# **Pension Trust**

1000 Mill Street San Luis Obispo, CA 93408 (805) 781-5465 Phone (805) 781-5697 Fax www.SLOPensionTrust.org



# **AGENDA**

# PENSION TRUST BOARD OF TRUSTEES

Monday, February 27, 2023 9:30 AM
Room 161/162
County Government Center
San Luis Obispo, CA 93408

#### MEETING MATERIALS

Materials for the meeting may be found at

http://www.slocounty.ca.gov/Departments/Pension-Trust/Board-of-Trustees

Any supporting documentation that relates to an agenda item for open session of any regular meeting that is distributed after the agenda is posted and prior to the meeting will also be available at this location.

### AMERICANS WITH DISABILITIES ACT (Government Code §54953.2)

Disabled individuals who need special assistance to listen to and/or participate in any meeting of the Board of Trustees may request assistance by calling 805/781-5465 or sending an email to SLOCPT@co.slo.ca.us. Every effort will be made to reasonably accommodate individuals with disabilities by making meeting materials and access available in alternative formats. Requests for assistance should be made at least two days in advance of a meeting whenever possible.

### **IN-PERSON MEETING**

This meeting of the Board of Trustees will be held as an in-person meeting at the place shown above. The meeting may be available for online viewing by accessing -

https://us06web.zoom.us/j/83830792582?pwd=dXllWVcwamRPV3lSR2Q3WXJLcDZnUT09

Webinar ID: 838 3079 2582 Passcode: 757193

If you wish to listen via phone to the meeting, please dial 669/900-6833 (Meeting ID 868 8230 7248). If you have any questions or require additional service, please contact SLOCPT at 805/781-5465.

# A) PUBLIC COMMENT

1. Public Comment: Members of the public wishing to address the Board on matters other than scheduled items may do so when recognized by the Chair. Presentations are limited to three minutes per individual.

# **B) ORGANIZATIONAL**

None

# C) CONSENT

- 2. Minutes of the Regular Meeting of January 23, 2023 (Approve Without Correction).
- 3. Reports of Deposits and Contributions for the month of January 2023 (Receive and File).
- 4. Reports of Service Retirements, Disability Retirements and DROP Participants for the month of January 2023 (Receive, Approve and File).
- 5. reserved

# D) APPLICATIONS FOR DISABILITY RETIREMENT

- 6. reserved
- 7. reserved

# E) OLD BUSINESS

None

## F) NEW BUSINESS

- 8. Approval of the 2023 Annual Cost-Of-Living Adjustments provided by the San Luis Obispo County Employees Retirement Plan (Recommend Approval).
- 9. Reserved

# G) INVESTMENTS

- 10. Quarterly Investment Report for the 4th Quarter of 2022 Verus (Receive and File).
- 11. Monthly Investment Report for January 2023 (Receive and File).
- 12. 2023 Capital Market Assumptions and Strategic Asset Allocation Policy Verus (Review, Discuss, Recommend Approval).
- 13. Private Markets Commitments Additional Private Equity Commitment (Review, Discuss, Recommend Approval)
- 14. Investment Policy Statement Review, Performance Benchmarks, Investment Procedures (Review, Discuss, Recommend Approval)
- 15. BlackRock Core Fixed Income (Recommend Approval).
- 16. Asset Allocation (Review, Discuss, and Direct Staff as necessary)

# H) OPERATIONS

- 17. Staff Reports
- 18. General Counsel Reports
- 19. Committee Reports:

i. Audit Committee Reportii. Personnel Committee No Report

- 20. Upcoming Board Topics (subject to change)
  - i. March 27, 2023
    - a. Disability cases (2)
    - b. 2023 Actuarial Valuation Planning
    - c. 2023 Actuarial Valuation Assumptions Approval
    - d. Employer Prefunding
    - e. SLOCPT Administrative Budget FY23-24 proposed
    - f. Executive Director search process
    - g. TBD
  - ii. April 24, 2023 planned as a non-meeting month
    - a. Personnel Committee Meeting
  - iii. May 22, 2023
    - a. 2023 Actuarial Valuation Preliminary Results

- b. 2023 Actuarial Valuation Assumptions Approval
- c. SLOCPT Administrative Budget FY23-24 approval
- d. Quarterly Investment Report
- e. Executive Director search
- f. Personnel Committee meeting
- g. Audit Committee Audit exit meeting
- iv. June 26, 2023
  - a. 2022 Annual Financial Audit and ACFR
  - b. 2023 Actuarial Valuation and Contribution Rates Approval
  - c. Employer Prefunding
  - d. Executive Director search
  - e. TBD
- 21. Trustee Comments

# I) CLOSED SESSION

None

# J) ADJOURNMENT

# PENSION TRUST BOARD OF TRUSTEES

1000 Mill Street San Luis Obispo, CA 93408 (805) 781-5465 Phone (805) 781-5697 Fax www.SLOPensionTrust.org



# **MINUTES**

# PENSION TRUST BOARD OF TRUSTEES

Monday, January 23, 2023 9:30 AM
Regular Meeting of the Pension Trust
Board of Trustees

**Board Members Present:** Jeff Hamm

Jim Hamilton
David Grim
Lisa Howe
Geoff O'Quest
Michelle Shoresman

Gere Sibbach

**Board Members Absent: -**

**Pension Trust Staff:** Carl Nelson Executive Director

Amy Burke Deputy Director

General Counsel: Chris Waddell Olson | Remcho

Consultants: -

Others: Miki Gilman (online) SLOCREA

Lisa Winter (online) SLOCPT Anna Bastidos (online) SLOCPT

Zack Cziryak (online) Journalist - Fin News

**Call to Order:** 9:31 AM by President Hamm

# A) PUBLIC COMMENT

1. None

### **B) ORGANIZATIONAL**

2. **Election of Officers** (Pursuant to Section 3.05 and Section 3.06 of the By-Laws of the San Luis Obispo County Pension Trust).

**Trustee Discussion:** Trustees discussed the general preference that the officer roles of President and Vice President are more efficiently rotated if each officer serves two years at a stretch (subject to the annual elections required by the By-Laws). Trustees also discussed that it is logical, but not required, that the Trustee serving as Vice President may be elected to serve as President for the following year.

**President:** Trustee Shoresman nominated Trustee Hamm to serve as Board of Trustees President for 2023. There were no other nominations.

Vote: Trustee Hamm elected President - Unanimous

**Vice President:** Trustee Shoresman nominated Trustee Hamilton to serve as Board of Trustees Vice President for 2023. There were no other nominations.

Vote: Trustee Hamilton elected Vice President – Unanimous

- 3. **Committees** appointment of members by President.
  - i. Audit Committee (*standing committee*)
  - ii. Personnel Committee (standing committee)
  - iii. Private Markets Investments (ad hoc committee)

Newly re-elected President Hamm appointed the following Trustees to the two standing committees and one ad hoc Committee as follows:

Audit Committee (standing): Trustees Sibbach, Howe, and O'Quest

Personnel Committee (standing): Trustees Hamilton, Shoresman, and Grim

**Private Markets Investments Committee** (ad hoc): Disbanded as its primary purpose was accomplished in 2021 and 2022.

# C) CONSENT

- 4. Minutes of the Regular Meeting of November 28, 2022 (Approve Without Correction).
- 5. Reports of Deposits and Contributions for the months of November and December 2022 (Receive and File).
- 6. Reports of Service Retirements, Disability Retirements and DROP Participants for the months of November and December 2022 (Receive, Approve and File).
- 7. Monthly Investment Report for November 2022 (Receive and File).
- 8. reserved

**Motion:** Approve the Consent items

**Discussion:** None

**Public Comment:** None

Motion Made: O'Quest Motion Seconded: Shoresman

Carried: Unanimous

# D) APPLICATIONS FOR DISABILITY RETIREMENT

9. reserved

# E) OLD BUSINESS

None

# F) NEW BUSINESS

10. Board Policies Review (Review, Discuss, and Direct Staff).

**Motion**: Approve revised Board of Trustees policies

**Ethical and Fiduciary Conduct** 

Governance

**Trustee Core Competencies and Education** 

**Discussion**: General Counsel Waddell presented the item.

Trustees discussed the proposed revisions to the core fiduciary policies at length and asked clarifying questions. Minor formatting revisions were made through out the discussion.

Public Comment: None

**Motion Made:** Grim **Motion Seconded:** Sibbach

Carried: Unanimous

- 11. Reserved
- 12. Reserved

# G) INVESTMENTS

13. Annual Cashflow Analysis (Receive and File).

Motion: Receive and File the 2023 Annual Cashflow Analysis

**Discussion**: Deputy Director Burke presented the item.

Trustees asked questions about the cashflow report relative to the overarching Functionally Focused Portfolio asset allocation policy that includes a long term target allocation of 10% to Liquidity assets.

Public Comment: None

**Motion Made**: Hamm **Motion Seconded**: Shoresman

**Carried:** Unanimous

15. Monthly Investment Report for December 2022 (Receive and File

**Motion:** To Receive and File the monthly investment report

**Discussion:** Executive Director Nelson presented the report.

Executive Director Nelson commented on the negative -7.9% preliminary rate of return for 2022. Relative to the upcoming 2023 actuarial valuation, prior analysis from September 2022 by the Plan Actuary, Cheiron, based on an assumed -10% 2022 return indicates, continued upward pressure on pension contribution rates will take place.

Public Comment: None

Motion Made: Sibbach Motion Seconded: O'Quest

**Carried:** Unanimous

16. Reserved

#### 17. Asset Allocation

**Discussion:** Routine item included should asset allocation changes be necessary.

**Public Comment:** None

**No Action Necessary** 

# **H) OPERATIONS**

### 18. Staff Reports

- i. Deputy Director Burke reminded Trustees of the need to file their annual FPPA Form 700s by April 1<sup>st</sup>.
- ii. Deputy Director Burke reported on preliminary 2022 statistics of the number of retirements and related data.
- iii. Executive Director Nelson reported that he has been requested to meet with the Sheriff's Department to discuss their concerns with the increased number of Industrial Disability Retirement cases approved over 2021-2022.

## 19. General Counsel Reports

General Counsel Waddell reported that the two beneficiaries in the cases of the overpayments served with a lawsuit in Nevada are proceeding towards a settlement acceptable to the SLOCPT involving a lien on the house that is the primary asset of the estate.

### 20. Committee Reports:

i.	Audit Committee	No Report
ii.	Personnel Committee	No Report
iii.	Private Markets Investments (ad hoc)	No Report

- 21. Upcoming Board Topics published on meeting agenda
- 22. Trustee Comments

None

# I) CLOSED SESSION

None

# J) ADJOURNMENT

There being no further business, the meeting was adjourned at 11:20 AM. The next Regular Meeting was set for February 27, 2023, at 9:30 AM, in room 161/162, County Government Center, San Luis Obispo, California 93408.

Respectfully submitted,

Carl Nelson Executive Director

# REPORT OF DEPOSITS AND CONTRIBUTIONS FOR THE MONTH OF JANUARY 2023

						Employer for					
PP 1	1/13/2023	Pensionable	Employer	Employer	Employee	Employee	Employee	Combined	Additional	Service	TOTAL
	By Employer and Tier:	Salary	Contributions	Rate	Contributions	Contributions	Rate	Rate	Contributions	Purchases	Contributions
	County Tier 1	2,734,077.66	904,162.95	33.07%	379,171.34	232,981.98	22.39%	55.46%	2,487.50	1,365.43	1,520,169.20
	County Tier 2	979,307.21	336,630.62	34.37%	64,783.25	84,486.44	15.24%	49.62%	(198.34)	-	485,701.97
	County Tier 3	4,874,812.74	1,596,223.47	32.74%	668,682.26	-	13.72%	46.46%	- 1	1,286.38	2,266,192.11
	Superior Court Tier 1	233,002.78	77,923.93	33.44%	50,301.34	-	21.59%	55.03%	-	-	128,225.27
	Superior Court Tier 3	194,726.19	62,615.90	32.16%	32,198.68	-	16.54%	48.69%	-	-	94,814.58
	APCD Tier 1	50,442.31	15,656.30	31.04%	7,872.27	4,071.98	23.68%	54.72%	-	-	27,600.55
	APCD Tier 2	3,791.20	1,150.63	30.35%	488.31	217.99	18.63%	48.98%	-	-	1,856.93
	APCD Tier 3	33,696.88	10,459.49	31.04%	4,827.90	-	14.33%	45.37%	-	-	15,287.39
	SLOCPT Tier 1	8,506.26	2,648.85	31.14%	1,291.25	790.23	24.47%	55.61%	-	-	4,730.33
	SLOCPT Tier 2	10,276.00	3,199.95	31.14%	580.60	954.64	14.94%	46.08%	-	-	4,735.19
	SLOCPT Tier 3	13,717.64	4,404.74	32.11%	1,829.00	-	13.33%	45.44%	250.00	-	6,483.74
	LAFCO Tier 3	11,039.88	3,548.22	32.14%	1,617.39	-	14.65%	46.79%	-	-	5,165.61
	RTA Tier 2	29,710.40	9,373.62	31.55%	607.39	3,862.35	15.04%	46.59%	-	-	13,843.36
	RTA Tier 3	17,220.80	5,509.11	31.99%	2,388.24	-	13.87%	45.86%	-	-	7,897.35
		9,194,327.95	3,033,507.78	32.99%	1,216,639.22	327,365.61	16.79%	49.79%	2,539.16	2,651.81	\$ 4,582,703.58
						Employer for					
DD 2	1/27/2023	Danaianahla		Consider to a	Complex see		Complexes a	Combined	Additional	Service	TOTAL
PP 2	By Employer and Tier:	Pensionable Salary	Employer Contributions	Employer Rate	Employee Contributions	Employee Contributions	Employee Rate	Rate	Contributions		Contributions
	County Tier 1	2,682,910.79	888,198.43	33.11%	371,511.47	228,603.89	22.37%	55.47%	2,487.50	1,365.43	1,492,166.72
	County Tier 2	971,051.93	334,077.82	34.40%	64,634.22	82,130.37	15.11%	49.52%	2,467.50	1,303.43	480,842.41
	County Tier 3	4,897,897.74	1,602,847.25	32.73%	668,099.15	62,130.37	13.64%	46.37%	-	1,367.49	2,272,313.89
	Superior Court Tier 1	228,964.89	76,779.47	33.53%	49,440.01	_	21.59%	55.13%	-	1,307.43	126,219.48
	Superior Court Tier 3	194,076.28	62,129.51	32.01%	31,953.40	-	16.46%	48.48%	-	-	94,082.91
	APCD Tier 1	47,813.70	14,997.05	31.37%	7,458.78	3,827.78	23.61%	54.97%	-	-	26,283.61
	APCD Tier 2	3,791.21	1,150.63	30.35%	488.31	217.99	18.63%	48.98%	_	_	1,856.93
	APCD Tier 3	34,835.68	10,810.93	31.03%	4,995.90	217.55	14.34%	45.38%		_	15,806.83
	SLOCPT Tier 1	8,506.26	2,648.85	31.14%	1,291.25	790.23	24.47%	55.61%	_	_	4,730.33
	SLOCPT Tier 2	10,276.00	3,199.95	31.14%	580.60	954.64	14.94%	46.08%	_	_	4,735.19
	SLOCPT Tier 3	13,717.65	4,404.74	32.11%	1,829.00	-	13.33%	45.44%	250.00	_	6,483.74
	LAFCO Tier 3	11,039.88	3,548.22	32.11%	1,617.39	-	14.65%	46.79%	250.00	175.07	5,340.68
	RTA Tier 2	29,710.40	9,373.62	31.55%	607.39	3,862.35	15.04%	46.59%	_	-	13,843.36
	RTA Tier 3	15,797.60	5,067.06	32.07%	2,140.32	3,002.33	13.55%	45.62%	_	_	7,207.38
	KTA Hel 3	9,150,390.01	3,019,233.53	33.00%	1,206,647.19	320,387.25	16.69%	49.68%	2,737.50	2,907.99	\$ 4,551,913.46
		3,100,000.01	0,010,200.00	00.0070	1,200,071.10	020,001.20	10.0070	70.0070	2,707.00	2,001.00	ψ -1,001,010. <del>1</del> 0
	TOTAL FOR THE MONTH	18,344,717.96	6,052,741.31	32.99%	2,423,286.41	647,752.86	16.74%	49.74%	5,276.66	5.559.80	\$ 9,134,617.04
	TO THE TOTAL THE MORE	10,017,111.00	3,002,171.01	J2.55 /0	_,,	0-11,1102.00	10.1 7/0	10.1 4 /0	0,210.00	0,000.00	<del>+ 0,10-1,011.04</del>
											• • • • • • • •
	TOTAL YEAR TO DATE	18,344,717.96	6,052,741.31	32.99%	2,423,286.41	647,752.86	16.74%	49.74%	5,276.66	5,559.80	\$ 9,134,617.04

RETIREE NAME	DEPARTMENT	BENEFIT TYPE *	EFFECTIVE DATE	MONTHLY BENEFIT	SS TEMP ANNUITY**
Avery-Caldwell, Patricia	Department of Social Services	Service Retirement	12/31/2022	6,901.38	False
Avery-Caldwell, Patricia	Department of Social Services	Additional Annuity	12/31/2022	1.16	False
Calvert, Jonathan Alden	Sheriff-Coroner	Duty Disability Retirement	12/01/2020	4,260.63	False
Coomer, Jill Denise	Planning Department	Service Retirement	12/31/2022	3,508.03	True
Cossin, Deann E	Probation Department	Service Retirement	12/31/2022	5,150.30	False
D'Acri, Philip M	Central Services	Service Retirement	12/31/2022	5,621.93	False
Ellis, Jody Marie	Sheriff-Coroner	Duty Disability Retirement	12/31/2022	3,682.23	False
Fahey, Dana P	ITD	Service Retirement	01/01/2023	4,033.88	False
Fields, Cherie	Public Health Department	Service Retirement	12/31/2022	1,689.93	False
Goldsmith, Nancy L	Public Health Department	Service Retirement	12/30/2022	5,149.98	False
Hicklin, Gary L	ITD	DROP	01/01/2023	8,083.16	False
Hochman, Rebecca L	Superior Court	Service Retirement	12/31/2022	2,189.39	False
Johnson, Dennis M	Probation Department	Service Retirement	12/31/2022	6,281.90	False
Kaizuka, Kevin H	Air Pollution Control District	Service Retirement	01/01/2023	6,712.45	False
King, Stacey L	Clerk-Recorder	Service Retirement	12/31/2022	4,443.56	False
Kleemann, Tamara E	Agricultural Commissioner	Service Retirement	12/31/2022	5,563.53	False
Kleemann, Tamara E	Agricultural Commissioner	Additional Annuity	12/31/2022	46.56	False
LaBarre, Aaron M	Public Health Department	Service Retirement	12/31/2022	3,680.92	False
Labreque, Terrie L	Superior Court	Service Retirement	12/31/2022	3,557.55	False
McConnaughhay, Dorothy	Public Health Department	Service Retirement	12/31/2022	2,406.16	False
Olson, Amy Juliet	Public Health Department	Service Retirement	12/31/2022	2,178.53	False
Quennell, Colin D	Behavioral Health	DROP	01/01/2023	6,635.20	False
Scott, Pamela K	Department of Social Services	Service Retirement	12/31/2022	5,888.05	False
Shurick, Shawn O.	ITD	Service Retirement	12/31/2022	7,842.14	False
Spear, Donna J	Public Health Department	Service Retirement	12/24/2022	3,800.98	False
Taylor, Christina M	Public Works ISF	Service Retirement	12/31/2022	3,827.64	False
Taylor, Christina M	Public Works ISF	Additional Annuity	12/31/2022	2.65	False
Wallravin, Brian E	Public Works ISF	Service Retirement	12/19/2022	2,350.33	False
Yozamp, Corinne	Behavioral Health	Service Retirement	12/31/2022	3,542.13	False
Zamora Martinez, Carmen	Probation Department	Service Retirement	12/31/2022	359.54	False

<sup>\*</sup> Additional Annuity Benefits are calculated based on the Additional Contribution and associated Interest balance of the Retiree at the point of retirement (per Sections 5.07, 27.12, 28.12, 29.12, 30.12, and 31.12 of the Plan)

<sup>\*\*</sup> If "True" Retiree has elected an optional Social Security Coordinated Temporary Annuity (per Section 13.06 of the Plan), actual monthly allowance will be increased until age 62 and then actuarially reduced going forward

# **Board of Trustees**

1000 Mill Street San Luis Obispo, CA 93408 Phone: (805) 781-5465 Fax: (805) 781-5697 www.SLOPensionTrust.org



Date: February 27, 2023

To: Board of Trustees

From: Carl Nelson – Executive Director Amy Burke – Deputy Director

# Agenda Item 8: Annual Cost-Of-Living Adjustments provided by the San Luis Obispo County Employees Retirement Plan

#### **Recommendation:**

It is recommended that the Board approve Cost-Of-Living Adjustments (COLAs) in accordance with the Retirement Plan and calculated by SLOCPT's Actuary (Cheiron).

- 1. Tier 1 benefit recipients, 2023 COLA of 3.0% (the maximum allowed).
- 2. Tier 2 and Tier 3 recipients, 2023 COLA of 2.00% (the maximum allowed).

#### **Discussion:**

**COLA Adjustments -** The Retirement Plan provides for annual cost-of-living adjustments for retirees in:

Section 19.01 and Section 19.02 of Article 19: Tier 1 - Cost-Of-Living;

Section 27.25 of Article 27: Tier Two –Miscellaneous;

Section 28.25 of Article 28: Tier Two – Safety;

Section 29.25 of Article 29: Tier Three – AB 340: Miscellaneous;

Section 30.25 of Article 30: Tier Three – AB 340: Safety; and

Section 31.24 of Article 31: Tier Three – AB 340: Probation.

**CPI-U Benchmarks -** The COLA percentage, as specified by the Plan, is determined by the annual average of the All-Urban Consumers Consumer Price Index – all items (CPI-U) for the Los Angeles and the San Francisco metropolitan areas.

The SLOCPT's Actuary calculates the recommended COLA as a smoothed value using the two most recent annual averages published by the Bureau of Labor Statistics for each specified metropolitan area.

While COLAs have historically been calculated as increases to benefits with positive inflation, the Plan also allows for decreases should there be deflation in the CPI-U data.

#### **Financial:**

This year's recommended COLA is expected to cumulatively increase the current monthly retiree payroll distribution by approximately \$318k.

The 2022 Actuarial Valuation used a long-term COLA assumption of 2.75% for Tier 1 COLA adjustments. As a result, the above assumed COLA for 2023 will contribute to an actuarial loss in the 2024 actuarial valuation.

### **Implementation:**

**COLA Recommendation** - The recommended COLA based on average of the years 2022 and 2021 has been calculated as **5.0%**. As dictated by the Plan, COLAs may not exceed 3.0% for Tier 1 retirees or 2.0% for Tier 2 and Tier 3 retirees. Furthermore, for Tier 1 retirees, if the calculated average percentage increase is greater than the Plan's 3.0% maximum, the difference will be added to the eligible individuals' Cumulative Carryover balance (to be drawn on and used in years where the percentage is below the 3.0% maximum). Tier 2 and Tier 3 retirees are not eligible for the Cumulative Carryover as stipulated by the Plan.

Upon Board approval, all eligible retirees (those retired on or before January 1, 2023) will receive a COLA increase starting April 1, 2023, as shown in the following table. The Cumulative Carryover (COLA Bank) for each vintage year of retirees will change as shown on the attached letter from SLOCPT's Actuary.

Tier:	Retirement Date:	COLA:
1	On or Before January 1, 2023	3.0%
2 & 3	On or Before January 1, 2023	2.0%

Respectfully Submitted



#### Via Electronic Mail

January 31, 2023

Mr. Carl Nelson Executive Director San Luis Obispo County Pension Trust 1000 Mill Street San Luis Obispo, California 93408

Re: Cost-of-Living Adjustment (COLA) as of April 1, 2023

Dear Carl,

Per your request, we are providing you with the April 1, 2023 Cost-of-Living Adjustment computations for San Luis Obispo County Pension Trust (SLOCPT) members, prepared in accordance with Sections 19.01 and 19.02 of the SLOCPT Retirement Plan.

## **Background**

The Cost-of-Living Adjustment (COLA) is determined annually based on the percentage increase or decrease in the cost of living, using the annual average of the Los Angeles-Long Beach-Anaheim and San Francisco-Oakland-Hayward Consumer Price Indices (CPI) for All Urban Consumers, for all items, using a base period of 1982-1984.

At the direction of SLOCPT and the terms of Section 19.01 of the Retirement Plan, we are using a two-year average of the percentage changes in the annual averages of the indices described above to determine the COLAs as of April 1, 2023. We understand this is permissible based on legal counsel's interpretation of "found by the Board of Trustees to approximate" in Section 19.01 of the Retirement Plan.

#### **COLA Calculations**

The Consumer Price Indices and calculations described above are as follows:

		Annual	Average
		Average CPI-U	Annual Increase
Los Angeles metropolitan area:	2020:	278.567	
	2021:	289.244	3.833%
	2022:	310.782	7.446%
San Francisco metropolitan area:	2020:	300.084	
	2021:	309.721	3.211%
	2022:	327.060	5.598%

Based on the averaging method, this represents an increase of 5.022%, which when rounded to the nearest one-tenth percent results in a two-year annual average CPI increase of 5.0%.

Mr. Carl Nelson January 31, 2023 Page 2

### Section 19.01 and 19.02

Tier 1 members are subject to the COLA provisions of Sections 19.01 and 19.02, which limits the COLA increases to 3.0% annually. Any excess of the COLA increase calculated without regard to the maximum above 3.0% is to be accumulated and carried over each year, rounded to the nearest one-tenth percent.

All Tier 1 members who retired on or before January 1, 2023 will receive a COLA increase of 3.0% to their monthly benefit, based on the two-year annual average CPI increase. Accumulated carry-over balances will be increased by 2.0% and will be used in future COLA calculations when the two-year annual average change in CPI is less than 3.0%.

The attached exhibit summarizes the COLAs and carry-over balances for Tier 1 members subject to Sections 19.01 and 19.02. The accumulated carry-over balances are consistent with last year; however, we have not reviewed the historical carry-over balances.

#### Sections 27.25, 28.25, 29.25, 30.25, 31.25

Tier 2 and Tier 3 (AB 340) members are subject to the COLA provisions of Sections 27.25, 28.25, 29.25, 30.25, and 31.25, and are also governed by Sections 19.01 and 19.02. The annual COLA for members in these Tiers is limited to 2.0% and they do not carry forward any accumulation of COLAs above the annual 2.0% maximum. Thus, Tier 2 and Tier 3 members will receive a COLA of 2.0%.

This letter was prepared exclusively for SLOCPT for the purpose described herein. Other users of this letter are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any other user.

Please contact us if you have any questions regarding these calculations.

Sincerely, Cheiron

Anne D. Harper, FSA, EA, MAAA

Principal Consulting Actuary

Attachment

cc: Amy Burke

Alice Alsberghe, ASA, EA, MAAA Tim Hall, FSA, MAAA, CERA



# San Luis Obispo County Pension Trust Cost of Living Adjustments (COLA) - Section 19.01 and 19.02 Tier 1 Members

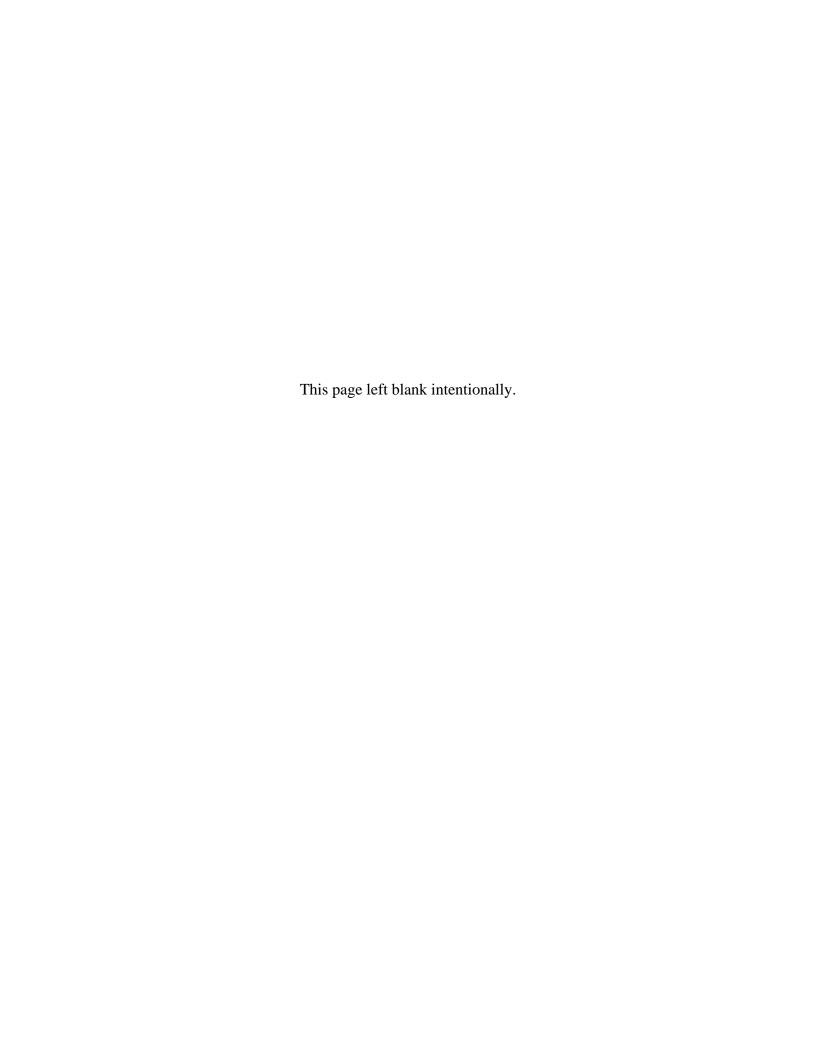
# Maximum Annual COLA: 3.0%

		April 1, 2022			April 1, 2023	
			Accumulated			Accumulated
	CPI Change <sup>1</sup>	COLA Granted	Carry-Over	CPI Change <sup>1</sup>	COLA Granted	Carry-Over
Initial Retirement Date	(A)	(B)	(C)	(D)	(E)	(F)
On or Before 1/1/1979	2.6%	3.0%	16.4%	5.0%	3.0%	18.4%
1/2/1979 to 1/1/1980	2.6%	3.0%	12.1%	5.0%	3.0%	14.1%
1/2/1980 to 1/1/1981	2.6%	3.0%	5.4%	5.0%	3.0%	7.4%
1/2/1981 to 1/1/2019	2.6%	2.9%	0.0%	5.0%	3.0%	2.0%
1/2/2019 to 1/1/2022	2.6%	2.6%	0.0%	5.0%	3.0%	2.0%
1/2/2022 to 1/1/2023	_	-	-	5.0%	3.0%	2.0%

 $<sup>^{</sup>I}$  Two-year average of annual average increases of the Los Angeles-Long Beach-Anaheim and San Francisco-Hayward-Oakland



All Urban Consumer Price Indices, for all items, 1982-1984 base (Section 19.01 and 19.02).



# **Board of Trustees**

1000 Mill Street San Luis Obispo, CA 93408 Phone: (805) 781-5465 Fax: (805) 781-5697 www.SLOPensionTrust.org San Luis Obispo County
Pension Trust

SLOCPT

Date: February 27, 2023

To: Board of Trustees

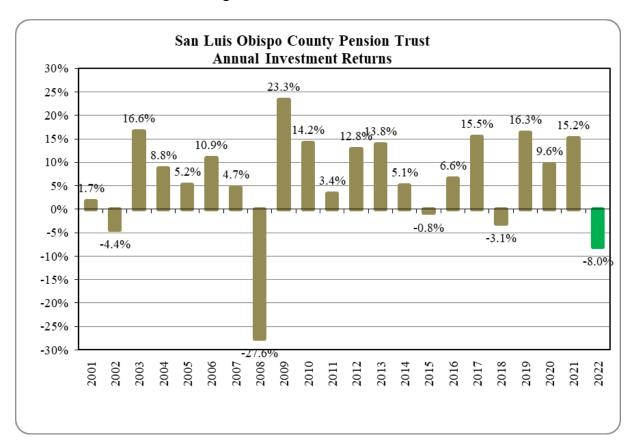
From: Carl Nelson – Executive Director

Amy Burke - Deputy Director

Scott Whalen - Verus

## Agenda Item 10: Quarterly Investment Report for the 4th Quarter of 2022

Attached is the 4Q22 quarterly investment report from the Trust's investment consultant - Verus. Scott Whalen of Verus will present and discuss the quarterly report. The history of SLOCPT investment returns, gross of fees, is shown below.



Respectfully submitted,

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PERIOD ENDING: DECEMBER 31, 2022

Investment Performance Review for

**San Luis Obispo County Pension Trust** 

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#### **VERUSINVESTMENTS.COM**

SEATTLE 206.622.3700
CHICAGO 312.815.5228
PITTSBURGH 412.784.6678
LOS ANGELES 310.297.1777
SAN FRANCISCO 415.362.3484

Investment Landscape	TABI
Investment Performance Review	TAB II



# Verus business update

# Since our last Investment Landscape webinar:

- Verus hired two new employees:
  - Cholo Villanueva, Performance Analyst Seattle office
  - Demitri Castaneda, Performance Analyst Seattle office
- Two employees passed their Level III CFA exams, earning their charters. Verus now has a total of 33 CFA charterholders.
- Verus retained a new client in Alaska, adding a fourth client to the state.
- We celebrated our 37th anniversary. Wurts Johnson & Company (founding name) was established in January 1986.
- We also enhanced our research content management system to improve how we
  communicate our conviction in managers with our new IQ Ratings system. (details on next page)

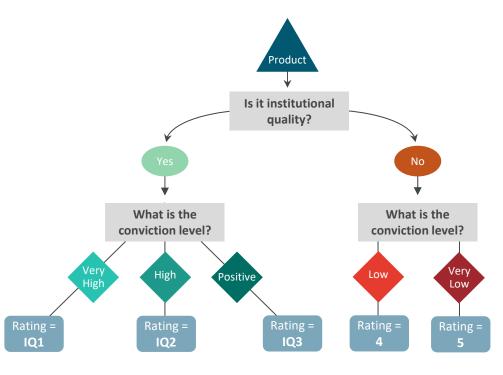
# Manager rating system

# The IQ Rating System communicates our conviction in investment products

There are two components to the rating:

- 1. Institutional quality (IQ) The product meets or exceeds the standards of fiduciary care required by institutional investors and is suitable for use in clients' portfolios.
- 2. Conviction (1 to 5) Represents the conviction of our research teams in the distinguishing qualities of the product relative to its peers, with 1 as the highest rating and 5 the lowest.

#### **PROCESS**



#### **DEFINITIONS & GUIDELINES**

		Institutional	Conviction		
F	Rating	Quality?	Level	<b>Defining Characteristics</b>	Recommendations
	IQ1	Yes	Very High	Earns Verus' highest conviction. Above-average characteristics most likely to achieve the strategy's desired investment results.	Recommended for use in client portfolios. May be used in Verus discretionary portfolios.
	IQ2	Yes	High	Maintains Verus' high conviction. Above-average characteristics most likely to achieve strategy's desired investment results.	Recommended for use in client portfolios. May be used in Verus discretionary portfolios.
	IQ3	Yes	Positive	Meets institutional quality standards that can achieve desired investment results. Strengths outweigh weaknesses.	While IQ1 or IQ2 rated products are generally preferable, certain client needs may be better addressed by a highly specialized IQ3 product.
	4	No	Low	Concerns with the product's ability to meet institutional-quality standards.	Clients should re- evaluate retention or monitor closely.
	5	No	Very Low	Significant issues inhibit the product's ability to meet institutional-quality standards.	Verus recommends termination, immediately.

Verus<sup>77</sup>

Rating process simplified for illustrative purposes only

**Investment Landscape** 

1st Quarter 2023

# Recent Verus research

Visit: <a href="https://www.verusinvestments.com/insights/">https://www.verusinvestments.com/insights/</a>

# Topics of interest papers

#### A BRIEF GUIDE TO THE SFA PROGRAM

In this paper, we plan to approach the Special Financial Assistance (SFA) program from an investment perspective. First, we describe the interest rate rules. Next, we offer some ways in which investors may think about their legacy assets relative to their new SFA funds. This section concludes by outlining a strategy in which SFA funds are used to cash flow match expected future liability payments. Overall, the health of a Plan will determine how much SFA funding is available, and the total amount of SFA funding awarded will likely determine the degree to which this program should reasonably impact an investor's total portfolio strategy.

#### IS PAINLESS DIVERSIFICATION BACK?

Low interest rates over the last few years have caused investors significant asset allocation problems. The 2022 market reversal has begun to reverse these challenges. The implications of this return to more normal conditions for investors include:

- The renewed role of fixed income in portfolios
- Greater flexibility to meet performance objectives through simple portfolio structures
- The ability of certain investors to meet return objectives while taking less market risk
- The potential for pensions to take advantage of higher interest rates and likely stronger funded status by pursuing more liability-aware investment strategies

# Annual research

#### 2023 CAPITAL MARKET ASSUMPTIONS

Some important developments occurred in the last year. Capital Market Assumptions guide our advice and recommendations. They reflect the best judgments of our research and investment teams regarding the expected behavior and associated risks of capital markets in the years ahead. During our 2023 Capital Market Assumptions webinar, we discussed:

- A significant increase in our Capital Market
   Assumptions, and aspects of the environment
   which have driven this change
- The "building blocks" of market returns and our philosophy around forecasting future asset-class performance
- Implications for investors as markets escape the low-return environment of recent years

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Other assets	36
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# 4<sup>th</sup> quarter summary

#### THE ECONOMIC CLIMATE

- Real GDP increased at a 2.9% rate in the fourth quarter (1.0% year-over-year growth), slightly exceeding expectations. Consumer spending, private inventory investment, government expenditures, and nonresidential investment were supportive of growth.
- Unemployment remained near historic lows during the quarter, at 3.5% in December. While this figure suggests a strong and resilient job market, the workforce remains much smaller than pre-pandemic times as more than two million workers remain out of the labor force.

#### PORTFOLIO IMPACTS

- Inflation fears continue to ease as domestic inflation fell further. Headline inflation was 6.5% year-over-year in December—the lowest since October 2021—while core inflation came in at 5.7%. Prices for most goods and services have moderated with the exception of shelter costs, which increased at a worryingly fast pace of 10.0% annualized in December.
- U.S. real personal spending held steady at 2.0% year-over-year in August. Households focused spending on services over goods, which has removed some stress from supply chains and likely helped to normalize global transportation issues. Relatively strong spending seems to suggest it is possible that inflation moderates without a painful slowdown in the economy.

#### THE INVESTMENT CLIMATE

- China's rapid pivot away from a "Zero Covid" policy towards the end of Q4 added a large tailwind to emerging market equity performance and the global growth outlook. Despite this positive news, an uptick in virus cases poses challenges for China's reopening.
- Credit performed well in the fourth quarter, as resilient U.S. economic growth combined with expectations for the Fed to ease their tightening cycle helped mitigate investor concerns of a near-term cyclical downturn.

#### **ASSET ALLOCATION ISSUES**

- Calendar year 2022 proved to be a year of reversal regarding asset class performance. Top performing investments of the past decade, such as U.S. growth and small cap stocks, suffered some of the largest losses.
   Meanwhile, many of the worst performing investments of the past decade, including commodities and value stocks, significantly outperformed.
- Value stocks outperformed markedly during 2022, outpacing growth stocks by 10.2% in Q4 and 21.6% for the year. Energy, industrials, and materials—sectors heavily tilted toward value—showed strong returns, with energy ending the year up 64.6%.

Markets have partially recovered as inflation fears eased

Recession risks and an earnings slowdown may come into focus in 2023



# What drove the market in Q4?

#### "Has Inflation Peaked?"

#### **HEADLINE CONSUMER PRICE INFLATION (YEAR-OVER-YEAR)**

Jul	Aug	Sep	Oct	Nov	Dec
8.5%	8.3%	8.2%	7.7%	7.1%	6.5%

*Article Source: Financial Times, December 8th, 2022* 

#### "The Labor Market is Still Hot"

#### **CHANGE IN U.S. NONFARM PAYROLLS**

Jul	Aug	Sep	Oct	Nov	Dec
+537k	+292k	+269k	+284k	+263k	+223k

Article Source: Axios, November 1st, 2022

## "Fed Raises Rate by 0.5 Percentage Point, Signals More Increases Likely"

#### FOMC MEETING RATE HIKE DECISIONS

May	Jun	July	Sep	Nov	Dec
+50 bps	+75 bps	+75 bps	+75 bps	+75 bps	+50 bps

Article Source: Wall Street Journal, December 14th, 2022

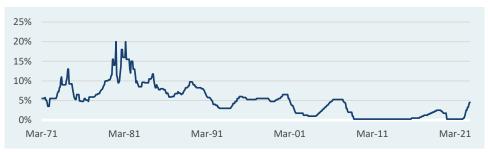
#### "China's Covid Pivot Accelerates as Cities Ease Testing Rules"

#### CHINESE REPORTED NEW CASES (DAILY AVERAGE FOR THE MONTH)

Jul	Aug	Sep	Oct	Nov	Dec
559	1,629	1,158	1,340	18,914	14,748

Article Source: Bloomberg, December 5th, 2022. Dataset from Our World in Data

#### FED FUNDS RATE UPPER BOUND



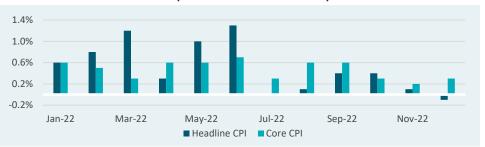
Source: Federal Reserve, as of 12/31/22

#### U.S. AVAILABLE WORKERS VS. AVAILABLE JOBS (MILLIONS)



Source: Bureau of Labor Statistics, as of 11/30/22

#### U.S. HEADLINE & CORE CPI (MONTH-OVER-MONTH)



Source: Bureau of Labor Statistics, as of 12/31/22



**Investment Landscape** 

1st Quarter 2023

# Economic environment



# U.S. economics summary

- Real GDP increased at a 2.9% rate in Q4 (1.0% year-over-year growth). Consumer spending, private inventory investment, government expenditures, and nonresidential investment supported the economy.
- Inflation fears continue to ease as domestic inflation fell further.
   December headline inflation came in at 6.5% year-over-year while core inflation (excluding food & energy) came in at 5.7%. Most goods and services price rises have slowed, with the exception of shelter costs, which increased at a worryingly fast pace of 10% annualized in December.
- Unemployment remained very low during the quarter, at 3.5% in December. While this official figure suggests a strong and resilient job market, the workforce remains much smaller than pre-pandemic times as more than two million workers are missing from the labor force.

- Consumer spending kept steady though savings rates dropped to 2.3%—a depressed level not seen since the mid-2000s. A low household savings rate is sometimes seen as an indicator of strong consumer confidence and spending, though we suspect household budgets are currently being hit hard by higher costs.
- Consumer sentiment improved during Q4 but is still very downbeat. In the most recent University of Michigan survey, respondents showed less concern around inflation, reported better business conditions and long-term outlook, but were pessimistic over personal finances.
- U.S. home prices peaked in June 2022 and have been falling since then, according to S&P CoreLogic. Significantly higher mortgage interest rates have led to the worst home affordability on record, according to the National Association of Realtors.

	Most Recent	12 Months Prior	
Real GDP (YoY)	1.0% 12/31/22	5.7% 12/31/21	
Inflation (CPI YoY, Core)	5.7% 12/31/22	5.5% 12/31/21	
Expected Inflation (5yr-5yr forward)	2.2% 12/31/22	2.3% 12/31/21	
Fed Funds Target Range	4.25% – 4.50% 12/31/22	0.00% – 0.25% 12/31/21	
10-Year Rate	3.87% 12/31/22	1.51% 12/31/21	
U-3 Unemployment	3.5% 12/31/22	3.9% 12/31/21	
U-6 Unemployment	6.5% 12/31/22	7.3% 12/31/21	



**Investment Landscape** 

1st Quarter 2023

# GDP growth

Real GDP increased at a 2.9% rate in the fourth quarter (1.0% growth year-over-year), slightly exceeding expectations of 2.8%. Consumer spending supported growth, along with gains in private inventory investment, government expenditures, and nonresidential investment. Residential fixed investment saw an extreme drop of -26.7% during the quarter as the housing market weakened. Declining exports also acted as a drag on growth.

Investors appear unsure about how to interpret the recent string of strong U.S. economic data. Although consumer sentiment is very poor by most measures, spending remains positive and the job market remains surprisingly resilient. Were the economy to avoid recession, this would be positive for businesses and for corporate

earnings, but might also lead to further aggressive Federal Reserve action and interest rate hikes, which are negative for equity prices.

The inflation environment following the COVID-19 pandemic is unlike many past inflation cycles. Much of the price pressure has been fueled by factors *other than* a strong economy, such as an unprecedented shift in consumer spending behavior towards goods and away from services, port and international transportation issues related to lockdowns, and Russia's invasion of Ukraine. Because many of these variables are outside of the Federal Reserve's control, we believe it is possible that inflation continues to fall despite a relatively strong U.S. economy.

#### U.S. REAL GROSS DOMESTIC PRODUCT



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



Source: FRED, as of 12/31/22 Source: FRED, as of 12/31/22



**Investment Landscape** 

1st Quarter 2023

# Inflation

The inflation picture continued to improve in the United States, as both headline and core inflation figures declined further. December headline inflation came in at 6.5% year-over-year—the lowest since October 2021—while core inflation came in at 5.7%. Most goods and services prices have moderated with the exception of shelter, which increased at a worryingly fast pace of 10% annualized in December. Food inflation has been a large contributor to high inflation, but food price rises reassuringly slowed in December, increasing at a 3.7% annualized rate.

Strong increases in U.S. hourly wages over recent years have

been a welcome development for workers who are feeling the squeeze of higher prices on household budgets. But wage rises can also act as a key risk to the inflation environment. Accelerating wages might sustain higher spending and therefore persistently elevated rates of inflation. However, government data now indicates that wage growth is slowing, which mitigates the risk of a wage-price spiral.

Overall, we believe inflation is falling and will likely be much less of a perceived market risk in 2023. Certain persistent price pressures suggest that an inflation level of 3-4% is more likely than the 1-2% experienced throughout much of the 2010s.

Price pressures continue to ease, adding to optimism that inflation will fall to more normal levels

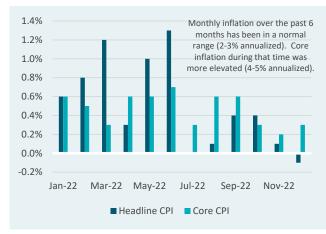
#### U.S. CPI (YOY)



#### **AVERAGE HOURLY EARNINGS**



# MONTHLY PRICE MOVEMENT



Source: BLS, as of 12/31/22

Source: BLS, as of 12/31/22

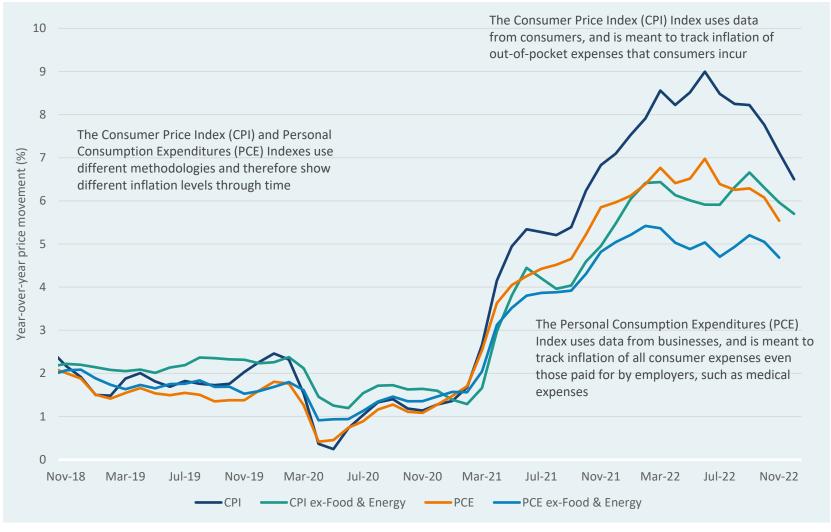


Source: BLS, as of 12/31/22

**Investment Landscape** 

1st Quarter 2023

# How are inflation conditions evolving?



Price rises have slowed considerably in recent months, which is bringing down official year-over-year inflation figures

Source: FRED, Verus, PCE data as of 11/30/22, CPI data as of 12/31/22



**Investment Landscape** 

1st Quarter 2023

# Labor market

Unemployment remained very low during the quarter, at 3.5% in December. This official figure suggests a strong and resilient job market for those workers who seek employment, although this data contrasts with media reports of fairly widespread layoff activity.

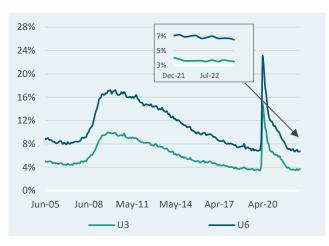
The labor participation rate also remained unchanged during the quarter. Low labor participation paints a different and much weaker picture of the job market, because this figure takes into account the workers who are not seeking employment. More than two million workers remain out of the labor force, relative to the pre-pandemic job market. Survey

and government-reported data suggests that much of this effect is due to "Long Covid" health troubles. Other variables such as early retirements, and parents taking time off to care for children, have also likely had a material impact on the size of the workforce.

The result of millions of Americans dropping out of the workforce has been a historically large mismatch regarding the number of jobs available and the number of workers available to fill those jobs. This gap remains wide, but has been closing recently as job openings have fallen.

The labor market remains tight, though the size of workforce is much smaller relative to prepandemic times

#### U.S. UNEMPLOYMENT



#### LABOR FORCE PARTICIPATION RATE



#### Source: FRED, as of 12/31/22

#### **WORKERS AVAILABLE VS. AVAILABLE JOBS**



Source: BLS, as of 11/30/22



Source: FRED, as of 12/31/22

**Investment Landscape** 

1st Quarter 2023

# The consumer

U.S. real (inflation-adjusted) personal consumption expenditures held steady in August, at 2.0% year-over-year. Households have focused spending on services rather than goods, which removed some stress from supply chains and likely helped to normalize transportation issues. Relatively strong spending seems to suggest it is possible that inflation moderates without a painful slowdown in the economy.

Spending has slowed but savings rates have also dropped to 2.3%—a depressed level not seen since the mid-2000s. A low household savings rate is sometimes seen as an indicator of

strong consumer confidence and spending, though in the current environment we suspect that household budgets are being hit hard by inflation and higher living costs.

Big ticket items such as automobiles have seen falling sales as higher interest rates make purchases less affordable and household budgets come under strain. The pressure of higher interest rates is reflected in average debt payments relative to average income—a metric which has risen towards pre-pandemic levels.

Household spending remains strong, though a very low savings rate may suggest budgets are being squeezed

#### **DEBT SERVICE AS % HOUSEHOLD INCOME**



#### REAL PERSONAL CONSUMPTION



PERSONAL SAVINGS RATE



Source: FRED, as of 11/30/22

Source: FRED, as of 11/30/22



Source: FRED, as of 9/30/22

**Investment Landscape** 

1st Quarter 2023

### Sentiment

Consumer sentiment improved again during the fourth quarter, but remains very downbeat, according to the University of Michigan. In the most recent survey, respondents expressed less concerns over inflation, reported better business conditions and long-term outlook, though pessimism around current and future personal finances remained.

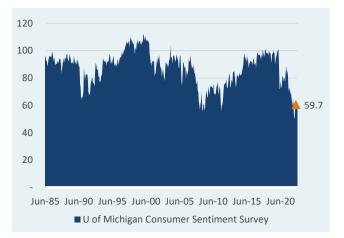
Consumer confidence measured by the Conference Board improved slightly in the fourth quarter—at the highest level since April. According to the Conference Board, views around

current conditions and future conditions improved as households were more upbeat regarding the economy and jobs. Inflation expectations continued to fall (improve), driven by lower gas prices in particular.

The NFIB Small Business Optimism index deteriorated slightly during the quarter, reflecting a very poor business outlook. Thirty-two percent of business owners expressed inflation as their greatest concern for business operations. Other concerns included difficulties in filling open job positions and an inability to raise prices to keep up with inflation.

Sentiment, by most measures, remains very poor

#### **CONSUMER SENTIMENT**



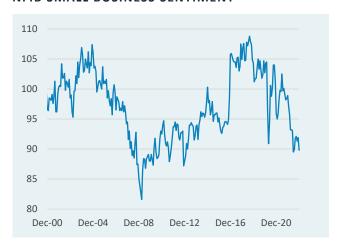
Source: University of Michigan, as of 12/31/22

#### CONFERENCE BOARD CONSUMER CONFIDENCE



Source: Conference Board, as of 12/31/22

#### NFIB SMALL BUSINESS SENTIMENT



Source: NFIB, as of 12/31/22



**Investment Landscape** 

1st Quarter 2023

### Housing

U.S. home prices peaked in June 2022 and have been falling since that time, according to the S&P CoreLogic Case-Shiller U.S. National Index. Significantly higher mortgage interest rates have led to the worst home affordability on record, as indicated by the National Association of Realtors.

Higher home prices and interest rates have also resulted in a sharp slowdown in sales activity—a notable change from the frothy environment that had occurred post-pandemic. Existing home sales activity has now fallen to a rate not seen since the real estate market was recovering from the housing

crisis during the early 2010s.

Conditions in housing today appear to be helping to *rebalance* the housing market, as suggested by the monthly supply of homes. Weaker sales volumes and worse affordability has meant that potential buyers have much more inventory to select from. The monthly supply of homes is now at 8.6 months, up from an all-time-low of 3.3 months in August 2020. As homes sit on the market unsold for longer, prices may need to fall further to attract buyers.

#### HOUSING AFFORDABILITY INDEX

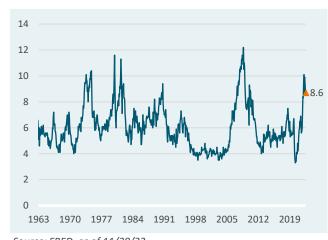


#### **HOME SALES: NEW & EXISTING (MILLIONS)**



#### Source: FRED, as of 10/31/22

#### MONTHLY SUPPLY OF HOMES



Source: FRED, as of 11/30/22

The Monthly Housing Affordability Index measures whether or not a typical family earns enough income to qualify for a mortgage loan on a typical home at the national and regional levels based on the most recent monthly price and income data



**Investment Landscape** 

1st Quarter 2023

### International economics summary

- Economic growth expectations continued to weaken, although the GDP outlook for emerging economies is starting to paint a more optimistic picture. Developed economies, specifically across the Eurozone and United Kingdom, are still facing the negative growth impacts of tighter financial conditions as inflation remains elevated.
- Inflation in both the Eurozone and U.K. has reinforced tighter policies from the ECB and BOE. While U.K. inflation fell to 10.7% from the 11.1% peak in October, interest rates are expected to be raised further (but in smaller increments). Eurozone inflation has shown signs of moving past its peak, although core inflation hit a new high of 5.2%, stoking fears that inflation may be spreading to core goods and services.
- Unemployment rates have remained stable over the quarter.

- India stood out as an exception, where unemployment jumped from 6.4% to 8.3%.
- The war in Ukraine carried on despite temporary "ceasefires" declared by Russia. The fighting has intensified in Eastern Ukraine around Kharkiv, with a supporting effort in Southern Ukraine, as Russian forces attempt to secure frontline positioning in the Kherson Oblast.
- China's rapid pivot away from a "Zero Covid" policy towards the end of the quarter added a large tailwind to the global growth outlook. Despite this positive news, a rapid uptick in COVID-19 cases challenges the timeline of the reopening story. Additionally, many wonder how a large uptick in global demand might impact inflation pressures at a time when advanced economies struggle specifically to reign in spending.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	1.0%	6.5%	3.5%
	12/31/22	12/31/22	12/31/22
Eurozone	<b>2.3</b> % 9/30/22	9.2% 12/31/22	6.5% 11/30/22
Japan	1.5%	4.0%	2.4%
	9/30/22	12/31/22	11/30/22
BRICS	3.6%	3.5%	5.2%
Nations	9/30/22	12/31/22	12/31/21
Brazil	3.6%	5.8%	8.3%
	9/30/22	12/31/22	10/31/22
Russia	(3.7%)	11.9%	3.7%
	9/30/22	12/31/22	11/30/22
India	6.3%	5.7%	8.3%
	9/30/22	12/31/22	12/31/22
China	3.9%	1.8%	5.7%
	9/30/22	12/31/22	11/30/22

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

Growth expectations outside of the U.S. contracted over the quarter, with the largest moves coming from developed economies. The IMF cut its GDP forecast by 0.7% and 0.2% for the Eurozone and U.K. in their October outlook (now expecting 2023 GDP of 0.5% and 0.3%, respectively) as the European Central Bank and Bank of England struggle to rein in record high inflation. Japan saw a smaller downward revision of 0.1%, with 2023 growth expectations now at 1.6%.

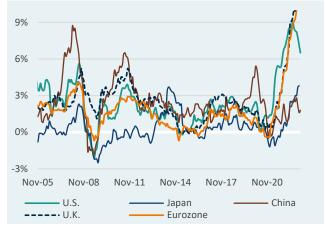
The outlook for emerging markets is much more optimistic. Most countries have avoided the high inflation seen in developed markets. A rapid reopening of the Chinese economy is likely providing a tailwind to growth, although the timing remains unclear due to another wave of COVID-19 infections. The 2023 GDP forecast for emerging economies per Bloomberg ticked down from 4.3% to 3.9% over the quarter, but emerging economy growth is still expected to far exceed that of developed economies (developed economy 2023 GDP expectations sit at 0.4%, according to the IMF).

Despite the slowdown in economic growth, employment remains stable amongst the regions we track. India stood out as an exception, where unemployment jumped from 6.4% to 8.3% during Q4.

#### **REAL GDP GROWTH (YOY)**

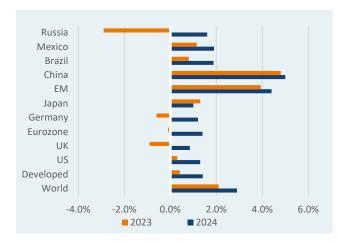


#### **INFLATION (CPI YOY)**



#### Source: Bloomberg, as of 12/31/22 – or most recent release

#### **ECONOMIC GROWTH FORECASTS**



Source: Bloomberg, as of 12/31/22 – or most recent release



Source: Bloomberg, as of 9/30/22

#### **Investment Landscape**

1st Quarter 2023

# Fixed income rates & credit



### Fixed income environment

- The 10-year U.S. Treasury yield ended the quarter unchanged at 3.8%. It is possible that long-term interest rates have already reached a cyclical peak, assuming inflation continues to fall and the Federal Reserve becomes less aggressive.
- Credit performance was positive during the fourth quarter, with riskier exposures such as U.S. high yield and emerging market debt (both local and hard currency) leading the pack. Expectations for a slowdown in Federal Reserve rate hikes, and a rosier U.S. economic environment, have provided a tailwind to the credit space.
- Default activity in high yield bonds and bank loans remained subdued during Q4. Throughout the year, 17 companies defaulted totaling \$26.3 billion, with large defaults concentrated in the Healthcare sector which accounted for over 36% of total dollar volume. Default rates for par-weighted U.S. high

- yield and bank loans remained very low at 0.8% and 1.0%, respectively.
- The U.S. yield curve inversion reached historically negative levels, with the 10-year 2-year yield spread seeing its widest inversion since 1981 (short-term interest rates being higher than long-term interest rates). The negative spread bottomed out at ~81 bps on December 5<sup>th</sup> before gradually easing during the latter half of the month.
- Derivative markets are beginning to clash with Federal Reserve projections, as investors are pricing in a shorter tightening cycle relative to that indicated by comments from Federal Reserve officials. Federal Funds futures reflect a target interest rate of approximately 4.6% by the end of 2023, which compares to 5.1% indicated by the Federal Reserve's December Summary of Economic Projections.

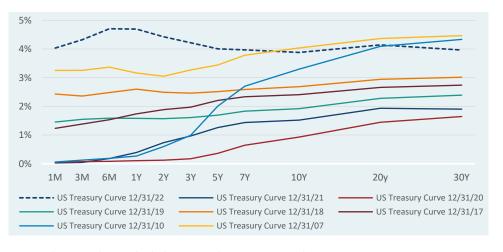
	QTD Total Return	1 Year Total Return
Core Fixed Income (Bloomberg U.S. Aggregate)	1.9%	(13.0%)
Core Plus Fixed Income (Bloomberg U.S. Universal)	2.2%	(13.0%)
U.S. Treasuries (Bloomberg U.S. Treasury)	0.7%	(12.5%)
U.S. High Yield (Bloomberg U.S. Corporate HY)	4.2%	(11.2%)
Bank Loans (S&P/LSTA Leveraged Loan)	2.7%	(0.6%)
Emerging Market Debt Local (JPM GBI-EM Global Diversified)	8.5%	(11.7%)
Emerging Market Debt Hard (JPM EMBI Global Diversified)	8.1%	(17.8%)
Mortgage-Backed Securities (Bloomberg MBS)	2.1%	(11.8%)

Source: Bloomberg, as of 12/31/22

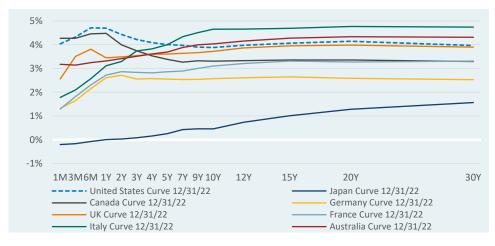


### Yield environment

#### **U.S. YIELD CURVE**



#### **GLOBAL GOVERNMENT YIELD CURVES**



#### YIELD CURVE CHANGES OVER LAST FIVE YEARS



#### **IMPLIED CHANGES OVER NEXT YEAR**



Source: Bloomberg, as of 12/31/22

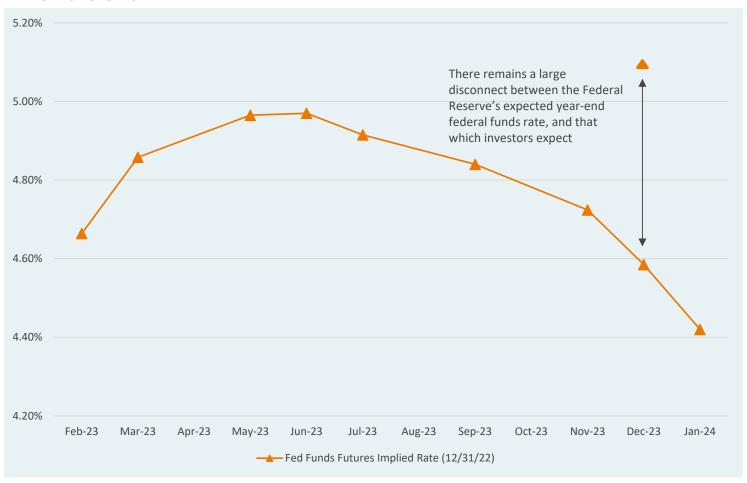


**Investment Landscape** 

1st Quarter 2023

### Markets more optimistic than the Fed

#### FED FUNDS FUTURES IMPLIED FED RATE



Markets expected the federal funds rate to rise to a peak of near 5.0% in Spring of 2023, followed by rate cuts throughout the remainder of the year

This contrasts sharply with forecasts from the Federal Reserve, which indicates a federal funds rate projection for the end of 2023 of 5.1%

Source: Bloomberg, as of 12/31/22



### Credit environment

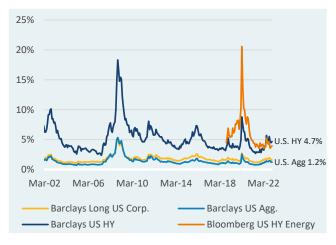
During the fourth quarter, markets began pricing in an eventual end to the Federal Reserve rate hiking cycle. This supported the performance of credit assets, as well as stronger-than-expected U.S. economic data which helped alleviate recession fears. High yield credit returns led the way with 4.2%, followed by 3.6% from investment grade credit and 2.3% from bank loans.

Credit spreads broadly tightened, with investment grade spreads falling to 130 bps from their high of 165 bps in Q3. High yield spreads compressed further, moving from 552 bps to 469 bps over the quarter. Despite calendar year returns of investment grade credit being the worst on record at - 15.8%, and two consecutive years of negative returns, spreads have

widened less than anticipated. This suggests spreads could expand from these levels if conditions deteriorate.

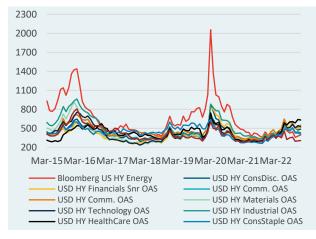
The total yield of high yield credit declined modestly throughout Q4, ending the quarter at 9.0%, which was 71 bps below Q3 yields but still elevated far above yields to start 2022. The Bloomberg US Corporate Investment Grade Index saw similar movement, with yields declining to 5.4% from 5.7% during the quarter, though still significantly higher than 2.4% to start the year. More attractive yield levels have the potential to drive demand for fixed income broadly, though concerns around growth and recession may act as headwinds to the spread-sensitive performance of higher risk credit.

#### **SPREADS**



Source: Barclays, Bloomberg, as of 12/31/22

#### HIGH YIELD SECTOR SPREADS (BPS)



Source: Bloomberg, as of 12/31/22

	Credit Spre	ead (OAS)
Market	12/31/22	12/31/21
Long U.S. Corp	1.6%	1.3%
U.S. Inv Grade Corp	1.3%	0.9%
U.S. High Yield	4.7%	2.8%
U.S. Bank Loans*	5.9%	4.3%

Source: Barclays, Credit Suisse, Bloomberg, as of 12/31/22

\*Discount margin (4-year life)



#### **Investment Landscape**

1st Quarter 2023

### Default & issuance

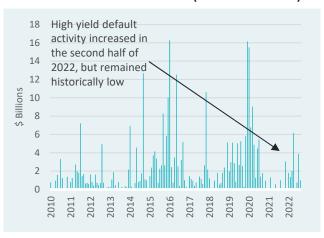
Default activity in high yield bonds and bank loans remained subdued during Q4. Throughout the year, 17 companies defaulted totaling \$26.3 billion, with large defaults concentrated in the Healthcare sector which accounted for over 36% of total dollar volume. Default rates for par-weighted U.S. high yield and bank loans remained very low at 0.8% and 1.0%, respectively. While these levels are well below long-term historical averages, defaults are widely expected to increase amid sustained higher interest rates, tighter financial conditions, and weaker economic growth.

Default recovery rates of high yield and bank loans remained strong for a second consecutive year. High yield recovery rates ended the year at 55% (above the long-term average of 40%) while the recovery rate of bank loans

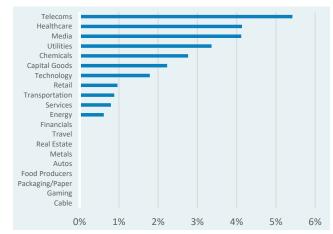
ended the year at 58% (below the long-term average of 64%).

Investment grade credit issuance remained light, with \$195 billion of issuance in Q4 being the lowest quarter of the year. During 2022, \$1.2 trillion of investment grade bond issuance was 12% lower than 2021 but still in line with the past five-year average. Levered credit also saw quarterly lows of issuance, with \$16.5 billion and \$47.6 billion in the high yield and levered loan spaces, respectively. The year-over-year declines in issuance within high yield and bank loans have been dramatic, down around 70% since 2021.

#### U.S. HY MONTHLY DEFAULTS (PAR WEIGHTED)

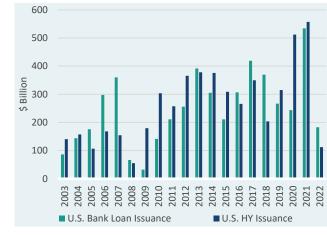


#### U.S. HY SECTOR DEFAULTS (LAST 12 MONTHS)



Source: BofA Merrill Lynch, as of 12/31/22 – par weighted

U.S. ISSUANCE (\$ BILLIONS)



Source: BofA Merrill Lynch, as of 12/31/22



Source: BofA Merrill Lynch, as of 12/31/22

**Investment Landscape** 

1st Quarter 2023

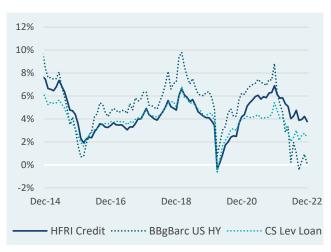
### Alternative credit

Credit hedge fund strategies held up well in 2022 despite continued pressure on high yield and duration-sensitive assets. The HFRI Credit Index, which typically delivers performance between that of high yield and bank loans, only lost -2.6% for the year despite widening credit spreads and exposure to duration (which has been very painful for traditional credit).

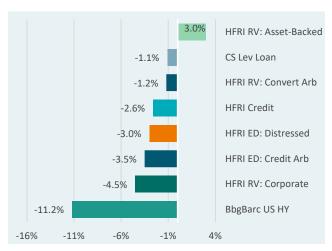
Looking more closely at hedge fund credit, asset-backed strategies were the strongest performers throughout the year. These strategies gained 3% while most other alternative credit funds were modestly negative, in line with bank loans.

We believe asset-backed and distressed strategies remain the most interesting in the space. Asset-backed funds have found attractive yields in off-the-run securitized credit markets, while distressed funds benefited from value investing coming back into favor, and increasing corporate stress which provides new trading opportunities.

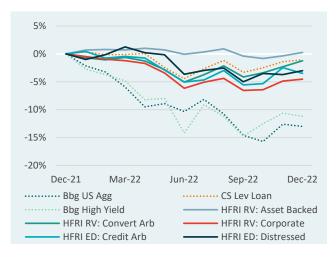
#### **3-YEAR ROLLING RETURN**



#### 2022 RETURN



#### **2022 CUMULATIVE RETURN**

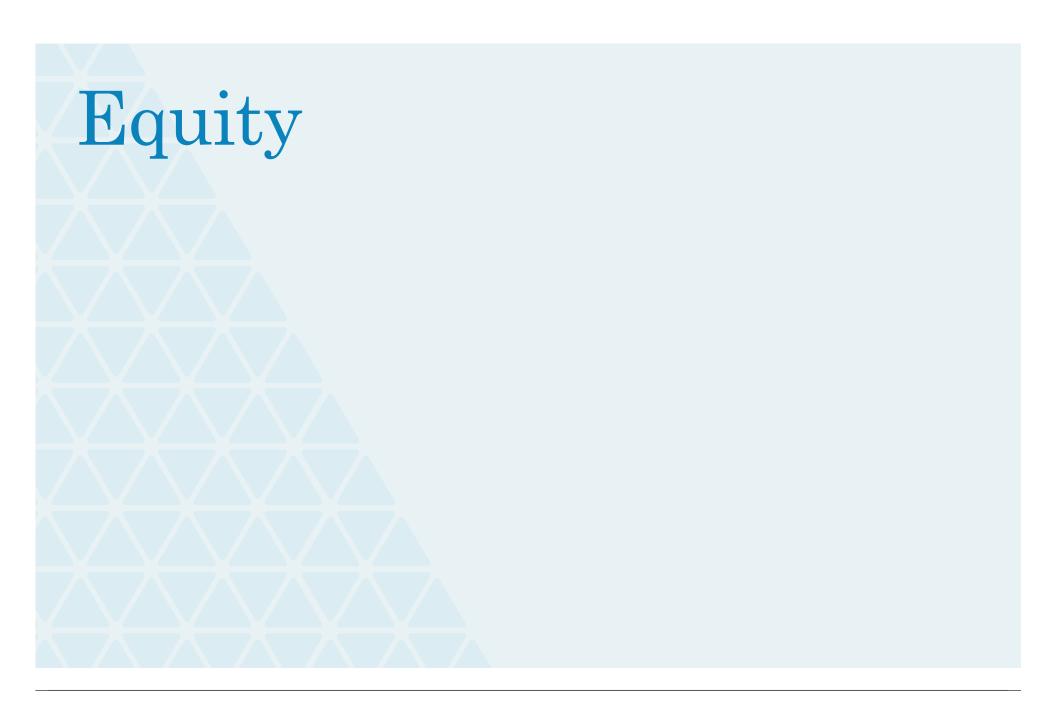


Source: MPI, Morningstar, HFR, Bloomberg, as of 12/31/22



**Investment Landscape** 

1st Quarter 2023





### Equity environment

- U.S. equities delivered their only positive quarterly return of 2022 during Q4 (S&P 500 +7.6%), helping to dampen the index's worst calendar year performance since 2008 (-18.1% loss in 2022). Higher interest rates and recession fears contributed to poor returns.
- U.S. corporate earnings in Q3 grew
   2.4% from the year prior, marking the slowest rate of growth since
   Q3 2020. Per FactSet, earnings are projected to decline by -4.1% in
   Q4, which would mark the first decline in U.S. earnings since 2020.
- Many equity markets now trade at valuation levels near historical averages as rising rates and growth concerns have contributed to more attractive pricing. The S&P 500 forward P/E ratio of 18.3 (as of November 30<sup>th</sup>) is under the five-year average of 18.6 and the ten-year average of 20.2.

- Currency movements continued to create portfolio volatility for investors with unhedged exposure to foreign currencies. The U.S. dollar depreciated sharply during Q4 which resulted in a large gain of 7.6% for investors with unhedged foreign currency exposure (+17.3% MSCI EAFE unhedged, +9.7% MSCI EAFE hedged).
- Value stocks outpaced growth stocks by 10.2% in Q4 and by 21.6% for the year. Energy, industrials, and materials—sectors which are heavily tilted toward value—showed strong returns, with energy ending the year up 64.6%.
- Implied volatility fell significantly over the quarter, as the Cboe VIX Index moved from 31.6 to 21.7.
   Equity markets advanced on cooling inflation, potential for less aggressive central bank action, and perhaps optimism around China's reopening.

	QTD TOTA	L RETURN (hedged)	1 YEAR TOTAL RETURN (unhedged) (hedged)					
U.S. Large Cap (S&P 500)	7.6	5%	(18.	(18.1%)				
U.S. Small Cap (Russell 2000)	6.2	2%	(20.	(20.4%)				
U.S. Equity (Russell 3000)	7.2	2%	(19.2%)					
U.S. Large Value (Russell 1000 Value)	12.	4%	(7.5%)					
US Large Growth (Russell 1000 Growth)	2.2	2%	(29.1%)					
Global Equity (MSCI ACWI)	9.8%	7.6%	(18.4%)	(15.5%)				
International Large (MSCI EAFE)	17.3%	9.7%	(14.5%)	(4.6%)				
Eurozone (EURO STOXX 50)	24.8%	15.7%	(15.1%)	(7.0%)				
U.K. (FTSE 100)	17.1%	9.3%	(7.0%)	5.9%				
Japan (NIKKEI 225)	11.3%	1.4%	(18.9%)	(5.2%)				
Emerging Markets (MSCI Emerging Markets)	9.7%	6.7%	(20.1%)	(16.3%)				

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 12/31/22



### Domestic equity

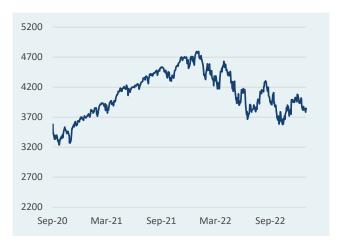
U.S. equities notched their only positive quarterly return for the year during Q4 (S&P 500 +7.6%), helping to dampen the index's worst annual performance since 2008 (-18.1% loss in 2022). Domestic shares were negatively impacted by higher interest rates and growing recession fears due to tightening from the Federal Reserve. While performance over the quarter was positive, U.S. equities trailed emerging market and international developed equities.

Earnings in the third quarter grew 2.4% from the year prior, marking the slowest rate of growth since Q3 2020. Energy dominated the narrative,

as earnings grew an incredible 137% from the previous year. U.S. energy companies experienced margin expansion due to materially higher commodity prices, specifically within oil and natural gas. Per FactSet, earnings are projected to decline by -4.1% in Q4, which would mark the first decline in U.S. earnings since 2020. A potential recession could pose challenges for the earnings outlook.

Energy dominated sector performance in the quarter (+22.8), leading the positive performance seen in most sectors, while telecommunications (-1.4%) and consumer discretionary (-10.2%) saw negative returns.

#### **S&P 500 PRICE INDEX**

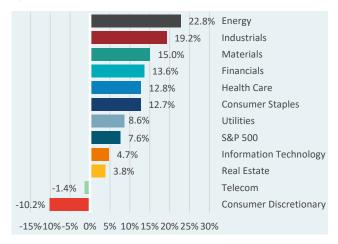


Source: Standard & Poor's, as of 12/31/22 Source: FactSet, as of 12/31/22

#### S&P 500 EARNINGS GROWTH (YEAR-OVER-YEAR)



#### **Q4 SECTOR PERFORMANCE**



Source: Morningstar, as of 12/31/22



**Investment Landscape** 

1st Quarter 2023

### Domestic equity size & style

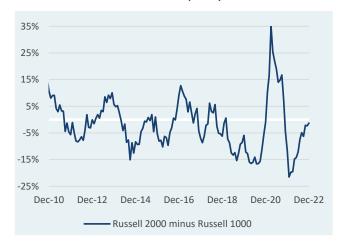
Value stocks outpaced growth stocks by 10.2% in Q4 and by 21.6% for the year. Energy, industrials, and materials—sectors which are heavily tilted toward value—showed strong returns, with the energy sector ending the year up 64.6%.

Markets adjusted to Federal Reserve rate hikes in the fourth quarter and throughout the year. Profitless and high-growth companies suffered the most as investors favored higher yielding fixed income and preferred stocks with strong fundamentals.

Small capitalization stocks underperformed large capitalization stocks (Russell 2000 +6.2%, Russell 1000 +7.2%), and remain relatively rich in valuations despite recent performance pain.

Domestic equities made a modest recovery in Q4 as inflation appears to have peaked and the end of the Fed's hiking cycle is in sight. These dynamics will likely help determine the relative performance of style factors in the near-term.

#### SMALL CAP VS LARGE CAP (YOY)



#### VALUE VS GROWTH (YOY)



Source: FTSE, as of 12/31/22

#### **VALUE VS. GROWTH RELATIVE VALUATIONS**



Source: FTSE, Bloomberg, as of 12/31/22



Source: FTSE, as of 12/31/22

**Investment Landscape** 

1st Quarter 2023

### International developed equity

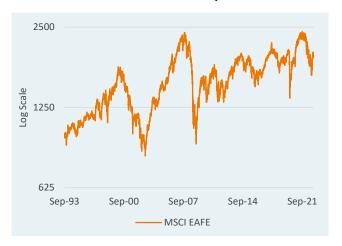
International developed equities rallied significantly in the fourth quarter, driven by strong gains from Eurozone equities and favorable currency movements. The MSCI EAFE Index finished the quarter up 17.3% on an unhedged currency basis, handily outperforming emerging market and U.S. equities.

A bounce back from European shares helped drive the double-digit returns seen from the MSCI EAFE Index. Investors showed preference towards larger names, as the EURO STOXX 50—a gauge of the largest companies in the

Eurozone—rose 24.8%, outpacing the 19.7% gain from the broader EURO STOXX 600 Index. Both indices were trading at 2022 lows at the start of the fourth quarter.

Currency movements played a large role in unhedged Eurozone performance and also boosted the unhedged returns of Japan and the United Kingdom. The U.S. dollar sharply pivoted on market views that the Federal Reserve may follow a shorter tightening cycle. As a result, exchange rates for the Euro, Pound, and Yen appreciated relative to the greenback.

#### INTERNATIONAL DEVELOPED EQUITY



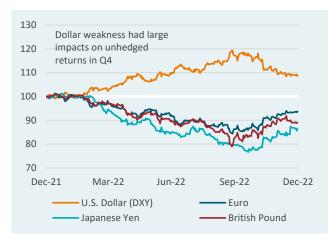
Source: MSCI, as of 12/31/22

#### Q4 2022 REGIONAL INDEX RETURNS



Source: MSCI, STOXX, FTSE, Nikkei, as of 12/31/22

#### 2022 CURRENCY MOVEMENTS (BASE OF 100)



Source: Bloomberg, as of 12/31/22



**Investment Landscape** 

1st Quarter 2023

### Emerging market equity

Emerging market equities advanced alongside global equities as the MSCI EM Index finished the quarter up 9.7%. Performance was volatile over the quarter, as losses in October were pared by a 13.2% rally over November and December. Despite the rally to close out the year, the index still ended down -20.1%, underperforming both international developed and U.S. equity benchmarks.

Returns in the fourth quarter were driven by gains in Chinese equities, which jumped following a rapid pivot away from the Chinese Communist Party's "Zero Covid" policy. While

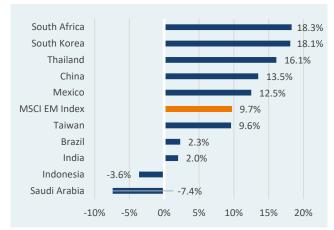
Chinese shares still dominate the index (around 30%), strong performance from countries with smaller weights also played a large role.

Indian shares, which hold the second largest weight in the index, acted as a drag on returns during the quarter but still ended in positive territory. Despite a modest 2.0% quarterly gain, the Indian market was one of the best performers of 2022, finishing the year down -8.0%. This compared to double-digit losses from other regional indices.

#### **EMERGING MARKET EQUITY**



#### Q4 2022 MSCI COUNTRY RETURNS (USD)



Source: Bloomberg, MSCI, as of 12/31/22

#### GROWTH OF \$100K IN 2022 (EM WEIGHTS >10%)



Source: Bloomberg, MSCI, as of 12/31/22 - performance in USD



Source: MSCI, as of 12/31/22

**Investment Landscape** 

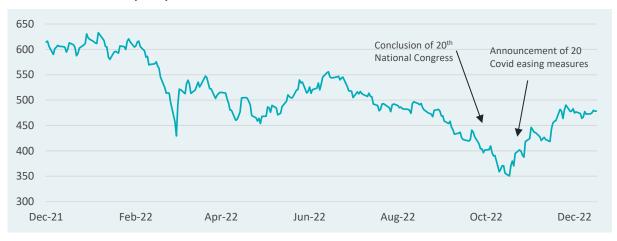
1st Quarter 2023

### Recent developments in China

China has continued to make global headlines, though two stories seemed to dominate the narrative. First, the 20<sup>th</sup> National Congress of the Chinese Communist Party (CCP) resulted in greater concentration of power and an unprecedented third-term for CCP General Secretary Xi Jinping. Second, China communicated a sharp reversal of its "Zero Covid" policy, as the government swiftly reopened major cities from stringent lockdowns, which has contributed to a new wave of COVID-19 cases.

Chinese equity markets dropped sharply following the 20<sup>th</sup> National Congress, but quickly reversed course following a string of economic reopening announcements. Markets moved even higher during the latter half of the quarter, fueled by the reopening story and prospects for easier monetary and fiscal policy relative to the rest of the world. While the reopening of the world's largest economy presents a tailwind to economic growth, concerns remain around the timeline of recovery, the net impact of eased supply chains and increased global demand, as well as the new concentration of power within the government.

#### MSCI CHINA INDEX (USD)



Source: Bloomberg, as of 12/31/22

#### CHINESE LEADERSHIP SINCE MAO ZEDONG

Leader	<b>Electing Central Committee</b>
Mao Zedong	6th (1928 - 1945)
	7th
	8th
	9th
	10th (1973 - 1977)
Hua Guofeng	11th (1977 - 1982)
Hu Yaobang	11th (1977 - 1982)
	12th (1982 - 1987)
Zhao Ziyang	12th (1982 - 1987)
	13th (1987 - 1992)
Jiang Zemin	13th (1987 - 1992)*
	14th (1992 - 1997)
	15th (1997 - 2002)
Hu Jintao	16th (2002 - 2007)
	17th (2007 - 2012)
Xi Jinping	18th (2012 - 2017)
	19th (2017 - 2022)
	20th (2022 - 2027)
*Panlaced 7ha	go Ziyana mid-tarm in 1080

<sup>\*</sup>Replaced Zhao Ziyang mid-term in 1989

First third-term election since Mao Zedong



**Investment Landscape** 

1st Quarter 2023

### Equity valuations

Many markets now trade at valuation levels near their historical average as inflation and rising interest rates have brought prices down. The S&P 500 forward P/E ratio of 17.1 is below the five- and ten-year averages of 18.6 and 20.2, respectively. The Federal Reserve remains in focus for U.S. investors as valuations over the past decade have been lifted by low interest rates. International equity valuations are depressed but may be further challenged by inflation and recession. Emerging market equities appear to be poised for a strong recovery, given a more positive growth outlook, and

as China's reopening could improve fundamentals and bring the asset class back into favor.

International developed equities remain inexpensive relative to U.S. equities, but developed markets face significant long-term headwinds. In Q4, gains in the Euro and Yen and an easing energy crisis boosted international developed equity returns, but high inflation, high debt and low growth in Japan, poor demographics, and a hawkish ECB make for a challenged long-term outlook.

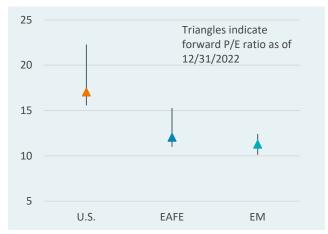
International developed equities remain extremely cheap relative to U.S. markets

#### **FORWARD P/E RATIOS**



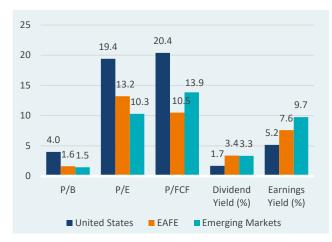
Source: MSCI, 12m forward P/E, as of 12/31/22

#### FORWARD P/E RATIO RANGES (DURING 2022)



Source: MSCI, 12m forward P/E, as of 12/31/22

#### VALUATION METRICS (3-MONTH AVERAGE)



Source: Bloomberg, MSCI, as of 12/31/22 - trailing P/E



**Investment Landscape** 

1st Quarter 2023

### Equity volatility

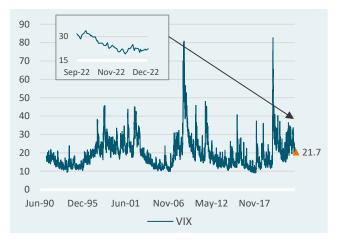
Implied volatility fell significantly over the quarter. The Cboe VIX Index moved from 31.6 to 21.7. Equity markets advanced on cooling inflation, potential for less aggressive central bank action, and perhaps optimism around China's reopening.

In contrast, realized volatility increased from the prior quarter. Volatility rose across S&P 500, MSCI EAFE, and MSCI EM Indices. Realized volatility in the domestic market remained the highest—a trend consistent with last quarter—as markets swung around inflation prints, two Federal

Reserve interest rate decisions, and growing concerns over a potential 2023 recession.

Historically speaking, the S&P 500 delivered exceptionally poor performance in line with some of the worst of the index's history. Looking all the way back to 1929, this year was the seventh worst in the index's history and the worst calendar year performance since 2008.

#### U.S. IMPLIED VOLATILITY (VIX)



#### REALIZED VOLATILITY



#### Source: S&P, MSCI, as of 12/31/22

#### **S&P 500 FIVE WORST YEARS SINCE 1988**



Source: S&P, Bloomberg, as of 12/31/22 - since 1988



Source: Choe, as of 12/31/22

#### **Investment Landscape**

1st Quarter 2023

### Long-term equity performance



Source: MPI, as of 12/31/22



**Investment Landscape** 

1st Quarter 2023





### Currency

Currency volatility has translated to much higher portfolio volatility for investors with unhedged exposure to foreign currencies. The U.S. dollar depreciated relative to major currencies during the fourth quarter which resulted in large gains for investors with unhedged foreign currency exposure. These currency gains amounted to 7.6% for investors with unhedged exposure to the MSCI EAFE Index (+17.3% MSCI EAFE unhedged, +9.7% MSCI EAFE hedged).

U.S. dollar strength of 2022 was reversed in Q4 as markets began pricing in a shorter Federal Reserve tightening cycle. Expectations for lower rates in the U.S., combined with an ongoing struggle to control high inflation (and therefore tighter financial policies from respective central banks)

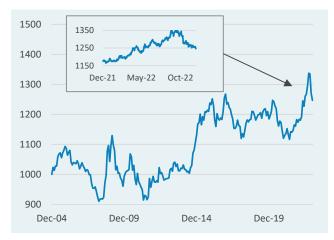
within developed economies, likely played a major role in the U.S. dollar sell-off.

Despite currency gains seen this quarter, we believe that a thoughtful currency program may allow an investor to reduce their total portfolio risk while also increasing long-term expected returns. The MSCI Currency Factor Mix Index—a representation of a passive investment in the currency market—has shown a positive one-year rolling return over most periods with very low volatility. This contrasts to the unhedged currency exposure (what we refer to as "embedded currency") that most investors own, which has shown high volatility and frequent losses.

#### **EFFECT OF CURRENCY (1-YEAR ROLLING)**



#### **BLOOMBERG DOLLAR SPOT INDEX**



#### Source: Bloomberg, as of 12/31/22

#### **EMBEDDED CURRENCY VS CURRENCY FACTORS**



Source: Bloomberg, as of 12/31/22



Source: MSCI, as of 12/31/22

**Investment Landscape** 

1st Quarter 2023





### Periodic table of returns

Small Cap Equity

Small Cap Value

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	YTD	5-Year	10-Year
	Commodities	31.8	14.0	25.9	56.3	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	11.0	14.1
	Real Estate	22.8	8.4	10.3	48.5	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	9.1	12.4
	Cash	12.2	7.3	6.7	47.3	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	8.6	10.3
Не	dge Funds of Funds	11.6	3.3	1.6	46.0	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	6.7	9.5
	Large Cap Value	7.0	2.8	1.0	39.2	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	6.4	9.2
	US Bonds	6.0	2.5	-5.9	30.0	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	4.1	9.0
	Small Cap Value	4.1	-2.4	-6.0	29.9	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	4.1	8.5
Ir	nternational Equity	-3.0	-5.6	-11.4	29.7	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	3.5	4.8
60,	/40 Global Portfolio	-7.3	-9.1	-15.5	25.2	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	3.2	4.7
	Large Cap Equity	-7.8	-9.2	-15.7	23.9	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	2.7	3.6
Em	erging Markets Equity	-14.0	-12.4	-20.5	11.6	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	1.5	1.4
	Small Cap Equity	-22.4	-19.5	-21.7	9.0	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	1.2	1.1
5	Small Cap Growth	-22.4	-20.4	-27.9	4.1	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	0.0	0.7
l	arge Cap Growth	-30.6	-21.2	-30.3	1.0	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	-1.4	-1.3
	Large Cap Equity Small Cap Growth									Co	mmo	dities														
	Large Cap Value						International Equity Real Estate																			
	Large Cap Growth Emerging Market						kets E	quity	Hedge Funds of Funds																	

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 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 as of 12/31/22. NCREIF Property Index performance data as of 9/30/22.

**US Bonds** 

Cash



60% MSCI ACWI/40% Bloomberg Global Bond

### Major asset class returns

#### ONE YEAR ENDING DECEMBER



#### TEN YEARS ENDING DECEMBER



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

Source: Morningstar, as of 12/31/22

Source: Morningstar, as of 12/31/22

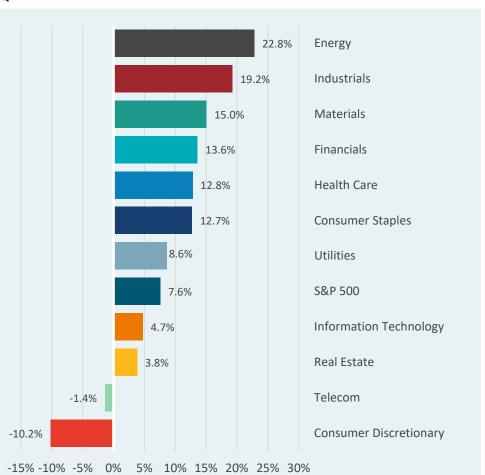


**Investment Landscape** 

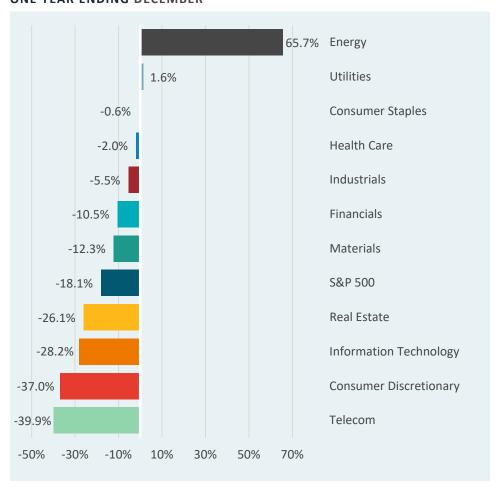
1st Quarter 2023

### S&P 500 sector returns

#### QTD



#### ONE YEAR ENDING DECEMBER



Source: Morningstar, as of 12/31/22 Source: Morningstar, as of 12/31/22



**Investment Landscape** 

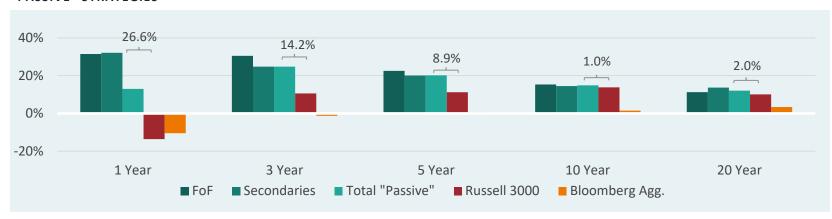
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## Private equity vs. traditional assets performance

#### **DIRECT PRIVATE EQUITY FUND INVESTMENTS**



#### "PASSIVE" STRATEGIES



Direct P.E Fund Investments outperformed over all time periods, though elevated shortterm outperformance may be transitory due to appraisal lags

"Passive" strategies outperformed over all periods

Sources: Refinitiv PME: U.S. Private Equity Funds sub asset classes as of June 30, 2022. Public Market Equivalent returns resulted from "Total Passive" and Total Direct's identical cash flows invested into and distributed from respective traditional asset comparable.



**Investment Landscape** 

1st Quarter 2023

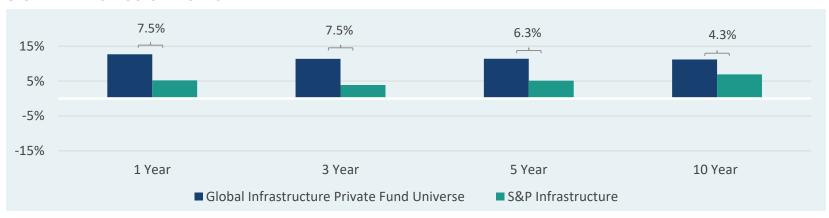
### Private vs. liquid real assets performance

#### **GLOBAL NATURAL RESOURCES FUNDS**



N.R. funds outperformed the MSCI World Natural Resources benchmark across 1- and 10year 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 June 30, 2022. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real assets universes.

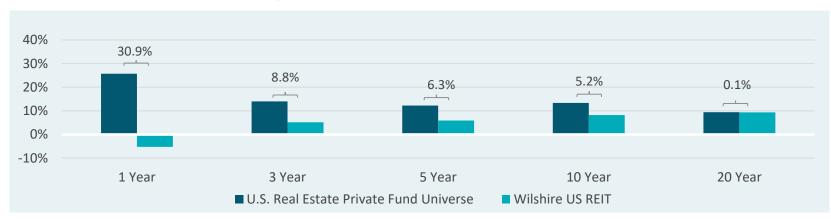


**Investment Landscape** 

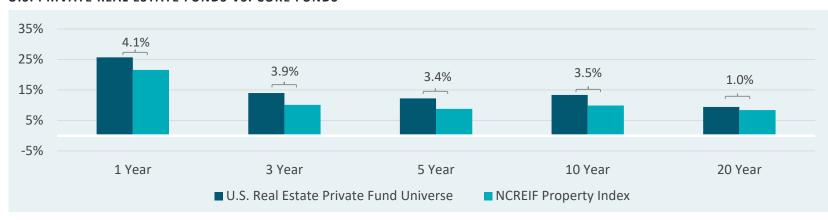
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## Private vs. liquid and core real estate performance

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



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



U.S. Private
R.E. funds
outperformed
the Wilshire
U.S. REIT Index
across all time
periods, though
short-term
outperformance
may be
transitory due to
appraisal lags

U.S. Private R.E. Funds outperformed across all periods

Sources: Refinitiv PME: U.S. Real Estate universes as of June 30, 2022. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real estate universes.



### Detailed index returns

DOMESTIC EQUITY								FIXED INCOME							
	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year		Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Core Index								Broad Index							
S&P 500	(5.8)	7.6	(18.1)	(18.1)	7.7	9.4	12.6	Bloomberg US TIPS	(1.0)	2.0	(11.8)	(11.8)	1.2	2.1	1.1
S&P 500 Equal Weighted	(4.7)	11.6	(11.4)	(11.4)	9.0	9.1	12.4	Bloomberg US Treasury Bills	0.4	0.9	1.3	1.3	0.7	1.2	0.8
DJ Industrial Average	(4.1)	16.0	(6.9)	(6.9)	7.3	8.4	12.3	Bloomberg US Agg Bond	(0.5)	1.9	(13.0)	(13.0)	(2.7)	0.0	1.1
Russell Top 200	(6.0)	6.6	(19.8)	(19.8)	7.9	9.9	12.9	Bloomberg US Universal	(0.3)	2.2	(13.0)	(13.0)	(2.5)	0.2	1.3
Russell 1000	(5.8)	7.2	(19.1)	(19.1)	7.3	9.1	12.4	Duration							
Russell 2000	(6.5)	6.2	(20.4)	(20.4)	3.1	4.1	9.0	Bloomberg US Treasury 1-3 Yr	0.2	0.7	(3.8)	(3.8)	(0.5)	0.7	0.7
Russell 3000	(5.9)	7.2	(19.2)	(19.2)	7.1	8.8	12.1	Bloomberg US Treasury Long	(1.7)	(0.6)	(29.3)	(29.3)	(7.4)	(2.2)	0.6
Russell Mid Cap	(5.4)	9.2	(17.3)	(17.3)	5.9	7.1	11.0	Bloomberg US Treasury	(0.5)	0.7	(12.5)	(12.5)	(2.6)	(0.1)	0.6
Style Index								Issuer							
Russell 1000 Growth	(7.7)	2.2	(29.1)	(29.1)	7.8	11.0	14.1	Bloomberg US MBS	(0.4)	2.1	(11.8)	(11.8)	(3.2)	(0.5)	0.7
Russell 1000 Value	(4.0)	12.4	(7.5)	(7.5)	6.0	6.7	10.3	Bloomberg US Corp. High Yield	(0.6)	4.2	(11.2)	(11.2)	0.0	2.3	4.0
Russell 2000 Growth	(6.4)	4.1	(26.4)	(26.4)	0.6	3.5	9.2	Bloomberg US Agency Interm	0.0	0.8	(6.5)	(6.5)	(1.3)	0.4	0.7
Russell 2000 Value	(6.6)	8.4	(14.5)	(14.5)	4.7	4.1	8.5	Bloomberg US Credit	(0.4)	3.4	(15.3)	(15.3)	(2.9)	0.4	1.8
INTERNATIONAL EQUITY								OTHER							
Broad Index								Index							
MSCI ACWI	(3.9)	9.8	(18.4)	(18.4)	4.0	5.2	8.0	Bloomberg Commodity	(2.4)	2.2	16.1	16.1	12.7	6.4	(1.3)
MSCI ACWI ex US	(0.7)	14.3	(16.0)	(16.0)	0.1	0.9	3.8	Wilshire US REIT	(5.6)	4.0	(26.8)	(26.8)	(0.5)	3.4	6.3
MSCI EAFE	0.1	17.3	(14.5)	(14.5)	0.9	1.5	4.7	CS Leveraged Loans	0.4	2.3	(1.1)	(1.1)	2.3	3.2	3.8
MSCI EM	(1.4)	9.7	(20.1)	(20.1)	(2.7)	(1.4)	1.4	S&P Global Infrastructure	(2.2)	11.0	(0.2)	(0.2)	1.7	3.9	6.5
MSCI EAFE Small Cap	1.1	15.8	(21.4)	(21.4)	(0.9)	(0.0)	6.2	Alerian MLP	(4.7)	10.5	31.4	31.4	8.3	3.6	2.1
Style Index								Regional Index							
MSCI EAFE Growth	(1.1)	15.0	(22.9)	(22.9)	0.5	2.5	5.6	JPM EMBI Global Div	0.3	8.1	(17.8)	(17.8)	(5.3)	(1.3)	1.6
MSCI EAFE Value	1.3	19.6	(5.6)	(5.6)	0.6	0.2	3.5	JPM GBI-EM Global Div	2.2	8.5	(11.7)	(11.7)	(6.1)	(2.5)	(2.0)
Regional Index								Hedge Funds							
MSCI UK	(0.4)	17.0	(4.8)	(4.8)	0.3	1.0	3.1	HFRI Composite	(0.4)	2.2	(4.3)	(4.3)	5.7	4.4	4.7
MSCI Japan	0.3	13.2	(16.6)	(16.6)	(1.0)	0.2	5.6	HFRI FOF Composite	0.9	2.4	(4.7)	(4.7)	3.9	3.2	3.6
MSCI Euro	(0.5)	23.0	(17.2)	(17.2)	0.5	0.8	4.3	Currency (Spot)							
MSCI EM Asia	(0.8)	10.8	(21.1)	(21.1)	(1.3)	(0.6)	3.6	Euro	3.7	8.9	(6.2)	(6.2)	(1.7)	(2.3)	(2.1)

Source: Morningstar, HFRI, as of 12/31/22.

(4.0)

8.9

(4.8)

(1.1)

(2.1)

Pound Sterling

Yen

1.0

7.8

9.7

(11.2)

(11.2)

(12.7) (12.7) (6.3)



MSCI EM Latin American

**Investment Landscape** 

(2.3)

(3.1)

(3.0)

(4.1)

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(3.2)

### **Definitions**

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

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. (<a href="https://www.nfib-sbet.org/about/">https://www.nfib-sbet.org/about/</a>)

NAHB Housing Market Index – the housing market index is a weighted average of separate diffusion induces 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 "(Good-Poor + 100)/2" to the present and future sales series and "(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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**Investment Landscape** 

1st Quarter 2023

### **San Luis Obispo County Pension Trust**

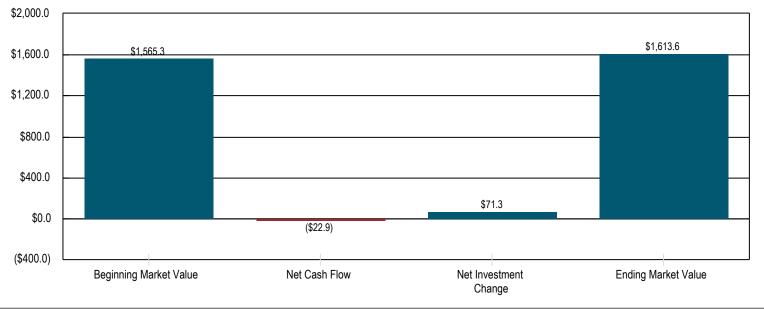
**Investment Performance Review Period Ending: December 31, 2022** 



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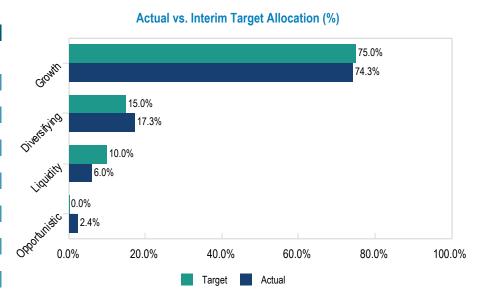
	Portfolio Reconciliation	
	Last Three Months	One Year
Beginning Market Value	1,565,280,274	1,775,445,132
Net Cash Flow	-22,913,278	-21,630,013
Net Investment Change	71,278,555	-139,428,442
Ending Market Value	1,613,645,551	1,613,645,551



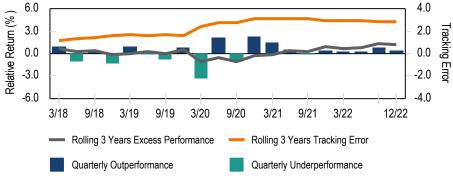
Contributions and withdrawals may include intra-account transfers between managers/funds.



	3 Mo	1 Yr	3 Yrs	5 Yrs
Total Fund	4.6	-8.0	5.2	5.6
Interim Policy Index	4.2	-9.7	4.0	4.9
FFP SAA Index	2.8	-6.9	8.0	7.9
Total Growth	5.4	-7.3	8.4	8.1
Custom Growth Benchmark	5.2	-8.5	7.5	7.6
Total Public Equity	12.8	-13.4	6.7	7.5
Russell 3000 Index	7.2	-19.2	7.1	8.8
Total Domestic Equity	11.6	-10.4	8.5	9.4
Russell 3000 Index	7.2	-19.2	7.1	8.8
Total International Equity	14.5	-17.4	4.3	5.4
MSCI AC World ex USA Index	14.4	-15.6	0.5	1.4
Total Private Equity	-0.3	-1.3	25.1	20.0
Private Equity Benchmark	-0.3	-1.3	-	-
Total Private Credit	1.1	1.4	7.3	8.2
Private Credit Benchmark	1.1	1.4	-	-
Total Real Estate	-4.5	6.7	8.5	7.5
NCREIF Property Index	-3.5	5.5	8.1	7.5
Total Risk Diversifying	3.9	-11.8	-2.6	-0.2
Total Risk Diversifying Benchmark	2.3	-14.6	-3.8	-0.7
Total Domestic Fixed Income	2.2	-9.8	-0.6	1.6
Blmbg. U.S. Aggregate Index	1.9	-13.0	-2.7	0.0
Total Global Fixed	9.3	-17.0	-6.3	-3.3
FTSE World Government Bond Index	3.8	-18.3	-5.7	-2.5
Total Liquidity	0.5	-1.0	0.2	0.9
90 Day U.S. Treasury Bill	0.8	1.5	0.7	1.3
Total Cash	0.5	-1.0	0.2	0.9
90 Day U.S. Treasury Bill	0.8	1.5	0.7	1.3
Total Opportunistic	2.5	-3.7	5.5	7.4
Russell 3000 + 3%	8.0	-16.8	10.3	12.1

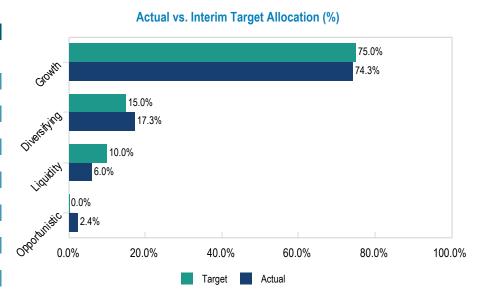




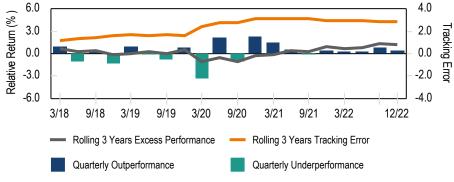




	3 Mo	1 Yr	3 Yrs	5 Yrs
Total Fund	4.5	-8.3	4.8	5.2
Interim Policy Index	4.2	-9.7	4.0	4.9
FFP SAA Index	2.8	-6.9	8.0	7.9
Total Growth	5.3	-7.6	8.1	7.7
Custom Growth Benchmark	5.2	-8.5	7.5	7.6
Total Public Equity	12.7	-13.9	6.1	6.9
Russell 3000 Index	7.2	-19.2	7.1	8.8
Total Domestic Equity	11.5	-10.9	7.9	8.8
Russell 3000 Index	7.2	-19.2	7.1	8.8
Total International Equity	14.4	-17.9	3.7	4.7
MSCI AC World ex USA Index	14.4	-15.6	0.5	1.4
Total Private Equity	-0.3	-1.3	25.1	20.0
Private Equity Benchmark	-0.3	-1.3	-	-
Total Private Credit	1.1	1.4	7.3	8.2
Private Credit Benchmark	1.1	1.4	-	-
Total Real Estate	-4.5	6.7	8.5	7.5
NCREIF Property Index	-3.5	5.5	8.1	7.5
Total Risk Diversifying	3.8	-12.2	-3.0	-0.6
Total Risk Diversifying Benchmark	2.3	-14.6	-3.8	-0.7
Total Domestic Fixed Income	2.1	-10.1	-0.9	1.3
Blmbg. U.S. Aggregate Index	1.9	-13.0	-2.7	0.0
Total Global Fixed	9.1	-17.6	-6.9	-3.9
FTSE World Government Bond Index	3.8	-18.3	-5.7	-2.5
Total Liquidity	0.5	-1.0	0.2	0.9
90 Day U.S. Treasury Bill	0.8	1.5	0.7	1.3
Total Cash	0.5	-1.0	0.2	0.9
90 Day U.S. Treasury Bill	0.8	1.5	0.7	1.3
Total Opportunistic	2.5	-3.7	5.5	7.4
Russell 3000 + 3%	8.0	-16.8	10.3	12.1

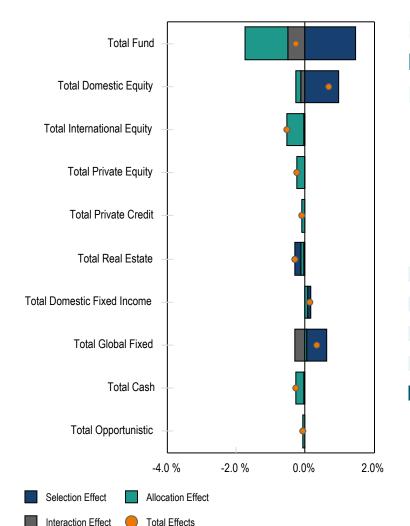








# Attribution Effects 3 Months Ending December 31, 2022



## Performance Attribution 3 Months Ending December 31, 2022

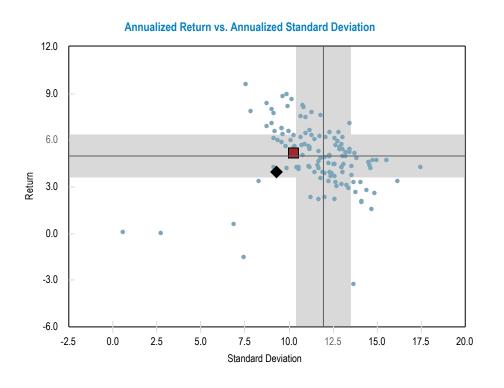
	3 Mo
Wtd. Actual Return	4.5
Wtd. Index Return	4.8
Excess Return	-0.3
Selection Effect	1.5
Allocation Effect	-1.3
Interaction Effect	-0.5

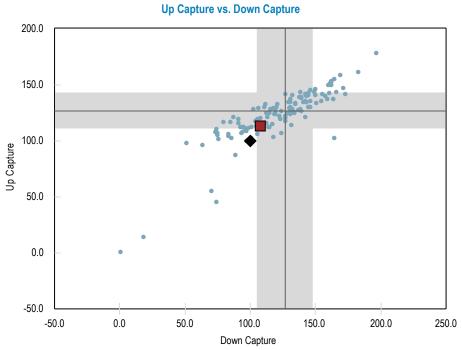
## Attribution Summary 3 Months Ending December 31, 2022

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Total Domestic Equity	11.5	7.2	4.3	1.0	-0.2	-0.1	0.7
Total International Equity	14.4	14.4	0.0	0.0	-0.5	0.0	-0.5
Total Private Equity	-0.3	-0.3	0.0	0.0	-0.2	0.0	-0.2
Total Private Credit	1.1	1.1	0.0	0.0	-0.1	0.0	-0.1
Total Real Estate	-4.5	-3.5	-1.0	-0.2	-0.1	0.0	-0.3
Total Domestic Fixed Income	2.1	1.7	0.4	0.1	0.1	0.0	0.2
Total Global Fixed	9.1	3.8	5.3	0.6	0.1	-0.3	0.3
Total Cash	0.5	0.8	-0.4	0.0	-0.2	0.0	-0.3
Total Opportunistic	2.5	8.0	-5.5	0.0	-0.1	0.0	-0.1
Total Fund	4.5	4.8	-0.3	1.5	-1.3	-0.5	-0.3

Attribution does not account for effects of overlay program. Weighted returns shown in attribution analysis may differ from actual returns. Wtd. Actual Return is the sum of the products of each group's return and its respective weight at the beginning of the period.

	Anlzd Ret	Ann Excess BM Return	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
Total Fund	5.56	0.67	9.04	0.28	1.09	2.43	0.93	0.50	0.30	112.75	111.79





#### All Public Plans > \$1B-Total Fund

	Return	Deviation
■ Total Fund	5.17	10.24
Interim Policy Index	3.97	9.29
Median	4.99	11.97
Population	132	132

#### All Public Plans > \$1B-Total Fund

	Up	Down
	Capture	Capture
Total Fund	113.67	107.74
Interim Policy Index	100.00	100.00
Median	126.81	126.68
Population	132	132







	Market Value	% of Portfolio	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2022	2021	2020	2019	2018	Inception	Inception Date
Total Fund	1,613,645,551	100.0	4.6	-8.0	5.2	5.6	6.7	-8.0	15.4	9.6	16.3	-3.1		Feb-07
Interim Policy Index			4.2	-9.7	4.0	4.9	6.3	-9.7	12.9	10.3	15.3	-2.1		
FFP SAA Index			2.8	-6.9	8.0	7.9	-	-6.9	21.4	11.5	12.6	3.0		
InvMetrics Public DB > \$1B Rank			76	21	37	52	78	21	53	76	74	43		
Total Growth	1,103,791,102	68.4	5.4	-7.3	8.4	8.1	9.5	-7.3	23.7	11.2	20.3	-4.0		
Custom Growth Benchmark			5.2	-8.5	7.5	7.6	8.9	-8.5	19.6	13.4	19.5	-2.8		
Total Public Equity	578,492,906	35.9	12.8	-13.4	6.7	7.5	9.8	-13.4	20.3	16.5	29.8	-9.0		
Russell 3000 Index			7.2	-19.2	7.1	8.8	12.1	-19.2	25.7	20.9	31.0	-5.2		
InvMetrics Public DB Total Equity Rank			1	4	1	1	2	4	4	31	14	42		
Total Domestic Equity	325,269,550	20.2	11.6	-10.4	8.5	9.4	12.6	-10.4	25.3	13.7	29.4	-5.2		
Russell 3000 Index			7.2	-19.2	7.1	8.8	12.1	-19.2	25.7	20.9	31.0	-5.2		
InvMetrics Public DB US Equity Rank			2	5	8	18	21	5	58	92	73	33		
PIMCO RAE US	91,301,098	5.7	14.5	-3.0	9.1	8.8	12.0	-3.0	28.3	4.4	25.5	-6.6	8.6	Dec-07
S&P 500 Index			7.6	-18.1	7.7	9.4	12.6	-18.1	28.7	18.4	31.5	-4.4	8.7	
eV US Large Cap Core Equity Rank			2	4	26	64	68	4	46	97	85	77	67	
Loomis Sayles Large Cap Growth	70,477,848	4.4	6.4	-27.1	4.9	8.6	-	-27.1	19.4	32.8	32.7	-1.7	12.6	Jan-17
Russell 1000 Growth Index			2.2	-29.1	7.8	11.0	-	-29.1	27.6	38.5	36.4	-1.5	13.5	
eV US Large Cap Growth Equity Rank			27	40	72	78	-	40	81	60	67	59	58	
Boston Partners Large Cap Value	87,734,138	5.4	12.7	-3.8	8.9	8.0	-	-3.8	30.9	2.4	24.3	-8.5	9.9	Feb-17
Russell 1000 Value Index			12.4	-7.5	6.0	6.7	-	-7.5	25.2	2.8	26.5	-8.3	7.8	
eV US Large Cap Value Equity Rank			53	36	37	57	-	36	20	66	79	57	47	
Atlanta Capital Mgmt	75,756,465	4.7	11.6	-7.9	8.0	10.2	14.1	-7.9	23.0	11.4	35.1	-4.5	15.6	Sep-10
Russell 2500 Index			7.4	-18.4	5.0	5.9	10.0	-18.4	18.2	20.0	27.8	-10.0	11.5	
eV US Small-Mid Cap Equity Rank			26	14	37	18	6	14	57	62	13	25	5	
Total International Equity	253,223,357	15.7	14.5	-17.4	4.3	5.4	6.8	-17.4	15.2	19.4	30.2	-12.2		
MSCI AC World ex USA Index			14.4	-15.6	0.5	1.4	4.3	-15.6	8.3	11.1	22.1	-13.8		
InvMetrics Public DB Global ex-US Equity Rank			44	52	4	1	5	52	7	7	1	20		
Dodge & Cox Intl Stock	136,865,968	8.5	16.2	-6.2	2.5	1.9	5.4	-6.2	11.7	2.8	23.6	-17.5	2.9	Dec-07
MSCI AC World ex USA Value			15.8	-8.0	0.7	0.6	3.3	-8.0	11.1	-0.2	16.5	-13.4	1.2	
eV ACWI ex-US All Cap Value Eq Rank			65	13	24	22	24	13	34	45	32	92	31	
WCM International Growth	116,357,389	7.2	12.6	-28.2	4.5	7.8	-	-28.2	18.5	34.0	36.7	-6.7	10.7	Feb-17
MSCI AC World ex USA Growth			12.9	-22.8	-0.1	1.8	-	-22.8	5.4	22.6	27.8	-14.1	5.5	
eV ACWI ex-US All Cap Growth Eq Rank			62	58	16	5	-	58	7	37	14	1	9	



<i>U</i> \	/													
	Market Value	% of Portfolio	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2022	2021	2020	2019	2018	Inception	Inception Date
Total Private Equity	154,756,859	9.6												
Harbourvest Partners IX Buyout Fund L.P.	13,388,093	0.8												
Pathway Private Equity Fund Investors 9 L.P.	83,503,440	5.2												
Harbourvest 2018 Global Fund L.P.	20,679,928	1.3												
Harbourvest SLO Fund Private Equity	23,758,330	1.5												
Pathway Private Equity Fund Investors 10 L.P.	13,427,068	8.0												
Total Private Credit	120,694,777	7.5												
Harbourvest SLO Credit Fund	40,870,096	2.5												
Sixth Street Partners DCP	79,824,681	4.9												
Total Real Estate	249,846,560	15.5	-4.5	6.7	8.5	7.5	9.4	6.7	18.5	1.1	4.3	7.5		
NCREIF Property Index			-3.5	5.5	8.1	7.5	8.8	5.5	17.7	1.6	6.4	6.7		
JP Morgan Core Real Estate	168,047,518	10.4	-5.0	4.3	8.0	6.9	9.1	4.3	20.2	0.5	3.4	7.0	6.0	Mar-0
NCREIF-ODCE			-5.0	7.5	9.9	8.7	10.1	7.5	22.2	1.2	5.3	8.3	6.2	
NCREIF Property Index			-3.5	5.5	8.1	7.5	8.8	5.5	17.7	1.6	6.4	6.7		
ARA American Strategic Value Realty	81,799,042	5.1	-3.5	12.3	9.9	9.2	-	12.3	14.0	3.8	7.3	9.1	9.1	Jul-10
NCREIF-ODCE			-5.0	7.5	9.9	8.7	-	7.5	22.2	1.2	5.3	8.3	8.5	
NCREIF Property Index			-3.5	5.5	8.1	7.5	-	5.5	17.7	1.6	6.4	6.7		
Total Risk Diversifying	373,409,046	23.1	3.9	-11.8	-2.6	-0.2	0.9	-11.8	-1.6	6.6	8.8	-1.8		
Total Risk Diversifying Benchmark			2.3	-14.6	-3.8	-0.7	0.7	-14.6	-3.2	7.5	8.7	0.0		
Total Domestic Fixed Income	278,438,678	17.3	2.2	-9.8	-0.6	1.6	2.0	-9.8	0.9	8.1	9.9	0.4		
Blmbg. U.S. Aggregate Index			1.9	-13.0	-2.7	0.0	1.1	-13.0	-1.5	7.5	8.7	0.0		
InvMetrics Public DB US Fixed Income Rank			50	17	19	11	48	17	18	70	29	34		
BlackRock Core Bond	56,828,770	3.5	2.1	-14.9	-2.9	0.3	-	-14.9	-1.6	9.4	10.2	0.3	0.7	Feb-1
Blmbg. U.S. Aggregate Index			1.9	-13.0	-2.7	0.0	-	-13.0	-1.5	7.5	8.7	0.0	0.6	
eV US Core Fixed Inc Rank			26	97	96	80	-	97	77	25	10	25	89	
Dodge & Cox Income Fund	54,146,876	3.4	2.9	-10.5	-0.7	1.6	-	-10.5	-0.5	9.9	10.2	0.1	2.1	Jan-1
Blmbg. U.S. Aggregate Index			1.9	-13.0	-2.7	0.0	-	-13.0	-1.5	7.5	8.7	0.0	0.6	
eV US Core Fixed Inc Rank			1	8	4	3	-	8	20	14	11	41	2	
Pacific Asset Corporate Loan	68,430,070	4.2	2.9	-0.2	2.8	3.7	-	-0.2	5.6	3.0	9.1	1.0	4.0	Sep-14
Morningstar LSTA US Leveraged Loan			2.7	-0.6	2.5	3.3	-	-0.6	5.2	3.1	8.6	0.4	3.5	
eV US Float-Rate Bank Loan Fixed Inc Rank			44	25	26	19	-	25	41	46	42	37	12	
SSGA U.S. Govt Bond Index	54,063,721	3.4	0.5	-12.5	-	-	-	-12.5	-	-	-	-	-9.2	Jul-2
Blmbg. U.S. Treasury: 7-10 Year			1.0	-14.9	-	-	-	-14.9	-	-	-	-	-11.1	
eV Global Government Fixed Inc Rank			94	27				27					24	



Since Inception ranking is from the beginning of the first complete month of performance. Stone Harbor Local Markets terminated 3/22/2019. Ashmore EM Blended Debt funded 3/31/2019. Direct RE liquidated as of 12/19/2019. Pathway Private Equity Fund Investors 10 L.P. funded 3/25/2020. Sixth Street Partners TAO funded 4/16/2020. Gresham liquidated as of 9/30/2020. PIMCO Short Duration funded 7/14/2021. SSGA U.S. Govt Bond Index funded 7/16/2021. BlackRock TIPS funded 9/1/2021. Effective 1/01/2017, only traditional asset classes (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.

	Market Value	% of Portfolio	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2022	2021	2020	2019	2018	Inception	Inception Date
BlackRock TIPS	44,969,240	2.8	1.9	-11.9	-	-	-	-11.9	-	-	-	-	-8.0	Sep-21
Blmbg. U.S. TIPS			2.0	-11.8	-	-	-	-11.8	-	-	-	-	-7.9	
eV US TIPS / Inflation Fixed Inc Rank			67	81	-	-	-	81	-	-	-	-	81	
Total Global Fixed	94,970,369	5.9	9.3	-17.0	-6.3	-3.3	-1.7	-17.0	-7.0	6.7	7.4	-4.3		
FTSE World Government Bond Index			3.8	-18.3	-5.7	-2.5	-1.2	-18.3	-7.0	10.1	5.9	-0.8		
Brandywine Global Fixed Income	41,448,660	2.6	7.7	-13.8	-	-	-	-13.8	-4.0	-	-	-	-2.6	Jul-20
FTSE Non-U.S. World Government Bond			6.5	-22.1	-	-	-	-22.1	-9.7	-	-	-	-9.8	
eV All Global Fixed Inc Rank			22	55	-	-	-	55	69	-	-	-	50	
Ashmore EM Blended Debt Fund	53,521,708	3.3	10.6	-19.9	-9.2	-	-	-19.9	-9.5	3.2	-	-	-6.2	Apr-19
50% JPM EMBI GD/25% JPM GBI EM GD/25% JPM ELMI+			8.0	-13.6	-4.8	-	-	-13.6	-3.9	3.9	-	-	-2.1	
eV All Emg Mkts Fixed Inc Rank			12	95	100	-	-	95	97	86	-	-	100	
Total Liquidity	97,398,246	6.0	0.5	-1.0	0.2	0.9	1.6	-1.0	0.2	1.5	2.1	1.6		
90 Day U.S. Treasury Bill			0.8	1.5	0.7	1.3	0.8	1.5	0.0	0.7	2.3	1.9		
Total Cash	97,398,246	6.0	0.5	-1.0	0.2	0.9	1.5	-1.0	0.2	1.5	2.1	1.6		
90 Day U.S. Treasury Bill			0.8	1.5	0.7	1.3	0.8	1.5	0.0	0.7	2.3	1.9		
PIMCO Short Duration Fund	33,230,057	2.1	0.9	-4.3	-	-	-	-4.3	-	-	-	-	-3.3	Jul-21
Blmbg. 1-3 Year Gov/Credit index			0.9	-3.7	-	-	-	-3.7	-	-	-	-	-2.8	
Short-Term Bond Rank			85	48	-	-	-	48	-	-	-	-	64	
Cash Account	50,936,047	3.2	0.3	0.4	1.0	1.4	0.9	0.4	8.0	1.9	2.2	1.5		
90 Day U.S. Treasury Bill			0.8	1.5	0.7	1.3	0.8	1.5	0.0	0.7	2.3	1.9		
Investment Cash	13,232,141	0.8	0.8	0.9	-	-	-	0.9	-	-	-	-	0.6	Jun-21
90 Day U.S. Treasury Bill			0.8	1.5	-	-	-	1.5	-	-	-	-	0.9	
Total Opportunistic	39,047,157	2.4												
Kohlberg Kravis Roberts & Co. Mezzanine Partners I	2,683,632	0.2												
Sixth Street Partners TAO	36,363,525	2.3												



	Market Value	% of Portfolio	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2022	2021	2020	2019	2018	Inception	Inception Date
Total Fund	1,613,645,551	100.0	4.5	-8.3	4.8	5.2	6.3	-8.3	14.9	9.2	15.8	-3.5		Feb-07
Interim Policy Index			4.2	-9.7	4.0	4.9	6.3	-9.7	12.9	10.3	15.3	-2.1		
FFP SAA Index			2.8	-6.9	8.0	7.9	-	-6.9	21.4	11.5	12.6	3.0		
Total Growth	1,103,791,102	68.4	5.3	-7.6	8.1	7.7	9.0	-7.6	23.3	10.8	19.9	-4.4		
Custom Growth Benchmark			5.2	-8.5	7.5	7.6	8.9	-8.5	19.6	13.4	19.5	-2.8		
Total Public Equity	578,492,906	35.9	12.7	-13.9	6.1	6.9	9.3	-13.9	19.6	15.9	29.1	-9.5		
Russell 3000 Index			7.2	-19.2	7.1	8.8	12.1	-19.2	25.7	20.9	31.0	-5.2	_	
Total Domestic Equity	325,269,550	20.2	11.5	-10.9	7.9	8.8	12.1	-10.9	24.6	13.1	28.7	-5.7		
Russell 3000 Index			7.2	-19.2	7.1	8.8	12.1	-19.2	25.7	20.9	31.0	-5.2		
PIMCO RAE US	91,301,098	5.7	14.4	-3.4	8.7	8.3	11.5	-3.4	27.8	3.9	25.0	-7.0	8.2	Dec-07
S&P 500 Index			7.6	-18.1	7.7	9.4	12.6	-18.1	28.7	18.4	31.5	-4.4	8.7	
Loomis Sayles Large Cap Growth	70,477,848	4.4	6.2	-27.5	4.5	8.1	-	-27.5	18.9	32.3	32.1	-2.1	12.1	Jan-17
Russell 1000 Growth Index			2.2	-29.1	7.8	11.0	-	-29.1	27.6	38.5	36.4	-1.5	13.5	
Boston Partners Large Cap Value	87,734,138	5.4	12.6	-4.2	8.4	7.5	-	-4.2	30.4	2.0	23.8	-8.9	9.4	Feb-17
Russell 1000 Value Index			12.4	-7.5	6.0	6.7	-	-7.5	25.2	2.8	26.5	-8.3	7.8	
Atlanta Capital Mgmt	75,756,465	4.7	11.4	-8.7	7.2	9.4	13.2	-8.7	22.0	10.5	34.1	-5.3	14.8	Sep-10
Russell 2500 Index			7.4	-18.4	5.0	5.9	10.0	-18.4	18.2	20.0	27.8	-10.0	11.5	
Total International Equity	253,223,357	15.7	14.4	-17.9	3.7	4.7	6.1	-17.9	14.4	18.6	29.3	-12.8		
MSCI AC World ex USA Index			14.4	-15.6	0.5	1.4	4.3	-15.6	8.3	11.1	22.1	-13.8		
Dodge & Cox Intl Stock	136,865,968	8.5	16.0	-6.8	1.8	1.2	4.8	-6.8	11.0	2.1	22.8	-18.0	2.4	Dec-07
MSCI AC World ex USA Value			15.8	-8.0	0.7	0.6	3.3	-8.0	11.1	-0.2	16.5	-13.4	1.3	
WCM International Growth	116,357,389	7.2	12.5	-28.6	3.8	7.1	-	-28.6	17.7	33.1	35.8	-7.4	9.9	Feb-17
MSCI AC World ex USA Growth			12.9	-22.8	-0.1	1.8	-	-22.8	5.4	22.6	27.8	-14.1	5.5	

	Market Value	% of Portfolio	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2022	2021	2020	2019	2018	Inception	Inception Date
Total Private Equity	154,756,859	9.6												
Harbourvest Partners IX Buyout Fund L.P.	13,388,093	0.8												
Pathway Private Equity Fund Investors 9 L.P.	83,503,440	5.2												
Harbourvest 2018 Global Fund L.P.	20,679,928	1.3												
Harbourvest SLO Fund Private Equity	23,758,330	1.5												
Pathway Private Equity Fund Investors 10 L.P.	13,427,068	8.0												
Total Private Credit	120,694,777	7.5												
Harbourvest SLO Credit Fund	40,870,096	2.5												
Sixth Street Partners DCP	79,824,681	4.9												
Total Real Estate	249,846,560	15.5	-4.5	6.7	8.5	7.5	9.0	6.7	18.5	1.1	4.3	7.5		
NCREIF Property Index			-3.5	5.5	8.1	7.5	8.8	5.5	17.7	1.6	6.4	6.7		
JP Morgan Core Real Estate	168,047,518	10.4	-5.0	4.3	8.0	6.9	8.6	4.3	20.2	0.5	3.4	7.0	5.5	Mar-08
NCREIF-ODCE			-5.0	7.5	9.9	8.7	10.1	7.5	22.2	1.2	5.3	8.3	6.2	
NCREIF Property Index			-3.5	5.5	8.1	7.5	8.8	5.5	17.7	1.6	6.4	6.7	6.5	
ARA American Strategic Value Realty	81,799,042	5.1	-3.5	12.3	9.9	9.2	-	12.3	14.0	3.8	7.3	9.1	9.0	Jul-16
NCREIF-ODCE			-5.0	7.5	9.9	8.7	-	7.5	22.2	1.2	5.3	8.3	8.5	
NCREIF Property Index			-3.5	5.5	8.1	7.5	-	5.5	17.7	1.6	6.4	6.7	7.4	
Total Risk Diversifying	373,409,046	23.1	3.8	-12.2	-3.0	-0.6	0.6	-12.2	-2.0	6.1	8.4	-2.2		
Total Risk Diversifying Benchmark			2.3	-14.6	-3.8	-0.7	0.7	-14.6	-3.2	7.5	8.7	0.0		
Total Domestic Fixed Income	278,438,678	17.3	2.1	-10.1	-0.9	1.3	1.7	-10.1	0.5	7.7	9.5	0.0		
Blmbg. U.S. Aggregate Index			1.9	-13.0	-2.7	0.0	1.1	-13.0	-1.5	7.5	8.7	0.0		
BlackRock Core Bond	56,828,770	3.5	2.1	-15.1	-3.1	0.0	-	-15.1	-1.8	9.1	9.9	0.1	0.5	Feb-17
Blmbg. U.S. Aggregate Index			1.9	-13.0	-2.7	0.0	-	-13.0	-1.5	7.5	8.7	0.0	0.6	
Dodge & Cox Income Fund	54,146,876	3.4	2.8	-10.9	-1.1	1.1	-	-10.9	-0.9	9.4	9.7	-0.3	1.6	Feb-17
Blmbg. U.S. Aggregate Index			1.9	-13.0	-2.7	0.0	-	-13.0	-1.5	7.5	8.7	0.0	0.6	
Pacific Asset Corporate Loan	68,430,070	4.2	2.8	-0.5	2.4	3.3	-	-0.5	5.2	2.6	8.7	0.7	3.7	Sep-14
Morningstar LSTA US Leveraged Loan			2.7	-0.6	2.5	3.3	-	-0.6	5.2	3.1	8.6	0.4	3.5	
SSGA U.S. Govt Bond Index	54,063,721	3.4	0.5	-12.5	-	-	-	-12.5	-	-	-	-	-9.2	Jul-21
Blmbg. U.S. Treasury: 7-10 Year			1.0	-14.9	-	-	-	-14.9	-	-	-	-	-11.1	



### Total Fund Performance Summary (Net of Fees)

	Market Value	% of Portfolio	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2022	2021	2020	2019	2018	Inception	Inception Date
BlackRock TIPS	44,969,240	2.8	1.9	-11.9	-	-	-	-11.9	-	-	-	-	-8.0	Sep-21
Blmbg. U.S. TIPS			2.0	-11.8	-	-	-	-11.8	-	-	-	-	-7.9	
Total Global Fixed	94,970,369	5.9	9.1	-17.6	-6.9	-3.9	-2.2	-17.6	-7.7	6.0	6.9	-4.7		
FTSE World Government Bond Index			3.8	-18.3	-5.7	-2.5	-1.2	-18.3	-7.0	10.1	5.9	-0.8		
Brandywine Global Fixed Income	41,448,660	2.6	7.6	-14.3	-	-	-	-14.3	-4.4	-	-	-	-3.0	Jul-20
FTSE Non-U.S. World Government Bond			6.5	-22.1	-	-	-	-22.1	-9.7	-	-	-	-9.8	
Ashmore EM Blended Debt Fund	53,521,708	3.3	10.3	-20.7	-10.1	-	-	-20.7	-10.4	2.1	-	-	-7.1	Apr-19
50% JPM EMBI GD/25% JPM GBI EM GD/25% JPM ELMI+			8.0	-13.6	-4.8	-	-	-13.6	-3.9	3.9	-	-	-2.1	
Total Liquidity	97,398,246	6.0	0.5	-1.2	0.1	0.8	1.6	-1.2	0.2	1.5	2.1	1.6		
90 Day U.S. Treasury Bill			0.8	1.5	0.7	1.3	0.8	1.5	0.0	0.7	2.3	1.9		
Total Cash	97,398,246	6.0	0.5	-1.2	0.1	0.8	1.5	-1.2	0.2	1.5	2.1	1.6		
90 Day U.S. Treasury Bill			0.8	1.5	0.7	1.3	0.8	1.5	0.0	0.7	2.3	1.9		
PIMCO Short Duration Fund	33,230,057	2.1	0.8	-4.7	-	-	-	-4.7	-	-	-	-	-3.8	Jul-21
Blmbg. 1-3 Year Gov/Credit index			0.9	-3.7	-	-	-	-3.7	-	-	-	-	-2.8	
Cash Account	50,936,047	3.2	0.3	0.4	1.0	1.4	0.9	0.4	0.8	1.9	2.2	1.5		
90 Day U.S. Treasury Bill			0.8	1.5	0.7	1.3	0.8	1.5	0.0	0.7	2.3	1.9		
Investment Cash	13,232,141	8.0	0.8	0.9	-	-	-	0.9	-	-	-	-	0.6	Jun-21
90 Day U.S. Treasury Bill			0.8	1.5	-	-	-	1.5	-	-	-	-	0.9	
Total Opportunistic	39,047,157	2.4												
Kohlberg Kravis Roberts & Co. Mezzanine Partners I	2,683,632	0.2												
Sixth Street Partners TAO	36,363,525	2.3												

	Anlzd Ret	Ann Excess BM Return	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
PIMCO RAE US	8.67	1.01	25.65	1.42	1.04	9.85	0.85	0.44	0.19	105.39	96.77
Loomis Sayles Large Cap Growth	4.47	-3.32	23.49	-2.46	0.89	5.44	0.96	0.27	-0.68	84.20	96.51
Boston Partners Large Cap Value	8.42	2.46	26.00	2.19	1.08	3.36	0.99	0.42	0.87	112.00	99.91
Atlanta Capital Mgmt	7.21	2.21	26.20	2.48	0.83	7.46	0.96	0.38	0.11	91.47	83.02
Dodge & Cox Intl Stock	1.84	1.15	28.08	1.45	1.09	4.11	0.99	0.19	0.44	110.67	102.81
WCM International Growth	3.82	3.91	27.02	4.46	1.12	6.36	0.96	0.25	0.74	122.06	100.57
BlackRock Core Bond	-3.13	-0.42	7.39	-0.03	1.12	2.82	0.86	-0.49	-0.12	112.46	112.80
Dodge & Cox Income Fund	-1.13	1.59	6.51	1.48	0.94	3.12	0.77	-0.25	0.52	123.03	87.54
Pacific Asset Corporate Loan	2.40	-0.15	7.89	0.38	0.75	2.78	0.98	0.24	-0.14	81.88	79.04
JP Morgan Core Real Estate	8.04	-1.89	7.44	-1.72	1.00	1.31	0.97	0.95	-1.35	87.18	110.41
ARA American Strategic Value Realty	9.93	0.00	7.30	2.55	0.74	5.21	0.56	1.21	0.00	88.23	35.36
Ashmore EM Blended Debt Fund	-10.12	-5.30	20.93	-2.15	1.53	7.81	0.98	-0.43	-0.55	149.54	166.34

#### 5 Years

	Anlzd Ret	Ann Excess BM Return	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
PIMCO RAE US	8.33	-1.10	21.91	-0.75	1.02	7.81	0.87	0.43	-0.07	97.59	99.78
Loomis Sayles Large Cap Growth	8.07	-2.89	20.72	-1.60	0.88	5.05	0.96	0.42	-0.63	83.24	90.79
Boston Partners Large Cap Value	7.53	0.86	22.04	0.57	1.07	3.40	0.98	0.39	0.36	106.67	101.39
Atlanta Capital Mgmt	9.37	3.48	23.07	4.00	0.84	7.17	0.94	0.46	0.34	95.78	77.75
Dodge & Cox Intl Stock	1.24	0.67	23.55	0.90	1.10	3.67	0.98	0.12	0.33	112.30	106.40
WCM International Growth	7.08	5.25	23.00	5.35	1.10	5.44	0.95	0.36	1.04	122.34	89.44
BlackRock Core Bond	0.00	-0.02	6.39	0.02	1.12	2.24	0.89	-0.17	0.02	110.52	110.08
Dodge & Cox Income Fund	1.12	1.10	5.54	1.12	0.91	2.58	0.79	0.00	0.43	113.07	86.62
Pacific Asset Corporate Loan	3.29	-0.02	6.57	0.67	0.77	2.17	0.98	0.33	-0.08	88.08	81.76
JP Morgan Core Real Estate	6.88	-1.80	5.87	-1.66	1.00	1.22	0.96	0.91	-1.39	84.20	110.41
ARA American Strategic Value Realty	9.23	0.55	5.70	2.79	0.74	4.09	0.56	1.33	0.12	96.62	35.36



		F-4!4						Manhadata	Distrib./	Tot. Value/	Net IRR	
		Estimated 12/31	Total	Capital	%	Remaining	Capital	Market Value	Paid-In	Paid-In	Since	IRR
Vintage	Manager & Fund Name	Market Value <sup>3</sup>	Commitment	Called	Called	Commitment	Returned	as of IRR date	(DPI) <sup>1</sup>	(TVPI) <sup>2</sup>	Inception⁵	Date
					2-01		****				12.51	
2011	HarbourVest Partners IX-Buyout Fund L.P.	\$13,388,093	\$20,000,000	\$17,050,000	85%	\$2,950,000	\$23,804,645	\$13,388,093	139.6%	218.1%	18.7%	9/30/22
2018	HarbourVest Partners 2018 Global Fund L.P.	\$20,679,928	\$20,000,000	\$14,400,000	72%	\$5,600,000	\$4,199,227	\$21,583,354	29.2%	172.8%	28.6%	9/30/22
2010	KKR Mezzanine Partners I L.P. 4	\$2,683,632	\$20,000,000	\$21,593,388	108%	-\$1,593,388	\$25,959,476	\$2,683,632	120.2%	132.6%	5.5%	9/30/22
2016	Sixth Street Partners DCP	\$79,824,681	\$152,500,000	\$98,176,397	64%	\$54,323,603	\$45,527,949	\$79,760,597	46.4%	127.7%	15.1%	9/30/22
2017	Pathway Private Equity Fund Investors 9 L.P.	\$83,503,440	\$65,000,000	\$52,410,796	81%	\$12,589,204	\$12,290,037	\$88,315,813	23.4%	182.8%	24.5%	6/30/22
2020	Pathway Private Equity Fund Investors 10 L.P.	\$13,427,068	\$20,000,000	\$9,716,755	49%	\$10,283,245	\$0	-	0.0%	138.2%	-	-
2020	Sixth Street Partners TAO	\$36,363,525	\$60,000,000	\$44,547,414	74%	\$15,452,586	\$15,225,989	\$34,837,839	34.2%	115.8%	9.9%	9/30/22
2022	HarbourVest SLO Fund Private Equity <sup>7</sup>	\$23,758,330	\$76,000,000	\$24,800,000	33%	\$51,200,000	\$0	-	0.0%	95.8%	-	-
2022	HarbourVest SLO Fund Private Credit <sup>7</sup>	\$40,870,096	\$95,000,000	\$40,870,096	43%	\$54,129,904	\$0	-	0.0%	100.0%	-	-
2022	HarbourVest SLO Fund Infrastructure <sup>7</sup>	\$0	\$9,000,000	\$0	0%	\$9,000,000	\$0	-	-	-	-	
	Total Alternative Illiquids	\$314,498,793	\$537,500,000	\$323,564,847	60%	\$213,935,153	\$127,007,323	\$240,569,328	74.3%	113.6%		
	% of Portfolio (Market Value)	19.5%										

	Management Fee	Admin Fee	Interest Expense	Expense	Total Expense <sup>6</sup>
HarbourVest Partners IX-Buyout Fund L.P.	\$44,849	\$0	\$0	\$2,582	\$47,431
HarbourVest Partners 2018 Global Fund L.P.	\$46,591	\$0	\$0	\$27,832	\$74,423
KKR Mezzanine Partners I L.P.	\$6,419	\$0	\$0	\$2,511	\$8,930
Sixth Street Partners DCP	\$0	\$0	\$0	\$116,370	\$116,370
Pathway Private Equity Fund Investors 9 L.P.	\$0	\$0	\$0	\$0	\$0
Pathway Private Equity Fund Investors 10 L.P.	\$0	\$0	\$0	\$0	\$0
Sixth Street Partners TAO	\$146,936	\$0	\$0	\$30,838	\$177,774
HarbourVest SLO Fund Private Credit	\$56,712	\$0	\$0	\$18,183	\$74,895
HarbourVest SLO Fund Private Equity	\$257,852	\$0	\$0	\$311,073	\$568,925
HarbourVest SLO Fund Infrastructure	\$0	\$0	\$0	\$0	\$0
	\$559,359	\$0	\$0	\$509,389	\$1,068,748



<sup>&</sup>lt;sup>1</sup>(DPI) is equal to (capital returned / capital called)

<sup>&</sup>lt;sup>2</sup>(TVPI) is equal to (market value + capital returned) / capital called

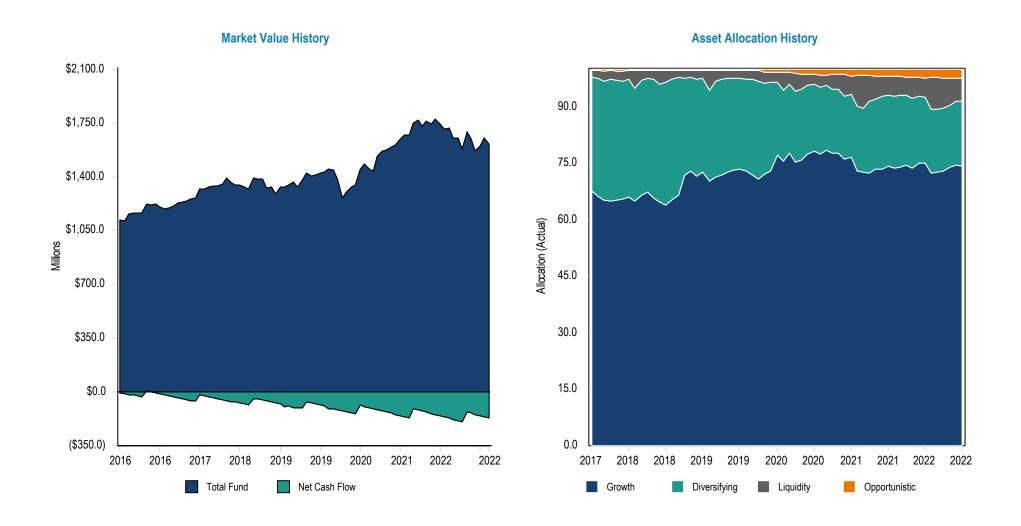
<sup>&</sup>lt;sup>3</sup>Last known market value + capital calls - distributions

<sup>&</sup>lt;sup>4</sup>Investment period ended, capital called includes recycled capital. Liquidated as of June 2020.

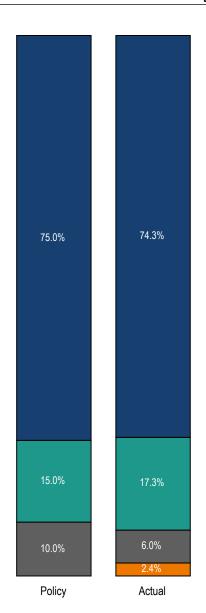
<sup>&</sup>lt;sup>5</sup>Net IRR is calculated on the cash flows of the underlying investments of the fund and is net of the underlying fund fees and carried interest.

 $<sup>^6 \</sup>text{All}$  fees and expenses are for 3Q 2022.

<sup>&</sup>lt;sup>7</sup>Harbour/Vest SLO Fund sleeve reflects the 1st year's commitment estimate as scheduled in Harbour/Vest's tactical plan for the \$770m private markets program.







	Current Balance (\$)	Current Allocation (%)	Policy Allocation (%)	Excess Allocation (\$)	Policy Range (%)	Within IPS Range?
■ Growth	1,198,761,471	74.3	75.0	-11,472,693	25.0 - 95.0	Yes
Diversifying	278,438,678	17.3	15.0	36,391,845	5.0 - 30.0	Yes
■ Liquidity	97,398,246	6.0	10.0	-63,966,309	5.0 - 20.0	Yes
Opportunistic	39,047,157	2.4	0.0	39,047,157	0.0 - 10.0	Yes
Total	1,613,645,551	100.0	100.0			

### Total Fund Investment Fund Fee Analysis

Account	Fee Schedule	Market Value As of December 31, 2022	% of Portfolio	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
ARA American Strategic Value Realty	1.25 % of First \$10 M 1.20 % of Next \$15 M 1.10 % of Next \$25 M 1.00 % Thereafter	81,799,042	5.07	897,990	1.10
Ashmore EM Blended Debt Fund	1.00 % of Assets	53,521,708	3.32	535,217	1.00
Atlanta Capital Mgmt	0.80 % of First \$50 M 0.70 % of Next \$100 M 0.60 % Thereafter	75,756,465	4.69	580,295	0.77
BlackRock Core Bond	0.28 % of First \$100 M 0.26 % Thereafter	56,828,770	3.52	159,121	0.28
BlackRock TIPS	0.02 % of First \$100 M 0.02 % of Next \$300 M 0.01 % Thereafter	44,969,240	2.79	10,118	0.02
Boston Partners Large Cap Value	0.40 % of Assets	87,734,138	5.44	350,937	0.40
Brandywine Global Fixed Income	0.45 % of First \$50 M 0.40 % of Next \$50 M 0.35 % Thereafter	41,448,660	2.57	186,519	0.45
Cash Account		50,936,047	3.16	-	-
Dodge & Cox Income Fund	0.41 % of Assets	54,146,876	3.36	222,002	0.41
Dodge & Cox Intl Stock	0.62 % of Assets	136,865,968	8.48	848,569	0.62
Harbourvest 2018 Global Fund L.P.	Minimum Fee: \$282,000	20,679,928	1.28	282,000	1.36
Harbourvest Partners IX Buyout Fund L.P.	Minimum Fee: \$200,000	13,388,093	0.83	200,000	1.49
Harbourvest SLO Credit Fund		40,870,096	2.53	-	-
Harbourvest SLO Fund Private Equity		23,758,330	1.47	-	-

#### Total Fund Investment Fund Fee Analysis

Account	Fee Schedule	Market Value As of December 31, 2022	% of Portfolio	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
Investment Cash		13,232,141	0.82	-	-
JP Morgan Core Real Estate	0.92 % of First \$100 M 0.80 % of Next \$150 M 0.70 % of Next \$250 M 0.50 % Thereafter	168,047,518	10.41	1,464,380	0.87
Kohlberg Kravis Roberts & Co. Mezzanine Partners I	Minimum Fee: \$300,000	2,683,632	0.17	300,000	11.18
Loomis Sayles Large Cap Growth	0.45 % of First \$100 M 0.40 % Thereafter	70,477,848	4.37	317,150	0.45
Pacific Asset Corporate Loan	0.37 % of Assets	68,430,070	4.24	253,191	0.37
Pathway Private Equity Fund Investors 10 L.P.		13,427,068	0.83	-	-
Pathway Private Equity Fund Investors 9 L.P.		83,503,440	5.17	-	-
PIMCO RAE US	0.40 % of Assets	91,301,098	5.66	365,204	0.40
PIMCO Short Duration Fund	0.50 % of Assets	33,230,057	2.06	166,150	0.50
Sixth Street Partners DCP		79,824,681	4.95	-	-
Sixth Street Partners TAO		36,363,525	2.25	-	-
SSGA U.S. Govt Bond Index	0.04 % of First \$50 M 0.03 % Thereafter	54,063,721	3.35	21,219	0.04
WCM International Growth	0.70 % of Assets	116,357,389	7.21	814,502	0.70
Investment Management Fee		1,613,645,551	100.00	7,974,565	0.49



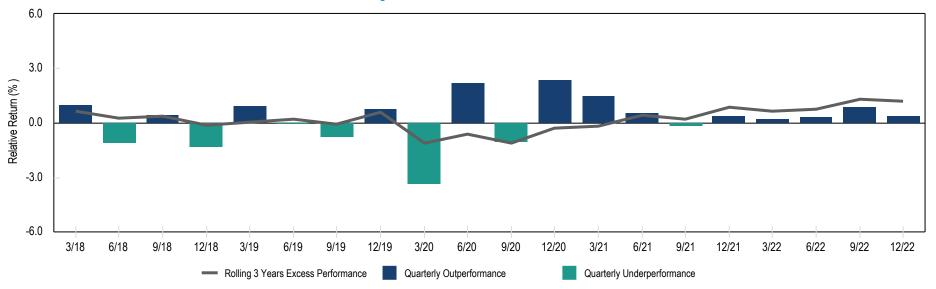
Total Fund vs. InvMetrics Public DB > \$1B 12.0 8.0 4.0 0.0 Return -4.0 -8.0 -12.0 -16.0 -20.0 3 Mo 1 Yr 3 Yrs 5 Yrs 7 Yrs 10 Yrs 4.61 (76) -8.03 (21) 5.17 (37) 5.56 (52) 7.06 (58) 6.71 (78) Total Fund 4.22 (84) -9.73 (36) 3.97 (73) 4.88 (70) 6.46 (83) 6.29 (84) ▲ Interim Policy Index 5th Percentile 7.77 -6.17 7.21 7.15 8.47 8.51 1st Quartile 6.19 -8.91 5.78 6.13 7.92 7.92 Median 5.38 -11.12 4.69 5.56 7.33 7.43 6.73 3rd Quartile 4.61 -12.89 3.90 4.69 6.79 95th Percentile 3.20 -15.78 2.19 3.83 5.85 5.63 81 Population 85 78 77 77 73



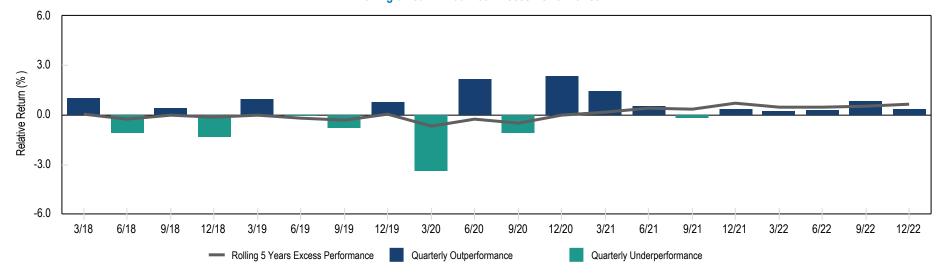
Total Fund vs. InvMetrics Public DB > \$1B 26.0 20.0 14.0 8.0 Return 2.0 -4.0 -10.0 -16.0 -22.0 2022 2021 2014 2013 2020 2019 2018 2017 2016 2015 -8.03 (21) 15.37 (53) 9.63 (76) -3.12 (43) 15.47 (61) 6.55 (92) -0.81 (71) 5.15 (73) Total Fund 16.29 (74) 13.85 (73) -9.73 (36) 15.33 (89) -2.09 (24) 13.29 (93) 7.78 (64) ▲ Interim Policy Index 12.93 (84) 10.26 (71) -0.52 (61) 5.23 (71) 13.39 (73) 5th Percentile -6.17 21.20 16.06 21.35 0.65 18.50 10.21 2.48 8.22 21.20 1st Quartile -8.91 17.71 13.58 18.72 -2.26 16.88 8.63 1.00 6.98 18.01 Median -11.12 15.53 12.06 17.36 -3.37 16.10 8.06 -0.07 5.94 16.06 3rd Quartile -12.89 13.49 9.70 16.17 -4.75 14.36 7.37 -0.89 5.09 12.50 95th Percentile -15.78 13.93 -6.53 12.69 -2.43 8.66 11.54 7.16 5.66 3.91 Population 81 149 169 139 119 131 137 129 129 119







#### **Rolling 5 Year Annualized Excess Performance**







	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2022	2021	2020	2019	2018
Total Domestic Equity	325,269,550	11.6	-10.4	8.5	9.4	12.6	-10.4	25.3	13.7	29.4	-5.2
Russell 3000 Index		7.2	-19.2	7.1	8.8	12.1	-19.2	25.7	20.9	31.0	-5.2
InvMetrics Public DB US Equity Rank		2	5	8	18	21	5	58	92	73	33
PIMCO RAE US	91,301,098	14.5	-3.0	9.1	8.8	12.0	-3.0	28.3	4.4	25.5	-6.6
S&P 500 Index		7.6	-18.1	7.7	9.4	12.6	-18.1	28.7	18.4	31.5	-4.4
eV US Large Cap Core Equity Rank		2	4	26	64	68	4	46	97	85	77
Loomis Sayles Large Cap Growth	70,477,848	6.4	-27.1	4.9	8.6	-	-27.1	19.4	32.8	32.7	-1.7
Russell 1000 Growth Index		2.2	-29.1	7.8	11.0	-	-29.1	27.6	38.5	36.4	-1.5
eV US Large Cap Growth Equity Rank		27	40	72	78	-	40	81	60	67	59
Boston Partners Large Cap Value	87,734,138	12.7	-3.8	8.9	8.0	-	-3.8	30.9	2.4	24.3	-8.5
Russell 1000 Value Index		12.4	-7.5	6.0	6.7	-	-7.5	25.2	2.8	26.5	-8.3
eV US Large Cap Equity Rank		23	16	29	72	-	16	17	87	88	79
Atlanta Capital Mgmt	75,756,465	11.6	-7.9	8.0	10.2	14.1	-7.9	23.0	11.4	35.1	-4.5
Russell 2500 Index		7.4	-18.4	5.0	5.9	10.0	-18.4	18.2	20.0	27.8	-10.0
eV US Small-Mid Cap Equity Rank		26	14	37	18	6	14	57	62	13	25

U.S. Effective Style Map 3 Years Ending December 31, 2022



U.S. Effective Style Map 5 Years Ending December 31, 2022





### Total Domestic Equity Asset Class Overview (Net of Fees)

	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2022	2021	2020	2019	2018
Total Domestic Equity	325,269,550	11.5	-10.9	7.9	8.8	12.1	-10.9	24.6	13.1	28.7	-5.7
Russell 3000 Index		7.2	-19.2	7.1	8.8	12.1	-19.2	25.7	20.9	31.0	-5.2
PIMCO RAE US	91,301,098	14.4	-3.4	8.7	8.3	11.5	-3.4	27.8	3.9	25.0	-7.0
S&P 500 Index		7.6	-18.1	7.7	9.4	12.6	-18.1	28.7	18.4	31.5	-4.4
Loomis Sayles Large Cap Growth	70,477,848	6.2	-27.5	4.5	8.1	-	-27.5	18.9	32.3	32.1	-2.1
Russell 1000 Growth Index		2.2	-29.1	7.8	11.0	-	-29.1	27.6	38.5	36.4	-1.5
Boston Partners Large Cap Value	87,734,138	12.6	-4.2	8.4	7.5	-	-4.2	30.4	2.0	23.8	-8.9
Russell 1000 Value Index		12.4	-7.5	6.0	6.7	-	-7.5	25.2	2.8	26.5	-8.3
Atlanta Capital Mgmt	75,756,465	11.4	-8.7	7.2	9.4	13.2	-8.7	22.0	10.5	34.1	-5.3
Russell 2500 Index		7.4	-18.4	5.0	5.9	10.0	-18.4	18.2	20.0	27.8	-10.0



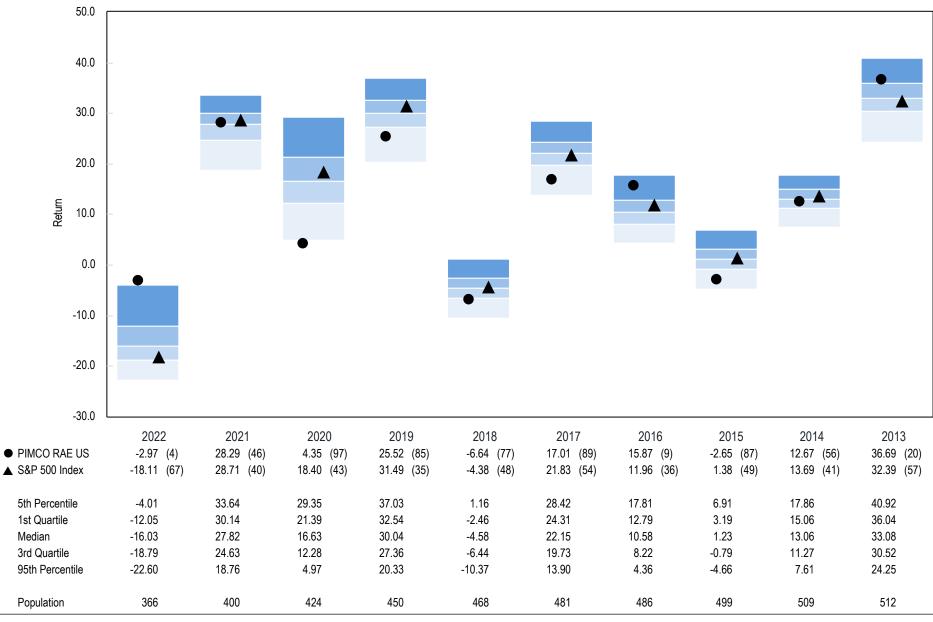
			Correlation Matrix 1 Year Ending December 31,	2022		
Total Domestic	Total Domestic Equity 1.00	PIMCO RAE US	Loomis Sayles Large Cap Growth	Boston Partners Large Cap Value	Atlanta Capital Mgmt	Russell 3000 Index
Equity PIMCO RAE US	0.99	1.00				
Loomis Sayles Large Cap Growth	0.97	0.94	1.00			
Boston Partners Large Cap Value	0.98	0.99	0.90	1.00		
Atlanta Capital Mgmt	0.98	0.96	0.95	0.95	1.00	
Russell 3000 Index	0.99	0.98	0.99	0.95	0.98	1.00



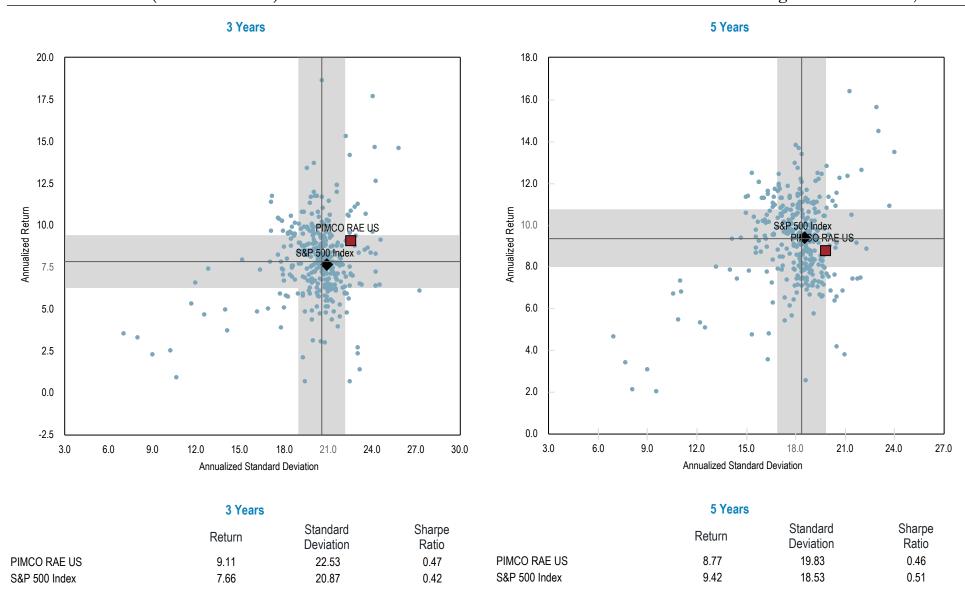
PIMCO RAE US vs. eV US Large Cap Core Equity Gross Universe 20.0 14.0 8.0 2.0 Return -4.0 -10.0 -16.0 -22.0 -28.0 Quarter 1 Yr 3 Yrs 5 Yrs 7 Yrs 10 Yrs PIMCO RAE US 14.51 (2) -2.97 (4) 9.11 (26) 8.77 (64) 10.90 (61) 11.96 (68) ▲ S&P 500 Index 7.56 (73) -18.11 (67) 7.66 (57) 9.42 (48) 11.48 (45) 12.56 (46) 5th Percentile 13.05 -4.01 11.54 12.24 13.87 14.73 1st Quartile 10.75 -12.05 9.12 10.60 12.20 13.02 Median 8.73 -16.03 7.85 9.38 11.27 12.45 3rd Quartile 7.27 -18.79 6.55 8.05 10.35 11.74 95th Percentile 4.61 -22.60 4.42 6.18 8.17 9.52 Population 366 366 358 343 312 276



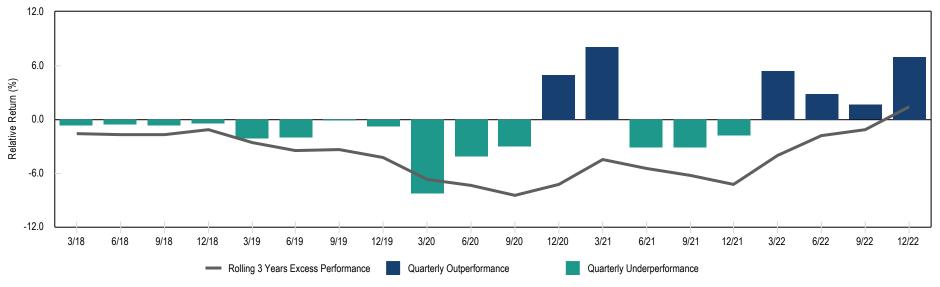
PIMCO RAE US vs. eV US Large Cap Core Equity Gross Universe



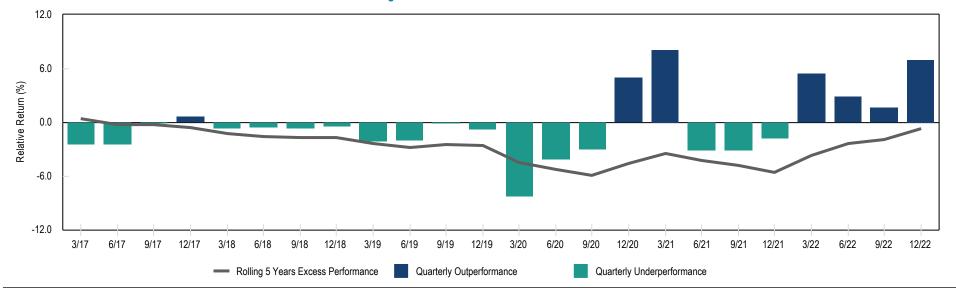




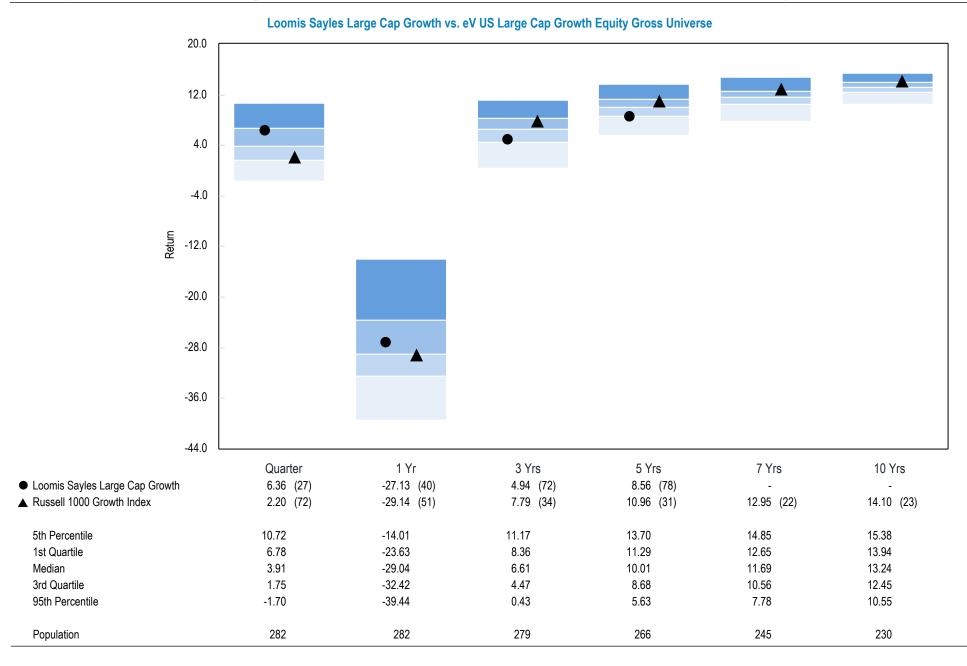




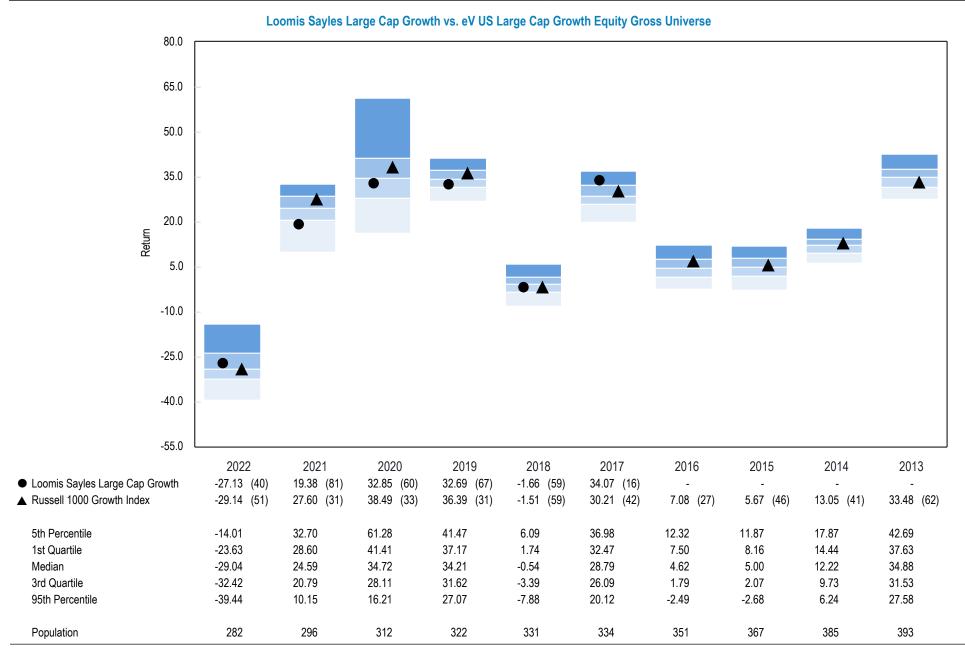
#### **Rolling 5 Years Annualized Excess Performance**



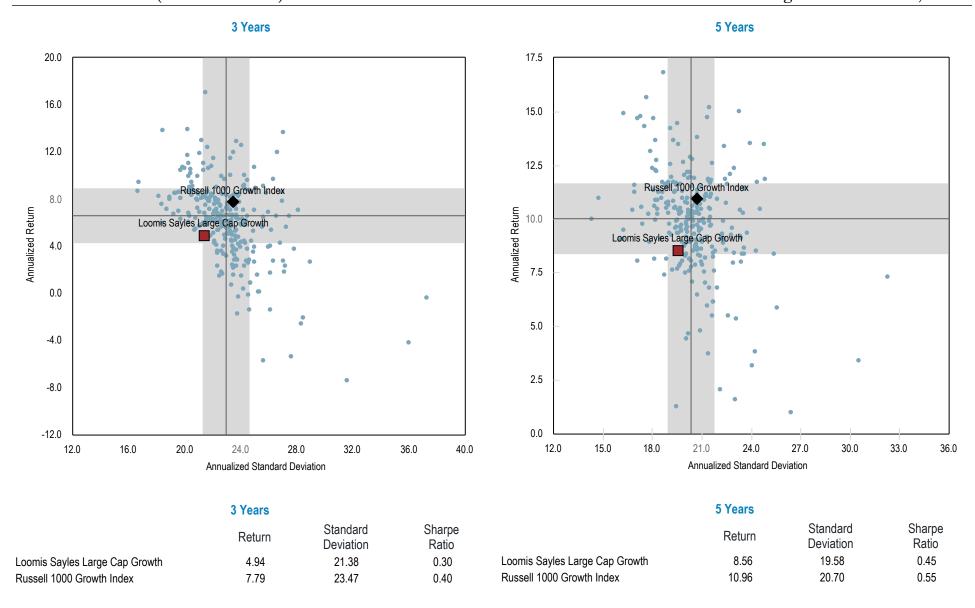


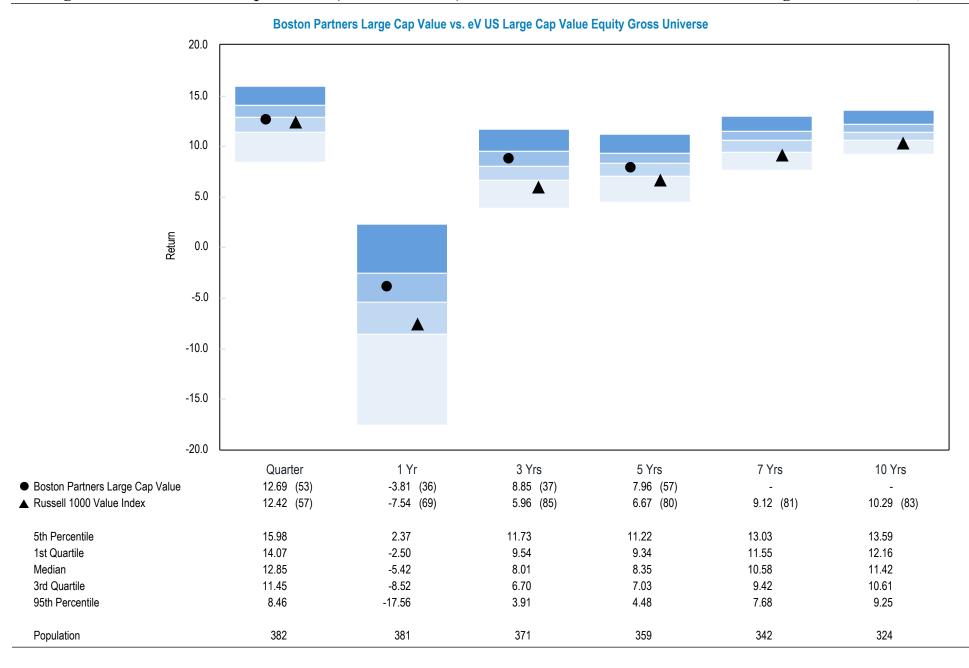




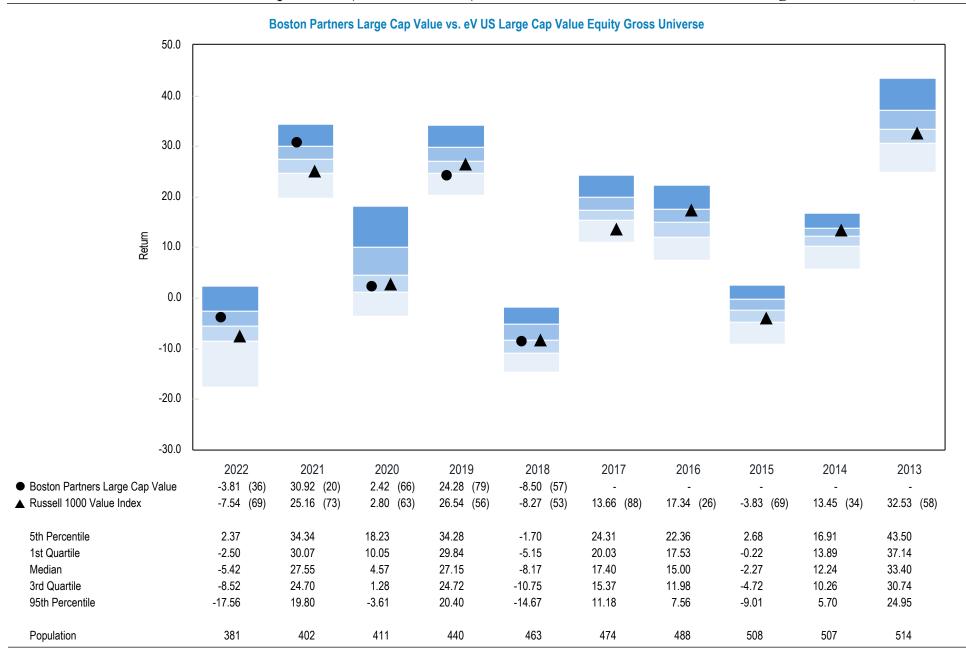




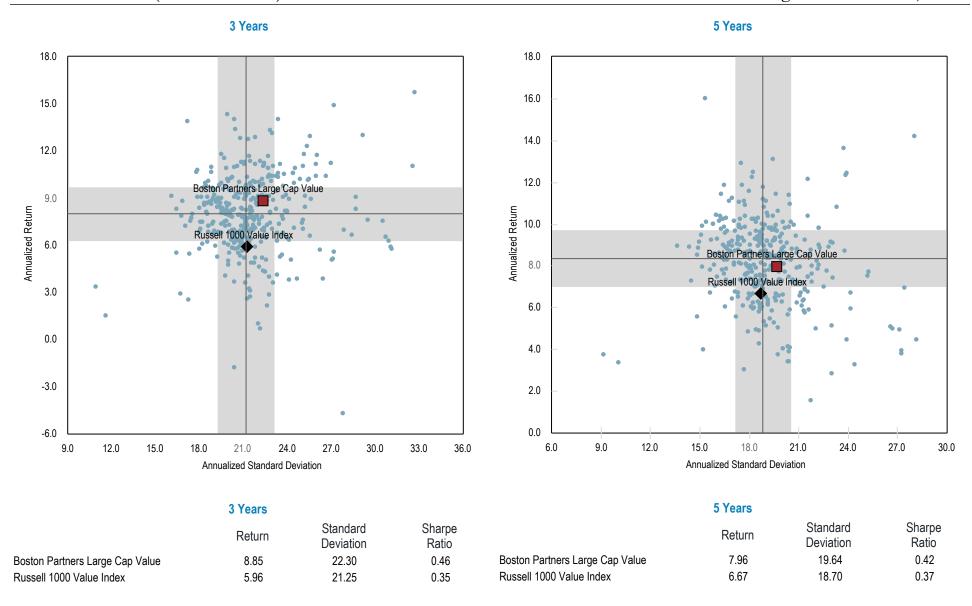


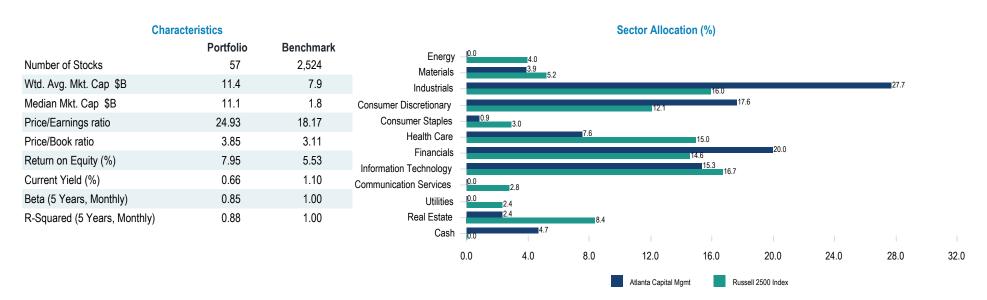






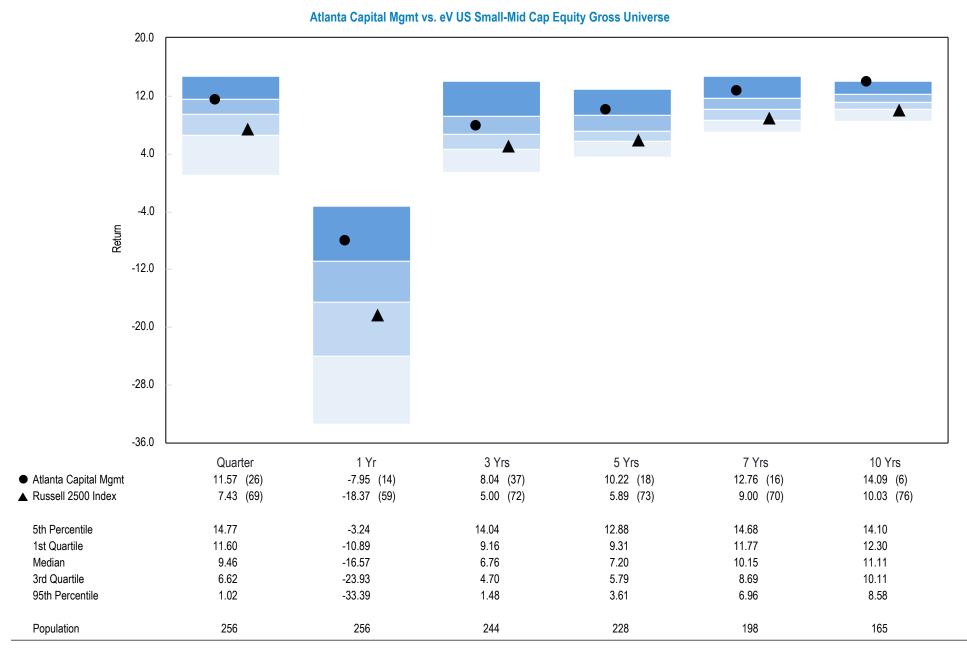






Largest Equity Ho	oldings		Top Con	tributors			Bottom Contributors				
	Wgt (%)	Return (%)		Wgt (%)	Return (%)	Contr (%)		Wgt (%)	Return (%)	Contr (%)	
Berkley (W.R.) Corp	4.67	8.99	J.B. Hunt Transport Services Inc.	3.32	17.27	0.57	Terminix Global Holdings Inc	3.27	-22.90	-0.75	
Carlisle Cos Inc	4.40	10.51	Gartner Inc	2.25	25.38	0.57	WEX Inc	2.94	-21.10	-0.62	
J.B. Hunt Transport Services Inc.	3.78	17.27	Morningstar Inc	1.98	25.52	0.51	DENTSPLY SIRONA Inc	2.33	-13.21	-0.31	
Aramark	3.19	4.18	Carlisle Cos Inc	4.11	10.51	0.43	Envista Holdings Corp	3.09	-9.24	-0.29	
Gartner Inc	2.74	25.38	Berkley (W.R.) Corp	4.42	8.99	0.40	Black Knight Inc	1.41	-15.34	-0.22	
Envista Holdings Corp	2.72	-9.24	Brown & Brown Inc	2.21	16.21	0.36	Frontdoor Inc	0.80	-23.82	-0.19	
SEI Investments Co	2.57	3.68	Choice Hotels International Inc.	1.91	17.48	0.33	Burlington Stores Inc	1.02	-17.48	-0.18	
Brown & Brown Inc	2.49	16.21	Jones Lang LaSalle Inc	2.08	16.02	0.33	Lennox International Inc.	1.94	-8.88	-0.17	
Terminix Global Holdings Inc	2.45	-22.90	Manhattan Associates Inc	2.05	13.73	0.28	Dolby Laboratories Inc	1.91	-8.80	-0.17	
Affiliated Managers Group Inc.	2.43	5.96	Acuity Brands Inc.	1.53	17.21	0.26	AptarGroup Inc.	2.33	-5.76	-0.13	

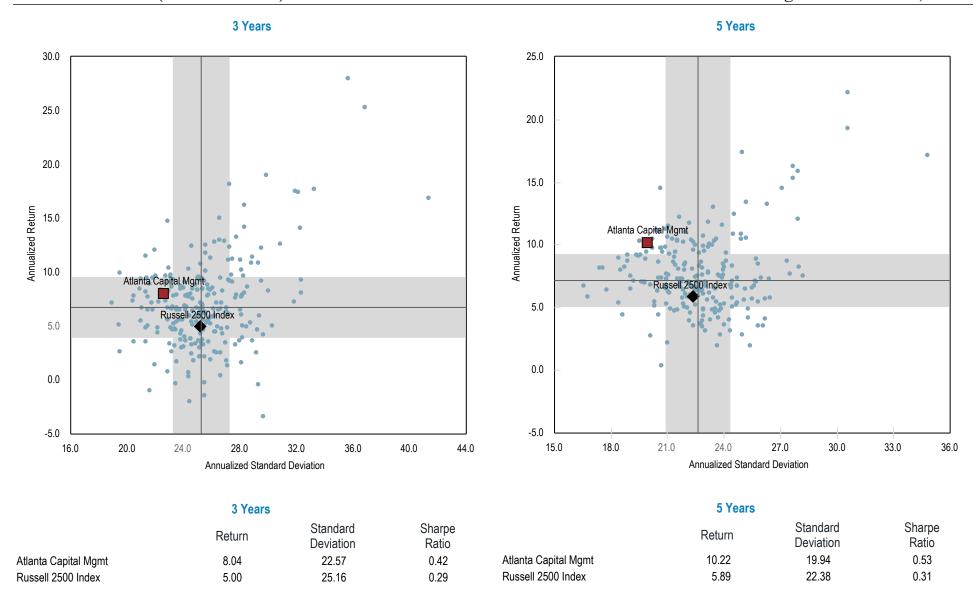




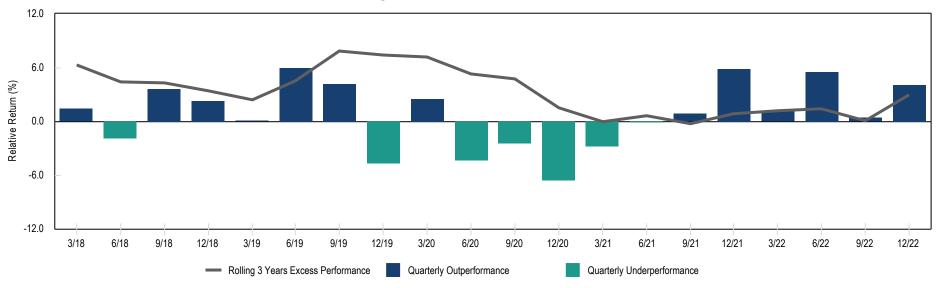


Atlanta Capital Mgmt vs. eV US Small-Mid Cap Equity Gross Universe 0.08 65.0 50.0 35.0 Return 20.0 5.0 -10.0 -25.0 -40.0 2022 2018 2013 2021 2020 2019 2017 2016 2015 2014 Atlanta Capital Mgmt -7.95 (14) 22.96 (57) 11.41 (62) -4.52 (25) 26.58 (15) 5.83 (59) 37.85 (55) 35.12 (13) 12.58 (65) 10.44 (1) 19.99 (45) -10.00 (56) ▲ Russell 2500 Index -18.37 (59) 18.18 (73) 27.77 (57) 16.81 (60) 17.59 (40) -2.90 (67) 7.07 (48) 36.80 (61) 5th Percentile -3.24 36.82 64.44 39.05 2.93 32.51 27.43 5.63 13.96 49.78 -10.89 29.66 30.80 32.08 -4.60 23.71 21.19 0.70 9.93 42.76 1st Quartile Median -16.57 24.32 17.26 28.90 -8.89 18.24 16.25 -1.24 6.87 38.55 3rd Quartile -23.93 17.47 7.41 24.44 -12.9814.12 9.45 -4.37 3.65 34.54 95th Percentile -33.39 6.84 18.01 -18.28 3.09 -12.74 -2.09 29.35 -1.49 7.75 Population 256 266 274 281 295 285 289 292 290 295

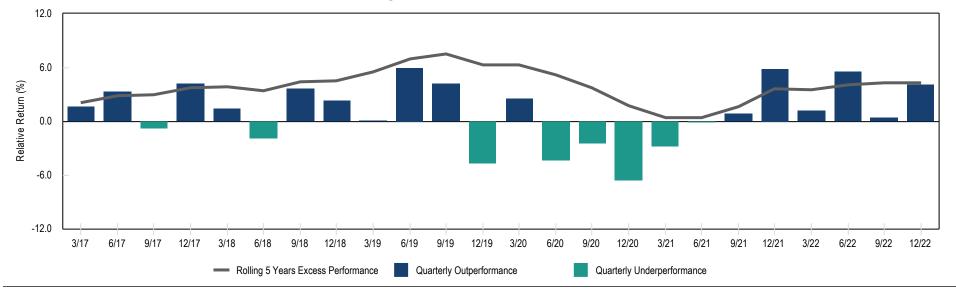








#### **Rolling 5 Years Annualized Excess Performance**





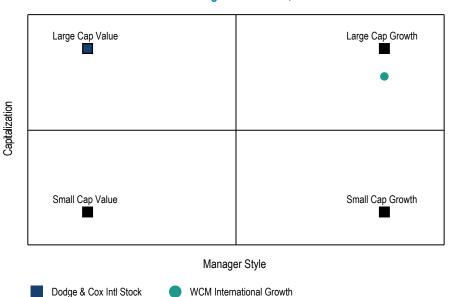


#### Total International Equity Asset Class Overview (Gross of Fees)

#### San Luis Obispo County Pension Trust Period Ending: December 31, 2022

	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2022	2021	2020	2019	2018
Total International Equity	253,223,357	14.5	-17.4	4.3	5.4	6.8	-17.4	15.2	19.4	30.2	-12.2
MSCI AC World ex USA Index		14.4	-15.6	0.5	1.4	4.3	-15.6	8.3	11.1	22.1	-13.8
InvMetrics Public DB Global ex-US Equity Rank		44	52	4	1	5	52	7	7	1	20
Dodge & Cox Intl Stock	136,865,968	16.2	-6.2	2.5	1.9	5.4	-6.2	11.7	2.8	23.6	-17.5
MSCI AC World ex USA Value		15.8	-8.0	0.7	0.6	3.3	-8.0	11.1	-0.2	16.5	-13.4
eV ACWI ex-US All Cap Value Eq Rank		65	13	24	22	24	13	34	45	32	92
WCM International Growth	116,357,389	12.6	-28.2	4.5	7.8	-	-28.2	18.5	34.0	36.7	-6.7
MSCI AC World ex USA Growth		12.9	-22.8	-0.1	1.8	-	-22.8	5.4	22.6	27.8	-14.1
eV ACWI ex-US All Cap Growth Eq Rank		62	58	16	5	-	58	7	37	14	1

# EAFE Effective Style Map 3 Years Ending December 31, 2022



# EAFE Effective Style Map 5 Years Ending December 31, 2022





#### Total International Equity Asset Class Overview( Net of Fees)

	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2022	2021	2020	2019	2018
Total International Equity	253,223,357	14.4	-17.9	3.7	4.7	6.1	-17.9	14.4	18.6	29.3	-12.8
MSCI AC World ex USA Index		14.4	-15.6	0.5	1.4	4.3	-15.6	8.3	11.1	22.1	-13.8
Dodge & Cox Intl Stock	136,865,968	16.0	-6.8	1.8	1.2	4.8	-6.8	11.0	2.1	22.8	-18.0
MSCI AC World ex USA Value		15.8	-8.0	0.7	0.6	3.3	-8.0	11.1	-0.2	16.5	-13.4
WCM International Growth	116,357,389	12.5	-28.6	3.8	7.1	-	-28.6	17.7	33.1	35.8	-7.4
MSCI AC World ex USA Growth		12.9	-22.8	-0.1	1.8	-	-22.8	5.4	22.6	27.8	-14.1

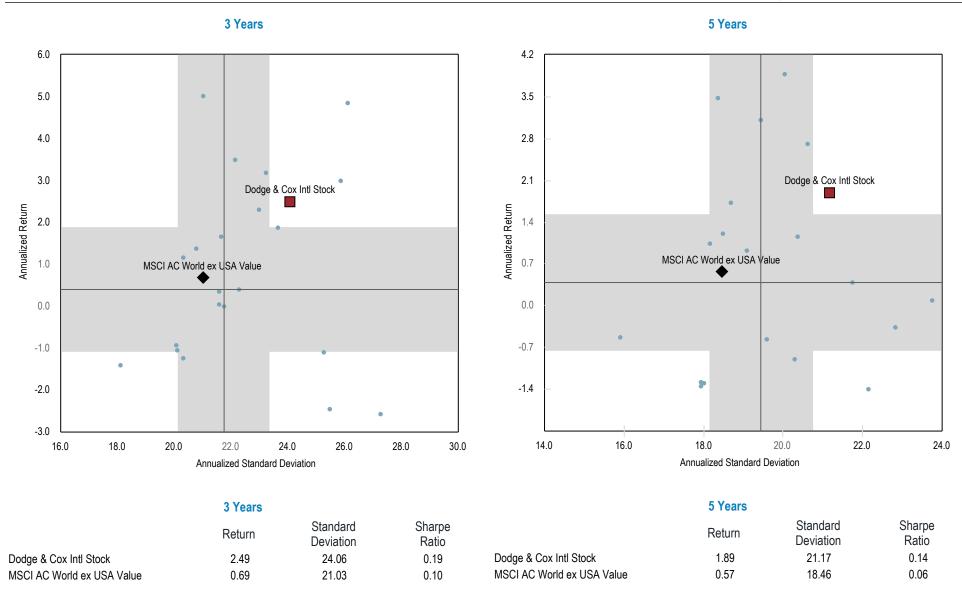


Dodge & Cox Intl Stock vs. eV ACWI ex-US All Cap Value Eq Gross Universe 26.0 20.0 14.0 8.0 Return 2.0 -4.0 -10.0 -16.0 -22.0 Quarter 1 Yr 3 Yrs 5 Yrs 7 Yrs 10 Yrs Dodge & Cox Intl Stock 16.18 (65) -6.19 (13) 2.49 (24) 1.89 (22) 5.89 (33) 5.43 (24) ▲ MSCI AC World ex USA Value -7.95 (28) 0.69 (49) 0.57 (49) 4.83 (53) 3.33 (71) 15.82 (77) 5th Percentile 21.86 -5.75 4.86 3.52 7.63 7.22 1st Quartile 20.14 -7.83 2.31 1.47 6.61 5.22 Median 18.04 -9.99 0.41 0.39 5.10 4.50 3rd Quartile 15.83 -12.50 -1.05 -0.73 3.45 2.75 95th Percentile 14.24 -18.39 -2.45 -1.35 2.40 2.29 Population 22 22 21 19 18 16



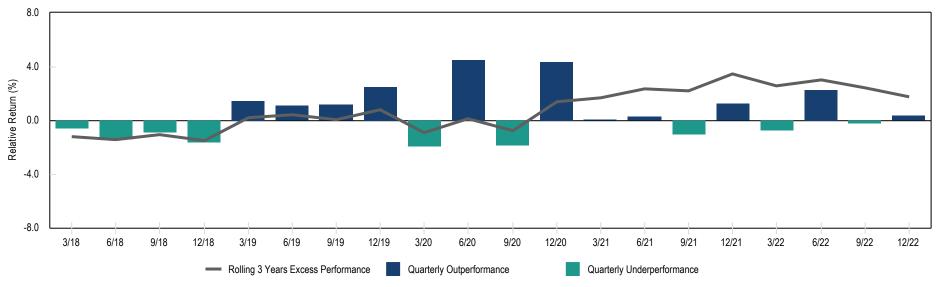
Dodge & Cox Intl Stock vs. eV ACWI ex-US All Cap Value Eq Gross Universe 44.0 36.0 28.0 20.0 12.0 Return 4.0 -4.0 -12.0 -20.0 -28.0 2020 2019 2018 2013 2022 2021 2017 2016 2015 2014 Dodge & Cox Intl Stock -6.19 (13) 2.75 (45) 23.58 (32) -17.46 (92) 24.74 (60) 8.96 (37) -10.78 (88) 26.72 (16) 11.70 (34) 0.56 (17) -7.95 (28) -0.21 (64) 16.45 (73) 9.59 (36) -4.60 (41) ▲ MSCI AC World ex USA Value 11.13 (39) -13.45 (29) 23.35 (83) -9.59 (85) 15.65 (85) 5th Percentile -5.75 17.09 20.50 26.60 -10.67 34.42 12.21 2.89 4.28 34.24 1st Quartile -7.83 13.21 9.38 25.19 -13.03 28.48 11.03 -2.98 -3.23 23.42 Median -9.99 9.15 1.89 19.88 -14.50 26.22 5.52 -5.01 -5.89 19.84 3rd Quartile -12.507.00 -1.18 15.48 -15.27 23.97 3.49 -7.84 -8.15 17.71 95th Percentile -18.39 4.32 13.81 -20.81 22.99 2.06 -11.90 -11.89 12.46 -3.59 Population 22 24 25 25 23 22 21 20 21 21



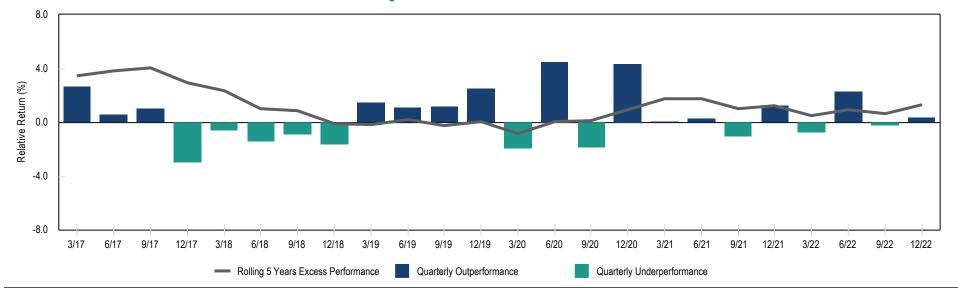








#### **Rolling 5 Years Annualized Excess Performance**



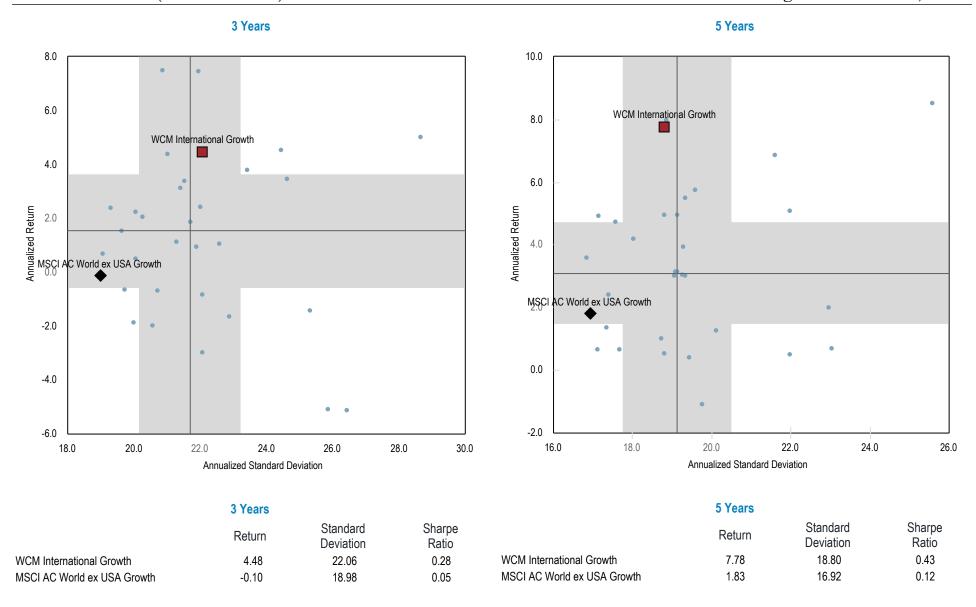


WCM International Growth vs. eV ACWI ex-US All Cap Growth Eq Gross Universe 20.0 12.0 4.0 -4.0 Return -12.0 -20.0 -28.0 -36.0 -44.0 3 Mo 1 Yr 3 Yrs 5 Yrs 7 Yrs 10 Yrs 12.61 (62) -28.19 (58) 4.48 (16) 7.78 (5) WCM International Growth 12.94 (49) -22.80 (26) -0.10 (69) 1.83 (67) 5.53 (77) 5.04 (94) ▲ MSCI AC World ex USA Growth 5th Percentile 15.69 -17.48 6.26 7.49 10.08 10.00 1st Quartile 14.61 -22.64 3.44 4.95 7.65 8.01 Median 12.90 -27.66 1.54 3.10 6.79 6.77 3rd Quartile 11.77 -30.71 -0.74 1.08 5.58 5.84 95th Percentile 10.09 -37.85 -4.02 3.54 4.82 0.46 Population 32 32 31 30 28 25



WCM International Growth vs. eV ACWI ex-US All Cap Growth Eq Gross Universe 80.0 65.0 50.0 35.0 20.0 Retum 5.0 -10.0 -25.0 -40.0 -55.0 2022 2021 2020 2019 2018 2017 2016 2015 2014 2013 -28.19 (58) 18.49 (7) 36.70 (14) -6.70 (1) WCM International Growth 34.02 (37) ▲ MSCI AC World ex USA Growth -22.80 (26) 5.37 (67) 22.56 (75) 27.84 (77) -14.10 (53) 32.47 (73) 0.50 (45) -0.91 (84) -2.29 (41) 15.86 (84) 5th Percentile -17.48 19.16 62.10 39.44 -9.30 51.04 7.32 8.82 3.31 38.17 1st Quartile -22.64 43.40 34.13 -11.72 39.02 2.12 5.54 -0.20 29.70 11.67 Median -27.66 8.62 29.51 31.56 -13.05 36.67 -0.20 3.48 -3.41 23.06 3rd Quartile -30.71 1.94 22.46 28.32 -16.85 32.35 -3.99 0.44 -6.01 19.03 95th Percentile -37.85 -3.61 13.63 23.54 -19.45 26.60 -8.59 -8.23 13.03 -3.55 Population 32 34 34 36 34 32 32 33 32 32





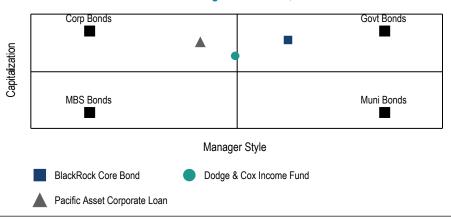


#### Total Domestic Fixed Income Asset Class Overview (Gross of Fees)

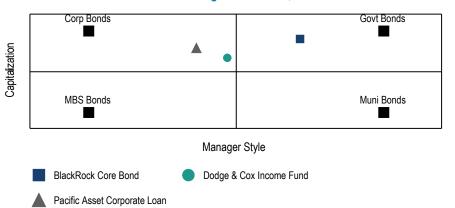
#### San Luis Obispo County Pension Trust Period Ending: December 31, 2022

	Market Value	% of Portfolio	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2022	2021	2020	2019	2018
Total Domestic Fixed Income	278,438,678	100.0	2.2	-9.8	-0.6	1.6	2.0	-9.8	0.9	8.1	9.9	0.4
Blmbg. U.S. Aggregate Index			1.9	-13.0	-2.7	0.0	1.1	-13.0	-1.5	7.5	8.7	0.0
InvMetrics Public DB US Fixed Income Rank			50	17	19	11	48	17	18	70	29	34
BlackRock Core Bond	56,828,770	20.4	2.1	-14.9	-2.9	0.3	-	-14.9	-1.6	9.4	10.2	0.3
Blmbg. U.S. Aggregate Index			1.9	-13.0	-2.7	0.0	-	-13.0	-1.5	7.5	8.7	0.0
eV US Core Fixed Inc Rank			26	97	96	80	-	97	77	25	10	25
Dodge & Cox Income Fund	54,146,876	19.4	2.9	-10.5	-0.7	1.6	-	-10.5	-0.5	9.9	10.2	0.1
Blmbg. U.S. Aggregate Index			1.9	-13.0	-2.7	0.0	-	-13.0	-1.5	7.5	8.7	0.0
eV US Core Fixed Inc Rank			1	8	4	3	-	8	20	14	11	41
Pacific Asset Corporate Loan	68,430,070	24.6	2.9	-0.2	2.8	3.7	-	-0.2	5.6	3.0	9.1	1.0
Morningstar LSTA US Leveraged Loan			2.7	-0.6	2.5	3.3	-	-0.6	5.2	3.1	8.6	0.4
eV US Float-Rate Bank Loan Fixed Inc Rank			44	25	26	19	-	25	41	46	42	37
SSGA U.S. Govt Bond Index	54,063,721	19.4	0.5	-12.5	-	-	-	-12.5	-	-	-	-
Blmbg. U.S. Treasury: 7-10 Year			1.0	-14.9	-	-	-	-14.9	-	-	-	-
eV US Government Fixed Inc Rank			95	80	-	-	-	80	-	-	-	-
BlackRock TIPS	44,969,240	16.2	1.9	-11.9	-	-	=	-11.9	-	-	-	-
Blmbg. U.S. TIPS			2.0	-11.8	-	-	-	-11.8	-	-	-	-
eV US TIPS / Inflation Fixed Inc Rank			67	81	-	-	-	81	-	-	-	-

# Fixed Income Effective Style Map 3 Years Ending December 31, 2022



# Fixed Income Effective Style Map 5 Years Ending December 31, 2022





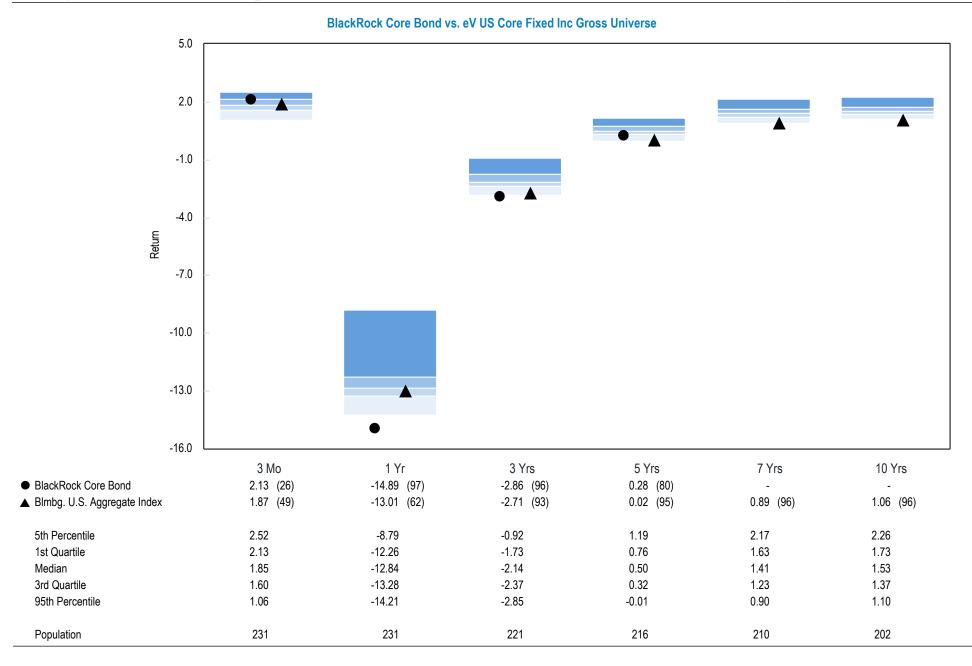
#### Total Domestic Fixed Income Asset Class Overview (Net of Fees)

#### San Luis Obispo County Pension Trust Period Ending: December 31, 2022

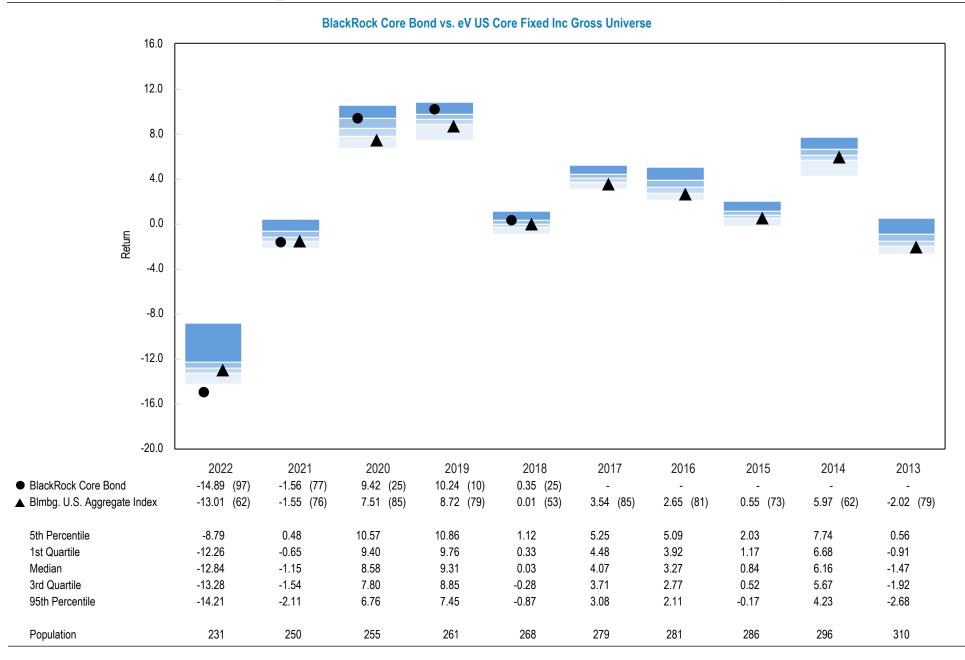
	Market Value	% of Portfolio	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2022	2021	2020	2019	2018
Total Domestic Fixed Income	278,438,678	100.0	2.1	-10.1	-0.9	1.3	1.7	-10.1	0.5	7.7	9.5	0.0
Blmbg. U.S. Aggregate Index			1.9	-13.0	-2.7	0.0	1.1	-13.0	-1.5	7.5	8.7	0.0
BlackRock Core Bond	56,828,770	20.4	2.1	-15.1	-3.1	0.0	-	-15.1	-1.8	9.1	9.9	0.1
Blmbg. U.S. Aggregate Index			1.9	-13.0	-2.7	0.0	1.1	-13.0	-1.5	7.5	8.7	0.0
Dodge & Cox Income Fund	54,146,876	19.4	2.8	-10.9	-1.1	1.1	-	-10.9	-0.9	9.4	9.7	-0.3
Blmbg. U.S. Aggregate Index			1.9	-13.0	-2.7	0.0	1.1	-13.0	-1.5	7.5	8.7	0.0
Pacific Asset Corporate Loan	68,430,070	24.6	2.8	-0.5	2.4	3.3	-	-0.5	5.2	2.6	8.7	0.7
Morningstar LSTA US Leveraged Loan			2.7	-0.6	2.5	3.3	3.7	-0.6	5.2	3.1	8.6	0.4
SSGA U.S. Govt Bond Index	54,063,721	19.4	0.5	-12.5	-	-	-	-12.5	-	-	-	-
Blmbg. U.S. Treasury: 7-10 Year			1.0	-14.9	-3.2	-0.1	0.7	-14.9	-3.1	10.0	8.5	0.9
BlackRock TIPS	44,969,240	16.2	1.9	-11.9	-	-	-	-11.9	-	-	-	-
Blmbg. U.S. TIPS			2.0	-11.8	1.2	2.1	1.1	-11.8	6.0	11.0	8.4	-1.3

#### 1 Year Correlation Matrix

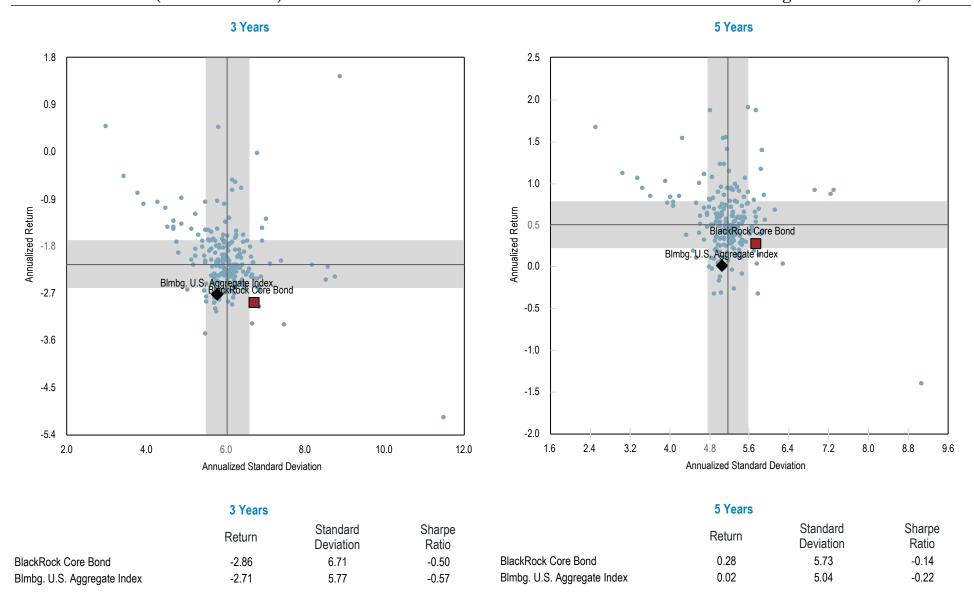
		i icai oo	TCIUTION MUUNA		
	Total Domestic Fixed Income	BlackRock Core Bond	Dodge & Cox Income Fund	Pacific Asset Corporate Loan	Blmbg. U.S. Aggregate Index
Total Domestic Fixed Income	1.00				
BlackRock Core Bond	0.99	1.00			
Dodge & Cox Income Fund	0.97	0.98	1.00		
Pacific Asset Corporate Loan	0.79	0.75	0.63	1.00	
Blmbg. U.S. Aggregate Index	0.94	0.96	1.00	0.55	1.00









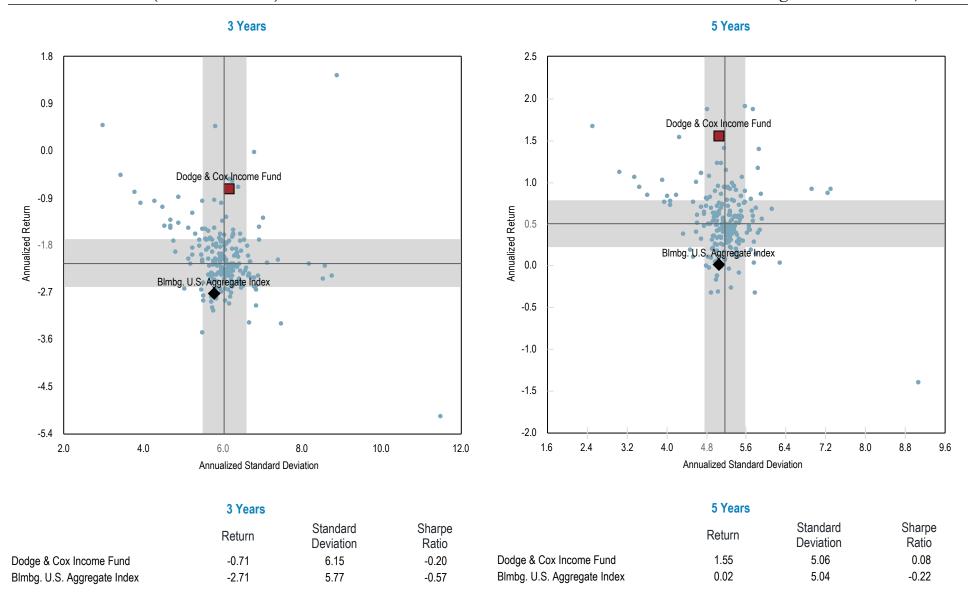


Dodge & Cox Income Fund vs. eV US Core Fixed Inc Gross Universe 5.0 2.0 -1.0 -4.0 Return -7.0 -10.0 -13.0 -16.0 3 Mo 1 Yr 3 Yrs 5 Yrs 7 Yrs 10 Yrs Dodge & Cox Income Fund 2.86 (1) -10.50 (8) -0.71 (4) 1.55 (3) ▲ Blmbg. U.S. Aggregate Index 1.87 (49) -13.01 (62) -2.71 (93) 0.02 (95) 0.89 (96) 1.06 (96) 5th Percentile 2.52 -8.79 -0.92 1.19 2.17 2.26 1st Quartile 2.13 -12.26 -1.73 0.76 1.63 1.73 Median 1.85 -12.84 -2.14 0.50 1.41 1.53 3rd Quartile 1.60 -13.28 -2.37 0.32 1.23 1.37 95th Percentile 1.06 -14.21 -2.85 -0.01 0.90 1.10 Population 231 231 221 216 210 202



Dodge & Cox Income Fund vs. eV US Core Fixed Inc Gross Universe 16.0 12.0 8.0 4.0 Return 0.0 -4.0 -8.0 -12.0 -16.0 2022 2021 2020 2019 2018 2017 2016 2015 2014 2013 Dodge & Cox Income Fund -10.50 (8) -0.49 (20) 10.20 (11) 0.12 (41) 9.91 (14) 5.12 (7) 2.65 (81) ▲ Blmbg. U.S. Aggregate Index -13.01 (62) -1.55 (76) 7.51 (85) 8.72 (79) 0.01 (53) 3.54 (85) 0.55 (73) 5.97 (62) -2.02 (79) 5th Percentile -8.79 0.48 10.57 10.86 1.12 5.25 5.09 2.03 7.74 0.56 1st Quartile -12.26 -0.65 9.40 9.76 0.33 4.48 3.92 6.68 -0.91 1.17 Median -12.84 -1.15 8.58 9.31 0.03 4.07 3.27 0.84 6.16 -1.47 3rd Quartile -13.28 -1.54 7.80 8.85 -0.28 3.71 2.77 0.52 5.67 -1.92 95th Percentile -14.21 -2.11 6.76 -0.87 3.08 2.11 4.23 -2.68 7.45 -0.17 Population 231 250 255 261 268 279 281 286 296 310



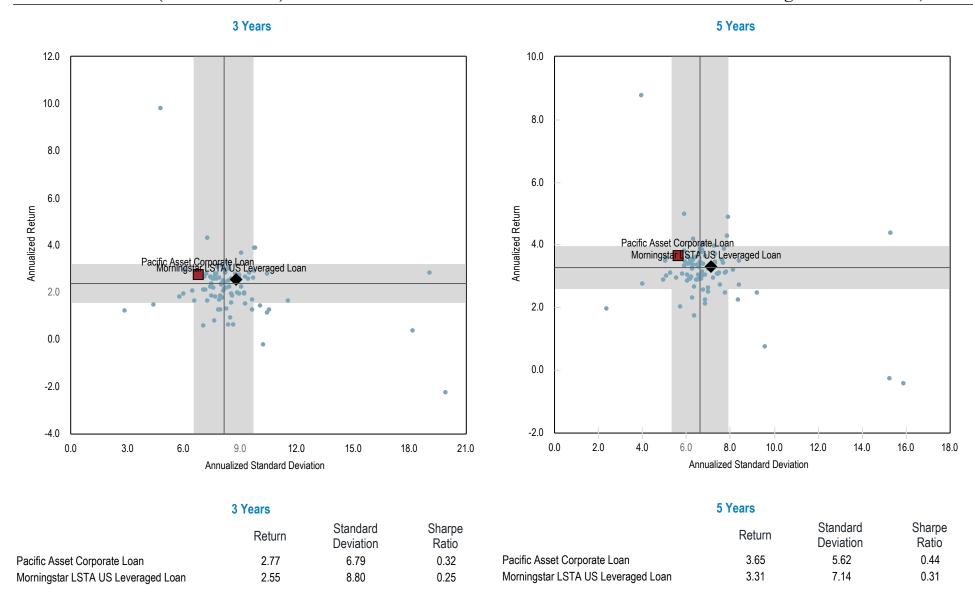


Pacific Asset Corporate Loan vs. eV US Float-Rate Bank Loan Fixed Inc Gross Universe 8.0 6.0 4.0 2.0 Return 0.0 -2.0 -4.0 -6.0 -8.0 3 Mo 1 Yr 3 Yrs 5 Yrs 7 Yrs 10 Yrs Pacific Asset Corporate Loan 2.93 (44) -0.15 (25) 2.77 (26) 3.65 (19) 4.60 (27) ▲ Morningstar LSTA US Leveraged Loan 2.74 (56) -0.60 (33) 2.55 (44) 3.31 (49) 4.38 (45) 3.67 (66) 5th Percentile 3.59 1.26 3.43 4.24 5.56 4.97 1st Quartile 3.13 -0.17 2.77 3.54 4.62 4.27 Median 2.80 -1.09 2.40 3.29 4.31 3.91 2.22 2.93 3rd Quartile -2.48 1.75 3.91 3.61 95th Percentile 0.70 -5.92 0.66 2.01 3.31 2.98 Population 97 97 95 94 87 75

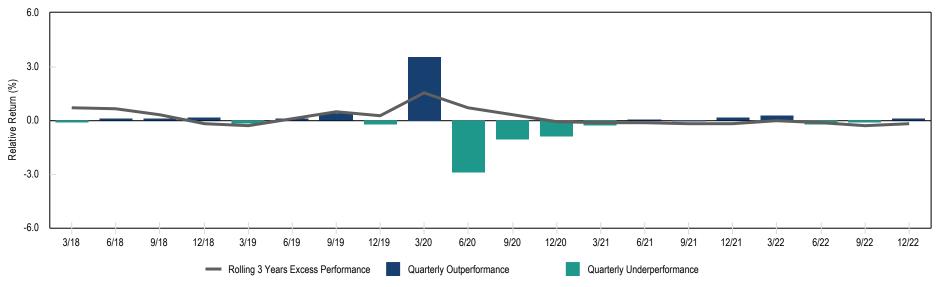


Pacific Asset Corporate Loan vs. eV US Float-Rate Bank Loan Fixed Inc Gross Universe 17.0 14.0 11.0 8.0 Return 5.0 2.0 -1.0 -4.0 -7.0 2022 2018 2021 2020 2019 2017 2016 2015 2014 2013 -0.53 (23) 5.19 (38) 2.61 (36) 8.75 (28) 0.69 (28) 4.56 (26) 8.83 (53) 2.11 (11) Pacific Asset Corporate Loan -0.60 (24) 5.21 (38) 3.12 (23) 5.29 (68) ▲ Morningstar LSTA US Leveraged Loan 8.64 (33) 0.44 (41) 4.12 (45) 10.16 (28) -0.69 (72) 1.60 (46) 5th Percentile 0.71 8.46 5.16 10.17 2.66 6.94 13.47 3.52 4.08 10.07 1st Quartile -0.66 5.78 3.04 8.88 0.75 4.56 10.31 1.34 2.07 6.89 Median -1.63 4.83 2.10 8.05 0.20 3.88 8.96 0.22 1.47 5.85 3rd Quartile -2.82 4.15 1.20 7.45 -0.26 3.48 7.81 -0.82 0.86 4.90 95th Percentile 3.27 -0.88 4.25 -0.95 2.90 6.27 -3.97 0.02 3.98 -5.50Population 83 93 101 103 109 107 110 107 106 91

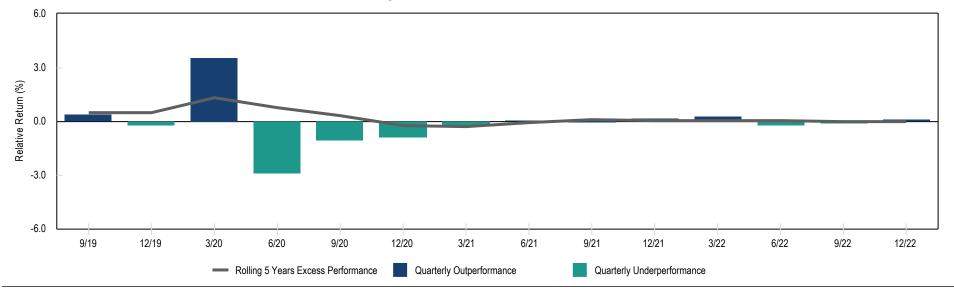








#### **Rolling 5 Years Annualized Excess Performance**







## Total Global Fixed Asset Class Overview (Gross of Fees)

	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2022	2021	2020	2019	2018
Total Global Fixed	94,970,369	9.3	-17.0	-6.3	-3.3	-1.7	-17.0	-7.0	6.7	7.4	-4.3
FTSE World Government Bond Index		3.8	-18.3	-5.7	-2.5	-1.2	-18.3	-7.0	10.1	5.9	-0.8
Brandywine Global Fixed Income	41,448,660	7.7	-13.8	-	-	-	-13.8	-4.0	-	-	-
FTSE Non-U.S. World Government Bond		6.5	-22.1	-8.0	-4.2	-	-22.1	-9.7	10.8	5.3	-1.8
eV All Global Fixed Inc Rank		22	55	-	-	-	55	69	-	-	-
Ashmore EM Blended Debt Fund	53,521,708	10.6	-19.9	-9.2	-	-	-19.9	-9.5	3.2	-	-
50% JPM EMBI GD/25% JPM GBI EM GD/25% JPM ELMI+		8.0	-13.6	-4.8	-	-	-13.6	-3.9	3.9	-	-
eV All Emg Mkts Fixed Inc Rank		10	95	100	-	-	95	95	80	-	-

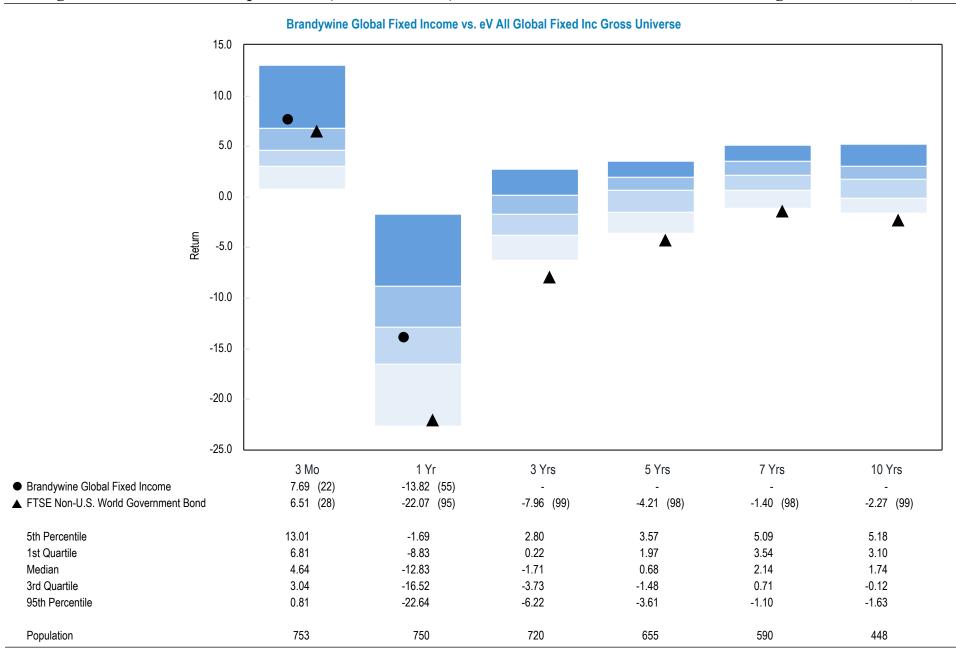
#### Total Global Fixed Income Asset Class Overview (Net of Fees)

#### San Luis Obispo County Pension Trust Period Ending: December 31, 2022

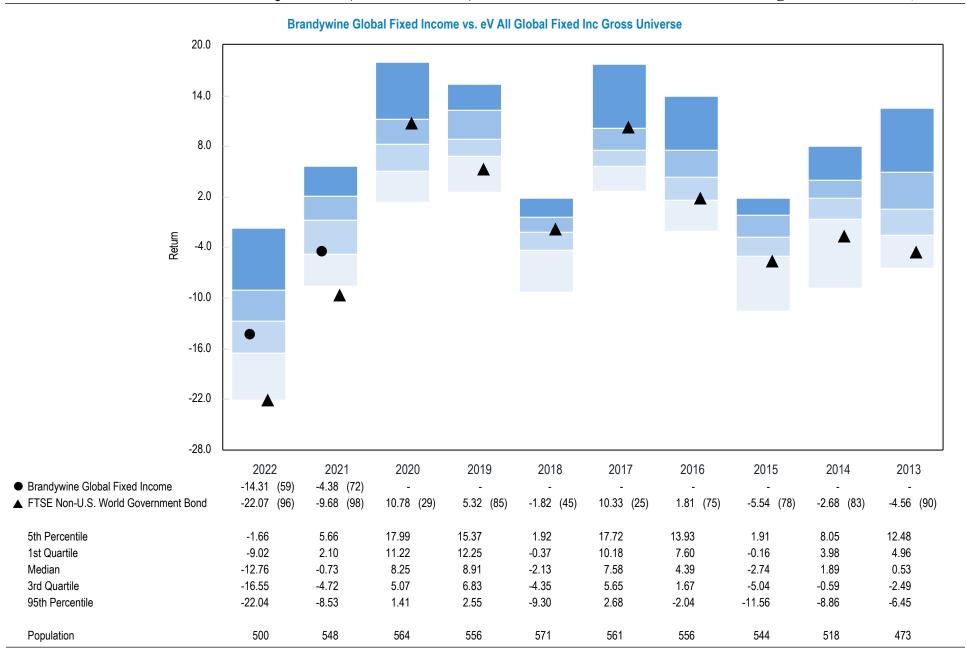
	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2022	2021	2020	2019	2018
Total Global Fixed	94,970,369	9.1	-17.6	-6.9	-3.9	-2.2	-17.6	-7.7	6.0	6.9	-4.7
FTSE World Government Bond Index		3.8	-18.3	-5.7	-2.5	-1.2	-18.3	-7.0	10.1	5.9	-0.8
Brandywine Global Fixed Income	41,448,660	7.6	-14.3	-	-	-	-14.3	-4.4	-	-	-
FTSE Non-U.S. World Government Bond		6.5	-22.1	-8.0	-4.2	-	-22.1	-9.7	10.8	5.3	-1.8
Ashmore EM Blended Debt Fund	53,521,708	10.3	-20.7	-10.1	-	-	-20.7	-10.4	2.1	-	-
50% JPM EMBI GD/25% JPM GBI EM GD/25% JPM ELMI+		8.0	-13.6	-4.8	-	-	-13.6	-3.9	3.9	-	-

#### 1 Year Correlation Matrix

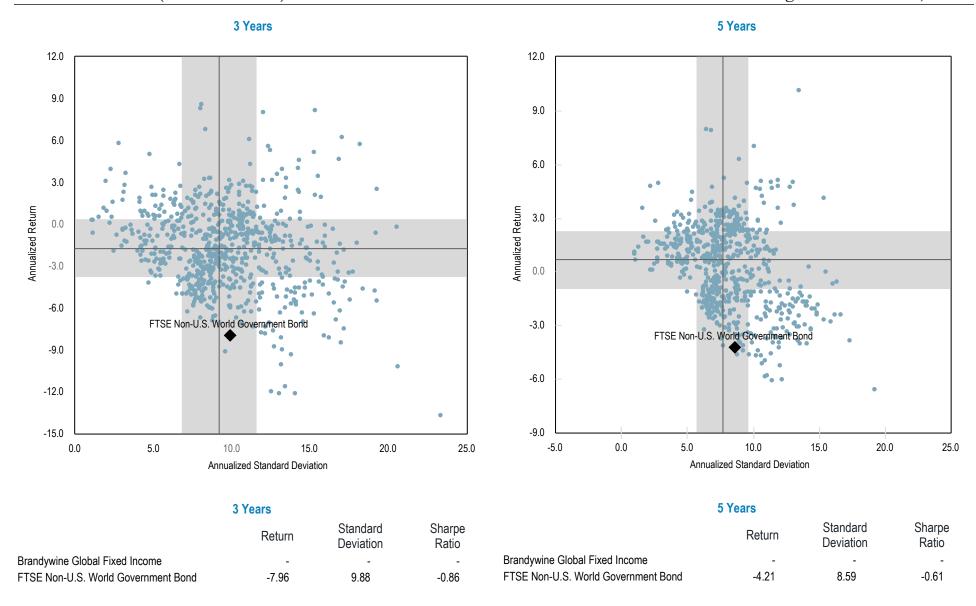
	Total Global Fixed	Brandywine Global Fixed Income	Ashmore EM Blended Debt Fund	FTSE World Government Bond Index
Total Global Fixed	1.00			
Brandywine Global Fixed Income	0.95	1.00		
Ashmore EM Blended Debt Fund	0.97	0.85	1.00	
FTSE World Government Bond Index	0.88	0.94	0.78	1.00

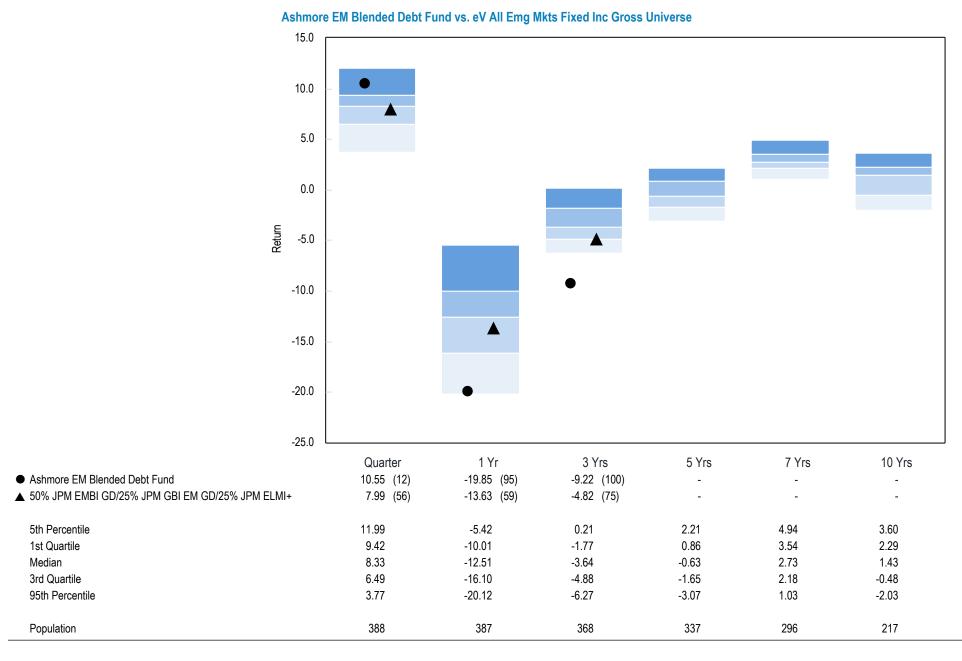




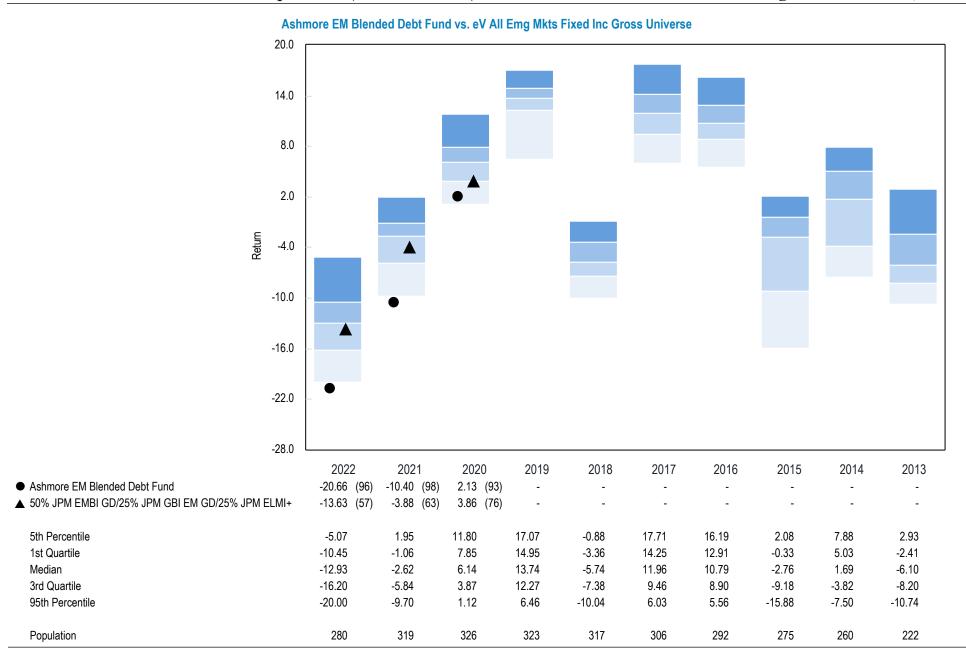




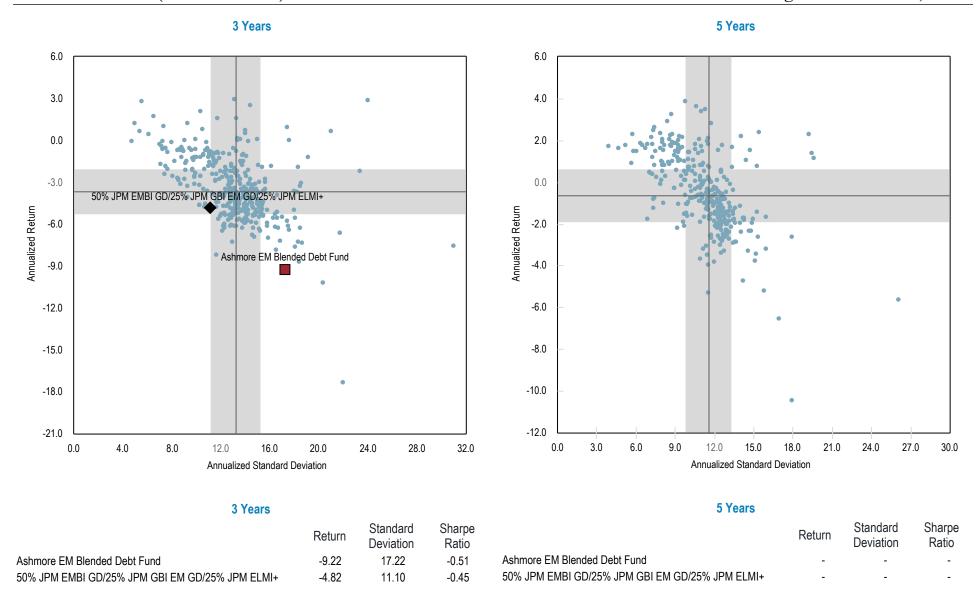












#### Total Real Estate Asset Class Overview (Gross of Fees)

	Market Value	% of Portfolio	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2022	2021	2020	2019	2018
Total Real Estate	249,846,560	100.0	-4.5	6.7	8.5	7.5	9.4	6.7	18.5	1.1	4.3	7.5
NCREIF Property Index			-3.5	5.5	8.1	7.5	8.8	5.5	17.7	1.6	6.4	6.7
JP Morgan Core Real Estate	168,047,518	67.3	-5.0	4.3	8.0	6.9	9.1	4.3	20.2	0.5	3.4	7.0
NCREIF-ODCE			-5.0	7.5	9.9	8.7	10.1	7.5	22.2	1.2	5.3	8.3
NCREIF Property Index			-3.5	5.5	8.1	7.5	8.8	5.5	17.7	1.6	6.4	6.7
ARA American Strategic Value Realty	81,799,042	32.7	-3.5	12.3	9.9	9.2	-	12.3	14.0	3.8	7.3	9.1
NCREIF-ODCE			-5.0	7.5	9.9	8.7	10.1	7.5	22.2	1.2	5.3	8.3
NCREIF Property Index			-3.5	5.5	8.1	7.5	8.8	5.5	17.7	1.6	6.4	6.7

#### Total Real Estate Asset Class Overview (Net of Fees)

	Market Value	% of Portfolio	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2022	2021	2020	2019	2018
Total Real Estate	249,846,560	100.0	-4.5	6.7	8.5	7.5	9.0	6.7	18.5	1.1	4.3	7.5
NCREIF Property Index			-3.5	5.5	8.1	7.5	8.8	5.5	17.7	1.6	6.4	6.7
JP Morgan Core Real Estate	168,047,518	67.3	-5.0	4.3	8.0	6.9	8.6	4.3	20.2	0.5	3.4	7.0
NCREIF-ODCE			-5.0	7.5	9.9	8.7	10.1	7.5	22.2	1.2	5.3	8.3
NCREIF Property Index			-3.5	5.5	8.1	7.5	8.8	5.5	17.7	1.6	6.4	6.7
ARA American Strategic Value Realty	81,799,042	32.7	-3.5	12.3	9.9	9.2	-	12.3	14.0	3.8	7.3	9.1
NCREIF-ODCE			-5.0	7.5	9.9	8.7	10.1	7.5	22.2	1.2	5.3	8.3
NCREIF Property Index			-3.5	5.5	8.1	7.5	8.8	5.5	17.7	1.6	6.4	6.7

### Data Sources and Methodology

#### Performance Return Calculation

Performance is calculated using Time Weighted Rates of Return (TWRR) methodologies. Monthly returns are geometrically linked and annualized for periods longer than one year. Effective 1/01/2017, only traditional asset classes (public equity, public fixed income, REITs) investment management fees will be included in the gross of returns calculation.

#### 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.

Manager Line Up					
Manager	Inception Date	Data Source	Manager	Inception Date	Data Source
PIMCO RAE Fundamental PLUS	11/30/2007	J.P. Morgan	JP Morgan Core Real Estate	3/6/2008	J.P. Morgan
Loomis Sayles Large Cap Growth	12/31/2016	J.P. Morgan	Gresham MTAP Commodity	8/31/2013	BNY Mellon
Boston Partners Large Cap Value	1/31/2017	Boston Partners	Cash Account	-	SLOCPT
Atlanta Capital Management	8/31/2010	J.P. Morgan	HarbourVest Partners IX-Buyout	2011 <sup>1</sup>	HarbourVest
Dodge & Cox Intl Stock	12/6/2007	J.P. Morgan	HarbourVest 2018 Global Fund L.P.	-	HarbourVest
WCM International Growth	2/15/2017	WCM	HarbourVest SLO Credit Fund	-	HarbourVest
BlackRock Core Bond	1/19/2017	J.P. Morgan	HarbourVest SLO Private Equity Fund	-	HarbourVest
Dodge & Cox Income	1/19/2017	Deutsche Bank	KKR Mezzanine Partners	2010 <sup>1</sup>	KKR
Pacific Asset Corporate Loan	9/1/2014	Deutsche Bank	PIMCO Distressed Credit Fund	2010 <sup>1</sup>	Brown Brothers Harriman
SSGA U.S. Govt Bond Index	7/16/2021	SSGA	ARA American Strategic Value	6/22/2016	American Realty Adv.
BlackRock TIPS	9/1/2021	BlackRock	Sixth Street Partners DCP	2016 <sup>1</sup>	TPG
Brandywine Global Fixed	6/24/2020	J.P. Morgan	Pathway Private Equity Fund 9	2017 <sup>1</sup>	Pathway
Ashmore EM Blended Debt Fund	3/31/2019	Ashmore	Pathway Private Equity Fund 10	3/25/2020	Pathway
PIMCO Short Duration Fund	7/14/2021	PIMCO	Sixth Street Partners TAO	4/16/2020	TPG
<sup>1</sup> Represents fund vintage year.					
Policy & Custom Index Composition Policy Index (1/1/2022-Current)	21% Puscell 2000, 17% N	ASCLACIAL OVILLS (Groot	s), 12% Bloomberg U.S. Aggregate, 7% FTSE	Norld Cout Bond Indo	v 49/ Plaambara US
Policy littles (1/1/2022-Guitefit)		omberg US TIPS 5+ Year	r, 11% NCREIF Property Index, 10% Private Ed		
Policy Index (1/1/2021-12/31/2021		omberg US TIPS, 15% N	s), 12% Bloomberg U.S. Aggregate, 11% FTSE CREIF Property Index, 5% Private Equity Benc II.		
Policy Index (10/1/2020-12/31/2020)	21% Russell 3000, 21% I Equity Benchmark, 5% P		s), 31% Bloomberg U.S. Aggregate, 17% NCR	EIF Property Index, 1%	6 Russell 3000,4 Private
Policy Index (4/1/2020-9/30/2020)	21% Russell 3000, 21% (lagged), 5% Bloomberg		s), 31% Bloomberg U.S. Aggregate, 17% NCR	EIF Property Index, 5%	6 Russell 3000+ 300 bps
Policy Index (1/1/2017-3/31/2020)			s), 30% Bloomberg U.S. Aggregate, 15% NCRE comberg High Yield +2% (lagged).	EIF Property Index, 5%	6 Bloomberg Commodity
Policy Index (10/1/2016-12/31/2016)			s), 30% Bloomberg U.S. Aggregate, 15% NCRI High Yield +2% (lagged).	EIF Property Index, 5%	6 Bloomberg Commodity
Policy Index (7/1/2014-9/30/2016)	23% Russell 3000, 22% N Index, 5% Russell 3000+		s), 35% Bloomberg U.S. Aggregate, 10% NCR	EIF Property Index, 5%	6 Bloomberg Commodity
Policy Index (7/1/2013-6/30/2014)	27% Russell 3000, 23% I Index, 5% Russell 3000+		s), 30% Bloomberg U.S. Aggregate, 10% NCR	EIF Property Index, 5%	6 Bloomberg Commodity
Policy Index (4/1/2011-6/30/2013)			s), 20% Bloomberg U.S. Aggregate, 5% Citi Wo ty Index, 5% Russell 3000+ 300 bps.	orld Gov't Bond, 5% Ba	arclays US TIPS, 10%
Private Equity Index (1/1/2017-10/1/2020) Private Equity Index (6/1/2011-12/31/2016)	Russell 3000 +3% (Lagge Russell 3000 +3%	ed)			
Private Equity Benchmark and Private Credit Benchmarks a	re equal to the actual private	e equity and private credit	returns, respectively.		
Custom Growth Benchmark (1/1/2021-Present)	30.8% Russell 3000, 25% Index, 2.94% ARA Americ		71% Private Equity Benchmark, 10.29% Private y	Credit Benchmark, 16	6.18% NCREIF Property
Custom Risk Diversifying Benchmark (1/1/2021-Present)	46.15% Bloomberg U.S. A Bloomberg US TIPS	Aggregate Index, 26.92%	FTSE World Government Bond Index, 15.38%	Bloomberg US Treas	ury: 7-10 Year, 11.54%
Other Disclosures					



#### 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: Portfolio Return - [Risk-free Rate + Portfolio Beta x (Market Return - 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: Portfolio Excess Return / 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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The information presented may be deemed to contain forward-looking information. Examples of forward looking information include, but are not limited to, (a) projections of or statements regarding return on investment, future earnings, interest income, other income, growth prospects, capital structure and other financial terms, (b) statements of plans or objectives of management, (c) statements of future economic performance, and (d) statements of assumptions, such as economic conditions underlying other statements. Such forward-looking information can be identified by the use of forward looking terminology such as believes, expects, may, will, should, anticipates, or the negative of any of the foregoing or other variations thereon comparable terminology, or by discussion of strategy. No assurance can be given that the future results described by the forward-looking information will be achieved. Such statements are subject to risks, uncertainties, and other factors which could cause the actual results to differ materially from future results expressed or implied by such forward looking information. The findings, rankings, and opinions expressed herein are the intellectual property of Verus and are subject to change without notice. The information presented does not claim to be all-inclusive, nor does it contain all information that clients may desire for their purposes. The information presented should be read in conjunction with any other material provided by Verus, investment managers, and custodians.

Verus will make every reasonable effort to obtain and include accurate market values. However, if managers or custodians are unable to provide the reporting period's market values prior to the report issuance, Verus may use the last reported market value or make estimates based on the manager's stated or estimated returns and other information available at the time. These estimates may differ materially from the actual value. Hedge fund market values presented in this report are provided by the fund manager or custodian. Market values presented for private equity investments reflect the last reported NAV by the custodian or manager net of capital calls and distributions as of the end of the reporting period. These values are estimates and may differ materially from the investments actual value. Private equity managers report performance using an internal rate of return (IRR), which differs from the time-weighted rate of return (TWRR) calculation done by Verus. It is inappropriate to compare IRR and TWRR to each other. IRR figures reported in the illiquid alternative pages are provided by the respective managers, and Verus has not made any attempts to verify these returns. Until a partnership is liquidated (typically over 10-12 years), the IRR is only an interim estimated return. The actual IRR performance of any LP is not known until the final liquidation.

Verus receives universe data from InvMetrics, eVestment Alliance, and Morningstar. We believe this data to be robust and appropriate for peer comparison. Nevertheless, these universes may not be comprehensive of all peer investors/managers but rather of the investors/managers that comprise that database. The resulting universe composition is not static and will change over time. Returns are annualized when they cover more than one year. Investment managers may revise their data after report distribution. Verus will make the appropriate correction to the client account but may or may not disclose the change to the client based on the materiality of the change.



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#### **Board of Trustees**

1000 Mill Street San Luis Obispo, CA 93408 Phone: (805) 781-5465 Fax: (805) 781-5697 www.SLOPensionTrust.org



Date: February 27, 2023

To: Board of Trustees

From: Carl Nelson - Executive Director

Amy Burke – Deputy Director

#### **Agenda Item 11: Monthly Investment Report for January 2023**

	January	Year to	2022	2021	2020	2019	2018
		Date					
		2023					
Total Trust	\$1,665		\$1,614	\$1,775	\$1,552	\$1,446	\$1,285
Investments			year	year	year	year	year
(\$ millions)			end	end	end	end	end
<b>Total Fund</b>	3.6%	3.6%	-8.0%	15.2%	8.9 %	16.3 %	-3.2 %
Return	Gross						
Policy Index	3.7%	3.7%	-9.7%	12.8%	10.0 %	16.4 %	-3.2 %
Return (r)							

(r) Policy index as of Nov. 2021 Strategic Asset Allocation Policy with 2023 Interim targets:

Public Mkt Equity- 21% Russell 3000, 17% MSCI ACWI ex-US

Public Mkt Debt-Risk Diversifying 10% Barclays US Aggregate, 4% Barclays US Aggregate,

5% Barclays 7-10yr Treasury, 4% Barclays 5-10yr US TIPS

Real Estate & Infrastructure-Private Equity-Private Credit-15% NCREIF Index (inc. Infrastructure) 10% actual private equity returns 8% actual private credit returns

Liquidity- 6% 90 day T-Bills

Pending annual updates to interim targets.

#### **SLOCPT Investment Returns:**

The attached report from Verus covers the preliminary investment returns of the SLOCPT portfolio and general market conditions through the end of January. The attached market commentary from Verus details market conditions in January, but subsequent activity in February is not yet factored into these numbers. As of February 17th, the month has had mixed returns for equities and negative returns for bonds.

#### **SLOCPT Investments:**

The attached Verus Capital Markets Update details the investment results for the month and Verus' capital market commentary.

#### **Capital Markets:**

• Investment Markets - January saw robust returns on equities – both US stocks (S&P 500 +6.3% and International stocks (MSCI ACWI ex-US +8.1%) rallied significantly. Bonds benefited from interest rates retracing some of their recent increases back down slightly (Bloomberg US Aggregate bonds +3.1%).

#### The Economy:

#### • Inflation –

- The full year 2022 measure of the Personal Consumption Expenditures index The Fed's preferred measure of inflation came in at a 5.0% rate. Excluding volatile food and fuel prices the PCE increase for 2022 was 4.4%. This is continued evidence of moderating inflation.
- The January US CPI inflation report showed continued upward pressure on prices for the month. The trailing year rate for inflation moderated to a 6.4% year-over-year increase.

#### • Economic Growth –

- The report on 4Q22 domestic GDP growth showed a resilient positive growth rate of +2.9%.
- Consumer spending declined in November and December as consumers slowed their purchasing in the face of rising prices and fears of a recession in 2024. This is positive news on the inflation front as consumer spending shifts away from goods and more towards services.
- The outlook for 2024 remains clouded. As the Fed's interest rate increases kick in fully, economists at the central bank and on Wall Street expect the U.S. economy to slow and for unemployment to tick higher. Officials are hoping that they can pull off the slowdown without tipping the economy into an outright recession. Many economists opine that if the US economy does slip into recession in 2024, it will be a relatively mild one given the underlying strength and balance in the economy.
- Internationally, Eurozone economic growth in 4Q22 remained positive at a +0.1% rate despite persistent inflation, constrained natural gas supplies, rising interest rates and ongoing war in Ukraine

#### • New Jobs, Unemployment, Wages –

- The January jobs report from the BLS on nonfarm employment showed a resurgence in job creation with a gain of 517k new jobs well above most analysts' expectations.
- The strong job results for January put additional pressure on the Fed in its efforts to raise interest rates and cool the pace of the economy and lower inflation.
- The unemployment rate in January fell further to 3.4% the lowest rate since 1969. Increasing numbers of large corporations particularly Tech companies announced layoffs during January as they anticipated slowing business conditions. However, the US economy started January with two job openings for every person actively seeking a job which cushions the effect of layoffs. The January BLS report noted that the number of lost jobs in the Tech sector was a modest 5k.
- The Labor Force Participation rate remains little changed at 62.4% about 1% below its pre-pandemic level in 2020.

#### Participation in the work force is still well below prepandemic levels

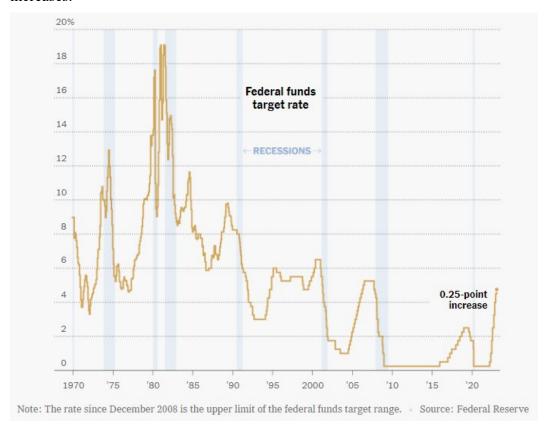
Share of people who are in the labor force (employed, unemployed but looking for work or on temporary layoff)



Data is seasonally adjusted. • Source: Bureau of Labor Statistics • By Ella Koeze

The Employment Cost Index – closely watched by the Fed – had a 4Q22 increase of 1.0% - less than expected. For the full year the Employment Cost Index increased 5.1% in 2022 compared to the 2.2% annual rate of increase for the ten years prior to the Covid pandemic. The relatively calm increase to employment costs in the final quarter of 2022 may reaffirm to central bankers that the economy and labor market are cooling, which could help inflation to return to normal over time. While wage gains are still faster than normal, the moderation could help the Fed to feel less urgency as they adjust interest rates less aggressively than they did throughout 2022.

• Monetary Policy – At the Fed meeting held February 1<sup>st</sup> the FOMC again increased the Fed Funds rate by 25 basis points as expected. The current range for the Fed Funds rate is 4.50% to 4.75%. The slowed pace of Fed interest rate increases was expected after the aggressive rate-normalization since March of last year. With this slower increase the Fed signaled that it is giving time for the impact of past increases to be felt in economic activity and inflation. The Fed also commented that additional rate increases could be expected. Significantly, Fed Chair Powell's comments acknowledged a disinflationary trend which the capital markets took as a rationale to lower their expectations for future Fed rate increases.



Respectfully Submitted,



# Market commentary

#### **U.S. ECONOMICS**

- Nonfarm payrolls jumped by an unexpected 517,000, more than double market estimates (187,000), as job growth was reportedly widespread across industries. However, this number should perhaps not be received as positively, since a technical seasonal adjustment was the reason for the upward surprise.
- Unemployment fell to 3.4%, a level not seen since 1969. Despite persistent labor market strength, year-over-year wage growth continued to decelerate, falling to +4.4%.
- Real GDP grew +2.9% year-over-year in Q4 2022, down from the +3.2% annualized figure reported in Q3. Increases in private inventory investment and government spending at the federal, state, and local level contributed to growth exceeding expectations (2.6%).

#### **U.S. EQUITIES**

- All major equity indices gained to start the year. Signs of a slowdown in inflation alongside weak retail sales data released early in the month boosted equities as investors became optimistic about a less hawkish Federal Reserve.
- Expectations for Q4 S&P 500 earnings growth continued to fall. As of February 3<sup>rd</sup>, the blended year-over-year earnings growth rate for S&P 500 companies measured -5.3%, lower than expectations of -3.3% from a month prior, per FactSet.
- Disparity between the earnings growth rates of S&P 500 sectors remains wide. Thus far, the Energy and Industrials sectors are reporting the highest year-over-year earnings growth rates at +57.7% and +36.8%, respectively. Alternatively, the Communication Services, Materials, and Consumer Discretionary sectors are reporting declines in excess of -20%.

#### U.S. FIXED INCOME

- Market participants expected a more moderate rate hike path as recent economic data suggested the Fed's restrictive policy may be putting downward pressure on prices. Investors priced in one 25bp hike for the February FOMC meeting, down slightly from December.
- There remains a disconnect between recent market optimism and the language of the Fed. Although investors had priced an initial rate cut by July 2023 at month end, Fed officials have not yet indicated that rate cuts would be appropriate in the current year.
- Treasury yields fell across most of the yield curve on increased expectations of a potential Fed pivot. The 10-year was the hardest hit, falling -36bps on the month. Conversely, 3-month treasury yields surged +28bps. The 10-year / 3-month inversion widened to -118bps, more than double the -54bp deficit at year end 2022.

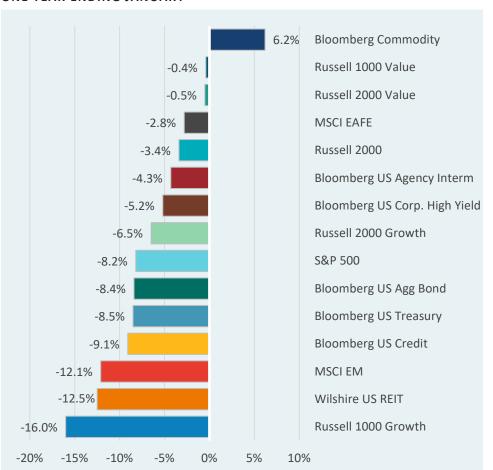
#### INTERNATIONAL MARKETS

- China finalized measures to end its zero-Covid policy which has dampened economic growth over the prior year. Travel restrictions loosened within the region and served as a tailwind for emerging Asian equity performance (MSCI EM Asia Index +8.6%).
- European stocks (MSCI Euro Index +11.8%) rallied on a drop in headline eurozone inflation (+8.5%) which declined for a third consecutive month. Despite a recent pullback in the headline figure, core inflation remained at a record +5.2% in January.
- Yields on sovereign debt fell across major markets outside of Japan. The BOJ maintained its dovish monetary policy by leaving its policy rate at -0.1% despite the release of December inflation data which measured +4.0% year-over-year.

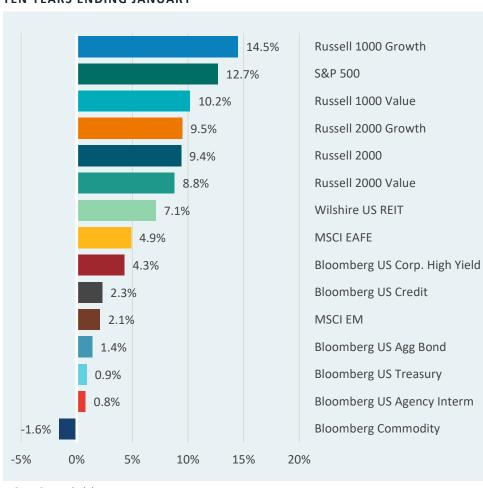


# Major asset class returns

#### ONE YEAR ENDING JANUARY



#### TEN YEARS ENDING JANUARY



\*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 1/31/23

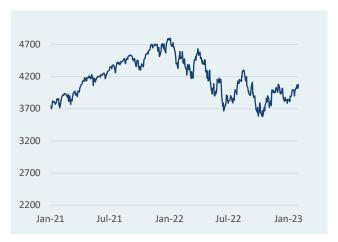
Source: Morningstar, as of 1/31/23



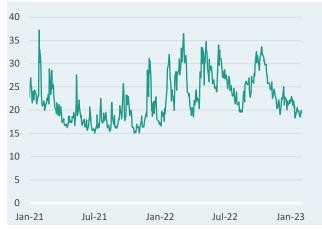
# U.S. large cap equities

- The S&P 500 Index (+6.3%) finished on a high note despite weaker-than-expected Q4 corporate earnings. Investors responded positively to continued signs of decelerating inflation and a potential softening of Fed policy.
- 8 of 11 S&P 500 GICS Sectors ended higher. Consumer Discretionary (+15.0%) and Communication Services (+14.5%) – the two worst performing sectors of the prior year – posted the largest gains while defensive sectors including Utilities (-2.0%), Health Care (-1.9%), and Consumer Staples (-0.9%) posted the weakest returns.
- The Dow Jones Industrial Average (+2.9%) lagged the S&P 500 for the first time in six months. The index, which holds a greater weight of defensive sectors, appears to have underperformed due to market participants' recent shift into more cyclical stocks.
- The Cboe VIX Index of implied volatility closed well below it's 2022 average of 25.6. The index hit a fresh 1year low of 18.35 near mid-month as equities rallied and ended the month at 19.4, down -2.3 from December.

#### **S&P 500 PRICE INDEX**

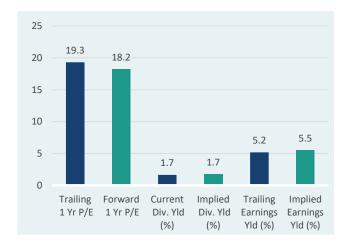


#### IMPLIED VOLATILITY (VIX INDEX)



#### Source: Choe, as of 1/31/23

#### **S&P 500 VALUATION SNAPSHOT**



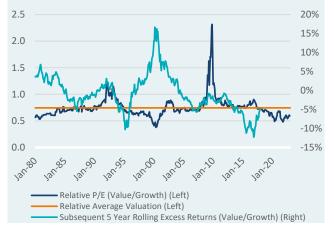
Source: Bloomberg, as of 1/31/23



# Domestic equity size and style

- The Russell 1000 Growth Index (+8.3%) outperformed the Russell 1000 Value Index (+5.2%) as growthoriented sectors delivered outsized gains. The large-cap value index was pulled lower by declines in defensive sectors and lagged the broader market.
- Despite coming off their worst year since 2008, large-cap growth stocks still appear expensive when compared to historical multiples on forward earnings. At month end, the forward P/E for the Russell 1000 Growth Index measured 26.3x, 13.7% higher than its 10-year monthly average of 23.1x.
- Small-caps (+9.7%) rallied more than large-caps (+6.7%) as all small-cap sectors ended the month higher. Small-caps, which tend to be more leveraged than large-caps, likely benefitted from recent declines in interest rates and expectations for a shift in Fed policy.
- Small company overperformance was supported by inflows into small-cap funds and a growing volume of outflows from large-cap funds. Small-cap ETF flows totaled \$670 million while large-cap ETFs saw outflows of -\$2.5 billion.

#### **VALUE VS. GROWTH RELATIVE VALUATIONS**



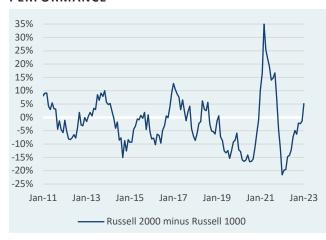
Source: FTSE, Bloomberg, as of 1/31/23

VALUE VS. GROWTH 1-YR ROLLING RELATIVE PERFORMANCE



Source: FTSE, Bloomberg, as of 1/31/23

SMALL VS. LARGE 1-YR ROLLING RELATIVE PERFORMANCE

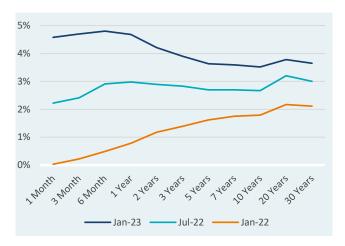




# Fixed income

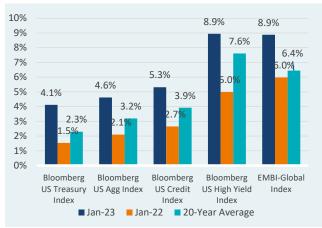
- Signs of a potential Fed pivot pushed yields lower, resulting in positive fixed income performance. Declines were more exaggerated at the long-end of the curve which led to stronger performance in long-dated Treasuries (+6.7%) relative to short-term tenors (+0.7%).
- An increasingly consensus view that monetary policy will loosen in the future helped drive a decline in bond market volatility. The MOVE Index, which measures bond market volatility, fell -22.1 points to 99.5 - its lowest level since June 2022 - and is now -61.2 points below its 2022 peak (160.7).
- Investment grade corporate debt gained from the broad decline in interest rates. Additionally, spreads of investment grade bonds narrowed, falling -13bps to 125bps. The Bloomberg U.S. Corporate Investment Grade Index rose +4.0%.
- The JP Morgan EMBI Global Diversified Index (+3.2%) was positive for the fourth month in a row. Investor demand for emerging market bonds and declines in U.S. Dollar strength have likely influenced performance. From October through January, the Bloomberg Dollar Spot Index fell -8.8% and the JPMorgan EMBI increased +11.3%.

#### U.S. TREASURY YIELD CURVE



Source: Bloomberg, as of 1/31/23

#### **NOMINAL YIELDS**



Source: Morningstar, as of 1/31/23

#### **BREAKEVEN INFLATION RATES**

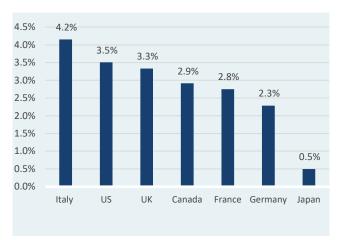




# Global markets

- Global equities (MSCI ACWI Index +8.1%) continued to outperform domestic equities. Additional reopening milestones in China helped push emerging equities (MSCI EM Index +7.9%) higher while falling inflation and hopes of a slowdown in rate hikes from central banks benefited international developed equities (MSCI EAFE Index +8.1%).
- Chinese equities (MSCI China Index +12.3%) rose for a third consecutive month with help from pivotal reopening efforts. In a reversal of its zero-Covid policies, mainland China reopened its borders and ended quarantine periods for incoming travelers.
- Latin American equities (+9.9%) outperformed other emerging market regions. Much of this was due to movements in currency markets, as local currencies strengthened on higher inflation and anticipation of higher interest rates. Mexican equities rallied a noteworthy +17.3% and the peso neared a 3-year high against the U.S. Dollar.
- The Eurozone Manufacturing PMI posted a reading of 48.8, up from 47.8 in December. Input cost inflation dropped to its lowest level in more than two years and business growth expectations improved to the highest level since February 2022.

#### **GLOBAL SOVEREIGN 10-YEAR YIELDS**

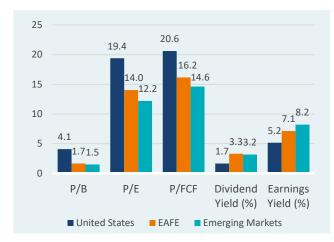


#### **U.S. DOLLAR MAJOR CURRENCY INDEX**



Source: Federal Reserve, as of 1/31/23

#### MSCI VALUATION METRICS (3-MONTH AVG)



Source: Bloomberg, as of 1/31/23



# Commodities

- The Bloomberg Commodity Index (-0.5%) fell narrowly as persistent declines in natural gas prices (-40.0%) drove an outsized drop in the Bloomberg Energy Sub-Index (-9.7%). Price gains were modest within agriculture while metals rallied for a third straight month.
- The Bloomberg Industrial Metals Sub-Index climbed +8.1% driven by double-digit gains in copper, aluminum, and zinc prices. Industrial metals prices have jumped in recent months on expectations that the reopening of China's economy will lead to a recovery in demand.
- Gold prices appreciated (+6.5%) on recent weakness in the U.S. Dollar along with expectations of a slowdown in Fed rate hikes. Prices for the metal hit an 8-month high toward month-end. Silver prices (-0.8%) were muted, weighing on gains in the Bloomberg Precious Metals Sub-Index (+4.4%).
- The Bloomberg Softs Sub-Index climbed +8.6% after coffee (+8.6%) and cotton (+8.6%) prices moved higher.
   Lower exports out of Brazil and Vietnam the world's two largest exporters drove increases in coffee prices and reduced acreage in the U.S. Southeast lifted cotton prices.

#### INDEX AND SECTOR PERFORMANCE

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Bloomberg Commodity	(0.5)	(0.5)	(0.5)	6.2	15.4	5.9	(1.6)
Bloomberg Agriculture	2.3	2.3	2.3	11.7	22.6	9.3	(0.9)
Bloomberg Energy	(9.7)	(9.7)	(9.7)	0.9	8.0	0.0	(7.9)
Bloomberg Grains	0.0	0.0	0.0	12.1	21.1	8.8	(2.5)
Bloomberg Industrial Metals	8.1	8.1	8.1	2.5	20.0	6.6	2.1
Bloomberg Livestock	(2.8)	(2.8)	(2.8)	1.4	(8.0)	(4.1)	(3.3)
Bloomberg Petroleum	(0.1)	(0.1)	(0.1)	24.8	18.3	7.9	(3.9)
Bloomberg Precious Metals	4.4	4.4	4.4	7.1	6.1	6.2	(0.5)
Bloomberg Softs	8.6	8.6	8.6	1.2	17.8	6.3	(2.1)

Source: Morningstar, as of 1/31/23

#### **COMMODITY PERFORMANCE**



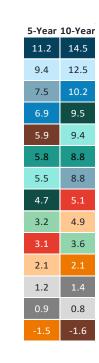


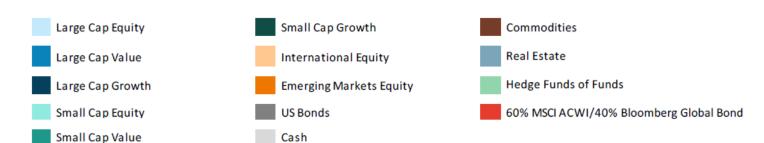
# Appendix



# Periodic table of returns

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	YTD
Small Cap Growth	56.3	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	9.9
Small Cap Equity	48.5	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	9.7
Small Cap Value	47.3	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	9.5
Large Cap Growth	46.0	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	8.3
International Equity	39.2	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	8.1
Emerging Markets Equity	30.0	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	7.9
Large Cap Equity	29.9	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	6.7
60/40 Global Portfolio	29.7	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	5.6
Large Cap Value	25.2	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	5.2
US Bonds	23.9	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	3.1
Cash	11.6	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	0.3
Real Estate	9.0	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	0.0
Commodities	4.1	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	-0.5
Hedge Funds of Funds	1.0	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	-4.7



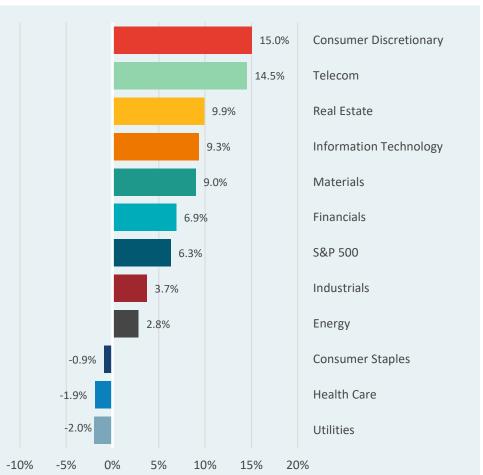


Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, MSCI EAFE, MSCI EM, Bloomberg US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, Bloomberg Global Bond. NCREIF Property Index performance data as of 12/31/22.

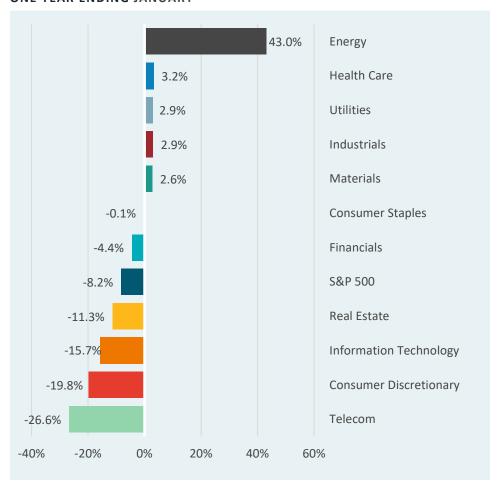


# S&P 500 sector returns

#### QTD



#### **ONE YEAR ENDING JANUARY**



Source: Morningstar, as of 1/31/23

Source: Morningstar, as of 1/31/23



# Detailed index returns

DOMESTIC EQUITY								FIXED INCOME							
	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year		Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Core Index								Broad Index							
S&P 500	6.3	6.3	6.3	(8.2)	9.9	9.5	12.7	Bloomberg US TIPS	1.8	1.8	1.8	(8.4)	1.1	2.7	1.4
S&P 500 Equal Weighted	7.4	7.4	7.4	(0.6)	12.3	9.7	12.5	Bloomberg US Treasury Bills	0.3	0.3	0.3	1.7	0.8	1.3	0.8
DJ Industrial Average	2.9	2.9	2.9	(0.9)	8.7	7.8	12.0	Bloomberg US Agg Bond	3.1	3.1	3.1	(8.4)	(2.3)	0.9	1.4
Russell Top 200	6.1	6.1	6.1	(10.3)	9.9	9.9	13.1	Bloomberg US Universal	3.1	3.1	3.1	(8.3)	(2.1)	1.0	1.7
Russell 1000	6.7	6.7	6.7	(8.5)	9.7	9.4	12.5	Duration							
Russell 2000	9.7	9.7	9.7	(3.4)	7.5	5.5	9.4	Bloomberg US Treasury 1-3 Yr	0.7	0.7	0.7	(2.4)	(0.4)	1.0	0.7
Russell 3000	6.9	6.9	6.9	(8.2)	9.5	9.1	12.3	Bloomberg US Treasury Long	6.4	6.4	6.4	(21.5)	(7.5)	(0.3)	1.6
Russell Mid Cap	8.3	8.3	8.3	(3.3)	9.0	8.0	11.1	Bloomberg US Treasury	2.5	2.5	2.5	(8.5)	(2.6)	0.7	0.9
Style Index								Issuer							
Russell 1000 Growth	8.3	8.3	8.3	(16.0)	9.9	11.2	14.5	Bloomberg US MBS	3.3	3.3	3.3	(7.5)	(2.4)	0.3	1.1
Russell 1000 Value	5.2	5.2	5.2	(0.4)	8.5	6.9	10.2	Bloomberg US Corp. High Yield	3.8	3.8	3.8	(5.2)	1.3	3.0	4.3
Russell 2000 Growth	9.9	9.9	9.9	(6.5)	4.3	4.7	9.5	Bloomberg US Agency Interm	1.2	1.2	1.2	(4.3)	(1.2)	0.8	0.8
Russell 2000 Value	9.5	9.5	9.5	(0.5)	9.9	5.8	8.8	Bloomberg US Credit	3.8	3.8	3.8	(9.1)	(2.4)	1.4	2.3
INTERNATIONAL EQUITY								OTHER							
Broad Index								Index							
MSCI ACWI	7.2	7.2	7.2	(8.0)	6.8	5.5	8.2	Bloomberg Commodity	(0.5)	(0.5)	(0.5)	6.2	15.4	5.9	(1.6)
MSCI ACWI ex US	8.1	8.1	8.1	(5.7)	3.6	1.4	4.2	Wilshire US REIT	11.3	11.3	11.3	(12.5)	2.9	6.4	7.1
MSCI EAFE	8.1	8.1	8.1	(2.8)	4.3	2.1	4.2	CS Leveraged Loans	2.6	2.6	2.6	1.1	3.0	3.5	3.9
MSCI EM	7.9	7.9	7.9	(12.1)	1.4	(1.5)	2.1	S&P Global Infrastructure	5.0	5.0	5.0	5.9	2.8	4.7	6.7
MSCI EAFE Small Cap	7.5	7.5	7.5	(8.9)	2.5	0.4	6.4	3&F Global Illi astructure	3.0	5.0	5.0	5.5	2.0	4.7	0.7
Style Index	7.5	7.5	7.5	(0.5)	2.5	0.4	0.4	Regional Index							
MSCI EAFE Growth	8.5	8.5	8.5	(6.6)	3.4	3.2	6.0	JPM EMBI Global Div	3.2	3.2	3.2	(12.7)	(4.8)	(0.7)	2.0
MSCI EAFE Value	7.7	7.7	7.7	0.7	4.4	0.6	3.7	JPM GBI-EM Global Div	4.3	4.3	4.3	(7.9)	(4.4)	(2.5)	(1.7)
Regional Index	7.7	7.7	7.7	0.7	7.7	0.0	5.7	Hedge Funds	4.5	4.5	4.5	(7.5)	(4.4)	(2.5)	(1.7)
MSCI UK	6.5	6.5	6.5	0.5	3.8	1.6	3.3	HFRI Composite	(0.4)	2.2	(4.3)	(4.3)	5.7	4.4	4.7
MSCI Japan	6.2	6.2	6.2	(6.7)	1.5	0.5	5.8	HFRI FOF Composite	0.4)	2.4	(4.7)	(4.7)	3.9	3.2	3.6
MSCI Euro	11.8	11.8	11.8	(3.2)	5.4	1.7	4.9	Currency (Spot)	0.9	2.4	(4.7)	(4.7)	3.3	5.2	3.0
								, , , ,	1.0	1.8	1.0	(2.1)	(0.7)	(2.7)	(2.2)
MSCI EM Asia	8.6	8.6	8.6	(11.2)	3.0	(0.5)	4.3	Euro	1.8		1.8	(3.1)	(0.7)	(2.7)	(2.2)
MSCI EM Latin American	9.9	9.9	9.9	11.5	0.1	(1.7)	(1.6)	Pound Sterling	2.3	2.3	2.3	(8.2)	(2.3)	(2.8)	(2.5)

Source: Morningstar, HFRI, as of 1/31/23.



# Detailed private market returns

#### Comparison to public market index returns

Private Equity Pooled IRRs	1 Year	3 Year	5 Year	10 Year
Global Private Equity FoFs & Secondary Funds	(1.6)	21.3	17.3	14.0
Global Private Equity Direct Funds *	(5.0)	21.1	18.3	16.2
U.S. Private Equity Direct Funds *	(2.3)	24.2	20.9	17.9
Europe Private Equity Direct Funds *	(11.4)	17.3	15.2	14.1
Asia Private Equity Direct Funds *	(9.5)	11.9	11.2	12.9
Public Index Time-weighted Returns				
MSCI World	(19.6)	4.6	5.3	8.1
S&P 500	(15.5)	8.2	9.2	11.7
MSCI Europe	(24.8)	(1.7)	(1.2)	3.4
MSCI AC Asia Pacific	(27.7)	(1.7)	(0.6)	3.7

Private Credit Pooled IRRs	1 Year	3 Year	5 Year	10 Year
U.S. All Private Debt **	9.9	15.3	12.4	11.6
Public Index Time-weighted Returns				
S&P / LSTA U.S. Leveraged Loan 100 Index	(3.9)	1.4	2.5	3.0

Private Real Assets Pooled IRRs	1 Year	3 Year	5 Year	10 Year
Global Nature Resources ***	25.2	8.7	5.1	3.6
Global Infrastructure	9.4	10.8	10.3	10.7
Public Index Time-weighted Returns				
S&P Global Natural Resources	1.0	9.1	5.7	3.4
S&P Global Infrastructure	(6.0)	(0.1)	2.1	5.7

Private Real Estate Pooled IRRs	1 Year	3 Year	5 Year	10 Year
U.S. All Private Real Estate	15.7	13.5	11.9	13.3
Public Index Time-weighted Returns				
FTSE NAREIT Equity REIT	(16.4)	(2.0)	2.9	6.3

Source: Pooled IRRs are from Thompson Reuters C/A and Time-weighted Returns are from Investment Metrics, as of September 30th, 2022. All returns in U.S. dollars.

<sup>\*\*\*</sup> Includes Private Equity Energy, Timber and Upstream Energy & Royalties.



<sup>\*</sup> Includes Buyout, Growth Equity and Venture Capital.

<sup>\*\*</sup> Includes Control-Oriented Distressed, Credit Opportunities, Senior Debt and Subordinated Capital.

# Notices & disclosures

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 advice, or a recommendation to buy, sell or hold a security or pursue a particular 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. Additional information about Verus Advisory, Inc. is available on the SEC's website at www.adviserinfo.sec.gov.

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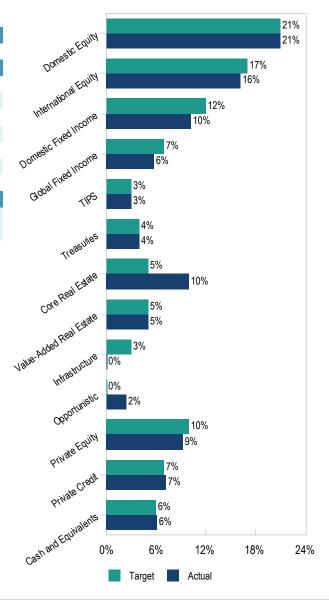
	Market Value	% of Portfolio	1 Mo		21%
otal Fund	1,664,546,521	100.0	3.6		21%
Interim Policy Index			3.7	aestic Eur	
FFP SAA Index			2.6	Done 17%	
Total Growth	1,142,848,156	68.7	4.1	and Equity 16%	
Custom Growth Benchmark			4.2	International Equity 16%	
Total Public Equity	618,961,508	37.2	7.9	mic 10%	
Russell 3000 Index			6.9	cixed the	
Total Domestic Equity	348,774,093	21.0	7.3	Domestic Fixed Income 7%	
Russell 3000 Index			6.9	Douges 6%	
PIMCO RAE US	96,130,720	5.8	5.3	alkings 3%	
S&P 500 Index			6.3	Downestic 1, 162 3%	
Loomis Sayles Large Cap Growth	80,193,621	4.8	13.8		
Russell 1000 Growth Index			8.3	4% 4%	
Boston Partners Large Cap Value	91,873,209	5.5	4.7	Teasylies 4%	
Russell 1000 Value Index			5.2		
Atlanta Capital Mgmt	80,576,542	4.8	6.4	Care Real Estate 5%	
Russell 2500 Index			10.0	a Real F	
Total International Equity	270,187,416	16.2	8.7	Care 1 5% 5%	
MSCI AC World ex USA Index			8.1	J/M	
Dodge & Cox Intl Stock	143,541,730	8.6	8.6	Nded Ko	
MSCI AC World ex USA Value			7.8	Value no victure 0%	
WCM International Growth	126,645,685	7.6	8.9	Kii., 100/	
MSCI AC World ex USA Growth			8.5	2%	
Total Private Equity	154,158,571	9.3		Opportunistic - 2%	
Harbourvest Partners IX Buyout Fund L.P.	12,685,578	0.8		10%	
Pathway Private Equity Fund Investors 9 L.P.	83,591,868	5.0		Private Equity 9%	
Harbourvest 2018 Global Fund L.P.	20,679,928	1.2		Private 7%	
Harbourvest SLO Fund Private Equity	23,758,330	1.4		Cretit 7%	
Pathway Private Equity Fund Investors 10 L.P.	13,442,867	0.8		in ate C.	
Total Private Credit	120,694,777	7.3		6%	
Sixth Street Partners DCP	79,824,681	4.8		ivalents 6%	
Harbourvest SLO Credit Fund	40,870,096	2.5		and Equit 0% 6% 12% 18%	24%
				6% 6% Cash and Equivalents 0% 6% 12% 18% Target Actual	27/



	Market Value	% of Portfolio	1 Mo	21%	7
Total Real Estate	249,033,300	15.0	-0.2	Donestic Equity 21%	
NCREIF Property Index			0.0	estic Ed	
JP Morgan Core Real Estate	165,131,858	9.9	-0.3	Done 17%	
NCREIF-ODCE			0.0	nternational Equity 16%	
NCREIF Property Index			0.0	harnationth. 12%	
ARA American Strategic Value Realty	83,901,442	5.0	0.0	Interior	
NCREIF-ODCE			0.0	ixed inco	
NCREIF Property Index			0.0	Oonesic fixed moone  7%  6%	
Total Risk Diversifying	381,198,853	22.9	3.5	Oousign Liked lucolus 2%	
Total Risk Diversifying Benchmark			3.0	alkika 3%	
Total Domestic Fixed Income	286,317,220	17.2	2.9	G <sub>QQ</sub> 1/kg - 3%	
Blmbg. U.S. Aggregate Index			3.1		
BlackRock Core Bond	48,540,613	2.9	3.1	4% 4%	
Blmbg. U.S. Aggregate Index			3.1	Treasuries 4%	
Dodge & Cox Income Fund	51,145,458	3.1	3.7		
Blmbg. U.S. Aggregate Index			3.1	Core Real Estate	
Pacific Asset Corporate Loan	70,268,038	4.2	2.7	Cac Real 5	
Morningstar LSTA US Leveraged Loan			2.7	Value Added Real Estate  7 Alle Added Real E	
SSGA U.S. Govt Bond Index	65,520,021	3.9	2.7	ORAL ESTA	
Blmbg. U.S. Treasury: 7-10 Year			3.2	ndded ke	
BlackRock TIPS	50,843,090	3.1	2.0	Valle 10%	
Blmbg. U.S. TIPS			1.8	/hir 100/	
Total Global Fixed	94,881,633	5.7	5.5	Opportunistic 2%	
FTSE World Government Bond Index			3.2	Opportunity - 1	
Brandywine Global Fixed Income	43,463,203	2.6	4.9	10%	
FTSE Non-U.S. World Government Bond			3.5	La Equity 9%	
Ashmore EM Blended Debt Fund	51,418,430	3.1	6.0	Private Equity 9%	
50% JPM EMBI GD/25% JPM GBI EM GD/25% JPM ELMI+			3.4	Private Credit 7%	
				4 Equivalents 6%	1%



	Market Value	% of Portfolio	1 Mo
Total Liquidity	101,390,584	6.1	0.6
90 Day U.S. Treasury Bill			0.3
Total Cash	101,390,584	6.1	0.6
90 Day U.S. Treasury Bill			0.3
PIMCO Short Duration Fund	33,540,964	2.0	1.0
Blmbg. 1-3 Year Gov/Credit index			0.8
Cash Account	43,566,116	2.6	0.5
90 Day U.S. Treasury Bill			0.3
Investment Cash	24,283,504	1.5	0.1
90 Day U.S. Treasury Bill			0.3
Total Opportunistic	39,108,929	2.3	
Kohlberg Kravis Roberts & Co. Mezzanine Partners I	2,745,404	0.2	
Sixth Street Partners TAO	36,363,525	2.2	



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#### **Board of Trustees**

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Date: February 27, 2023

To: Board of Trustees

From: Carl Nelson – Executive Director

Amy Burke – Deputy Director

Scott Whalen - Verus

## Agenda Item 12: 2023 Capital Market Assumptions and Strategic Asset Allocation Policy - Verus

#### **Recommendation:**

Staff recommends that the Board of Trustees review and discuss the presentation to be given by Scott Whalen of Verus, the Pension Trust's investment consultant. Specific recommendations are –

- 1. Capital Market Assumptions review and discuss.
- 2. Strategic Asset Allocation Policy (SAA) recommend approval of
  - a. Maintain current SAA asset allocation long-term targets.
  - b. Extend the SAA Implementation Glidepath one year to 2027.
  - c. Amend the 2023 Interim Asset Allocation targets.
  - d. Continue to monitor and approve interim asset allocation targets annually leading to the planned SAA targets in 2027.
- 3. Private Equity increased commitment Addressed in Agenda Item 13

#### **Capital Market Assumptions:**

It is the practice of the Pension Trust to include in the February Board of Trustees meeting an annual review of asset allocation and Capital Market Assumptions (CMA). Verus' CMAs are primarily for a 10-year period. CMAs are inherently heavily influenced by

current market valuation levels and interest rates. The starting point determines the path to the eventual reversion-to-the-mean of returns. In the current investment environment -

- Low interest rates suppress lower risk assets' return expectations the 2022 increase in interest rates raises the expected return for bonds.
- Elevated equity market valuations (high P/E ratios) lower future expectations in anticipation of, at some point, contracting equity valuations the 2022 bear market in stocks combined with resilient expectations for corporate earnings has increased the expected return of equities.

The table below recaps the effect of CMA changes for the SLOCPT Strategic Asset Allocation asset mix targets in place in each of the respective years.

	Exp. 10-year Annualized	Expected Risk		
Year	Return	(Std. Dev.)		
2017	6.3%	11.1%		
2018	6.0%	11.4%		
2019	6.7%	11.4%		
2020 (legacy)	6.2%	11.1%		
2020 (FFP)	6.9%	11.4%		
2021	5.6%	11.4%		
2022	6.3%	11.8%		
2023	7.5%	11.7%		

#### **Strategic Asset Allocation Policy:**

The recommendation made above, and the attached presentation materials detail the Staff and Verus' recommendation on SAA Policy - unchanged. It includes an adjustment to the Interim asset allocation targets for 2023 and an extension of the "glidepath" to the ending target SAA to 2027.

#### **Private Equity – Increased Commitment:**

The recommendation made above, and the attached presentation materials detail the Staff and Verus' recommendation on an expanded commitment to Private Equity. This consideration is intrinsically part of the asset allocation discussion to it is presented here.

However, for the sake of clarity in the process of Board of Trustees decisions, the actual Private Equity action item for the Board is covered in the following Agenda Item 13.

#### **Discount Rate Considerations:**

While not a part of this Board action item, any discussion of CMA's naturally relates to the later discussion of the Actuarial Valuation and its assumptions. The Discount Rate for pension liabilities in the actuarial process should reflect **very long-term expectations for investment returns at an appropriate level of risk for the fund**.

Actual returns will, of course, vary widely year to year. If a long-term discount rate is used that is unrealistically high, it increases the probability that actual returns will average below that rate. This will have the effect of creating actuarial losses over time that will be smoothed into the necessary contribution rates to fund the Plan. If this is consistently the case, it will defer pension costs properly attributable to the current generation of pension rate payers to future generations. Hence, the importance of using a realistic long term expected investment return as the discount rate for Plan liabilities. The range of reasonable discount rates has been reducing significantly in recent years but has increased following the 2022 bear markets in both stocks and bonds.

Pension Trust practice has been to consider changes to the long-term actuarial Discount Rate in conjunction with biennial Actuarial Experience Studies. This allows for an integrated consideration of not just the Discount Rate, but the other key actuarial assumptions (e.g., inflation, mortality, etc.) that go into determining the necessary funding for the Plan. 2023 is an "off year" for an Actuarial Experience Study.

The selection of a prudent Discount Rate is done by the Board of Trustees in consultation with the Plan's Actuary. It considers the CMAs of SLOCPT's investment consultant and other consultants. This discussion on Discount Rates is scheduled for the March Board of Trustees meeting as part of planning for the 2023 Actuarial Valuation.

In the absence of any compelling factors driving a need to adjust actuarial assumptions, including the Discount Rate, Staff anticipates recommending no changes to actuarial assumptions at the March Board of Trustees meeting. This includes the intent to recommend keeping the current Discount Rate of 6.75%.

Respectfully Submitted,

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**FEBRUARY 27, 2023** 

Strategic Asset Allocation Review

**San Luis Obispo County Pension Trust** 

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#### **VERUSINVESTMENTS.COM**

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# Executive summary

#### **Observations**

- Return expectations in 2023 are higher than last year across markets...but came at the cost of disappointing 2022 performance
- The 10-year projected return for the plan increased to 7.5% from 6.3% a year ago
- A private equity top-up commitment is likely required to meet the plan's target allocation

#### Recommendations

- Maintain current long-term strategic asset allocation
- Extend implementation glidepath 1-year to 2027 and continue to monitor
- Implement 2023 interim benchmark
- Increase private equity commitment to achieve 18% target allocation



# 2023 capital market assumptions



# Methodology

#### **CORE INPUTS**

- We use a fundamental building block approach based on several inputs, including historical data and academic research to create asset class return forecasts.
- For most asset classes, we use the long-term historical volatility after adjusting for autocorrelation.
- Correlations between asset classes are calculated based on the last 10 years. For illiquid assets, such as private equity and private real estate, we use BarraOne correlation estimates.

Asset	Return Methodology	Volatility Methodology*		
Inflation	25% weight to the University of Michigan Survey 5-10 year ahead inflation expectation and the Survey of Professional Forecasters (Fed Survey), and the remaining 50% to the market's expectation for inflation as observed through the 10-year TIPS breakeven rate	-		
Cash	75% * current federal funds rate + 25% * U.S. 10-year Treasury yield	Long-term volatility		
Bonds	Nominal bonds: current yield; Real bonds: real yield + inflation forecast	Long-term volatility		
International Bonds	Current yield	Long-term volatility		
Credit	Current option-adjusted spread + U.S. 10-year Treasury – effective default rate	Long-term volatility		
International Credit	Current option-adjusted spread + foreign 10-year Treasury – effective default rate	Long-term volatility		
Private Credit	Levered gross return (LIBOR + spread + original issuance discounts) – management fees – carried interest	Estimated volatility		
Equity	Current yield + real earnings growth (historical average) + inflation on earnings (inflation forecast) + expected P/E change	Long-term volatility		
Intl Developed Equity	Current yield + real earnings growth (historical average) + inflation on earnings (intl. inflation forecast) + expected P/E change	Long-term volatility		
Private Equity	US large cap domestic equity forecast * 1.85 beta adjustment	1.2 * Long-term volatility of U.S. small cap		
Commodities	Collateral return (cash) + spot return (inflation forecast) + roll return (assumed to be zero)	Long-term volatility		
Hedge Funds	Return coming from traditional betas + 15-year historical idiosyncratic return	Long-term volatility		
Core Real Estate	Cap rate + real income growth – capex + inflation forecast	65% of REIT volatility		
REITs	Core real estate	Long-term volatility		
Value-Add Real Estate	Core real estate + 2%	Volatility to produce Sharpe Ratio (g) equal to core real estate		
Opportunistic Real Estate	Core real estate + 3%	Volatility to produce Sharpe Ratio (g) equal to core real estate		
Infrastructure	Current yield + real income growth + inflation on earnings (inflation forecast)	Long-term volatility		
Risk Parity	Expected Sharpe Ratio * target volatility + cash rate	Target volatility		

<sup>\*</sup>Long-term historical volatility data is adjusted for autocorrelation (see Appendix)



# 10-year return & risk assumptions

		Ten Year Return Forecast		Standard Deviation	Sharpe Ratio	Sharpe Ratio	10-Year Historical	10-Year Historical
Asset Class	Index Proxy	Geometric	Arithmetic	Forecast	Forecast (g)	Forecast (a)	Sharpe Ratio (g)	Sharpe Ratio (a)
Equities								
U.S. Large	S&P 500	6.5%	7.6%	15.6%	0.21	0.28	0.76	0.79
U.S. Small	Russell 2000	5.4%	7.5%	21.5%	0.10	0.20	0.42	0.49
International Developed	MSCI EAFE	9.1%	10.5%	17.8%	0.33	0.40	0.21	0.27
International Small	MSCI EAFE Small Cap	9.2%	11.3%	22.1%	0.27	0.36	0.29	0.36
Emerging Markets	MSCI EM	8.5%	11.2%	25.2%	0.21	0.31	0.02	0.10
Global Equity	MSCI ACWI	7.4%	8.7%	17.1%	0.23	0.32	0.47	0.52
Global Equity ex-US	MSCI ACWI ex-US	9.0%	10.7%	19.9%	0.29	0.37	0.16	0.23
Private Equity	CA U.S. Private Equity	9.2%	12.1%	25.8%	0.23	0.34	-	-
Private Equity Direct	CA U.S. Private Equity	10.2%	13.0%	25.8%	0.27	0.38	-	-
Private Equity (FoF)	CA U.S. Private Equity	8.2%	11.1%	25.8%	0.19	0.30	-	-
Fixed Income								
Cash	30 Day T-Bills	3.3%	3.3%	1.2%	-	-	-	-
U.S. TIPS	Bloomberg U.S. TIPS 5-10	4.1%	4.3%	5.6%	0.14	0.18	0.06	0.08
U.S. Treasury	Bloomberg Treasury 7-10 Year	3.8%	4.0%	7.1%	0.07	0.10	(0.02)	0.01
Long U.S. Treasury	Bloomberg Treasury 20+ Year	3.8%	4.6%	13.2%	0.04	0.10	(0.01)	0.05
Global Sovereign ex U.S.	Bloomberg Global Treasury ex U.S.	2.2%	2.7%	10.0%	(0.11)	(0.06)	(0.47)	(0.44)
Global Aggregate	Bloomberg Global Aggregate	3.0%	3.2%	6.7%	(0.05)	(0.01)	(0.30)	(0.28)
Core Fixed Income	Bloomberg U.S. Aggregate Bond	4.3%	4.4%	4.6%	0.22	0.24	0.05	0.07
Core Plus Fixed Income	Bloomberg U.S. Universal	4.6%	4.7%	4.6%	0.28	0.30	0.17	0.14
Short-Term Gov't/Credit	Bloomberg U.S. Gov't/Credit 1-3 Year	3.9%	4.0%	3.7%	0.16	0.19	0.11	0.11
Short-Term Credit	Bloomberg Credit 1-3 Year	4.3%	4.4%	3.7%	0.27	0.30	0.40	0.40
Long-Term Credit	Bloomberg Long U.S. Credit	5.3%	5.9%	11.0%	0.18	0.24	0.11	0.16
High Yield Corp. Credit	Bloomberg U.S. Corporate High Yield	6.4%	7.0%	11.2%	0.28	0.33	0.44	0.47
Bank Loans	S&P/LSTA Leveraged Loan	6.8%	7.2%	9.2%	0.38	0.42	0.53	0.54
Global Credit	Bloomberg Global Credit	4.5%	4.8%	7.9%	0.15	0.19	0.00	0.03
Emerging Markets Debt (Hard)	JPM EMBI Global Diversified	8.9%	9.4%	10.7%	0.52	0.57	0.05	0.09
Emerging Markets Debt (Local)	JPM GBI-EM Global Diversified	7.0%	7.7%	12.3%	0.30	0.36	(0.28)	(0.23)
Private Credit	S&P LSTA Leveraged Loan Index	8.2%	9.0%	13.0%	0.38	0.44	-	-
Private Credit (Direct Lending - Unlevered)	S&P LSTA Leveraged Loan Index	6.8%	7.2%	9.2%	0.38	0.42	-	-
Private Credit (Direct Lending - Levered)	S&P LSTA Leveraged Loan Index	9.1%	10.1%	15.3%	0.38	0.44	-	-
Private Credit (Credit Opportunities)	S&P LSTA Leveraged Loan Index	8.5%	9.4%	13.8%	0.38	0.44	-	-
Private Credit (Junior Capital / Mezzanine)	S&P LSTA Leveraged Loan Index	9.0%	10.0%	15.1%	0.38	0.44	-	-
Private Credit (Distressed)	S&P LSTA Leveraged Loan Index	9.1%	12.7%	29.1%	0.20	0.32	-	-

Investors wishing to produce expected geometric return forecasts for their portfolios should use the arithmetic return forecasts provided here as inputs into that calculation, rather than the single-asset-class geometric return forecasts. This is the industry standard approach but requires a complex explanation only a heavy quant could love, so we have chosen not to provide further details in this document – we will happily provide those details to any readers of this who are interested.



# 10-year return & risk assumptions

#### Ten Year Return Forecast

				Standard	Sharpe Ratio	Sharpe Ratio	10-Year Historical	10-Year Historical
Asset Class	Index Proxy	Geometric	Arithmetic	Deviation Forecast	Forecast (g)	Forecast (a)	Sharpe Ratio (g)	Sharpe Ratio (a)
Other								
Commodities	Bloomberg Commodity	5.7%	6.9%	16.3%	0.15	0.22	(0.20)	(0.13)
Hedge Funds	HFRI Fund Weighted Composite	4.6%	4.9%	7.7%	0.17	0.21	0.70	0.71
Hedge Fund of Funds	HFRI Fund of Funds Composite	3.6%	3.9%	7.7%	0.04	0.08	-	-
Hedge Funds (Equity Style)	Custom HFRI Benchmark Mix*	7.4%	8.4%	14.6%	0.28	0.35	-	-
Hedge Funds (Credit Style)	Custom HFRI Benchmark Mix*	7.1%	7.5%	9.8%	0.39	0.43	-	-
Hedge Funds (Asymmetric Style)	Custom HFRI Benchmark Mix*	4.8%	4.9%	4.8%	0.31	0.33	-	-
Real Estate Debt	Bloomberg CMBS IG	5.2%	5.5%	7.5%	0.25	0.29	0.26	0.28
Core Real Estate	NCREIF Property	5.8%	6.5%	12.6%	0.20	0.25	1.94	1.87
Value-Add Real Estate	NCREIF Property + 200bps	7.8%	8.9%	15.5%	0.29	0.36	-	-
Opportunistic Real Estate	NCREIF Property + 300bps	8.8%	10.8%	21.3%	0.26	0.35	-	-
REITs	Wilshire REIT	5.8%	7.5%	19.4%	0.13	0.22	0.32	0.40
Global Infrastructure	S&P Global Infrastructure	7.8%	9.1%	17.3%	0.26	0.34	0.28	0.35
Risk Parity**	S&P Risk Parity 10% Vol Index	8.3%	8.8%	10.0%	0.50	0.55	-	-
Currency Beta	MSCI Currency Factor Index	1.6%	1.7%	3.4%	(0.49)	(0.46)	0.20	0.21
Inflation		2.5%	-	-	-	-	-	-

Investors wishing to produce expected geometric return forecasts for their portfolios should use the arithmetic return forecasts provided here as inputs into that calculation, rather than the single-asset-class geometric return forecasts. This is the industry standard approach, but requires a complex explanation only a heavy quant could love, so we have chosen not to provide further details in this document – we will happily provide those details to any readers of this who are interested.

<sup>\*\*</sup>The Risk Parity forecast shown here assumes a 10% target volatility strategy. We recommend customizing this forecast to the target volatility specifications of the risk parity strategy that an investor wishes to model. Please speak with your Verus consultant for customization needs.



<sup>\*</sup>To represent hedge fund styles, we use a combination of HFRI benchmarks: Equity Style = 33% HFRI Fundamental Growth, 33% HFRI Fundamental Value, 33% HFRI Activist. Credit Style = 20% HFRI Distressed/Restructuring, 20% HFRI Credit Arbitrage, 20% HFRI Fixed Income-Corporate, 20% HFRI Fixed Income-Convertible Arbitrage, 20% HFRI Fixed I

# Correlation assumptions

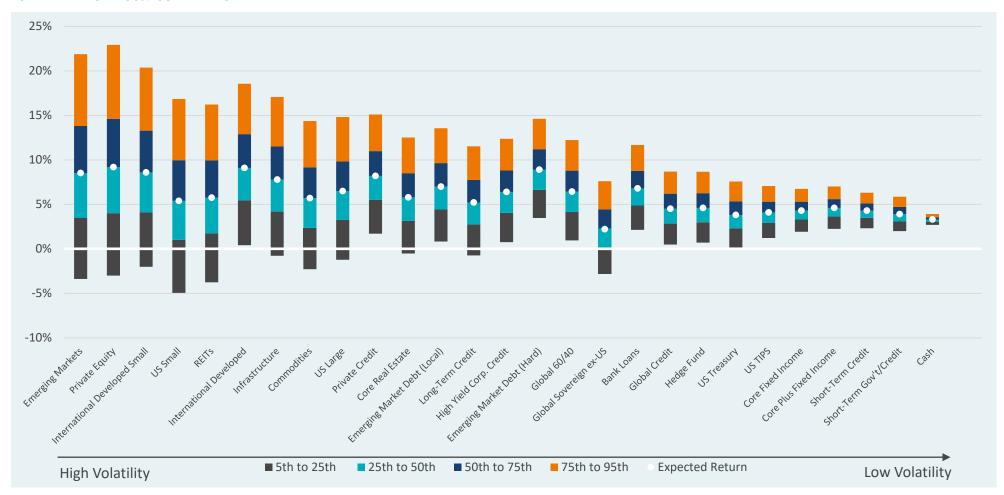
	Cash	US Large	US Small	Intl Large	Intl Small	EM	Global Equity	PE	US TIPS	US Treasury	Global Sovereign ex-US	US Core	Core Plus	Short- Term Gov't/Cre dit	Short- Term Credit	Long- Term Credit	US HY	Bank Loans	Global Credit	EMD USD	EMD Local	Commodi ties	Hedge Funds	Real Estate	REITs	Infrastruc ture	Risk Parity	Currency Beta
Cash	1.0																											
US Large	-0.2	1.0																										
US Small	-0.2	0.9	1.0																									
Intl Large	-0.2	0.9	0.8	1.0																								
Intl Small	-0.3	0.9	0.8	1.0	1.0																							
EM	-0.2	0.7	0.6	0.8	0.8	1.0																						
Global Equity	-0.2	1.0	0.9	1.0	0.9	0.8	1.0																					
PE	-0.2	0.7	0.6	0.6	0.6	0.6	0.7	1.0																				
US TIPS	0.0	0.4	0.3	0.4	0.4	0.4	0.4	0.2	1.0																			
US Treasury	0.2	0.0	-0.1	0.0	0.0	0.0	0.0	-0.2	0.8	1.0																		
Global Sovereign ex- US	0.1	0.0	-0.2	-0.1	-0.1	0.0	-0.1	-0.2	0.7	0.9	1.0																	
US Core	0.0	0.3	0.2	0.4	0.4	0.5	0.4	0.1	0.7	0.6	0.5	1.0																
Core Plus	0.1	0.3	0.2	0.3	0.3	0.3	0.3	0.0	0.8	0.9	0.9	0.7	1.0															
Short-Term Gov't/Credit	0.0	0.4	0.3	0.4	0.4	0.4	0.4	0.1	0.9	0.8	0.8	0.7	1.0	1.0														
Short-Term Credit	0.2	0.1	0.1	0.2	0.2	0.2	0.2	-0.1	0.7	0.8	0.6	0.6	0.8	0.8	1.0													
Long-Term Credit	0.0	0.4	0.4	0.5	0.5	0.5	0.5	0.0	0.7	0.5	0.4	0.6	0.8	0.8	0.8	1.0												
US HY	0.0	0.5	0.4	0.5	0.5	0.5	0.5	0.1	0.7	0.6	0.7	0.6	0.8	0.9	0.6	0.7	1.0											
Bank Loans	-0.2	0.8	0.8	0.8	0.8	0.7	0.8	0.5	0.5	0.1	0.1	0.5	0.4	0.6	0.3	0.7	0.6	1.0										
Global Credit	-0.3	0.6	0.7	0.6	0.7	0.6	0.7	0.5	0.3	-0.2	-0.2	0.2	0.1	0.3	0.0	0.5	0.4	0.8	1.0									
EMD USD	-0.1	0.6	0.5	0.7	0.7	0.7	0.7	0.4	0.6	0.3	0.3	0.6	0.6	0.7	0.4	0.7	0.7	0.8	0.7	1.0								
EMD Local	0.0	0.5	0.4	0.7	0.6	0.8	0.6	0.4	0.5	0.2	0.1	0.6	0.4	0.5	0.3	0.5	0.5	0.7	0.5	0.8	1.0							
Commodities	-0.2	0.4	0.4	0.5	0.5	0.5	0.5	0.3	0.2	-0.3	-0.3	0.2	-0.1	0.0	-0.1	0.2	0.1	0.5	0.5	0.3	0.4	1.0						
Hedge Funds	-0.2	0.8	0.9	0.9	0.9	0.8	0.9	0.6	0.3	-0.2	-0.2	0.3	0.1	0.3	0.0	0.5	0.4	0.8	0.8	0.7	0.6	0.5	1.0					
Real Estate	-0.2	0.6	0.5	0.5	0.5	0.4	0.6	0.4	0.2	-0.1	-0.1	0.2	0.0	0.1	-0.1	0.1	-0.1	0.4	0.4	0.4	0.4	0.3	0.5	1.0				
REITs	-0.2	0.7	0.6	0.6	0.6	0.5	0.7	0.5	0.6	0.3	0.3	0.4	0.5	0.5	0.2	0.5	0.6	0.6	0.5	0.6	0.5	0.3	0.6	0.7	1.0			
Infrastructure	-0.2	0.8	0.7	0.8	0.8	0.7	0.8	0.7	0.5	0.1	0.0	0.5	0.3	0.5	0.2	0.5	0.6	0.8	0.7	0.7	0.7	0.5	0.8	0.3	0.7	1.0		
Risk Parity	-0.2	0.7	0.7	0.8	0.7	0.7	0.8	0.4	0.6	0.1	0.1	0.4	0.4	0.5	0.2	0.6	0.6	0.8	0.7	0.8	0.6	0.6	0.8	0.4	0.7	0.8	1.0	
Currency Beta	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0	0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.0	0.1	0.0	0.0	0.0	1.0

Note: as of 9/30/22 - Correlation assumptions are based on the last ten years. Private Equity and Real Estate correlations are especially difficult to model – we have therefore used BarraOne correlation data to strengthen these correlation estimates.



# Range of likely 10-year outcomes

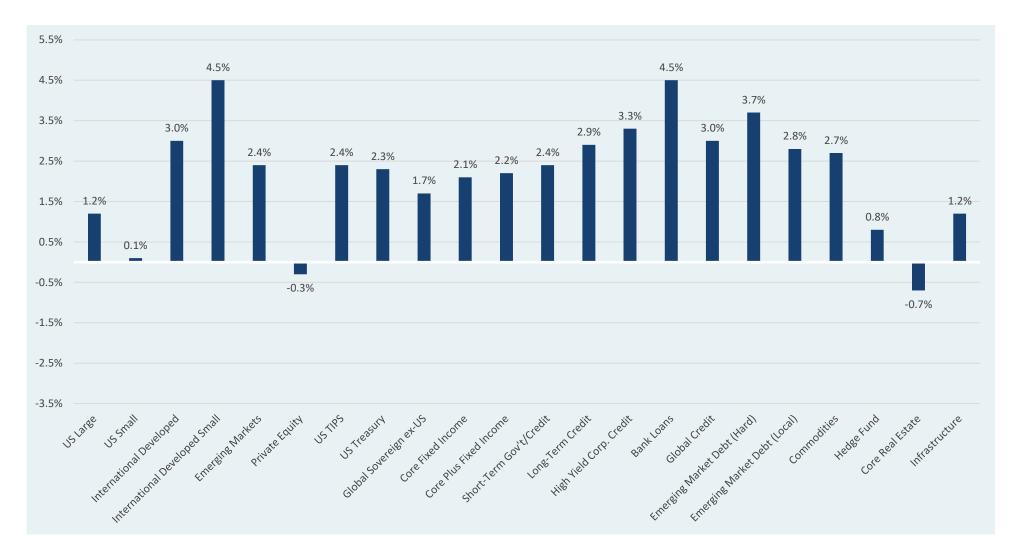
#### 10-YEAR RETURN 90% CONFIDENCE INTERVAL



Source: Verus, MPI



# 2023 vs. 2022 return forecast



Source: Verus, as of 9/30/22

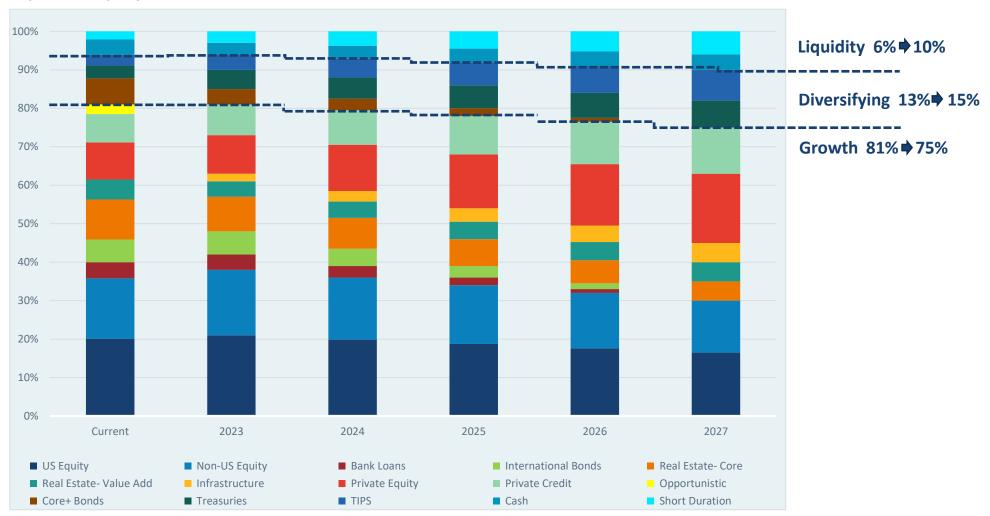


# Strategic asset allocation review



# Implementation glide path

#### **BASELINE ANNUAL GLIDE PATH**





# Implementation glide path (cont'd)

	Current	2023 Baseline Annual Glidepath						
Asset Class	12/30/2022	2023	2024	2025	2026	2027		
US Equity	20%	21%	20%	19%	18%	17%		
Non-US Equity	16%	17%	16%	15%	14%	14%		
Bank Loans	4%	4%	3%	2%	1%	0%		
International Bonds	6%	6%	5%	3%	2%	0%		
Real Estate- Core	10%	9%	8%	7%	6%	5%		
Real Estate- Value Add	5%	4%	4%	5%	5%	5%		
Infrastructure	0%	2%	3%	4%	4%	5%		
Private Equity	10%	10%	12%	14%	16%	18%		
Private Credit	7%	8%	9%	10%	11%	12%		
Opportunistic	3%	0%	0%	0%	0%	0%		
<b>Total Growth</b>	81%	81%	80%	78%	77%	75%		
Core+ Bonds	7%	4%	3%	2%	1%	0%		
Treasuries	3%	5%	6%	6%	7%	7%		
TIPS	3%	4%	5%	6%	7%	8%		
Total Diversifying	13%	13%	14%	14%	15%	15%		
Cash	4%	3%	3%	4%	4%	4%		
Short Duration	2%	3%	4%	5%	5%	6%		
Total Liquidity	6%	6%	7%	8%	9%	10%		
Total Portfolio	100%	100%	100%	100%	100%	100%		

- Public equities decline from 36% to 31%
- Private Equity and Private Credit increase from 17% to 30%
- Core real estate declines from 10% to 5%; Infrastructure increases from 0% to 5%
- Treasuries and TIPS increase from 6% to 15%
- Cash/short-term investments increase from 6% to 10%



## 2023 interim benchmark

# Benchmark adjusts annually to reflect expected end of year glidepath position for public markets

Asset Class	EOY 2023 Target	Implementation Benchmark
Domestic Equity	21%	Russell 3000
International Equity	17%	MSCI ACWI ex US
Private Equity*	10%	Actual Return
Domestic Fixed Income (Bank Loans and Core+ Fixed)	8%	Bloomberg Agg
Global Fixed Income	6%	FTSE WGBI
US Treasuries	5%	Bloomberg Treasury 7-10
US TIPS	4%	Bloomberg US TIPS 5-10
Private Credit*	8%	Actual Return
Core Real Estate	9%	NCREIF Property Index
VA Real Estate / Infrastructure*	6%	Actual Return
Cash/Liquidity	6%	91 Day T-Bill

 $<sup>*</sup>Private\ markets\ benchmarks\ will\ equal\ current\ allocation\ during\ glidepath\ implementation\ with\ remaining\ allocated\ to\ public\ markets\ holding\ place.$ 



# Mean variance analysis

#### <u>Verus</u> 2023 CMA's (10 Yr)

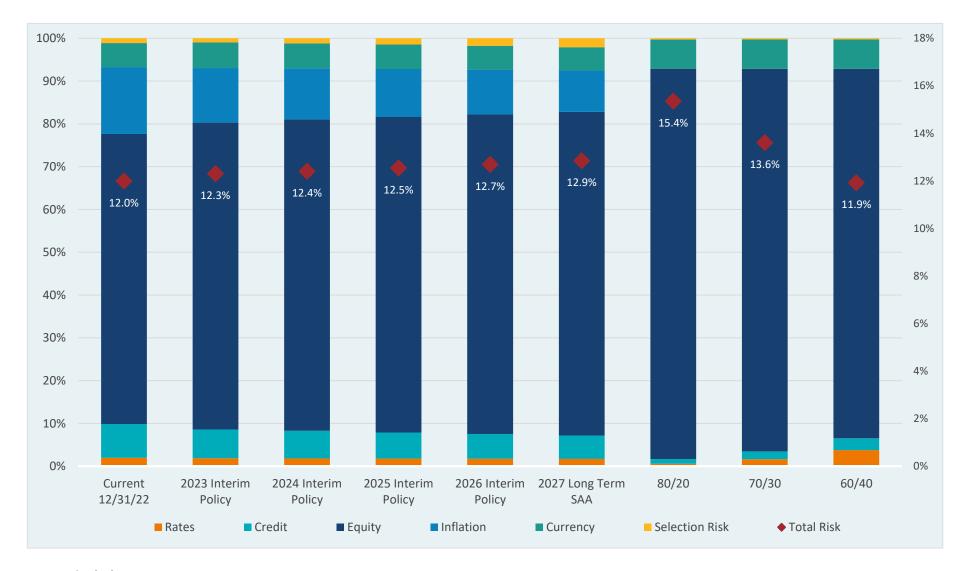
		2023	2024	2025	2026	Long							
	Current	Interim	Interim	Interim	Interim	Term				Return	Return	Standard	Sharpe
	12-31-22	Policy	Policy	Policy	Policy	SAA	80-20	70-30	60-40	(g)	(a)	Deviation	Ratio (a)
Growth	81	81	79	78	77	<i>75</i>	80	70	60				
Global Equity	36.0	38.0	36.0	34.0	32.0	30.0	80.0	70.0	60.0	7.4	8.7	17.1	0.32
Private Equity	9.6	10.0	12.0	14.0	16.0	18.0	0.0	0.0	0.0	9.2	12.1	25.8	0.34
Private Credit	9.8	8.0	9.0	10.0	11.0	12.0	0.0	0.0	0.0	8.2	9.0	13.0	0.44
Global Sovereign ex-US	2.6	3.0	2.250	1.50	0.75	0.00	0.00	0.00	0.00	2.2	2.7	10.0	-0.06
Bank Loans	4.2	4.0	3.00	2.00	1.00	0.00	0.00	0.00	0.00	6.8	7.2	9.2	0.42
Emerging Market Debt (Hard)	1.7	1.5	1.120	0.75	0.380	0.00	0.00	0.00	0.00	8.9	9.4	10.7	0.57
Emerging Market Debt (Local)	1.7	1.5	1.120	0.75	0.380	0.00	0.00	0.00	0.00	7.0	7.7	12.3	0.36
Core Real Estate	10.4	9.0	8.000	7.00	6.00	5.00	0.00	0.00	0.00	5.8	6.5	12.6	0.25
Value Add Real Estate	5.2	4.0	4.250	4.50	4.75	5.00	0.00	0.00	0.00	7.8	8.9	15.5	0.36
Infrastructure	0.0	2.0	2.750	3.50	4.25	5.00	0.00	0.00	0.00	7.8	9.1	17.3	0.34
Diversifying	13	13	13.50	14.00	14.50	15.00	20.00	30.00	40.00				
Core Fixed Income	6.8	4.0	3.00	2.00	1.00	0.00	20.00	30.00	40.00	4.3	4.4	4.6	0.24
US Treasury	3.3	5.0	5.50	6.00	6.50	7.00	0.00	0.00	0.00	3.8	4.0	7.1	0.10
US TIPS	2.8	4.0	5.00	6.00	7.00	8.00	0.00	0.00	0.00	4.1	4.3	5.6	0.18
Liquidity	6	6	7.10	8.00	9.00	10.00	0.00	0.00	0.00				
Cash	3.9	3.0	3.30	3.50	3.75	4.00	0.00	0.00	0.00	3.3	3.3	1.2	-
Short-Term Gov't/Credit	2.1	3.0	3.80	4.50	5.25	6.00	0.00	0.00	0.00	3.9	4.0	3.7	0.19
Total Allocation	100	100	100	100	100	100	100	100	100				
	Current	2023	2024	2025	2026	Long							
	12-31-22	Interim	Interim	Interim	Interim	Term	80-20	70-30	60-40	_			
Mean Variance Analysis													
Forecast 10 Year Return	7.2	7.2	7.2	7.3	7.4	7.5	7.0	6.7	6.4				

	Current	2023	2024	2025	2026	Long			
	12-31-22	Interim	Interim	Interim	Interim	Term	80-20	70-30	60-40
Mean Variance Analysis									
Forecast 10 Year Return	7.2	7.2	7.2	7.3	7.4	7.5	7.0	6.7	6.4
Standard Deviation	11.0	11.3	11.3	11.4	11.6	11.7	14.0	12.4	10.9
Return/Std. Deviation	0.7	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.6
1st percentile ret. 1 year	-15.4	-15.9	-15.9	-16.1	-16.2	-16.3	-20.7	-18.4	-16.0
Sharpe Ratio	0.39	0.38	0.39	0.39	0.40	0.40	0.32	0.32	0.33

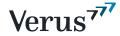
Source: MPI and Verus 2023 Inflation forecast: 2.5%



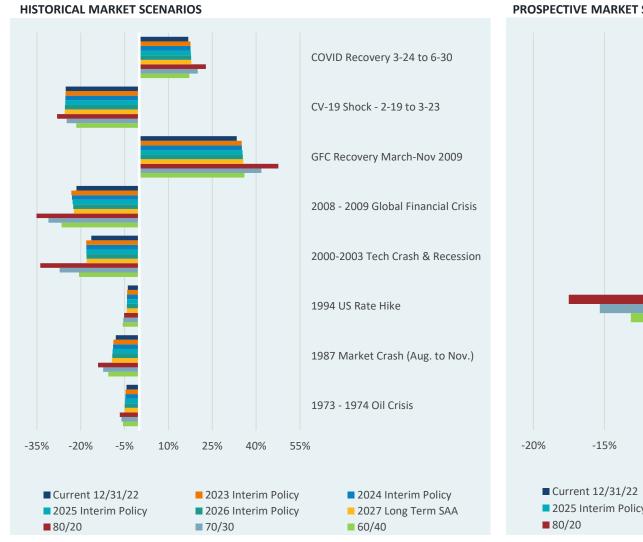
# Risk decomposition

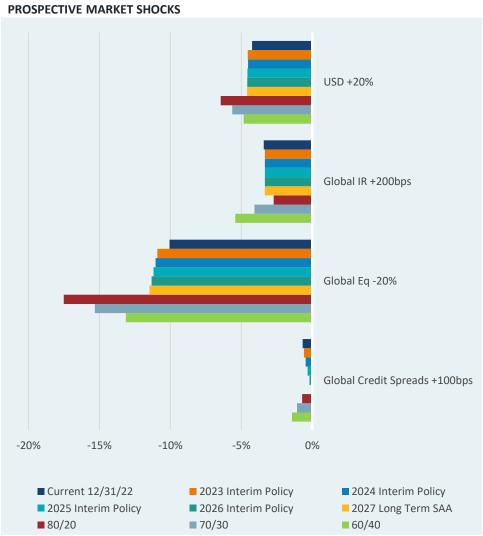


Barra as of 12/31/22



# Scenario analysis and stress test





Barra as of 12/31/22



# Private equity implementation



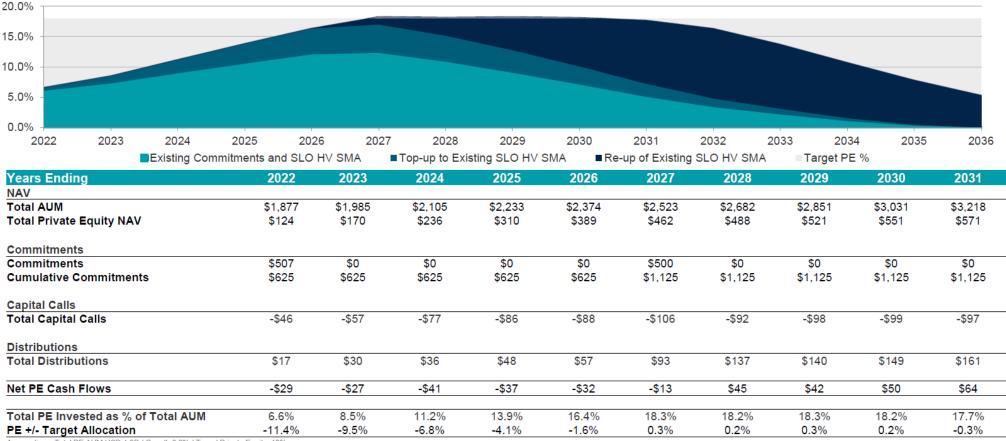
# Overview

- During our 2022 private markets program review in November, we discovered that, based on our proprietary pacing model, SLOCPT's private equity allocation was on track to reach only 11.5% of the total portfolio, well shy of the 18% target
- Based on input from SLOCPT's private markets advisor, HarbourVest, we believe an additional "top-up" commitment of \$150 million is appropriate
- Notably, HarbourVest has agreed to maintain the current fee schedule for the overall program that includes Private Equity, Private Credit, and Infrastructure



# Private equity implementation

Additional \$150 million committed to existing separate account program assuming existing portfolio construction Re-up commitment in 2027 of \$500 million to achieve target allocation



Assumptions: Total PE AUM USD 1.9B / Growth 6.2% / Target Private Equity: 18%

Performance is based on hypothetical projections after December 2022. Hypothetical projections are not a reliable indicator of future performance. This information is provided at your request, solely as an example of the pace at which capital may be called and distributed by the fund(s). Hypothetical projections should be used solely as a guide and should not be relied upon to manage your investments or make investment decisions. Past performance and hypothetical projections are not reliable indicators of future results. Realized results will differ from the hypothetical projections, and there can be no assurance that future funds will achieve comparable results. See additional disclosures at the end of this section.

Source: Harbourvest



# Recommendations



## Recommendations

- Maintain current long-term strategic asset allocation
- Extend implementation glidepath 1-year to 2027 and continue to monitor
- Implement 2023 interim benchmark
- Increase private equity commitment to achieve 18% target allocation



#### **Board of Trustees**

1000 Mill Street San Luis Obispo, CA 93408 Phone: (805) 781-5465 Fax: (805) 781-5697 www.SLOPensionTrust.org



Date: February 27, 2023

To: Board of Trustees

From: Carl Nelson – Executive Director

Amy Burke - Deputy Director

Scott Whalen - Verus - Investment Consultant

#### Agenda Item 13: Private Equity - Additional Commitment - Harbour Vest SLO Fund

#### **Recommendation:**

- 1. Approve an additional commitment of \$150 million to the existing HarbourVest SLO Fund private markets program to be allocate to Private Equity.
- 2. Authorize the Executive Director to execute necessary documents and amendments, subject to legal review, to implement the additional comment.

#### **Background:**

The SLOCPT implemented a large, 5+ year program to significantly increase its Private Market investments (Private Equity, Private Credit, and Infrastructure) with the September 2021 hiring of HarbourVest. This was an important step in implementing the Functionally Focused Portfolio revisions to the SLOCPT's long term Strategic Asset Allocation Policy (SAA). The 2020 revisions to the SAA include large increases in allocation to Private Market assets to improve expected risk-adjusted returns.

The HarbourVest SLO Fund is a "Fund-of-One" Limited Partnership managed by HarbourVest. The SLOCPT is the only LP in this large, diversified pool of various private market investments - Private Equity, Private Credit, and Infrastructure. The initial commitment to invest in the HarbourVest SLO Funs is \$770 million to be called over multiple years.

The HarbourVest Tactical Plan for investing the SLO Fund has been presented to the Board of Trustees early in 2022 with an update at the November 2022 Board meeting.

#### **Additional Private Equity Commitment:**

Additional analysis by both Verus and HarbourVest about the pace of underlying commitments to Private Equity (PE) were discussed in the preceding Agenda Item 12 on asset allocation. Staff concurs with the conclusion of both Verus and HarbourVest that to achieve the total SAA target of 18% allocated to Private Equity, additional commitments are necessary. The initial commitment to the HarbourVest SLO Fund of \$770 million included \$350 million allocated to PE.

- 1. We recommend an additional commitment of \$150 million to PE.
- 2. We further recommend that we fill this added PE commitment by expanding the existing HarbourVest SLO Fund program.
  - a. The alternative of adding other fund-of-funds for the increase of \$150 million will likely be at materially higher fee levels compared to the highly competitive fee structure already in place with the HarbourVest SLO Fund. HarbourVest has agreed to take in the added PE commitment under the existing fee schedule.
  - b. The original 2021 rationale for hiring HarbourVest to manage such a large portion of the total SLOCPT fund is still valid given the strength of the HarbourVest organization and their performance track-record with other similar funds.
  - c. Expanding the HarbourVest SLO Fund Private Equity commitment from \$350 million to \$500 million can be implemented in a timely manner via a straightforward amendment to the existing LP agreement.

The attached presentation materials from HarbourVest detail the recommendation and the proposed changes to the HarbourVest tactical plan for the HarbourVest SLO Fund. The exhibits include projections of asset values and cashflows for —

Private Equity additional \$150 million commitment

Private Credit no changesInfrastructure no changes

Respectfully Submitted,



Private equity program proposal and cash flows



## Proposal for \$150 million top-up to existing separate account program



#### HarbourVest sets out key elements designed to deliver a comprehensive and supportive partnership



#### Partnership objectives and structure

- > Partner on the development and implementation of a customized global private markets program
- > Create long-term outperformance compared to public markets while limiting volatility and downside risk
- > Fund-of-one



#### Future capital deployment - No changes compared to existing diversification

- > \$150 million commitment over the remaining 4 years of the investment period; term unchanged at 15-years
- > 70% primary, 20% co-investment, and 10% secondary
  - Primary Stage: 65% Buyout, 35% Venture/Growth
  - Primary Geography: 55% North America, 25% Europe, and 20% Asia
- > 45-50 primary managers selected for optimal exposure to value, growth, and industry specialization



#### **Knowledge Transfer Services**

- > Online 24/7 access to Investment Committee due diligence memos
- > Annual tactical planning sessions focused on investment execution consistent with strategic plan
- > Access to deal team members to review due diligence for approved investments

Prepared at the request of San Luis Obispo (February 2023). These amounts reflect the account and subject to further discussion. Terms are subject to change prior to the issuance of definitive fund documentation.

Agenda Item 13

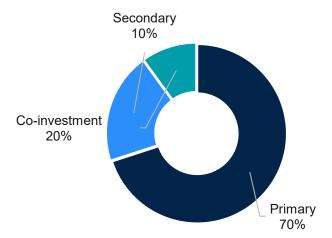
## Private equity tactical plan - \$500 million



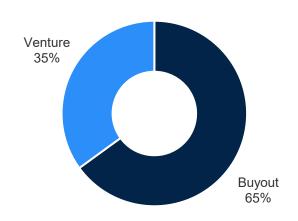
			Targ		ry (\$m) ers with a Target	of 45		Secondary (\$m) Target: 20-30 Deals	Co-investment (\$m) Target: 30-40 Deals		
Program Year	Total per Year		Buyout - 20			Venture - 25			300000		
		North America	Europe	Asia	North America	Europe	Asia	Global	Global		
Year 1	\$76	\$19	\$9	\$4	\$8	\$4	\$6	\$12	\$14		
Year 2	\$116	\$29	\$13	\$6	\$12	\$6	\$9	\$19	\$22		
Year 3	\$115	\$30	\$12	\$6	\$12	\$6	\$9	\$19	\$21		
Year 4	\$97	\$29	\$13	\$6	\$12	\$6	\$9	\$0	\$22		
Year 5	\$96	\$30	\$12	\$6	\$12	\$6	\$9	\$0	\$21		
Total	\$500	\$137	\$59	\$28	\$56	\$28	\$42	\$50	\$100		

#### **Proposed Portfolio Construction**

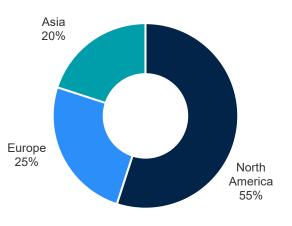
#### **Strategy**



#### **Primary Stage**



### **Primary Geography**



These amounts reflect the current expectations for the allocation of the account. The ultimate allocation may differ based upon market conditions and available investment opportunities over the life of the account and subject to further discussion with San Luis Obispo. Tactical plan totals might not foot due to rounding.

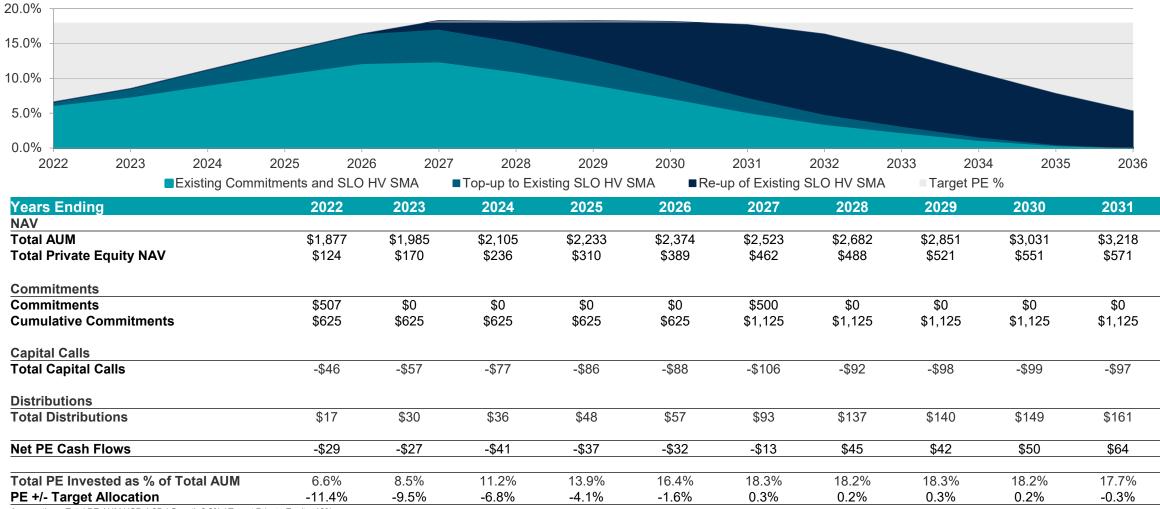
Agenda Item 13



## Private equity projected cash flows and NAV development



Additional \$150 million committed to existing separate account program assuming existing portfolio construction Re-up commitment in 2027 of \$500 million to achieve target allocation



Assumptions: Total PE AUM USD 1.9B / Growth 6.2% / Target Private Equity: 18%

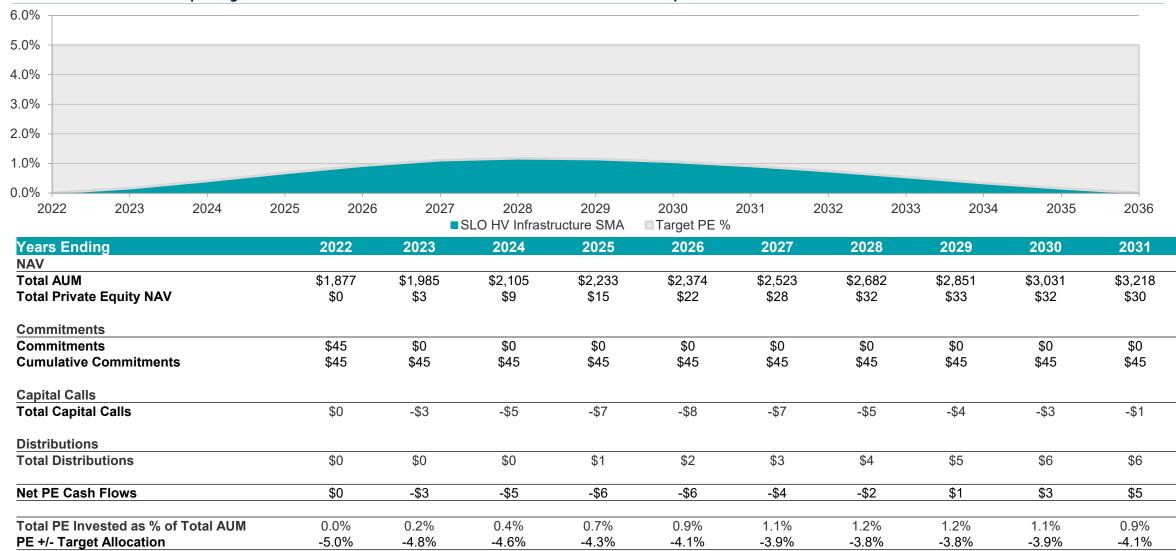
Performance is based on hypothetical projections after December 2022. Hypothetical projections are not a reliable indicator of future performance. This information is provided at your request, solely as an example of the pace at which capital may be called and distributed by the fund(s). Hypothetical projections should be used solely as a guide and should not be relied upon to manage your investments or make investment decisions. Past performance and hypothetical projections are not reliable indicators of future results. Realized results will differ from the hypothetical Agenda Item 13 projections, and there can be no assurance that future funds will achieve comparable results. See additional disclosures at the end of this section.

Infrastructure and private credit cash flows



## Infrastructure projected cash flows and NAV development



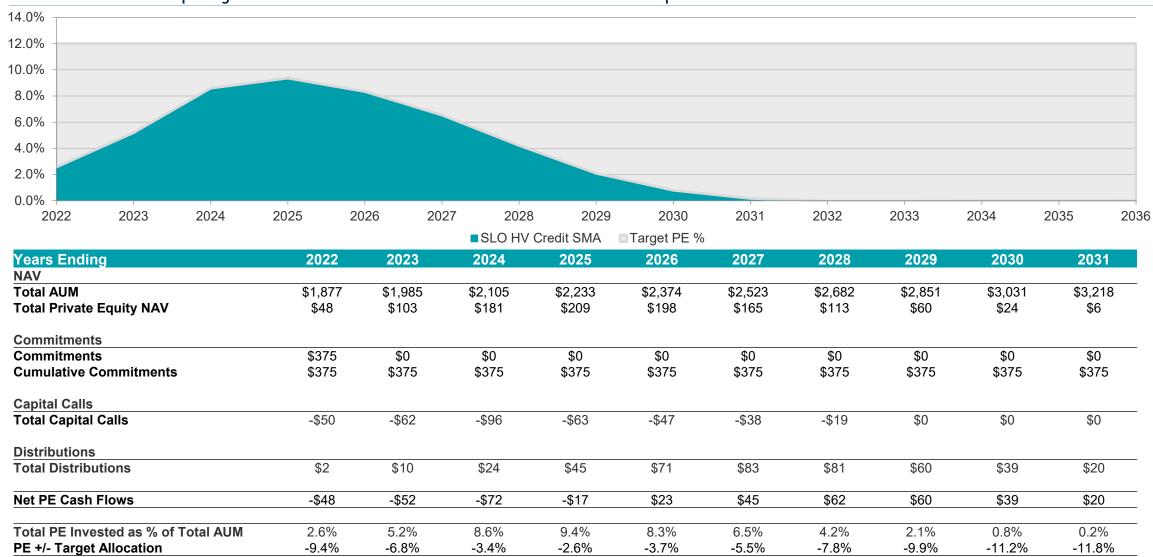


Assumptions: Total PE AUM USD 1.9B / Growth 6.2% / Target Infrastructure: 5%

Performance is based on hypothetical projections after December 2022. Hypothetical projections are not a reliable indicator of future performance. This information is provided at your request, solely as an example of the pace at which capital may be called and distributed by the fund(s). Hypothetical projections should be used solely as a guide and should not be relied upon to manage your investments or make investment decisions. Past performance and hypothetical projections are not reliable indicators of future results. Realized results will differ from the hypothetical Agenda Item 13 projections, and there can be no assurance that future funds will achieve comparable results. See additional disclosures at the end of this section.

## Private credit projected cash flows and NAV development





Assumptions: Total PE AUM USD 1.9B / Growth 6.2% / Target Credit: 12%

Performance is based on hypothetical projections after December 2022. Hypothetical projections are not a reliable indicator of future performance. This information is provided at your request, solely as an example of the pace at which capital may be called and distributed by the fund(s). Hypothetical projections should be used solely as a guide and should not be relied upon to manage your investments or make investment decisions. Past performance and hypothetical projections are not reliable indicators of future results. Realized results will differ from the hypothetical Agenda Item 13 projections, and there can be no assurance that future funds will achieve comparable results. See additional disclosures at the end of this section.

## Important information regarding hypothetical cash flow projections



Fund Cash Flow Projections. The projections contained herein are based on information about actual cash flows and dispositions made to date as well as certain assumptions regarding estimated future net cash flows and dispositions, with the valuations and timing of such estimates based on a number of factors. HarbourVest's cash flow model incorporates certain assumptions regarding expected portfolio construction, capital call pacing, and distribution pacing. These assumptions are based on historical HarbourVest data, internal expected investment value targets, expected fund level expenses and fees, expected near-term activity, fund-level leverage, and actual portfolio and fund level cash flows. The cash flow model for the fund is then refined based on fund-specific portfolio developments and expectations including portfolio company events, current and projected valuation changes, and market environment. Consequently, the cash flow model for the fund represents an estimate of future returns based on both historical performance and certain inputs that are influenced by HarbourVest's expectations for future fund events. Performance is based on hypothetical projections after the date indicated, and actual returns prior to such date. The assumptions used for such projections and the projections themselves are subject to uncertainty, and are likely to be modified as new information becomes available. Detailed information regarding the process for constructing the cash flow analysis herein, including valuation methodology, assumptions and calculations, is available upon request.

Custom Cash Flow Projections. Customized cash flow projections are prepared upon request to project the cash flows and total assets under management that would result from investments in multiple HarbourVest funds, given certain stated assumptions. Customized projections are derived from applying the stated assumptions and projected commitments to HarbourVest's fund-level cash flow projections. Changes to model assumptions would result in different custom projects, which changes may be material. Where commitments to successor funds are indicated, successor fund cash flow projections are based primarily on historical HV data related to prior funds in the same investment program. The investment strategies of successor funds may deviate from prior funds in the program, in which case the assumptions used to project custom cash flows may no longer be representative of the anticipated characteristics of successor funds.

Realized Cash Flows Will Differ From Projections. This information is provided at your request, solely as an example of the pace at which capital may be called and distributed by the fund(s) based on historical commitments and projected next cycle commitment. Investors and prospective investors should bear in mind that the cash flow projections presented is are derived from a hypothetical model and, as such, do not reflect actual timing or underlying fund performance and should not be construed as predicting the future. Hypothetical assumptions used in this modeling exercise are Harbour/Vest estimates based on prior fund experience, current market conditions, and current fund expectations. The actual pace and timing of cash flows is likely to be different and will be highly dependent on the funds' commitment pace, the types of investments made by the funds, the investment pace of the underlying partnerships, and market conditions; consequently, realized cash flows will differ from the hypothetical model. The cash flow projections are based on assumptions about returns using current and historical data. No representation or warranty is made as to the reasonableness of the assumptions made or that all assumptions used in achieving the returns have been stated or fully considered. Changes in the assumptions may have a material impact on the illustrative cash flows presented. Market conditions have a strong impact on investments and realizations and could materially change these projections. Projections may also under or over compensate for the impact of certain economic and market factors all of which can adversely impact results. The projections in this presentation, including projected cash flow, projected IRR, and other information generated by the modeling herein regarding the likelihood of a similar outcome as that depicted above are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results. No investor received the performance shown. Results may vary with each

**No Warranties**. HarbourVest disclaims any and all responsibility for any errors and accuracy of the information that may be contained herein. The information and data included herein have been compiled by HarbourVest from a variety of sources, and are subject to change without notice. HarbourVest makes no warranties or representations whatsoever regarding the quality, content, completeness, suitability, adequacy, sequence, accuracy, or timeliness of such information and data.

This custom cash flow projection was prepared at the request of San Luis Obispo on February 3rd, 2023

Agenda Item 13

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#### **Board of Trustees**

1000 Mill Street San Luis Obispo, CA 93408 Phone: (805) 781-5465 Fax: (805) 781-5697 www.SLOPensionTrust.org



Date: February 27, 2023

To: Board of Trustees

From: Carl Nelson – Executive Director

Amy Burke – Deputy Director

Scott Whalen – Verus – Investment Consultant

Chris Waddell – General Counsel

#### Agenda Item 14: Investment Policy Statement and Investment Procedures Review

#### **Recommendation:**

That the Board of Trustee review and discuss the proposed amendments to the Pension Trust Investment Policy Statement, Strategic Asset Allocation benchmarks and Investment Procedures document with Staff and Verus.

Approval recommended for -

- 1. **Investment Policy Statement (IPS)** no changes to the fundamental IPS are recommended. Staff recommends that the existing Environmental, Social, Governance (ESG) risk-return factors language be retained without change.
- 2. **Strategic Asset Allocation Addendum A to the IPS** the Strategic Asset Allocation (SAA) exhibit is incorporated in the IPS as **Addendum A**. No changes to the SAA long-term asset mix are recommended. An extension of the target date for reaching the long-term SAA to 2027 was included in the preceding Agenda Item 12. A minor revision to the investment benchmark used for total public market equities is proposed to use a global benchmark.
- 3. **Investment Procedures (IP)** Minor changes to the IP document are recommended. A revised requirement for cashflow reporting to the Board of Trustees is recommended.

#### **Discussion:**

The current Investment Policy Statement and Investment Procedures were adopted in September 2020. At that time, they were significantly revised from the prior IPS to both clean them up for contemporary use and to incorporate the use of a Functionally Focused Portfolio approach. The Strategic Asset Allocation (SAA) policy is part of the overall IPS document as "Addendum A" so that it can readily be reviewed annually and amended as necessary. The SAA policy had minor amendments to the investment benchmarks specified in that exhibit approved by the Board of Trustees in March of 2021.

#### Investment Policy Statement – ESG related language

In September 2022, the Board of Trustees, Staff, General Counsel, and the Investment Consultant (Verus) had an extensive presentation and discussion on Environmental, Social, and Governance (ESG) risk-return factors as they are addressed in the Pension Trust's investment policy. At that time, it was planned that Staff and Verus would return to the Board in February 2023 with a review of the full IPS document and provide proposed revisions to the ESG language included in the IPS.

Language addressing Environmental, Social, and Governance (ESG) risk-return factors was first incorporated in the Pension Trust's IPS in 2015. Staff has reviewed the existing ESG language in the IPS and believes that it continues to be appropriate for the Pension Trust's investment management purposes and therefore recommends that it remain unchanged.

#### Strategic Asset Allocation – Addendum A to the IPS – benchmark revision

No changes to the asset allocation targets included in the SAA are recommended. Verus recommends a revision to the investment benchmark for total public market equities. In the current SAA, total public market equites are compared to the Russell 3000 index of U.S. equities. However, the public market equities allocation includes both U.S. stocks and international stocks. Therefore, it is recommended that the benchmark for total public market equites be revised effective 1/1/23 to be the MSCI AC World Equity Index.

#### Investment Procedures - cashflow analysis revision

The adopted Investment Procedures document includes a requirement for an annual Cashflow Analysis to be presented to the Board of Trustees addressing pension contributions, benefits and other cashflows. This is a holdover requirement from the IPS that predated the adoption of the Functionally Focused Portfolio approach with its dedicated Liquidity Pool.

The more relevant reporting for the Board under the current IPS is on the monthly asset allocation of the total fund demonstrating the maintenance of the targeted allocation to liquid assets. The issue of whether or not the Retirement Plan is cashflow positive or negative (contributions vs. benefits) is fully addressed as part of the annual actuarial valuation. Therefore, it is recommended that the IP document be amended as shown on the attached redline version.

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## SAN LUIS OBISPO COUNTY PENSION TRUST

## **BOARD OF TRUSTEES**

## **INVESTMENT POLICY STATEMENT**

#### March 22, 2021 February 27, 2023

Amends Investment Policy Statement originally adopted September 28, 2020,

Last amended March 22, 2021

•

Replaces prior Investment Policy
Dated Nov. 23, 2015 and
Last amended March 23, 2020

### I. Investment Policy Purpose and Authority

The San Luis Obispo County Pension Trust Board of Trustees, pursuant to applicable County, State and Federal laws and regulations and in keeping with its fiduciary responsibilities, has established this Investment Policy to govern the investment of the assets of the Pension Trust.

The purpose of this Investment Policy is to provide policy guidance and documentation of the authority, role and governance practices of the Pension Trust relative to the investment of the Trust's assets.

In formulating this Investment Policy, the Board of Trustees has followed the provisions of Article XVI, Section 17 of the California State Constitution which are set forth in pertinent part below:

- 1. Notwithstanding any other provision of law or of the California Constitution to the contrary, the Board of Trustees shall have plenary authority and fiduciary responsibility for investment of moneys and administration of the Pension Trust.
- 2. The Board of Trustees shall have the sole and exclusive fiduciary responsibility over the assets of the Pension Trust.
- 3. The Board of Trustees shall have the sole and exclusive responsibility to administer the Pension Trust in a manner that will assure the prompt delivery of benefits and related services to members, participants, and their beneficiaries.
- 4. The assets of the Pension Trust are trust funds and shall be held for the exclusive purpose of providing benefits to members, participants and their beneficiaries and defraying the reasonable expenses of administering the Pension Trust.
- 5. That each member of the Board of Trustees shall discharge his or her duty with respect to the Pension Trust solely in the interest of, and for the exclusive purposes of:
  - a. providing benefits to members, retired participants and their beneficiaries
  - b. minimizing contributions to the Pension Trust
  - c. defraying the reasonable expenses of administering the Pension Trust.
- 6. The Board of Trustees' duty to its members, participants and beneficiaries shall take precedence over any other duty.
- 7. Each member of the Board of Trustees shall discharge his or her duty with respect to the Pension Trust with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in like capacity and familiar with these matters would use in the conduct of an enterprise of a like character and with like aims.
- 8. The Board shall diversify the investments of the Pension Trust so as to minimize the risk of loss and to maximize the rate of return, unless under the circumstances it is clearly not prudent to do so.

## II. Investment Objectives

- 1. The overall objective is to invest the assets of the Pension Trust solely for the benefit of plan members, participants and their beneficiaries while attempting to minimize contributions, investment costs and administration costs.
- 2. The long-term performance objective for the Pension Trust is to meet or exceed the actuarially assumed rate of return net of fees and expenses, over a complete economic cycle and relevant longer periods.

## III. Investment Philosophy

- 1. Time Horizon The Pension Trust will periodically review the portfolio's alignment with the Retirement Plan's liabilities. The investment policy and guidelines are based on a time horizon of greater than five years. The Pension Trust will consider both intermediate-term and longer-term investment return horizons in formulating expected returns and assessing portfolio risk parameters. The Pension Trust's strategic asset allocation is based on this longer-term perspective. Fluctuations of investment results in the interim should be viewed with an appropriate perspective.
- 2. Risk Tolerance Investment opportunities in various asset classes have differing risk and return expectations. In general, investments with higher expected returns involve a higher level of risk. The Pension Trust recognizes that some level of risk must be assumed to achieve the long-term investment objectives. The Pension Trust will attempt to achieve its investment return objective with an appropriate level of risk using an efficient combination of investable assets.
- 3. Drawdown Risk The Pension Trust is a retirement system in a negative cashflow status (benefits paid exceed contributions received annually), As a result, the Pension Trust's funded level and required contributions are increasingly sensitive to periods when investment returns are negative even with the expectation that investment markets will recover after such events. As part of its consideration of risk tolerance and asset allocation the Pension Trust will attempt to manage short-term drawdown risk when developing its long-term asset allocation policy and when shifting or rebalancing the portfolio.
- 4. Liquidity Needs Sufficient liquidity must be maintained to pay benefits and expenses. Investment income and contributions may or may not exceed projected benefit payments and expenses on an annual basis. Within the constraints of maintaining adequate liquidity for the payment of benefits and expenses, a reasonable portion of the portfolio may be invested in illiquid investments. The liquidity requirements shall be reviewed at least annually.
- 5. Asset Allocation as Primary Control Over Risk and Return It is impossible to accurately and consistently predict the future; therefore, the Plan is required to be prudently diversified across

and within asset classes in anticipation of various economic conditions. In a well-diversified portfolio, the overall volatility of investment returns is principally driven by the asset allocation and secondarily driven by the individual investment strategies. As such, asset allocation is the primary tool by which the Board can manage the expected risk/return profile of the Plan.

6. Performance Objectives - The expected and actual investment returns of the total fund will depend on the asset allocation targets, the mix of investment styles within asset classes, and individual manager performance. Therefore, performance objectives have been set at three levels: total fund, asset class, and individual portfolios.

#### a. Total Fund

- i. Meet or exceed the actuarial discount rate which has taken into account expected composite portfolio returns. Annualized investment returns (net of fees) should exceed the actuarial discount rate over most five-year periods and over complete economic cycles.
- ii. Meet or exceed the policy benchmark. Annualized investment returns (net of fees) to exceed the policy benchmark over five-year periods. The policy benchmark is a composite of the benchmarks of the asset classes in the asset allocation policy. Composition of the policy benchmark is detailed in Addendum A.

#### b. Asset Class

i. Annualized returns (net of fees) for the asset classes should exceed their respective benchmarks over a five-year period. The asset class benchmarks will be broad market indices that are representative of the investment structure for that asset class. Current benchmarks for the asset classes are shown in Addendum A.

#### c. Individual Portfolios

- i. Performance objectives for manager portfolios are stated in the respective investment management agreements. Returns (net of fees) are expected to exceed the respective benchmarks over three to five-year periods. Manager benchmarks will be determined based upon the investment style of the portfolio for which the manager is hired.
- 7. Compliance The Board believes that investment policies, in aggregate, are the most important determinants of investment success. Compliance with investment policies should, therefore, be monitored diligently.

#### IV. Asset Classes

The asset classes that may be utilized by the Pension Trust include, but are not limited to, the listing shown below. Not all asset classes listed below may be approved for use at any given time. The asset classes approved by the Board of Trustees at any given time are specified in the Strategic Asset Allocation (SAA) policy contained in Addendum A to this Investment Policy. The purpose of utilizing multiple asset classes for the investment of Pension Trust assets is to diversify across different assets that respond to economic and capital market conditions differently. The expected returns, volatility of returns, cross-asset-class-correlations, liquidity and cashflow of different asset classes are to be considered in the setting of the Strategic Asset Allocation specified in Addendum A.

#### **Possible Asset Classes:**

- 1. Domestic Equities
- 2. International / Global Equities
- 3. International Developed Market Equities
- 4. International Emerging Market Equities
- 5. Domestic Fixed Income / Bonds
- 6. International / Global Fixed Income
- 7. International Developed Market Fixed Income
- 8. International Emerging Market Fixed Income
- 9. Short Term Cash Equivalents
- 10. Domestic Real Estate
- 11. International / Global Real Estate
- 12. Infrastructure
- 13. Timber
- 14. Commodities
- 15. Private Equity
- 16. Private Credit
- 17. Other Alternative Strategies (e.g., Risk Parity, Alternative Risk Premia, Momentum, Volatility Capture, Currency Beta)

#### V. Asset Allocation

The current Strategic Asset Allocation – approved asset classes, target allocations and ranges are detailed in Addendum A as approved by the Board of Trustees of the Pension Trust.

The Board of Trustees of the Pension Trust has adopted a strategic asset allocation plan based upon the fund's projected actuarial liabilities and liquidity needs, the Pension Trust's risk tolerances and the risk/return expectations for various asset classes. This asset allocation plan seeks to optimize long-term returns for the level of risk that the Pension Trust considers appropriate. Since projected liability and risk/return expectations will change over time, the Pension Trust will conduct a periodic review of the asset allocation plan, at least triennially, to maintain an optimal allocation, and may also revise the asset allocation in response to significantly changing market conditions that have affected valuations and forward-looking expected returns of asset classes. The Pension Trust will review capital market expectations at least annually.

#### **Functionally Focused Sub-Portfolios**

The asset allocation methodology used in this Strategic Asset Allocation (SAA) policy is based on the Functionally Focused Portfolios model. Three primary sub-portfolios are employed – **Liquidity, Growth, and Risk-Diversifying**. Specific investment strategies and investment managers fit within these three Functional sub-Portfolios. The sub-portfolios are described below.

#### **LIQUIDITY**

- Purpose to ensure adequate assets are available to pay benefits over an extended period, thereby allowing the Growth sub-portfolio to invest for the long term with lessened constraints on liquidity.
- Liquidity Allocation to be established in the setting of the SAA policy specified in Addendum A to this Investment Policy as a certain number of months of gross benefit payments set within an allowable range.
- Replenishment to be replenished through contribution payments and periodic transfers from the Growth or Risk-Diversifying sub-portfolios as part of routine rebalancing transactions.
- Investments highly liquid, low volatility securities expected to generate modest levels of return while preserving capital throughout a market cycle. This portfolio will contain assets such as cash, short-term bonds, laddered government bonds, derivatives, and other investments that provide fixed, contractual cash flows with an acceptable level of credit risk.
- Secondary Purpose a portion of the Liquidity sub-portfolio may be allocated to the Growth sub-portfolio on an opportunistic basis during broad market corrections so long as at least 50% of the SAA Policy target for the Liquidity sub-portfolio is maintained.

• The success of the Liquidity sub-portfolio will be measured by its ability to directly fund benefit payments through low-risk, cash flowing investments, as well as providing a stable offset to the rest of the portfolio during periods of severe market stress.

#### **GROWTH**

- Purpose to grow invested assets over the long term to pay future benefits. Assets from the Growth sub-portfolio may be sold over time and transferred to the Liquidity sub-portfolio as needed.
- Time Horizon, risk and return The Growth sub-portfolio has a long investment horizon and can, therefore, accept a higher level of risk. Assets in this portfolio may be volatile, have reduced liquidity, and derive the bulk of their return from capital appreciation. These assets include public and private equity, corporate and other debt with credit risk premiums, private real estate and other private assets.
- The success of this portfolio will be measured primarily by compounded annual growth rates in conjunction with the annualized standard deviation of returns as the primary measure of risk. Performance evaluation will, therefore, focus on the long-term total risk-adjusted return of the portfolio.

#### RISK DIVERSIFYING

- Purpose to offset the investment risk of the Growth sub-portfolio.
- Time Horizon, risk, and return investment strategies in the Risk Diversifying sub-portfolio are expected to have return profiles that have a low correlation to those in the Growth sub-portfolio. This low correlation of returns is expected to effectively dampen the market volatility across the entire portfolio.
- Secondary Purpose the investment strategies in the Risk Diversifying sub-portfolio will offer additional sources of return to those in the Liquidity and Growth sub-portfolios. Assets in the Diversifying sub-portfolio may be sold during times of market stress or when the assets in the Growth Sub-portfolio are impaired to fund the Liquidity sub-portfolio.
- The success of the Risk 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.

#### ADMINISTRATION OF THE FUNCTIONAL SUB-PORTFOLIOS

• The allocations to the Liquidity, Growth, and Risk Diversifying sub-portfolios will vary over time.

- The Liquidity sub-portfolio will operate as a drawdown vehicle to pay benefits and expenses.
- The Growth and Risk Diversifying sub-portfolios will be subject to the volatility of the markets in which each functional sub-portfolio invests.
- In order to reallocate between the functional sub-portfolios, the SAA Policy as shown in Addendum A to this Investment Policy will guide periodic rebalancing transactions.
- The SAA Policy as shown in Addendum A to this Investment Policy will be reviewed annually by the Board of Trustees based on the advice of the Executive Director / CIO and the Investment Consultant(s).

# VI. Investment Managers

### **Internal vs. External Investment Management:**

The Board of Trustees may from time to time authorize the Pension Trust staff to provide investment management services directly, on an internally managed basis. Any such internal management must consider the professional qualifications and resources of Pension Trust staff. Any such internal management must be fully specified with a stated investment style and goals equivalent to those applied to external investment managers. In general, the Pension Trust has a strong bias towards utilizing external investment managers.

### **Investment Manager Diversification:**

In general, the Pension Trust will employ multiple investment managers across asset classes with diversified investment styles. Examples of investment manager diversification may include but, are not limited to the list shown below.

- 1. Domestic Equities diversified by
  - a. Market capitalization (e.g., small cap, mid cap, large cap)
  - b. Industry and across individual companies
  - c. Investment style (e.g., "growth" and "value")
  - d. Active investment management and index/ passive/ semi-passive strategies.
- 2. International / Global Equities diversified by
  - a. Developed markets
  - b. Emerging markets
  - c. Global markets (including both domestic U.S. and international)
  - d. Individual countries
  - e. Currency exposure and management
  - f. Market capitalization (e.g., small cap, mid cap, large cap)
  - g. Industry and across individual companies
  - h. Investment style (e.g., "growth" and "value")
  - i. Active investment management and index/ passive/ semi-passive strategies.
- 3. Domestic Fixed Income / Bonds diversified by
  - a. Governmental or corporate issuer
  - b. Credit quality
  - c. Industry
  - d. Collateral (e.g., mortgage backed)
  - e. Maturity and Duration
  - f. Yield
  - g. Active or passive management
  - h. Investment Style
- 4. International / Global Fixed Income diversified by
  - a. Developed markets

- b. Emerging markets
- c. Governmental or corporate issuer
- d. Country
- e. Currency exposure and management
- f. Credit quality
- g. Industry
- h. Collateral (e.g., mortgage backed)
- i. Maturity and Duration
- j. Yield
- k. Active or passive management
- 1. Investment Style
- 5. Domestic / International / Global Real Estate Income diversified by
  - a. Geographic area
  - b. Property type
  - c. Leverage
  - d. Investment style e.g., "core", "value added"
  - e. Open end commingled fund or closed end fund (e.g., a limited partnership)
- 6. Commodities–diversified by
  - a. Active or passive management
  - b. Derivatives used
- 7. Private Equity, Private Credit, and other private market illiquid funds diversified by
  - a. Type of investment (e.g., venture capital, buyout, debt, secondary market interests, co-investments)
  - b. General Partner
  - c. Vintage year of limited partnership
  - d. Investment Style

### **Active Investment Management:**

The Pension Trust may from time to time utilize active investment managers to the extent that it holds the expectation that active investment management can generate risk adjusted returns greater than relevant, investable benchmarks over an entire market cycle. The use of passive or index-based investment management will be preferred by the Pension Trust in the absence of expectations of active management outperformance. The Pension Trust will regularly evaluate all active investment managers relative to lower cost alternatives of passive or index-based management.

#### **Environmental / Social / Governance:**

The Pension Trust recognizes that the economic value of its investments may be impacted by Environmental / Social / Governance issues. In its capacity as fiduciaries, the Board of Trustees in the interests of prudent diversification may evaluate potential Environmental / Social / Governance issues at the investment manager level as being a reasonable factor when other expected investment alternatives are estimated to be equal in merit (i.e., all else being equal). The Pension Trust delegates consideration of the merits of any such Environmental / Social / Governance issues at the individual investment level to investment managers employed by the Pension Trust. Investment managers employed by the Pension Trust may consider Environmental / Social / Governance factors (e.g., environmentally sustainable business practices, responsible corporate governance and transparency) in the context of their positive impacts on expected investment returns. The Pension Trust expects its investment managers to be aware of Environmental / Social / Governance issues and consider their impact on diversification and risk in their portfolios.

### Role of Derivatives, Cash Securities, Long/Short Positions, Leverage:

In general Pension Trust investments will be in long positions in cash securities markets. Some asset strategies may employ both long and short positions in derivative securities or which may be acceptable depending on the type of investment manager and/or strategy applicable. Some asset strategies may employ leverage which may be acceptable depending on the type of investment manager and/or strategy applicable.

Some investment exposures may be more efficiently achieved with derivative instruments which are acceptable depending on the type of investment manager and/or strategy applicable. Investment managers may be permitted under the terms of individual investment guidelines to use derivative instruments to implement market decisions and security positions and to control portfolio risk. Derivatives are contracts or securities whose returns are derived from the returns of other securities, indices or instruments including, but not limited to, futures, forwards, options, swaps and options on futures. Examples of appropriate applications of derivative strategies include hedging interest rate and currency risk, rebalancing portfolio exposures, securitizing fund level and manager cash, maintaining exposure to a desired asset class while effecting asset allocation changes, adjusting portfolio duration for fixed income and gaining exposure to commodities. Portfolio liabilities associated with investments (i.e. mortgage forward bond purchases, futures, in-the-money short puts, reverse repurchase agreements, etc.) shall be backed by cash equivalents or deliverable securities. No derivatives positions can be established that create portfolio characteristics outside of portfolio guidelines. Managers must ascertain and carefully monitor the creditworthiness of any third parties involved in derivative transactions.

# VII. Investment Policy Statement and Investment Procedures – Review and Revision

The Board of Trustees reserves the right to amend this Investment Policy Statement and the Investment Procedures at any time they deem such amendment to be necessary, or to comply with changes in federal law as these changes affect the investment of Fund assets.

This Investment Policy Statement and the Investment Procedures shall be reviewed, at a minimum, every three years or as directed by the Board of Trustees. Such reviews will focus on the continuing feasibility of achieving the investment objectives and the continued appropriateness of the investment policy relative to the Pension Trust's circumstances.

It is not expected that the investment policy will change frequently; in particular, short-term changes in the financial markets generally should not require an adjustment in the investment policy. However, specific policy issues may be visited whenever the Board of Trustees deems necessary. Specific occurrences which might suggest to the Board an earlier review include, but are not limited to, a change in the Fund's circumstances and / or a material change in the capital market environment.

### ADDENDUM A

Strategic Asset Allocation Policy			Limits		Performance	
Proposed Policy Feb. 27, 2023		TARGET	Min.	Max.	Benchmark	
LIQUIDITY						
Total Liquidity Allocation	(a)	10%	5%	20%	Policy mix composite	
Cash Equivalents		4%	1%	15%	90 day T-Bills	
Short Duration Govt/ IG Credit	(c)	6%	0%	15%	Barclays U.S. Govt/Credit 1-3	
GROWTH						
Total Growth Allocation	(b)	75%	25%	95%	Policy mix composite	
Equities - Public Market		30%	15%	85%	MSCI ACWI	
US Large Cap Growth/Value					S&P 500	
US Small/Mid Cap Growth/Value					Russell 2500	
Intl. Developed Market Growth/Value Intl. Emerging Market					MSCI EAFE	
Global		30%	15%	70%	MSCI ACWI	
Debt - Public Market		0%	0%	30%		
US Core + Bonds IG	(c)	070	070	2070	BC Aggregate Bond	
Global Bonds					FTSE WGBI ex US Treas.	
Bank Loans					S&P/LSTA Leveraged Loan Index	
Emerging Market Debt					50% JPM EMBI / 25% JPM	
Emerging Warket Beet					GBIEM / 25% JPM ELMI+	
Real Assets		15%	10%	30%	Policy mix composite	
Real Estate - Core		5%	5%	15%	NCREIF	
Real Estate Value Add		5%	0%	15%	NCREIF	
Infrastructure - Global		5%	0%	15%	TBD	

Strategic Asset Allocation Policy Proposed Policy Feb. 27, 2023		TARGET	Limits Min. Max.		Performance Benchmark		
110posed 1 oney 1 co. 27, 2020		IMOLI	TVIIII.	141421.	Beneimark		
Private Markets	(e)	30%	5%	45%	(e)		
Private Equity Diversified PE strategies Specific PE funds Equity related alternatives	(d)	18%	5%	30%			
Private Credit Diversified PC strategies Specific PC funds Debt related alternatives	(d)	12%	5%	25%			
Other Growth Strategies Opportunistic		Varies	0%	10%			
RISK DIVERSIFYING							
Total Risk Diversifying Allocation		15%	5%	30%			
US Treasury - Intermediate/Long Govt.Bond US Treasury - Inflation Protected - TIPS	ls	8% 7%	4% 3%	15% 15%	Barclays Treasury 7-10 Year Barclays U.S. TIPS 5-10 Index		
TOTAL		100%			Total Fund Policy mix		
<ul> <li>(a) Liquidity target ~ 1.3 yrs gross pension benefits - currently ~\$140m ~10%</li> <li>(b) Growth - long-term investments with some illiquidity. Periodic drawdowns to replenish Liquidity as needed.</li> <li>(c) IG = Investment Grade Credit HY = High Yield - below IG Credit</li> </ul>		<ul> <li>(d) Diversified Private Markets may be Fund-of-Funds and/or Direct LP program</li> <li>(e) To avoid unnecessary and possibly misleading Tracking Error, the Total Fund Policy Benchmark uses actual time-weighted private markets returns applied to actual private market asset class weights rounded to the nearest whole percentage point. The difference in actual weight versus target is allocated to the private market investment's public market "equivalent" (e.g., private equity to public equity; private credit to public fixed income).</li> </ul>					

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# SAN LUIS OBISPO COUNTY PENSION TRUST

# **BOARD OF TRUSTEES**

# **INVESTMENT PROCEDURES**

# **Supplement to Investment Policy Statement**

**September 28, 2020 February 27, 2023** 

# I. <u>Investment Procedures Purpose and Authority</u>

The San Luis Obispo County Pension Trust (SLOCPT) Board of Trustees establishes the Investment Policy governing the investment of Pension Trust assets. The Investment Policy Statement (IPS) approved and periodically amended by the Board of Trustees is the guiding document for investments.

This document on Investment Procedures addresses the various procedures that support the implementation of the IPS and thus is supplementary to the Investment Policy Statement. The Investment Procedures are presented herein as a separate document from the IPS for the sake of clarity and a concise focus in the IPS.

The primary responsibility for administering, monitoring, and reporting to the Board of Trustees on the Pension Trust Investment Policy lies with the Executive Director / Chief Investment Officer (CIO).

# II. Investment Managers

### **Investment Manager Guidelines:**

All investment managers engaged by the Pension Trust must:

- 1. Be registered investment advisors with the Securities and Exchange Commission, trust companies that are regulated by State and Federal Banking authorities, or mutual fund companies.
- 2. Accept fiduciary responsibility and contractually agree to notify the President of the Board of Trustees and the Executive Director in writing if they are unable to continue acting in the capacity of a fiduciary or investment advisor.
- 3. Maintain insurance coverage, including errors & omissions, surety bond, fiduciary liability, ERISA bond, etc. consistent with normal practices for investment management firms managing retirement plan assets.

Each investment manager hired by the Pension Trust shall be governed by the Investment Policy Statement and these Investment Procedures. Moreover, each investment manager shall be hired by the Board of Trustees pursuant to a written agreement which shall incorporate this Investment Policy Statement and these Investment Procedures and which shall provide that the agreement is terminable at any time, with or without cause, at the discretion of the Board of Trustees.

Investment Managers shall agree to:

- 1. Maintain the investment approach that the manager was hired to implement under any and all capital market environments.
- 2. Immediately report in writing to the Board any changes in firm structure, firm management, portfolio management personnel, or the manager's investment decision making process.
- 3. Fully educate the Pension Trust as to the specifics of the manager's investment process.
- 4. Exclusive of specific Pension Trust investment guidelines, maintain a portfolio that generally conforms to other portfolios managed by the investment manager for other clients using similar mandates.
- 5. Otherwise, treat the portfolio managed for the Pension Trust in a manner consistent with comparable portfolios managed for other clients in portfolio construction, trading, and all other aspects.

Members of the investment manager's research and portfolio management teams will comply with the CFA Institute Professional Standards and Code of Ethics. Any industry or regulatory disciplinary action taken against members of the investment manager's investment staff must be immediately reported in writing to the Board.

If the Board delegates proxy voting responsibilities to its investment managers, the investment manager agrees to vote all proxy ballots according to the best economic interest of the Pension Trust and in a manner consistent with any specified Board approved proxy policies.

### **Investment Manager Due Diligence – Retention and Termination:**

The Board of Trustees delegates to Staff, with assistance from its Consultant(s), the process of identifying and recommending investment managers for retention or termination. Staff, working with Consultant(s), will conduct comprehensive due diligence to provide the Board of Trustees with necessary and sufficient information in support of recommendations to retain or terminate external investment managers. The specific elements of due diligence will vary based on the asset class and the characteristics of the individual manager(s) and/or strategies under consideration. The due diligence with respect to underlying investment managers shall include, but is not limited to, an assessment of the merits of investment process and philosophy, resources and talent available to the organization, the likelihood that key resources will remain, risk management processes, internal control and compliance processes and procedures, and other organizational considerations.

# Prohibited Transactions, Transactions and Brokerage:

The following transactions will be prohibited: selling on margin; "prohibited transactions" as defined under ERISA; transactions that involve a broker acting as a "principal" where such broker is also the investment manager who is making the transaction; and any or all investment activities forbidden by Securities and Exchange Commission or other applicable governing bodies. The Pension Trust hereby instructs its investment managers to seek best execution when conducting all trades. Managers are instructed to seek to minimize commission and market impact costs when

trading securities. Also, either internally or through an externally provided transaction cost evaluation service, investment managers are expected to measure the costs associated with their investment trades. When trading securities, best execution is the paramount consideration and this objective is expected to provide for and protect the best economic interest of the Pension Trust.

### **Placement Agents:**

The Pension Trust will not use the services of investment managers secured through the use of external Placement Agents as that term is defined in Section 7513.8(d) of the California Government Code.

# III. Investment Custody

#### **Master Custodian:**

The Custodian Bank, selected by the Board to act as the principal custodian of assets of the Trust, is delegated the responsibility of holding the assets and evidence of interests owned by the Pension Trust in investment vehicles and cash (and equivalents). The Board may authorize the Custodian Bank to invest in temporary short-term fixed income investments both for the investment strategies and as a part of the cash portion of the Pension Trust assets. Such investments will be managed in general accordance with short-term fixed income investment guidelines as detailed in the Custodial Agreement. Cash managed for investment strategies shall be considered to be sub-portions of the assets managed by the directing Investment Managers.

The Custodian Bank shall be authorized to conduct a securities lending program within liquidity and risk constraints if established by the Board.

### **Separate Account vs. Commingled Funds:**

The Pension Trust may hold its investments in separate accounts managed by investment managers and custodied by a master custodian. The Pension Trust may also hold its investments in pooled, commingled accounts, mutual funds, collective trusts, limited partnership interests or similar arrangements. In general, the Pension Trust has a bias in favor of commingled funds where available.

# IV. Investment Consultants

The Board of Trustees of the Pension Trust recognizes that the employment of highly qualified investment consultants is necessary to the discharge of its fiduciary duties. Accordingly, it is the policy of the Pension Trust to consistently employ a general investment consultant. From time to time the Pension Trust may employ more specialized investment consultants as deemed necessary for particular asset classes (e.g., real estate, private equity, other alternatives).

# V. <u>Investment Administration</u>

### **Liquidity Management:**

Cashflow Analysis Liquidity and Asset Allocation - Annually tThe Executive Director/CIO shall cause to be prepared a Cashflow Analysis of the Pension Trust addressing at least monthly analyze the status of the Liquidity Pool under the adopted Investment Policy Statement considering contributions, benefit payments, investment cashflows, administrative expenses and the net liquidity needs of the Pension Trust and submit include appropriate measures in the monthly report such report to the Board of Trustees required below under "Reporting".-

**Cash Management** – The Executive Director/CIO will manage the cash transactions of the Pension Trust such that benefit payments are made in a timely manner. A reserve of liquid funds shall be maintained equal to at least three months of expected benefit payments.

## **Portfolio Rebalancing:**

The Pension Trust recognizes the importance of regular and disciplined rebalancing of its asset allocation to match the target allocations and remain within the approved asset mix ranges as specified in Addendum A to the Investment Policy Statement. Accordingly, the Executive Director/CIO is authorized by this policy to evaluate the need for rebalancing at least quarterly and effect regular rebalancing of the asset mix as needed, but no less than annually if needed.

Portfolio rebalancing necessary to maintain the targeted level of the Liquidity Pool under the adopted Investment Policy Statement shall be performed monthly by the Executive Director / CIO.

### **Proxy Voting:**

The Pension Trust acknowledges that the ownership of equities requires proxies to be voted and commits to managing its proxy voting rights with the same care, skill, diligence, and prudence as is exercised in managing its other assets. As a responsible fiduciary, the Pension Trust will exercise its proxy voting rights in the sole interest of the Plan's members, participants, and their beneficiaries in accordance with all applicable statutes.

Consequently, all proxies shall be voted by the Pension Trust's equity investment managers consistent with their respective policies on proxy voting and in the best interest of the shareholders. The investment managers will provide a copy of their proxy voting guidelines to the Pension Trust when first hired and whenever there are changes thereafter. The Executive Director/CIO will monitor the voting of proxies by external investment managers managing separate accounts to ensure that all proxies are being voted and to identify any potential policy concerns with such votes. The Executive Director/CIO will report to the Board of Trustees as necessary with respect to proxy voting.

### **Reporting:**

- 1. Monthly reports on the estimated investment performance and status of the Pension Trust shall be made to the Board of Trustees. <u>Monthly reports shall include estimates of the asset allocation status of the investment funds relative to the adopted asset allocation policy.</u>
- 2. Quarterly reports on investment performance shall be made to the Board of Trustees and shall include a review of the Pension Trust's adherence to investment style and discipline as set forth by the Investment Policy Statement and these Investment Procedures, a review of current strategy, and recent investment performance. Investment performance is to be evaluated on a total return basis. Quarterly reports will include a report on asset allocation policy compliance.
- 3. An annual report on expected capital market returns and recommendations for potential modifications to asset allocation policy shall be made to the Board of Trustees.

### **Policy Compliance Monitoring:**

The Executive Director and/or the Chief Investment Officer shall monitor the compliance of the Pension Trust's Investment Managers with the requirements of the Investment Policy Statement and these Investment Procedures and their respective investment management agreements and report any instances of non-compliance to the investment consultant and to the Board of Trustees.

### **Funds Transfers:**

- 1. Funds transfers, including wire transfers, outside of the accounts of the Master Custodian may be necessary for purposes that include
  - a. Benefit payments
  - b. Administrative expenses
  - c. Transfers to or from commingled investment accounts, mutual funds or limited partnerships.

#### 2. All Wire Transfer Instructions shall –

- a. Be in writing or submitted via a secure online portal to the Custodian Bank.
- b. Require the signatures or electronic validation through a secure online portal to the Custodian Bank of at least two officers of the Pension Trust as may be designated from time to time by Board of Trustees action.
- c. Wire Transfer Instructions for amounts in excess of \$5,000,000 shall always require the signature or electronic validation through a secure online portal to the Custodian Bank of the Executive Director or the Deputy Director.
- d. Wire Transfers shall be verified by the Bank via telephone with one of the Pension Trust employees authorized as officers with signing authority over the account consistent with the Bank's policy on wire transfers or verified via electronic validation through a secure online portal to the Custodian Bank.

# VI. Responsibilities and Delegation of Authority

### **Responsibilities of the Board of Trustees:**

In keeping with the provisions of California State Constitution, the Board of Trustees shall have the following responsibilities under this policy:

- 1. Establish Policy and Policy Guidelines.
- 2. Delegation of Specific Authority to Qualified Investment Personnel or Providers
- 3. Designate the Executive Director of the Pension Trust to act as the Chief Investment Officer (CIO) or designate other staff or service providers/consultants to act as the CIO under the supervision of the Executive Director.
- 4. Establish the Strategic Asset Allocation (SAA) Policy.
- 5. Monitor Compliance and Adherence to This Policy.
- 6. Retaining and terminating investment managers based on recommendations of the Executive Director, CIO, and Investment Consultant(s).
- 7. Retaining and terminating key professionals including General Counsel, Investment Counsel, and Investment Consultants.

### **Responsibilities of the Executive Director:**

The Executive Director shall have the following responsibilities under this policy:

- 1. Management and Supervision of the investment activities of the Pension Trust
- 2. Adherence to and implementation of the Investment Policy Statement and these Investment Procedures including periodic rebalancing transactions
- 3. Management and Supervision of the Chief Investment Officer and other investment staff if applicable
- 4. Respond to Information Requests from the Board of Trustees
- 5. Maintenance of Due Diligence of Custodian Banks, Consultants and External Managers
- 6. Ensure Policy Compliance, Identify Areas for Review and Revision
- 7. Implement Asset Allocation Decisions of the Board of Trustees

- 8. Manage internally managed investment portfolios if directed by the Board of Trustees and execute investment trades as necessary
- 9. Manage the cashflow of the Pension Trust to ensure the timely payment of benefits

# VII. <u>Investment Policy Statement and</u> <u>Investment Procedures – Review and</u> <u>Revision</u>

The Board of Trustees reserves the right to amend the Investment Policy Statement and these Investment Procedures at any time they deem such amendment to be necessary, or to comply with changes in federal law as these changes affect the investment of Plan assets.

The Investment Policy Statement and these Investment Procedures shall be reviewed, at a minimum, every three years or as directed by the Board of Trustees. Such reviews will focus on the continuing feasibility of achieving the investment objectives and the continued appropriateness of the investment policy relative to the Pension Trust's circumstances.

It is not expected that the investment policy will change frequently; in particular, short-term changes in the financial markets generally should not require an adjustment in the investment policy. However, specific policy issues may be visited whenever the Board of Trustees deems necessary. Specific occurrences which might suggest to the Board an earlier review include, but are not limited to, a change in the Fund's circumstances and/or a material change in the capital market environment.

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### **Board of Trustees**

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Date: February 27, 2023

To: Board of Trustees

From: Carl Nelson – Executive Director

Amy Burke - Deputy Director

Scott Whalen - Verus - Investment Consultant

### **Agenda Item 15: BlackRock Core Bonds Separately Managed Account**

#### **Recommendation:**

1. Authorize the Executive Director to wind-down and close the BlackRock Core Bond separately managed account in 2023 consistent with the previously adopted Strategic Asset Allocation policy and to rebalance the liquidated funds as necessary.

#### **Background:**

Starting in 2017 the SLOCPT added BlackRock Investment Management to invest a core fixed income strategy. This was set up as a Separately Managed Account (SMA) with the individual assets held in the SLOCPT's custody account with J.P. Morgan Bank.

The Pension Trust normally prefers to use commingled funds for its various investment manager assignments. In commingled funds the individual investments are held in the name of the "fund" and investors like the SLOCPT own their relative portion of the fund. This has significant advantages for a medium size pension fund. Adequate diversification is automatically achieved, and the custody bank administrative details are significantly easier. Commingled funds perform their own administration, custody, regulatory compliance and audits.

However, in 2017 BlackRock offered a fee discount if we instead used an SMA. The account has proceeded since 2017 with acceptable performance and no problems.

### **Asset Allocation Policy:**

Starting in 2020 the SLOCPT adopted a Functionally Focused Portfolio based Strategic Asset Allocation Policy (SAA) that significantly increased the allocation to private market assets over a 5-6 year period. Part of this multi-year phase-in of the revised SAA included reducing various assets, including Core Bonds, to 0% allocations eventually. The plan for interim years' asset allocation targets has included eliminating the Core Bonds portfolios by 2025.

#### **BlackRock Core Bonds SMA:**

As Staff has implemented asset allocation rebalancing changes, the funds allocated to the BlackRock Core Bonds SMA have fallen below \$100 million – the threshold for the minimum fee provisions in the BlackRock SMA agreement. Furthermore, BlackRock has approached the SLOCPT and requested that we wind-down and close the BlackRock SMA for this account. BlackRock's strategy for this fund involves numerous complex fixed income securities and derivatives. The firm is of the opinion that they cannot effectively manage an SMA smaller than \$50 million and achieve the trading efficiency and the investment performance that is their objective.

#### Recommendation to wind-down the BlackRock SMA:

Staff and Verus fully agree with this conclusion. Alternatives include allocating the remaining ~\$48 million in the BlackRock Core Bond SMA to another BlackRock commingled fund. However, the ultimate objective for core bonds is to transition them to the Treasury bond index fund and the TIPS bond fund already in the Risk Diversifying portion of the SAA mix. Also, the SLOCPT also has a second core bond fund in the Dodge & Cox Income Fund already.

Accordingly, the recommendation of Staff and Verus is to wind-down and close out the BlackRock Core Bond SMA and reallocate those funds as needed to rebalance to 2023 asset mix targets among the Dodge & Cox Income Fund, the SSGA Government Bond Index Fund and the BlackRock TIPS commingled fund.

The transition management of liquidating the remainder of the BlackRock Core Bond SMA is best performed by BlackRock given the complexity of the portfolio and the immense scale of the BlackRock trading desk. We expect to complete the transition in the March-April time period.

Respectfully Submitted,

# **Board of Trustees**

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Date: February 27, 2023

To: Board of Trustees

From: Carl Nelson – Executive Director Amy Burke – Deputy Director

### Agenda Item 16: Asset Allocation – January 2023

This item on the agenda provides a properly noticed opportunity for the Board of Trustees to discuss and take action, if necessary, regarding asset allocation and related investment matters.

As a report on current asset allocation relative to the 2023 Interim SAA Target Allocation the following table provides details. Also shown is a comparison to the SAA Target Allocation targeted for 2027.

Asset values may differ slightly from those shown in the Monthly Investment report due to when the report was run as various market values are finalized for month-end.

FFP Asset Mix	Est. Market Value (\$000s)	% Allocation	SAA Target Allocation	Variance	Strategic Asset Allocation		
	01/31/23	01/31/23		2023 Interim			
Bank (operating)	3,023	0.2%	0.1%	0.1%	0.1%		
SLOC Treasury	40,543	2.4%	1.9%	0.5%	1.7%		
JPM short term	24,284	1.5%	2.0%	-0.5%	2.3%		
Short Duration	33,541	2.0%	2.0%	0.0%	6.0%		
LIQUIDITY	101,391	6.1%	6.0%	0.1%	10.0%		
Equity- Public Mkt US	348,758	20.9%	20.0%	0.9%			
Equity- Public Mkt Intl	270,187	16.2%	17.0%	-0.8%			
Equity- Public Mkt Global	-	0.0%		0.0%	30.0%		
Bank Loans	69,114	4.2%	4.0%	0.2%			
Bonds-Intl.	43,463	2.6%	2.5%	0.1%			
Bonds - Emerging Mkts	51,418	3.1%	2.5%	0.6%			
Real Estate- Core	165,132	9.9%	7.0%	2.9%	5.0%		
Real Estate- Value Add	83,901	5.0%	5.0%	0.0%	5.0%		
Infrastructure	-	0.0%	2.0%	-2.0%	5.0%		
Private Equity	155,959	9.4%	11.0%	-1.6%	18.0%		
Private Credit	120,343	7.2%	8.0%	-0.8%	12.0%		
Opportunistic	39,047	2.3%	0.0%	2.3%			
GROWTH	1,347,323	80.9%	79.0%	1.9%	75.0%		
Bonds- Core	99,762	6.0%	6.0%	0.0%			
Treasuries - Intermediate	65,520	3.9%	5.0%	-1.1%	8.0%		
TIPS	50,843	3.1%	4.0%	-0.9%	7.0%		
RISK DIVERS FYING	216,125	13.0%	15.0%	-2.0%	15.0%		
TOTAL	1,664,839	100.0%	100.0%		100.0%		
Liquidity + Risk Diversifying		19.1%	21.0%	-1.9%	25.0%		

Respectfully submitted,