

June 25, 2024 1:30 P.M. BOARD ROOM

BOARD OF RETIREMENT

AGENDA

832 12th Street Suite 600 Modesto, CA 95354

The Board of Retirement welcomes you to its meetings, which are regularly held on the fourth Tuesday of each month. Your interest is encouraged and appreciated.

The StanCERA boardroom, is currently open to public access. Members of the public who wish to attend Board meetings may also do so by teleconference, by calling (669) 900-6833. The Meeting ID: 859 3221 9325. Member ID: 278857.

If you wish to make a public comment during the Public Comment section of the meeting, or if you wish to comment on a specific agenda item, please press *9 on your phone to alert the Chair that you wish to speak. As permitted by Gov. Code § 54954.3(b)(1), each public comment is limited to three minutes.

You may also submit public comments in writing. If you wish to make a general public comment or a comment on a specific agenda item in writing, please submit your comment via email or fax no later than 4:30 p.m. on the day before a Board meeting. Comments can be submitted via email at taaa@stancera.org or via fax at (209) 558-4976. If your comment pertains to a specific agenda item, please include the agenda item number in the subject line. As permitted by Gov. Code § 54954.3(b)(1), each public comment is limited to 400 words. Comments submitted in writing will be read aloud during the meeting.

CONSENT/ACTION ITEMS: Consent matters include routine administrative actions and are identified under the Consent Items heading. All other items are action items, "Action" means that the Board may dispose of any item by any action, including but not limited to the following acts: approve, disapprove, authorize, modify, defer, table, take no action, or receive and file.

BOARD AGENDAS & MINUTES: Board agendas, minutes and copies of items to be considered by the Board of Retirement are customarily posted on the Internet by Friday afternoon preceding a meeting at the following website: www.stancera.org.

NOTICE REGARDING NON-ENGLISH SPEAKERS: Board of Retirement meetings are conducted in English and translation to other languages is not provided. Please make arrangements for an interpreter if necessary.

In compliance with the Americans with Disabilities Act: If you require an accommodation, auxiliary aid, or service in order to participate in this meeting, please contact StanCERA at (209) 525-6393 as far in advance as possible but no later than 48 hours before the scheduled event.

- 1) Call Meeting to Order
- 2) Pledge of Allegiance
- 3) Roll Call

- 4) Announcements
- 5) Public Comment
- 6) Emergency Declaration
- 7) Consent Items:
 - (a) Approval of May 28, 2024 Meeting Minutes View
 - (b) Application for Service Retirement(s)
 Government Code Section 31499.17, 31670, 31662.2 & 31810
 See attached for details View
 - (c) Application for Disability Government Code Section 31837
 - i. Freitas, Trevin Service-Connected Reciprocal Disability Effective 04-23-23
 - ii. Villarreal, Hilda Service-Connected Disability Effective 10-22-2020
 - (d) Application for Death Benefit Government Code Sections 31781, 31781.1, 31781.3
 - i. Hernandez, Monica (Active) Stanislaus County Non-Service Connected Effective 04-18-24
 - (e) Investment Matrix View
- 8) Investment:
 - (a) Private Equity Portfolio Review and Performance Report Verus View
 - (b) Public Equities Education NEPC View
 - (c) Investment Consultant NEPC May Flash Report View
- 9) Closed Session:
 - (a) Review of Independent Contractor Functioning as Employee Government Code Section 54957(b)(4)
 - (b) Review of Legal Services provided by Disability Counsel Government Code Section 54957 (b)(4)
 - (c) Exposure to Litigation 1 Case Government Code Section 54956.9 (d)(2)

- (d) Personnel Matters (3 Matters) Government Code Section 54957 (b)(1)
- 10) Members' Forum (Information and Future Agenda Requests Only)
- 11) Adjournment



May 28, 2024 1:30 P.M. BOARD ROOM

Trustees Present

Donna Riley
Mandip Dhillon
Delilah Vasquez
Darin Gharat
Mike Lynch
Samuel Sharpe
Joshua Clayton
Rhonda Biesemeier
Terry Withrow (arrived at 1:37 p.m.)

Trustees Absent

Jeff Grover

Others Present

Tom Stadelmaier, Executive Director
Stan Conwell, Retirement Investment Officer
Kellie Gomes, Business and Operations Manager
Brittany Smith-Atkins – Retirement Fiscal Manager
Fred Silva, General Legal Counsel
Alaine Taa, Executive Board Assistant
Jamie Gingerich, Member and Employer Services Specialist
Steve Hempler – VERUS, Investment Consultant
Faraz Shooshani – VERUS, Investment Consultant
Daniel Hennessey- NEPC, Investment Consultant
Kadmiel Onodje, NEPC (Video Conference)
Maytak Chin, Fiduciary Counsel
Akin Greville, Wellington
Mark Sullivan, Wellington

- 1) Call Meeting to Order
- 2) Pledge of Allegiance
- 3) Roll Call
- 4) Announcements
- 5) Public Comment
- 6) Emergency Declaration
- 7) Consent Items:
 - (a) Approval of April 23, 2024 Meeting Minutes
 - (b) Application for Service Retirement(s)
 Government Code Section 31499.17, 31670, 31662.2 & 31810
 See attached for details
 - (c) Application for Disability Government Code Section 31837
 - i. Christensen, Joshua Service Connected Reciprocal Disability Effective 09-28-23
 - (d) Investment Matrix
 - (e) Investment Policy Update for Strategic Asset Allocation
 - (f) Private Market Commitment Notice
 - 1. PALISTAR Digital Infrastructure Fund III
 - (g) Conference Summary

Motion was made by Trustee Biesemeier and seconded by Trustee Vasquez to approve all consent items as presented.

Motion passed unanimously.

- 8) Investment:
 - (a) Private Credit Portfolio Review and Performance Verus
 - (b) Investment Consultant NEPC April Flash Report
 - (c) Quarterly Performance Report NEPC
 - (d) Quarter 4 2023 Private Real Assets Performance Report NEPC

(e) Liquid Absolute Return Recommendation – NEPC

Motion was made by Trustee Lynch and seconded by Trustee Beisemeier to allocate 2% of the portfolio to the Wellington Macro Strategies Fund and authorize staff to negotiate and execute the final contract.

Motion passed unanimously.

9) Administrative:

(a) Fiscal year 2024-2025 Proposed Administrative Budget

Motion was made by Trustee Dhillon and seconded by Trustee Riley to approve the recommended Proposed Administrative Budget for Fiscal Year 2024-2025.

Motion passed unanimously.

Motion was made by Trustee Clayton and seconded by Trustee Dhillon to enter into closed session.

Motion passed unanimously.

10) First Closed Session:

(a) Conference with Legal Counsel - Exposure to Litigation 2 Cases Government Code Section 54956.9 (d)(2)

Motion was made by Trustee Clayton and seconded by Trustee Vasquez to enter into open session.

Motion passed unanimously.

No read out from Closed Session to report.

9) Administrative Discussion After Closed Session

- (b) Leave Cash Out and Straddling Policy Agenda item will be discussed after Closed Session
 - Motion was made by Trustee Clayton and seconded by Trustee Withrow to waive the attorney-client privilege regarding the Memo from Reed Smith dated May 28, 2024.

Motion passed unanimously.

ii) Motion was made by Trustee Withrow and seconded by Trustee Biesemeier to approve the staff recommendation that as of July 1, 2024, StanCERA will no longer allow eligible retiring members to utilize vacation cashout pay above what is normally allowed to be paid in one year for purposes of determining "compensation earnable" for use in the calculation of monthly pension benefits. For the members that "straddle" vacation cashout payments, StanCERA will limit the portion of the vacation cashout that is deemed as pension-eligible to the annual limit imposed by the Employer, which could be either a fiscal year limit or a calendar year limit. If the pension measurement period for the retiring member is three years, that member will be limited to the maximum cashout for each of the three years.

Motion passed 6-2.

Trustee Riley – Yes.

Trustee Dhillon - No.

Trustee Vasquez – Yes.

Trustee Gharat - Yes.

Trustee Lynch – Yes.

Trustee Clayton – No.

Trustee Biesemeier - Yes.

Trustee Withrow - Yes.

Motion was made by Trustee Withrow and seconded by Trustee Clayton to re-enter into closed session.

Motion passed unanimously.

- 10) Second Closed Session:
 - (a) Conference with Legal Counsel Exposure to Litigation 2 Cases Government Code Section 54956.9 (d)(2)
 - (b) Personnel Matter Independent Contractor Functioning as Officer of StanCERA General Counsel Government Code Section 54957 (b)(4)

Motion was made by Trustee Clayton and seconded by Trustee Dhillon to re-enter into open session.

Motion passed unanimously.

No read out from Closed Session to report.

- 11) Members' Forum (Information and Future Agenda Requests Only)
- 12) Adjournment: Time 5:05 p.m.

Respectively submitted,

Johnson Stadelminier

Thomas Stadelmaier, Executive Director

APPROVED AS TO FORM

By Ched St. Solm

Fred A. Silva, General Legal Counsel

StanCERA APPLICATIONS FOR SERVICE RETIREMENT(S) GOVERNMENT CODE SECTIONS 31499.14, 31670, 31662.2, 31810 & 31700

06/25/2024 Item 7.b

Cadena, Maria - Stanislaus County - Effective 06/05/2024
Carter, Brian - Stanislaus County - Effective 12/27/2023
Griffin, David - East Side Mosquito Abatement District - Effective 6/06/2024
Jackson, Dave - Stanislaus County - Effective 06/15/2024
Lange, Scott - Stanislaus County - Effective 06/04/2024
PIANALTO, NICOLE G - Stanislaus County - Effective 06/09/2024
Rakoncza, Kandy - Stanislaus County - Effective 05/29/2024

Rodenburg, Denise - Stanislaus County - Effective 06/21/2024

Sanford, Denise - Stanislaus County - Effective 06/12/2024



June 25, 2024

Retirement Board Agenda Item

TO: Retirement Board

FROM: Stan Conwell, Retirement Investment Officer

I. SUBJECT: Investment Matrix

II. ITEM NUMBER: 7.e

III. ITEM TYPE: Information Only

IV. STAFF RECOMMENDATION: N/A

V. ANALYSIS:

a) Investment Program Activities:

In May and early June, staff began prepping for the annual Due Diligence Committee's review of managers/venders selected by the committee. As a first step, the due diligence questionnaires were updated and will need to be sent out in the coming weeks. Staff is also working closely with NEPC on the public credit manager search that is expected for later this year as well as reviewing and meeting with potential real estate managers. The initial analysis for the upcoming specialty investment consulting search is also underway and additional progress is expected once the search committee convenes. Staff also continues to work with Northern Trust to develop additional performance reporting and monitoring reports.

b) Money Transfer Report:

May 2024: Rebalance and Capital Calls

	From			То			
Manager	Asset Class	Amount	Manager	Asset Class	Amount		
AQR GRP EL Fund	Risk Parity	-\$66,000,000.00	NTAM US TIPS Index Fund	Fixed Income	\$66,000,000.00		
NT STIF Fund	Cash	-\$17,000,000.00	NTAM US Long-Term Government Bond Index Fund	Fixed Income	\$17,000,000.00		

NT STIF Fund	Cash	-\$1,225,905.50	Great Hill Equity Partners VIII	Private Equity	\$1,225,905.50
BlackRock Russell 1000 Growth	US Equities	-\$9,000,000.00	NTAM Intermediate Government Bond Index Fund	Fixed Income	\$9,000,000.00
NT STIF Fund	Cash	-\$6,000,000.00	TA Realty Value-Add Fund XIII	Private Real Estate	\$6,000,000.00
PanAgora Diversified Risk Multi- Asset Fund	Risk Parity	-\$46,000,000.00	NTAM US TIPS Index Fund	Fixed Income	\$46,000,000.00

c) Manager Meetings:

Genstar Annual General Meeting (AGM) May 22-23, San Francisco

Staff attended the Genstar AGM held in San Francisco. StanCERA is invested in Genstar Fund X and it is an important part of the buyout sub-portfolio within the private equity asset class. Attending the meeting is a great way to stay informed on the activities of the firm and fund investments. The in-person meeting provides opportunities to interact directly with the investment team to assess and monitor the investment activities and strategic direction of the firm. Networking with other like-minded institutional investors to share insights and build relationships is another benefit of attending the AGM.

The US economic outlook was discussed and while challenges and uncertainties remain, there are signs that a recession may be avoided and deal flow should pick up, but higher interest rates will put pressure on the buyout market. Those firms that focus on quality companies and active ownership, as Genstar does, should be well equipped to navigate the higher rate environment. Genstar X is still early in its fund life, but the investment pacing and diversification is in line with expectations and performance, while early, is positive.

VI. RISK: None

VII. STRATEGIC PLAN: N/A

VIII. ADMINISTRATIVE BUDGET IMPACT: None







PERIOD ENDING DECEMBER 31, 2023

Private Equity Portfolio Review

Stanislaus County Employees' Retirement Association

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Why invest in private equity?

Primary reason: higher <u>net</u> expected returns versus public markets

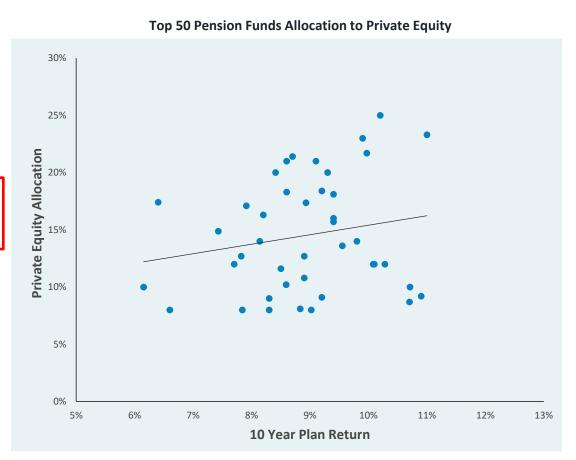
Structural features underlying outperformance

- Enhanced alignment of interests
- Investment structures with return guarantees, preferred payouts, etc.
- Operational expertise of select investment managers:
 - Sector / asset selection
 - Revenue growth
 - Margin improvement
- Flexibility in timing of capital deployment and exits: multiple expansion
- Utilization of leverage (buyouts)

Features that in our view generally persist over the long-term.

Who invests in private equity?

	Investor Type	Average Allocation
	Family Office	19%
_	Endowment/Foundation	17%
	Public Pension Funds	12%
	Insurance	13%
	Corporate Pensions	4.3%
	High New Worth*	35-52%



Source: P&I, WillisTowersWatson, KKR, Peltz International

^{*} High net worth range includes high net worth and ultra high net worth



Key differences between public and private markets

Traditional Assets:

- Listed companies on regulated exchanges;
 can be sold, thus liquid
- Immediate exposure to investments
- Index covers ~entire universe of companies
- "Active Management:" stock selection from defined universe
- Fees: typically, less than 1% of invested capital
- GIPS (Global Investment Performance Standards) compliant returns

Private Equity/Private Credit:

- Unlisted companies held in private partnerships (i.e. funds); negotiated and sold over time, thus illiquid
- Peak exposure (60-70% of commitment size)
 lags commitment to a fund
- Index captures performance and cashflows of (a subset of) private partnerships
- "Active Management:" company selection from undefined universe; <u>and</u> transformation of portfolio companies
- Fees: 1.5-2% of commitments, plus 10-20% of profits (subject to 6-8% hurdle)
- Diligence, reporting, etc.: standards vary



Key risks of private equity

- *Illiquidity risk*: cumbersome, time-intensive, and costly to liquidate assets
 - Mitigated via liquidity analysis during asset allocation; diversification
- Market risk: volatility driven by broader risk factors such as equity, inflation, interest rates, etc.
 - Mitigated by investment managers
- *Financial structure risk:* complexity, leverage, and different rights of varying investors
 - Mitigated by investment managers
- Capital risk: loss of capital due to investment in speculative strategies or other factors such as credit events
 - Mitigated by investment managers
- Manager selection risk: below expected returns due to inferior manager selection and active bets
 - Mitigated via more extensive due diligence; diversification
- Operational risk: losses from inadequate processes and systems supporting the GP's investment process
 - Mitigated via alignment of program discretionary model with approval process, staffing, organization
 - Also mitigated by operational due diligence process

Once allocation to privates is determined, investors generally focus on mitigating manager selection risks.



Private Equity Performance



Overview of private equity performance

- Investments in privately held companies:
 - Generally illiquid / limited liquidity
 - Few established industry benchmarks
 - Sub-classes differ in cash-flow and performance attributes
- Long term investment horizon: 3-12+ years
- Primary reason to invest: Return enhancement

	1 Year	3 Years	5 Years	10 Years	20 Years
Venture Capital	18.7%	23.8%	21.7%	18.9%	12.5%
Buyouts	-3.2%	17.8%	15.7%	15.2%	14.9%
Growth Equity	-14.1%	18.4%	17.1%	15.2%	14.2%
Fund of Funds / Secondaries	-8.7%	19.7%	16.2%	13.8%	11.9%
All Private Equity*	-7.9%	18.4%	16.2%	14.9%	13.5%
S&P 500	-18.1%	7.7%	9.4%	12.6%	9.8%
Russell 3000	-19.2%	7.1%	8.8%	12.1%	9.9%
Bloomberg Barclays Aggregate	-13.0%	-2.7%	0.0%	1.1%	3.1%
91 Day T-Bill	1.5%	0.6%	1.2%	0.7%	1.2%

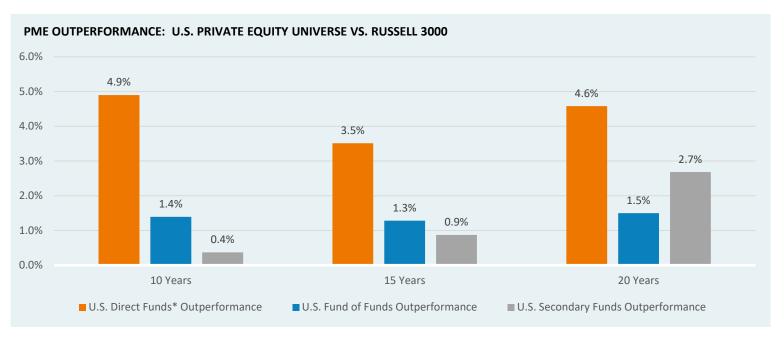
Source: Refinitiv and InvestmentMetrics as of December 31, 2022.

^{*} Includes Venture Capital, Buyouts, Growth Equity, Fund of Funds and Secondaries.



Returns and outperformance tend to bake in over the long-term.

U.S. private markets funds performance vs. public market equivalent



	10 Years	15 Years	20 Years
U.S. Direct Funds*	17.6%	12.6%	14.4%
PME (Russell 3000)	12.7%	9.0%	9.8%
U.S. Fund of Funds	15.3%	10.7%	11.4%
PME (Russell 3000)	13.9%	9.4%	9.9%
U.S. Secondary Funds	13.4%	11.3%	13.3%
PME (Russell 3000)	13.0%	10.4%	10.6%

Source: Refinitiv as of December 31, 2022.

Most recent data suggests that private equity outperformed public equity by a wide margin over the long-term.

Direct funds outperformed by a wider margin than US FoFs and Secondary funds.

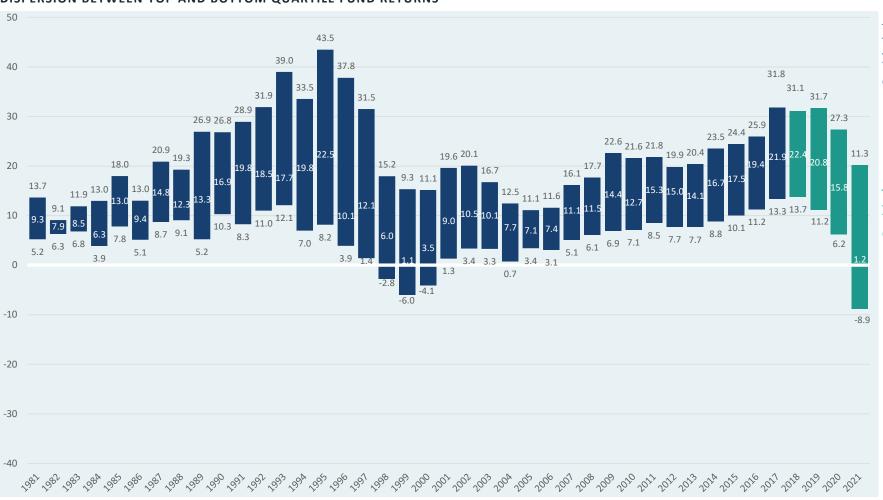
FoFs tend to be less liquid than Directs and Secondaries.



^{*} Buyout, Venture Capital and Growth Equity.

Manager selection is critical to results

DISPERSION BETWEEN TOP AND BOTTOM QUARTILE FUND RETURNS



Mature funds avg. dispersion: 15.58%

Active funds avg. dispersion: 19.81%

Source: Thomson Reuters C/A U.S. All Private Equity net IRRs, as of 12/31/22

For illustrative purposes only as dispersion of returns varies by sub-asset class. Mature funds defined as those whose 80% or more of total value has been distributed.



Implementation aspects of private equity investing

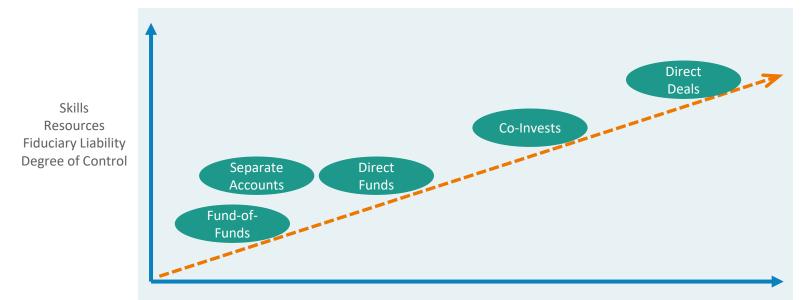


Implementation approaches to private markets

Implementation approach driven by each investor's:

- Investment objectives
- Internal skills and resources
- Tolerance for control, risks, cost

ACTIVE-PASSIVE INVESTOR SPECTRUM



Institutions of size seeking to retain control typically adopt the "direct funds" model to launch their programs.

Smaller investors tend to outsource investing in private markets to fund-of-funds or OCIOs.

Passive Investors Active Investors



Alternative approaches to implementation

	Fund of Funds	Direct Funds	Funds & Co-Invests	Direct Deals
Level of Customization	Best for the Fund	Best for a smaller number of clients	Closely aligned with client needs	Most aligned with client needs
Skills Required	Minimal	Manager selection	Manager selection and underwriting	Various direct private market
Additional Resources Required	None	Minimal	1-3 dedicated	Generally 10+ dedicated
Fiduciary Liability	Selecting single manager Selecting potentially multiple managers		Selection potentially multiple managers and Co-Invest deals	Selecting all deals
Degree of Control	Low - Funds selected by Medium - Fund of Funds Manager selected b		Higher - Funds & Co- Invests selected by Client	Highest - all investments selected by Client
Investment Costs	Generally highest due to Fund of Fund fees	Significantly lower than Fund of Funds due to elimination of Fund of Fund fees	Lower than Direct Funds due to favorable pricing from Co-Invests	Lowest due to elimination of General Partner fees

Passive Investors Active Investors



Alternative approaches to implementation

		Fund-of-Funds	Secondary Funds	Direct - Staff Only	Direct - w/ Consultant
Typical Portfolio	GPs (#)	1-3+	1-3+	4-15+	4-15+
	Funds (#)	15-30+	20-30+	10-30+	10-30+
	Portfolio Cos. (#)	225-450+	250-450+	150-450+	150-450+
Exposure	Years to reach target	5-7	3-4	4-6	4-6
Diversification	Vintage year	•-•	•-•	•-•	•
	Sub-asset class	O - O	O - O	- 0	
	Geography Sector/industry			-	
Required Staff	Portfolio construction/oversight	•	•	•	•-•
	Manager selection				0 - 0
	Legal diligence				
	Ongoing administration (capital flows, stock	•	•	•	•
	distributions, ammendments) Monitoring				
	Performance tracking / reporting				
Pooled Returns	Last 10-years (U.S.)	9.7%	10.5%	11.3%	11.3%
	Last 20-years (U.S.)	9.4%	9.4%	14.8%	14.8%
Implementation (Costs	\$020k/yoar v 17 yoars	\$900k/yoar v 12 yoars	Varies	Varies
•	00M commitment)	\$930k/year x 17 years \$15.8 million	\$800k/year x 12 years \$13.5 million	varies	varies





J-curve and lifecycle of fund cash flows



Investment Stage (Years 1-5)

- Capital commitments are made by limited partner at partnership's closing
- Investments are made in portfolio companies and typically can be made through Year 5
- Capital is called to fund investments as needed

Development Stage (Years 3-8)

- Manager works to add value to portfolio companies
- > Follow-on investments are made
- Initial investments start to mature
- > Mature investments are exited
- > Cash distributions are paid to investors

Liquidation Stage (Years 8-10)

- Many investments have been exited
- Several investments are left to wind down
- Provisions to extend usually in one to two year increments up to a maximum of four years

J-curve can produce negative returns in early years on temporary basis

Secondaries can mitigate the Jcurve as they generally invest in more mature funds

As cash is iteratively called and distributed, investors need to (a) overcommit to hit target exposures; and (b) commit to funds ongoing to maintain exposure

Source: HarbourVest

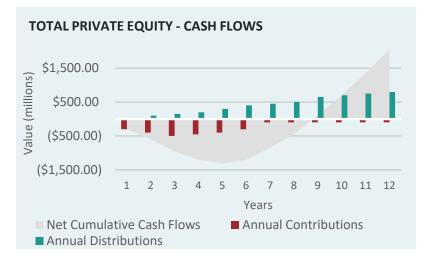
This example is shown for illustrative purposes only and is intended to demonstrate the mechanics and cash flows of a private equity fund. It is not intended to predict the performance or cash flows of any specific fund and should not be construed as predicting the future. The actual pace and timing of cash flows of a private equity fund are highly dependent on the fund's investment pace, the types of investments made by the fund, and market conditions. Private equity investing involves significant risks, including loss of the entire investment. Investments in private equity fund involve significant risk, including loss of the entire investment.

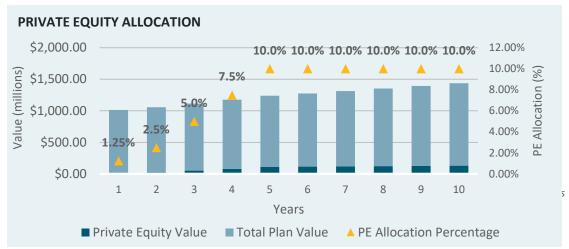


Commitment planning

VERUS PE ROADMAP

Purpose	Plan future commitments given varying cash flows and valuations of existing fund commitments
Process	 Each underlying existing commitment projected Projections aggregated to total portfolio level to determine PE allocation in future years Once future PE allocations forecasted, adjust future commitments to reach PE allocation target by certain year
Benefits	 Flexibility in adjusting future commitments Ability to conduct scenario analysis
Verus Assumptions	 Organized by sub-class Iteratively developed over years Based on Venture Economics, Private I, and vast knowledge and experience of our private markets team







StanCERA's Private Equity Portfolio Construction/ Pacing



Relationship Overview

StanCERA engaged Verus in August 2018 to serve as a non-discretionary consultant for the private markets program focusing on private equity and private credit.

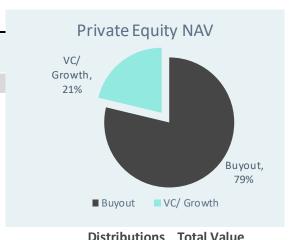
StanCERA's Private Equity portfolio allocation as of 12/31/2023

Allocation Summary						
Period	Commitment Amou	Investments				
2019	\$15M	1 Fund				
2020	\$55M	3 Funds				
2021	\$55M	3 Funds				
2022	\$40M	2 Funds				
2023	\$15M	2 Funds				
2024	\$20M	1 Fund				
Total Allocation	\$180M	11 Funds				



Strategy and Vintage Year Exposure

Investment Strategy	Commitment	Current (NAV)	Unfunded Capital	Current NAV as % of Private Equity
Buyout	140.0	92.4	60.5	79%
VC/ Growth	40.0	24.9	21.1	21%
Total Private Equity	180.0	117.3	81.6	100%



								Distributions	Total Value
Vintage			Unfunded	Distributed	Net Asset	Total	Percentage	to Paid In	to Paid In
Year	Commitment	Paid In Capital	Capital	Capital	Value	Value	Called	(DPI)	(TVPI)
2019	15.0	14.6	0.4	0.1	21.7	21.8	97%	0.01x	1.50x
2020	55.0	37.5	19.1	3.9	46.7	50.7	68%	0.10x	1.35x
2021	55.0	27.0	33.1	0.2	27.4	27.6	49%	0.01x	1.02x
2022	40.0	16.9	18.2	0.1	17.0	17.0	42%	0.00x	1.01x
2023	15.0	4.3	10.7	0.0	4.5	4.5	29%	-	-
Total Private Equity	\$180.0	\$100.3	\$81.6	\$4.3	\$117.3	\$121.6	56%	0.04x	1.21x



Pacing for Future Commitments

- Every year, Verus provides a roadmap of the private markets allocations to determine the commitment pacing for the upcoming year.
- Pacing models are an essential tool used to address the complexities of a private capital portfolio and the balance between profitability, risk diversification and cash flows.
 - We consider existing commitments, anticipated capital calls and distributions, and the forecasted net growth rate.
 - The annual review provides an opportunity to adjust any of the above factors and assess the program to not overallocate to illiquid investments.
- The strategy is to maintain an active commitment pace within each vintage year going forward, being mindful of the liquidity needs.
 - Fund manager recommendations are made in the context of the existing portfolio along with Verus' market views.
 - Our goal is to maintain a program that will invest in various strategies and achieve returns in excess of public market returns.
 - The simulation will run through 2030 and the plan will be created for the vintage years 2024 2025. Investments will be planned in the private equity sub-asset classes; Venture Capital/ Growth Equity, and Buyouts.



Projections of Future Commitments



Assuming 6.51% Total Plan growth; modeling a 35% decline in contributions and distributions over the next two years

PRIVATE EQUITY PROJECTIONS BY VINTAGE YEAR

(in \$ millions)	Actual	Near-	-Term Projectio	ons	Long-Term Projections				
Annual Commitments	2023	2024	2025	2026	2027	2028	2029	2030	
Buyout (3.5% Allocation Target)	140	10	10	10	20	10	20	10	
VC/ Growth (1.5% Allocation Target)	40	0	0	10	0	10	0	10	
Total Private Equity	\$180	\$10	\$10	\$20	\$20	\$20	\$20	\$20	
Number of Commitments									
Buyout	8	1	1	1	1-2	1	1-2	1	
VC/ Growth	3	0	0	1	0	1	0	1	
Total Private Equity	11	1	1	2	1-2	2	1-2	2	
Projected PE as a % of Total Assets	4.2%	4.8%	5.2%	5.6%	5.8%	5.8%	5.2%	4.6%	
Target Private Equity Allocation (%)	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	



StanCERA's Private Equity Portfolio Performance



		Veru	ıs Internal Analy	/sis														
Vintage Year	Manager Name/Fund Name	C	Total ommitment	c	apital Called	% Called	Di	Total stributions	Unfunded	Re	ported Value	7	Total Value	Net TVPI	Net DPI	Net IRR	R3000 + 300bps TR PME	Fund vs. PME
Private E	quity																	
Buyout																		
2020	Vista Foundation IV, L.P.	\$	20,000,000	\$	15,278,955	76%	\$	24,205	\$ 4,741,398	\$	15,193,537	\$	15,217,742	1.00	0.00	-0.2%	12.3%	-12.5%
2020	CD&R XI, L.P.	\$	20,000,000	\$	16,355,763	82%	\$	245,040	\$ 3,887,855	\$	16,773,290	\$	17,018,330	1.04	0.01	2.8%	12.9%	-10.1%
2021	Gryphon Partners VI, L.P.	\$	20,000,000	\$	16,281,861	81%	\$	196,043	\$ 3,783,157	\$	18,868,639	\$	19,064,682	1.17	0.01	8.5%	11.4%	-2.9%
2021	Genstar Capital Partners X, L.P.	\$	15,000,000	\$	13,908,015	93%	\$	63,982	\$ 1,155,968	\$	14,144,615	\$	14,208,597	1.02	0.00	2.1%	18.5%	-16.4%
2020	Sole Source Fund II, L.P.	\$	15,000,000	\$	5,909,512	39%	\$	3,655,797	\$ 10,516,598	\$	14,763,192	\$	18,418,989	3.12	0.62	170.6%	-7.3%	177.9%
2022	Blue Wolf Fund V, L.P.	\$	20,000,000	\$	6,351,148	32%	\$	-	\$ 13,648,852	\$	5,278,523	\$	5,278,523	0.83	0.00	N/M	N/M	N/M
2022	Audax Private Equity Fund VII-A, L.P.	\$	20,000,000	\$	2,995,298	15%	\$	-	\$ 17,004,702	\$	2,818,202	\$	2,818,202	0.94	0.00	N/M	N/M	N/M
2023	Gridiron Capital Fund V, L.P.	\$	10,000,000	\$	4,285,572	43%	\$	-	\$ 5,714,428	\$	4,528,199	\$	4,528,199	1.06	0.00	N/M	N/M	N/M
Venture (Capital / Growth Equity																	
2019	Insight Partners Fund XI, L.P.	\$	15,000,000	\$	14,595,000	97%	\$	93,280	\$ 421,929	\$	21,730,270	\$	21,823,550	1.50	0.01	14.7%	13.1%	1.6%
2021	Great Hill Equity Partners VIII, L.P.	\$	20,000,000	\$	4,318,600	22%	\$	-	\$ 15,681,400	\$	3,212,701	\$	3,212,701	0.74	0.00	-31.7%	N/M	N/M
2023	Eclipse Fund V, L.P. ²	\$	5,000,000	\$	-	0%	\$	-	\$ 5,000,000	\$	-	\$	-					
	Total Private Equity	\$	180,000,000	\$	100,279,724	56%	\$	4,278,347	\$ 81,556,287	\$	117,311,168	\$	121,589,515	1.21	0.04	12.8%	13.5%	-0.7%
		% of Portfolio (Market Value) 4.						4.2%										
										•								



² Fund has not called capital as of December 31, 2023 N/M = Not meaningful: Fund has less than one year of investment activity.



PUBLIC EQUITY EDUCATION

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION



JUNE 25, 2024

Dan Hennessy, CFA, CAIA, Senior Consultant Sam Austin, Partner John Tolar, Consulting Analyst

STANCERA'S PUBLIC EQUITY INVESTMENTS

- Public equities comprise the largest component of StanCERA's growth sub-portfolio
 - Its purpose is to provide long-term growth to pay future benefits.
 Growth assets can be volatile, so performance evaluation focuses on the long-term total risk-adjusted return of the portfolio.
- StanCERA's historical performance has been strong

10-Year Annu	ıalized Return
StanCFR _A	Renchmark

	Stancena	Denominark	_
U.S. Large Equity 25% Active	12.5%	12.4%	+0.1% outperformance
U.S. Small Equity 100% Active	7.9%	7.7%	+0.2% outperformance
Non-U.S. Equity 100% Active	5.1%	4.0%	+1.1% outperformance

 StanCERA's active equity managers have delivered good risk-adjusted performance over the past five years

5-Year Sharpe Ratio Percentile Rank

StanCERA Benchmark

Dodge & Cox Stock	35th	72nd
Attucks Small Cap	24th	81st
LSV Int'l Large Value	33rd	86th
Fidelity Int'l Growth	54th	72nd



WHAT ARE THE MAIN RETURN DRIVERS FOR PUBLIC EQUITIES?

Equities represent the residual ownership claim on corporate earnings

Equity returns can be highly volatile as both earnings and valuation changes influence stock price movements

Equity returns can be deconstructed into sub-sector building blocks or risk premia:

Dividend Yield

- Divided income paid in excess of retained earnings to a stockholder
- Dividends have historically been a large source of returns but declined in last 40 years

Valuation

- Represented by the P/E ratio or the price investors are willing to pay for earnings
- P/E is highly cyclical in nature and influenced by investor risk appetite

Real Earnings Growth

- Growth of corporate earnings in excess of inflation
- Earnings influenced both by changes in profit margins and economic growth cycles



EQUITY CHARACTERISTICS

Capitalization:

- Price of a company's stock X number of shares outstanding
 - Large Cap: Range from \$10 B to \$ Trillions (ex: Apple Inc.)
 - Mid Cap: Range from \$2-10 B (ex: Meritage Homes)
 - Small Cap: Range usually below \$2 B (ex: Herbalife Nutrition

Domicile:

- Country of Origin
 - Domestic (US)
 - International Developed (Japan, UK, Germany) ex: Sony Corp.
 - International Emerging (Mexico, Russia, China) ex: TV AZTECA
 - Frontier (Vietnam, Colombia) ex: Bancolombia SA

Factors that have been found to deliver better long-term performance:

Factors	Definition	Rationales	Opposite Trades
		Discomfort	
Value	Cheap stocks	owning poor	Glamour stocks
		performers	
Momentum	Strong recent	Underreaction	Contrarians
Momentum	price gains	to news	Contrarians
	Consistent	Lottery-	
Quality	strong profits	seeking	Lottery tickets
	strong pronts	preferences	



WHERE COULD WE INVEST IN EQUITIES?

Dev	veloped Mark	cets	Emerging Markets						
North America	Europe	Asia	Americas	Europe & MEA	Asia				
Canada United States	Denmark Israel Norway Sweden Switzerland United Kingdom Eurozone Austria Belgium Germany Finland France Ireland Italy Netherlands Portugal Spain	Australia Hong Kong Japan New Zealand Singapore	Brazil Chile Columbia Mexico Peru	Czech Republic Egypt Greece Hungary Poland Qatar South Africa Turkey U.A.E.	China Indonesia India Korea Malaysia Philippines Thailand Taiwan				

Frontier Markets

Americas	Europe & CIS	Africa	Middle East	Asia
Argentina	Bulgaria Estonia Croatia Kazakhstan Lithuania Romania Serbia Slovenia	Kenya Mauritius Morocco Nigeria Tunisia	Bahrain Jordan Kuwait Lebanon Oman	Bangladesh Pakistan Sri Lanka Vietnam



EQUITY VERSUS DEBT

Equity

- Owner
 - Own part of the entity
- Residual claim on earnings
 - Dividends
 - Price appreciation
- Price changes
 - Expected earnings
 - Macro factors
 - Company factors

Debt

- Creditor
 - Loan the entity money
- Owed interest and principal
 - Regular interest payments (yield)
 - Zero coupon (interest and principal at maturity)
- Price changes
 - Interest rate change
 - Spread change (over Treasury rate)
 - Credit quality change
 - Estimate probability of
 - Default
 - Recovery



CORPORATE CAPITAL STRUCTURE

Bank Loan Debt

Corporate Debt

Converts

Preferred Equity

Common Equity

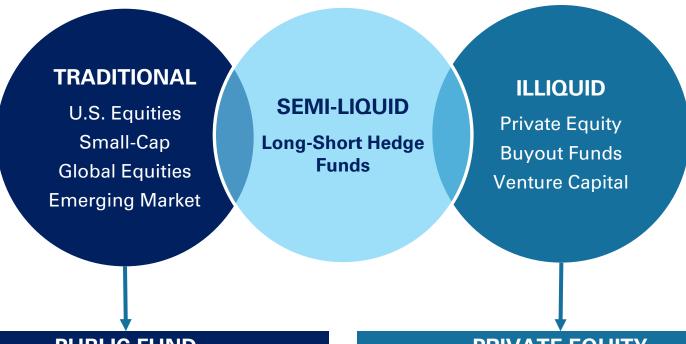
- Senior and secured debt
- Typically floating rate
- Highest asset coverage
- Priority of payment in event of liquidation
- Unsecured debt
- Typically fixed rate
- Reduced asset coverage
- Priority over equity in event of liquidation
- Unsecured debt
- Coupon lower than high yield debt, but offers optionality to convert to equity
- Equity participation
- Priority in dividend payments over common equity
- No voting rights
- Most unsecured in the capital structure
- Highest risk and reward potential
- · No rights in an event of liquidation







EQUITY: TRADITIONAL VERSUS ALTERNATIVES



PUBLIC FUND

- Primarily focused on publicly-traded companies
- Liquid investments
- Could be indexed, or buy-and-hold, or tradingoriented

PRIVATE EQUITY

- PE managers typically buy a portion or all of a private company
- Typically 8+ years to receive entire investment return
- Manager might negotiate directly with a private company, or participate in an auction, or join a syndicate of private equity investors

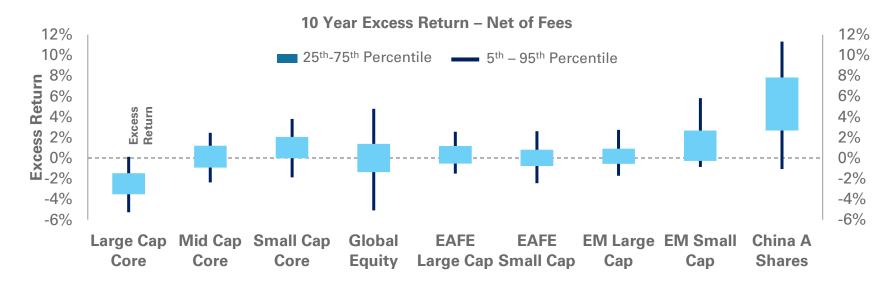




EQUITY IMPLEMENTATION PHILOSOPHY

ACTIVE IMPLEMENTATION IN LESS EFFICIENT MARKETS

- Global Equity or ACWI ex US allocations complemented by satellite positions in alpha rich asset classes provide the best structure for outperformance
 - Preference for Global or ACWI ex US implementation complemented by satellite positions in US Small Cap, EM & EM Small Cap, and EAFE Small Cap
- Stand alone US Large Cap allocations should be expressed through an efficient implementation approach and active risk should be taken in other areas
 - Consider fully indexing the US Large Cap or using passive management for the bulk of it and complement with 1-2 Flex Equity strategies

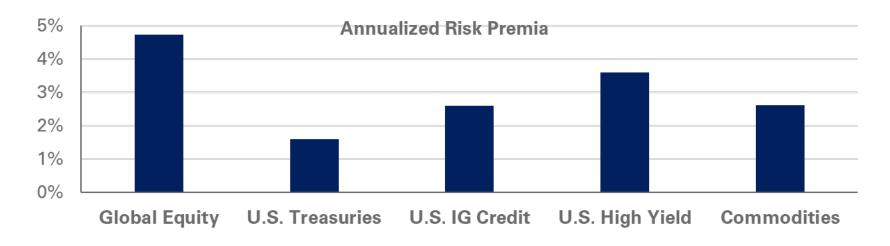




PUBLIC MARKET EQUITY

NEPC STRATEGIC VIEWS

- Public market equities serve as the primary return generating asset,
 with the objective of delivering long-term portfolio wealth gains
 - Equity generally exhibits the highest volatility among public market assets,
 but long-term return potential warrants a large exposure in most portfolios
- Sizing public equity exposure is a strategic exercise and should reflect investor return objectives, risk-tolerance, and liquidity needs





Notes: Risk premia calculated from 1/31/1970. Global Equity reflects the MSCI World Index through 1/31/1988 and the MSCI ACWI Index thereafter. Sources: MSCI, S&P, Bloomberg, FactSet

2024 MARKETABLE EQUITY THEMES

Attractive
Opportunity Set
For Active
Management

We believe that the opportunity set for active management is as strong as we've seen in some time

Quality Bias Implementation

Lean into strategies that have a Quality bias from a factor perspective Global Equity
Preferred
Implementation

Use a Global Equity allocation as the core of your Equity allocation

Hedge Funds Should Benefit From Higher Rate Regime

Structural changes in markets should be advantageous for skilled hedge fund strategies

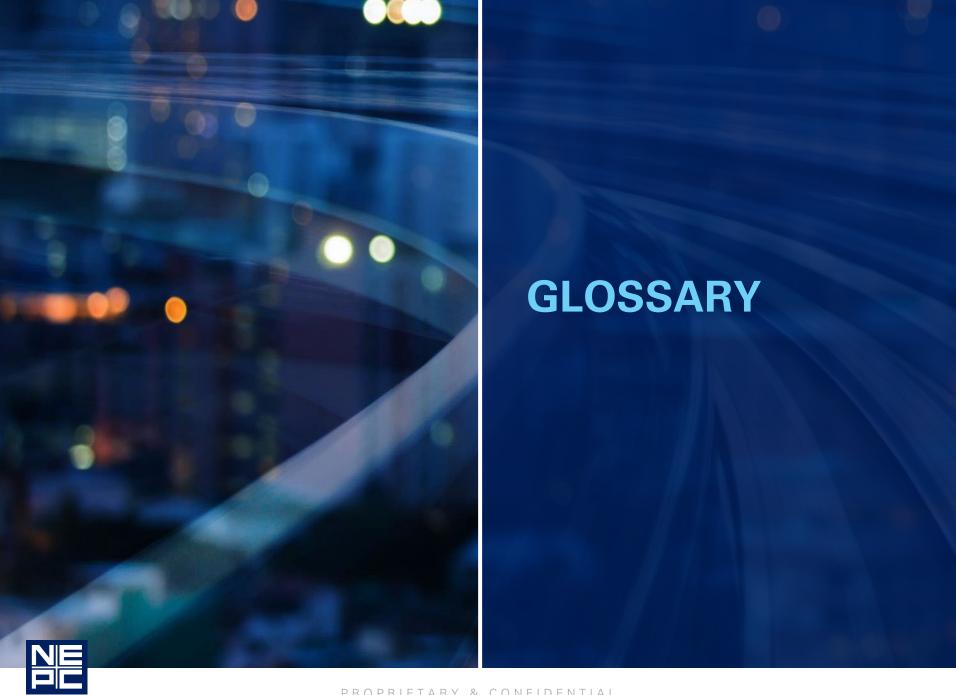
IMPLEMENTATION

We remain proponents of active management globally

Use of passive management in US Large Cap can still be an effective solution Factor regression will assist in identifying strategies with Quality bias (high ROI, ROE, and FCF) Leverage our Global Equity Model Pairings as a starting point for preferred implementation Consider long/short hedge funds in Equity or Opportunistic allocations:

Equity Market Neutral strategies within Diversifying allocations Sector hedge funds





GLOSSARY

Stock

- You own a little piece of a company when you invest/buy stock

Bond

- Similar to a loan, you are borrowing from a company when you invest/buy bonds

Leverage

- "Adding debt." Using borrowed money/capital to increase the potential return of an investment.
 - Example: Taking out a loan to buy a house. You will need to pay off the loan plus interest but hope that you sell the house for more than you bought it for. Thus, making a higher return/capital gain

Liquidity

 How easily you can sell or buy an asset or security in the market. Some assets have daily, and monthly valuation (liquid) and others could have annual valuation or even up to 5–10-year investment periods (illiquid)

Custodian

 A financial institution that holds securities and other assets for a client. This minimizes the risk of loss or theft

Volatility

- Measure of risk or uncertainty about the size of changes in the value of a security

Capital Gain

Profit from the sale of an investment; based on selling your asset/security for a higher price than you bought it for

Capital Loss

 Loss from the sale of an investment; based on selling your asset/security for a lower price than you bought it for

GLOSSARY

Index

 A statistical composite that measures changes in the economy or in specific financial markets, usually expressed relative to a base year. Some wellknown indexes include the Dow Jones, S&P 500, NASDAQ, Russell and Consumer Price Index (CPI)

Benchmark

 Any basis of measurement, such as an interest rate or an index of stock performance, that is used as a reference point for purposes of comparison

Rebalance

- To sell existing investments and buy new investments in order to maintain the agreed-upon asset mix. A discipline to facilitate "buy low/sell high"
- However when you buy low the price can go lower, and you can sell high when the price ends up rising higher
- However, problems can arise when:
 - You sell an investment and the price rises
 - You buy an investment and the price falls

Beta

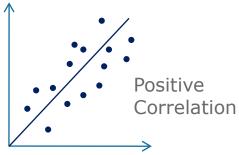
- The degree to which a portfolio moves in tandem with the benchmark index.
- A measure of the overall market's risk
 - The market's Beta is 1.0 by definition
 - A portfolio with a beta of 0.5 is half as risky as the market
 - A portfolio with a beta of 2.0 is twice as risky as the market

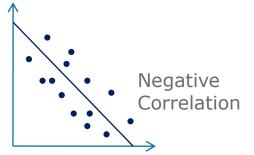


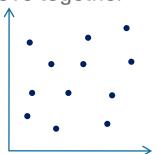
GLOSSARY

Correlation

A measure of the degree to which two asset classes move together







Expected Return

 The expected percentage change in an accounts market value over a defined period of time (evaluation period)

Standard Deviation

- Statistical measure of the distance a quantity is likely to lie from its average value
- Measures an investments volatility or "risk"

Asset Allocation

 An investment strategy that aims to balance risk and reword by apportioning a portfolio's assets according to goals, risk tolerance and investment horizon



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Past performance is no guarantee of future results.

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Information on market indices was provided by sources external to NEPC. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.

All investments carry some level of risk. Diversification and other asset allocation techniques do not ensure profit or protect against losses.

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MONTHLY PERFORMANCE REPORT

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION



MAY 31, 2024

Dan Hennessy, CFA, CAIA, Senior Consultant Sam Austin, Partner John Tolar, Consulting Analyst

CALENDAR YEAR INDEX PERFORMANCE

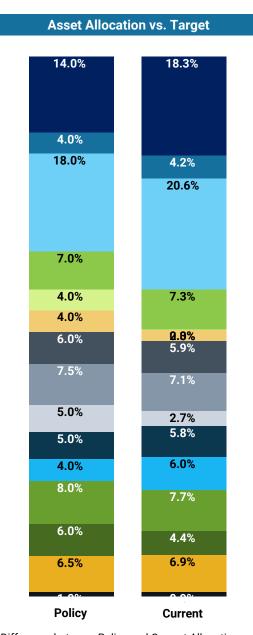
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	May	YTD
S&P 500	13.7%	1.4%	12.0%	21.8%	-4.4%	31.5%	18.4%	28.7%	-18.1%	26.3%	5.0%	11.3%
Russell 1000	13.2%	0.9%	12.1%	21.7%	-4.8%	31.4%	21.0%	26.5%	-19.1%	26.5%	4.7%	10.6%
Russell 2000	4.9%	-4.4%	21.3%	14.6%	-11.0%	25.5%	20.0%	14.8%	-20.4%	16.9%	5.0%	2.7%
Russell 2500	7.1%	-2.9%	17.6%	16.8%	-10.0%	27.8%	20.0%	18.2%	-18.4%	17.4%	4.2%	3.9%
MSCI EAFE	-4.9%	-0.8%	1.0%	25.0%	-13.8%	22.0%	7.8%	11.3%	-14.5%	18.2%	3.9%	7.1%
MSCI EM	-2.2%	-14.9%	11.2%	37.3%	-14.6%	18.4%	18.3%	-2.5%	-20.1%	9.8%	0.6%	3.4%
MSCI ACWI	4.2%	-2.4%	7.9%	24.0%	-9.4%	26.6%	16.3%	18.5%	-18.4%	22.2%	4.1%	8.9%
Private Equity	22.3%	14.6%	10.4%	10.3%	21.0%	13.1%	17.2%	45.0%	-9.3%	5.7%	-	-
BBG TIPS	3.6%	-1.4%	4.7%	3.0%	-1.3%	8.4%	11.0%	6.0%	-11.8%	3.9%	1.7%	-0.1%
BBG Municipal	9.1%	3.3%	0.2%	5.4%	1.3%	7.5%	5.2%	1.5%	-8.5%	6.4%	-0.3%	-1.9%
BBG Muni High Yield	13.8%	1.8%	3.0%	9.7%	4.8%	10.7%	4.9%	7.8%	-13.1%	9.2%	0.8%	1.7%
BBG US Corporate HY	2.5%	-4.5%	17.1%	7.5%	-2.1%	14.3%	7.1%	5.3%	-11.2%	13.4%	1.1%	1.6%
BBG US Agg Bond	6.0%	0.5%	2.6%	3.5%	0.0%	8.7%	7.5%	-1.5%	-13.0%	5.5%	1.7%	-1.6%
BBG Global Agg	0.6%	-3.2%	2.1%	7.4%	-1.2%	6.8%	9.2%	-4.7%	-16.2%	5.7%	1.3%	-3.3%
BBG Long Treasuries	25.1%	-1.2%	1.3%	8.5%	-1.8%	14.8%	17.7%	-4.6%	-29.3%	3.1%	2.9%	-6.6%
BBG US Long Credit	16.4%	-4.6%	10.2%	12.2%	-6.8%	23.4%	13.3%	-1.2%	-25.3%	10.7%	2.8%	-3.8%
BBG US STRIPS 20+ Yr	46.4%	-3.7%	1.4%	13.7%	-4.1%	20.9%	24.0%	-5.2%	-39.6%	1.1%	3.9%	-11.6%
JPM GBI-EM Global Div	-5.7%	-14.9%	9.9%	15.2%	-6.2%	13.5%	2.7%	-8.7%	-11.7%	12.7%	1.6%	-2.7%
JPM EMBI Glob Div	7.4%	1.2%	10.2%	10.3%	-4.3%	15.0%	5.3%	-1.8%	-17.8%	11.1%	1.8%	1.7%
CS Hedge Fund	4.1%	-0.7%	1.2%	7.1%	-3.2%	9.3%	6.4%	8.2%	1.1%	5.8%	-	5.5%
BBG Commodity	-17.0%	-24.7%	11.8%	1.7%	-11.2%	7.7%	-3.1%	27.1%	16.1%	-7.9%	1.8%	6.8%
Alerian Midstream	16.4%	-37.3%	33.8%	-2.4%	-13.3%	24.0%	-23.4%	38.4%	21.5%	14.5%	3.9%	12.9%
FTSE NAREIT Equity REITs	30.1%	3.2%	8.5%	5.2%	-4.6%	26.0%	-8.0%	43.2%	-24.4%	13.7%	4.6%	-2.9%



*Private Equity return represents calendar year pooled IRR and is subject to a one quarter lag Source: FactSet, Barclays, Thomson One

Stanislaus County ERA May 31, 2024

ASSET ALLOCATION VS. POLICY



	Current (\$)	Current (%)	Policy (%)	Differences* (%)	Policy Range (%)	Within Range
Large Cap Equity	518,736,869	18.3	14.0	4.3	10.0 - 18.0	No
Small Cap Equity	119,549,068	4.2	4.0	0.2	0.0 - 7.0	Yes
International Equity	583,564,115	20.6	18.0	2.6	12.0 - 24.0	Yes
Intermediate	206,298,608	7.3	7.0	0.3	4.0 - 10.0	Yes
Credit		0.0	4.0	-4.0	0.0 - 6.0	Yes
■ TIPS	66,000,000	2.3	4.0	-1.7	2.0 - 6.0	Yes
■ Treasury	166,447,800	5.9	6.0	-0.1	4.0 - 8.0	Yes
■ Infrastructure	202,206,517	7.1	7.5	-0.4	0.0 - 12.0	Yes
Absolute Return	76,995,182	2.7	5.0	-2.3	0.0 - 7.0	Yes
■ Private Equity	163,765,921	5.8	5.0	0.8	0.0 - 8.0	Yes
Risk Parity	170,606,085	6.0	4.0	2.0	0.0 - 8.0	Yes
■ Private Credit	217,190,197	7.7	8.0	-0.3	0.0 - 10.0	Yes
■ Non-Core Real Estate	124,204,360	4.4	6.0	-1.6	0.0 - 10.0	Yes
Real Estate - Core	195,438,029	6.9	6.5	0.4	0.0 - 10.0	Yes
■ Cash	24,128,305	0.9	1.0	-0.1	0.0 - 4.0	Yes
Total	2,835,131,055	100.0	100.0	0.0		

^{*}Difference between Policy and Current Allocation



TOTAL FUND PERFORMANCE DETAIL

	Allocat	Allocation					Pe	rforman	ce (%)_			
	Market	% of	1 Mo	YTD	FYTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inception
	Value (\$)	Portfolio	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	Date
Total Fund	2,835,131,055	100.0	2.0	4.1	8.6	11.4	3.1	7.4	6.7	6.4	8.6	Jan-95
Policy Index			2.3	4.2	9.5	12.7	4.1	8.1	7.2	6.8	7.9	
Allocation Index			2.5	5.0	9.9	12.8	2.8					
Liquidity Sub-Portfolio	230,426,913	8.1	0.9	1.0	4.9	4.7	1.1	2.6	2.5		2.1	Aug-14
StanCERA Liquidity Blended BM			1.1	0.0	3.6	3.0	-0.8	1.7	1.8		1.6	
Cash	24,128,305	0.9	0.5	2.3	5.4	6.1	4.2	3.2	2.6		2.2	Aug-14
FTSE 1 Month T-Bill			0.5	2.3	5.1	5.5	3.0	2.1	2.0		1.5	
Cashflow-Matched Bonds	206,298,608	7.3	1.0	0.6	4.9	4.4	0.2	2.2			2.4	Jul-17
Blmbg. Intermed. U.S. Government/Credit			1.2	-0.3	3.4	2.7	-1.4	0.8			1.3	
Insight	206,298,608	7.3	1.0	0.6	4.9	4.4	0.2	2.2			2.4	Jul-17
Blmbg. Intermed. U.S. Government/Credit			1.2	-0.3	3.4	2.7	-1.4	0.8			1.3	
Growth Sub-Portfolio	2,124,655,076	74.9	2.3	5.0	10.1	13.9	4.6	9.6	8.5	7.9	8.1	Jan-04
StanCERA Growth Blended BM			2.7	5.8	11.3	15.4	5.9	10.7	9.4			
US Equities	638,285,938	22.5	4.0	8.6	19.0	27.7	8.0	15.0	12.6	11.4	10.2	Jan-04
Russell 3000 Index			4.7	10.1	19.4	27.6	7.8	15.0	13.1	12.1	10.0	
US Large Equity	518,736,869	18.3	4.6	10.4	20.6	28.7	8.7	15.9	13.9	12.5	12.8	Jan-95
Russell 1000 Index			4.7	10.6	19.9	28.0	8.5	15.4	13.5	12.4	10.8	
BlackRock Russell 1000 Growth	250,329,133	8.8	6.0	13.1	25.0	33.6	11.1	19.3	17.5	15.8	16.7	Aug-10
Russell 1000 Growth Index			6.0	13.1	25.0	33.6	11.1	19.4	17.5	15.8	16.7	
BlackRock Russell 1000 Value	131,126,599	4.6	3.2	7.6	14.1	21.7	5.4	10.8	9.1	8.7	11.5	Aug-09
Russell 1000 Value Index			3.2	7.6	14.1	21.7	5.5	10.7	9.0	8.6	11.4	
Dodge & Cox-Equity	137,281,137	4.8	3.4	8.4	19.1	27.2	7.3	13.9	11.4	10.7	12.0	Jan-95
Russell 1000 Value Index			3.2	7.6	14.1	21.7	5.5	10.7	9.0	8.6	9.8	
US Small Equity	119,549,068	4.2	1.4	1.1	12.6	23.6	4.7	11.5	8.2	7.9	11.8	Jan-09
Russell 2000 Index	, ,		5.0	2.7	11.1	20.1	-1.7	8.6	7.5	7.7	11.2	
Attucks Small Cap	119,549,068	4.2	1.4	1.1	12.6	23.6	4.7	11.5	8.6	8.2	12.0	Jan-09
Russell 2000 Value Index	, ,		4.7	0.8	12.8	21.8	-0.2	8.8	6.7	6.9	10.0	
International Equity	583,564,115	20.6	3.6	7.4	15.3	21.2	2.6	8.8	6.2	5.1	6.6	Oct-04
MSCI AC World ex USA (Net)			2.9	5.8	11.7	16.7	0.3	6.8	5.2	4.0	5.8	
LSV Int'l Large Cap Value	317,709,468	11.2	3.9	7.9	18.4	24.9	5.4	9.6	6.4	5.1	6.6	Oct-04
MSCI AC World ex USA Value (Net)	, , , , , ,		3.2	5.9	14.8	20.7	3.4	6.6	4.7	3.1	5.3	
Fidelity Int'l Growth	265,854,647	9.4	3.3	6.8	11.8	17.0	-0.4	7.7	5.8	4.8	4.5	May-06
MSCI AC World ex USA Growth (Net)	, ,		2.6	5.7	8.9	13.0	-2.8	6.7	5.6	4.8	4.3	,

⁻ Cash Composite includes the Transaction Account Value.



TOTAL FUND PERFORMANCE DETAIL

	Allocat	tion					Pe	rforman	ce (%)			
	Market	% of	1 Mo	YTD	FYTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inception
	Value (\$)	Portfolio	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	Date
Core Real Estate	195,438,029	6.9	0.0	0.1	0.0	-0.1	4.5	4.8	5.0	5.2	2.9	Apr-08
NCREIF Property Index			0.0	-1.0	-5.3	-7.2	3.6	3.8	4.7	6.4	5.3	
Prime Property Fund	93,638,622	3.3	0.0	-1.3	-3.7	-5.9	5.5	4.9	5.8		6.3	Oct-15
NCREIF ODCE			0.0	-2.4	-8.8	-11.3	3.4	3.5	4.7		5.4	
PGIM Real Estate US Debt Fund	101,799,407	3.6	0.0	1.5	4.2	6.1	5.6	5.4			5.3	Sep-18
Blmbg. U.S. Investment Grade: CMBS Index			1.6	0.8	5.0	4.1	-2.0	0.7			1.7	
Value-Add Real Estate	124,204,360	4.4	0.0	-2.0	-5.3	-8.7	4.1	6.7	8.0		8.5	Aug-14
NCREIF Property Index +2%			0.2	-0.2	-3.6	-5.3	5.7	5.8	6.8		8.3	
American Strategic Value Realty	77,498,723	2.7	0.0	-2.6	-8.4	-10.5	3.0	4.0	5.5		7.5	Jan-15
NCREIF Property Index			0.0	-1.0	-5.3	-7.2	3.6	3.8	4.7		5.9	
Greenfield Acquisition Partners VII	862,096	0.0	0.0	3.0	-4.9	-2.4	-3.6	2.8	5.6		6.7	Aug-14
NCREIF-ODCE +1%			0.1	-2.0	-8.0	-10.4	4.4	4.5	5.7		7.6	
Grandview Property Partners I	18,631,838	0.7	0.0	-0.5	12.1	-0.5	12.2	17.3			17.5	Apr-18
NCREIF-ODCE +1%			0.1	-2.0	-8.0	-10.4	4.4	4.5			5.1	
Grandview Property Partners II	17,248,687	0.6	0.0	-0.5	1.4	0.7					-0.4	Dec-21
NCREIF-ODCE +1%			0.1	-2.0	-8.0	-10.4					0.9	
TA Realty Value Fund XIII	9,696,333	0.3	0.0	-3.0							-26.1	Dec-23
NCREIF-ODCE +1%			0.1	-2.0							-6.6	
KSL Credit Opportunities IV	266,684	0.0	0.0								0.0	Apr-24
NCREIF-ODCE +1%			0.1								0.2	
Infrastructure	202,206,517	7.1	0.0	5.3	3.4	5.9	3.2	3.2	7.6		5.0	Jun-15
CPI + 5% 1 Qtr Lag (Unadjusted)			1.0	2.9	7.5	8.3	11.0	9.4	8.7		8.3	
MS Infrastructure Partners II	13,120,482	0.5	0.0	0.2	-1.5	-1.8	7.6	5.9	9.5		6.5	Jun-15
CPI + 5% 1 Qtr Lag (Unadjusted)			1.0	2.9	7.5	8.3	11.0	9.4	8.7		8.3	
Palistar Communications Infrastructure Fund II	16,941,703	0.6	0.0	1.7	3.2	7.8					7.5	Feb-22
CPI + 5% 1 Qtr Lag (Unadjusted)			1.0	2.9	7.5	8.3					10.3	
JP Morgan IIF Hedged LP	35,674,506	1.3	0.0	3.8	5.9	7.5					9.1	Apr-22
CPI + 5% 1 Qtr Lag (Unadjusted)			1.0	2.9	7.5	8.3					10.3	·
Northern Trust Infrastructure Fund	77,791,679	2.7	0.0	10.2	3.7	6.6					-0.5	Jul-21
67% STOXX Global Broad Infra/33% Blmbg. US TIPS 1 Qtr Lag			0.0	9.1	3.2	6.2					-0.5	
IFM Global Infrastructure Fund	56,744,171	2.0	0.0	2.6	3.5	6.2					7.1	Aug-22
CPI + 5% 1 Qtr Lag (Unadjusted)			1.0	2.9	7.5	8.3					9.1	
Carlyle Renewable and Sustainable Energy Fund II	1,933,976	0.1	0.0								0.0	Feb-24
CPI + 5% 1 Qtr Lag (Unadjusted)			1.0								2.5	



TOTAL FUND PERFORMANCE DETAIL

	Allocat	ion					Pe	rforman	ce (%)			
	Market	% of	1 Mo	YTD	FYTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inception
	Value (\$)	Portfolio	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	Date
Private Equity	163,765,921	5.8	1.1	3.2	7.0	8.1	4.0	12.5			12.4	Dec-18
Russell 3000 + 3% QTR Lagged			5.7	20.9	28.7	32.5	13.2	17.4			15.2	
Private Equity	124,183,091	4.4	0.0	1.1	3.5	1.7	7.3				12.7	Apr-20
Russell 3000 + 3% QTR Lagged			5.7	20.9	28.7	32.5	13.2				16.1	
Private Equity Proxy	39,582,830	1.4	4.7	10.1	19.4	27.6	7.8	15.0	13.9	12.7	10.3	Dec-03
Russell 3000 Index			4.7	10.1	19.4	27.6	7.8	15.0	13.1	12.1	10.2	
Private Credit	217,190,197	7.7	0.4	-1.5	1.9	2.6	2.8	-0.4	0.8	1.8	2.2	Jun-13
S&P/LSTA Leveraged Loan Index +2% Qtr Lag			1.1	5.4	13.6	13.7	7.8	7.4	6.9	6.6	6.6	
Private Credit	133,267,573	4.7	0.0	-3.4	-2.3	-2.3	5.3	1.1	1.9	2.6	2.9	Jun-13
S&P/LSTA Leveraged Loan Index +2% Qtr Lag			1.1	5.4	13.6	13.7	7.8	7.4	6.9	6.6	6.6	
Private Credit Proxy	83,922,623	3.0	1.2	1.7	9.5	11.2					1.1	Jul-21
ICE BofA US High Yield Master II Constrained			1.1	1.6	9.4	11.2					1.4	
Risk-Diversifying Sub-Portfolio	480,049,067	16.9	1.5	2.0	4.1	4.6	-1.7	0.7	1.3	1.9	3.8	Dec-03
StanCERA Risk-Diversifying Blended BM			2.3	1.8	6.5	8.1	0.1	2.3	2.2	2.0		
Risk Parity	170,606,085	6.0	2.2	2.4	4.7	5.7	-4.3	2.0			2.2	Dec-17
60% MSCI ACWI (Net)/ 40% Bloomberg Global Agg			3.0	3.9	10.2	14.0	0.8	6.4			5.1	
AQR Global Risk Premium - EL	62,679,763	2.2	2.1	2.7	6.7	8.1	-1.5	3.4			3.6	Apr-18
60% MSCI ACWI (Net)/ 40% Bloomberg Global Agg			3.0	3.9	10.2	14.0	0.8	6.4			5.2	
PanAgora Risk Parity Multi Asset	107,926,322	3.8	2.4	2.0	2.2	2.9	-7.3	0.4			1.0	Dec-17
60% MSCI ACWI (Net)/ 40% Bloomberg Global Agg			3.0	3.9	10.2	14.0	0.8	6.4			5.1	
US Treasury Bonds	166,447,800	5.9	1.6	-2.2	-0.3	-0.9	-3.9	-1.1	0.3	1.2	3.5	Dec-03
Blmbg. U.S. Treasury: 7-10 Year			1.8	-2.8	-0.9	-2.2	-4.6	-1.2	-0.1	0.9	3.2	
Northern Trust Intermediate Gov't Bond	111,616,047	3.9	1.1	-0.6	2.5	1.5	-1.7	0.2			0.8	Aug-17
Blmbg. U.S. Government: Intermediate			1.1	-0.6	2.5	1.6	-1.7	0.3			0.8	· ·
Northern Trust Long Term Gov't Bond	54,831,753	1.9	2.9	-6.5	-7.1	-7.2	-8.9	-3.8			-1.3	Aug-17
Blmbg. U.S. Government: Long Term Bond Index			2.9	-6.5	-7.1	-7.1	-9.9	-4.3			-1.6	· ·
Liquid Absolute Return	76,995,182	2.7	-0.3	10.1	10.1	11.2					11.0	Oct-21
30 Day T-Bill + 4%			0.8	4.0	8.9	9.8					7.5	
Graham Proprietary Matrix	76,995,182	2.7	-0.3	10.1	13.7	15.3					15.0	Nov-21
HFRI Macro (Total) Index	, ,		-0.2	7.0	7.5	8.7					5.4	
US Short Duration TIPS	66,000,000	2.3										Jun-24
Blmbg. U.S. TIPS 0-5 Year	. ,											
Northern Trust US TIPS	66,000,000	2.3										Jun-24
Blmbg. U.S. TIPS 0-5 Year												



CASH FLOW SUMMARY BY MANAGER

	1 Month E	nding May 31, 202	4		
	Beginning Market Value	Contributions	Withdrawals	Ending Market Value	Net Investment Change
Abry Senior Equity VI, L.P.	\$10,255,673	-	-	\$10,255,673	-
American Strategic Value Realty	\$77,498,723	-	-	\$77,498,723	-
AQR Global Risk Premium - EL	\$125,877,226	-	-\$66,000,000	\$62,679,763	\$2,802,537
Audax Private Equity VII	\$6,475,643	-	-	\$6,475,643	-
Blackrock High Yield Fund	\$82,959,275	-	-	\$83,922,623	\$963,348
BlackRock Russell 1000 Growth	\$244,621,679	-	-\$9,000,000	\$250,329,133	\$14,707,454
BlackRock Russell 1000 Value	\$127,100,065	-	-	\$131,126,599	\$4,026,534
Blue Wolf Capital Fund V-A, L.P.	\$5,278,523	-	-	\$5,278,523	-
Callodine Loan Fund II LP	\$11,901,254	-	-\$359,549	\$11,541,705	-
Cash Account	\$43,269,393	\$78,624,986	-\$98,000,005	\$24,077,943	\$183,569
Carlyle Renewable and Sustainable Energy Fund II	\$2,174,241	-	-\$240,265	\$1,933,976	-
Channing	\$32,442,362	-	-	\$33,588,593	\$1,146,231
Clayton, Dublier, & Rice	\$17,441,859	-	-	\$17,441,859	-
Comvest Credit Partners VII	\$1,000,000	-	-	\$1,000,000	-
Crestline Opportunity Fund IV	\$7,466,355	-	-	\$7,466,355	-
Dodge & Cox-Equity	\$132,782,825	-	-	\$137,281,137	\$4,498,312
Fidelity Int'l Growth	\$257,457,156	-	-	\$265,854,647	\$8,397,491
Genstar Capital Partners X	\$14,444,519	-	-	\$14,444,519	-
Graham Proprietary Matrix	\$77,090,564	-	-	\$76,995,182	-\$95,382
Grandview Property Partners I	\$18,631,838	-	-	\$18,631,838	-
Grandview Property Partners II	\$17,248,687	-	-	\$17,248,687	-
Great Hill EP VIII	\$3,353,018	\$1,225,906	-	\$4,578,923	-
Greenfield Acquisition Partners VII	\$862,096	-	-	\$862,096	-
Gridiron Capital Fund V	\$4,528,199	-	-	\$4,528,199	-
Gryphon Partners VI LP	\$18,868,639	-	-	\$18,868,639	-
IFM Global Infrastructure Fund	\$56,744,171	-	-	\$56,744,171	-
Insight	\$204,286,790	-	-	\$206,298,608	\$2,011,818
Insight Partners XI	\$21,730,270	-	-	\$21,730,270	-
JP Morgan IIF Hedged LP	\$35,674,506	-	-	\$35,674,506	-



CASH FLOW SUMMARY BY MANAGER

	Beginning Market Value	Contributions	Withdrawals	Ending Market Value	Net Investment Change
KSL Credit Opportunities IV	\$266,684	-	-	\$266,684	-
LSV Int'l Large Cap Value	\$305,603,111	-	-	\$317,709,468	\$12,106,356
Upwelling Capital	\$112,049	-	-	\$112,049	-
Monroe Private Credit IV	\$16,663,111	-	-\$535,424	\$16,127,687	-
MS Infrastructure Partners II	\$13,120,482	-	-	\$13,120,482	-
Northern Trust Infrastructure Fund	\$77,791,679	-	-	\$77,791,679	-
Northern Trust Intermediate Gov't Bond	\$101,498,796	\$9,000,000	-	\$111,616,047	\$1,117,250
Northern Trust Long Term Gov't Bond	\$37,014,452	\$17,000,000	-	\$54,831,753	\$817,301
Northern Trust Russell 3000	\$38,959,862	-	-\$1,225,906	\$39,582,830	\$1,848,874
Northern Trust US TIPS	-	\$66,000,000	-	\$66,000,000	-
Owl Rock First Lien Fund	\$9,229,808	-	-\$2,215,768	\$7,014,040	-
Pacific Ridge	\$18,219,069	-	-	\$18,799,088	\$580,019
Palistar Communications Infrastructure Fund II	\$16,941,703	-	-	\$16,941,703	-
PanAgora Risk Parity Multi Asset	\$105,415,617	-	-	\$107,926,322	\$2,510,705
PGIM Real Estate US Debt Fund	\$101,799,407	-	-	\$101,799,407	-
Phocas'	\$28,187,874	-	-	\$28,187,874	-
Prime Property Fund	\$93,638,622	-	-	\$93,638,622	-
Raven Opportunity III	\$45,746,426	-	-	\$45,746,426	-
Seizert	\$38,973,513	-	-	\$38,973,513	-
Sole Source Capital Partners II	\$15,283,786	-	-	\$15,283,786	-
Strategic Values Special Situations Fund V, L.P.	\$7,364,434	-	-	\$7,364,434	-
TA Realty Value Fund XIII	\$3,696,333	\$6,000,000	-	\$9,696,333	-
Transition Account	\$320,819	-	-\$271,226	\$50,362	\$769
Vista Foundation Fund IV	\$15,552,729	-	-	\$15,552,729	-
White Oak Pinnacle	\$26,639,205	-	-	\$26,639,205	-
Total	\$2,777,505,119	\$177,850,892	-\$177,848,143	\$2,835,131,055	\$57,623,187



NOTES

- All performance is shown net of investment management fees. Fiscal year end date is June 30th. Phocas and Seizert stated as of 4/24.
- Performance history is provided by Verus through June 2020. As of July 1, 2020 performance is calculated and reported by NEPC.
- Policy Index history:
 - Inception 6/30/2017: 14.4% Russell 1000 Value, 11.3% Russell 1000 Growth, 4.8% S&P 500, 4% Russell 2000 Value, 3.7% Russell 2000 Growth, 18% MSCI ACWI ex USA Gross, 29.8%Bloomberg US Aggregate TR, 3.5% DJ US Select RESI TR USD, 7.5% 9% Annual, 3% CPI + 4%
 - **7/1/2017 8/31/2018:** 18.5% Russell 1000, 5.5% Russell 2000, 24% MSCI ACWI ex USA Gross, 19% Bloomberg US Govt/Credit 1-3 Yr. TR, 1% FTSE T-Bill 1 Month TR, 3% Bloomberg US Treasury 7-10 Yr TR, 7.7% NCREIF Property Index, 1.7% NCREIF Property Index +2%, 0.6% CPI + 5%, 5% Bloomberg US High Yield + 2%, 14% 60% MSCI ACWI Net/40% Bloomberg Global Aggregate
 - 9/1/2018 5/30/2019: 10% Russell 1000, 3% Russell 2000, 6% Russell 3000 +3%, 27% MSCI ACWI ex USA Gross, 20% Bloomberg US Govt/Credit 1-3 Yr. TR, 1% FTSE T-Bill 1 Month TR, 3%Bloomberg US Treasury 7-10 Yr TR, 5% NCREIF Property Index, 5% NCREIF Property Index +2%, 1% CPI + 5%, 6% S&P/LSTA Leveraged Loan Index+2%, 13% 60% MSCI ACWI Net/40% Bloomberg Global Aggregate
 - 6/1/2019 6/30/2020: 14% Russell 1000, 3% Russell 2000, 6% Russell 3000 + 3%, 23% MSCI ACWI ex-USA, 19% Bloomberg US Gov't/Credit 1-3 Yr, 1% Citi 1 Month T-Bills, 3% Bloomberg US Treasury 7-10 Yr, 5% NCREIF Property, 5% NCREIF Property +2%, 2% CPI +5%, 6% S&P/LSTA Leveraged Loan Index + 2%, 13% 60% MSCI ACWI / 40% Bloomberg Global Aggregate
 - **7/1/2020 12/31/2020**: 14% Russell 1000, 3% Russell 2000, 6% Russell 3000 + 3%, 23% MSCI ACWI ex-USA, 8% Bloomberg US Gov't/Credit 1-3 Yr, 1% Citi 1 Month T-Bills, 3% Bloomberg US Treasury 7-10 Yr, 5% NCREIF Property, 5% NCREIF Property +2%, 2% CPI +5%, 6% S&P/LSTA Leveraged Loan Index + 2%, 13% 60% MSCI ACWI / 40% Bloomberg Global Aggregate, 11% Bloomberg US Intermediate.
 - 1/1/2021 06/30/2021: 16% Russell 1000, 3.5% Russell 2000, 6% Russell 3000 + 3%, 23% MSCI ACWI ex-USA, 8% Bloomberg US Gov't/Credit 1-3 Yr, 1% Citi 1 Month T-Bills, 5% Bloomberg US Treasury 7-10 Yr, 6% NCREIF Property, 5% NCREIF Property +2%, 2% CPI +5%, 4.5% S&P/LSTA Leveraged Loan Index + 2%, 13%60% MSCI ACWI / 40% Bloomberg Global Aggregate, 7%Bloomberg US Intermediate.
 - **7/1/2021 6/30/2023:** 16% Russell 1000, 4% Russell 2000, 5% Russell 3000 + 3%, 20% MSCI ACWI ex USA Gross, 6.5% NCREIF Property Index, 6% NCREIF Property Index + 2%, 7.5% CPI + 5% (Unadjusted), 8% S&P/LSTA Leveraged Loan Index +2%, 6% Bloomberg US Treasury 7-10 Yr TR, 10% 60% MSCI ACWI (Net)/ 40% Bloomberg Global Agg, 3% 30 Day T-Bill + 4%, 1% FTSE T-Bill 1 Month TR, 7% Bloomberg US Govt/Credit Int TR.
 - **7/1/2023 Present:** 16% Russell 1000, 4% Russell 2000, 5% Russell 3000 + 3%, 20% MSCI ACWI ex USA Gross, 6.5% NCREIF Property Index, 6% NCREIF Property Index + 2%, 7.5% CPI + 5% 1 Qtr Lag (Unadjusted), 8% S&P/LSTA Leveraged Loan Index +2%, 6% Bloomberg US Treasury 7-10 Yr TR, 10% 60% MSCI ACWI (Net)/ 40% Bloomberg Global Agg, 3% 30 Day T-Bill + 4%, 1% FTSE T-Bill 1 Month TR, 7% Bloomberg US Govt/Credit Int TR.
 - **5/1/2024 Present:** 14% Russell 1000, 4% Russell 2000, 5% Russell 3000 + 3%, 18% MSCI ACWI ex USA Gross, 6.5% NCREIF Property Index, 6% NCREIF Property Index + 2%, 7.5% CPI + 5% 1 Qtr Lag (Unadjusted), 8% S&P/LSTA Leveraged Loan Index +2%, 4% Public Credit Custom Benchmark (50% Bloomberg US Corp Investment Grade Index/25% Bloomberg US HY 2% Cap/25% Morningstar LTSA US Leveraged Loan Index), 6% Bloomberg US Treasury 7-10 Yr TR, 4% Bloomberg US TIPS 1-5 Yr, 4% 60% MSCI ACWI (Net)/ 40% Bloomberg Global Agg, 5% 30 Day T-Bill + 4%, 1% FTSE T-Bill 1 Month TR, 7% Bloomberg US Govt/Credit Int TR.
- As of July 1, 2020, the small Capital Prospects transition cash balance is moved from the Cash composite to the Capital Prospects account. Historical performance for Capital Prospects, US Small, US Equities, Growth Sub-Portfolio, Cash, and Liquidity Sub-Portfolio prior to July 1, 2020 reflects performance of these composites before this change.
- Private Equity investments are valued one guarter lagged and adjusted for capital calls and distributions between guarter-end months.
- Value-Add Real Estate managers are valued quarterly adjusted for current cash flows.
- As of July 1, 2023, Infrastructure funds (MS Infrastructure Partners II, Northern Infrastructure Fund, Palistar Communications Infrastructure Fund II, JP Morgan IF Hedged LP, and IFM Global Infrastructure Fund) are valued one quarter lagged and adjusted for capital calls and distributions between quarter-end months. Northern Trust Infrastructure Fund's benchmark of 67% STOXX Global Broad Infra/33% Bloomberg US TIPS is valued one quarter lagged.



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Past performance is no guarantee of future results.

Returns for pooled funds, e.g. mutual funds and collective investment trusts, are collected from third parties; they are not generally calculated by NEPC. Returns for separate accounts, with some exceptions, are calculated by NEPC. Returns are reported net of manager fees unless otherwise noted.

A "since inception" return, if reported, begins with the first full month after funding, although actual inception dates (e.g. the middle of a month) and the timing of cash flows are taken into account in Composite return calculations.

NEPC's preferred data source is the plan's custodian bank or record-keeper. If data cannot be obtained from one of the preferred data sources, data provided by investment managers may be used. Information on market indices and security characteristics is received from additional providers. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within. In addition, some index returns displayed in this report or used in calculation of a policy index, allocation index or other custom benchmark may be preliminary and subject to change.

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Source of private fund performance benchmark data: Cambridge Associates, via Refinitiv



