.3	8.4	3.8	7.2	6.8	9.9	-8.4	15.3	10.8	14.6		
Implementation Benchmark			1.6	3.9	8.0	3.0	6.0	6.1	9.0	-8.7	14.2	8.7	13.6		
InvMetrics Public DB > \$1B Rank			24	61	75	78	90	68	85	51	65	80	87		
Total Fund ex Overlay & Cash	11,057,176,085	97.9	1.4	4.8	8.8	2.7	6.3	6.4	9.1	-9.9	14.6	9.7	14.7		
Policy Index			1.7	4.3	8.4	3.8	7.2	6.8	9.9	-8.4	15.3	10.8	14.6		
Implementation Benchmark			1.6	3.9	8.0	3.0	6.0	6.1	9.0	-8.7	14.2	8.7	13.6		
InvMetrics Public DB > \$1B Rank			24	61	76	70	85	57	86	44	60	76	88		
Growth	8,670,043,057	76.7	1.7	5.8	9.9	3.3	8.0	8.0	10.3	-11.4	19.6	12.4	18.7		
Custom Growth Benchmark			2.0	5.3	9.4	4.5	9.3	8.5	11.2	-10.3	21.6	13.8	19.3		
Total Domestic Equity	2,136,542,782	18.9	2.1	11.8	21.2	5.5	11.9	11.0	21.6	-18.3	20.6	22.2	26.7		
Russell 3000 Index			3.2	13.6	23.1	8.1	14.1	12.1	26.0	-19.2	25.7	20.9	31.0		
InvMetrics Public DB US Equity Rank			39	52	56	79	92	81	77	52	98	15	99		
BlackRock Russell 1000 Index	1,286,476,554	11.4	3.6	14.2	23.9	8.8	14.6	-	26.6	-19.1	26.5	21.0	31.4	13.9	May-17
Russell 1000 Index			3.6	14.2	23.9	8.7	14.6	-	26.5	-19.1	26.5	21.0	31.4	13.9	
eV US Large Cap Equity Rank			34	39	40	44	39	-	34	70	56	35	40		
Boston Partners	426,935,345	3.8	-1.3	10.6	21.5	9.7	12.7	10.2	14.7	-3.8	31.3	3.0	24.3	10.9	Jun-95
Russell 1000 Value Index			-2.2	6.6	13.1	5.5	9.0	8.2	11.5	-7.5	25.2	2.8	26.5	9.3	
eV US Large Cap Value Equity Rank			55	20	14	16	26	31	39	36	19	64	79		
Emerald Advisers	223,153,822	2.0	3.4	9.4	14.9	-0.5	8.6	10.4	19.2	-23.8	5.5	39.0	30.3	12.6	Apr-03
Russell 2000 Growth Index			-2.9	4.4	9.1	-4.9	6.2	7.4	18.7	-26.4	2.8	34.6	28.5	10.2	
eV US Small Cap Growth Equity Rank			5	21	21	30	47	41	41	27	77	57	48		
Ceredex	199,977,061	1.8	-1.1	3.0	12.2	5.8	8.3	7.5	16.0	-8.5	28.4	2.3	18.4	10.3	Nov-11
Russell 2000 Value Index			-3.6	-0.8	10.9	-0.5	7.1	6.2	14.6	-14.5	28.3	4.6	22.4	9.2	
eV US Small Cap Value Equity Rank			17	40	52	29	76	65	61	28	59	70	88		

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: June 30, 2024

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2023	2022	2021	2020	2019	Inception	Inception Date
Total International Equity	1,505,041,786	13.3	1.6	6.3	11.9	-1.1	6.3	4.7	15.4	-18.2	8.3	15.8	23.7		Sep-88
MSCI AC World ex USA Index			1.2	6.0	12.2	1.0	6.1	4.3	16.2	-15.6	8.3	11.1	22.1		
MSCI EAFE Index			-0.2	5.7	12.1	3.4	7.0	4.8	18.9	-14.0	11.8	8.3	22.7		
InvMetrics Public DB Global ex-US Equity Rank			20	40	44	90	45	43	82	64	54	29	43		
International Equity	968,878,094	8.6	-0.5	3.6	8.1	-0.3	6.7	5.2	15.6	-18.1	9.0	19.0	27.0	6.3	Oct-10
MSCI AC World ex USA Index			1.2	6.0	12.2	1.0	6.1	4.3	16.2	-15.6	8.3	11.1	22.1	5.1	
InvMetrics Public DB Global ex-US Equity Rank			92	95	92	74	37	30	79	61	43	15	16		
Pyrford	492,099,248	4.4	0.5	2.2	6.9	3.3	5.8	4.4	15.2	-7.0	7.6	4.7	22.1	4.6	May-14
MSCI AC World ex USA Value			1.3	4.7	13.5	3.5	5.3	2.8	17.3	-8.6	10.5	-0.8	15.7	3.1	
eV ACWI ex-US Value Equity Rank			54	75	92	58	84	58	83	21	84	47	38		
William Blair	476,778,846	4.2	-1.5	5.1	9.3	-3.7	7.4	5.8	16.2	-27.7	10.5	33.3	32.0	6.8	Nov-10
MSCI AC World ex USA Growth			0.7	6.7	9.9	-2.6	5.5	4.7	14.0	-23.1	5.1	22.2	27.3	5.3	
eV ACWI ex-US Growth Equity Rank			72	45	45	62	40	68	59	56	41	36	38		
Emerging Markets Equity	536,163,692	4.7	5.8	11.7	18.2	-1.8	5.9	-	14.4	-18.4	7.6	11.4	19.4	5.6	Feb-17
MSCI Emerging Markets			5.0	7.5	12.5	-5.1	3.1	-	9.8	-20.1	-2.5	18.3	18.4	4.5	
InvMetrics Public DB Emerging Markets Equity Rank			35	13	42	37	10	-	60	36	20	76	26		
PIMCO RAE Emerging Markets	273,873,447	2.4	5.5	10.3	22.4	5.8	8.9	-	23.1	-9.7	17.1	2.1	14.6	7.7	Mar-17
MSCI Emerging Markets Value			5.1	6.5	14.1	-1.1	2.9	-	14.2	-15.8	4.0	5.5	12.0	3.9	
eV Emg Mkts All Cap Value Equity Rank			17	13	5	7	5	-	11	34	8	85	78		
TT Emerging Markets	262,290,245	2.3	6.0	13.2	14.2	-8.8	2.9	-	5.8	-26.4	-0.2	20.8	24.8	2.9	Aug-17
MSCI Emerging Markets			5.0	7.5	12.5	-5.1	3.1	-	9.8	-20.1	-2.5	18.3	18.4	2.7	
eV Emg Mkts Equity Rank			24	9	41	94	79	-	91	90	58	39	24		
Total Global Equity	1,240,758,085	11.0	1.5	10.6	16.9	3.9	10.6	9.4	19.0	-18.8	14.1	25.3	28.9		Dec-03
MSCI AC World Index			2.9	11.3	19.4	5.4	10.8	8.4	22.2	-18.4	18.5	16.3	26.6	7.9	
InvMetrics Public DB Global Equity Rank			36	13	65	74	43	1	65	58	47	1	10		
Artisan Partners	634,593,849	5.6	1.7	12.9	21.3	2.0	12.2	11.9	24.5	-29.6	15.0	41.7	37.0	12.8	Oct-12
MSCI ACWI Growth NR USD			6.2	16.3	24.7	5.5	13.8	11.1	33.2	-28.6	17.1	33.6	32.7	12.1	
eV Global Growth Equity Rank			44	29	27	43	26	20	37	61	56	33	12		
First Eagle	606,164,236	5.4	1.4	8.1	12.4	5.9	8.5	7.2	13.7	-5.6	13.0	8.5	21.0	8.3	Jan-11
MSCI ACWI Value NR USD			-0.6	6.2	13.9	4.8	7.0	5.4	11.8	-7.5	19.6	-0.3	20.6	6.6	
eV Global Value Equity Rank			17	19	49	29	46	26	67	22	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: June 30, 2024

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2023	2022	2021	2020	2019	Inception	Inception Date
Private Credit	1,167,689,299	10.3	5.4	5.6	10.3	9.4	8.7	9.1	9.1	10.5	10.0	4.0	7.7		
Total High Yield	161,940,512	1.4	1.6	3.0	9.9	1.7	3.7	3.8	12.4	-10.6	5.3	5.2	15.3		
ICE BofA U.S. High Yield Index			1.1	2.6	10.4	1.6	3.7	4.2	13.5	-11.2	5.4	6.2	14.4		
eV US High Yield Fixed Inc Rank			21	56	72	78	83	92	63	74	55	73	36		
Voya Global Investors	161,940,512	1.4	1.6	3.0	9.9	1.7	3.7	3.8	12.4	-10.6	5.3	5.2	15.3	6.3	May-00
ICE BofA U.S. High Yield Index			1.1	2.6	10.4	1.6	3.7	4.2	13.5	-11.2	5.4	6.2	14.4	6.5	
eV US High Yield Fixed Inc Rank			21	56	72	78	83	92	63	74	55	73	36		
Total Real Estate	786,042,923	7.0	-1.7	-7.8	-13.3	-4.8	-2.1	3.8	-10.6	-5.2	19.2	-5.9	8.1		
Real Estate Benchmark			-1.8	-8.4	-14.4	-4.8	-0.8	3.6	-11.3	-4.5	19.3	0.6	7.5		
NCREIF-ODCE			-0.4	-2.8	-9.3	1.9	3.2	6.4	-12.0	7.5	22.2	1.2	5.3		
NCREIF Property Index			-0.3	-1.2	-5.5	2.3	3.4	6.1	-7.9	5.5	17.7	1.6	6.4		
Total Core Real Estate	212,316,052	1.9	-0.4	-0.8	6.9	0.3	4.9	6.7	12.8	-24.8	48.3	-4.6	28.2		
Adelante	97,762,527	0.9	-0.4	0.4	8.6	1.1	5.4	7.0	17.2	-26.7	48.3	-4.6	28.2	9.5	Oct-01
Wilshire U.S. REIT Index			-0.2	-0.3	8.6	0.3	4.0	5.9	16.2	-26.8	46.2	-7.9	25.8	8.9	
Invesco US Fundamental Beta	114,553,525	1.0	-0.3	-1.8	5.5	-	-	-	9.4	-	-	-	-	-3.8	Mar-22
Wilshire U.S. REIT Index			-0.2	-0.3	8.6	-	-	-	16.2	-	-	-	-	-2.5	
Total Private Real Estate	573,726,872	5.1	-2.2	-10.4	-19.7	-6.6	-3.7	3.1	-17.6	1.3	15.3	-6.1	6.2		
Private Equity	1,321,162,932	11.7	0.8	0.9	1.0	8.9	12.7	11.8	-1.0	-0.5	60.4	8.7	8.4		
Risk Parity	350,864,737	3.1	0.3	3.3	5.7	-4.2	1.5	-	4.9	-21.5	9.7	10.0	18.1		
60% MSCI ACWI Net/40% Blmbg. Global Aggregate			1.3	5.3	11.7	1.1	5.7	-	15.4	-17.3	8.8	14.0	18.6		
AQR Global Risk Premium-EL	183,416,932	1.6	0.3	3.7	7.8	-1.3	2.9	-	7.0	-16.3	10.7	6.2	18.7	4.8	Jan-19
HFR Risk Parity Vol 10 Index			0.3	4.5	10.4	-1.2	1.8	-	10.5	-18.3	6.8	3.6	18.4	3.9	
PanAgora Risk Parity Multi Asset	167,447,805	1.5	0.2	2.9	3.4	-7.0	0.2	-	2.8	-26.1	8.7	14.0	-	1.8	Mar-19
HFR Risk Parity Vol 10 Index			0.3	4.5	10.4	-1.2	1.8	-	10.5	-18.3	6.8	3.6	-	2.9	

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: June 30, 2024

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2023	2022	2021	2020	2019	Inception	Inception Date
Diversifying	789,772,989	7.0	-1.0	0.2	1.5	-0.8	0.1	0.3	2.6	-5.4	2.0	-1.3	7.1		
Custom Diversifying Benchmark			0.9	1.2	5.4	1.2	2.1	2.9	7.4	-5.7	1.6	4.7	6.1		
Diversifying Fixed Income	219,913,834	1.9	0.7	0.5	3.8	-2.8	-1.0	0.8	5.5	-13.3	-0.7	1.6	8.6		
Blmbg. U.S. Aggregate Index			0.1	-0.7	2.6	-3.0	-0.2	1.3	5.5	-13.0	-1.5	7.5	8.7		
eV US Core Fixed Inc Rank			10	16	35	77	100	100	84	75	33	100	79		
AFL-CIO	219,866,759	1.9	0.7	0.5	3.8	-2.8	-0.2	1.5	5.5	-13.3	-0.7	6.6	8.2	5.1	Jul-91
Blmbg. U.S. Aggregate Index			0.1	-0.7	2.6	-3.0	-0.2	1.3	5.5	-13.0	-1.5	7.5	8.7	4.8	
eV US Core Fixed Inc Rank			10	16	35	79	94	90	85	75	33	94	85		
Diversifying Multi-Asset	569,859,154	5.0	-1.6	0.1	0.6	-0.1	-	-	1.4	-1.9	2.8	-	-		
Custom Diversifying Multi-Asset Benchmark			1.5	2.6	7.4	3.1	-	-	8.7	-3.1	4.1	-	-		
Sit LLCAR	372,820,504	3.3	0.2	2.0	5.5	2.0	-	-	6.9	-3.3	-	-	-	3.0	Apr-21
Blmbg. U.S. Aggregate Index +1%			0.3	-0.2	3.7	-2.0	-	-	6.6	-12.1	-	-	-	-1.3	
BH-DG Systematic	197,038,650	1.7	-	-	-	-	-	-	-	-	-	-	-	-3.0	Apr-24
SG Trend Index			-3.2	-	-	-	-	-	-	-	-	-	-	-4.3	
Liquidity	1,597,360,040	14.1	1.2	2.1	5.7	1.2	1.7	-	5.5	-3.4	-0.2	3.5	4.9	2.2	Nov-16
Blmbg. 1-3 Year Gov/Credit Index			1.0	1.4	4.9	0.6	1.2	-	4.6	-3.7	-0.5	3.3	4.0	1.5	
eV US Short Duration Fixed Inc Rank			22	32	43	43	54	-	44	49	46	74	39	26	
DFA Short Credit	367,733,492	3.3	1.4	2.9	6.2	0.7	1.3	-	5.4	-5.3	-0.4	2.9	5.2	1.8	Dec-16
ICE BofA 1-5 Year U.S. Corp/Govt Index			0.9	1.1	4.8	-0.2	1.1	-	4.9	-5.5	-0.9	4.6	5.1	1.5	
eV US Short Duration Fixed Inc Rank			10	11	29	72	82	-	47	90	68	88	26		
Insight Short Duration	599,621,524	5.3	1.3	2.2	5.8	2.2	2.4	-	5.7	-1.1	0.1	3.2	4.7	2.4	Dec-16
Bloomberg U.S. Gov/Credit 1-3 Year Index			1.0	1.4	4.9	0.6	1.2	-	4.6	-3.7	-0.5	3.3	4.0	1.5	
eV US Short Duration Fixed Inc Rank			17	25	39	10	17	-	33	6	33	84	48		
Sit Short Duration	630,005,024	5.6	1.1	1.5	5.2	0.3	1.3	-	5.4	-4.8	-0.3	4.6	4.9	1.9	Dec-16
Blmbg. 1-3 Year Govt Index			0.9	1.2	4.5	0.3	1.0	-	4.3	-3.8	-0.6	3.1	3.6	1.3	
eV US Short Duration Fixed Inc Rank			54	74	68	85	84	-	50	79	59	30	40		
Total Cash	111,025,031	1.0	1.4	2.8	5.7	3.6	2.8	1.9	5.5	2.4	0.4	1.3	3.3		
90 Day U.S. Treasury Bill			1.3	2.6	5.4	3.0	2.2	1.5	5.0	1.5	0.0	0.7	2.3		
Cash	111,020,415	1.0	1.4	2.8	5.7	3.7	2.9	2.0	6.1	2.2	0.4	1.3	3.4	17.2	Apr-98
Northern Trust Transition	4,617	0.0	4.4	5.8	8.7	-80.5	-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. \$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: June 30, 2024

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2023	2022	2021	2020	2019	Inception	Inception Date
Total Fund	11,299,200,066	100.0	1.4	4.7	8.6	2.2	5.8	6.0	9.0	-10.6	13.9	9.2	14.6		
Policy Index			1.7	4.3	8.4	3.8	7.2	6.8	9.9	-8.4	15.3	10.8	14.6		
Implementation Benchmark			1.6	3.9	8.0	3.0	6.0	6.1	9.0	-8.7	14.2	8.7	13.6		
Total Fund ex Overlay & Cash	11,057,176,085	97.9	1.4	4.7	8.6	2.5	6.1	6.1	8.9	-10.1	14.3	9.4	14.3		
Policy Index			1.7	4.3	8.4	3.8	7.2	6.8	9.9	-8.4	15.3	10.8	14.6		
Implementation Benchmark			1.6	3.9	8.0	3.0	6.0	6.1	9.0	-8.7	14.2	8.7	13.6		
Growth	8,670,043,057	76.7	1.6	5.7	9.7	3.1	7.7	7.6	10.1	-11.7	19.2	12.0	18.3		
Custom Growth Benchmark			2.0	5.3	9.4	4.5	9.3	8.5	11.2	-10.3	21.6	13.8	19.3		
Total Domestic Equity	2,136,542,782	18.9	2.0	11.6	20.9	5.3	11.6	10.6	21.4	-18.5	20.2	21.8	26.1	-	Sep-82
Russell 3000 Index			3.2	13.6	23.1	8.1	14.1	12.1	26.0	-19.2	25.7	20.9	31.0	11.9	
BlackRock Russell 1000 Index	1,286,476,554	11.4	3.6	14.2	23.9	8.7	14.6	-	26.6	-19.1	26.5	20.9	31.4	13.9	May-17
Russell 1000 Index			3.6	14.2	23.9	8.7	14.6	-	26.5	-19.1	26.5	21.0	31.4	13.9	
Boston Partners	426,935,345	3.8	-1.3	10.4	21.1	9.3	12.3	9.8	14.3	-4.1	31.0	2.6	23.8	10.8	Jun-95
Russell 1000 Value Index			-2.2	6.6	13.1	5.5	9.0	8.2	11.5	-7.5	25.2	2.8	26.5	9.3	
Emerald Advisers	223,153,822	2.0	3.3	9.0	14.4	-1.1	7.9	9.7	18.6	-24.2	4.9	38.2	29.4	12.2	Apr-03
Russell 2000 Growth Index			-2.9	4.4	9.1	-4.9	6.2	7.4	18.7	-26.4	2.8	34.6	28.5	10.1	
Ceredex	199,977,061	1.8	-1.3	2.7	11.7	5.2	7.8	6.9	15.5	-9.0	27.7	1.7	17.7	9.7	Nov-11
Russell 2000 Value Index			-3.6	-0.8	10.9	-0.5	7.1	6.2	14.6	-14.5	28.3	4.6	22.4	9.2	
Total International Equity	1,505,041,786	13.3	1.6	6.2	11.7	-1.5	5.8	4.3	15.1	-18.6	7.8	15.2	23.2		
MSCI AC World ex USA Index			1.2	6.0	12.2	1.0	6.1	4.3	16.2	-15.6	8.3	11.1	22.1		
MSCI EAFE Index			-0.2	5.7	12.1	3.4	7.0	4.8	18.9	-14.0	11.8	8.3	22.7		
International Equity	968,878,094	8.6	-0.6	3.5	7.7	-0.7	6.3	4.8	15.2	-18.4	8.6	18.5	26.5		
MSCI AC World ex USA Index			1.2	6.0	12.2	1.0	6.1	4.3	16.2	-15.6	8.3	11.1	22.1		
Pyrford	492,099,248	4.4	0.4	2.0	6.4	2.8	5.3	4.0	14.7	-7.4	7.1	4.2	21.6	4.2	May-14
MSCI AC World ex USA Value			1.3	4.7	13.5	3.5	5.3	2.8	17.3	-8.6	10.5	-0.8	15.7	3.1	
William Blair	476,778,846	4.2	-1.6	5.0	9.1	-4.0	7.0	5.4	15.8	-28.0	10.1	32.8	31.5	6.4	Nov-10
MSCI AC World ex USA Growth			0.7	6.7	9.9	-2.6	5.5	4.7	14.0	-23.1	5.1	22.2	27.3	5.3	
Emerging Markets Equity	536,163,692	4.7	5.8	11.7	18.2	-2.1	5.4	-	14.4	-18.9	7.0	10.7	18.7		
MSCI Emerging Markets			5.0	7.5	12.5	-5.1	3.1	-	9.8	-20.1	-2.5	18.3	18.4	4.5	
PIMCO RAE Emerging Markets	273,873,447	2.4	5.5	10.3	22.4	5.5	8.5	-	23.0	-10.1	16.5	1.6	14.0	7.3	Mar-17
MSCI Emerging Markets Value			5.1	6.5	14.1	-1.1	2.9	-	14.2	-15.8	4.0	5.5	12.0	3.9	
TT Emerging Markets	262,290,245	2.3	6.0	13.2	14.2	-9.1	2.4	-	5.8	-26.8	-0.9	20.0	24.0	2.3	Aug-17
MSCI Emerging Markets			5.0	7.5	12.5	-5.1	3.1	-	9.8	-20.1	-2.5	18.3	18.4	2.7	

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: June 30, 2024

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2023	2022	2021	2020	2019	Inception	Inception Date
Total Global Equity	1,240,758,085	11.0	1.3	10.2	16.1	3.1	9.7	8.6	18.2	-19.4	13.2	24.4	27.9		
MSCI AC World Index			2.9	11.3	19.4	5.4	10.8	8.4	22.2	-18.4	18.5	16.3	26.6		
Artisan Partners	634,593,849	5.6	1.5	12.5	20.4	1.2	11.4	11.1	23.6	-30.1	14.1	40.6	36.0	12.0	Oct-12
MSCI ACWI Growth NR USD			6.2	16.3	24.7	5.5	13.8	11.1	33.2	-28.6	17.1	33.6	32.7	12.1	
First Eagle	606,164,236	5.4	1.2	7.7	11.5	5.1	7.7	6.4	12.9	-6.3	12.1	7.7	20.1	7.6	Jan-11
MSCI ACWI Value NR USD			-0.6	6.2	13.9	4.8	7.0	5.4	11.8	-7.5	19.6	-0.3	20.6	6.6	
Private Credit	1,167,689,299	10.3	5.4	5.6	10.3	9.4	8.7	8.8	9.1	10.5	10.0	4.0	7.7		
Total High Yield	161,940,512	1.4	1.5	2.8	9.3	1.3	3.2	3.3	11.8	-10.9	4.9	4.7	14.7		
ICE BofA US High Yield Master II			1.1	2.6	10.5	1.6	3.7	4.2	13.5	-11.2	5.3	6.1	14.4	6.4	
Voya Global Investors	161,940,512	1.4	1.5	2.8	9.3	1.3	3.2	3.3	11.8	-10.9	4.9	4.7	14.7	6.1	May-00
ICE BofA US High Yield Master II			1.1	2.6	10.5	1.6	3.7	4.2	13.5	-11.2	5.3	6.1	14.4	6.5	
Total Real Estate	786,042,923	7.0	-1.7	-8.0	-13.6	-4.9	-2.2	3.5	-10.7	-5.3	19.2	-6.0	8.1		
Real Estate Benchmark			-1.8	-8.4	-14.4	-4.8	-0.8	3.6	-11.3	-4.5	19.3	0.6	7.5		
NCREIF-ODCE			-0.4	-2.8	-9.3	1.9	3.2	6.4	-12.0	7.5	22.2	1.2	5.3		
NCREIF Property Index			-0.3	-1.2	-5.5	2.3	3.4	6.1	-7.9	5.5	17.7	1.6	6.4		
Total Core Real Estate	212,316,052	1.9	-0.4	-1.0	6.6	-0.1	4.5	6.2	12.4	-25.1	47.5	-5.2	27.5		
Adelante	97,762,527	0.9	-0.5	0.1	8.0	0.5	4.8	6.5	16.5	-27.2	47.5	-5.2	27.5	9.2	Oct-01
Wilshire U.S. REIT Index			-0.2	-0.3	8.6	0.3	4.0	5.9	16.2	-26.8	46.2	-7.9	25.8	8.9	
Invesco US Fundamental Beta	114,553,525	1.0	-0.4	-1.9	5.3	-	-	-	9.2	-	-	-	-	-3.9	Mar-22
Wilshire U.S. REIT Index			-0.2	-0.3	8.6	-	-	-	16.2	-	-	-	-	-2.5	
Total Private Real Estate	573,726,872	5.1	-2.2	-10.7	-20.0	-6.7	-3.8	2.8	-17.6	1.3	15.3	-6.1	6.2		
Private Equity	1,321,162,932	11.7	0.8	0.9	1.0	8.9	12.7	11.5	-1.0	-0.5	60.4	8.7	8.4		
Risk Parity	350,864,737	3.1	0.2	3.2	5.5	-4.5	1.2	-	4.7	-21.8	9.3	9.6	17.7		
60% MSCI ACWI Net/40% Blmbg. Global Aggregate			1.3	5.3	11.7	1.1	5.7	-	15.4	-17.3	8.8	14.0	18.6		
AQR Global Risk Premium-EL	183,416,932	1.6	0.3	3.7	7.8	-1.5	2.6	-	6.8	-16.6	10.3	5.8	18.3	4.5	Jan-19
HFR Risk Parity Vol 10 Index			0.3	4.5	10.4	-1.2	1.8	-	10.5	-18.3	6.8	3.6	18.4	3.9	
PanAgora Risk Parity Multi Asset	167,447,805	1.5	0.2	2.7	3.1	-7.3	-0.2	-	2.4	-26.3	8.3	13.6	-	1.4	Mar-19
HFR Risk Parity Vol 10 Index			0.3	4.5	10.4	-1.2	1.8	-	10.5	-18.3	6.8	3.6	-	2.9	

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: June 30, 2024

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2023	2022	2021	2020	2019	Inception	Inception Date
Diversifying	789,772,989	7.0	-1.1	0.0	1.1	-1.2	-0.3	0.0	2.2	-5.7	1.7	-1.7	6.8		
<i>Custom Diversifying Benchmark</i>			0.9	1.2	5.4	1.2	2.1	2.9	7.4	-5.7	1.6	4.7	6.1		
Diversifying Fixed Income	219,913,834	1.9	0.6	0.3	3.5	-3.1	-1.3	0.5	5.2	-13.5	-1.0	1.2	8.3		
<i>Blmbg. U.S. Aggregate Index</i>			0.1	-0.7	2.6	-3.0	-0.2	1.3	5.5	-13.0	-1.5	7.5	8.7		
AFL-CIO	219,866,759	1.9	0.6	0.3	3.5	-3.1	-0.5	1.1	5.2	-13.6	-1.0	6.2	7.8	4.8	Jul-91
<i>Blmbg. U.S. Aggregate Index</i>			0.1	-0.7	2.6	-3.0	-0.2	1.3	5.5	-13.0	-1.5	7.5	8.7	4.8	
Diversifying Multi-Asset	569,859,154	5.0	-1.7	-0.1	0.2	-0.5	-	-	0.9	-2.3	2.4	-	-		
<i>Custom Diversifying Multi-Asset Benchmark</i>			1.5	2.6	7.4	3.1	-	-	8.7	-3.1	4.1	-	-		
Sit LLCAR	372,820,504	3.3	0.1	1.8	5.1	1.7	-	-	6.5	-3.7	-	-	-	2.7	Apr-21
<i>Blmbg. U.S. Aggregate +1%</i>			0.3	-0.2	3.7	-2.0	-	-	6.6	-12.1	-	-	-	-1.3	
BH-DG Systematic	197,038,650	1.7	-	-	-	-	-	-	-	-	-	-	-	-3.0	Apr-24
<i>SG Trend Index</i>			-3.2	-	-	-	-	-	-	-	-	-	-	-4.3	
Liquidity	1,597,360,040	14.1	1.2	2.0	5.6	1.1	1.6	-	5.4	-3.5	-0.3	3.4	4.8		
<i>Blmbg. 1-3 Year Gov/Credit Index</i>			1.0	1.4	4.9	0.6	1.2	-	4.6	-3.7	-0.5	3.3	4.0		
DFA Short Credit	367,733,492	3.3	1.4	2.8	6.1	0.6	1.2	-	5.3	-5.4	-0.5	2.8	5.2	1.7	Dec-16
<i>ICE BofA 1-5 Year U.S. Corp/Govt</i>			0.9	1.1	4.8	-0.2	1.1	-	4.9	-5.5	-0.9	4.6	5.1	1.5	
Insight Short Duration	599,621,524	5.3	1.3	2.2	5.8	2.1	2.3	-	5.7	-1.2	0.0	3.1	4.6	2.3	Dec-16
<i>Bloomberg U.S. Gov/Credit 1-3 Year Index</i>			1.0	1.4	4.9	0.6	1.2	-	4.6	-3.7	-0.5	3.3	4.0	1.5	
Sit Short Duration	630,005,024	5.6	1.0	1.4	5.1	0.2	1.2	-	5.2	-5.0	-0.5	4.4	4.7	1.8	Dec-16
<i>Blmbg. 1-3 Year Govt Index</i>			0.9	1.2	4.5	0.3	1.0	-	4.3	-3.8	-0.6	3.1	3.6	1.3	
Total Cash	111,025,031	1.0	1.4	2.8	5.7	3.6	2.8	1.9	5.5	2.4	0.4	1.3	3.3		
<i>90 Day U.S. Treasury Bill</i>			1.3	2.6	5.4	3.0	2.2	1.5	5.0	1.5	0.0	0.7	2.3		
Cash	111,020,415	1.0	1.4	2.8	5.7	3.7	2.9	2.0	6.1	2.2	0.4	1.3	3.4		
Northern Trust Transition	4,617	0.0	4.4	5.8	8.7	-80.5	-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. \$47,075.25 in residual value is reflected in the Diversifying Fixed Income composite.

Total Fund
Closed End Funds - Investment Summary

Contra Costa County Employees' Retirement Association
Period Ending: June 30, 2024

StepStone Group Analysis (*)

Closing Date	Manager Name/Fund Name	Estimated Market Value as of 6/30/2024 ¹	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) ²	Tot. Value/Paid-In (TVPI) ³	Latest Valuation
Private Equity & Venture Capital												
2/11/2004	Adams Street Partners	\$107,867,712	\$210,000,000	93%	\$195,823,407	\$0	\$4,157,988	\$288,204,328	\$14,176,593	1.47	2.02	3/31/2024
1/15/2009	Adams Street Partners II	\$3,223,082	\$30,000,000	95%	\$28,365,000	\$0	\$0	\$45,661,555	\$1,635,000	1.61	1.72	3/31/2024
9/21/2012	Adams Street Partners - Fund 5	\$10,173,649	\$40,000,000	77%	\$30,845,875	\$0	\$0	\$32,286,795	\$9,154,125	1.05	1.38	3/31/2024
1/18/1996	Adams Street Partners - BPF	\$472,566	\$59,565,614	97%	\$57,517,409	\$0	\$0	\$103,896,144	\$2,024,035	1.81	1.81	3/31/2024
3/31/2016	Adams Street Venture Innovation	\$157,150,606	\$75,000,000	92%	\$69,280,251	\$0	\$2,004,021	\$41,627,212	\$5,719,749	0.60	2.87	3/31/2024
5/18/2018	AE Industrial Partners Fund II, LP	\$37,297,774	\$35,000,000	105%	\$36,649,120	\$0	\$1,126,741	\$21,850,706	\$7,831,761	0.60	1.61	3/31/2024
11/27/2013	Aether Real Assets III	\$15,341,278	\$25,000,000	107%	\$26,707,255	\$54,323	\$637,590	\$8,507,323	\$796,512	0.32	0.89	3/31/2024
11/30/2013	Aether Real Assets III Surplus	\$36,490,193	\$50,000,000	107%	\$53,550,511	\$89,189	\$606,704	\$15,779,909	\$353,806	0.29	0.98	3/31/2024
1/30/2016	Aether Real Assets IV	\$46,719,938	\$50,000,000	102%	\$51,178,527	\$59,500	\$837,610	\$12,584,299	\$5,367,254	0.25	1.16	3/31/2024
6/29/2009	Bay Area Equity Fund II ⁴	\$13,078,593	\$10,000,000	100%	\$10,000,000	\$0	\$0	\$3,684,910	\$0	0.37	1.68	3/31/2024
6/30/2013	Commonfund	\$35,042,524	\$50,000,000	95%	\$47,749,993	\$0	\$828,435	\$36,231,577	\$2,250,007	0.76	1.49	3/31/2024
7/15/2005	EIF US Power Fund II ⁴	\$18,111	\$50,000,000	130%	\$65,029,556	\$0	\$0	\$76,092,655	\$0	1.17	1.17	12/31/2023
5/31/2007	EIF US Power Fund III ⁴	\$2,302,288	\$65,000,000	110%	\$71,409,097	\$0	\$0	\$93,077,887	\$0	1.30	1.34	3/31/2024
11/28/2011	EIF US Power Fund IV	\$17,689,654	\$50,000,000	130%	\$64,917,547	\$0	\$0	\$50,464,797	\$4	0.78	1.05	12/31/2023
11/28/2016	EIF US Power Fund V	\$31,720,231	\$50,000,000	143%	\$71,633,870	\$0	\$0	\$65,340,271	\$3,888,697	0.91	1.35	3/31/2024
3/31/2023	EQT X, L.P.	\$13,763,327	\$100,000,000	18%	\$18,000,288	-\$562,535	-\$213,947	\$2,471,665	\$84,353,094	0.14	0.90	3/31/2024
12/31/2023	EQT Infrastructure VI	\$18,529,925	\$125,000,000	20%	\$25,306,137	\$18,279,381	-\$17,398	\$881,061	\$100,420,675	0.03	0.77	3/31/2024
2/21/2019	Genstar Capital Partners IX, L.P.	\$20,351,040	\$50,000,000	98%	\$49,105,305	\$148,447	\$441,001	\$27,740,646	\$7,016,726	0.56	2.00	3/31/2024
4/1/2021	Genstar Capital Partners X, L.P.	\$41,426,199	\$42,500,000	95%	\$40,255,778	\$161,205	\$0	\$181,283	\$2,425,505	0.00	1.03	3/31/2024
6/30/2023	Genstar Capital Partners XI, L.P.	\$347,970	\$75,000,000	1%	\$594,094	\$295,883	\$276,405	\$276,405	\$74,682,312	0.47	1.05	3/31/2024
6/30/2023	Green Equity Investors IX	\$20,753,827	\$60,000,000	30%	\$17,866,412	\$6,276,844	\$0	\$640,219	\$42,773,807	0.04	1.20	6/30/2024
10/27/2020	GTCR Fund XIII, L.P.	\$34,718,147	\$50,000,000	65%	\$32,562,753	\$5,985,000	\$0	\$5,556,257	\$17,437,247	0.17	1.24	3/31/2024
6/30/2023	GTCR Fund XIV	\$118,131	\$100,000,000	0%	\$0	\$0	\$0	\$0	\$100,000,000	N/A	N/A	3/31/2024
5/10/2021	Hellman & Friedman Capital Partners X, L.P.	\$58,684,620	\$75,000,000	72%	\$54,291,281	\$0	\$0	\$5,333,316	\$24,705,082	0.10	1.18	3/31/2024
3/31/2023	Jade Equity Investors II, LP	-\$74,050	\$15,000,000	0%	\$0	\$0	\$0	\$0	\$15,000,000	N/A	N/A	6/30/2024
11/18/2009	Oaktree PIF 2009	\$325,151	\$40,000,000	87%	\$34,812,560	\$0	\$0	\$47,032,470	\$6,308,961	1.35	1.36	3/31/2024
5/2/2013	Ocean Avenue Fund II	\$17,008,965	\$30,000,000	90%	\$27,000,000	\$0	\$555,000	\$49,568,249	\$3,000,000	1.84	2.47	3/31/2024
4/15/2016	Ocean Avenue Fund III	\$51,764,703	\$50,000,000	93%	\$46,500,000	\$0	\$0	\$57,709,752	\$3,500,000	1.24	2.35	3/31/2024
11/30/2007	Paladin III	\$6,672,193	\$25,000,000	140%	\$35,078,514	\$0	\$0	\$72,045,990	\$387,482	2.05	2.24	3/31/2024
8/22/2011	Pathway 6	\$9,546,080	\$30,000,000	101%	\$30,340,170	\$9,357	\$314,309	\$54,013,917	\$2,605,769	1.78	2.09	12/31/2023
7/10/2013	Pathway 7	\$23,471,647	\$40,000,000	99%	\$39,706,254	\$41,242	\$1,530,223	\$58,556,530	\$3,678,788	1.47	2.07	12/31/2023
11/23/2015	Pathway 8	\$55,632,528	\$70,000,000	100%	\$69,920,536	\$94,500	\$3,985,806	\$94,936,293	\$5,258,418	1.36	2.15	12/31/2023
1/19/1999	Pathway	\$61,757,026	\$50,000,000	99%	\$49,474,302	\$78,888	\$2,394,562	\$47,060,699	\$3,069,662	0.95	2.20	12/31/2023
7/31/2009	Pathway 2008	\$1,610,378	\$125,000,000	101%	\$126,605,914	\$0	\$0	\$190,811,769	\$10,519,913	1.51	1.52	12/31/2023
6/3/2014	Siguler Guff CCCERA Opportunities	\$81,288,681	\$200,000,000	88%	\$175,083,208	\$0	\$19,389,119	\$260,598,930	\$28,597,500	1.49	1.95	3/31/2024
5/18/2018	Siris Partners IV, L.P.	\$45,876,571	\$35,000,000	111%	\$38,773,895	\$417,352	\$0	\$6,375,168	\$525,878	0.16	1.35	3/31/2024
6/30/2023	Symphony Technology Group VII	\$4,832,800	\$50,000,000	12%	\$6,068,399	\$0	\$0	\$0	\$43,931,601	0.00	0.80	3/31/2024
5/27/2021	TA XIV-A, L.P.	\$44,756,834	\$50,000,000	94%	\$47,000,000	\$5,250,000	\$0	\$1,500,000	\$4,500,000	0.03	0.98	3/31/2024
6/30/2023	TA XV-A, L.P.	\$0	\$90,000,000	0%	\$0	\$0	\$0	\$0	\$90,000,000	N/A	N/A	N/A
6/28/2019	TPG Healthcare Partners, L.P.	\$24,622,200	\$24,000,000	99%	\$23,653,717	\$0	\$287,916	\$6,599,452	\$3,098,020	0.28	1.32	3/31/2024
3/31/2023	TPG Healthcare Partners II	\$15,211,913	\$60,000,000	23%	\$13,790,105	\$0	\$0	\$0	\$46,233,847	0.00	1.10	3/31/2024
3/31/2023	TPG Partners IX	\$20,395,229	\$65,000,000	29%	\$19,102,674	\$1,848,862	\$0	\$26,805	\$45,898,482	0.00	1.07	3/31/2024
9/17/2021	Trident IX, L.P.	\$31,393,290	\$50,000,000	58%	\$28,842,239	\$3,341,854	\$0	\$115,762	\$21,273,524	0.00	1.09	3/31/2024
5/24/2019	Trident VIII, L.P.	\$50,117,112	\$40,000,000	97%	\$38,756,318	\$442,025	\$1,917,304	\$5,709,676	\$4,699,142	0.15	1.44	3/31/2024
12/8/2015	Wastewater Opportunity Fund	\$1,672,297	\$25,000,000	126%	\$31,579,656	\$66,898	\$4,403,832	\$31,480,004	\$521,541	1.00	1.05	3/31/2024
Total Private Equity and Venture Capital		\$1,321,162,932	\$2,691,065,614	74%	\$2,000,727,926	\$42,378,215	\$45,463,220	\$1,922,512,686	\$849,620,520	0.96	1.62	
% of Portfolio (Market Value)		11.7%										

* All Data provided by StepStone Group
¹ Latest valuation + capital calls - distributions
² (DPI) is equal to (capital returned / capital called)
³ (TVPI) is equal to (market value + capital returned) / capital called
⁴ 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: June 30, 2024

Private Equity & Venture Capital	Closing Date	Fund Level (G) ²	CCCERA (G)	Fund Level (N) ^{2,3}	CCCERA (N) ³	IRR Date
Adams Street Partners	2/11/2004	14.7%	14.7%	-	12.6%	12/31/2023
Adams Street Partners II	12/31/2008	16.3%	13.2%	-	10.5%	12/31/2023
Adams Street Partners - Fund 5	12/31/2008	9.1%	8.1%	-	6.7%	12/31/2023
Adams Street Partners Venture	1/18/1996	31.5%	31.4%	-	29.5%	12/31/2023
Adams Street Partners - BPF	3/31/2016	14.2%	14.2%	-	11.6%	12/31/2023
AE Industrial Partners Fund II, LP	5/18/2018	24.2%	-	21.3%	-	3/31/2024
Aether Real Assets III ¹	11/27/2013	-0.4%	-	-1.9%	-	3/31/2024
Aether Real Assets III Surplus ¹	11/30/2013	0.7%	-	-0.4%	-	3/31/2024
Aether Real Assets IV ¹	1/30/2016	4.7%	-	3.1%	-	3/31/2024
Bay Area Equity Fund II ⁹	11/26/2003	9.0%	9.0%	5.3%	5.3%	3/31/2024
CommonFund ¹	6/30/2013	-	-	-	6.7%	12/31/2023
Energy Investor Fund II ⁹	7/15/2005	5.6%	5.3%	2.9%	2.6%	3/31/2024
Energy Investor Fund V	11/28/2016	17.3%	-	12.1%	-	3/31/2024
Genstar Capital Partners IX, L.P.	2/21/2019	40.4%	-	32.1%	-	3/31/2024
Oaktree PIF 2009	2/28/2010	6.8%	-	6.5%	-	3/31/2024
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	19.9%	-	13.0%	-	3/31/2024
Pathway 6	8/22/2011	16.6%	16.6%	13.8%	13.8%	3/31/2024
Benchmark ⁴		14.2%	-	-	-	3/31/2024
Pathway 7	7/10/2013	15.7%	15.7%	18.4%	18.4%	3/31/2024
Benchmark ⁵		14.7%	-	-	-	3/31/2024
Pathway 8	11/23/2015	20.1%	20.1%	18.1%	18.1%	3/31/2024
Benchmark ⁶		15.6%	-	-	-	3/31/2024
Pathway Private Equity Fund	1/19/1999	10.8%	10.8%	8.3%	8.3%	3/31/2024
Benchmark ⁷		10.3%	-	-	-	3/31/2024
Pathway Private Equity Fund 2008	7/31/2009	16.9%	16.9%	13.8%	13.8%	3/31/2024
Benchmark ⁸		13.2%	-	-	-	3/31/2024
Siguler Guff CCCERA Opportunities	6/3/2014	17.5%	18.3%	17.0%	15.8%	3/31/2024
Siguler Guff Secondary Opportunities ⁹	8/31/2013	55.3%	118.4%	49.5%	69.0%	9/30/2020
Siris Partners IV, L.P. ¹	5/18/2018	19.9%	-	19.0%	-	3/31/2023
TPG Healthcare Partners, L.P.	6/28/2019	-	-	-	16.4%	12/31/2023
Trident VIII, L.P.	5/24/2019	14.0%	-	-	12.8%	12/31/2023
Wastewater Opportunity Fund ¹	12/8/2015	-	-	3.7%	-	9/30/2023

¹Manager has yet to report IRR figure.

²Fund level data includes CCCERA and all other fund investors.

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

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

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

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

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

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

⁹Capital has been fully called and fund is in redemption.

Total Fund
Closed End Funds - Investment Summary

Contra Costa County Employees' Retirement Association
Period Ending: June 30, 2024

StepStone Group Analysis (*)													
Closing Date	Manager Name/Fund Name	Estimated Market Value as of 6/30/2024 ¹	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) ²	Tot. Value/ Paid-In (TVPI) ³	Latest Valuation	
Private Credit													
8/31/2015	Angelo Gordon Energy Credit Opp. ⁴	\$328,410	\$16,500,000	114%	\$18,750,000	\$0	\$2,250,126	\$22,660,158	\$2,319,783	1.21	1.23	3/31/2024	
12/18/2017	Stepstone CC Opportunities Fund	\$1,156,385,574	\$1,170,000,000	88%	\$1,024,707,278	\$0	\$0	\$252,622,836	\$254,868,860	0.25	1.38	3/31/2024	
8/1/2012	Torchlight IV	\$3,450,275	\$60,000,000	141%	\$84,866,971	\$0	\$0	\$109,589,365	\$0	1.29	1.33	6/30/2024	
3/12/2015	Torchlight V	\$7,525,040	\$75,000,000	80%	\$60,000,000	\$0	\$0	\$71,460,214	\$15,000,000	1.19	1.32	3/31/2024	
Total Private Credit		\$1,167,689,299											
% of Portfolio (Market Value)		10.3%											

*All Data provided by StepStone Group

¹Latest valuation + capital calls - distributions

²(DPI) is equal to (capital returned / capital called)

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

⁴Capital has been fully called and fund is in redemption.

Total Fund
Closed End Funds - Investment Summary

Contra Costa County Employees' Retirement Association
Period Ending: June 30, 2024

Verus Internal Analysis												
Inception Date	Manager Name/Fund Name	Estimated Market Value as of 6/30/2024 ¹	Total Commitment	Total % Called	Capital Called	Current Qtr. Capital Called	Current Qtr. Distributions	Total Distributions ⁵	Remaining Commitment	Distrib./Paid-In (DPI) ²	Tot. Value/Paid-In (TVPI) ³	Latest Valuation
Real Estate												
1/23/2012	Angelo Gordon Realty Fund VIII ⁴	\$8,618,767	\$80,000,000	94%	\$75,401,855	\$0	\$0	\$101,711,550	\$12,334,302	1.35	1.46	3/31/2024
12/8/2014	Angelo Gordon Realty Fund IX	\$16,277,597	\$65,000,000	93%	\$60,125,000	\$0	\$1,300,000	\$59,312,501	\$7,572,500	0.99	1.26	3/31/2024
3/24/2023	BlackStone Strategic Partners Real Estate VIII	\$17,619,730	\$80,000,000	21%	\$16,656,030	\$8,935,285	\$0	\$0	\$63,343,970	0.00	1.06	3/31/2024
3/24/2023	Blackstone Real Estate Partners X	\$24,377,636	\$100,000,000	25%	\$25,244,264	\$18,770,635	\$0	\$0	\$74,755,736	0.00	0.97	3/31/2024
12/14/2023	Cross Lake RE IV	\$411,560	\$60,000,000	3%	\$1,880,326	\$0	\$0	\$0	\$58,119,674	0.00	0.22	3/31/2024
3/18/2024	Cross Lake RE IV SRO AIV	\$1,607,871	\$8,975,352	17%	\$1,495,894	\$0	\$0	\$0	\$7,479,458	0.00	1.07	3/31/2024
6/23/2005	DLJ RECP III	\$11,272,264	\$75,000,000	95%	\$70,968,662	\$0	\$0	\$77,985,055	\$4,031,338	1.10	1.26	3/31/2024
2/11/2008	DLJ RECP IV	\$35,422,822	\$100,000,000	119%	\$118,794,333	\$0	\$0	\$99,841,735	\$1,876,084	0.84	1.14	3/31/2024
7/1/2014	DLJ RECP V	\$12,259,819	\$75,000,000	146%	\$109,393,496	\$0	\$0	\$100,933,448	\$1,766,747	0.92	1.03	3/31/2024
3/19/2019	DLJ RECP VI	\$15,080,536	\$50,000,000	88%	\$43,951,508	\$5,454,749	\$0	\$11,369,099	\$15,396,028	0.26	0.60	3/31/2024
12/14/2023	EQT Exeter Industrial Value Fund VI	\$13,862,806	\$60,000,000	25%	\$15,000,000	\$9,000,000	\$0	\$0	\$45,000,000	0.00	0.92	3/31/2024
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 ⁴	\$110,579	\$35,000,000	87%	\$30,546,401	\$0	\$209,179	\$39,986,504	\$4,453,599	1.31	1.31	3/31/2024
2/20/2019	Invesco Real Estate V	\$57,133,237	\$75,000,000	87%	\$65,318,898	\$0	\$0	\$9,319,462	\$9,681,102	0.14	1.02	6/30/2024
9/27/2022	Invesco Real Estate VI	\$47,545,781	\$100,000,000	57%	\$56,734,047	\$841,121	\$0	\$2,230,131	\$66,873,408	0.04	0.88	3/31/2024
11/10/2023	KSL Capital Partners VI, L.P.	\$8,343,536	\$50,000,000	25%	\$12,266,048	\$499,235	\$822,835	\$0	\$37,733,952	0.00	0.68	3/31/2024
7/16/2013	LaSalle Income & Growth VI ⁴	\$11,502,890	\$75,000,000	95%	\$71,428,571	\$0	\$0	\$84,541,423	\$0	1.18	1.34	3/31/2024
2/28/2017	LaSalle Income & Growth VII	\$22,868,035	\$75,000,000	114%	\$85,708,742	\$0	\$0	\$61,623,058	\$2,845,685	0.72	0.99	3/31/2024
7/3/2013	Long Wharf Fund IV ⁴	\$107,880	\$25,000,000	100%	\$25,000,000	\$0	\$0	\$34,948,087	\$0	1.40	1.40	6/30/2024
9/30/2016	Long Wharf Fund V ⁴	\$25,046,517	\$50,000,000	100%	\$50,000,000	\$0	\$456,986	\$37,701,359	\$0	0.75	1.25	6/30/2024
6/27/2019	Long Wharf Fund VI	\$33,431,828	\$50,000,000	100%	\$49,999,998	\$0	\$991,080	\$28,047,570	\$2	0.56	1.23	6/30/2024
5/30/2023	Long Wharf Fund VII	\$13,675,575	\$50,000,000	32%	\$16,241,774	\$5,242,718	\$0	\$0	\$33,758,226	0.00	0.84	6/30/2024
12/31/2011	Oaktree REOF V ⁴	\$391,098	\$50,000,000	101%	\$50,315,673	\$0	\$0	\$78,780,733	\$5,000,000	1.57	1.57	6/30/2024
9/30/2013	Oaktree REOF VI ⁴	\$16,756,778	\$80,000,000	100%	\$80,000,000	\$0	\$0	\$84,810,175	\$18,400,000	1.06	1.27	6/30/2024
4/1/2015	Oaktree REOF VII	\$37,717,749	\$65,000,000	139%	\$90,407,856	\$28,928	\$0	\$26,277,174	\$18,915,000	0.29	0.71	6/30/2024
11/10/2013	Paulson Real Estate Fund II ⁴	\$12,566,601	\$20,000,000	97%	\$19,345,623	\$0	\$0	\$25,449,660	\$654,377	1.32	1.97	3/31/2024
4/28/2022	PCCP IX	\$67,717,532	\$75,000,000	83%	\$62,051,564	\$1,875,000	\$0	\$0	\$12,948,436	0.00	1.09	3/31/2024
1/25/2012	Siguler Guff DREOF	\$11,181,174	\$75,000,000	93%	\$69,375,000	\$0	\$7,759	\$103,778,870	\$5,625,000	1.50	1.66	3/31/2024
8/31/2013	Siguler Guff DREOF II	\$24,738,654	\$70,000,000	89%	\$61,985,000	\$0	\$13,107	\$55,704,893	\$8,015,000	0.90	1.30	3/31/2024
1/27/2016	Siguler Guff DREOF II Co-Inv	\$11,620,699	\$25,000,000	85%	\$21,277,862	\$0	\$0	\$13,871,261	\$3,722,138	0.65	1.20	3/31/2024
6/26/2024	Stockbridge Value Fund I	\$14,459,322	\$60,000,000	24%	\$14,459,322	\$14,459,322	\$0	\$0	\$45,540,678	0.00	1.00	3/31/2024
Total Closed End Real Estate		\$573,726,872	\$1,858,975,352	78%	\$1,441,914,426	\$65,106,992	\$3,800,947	\$1,138,223,748	\$565,842,440	0.79	1.19	
% of Portfolio (Market Value)		5.1%										

¹Latest valuation + capital calls - distributions

²(DPI) is equal to (capital returned / capital called)

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

⁴Capital has been fully called and fund is in redemption.

⁵Total distributions may include callable distributions

⁶Remianing commitment includes callable distributions

Total Fund
Closed End Funds - IRR Summary

Contra Costa County Employees' Retirement Association
Period Ending: June 30, 2024

Private Credit	Inception	Fund Level (G) ²	CCCERA (G)	Fund Level (N) ^{2,3}	CCCERA (N) ³	IRR Date
Angelo Gordon Energy Cred Opp. ⁴	9/24/2015	-	-	-	7.6%	3/31/2024
Stepstone CC Opportunities Fund ¹	2/2/2018	-	9.9%	-	9.2%	12/31/2023
Torchlight IV	8/1/2012	11.0%	11.6%	8.8%	9.7%	3/31/2024
Torchlight V	3/12/2015	14.0%	14.1%	10.1%	10.1%	3/31/2024
Real Estate	Inception	Fund Level (G) ²	CCCERA (G)	Fund Level (N) ^{2,3}	CCCERA (N) ³	IRR Date
Angelo Gordon VIII ⁴	1/23/2012	-	-	-	11.8%	3/31/2024
Angelo Gordon IX	12/8/2014	-	-	-	5.2%	3/31/2024
Blackstone Real Estate Partners X ¹	3/24/2023	-	-	-	-	N/A
BlackStone Strategic Partners Real Estate VIII ¹	3/25/2022	-	-	-	-	N/A
Cross Lake RE IV ¹	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 ¹	12/14/2023	-	-	-	-	N/A
EQT Industrial Value VI ¹	12/31/2023	-	-	-	-	N/A
EQT Multifamily Value II ¹	N/A	-	-	-	-	N/A
Invesco Fund IV ⁴	6/30/2014	12.6%	-	10.1%	-	3/31/2024
Invesco Fund V	2/20/2019	2.4%	-	-2.4%	-	3/31/2024
Invesco Fund VI	9/27/2022	-	-	-	-	N/A
KSL Capital Partners VI ¹	11/10/2023	-	-	-	-	N/A
LaSalle Income & Growth VI ⁴	7/16/2013	9.7%	9.7%	7.6%	7.7%	6/30/2024
LaSalle Income & Growth VII	2/28/2017	1.7%	1.6%	-0.3%	-0.4%	6/30/2024
Long Wharf IV ⁴	7/3/2013	14.5%	14.3%	11.0%	10.9%	6/30/2024
Long Wharf V ⁴	9/30/2016	6.3%	8.6%	5.7%	5.9%	6/30/2024
Long Wharf VI	6/27/2019	22.7%	23.8%	13.8%	14.4%	6/30/2024
Long Wharf VII	5/1/2023	0.5%	0.5%	-17.4%	-17.1%	6/30/2024
Oaktree REOF V ⁴	12/31/2011	16.6%	-	12.2%	-	6/30/2024
Oaktree REOF VI ⁴	9/30/2013	10.2%	-	6.3%	-	6/30/2024
Oaktree REOF VII	4/1/2015	14.8%	-	9.4%	-	6/30/2024
Paulson ⁴	11/10/2013	-	-	12.0%	-	12/31/2023
PCCP IX	5/27/2021	9.9%	-	6.6%	-	3/31/2024
Siguler Guff I	1/25/2012	12.1%	14.8%	10.5%	12.1%	3/31/2024
Siguler Guff II	8/31/2013	8.2%	8.4%	7.0%	6.8%	3/31/2024
Siguler Guff DREOF II Co-Inv	1/27/2016	-2.4%	5.1%	-2.5%	3.7%	3/31/2024

¹Manager has yet to report IRR figure.

²Fund level data includes CCCERA and all other fund investors.

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

⁴Capital 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: June 30, 2024

3 Years

	Anlzd Return	Anlzd Excess Performance	Anlzd Standard Deviation	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Information Ratio	Up Capture	Down Capture
BlackRock Russell 1000 Index	8.74	0.00	17.75	0.00	1.00	0.02	1.00	0.40	-0.04	99.99	99.99
Boston Partners	9.34	3.82	15.99	3.85	0.96	3.05	0.97	0.45	1.15	101.40	85.34
Emerald Advisers	-1.09	3.77	22.25	3.82	0.97	4.33	0.96	-0.07	0.88	106.73	94.48
Ceredex	5.22	5.75	19.24	5.56	0.85	6.63	0.91	0.21	0.78	94.30	77.69
Pyrford	2.85	-0.70	13.50	-0.17	0.83	5.02	0.90	0.05	-0.19	85.57	87.11
William Blair	-3.98	-1.36	19.06	-1.13	1.02	5.72	0.91	-0.28	-0.20	102.88	107.22
PIMCO RAE Emerging Markets	5.55	6.64	16.74	6.88	0.96	6.83	0.83	0.23	0.98	114.46	83.06
TT Emerging Markets	-9.14	-4.07	19.41	-3.70	1.07	5.11	0.93	-0.56	-0.79	105.37	120.22
Artisan Partners	1.21	-4.29	19.54	-3.80	0.96	5.05	0.94	0.01	-0.83	87.83	100.65
First Eagle	5.07	0.28	12.76	1.00	0.82	4.20	0.94	0.22	-0.01	80.98	75.52
Voya Global Investors	1.27	-0.38	8.42	-0.36	1.00	1.12	0.98	-0.17	-0.33	96.98	100.17
Adelante	0.50	0.16	20.69	0.10	0.96	1.54	1.00	-0.02	-0.01	96.28	96.01
AQR Global Risk Premium-EL	-1.50	-0.26	10.38	-0.46	0.88	2.32	0.97	-0.38	-0.17	87.30	89.99
PanAgora Risk Parity Multi Asset	-7.34	-6.10	14.86	-5.61	1.25	4.53	0.94	-0.64	-1.30	103.87	137.87
AFL-CIO	-3.13	-0.10	7.04	-0.26	0.95	1.00	0.98	-0.86	-0.13	94.17	96.69
DFA Short Credit	0.57	0.74	2.77	0.70	0.76	1.59	0.75	-0.96	0.46	86.78	70.92
Insight Short Duration	2.13	1.58	1.80	1.83	0.56	1.64	0.48	-0.56	0.95	75.62	17.35
Sit Short Duration	0.18	-0.16	3.67	-0.30	1.49	1.90	0.82	-0.78	-0.06	149.42	159.70

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: June 30, 2024

5 Years

	Anlzd Return	Anlzd Excess Performance	Standard Deviation	Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Information Ratio	Up Capture	Down Capture
BlackRock Russell 1000 Index	14.60	-0.01	18.32	-0.01	1.00	0.02	1.00	0.72	-0.56	99.97	100.00
Boston Partners	12.30	3.30	18.81	2.97	1.02	2.98	0.98	0.60	1.04	105.02	92.38
Emerald Advisers	7.94	1.78	23.18	1.99	0.95	5.24	0.95	0.35	0.29	101.81	96.82
Ceredex	7.76	0.68	21.73	1.49	0.85	7.00	0.92	0.36	0.00	86.53	81.88
Pyrford	5.34	0.04	14.49	1.14	0.75	6.72	0.89	0.28	-0.09	82.67	79.86
William Blair	7.00	1.51	18.86	1.37	1.06	5.14	0.93	0.34	0.34	111.00	106.15
PIMCO RAE Emerging Markets	8.52	5.60	20.30	5.64	1.06	6.37	0.90	0.40	0.91	116.11	92.54
TT Emerging Markets	2.44	-0.66	21.85	-0.63	1.15	6.09	0.94	0.12	0.01	116.48	119.68
Artisan Partners	11.41	-2.44	18.46	-1.28	0.93	5.14	0.93	0.56	-0.45	89.79	93.60
First Eagle	7.75	0.72	13.57	2.15	0.75	5.60	0.93	0.46	0.01	81.15	72.86
Voya Global Investors	3.21	-0.52	8.65	-0.21	0.91	1.69	0.97	0.16	-0.33	91.93	94.63
Adelante	4.85	0.81	19.98	0.88	0.95	1.65	1.00	0.23	0.35	97.74	95.03
AFL-CIO	-0.52	-0.29	5.82	-0.31	0.93	1.07	0.97	-0.43	-0.29	88.43	92.30
DFA Short Credit	1.24	0.18	2.46	0.44	0.75	1.59	0.65	-0.37	0.11	79.61	65.90
Insight Short Duration	2.31	1.06	2.03	1.57	0.60	1.87	0.29	0.08	0.56	83.32	14.10
Sit Short Duration	1.16	0.13	3.06	-0.29	1.43	1.62	0.79	-0.31	0.10	146.50	163.96

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: June 30, 2024

Name	Asset Class	Fee Schedule	Market Value	Estimated Fee Value	Expense Fee (%)
BlackRock Russell 1000 Index	Growth	0.03 % of Assets	\$1,286,476,554	\$385,943	0.03
Boston Partners	Growth	0.50 % of First \$25 M 0.30 % Thereafter	\$426,935,345	\$1,330,806	0.31
Emerald Advisers	Growth	0.75 % of First \$10 M 0.60 % Thereafter	\$223,153,822	\$1,353,923	0.61
Ceredex	Growth	0.85 % of First \$10 M 0.68 % of Next \$40 M 0.51 % Thereafter	\$199,977,061	\$1,121,883	0.56
Pyrford	Growth	0.70 % of First \$50 M 0.50 % of Next \$50 M 0.35 % Thereafter	\$492,099,248	\$1,972,347	0.40
William Blair	Growth	0.80 % of First \$20 M 0.60 % of Next \$30 M 0.50 % of Next \$50 M 0.45 % of Next \$50 M 0.40 % of Next \$50 M 0.30 % Thereafter	\$476,778,846	\$1,845,337	0.39
PIMCO RAE Emerging Markets	Growth	0.75 % of First \$50 M 0.68 % of Next \$50 M 0.50 % of Next \$100 M 0.45 % Thereafter	\$273,873,447	\$1,544,931	0.56
TT Emerging Markets	Growth	0.70 % of First \$100 M 0.65 % of Next \$100 M 0.60 % Thereafter	\$262,290,245	\$1,723,741	0.66
Artisan Partners	Growth	0.75 % of Assets	\$634,593,849	\$4,759,454	0.75
First Eagle	Growth	0.75 % of Assets	\$606,164,236	\$4,546,232	0.75
Voya Global Investors	Growth	0.50 % of First \$50 M 0.40 % of Next \$50 M 0.35 % Thereafter	\$161,940,512	\$666,792	0.41
Invesco US Fundamental Beta	Growth	0.15 % of Assets	\$114,553,525	\$171,830	0.15
AQR Global Risk Premium-EL	Growth	0.38 % of Assets	\$183,416,932	\$696,984	0.38

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

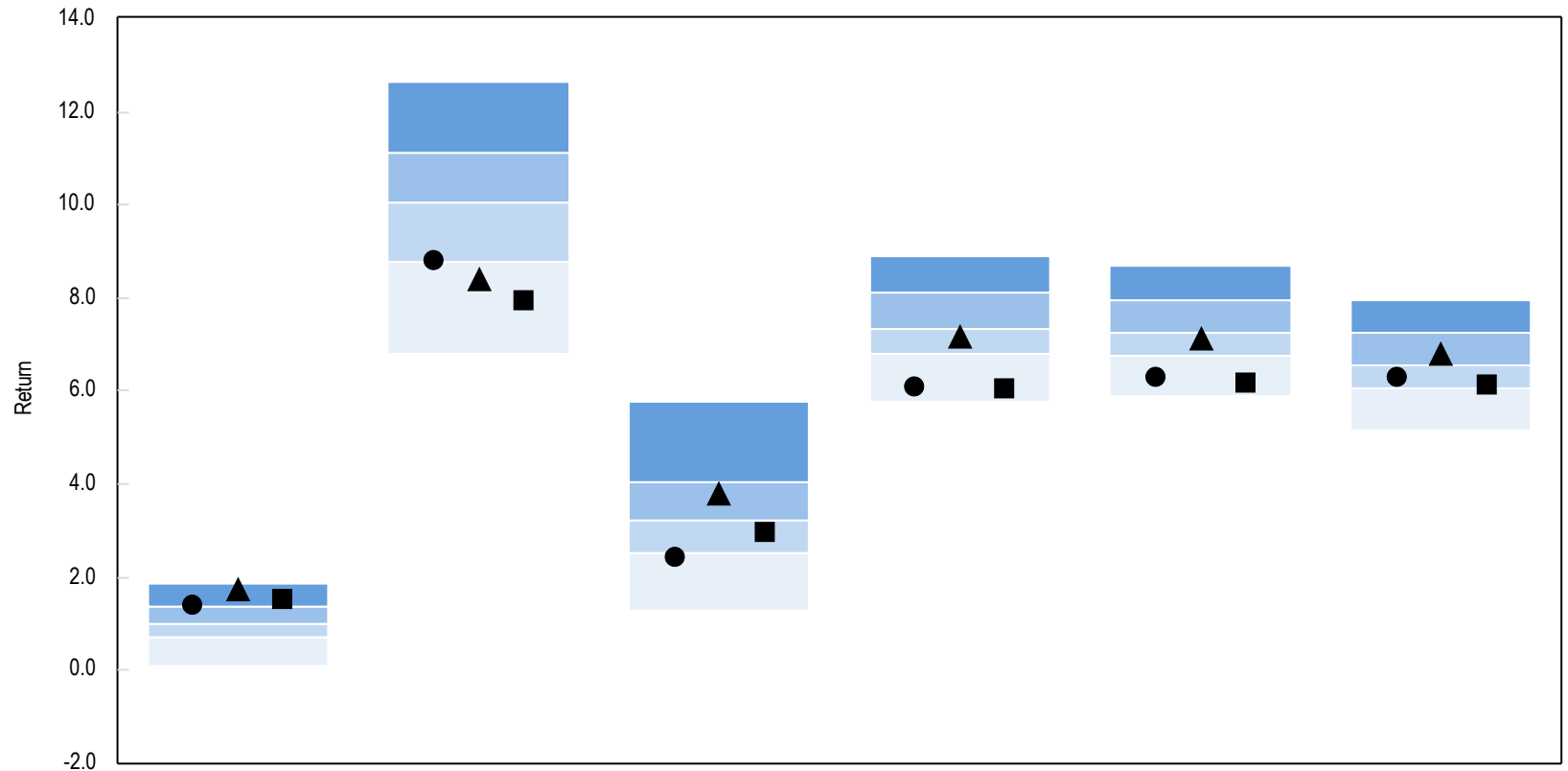
Total Fund
Investment Fund Fee Analysis

Contra Costa County Employees' Retirement Association
Period Ending: June 30, 2024

Name	Asset Class	Fee Schedule	Market Value	Estimated Fee Value	Expense Fee (%)
PanAgora Risk Parity Multi Asset	Growth	0.35 % of Assets	\$167,447,805	\$586,067	0.35
AFL-CIO	Diversifying	0.32 % of Assets	\$219,866,759	\$703,574	0.32
Sit LLCAR	Diversifying	0.39 % of First \$200 M 0.35 % Thereafter	\$372,820,504	\$1,416,718	0.38
DFA Short Credit	Liquidity	0.20 % of First \$25 M 0.10 % Thereafter	\$367,733,492	\$392,733	0.11
Insight Short Duration	Liquidity	0.06 % of First \$500 M 0.05 % of Next \$500 M 0.04 % Thereafter	\$599,621,524	\$349,811	0.06
Sit Short Duration	Liquidity	0.15 % of Assets	\$630,005,024	\$945,008	0.15

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

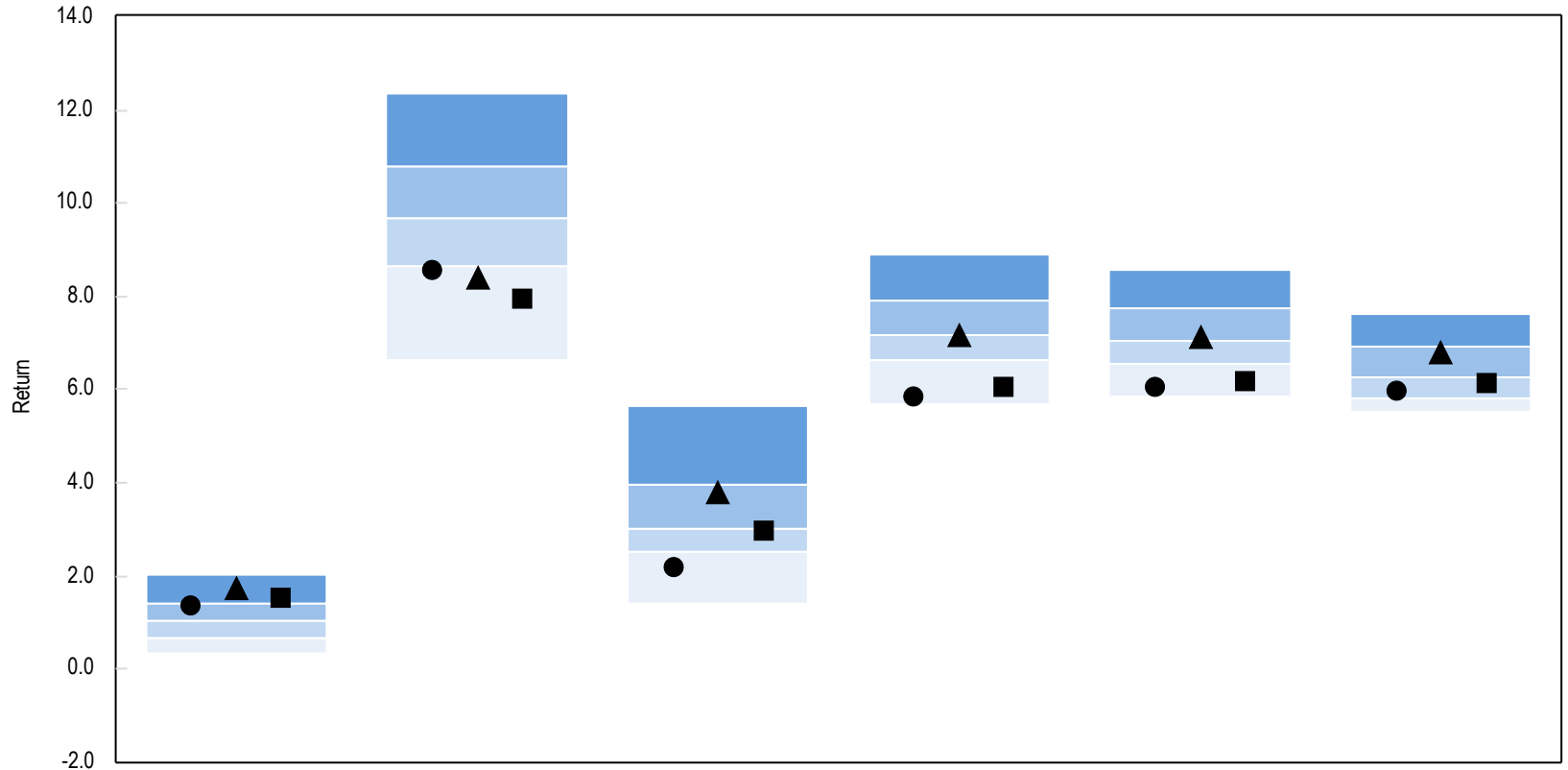
Total Fund Cumulative Performance vs. InvMetrics Public DB >\$1B Gross



	3 Mo	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
● Total Fund	1.42 (24)	8.80 (75)	2.45 (78)	6.11 (90)	6.33 (86)	6.31 (68)
▲ Policy Index	1.73 (9)	8.40 (82)	3.81 (32)	7.16 (56)	7.14 (57)	6.81 (45)
■ Implementation Benchmark	1.55 (19)	7.97 (83)	2.97 (63)	6.05 (91)	6.20 (87)	6.13 (73)
5th Percentile	1.87	12.64	5.77	8.90	8.71	7.95
1st Quartile	1.38	11.11	4.06	8.12	7.94	7.24
Median	0.99	10.03	3.21	7.33	7.26	6.57
3rd Quartile	0.70	8.79	2.52	6.80	6.76	6.05
95th Percentile	0.09	6.80	1.29	5.78	5.88	5.16
Population	103	103	99	98	95	95

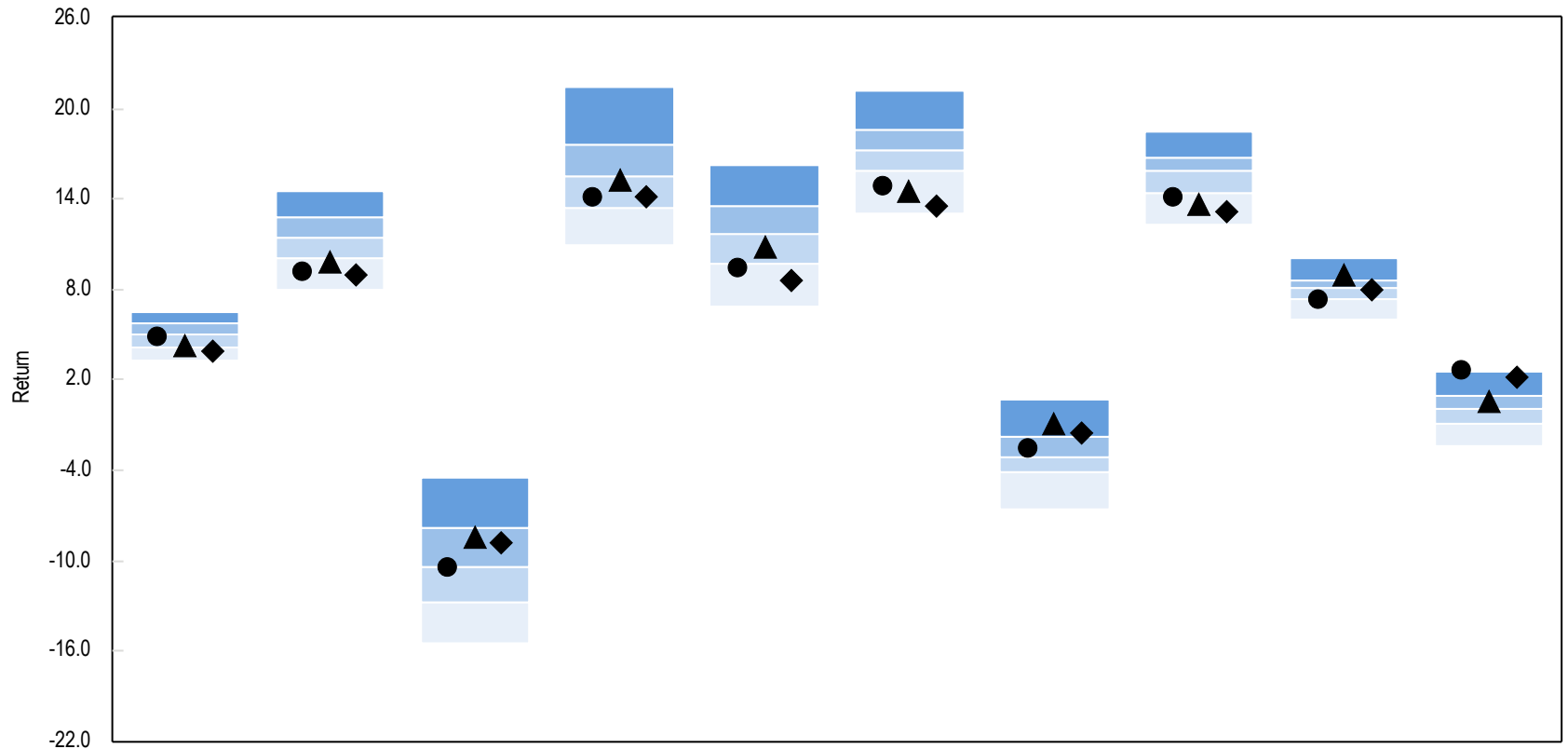
Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.

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



	3 Mo	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
● Total Fund	1.36 (29)	8.57 (77)	2.21 (80)	5.85 (95)	6.05 (90)	5.97 (70)
▲ Policy Index	1.73 (10)	8.40 (78)	3.81 (29)	7.16 (49)	7.14 (47)	6.81 (30)
■ Implementation Benchmark	1.55 (17)	7.97 (82)	2.97 (57)	6.05 (89)	6.20 (88)	6.13 (62)
5th Percentile	2.05	12.36	5.63	8.89	8.56	7.64
1st Quartile	1.42	10.80	3.96	7.89	7.73	6.91
Median	1.03	9.68	3.03	7.16	7.06	6.28
3rd Quartile	0.66	8.64	2.51	6.63	6.58	5.82
95th Percentile	0.35	6.63	1.40	5.70	5.86	5.54
Population	94	94	89	87	84	82

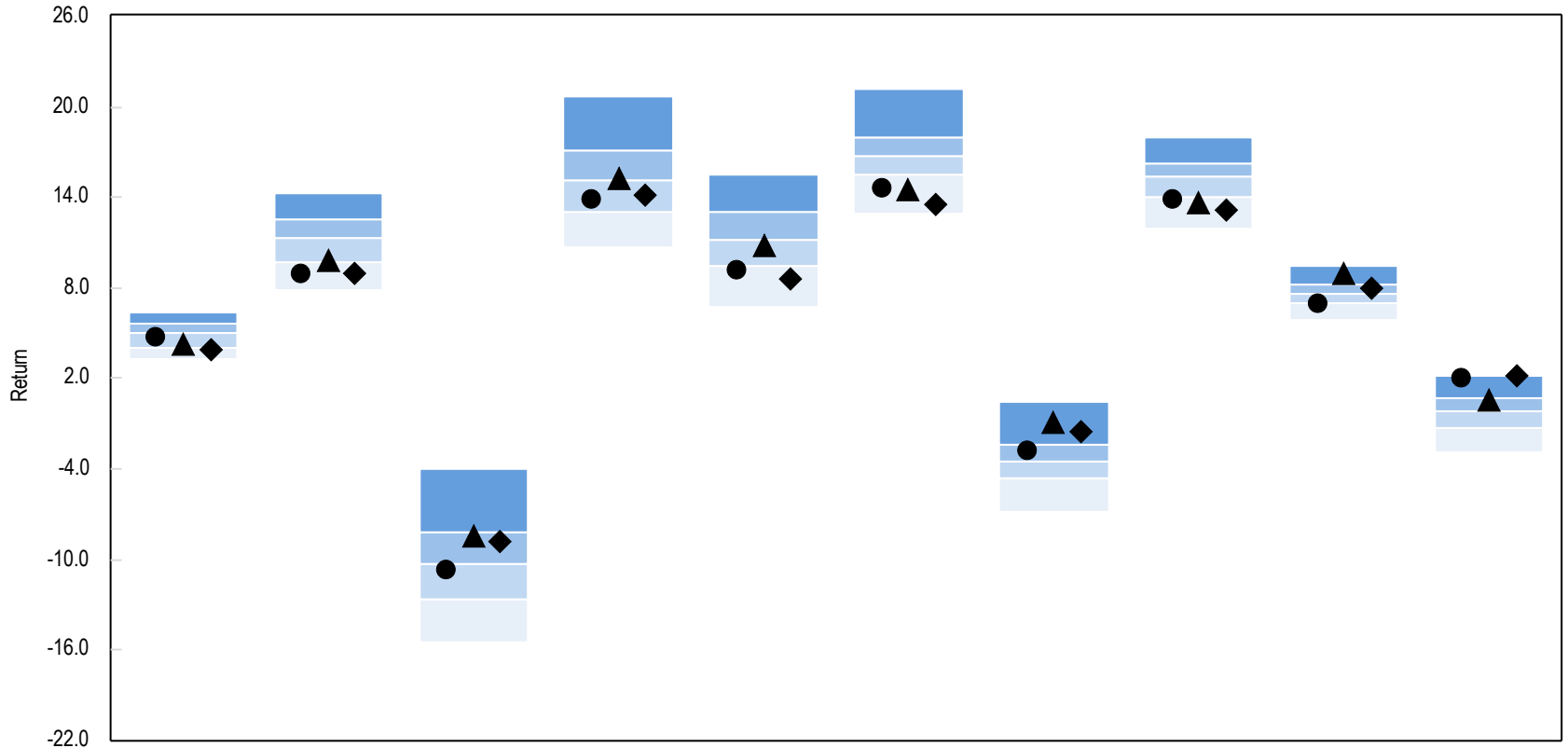
Total Fund Consecutive Periods vs. InvMetrics Public DB >\$1B Gross



	YTD	2023	2022	2021	2020	2019	2018	2017	2016	2015
● Total Fund	4.84 (61)	9.23 (85)	-10.39 (51)	14.21 (65)	9.52 (80)	14.92 (87)	-2.46 (35)	14.18 (78)	7.43 (71)	2.70 (3)
▲ Policy Index	4.34 (73)	9.85 (78)	-8.38 (29)	15.29 (54)	10.81 (64)	14.58 (88)	-0.94 (14)	13.69 (87)	8.93 (16)	0.58 (33)
◆ Implementation Benchmark	3.88 (86)	8.99 (87)	-8.74 (32)	14.17 (66)	8.66 (89)	13.59 (94)	-1.52 (18)	13.21 (90)	8.00 (55)	2.18 (10)
5th Percentile	6.48	14.55	-4.49	21.42	16.27	21.23	0.71	18.42	10.06	2.54
1st Quartile	5.77	12.76	-7.81	17.63	13.54	18.55	-1.75	16.78	8.57	1.00
Median	5.04	11.42	-10.38	15.54	11.74	17.18	-3.15	15.90	8.07	0.11
3rd Quartile	4.16	10.11	-12.74	13.47	9.75	15.89	-4.14	14.36	7.34	-0.89
95th Percentile	3.27	8.00	-15.51	10.90	6.83	13.00	-6.63	12.35	5.95	-2.44
Population	103	183	188	222	232	192	168	177	178	173

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.

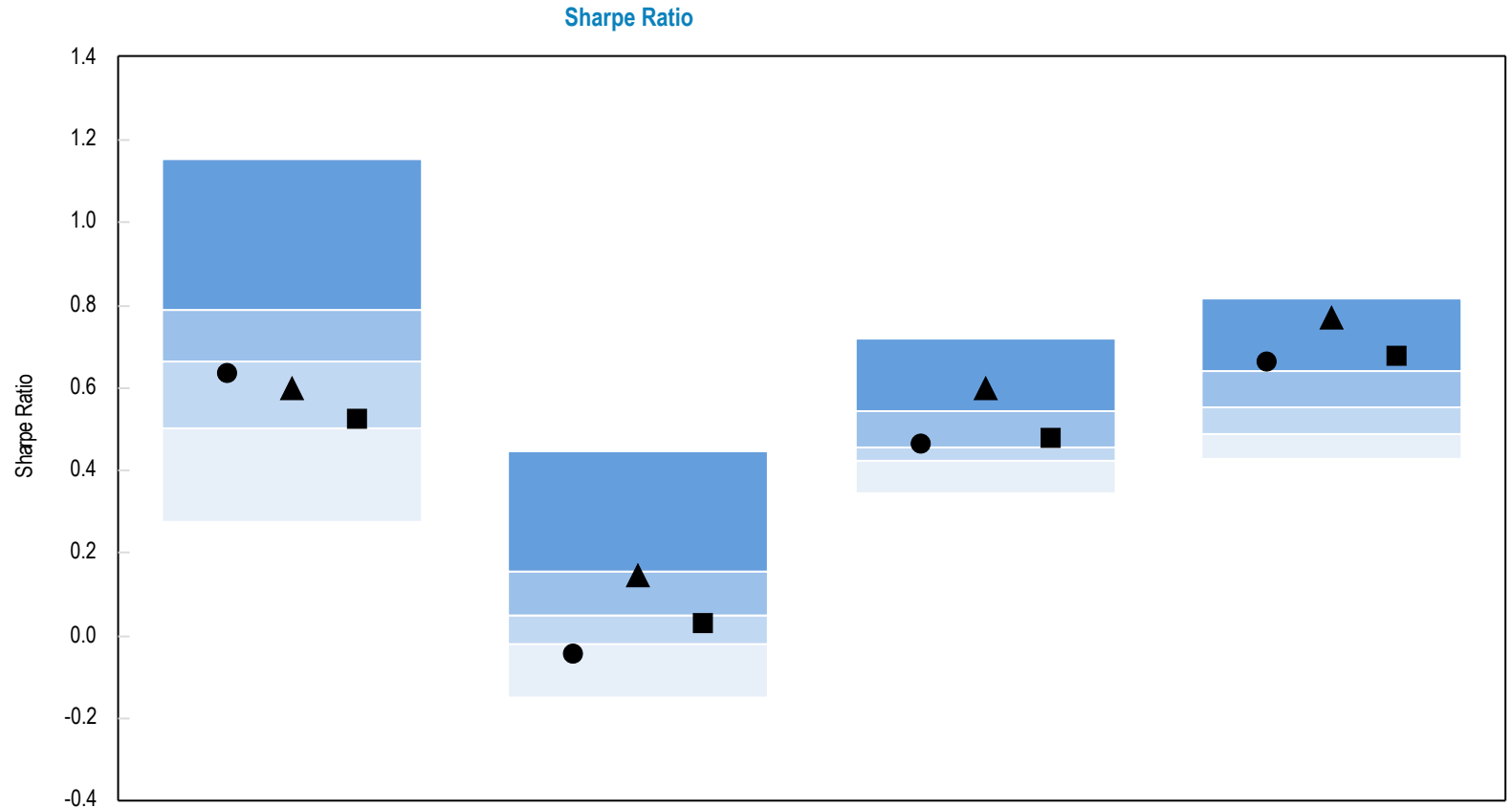
Total Fund Consecutive Periods vs. InvMetrics Public DB >\$1B Net



	YTD	2023	2022	2021	2020	2019	2018	2017	2016	2015
● Total Fund	4.72 (61)	9.01 (85)	-10.61 (55)	13.90 (63)	9.23 (77)	14.61 (88)	-2.72 (34)	13.86 (80)	6.94 (76)	2.09 (8)
▲ Policy Index	4.34 (73)	9.85 (75)	-8.38 (29)	15.29 (50)	10.81 (60)	14.58 (88)	-0.94 (10)	13.69 (85)	8.93 (11)	0.58 (26)
◆ Implementation Benchmark	3.88 (84)	8.99 (85)	-8.74 (30)	14.17 (61)	8.66 (86)	13.59 (92)	-1.52 (13)	13.21 (90)	8.00 (36)	2.18 (6)
5th Percentile	6.42	14.26	-4.02	20.71	15.55	21.20	0.48	17.98	9.52	2.24
1st Quartile	5.66	12.51	-8.18	17.17	13.03	17.93	-2.33	16.31	8.20	0.74
Median	5.05	11.26	-10.32	15.18	11.24	16.79	-3.52	15.40	7.62	-0.19
3rd Quartile	4.08	9.70	-12.57	12.99	9.41	15.54	-4.55	14.08	7.00	-1.26
95th Percentile	3.24	7.89	-15.50	10.67	6.81	12.87	-6.78	11.98	5.84	-2.87
Population	94	171	171	201	212	188	165	175	170	166

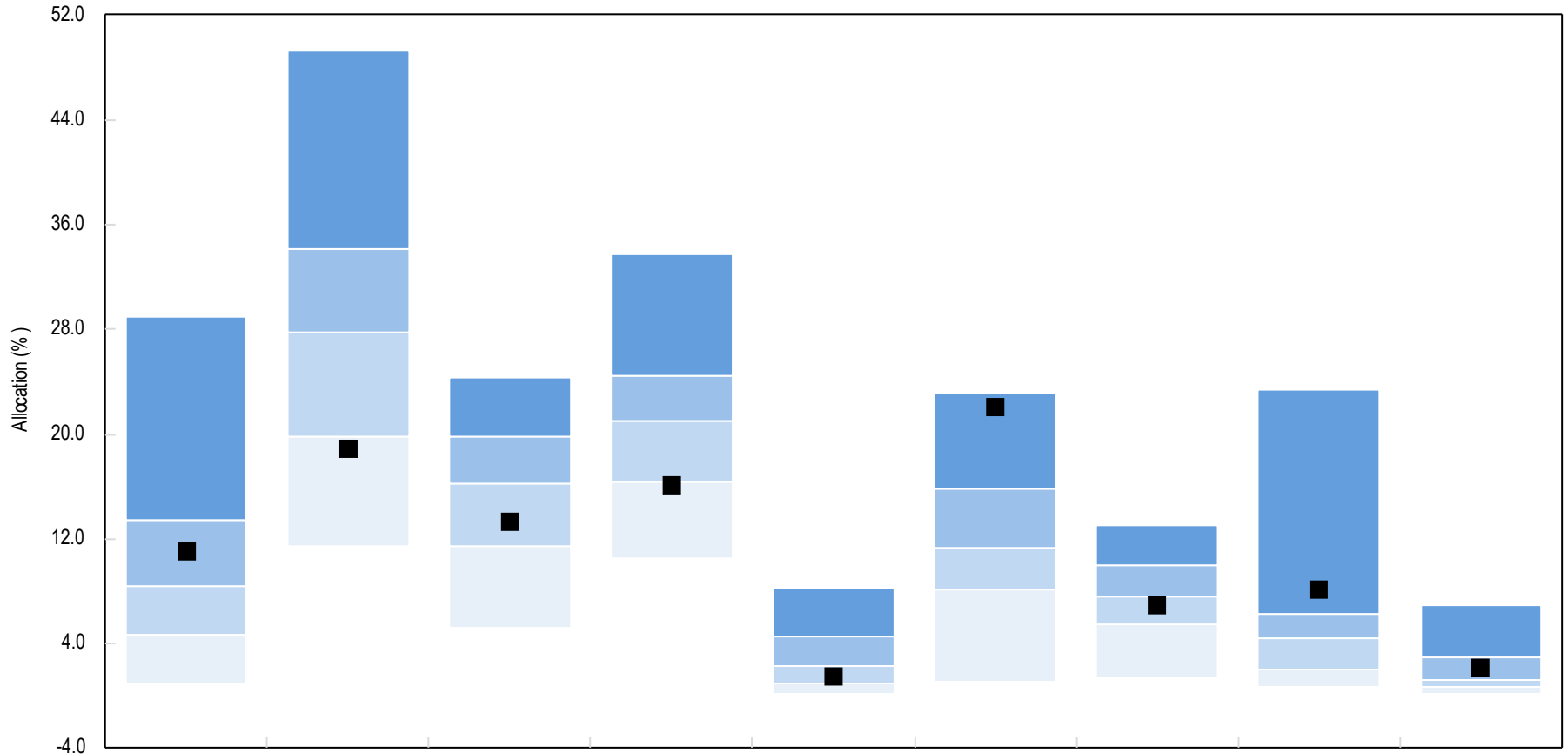
Total Fund
Sharpe Ratio Ranking (Gross of Fees)

Contra Costa County Employees' Retirement Association
Period Ending: June 30, 2024



	1 Yr	3 Yrs	5 Yrs	10 Yrs
● Total Fund	0.64 (58)	-0.04 (82)	0.46 (46)	0.66 (23)
▲ Policy Index	0.60 (66)	0.15 (28)	0.60 (19)	0.77 (12)
■ Implementation Benchmark	0.53 (74)	0.03 (63)	0.48 (44)	0.68 (21)
5th Percentile	1.16	0.45	0.72	0.82
1st Quartile	0.79	0.16	0.54	0.64
Median	0.66	0.05	0.46	0.55
3rd Quartile	0.50	-0.02	0.43	0.49
95th Percentile	0.27	-0.15	0.35	0.43
Population	94	89	87	82

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



	Global Equity	US Equity	Global ex-US Equity	US Fixed	Global ex-US Fixed	Private Equity	Total Real Estate	Multi-Asset	Cash & Equivalents
■ Total Fund	11.0 (29)	18.9 (78)	13.3 (68)	16.1 (78)	1.4 (68)	22.0 (8)	7.0 (59)	8.1 (19)	2.1 (36)
5th Percentile	29.0	49.3	24.4	33.8	8.2	23.1	13.0	23.4	6.9
1st Quartile	13.4	34.1	19.9	24.5	4.5	15.9	10.0	6.2	3.0
Median	8.4	27.8	16.3	21.1	2.3	11.3	7.6	4.4	1.3
3rd Quartile	4.7	19.8	11.4	16.4	1.0	8.2	5.4	2.0	0.7
95th Percentile	0.9	11.5	5.2	10.6	0.1	1.0	1.3	0.7	0.1
Population	38	94	95	96	39	83	83	26	91

Domestic Equity Managers

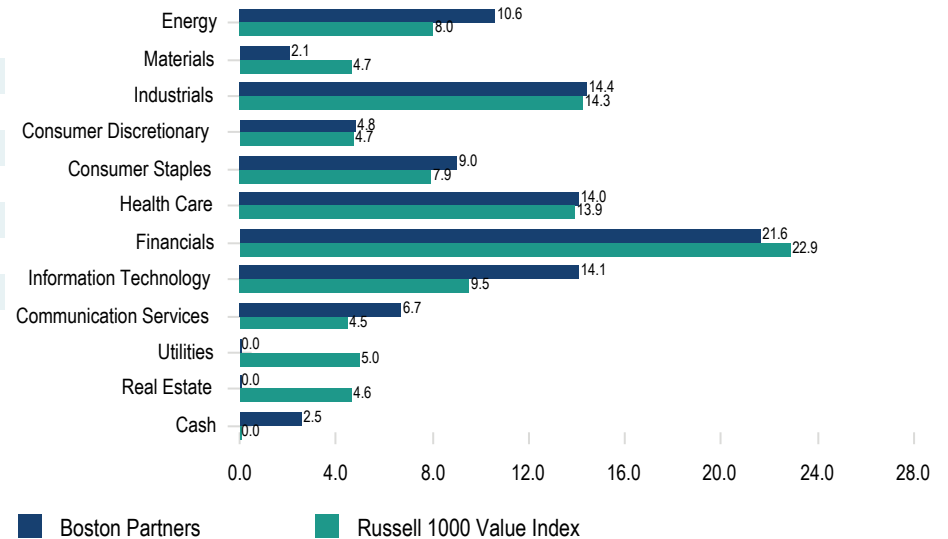
Boston Partners
Manager Portfolio Overview

Contra Costa County Employees' Retirement Association
Period Ending: June 30, 2024

Characteristics

	Portfolio	Benchmark
Number of Stocks	90	846
Wtd. Avg. Mkt. Cap \$M	201,620.41	160,113.85
Median Mkt. Cap \$M	45,106.35	12,594.63
Price/Earnings ratio	19.07	19.03
Price/Book ratio	2.87	2.56
Return on Equity (%)	-5.85	1.51
Current Yield (%)	1.74	2.24
Beta (5 Years, Monthly)	1.02	1.00

Sector Allocation (%) vs. Russell 1000 Value Index



Largest Holdings

	End Weight (%)	Quarterly Return (%)
JPMorgan Chase & Co	4.79	1.57
Alphabet Inc	3.82	20.82
Oracle Corp	2.45	12.78
Morgan Stanley	2.32	4.17
Wells Fargo & Co	2.01	3.05
Micron Technology Inc.	1.97	11.57
Philip Morris International Inc	1.97	12.04
Walmart Inc	1.96	12.92
Dell Technologies Inc	1.95	21.32
AutoZone Inc	1.74	-5.95

Top Contributors

	Portfolio Weight (%)	Quarterly Return (%)	Contribution to Return (%)
Alphabet Inc	3.09	20.82	0.64
Dell Technologies Inc	1.57	21.32	0.34
Oracle Corp	2.12	12.78	0.27
Walmart Inc	1.70	12.92	0.22
Philip Morris International Inc	1.73	12.04	0.21
Applied Materials Inc	1.39	14.64	0.20
Micron Technology Inc.	1.72	11.57	0.20
Howmet Aerospace Inc	1.01	13.51	0.14
Amgen Inc	1.27	10.68	0.14
Leidos Holdings Inc	1.00	11.58	0.12

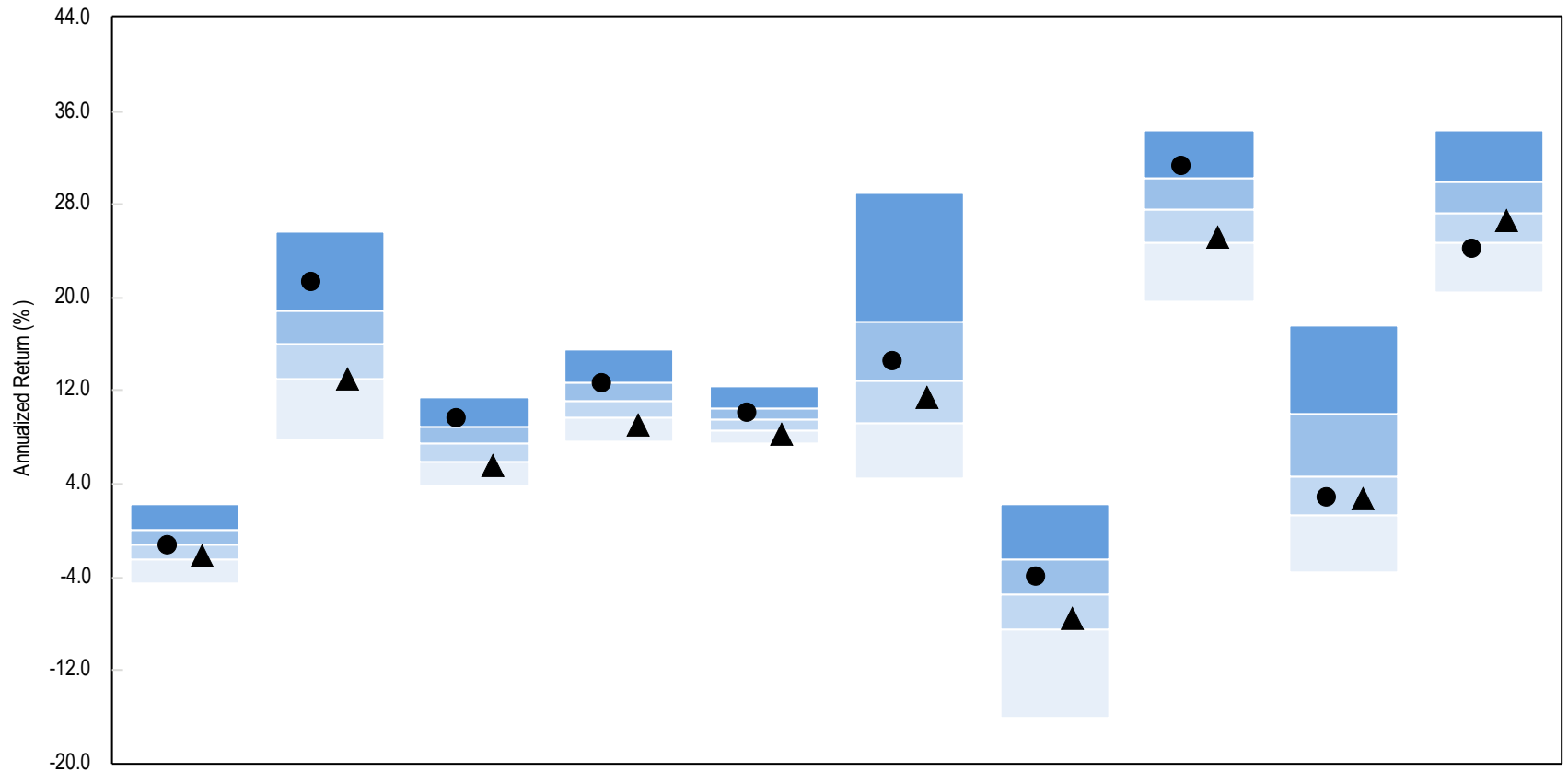
Top Detractors

	Portfolio Weight (%)	Quarterly Return (%)	Contribution to Return (%)
Global Payments Inc	1.29	-27.46	-0.35
Bristol-Myers Squibb Co	1.22	-22.52	-0.27
Marathon Petroleum Corp	1.78	-13.49	-0.24
Schlumberger Ltd	1.46	-13.37	-0.20
Phillips 66	1.50	-12.90	-0.19
CRH PLC	1.46	-12.70	-0.19
Centene Corp	1.17	-15.52	-0.18
Norfolk Southern Corp	1.17	-15.28	-0.18
NICE Ltd	0.53	-34.01	-0.18
Builders FirstSource Inc	0.53	-33.63	-0.18

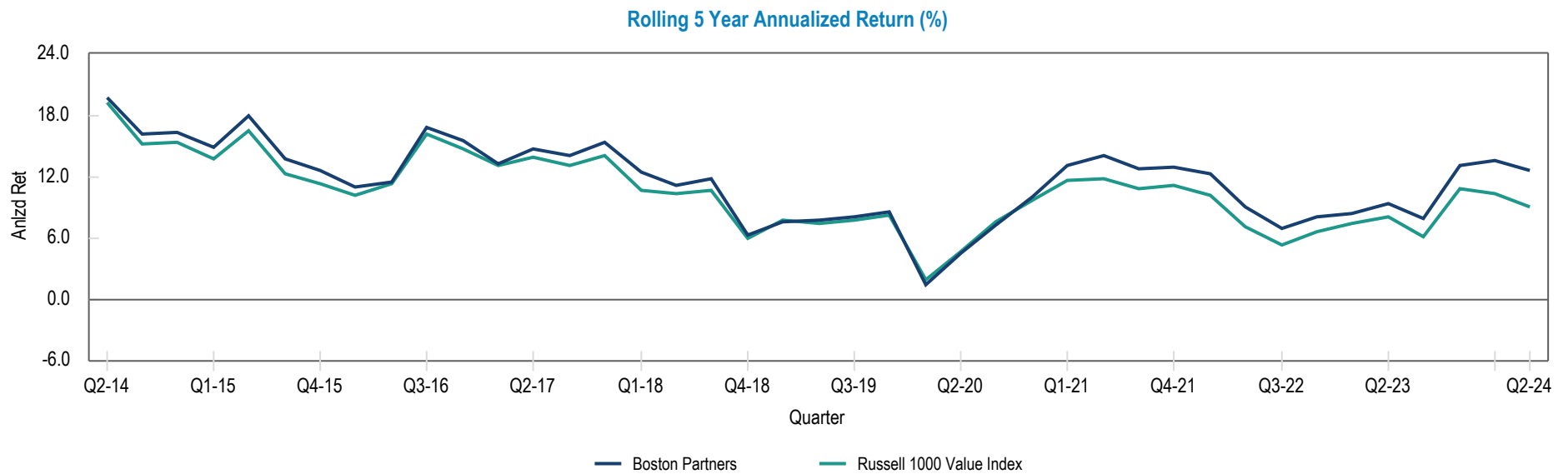
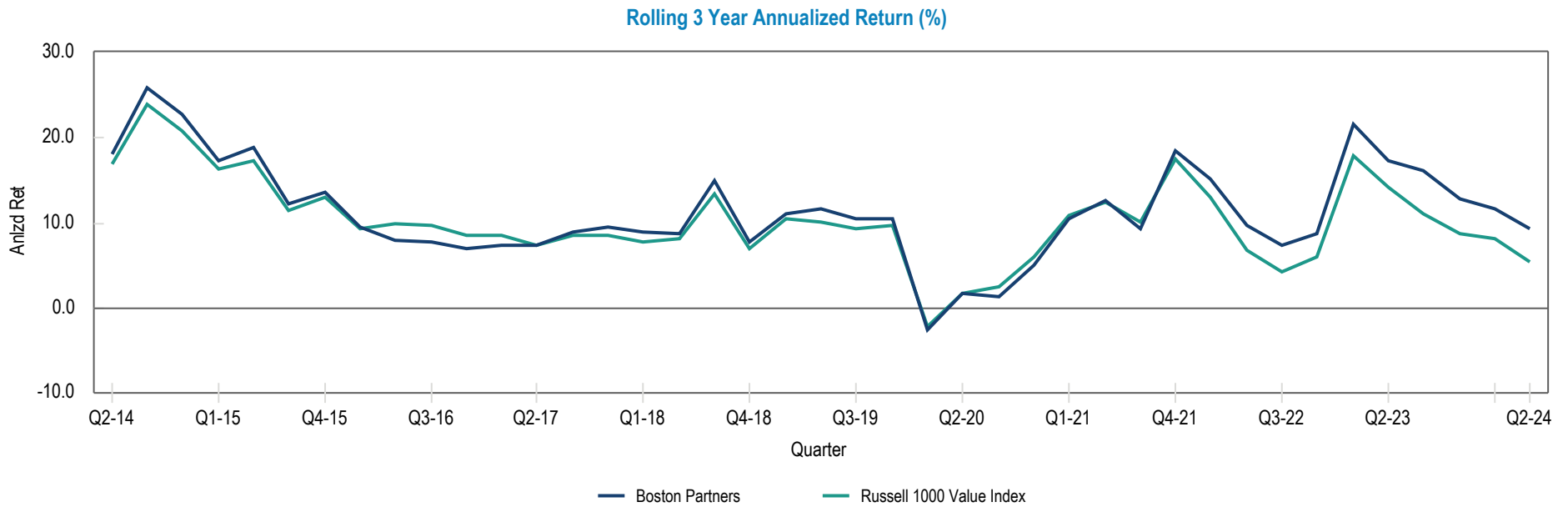
% of Portfolio 16.60 2.47 % of Portfolio 12.11 -2.16

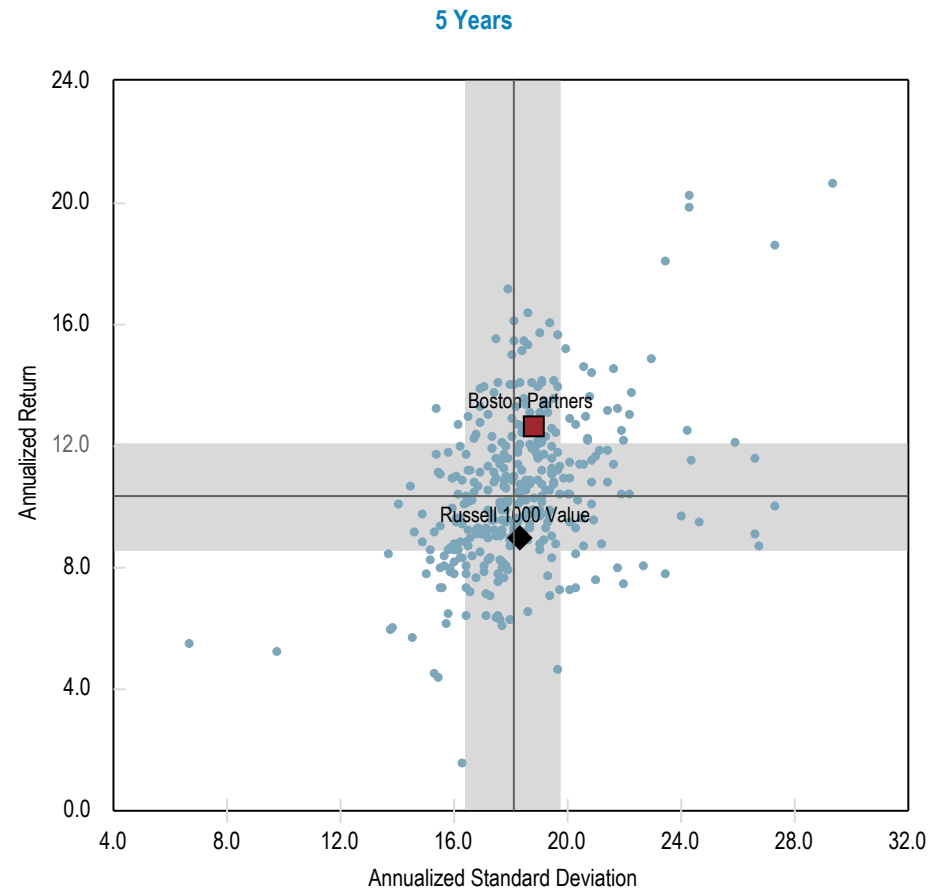
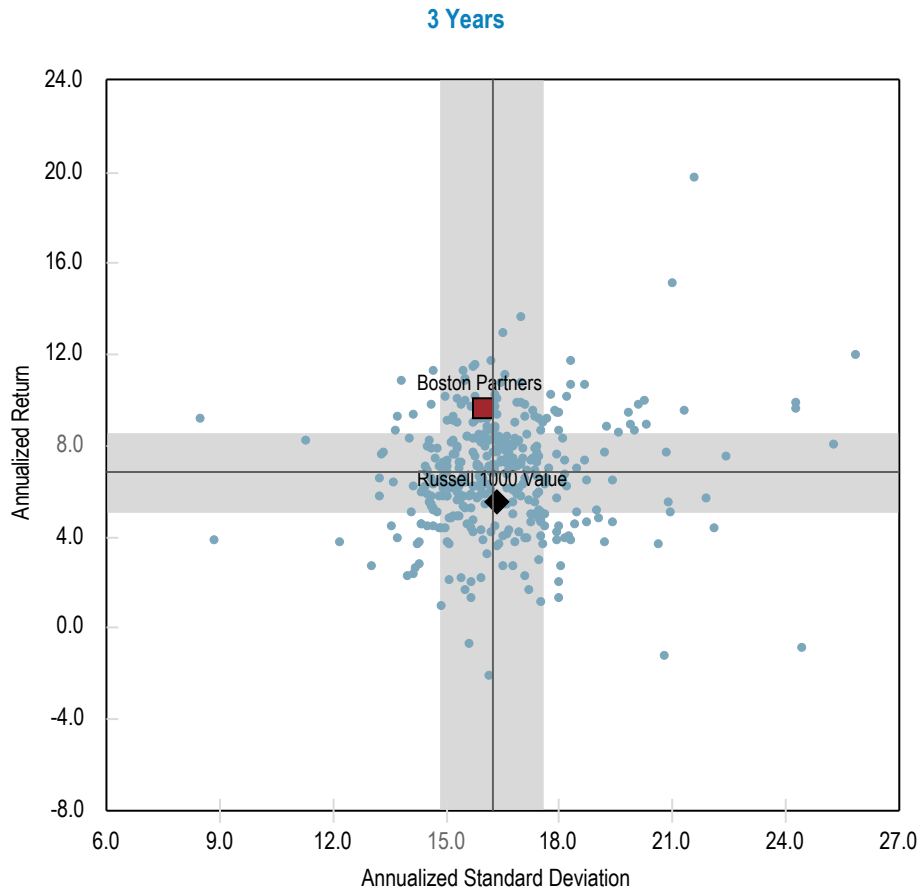
Domestic equity large cap value portfolio exhibiting low turnover in companies with low valuations relative to intrinsic value. Primary personnel include Mark Donovan and David Pyle.

Boston Partners 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	-1.26 (55)	21.46 (14)	9.67 (16)	12.65 (26)	10.17 (31)	14.67 (39)	-3.82 (36)	31.34 (19)	2.96 (64)	24.26 (79)
▲ Russell 1000 Value Index	-2.17 (71)	13.06 (75)	5.52 (80)	9.01 (86)	8.23 (85)	11.46 (62)	-7.54 (69)	25.16 (72)	2.80 (65)	26.54 (57)
5th Percentile	2.23	25.70	11.39	15.59	12.35	28.99	2.35	34.34	17.56	34.33
1st Quartile	0.10	18.89	8.98	12.66	10.55	17.98	-2.41	30.18	10.09	29.98
Median	-1.12	16.02	7.54	11.17	9.60	12.86	-5.42	27.59	4.71	27.19
3rd Quartile	-2.52	12.99	5.99	9.66	8.67	9.26	-8.50	24.70	1.32	24.74
95th Percentile	-4.45	7.81	3.88	7.66	7.54	4.44	-16.05	19.63	-3.51	20.41
Population	384	382	376	358	323	406	421	429	435	461





	3 Years		
	Anlzd Return (%)	Anlzd Standard Deviation (%)	Sharpe Ratio
Boston Partners	9.7	16.0	0.5
Russell 1000 Value Index	5.5	16.4	0.2
eV US Large Cap Value Equity Median	7.5	16.3	0.3
Population	376	376	376

	5 Years		
	Anlzd Return (%)	Anlzd Standard Deviation (%)	Sharpe Ratio
Boston Partners	12.7	18.8	0.6
Russell 1000 Value Index	9.0	18.3	0.4
eV US Large Cap Value Equity Median	11.2	18.1	0.6
Population	358	358	358

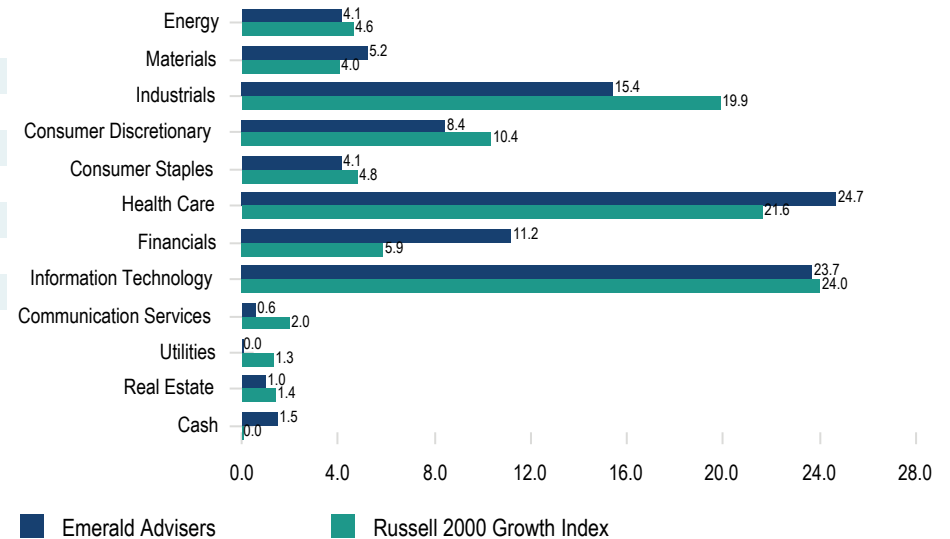
Emerald Advisers Manager Portfolio Overview

Contra Costa County Employees' Retirement Association Period Ending: June 30, 2024

Characteristics

	Portfolio	Benchmark
Number of Stocks	114	1,054
Wtd. Avg. Mkt. Cap \$M	5,764.42	5,874.95
Median Mkt. Cap \$M	3,003.46	1,162.61
Price/Earnings ratio	24.03	22.65
Price/Book ratio	4.31	4.10
Return on Equity (%)	0.99	1.52
Current Yield (%)	0.46	0.64
Beta (5 Years, Monthly)	0.95	1.00

Sector Allocation (%) vs. Russell 2000 Growth Index



Largest Holdings

	End Weight (%)	Quarterly Return (%)
FTAI Aviation Ltd	3.62	53.97
TransMedics Group Inc	3.14	103.71
Super Micro Computer Inc	3.03	-18.88
Freshpet Inc	2.86	11.68
Carpenter Technology Corp	2.78	53.82
Varonis Systems Inc	1.95	1.70
Credo Technology Group Holding Ltd	1.90	50.73
Blueprint Medicines Corp	1.77	13.62
Churchill Downs Inc	1.75	12.81
Insmed Inc	1.67	146.96

Top Contributors

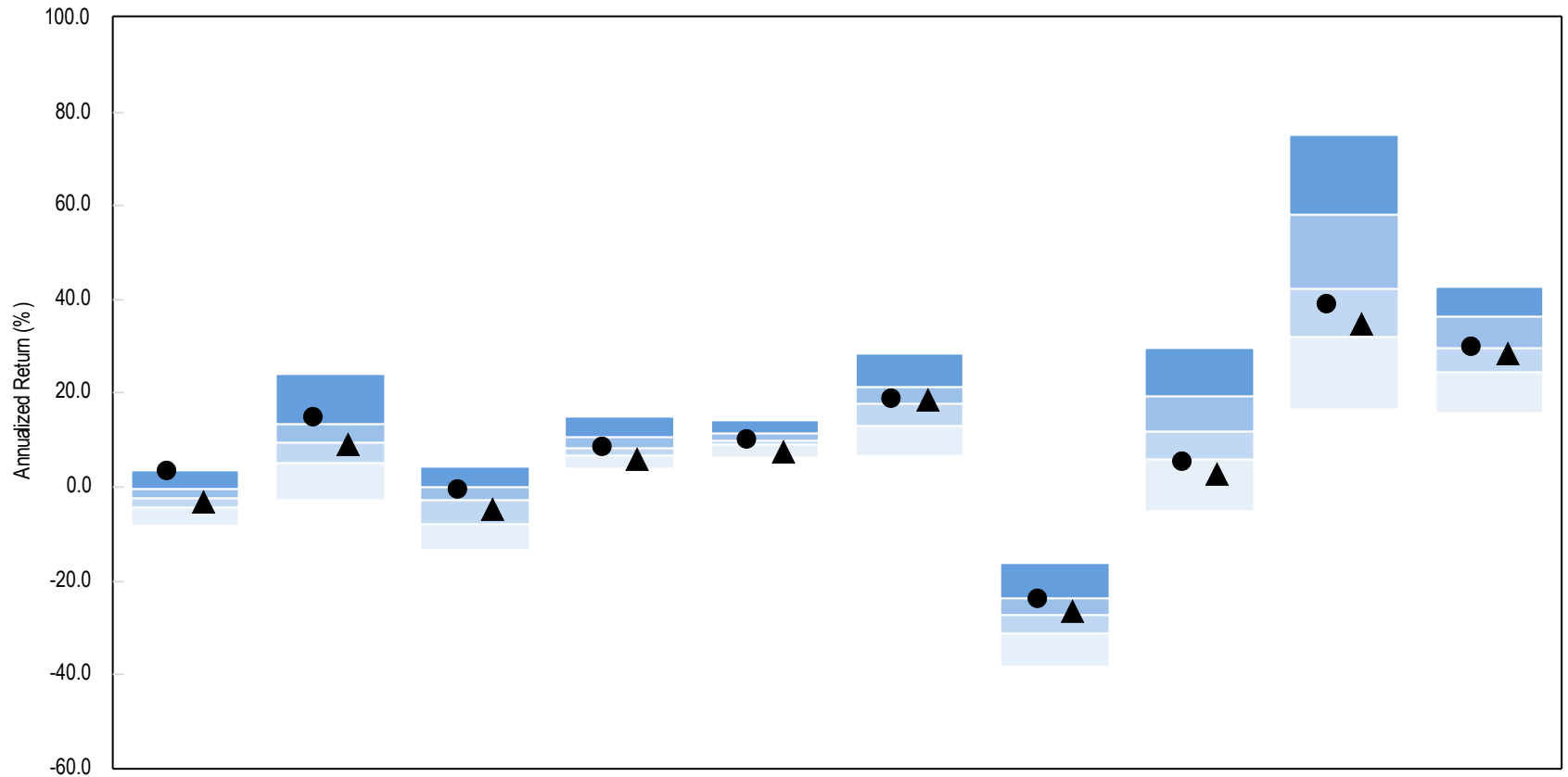
	Portfolio Weight (%)	Quarterly Return (%)	Contribution to Return (%)
TransMedics Group Inc	1.58	103.71	1.63
FTAI Aviation Ltd	2.42	53.97	1.30
Insmed Inc	0.69	146.96	1.02
Carpenter Technology Corp	1.85	53.82	1.00
Credo Technology Group Holding Ltd	1.29	50.73	0.65
Deciphera Pharmaceuticals Inc	0.69	62.68	0.43
FormFactor Inc	1.09	32.65	0.35
Freshpet Inc	2.63	11.68	0.31
RadNet Inc	1.37	21.08	0.29
Onto Innovation Inc	1.17	21.25	0.25
% of Portfolio	14.78		7.24

Top Detractors

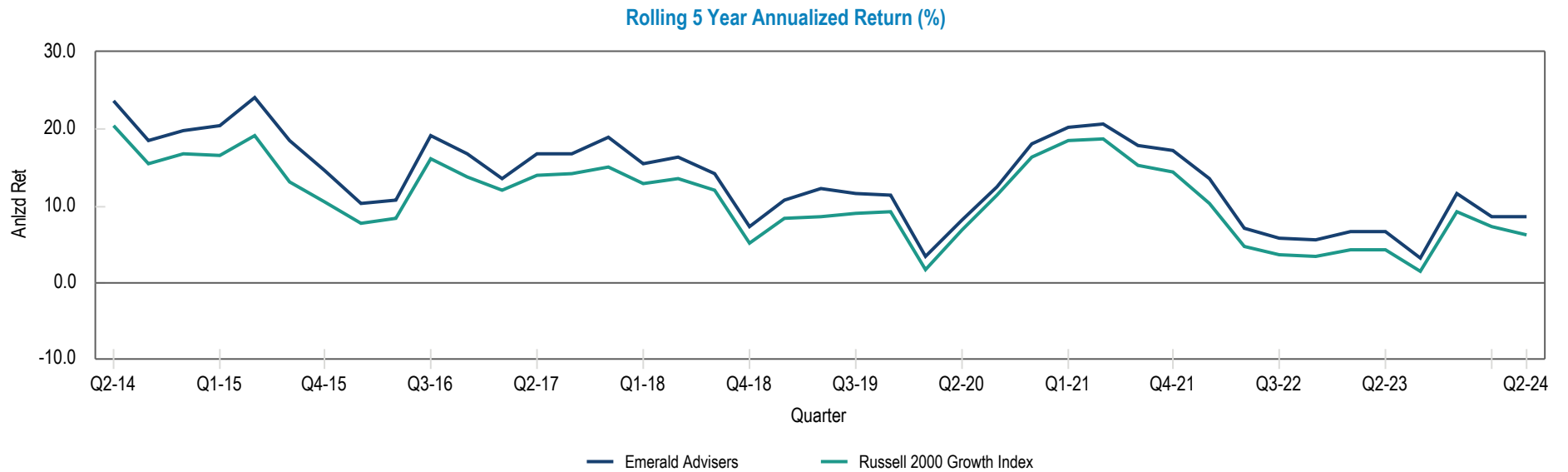
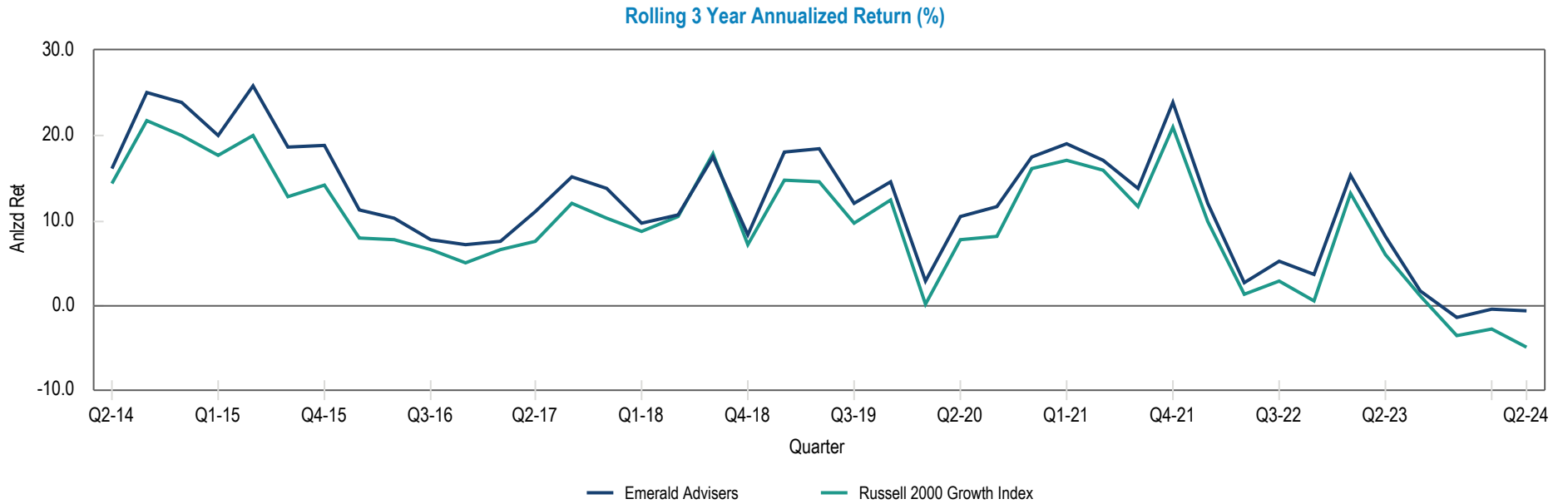
	Portfolio Weight (%)	Quarterly Return (%)	Contribution to Return (%)
Super Micro Computer Inc	3.83	-18.88	-0.72
Treace Medical Concepts Inc	0.85	-49.04	-0.42
Viking Therapeutics Inc	1.05	-35.35	-0.37
TriNet Group Inc	1.45	-24.52	-0.36
Savers Value Village Inc	0.97	-36.51	-0.36
National Vision Holdings Inc	0.81	-40.93	-0.33
Quanterix Corp	0.70	-43.93	-0.31
Chart Industries Inc	1.65	-12.37	-0.20
Tenable Holdings Inc	1.70	-11.83	-0.20
Collegium Pharmaceutical Inc	1.09	-17.05	-0.19
% of Portfolio	14.10		-3.46

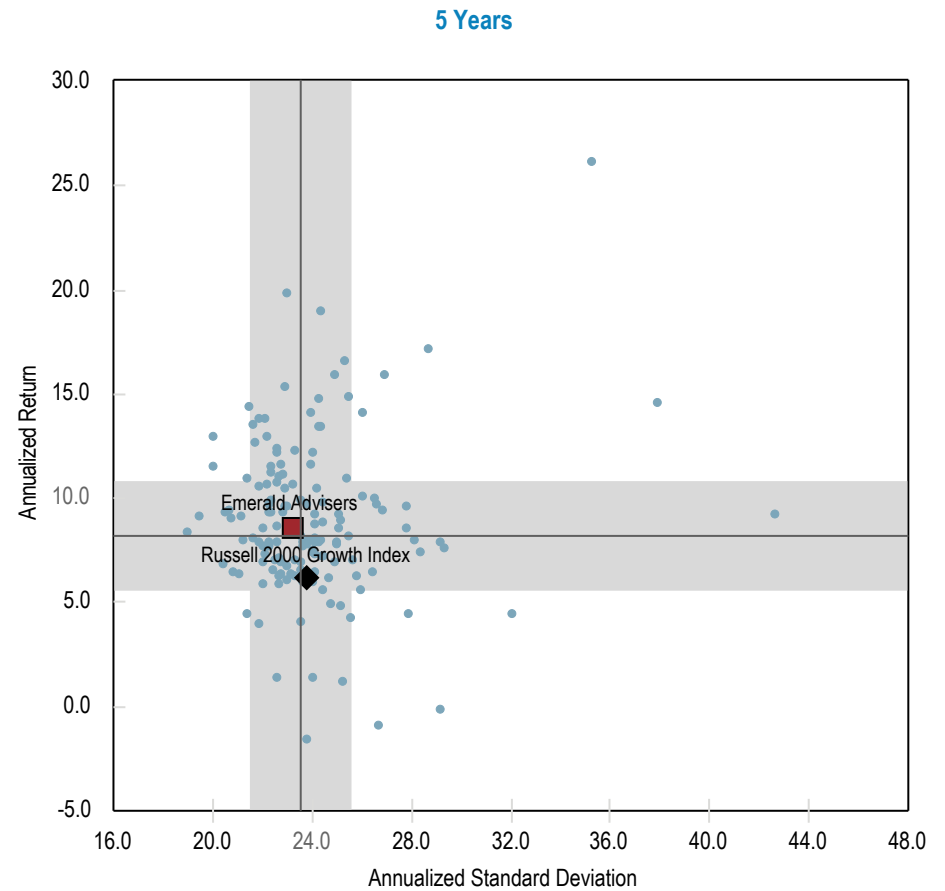
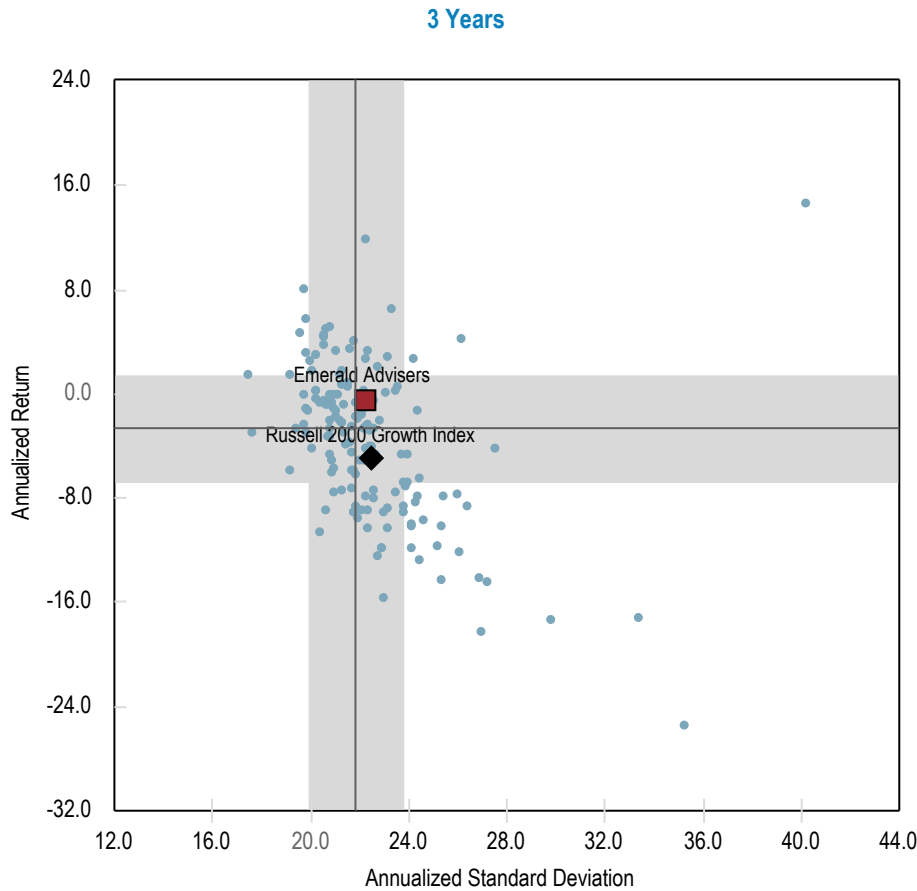
Domestic equity small cap growth portfolio of companies with significantly high growth rates. Primary personnel include Kenneth Mertz, Joseph Garner, and Stacey Sears.

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



	Quarter	1 Year	3 Years	5 Years	10 Years	2023	2022	2021	2020	2019
● Emerald Advisers	3.44 (5)	14.95 (21)	-0.53 (30)	8.58 (47)	10.39 (41)	19.15 (41)	-23.75 (27)	5.53 (77)	38.96 (57)	30.26 (48)
▲ Russell 2000 Growth Index	-2.92 (58)	9.14 (54)	-4.86 (63)	6.17 (86)	7.39 (93)	18.66 (45)	-26.36 (44)	2.83 (85)	34.63 (67)	28.48 (53)
5th Percentile	3.43	24.19	4.56	15.16	14.31	28.63	-16.20	29.85	74.95	42.60
1st Quartile	-0.46	13.43	0.04	10.65	11.56	21.33	-23.57	19.36	58.30	36.52
Median	-2.34	9.47	-2.69	8.20	10.09	17.72	-27.20	11.86	42.23	29.57
3rd Quartile	-4.47	5.24	-7.73	6.96	8.95	13.28	-31.12	5.92	31.96	24.74
95th Percentile	-8.18	-2.53	-13.23	4.15	6.55	6.73	-38.40	-4.98	16.49	15.94
Population	155	155	154	150	136	160	171	182	183	190





	3 Years		
	Anlzd Return (%)	Anlzd Standard Deviation (%)	Sharpe Ratio
Emerald Advisers	-0.5	22.2	0.0
Russell 2000 Growth Index	-4.9	22.5	-0.2
eV US Small Cap Growth Equity Median	-2.7	21.9	-0.2
Population	154	154	154

	5 Years		
	Anlzd Return (%)	Anlzd Standard Deviation (%)	Sharpe Ratio
Emerald Advisers	8.6	23.2	0.4
Russell 2000 Growth Index	6.2	23.8	0.3
eV US Small Cap Growth Equity Median	8.2	23.6	0.4
Population	150	150	150

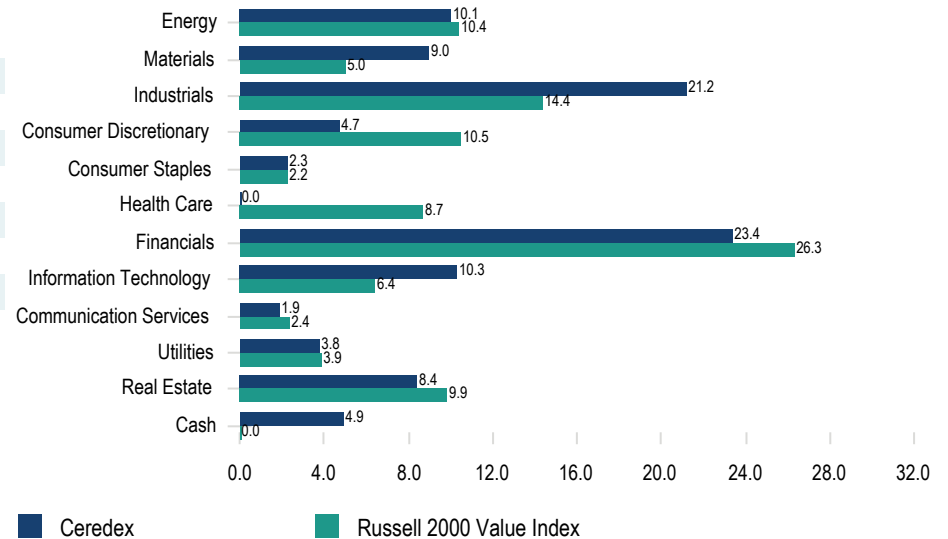
Ceredex
Manager Portfolio Overview

Contra Costa County Employees' Retirement Association
Period Ending: June 30, 2024

Characteristics

	Portfolio	Benchmark
Number of Stocks	73	1,402
Wtd. Avg. Mkt. Cap \$M	5,396.22	2,979.56
Median Mkt. Cap \$M	5,313.26	766.20
Price/Earnings ratio	16.70	12.76
Price/Book ratio	2.19	1.67
Return on Equity (%)	2.73	0.94
Current Yield (%)	2.43	2.31
Beta (5 Years, Monthly)	0.85	1.00

Sector Allocation (%) vs. Russell 2000 Value Index



Largest Holdings

	End Weight (%)	Quarterly Return (%)
Camden Property Trust	2.45	11.93
Valmont Industries Inc	2.30	20.49
Schneider National Inc	2.29	7.17
KBR Inc	2.01	0.99
OGE Energy Corp	1.94	5.37
Carpenter Technology Corp	1.87	53.82
Cactus Inc	1.87	5.54
IDACORP Inc.	1.84	1.15
Progress Software Corp	1.83	2.14
Belden Inc	1.81	1.34

Top Contributors

	Portfolio Weight (%)	Quarterly Return (%)	Contribution to Return (%)
Carpenter Technology Corp	1.19	53.82	0.64
Valmont Industries Inc	1.88	20.49	0.38
Hudbay Minerals Inc	1.01	29.28	0.30
Camden Property Trust	2.17	11.93	0.26
Schneider National Inc	2.10	7.17	0.15
Agree Realty Corp	1.43	9.80	0.14
Perella Weinberg Partners	0.88	15.51	0.14
Element Solutions Inc	1.35	8.93	0.12
OGE Energy Corp	1.82	5.37	0.10
Helios Technologies Inc	1.38	7.07	0.10

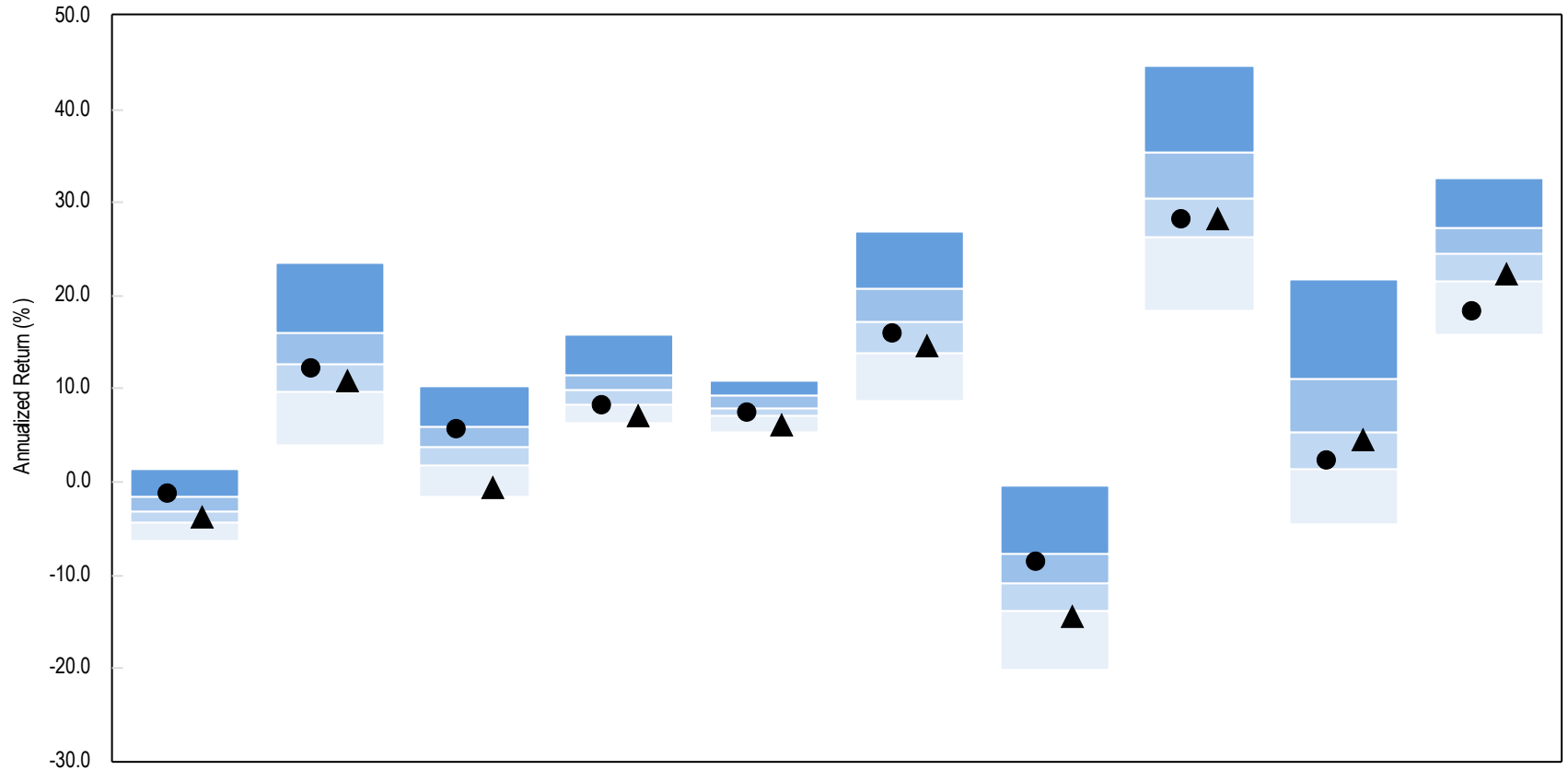
Top Detractors

	Portfolio Weight (%)	Quarterly Return (%)	Contribution to Return (%)
MSC Industrial Direct Co Inc.	1.64	-17.55	-0.29
Vail Resorts Inc.	1.58	-18.15	-0.29
Atkore Inc	0.95	-28.97	-0.27
Herc Holdings Inc	1.32	-20.44	-0.27
Hexcel Corp	1.48	-14.09	-0.21
Matador Resources Co	1.93	-10.45	-0.20
Huntington Ingalls Industries Inc	1.26	-15.05	-0.19
Autoliv Inc	1.38	-10.68	-0.15
Cogent Communications	1.19	-12.18	-0.15
First American Financial Corp	1.35	-10.74	-0.15

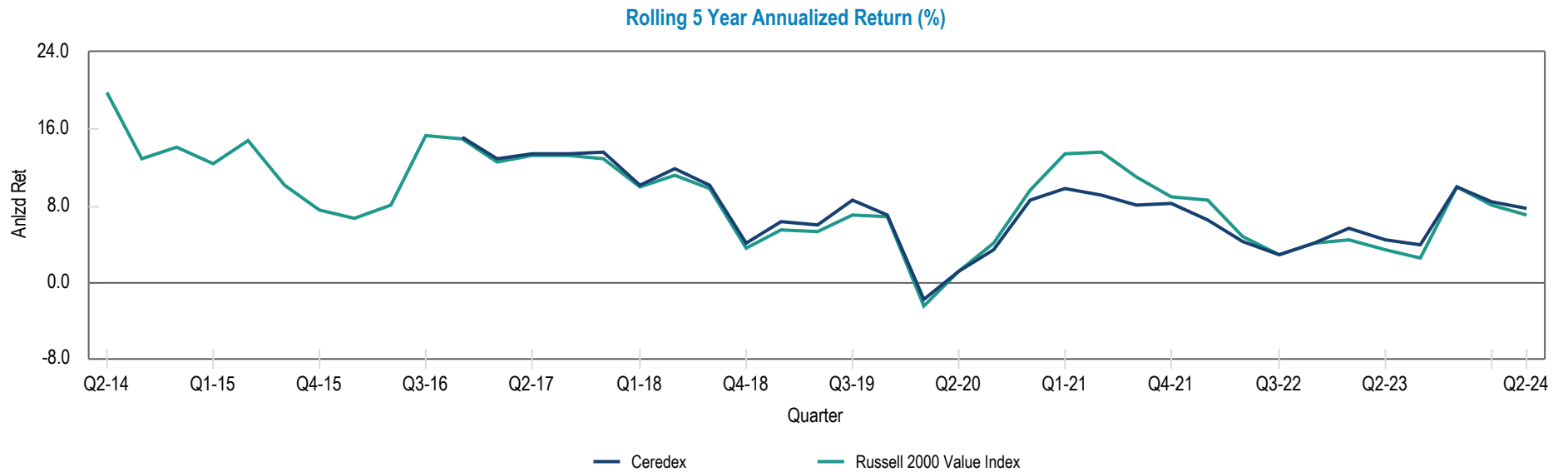
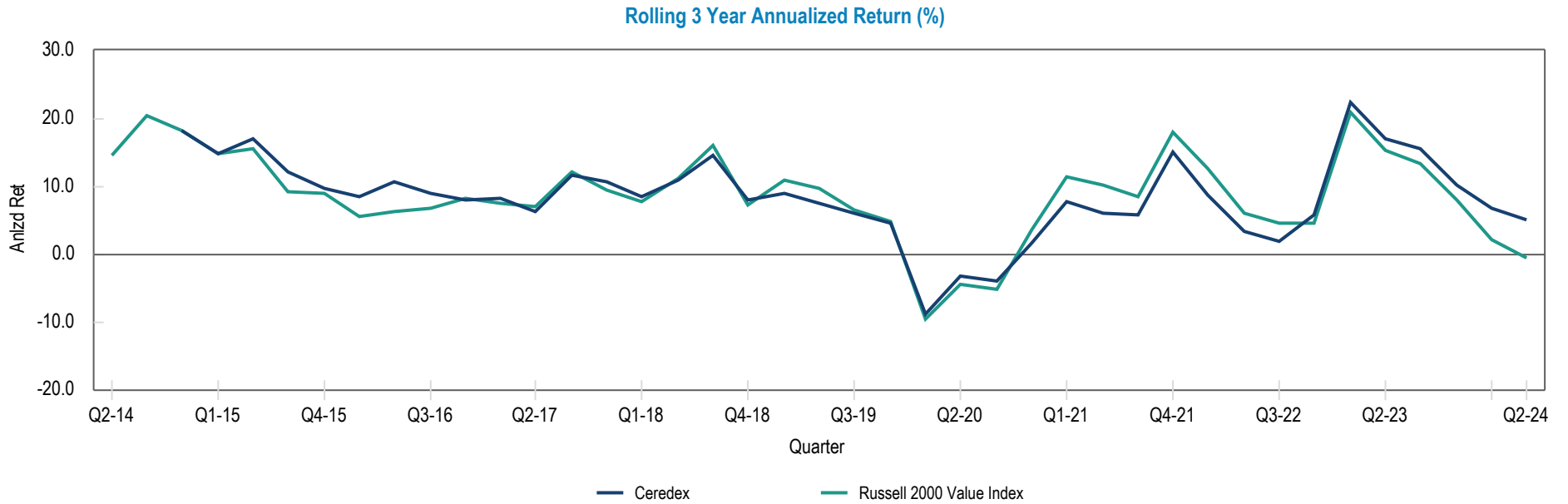
% of Portfolio 15.21 2.33 % of Portfolio 14.08 -2.16

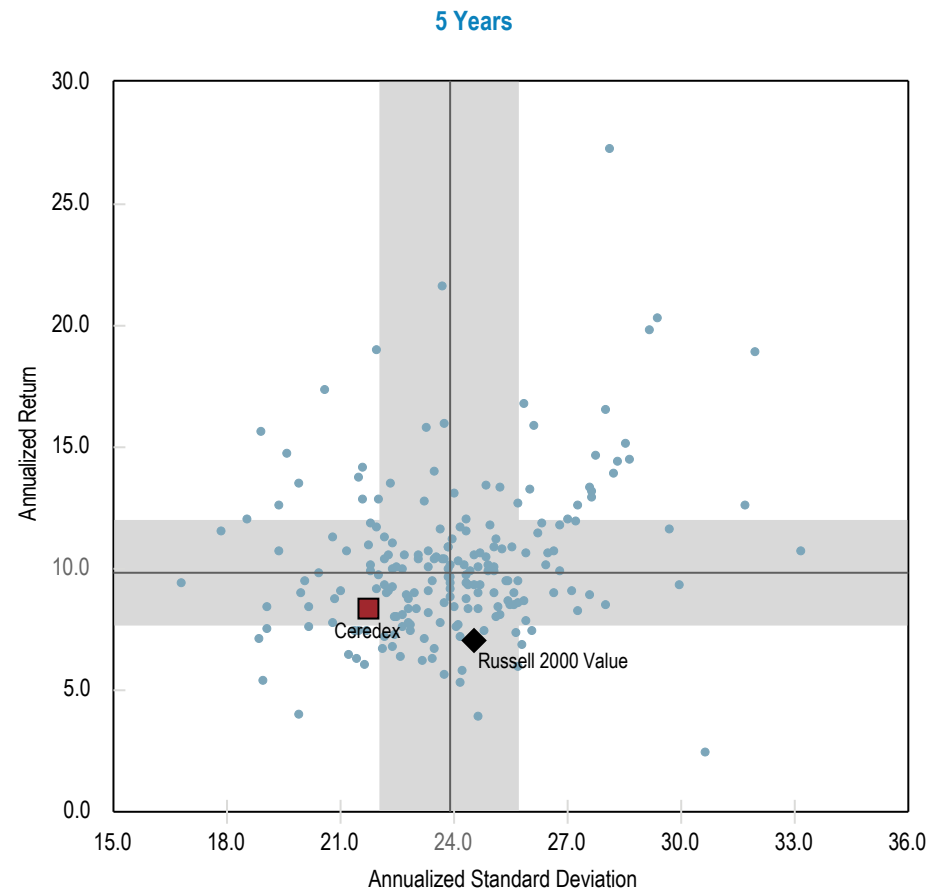
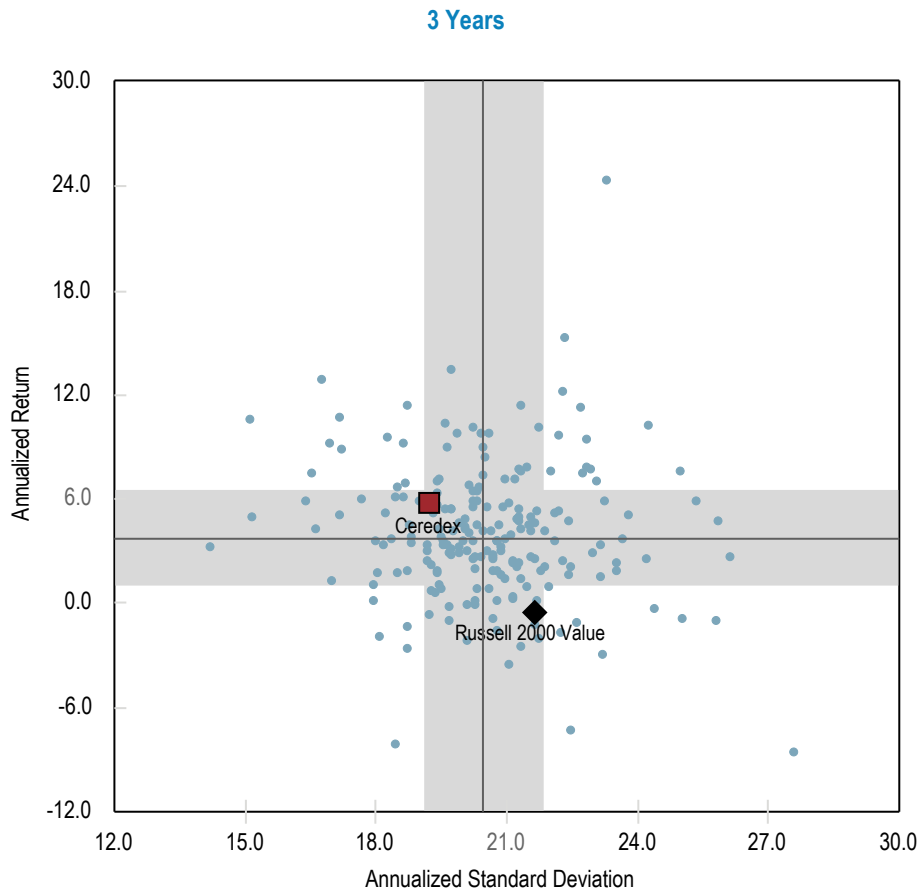
Domestic equity small cap value portfolio of companies with dividend yields and low valuations. Primary personnel include Brett Barner and David Maynard.

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	-1.09 (17)	12.25 (52)	5.78 (29)	8.34 (76)	7.49 (65)	16.02 (61)	-8.46 (28)	28.37 (59)	2.32 (70)	18.36 (88)
▲ Russell 2000 Value Index	-3.64 (64)	10.90 (64)	-0.53 (91)	7.07 (92)	6.23 (93)	14.65 (71)	-14.48 (79)	28.27 (60)	4.63 (55)	22.39 (70)
5th Percentile	1.32	23.52	10.36	15.89	10.89	26.82	-0.42	44.60	21.68	32.72
1st Quartile	-1.54	15.94	5.96	11.54	9.24	20.70	-7.72	35.33	11.03	27.36
Median	-3.08	12.69	3.73	9.85	7.96	17.29	-10.93	30.49	5.40	24.42
3rd Quartile	-4.29	9.80	1.84	8.38	7.23	13.94	-13.88	26.23	1.38	21.58
95th Percentile	-6.33	3.96	-1.61	6.29	5.35	8.80	-20.04	18.40	-4.57	15.75
Population	209	209	207	202	177	214	222	234	248	256





	3 Years		
	Anlzd Return (%)	Anlzd Standard Deviation (%)	Sharpe Ratio
Ceredex	5.8	19.2	0.2
Russell 2000 Value Index	-0.5	21.6	-0.1
eV US Small Cap Value Equity Median	3.7	20.5	0.1
Population	207	207	207

	5 Years		
	Anlzd Return (%)	Anlzd Standard Deviation (%)	Sharpe Ratio
Ceredex	8.3	21.7	0.4
Russell 2000 Value Index	7.1	24.5	0.3
eV US Small Cap Value Equity Median	9.9	23.9	0.4
Population	202	202	202

International Equity Managers

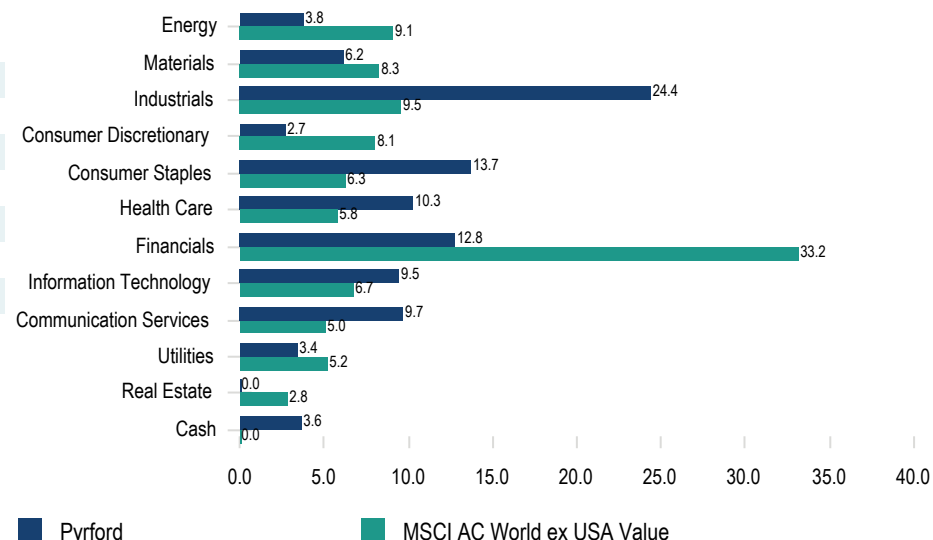
Pyrford Manager Portfolio Overview

Contra Costa County Employees' Retirement Association Period Ending: June 30, 2024

Characteristics

	Portfolio	Benchmark
Number of Stocks	79	1,242
Wtd. Avg. Mkt. Cap \$M	68,424.02	70,390.72
Median Mkt. Cap \$M	21,736.99	9,477.38
Price/Earnings ratio	18.59	12.06
Price/Book ratio	2.30	1.78
Return on Equity (%)	3.87	3.16
Current Yield (%)	4.06	4.43
Beta (5 Years, Monthly)	0.75	1.00

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



Largest Holdings

	End Weight (%)	Quarterly Return (%)
Japan Tobacco Inc	2.68	3.15
United Overseas Bank Ltd	2.61	9.41
Mitsubishi Electric Corp	2.47	-3.84
SAP SE	2.42	5.51
Roche Holding AG	2.28	8.87
Novartis AG	2.23	10.33
Nestle SA, Cham Und Vevey	2.12	-0.92
Brambles Ltd	2.10	-7.90
Telenor ASA	2.08	6.79
Taiwan Semiconductor Man.	2.04	22.80

Top Contributors

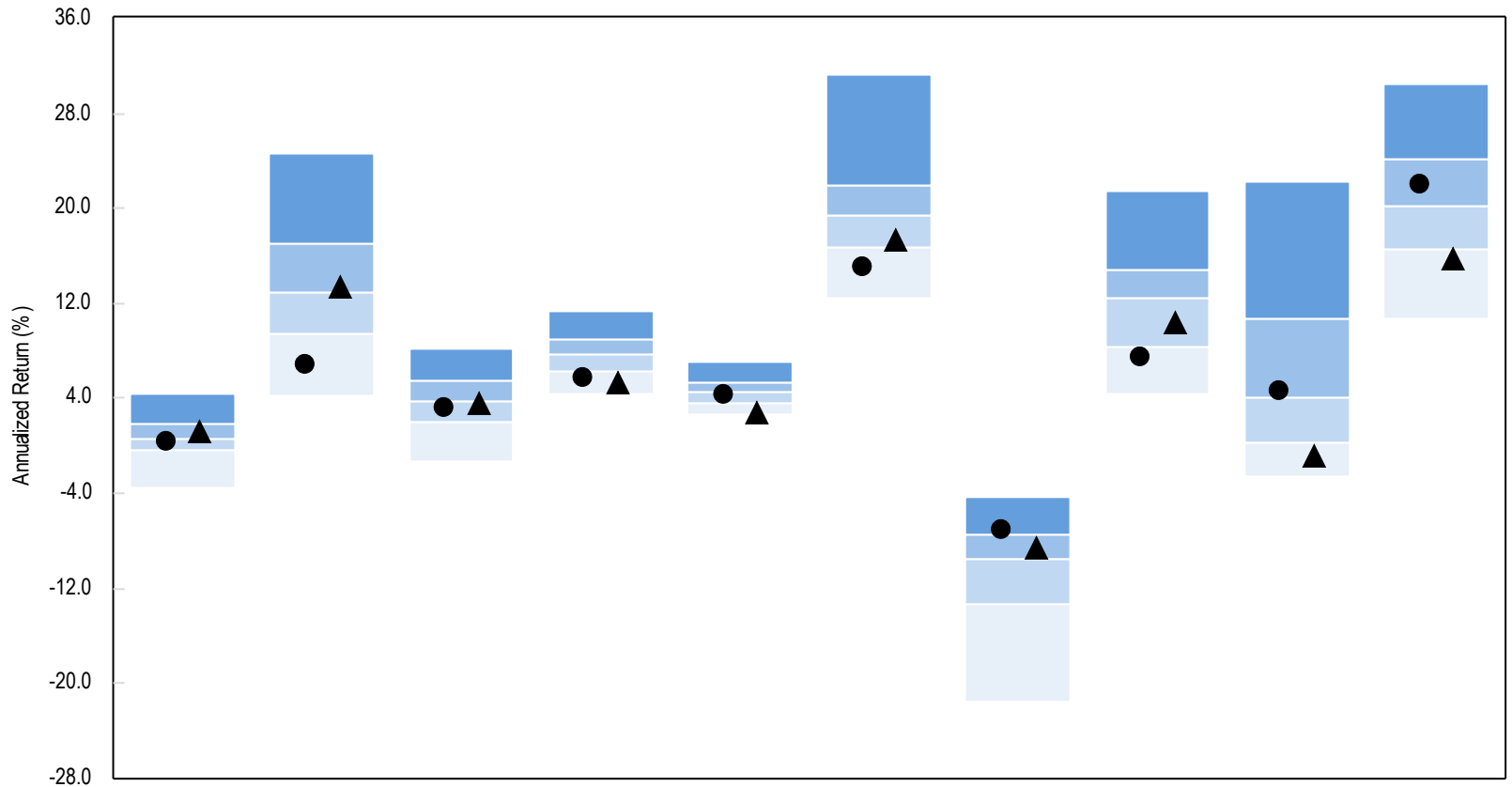
	Portfolio Weight (%)	Quarterly Return (%)	Contribution to Return (%)
Taiwan Semiconductor Man.	1.62	22.80	0.37
VTech Holdings Ltd	1.13	23.38	0.26
United Overseas Bank Ltd	2.39	9.41	0.22
Novartis AG	1.97	10.33	0.20
Koninklijke Philips NV	0.62	30.12	0.19
Roche Holding AG	2.04	8.87	0.18
Unilever PLC	1.73	10.33	0.18
Imperial Brands PLC	1.05	15.75	0.17
Nihon Kohden Corp	1.59	9.22	0.15
Singapore Telecommunications	1.72	8.24	0.14
% of Portfolio	15.86		2.06

Top Detractors

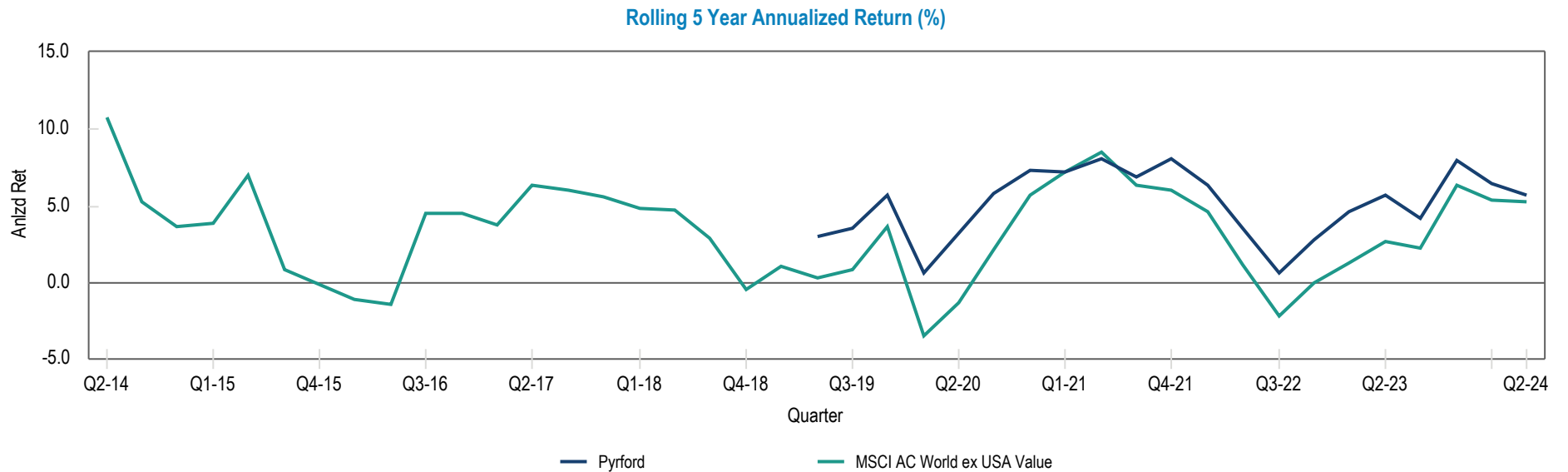
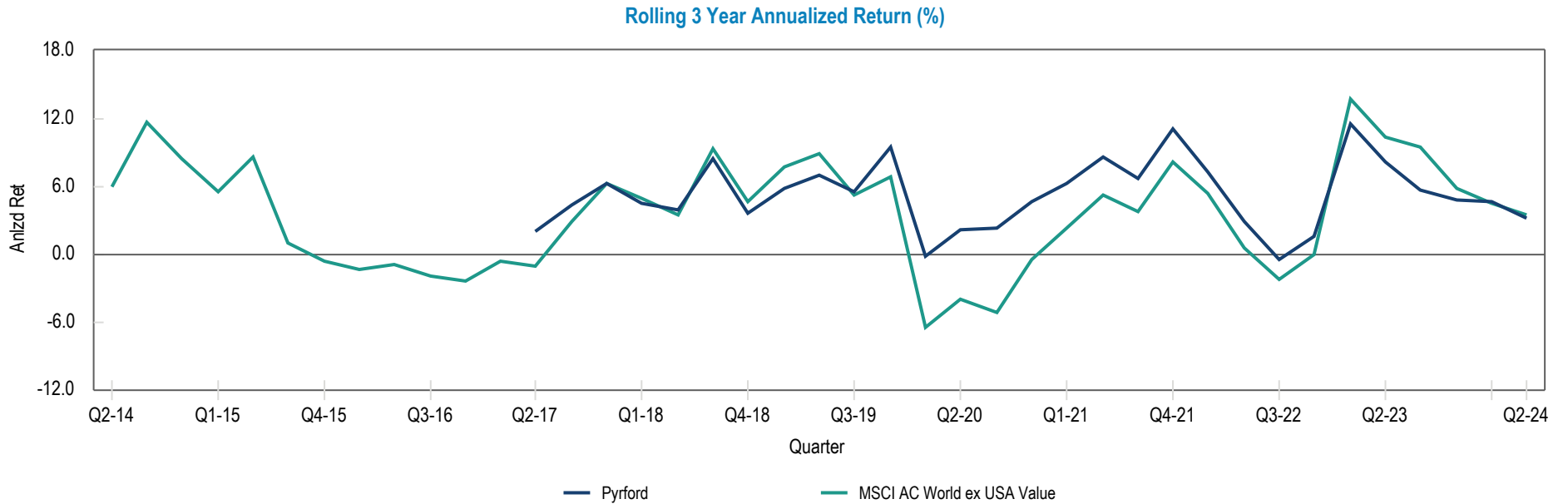
	Portfolio Weight (%)	Quarterly Return (%)	Contribution to Return (%)
PT Bank Rakyat Indonesia (Persero) Tbk	1.52	-26.38	-0.40
Brenntag SE	1.67	-17.40	-0.29
Kddi Corp	2.03	-10.70	-0.22
Brambles Ltd	2.23	-7.90	-0.18
L'Air Liquide SA	2.20	-7.13	-0.16
Sumitomo Rubber Industries Ltd	0.83	-18.26	-0.15
GSK plc	1.53	-9.67	-0.15
Nissan Chemical Corp	0.78	-16.24	-0.13
Rubis	0.86	-14.60	-0.13
Bureau Veritas SA	1.32	-9.26	-0.12
% of Portfolio	14.97		-1.92

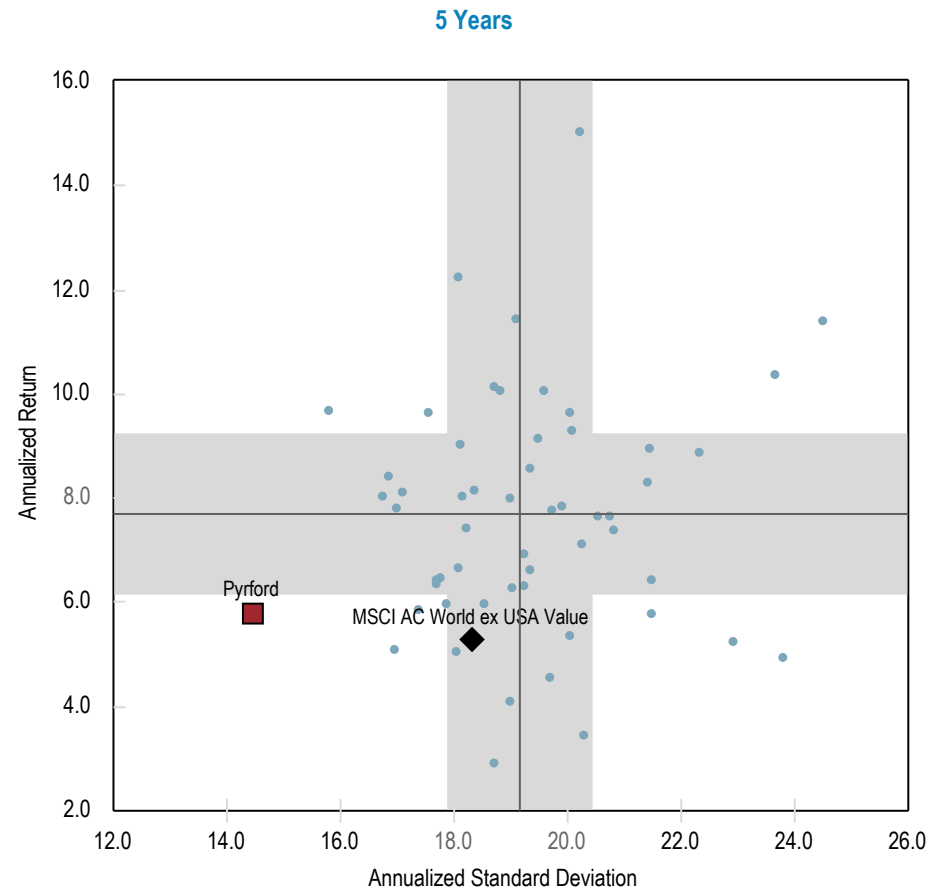
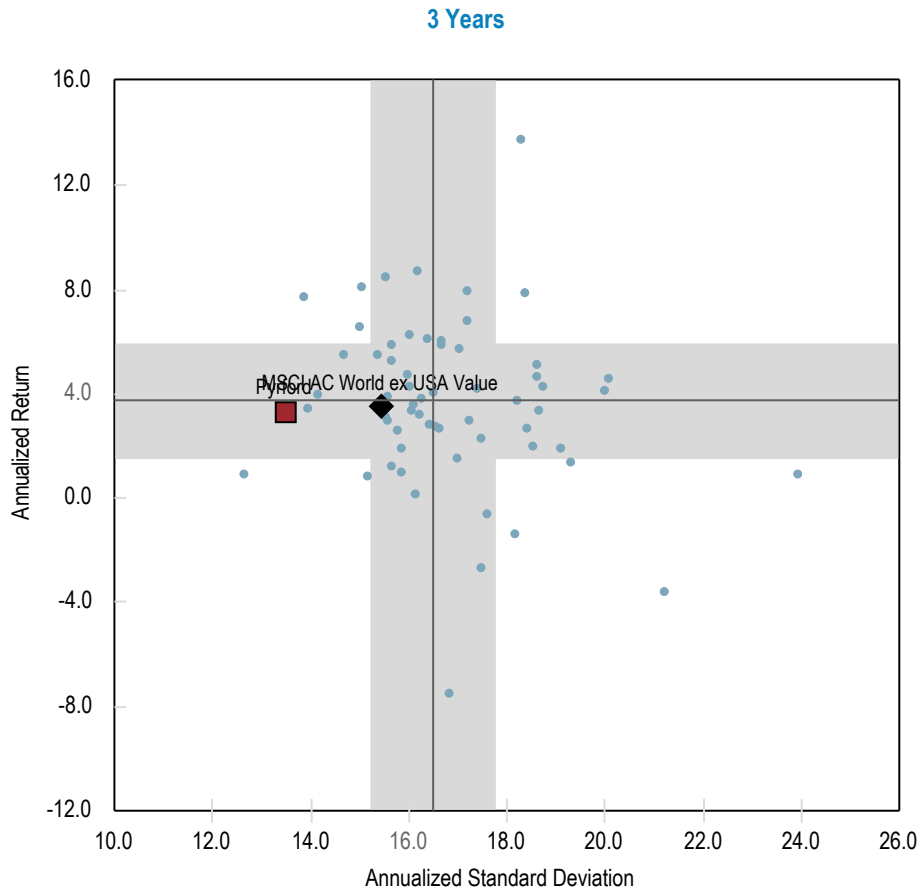
International equity value portfolio of non-US companies with low valuations at the country and stock level. Primary personnel include Tony Cousins, Daniel McDonagh, and Paul Simons.

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



	Quarter	1 Year	3 Years	5 Years	10 Years	2023	2022	2021	2020	2019
● Pyrford	0.50 (54)	6.85 (92)	3.27 (58)	5.77 (84)	4.41 (58)	15.17 (83)	-6.97 (21)	7.57 (84)	4.66 (47)	22.07 (38)
▲ MSCI AC World ex USA Value (Net)	1.26 (40)	13.45 (49)	3.55 (53)	5.29 (87)	2.76 (94)	17.30 (68)	-8.59 (41)	10.46 (66)	-0.77 (80)	15.72 (78)
5th Percentile	4.40	24.60	8.14	11.42	7.15	31.22	-4.22	21.44	22.18	30.55
1st Quartile	1.93	17.08	5.51	9.03	5.31	21.96	-7.46	14.88	10.71	24.23
Median	0.65	12.87	3.74	7.72	4.58	19.46	-9.43	12.53	4.15	20.24
3rd Quartile	-0.28	9.48	1.99	6.30	3.63	16.69	-13.27	8.35	0.31	16.63
95th Percentile	-3.56	4.31	-1.37	4.40	2.61	12.47	-21.52	4.34	-2.63	10.68
Population	63	63	61	54	38	64	67	69	71	69





	3 Years		
	Anlzd Return (%)	Anlzd Standard Deviation (%)	Sharpe Ratio
Pyrford	3.3	13.5	0.1
MSCI AC World ex USA Value (Net)	3.5	15.4	0.1
eV ACWI ex-US Value Equity Median	3.7	16.5	0.1
Population	61	61	61

	5 Years		
	Anlzd Return (%)	Anlzd Standard Deviation (%)	Sharpe Ratio
Pyrford	5.8	14.5	0.3
MSCI AC World ex USA Value (Net)	5.3	18.3	0.3
eV ACWI ex-US Value Equity Median	7.7	19.2	0.4
Population	54	54	54

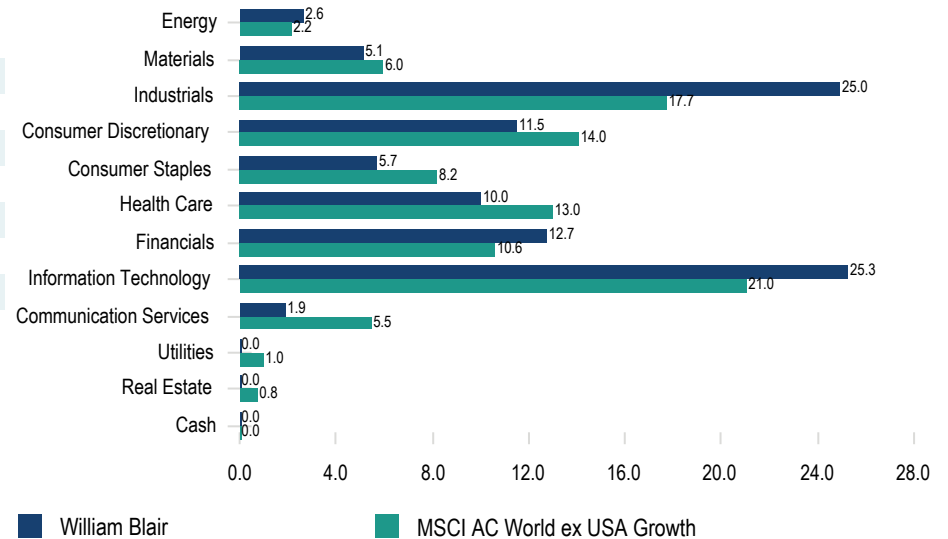
William Blair
Manager Portfolio Overview

Contra Costa County Employees' Retirement Association
Period Ending: June 30, 2024

Characteristics

	Portfolio	Benchmark
Number of Stocks	173	1,227
Wtd. Avg. Mkt. Cap \$M	117,131.63	152,710.63
Median Mkt. Cap \$M	17,603.88	8,852.77
Price/Earnings ratio	28.09	23.43
Price/Book ratio	4.38	3.76
Return on Equity (%)	6.85	2.62
Current Yield (%)	1.50	1.67
Beta (5 Years, Monthly)	1.06	1.00

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



Largest Holdings

	End Weight (%)	Quarterly Return (%)
Taiwan Semiconductor Man.	3.89	28.16
Novo Nordisk A/S	2.85	13.26
ASML Holding NV	2.75	7.46
London Stock Exchange Group	1.53	-0.01
Safran SA	1.49	-5.78
Reliance Industries Ltd	1.47	5.37
Keyence Corp	1.45	-4.55
Tokio Marine Holdings Inc	1.43	20.13
SK Hynix Inc	1.35	26.39
Samsung Electronics Co Ltd	1.35	-3.27

Top Contributors

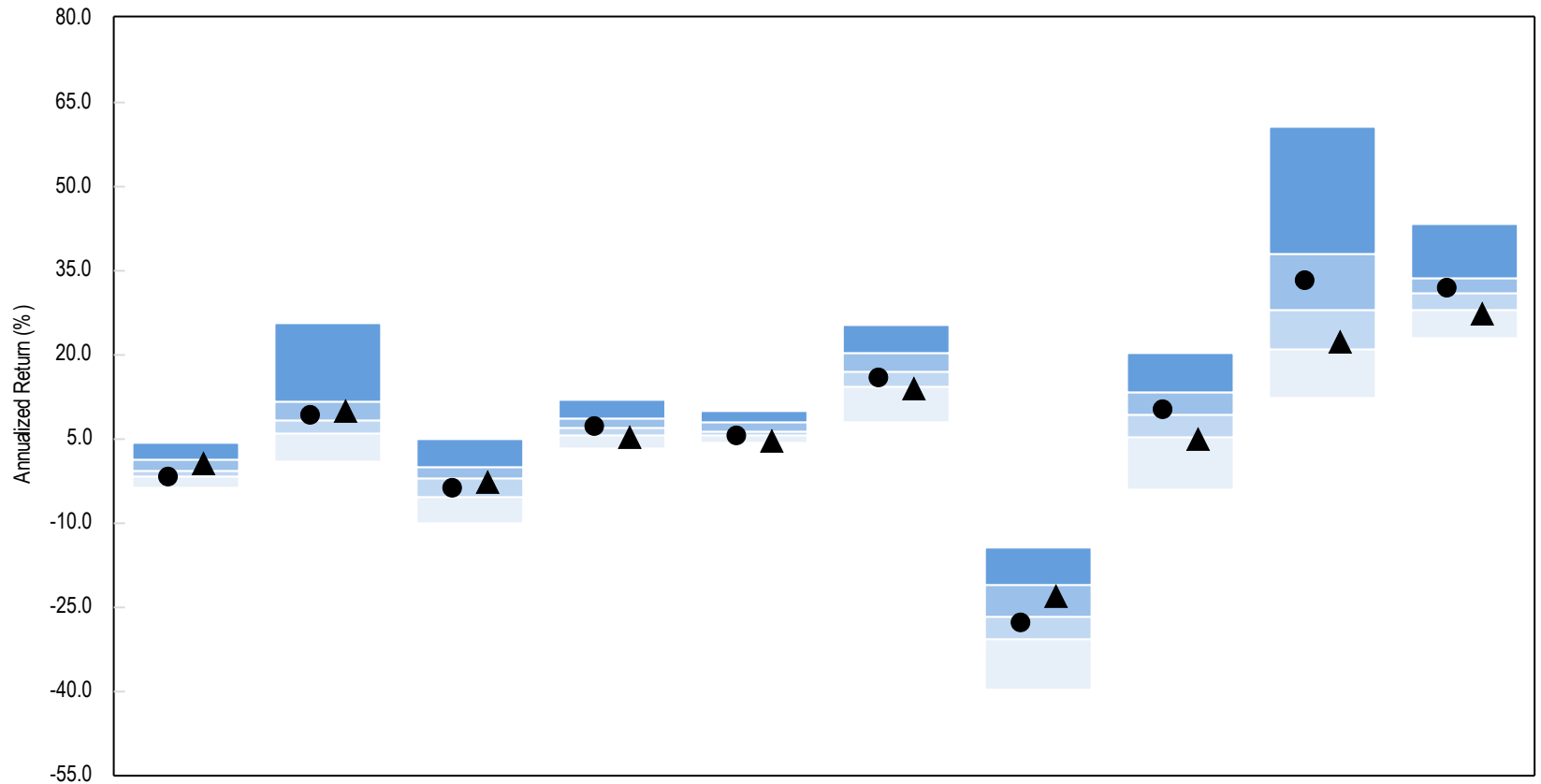
	Portfolio Weight (%)	Quarterly Return (%)	Contribution to Return (%)
Taiwan Semiconductor Man.	2.96	28.16	0.83
Novo Nordisk A/S	2.45	13.26	0.32
SK Hynix Inc	1.04	26.39	0.27
Tokio Marine Holdings Inc	1.15	20.13	0.23
Mahindra & Mahindra Ltd	0.43	49.23	0.21
Dollarama Inc	0.98	19.81	0.19
ASML Holding NV	2.49	7.46	0.19
Mediatek Incorporation	0.97	15.57	0.15
HDFC Bank Limited	0.81	17.89	0.14
Pro Medicus Ltd	0.34	41.35	0.14
% of Portfolio	13.62		2.69

Top Detractors

	Portfolio Weight (%)	Quarterly Return (%)	Contribution to Return (%)
Airbus SE	1.68	-24.13	-0.41
Tokyo Electron Ltd	1.36	-17.02	-0.23
Ryanair Holdings PLC	0.98	-20.02	-0.20
NICE Ltd	0.55	-34.01	-0.19
Dassault Systemes SE	1.26	-14.14	-0.18
Lasertec Corp	0.83	-18.49	-0.15
LVMH Moet Hennessy Louis V	1.07	-14.26	-0.15
SCREEN Holdings Co Ltd	0.46	-31.67	-0.14
Lululemon Athletica Inc	0.61	-23.54	-0.14
Canadian Pacific Kansas City Ltd	1.30	-10.55	-0.14
% of Portfolio	10.10		-1.93

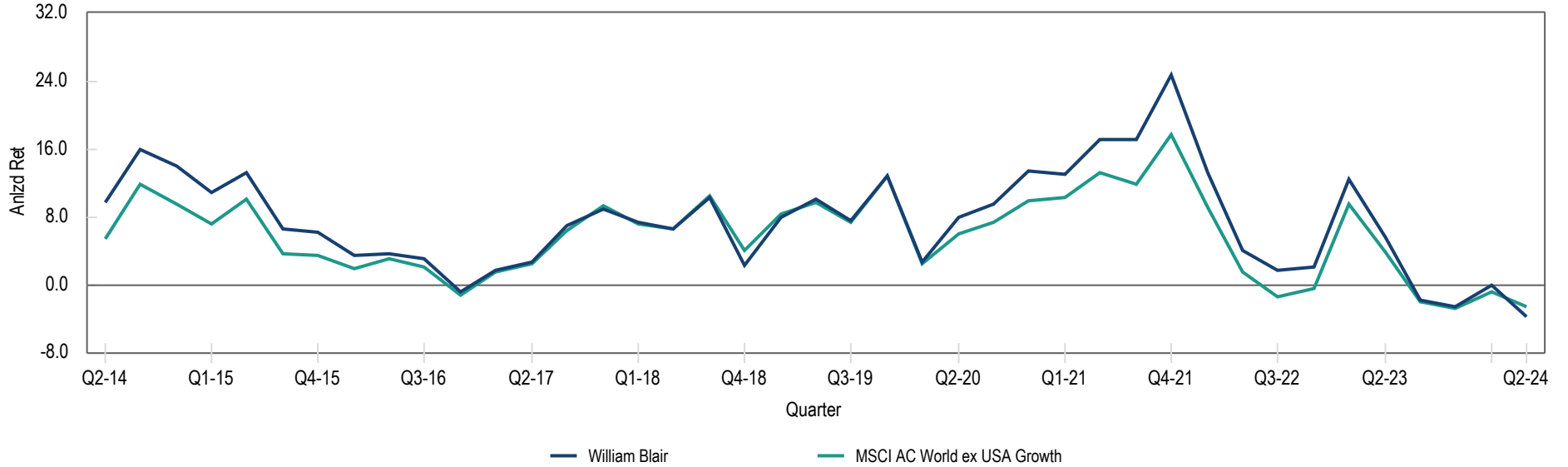
International equity growth portfolio of non-US companies with high growth rates constructed from the security level. Primary personnel include Simon Fennell and Kenneth McAtamney.

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

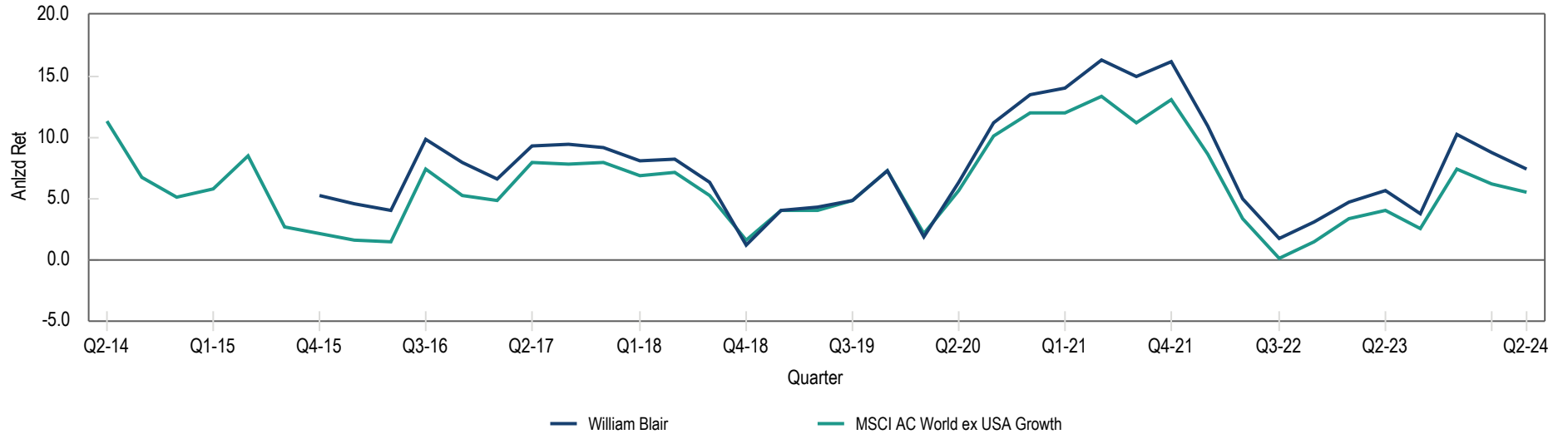


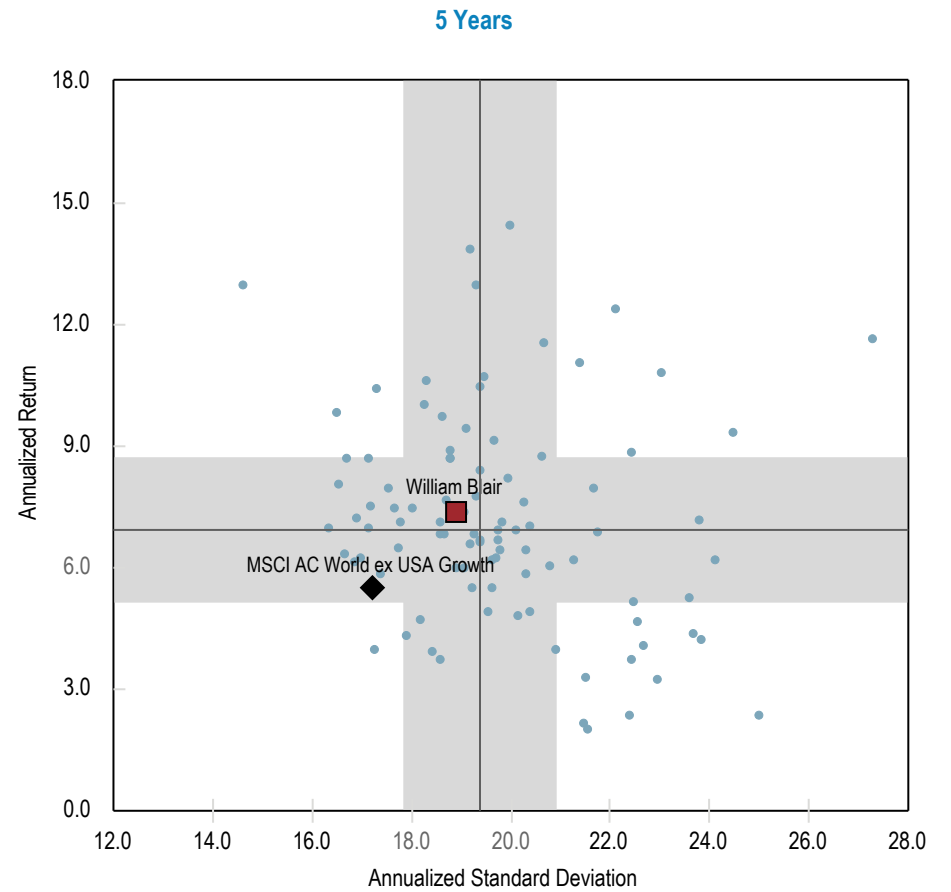
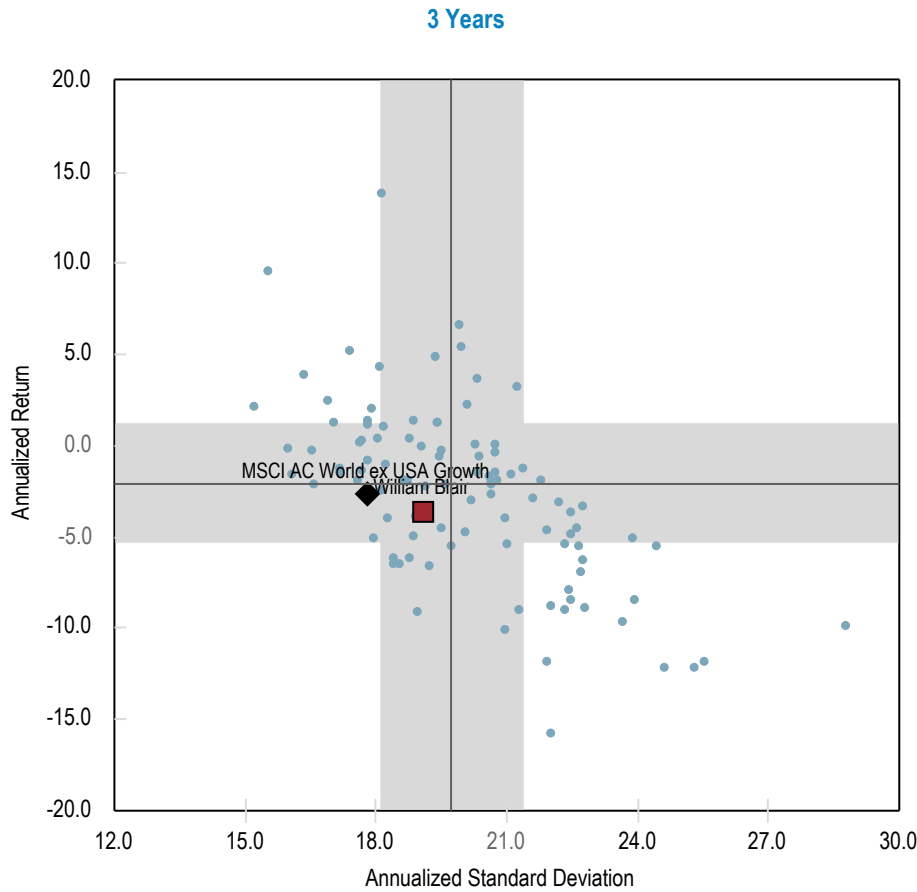
	Quarter	1 Year	3 Years	5 Years	10 Years	2023	2022	2021	2020	2019
● William Blair	-1.51 (72)	9.30 (45)	-3.66 (62)	7.38 (40)	5.81 (68)	16.15 (59)	-27.75 (56)	10.48 (41)	33.25 (36)	32.01 (38)
▲ MSCI AC World ex USA Growth	0.72 (32)	9.88 (40)	-2.62 (55)	5.49 (77)	4.74 (90)	14.03 (77)	-23.05 (31)	5.09 (76)	22.20 (73)	27.34 (78)
5th Percentile	4.23	25.76	4.91	11.85	9.99	25.47	-14.29	20.35	60.75	43.36
1st Quartile	1.21	11.59	0.08	8.72	8.04	20.18	-20.98	13.39	37.97	33.67
Median	-0.59	8.44	-2.02	6.94	6.28	17.08	-26.60	9.33	28.13	30.96
3rd Quartile	-1.76	5.97	-5.42	5.68	5.56	14.18	-30.77	5.17	21.13	27.84
95th Percentile	-3.81	0.86	-10.08	3.29	4.41	7.96	-39.81	-3.97	12.38	23.07
Population	104	104	103	95	71	111	115	118	113	111

Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)





	3 Years		
	Anlzd Return (%)	Anlzd Standard Deviation (%)	Sharpe Ratio
William Blair	-3.7	19.1	-0.3
MSCI AC World ex USA Growth (Net)	-2.6	17.8	-0.2
eV ACWI ex-US Growth Equity Median	-2.0	19.7	-0.2
Population	103	103	103

	5 Years		
	Anlzd Return (%)	Anlzd Standard Deviation (%)	Sharpe Ratio
William Blair	7.4	18.9	0.4
MSCI AC World ex USA Growth (Net)	5.5	17.2	0.3
eV ACWI ex-US Growth Equity Median	6.9	19.4	0.3
Population	95	95	95

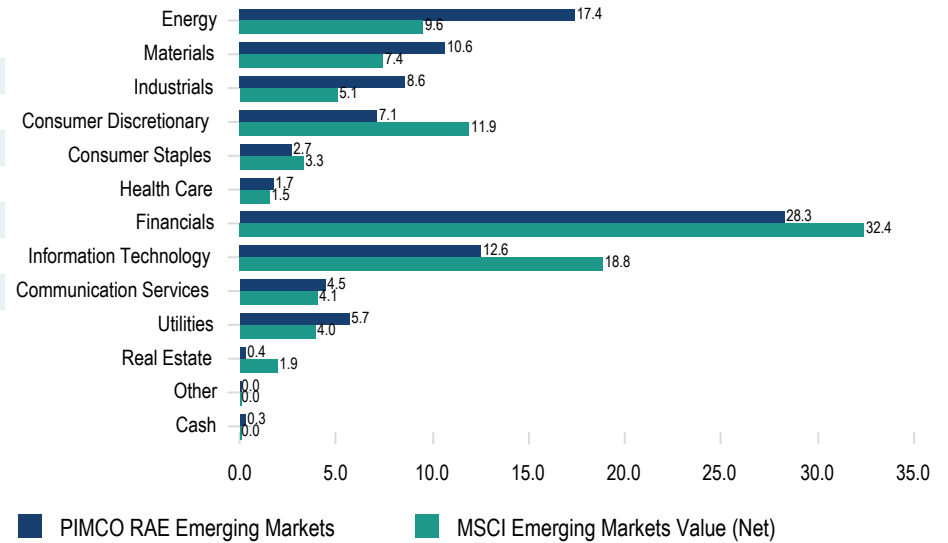
PIMCO RAE Emerging Markets Manager Portfolio Overview

Contra Costa County Employees' Retirement Association Period Ending: June 30, 2024

Characteristics

	Portfolio	Benchmark
Number of Stocks	335	733
Wtd. Avg. Mkt. Cap \$M	28,487.88	69,960.00
Median Mkt. Cap \$M	4,351.51	7,389.02
Price/Earnings ratio	8.63	11.26
Price/Book ratio	1.83	1.93
Return on Equity (%)	3.06	3.40
Current Yield (%)	5.47	4.08
Beta (5 Years, Monthly)	1.06	1.00

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



Largest Holdings

	End Weight (%)	Quarterly Return (%)
China Construction Bank Corp	5.03	22.54
PetroChina Company Limited	3.49	22.48
Petroleo Brasileiro S.A	3.46	1.31
China Petroleum & Chemical	3.04	14.24
Bank of China Ltd	3.01	19.49
Industrial & Comm. Bank of China	2.82	18.05
Vedanta Ltd	2.15	71.15
POSCO Holdings Inc	2.15	-15.87
Quanta Computer Inc	1.84	8.35
Power Finance Corp Ltd	1.77	24.33

Top Contributors

	Portfolio Weight (%)	Quarterly Return (%)	Contribution to Return (%)
China Construction Bank Corp	4.13	22.54	0.93
Vedanta Ltd	1.30	71.15	0.92
PetroChina Company Limited	2.97	22.48	0.67
Hon Hai Precision Industry	1.21	40.74	0.49
Bank of China Ltd	2.54	19.49	0.49
Industrial & Comm. Bank of China	2.41	18.05	0.44
China Petroleum & Chemical	2.68	14.24	0.38
Power Finance Corp Ltd	1.43	24.33	0.35
Lenovo Group Ltd	1.14	21.79	0.25
Bharat Heavy Electricals Ltd	1.03	21.68	0.22

% of Portfolio 20.84 5.15

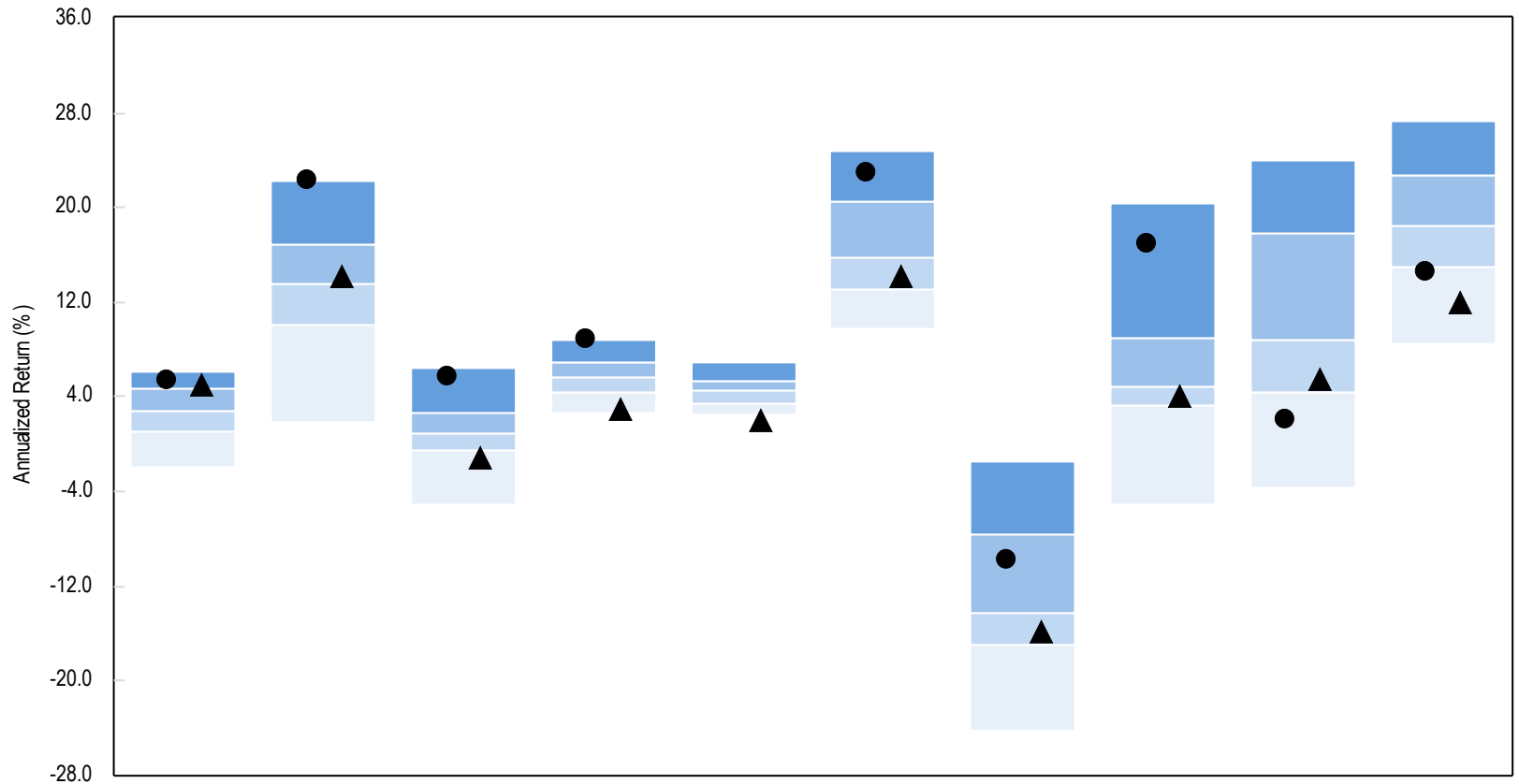
Top Detractors

	Portfolio Weight (%)	Quarterly Return (%)	Contribution to Return (%)
CEMEX SAB de CV	1.91	-27.21	-0.52
POSCO Holdings Inc	2.57	-15.87	-0.41
Vipshop Holdings Limited	1.58	-21.33	-0.34
CEMEX SAB de CV	0.43	-28.85	-0.12
Korea Electric Power Corp	0.80	-13.00	-0.10
PT Bank Mandiri TBK	0.51	-17.87	-0.09
Banco Bradesco S A	0.45	-18.93	-0.08
Vale SA	1.06	-7.82	-0.08
Cielo SA	1.11	-6.04	-0.07
Chicony Electronics Co Ltd	0.30	-20.63	-0.06

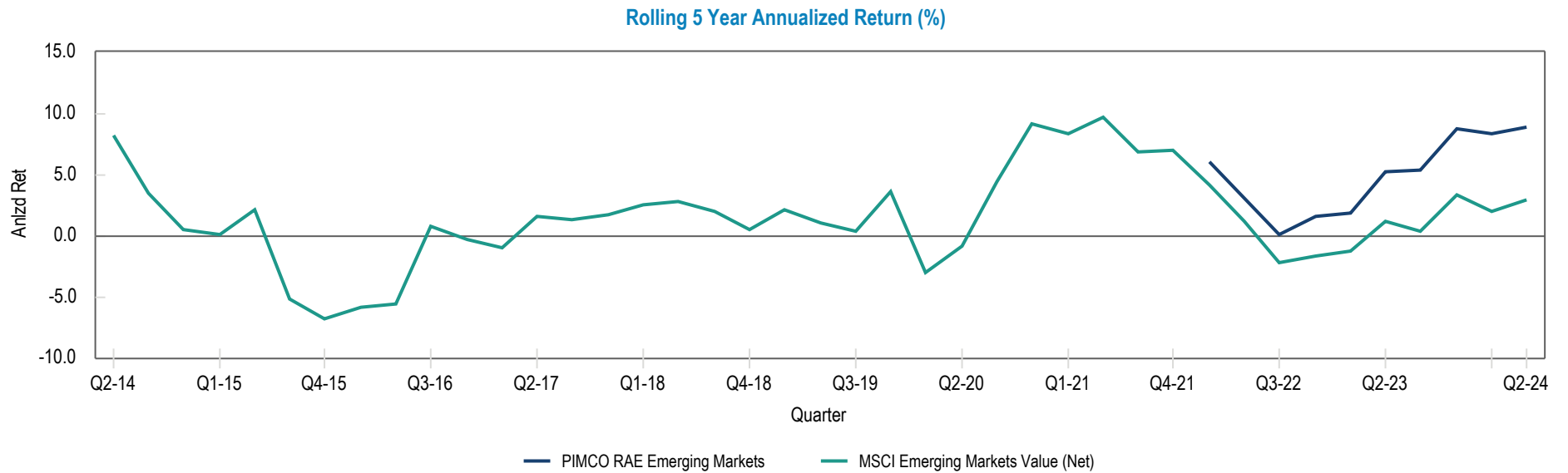
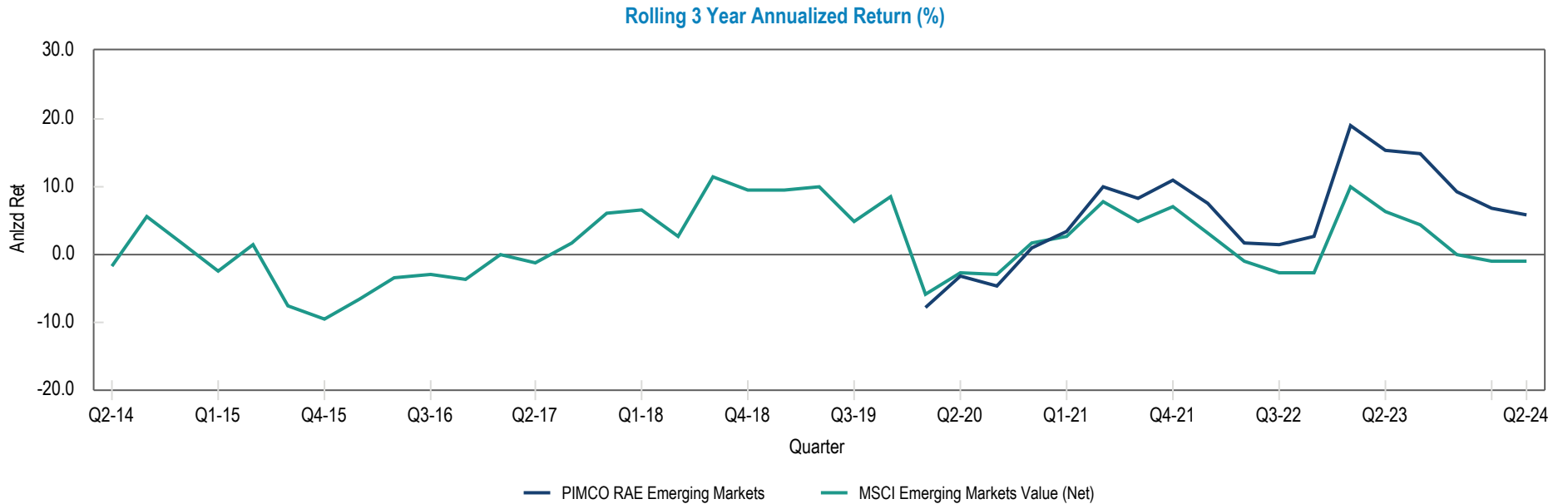
% of Portfolio 10.72 -1.88

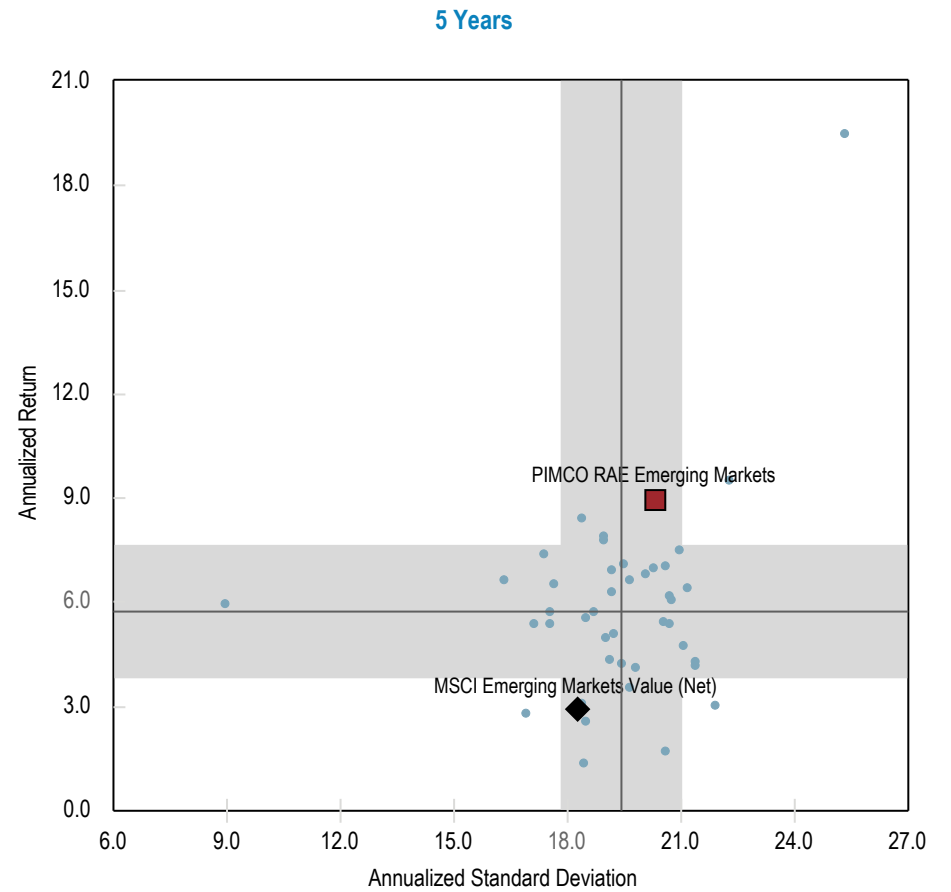
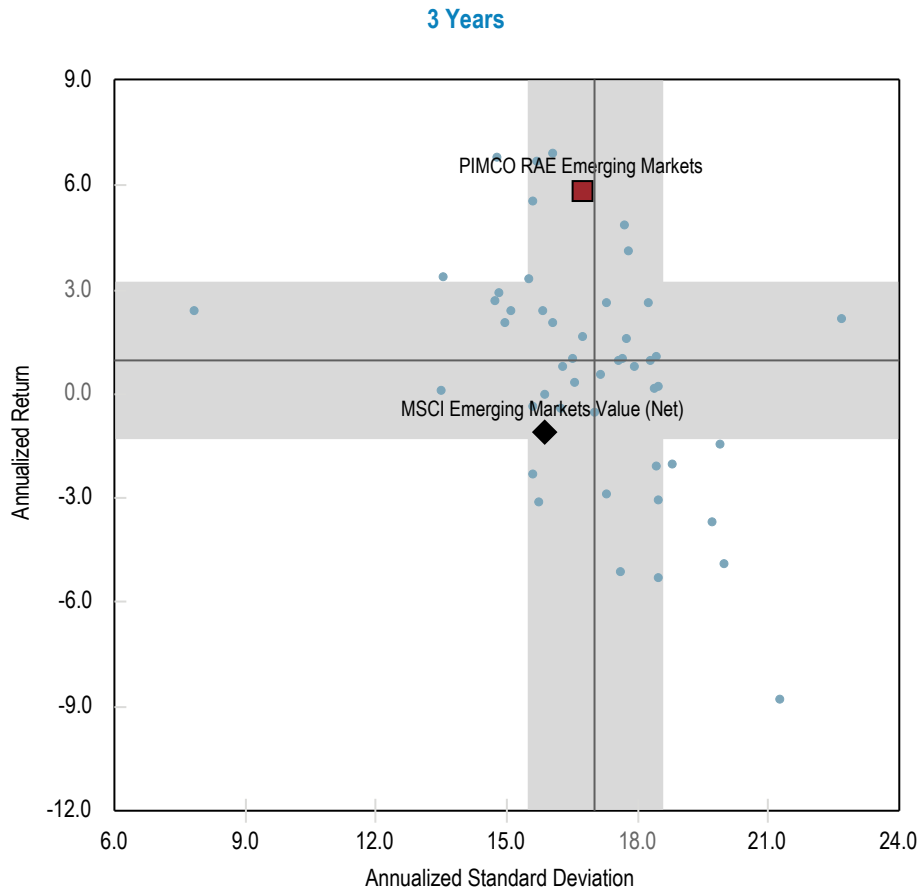
The PIMCO RAE Emerging Markets seeks to invest 80% of its assets in investments that are economically tied to emerging market countries. The portfolio is sub-advised by Research Affiliates, LLC.

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



	Quarter	1 Year	3 Years	5 Years	10 Years	2023	2022	2021	2020	2019
● PIMCO RAE Emerging Markets	5.55 (17)	22.36 (5)	5.85 (7)	8.94 (5)	-	23.09 (11)	-9.66 (34)	17.08 (8)	2.13 (85)	14.63 (78)
▲ MSCI Emerging Markets Value NR	5.08 (22)	14.13 (44)	-1.09 (77)	2.91 (92)	1.96 (100)	14.21 (67)	-15.83 (62)	4.00 (68)	5.48 (71)	11.96 (93)
5th Percentile	6.20	22.26	6.42	8.86	6.85	24.78	-1.44	20.40	23.96	27.36
1st Quartile	4.72	16.94	2.61	6.98	5.32	20.53	-7.67	9.02	17.81	22.69
Median	2.78	13.61	0.96	5.73	4.53	15.78	-14.26	4.86	8.90	18.43
3rd Quartile	1.14	10.15	-0.53	4.32	3.49	13.03	-16.88	3.26	4.47	14.93
95th Percentile	-1.88	1.79	-5.03	2.59	2.47	9.79	-24.26	-5.01	-3.71	8.58
Population	52	52	49	43	30	52	57	56	58	59





3 Years

	Anlzd Return (%)	Anlzd Standard Deviation (%)	Sharpe Ratio
PIMCO RAE Emerging Markets	5.8	16.7	0.2
MSCI Emerging Markets Value (Net)	-1.1	15.9	-0.2
eV Emg Mkts All Cap Value Equity Median	1.0	17.0	0.0
Population	49	49	49

5 Years

	Anlzd Return (%)	Anlzd Standard Deviation (%)	Sharpe Ratio
PIMCO RAE Emerging Markets	8.9	20.3	0.4
MSCI Emerging Markets Value (Net)	2.9	18.2	0.1
eV Emg Mkts All Cap Value Equity Median	5.7	19.4	0.3
Population	43	43	43

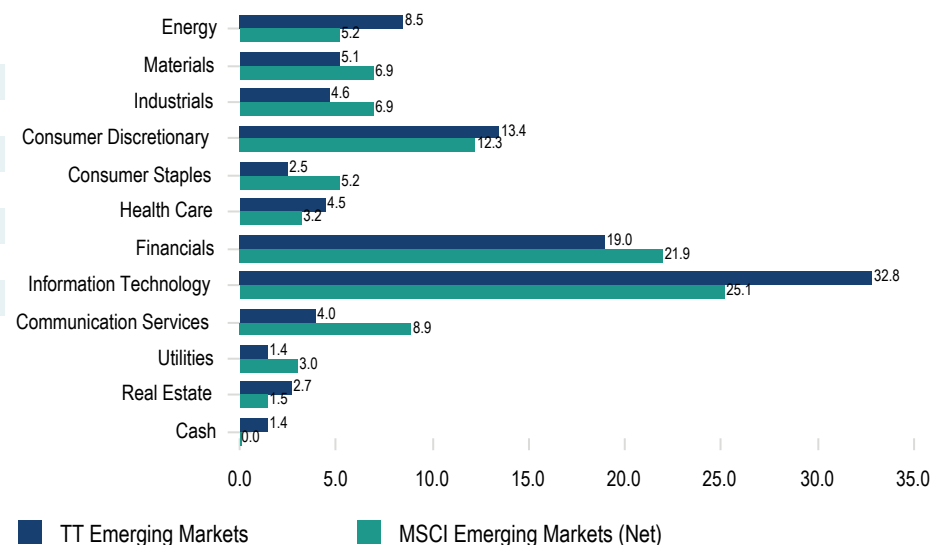
TT Emerging Markets Manager Portfolio Overview

Contra Costa County Employees' Retirement Association Period Ending: June 30, 2024

Characteristics

	Portfolio	Benchmark
Number of Stocks	61	1,330
Wtd. Avg. Mkt. Cap \$M	174,929.76	152,426.25
Median Mkt. Cap \$M	18,156.21	7,007.92
Price/Earnings ratio	14.61	15.38
Price/Book ratio	2.62	2.62
Return on Equity (%)	4.37	4.35
Current Yield (%)	2.18	2.75
Beta (5 Years, Monthly)	1.15	1.00

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



Largest Holdings

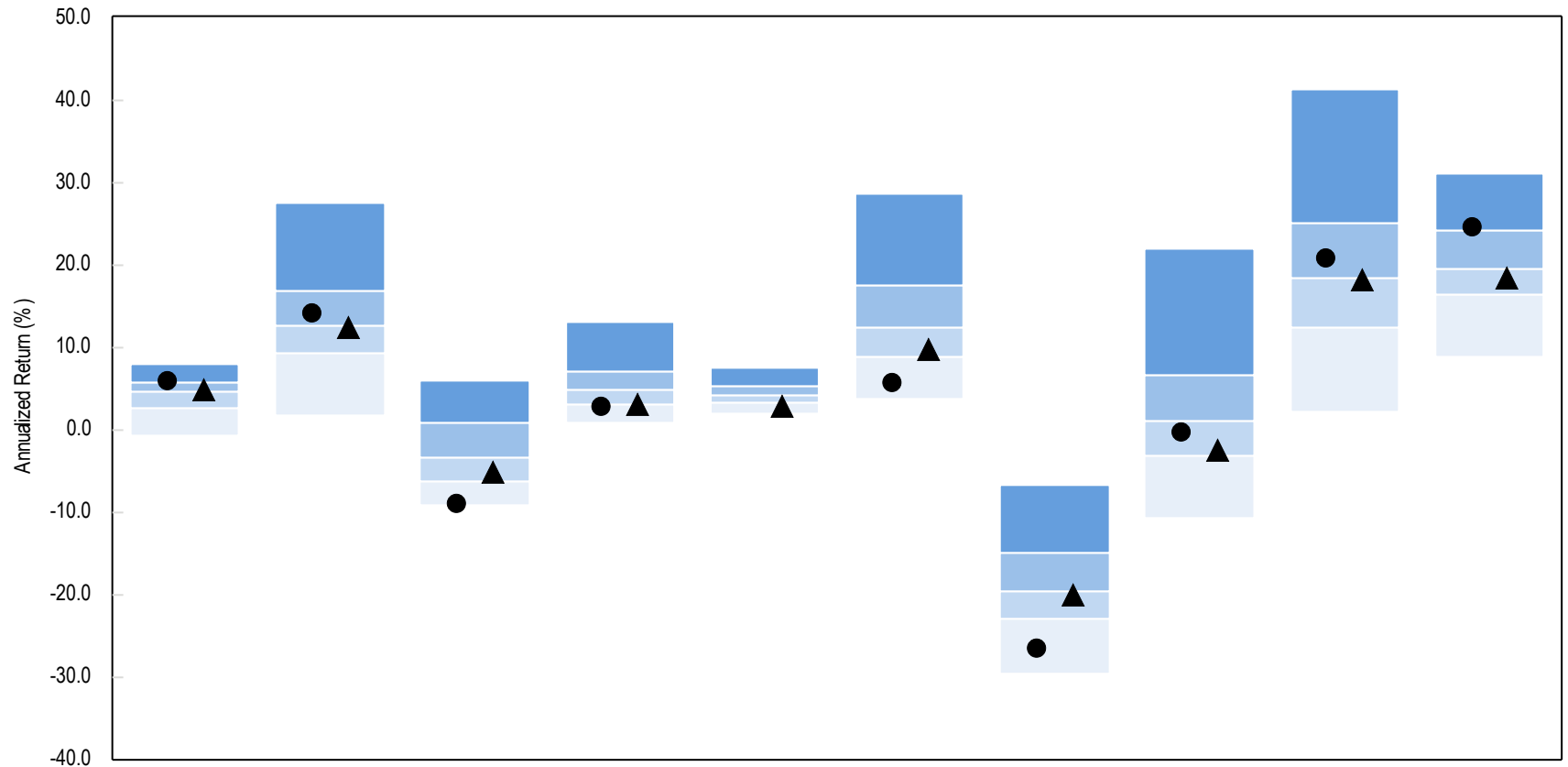
Top Contributors

Top Detractors

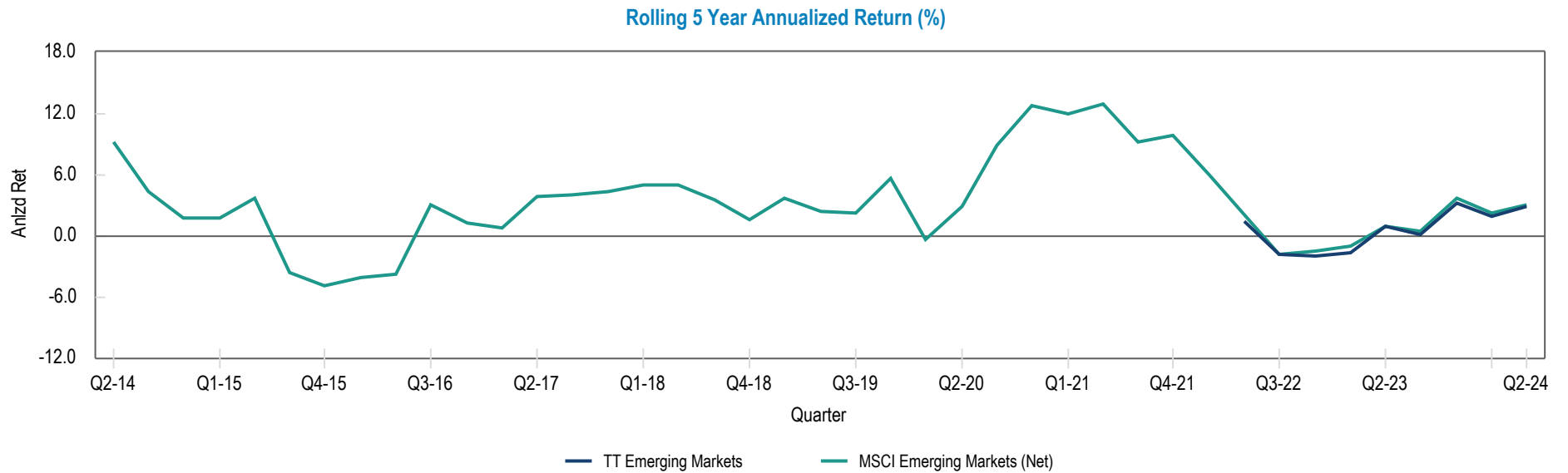
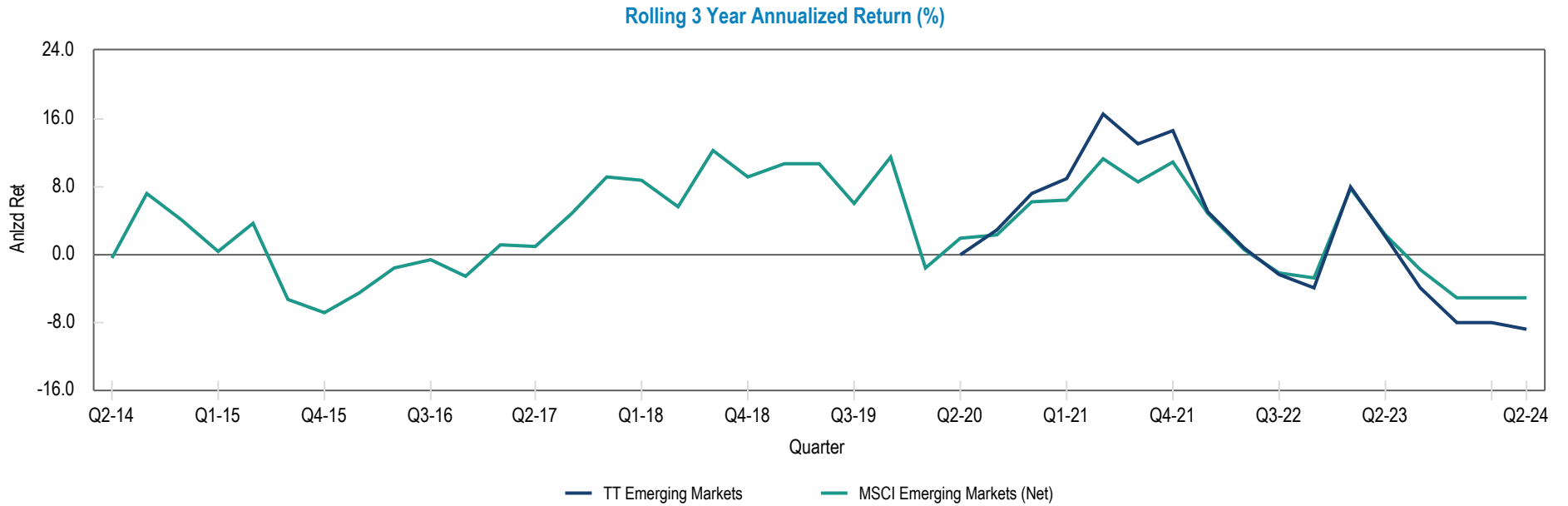
	End Weight (%)	Quarterly Return (%)		Portfolio Weight (%)	Quarterly Return (%)	Contribution to Return (%)		Portfolio Weight (%)	Quarterly Return (%)	Contribution to Return (%)
Taiwan Semiconductor Man.	13.10	22.80	Taiwan Semiconductor Man.	11.26	22.80	2.57	Grupo Financiero Banorte	3.61	-21.85	-0.79
Axis Bank Ltd	4.41	20.84	Axis Bank Ltd	3.84	20.84	0.80	Sendas Distribuidora S.A.	1.53	-36.65	-0.56
Nova Ljubljanska Banka d.d	3.52	19.73	Mahindra & Mahindra Ltd	1.57	49.23	0.77	Samsung Electronics Co Ltd	4.01	-8.53	-0.34
Samsung Electronics Co Ltd	3.49	-8.53	SK Hynix Inc	2.60	26.39	0.69	PT Bank Mandiri TBK	1.81	-17.87	-0.32
Samsung Electronics Co Ltd	3.29	-3.27	Nova Ljubljanska Banka d.d	3.23	19.73	0.64	Regional SAB de CV	1.20	-22.35	-0.27
Icici Bank Ltd	3.16	9.74	Tencent Holdings LTD	2.51	23.94	0.60	Vamos Locacao	1.43	-18.30	-0.26
SK Hynix Inc	3.13	26.39	Ypf Sociedad Anonima	2.74	17.25	0.47	Equatorial Energia SA	1.78	-13.72	-0.24
Ypf Sociedad Anonima	3.06	17.25	KLA Corp	2.00	18.26	0.36	Localiza Rent A Car SA	0.78	-29.48	-0.23
Tencent Holdings LTD	2.93	23.94	Delta Electronics Inc	2.24	14.17	0.32	Delhivery Limited	2.05	-10.17	-0.21
Emaar Properties	2.68	6.85	Kia Corporation	2.09	14.75	0.31	Unimicron Technology Corp	2.41	-7.03	-0.17
			% of Portfolio	34.08		7.53	% of Portfolio	20.61		-3.40

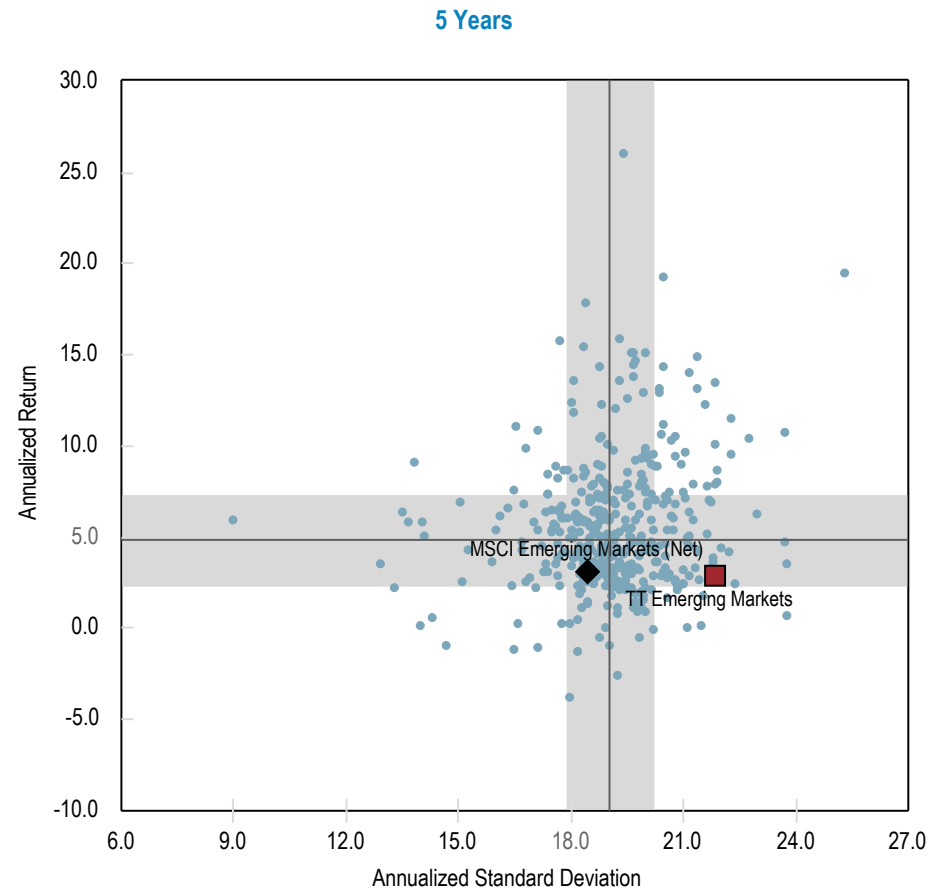
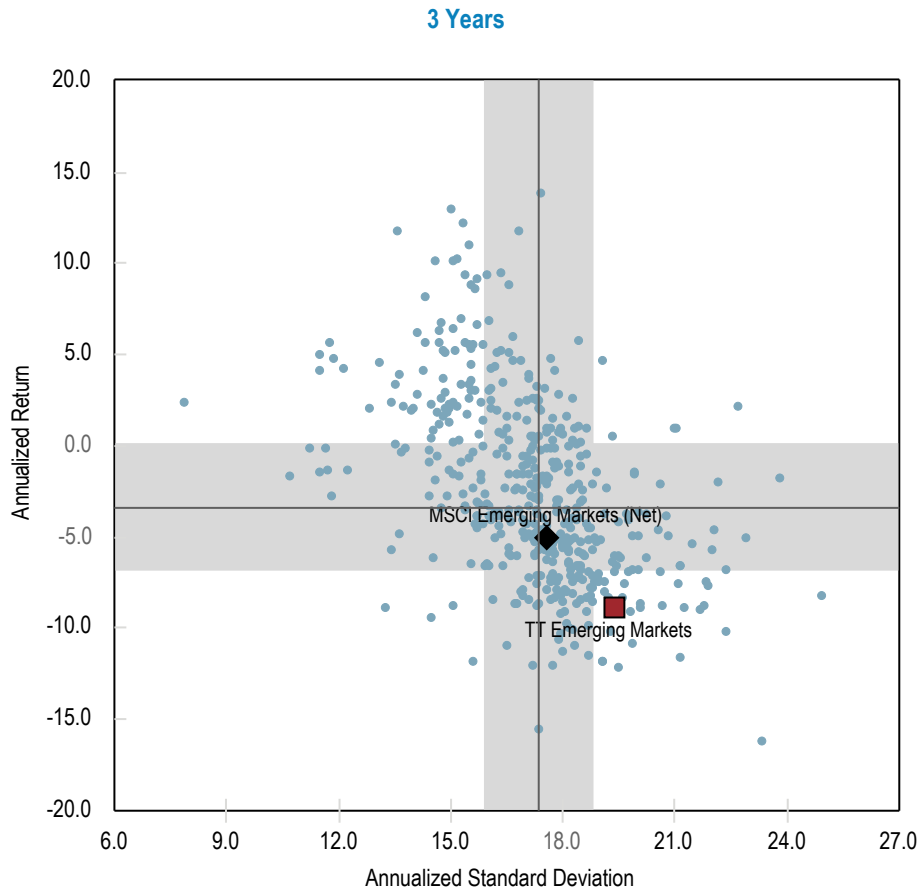
The Emerging Markets Unconstrained strategy aims to outperform its benchmark, MSCI Emerging Markets Index by 5% per annum over a three-year rolling period. It targets high returns and long term capital growth by investing in a focused portfolio of primarily equity and equity-related securities traded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

TT Emerging Markets vs. eV Emg Mkts Equity Gross Universe



	Quarter	1 Year	3 Years	5 Years	10 Years	2023	2022	2021	2020	2019
● TT Emerging Markets	5.97 (24)	14.19 (41)	-8.85 (94)	2.90 (79)	-	5.80 (91)	-26.36 (90)	-0.23 (58)	20.79 (39)	24.77 (24)
▲ MSCI Emerging Markets	5.00 (44)	12.55 (53)	-5.07 (65)	3.10 (74)	2.79 (84)	9.83 (66)	-20.09 (57)	-2.54 (72)	18.31 (51)	18.42 (62)
5th Percentile	8.03	27.45	5.99	13.02	7.63	28.71	-6.73	22.04	41.39	31.07
1st Quartile	5.81	16.84	0.95	7.09	5.40	17.56	-14.93	6.76	25.15	24.31
Median	4.71	12.75	-3.34	4.82	4.31	12.49	-19.51	1.02	18.37	19.56
3rd Quartile	2.72	9.31	-6.12	3.05	3.30	8.95	-22.91	-3.12	12.38	16.49
95th Percentile	-0.66	1.82	-9.05	0.97	2.07	3.74	-29.48	-10.71	2.18	8.98
Population	517	517	481	432	304	539	571	580	578	601





	3 Years		
	Anlzd Return (%)	Anlzd Standard Deviation (%)	Sharpe Ratio
TT Emerging Markets	-8.8	19.4	-0.5
MSCI Emerging Markets (Net)	-5.1	17.6	-0.4
eV Emg Mkts Equity Median	-3.3	17.3	-0.3
Population	481	481	481

	5 Years		
	Anlzd Return (%)	Anlzd Standard Deviation (%)	Sharpe Ratio
TT Emerging Markets	2.9	21.9	0.1
MSCI Emerging Markets (Net)	3.1	18.4	0.1
eV Emg Mkts Equity Median	4.8	19.1	0.2
Population	432	432	432

Global Equity Managers

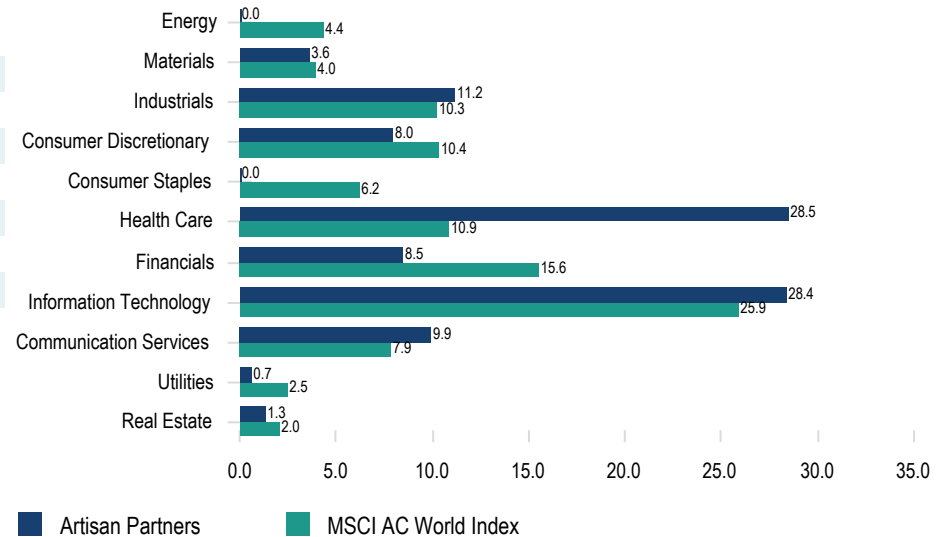
Artisan Partners
Manager Portfolio Overview

Contra Costa County Employees' Retirement Association
Period Ending: June 30, 2024

Characteristics

	Portfolio	Benchmark
Number of Stocks	43	2,760
Wtd. Avg. Mkt. Cap \$M	425,841.61	659,033.17
Median Mkt. Cap \$M	84,921.12	11,877.45
Price/Earnings ratio	42.89	22.38
Price/Book ratio	6.13	3.87
Return on Equity (%)	6.36	7.30
Current Yield (%)	0.56	1.94
Beta (5 Years, Monthly)	0.98	1.00

Sector Allocation (%) vs. MSCI AC World Index



Largest Holdings

	End Weight (%)	Quarterly Return (%)
Novo Nordisk A/S	7.03	13.26
Boston Scientific Corp	5.89	12.44
Advanced Micro Devices Inc	4.91	-10.13
Netflix Inc	4.60	11.12
Taiwan Semiconductor Man.	4.43	28.16
Intuit Inc.	3.95	1.25
Amazon.com Inc	3.72	7.13
Microsoft Corp	3.65	6.42
Alphabet Inc	3.52	20.82
Techtronic Industries Co Ltd	3.42	-14.95

Top Contributors

	Portfolio Weight (%)	Quarterly Return (%)	Contribution to Return (%)
Taiwan Semiconductor Man.	3.37	28.16	0.95
Novo Nordisk A/S	6.03	13.26	0.80
Boston Scientific Corp	5.09	12.44	0.63
Alphabet Inc	2.84	20.82	0.59
Netflix Inc	4.02	11.12	0.45
Arista Networks Inc	1.64	20.86	0.34
Tencent Holdings LTD	1.41	23.94	0.34
Chipotle Mexican Grill Inc	3.69	7.77	0.29
Amazon.com Inc	3.38	7.13	0.24
Microsoft Corp	3.33	6.42	0.21

Top Detractors

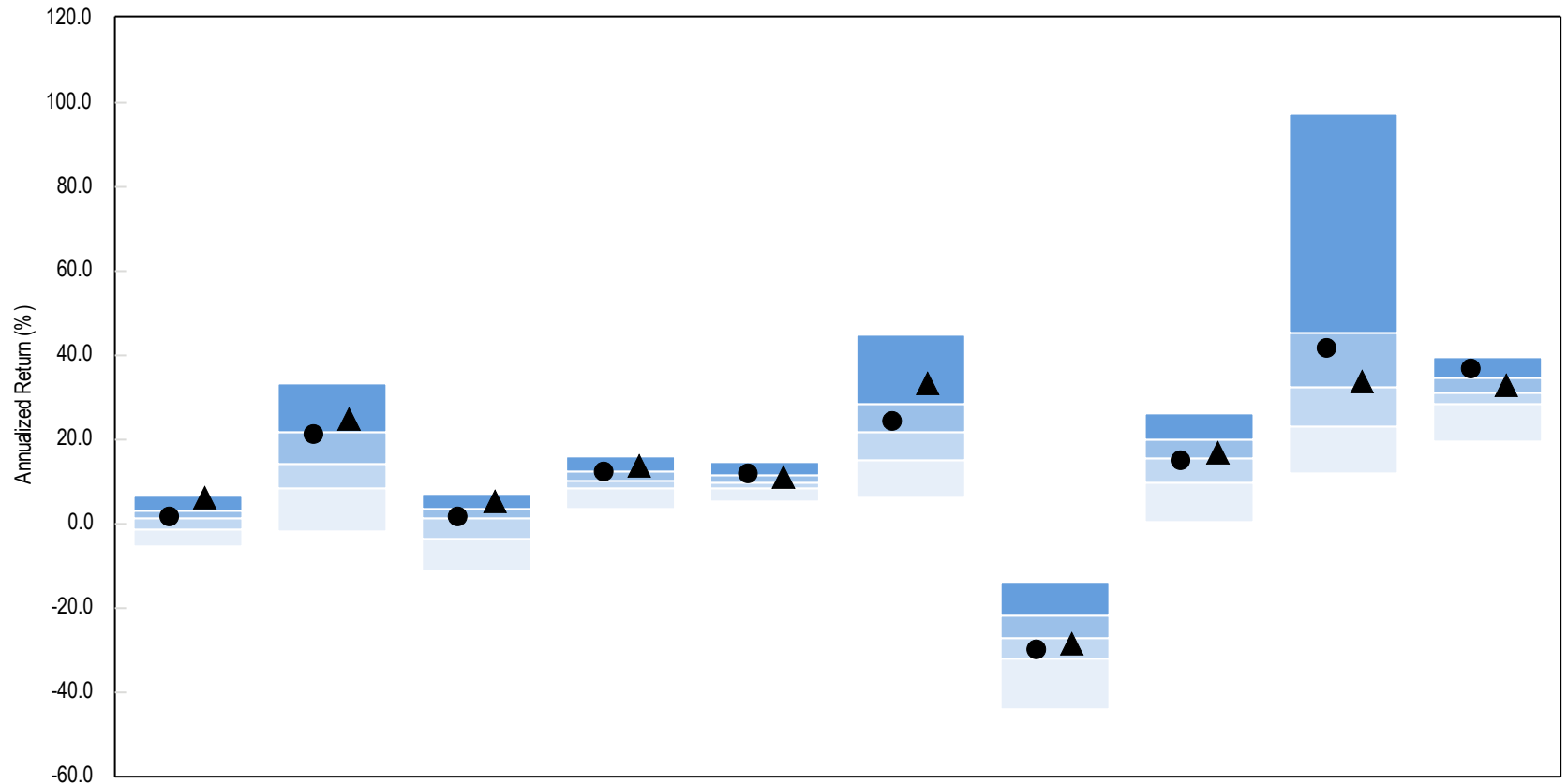
	Portfolio Weight (%)	Quarterly Return (%)	Contribution to Return (%)
Veeva Systems Inc	3.36	-21.01	-0.71
Techtronic Industries Co Ltd	3.94	-14.95	-0.59
Advanced Micro Devices Inc	5.31	-10.13	-0.54
CoStar Group Inc	1.65	-23.25	-0.38
DexCom Inc	1.83	-18.26	-0.33
Atlassian Corp	3.02	-9.34	-0.28
West Pharmaceutical Services Inc.	1.55	-16.72	-0.26
Vestas Wind Systems A/S	1.37	-17.07	-0.23
LONZA GROUP AG	2.63	-8.30	-0.22
Shopify Inc	1.42	-14.41	-0.21

% of Portfolio 34.80 4.84

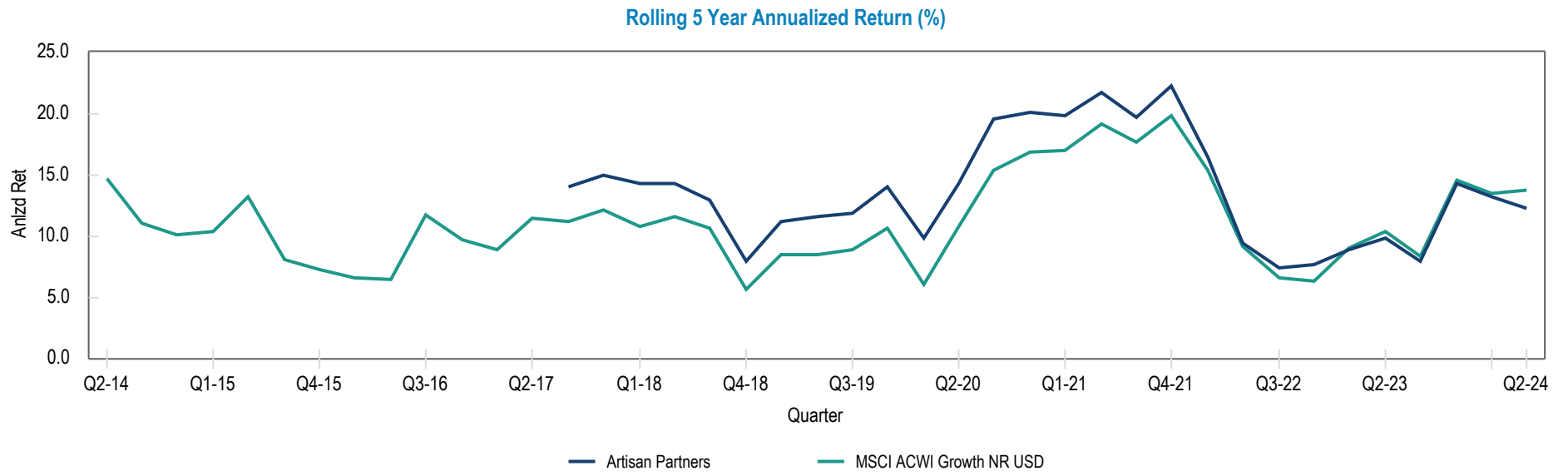
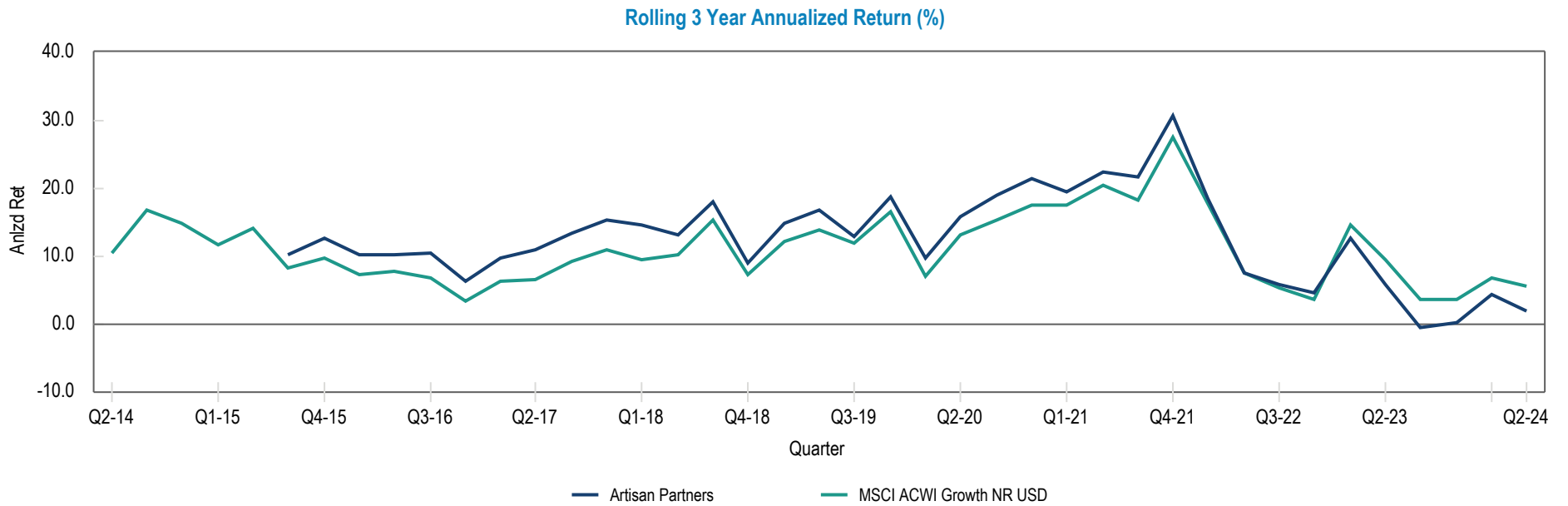
% of Portfolio 26.08 -3.75

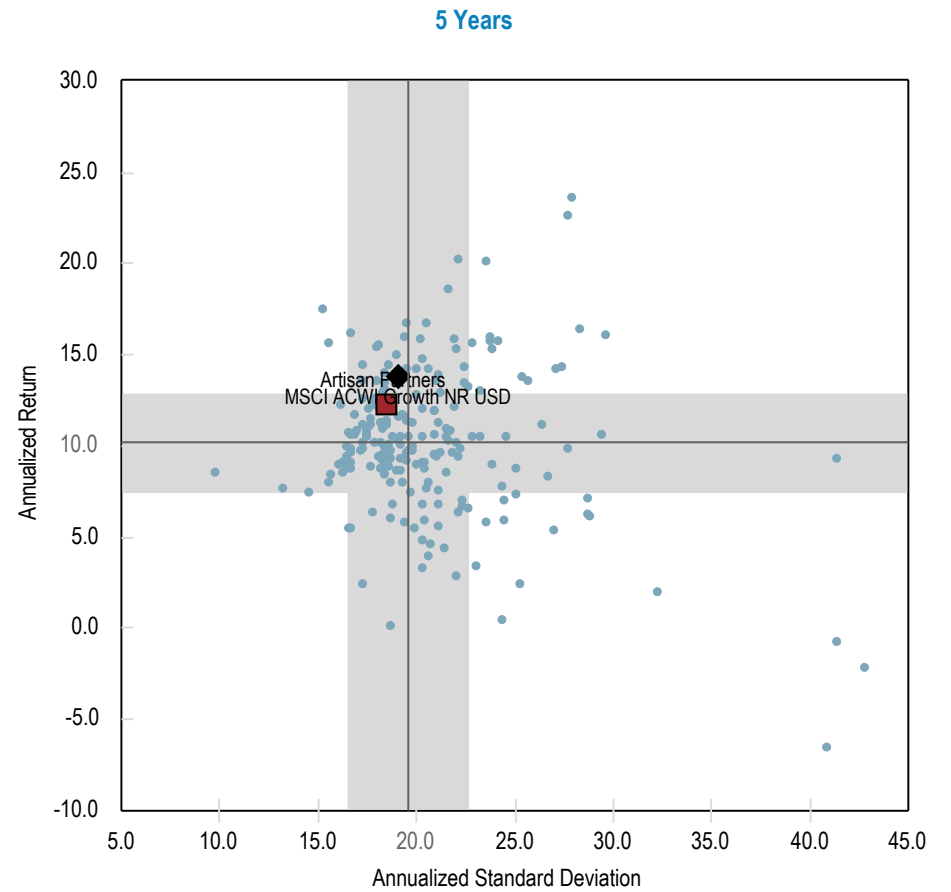
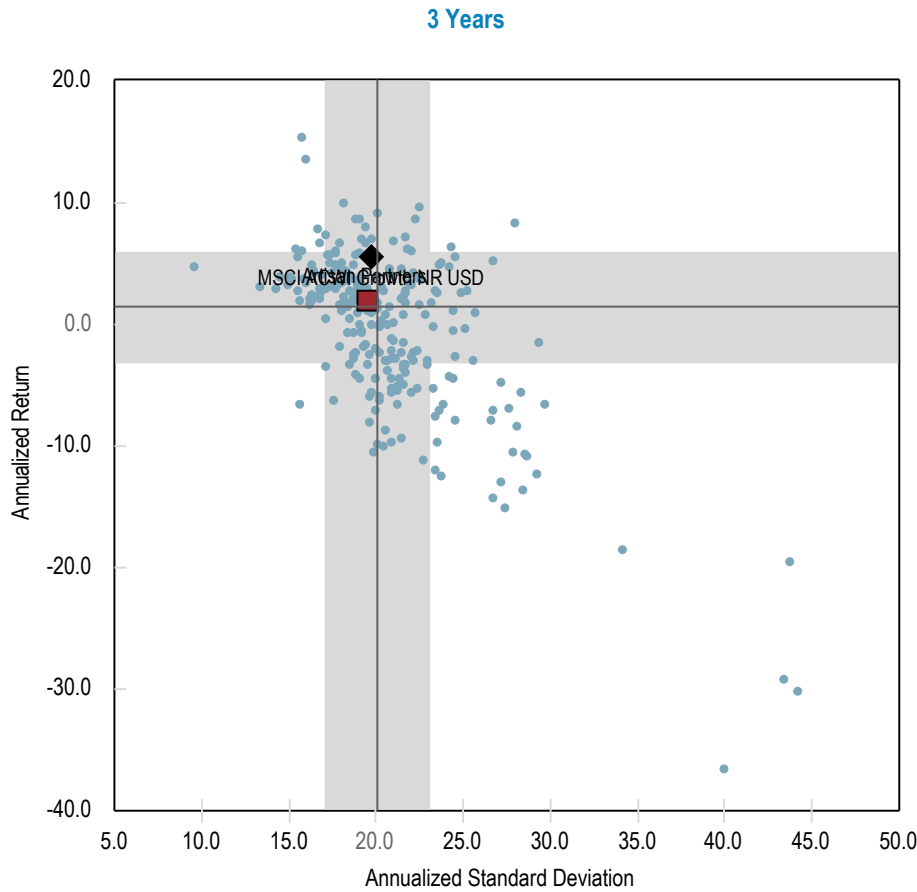
Global equity portfolio of companies that is benchmark agnostic with accelerating profit cycles and a focus on capital allocation. Primary personnel include James Hamel, Craigh Cepukenas, and Matthew Kamm.

Artisan Partners vs. eV Global Growth Equity Gross Universe



	Quarter	1 Year	3 Years	5 Years	10 Years	2023	2022	2021	2020	2019
● Artisan Partners	1.65 (44)	21.34 (27)	1.97 (43)	12.24 (26)	11.93 (20)	24.54 (37)	-29.59 (61)	14.99 (56)	41.66 (33)	37.00 (12)
▲ MSCI ACWI Growth NR USD	6.20 (7)	24.70 (20)	5.50 (13)	13.85 (17)	11.15 (28)	33.22 (16)	-28.61 (57)	17.10 (43)	33.60 (48)	32.72 (37)
5th Percentile	6.80	33.15	7.22	16.07	14.50	44.88	-13.85	26.09	97.21	39.49
1st Quartile	3.24	21.90	3.73	12.33	11.35	28.41	-21.81	19.82	45.27	34.63
Median	1.12	14.37	1.40	10.17	9.56	21.64	-26.91	15.66	32.23	31.28
3rd Quartile	-1.12	8.62	-3.52	8.55	8.54	15.31	-31.79	9.96	23.24	28.33
95th Percentile	-5.49	-1.82	-11.06	3.65	5.24	6.13	-43.97	0.23	12.21	19.44
Population	270	268	247	209	121	288	294	281	265	249





	3 Years		
	Anlzd Return (%)	Anlzd Standard Deviation (%)	Sharpe Ratio
Artisan Partners	2.0	19.5	0.0
MSCI ACWI Growth NR USD	5.5	19.8	0.2
eV Global Growth Equity Median	1.4	20.1	0.0
Population	247	247	247

	5 Years		
	Anlzd Return (%)	Anlzd Standard Deviation (%)	Sharpe Ratio
Artisan Partners	12.2	18.5	0.6
MSCI ACWI Growth NR USD	13.8	19.1	0.7
eV Global Growth Equity Median	10.2	19.6	0.5
Population	209	209	209

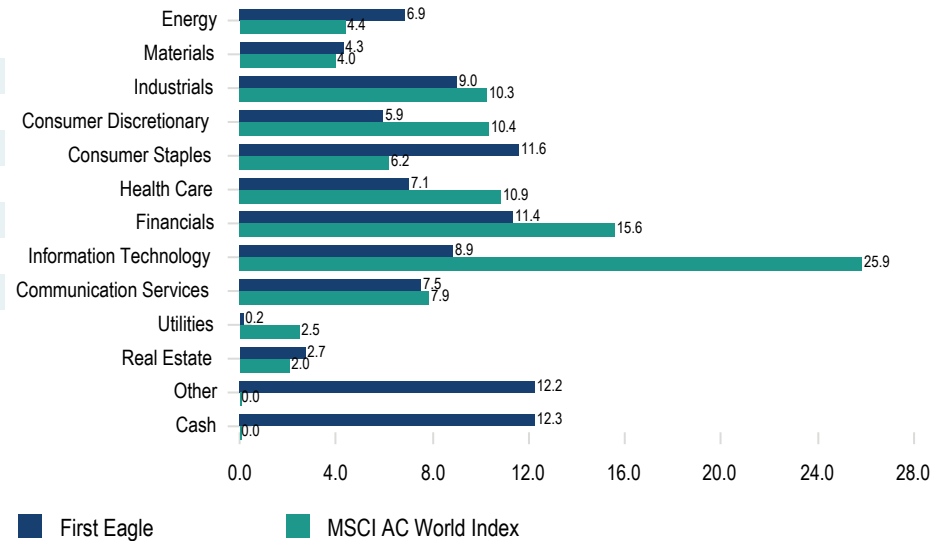
First Eagle
Manager Portfolio Overview

Contra Costa County Employees' Retirement Association
Period Ending: June 30, 2024

Characteristics

	Portfolio	Benchmark
Number of Stocks	123	2,760
Wtd. Avg. Mkt. Cap \$M	187,092.66	659,033.17
Median Mkt. Cap \$M	28,780.60	11,877.45
Price/Earnings ratio	18.84	22.38
Price/Book ratio	2.53	3.87
Return on Equity (%)	7.80	7.30
Current Yield (%)	2.09	1.94
Beta (5 Years, Monthly)	0.75	1.00

Sector Allocation (%) vs. MSCI AC World Index



Largest Holdings

	End Weight (%)	Quarterly Return (%)
SPDR Gold Trust	12.22	4.52
Oracle Corp	2.82	12.78
Meta Platforms Inc	2.55	3.94
Exxon Mobil Corp	2.12	-0.16
Alphabet Inc	1.97	20.60
Schlumberger Ltd	1.82	-13.37
HCA Healthcare Inc	1.82	-3.48
Comcast Corp	1.63	-9.00
Taiwan Semiconductor Man.	1.53	28.16
Philip Morris International Inc	1.46	12.04

Top Contributors

	Portfolio Weight (%)	Quarterly Return (%)	Contribution to Return (%)
SPDR Gold Trust	11.77	4.52	0.53
Taiwan Semiconductor Man.	1.20	28.16	0.34
Alphabet Inc	1.64	20.60	0.34
Oracle Corp	2.53	12.78	0.32
MS&AD Insurance Group	0.93	24.07	0.22
C.H. Robinson Worldwide Inc.	1.21	16.55	0.20
Analog Devices Inc	1.01	15.86	0.16
Philip Morris International Inc	1.32	12.04	0.16
Prosus NV	0.97	13.52	0.13
Unilever PLC	1.25	10.33	0.13

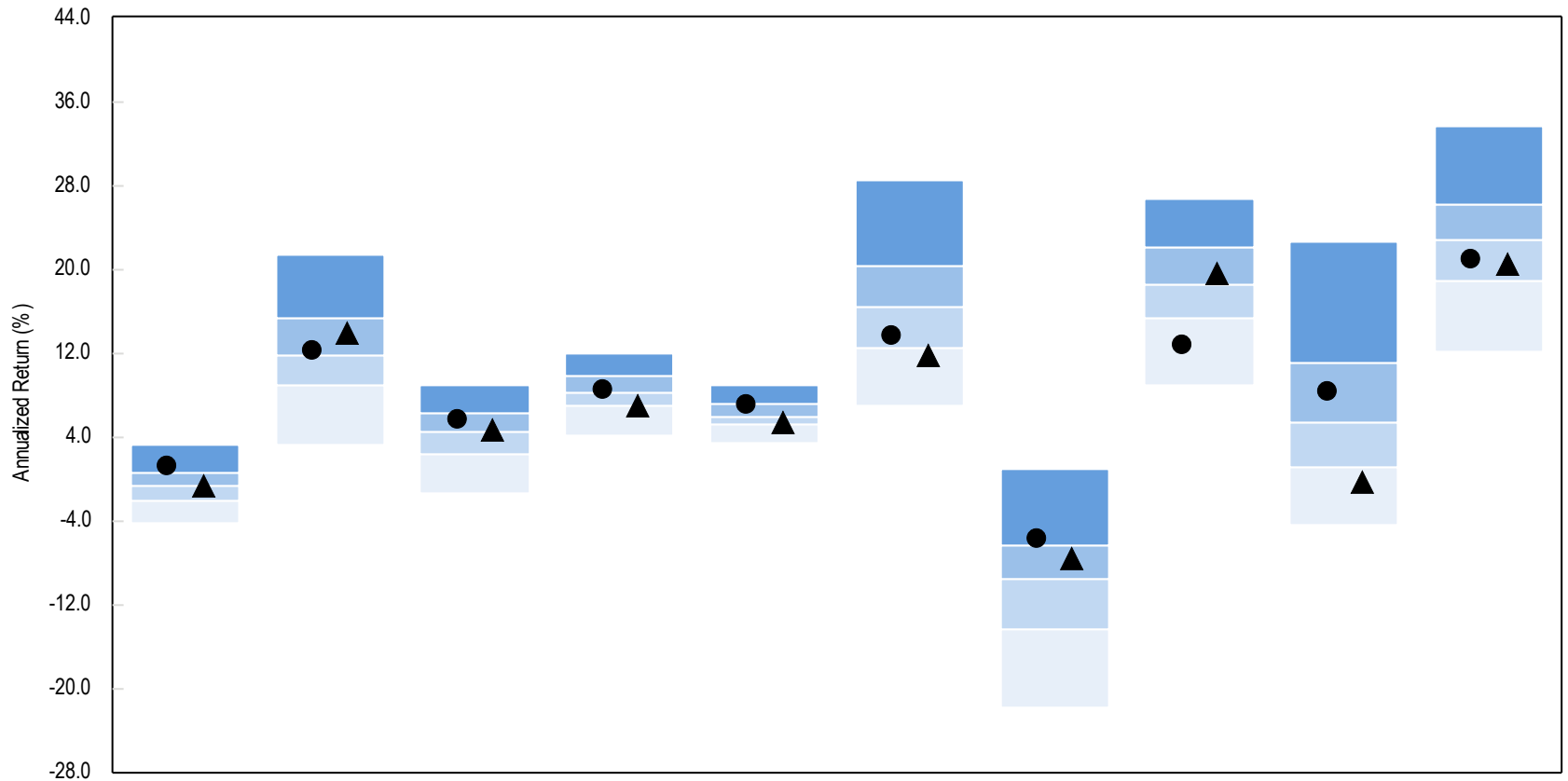
Top Detractors

	Portfolio Weight (%)	Quarterly Return (%)	Contribution to Return (%)
Schlumberger Ltd	2.13	-13.37	-0.28
Fomento Economico Mexican	1.25	-16.29	-0.20
Secom Co Ltd	0.98	-18.47	-0.18
Comcast Corp	1.81	-9.00	-0.16
Weyerhaeuser Co	0.68	-20.41	-0.14
Walt Disney Co (The)	0.69	-18.85	-0.13
Ambev SA	0.71	-17.34	-0.12
SALESFORCE INC	0.77	-14.64	-0.11
DENTSPLY SIRONA Inc	0.43	-24.46	-0.10
Medtronic PLC	1.06	-8.88	-0.09

% of Portfolio 23.83 2.54 % of Portfolio 10.51 -1.53

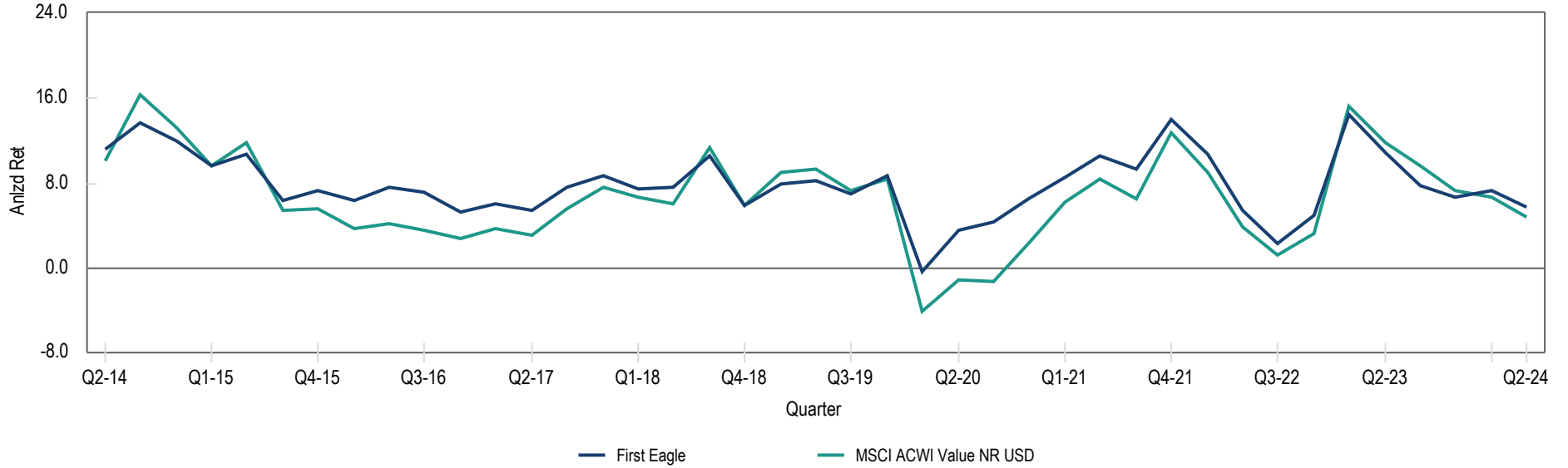
Global equity portfolio that is benchmark agnostic comprised of companies with low valuations. Primary personnel include Matt McLennan and Kimball Brooker.

First Eagle vs. eV Global Value Equity Gross Universe

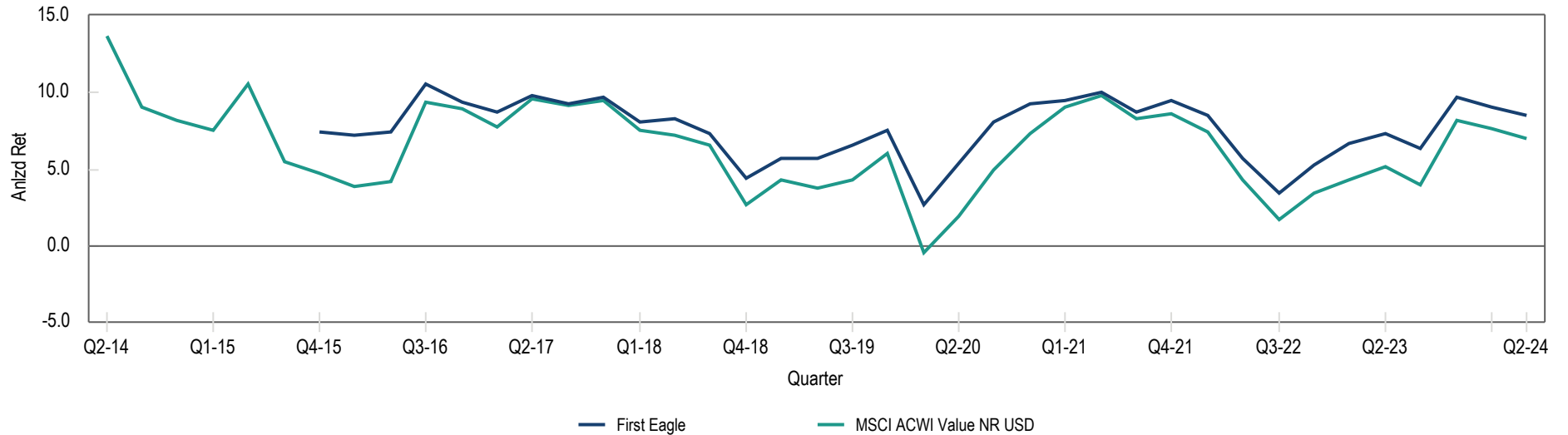


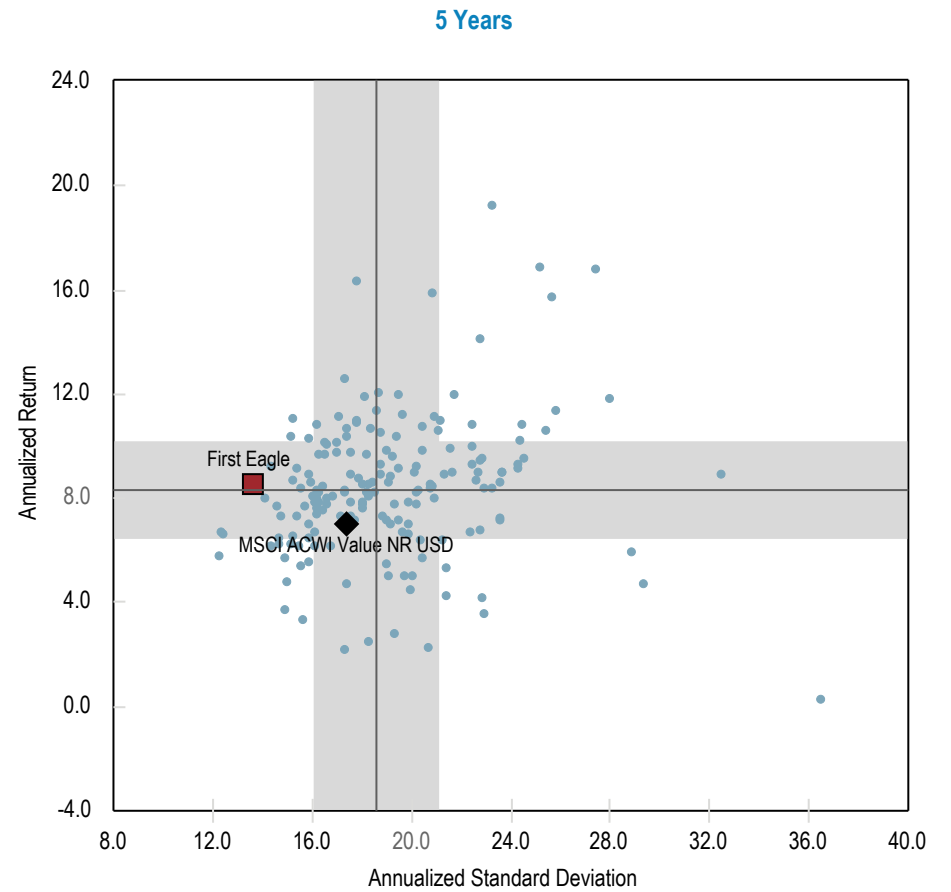
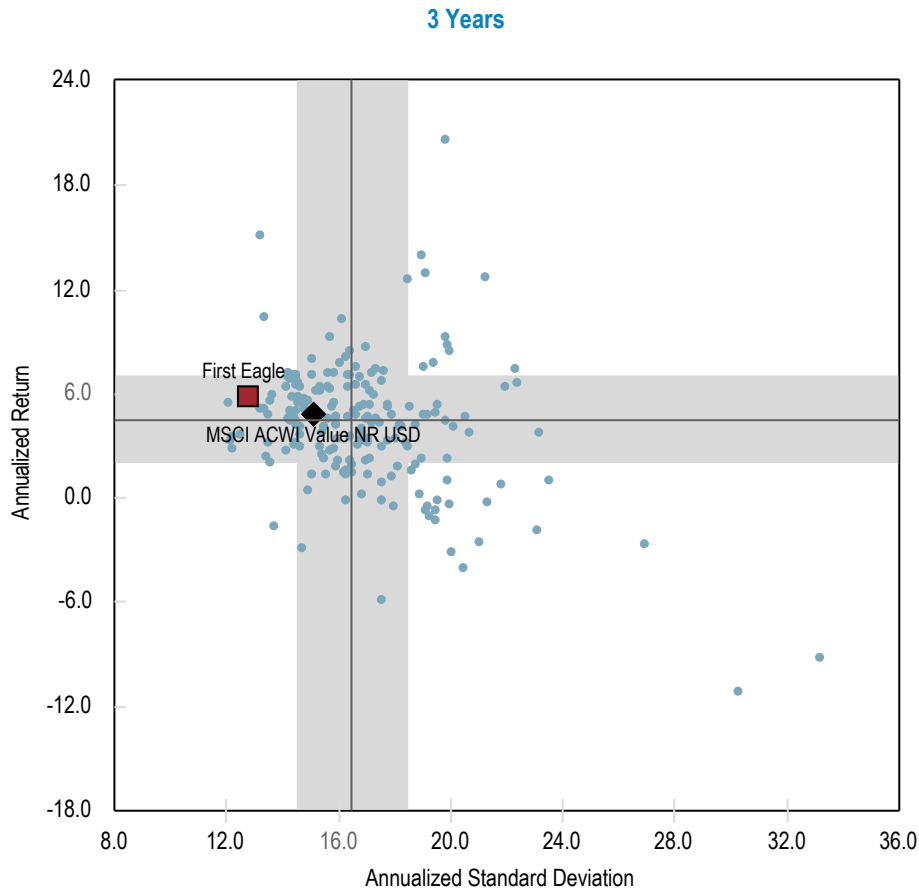
	Quarter	1 Year	3 Years	5 Years	10 Years	2023	2022	2021	2020	2019
● First Eagle	1.38 (17)	12.36 (49)	5.85 (29)	8.55 (46)	7.15 (26)	13.75 (67)	-5.61 (22)	12.95 (87)	8.47 (33)	21.01 (64)
▲ MSCI ACWI Value NR USD	-0.59 (50)	13.92 (34)	4.79 (43)	7.03 (75)	5.39 (72)	11.81 (81)	-7.55 (35)	19.62 (41)	-0.33 (81)	20.59 (66)
5th Percentile	3.28	21.37	8.93	12.01	9.05	28.50	0.93	26.73	22.61	33.76
1st Quartile	0.64	15.41	6.32	9.78	7.19	20.42	-6.24	22.12	11.04	26.19
Median	-0.60	11.87	4.55	8.34	6.04	16.40	-9.44	18.62	5.41	22.80
3rd Quartile	-2.06	9.02	2.43	7.02	5.18	12.57	-14.39	15.33	1.08	18.96
95th Percentile	-4.13	3.21	-1.37	4.26	3.47	7.05	-21.82	9.04	-4.34	12.20
Population	216	213	196	175	127	224	227	230	237	233

Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)





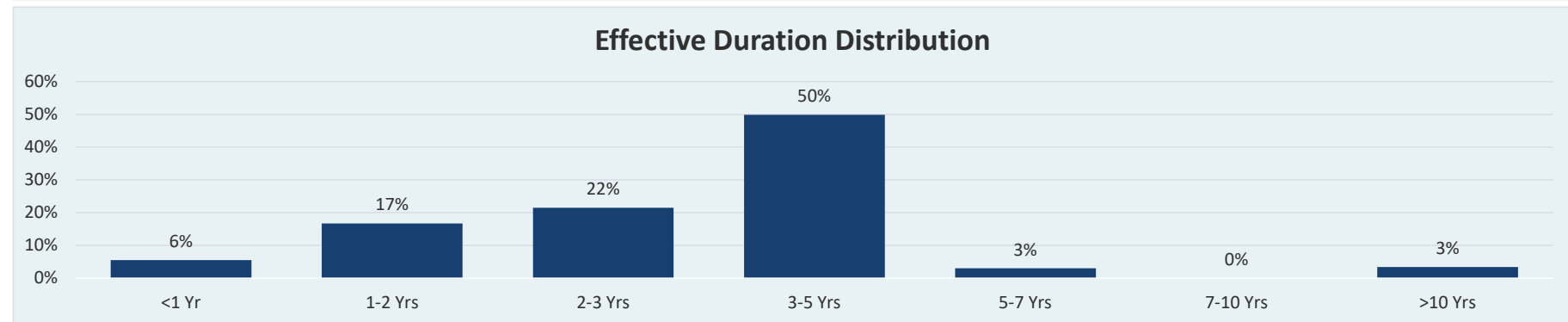
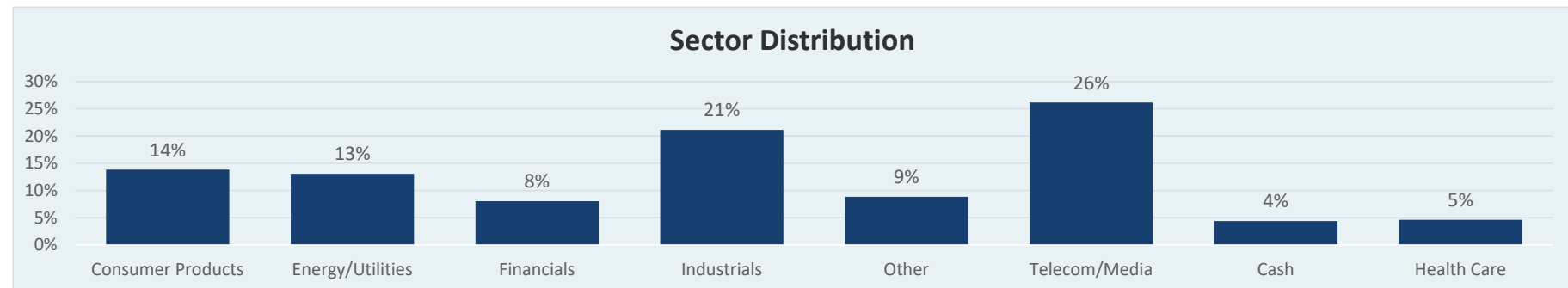
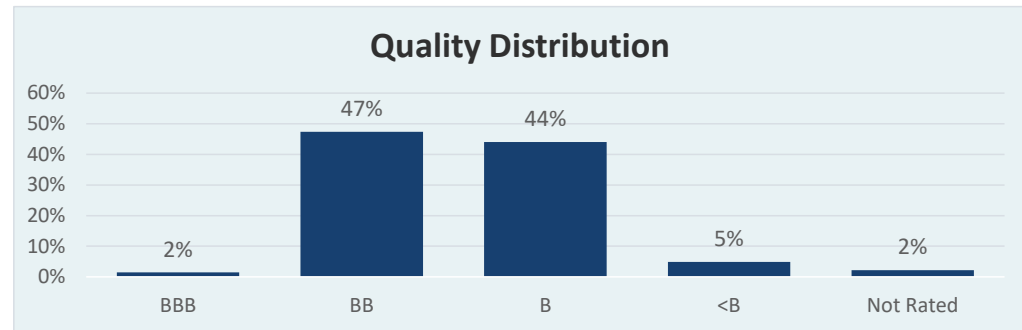
	3 Years		
	Anlzd Return (%)	Anlzd Standard Deviation (%)	Sharpe Ratio
First Eagle	5.9	12.8	0.3
MSCI ACWI Value NR USD	4.8	15.1	0.2
eV Global Value Equity Median	4.5	16.5	0.2
Population	196	196	196

	5 Years		
	Anlzd Return (%)	Anlzd Standard Deviation (%)	Sharpe Ratio
First Eagle	8.5	13.6	0.5
MSCI ACWI Value NR USD	7.0	17.4	0.4
eV Global Value Equity Median	8.3	18.6	0.4
Population	175	175	175

High Yield Managers

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

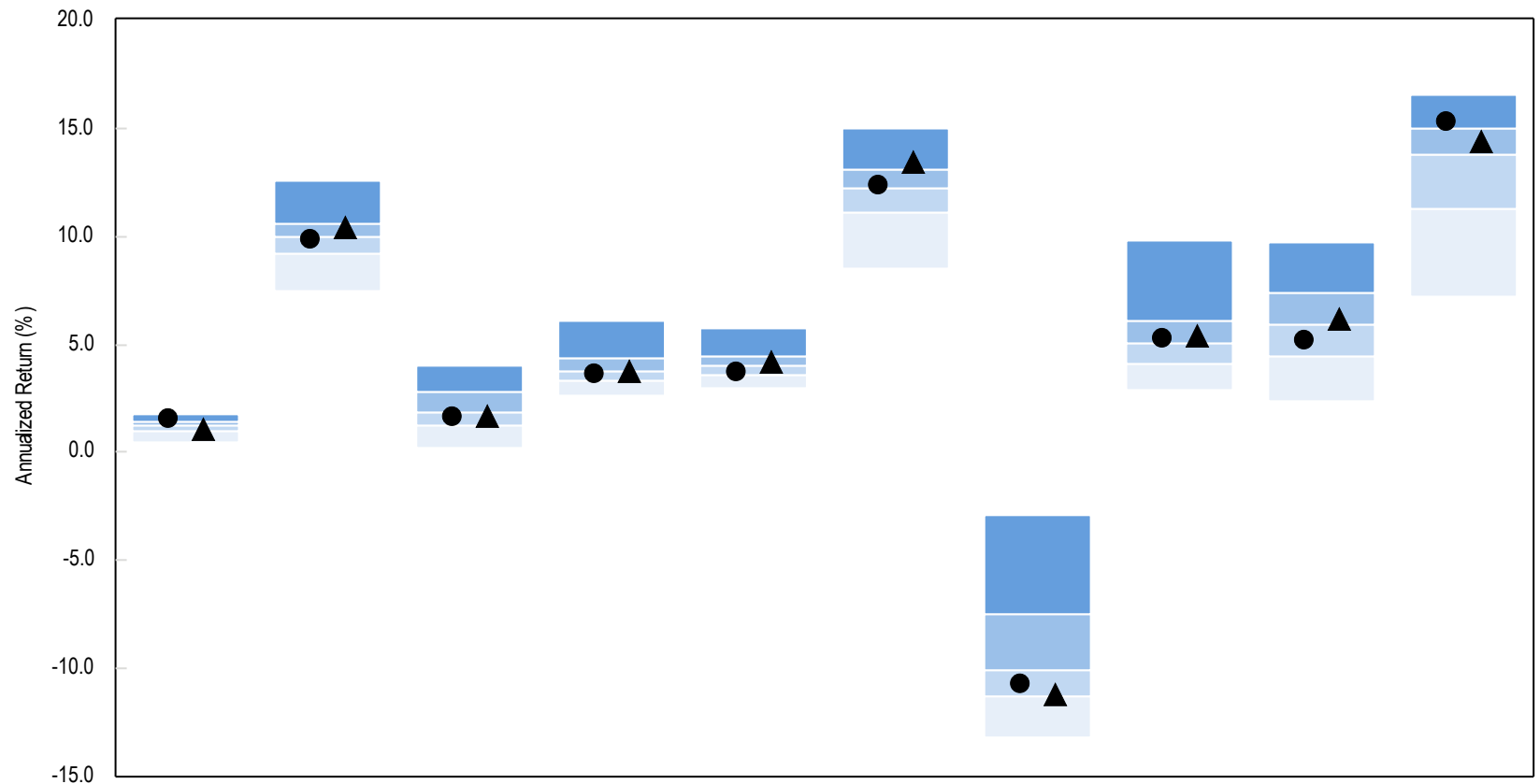
	Voya	ICE BofAML HY Master II
Effective Duration	3.10	3.30
Yield to Maturity	7.0%	8.1%
Average Quality	B+	B1
Average Coupon	6.8%	6.3%



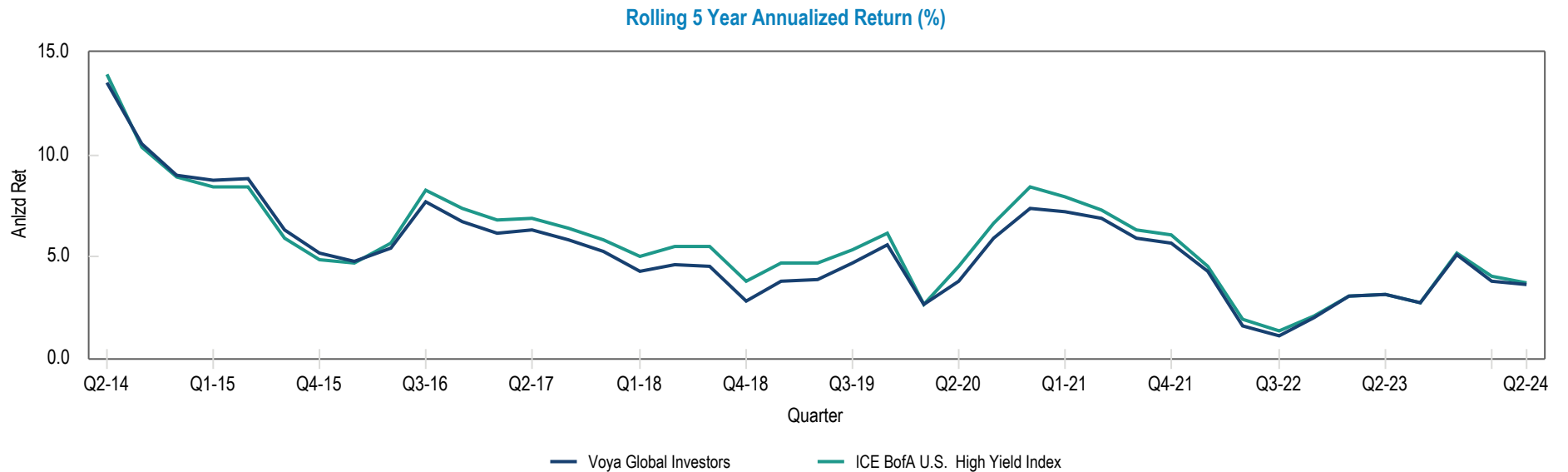
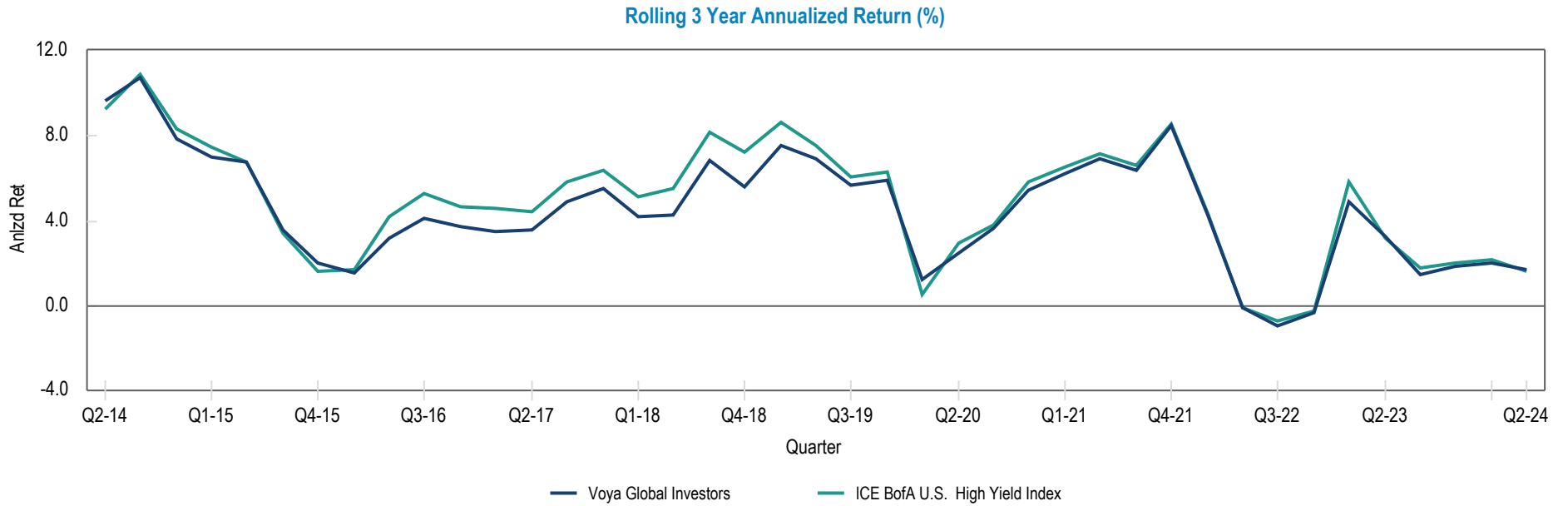
Quality distributions exclude cash.

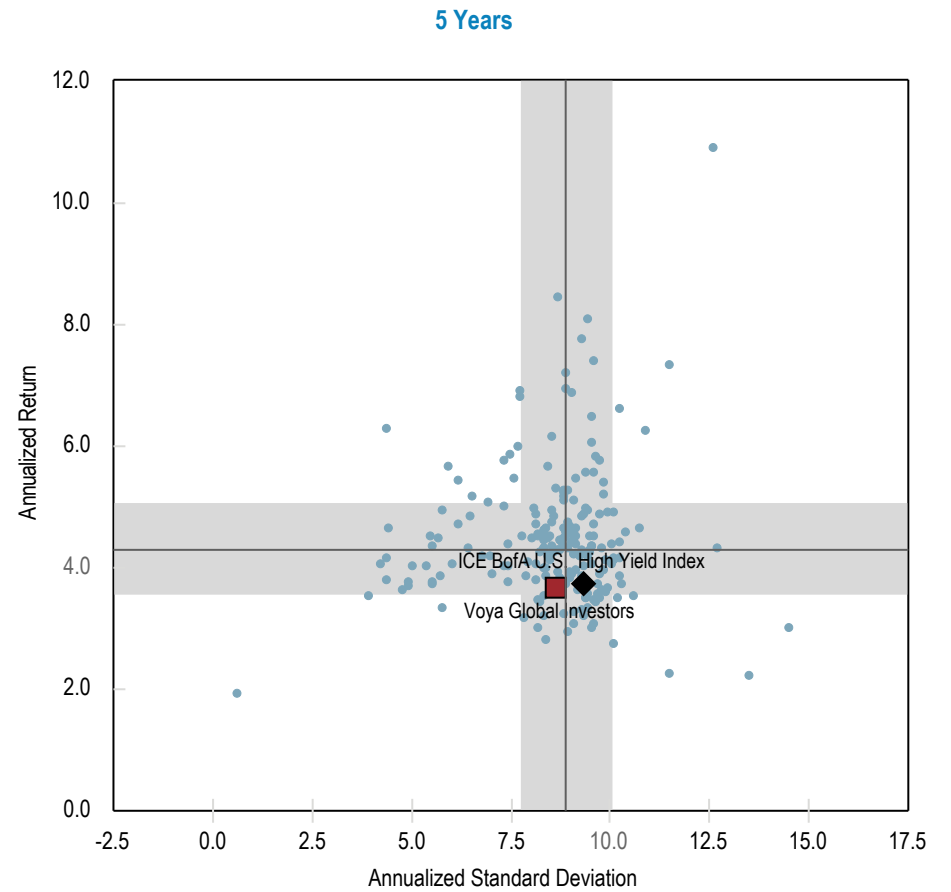
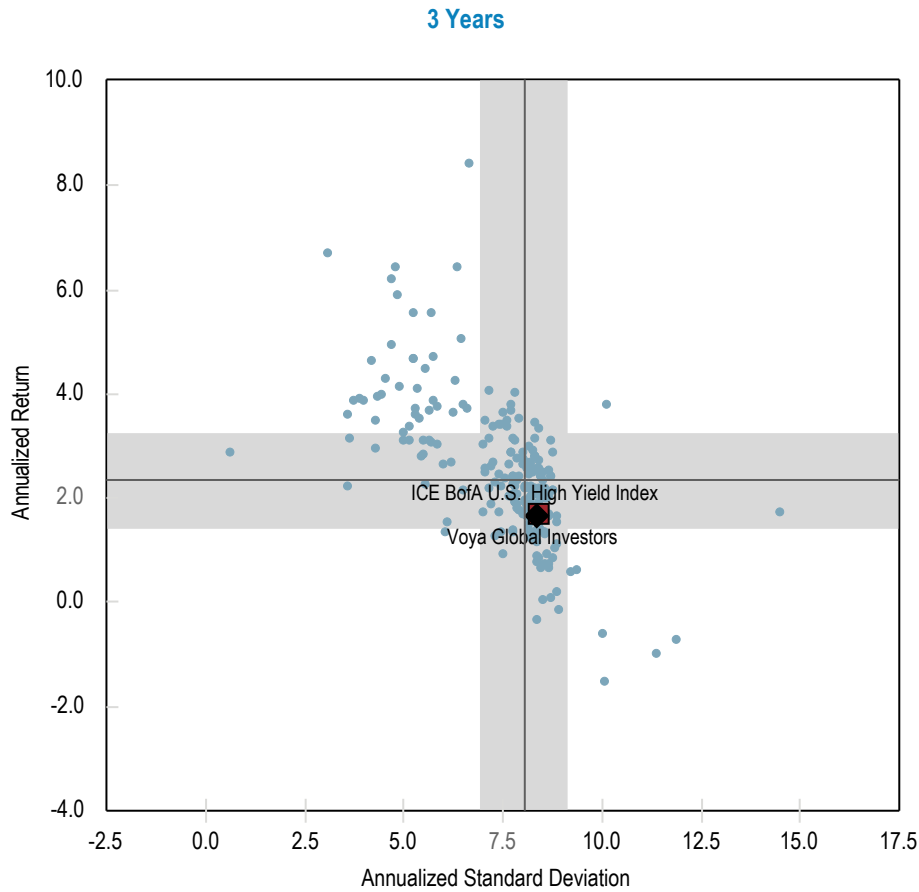
Voya Financial acquired Allianz Global Investors in 2022.

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	1.59 (10)	9.88 (53)	1.69 (56)	3.67 (59)	3.77 (63)	12.39 (47)	-10.64 (63)	5.34 (42)	5.18 (66)	15.32 (19)
▲ ICE BofA U.S. High Yield Index	1.09 (68)	10.45 (34)	1.65 (58)	3.73 (53)	4.21 (37)	13.46 (18)	-11.22 (75)	5.36 (41)	6.17 (42)	14.41 (36)
5th Percentile	1.74	12.59	3.98	6.08	5.73	14.98	-2.92	9.80	9.69	16.50
1st Quartile	1.42	10.62	2.80	4.36	4.40	13.11	-7.50	6.11	7.39	14.96
Median	1.24	9.94	1.83	3.76	3.99	12.25	-10.05	5.05	5.87	13.80
3rd Quartile	1.00	9.22	1.26	3.31	3.57	11.14	-11.29	4.07	4.43	11.24
95th Percentile	0.47	7.47	0.25	2.59	2.96	8.53	-13.20	2.88	2.41	7.25
Population	228	225	216	208	176	242	258	253	259	265





	3 Years		
	Anlzd Return (%)	Anlzd Standard Deviation (%)	Sharpe Ratio
Voya Global Investors	1.7	8.4	-0.1
ICE BofA U.S. High Yield Index	1.6	8.4	-0.1
eV US High Yield Fixed Inc Median	2.3	8.0	0.0
Population	225	225	225

	5 Years		
	Anlzd Return (%)	Anlzd Standard Deviation (%)	Sharpe Ratio
Voya Global Investors	3.7	8.6	0.2
ICE BofA U.S. High Yield Index	3.7	9.3	0.2
eV US High Yield Fixed Inc Median	4.3	8.9	0.3
Population	217	217	217

Real Estate Managers

Adelante Manager Portfolio Overview

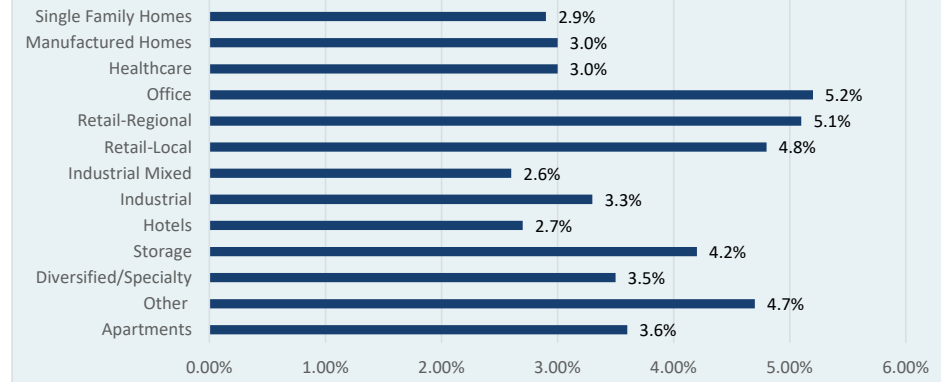
Contra Costa County Employees' Retirement Association
Period Ending: June 30, 2024

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

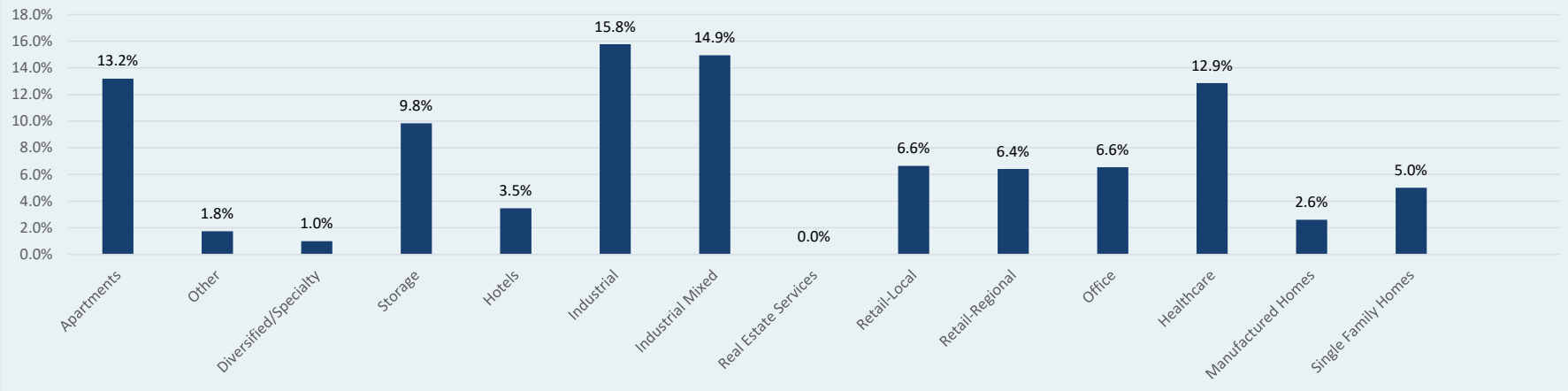
Top Five Holdings

Company	Property Type	Allocation
ProLogis Inc.	Industrial	11.7%
Equinix Inc.	Industrial Mixed	9.4%
Welltower Inc.	Healthcare	8.7%
Public Storage	Storage	6.6%
Simon Property Group	Retail-Regional	6.4%

Dividend Yield by Property Type



Property Type Allocation



1.75% is allocated to Cash and Cash Equivalents.

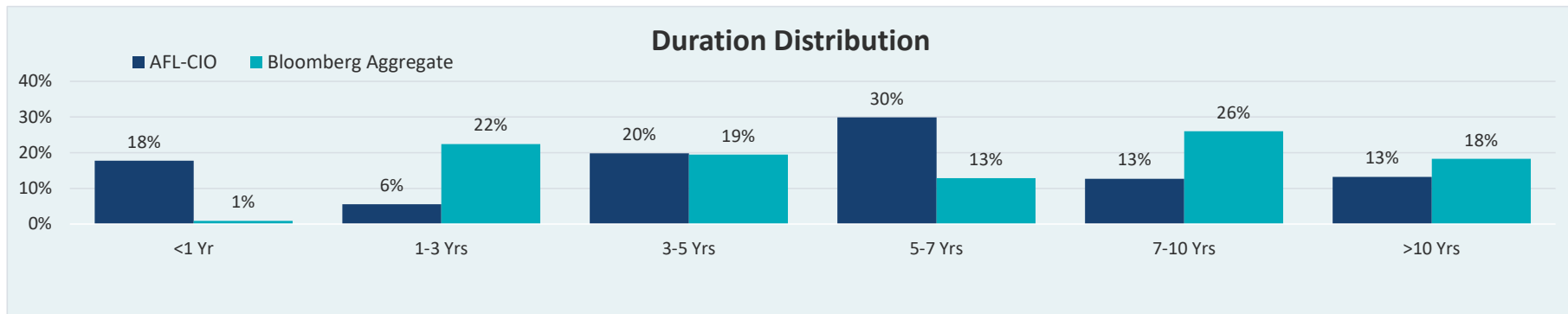
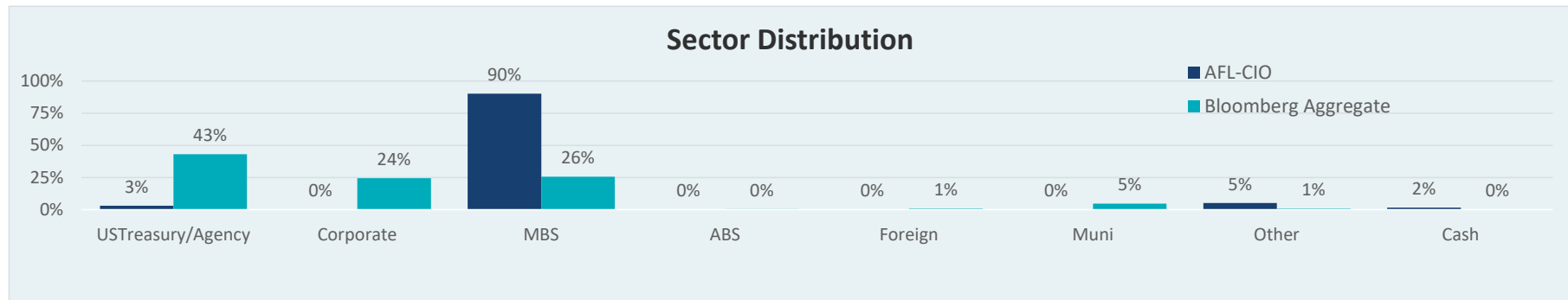
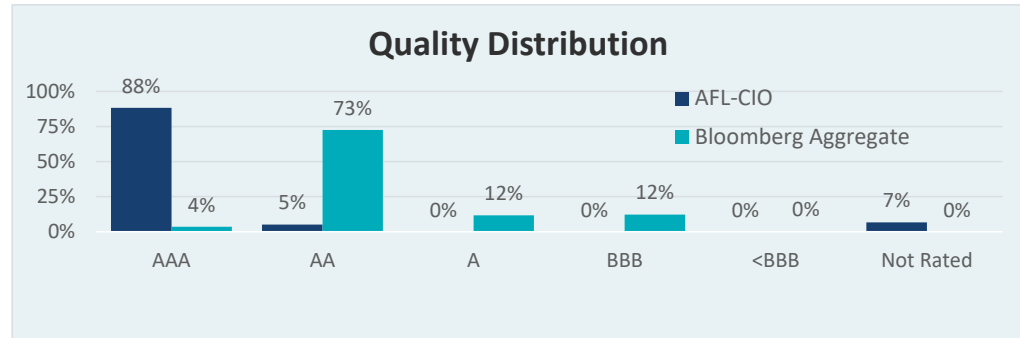
Diversifying Fixed Income Managers

AFL-CIO Manager Portfolio Overview

Contra Costa County Employees' Retirement Association Period Ending: June 30, 2024

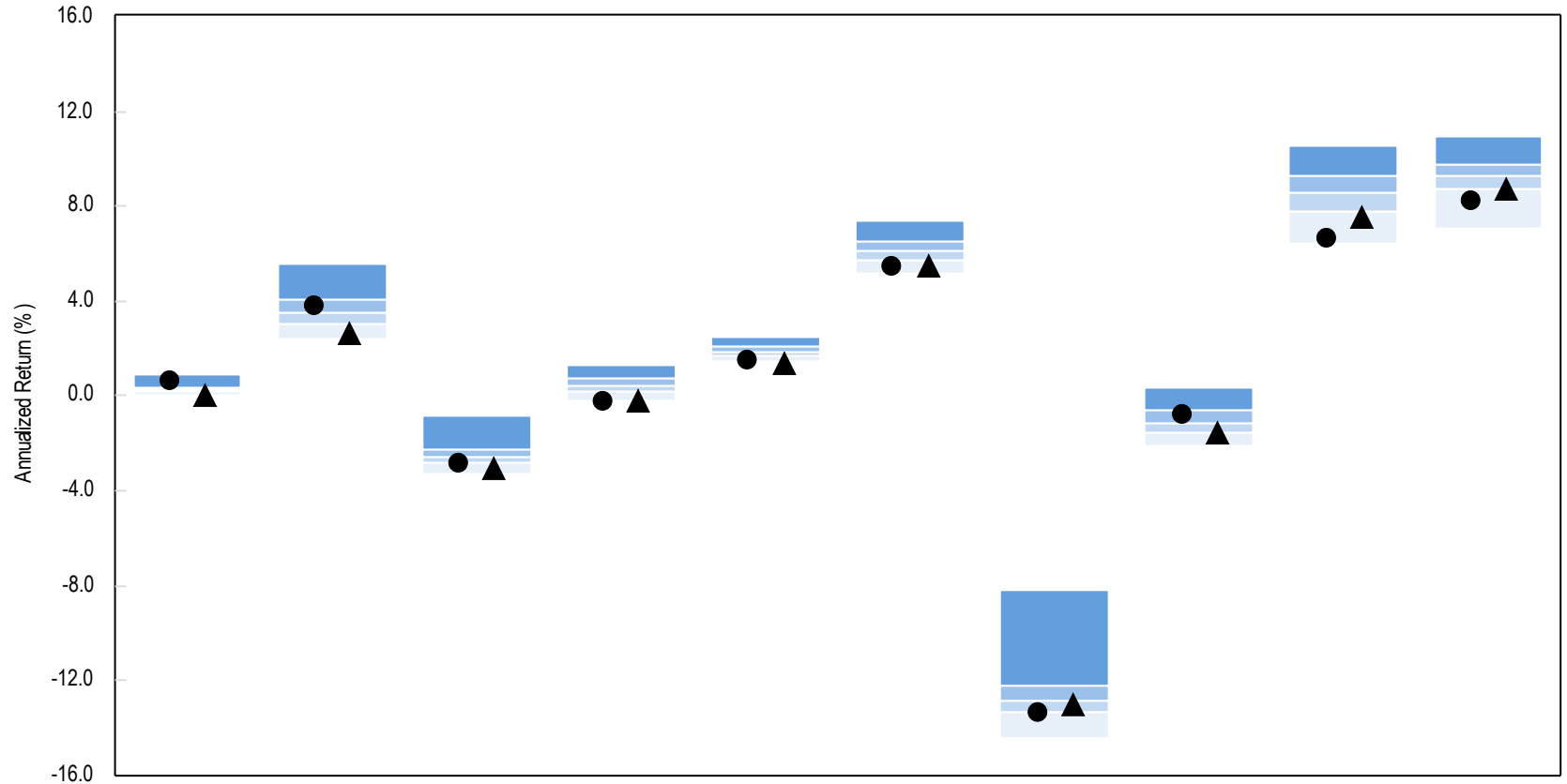
Domestic core fixed income portfolio with an exclusive focus on mortgage-related securities. Primary personnel include Stephen Coyle and Chang Su.

	AFL-CIO	Bloomberg Aggregate
Effective Duration	5.97	6.02
Yield to Maturity	4.1%	3.7%
Average Quality	Aa1	Aa2
Average Coupon	3.7%	3.3%

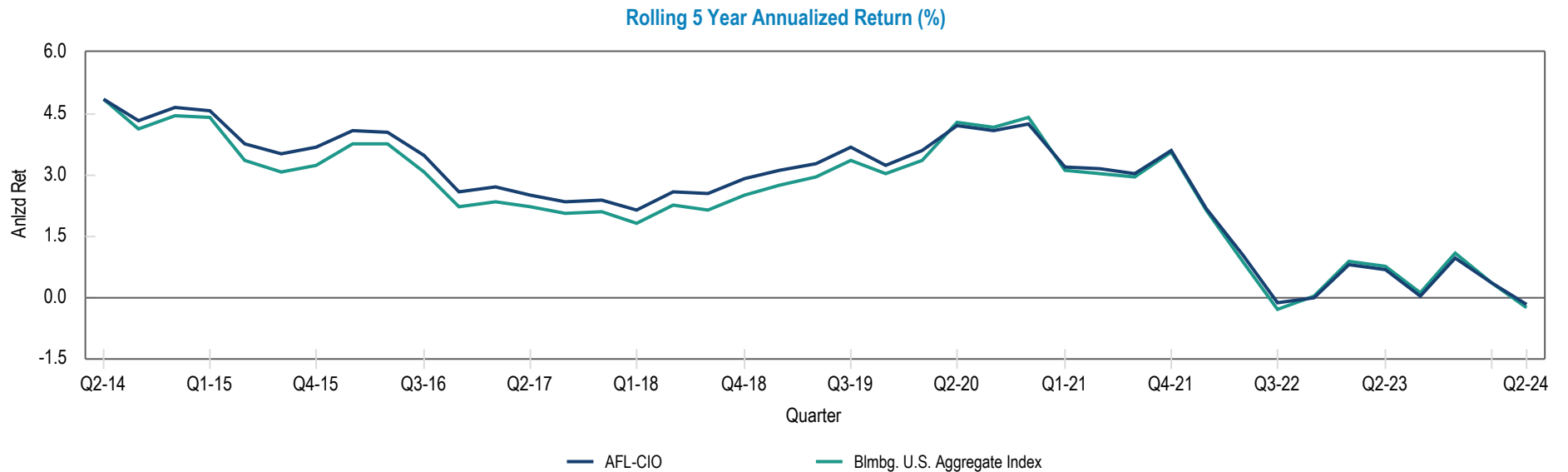
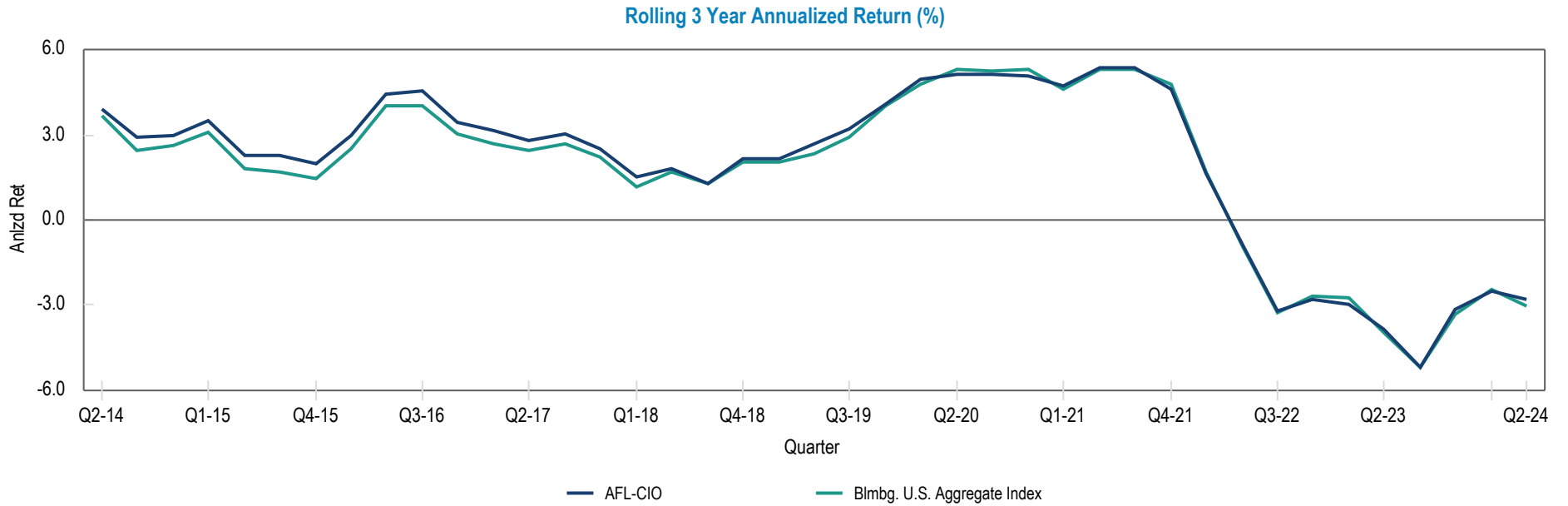


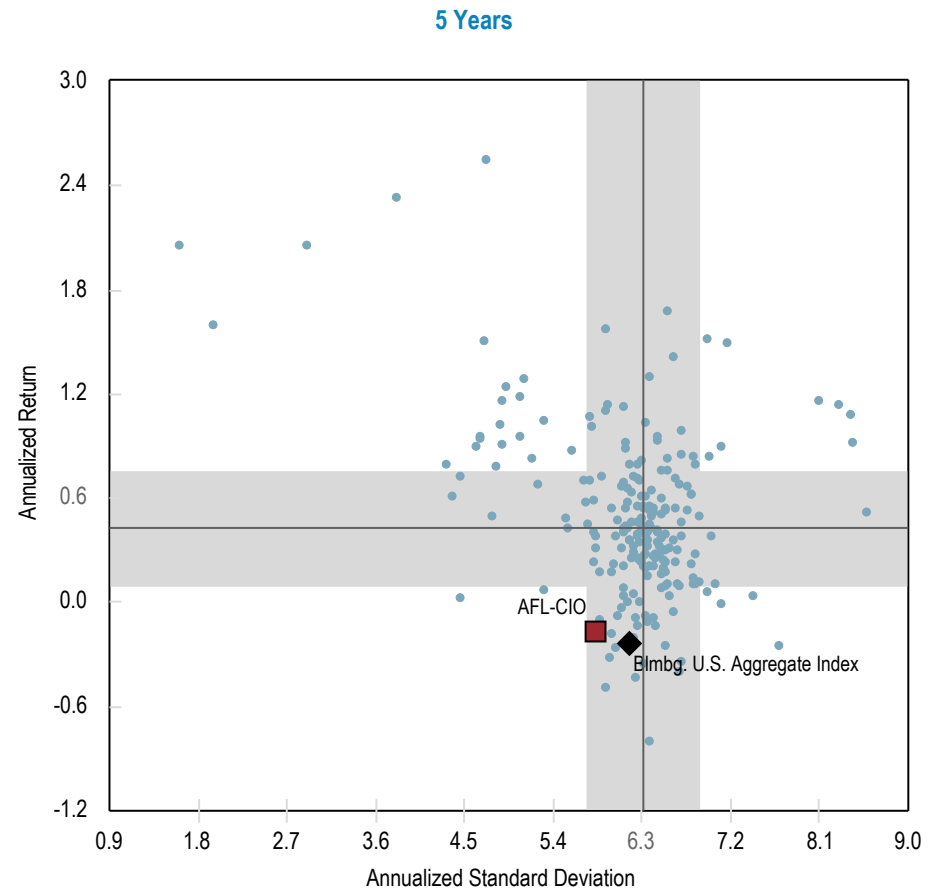
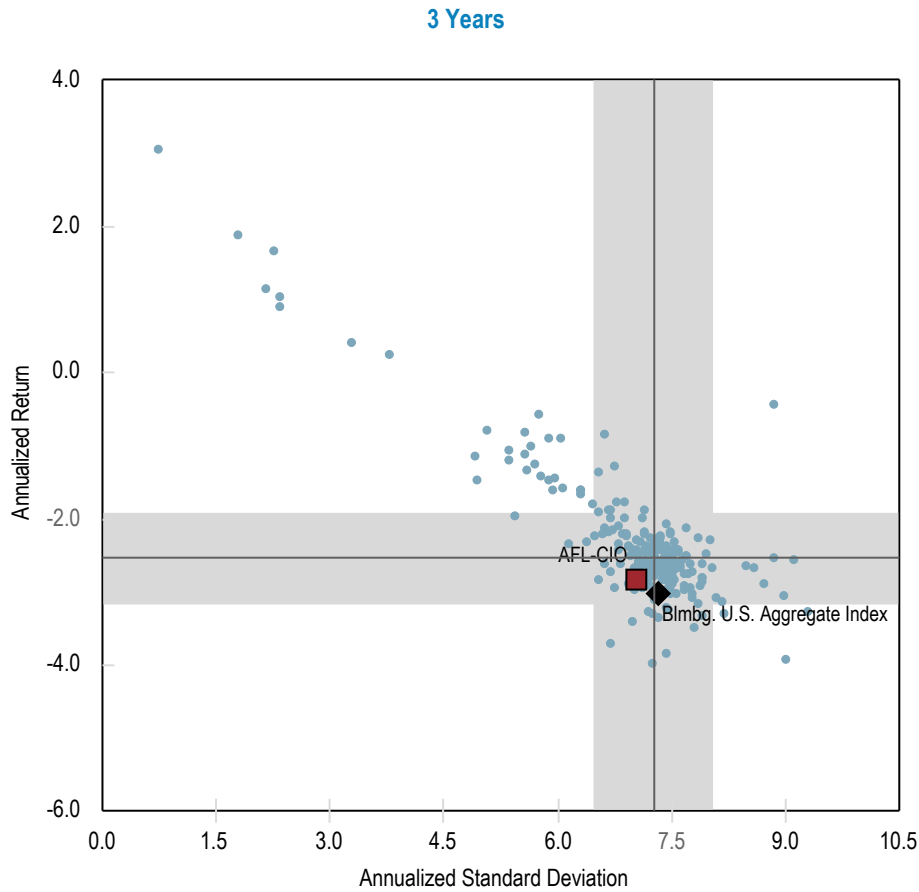
Duration and Quality distributions exclude cash.

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	0.66 (10)	3.81 (35)	-2.82 (79)	-0.17 (94)	1.54 (90)	5.51 (85)	-13.27 (75)	-0.73 (33)	6.65 (94)	8.25 (85)
▲ Blmbg. U.S. Aggregate Index	0.07 (94)	2.63 (92)	-3.02 (89)	-0.23 (96)	1.35 (99)	5.53 (84)	-13.01 (63)	-1.55 (77)	7.51 (83)	8.72 (76)
5th Percentile	0.90	5.59	-0.82	1.31	2.48	7.38	-8.18	0.38	10.57	10.95
1st Quartile	0.38	4.08	-2.22	0.72	2.06	6.53	-12.18	-0.61	9.30	9.76
Median	0.27	3.50	-2.54	0.43	1.86	6.14	-12.83	-1.11	8.54	9.30
3rd Quartile	0.18	3.07	-2.79	0.21	1.70	5.72	-13.28	-1.52	7.75	8.74
95th Percentile	0.05	2.42	-3.25	-0.21	1.44	5.17	-14.44	-2.11	6.41	7.04
Population	233	233	229	219	200	245	265	272	277	281





	3 Years		
	Anlzd Return (%)	Anlzd Standard Deviation (%)	Sharpe Ratio
AFL-CIO	-2.8	7.0	-0.8
Blmbg. U.S. Aggregate Index	-3.0	7.3	-0.8
eV US Core Fixed Inc Median	-2.5	7.3	-0.7
Population	229	229	229

	5 Years		
	Anlzd Return (%)	Anlzd Standard Deviation (%)	Sharpe Ratio
AFL-CIO	-0.2	5.8	-0.4
Blmbg. U.S. Aggregate Index	-0.2	6.2	-0.4
eV US Core Fixed Inc Median	0.4	6.3	-0.2
Population	219	219	219

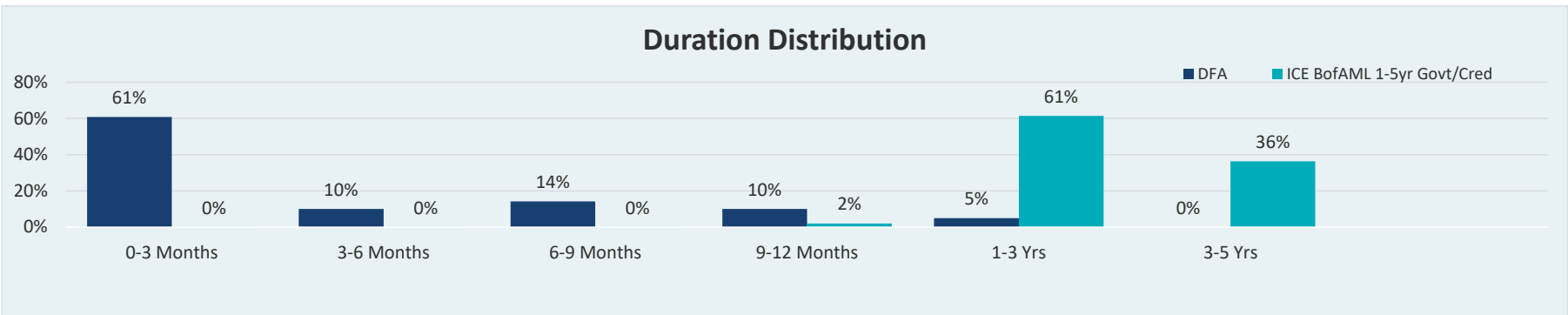
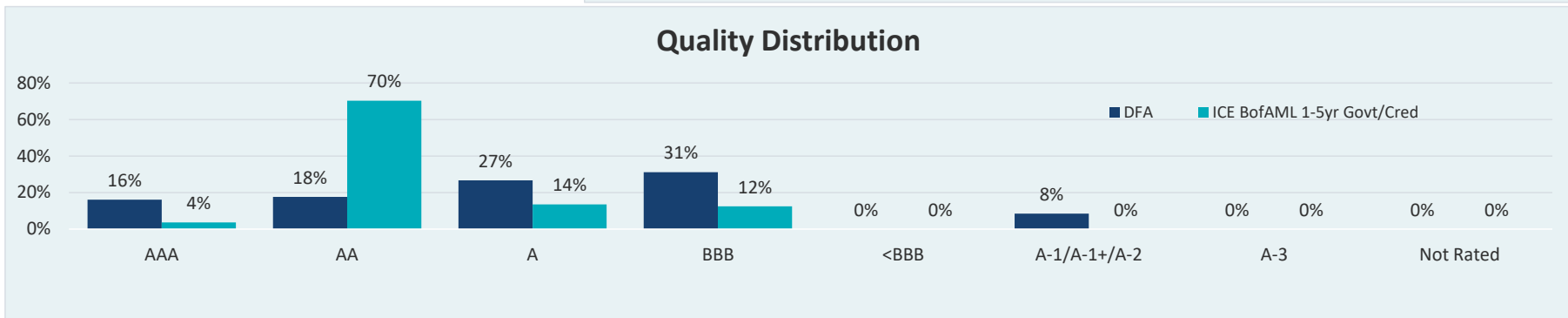
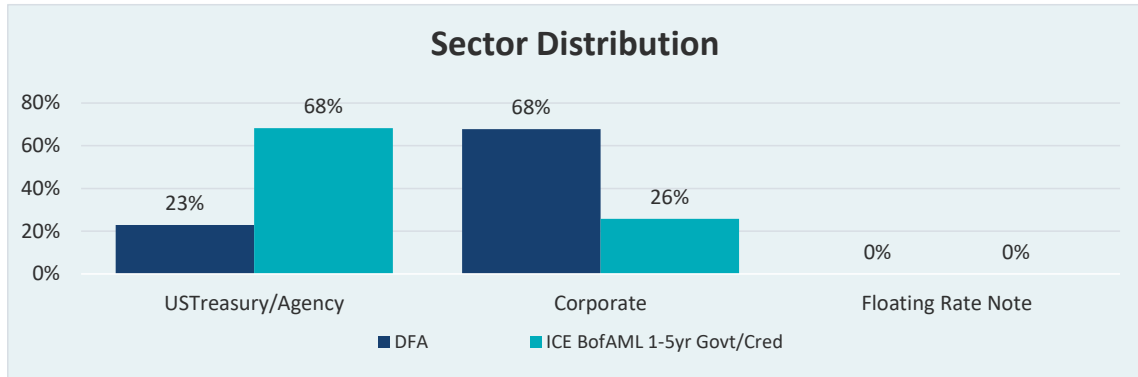
Liquidity Managers

DFA Short Credit
 Manager Portfolio Overview

Contra Costa County Employees' Retirement Association
 Period Ending: June 30, 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	0.32	2.58
Yield to Maturity	5.79	4.89
Average Quality	A+	Aa2
Average Coupon	3.89%	3.09%

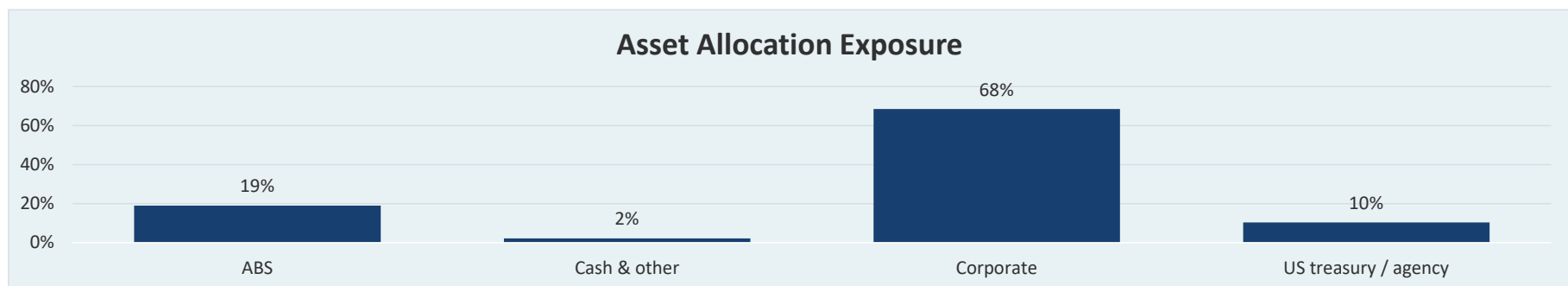
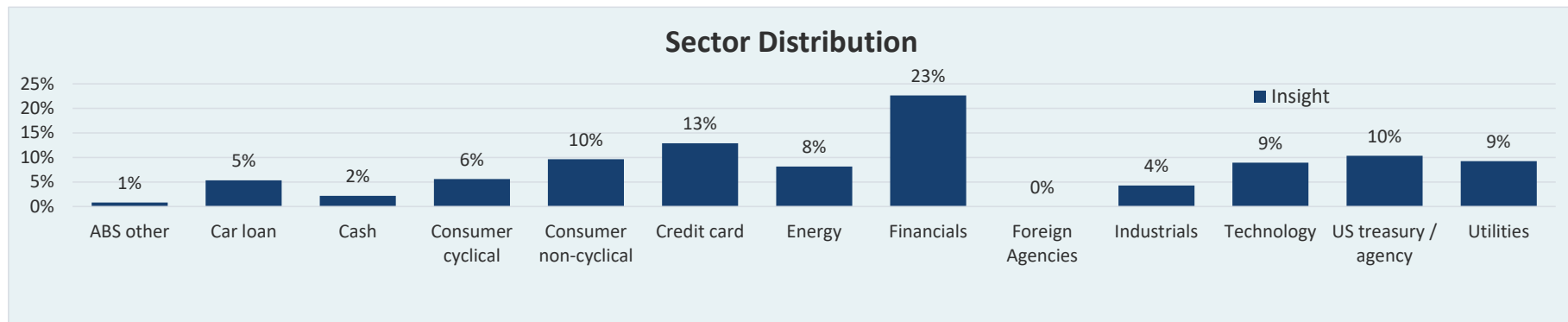
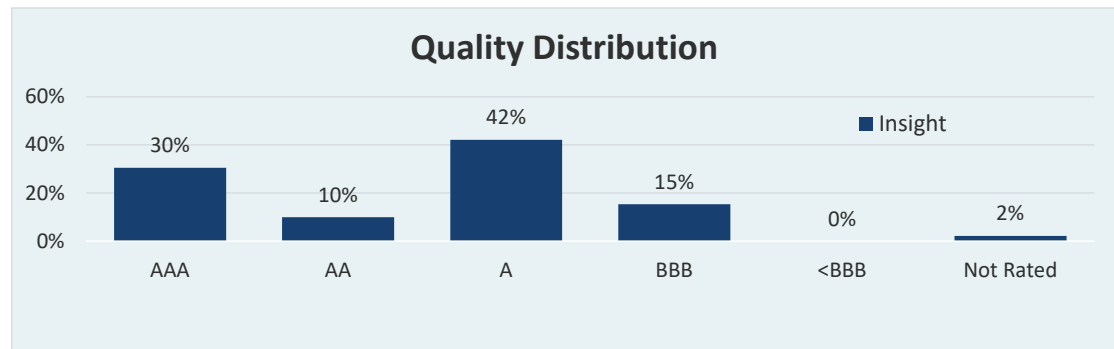


Insight Short Duration Manager Portfolio Overview

Contra Costa County Employees' Retirement Association Period Ending: June 30, 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	1.23	1.90
Yield to Maturity	5.34	N/A
Average Quality	A+	AGY/AGY
Average Coupon	3.44%	2.70%

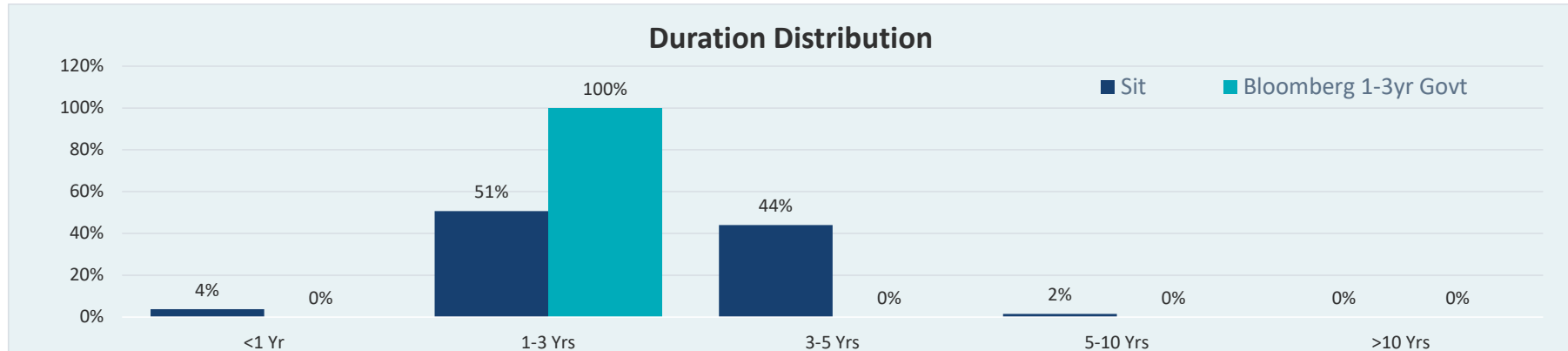
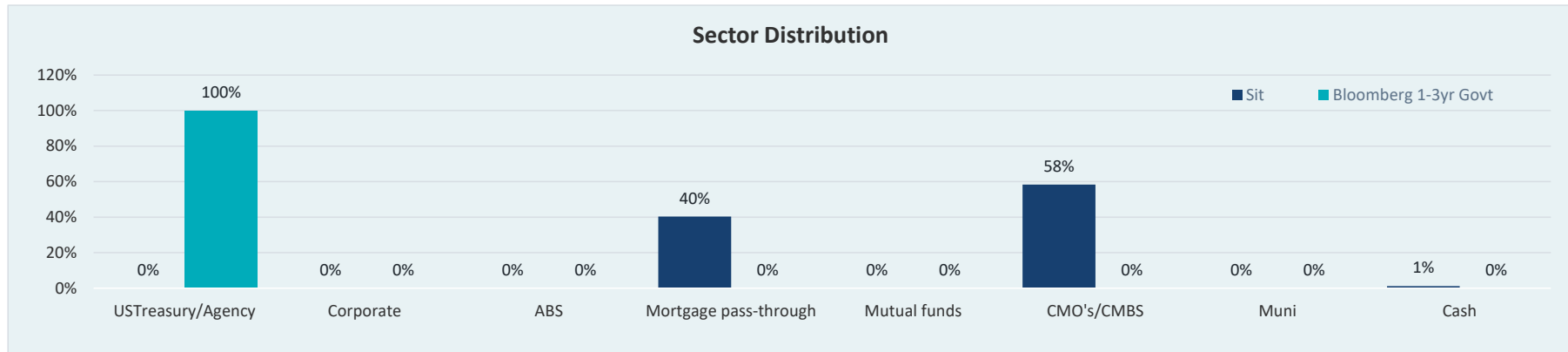


Sit Short Duration Manager Portfolio Overview

Contra Costa County Employees' Retirement Association Period Ending: June 30, 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 1-3yr Govt
Modified Duration	2.90	1.90
Yield to Maturity	5.90	N/A
Average Quality	AGY/AGY	AGY/AGY
Average Coupon	5.90%	2.70%



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 (8/1/2023 - present)	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.

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 (7/1/2022 - present)	21.2% Russell 3000, 19.9% MSCI ACWI ex-US (Gross), 11.9% MSCI ACWI (Net), 2.6% Wilshire REIT, 10.6% Private Real Estate composite returns, 17.2% Private Equity composite returns, 10.6% Private Credit composite returns, 2.0% ICE BofAML High Yield Master II, 4% 60% MSCI ACWI Net/40% Bloomberg Global Aggregate
Custom Growth Benchmark (7/1/2021 - 6/30/2022)	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.

Data Sources and Methodology

Period Ending: June 30, 2024

IMPLEMENTATION BENCHMARK WEIGHTS BY INVESTMENT ALLOCATION RESOLUTION (1/1/17 TO CURRENT)

Manager	Benchmark	1/1/17 - 9/30/17	10/1/17 - 6/30/18	7/1/18 - 6/30/19	7/1/19 - 6/30/20	7/1/20 - 6/30/21	7/1/21 - 6/30/22	7/1/22 - 7/31/23	8/1/2023 - current
BlackRock Index Fund	Russell 1000 Index	0.0%	1.0%	1.0%	2.0%	2.0%	5.0%	9.0%	10.0%
Intech Large Cap	S&P 500 Index	3.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Pimco Stocks +	S&P 500 Index	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Boston Partners	Russell 1000 Value	4.2%	4.5%	3.0%	2.5%	2.0%	4.0%	4.0%	3.0%
Jackson Square	Russell 1000 Growth	4.3%	4.5%	3.0%	2.5%	2.0%	4.0%	0.0%	0.0%
Emerald	Russell 2000 Growth	3.2%	3.3%	2.0%	1.5%	1.5%	1.5%	1.5%	1.5%
Ceredex	Russell 2000 Value	3.0%	3.3%	2.0%	1.5%	1.5%	1.5%	1.5%	1.5%
Pyrford	MSCI AC World ex USA Value	5.5%	5.4%	5.5%	5.0%	5.0%	4.0%	4.0%	4.0%
William Blair	MSCI AC World ex USA Growth	5.5%	5.4%	5.5%	5.0%	5.0%	4.0%	4.0%	4.0%
TT Emerging Markets	MSCI Emerging Markets	0.0%	4.2%	4.0%	4.0%	4.0%	4.0%	3.5%	2.0%
PIMCO/RAE Emerging Markets	MSCI Emerging Markets Value	0.0%	4.2%	4.0%	4.0%	4.0%	4.0%	3.5%	2.0%
Artisan	MSCI ACWI Growth NR USD	4.5%	4.3%	4.0%	4.0%	4.0%	4.5%	4.5%	5.0%
Intech Global Low Vol	MSCI ACWI	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
JP Morgan	MSCI ACWI	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
First Eagle	MSCI ACWI Value NR USD	4.3%	4.3%	4.0%	4.0%	4.0%	4.5%	4.5%	5.0%
Allianz (Voya?)	ICE BofA U.S. High Yield Index	5.1%	5.0%	2.0%	2.0%	1.5%	2.0%	1.5%	2.0%
Adelante REIT	Wilshire U.S. REIT Index	1.0%	1.0%	1.0%	1.0%	1.0%	2.0%	1.0%	1.0%
INVESCO REIT	Wilshire U.S. REIT Index	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	1.0%
Private RE (NPI)	Private RE Composite Returns	1.1%	1.4%	1.8%	1.6%	1.6%	0.0%	0.0%	0.0%
Private RE (ODCE)	Private RE Composite Returns	8.4%	8.2%	7.2%	6.4%	6.4%	0.0%	0.0%	0.0%
Private RE	Private RE Composite Returns	0.0%	0.0%	0.0%	0.0%	0.0%	8.0%	8.0%	8.0%
Private Credit	Private Equity Composite Returns	0.0%	0.0%	4.0%	5.0%	7.0%	8.0%	8.0%	10.0%
Torchlight	Private Equity Composite Returns	1.7%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Private Equity	Private Equity Composite Returns	7.7%	8.2%	10.0%	11.0%	11.0%	11.0%	13.0%	13.0%
Opportunistic	Private Equity Composite Returns	0.5%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Risk Parity	60% MSCI ACWI (Net) / 40% Bloomberg Global Aggregate	0.0%	0.0%	5.0%	5.0%	5.0%	3.0%	3.0%	3.0%
Insight	Bloomberg 1-3 Yr Gov/Cred	10.5%	10.7%	12.0%	12.0%	13.0%	7.0%	6.5%	6.5%
DFA	ICE BofA 1-5 Year U.S. Corp/Gov't Index	6.0%	5.3%	5.5%	6.0%	6.0%	4.0%	4.0%	4.0%
Cash	3-month Tbills	1.6%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Sit	Bloomberg 1-3 Yr Govt index	5.9%	6.0%	5.5%	6.0%	6.0%	7.0%	6.5%	6.5%
AFL-CIO HIT	Bloomberg US Aggregate TR	3.2%	3.5%	3.5%	3.5%	3.0%	2.5%	2.5%	2.5%
Parametric Defensive Equity	CPI + 4%	0.0%	0.0%	2.5%	2.5%	0.0%	1.5%	0.0%	0.0%
Wellington Real TR	Bloomberg Global Aggregate	2.5%	2.5%	2.0%	2.0%	0.0%	0.0%	0.0%	0.0%
Acadian MAARS	FTSE 3-month T-bill + 5%	0.0%	0.0%	0.0%	0.0%	1.5%	1.5%	2.5%	2.0%
Sit AR	Bloomberg US Aggregate TR +100	0.0%	0.0%	0.0%	0.0%	2.0%	1.5%	2.5%	2.5%

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	4/28/2022	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
Allianz Global Investors	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
AQR Global Risk Premium - EL	1/18/2019	AQR	Adams Street Partners Venture	4/28/2017	StepStone Group
Panagora Risk Parity Multi Asset	3/15/2019	Panagora	Adams Street Partners - BFP	1/18/1996	StepStone Group
AFL-CIO	6/30/1991	AFL-CIO	Adams Street Partners - Fund 5	9/21/2012	StepStone Group
Wellington Real Total Return (in Liquidation)	2/26/2013	Wellington	Aether Real Assets IV	3/16/2016	StepStone Group
Acadian Multi-Asset Absolute Return Fund	8/4/2020	SS&C	Aether Real Assets III	11/27/2013	StepStone Group
Sit LLCAR	4/15/2021	Northern Trust	Aether Real Assets III Surplus	11/30/2013	StepStone Group
Sit Short Duration	11/2/2016	Northern Trust	Bay Area Equity Fund	6/14/2004	StepStone Group
DFA Short Credit	11/21/2016	Northern Trust	Bay Area Equity Fund II	12/7/2009	StepStone Group
Insight Short Duration	11/18/2016	Northern Trust	Commonfund	6/28/2013	StepStone Group
Parametric Overlay	3/29/2017	Northern Trust	EIF US Power Fund II	8/16/2005	StepStone Group
Cash	-	Northern Trust	EIF US Power Fund III	5/30/2007	StepStone Group
Angelo Gordon Energy Credit Opp	9/24/2015	StepStone Group	EIF US Power Fund IV	11/28/2011	StepStone Group
StepStone CC Opportunities Fund	2/1/2018	StepStone Group	EIF US Power Fund V	11/28/2016	StepStone Group
Torchlight II	9/30/2006	StepStone Group	Genstar Capital Partners IX, L.P.	2/21/2019	StepStone Group
Torchlight IV	7/1/2012	StepStone Group	Oaktree PIF 2009	2/28/2010	StepStone Group
Torchlight V	7/1/2012	StepStone Group	Paladin III	11/30/2007	StepStone Group
Angelo Gordon Realty Fund VIII	1/23/2012	Angelo Gordon	Ocean Avenue Fund II	6/11/2014	StepStone Group
Angelo Gordon Realty Fund IX	12/8/2014	Angelo Gordon	Ocean Avenue Fund III	4/15/2016	StepStone Group
Blackstone Real Estate Partners VIII	3/24/2023	Blackstone	Pathway 6	5/24/2011	StepStone Group
DLJ RECP III	6/23/2005	DLJ	Pathway 7	2/7/2013	StepStone Group
DLJ RECP IV	2/11/2008	DLJ	Pathway 8	11/23/2015	StepStone Group
DLJ RECP V	7/1/2014	DLJ	Pathway	11/9/1998	StepStone Group
DLJ RECP VI	3/19/2019	DLJ	Pathway 2008	12/26/2008	StepStone Group
LaSalle Income & Growth VI	7/16/2013	LaSalle	Siguler Guff CCCERA Opps	6/3/2014	StepStone Group
LaSalle Income & Growth VII	2/28/2017	LaSalle	Siguler Guff Secondary Opps	11/30/2016	StepStone Group
Hearthstone II	6/17/1998	Hearthstone	Siris Partners IV	3/15/2019	StepStone Group
Long Wharf Fund IV	7/3/2013	Long Wharf	TPG Healthcare Partners, L.P.	6/28/2019	StepStone Group
Long Wharf Fund V	9/30/2016	Long Wharf	Trident VIII, L.P.	5/24/2019	StepStone Group
Long Wharf Fund VI	2/5/2020	Long Wharf	Wastewater Opp. Fund	12/8/2015	StepStone Group
Long Wharf Fund VII	5/30/2023	Long Wharf	Cross Lake RE IV	12/14/2023	Cross Lake
Invesco Real Estate IV	6/30/2014	Invesco	KSL Capital Partners VI, L.P.	11/10/2023	KSL
Invesco Real Estate V	2/20/2019	Invesco	EQT Infrastructure VI	12/31/2023	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

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.

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Meeting Date
08/28/2024
Agenda Item
#6b.

Memorandum

Date: August 28, 2024
To: CCCERA Board of Retirement Trustees
From: Timothy Price, Chief Investment Officer
Subject: Investment Staff Report – Q2 2024

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 76% MSCI ACWI, 17% Bloomberg 1-3 Year Gov/Credit, and 7% 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 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.

Subsequent to the end of the second quarter, the Board 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.

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 second 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 1.7 years, which is considered short. Importantly, the current yield of all three portfolios 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 ending June 30, 2024, the Growth portfolio returned 7.7% relative to the index return of 10.8%, for a relative underperformance of -3.0%. Over this period, the Growth program produced a superior Sharpe ratio of 0.48 relative to the index's 0.44. During the second quarter of 2024, CCCERA's Growth sub-portfolio returned 1.6% relative to MSCI ACWI Index return of 2.9%. We expect underperformance relative to the public equity markets during sharp rallies such as we experienced in 2023 and the first quarter of 2024 due to the private market investments where valuations lag.

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 second 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 correlation of the mandate to growth markets is 0.7, the same as in March 2024. The trailing real (net of inflation) return over the past five years is -4.5%, worsening slightly in the last quarter from -3.9%, 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	1.7 years	Meeting Expectations
Appropriately Sized	Months of Benefit Payments Invested	25 Months	Meeting Expectations

Growth

Objective	Measurement	Current Period Data	Status
Growth of Plan Assets	Absolute Returns	Trailing 5 yr return: 7.7%	Meeting Expectations
	Benchmark Relative Returns	-3.0% relative to ACWI over trailing 5 years	Below Expectations
Efficient Capital Deployment	Sharpe Ratio	CCCERA: 0.48 MSCI ACWI: 0.44 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: -4.5% 5 yr nominal return: -0.3%	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	9%	5%	N
Sit	Good	-4%	12%	N
DFA	Good	19%	17%	N

Performance

	Portfolio Average Credit Quality	Portfolio Average Duration	Portfolio Average Yield	1 Year Total Return
Insight	A+	1.2	5.3	5.7%
Sit	AAA	2.9	5.9	4.8%
DFA	A+	0.3	5.8	6.0%

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 late 2024. 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 high 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 Management Assessment	1 Year Product Asset Growth	1 Year Firm Asset Growth	Regulatory Action in Last Year?
Boston Partners	Good	17%	12%	N
BlackRock Index Fund	Good	11%	13%	N
Emerald Advisors	Good	6%	5%	N
Ceredex	Good	-4%	-17%	N
Pyrford	Good	-12%	-12%	N
William Blair	Good	1%	12%	N
First Eagle	Good	6%	5%	N
Artisan Global	Good	1%	11%	N
PIMCO/RAE EM	Good	18%	5%	N
TT EM	Good	-46%	-24%	N
Adelante	Good	5%	-3%	N
Invesco REIT	Good	1%	12%	N
Voya	Good	12%	4%	N
AQR	Good	-8%	14%	N
PanAgora	Good	-34%	0%	N
Private Equity	Good	--	--	N
Private Credit	Good	--	--	N
Real Estate	Good	--	--	N

Performance

	Trailing 1-Yr Return	Trailing 5-yr Return	Trailing 10-yr Return	Performance in Line with Expectations?	Inception Date
MSCI ACWI-ND	19%	11%	8%		
Boston Partners	21%	12%	10%	Y	04/30/1995
BlackRock Index Fund	24%	15%	13%	Y	03/31/2017
Emerald Advisors	15%	8%	10%	Y	03/31/2003
Ceredex	12%	8%	7%	Y	09/30/2011
Total Domestic Equity	21%	12%	11%	Y	
Pyrford	6%	5%	4%	Y	03/31/2014
William Blair	9%	7%	5%	Y	09/30/2010
PIMCO/RAE EM	23%	9%	5%	Y	01/31/2017
TT EM	14%	2%	4%	N	06/30/2017
Total International Equity	12%	6%	4%	Y	
First Eagle	12%	8%	6%	Y	12/31/2010
Artisan Global	20%	11%	11%	Y	11/30/2012
Total Global Equity	16%	10%	9%	Y	
Adelante	8%	5%	6%	Y	07/31/2001
Invesco REIT	5%	N/A	N/A	Y	02/28/2022
Voya	9%	3%	3%	N	04/30/2000
AQR	8%	3%	3%	N	12/31/2018
PanAgora	3%	0%	3%	N	02/28/2019
Private Equity	1%	13%	11%	Y	
Private Credit	10%	9%	9%	Y	
Real Estate	-13%	-2%	4%	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, announced his planned retirement as of June 30, 2024. Rob James, who had been a co-PM on the strategy, will continue 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 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	4%	4%	N
BH-DG	Good	23%	-14%	N
Sit LLCAR	Good	23%	12%	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	0.8	0.8	3%	-1%	100%
BH-DG	0.5	-0.6	-5%	10%	100%
Sit LLCAR	0.7	0.5	6%	N/A	100%

Notes: Acadian MAARS was liquidated in May 2024; BH-DG Systematic Trend was funded in April 2024.

Manager Notes:

During the second quarter CCCERA terminated the Acadian strategy and funded BH-DG Systematic Trend Following strategy.

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.

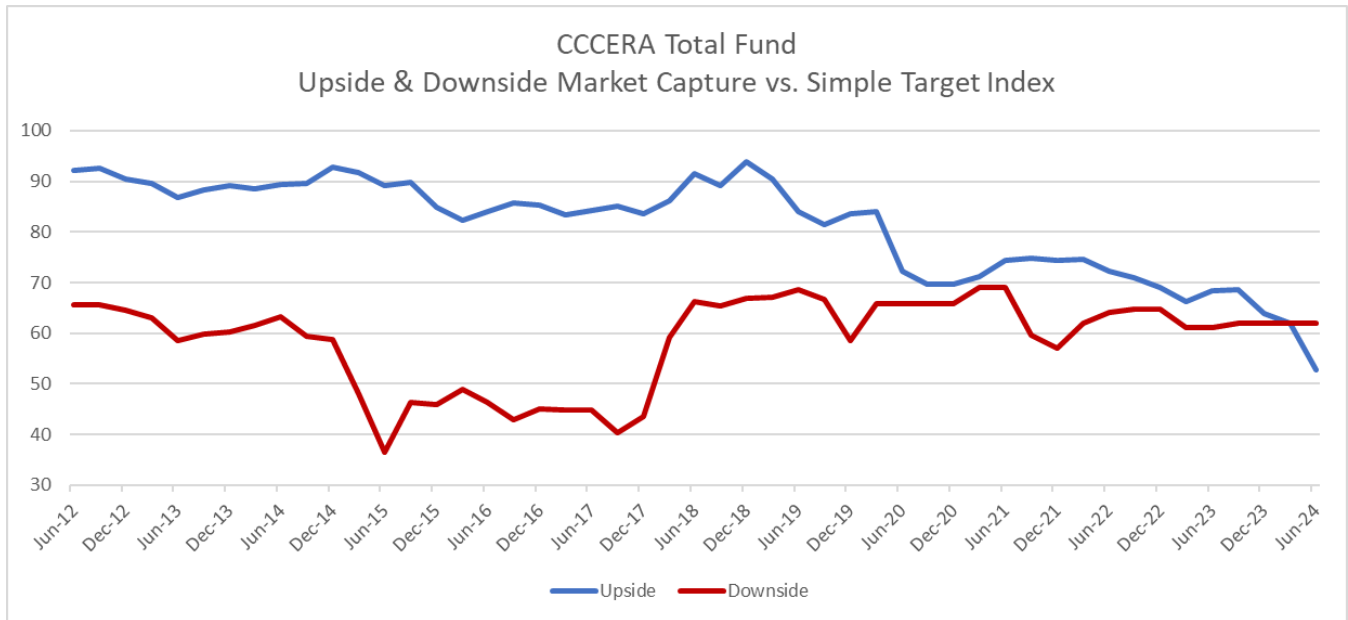
AFL-CIO: Portfolio of domestic, high quality fixed income securities which are backed by commercial and residential mortgages.

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.

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	14.7%	1.2%	0.2%	17.0%	1.0%	0.2%	-2.3%	0.3%	0.0%
Growth	77.4%	1.6%	1.3%	76.0%	2.9%	2.2%	1.4%	-1.2%	-0.9%
Risk Diversifying	6.7%	-1.1%	-0.1%	7.0%	1.3%	0.1%	-0.3%	-2.4%	-0.2%
Overlay	1.2%	-0.5%	0.0%	0%	0%	0%	1.2%	-0.5%	0.0%
Total Fund	100%		1.4%	100%		2.4%	-0.1%		-1.1%

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	8.6	15.9	2.2	4.7	5.8	8.4	6.0	6.3
Volatility	6.1	9.9	7.8	12.6	9.3	14.1	7.5	11.2
Sharpe	0.6	1.1	-0.1	0.1	0.4	0.5	0.6	0.4

The Simple Target Index is made up of 76% MSCI ACWI, 17% Bloomberg 1-3 Year Gov/Credit, and 7% 3-Month Treasury Bill. This 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.

Meeting Date
08/28/2024
Agenda Item
#7



Contra Costa County Employees'
Retirement Association

Timothy Price, CFA

Chief Investment Officer

Mitchell Taylor, CFA

Investment Officer

Risk Diversifying Sub-Portfolio Review

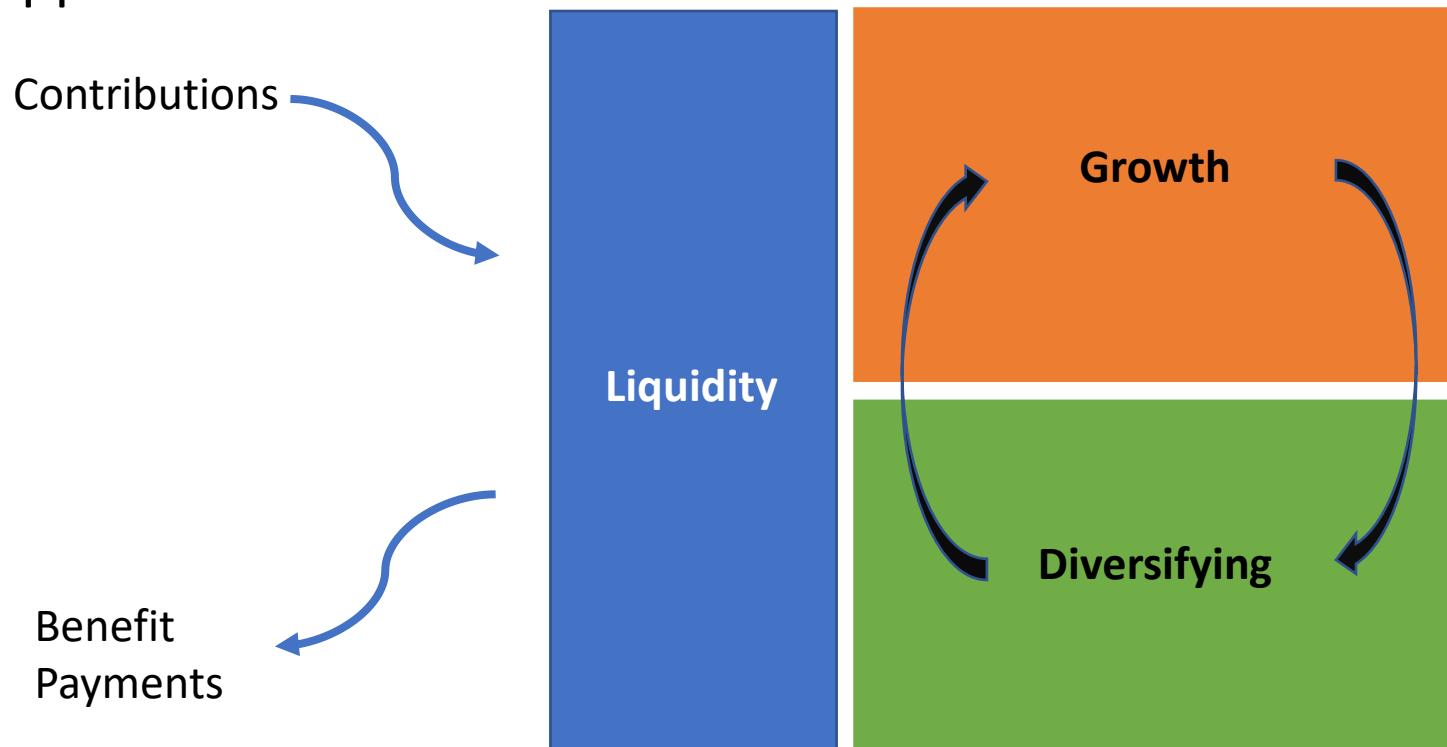
August 28, 2024

Review of Risk Diversifying Sub-Portfolio

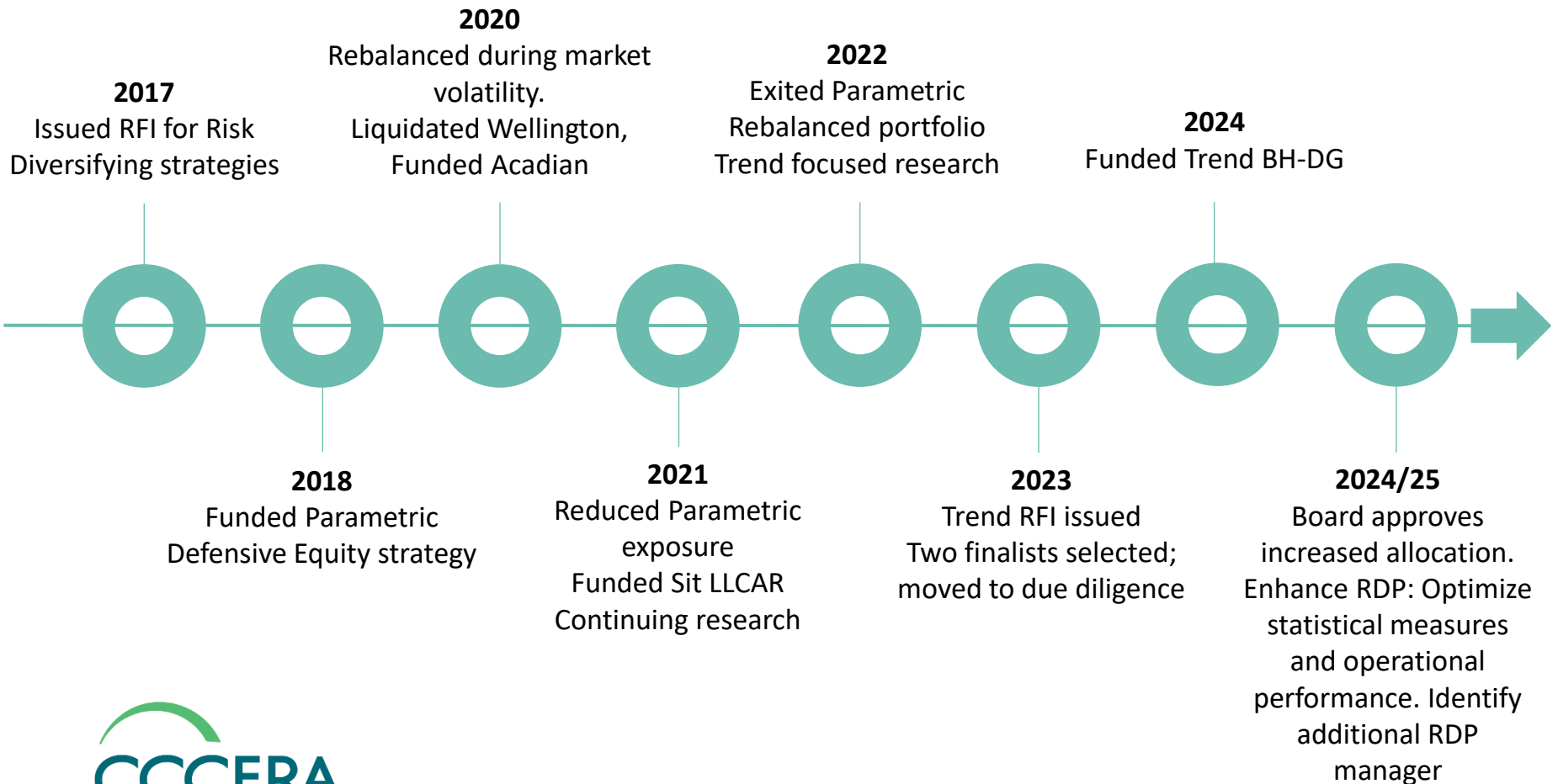
1. Role of Risk Diversifying in CCCERA portfolio
2. Characteristics of diversifying assets
3. Past successes; refining the process
4. Risk Diversifying allocation
5. CCCERA performance
6. Future enhancements

Risk Diversifying Role in CCCERA Portfolio

- Downside protection to diversify the growth allocation
- Liquid pool of capital to capture stressed growth opportunities



Evolution of Risk Diversifying Allocation



Risk Diversifying Sub-Portfolio Purpose

From the Investment Policy Statement

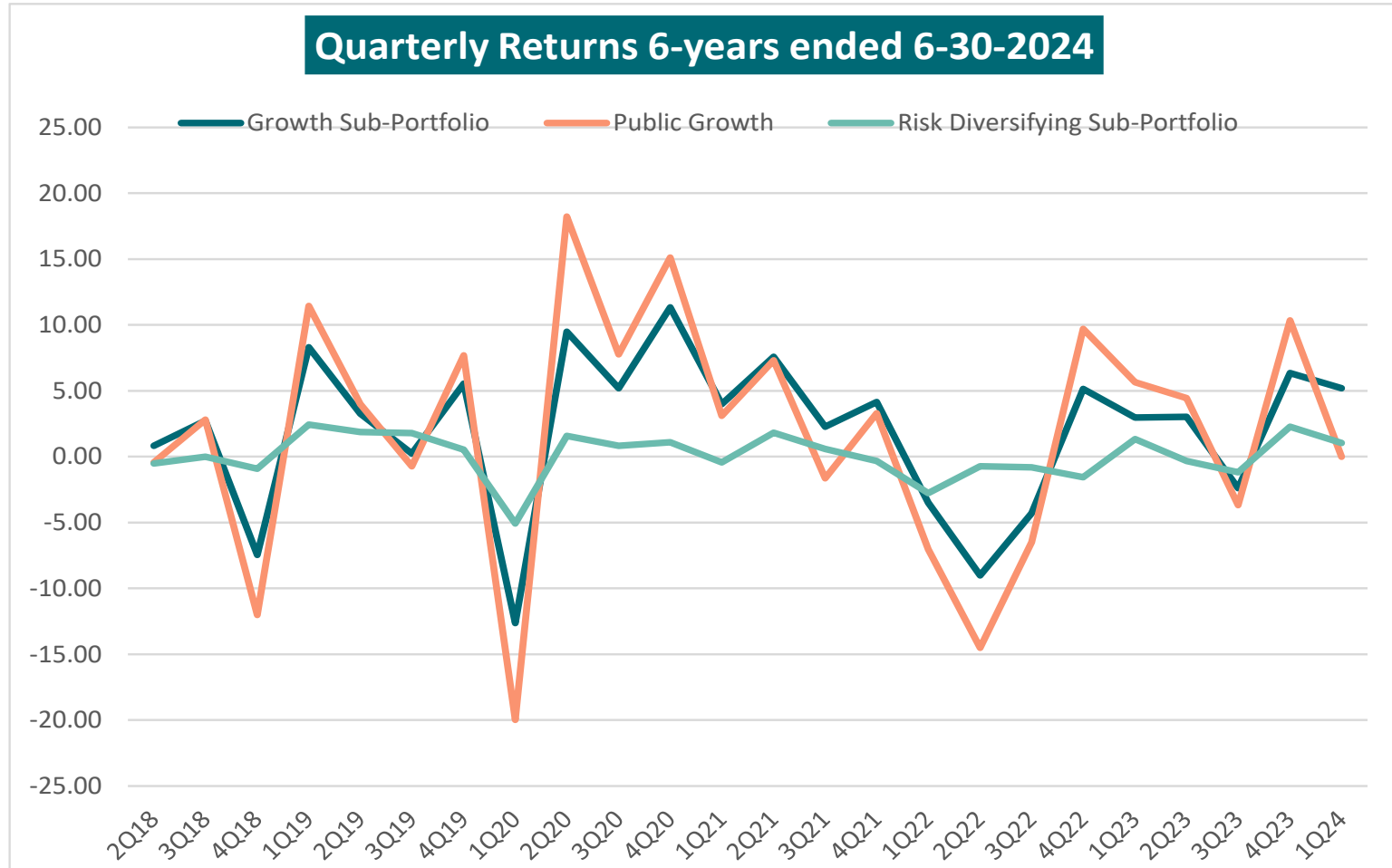
- *“the purpose of the Diversifying Sub-portfolio is to offset the investment risk of the Growth Sub-portfolio.”*
- *“return profiles that have a low correlation to those in the Growth Sub-portfolio. This is expected to effectively dampen the market volatility across the entire portfolio.”*
- *“strategies in the Diversifying Sub-portfolio will offer additional sources of return”*
- *“The success of the Diversifying Sub-portfolio will be measured by its ability to offset declines in value in the Growth Sub-portfolio, as well as its ability to provide liquidity during times of market stress.”*

RDP: Characteristics

Quality	Rationale
Low to negative correlation with growth asset returns	Act as diversifying offset to CCCERA's Growth Portfolio with positive returns in downturns.
Low Beta to growth asset returns	Act as diversifying offset to CCCERA's Growth Portfolio with less negative returns in downturns
High liquidity during periods of equity market stress	Must be able to redeploy these assets to capture opportunities in stressed environment.
Positive expected real return	Strategies that can be held on a permanent basis with minimal drag on overall expected returns
Portfolio of Diversified Strategies	Diversified strategies with differentiated return profiles given the variety of macro scenarios

Risk Diversifying Sub-Portfolio Returns

“expected to dampen the market volatility”



Diversification: Correlation and Beta

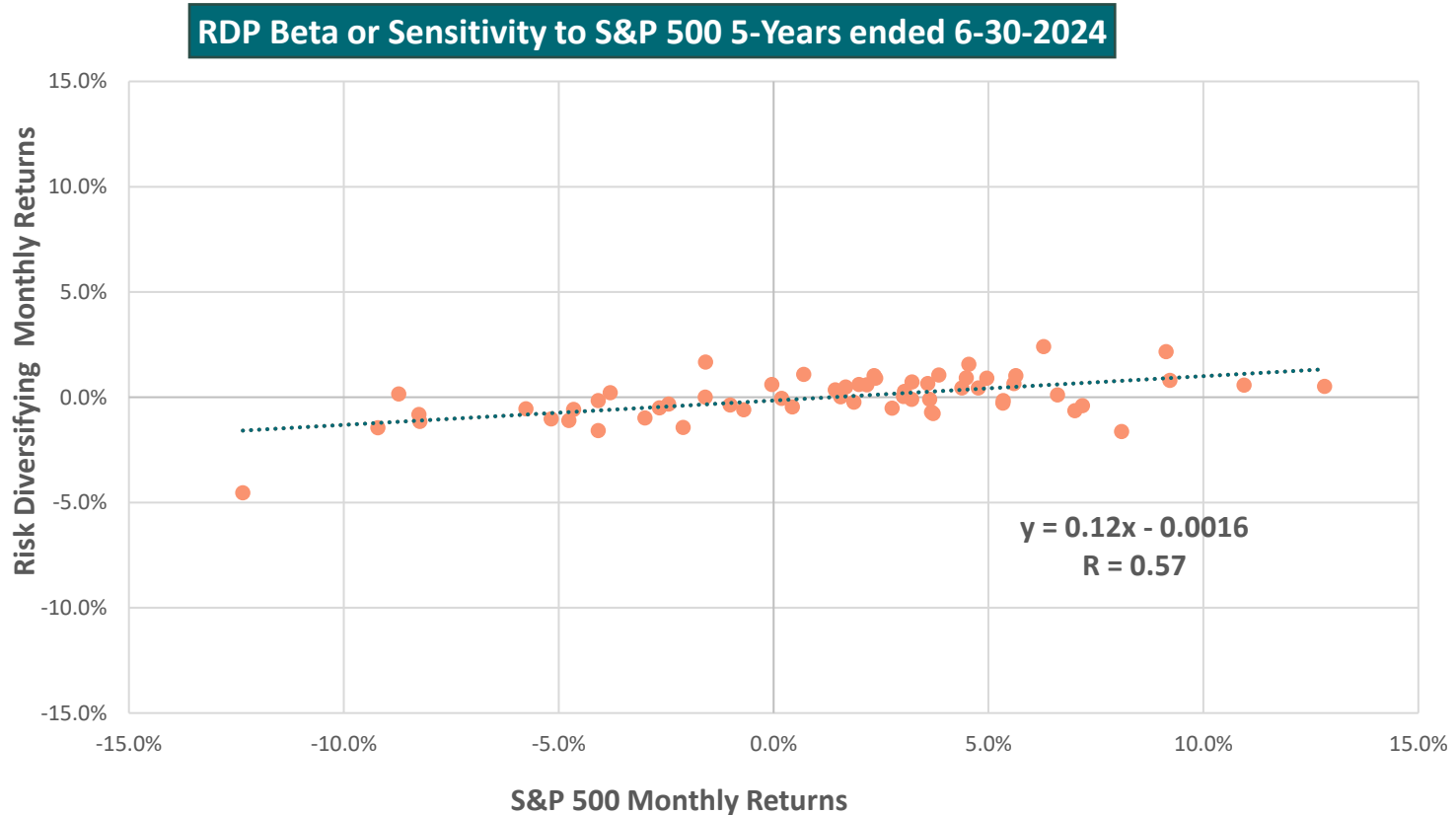
“expected to dampen the market volatility”

- **Correlation**: The degree to which two assets move in relation to each other
 - 0.9 to 1.0: Very Highly Correlated
 - 0.5 to 0.7: Moderately Correlated
 - < 0.3: Little to no Correlation
- **Beta**: The expected increase/decrease of one asset in relation to the market
 - Beta = 2: Asset return two times market in same direction
 - Beta = 1: Asset return equal to market
 - Beta = 0.2: Asset return equal to 20% of market return in same direction

Risk Diversifying: Moderate Correlation

“Low correlation...is expected to dampen the market volatility”

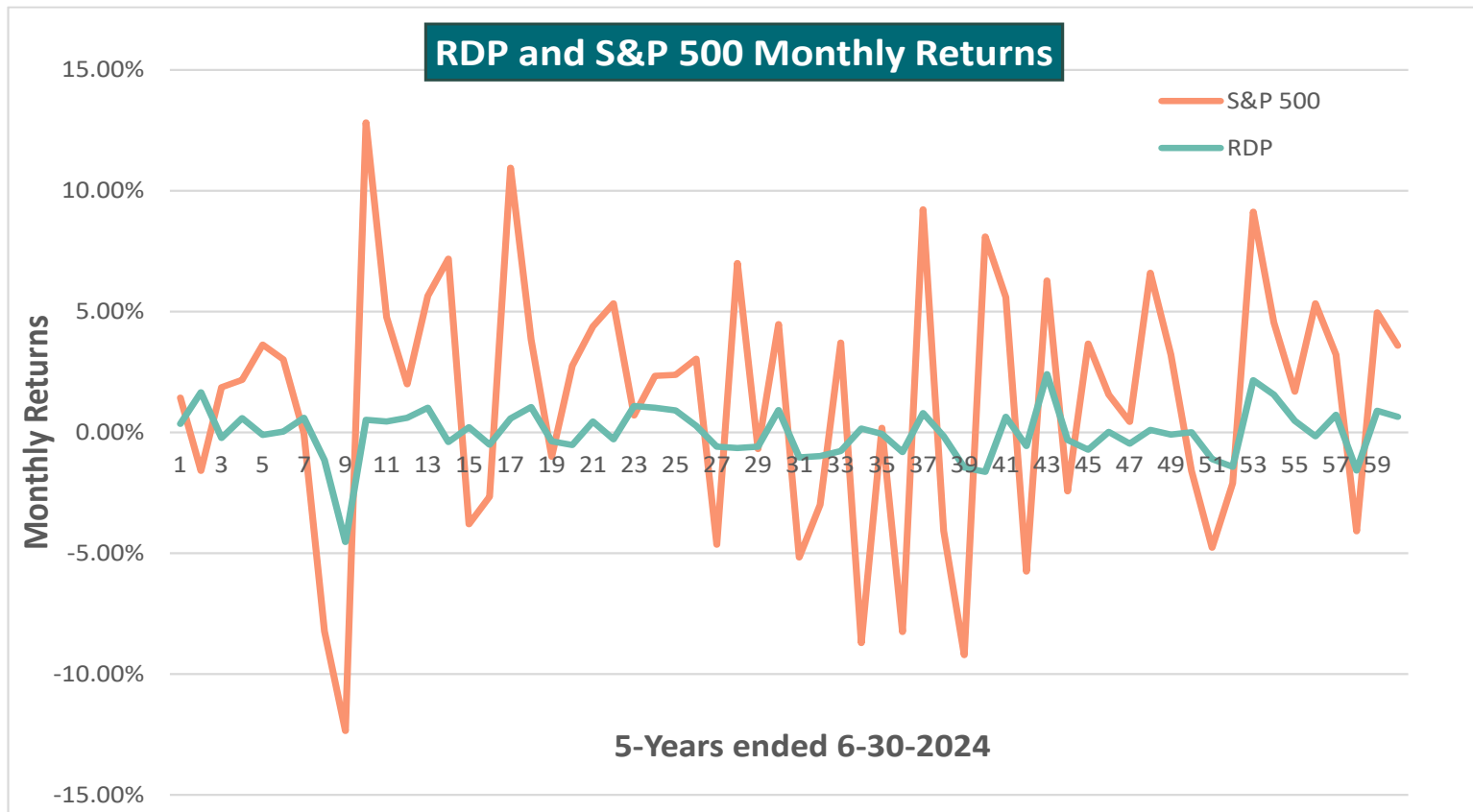
RDP return correlation to S&P 500: 0.57



RDP: Low Return Beta

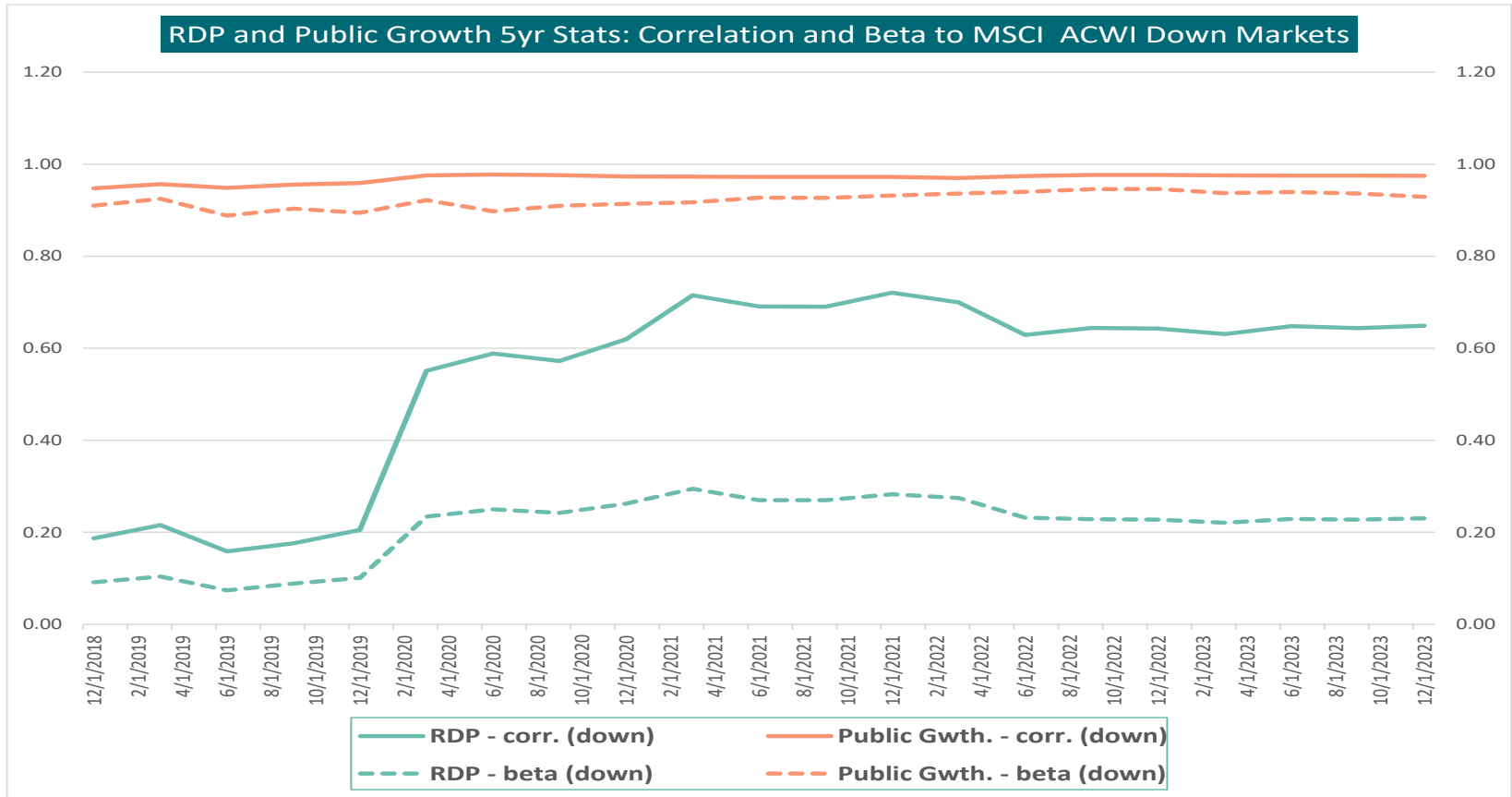
“is expected to dampen the market volatility”

Low Return Beta: RDP to Growth 0.12, i.e., for a 10% move in the S&P 500, the RDP moves 1.2%



RDP and Public Growth – Down Markets

Correlation and Beta are Relatively constant and consistent in down markets. Beta increases to ~0.20



Risk Diversifying Sub-Portfolio: Case Study

From the Investment Policy Statement

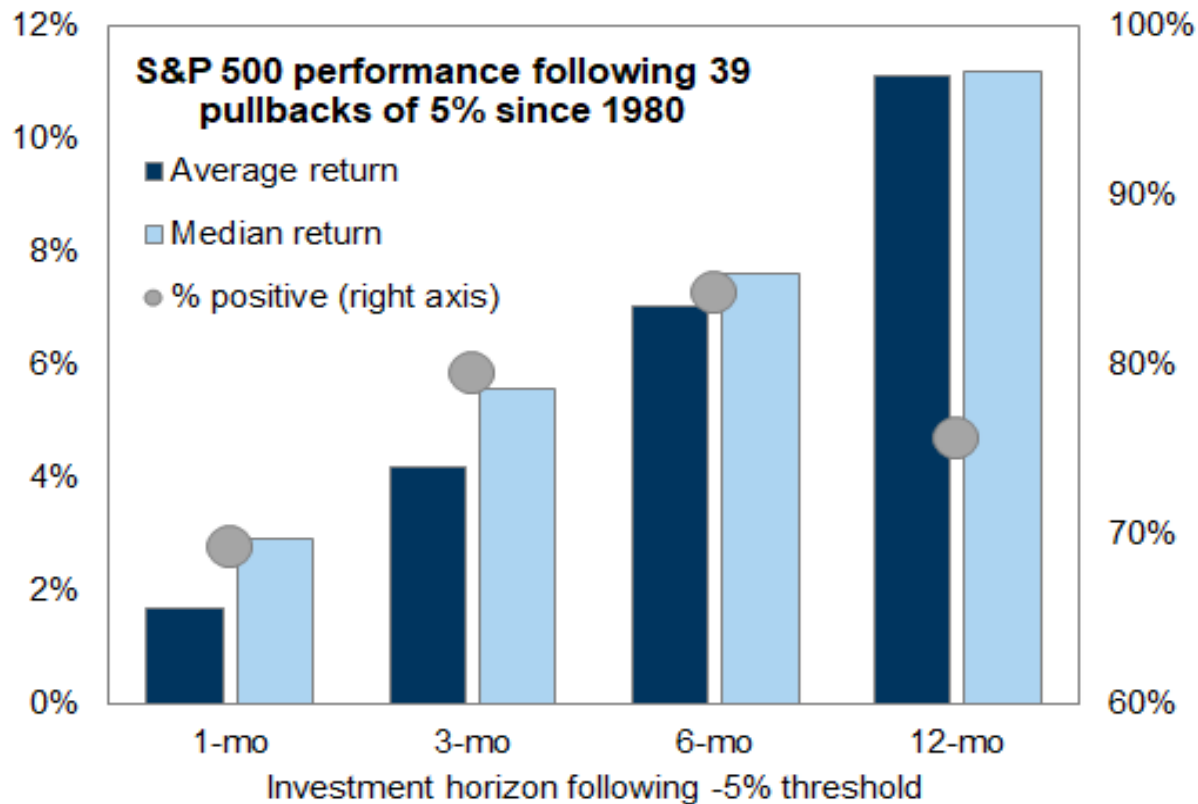
- *“The success of the Diversifying Sub-portfolio will be measured by its ability to offset declines in value in the Growth Sub-portfolio, as well as its ability to provide liquidity during times of market stress.”*
- *“The CIO is delegated the authority to conduct portfolio rebalancing in order to meet two distinct objectives. The first is to maintain the long-term strategic asset allocation targets approved by the Board. The second is to capture valuation-based opportunities by deviating from the long-term strategic asset allocation targets within as set forth in the Investment Resolutions.”*

From Berkshire Hathaway

- *“to be fearful when others are greedy and to be greedy only when others are fearful.”* Warren Buffett

S&P 500 Performance after a 5% Drawdown

Since 1980, buying the S&P 5% below a recent high produced a median return of 6% over the following three months. Returns were positive 80% of the time.



Source: Goldman Sachs Global Investment Research

RDP Case Study – 1Q2020 COVID Drawdown

- 1Q2020: Negative returns for all risk-assets
- Positive Returns for risk-free UST and AFL-CIO
- While RDP returned -5.1%, the negative return was ~1/5 of the broader equity market
- While the RDP return was positively correlated the Beta was low at ~0.20

COVID Drawdown March 2020 - Quarterly Returns					
Asset	1Q	2Q	3Q	4Q	FY2020
MSCI ACWI	-21.4%	19.2%	8.1%	14.7%	16.2%
Artisan	-12.9%	27.8%	14.2%	10.6%	40.6%
First Eagle	-18.7%	13.4%	5.5%	10.7%	7.7%
Risk Diversifying Portfolio	-5.1%	1.6%	0.8%	1.5%	-1.4%
AFL-CIO	3.4%	1.8%	0.8%	0.4%	6.5%
US 10-Year Treasury	11.7%	0.7%	0.0%	-1.9%	10.4%

RDP Case Study – 1Q2020 COVID Rebalance

- Rebalanced out of AFL-CIO into global equity: Artisan and First Eagle
- Incremental return of \$15.4MM at 2Q2020 end, or additional 0.44%: 3Q2020 end, incremental return of \$26.3MM, or additional 0.75% return to Public Growth Portfolio and 0.31% to the Total Plan

Manager/Portfolio (\$ in MMs)	Action Date	Beg Bal	Change	Adj Bal	6/30/20	Return	\$ in MMs
Artisan	4/13/2020	352.1	50.0	402.1	511.1	27.1%	13.5
First Eagle	4/13/2020	337.6	50.0	387.6	414.0	6.8%	3.4
Total	4/13/2020	689.7	100.0	789.7	925.1	17.0%	17.0
Less RDP	4/13/2020	588.9	(100.0)	488.9	496.7	1.6%	1.6
Incremental Yield & \$MMs						15.4%	15.4
Incremental Percentage Return							
Growth Sub-Portfolio		5,881.0				0.26%	
Public Growth Sub-Portfolio		3,502.0				0.44%	

Asset Allocation

- RDP at previous target 7% set December 2020: Board increased target to 10% in July 2024
- Exited Acadian May 2024
- Funded BH-DG April 2024

Risk Diversifying Portfolio Allocation Year over Year				
Investment Manager	\$ in MMs as of 6/30/2023	% of RDP	\$ in MMs as of 6/30/2024	% of RDP
AFL-CIO (Fixed Income)	221.0	28.5%	220.5	27.8%
Acadian (Multi-Asset)	248.7	32.1%	-	0.0%
BH-DG (Trend)	-	0.0%	197.0	24.8%
Sit LLCAR (Multi-Asset)	305.4	39.4%	376.5	47.4%
Total Risk Diversifying	775.1	100.0%	794.0	100.0%
Total CCCERA	10,492.3	7.4%	11,295.9	7.0%

**\$50MM added to Sit LLCAR in January 2024 in conjunction with Acadian exit*



Returns – Risk Diversifying Portfolio

- One-year return as of 06/30/24: CCCERA Public Equity returned 16.75%, CPI was 2.97%, Risk Diversifying Portfolio returned 2.22%.
- Over one-year through 6/30/24, CCCERA terminated Acadian (5/20/2024) and added BH-DG (4/20/2024).

Returns, net of fees (6/30/2024)	2Q2024	YTD	1 Yr.	3 Yrs	5 Yrs	7 Yrs.	ITD	Inception
Risk Diversifying Portfolio	-0.09%	0.92%	2.22%	-0.72%	-0.03%	0.47%	2.49%	9/30/2016
CPI	0.59%	2.42%	2.97%	4.96%	4.17%	3.62%	2.62%	
Delta	-0.68%	-1.50%	-0.75%	-5.68%	-4.20%	-3.15%	-0.13%	
AFL-CIO	0.58%	0.31%	3.48%	-3.12%	-0.52%	0.63%	4.86%	08/31/1991
BBG US Aggregate	0.07%	-0.71%	2.63%	-3.02%	-0.23%	0.86%	4.75%	
Delta	0.51%	1.02%	0.85%	-0.10%	-0.29%	-0.23%	0.11%	
Acadian Multi Asset (As of 05/31/24)	-2.96%	-1.59%	-4.82%	-1.62%	--	--	-0.92%	07/31/2020
91 Day T-Bill + 5%	1.72%	4.36%	10.81%	8.38%	--	--	7.65%	
Delta	-4.7%	-6.0%	-15.6%	-10.0%	--	--	-8.6%	
Sit LLCAR	1.06%	2.66%	6.16%	1.80%	--	--	2.84%	03/31/2021
BB Barclays US Agg + 1%	0.31%	-0.22%	3.65%	-2.00%	--	--	-1.27%	
Delta	0.75%	2.88%	2.51%	3.80%	--	--	4.11%	
BH-DG Systemic Trading	-1.69%	--	--	--	--	--	-1.69%	04/20/24
40% BBgBrc Ib Agg/60% MSCI Wd	1.61%	--	--	--	--	--	1.61%	
Delta	-3.30%	--	--	--	--	--	-3.30%	

CCCERA Scorecard

- **Returns and Correlation.** Five-year correlation to MSCI ACWI is increased from 0.55 to 0.62. Trailing five-year real returns decreased y/y from -3.8% to -4.2%.
- **LTM Returns.** For the LTM ended 06/30/24, S&P 500 rose 24.6%, while the RDP rose 2.2%.
- **Short track record.** Initial RDP strategies were presented by Verus in 2Q2017.
- **Evolution.** Identified and funded strategies are diversified that function across drawdown and market scenarios.

Objective	Measurement	Current Period Data	Status
Offset Volatility in Growth Portfolio	Correlation	0.6 over trailing 5 years	Below Expectations?
Positive Real Returns	Returns	5 yr real return: -4.2% 5 yr nominal return: -0.03%	Below Expectations
High Liquidity	% of Portfolio that can be liquidated within 90 days	100.0%	Meeting Expectations

RDP Portfolio Actions: 2023 and 2024

2023 Rate Change Impact

- **Rates & Inflation**
 - Policy rate increased from 4.50% to 5.25%, CPI 4.0%
 - Rates negatively impact high duration assets, Commercial Real Estate and Regional Banking
- **Rebalancing & Research**
 - Added to assets with low sensitivity to positive bond equity correlation: \$25MM to Sit LLCAR.
 - RFI for Trend

2024 Rates Stabilize

- **Rates & Inflation**
 - Policy rate increased from 4.25% to 5.50%, CPI decreased from 4.0% to 3.0%
 - Steady rates and lower inflation positively impact risk assets and treasuries
- **Rebalancing & Research**
 - Completed research on Trend
 - Exited Acadian
 - Added \$50MM to Sit LLCAR
 - Funded BH-DG \$200MM

Future Enhancements 2024



Identifying complementary strategies was a priority for the Investment Office. Research over the last 24 months has identified several asset managers for inclusion in the portfolio.



Develop battle plans for specific drawdown scenarios (depths and lengths) inclusive of Growth Sub-Portfolio rebalance/funding pace and drawdown triggers.



Optimize portfolio size and allocations across strategies
Refine statistical metrics to evaluate portfolio performance

Q & A



Meeting Date
08/28/2024
Agenda Item
#8

MEMORANDUM

Date: August 28, 2024
To: CCCERA Board of Retirement
From: Christina Dunn, Chief Executive Officer
Tim Price, Chief Investment Officer
Subject: Consider and take possible action to issue a request for proposals for investment consultant services.

Background

CCCERA has contracted with Verus Consulting (previously Wurts & Associates) since April 2015 as CCCERA's general investment consultant. In August 2017 CCCERA contracted with Stepstone to provide specialized investment consultant services in private equity, private credit, and private real assets. In an effort to assure that services are the most effective and provide the highest value to CCCERA and its members, staff requests approval to issue a request for proposal for investment consultant services.

Recommendation

Consider and take possible action to issue a request for proposals for both general and specialty investment consultant services. Specialty consulting services would include private equity, real assets/infrastructure, private credit, real estate, and hedge funds.



Meeting Date
08/28/2024
Agenda Item
#9

MEMORANDUM

Date: August 28, 2024
To: Board of Retirement
From: Karen Levy, General Counsel
Subject: Consider and Take Possible Action to Establish an Investment Committee

Background

CCCERA Board Regulations have been amended to provide that committees of the Board may be established if deemed necessary to carry out the business of the Board. (Regulations, Section II.8.) It has been indicated that there is interest in establishing a standing investment committee.

Analysis

A standing committee, as distinguished from an *ad hoc* committee, has continuing subject matter jurisdiction and an indefinite duration. It is subject to the same Brown Act requirements that govern full Board meetings. Committee meeting agendas must be published, and the public must be afforded the opportunity to attend and comment.

Generally, the purpose of an investment committee would be to assist the full Board in the development of investment policies and the selection and oversight of investment managers and investment consultants. When establishing a standing committee, it is advisable for the Board to adopt a committee charter which sets forth the responsibilities given to the committee by the full Board, the composition of the committee, and the scheduling of committee meetings. Enclosed, for the Board's consideration, is a draft Investment Committee Charter.

Recommendation

1. Consider and take possible action to establish an investment committee comprised of a maximum of four trustees to make recommendations to the full Board regarding investment matters.
2. Consider and take possible action to adopt an Investment Committee Charter.

CONTRA COSTA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
BOARD OF RETIREMENT

INVESTMENT COMMITTEE CHARTER

I. INTRODUCTION

The Board of Retirement ("Board") has established an Investment Committee ("Committee") to assist it in overseeing the investment function within the Contra Costa County Employees' Retirement Association ("CCCERA").

II. PURPOSE

The purpose of the Committee is to assist the full Board in the development and implementation of investment policies and the oversight of investment managers and investment consultants.

III. MEMBERSHIP

The Committee will consist of at least three and no more than four members of the Board. At the second regular meeting in July, as the second order of business, or as thereafter may be required to appoint members and fill vacancies, the Board Chairperson will appoint members of the Committee as provided in the CCCERA Regulations and designate one member to serve as the Committee Chairperson and another member to serve as the Committee Vice Chairperson.

Ideally, members should have an interest in investment management, investment due diligence processes, financial forecasting and investment performance against benchmarks. Although these desired traits are not mandatory, members should be sufficiently knowledgeable about these topics to make informed recommendations to the full Board when appropriate.

IV. MEETINGS

The Committee will meet monthly or as needed. All Committee members are expected to attend each meeting. Three Committee members present at the meeting shall constitute a quorum. No motion may be passed or business transacted without three affirmative votes. The Chief Executive Officer will appoint appropriate staff to attend the Committee meetings. Meeting notices will be provided to interested parties in conformance with applicable laws, regulations, customs, and practices. All meetings are subject to the Ralph M. Brown Act, Government Code Section 54950 *et seq.* Meeting agendas will be prepared and provided in advance to Committee members, along with appropriate briefing materials. Minutes of meetings will be prepared. Minutes of the meeting will contain a record of persons present, actions taken, and a high-level summary of the discussion.

V. RESPONSIBILITIES AND DUTIES

The Committee's areas of responsibility are:

1. Periodically review the Investment Policy Statement (IPS) and all other material investment policies of CCCERA and provide recommendations to the Board, as appropriate.
2. Review periodic asset allocation studies and provide recommendations to the Board accordingly, pursuant to the IPS.
3. Review recommendations by staff and the investment consultant related to establishing asset class and sub-asset class targets, ranges and structures and provide recommendations to the Board accordingly, pursuant to the IPS.
4. Review the CCCERA investment portfolio performance from time to time, no less frequently than quarterly using the quarterly performance review reporting prepared by CCCERA's investment consultants, and make recommendations to the investment staff and Board as appropriate
5. Review the performance of CCCERA investment consultants and provide recommendations to the Board accordingly, including recommendations regarding requests for proposals and contractual terms and conditions for investment consultants providing fiduciary advice and counsel to the Board, pursuant to the IPS.
6. Review recommendations by staff and/or the investment consultants concerning the appointment of investment managers that exceed \$150 million per fund and provide recommendations to the Board accordingly, pursuant to the IPS.
7. Receive and review investment manager staff reports related to manager performance or operations, portfolio rebalancing, investment manager terminations and fee reporting, and make recommendations to the Board.
8. Receive and review private markets performance assessments and pacing analyses.
9. Encourage the participation of Board members in the due diligence processes for Manager selection, and work with investment staff to provide outreach to the Board regarding due diligence activities and opportunities for Board participation.
10. Other specific subject matters that the Board deems appropriate.

The Investment Committee shall establish the priorities of the Committee from time to time in the discretion of the Committee, and/or as may be directed by the Board from time to time.

VI. REPORT AND RECOMMENDATION TO THE BOARD

The Committee will report its activities and make written recommendations to the Board. All formal actions taken at Committee meetings must be considered for approval by the Board at a scheduled and properly noticed Board meeting.

VII. HISTORY

Adopted:

DRAFT



Meeting Date
08/28/2024
Agenda Item
#10

MEMORANDUM

Date: August 28, 2024
To: CCCERA Board of Retirement
From: Christina Dunn, Chief Executive Officer
Subject: Consider and take possible action to approve updated pay code lists

Background

Pay code lists are posted on the CCCERA website and updated on an annual basis. These lists reflect pay codes for the employers that participate in the CCCERA pension plan, along with a notation reflecting whether each pay code is included or excluded from compensation earnable (for Legacy members) or pensionable compensation (for PEPRAs members). Enclosed are the updated pay code lists. Once approved, they will be posted on the website.

Recommendations

Consider and take possible action to approve the updated pay code lists.

Contra Costa County Employees' Retirement Association
Compensation for Retirement Purposes
August 28, 2024
Employer: Contra Costa County

		Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013	PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013
Pay Code Description	Pay Code	INCLUDED/EXCL	INCLUDED/EXCL
350 Offset Adjustment	RX3	EXCLUDED	EXCLUDED
Absent without Leave	R27	EXCLUDED	EXCLUDED
Absent without Pay	R26	EXCLUDED	EXCLUDED
Access Incentive Bonus	M21	INCLUDED	EXCLUDED
Additional Duty Emergency	ADE	EXCLUDED	EXCLUDED
Additional Duty Pay - base hrly rate	ADD	EXCLUDED	EXCLUDED
Additional Duty Residents	ADR	EXCLUDED	EXCLUDED
Additional Pay - Elections	REP	INCLUDED	EXCLUDED
Additional Pay County Fair	RSF	INCLUDED	EXCLUDED
Adjustment Sale of Vacation	VAD	INCLUDED	EXCLUDED
Adjustment Shift Pay	SHA	INCLUDED	EXCLUDED
Adjustment to SDI Earnings	SDA	EXCLUDED	EXCLUDED
Adjustment Uniform Allowance	A99	INCLUDED	EXCLUDED
Admin Leave Hours Taken (within base pay)	ALP	INCLUDED	INCLUDED
Advance	ADV	EXCLUDED	EXCLUDED
Agreed Upon Temp Abs Hrs Taken	ATA	EXCLUDED	EXCLUDED
Agreed Upon Temp Ded'n Adj	ATJ	EXCLUDED	EXCLUDED
Annual Registrar Stipnd	M49	INCLUDED	EXCLUDED
Assessmt Appeals Brd Stipend	M52	INCLUDED	EXCLUDED
ATA Deduction	ATD	EXCLUDED	EXCLUDED
Auto Allow Department Heads	AU3	INCLUDED	EXCLUDED
Auto Allow Elected Dept Head	AUT	INCLUDED	EXCLUDED
Auto Allowance	AU1	INCLUDED	EXCLUDED
Auto Allowance 2	AU2	INCLUDED	EXCLUDED
Benefit Replace Plan Retiree	BRP	EXCLUDED	EXCLUDED
Bi Lingual Pay \$80	M80	INCLUDED	EXCLUDED
Bilingual Pay	M65	INCLUDED	EXCLUDED
Bi-Lingual Pay	M57	INCLUDED	EXCLUDED
Bi-Lingual Pay Safety	M85	INCLUDED	EXCLUDED
Bldg Supv Diff 9%	D50	INCLUDED	EXCLUDED
Bonus Hazard Matl Response TM	B95	INCLUDED	EXCLUDED
Bonus Lateral Hire Incentive	B55	EXCLUDED	EXCLUDED
Bonus RN Special Assignment	B60	INCLUDED	EXCLUDED
Bonus Special Pay	B79	INCLUDED	EXCLUDED
CA COVID Supp Sck Lv Taken	CAL	EXCLUDED	EXCLUDED
Call Back @ 1.50 Local 1230	N77	EXCLUDED	EXCLUDED
Call-Back	N52	EXCLUDED	EXCLUDED
Callback @ 1.50 CNA	N62	EXCLUDED	EXCLUDED
Callback @ 1.50 DSA	N42	EXCLUDED	EXCLUDED
Callback @ 1.50 Local 1021	N32	EXCLUDED	EXCLUDED
Callback @ 1.50 Local 2700	N34	EXCLUDED	EXCLUDED
Callback @ 1.50 Local 512	N33	EXCLUDED	EXCLUDED
Callback @ 1.50 Local One	N35	EXCLUDED	EXCLUDED
Callback @ 1.50 PPOA	N37	EXCLUDED	EXCLUDED
Callback @ 1.50 Public Def Inv	N30	EXCLUDED	EXCLUDED
Callback @ 1.50 RNs in OR	N64	EXCLUDED	EXCLUDED
Callback @ 1.50 T856	N38	EXCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

Contra Costa County Employees' Retirement Association
Compensation for Retirement Purposes
August 28, 2024
Employer: Contra Costa County

		Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013	PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013
Pay Code Description	Pay Code	INCLUDED/EXCL	INCLUDED/EXCL
Callback @ 1.50 T856 SterlProc	N36	EXCLUDED	EXCLUDED
Callback @ 1.50 WCE	N31	EXCLUDED	EXCLUDED
Callback @1.5 Loc 21 and Unrep	N73	EXCLUDED	EXCLUDED
Callback Additional 1 Hour	N1H	EXCLUDED	EXCLUDED
CallBack Adjustment	NAD	EXCLUDED	EXCLUDED
Callback CNA Comp Time	N67	EXCLUDED	EXCLUDED
Callback CNA Comp Time RNs OR	N68	EXCLUDED	EXCLUDED
Callback Minimum Guarantee	NMG	EXCLUDED	EXCLUDED
CALWORKS Differential	M19	INCLUDED	EXCLUDED
Canine Care Agriculture	E09	EXCLUDED	EXCLUDED
CERA Cert Diff 2.5%	C74	INCLUDED	EXCLUDED
Cert Elect/Regist Admin Diff 5%	C73	INCLUDED	EXCLUDED
Cert PD CCCERA 5.0%	C38	INCLUDED	EXCLUDED
Certificate Agriculture Commn	C11	INCLUDED	EXCLUDED
Certificate Ca Prof Engineer	C25	INCLUDED	EXCLUDED
Certificate Hazardous Materals	C28	INCLUDED	EXCLUDED
Certificate Prof Accounting	C39	INCLUDED	EXCLUDED
Certificate Prof Dev Tr/TaxCol	C15	INCLUDED	EXCLUDED
Certificate Weights/Measures	C12	INCLUDED	EXCLUDED
Charge Nurse Relief	D44	INCLUDED	EXCLUDED
Charge Nurse Relief Per Diem	D79	EXCLUDED	EXCLUDED
Charge Pay Clinical Lab Sci II	D43	INCLUDED	EXCLUDED
Charge Pay LVN Psych Tech	D47	INCLUDED	EXCLUDED
Chief Fire EMS Differential	F11	INCLUDED	EXCLUDED
Clinical On Call	N56	EXCLUDED	EXCLUDED
CNA Code Grey Team Assgn 10%	D87	INCLUDED	EXCLUDED
CNA Code Grey Team Assgn 5%	D88	INCLUDED	EXCLUDED
CNA Emergency Dept Diff	HZE	INCLUDED	EXCLUDED
CNA Grievance Meetings Stipend	OGM	EXCLUDED	EXCLUDED
CNA Weekend Only Shift 1	E08	EXCLUDED	EXCLUDED
CNA Weekend Only Shift 2	E20	EXCLUDED	EXCLUDED
CNA Weekend Shift Bonus	B14	INCLUDED	EXCLUDED
Code Gray Loc 2700 10 Pct	D96	INCLUDED	EXCLUDED
Code Gray Loc 2700 5 Pct	D99	INCLUDED	EXCLUDED
Code Gray Loc One 5 Pct	D92	INCLUDED	EXCLUDED
Code Gray NSC 10 Pct	E78	INCLUDED	EXCLUDED
Code Gray Staff NursePD 10 Pct	E52	EXCLUDED	EXCLUDED
Code Gray T856 LVN 10 Pct	D91	INCLUDED	EXCLUDED
Comm Staff Tower Climbing	E70	INCLUDED	EXCLUDED
Commute Vehicle Taxable Fringe	Z01	EXCLUDED	EXCLUDED
Countywide Acctng Diff	C37	INCLUDED	EXCLUDED
Court Appearance Pay	OSH	EXCLUDED	EXCLUDED
COV19 Worker Retention Payment	MSC	EXCLUDED	EXCLUDED
COVID Admin Lv Taken	COV	EXCLUDED	EXCLUDED
Custodian Wrk Trng Juv Program	E31	INCLUDED	EXCLUDED
DAIA AWI Comp	N49	EXCLUDED	EXCLUDED
DAIA AWI Pay	N47	EXCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

Contra Costa County Employees' Retirement Association
Compensation for Retirement Purposes
August 28, 2024
Employer: Contra Costa County

		Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013	PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013
Pay Code Description	Pay Code	INCLUDED/EXCL	INCLUDED/EXCL
Detent Facility Clerical Supvr	HZS	INCLUDED	EXCLUDED
Detention Assign Staff NursePD	E50	EXCLUDED	EXCLUDED
Detention Assignment	HZX	INCLUDED	EXCLUDED
Detention Assignment CNA	E80	INCLUDED	EXCLUDED
Detention Assignment T856	HZT	INCLUDED	EXCLUDED
Detention Division Diff NonSw	HZ5	INCLUDED	EXCLUDED
Detention Nurse Adv Level Pay	E85	INCLUDED	EXCLUDED
DI Services Lead Pay 5%	D13	INCLUDED	EXCLUDED
Diff Appr Std Div Lead 5%	D70	INCLUDED	EXCLUDED
Diff Longevity Law Enf 7%	D74	INCLUDED	EXCLUDED
Diff RPA Sr Memb Cert 5%	D14	INCLUDED	EXCLUDED
Differential Adjustment	D01	INCLUDED	EXCLUDED
Differential Adjustment - NIR	D02	EXCLUDED	EXCLUDED
Differential Appr Standard Div 2.5%	D10	INCLUDED	EXCLUDED
Differential Assessor Educ Ach	D09	INCLUDED	EXCLUDED
Differential Bldg Management	D85	INCLUDED	EXCLUDED
Differential BOMI Certificate	D03	INCLUDED	EXCLUDED
Differential Call Back	D15	EXCLUDED	EXCLUDED
Differential Call Back @ 1.5	D19	EXCLUDED	EXCLUDED
Differential CNA Psych Assignm	E84	INCLUDED	EXCLUDED
Differential Comp Ops Supv	D53	INCLUDED	EXCLUDED
Differential DA Office Mnger	D54	INCLUDED	EXCLUDED
Differential Driver Clerk	E71	INCLUDED	EXCLUDED
Differential DSA NonSworn Trng	D30	INCLUDED	EXCLUDED
Differential DSA Training 5%	D29	INCLUDED	EXCLUDED
Differential EHSD Spec Proj	D76	INCLUDED	EXCLUDED
Differential Exec Assist CAO	D83	INCLUDED	EXCLUDED
Differential FACS	D62	INCLUDED	EXCLUDED
Differential Hazard Mat	E72	INCLUDED	EXCLUDED
Differential Heavy Equip Op/In	D84	INCLUDED	EXCLUDED
Differential HM Prog Coord	E41	INCLUDED	EXCLUDED
Differential HM Program Leader	E42	INCLUDED	EXCLUDED
Differential Hospital PSO	D67	INCLUDED	EXCLUDED
Differential Hourly Prem 12.5%	D06	EXCLUDED	EXCLUDED
Differential Hourly Prem 15%	D07	EXCLUDED	EXCLUDED
Differential Hourly Prem 17.5%	D08	EXCLUDED	EXCLUDED
Differential Hourly Prem 5%	D05	EXCLUDED	EXCLUDED
Differential Investigative Dut	D27	INCLUDED	EXCLUDED
Differential K9 Premium	DK9	EXCLUDED	EXCLUDED
Differential Lieut On-Call	D25	EXCLUDED	EXCLUDED
Differential Longevity Law Enf	D73	INCLUDED	EXCLUDED
Differential M S W II Lead	D22	INCLUDED	EXCLUDED
Differential Mgmt Struct Eng	D86	INCLUDED	EXCLUDED
Differential Off Duty Standby	F80	EXCLUDED	EXCLUDED
Differential Office of Emg Svc	D41	INCLUDED	EXCLUDED
Differential On Call	D33	EXCLUDED	EXCLUDED
Differential On Call DSA/DAI	D26	EXCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

Contra Costa County Employees' Retirement Association
Compensation for Retirement Purposes
August 28, 2024
Employer: Contra Costa County

		Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013	PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013
Pay Code Description	Pay Code	INCLUDED/EXCL	INCLUDED/EXCL
Differential On Call Local 1	D36	EXCLUDED	EXCLUDED
Differential On Call Pay @ 1.0	D32	EXCLUDED	EXCLUDED
Differential Phone Call Back	D21	EXCLUDED	EXCLUDED
Differential Police Manager 3%	D66	INCLUDED	EXCLUDED
Differential Police Manager 6%	D68	INCLUDED	EXCLUDED
Differential Police Manager 9%	D69	INCLUDED	EXCLUDED
Differential Police Mgr 15%	D72	INCLUDED	EXCLUDED
Differential Police Mgr 4.5%	D65	INCLUDED	EXCLUDED
Differential Police Svcs 10%	D61	INCLUDED	EXCLUDED
Differential PS Project Manger	D55	INCLUDED	EXCLUDED
Differential RPA Sr Memb Cert 10%	D04	INCLUDED	EXCLUDED
Differential Spec Proj 10%	D49	INCLUDED	EXCLUDED
Differential Special Proj 5%	D48	INCLUDED	EXCLUDED
Differential Sterile Process	E25	INCLUDED	EXCLUDED
Differential Training Assignmt	E29	INCLUDED	EXCLUDED
Differential Unit Leader 5%	D18	INCLUDED	EXCLUDED
Differtial Recordble Docs Tech	D40	INCLUDED	EXCLUDED
Dir of Safety and Perf Improv Diff	E44	INCLUDED	EXCLUDED
Dispatcher Hiring Incentive	B56	INCLUDED	EXCLUDED
Double Shift Premium T856	SHC	INCLUDED	EXCLUDED
DSA Forensic Services	D12	INCLUDED	EXCLUDED
DSA Invest & Spec Invest Unit	D11	INCLUDED	EXCLUDED
DSA Prob Training Diff	B90	INCLUDED	EXCLUDED
DSA Prob Training Diff NIR	B91	EXCLUDED	EXCLUDED
DSA School Security Detail	RSD	INCLUDED	EXCLUDED
DSA Training Days	T08	EXCLUDED	EXCLUDED
DSW-Non Essential	T04	EXCLUDED	EXCLUDED
DSW-Not Available	T05	EXCLUDED	EXCLUDED
Earnings Adj-Worker Comp	WCA	EXCLUDED	EXCLUDED
Education Allow Annual 2.5%	AC3	INCLUDED	EXCLUDED
Employee Recognition Awards	Z92	EXCLUDED	EXCLUDED
ER Assignment CNA	E82	INCLUDED	EXCLUDED
ER Staff Nurse PD	E51	EXCLUDED	EXCLUDED
Exchange Day Off	EXO	EXCLUDED	EXCLUDED
Exchange Day Worked	EXW	EXCLUDED	EXCLUDED
Fire Crck-Carq Differentials	F70	EXCLUDED	EXCLUDED
Fire Differential ALSEC Param	F27	INCLUDED	EXCLUDED
Fire Dispatchers FLSA Addl Pay	F22	INCLUDED	EXCLUDED
Fire EMT Diff Rodeo Fire Only	F33	INCLUDED	EXCLUDED
Fire Investigation Standby	F68	EXCLUDED	EXCLUDED
Fire Mgmt Educ Incent Conting	F07	INCLUDED	EXCLUDED
Fire Mgmt Educ Incentive	F05	INCLUDED	EXCLUDED
Fire Mgmt Educ Incentive	F06	INCLUDED	EXCLUDED
Fire Mgmt Longevity @ 5%	F18	INCLUDED	EXCLUDED
Fire Mgmt Longevity @ 7.5%	F28	INCLUDED	EXCLUDED
Fire Mgmt Longevity Pay	F08	INCLUDED	EXCLUDED
Fire Recall & Standby @ 2.5%	F72	EXCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

Contra Costa County Employees' Retirement Association
Compensation for Retirement Purposes
August 28, 2024
Employer: Contra Costa County

		Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013	PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013
Pay Code Description	Pay Code	INCLUDED/EXCL	INCLUDED/EXCL
Fire Recall & Standby @ 5%	F67	EXCLUDED	EXCLUDED
Fire Sched FLSA-Additnl 24 day	F21	INCLUDED	EXCLUDED
Fire Scheduled FLSA Pay	F20	INCLUDED	EXCLUDED
Fire Temp Training Diff 40hr	F78	INCLUDED	EXCLUDED
Fire Traing/Prevnt Captains	F77	INCLUDED	EXCLUDED
Fire Vol/Reserve Firefighters	F40	EXCLUDED	EXCLUDED
Flex Hours in Excess	FWE	EXCLUDED	EXCLUDED
Flex Hours Pay Off	FWS	EXCLUDED	EXCLUDED
Flexible Hours Earned	FW1	EXCLUDED	EXCLUDED
Flexible Hours Used	FWP	EXCLUDED	EXCLUDED
Flexible Work Pay @ 1.00	FWM	EXCLUDED	EXCLUDED
Flexible Work Pay Adjustment	FWA	EXCLUDED	EXCLUDED
FLSA Adjustment	OFA	EXCLUDED	EXCLUDED
FLSA Overtime	OTF	EXCLUDED	EXCLUDED
FMLA+	T07	EXCLUDED	EXCLUDED
FNP Wknd Diff Hosp-Clinics	B31	INCLUDED	EXCLUDED
FNP Wknd Hosp-Clinics	B32	INCLUDED	EXCLUDED
Furlough	R29	EXCLUDED	EXCLUDED
Geographical Info Sys Differential	E10	INCLUDED	EXCLUDED
Graveyard Shift Differential	SHG	INCLUDED	EXCLUDED
Hazard Duty Pay	HZ2	INCLUDED	EXCLUDED
Hazard Pay Adjustment	HZA	INCLUDED	EXCLUDED
Health Services Manager Diff	HZ4	INCLUDED	EXCLUDED
Hiring Incentive	B51	INCLUDED	EXCLUDED
HMRT Differential 5%	F75	INCLUDED	EXCLUDED
Holiday Comp Excess Hours Pay	HCE	INCLUDED	EXCLUDED
Holiday Comp Hours Earned @1.0	HCM	EXCLUDED	EXCLUDED
Holiday Comp Hours Earned@1.50	HCR	EXCLUDED	EXCLUDED
Holiday Comp Hours Pay Off	HPO	EXCLUDED	EXCLUDED
Holiday Comp Hours Taken	HCP	EXCLUDED	EXCLUDED
Holiday Pay @ 1.50	HP2	INCLUDED	EXCLUDED
Holiday Pay Adjustment	HOA	INCLUDED	EXCLUDED
Holiday Pay for PS Table	HOT	INCLUDED	EXCLUDED
Holiday Pay @ 1.00	HP1	INCLUDED	EXCLUDED
Hourly Paid Leave Accrual Use	RAU	EXCLUDED	EXCLUDED
Housing Allowance	ALH	EXCLUDED	EXCLUDED
HS Education Leave Hours	T06	EXCLUDED	EXCLUDED
In Lieu of Def Comp Bene-Elect	M43	INCLUDED	EXCLUDED
ISW - Relief Pay	B97	INCLUDED	EXCLUDED
ISW Gen-Spec-Relief Cook	B73	INCLUDED	EXCLUDED
Jury Duty Hours Reported	JRY	EXCLUDED	EXCLUDED
Lateral Incentive Bonus	B58	EXCLUDED	EXCLUDED
Law School SLRP	M32	EXCLUDED	EXCLUDED
Lead Juvenile Inst Officer	B96	INCLUDED	EXCLUDED
Long Term Disability Pay	M59	EXCLUDED	EXCLUDED
Longevity Exempt @ 7.5 %	L09	INCLUDED	EXCLUDED
Longevity 10 Years	L31	INCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

Contra Costa County Employees' Retirement Association
Compensation for Retirement Purposes
August 28, 2024
Employer: Contra Costa County

		Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013	PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013
Pay Code Description	Pay Code	INCLUDED/EXCL	INCLUDED/EXCL
Longevity 15 Years	L32	INCLUDED	EXCLUDED
Longevity 6 years	L30	INCLUDED	EXCLUDED
Longevity CNA 10 years @ 5%	L16	INCLUDED	EXCLUDED
Longevity CNA 15 years @ 7.5%	L17	INCLUDED	EXCLUDED
Longevity CNA 20 Years @ 10%	L18	INCLUDED	EXCLUDED
Longevity CNA 7 years @ 2.5%	L15	INCLUDED	EXCLUDED
Longevity Nurs Mgrm 10 yrs	L26	INCLUDED	EXCLUDED
Longevity Nurs Mgrm 15 yrs	L27	INCLUDED	EXCLUDED
Longevity Nurs Mgrm 20 yrs	L28	INCLUDED	EXCLUDED
Longevity Nurs Mgrm 7 yrs	L25	INCLUDED	EXCLUDED
Longevity Pay @ 2.00%	L04	INCLUDED	EXCLUDED
Longevity Pay @ 2.5%	L05	INCLUDED	EXCLUDED
Longevity Pay @ 3.5%	L13	INCLUDED	EXCLUDED
Longevity Pay @ 4.50%	L10	INCLUDED	EXCLUDED
Longevity Pay @ 5%	L06	INCLUDED	EXCLUDED
Longevity Pay @ 6.50%	L11	INCLUDED	EXCLUDED
Longevity Pay @ 7.00%	L07	INCLUDED	EXCLUDED
Longevity Pay @ 8%	L14	INCLUDED	EXCLUDED
Longevity/Mgmt Inc Exempt @ 5%	L08	INCLUDED	EXCLUDED
Longevty 20 Years	L33	INCLUDED	EXCLUDED
LTD FICA EXEMPT	M68	EXCLUDED	EXCLUDED
Lump Sum Differential	DPR	INCLUDED	EXCLUDED
Lump Sum Pay	LSP	INCLUDED	EXCLUDED
Lump Sum Pay	RPR	INCLUDED	EXCLUDED
LVN Weekend Bonus	B25	INCLUDED	EXCLUDED
Merit Board Stipend	M54	EXCLUDED	EXCLUDED
MH Assigned Lead T856	E18	INCLUDED	EXCLUDED
MH Program Chief Differential	E43	INCLUDED	EXCLUDED
MH Weekend Shift Bonus	B15	INCLUDED	EXCLUDED
Military Salary Augmentation	MSA	EXCLUDED	EXCLUDED
Missed Break	M11	EXCLUDED	EXCLUDED
Month Work Hour	MWH	EXCLUDED	EXCLUDED
Moving Allowance	MAL	EXCLUDED	EXCLUDED
Moving Expense Taxable	MTX	EXCLUDED	EXCLUDED
Moving Expenses NonTaxable	MNT	EXCLUDED	EXCLUDED
Negotiations Time Off	T03	EXCLUDED	EXCLUDED
Nocturnist Pay	B86	INCLUDED	EXCLUDED
Nocturnist Pay - NIR	B87	EXCLUDED	EXCLUDED
Non-Productive Hours	T01	EXCLUDED	EXCLUDED
On Call CNA 1for2	N65	EXCLUDED	EXCLUDED
On Call CNA 1for4	N66	EXCLUDED	EXCLUDED
On Call DAI	N48	EXCLUDED	EXCLUDED
On Call DSA Lieut	N44	EXCLUDED	EXCLUDED
On Call DSA Rank & File	N43	EXCLUDED	EXCLUDED
On Call Local 1021	N12	EXCLUDED	EXCLUDED
On Call Local 21 and Unrep	N71	EXCLUDED	EXCLUDED
On Call Local 2700	N14	EXCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

Contra Costa County Employees' Retirement Association
Compensation for Retirement Purposes
August 28, 2024
Employer: Contra Costa County

		Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013	PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013
Pay Code Description	Pay Code	INCLUDED/EXCL	INCLUDED/EXCL
On Call Local 512	N13	EXCLUDED	EXCLUDED
On Call Local One	N15	EXCLUDED	EXCLUDED
On Call T856	N18	EXCLUDED	EXCLUDED
On Call T856 Cardio-Rad	N17	EXCLUDED	EXCLUDED
On Call T856 Sterile Proc	N16	EXCLUDED	EXCLUDED
On Call WCE	N11	EXCLUDED	EXCLUDED
OT Comp Hours Earned @ 1.00	OCM	EXCLUDED	EXCLUDED
OT Comp Hours Earned @ 1.50	OCR	EXCLUDED	EXCLUDED
OT Comp Hours Taken	OCP	EXCLUDED	EXCLUDED
OT DepSheriff AssignCoronerDiv	OSC	EXCLUDED	EXCLUDED
OT Earnings @ 1.50 Exempt Excl	OPE	EXCLUDED	EXCLUDED
OT Sgt Work as Deputy Sheriff	OSD	EXCLUDED	EXCLUDED
OT UCOA @ 40 hour rate	OTU	EXCLUDED	EXCLUDED
Overtime - Straight Time Rate	OTS	EXCLUDED	EXCLUDED
Overtime Adjustment	OTA	EXCLUDED	EXCLUDED
Overtime After Holiday Pay	OSN	EXCLUDED	EXCLUDED
Overtime Comp Excess Hrs Pay	OTE	EXCLUDED	EXCLUDED
Overtime Comp Hours Pay Off	OCS	EXCLUDED	EXCLUDED
Overtime Earnings @ 1.50	OPT	EXCLUDED	EXCLUDED
Overtime NormalWork Scheduled	ORS	EXCLUDED	EXCLUDED
Paid Military Leave	MLX	EXCLUDED	EXCLUDED
Pandemic Service Relief Payment	CPP	INCLUDED	EXCLUDED
Paramedic Differential Rodeo	F35	INCLUDED	EXCLUDED
Patient Exp Incentive Bonus	M22	EXCLUDED	EXCLUDED
Payroll Adjustment-Retirement	ADJ	INCLUDED	INC /w Review Type 5
Payroll Adjust-NonRetirement	ADN	EXCLUDED	EXCLUDED
Performance Stipend	M48	INCLUDED	EXCLUDED
Pers Hol Pay Off L 5%	PP5	EXCLUDED	EXCLUDED
Pers Hol Pay Off L 5% NIR	PN5	EXCLUDED	EXCLUDED
Pers Hol Pay Off L 10%	PP1	EXCLUDED	EXCLUDED
Pers Hol Pay Off L 10% NIR	PN1	EXCLUDED	EXCLUDED
Pers Hol Pay Off L 7.0%	PP3	EXCLUDED	EXCLUDED
Pers Hol Pay Off L 7.0% NIR	PN3	EXCLUDED	EXCLUDED
Pers Hol Pay Off L 7.5%	PP7	EXCLUDED	EXCLUDED
Pers Hol Pay Off L 7.5% NIR	PN7	EXCLUDED	EXCLUDED
Pers Holiday Pay Off L 4.50%	PP4	EXCLUDED	EXCLUDED
Pers Holiday Pay Off L 6.50%	PP6	EXCLUDED	EXCLUDED
Pers Holiday PO L 4.50% NIR	PN4	EXCLUDED	EXCLUDED
Pers Holiday PO L 6.50% NIR	PN6	EXCLUDED	EXCLUDED
PersHoliday Pay Off - L 2.5%	PLP	EXCLUDED	EXCLUDED
PersHoliday PayOff - L 2.5%	PLN	EXCLUDED	EXCLUDED
Personal Hol Hours Taken (within base pay)	PHL	INCLUDED	INCLUDED
Personal Holiday Hrs Pay Off	PHN	EXCLUDED	EXCLUDED
Personal Holiday Hrs Pay Off	PHP	EXCLUDED	EXCLUDED
Phys Callback Min Guarantee	NPG	EXCLUDED	EXCLUDED
Planning Comm Stipend	M53	EXCLUDED	EXCLUDED
POST Cert Allow 2.5%	AC1	INCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

Contra Costa County Employees' Retirement Association
Compensation for Retirement Purposes
August 28, 2024
Employer: Contra Costa County

		Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013	PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013
Pay Code Description	Pay Code	INCLUDED/EXCL	INCLUDED/EXCL
POST Cert Allow 5%	AC2	INCLUDED	EXCLUDED
POST Cert Allow Advanced 1.0	AC5	INCLUDED	EXCLUDED
POST Cert Allow Intermed 1.0	AC4	INCLUDED	EXCLUDED
Preceptor Pay	E01	INCLUDED	EXCLUDED
Preceptor Pay - NIR	E02	EXCLUDED	EXCLUDED
PTO Accrual Hours Pay Off	PTP	EXCLUDED	EXCLUDED
PTO Taken	PTO	EXCLUDED	EXCLUDED
Public Works Emergency Diff	E35	EXCLUDED	EXCLUDED
Public Works Seasonal Diff	E36	EXCLUDED	EXCLUDED
Quality Incentive Bonus	M23	EXCLUDED	EXCLUDED
RDA Meeting Stipend	M51	INCLUDED	EXCLUDED
REACH Partnership Helicopter Diff	F79	INCLUDED	EXCLUDED
Regular Pay - Labor Distrib	LBD	EXCLUDED	EXCLUDED
Regular Pay (within base pay)	REG	INCLUDED	INCLUDED
Reserved Hospital	R	EXCLUDED	EXCLUDED
Retention Incentive	B52	INCLUDED	EXCLUDED
Retirement Board Stipend	M58	INCLUDED	EXCLUDED
Retirement CompRate (within base pay)	RXX	INCLUDED	INCLUDED
Rodeo Fire Acting Overtime Pay	F48	EXCLUDED	EXCLUDED
Rodeo Fire Acting Pay	F47	INCLUDED	EXCLUDED
Rodeo Fire Chief Longevity	F45	INCLUDED	EXCLUDED
Rodeo Fire Longevity	F34	INCLUDED	EXCLUDED
Sabbatical Leave Hours Taken	SBL	EXCLUDED	EXCLUDED
Sabbatical Hours Pay Off	SBP	EXCLUDED	EXCLUDED
Sabbatical Leave PayOff	SBN	EXCLUDED	EXCLUDED
Sale of Vacation	V01	INCLUDED	EXCLUDED
Sale of Vacation L 2.5%	V11	INCLUDED	EXCLUDED
Sale of Vacation L 5.0%	V21	INCLUDED	EXCLUDED
Sale of Vacation L 7.5%	V31	INCLUDED	EXCLUDED
Sale of Vacation L10.0%	V41	INCLUDED	EXCLUDED
Sale of Vacation L 4.50%	V51	INCLUDED	EXCLUDED
Sale of Vacation L 6.5%	V61	INCLUDED	EXCLUDED
Sale of Vacation L 7.00%	V71	INCLUDED	EXCLUDED
SDI SickLeave BuyBack	SDI	EXCLUDED	EXCLUDED
Search Warrant Dep Dir Animal	D63	INCLUDED	EXCLUDED
Search Warrant Loc 21	D60	INCLUDED	EXCLUDED
Search Warrant Loc One	D58	INCLUDED	EXCLUDED
Settlement Pay	M15	EXCLUDED	EXCLUDED
Sheriff Scheduled FLSA Pay	OSF	INCLUDED	EXCLUDED
Shift @ 3 pct DSA Dspth Morn	SWM	INCLUDED	EXCLUDED
Shift @ 5.00 pct DSADspth Eve	SWE	INCLUDED	EXCLUDED
Shift Clerical Grave Yard PI	SHF	EXCLUDED	EXCLUDED
Shift CNA Double Premium	SHD	INCLUDED	EXCLUDED
Shift Night @ 10.00 pct T856	SNS	INCLUDED	EXCLUDED
Shift Pay @ 10%	SH4	INCLUDED	EXCLUDED
Shift Pay @ 12%	SH5	INCLUDED	EXCLUDED
Shift Pay @ 15%	SH7	INCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

Contra Costa County Employees' Retirement Association
Compensation for Retirement Purposes
August 28, 2024
Employer: Contra Costa County

		Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013	PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013
Pay Code Description	Pay Code	INCLUDED/EXCL	INCLUDED/EXCL
Shift Pay @ 5%	SH2	INCLUDED	EXCLUDED
Shift Pay @ 7.5%	SH3	INCLUDED	EXCLUDED
Sick Leave Hours Pay Off	S01	EXCLUDED	EXCLUDED
Sick Leave Hours Taken (within base pay)	SCK	INCLUDED	INCLUDED
Sick Leave Pay Off L 2.5%	S11	EXCLUDED	EXCLUDED
Sick Leave Pay Off L 5%	S12	EXCLUDED	EXCLUDED
Spec Procedure Angio T856	D51	INCLUDED	EXCLUDED
Spec Procedure Mammo-CT T856	D52	INCLUDED	EXCLUDED
Special Circumstance OT Pay	OTC	EXCLUDED	EXCLUDED
Special Procedure Angio Loc 21	D59	INCLUDED	EXCLUDED
State Comp Doctor Appointments	T02	EXCLUDED	EXCLUDED
Straight Time Pay	OVT	EXCLUDED	EXCLUDED
Supp Pd Sck Lv1	SP1	EXCLUDED	EXCLUDED
Supp Pd Sck Lv2	SP2	EXCLUDED	EXCLUDED
Tax Vehicle Usage	Z02	EXCLUDED	EXCLUDED
Taxable Elections Stipend	ZET	EXCLUDED	EXCLUDED
Taxable Other Reimbursement	ZOT	EXCLUDED	EXCLUDED
Taxable Professional Developmnt	ZPT	EXCLUDED	EXCLUDED
Telehealth Visit	B49	EXCLUDED	EXCLUDED
Telephone Callback @ 1.50	N76	EXCLUDED	EXCLUDED
Truck Allowance	A58	INCLUDED	EXCLUDED
Uniform Allow - Fire Mgmt	A83	INCLUDED	EXCLUDED
Uniform Allow Sher Mgmt	A82	INCLUDED	EXCLUDED
Uniform Allowance	A80	INCLUDED	EXCLUDED
Uniform Allowance - Fire	A79	INCLUDED	EXCLUDED
Uniform Allowance \$25	A64	INCLUDED	EXCLUDED
Uniform Allowance Rodeo Fire	A76	INCLUDED	EXCLUDED
Uniform Allowance Sheriff	A81	INCLUDED	EXCLUDED
Vacation Hours Pay Off	V02	INC /w Review Type 3	EXCLUDED
Vacation Hours Pay Off	V03	EXCLUDED	EXCLUDED
Vacation Hours Taken (within base pay)	VAC	INCLUDED	INCLUDED
Vacation Pay Off L 2.5%	V12	INC /w Review Type 3	EXCLUDED
Vacation Pay Off L 2.5% NIR	V13	EXCLUDED	EXCLUDED
Vacation Pay Off L 5.0%	V22	INC /w Review Type 3	EXCLUDED
Vacation Pay Off L 5.0% NIR	V23	EXCLUDED	EXCLUDED
Vacation Pay Off L 7.5%	V32	INC /w Review Type 3	EXCLUDED
Vacation Pay Off L 7.5% NIR	V33	EXCLUDED	EXCLUDED
Vacation Pay Off L 4.50%	V52	INC /w Review Type 3	EXCLUDED
Vacation Pay Off L 4.50% NIR	V53	EXCLUDED	EXCLUDED
Vacation Pay Off L 6.50%	V62	INC /w Review Type 3	EXCLUDED
Vacation Pay Off L 6.50% NIR	V63	EXCLUDED	EXCLUDED
Vacation Pay Off L 7.0% NIR	V73	EXCLUDED	EXCLUDED
Vacation Pay Off L 7.00%	V72	INC /w Review Type 3	EXCLUDED
Vacation Pay Off L10.0%	V42	INC /w Review Type 3	EXCLUDED
Vacation Pay Off L10.0% NIR	V43	EXCLUDED	EXCLUDED
Voluntary Salary Waiver (within base pay)	VSW	INCLUDED	INCLUDED
Voluntary Temporary Waiver	VTW	INCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

Contra Costa County Employees' Retirement Association

Compensation for Retirement Purposes

August 28, 2024

Employer: Contra Costa County

		Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013	PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013
Pay Code Description	Pay Code	INCLUDED/EXCL	INCLUDED/EXCL
Witness Pay	WPY	EXCLUDED	EXCLUDED
Workers Comp Pay @ 70%	WCB	EXCLUDED	EXCLUDED
Workers Comp Pay @ 75%	WC9	EXCLUDED	EXCLUDED
Workers Comp Pay @ 80%	WC8	EXCLUDED	EXCLUDED
Workers Comp Pay @ 86%	WC6	EXCLUDED	EXCLUDED
Workers Comp Pay @ 87%	WC2	EXCLUDED	EXCLUDED
Workers Comp Pay @ 88%	WC3	EXCLUDED	EXCLUDED
Workers Comp Pay @ 94%	WC4	EXCLUDED	EXCLUDED
Workers Comp Prior Period Adj	WC5	EXCLUDED	EXCLUDED
Wrkr Comp Full 4850 Safety EE	WC1	EXCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

**Contra Costa County Employees' Retirement Association
 Compensation for Retirement Purposes
 August 28, 2024**

Employer: Contra Costa County Employees' Retirement Association

		Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013	PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013
Pay Code Description	Pay Code	INCLUDED/EXCL	INCLUDED/EXCL
Accounting Differential 5%	C38	INCLUDED	EXCLUDED
Adjustment non-ret	AND	EXCLUDED	EXCLUDED
Adjustment ret	ADJ	INC /w Review Type 5	INC /w Review Type 5
Administrative Leave Taken (within base pay)	ALP	INCLUDED	INCLUDED
Base Salary (within base pay)	REG	INCLUDED	INCLUDED
Board Stipend	M58	EXCLUDED	EXCLUDED
Comp Pay off	OCS	EXCLUDED	EXCLUDED
Comp Taken (within base pay)	OCP	INCLUDED	INCLUDED
Families First-FMLA (within base pay)	FFFMEX	INCLUDED	INCLUDED
Families First-Paid Sick Leave-EE (within base pay)	FFPSLE	INCLUDED	INCLUDED
Families First-Paid Sick Leave-FAM (within base pay)	FFPSLF	INCLUDED	INCLUDED
Flexible Compensation Taken (within base pay)	FWP	INCLUDED	INCLUDED
Holiday (within base pay)	E10	INCLUDED	INCLUDED
Jury Duty (within base pay)	JRYDTY	INCLUDED	INCLUDED
Longevity 2.5%	L05	INCLUDED	EXCLUDED
Longevity 5%	L06	INCLUDED	EXCLUDED
Longevity 7%	L07	INCLUDED	EXCLUDED
Lump Sum	LMPSUM	INCLUDED	EXCLUDED
Negotiations (within base pay)	T03	INCLUDED	INCLUDED
Non-productive (within base pay)	T01	INCLUDED	INCLUDED
OT Adjustment	OTADJ	EXCLUDED	EXCLUDED
Personal Holiday no ret	PHN	EXCLUDED	EXCLUDED
Personal Holiday no-ret 2.5%	PLN	EXCLUDED	EXCLUDED
Personal Holiday ret	PHP	EXCLUDED	EXCLUDED
Personal Holiday Taken (within base pay)	PLP	INCLUDED	INCLUDED
Prior Period Overtime	POT	EXCLUDED	EXCLUDED
Severance	SEV	EXCLUDED	EXCLUDED
Sick Leave Taken (within base pay)	SCK-2RS	INCLUDED	INCLUDED
Vacation (within base pay)	VAC	INCLUDED	INCLUDED
Vacation pay off with 2.5% and no ret	V03	EXCLUDED	EXCLUDED
Vacation payoff with 5% and no ret	V23	EXCLUDED	EXCLUDED
Vacation payoff with no ret	V03	EXCLUDED	EXCLUDED
Vacation Sale	V01	INCLUDED	EXCLUDED
Vacation Sale 2.5% Long	V11	INCLUDED	EXCLUDED
Vacation Sale 5% Long	V21	INCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

**Contra Costa County Employees' Retirement Association
 Compensation for Retirement Purposes
 August 28, 2024
 Employer: Bethel Island Municipal Improvement District**

		Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013	PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013
Pay Code Description	Pay Code	INCLUDED/EXCL	INCLUDED/EXCL
Base Salary (within base pay)	REG	INCLUDED	INCLUDED
Doubletime		EXCLUDED	EXCLUDED
Health Insurance Allowance		INCLUDED	EXCLUDED
Health Insurance in Lieu		EXCLUDED	EXCLUDED
Overtime		EXCLUDED	EXCLUDED
Sick Time (within base pay)		INCLUDED	INCLUDED
Vacation Pay (sale of vacation)	VS	INCLUDED	INCLUDED
Vacation Pay (within base pay)		INCLUDED	INCLUDED
Vacation Payout	VAC	EXCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

**Contra Costa County Employees' Retirement Association
 Compensation for Retirement Purposes
 August 28, 2024
 Employer: Byron Brentwood Knightsen Union Cemetery District**

		Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013	PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013
Pay Code Description	Pay Code	INCLUDED/EXCL	INCLUDED/EXCL
Anniversary (within base pay)	ANN	INCLUDED	INCLUDED
Base Salary (within base pay)	REG	INCLUDED	INCLUDED
Bereavement Leave (within base pay)	BER	INCLUDED	INCLUDED
Covid (within base pay)	COV	INCLUDED	INCLUDED
Holiday Pay (within base pay)	HOL	INCLUDED	INCLUDED
Personal Day (within base pay)	PER	INCLUDED	INCLUDED
Sick Pay (within base pay)	SIC	INCLUDED	INCLUDED
Vacation Payout	VAC	EXCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

Contra Costa County Employees' Retirement Association
Compensation for Retirement Purposes
August 28, 2024
Employer: Central Contra Costa Sanitation District

		Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013	PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013
Pay Code Description	Pay Code	INCLUDED/EXCL	INCLUDED/EXCL
Base Salary (within base pay)	REG	INCLUDED	INCLUDED
Bilingual Pay	CBP	INCLUDED	EXCLUDED
CAFETERIA PLAN CASH - GENERAL	CC1	INCLUDED	EXCLUDED
Call Out Pay Premium		EXCLUDED	EXCLUDED
Capital Overtime Premium		EXCLUDED	EXCLUDED
Capital Regular	REG	INCLUDED	INCLUDED
Capital Regular Retro Active	REG	INCLUDED	INCLUDED
Capital Relief Ops Differential	ROD	INCLUDED	EXCLUDED
Capital Relief Ops Overtime Premium		EXCLUDED	EXCLUDED
Capital Swing Shift Overtime Premium		EXCLUDED	EXCLUDED
CC Earnings Balance for Absences	REG	INCLUDED	INCLUDED
Cell Phone Stipend		EXCLUDED	EXCLUDED
CLASS A/B LICENSE PAY	CAB	INCLUDED	EXCLUDED
COVID Telework Capital Regular	REG	INCLUDED	INCLUDED
COVID Telework OM Regular	REG	INCLUDED	INCLUDED
COVID Telework Regular	REG	INCLUDED	INCLUDED
Crane/Boom Truck Pay	CCR	INCLUDED	EXCLUDED
Double OT Premium		EXCLUDED	EXCLUDED
Excess Holiday Comp Payout		EXCLUDED	EXCLUDED
Fatigue Time Worked		EXCLUDED	EXCLUDED
Holiday Pay	REG	INCLUDED	INCLUDED
Holiday Premium	HP2	INCLUDED	EXCLUDED
Holiday Premium 2x	C31	INCLUDED	EXCLUDED
Holiday Premium Night	C32	INCLUDED	EXCLUDED
Holiday Premium Swing	C26	INCLUDED	EXCLUDED
Longevity Pay	L05	INCLUDED	EXCLUDED
Make-up Time Worked	REG	INCLUDED	INCLUDED
Meal Allowance - Local 1	CMA	INCLUDED	EXCLUDED
Meal Allowance - MSCG	CMA	INCLUDED	EXCLUDED
Night Shift Differential	SNS	INCLUDED	EXCLUDED
Night Shift Overtime		EXCLUDED	EXCLUDED
Night Shift Overtime Premium		EXCLUDED	EXCLUDED
Out of Class	COC	INCLUDED	EXCLUDED
OUT OF CLASS OVERTIME		EXCLUDED	EXCLUDED
Paid Overtime OM Premium		EXCLUDED	EXCLUDED
Paid Overtime Premium		EXCLUDED	EXCLUDED
Provisional Pay		EXCLUDED	EXCLUDED
Registration Differential	CRD	INCLUDED	EXCLUDED
Regular Pay	REG	INCLUDED	INCLUDED
Regular Pay OM	REG	INCLUDED	INCLUDED
Relief Ops Differential	ROD	INCLUDED	EXCLUDED
Relief Ops Overtime		EXCLUDED	EXCLUDED
Relief Ops Overtime OM		EXCLUDED	EXCLUDED
Relief Ops Overtime OM Premium		EXCLUDED	EXCLUDED
Relief Ops Overtime Premium		EXCLUDED	EXCLUDED
Stand By Pay	C13	EXCLUDED	EXCLUDED
Stand By Pay Voluntary		EXCLUDED	EXCLUDED
Swing Shift Differential	C04	INCLUDED	EXCLUDED
Swing Shift Overtime Premium		EXCLUDED	EXCLUDED
Telework Capital Regular	REG	INCLUDED	INCLUDED
Telework Regular Pay	REG	INCLUDED	INCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

Telework Regular Pay OM	REG	INCLUDED	INCLUDED
Telework Reserve Capital	REG	INCLUDED	INCLUDED
Telework Reserve OM	REG	INCLUDED	INCLUDED
Telework Reserve Regular	REG	INCLUDED	INCLUDED
Vacation Payout	V01	INCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

**Contra Costa County Employees' Retirement Association
 Compensation for Retirement Purposes
 August 28, 2024
 Employer: Contra Costa County Housing Authority**

		Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013	PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013
Pay Code Description	Pay Code	INCLUDED/EXCL	INCLUDED/EXCL
Admin Leave (within base pay)	Q	INCLUDED	INCLUDED
Bilingual	D	INCLUDED	EXCLUDED
CA SPSL 22 (within base pay)	1XQ	INCLUDED	INCLUDED
CA SUP PSL (within base pay)	1XX	INCLUDED	INCLUDED
COMPTIME (within base pay)	C	INCLUDED	INCLUDED
DEFERRED INC.	K	EXCLUDED	EXCLUDED
Double Time	G	EXCLUDED	EXCLUDED
ED Auto Allowance	N	INCLUDED	EXCLUDED
Jury Duty (within base pay)	J	INCLUDED	INCLUDED
Longevity	L	INCLUDED	EXCLUDED
Misc	M	INC /w Review Type 5	INC /w Review Type 5
On Call	O	EXCLUDED	EXCLUDED
Other (within base pay)	B	INCLUDED	INCLUDED
PERSONAL (within base pay)	H	INCLUDED	INCLUDED
PRIOR OT	POT	EXCLUDED	EXCLUDED
Regular (within base pay)	REG	INCLUDED	INCLUDED
Reimbursement for Remote Office Expense	ROE	EXCLUDED	EXCLUDED
Retro Pay (within base pay)	R	INCLUDED	INCLUDED
S/L Payoff	F	EXCLUDED	EXCLUDED
Sick (within base pay)	S	INCLUDED	INCLUDED
Term Pay	T	EXCLUDED	EXCLUDED
VACATION (within base pay)	V	INCLUDED	INCLUDED
Vacation Payout	P	INCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

Contra Costa County Employees' Retirement Association
Compensation for Retirement Purposes
August 28, 2024
Employer: Moraga Orinda Fire Protection District

		Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013	PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013
Pay Code Description	Pay Code	INCLUDED/EXCL	INCLUDED/EXCL
5% Ambulance	124	INCLUDED	EXCLUDED
ACLS Incentive	181	INCLUDED	EXCLUDED
Admin	200	EXCLUDED	EXCLUDED
Admin Payoff NR	201	EXCLUDED	EXCLUDED
Ambulance Stipend NR (PEPRA)	123	EXCLUDED	EXCLUDED
Baccal & Masters	112	INCLUDED	EXCLUDED
Bachelor	113	INCLUDED	EXCLUDED
Base Salary (within base pay)	REG	INCLUDED	INCLUDED
BC Coverage	136	EXCLUDED	EXCLUDED
COVID Sick Leave	1XT	EXCLUDED	EXCLUDED
CPR Earnings	106	EXCLUDED	EXCLUDED
CPR OT Earnings	107	EXCLUDED	EXCLUDED
CT Earned	134	EXCLUDED	EXCLUDED
CT Payoff	133	EXCLUDED	EXCLUDED
CT Taken	132	EXCLUDED	EXCLUDED
Ed 2.5%	110	INCLUDED	EXCLUDED
ED 2.5% Bachelors&FTM	111	INCLUDED	EXCLUDED
ED NR (PEPRA)	114	EXCLUDED	EXCLUDED
Fire Retirement Allotment	120	INCLUDED	EXCLUDED
Float	216	EXCLUDED	EXCLUDED
Float Payoff	218	INCLUDED	EXCLUDED
Float Payoff NR (PEPRA)	217	EXCLUDED	EXCLUDED
FLSA	333	INCLUDED	EXCLUDED
FLSA Additional	334	INCLUDED	EXCLUDED
FLSA NR (PEPRA)	335	EXCLUDED	EXCLUDED
FLSA+ NR (PEPRA)	336	EXCLUDED	EXCLUDED
FRA NR (PEPRA)	121	EXCLUDED	EXCLUDED
Holiday NR (PEPRA)	213	EXCLUDED	EXCLUDED
Holiday Pay 1230	215	INCLUDED	EXCLUDED
Leave WO Pay	220	INCLUDED	EXCLUDED
Leave WO Pay Non Contr	221	EXCLUDED	EXCLUDED
OT Earnings	108	EXCLUDED	EXCLUDED
Prior Period OT	POT	EXCLUDED	EXCLUDED
Retiree Health Savings	904	EXCLUDED	EXCLUDED
Retro Pay OT	156	EXCLUDED	EXCLUDED
Retro Pay ST	160	INCLUDED	EXCLUDED
SDI Pay	237	INCLUDED	EXCLUDED
Shift Diff 9%	115	INCLUDED	EXCLUDED
Sick Leave	210	EXCLUDED	EXCLUDED
Sick Leave Payoff NR (PEPRA)	211	EXCLUDED	EXCLUDED
ST Hourly	105	EXCLUDED	EXCLUDED
Strike Team BFOT	138	EXCLUDED	EXCLUDED
Strike Team OT	137	EXCLUDED	EXCLUDED
Strike Team ST	139	EXCLUDED	EXCLUDED
Uniform Allowance	180	INCLUDED	EXCLUDED

Uniform NR (PEPRA)	182	EXCLUDED	EXCLUDED
Upgrade Pay	125	INCLUDED	EXCLUDED
Upgrade Pay NR	126	EXCLUDED	EXCLUDED
Vac Payoff	207	INC /w Review Type 3	EXCLUDED
Vac Payoff NR (PEPRA)	206	EXCLUDED	EXCLUDED
Vac Sale	208	INCLUDED	EXCLUDED
Vacation	205	EXCLUDED	EXCLUDED
WC Pay 100%	235	INCLUDED	EXCLUDED
WC Pay 87%	236	INCLUDED	EXCLUDED

**Contra Costa County Employees' Retirement Association
 Compensation for Retirement Purposes
 August 28, 2024
 Employer: Contra Costa Mosquito and Vector Control District**

		Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013	PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013
Pay Code Description	Pay Code	INCLUDED/EXCL	INCLUDED/EXCL
Administrative Leave	AL	EXCLUDED	EXCLUDED
Base Salary (within base pay)	REG	INCLUDED	INCLUDED
Floater Holiday	FH	EXCLUDED	EXCLUDED
Medical Waiver	MED	INCLUDED	EXCLUDED
Merit (Performance) Pay	LNG	INCLUDED	EXCLUDED
Out of Class	DIF	INCLUDED	EXCLUDED
Overtime	OT	EXCLUDED	EXCLUDED
Overtime Cash Out (Comp Time)	OTC	EXCLUDED	EXCLUDED
Safety Award	SAF	INCLUDED	EXCLUDED
Sick Leave	SL	EXCLUDED	EXCLUDED
Vacation Cashout	VAC	INCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

**Contra Costa County Employees' Retirement Association
 Compensation for Retirement Purposes
 August 28, 2024
 Employer: Rodeo Sanitary District**

		Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013	PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013
Pay Code Description	Pay Code	INCLUDED/EXCL	INCLUDED/EXCL
Administrative Duties (within base pay)		INCLUDED	INCLUDED
Annual Safety Boot Allowance		EXCLUDED	EXCLUDED
Audit (within base pay)		INCLUDED	INCLUDED
Base Salary (within base pay)	REG	INCLUDED	INCLUDED
Bereavement Leave (within base pay)		INCLUDED	INCLUDED
Cell Phone Stipend	CELL	INCLUDED	EXCLUDED
Collection System Maintenance (within base pay)		INCLUDED	INCLUDED
Directors Payroll (within base pay)		INCLUDED	INCLUDED
District Management (within base pay)		INCLUDED	INCLUDED
Double Time Hourly Rate		EXCLUDED	EXCLUDED
Floating Holiday (within base pay)		INCLUDED	INCLUDED
Holiday Pay @ 1.50		EXCLUDED	EXCLUDED
Jury Duty (within base pay)		INCLUDED	INCLUDED
Laboratory (within base pay)		INCLUDED	INCLUDED
License/Certification Prep (within base pay)		INCLUDED	INCLUDED
Main Pump Station (within base pay)		INCLUDED	INCLUDED
Medical Administration (within base pay)		INCLUDED	INCLUDED
Medical Cash In Lieu		EXCLUDED	EXCLUDED
On Call Flat Rate Pay	OC	EXCLUDED	EXCLUDED
Operations (within base pay)		INCLUDED	INCLUDED
OT Hourly Rate		EXCLUDED	EXCLUDED
Paid Administrative Leave (within base pay)		INCLUDED	INCLUDED
Phone Stipend		EXCLUDED	EXCLUDED
Plant Maintenance (within base pay)		INCLUDED	INCLUDED
Pollution Prevention Program (within base pay)		INCLUDED	INCLUDED
Seminar/Workshop (within base pay)		INCLUDED	INCLUDED
Sewer Inspections (within base pay)		INCLUDED	INCLUDED
Sewer Lateral Program (within base pay)		INCLUDED	INCLUDED
Sick Pay (within base pay)		INCLUDED	INCLUDED
Special Class (within base pay)		INCLUDED	INCLUDED
Tormey Pump Station (within base pay)		INCLUDED	INCLUDED
Training (within base pay)		INCLUDED	INCLUDED
Vacation Pay (within base pay)		INCLUDED	INCLUDED
Vacation Pay Off	VAC	EXCLUDED	EXCLUDED
Vacation Payout	VAC	EXCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

**Contra Costa County Employees' Retirement Association
 Compensation for Retirement Purposes
 August 28, 2024
 Employer: San Ramon Valley Fire Protection District**

		Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013	PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013
Pay Code Description	Pay Code	INCLUDED/EXCL	INCLUDED/EXCL
Acting Pay	ACT	INCLUDED	EXCLUDED
Annual Admin Leave Cash Out	ALC	INCLUDED	EXCLUDED
Annual Vacation Cash Out	VAO	INCLUDED	EXCLUDED
Base Salary (within base pay)	REG	INCLUDED	INCLUDED
FLSA	FOT	INCLUDED	EXCLUDED
Holiday Pay	HOL	INCLUDED	EXCLUDED
Longevity Pay	LNG	INCLUDED	EXCLUDED
Opt-Out Medical Pay	MOO	INCLUDED	EXCLUDED
Overtime		EXCLUDED	EXCLUDED
Preceptor Pay	PMP	INCLUDED	EXCLUDED
Retirement Allotment	RET	INCLUDED	EXCLUDED
Terminal Payout of Admin Leave	ADM	EXCLUDED	EXCLUDED
Terminal Payout of Vacation	VAC	EXCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

**Contra Costa County Employees' Retirement Association
 Compensation for Retirement Purposes
 August 28, 2024
 Employer: Contra Costa Superior Court**

		Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013	PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013
Pay Code Description	Pay Code	INCLUDED/EXCL	INCLUDED/EXCL
350 Offset Adj	263	EXCLUDED	EXCLUDED
350 Offset Adj	563	EXCLUDED	EXCLUDED
Absnt w/o Pay	211	EXCLUDED	EXCLUDED
Absnt w/o Pay	511	EXCLUDED	EXCLUDED
ADJ RET BASE	290	EXCLUDED	EXCLUDED
ADJ RET BASE	590	EXCLUDED	EXCLUDED
ADJ SDI Earnings	371	EXCLUDED	EXCLUDED
Adm Leave	364	EXCLUDED	EXCLUDED
ADM P/O Long	477	EXCLUDED	EXCLUDED
ADM PAY OFF	455	EXCLUDED	EXCLUDED
ADM Payoff	476	EXCLUDED	EXCLUDED
ADM PAYOFF HR	556	EXCLUDED	EXCLUDED
ADM PAYOFF HR	256	EXCLUDED	EXCLUDED
Adm Payoff LO	456	EXCLUDED	EXCLUDED
Admin Pay	291	EXCLUDED	EXCLUDED
Admin Pay	591	EXCLUDED	EXCLUDED
Admin Payoff Retire	255	EXCLUDED	EXCLUDED
Admin Payoff Retire	555	EXCLUDED	EXCLUDED
Anniversary Day	387	EXCLUDED	EXCLUDED
AUTO ALLOW EPR	228	EXCLUDED	EXCLUDED
AUTO ALLOW EPR	528	EXCLUDED	EXCLUDED
AUTO ALLOWANCE DH	213	EXCLUDED	EXCLUDED
AUTO ALLOWANCE DH	513	EXCLUDED	EXCLUDED
AUTO ALLOWANCE EJ	214	EXCLUDED	EXCLUDED
AUTO ALLOWANCE EJ	514	EXCLUDED	EXCLUDED
BI-LINGUAL PAY	221	INCLUDED	EXCLUDED
BI-LINGUAL PAY	521	INCLUDED	EXCLUDED
BONUS SP PAY	225	EXCLUDED	EXCLUDED
Bonus Sp Pay	525	EXCLUDED	EXCLUDED
California Cert Real Time Reporting Differential	CRR	INCLUDED	EXCLUDED
Cat Bnk Recvd	310	EXCLUDED	EXCLUDED
CAT COMP BNK	304	EXCLUDED	EXCLUDED
CAT COMP IND	308	EXCLUDED	EXCLUDED
CAT ER RECVD	312	EXCLUDED	EXCLUDED
CAT HLCMP BNK	303	EXCLUDED	EXCLUDED
CAT HLCMP IND	307	EXCLUDED	EXCLUDED
CAT IND RECVD	311	EXCLUDED	EXCLUDED
CAT PRHOL BNK	302	EXCLUDED	EXCLUDED
CAT PRHOL IND	306	EXCLUDED	EXCLUDED
Cat Vac Bnk	301	EXCLUDED	EXCLUDED
CAT VAC IND	305	EXCLUDED	EXCLUDED
Certified Real Time Court Reporter Pay (CRR)	CRR	INCLUDED	EXCLUDED
Clerical Out of Class	COC	INCLUDED	EXCLUDED
COMP Payoff	478	EXCLUDED	EXCLUDED
Computer Aided Transcript Differential	CAT	INCLUDED	EXCLUDED
Contract Stwh	346	EXCLUDED	EXCLUDED
Court Clerk Trainer Differential	T43	INCLUDED	EXCLUDED
Court Interpreter (Per Diem)	396	EXCLUDED	EXCLUDED
Court Rep Pay (Per Diem)	397	EXCLUDED	EXCLUDED
CRT Reporting	203	INCLUDED	EXCLUDED
CRT Reporting	503	INCLUDED	EXCLUDED
CT REPORT TRAIN	388	EXCLUDED	EXCLUDED
Dent-N-Qual-ER	856	EXCLUDED	EXCLUDED
Dent-Qual-ER	877	EXCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

**Contra Costa County Employees' Retirement Association
 Compensation for Retirement Purposes
 August 28, 2024
 Employer: Contra Costa Superior Court**

		Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013	PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013
Pay Code Description	Pay Code	INCLUDED/EXCL	INCLUDED/EXCL
Dual Lanugage Interpreter Differential	238	INCLUDED	EXCLUDED
Dual Lanugage Interpreter Differential	538	INCLUDED	EXCLUDED
EMP Prof Dev	318	EXCLUDED	EXCLUDED
Equity Stipend	SC2	INCLUDED	EXCLUDED
Equity Stipend	SC5	INCLUDED	EXCLUDED
Facilities Clk OT	368	EXCLUDED	EXCLUDED
Facilities to Clerk IV	249	INCLUDED	EXCLUDED
Facilities to Clerk IV	549	INCLUDED	EXCLUDED
Finder's Fee	FFE	INCLUDED	EXCLUDED
Flex Benefit	251	INCLUDED	EXCLUDED
Flex Benefit	551	INCLUDED	EXCLUDED
Flex Benefit	750	EXCLUDED	EXCLUDED
Flex Hours	391		
FlexTime Pay/O	269	EXCLUDED	EXCLUDED
FlexTime Pay/O	569	EXCLUDED	EXCLUDED
Fringe Benefit	860	EXCLUDED	EXCLUDED
FRNG FEDOnly	859	EXCLUDED	EXCLUDED
Furlough	266	EXCLUDED	EXCLUDED
Furlough	267	EXCLUDED	EXCLUDED
Furlough	268	EXCLUDED	EXCLUDED
Furlough	381	EXCLUDED	EXCLUDED
Furlough	566	EXCLUDED	EXCLUDED
Furlough	567	EXCLUDED	EXCLUDED
Furlough	568	EXCLUDED	EXCLUDED
Furlough W/O PAY	212	EXCLUDED	EXCLUDED
Furlough W/O PAY	512	EXCLUDED	EXCLUDED
GTL Earnings	706	EXCLUDED	EXCLUDED
Hiring Bonus	HRB	INCLUDED	EXCLUDED
Hol Hrs Ret	276	EXCLUDED	EXCLUDED
Hol Hrs Ret	576	EXCLUDED	EXCLUDED
Hol P/O Long	480	EXCLUDED	EXCLUDED
Hol Pay @1.5	231	EXCLUDED	EXCLUDED
Hol Pay @1.5	531	EXCLUDED	EXCLUDED
HOL PAY ADJ	278	EXCLUDED	EXCLUDED
HOL PAY ADJ	578	EXCLUDED	EXCLUDED
HOL PAY OFF	461	EXCLUDED	EXCLUDED
HOL PAY OFF	479	EXCLUDED	EXCLUDED
HOLIDAY EARNED	496	EXCLUDED	EXCLUDED
Holiday Excess Hours	277	EXCLUDED	EXCLUDED
Holiday Excess Hours	577	EXCLUDED	EXCLUDED
Holiday Hours Taken	373	EXCLUDED	EXCLUDED
Hurricane Fund	417	EXCLUDED	EXCLUDED
Interpreter PD	270	EXCLUDED	EXCLUDED
Interpreter PD	570	EXCLUDED	EXCLUDED
Interpt PD LV	369	EXCLUDED	EXCLUDED
Jury Duty Hours	377	EXCLUDED	EXCLUDED
Lead Court Reporter (after 6 months)	544	INCLUDED	EXCLUDED
Lead Court Reporter (after 6 mos.)	244	INCLUDED	EXCLUDED
Lead Court Reporter (first 6 months)	240	INCLUDED	EXCLUDED
Lead Court Reporter (first 6 months)	540	INCLUDED	EXCLUDED
Lead Court Reporter Cert. basic (afert 6 months)	245	INCLUDED	EXCLUDED
Lead Court Reporter Cert. basic (afert 6 months)	545	INCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

**Contra Costa County Employees' Retirement Association
 Compensation for Retirement Purposes
 August 28, 2024
 Employer: Contra Costa Superior Court**

		Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013	PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013
Pay Code Description	Pay Code	INCLUDED/EXCL	INCLUDED/EXCL
Lead Court Reporter Cert. basic (first 6 months)	241	INCLUDED	EXCLUDED
Lead Court Reporter Cert. basic (first 6 months)	541	INCLUDED	EXCLUDED
Lead Court Reporter Cert. CRR (first 6 months)	242	INCLUDED	EXCLUDED
Lead Court Reporter Cert. CRR (first 6 months)	542	INCLUDED	EXCLUDED
LEAD CUSTODIAN	547	INCLUDED	EXCLUDED
LEAD CUSTODIAN	247	INCLUDED	EXCLUDED
Lead Custodian Overtime	367	EXCLUDED	EXCLUDED
Lead Differential	LED	INCLUDED	EXCLUDED
LEAD Legal Research Attorney Differential	246	INCLUDED	EXCLUDED
LEAD Legal Research Attorney Differential	546	INCLUDED	EXCLUDED
LMPSUM EXMPT	LSP	INCLUDED	EXCLUDED
LOA TRANSCRIPTS	223	EXCLUDED	EXCLUDED
LOA TRANSCRIPTS	523	EXCLUDED	EXCLUDED
LOA W/C APPT	224	EXCLUDED	EXCLUDED
LOA W/C APPT	524	EXCLUDED	EXCLUDED
Longevity 2.5%	222	INCLUDED	EXCLUDED
Longevity 2.5%	522	INCLUDED	EXCLUDED
Longevity 4%	229	INCLUDED	EXCLUDED
Longevity 4%	529	INCLUDED	EXCLUDED
LTD Pay	374	EXCLUDED	EXCLUDED
Lump Sum N/R	287	EXCLUDED	EXCLUDED
Lump Sum N/R	587	EXCLUDED	EXCLUDED
Lump Sum Pay No Differential	LSP	INCLUDED	EXCLUDED
Lump Sum SPC	499	EXCLUDED	EXCLUDED
LV W/O PERM	210	EXCLUDED	EXCLUDED
LV W/O PERM	510	EXCLUDED	EXCLUDED
Med-N-Qual-ER	855	EXCLUDED	EXCLUDED
Med-Qual-ER	876	EXCLUDED	EXCLUDED
MILITARY ADMIN	422	EXCLUDED	EXCLUDED
Military Leave Hours	375	EXCLUDED	EXCLUDED
MILITARY PERHOL	423	EXCLUDED	EXCLUDED
MILITARY VAC	421	EXCLUDED	EXCLUDED
Negotiation T/O	382	EXCLUDED	EXCLUDED
NIGHT DIFF-EVEN	248	INCLUDED	EXCLUDED
Night Shift Differential	548	INCLUDED	EXCLUDED
NONTX SDI REM	350	EXCLUDED	EXCLUDED
NQ Den DP	869	EXCLUDED	EXCLUDED
Nq Dompnr Frg	880	EXCLUDED	EXCLUDED
NQ Med DP	868	EXCLUDED	EXCLUDED
NQ TTL DOM PTR	898	EXCLUDED	EXCLUDED
NQ Vis DP	870	EXCLUDED	EXCLUDED
O.T. Adj	286	EXCLUDED	EXCLUDED
O/T ADJUSTMENT	342	EXCLUDED	EXCLUDED
One-Time Lump Sum	OLS	INCLUDED	EXCLUDED
OT Above 1.05	361	EXCLUDED	EXCLUDED
OT Clerk III-IV	365	EXCLUDED	EXCLUDED
OT Comp 1.0	450	EXCLUDED	EXCLUDED
OT Comp 1.5	451	EXCLUDED	EXCLUDED
OT Earn 1.5	360	EXCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

Contra Costa County Employees' Retirement Association
Compensation for Retirement Purposes
August 28, 2024
Employer: Contra Costa Superior Court

		Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013	PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013
Pay Code Description	Pay Code	INCLUDED/EXCL	INCLUDED/EXCL
OT Excess Pay	457	EXCLUDED	EXCLUDED
OT Hours Pay Off	420	EXCLUDED	EXCLUDED
OT Hours Taken	363	EXCLUDED	EXCLUDED
Parental Release	385	EXCLUDED	EXCLUDED
PER HOL PAYOFF	468	EXCLUDED	EXCLUDED
Per Hol Taken	370	EXCLUDED	EXCLUDED
Personal Holiday Longevity	279	EXCLUDED	EXCLUDED
Personal Holiday Longevity	579	EXCLUDED	EXCLUDED
Personal Holiday Retire	280	EXCLUDED	EXCLUDED
Personal Holiday Retire	580	EXCLUDED	EXCLUDED
Personal Leave	378	EXCLUDED	EXCLUDED
PH P/O Long	474	EXCLUDED	EXCLUDED
PH Payoff	473	EXCLUDED	EXCLUDED
PH Payoff Long	471	EXCLUDED	EXCLUDED
Q Dompnr Fring	881	EXCLUDED	EXCLUDED
QL TTL DOM PTR	899	EXCLUDED	EXCLUDED
Qual Den DP	866	EXCLUDED	EXCLUDED
Qual Med DP	865	EXCLUDED	EXCLUDED
Qual Vis DP	867	EXCLUDED	EXCLUDED
Registered Merit Reporter Differential	RMR	INCLUDED	EXCLUDED
Registered Professional Reporter Differential	RRD	INCLUDED	EXCLUDED
Regular Pay (within base pay)	REG	INCLUDED	INCLUDED
RET COMP RATE	564	EXCLUDED	EXCLUDED
RET COMP RATE	264	EXCLUDED	EXCLUDED
RET HRS ADJ	293	EXCLUDED	EXCLUDED
RET HRS ADJ	593	EXCLUDED	EXCLUDED
Retention Bonus	RTB	INCLUDED	EXCLUDED
Retro Salary Pay (within base pay)	RSI	INCLUDED	INCLUDED
SDI Sick Leave	344	EXCLUDED	EXCLUDED
Service Award	SVA	INCLUDED	EXCLUDED
Settlement Pay	493	EXCLUDED	EXCLUDED
Share the Savings	250	INCLUDED	EXCLUDED
Share the Savings	550	INCLUDED	EXCLUDED
Sick Leave Taken	384	EXCLUDED	EXCLUDED
Sick Lv Payoff	466	EXCLUDED	EXCLUDED
Sick Pay Off	416	EXCLUDED	EXCLUDED
State CMP Doc	494	EXCLUDED	EXCLUDED
STOT Clerkill-I	366	EXCLUDED	EXCLUDED
Supp Paid Sick	390	EXCLUDED	EXCLUDED
Suspense WOP	292	EXCLUDED	EXCLUDED
Suspense WOP	592	EXCLUDED	EXCLUDED
Temp Judge	398	EXCLUDED	EXCLUDED
Union Training	389	EXCLUDED	EXCLUDED
VAC ADJUSTMENT	275	EXCLUDED	EXCLUDED
VAC ADJUSTMENT	575	EXCLUDED	EXCLUDED
VAC Cashout	453	EXCLUDED	EXCLUDED
VAC Cashout L	454	EXCLUDED	EXCLUDED
Vac Hrs Taken	386	EXCLUDED	EXCLUDED
Vac P/O Long	475	EXCLUDED	EXCLUDED
Vac Payoff	472	EXCLUDED	EXCLUDED
VAC PAYOFF HRS	274	EXCLUDED	EXCLUDED
VAC PAYOFF HRS	574	EXCLUDED	EXCLUDED
Vacation Payoff Retire	273	EXCLUDED	EXCLUDED
Vacation Payoff Retire	573	EXCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.

**Contra Costa County Employees' Retirement Association
 Compensation for Retirement Purposes
 August 28, 2024
 Employer: Contra Costa Superior Court**

		Legacy Pensionable Compensation Membership (\$31461) BEFORE 1/1/2013	PEPRA Pensionable Compensation (\$7522.34) Membership AFTER 1/1/2013
Pay Code Description	Pay Code	INCLUDED/EXCL	INCLUDED/EXCL
Vacation Sale	271	INCLUDED	EXCLUDED
Vacation Sale	571	INCLUDED	EXCLUDED
Vacation Sale Longevity	272	INCLUDED	EXCLUDED
Vacation Sale Longevity	572	INCLUDED	EXCLUDED
Vis-N-Qual-ER	857	EXCLUDED	EXCLUDED
Vis-Qual-ER	878	EXCLUDED	EXCLUDED
VTO Even	265	EXCLUDED	EXCLUDED
VTO Odd	565	EXCLUDED	EXCLUDED
WC 100 Offest	204	EXCLUDED	EXCLUDED
WC 100 OFFSET	206	EXCLUDED	EXCLUDED
WC 100 OFFSET	208	EXCLUDED	EXCLUDED
Wc 100 Offset	294	EXCLUDED	EXCLUDED
Wc 100 Offset	296	EXCLUDED	EXCLUDED
Wc 100 Offset	504	EXCLUDED	EXCLUDED
WC 100 OFFSET	506	EXCLUDED	EXCLUDED
Wc 100 Offset	508	EXCLUDED	EXCLUDED
WC 100 OFFSET	226	EXCLUDED	EXCLUDED
Wc 100 Offset	594	EXCLUDED	EXCLUDED
Wc 100 Offset	596	EXCLUDED	EXCLUDED
WC 100 OFFSET	215	EXCLUDED	EXCLUDED
WC 100 OFFSET	217	EXCLUDED	EXCLUDED
WC 100 OFFSET	219	EXCLUDED	EXCLUDED
Wc 100 Offset	515	EXCLUDED	EXCLUDED
WC 100 OFFSET	517	EXCLUDED	EXCLUDED
Wc 100 Offset	519	EXCLUDED	EXCLUDED
Wc 100 Offset	526	EXCLUDED	EXCLUDED
WC 100%	295	EXCLUDED	EXCLUDED
WC 66.67%	297	EXCLUDED	EXCLUDED
WC 66.67%	597	EXCLUDED	EXCLUDED
WC ADJ EARN	372	EXCLUDED	EXCLUDED
WC PRIOR ADJ	337	EXCLUDED	EXCLUDED
WC100%	595	EXCLUDED	EXCLUDED
WRK CMP 71%	227	EXCLUDED	EXCLUDED
Wrk Cmp 71%	527	EXCLUDED	EXCLUDED
WRK CMP 73%	220	EXCLUDED	EXCLUDED
WRK CMP 73%	520	EXCLUDED	EXCLUDED
WRK CMP 75%	218	EXCLUDED	EXCLUDED
Wrk Cmp 75%	518	EXCLUDED	EXCLUDED
WRK CMP 77%	216	EXCLUDED	EXCLUDED
WRK CMP 77%	516	EXCLUDED	EXCLUDED
WRK CMP 80%	209	EXCLUDED	EXCLUDED
Wrk Cmp 80%	509	EXCLUDED	EXCLUDED
WRK CMP 86%	205	EXCLUDED	EXCLUDED
WRK CMP 86%	505	EXCLUDED	EXCLUDED
WRK CMP 87%	207	EXCLUDED	EXCLUDED
Wrk Cmp 87%	507	EXCLUDED	EXCLUDED
WRK CMP MSP	380	EXCLUDED	EXCLUDED

INC /w Review Type 5 - requires review at the time of retirement.



Meeting Date
08/28/2024
Agenda Item
#11

SACRS VOTING PROXY FORM

The following are authorized by the _____ County Retirement Board to vote on behalf of the County Retirement System at the upcoming SACRS Fall Conference 2024.

(If you have more than one alternate, please attach the list of alternates in priority order. If you have a resolution that covers multiple years or conferences, please send notice of resolution.):

_____ Voting Delegate

_____ Alternate Voting Delegate

These delegates were approved by the Retirement Board on ____ / ____ / ____.

The person authorized to fill out this form and submit electronically on behalf of the Retirement Board:

Signature: _____

Print Name: _____

Position: _____

Date: _____

Please send your system's voting proxy by October 31, 2024, to Sulema H. Peterson, SACRS Executive Director at Sulema@sacrs.org.