



AGENDA

RETIREMENT BOARD MEETING

REGULAR MEETING

January 25, 2023, 9:00 a.m.

The Board of Retirement will hold its meeting via teleconferencing as permitted by Government Code Section 54953(e). The meeting is accessible telephonically at 669-900-6833, Webinar ID: 816 6899 4370, Passcode: 432209, or via the web at:

<https://us06web.zoom.us/j/81668994370?pwd=SHhmNVhMamwvTGs0eUtGMIBSMG5pUT09>

Passcode: 432209

Persons who wish to address the Board of Retirement during public comment may call in during the meeting by dialing the phone number and passcode above. Access via Zoom is also available at the weblink above. To indicate you wish to speak during public comment, please select *9 on your phone or “raise your hand” in the Zoom app.

Public comments are limited to any item that is within the subject matter jurisdiction of the Board of Retirement. Comments will be received in real time via telephone or Zoom, subject to a three-minute time limit per speaker.

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

1. Pledge of Allegiance.
2. Roll Call.
3. Public Comment (3 minutes/speaker).
4. Verus review of investment performance attribution analysis. (Discussion Item)
5. Update on private equity commitments. (Discussion Item)
6. Consider and take possible action to adopt a cost-of-living increase for retirees as of April 1, 2023. (Action Item)
7. Update on the retirement application process improvement project. (Discussion Item)

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.

8. Consider authorizing the attendance of Board: (Action Item)
 - a. CALAPRS General Assembly, March 4-7, 2023, Monterey, CA.
 - b. Portfolio Concepts and Management, IFEBP, May 1-4, 2023, Wharton, PA.
(Note: Conflict with Board Meeting)

9. 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.

Meeting Date
01/25/2023
Agenda Item
#4

Verus 



**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**



DECEMBER 2022

Detailed Performance Attribution Analysis (July 1, 2019 through September 20, 2022)

Contra Costa Employees' Retirement Association

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Executive summary

- Following a review of 2Q22 portfolio performance. Verus expressed concern over one and three-year benchmark relative performance and subsequently undertook a detailed attribution modeling exercise to clearly determine the components of underperformance and identify if any structural issues may need to be addressed.
- Attribution analysis identified three primary sources of underperformance that occurred at different times over the past three years:
 - private equity benchmarking;
 - international equity managers; and
 - the Plan's cash overlay program.
- Based on this analysis, Verus has determined the primary causes of underperformance are not structural in nature and no corrective action is necessary at this time.

Problem identification

In the second quarter, cumulative underperformance across multiple time periods called for deeper analysis to identify potentially systemic portfolio structure issues.

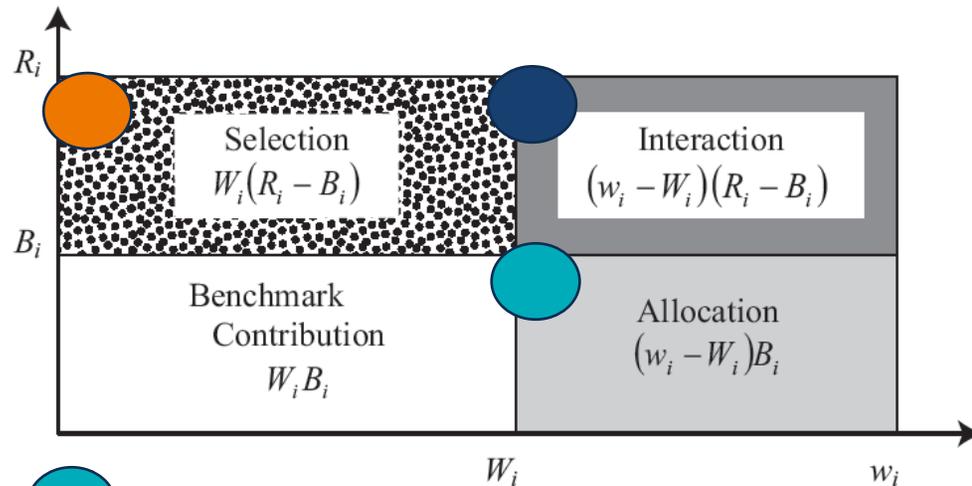
Total Fund
Executive Summary (Net of Fees)

Period Ending: June 30, 2022

	% of Portfolio	QTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2021	2020	2019	2018	2017
Total Fund	100.0	-7.7	-10.8	-6.7	5.1	5.7	7.4	13.9	9.2	14.6	-2.7	13.9
<i>Policy Index</i>		-7.0	-8.9	-2.9	7.0	7.1	8.2	15.3	10.8	14.6	-0.9	13.7
Growth	74.9	-9.0	-12.1	-6.4	7.5	7.7	8.9	19.2	12.0	18.3	-3.9	18.7
<i>Custom Growth Benchmark</i>		-9.1	-11.0	-3.3	9.7	9.4	9.8	21.6	13.8	19.3	-2.1	19.3
Diversifying	7.6	-0.7	-3.5	-3.2	-0.4	0.4	0.4	1.7	-1.7	6.8	-2.3	2.6
<i>Custom Diversifying Benchmark</i>		-2.1	-4.9	-3.9	1.0	2.1	2.5	1.6	4.7	6.1	1.4	4.7
Liquidity	12.2	-0.8	-3.2	-3.7	0.4	1.3	--	-0.3	3.4	4.8	1.7	1.4
<i>Bloomberg US Govt/Credit 1-3 Yr. TR</i>		-0.6	-3.1	-3.6	0.3	1.1	--	-0.5	3.3	4.0	1.6	0.8

We undertook the development of detailed, customized performance attribution model to help determine the specific sources of under performance.

Attribution primer – yep, we get to do a little math



We want...

Portfolio Return – Policy Return

Or... **wP – WB**

To be decomposed...

● Allocation: Policy Return * (Portfolio Weight – Policy Weight)

● Selection: Policy Weight * (Portfolio Return – Policy Return)

● Interaction: (Portfolio Weight - Policy Weight) * (Portfolio Return – Policy Return)

$$\begin{aligned}
 \text{Cyan} + \text{Orange} + \text{Dark Blue} &= (w-W)*B + W(P-B) + (w-W)*(P-B) \\
 &= (wB-WB) + (WP - WB) + (wP - wB - WP + WB) \\
 &= \cancel{(wB-WB)} + \cancel{(WP - WB)} + \cancel{(wP - wB - WP + WB)} = wP - WB
 \end{aligned}$$

<https://www.cfainstitute.org/-/media/documents/support/programs/cipm/2019-cipm-l1v1r5.ashx>

Interaction effect – and just a little more math

Interaction is a mathematical residual of the rational construction of selection and allocation effects. It does not represent the result of a conscience investment decision, nor is it of much informational value.

Interaction: $(\text{Portfolio Weight} - \text{Policy Weight}) * (\text{Portfolio Return} - \text{Policy Return})$

Four possible outcomes from this calculation

1. Overweight (Positive) * Overperform(Positive) = Positive
 - I overweight a winner, I deserve a positive result
2. Overweight (Positive) * Underperform (Negative) = Negative
 - I overweight a loser, I deserve a negative result
3. Underweight(Negative) * Underperform (Negative) = Positive
 - I underweight a loser, this is a **good** thing (positive result is rational)
4. Underweight(Negative) * Overperform (positive) = Negative
 - I underweight a winner, I deserve a negative result

Typically, interaction effect is de minimis.

Policy benchmarks over time

Analysis was conducted over 3 years and 4 periods, each representing a distinct policy benchmark.

		Period 1	Period 2	Period 3	Period 4
		7/1/2019	7/1/2020	1/1/2021	7/1/2021
Asset Bucket	Benchmark	6/30/2020	12/31/2020	6/30/2021	6/30/2022
Domestic Equity	Russell 3000	10.0%	9.0%	9.0%	16.0%
International Equity	MSCI ACWI ex USA Growth	18.0%	18.0%	18.0%	16.0%
Global Equity	MSCI ACWI	11.0%	11.0%	11.0%	9.0%
Diversifying Fixed Income	Bloomberg US Aggregate TR	3.5%	3.0%	3.0%	2.5%
Liquidity	Bloomberg US Govt/Credit 1-3 Yr. TR	24.0%	25.0%	25.0%	18.0%
High Yield	ICE BofAML High Yield Master II	2.0%	1.5%	1.5%	2.0%
Private Credit	Total Private Credit Benchmark	0.0%	0.0%	7.0%	8.0%
Private Credit	ICE BofAML High Yield Master II + 2%	5.0%	7.0%	0.0%	0.0%
Private Equity	S&P 500 Index +4% (Lagged)	11.0%	11.0%	0.0%	0.0%
Private Equity	Total Private Equity Benchmark	0.0%	0.0%	11.0%	11.0%
Risk Parity	60% MSCI ACWI Net/40% Bloomberg Global	0.0%	0.0%	0.0%	3.0%
Diversifying	Bloomberg Barclays Global Aggregate TR	2.0%	2.0%	2.0%	0.0%
Diversifying Multi-Asset	CPI + 4%	2.0%	1.5%	1.5%	3.0%
Core Real Estate	Wilshire REIT	1.0%	1.0%	1.0%	2.0%
Private Real Estate	Private Real Estate Benchmark	0.0%	0.0%	8.0%	8.0%
Private Real Estate	NCREIF Property Index	1.6%	1.6%	0.0%	0.0%
Private Real Estate	NCREIF-ODCE	6.4%	6.4%	0.0%	0.0%
Diversifying Multi-Asset	HFRI EH: Equity Market Neutral Index	2.5%	2.0%	2.0%	1.5%
Cash	91 Day T Bills	0.0%	0.0%	0.0%	0.0%

Plan year 2021 was split into two 6-month periods as a result of the change in the private markets benchmark

High level attribution

Two of the four periods had significant underperformance relative to policy but for different reasons. Period 2 was primarily due to private equity benchmark mismatch. Period 4 was primarily due to multiple factors, including manager performance and the overlay program.

		Policy Periods: Largest Contributors/Detractors			
Bucket	Asset Class	1	2	3	4
Growth	Domestic Equity	-0.53%	0.31%	-0.02%	-0.60%
Growth	International Equity	0.14%	0.47%	0.53%	-0.95%
Growth	Global Equity	0.71%	-0.30%	-0.43%	-0.38%
Growth	High Yield	-0.02%	-0.01%	-0.02%	0.04%
Growth	Core Real Estate	0.04%	0.01%	-0.02%	-0.02%
Growth	Private Equity	0.48%	-2.58%	-0.12%	0.18%
Growth	Private Credit	-0.07%	-0.40%	-0.01%	0.03%
Growth	Private Real Estate	-0.27%	-0.21%	0.05%	-0.49%
Growth	Risk Parity	-0.04%	-0.05%	-0.11%	-0.12%
Diversify	Diversifying	-0.45%	0.31%	0.26%	-0.30%
Liquidity	Liquidity	-0.23%	0.51%	0.55%	-0.19%
Cash	Cash	0.06%	-0.28%	-0.18%	0.15%
Overlay	Overlay	-0.13%	0.20%	0.12%	-1.12%
Total (Portfolio - Policy)		-0.32%	-2.03%	0.61%	-3.77%

Period 1: 7/1/2019 - 6/30/2020

Period 2: 7/1/2020 - 12/31/2020

Period 3: 1/1/2021 - 6/30/2021

Period 4: 7/1/2021 - Now

Detailed attribution – periods by effect

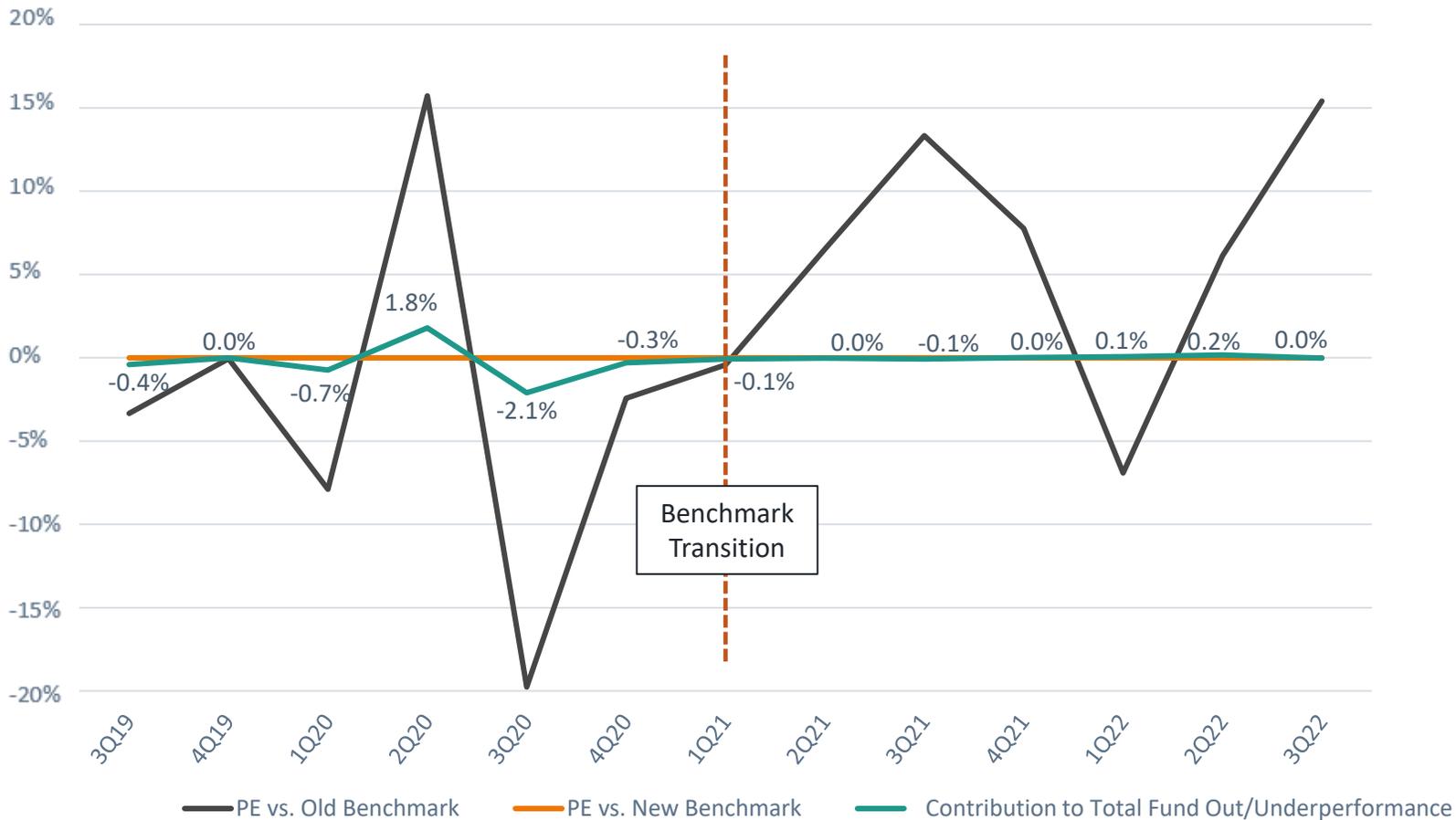
This chart splits each of the four periods into the three attribution effects, i.e., Allocation, Selection, and Interaction. In the first and third periods, the larger effects were mostly offsetting. In period two private equity “selection” overwhelmed the other effects, and in period four, the largest effects were all detractors.

Bucket	Asset Class	Period 1: 7/1/2019 - 6/30/2020				Period 2: 7/1/2020 - 12/31/2020				Period 3: 1/1/2021 - 6/30/2021				Period 4: 7/1/2021 - 6/30/22			
		Allocation	Selection	Interaction	Total	Allocation	Selection	Interaction	Total	Allocation	Selection	Interaction	Total	Allocation	Selection	Interaction	Total
Growth	Domestic Equity	-0.06%	-0.45%	-0.02%	-0.53%	0.07%	0.22%	0.02%	0.31%	0.13%	-0.11%	-0.04%	-0.02%	0.06%	-0.69%	0.03%	-0.60%
Growth	International Equity	-0.11%	0.28%	-0.03%	0.14%	-0.06%	0.52%	0.01%	0.47%	0.02%	0.47%	0.04%	0.53%	-0.13%	-0.80%	-0.02%	-0.95%
Growth	Global Equity	0.08%	0.79%	-0.16%	0.71%	-0.08%	-0.24%	0.03%	-0.30%	-0.02%	-0.42%	0.02%	-0.43%	-0.11%	-0.25%	-0.02%	-0.38%
Growth	High Yield	-0.01%	-0.01%	0.00%	-0.02%	0.00%	-0.01%	0.00%	-0.01%	-0.01%	0.00%	0.00%	-0.02%	0.04%	0.00%	0.00%	0.04%
Growth	Core Real Estate	0.02%	0.03%	0.00%	0.04%	0.00%	0.00%	0.00%	0.01%	-0.03%	0.01%	0.00%	-0.02%	-0.10%	0.08%	0.00%	-0.02%
Growth	Private Equity	-0.10%	0.56%	0.02%	0.48%	0.05%	-2.53%	-0.10%	-2.58%	-0.12%	0.00%	0.00%	-0.12%	0.18%	0.00%	0.00%	0.18%
Growth	Private Credit	0.00%	0.03%	-0.10%	-0.07%	-0.01%	-0.37%	-0.03%	-0.40%	-0.01%	0.00%	0.00%	-0.01%	0.03%	0.00%	0.00%	0.03%
Growth	Private Real Estate	-0.04%	-0.22%	0.00%	-0.27%	0.19%	-0.46%	0.06%	-0.21%	0.05%	0.00%	0.00%	0.05%	-0.49%	0.00%	0.00%	-0.49%
Growth	Risk Parity	-0.08%	0.00%	0.04%	-0.04%	-0.73%	0.00%	0.68%	-0.05%	-0.41%	0.00%	0.30%	-0.11%	-0.18%	0.03%	0.02%	-0.12%
Diversifying	Diversifying	-0.05%	-0.53%	0.13%	-0.45%	0.37%	-0.10%	0.04%	0.31%	0.24%	0.04%	-0.02%	0.26%	0.05%	-0.34%	-0.01%	-0.30%
Liquidity	Liquidity	-0.17%	-0.09%	0.03%	-0.23%	0.43%	0.09%	-0.01%	0.51%	0.50%	0.06%	-0.02%	0.55%	-0.18%	-0.02%	0.01%	-0.19%
Cash	Cash	0.02%	0.00%	0.04%	0.06%	-0.29%	0.00%	0.01%	-0.28%	-0.19%	0.00%	0.01%	-0.18%	0.13%	0.00%	0.02%	0.15%
Overlay	Overlay	0.00%	0.00%	-0.13%	-0.13%	-0.13%	0.00%	0.33%	0.20%	-0.11%	0.00%	0.23%	0.12%	0.03%	0.00%	-1.15%	-1.12%
Total		-0.50%	0.39%	-0.20%	-0.32%	-0.19%	-2.86%	1.02%	-2.03%	0.05%	0.04%	0.52%	0.61%	-0.66%	-1.99%	-1.11%	-3.77%

Green and orange reflect any effect greater than +/- 20 basis points, respectively.

Private equity

The selection effect implies the private markets portfolio significantly underperformed its benchmark over time. However, the apparent underperformance was caused by the change in the benchmarking methodology following a period of significant underperformance.



Beginning in 1Q21, the PE benchmark was changed to effectively eliminate the benchmark mismatch impact on Total Plan Tracking Error.

Note: Old Benchmark was S&P 500 + 4%, lagged one quarter; New Benchmark is the return of the Private Equity Composite.

Overlay program

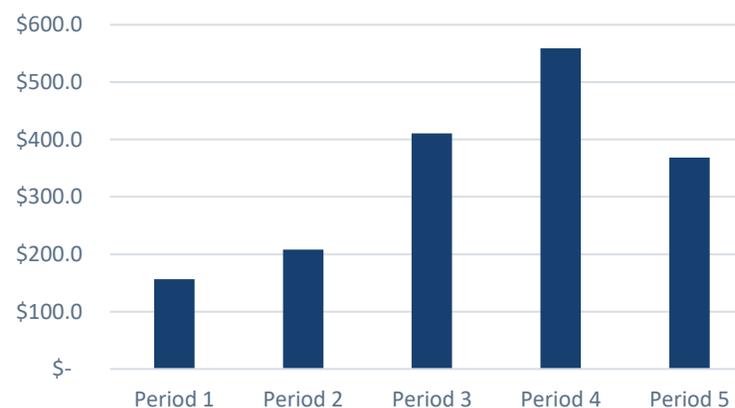
As stated earlier, the interaction effect demonstrated by the overlay program is not the result of an intentional investment decision, rather it was caused by the existence of the program itself, which is designed to reduce cash drag by investing residual cash in line with high-level risk factor targets.

Overlay Program Contribution to Total Fund Out/Underperformance

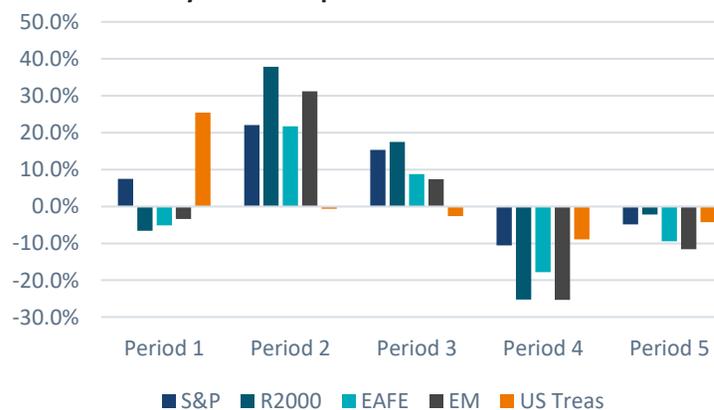
Asset Class	Period 1	Period 2	Period 3	Period 4	Period 5
Overlay	-0.13%	0.20%	0.12%	-1.12%	-0.13%

- As one could expect, the period with the largest negative contribution (Period 4) coincides with the period of highest average program assets and the worst market performance.

Average Program Assets



Performance by Market Exposure



International equity – quarter-by-quarter

		Period 4: Q3 2021				Period 4: Q4 2021				Period 4: Q1 2022				Period 4: Q2 2022			
Bucket	Asset Class	Allocation	Selection	Interaction	Total												
Growth	Domestic Equity	0.03%	-0.06%	0.03%	0.00%	-0.02%	-0.47%	0.01%	-0.48%	-0.01%	-0.17%	0.00%	-0.18%	0.06%	-0.04%	0.00%	0.03%
Growth	International Equity	-0.15%	-0.21%	-0.01%	-0.38%	-0.02%	-0.24%	0.00%	-0.27%	0.00%	-0.52%	0.00%	-0.53%	0.03%	0.13%	0.00%	0.16%
Growth	Global Equity	-0.05%	0.12%	0.02%	0.09%	0.02%	-0.22%	-0.02%	-0.22%	-0.03%	-0.15%	-0.01%	-0.20%	-0.05%	-0.01%	0.00%	-0.06%
Growth	High Yield	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	0.02%	0.01%	0.00%	0.00%	0.01%	0.01%	0.00%	0.00%	0.01%
Growth	Core Real Estate	0.00%	0.02%	-0.01%	0.01%	-0.14%	-0.01%	0.00%	-0.14%	0.05%	0.00%	0.00%	0.05%	-0.03%	0.07%	0.01%	0.05%
Growth	Private Equity	-0.08%	0.00%	0.00%	-0.08%	0.02%	0.00%	0.00%	0.02%	0.06%	0.00%	0.00%	0.06%	0.17%	0.00%	0.00%	0.17%
Growth	Private Credit	0.03%	0.00%	0.00%	0.03%	0.01%	0.00%	0.00%	0.01%	-0.03%	0.00%	0.00%	-0.03%	0.03%	0.00%	0.00%	0.03%
Growth	Private Real Estate	-0.06%	0.00%	0.00%	-0.06%	-0.01%	0.00%	0.00%	-0.01%	-0.20%	0.00%	0.00%	-0.20%	-0.22%	0.00%	0.00%	-0.22%
Growth	Risk Parity	-0.05%	0.04%	0.03%	0.01%	-0.01%	-0.03%	-0.01%	-0.05%	-0.05%	0.02%	0.01%	-0.02%	-0.07%	0.00%	0.00%	-0.07%
Diversifying	Diversifying	0.02%	-0.03%	0.00%	-0.01%	0.00%	-0.11%	0.01%	-0.10%	0.02%	-0.16%	-0.01%	-0.15%	-0.01%	-0.05%	-0.01%	-0.04%
Liquidity	Liquidity	0.02%	-0.02%	0.00%	0.00%	0.16%	0.02%	0.00%	0.17%	0.03%	0.01%	0.00%	0.03%	-0.36%	-0.02%	0.01%	-0.37%
Cash	Cash	-0.08%	0.00%	0.00%	-0.07%	-0.18%	0.00%	0.00%	-0.18%	0.07%	0.00%	0.01%	0.08%	0.29%	0.00%	0.01%	0.30%
Overlay	Overlay	-0.03%	0.00%	-0.16%	-0.18%	-0.05%	0.00%	0.12%	0.07%	0.03%	0.00%	-0.32%	-0.30%	0.07%	0.00%	-0.77%	-0.70%
Total		-0.39%	-0.16%	-0.09%	-0.64%	-0.20%	-1.06%	0.09%	-1.17%	-0.07%	-0.98%	-0.34%	-1.38%	-0.05%	0.08%	-0.76%	-0.72%

		Period 2: Q3 2020				Period 2: Q4 2020				Period 3: Q1 2021				Period 3: Q2 2021			
Bucket	Asset Class	Allocation	Selection	Interaction	Total												
Growth	Domestic Equity	0.02%	-0.18%	-0.01%	-0.17%	0.05%	0.40%	0.03%	0.47%	0.05%	0.03%	0.00%	0.08%	0.07%	-0.14%	-0.03%	-0.10%
Growth	International Equity	-0.01%	0.28%	-0.01%	0.26%	-0.05%	0.21%	0.02%	0.18%	0.01%	0.05%	0.00%	0.06%	0.01%	0.41%	0.04%	0.45%
Growth	Global Equity	-0.03%	0.22%	-0.01%	0.18%	-0.05%	-0.45%	0.03%	-0.47%	-0.01%	-0.40%	0.02%	-0.39%	-0.01%	0.00%	0.00%	-0.01%
Growth	High Yield	0.00%	0.01%	0.00%	0.01%	0.00%	-0.02%	0.00%	-0.02%	0.00%	0.00%	0.00%	-0.01%	0.00%	0.00%	0.00%	-0.01%
Growth	Core Real Estate	0.01%	0.00%	0.00%	0.01%	-0.01%	0.00%	0.00%	-0.01%	-0.01%	0.00%	0.00%	-0.01%	-0.01%	0.00%	0.00%	-0.01%
Growth	Private Equity	0.03%	-2.09%	-0.04%	-2.10%	0.01%	-0.25%	-0.06%	-0.30%	-0.08%	0.00%	0.00%	-0.08%	-0.03%	0.00%	0.00%	-0.03%
Growth	Private Credit	0.00%	-0.05%	0.00%	-0.06%	-0.01%	-0.29%	-0.03%	-0.33%	-0.01%	0.00%	0.00%	-0.01%	0.00%	0.00%	0.00%	0.00%
Growth	Private Real Estate	0.06%	-0.43%	0.06%	-0.32%	0.12%	0.01%	0.00%	0.13%	-0.01%	0.00%	0.00%	-0.01%	0.06%	0.00%	0.00%	0.06%
Growth	Risk Parity	-0.29%	0.00%	0.22%	-0.07%	-0.40%	0.00%	0.42%	0.02%	-0.16%	0.00%	-0.08%	-0.23%	-0.24%	0.00%	0.37%	0.14%
Diversifying	Diversifying	0.13%	-0.05%	0.02%	0.10%	0.22%	-0.04%	0.01%	0.19%	0.16%	0.08%	-0.03%	0.21%	0.06%	-0.04%	0.01%	0.04%
Liquidity	Liquidity	0.20%	0.04%	-0.01%	0.23%	0.20%	0.05%	0.00%	0.25%	0.16%	-0.01%	0.00%	0.16%	0.32%	0.07%	-0.02%	0.37%
Cash	Cash	-0.14%	0.00%	0.00%	-0.13%	-0.13%	0.00%	0.00%	-0.13%	-0.08%	0.00%	0.00%	-0.08%	-0.10%	0.00%	0.00%	-0.10%
Overlay	Overlay	-0.03%	0.00%	0.08%	0.05%	-0.09%	0.00%	0.23%	0.14%	-0.04%	0.00%	0.04%	0.00%	-0.06%	0.00%	0.19%	0.12%
Total		-0.04%	-2.28%	0.32%	-2.00%	-0.15%	-0.38%	0.65%	0.12%	-0.02%	-0.25%	-0.06%	-0.32%	0.06%	0.29%	0.56%	0.92%

		Period 1: Q3 2019				Period 1: Q4 2019				Period 1: Q1 2020				Period 1: Q2 2020			
Bucket	Asset Class	Allocation	Selection	Interaction	Total												
Growth	Domestic Equity	0.02%	-0.14%	-0.01%	-0.13%	0.03%	-0.19%	-0.01%	-0.18%	-0.07%	-0.25%	-0.01%	-0.32%	-0.03%	0.17%	0.00%	0.14%
Growth	International Equity	-0.01%	-0.23%	0.01%	-0.22%	-0.03%	0.31%	-0.01%	0.27%	0.08%	-0.11%	0.01%	-0.03%	-0.17%	0.36%	-0.04%	0.15%
Growth	Global Equity	0.03%	0.08%	-0.01%	0.09%	-0.13%	-0.20%	0.05%	-0.28%	0.36%	0.66%	-0.16%	0.85%	-0.24%	0.18%	-0.01%	-0.08%
Growth	High Yield	0.00%	0.01%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	-0.01%	0.04%	0.01%	0.04%	0.01%	-0.07%	-0.01%	-0.07%
Growth	Core Real Estate	-0.01%	0.00%	0.00%	-0.01%	0.01%	0.00%	0.00%	0.01%	0.03%	0.02%	0.00%	0.05%	-0.01%	0.00%	0.00%	-0.01%
Growth	Private Equity	0.02%	-0.40%	-0.02%	-0.40%	-0.01%	-0.01%	0.00%	-0.01%	0.10%	-0.79%	-0.04%	-0.74%	-0.23%	1.94%	0.09%	1.80%
Growth	Private Credit	0.00%	0.04%	-0.01%	0.03%	-0.01%	-0.07%	-0.01%	-0.09%	-0.06%	0.62%	0.16%	0.72%	0.08%	-0.67%	-0.26%	-0.85%
Growth	Private Real Estate	0.00%	-0.02%	0.00%	-0.02%	0.02%	-0.03%	0.00%	0.00%	-0.09%	0.07%	-0.02%	-0.03%	0.04%	-0.25%	0.01%	-0.21%
Growth	Risk Parity	-0.05%	0.00%	0.15%	0.09%	-0.21%	0.00%	0.08%	-0.13%	0.42%	0.00%	-0.48%	-0.06%	-0.30%	0.00%	0.36%	0.06%
Diversifying	Diversifying	-0.01%	0.05%	-0.01%	0.03%	0.08%	0.01%	0.00%	0.08%	-0.21%	-0.48%	0.12%	-0.58%	0.13%	-0.05%	0.01%	0.09%
Liquidity	Liquidity	0.03%	0.04%	0.00%	0.07%	0.08%	-0.02%	0.00%	0.06%	-0.33%	-0.36%	0.05%	-0.64%	0.09%	0.31%	-0.03%	0.38%
Cash	Cash	-0.01%	0.00%	0.01%	0.00%	-0.06%	0.00%	0.01%	-0.05%	0.19%	0.00%	0.01%	0.20%	-0.12%	0.00%	0.01%	-0.11%
Overlay	Overlay	0.00%	0.00%	0.00%	0.00%	-0.01%	0.00%	0.13%	0.12%	0.04%	0.00%	-0.37%	-0.33%	-0.03%	0.00%	0.15%	0.13%
Total		-0.01%	-0.59%	0.12%	-0.48%	-0.25%	-0.19%	0.25%	-0.20%	0.45%	-0.59%	-0.75%	-0.88%	-0.79%	1.92%	0.28%	1.42%

Most of the periods appear reasonably varied with no persistent pattern of out or under performance.

Even period 4 appears somewhat random with 3 quarters of under performance for international equity viewed as unfortunate but not a persistent pattern over the longer period.

Updated with 3Q results

We added the third quarter to the analysis as it was made available, and as can be seen here, the performance difference relative to policy has decreased significantly across asset classes.

Bucket	Asset Class	Period 1: 7/1/2019 - 6/30/2020				Period 2: 7/1/2020 - 12/31/2020				Period 3: 1/1/2021 - 6/30/2021				Period 4: 7/1/2021 - 6/30/2022				Period 5: 7/1/2022 - 9/30/22			
		Allocation	Selection	Interaction	Total	Allocation	Selection	Interaction	Total	Allocation	Selection	Interaction	Total	Allocation	Selection	Interaction	Total	Allocation	Selection	Interaction	Total
Growth	Domestic Equity	-0.06%	-0.45%	-0.02%	-0.53%	0.07%	0.22%	0.02%	0.31%	0.13%	-0.11%	-0.04%	-0.02%	0.06%	-0.69%	0.03%	-0.60%	-0.08%	0.06%	0.01%	-0.01%
Growth	International Equity	-0.11%	0.28%	-0.03%	0.14%	-0.06%	0.52%	0.01%	0.47%	0.02%	0.47%	0.04%	0.53%	-0.13%	-0.80%	-0.02%	-0.95%	0.05%	0.05%	-0.01%	0.10%
Growth	Global Equity	0.08%	0.79%	-0.16%	0.71%	-0.08%	-0.24%	0.03%	-0.30%	-0.02%	-0.42%	0.02%	-0.43%	-0.11%	-0.25%	-0.02%	-0.38%	-0.02%	0.09%	0.00%	0.08%
Growth	High Yield	-0.01%	-0.01%	0.00%	-0.02%	0.00%	-0.01%	0.00%	-0.01%	0.00%	0.00%	0.00%	-0.02%	0.04%	0.00%	0.00%	0.04%	0.00%	0.00%	0.00%	0.00%
Growth	Core Real Estate	0.02%	0.03%	0.00%	0.04%	0.00%	0.00%	0.00%	0.01%	-0.03%	0.01%	0.00%	-0.02%	-0.10%	0.08%	0.00%	-0.02%	-0.02%	0.03%	0.00%	0.01%
Growth	Private Equity	-0.10%	0.56%	0.02%	0.48%	0.05%	-2.53%	-0.10%	-2.58%	-0.12%	0.00%	0.00%	-0.12%	0.18%	0.00%	0.00%	0.18%	-0.03%	0.00%	0.00%	-0.03%
Growth	Private Credit	0.00%	0.03%	-0.10%	-0.07%	-0.01%	-0.37%	-0.03%	-0.40%	-0.01%	0.00%	0.00%	-0.01%	0.03%	0.00%	0.00%	0.03%	0.05%	0.00%	0.00%	0.05%
Growth	Private Real Estate	-0.04%	-0.22%	0.00%	-0.27%	0.19%	-0.46%	0.06%	-0.21%	0.05%	0.00%	0.00%	0.05%	-0.49%	0.00%	0.00%	-0.49%	-0.11%	-0.01%	0.00%	-0.12%
Growth	Risk Parity	-0.08%	0.00%	0.04%	-0.04%	-0.73%	0.00%	0.68%	-0.05%	-0.41%	0.00%	0.30%	-0.11%	-0.18%	0.03%	0.02%	-0.12%	0.00%	-0.05%	0.00%	-0.05%
Diversifying	Diversifying	-0.05%	-0.53%	0.13%	-0.45%	0.37%	-0.10%	0.04%	0.31%	0.24%	0.04%	-0.02%	0.26%	0.05%	-0.34%	-0.01%	-0.30%	0.00%	0.13%	0.00%	0.13%
Liquidity	Liquidity	-0.17%	-0.09%	0.03%	-0.23%	0.43%	0.09%	-0.01%	0.51%	0.50%	0.06%	-0.02%	0.55%	-0.18%	-0.02%	0.01%	-0.19%	0.09%	0.00%	-0.02%	0.08%
Cash	Cash	0.02%	0.00%	0.04%	0.06%	-0.29%	0.00%	0.01%	-0.28%	-0.19%	0.00%	0.01%	-0.18%	0.13%	0.00%	0.02%	0.15%	-0.05%	0.00%	0.01%	-0.03%
Overlay	Overlay	0.00%	0.00%	-0.13%	-0.13%	-0.13%	0.00%	0.33%	0.20%	-0.11%	0.00%	0.23%	0.12%	0.03%	0.00%	-1.15%	-1.12%	0.04%	0.00%	-0.17%	-0.13%
	Total	-0.50%	0.39%	-0.20%	-0.32%	-0.19%	-2.86%	1.02%	-2.03%	0.05%	0.04%	0.52%	0.61%	-0.66%	-1.99%	-1.11%	-3.77%	-0.06%	0.30%	-0.16%	0.08%

Conclusions

The three primary contributors to recent underperformance have been identified and evaluated and are not considered systemic issues that need to be addressed.

- Private equity benchmarking – this came about as a result of the change in benchmarking methodology in the middle of 2021 during a period, when there was a significant difference between the performance of the two benchmarking approaches. To provide the Board with additional perspective, the current policy index will be augmented with an “adjusted” policy index that incorporates the current private markets benchmark approach into historical policy index performance.
- International equity managers – the outsized impact came from combined underperformance of active managers over three consecutive quarters. Longer-term performance implies this was a random grouping of consecutively underperforming quarters, and at this point, we don’t believe corrective action is necessary.
- Overlay program – this program is designed to reduce cash drag by investing residual portfolio cash in line with the portfolio’s high-level risk exposures, utilizing equity and US Treasury futures contracts. While this has been a detractor to overall performance in the short-term, it is expected to be a contributor over the long-term.



Memorandum

Date: January 25, 2023

To: CCCERA Board of Retirement

From: Timothy Price, Chief Investment Officer

Subject: Update on Private Equity Allocations

Overview

CCCERA recently made commitments to three private equity funds using the delegated authority granted in the Investment Policy Statement. A brief description of each fund/strategy is included below. This memo is for informational purposes only and no action is required from the Board at this time.

Investment Policy Statement

The CCCERA Investment Policy Statement adopted by the Board on September 28, 2016 (amended on April 24, 2019 and May 26, 2021) outlines the hiring process for new investment mandates. Commitments up to a \$150 million per strategy may be approved via a staff review process, while mandates above this threshold require approval by the Board.

Hellman & Friedman XI

Hellman & Friedman Capital Partners XI is a large buyout private equity fund focused on control investments in the U.S. and Europe in the following primary sectors: technology; healthcare; financial services; consumer & retail; and business & information services. The Fund is targeting to raise \$23B and expects to make ~10-15 investments, primarily in mature companies with recurring revenue and cash flows. CCCERA committed \$100 mm to this fund.

Symphony Technology Group VII

STG targets control transactions in middle-market, value-oriented enterprise software and software-enabled service businesses. The strategy is operationally intensive, with the value creation thesis centered on operational improvements and bolt on activities to increase revenue. STG is raising \$3 billion for Symphony Technology Group VII ("STG VII"). The Fund will invest in 14-16 platforms in North America and Europe. CCCERA committed \$50 mm to this fund.

GTCR XIV

GTCR XIV is a private equity fund focused on control investments in the U.S. in the following primary sectors: healthcare, information services and technology, financial services and technology, and business services. The Fund is targeting to raise \$9.25B and expects to make ~15-20 platform investments with initial equity checks of >\$250M, and company TEV size >\$500 million. CCCERA committed \$100 mm to this fund.



MEMORANDUM

Date: January 25, 2023
To: CCCERA Board of Retirement
From: Gail Strohl, Chief Executive Officer
Subject: Consider and take possible action to adopt a cost-of-living increase for retirees as of April 1, 2023.

In accordance with Government Code §§31870, 31870.1 and 31870.3, the Board must determine the annual cost-of-living adjustments (COLAs) to be effective April 1, 2023.

Determination of COLA

Based on the statutes noted above, the increase or decrease of the retiree allowances must “approximate to the nearest one-half of 1 percent, the percentage of annual increase or decrease in the cost of living as of January 1st of each year as shown by the then current Bureau of Labor Statistics Consumer Price Index for All Urban Consumers for the area in which the county seat is situated.” The only difference in the three COLA statutes that apply to CCCERA members is that the annual maximum adjustment is either 2%, 3%, or 4% depending on which section is applicable.

The consumer price index values used by CCCERA are the December values from the San Francisco-Oakland-Hayward, California table. The increase in the index from December 2021 to December 2022 is 4.88%.

When this value is greater than the annual allowable maximum increase, the excess above the allowance increase is accumulated or “banked”. When the value is less than the annual allowable maximum increase, retirees with sufficient bank will receive the maximum allowable increase and have their banks reduced accordingly.

The attached Segal letter shows the determination of the consumer price index increase and the annual adjustment retirees will receive depending on Tier and bank. The letter also shows the adjustments to the banks.

Recommendation

Consider and take possible action to adopt a cost-of-living increase for retirees as of April 1, 2023.



Andy Yeung, ASA, MAAA, FCA, EA
Vice President & Actuary
T 415.263.8283
ayeung@segalco.com

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

January 17, 2023

Ms. Gail Strohl
Chief Executive Officer
Contra Costa County Employees' Retirement Association
1200 Concord Avenue, Suite 300
Concord, CA 94520

**Re: Contra Costa County Employees' Retirement Association
Cost-of-Living Adjustments (COLA) as of April 1, 2023**

Dear Gail:

We have determined the cost-of-living adjustments for the Association in accordance with Sections 31870.1, 31870.3 and 31870, as provided in the enclosed exhibits.

The cost-of-living factor to be used by the Association on April 1, 2023 is determined by comparing the December CPI for the San Francisco-Oakland-Hayward Area (with 1982-84 as the base period), as published by the Bureau of Labor Statistics (BLS), in each of the past two years. The ratio of the past two December indices, 331.222 in 2022 and 315.805 in 2021, is 1.0488. The County Law sections cited above indicate that the resulting percentage change of 4.88% should be rounded to the nearest one-half percent, which is 5.0%.

Please note the above cost-of-living adjustments calculated using established procedures for CCCERA may result in adjustments different from those calculated using alternative procedures by other systems.

The actual cost-of-living adjustment is dependent on tier. The CPI adjustment to be applied on April 1, 2023 is provided in Column (4) of the enclosed exhibits. The COLA bank on April 1, 2023 is provided in Column (5).

Please give us a call if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Andy Yeung".

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

bts/hy

Enclosures

cc: Ms. Christina Dunn

Contra Costa County Employees' Retirement Association
 Cost-Of-Living Adjustment
 As of April 1, 2023

	(1)	(2)	(3)	(4)	(5)
Retirement Date	April 1, 2022 Accumulated Carry-over	CPI Change*	CPI Rounded**	CPI Used***	April 1, 2023 Accumulated Carry-over****
Tier 1, Tier 3 (service retirement only), Tier 4 (3% COLA), Tier 5 (3%/4% COLA and service retirement only), Safety Tier A and Safety Tier D					
Section 31870.1					
Maximum Annual COLA	3.0%				
On or Before 3/31/1982	10.500%	4.88%	5.0%	3.0%	12.500%
04/01/1982 to 03/31/1983	4.027%	4.88%	5.0%	3.0%	6.027%
04/01/1983 to 03/31/2017	1.500%	4.88%	5.0%	3.0%	3.500%
04/01/2017 to 03/31/2022	1.000%	4.88%	5.0%	3.0%	3.000%
04/01/2022 to 03/31/2023		4.88%	5.0%	3.0%	2.000%

- * Based on ratio of December 2022 CPI to December 2021 CPI for the San Francisco - Oakland - Hayward Area.
- ** Based on CPI change rounded to nearest one-half percent.
- *** These are the cost-of-living adjustment factors to be applied on April 1, 2023.
- **** These are the carry-over of the cost-of-living adjustments that have not been used on April 1, 2023.

Contra Costa County Employees' Retirement Association
 Cost-Of-Living Adjustment
 As of April 1, 2023

Retirement Date	(1)	(2)	(3)	(4)	(5)	(6)
Retirement Date	April 1, 2022 Accumulated Carry-over	CPI Change*	CPI Rounded**	CPI Used***	CPI Used***	April 1, 2023 Accumulated Carry-over****
Tier 2, Tier 3 (disability retirement only) and Tier 5 (3%/4% COLA and disability retirement only)						
Section 31870.3						
<u>Maximum Annual COLA</u> 4.0%						
04/01/1984	to	03/31/2022	0.0%	4.88%	5.0%	4.0%
04/01/2022	to	03/31/2023		4.88%	5.0%	4.0%

* Based on ratio of December 2022 CPI to December 2021 CPI for the San Francisco - Oakland - Hayward Area.
 ** Based on CPI change rounded to nearest one-half percent.
 *** These are the cost-of-living adjustment factors to be applied on April 1, 2023.
 **** These are the carry-over of the cost-of-living adjustments that have not been used on April 1, 2023.

Contra Costa County Employees' Retirement Association
 Cost-Of-Living Adjustment
 As of April 1, 2023

			(1)	(2)	(3)	(4)	(5)
Retirement Date			April 1, 2022 Accumulated Carry-over	CPI Change*	CPI Rounded**	CPI Used***	April 1, 2023 Accumulated Carry-over****
Tier 4 (2% COLA), Tier 5 (2% COLA), Safety Tier C and Safety Tier E Section 31870							
<u>Maximum Annual COLA</u>			<u>2.0%</u>				
04/01/2007	to	03/31/2012	10.5%	4.88%	5.0%	2.0%	13.5%
04/01/2012	to	03/31/2014	9.5%	4.88%	5.0%	2.0%	12.5%
04/01/2014	to	03/31/2015	9.0%	4.88%	5.0%	2.0%	12.0%
04/01/2015	to	03/31/2016	8.5%	4.88%	5.0%	2.0%	11.5%
04/01/2016	to	03/31/2017	7.5%	4.88%	5.0%	2.0%	10.5%
04/01/2017	to	03/31/2018	6.0%	4.88%	5.0%	2.0%	9.0%
04/01/2018	to	03/31/2019	5.0%	4.88%	5.0%	2.0%	8.0%
04/01/2019	to	03/31/2020	2.5%	4.88%	5.0%	2.0%	5.5%
04/01/2020	to	03/31/2022	2.0%	4.88%	5.0%	2.0%	5.0%
04/01/2022	to	03/31/2023		4.88%	5.0%	2.0%	3.0%

* Based on ratio of December 2022 CPI to December 2021 CPI for the San Francisco - Oakland - Hayward Area.

** Based on CPI change rounded to nearest one-half percent.

*** These are the cost-of-living adjustment factors to be applied on April 1, 2023.

**** These are the carry-over of the cost-of-living adjustments that have not been used on April 1, 2023.

Meeting Date
01/25/2023
Agenda Item
#7



RETIREMENT APPLICATION PROCESS IMPROVEMENT PROJECT

January 25, 2023

CCCERA's Commitment to New Retirees in 2023

- ✓ CCCERA staff will clearly and frequently communicate how CCCERA will help you transition smoothly to receiving retirement payments *and* what you need to provide, by when, to allow us to make that happen for you.
- ✓ You will have access to an assigned CCCERA Retirement Counselor (with a back-up) to guide you through the process and answer your questions.
- ✓ If you pre-elect your *payment option*, you can expect to receive your first CCCERA retirement payment no more than 65 days from your final employer payment.
- ✓ If you opt to elect your payment option at a later time, you will receive an options payment letter to review. When signed and returned to us you will receive your first CCCERA payment no more than 15 days from CCCERA's receipt of your option election form.

Retirement Application Process Improvement Project Team

- Disability Specialist/Senior Retirement Counselor
- Retirement Services Supervisor – Active members
- Member Services Supervisor
- Information Systems Programmer Analyst
- Retirement Services Supervisor – Retired members
- Member Services Manager
- Accounting Manager
- Deputy Chief Executive Officer
- Retirement Services Manager

Retirement Application Process Improvement Project

- I. **Established Project Mission and Team**
- II. **Reviewed the “Before” Process:** *Analyzed the current process and identified what needed to change to achieve the project mission*
- III. **Created a “Redesigned” Retirement Application Process:** *Designed a new way of operating that will allow us to meet our 2023 commitment to members*
- IV. **Established a Performance Measurement:** *The scorecard we will use to monitor process performance and help us anticipate challenges*
- V. **Reviewed possible risks and mitigations:** *What could go wrong and how we will respond*
- VI. **Created an Implementation Plan and reviewed with the management team**

Retirement Application Process Improvement Project Roadmap

❖ ~85 Days from Launch to Wrap-Up

❖ 6 Workshop Days for Project Team Members

❖ Post-Workshop Individual Assignments

0 Project Planning

1 DEFINE The “As Is” Process

2 MEAASURE “In-Process” Performance

3 ANALYZE Constraints

4 INNOVATE Lean Process Design

5 COMPLETE Process Redesign and Activation Plans

6 CONTROL Transition and Process Performance

CCCERA Retirement Application Process

How to Get Better?

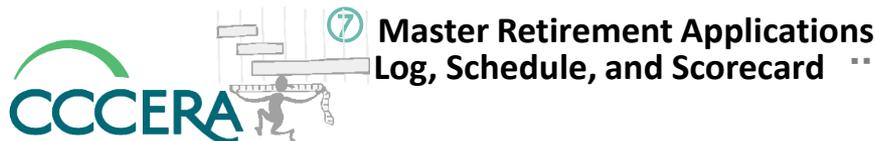
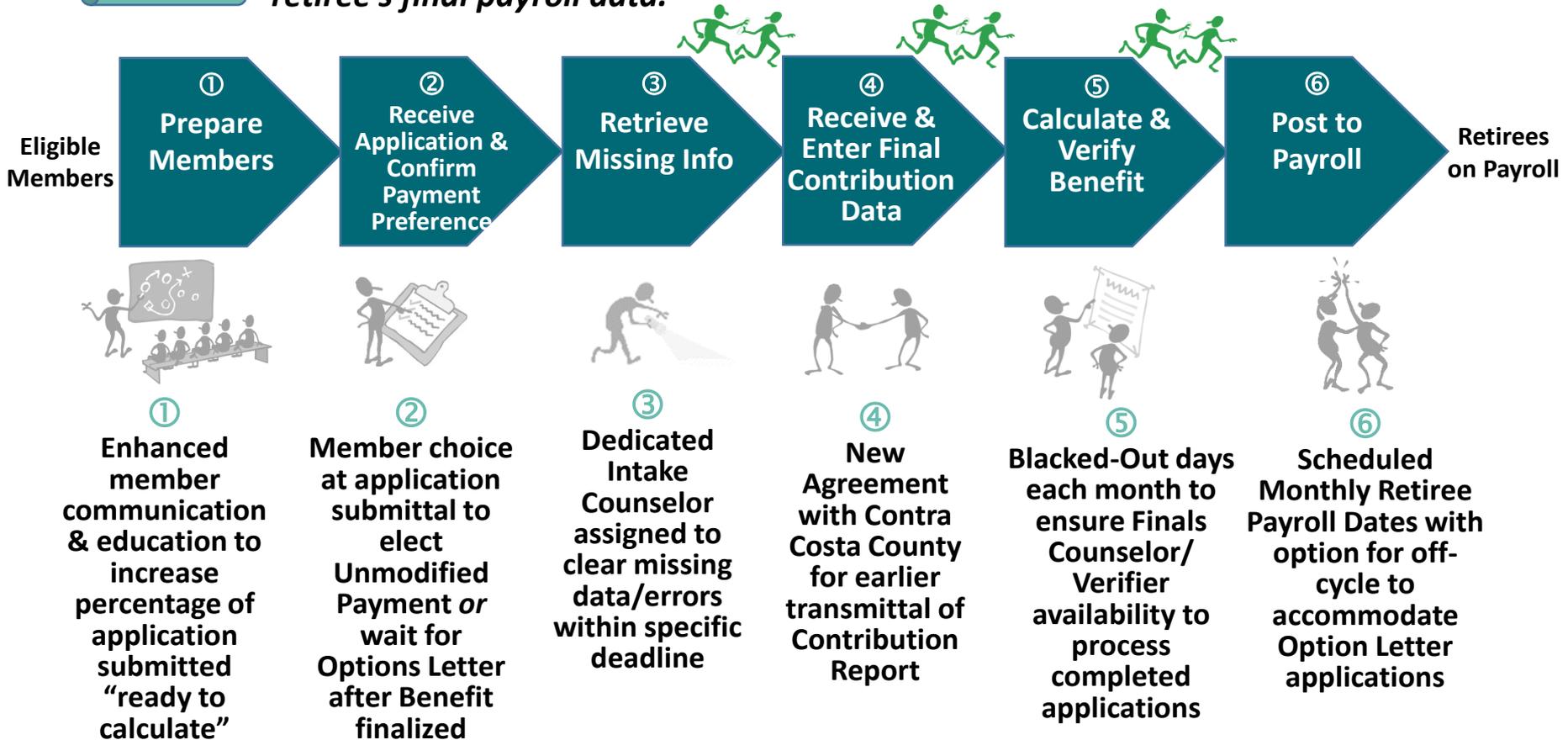
Break through five key constraints holding back consistently better and predictable performance ...

- ✘ Too many incomplete applications at submission**
- ✘ Multiple logs to track applications and processing**
- ✘ Too many steps in the process**
- ✘ Delays waiting for members to return their Option Election Form**
- ✘ Delay receiving Contra Costa County payroll data**

CCCERA *Redesigned* Retirement Application Process

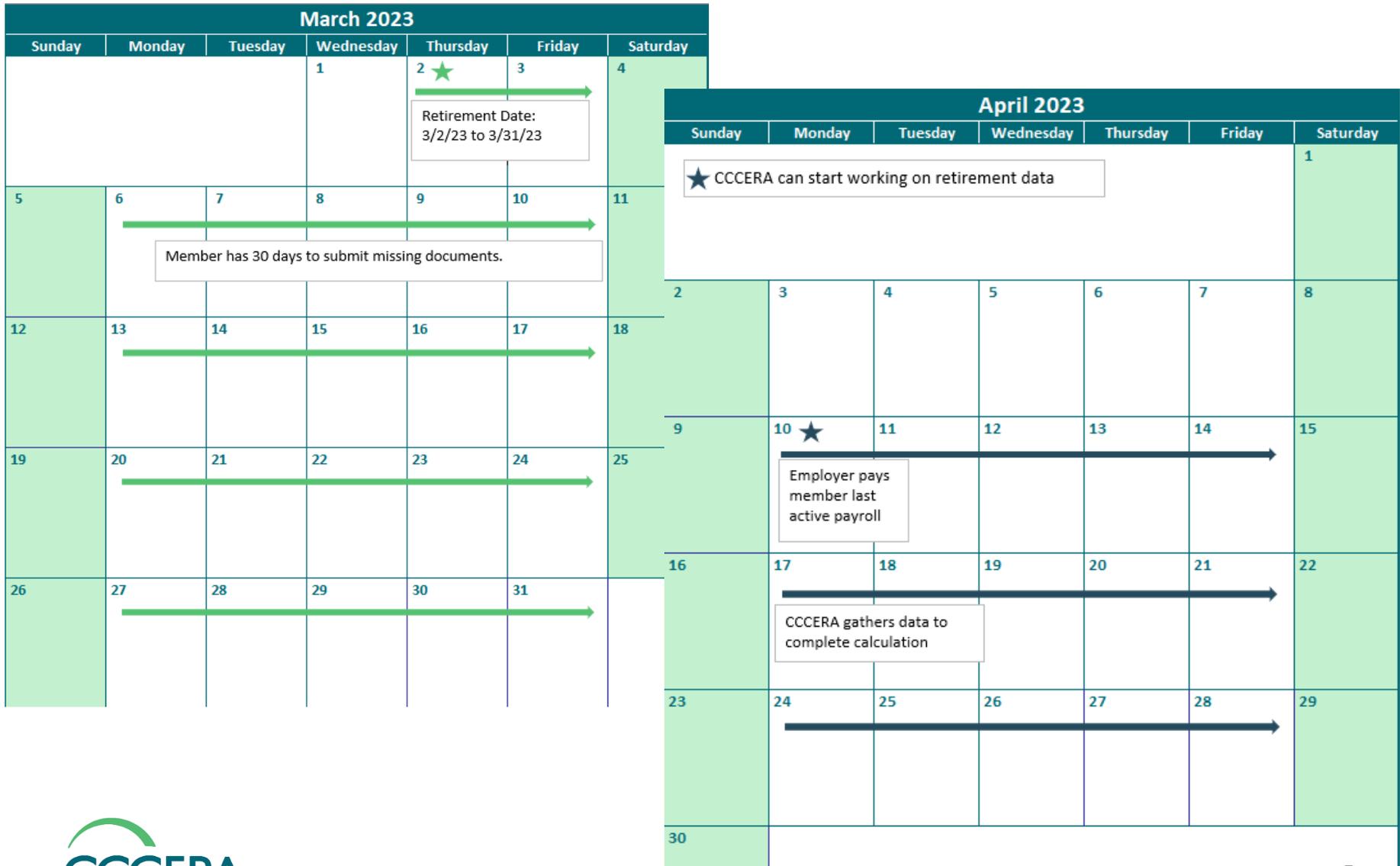
PROCESS MISSION

Provide members with a predictable transition from employment to retirement income that adds no additional financial burden to the retiree by making an accurate payment in the shortest time possible after receipt by CCCERA of the retiree's final payroll data.



65 days or faster from Final Employer Payroll to First Retiree Payment for pre-elected options and within 15 days or faster from receipt of signed Option Form

Redesigned Retirement Application Process Scheduling Model: March Retirees Example

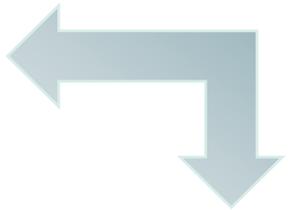
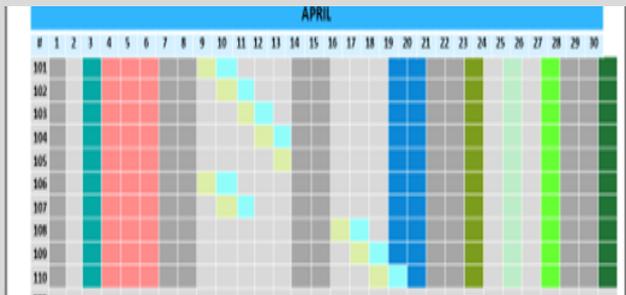


Redesigned Retirement Application Process Scheduling Model: March Retirees Example (Cont'd)



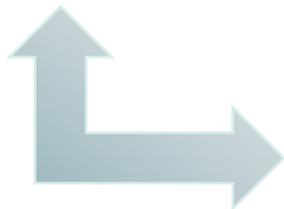
Redesigned Retirement Application Performance Reporting

Master Log



Report Performance by Retirement Month ...

...Review weekly for “Red Flag” applications and take action to get back on schedule



RETIREMENT APPLICATION PROCESS PERFORMANCE									
Retiree Month	Applications Received	% Complete/ Ready to Process	% Selecting Standard Payment	# Members Put on Payroll within 65 Days	# Applications Not Processed on Scheduled Date*			# of Option Letters Generated	# of Option Members on Payroll within 75 Days
					MEMBR	EMPLR	CCCERA		
January									
February									
March									
YTD									

...Review performance trends. Analyze causes, and make process, staffing, or policy adjustments as needed.

Redesigned Retirement Application Deployment Risks & Mitigation Strategies

Potential Risk:

- 1. Pension System Project time demands on staff processing retirement applications**
- 2. Insufficient Retirement Services Staff to meet application volume**

Mitigation Strategies:

- ✓ Establish “Black-out Calendar” for days of month when Finals Counselors/Sup/Payroll Counselors processing applications
- ✓ Work with Pension System Project Manager to adjust Pension System Schedule to not jeopardized milestone achievement.
- ✓ Open positions from 2022 on schedule to be filled by 1/31/23
- ✓ Staffing level and back-ups matched to anticipated peak volume month
- ✓ If unprecedented surge happens, Plan B in effect, shifting Active Counselors to support applications and suspending running of estimates until surge processed

Redesigned Retirement Application Deployment Risks & Mitigation Strategies *(Cont'd)*

Potential Risk:

3. Extended delays receiving accurate Employer Payroll
4. Higher than expected number of members submitting incomplete applications and requiring extensive follow-up to retrieve missing docs and info

Mitigation Strategies:

- ✓ Calculate Final retirement calculations based on data in Pension System.
- ✓ Reconcile when data feed resumed
- ✓ Temporarily Shift Active Counselor time to Intake Counselor duties
- ✓ Analyze long-term need for adding an additional Intake Counselor position



Closing Remarks and Questions?

CALAPRS

EDUCATION · COMMUNICATION · NETWORKING

California Association of Public Retirement Systems

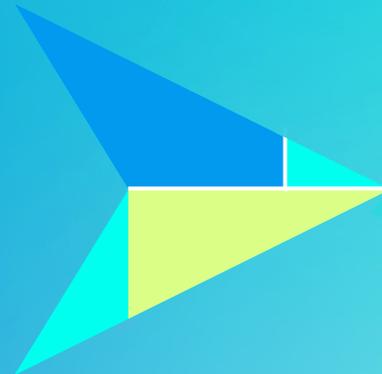
Meeting Date

01/25/2023

Agenda Item

#8a.

MARCHING FORWARD



GENERAL ASSEMBLY 2023

MARCH 4 – 7, 2023 > MONTEREY, CA

The California Association of Public Retirement Systems (CALAPRS) invites you to attend the annual **General Assembly, March 4 – March 7, 2023 at the Monterey Marriott!** The General Assembly is an educational conference for retirement system trustees, senior staff, and our annual sponsors. Attendees will learn from experts and peers, while getting the opportunity to network with colleagues.

REGISTRATION

Register online at www.calaprs.org/events

- **Retirement System Fee:** \$250/person
- **Sponsor Fee:** \$2,500 annual sponsorship includes registration for 2 representatives at no additional cost.

LODGING

CALAPRS has arranged for a discounted room rate at the meeting hotel, the Monterey Marriott, 350 Calle Principal, Monterey, CA for the duration of the meeting.

Room Rate: \$234/night, plus taxes and fees

Book Online: bit.ly/GA2023_Hotel

By Phone: 1-877-901-6632 and reference "CALAPRS"

Cut-off Date: The room rate is available until February 7, 2023 or until the block is sold out, whichever comes first.

HEALTH & SAFETY

CALAPRS is dedicated to providing a safe event experience for all participants involved including attendees, sponsors, staff, and guests. CALAPRS will conduct the General Assembly as advised by government (local, state, and national) regulations, CDC recommendations, and venue requirements at the time of the event. Read the fully in-person event policy here: www.calaprs.org/page/eventpolicy

CALAPRS GENERAL ASSEMBLY | PROGRAM

DAY 01

SATURDAY,
MARCH 4

4:00 – 6:00 PM
Registration Open

DAY 02

SUNDAY,
MARCH 5

9:30 AM – 5:00 PM
Registration Open

10:00 AM – 12:00 PM

AB1234 Ethics for Trustees | Ashley K. Dunning, Partner, Co-Chair Public Pensions & Investment Group, Nossaman LLP

2:00 – 2:15 PM

Opening Remarks | Johanna Shick, CEO, SJCERA and General Assembly Conference Chair; and Dave Nelsen, CEO, ACERA and CALAPRS President

2:15 – 3:15 PM

NASRA Statistics | Keith Brainard, Research Director, National Association of State Retirement Administrators

3:15 – 3:30 PM

Networking Break

3:30 – 4:30 PM

Legal Mock Trial | Maytak Chin, Partner and Harvey Leiderman, Partner, Reed Smith LLP

7:00 – 9:30 PM

Strolling Dinner at the Monterey Bay Aquarium | System attendees may bring a guest to the Strolling Dinner. Please contact info@calaprs.org to add a guest.

DAY 03

MONDAY,
MARCH 6

7:00 AM – 4:00 PM
Registration Open

7:15 – 8:15 AM
Breakfast

8:15 – 8:30 AM

Opening Remarks | Johanna Shick, CEO, SJCERA and General Assembly Conference Chair

8:30 – 9:30 AM

Searching for a Soft Landing in 2023 | Brian Nick, CAIA, Chief Investment Strategist, Nuveen

9:30 – 10:00 AM

Networking Break

10:00 – 11:00 AM

Geopolitical Risks Not Yet Resolved In 2023 | Matt Gertken, Chief Strategist, BCA Research

11:00 AM - 12:00 PM

Investments in 2023 - What You Need to Know | Toner, CFA, Chief Investment Officer, Verus

12:00 - 1:30 PM

Lunch

1:30 - 2:30 PM

Robotic Process Automation | Robert Pucci, Executive Director of Intelligent Automation, State of Tennessee

2:30 - 3:00 PM

Networking Break

3:00 - 4:00 PM

Tracking Productivity & Performance Measures | CalPERS

5:00 - 6:00 PM

Networking Reception (Ferrantes Bayview Room of the Monterey Marriott)

DAY 04
TUESDAY,
MARCH 7

7:30 - 11:00 AM

Registration Open

7:30 - 8:30 AM

Breakfast

8:30 - 10:00 AM

Digital Opportunities Panel: Online Retirement Process, Trustee Electronic Elections, and Multi-Factor Authentication/ID-ME | Danielle Couture, Communications Manager, SBCERA; Suzanne Jenike, Assistant CEO External Operations, OCERS; and Tim Taylor, Enterprise Solutions Development Division Chief, CalPERS

10:00 - 10:15 AM

Networking Break

10:15 - 11:00 AM

LDRM & The Impact of Inflation on Liabilities | Todd Tauzer, Vice President & Actuary, Segal

11:00 - 11:15 AM

Closing Remarks | Johanna Shick, CEO, SJCERA and General Assembly Conference Chair

***Thank you
to our 2023
General
Assembly
Planning
Committee***

Johanna Shick, CEO, SJCERA (Chair)

Steve Delaney, CEO, OCERS

Scott Hood, CEO, SamCERA

Greg Levin, CPA, CEO, SBCERS

Dave Nelsen, CEO, ACERA

Anthony Suine, Deputy Executive Officer, Communications & Stakeholder Relations, CalPERS

Portfolio Concepts and Management

Monday, May 1 - Thursday, May 4, 2023
Wharton, Philadelphia, PA

REGISTER

PROGRAM DETAILS

HOTEL/TRAVEL

IFEBP > Education > Certificate Programs > Wharton > Portfolio Concepts and Management

Portfolio management is a complex task with numerous decisions on how to allocate money in your fund. Portfolio Concepts and Management provides the core principles of portfolio theory and investment performance measurement, offering practical tools and experiences to help you make reliable investment management decisions. This program offers lecture/discussion sessions, problem solving exercises and small-group case study sessions in a 3½-day format. Grow confidence in your ability to evaluate investments with a broad, fundamental understanding of investment products and practices.

Tentative Outline

- Introduction and Overview of Financial Assets
- Fundamentals of Portfolio Theory
- Performance Evaluation
- Fundamentals of Valuation
- Managing Pensions in a Risky Global Environment
- Macroeconomic Issues and Financial Markets
- Asset Allocation and Impacts of Risk on Return

Benefits of Attending

- Learn the fundamental concepts needed for effective portfolio oversight.
- Obtain a solid grounding in the principles of modern portfolio theory.
- Gain practical experience needed to make sound investment management decisions.
- Apply what you have learned in an interactive case study.
- Learn from world-class faculty who are skilled educators and researchers, award-winning authors and leading authorities.

Who Should Attend

This program is intended for those who have little experience with investment-related course work.

Fiduciaries from both defined benefit and defined contribution plans who represent various industries, sizes and geographic areas (United States and Canada), including

- Multiemployer and public plan trustees
- Administrators and fund staff
- Human resources and benefits professionals
- Corporate officers and executives
- Finance personnel
- Investment professionals

Portfolio Concepts and Management

Monday, May 1 - Thursday, May 4, 2023
Wharton, Philadelphia, PA



Speakers



Gordon M. Bodnar, Ph.D.

Morris W. Offit Professor of International Finance and Director of the International Economics Program, Johns Hopkins School of Advanced International Studies (SAIS);
Lecturer
The Wharton School



Geoffrey Gerber, Ph.D.

President and Chief Investment Officer
TWIN Capital Management, Inc.



Olivia S. Mitchell, Ph.D.

Director, Pension Research Council and Boettner Center for Pensions and Retirement Research
The Wharton School, University of Pennsylvania

Continuing Education



Educational sessions at this program may qualify for CEBS continuing professional education (CPE) credit. Visit www.cebscpe.org for more information.

Continuing Education credit for additional professions and designations MAY be available for attendance at live sessions. You must register for the program and request CE credit at least 60 days prior to the beginning of the program so that the Foundation can seek preapproval from the governing agency.

Registration Information

Register early and save!

	Member	Nonmember	
Through 3/20/2023	US \$5,895.00	US \$6,335.00	Register
After 3/20/2023	US \$6,195.00	US \$6,635.00	