



# Board of Retirement Regular Meeting

## Sacramento County Employees' Retirement System

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### Agenda Item 8

**MEETING DATE:** February 21, 2024

**SUBJECT:** Portfolio Allocation and Rebalancing Report—Fourth Quarter 2023

**SUBMITTED FOR:**  Consent       Deliberation and Action       Receive and File

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### **RECOMMENDATION**

Receive and file the Portfolio Allocation and Rebalancing Report for quarter ended December 31, 2023.

### **PURPOSE**

This item complies with the SCERS Master Investment Policy Statement reporting requirements related to the review of SCERS' current asset allocation as it compares to established targets and ranges, and physical and Overlay Program rebalancing activity that occurred during the quarter.

### **SUMMARY**

SCERS employs an Overlay Program, which is managed by State Street Global Advisors (SSGA), to rebalance the asset allocation to policy targets and also invest available cash, in a manner which replicates SCERS' policy target strategic asset allocation.

Below is a summary of SCERS' asset category and asset class positioning relative to the target allocations as of December 31, 2023 (based on State Street market values, which can differ from those of SCERS' investment consultants). The comparisons to the benchmark allocations below, and throughout the memo, are made in two formats: (1) the difference between the actual and target allocation, and (2) the percentage amount of the actual allocation relative to the target allocation.

<u>Asset Category</u>	<u>Asset Class</u>	<u>Current Allocation</u>	<u>Target Allocation</u>	<u>Difference</u>	<u>% Relative to Target</u>
<b>GROWTH*</b>		<b>58.1%</b>	<b>58.0%</b>	<b>0.1%</b>	<b>100%</b>
	Global Equity	40.2%	40.0%	0.2%	100%
	Private Equity	12.9%	11.0%	1.9%	118%
	Public Credit	1.7%	2.0%	-0.3%	84%
	Private Credit	3.2%	5.0%	-1.8%	64%
	Growth Absolute Return	0.1%	0.0%	0.1%	N/A
<b>DIVERSIFYING*</b>		<b>22.4%</b>	<b>25.0%</b>	<b>-2.6%</b>	<b>89%</b>
	Fixed Income	14.0%	16.0%	-2.0%	88%
	Absolute Return	6.4%	7.0%	-0.6%	91%
	Dedicated Cash	2.0%	2.0%	0.0%	99%
<b>REAL RETURN**</b>		<b>17.1%</b>	<b>17.0%</b>	<b>0.1%</b>	<b>100%</b>
	Real Estate	7.6%	9.0%	-1.4%	84%
	Real Assets	8.3%	7.0%	1.3%	119%
	Liquid Real Return	1.2%	1.0%	0.2%	119%
<b>OTHER CASH/OVERLAY</b>		<b>2.2%</b>	<b>0.0%</b>	<b>2.2%</b>	<b>N/A</b>

\* Growth and Diversifying allocation weights do not include overlay proxy exposures, which are included in the Overlay allocation

\*\* Real Return allocation includes overlay proxy exposures

***During the fourth quarter of 2024, the following Overlay Program rebalancing occurred:***

- Quarter-end rebalance:
  - Sold \$88 million in Growth proxy
  - Sold \$53 million in the Diversifying proxy
  - Purchased \$141 million in the Real Return proxy
  - Decreased cash allocation by \$103,000

Over the past several quarters SCERS had been overweight within the Real Return asset category relative to its 17% target allocation. SCERS had a limited amount of the the Real Return proxy to sell (~\$10 million) over the past several quarter-end rebalances given that the Real Return proxy is a series of commingled funds rather than derivatives like the Growth and Diversifying proxies (can only sell what we own). Therefore, on a temporary basis, SSGA offset any overweights within the Real Return asset category by allocating with a 60%/40% split between the Growth and Diversifying overlay proxies, as instructed within the investment management agreement with SSGA. With the recent struggles within Real Estate, SCERS is now underweight within the Real Return asset category relative to its 17% target, so SSGA purchased the Real Return proxy to get the Real Return allocation in line with the target, while selling a corresponding amount of the Growth and Diversifying proxies.

***Key current portfolio allocations relative to targets, and physical rebalancing considerations include:***

- **Global Equity** has a 40.2% allocation as of December 31, 2023, up from a 38.7% allocation as of September 30, 2023, and in line with the 40% target allocation.

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- **Domestic Equity** has a 20.7% allocation as of December 31, 2023, up from a 19.6% allocation as of September 30, 2023. The 20.7% allocation is slightly higher than the 20% target allocation, but within range.
    - No physical rebalancing is recommended at this time
  - **International Equity** has a 16.7% allocation as of December 31, 2023, up from a 16.2% allocation as of September 30, 2023. The 16.7% allocation is above the 16% target allocation.
    - No physical rebalancing is recommended at this time.
  - **Global/Unconstrained** has a 2.9% allocation as of December 31, 2023, slightly down from a 3.0% allocation as of September 30, 2023. The 2.9% allocations is below the 4% target allocation.
    - This is a newer sub-asset class and the remaining allocation will be implemented over time.
    - No physical rebalancing is recommended at this time.
  - **Fixed Income** has a 14.0% allocation as of December 31, 2023, up from a 13.7% allocation as of September 30, 2023. The 14% allocation is below the 16% target allocation, but within range.
    - Staff will continue to monitor the underweight as the allocation is within range. As a reminder, the overlay program rebalances the underweight using cost effective derivatives.
  - **Alternative Asset Class** weights vs. target include:
    - **Absolute Return** – 6.4% vs. 7.0% target
    - **Private Equity** – 12.9% vs. 11.0% target
    - **Private Credit** – 3.2% vs. 5.0% target
    - **Real Assets** – 8.3% vs. 7.0% target
    - **Real Estate** – 7.6% vs. 9.0% target

## **BACKGROUND**

The Overlay Program rebalances the asset allocation to policy targets and minimizes the risk that SCERS falls short of achieving its targeted return due to the asset allocation straying from policy target ranges. The Overlay Program also invests available cash, including: (1) unallocated cash; (2) the cash balances in manager portfolios; and (3) cash held for previously committed to, but un-invested private market investments, in a manner which replicates SCERS' policy target strategic asset allocation. The Overlay Program does not invest the 2% dedicated cash allocation.

While SCERS' Overlay Program reduces the need for physical rebalancing, it does not eliminate it, as there are circumstances whereby physical rebalancing would be a better solution compared to the Overlay Program, including when there is a persistently large difference between physical assets and the target allocation.

While physical rebalancing typically costs more to execute compared to the Overlay Program, it remains important to assess whether SCERS' portfolio is at a point where physical rebalancing warrants greater consideration.

The Overlay Program structure replicates SCERS' asset category targets (Growth; Diversifying; Real Return), with bands around these targets (see below). The rebalancing methodology that SSGA utilizes is quarterly rebalancing with bands, where rebalancing occurs on a quarterly basis (at the end of a quarter), unless the bands are breached on an intra-quarter basis, in which case rebalancing occurs upon the breach of a band.

Asset Category	Minimum Allocation (%)	Target Allocation (%)	Maximum Allocation (%)
Growth	53	58	63
Diversifying	22	25	28
Cash	0	2	3
Real Return	15	17	19

Each asset category has a separate overlay proxy, which contains a mixture of investments that attempt to replicate the objectives and exposures of the asset category and the underlying asset classes within the asset category, in order to minimize tracking error and costs.

The underlying components of each asset category overlay proxy are shown within Appendix B of this report.

Because SCERS' Overlay Program rebalances SCERS' total fund, it is important to note that **Tables 1-15** in Appendix A refer only to physical holdings compared to policy targets, and not the exposures provided through the Overlay Program. The exception is Table 11 (Real Return asset category exposure), which includes the SSGA Real Return Strategy within the Liquid Real Return asset class, which is the Overlay proxy for this asset category, and is implemented through physical exposures (commingled funds).

SCERS' investment staff and general investment consultant, Verus Advisory, monitor the asset allocation on a quarterly basis and update the Board if the asset allocation moves outside of policy ranges and conditions warrant physical rebalancing.

## **FULL PORTFOLIO REVIEW**

### ***GROWTH ASSET CATEGORY:***

The Growth asset category is comprised of the Global Equity, Private Equity, Public Credit, and Private Credit segments of the portfolio. The Growth Absolute Return segment was eliminated from the SAA and is close to being wound down. As outlined in **Table 1 of Appendix A**, the Growth asset category currently has an allocation of 58.1%, which is in line with the strategic asset allocation's target of 58%, and the allocation is 100% relative to the target allocation. At a more granular level, the Private Equity exposure is above target while the remaining asset classes are in line or below target.

The Overlay Program rebalances the Growth asset category to the 58% target allocation by purchasing or selling global equity futures to bring the Global Equity asset class to its target

allocation, and then adjusts the remainder of the asset category by using a combination of 88% global equity futures and 12% U.S. Treasury futures.

At the end of the quarter, SCERS' overlay manager, SSGA, sold approximately \$88 million of overlay proxy exposure to rebalance the Growth asset category to its target allocation, which also offset the rebalancing of the Real Return proxy described earlier in the memo.

***Global Equities:***

As outlined in **Table 2**, SCERS' Global Equity asset class, which includes the sub-asset classes of Domestic Equity, International Equity, and Global/Unconstrained Equity, has an actual weighting of 40.2%, which is in line with SCERS' policy target allocation of 40%, and the allocation is 100% relative to the target allocation. No physical rebalancing is recommended at this time.

At the sub-asset class level, Domestic Equity has an actual allocation of 20.7%, which is above its target allocation of 20% (103% relative to the target).

International Equity has an actual allocation of 16.7%, which is higher than the target allocation of 16% (104% relative to the target).

The newly formed Global/Unconstrained segment has a 2.9% allocation, which is below the 4% target allocation (71% relative to target). This is a newer sub-asset class and the remaining allocation will be implemented over time.

SSGA buys and sells a basket of global equity index futures to rebalance the Global Equity asset class toward the policy target allocation.

***Private Equity:***

As outlined in **Table 3**, SCERS' Private Equity allocation of 12.9% remains above the target allocation of 11%, but within range. The allocation is 118% relative to the target allocation.

SSGA utilizes a basket of 88% global equities and 12% U.S. Treasuries to replicate Private Equity, as part of a broader non-public equity proxy within the Growth asset category.

***Public Credit:***

As outlined in **Table 4**, SCERS' Public Credit allocation of 1.7% is slightly below the policy target allocation of 2%, and the allocation is 84% relative to the target allocation. SSGA utilizes a basket of 88% global equities and 12% U.S. Treasuries to replicate Public Credit, as part of a broader non-public equity proxy within the Growth asset category.

***Private Credit:***

As outlined in **Table 5**, SCERS' Private Credit allocation of 3.2% is below the policy target allocation of 5%, and the allocation is 64% relative to the target allocation. Private credit valuations are lagged a quarter. The commitment schedule and cash flow forecast of Private Credit investments projects SCERS achieving and maintaining the policy target in 2026.

SSGA utilizes a basket of 88% global equities and 12% U.S. Treasuries to replicate Private Credit, as part of a broader non-public equity proxy within the Growth asset category.

***Growth Absolute Return:***

As outlined in **Table 6**, SCERS' Growth Absolute Return portfolio has a current allocation of 0.1%. The Growth Absolute Return Portfolio was eliminated from the revised SAA, and SCERS has nearly unwound the exposures within this portfolio. The small remaining allocation is expected to be unwound in 2024.

***DIVERSIFYING ASSET CATEGORY:***

The Diversifying asset category is comprised of the Fixed Income and Absolute Return segments of the portfolio, as well as the dedicated cash allocation. As outlined in **Table 7**, the Diversifying asset category currently has an allocation of 22.4%, which is below the strategic asset allocation's target of 25%, and the allocation is 89% relative to the target allocation.

The Overlay Program rebalances the Diversifying asset category to the target allocation by purchasing or selling U.S. government bond futures.

At the end of the quarter, SCERS' overlay manager, SSGA, sold approximately \$53 million of overlay proxy exposure to rebalance the Diversifying asset category to its target allocation, which also offset the rebalancing of the Real Return proxy described earlier in the memo.

***Fixed Income:***

As outlined in **Table 8**, SCERS' Fixed Income allocation of 14% is below SCERS' policy target allocation of 16%, and the allocation is 88% relative to the target allocation.

The Overlay Program utilizes a combination of U.S. Treasury futures and Mortgage TBAs to rebalance this segment of the portfolio to its policy target allocation, as part of a broader Diversifying asset category proxy. Staff will continue to monitor the underweight as the allocation is within range.

***Absolute Return:***

As outlined in **Table 9**, SCERS' Absolute Return allocation of 6.4% is below the policy target allocation of 7%, and the allocation is 91% relative to the target allocation.

SSGA utilizes a combination of U.S. Treasury futures and Mortgage TBAs to rebalance this segment of the portfolio to its policy target allocation, as part of a broader Diversifying asset category proxy.

***REAL RETURN ASSET CATEGORY:***

The Real Return asset category is comprised of the Real Estate, Real Assets, and Liquid Real Return segments of the portfolio. As outlined below in **Table 11**, the Real Return asset category currently has an allocation of 17.1%, which is in line with the strategic asset allocation's target of 17%, and the allocation is 100% relative to the target allocation.

The Overlay Program rebalances the Real Return asset category to the 17% target allocation through the SSGA real return overlay proxy, by purchasing or selling a series of commingled funds across global REITs, global infrastructure stocks, global natural resource stocks, commodities, U.S. TIPS, and floating rate notes.

At the end of the quarter, SCERS' overlay manager, SSGA, purchased approximately \$141 million of overlay proxy exposure to rebalance the Real Return asset category to its target allocation. As described earlier in the memo, over the past several quarters SCERS had been overweight within the Real Return asset category relative to its 17% target allocation. SCERS had a limited amount of the the Real Return proxy to sell (~\$10 million) over the past several quarter-end rebalances given that the Real Return proxy is a series of commingled funds rather than derivatives like the Growth and Diversifying proxies (can only sell what we own). Therefore, on a temporary basis, SSGA offset any overweights within the Real Return asset category by allocating with a 60%/40% split between the Growth and Diversifying overlay proxies, as instructed within the investment management agreement with SSGA. With the recent struggles within Real Estate, SCERS is now underweight within the Real Return asset category relative to its 17% target, so SSGA purchased the Real Return proxy to get the Real Return allocation in line with the target, while selling a corresponding amount of the Growth and Diversifying proxies.

***Real Estate:***

As outlined in **Table 12**, SCERS' Real Estate allocation of 7.6% is below the policy target allocation of 9%, and the allocation is 84% relative to the target allocation.

SSGA utilizes a series of listed commingled funds described above to replicate Real Estate, as part of the broader Real Return asset category proxy.

***Real Assets:***

As outlined in **Table 13**, SCERS' Real Assets allocation of 8.3%, is above the policy target allocation of 7%, and the allocation is 119% relative to the target allocation. Private real asset valuations are lagged a quarter.

SSGA utilizes a series of listed commingled funds described above to replicate Real Assets, as part of the broader Real Return asset category proxy.

***Liquid Real Return:***

As outlined in **Table 14**, SCERS' Liquid Real Return allocation of 1.2% is slightly above the policy target allocation of 1%, and the allocation is 119% relative to the target allocation. The Liquid Real Return allocation is managed by State Street Global Advisors (SSGA), and functions as part strategic mandate and part overlay program proxy for the Real Return asset category. The latter is used to adjust broad Real Return asset category exposures during quarterly overlay rebalancing, and accounts for the slight overweight to the segment.

***CASH:***

As outlined in **Tables 10 and 15**, SCERS' total cash balance is approximately 3.3% (as of December 31, 2023), which includes a combination of the 2.0% dedicated cash allocation and 1.3% in other cash. The dedicated cash allocation of 2.0% is 99% relative to the 2% target allocation.

The dedicated cash allocation is intended to close the gap between benefit payments and total contributions in an environment where investment earnings fall short of the targeted assumed rate of return, and also serves as a liquidity buffer.

Most of the 1.3% other cash allocation incorporates the 2023-24 pre-funded annual employer contribution, which was received in July of 2023. The other cash allocation is also used to fund drawdowns within the private markets segments of the portfolio, and other implementation and rebalancing activity. SCERS' Overlay Program rebalances the portfolio by eliminating cash drag by investing the non-dedicated cash allocation (1.3%) into positions that replicate SCERS' target portfolio.

**ATTACHMENTS**

- Board Order
- Appendix A: Quarterly Portfolio Allocation and Rebalancing Detail
- Appendix B: SCERS Overlay Proxies

Prepared by:

/s/

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Steve Davis  
Chief Investment Officer

Reviewed by:

/s/

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Eric Stern  
Chief Executive Officer





# Retirement Board Order

## Sacramento County Employees' Retirement System

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**Before the Board of Retirement  
February 21, 2024**

AGENDA ITEM:

### **Portfolio Allocation and Rebalancing Report—Fourth Quarter 2023**

THE BOARD OF RETIREMENT hereby approves Staff's recommendation to receive and file the Portfolio Allocation and Rebalancing Report for quarter ended December 31, 2023.

I HEREBY CERTIFY that the above order was passed and adopted on February 21, 2024 by the following vote of the Board of Retirement, to wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

ALTERNATES:

(Present but not voting)

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James Diepenbrock  
Board President

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Eric Stern  
Chief Executive Officer and  
Board Secretary

APPENDIX A: Quarterly Portfolio Allocation and Rebalancing Detail (as of December 31, 2023)

Fund Name	Market Value	Actual	Target	Delta	% Relative to Target
<b>Total Fund</b>	<b>\$12,816,002,396</b>				

Table 1: GROWTH ASSET CATEGORY

GROWTH ASSET CATEGORY:	Market Value	Actual	Target	Delta	% Relative to Target
	<b>\$7,448,193,243</b>	<b>58.1%</b>	<b>58.0%</b>	<b>0.1%</b>	<b>100%</b>

Table 2: Global Equity Asset Class

Allowable Range: 36-44%

Global Equity	Sub-Asset Class	Market Value	Actual	Target	Delta	% Relative to Target
		<b>\$5,151,131,953</b>	<b>40.2%</b>	<b>40.0%</b>	<b>0.2%</b>	<b>100%</b>

		Market Value	Actual	Target	Delta	% Relative to Target
	<b>Domestic Equity</b>	<b>\$2,647,845,248</b>	<b>20.7%</b>	<b>20.0%</b>	<b>0.7%</b>	<b>103%</b>
AllianceBernstein	Equity Core Index	\$1,336,001,635	10.4%			
JP Morgan 130/30	Equity Core Active Short Extension (130/30)	\$188,352,636	1.5%			
DE Shaw Broad Market Core Alpha Extension	Equity Core Active Short Extension (130/30)	\$150,834,760	1.2%			
Eagle Capital Management	Equity Large Cap Core	\$368,787,894	2.9%			
AQR US Enhanced Equity	Equity Systematic Multi-Factor Core	\$373,586,406	2.9%			
	Equity Large Cap		18.9%	18.0%	0.9%	
Snyder Capital Management	Equity Small Cap Value	\$129,289,689	1.0%			
Weatherbie & Co.	Equity Small Cap Growth	\$100,992,228	0.8%			
	Equity Small Cap		1.8%	2.0%	-0.2%	

		Market Value	Actual	Target	Delta	% Relative to Target
	<b>International Equity</b>	<b>\$2,137,708,576</b>	<b>16.7%</b>	<b>16.0%</b>	<b>0.7%</b>	<b>104%</b>
Lazard Asset Management	ACWI Ex-US	\$341,718,262	2.7%			
LSV Large Cap International Value	International Equity Large Cap Value	\$524,881,483	4.1%			
Walter Scott	International Equity Large Cap Growth	\$514,702,693	4.0%			
William Blair & Co.	International Equity Small Cap Growth	\$96,663,978	0.8%			
Acadian Asset Management	International Equity Small Cap Value	\$107,810,412	0.8%			
	International Developed		12.4%	11.2%	1.2%	
Baillie Gifford	Emerging Markets Equity - All Cap	\$205,028,798	1.6%			
ARGA Emerging Markets Equity Fund	Emerging Markets Equity - All Cap	\$181,179,820	1.4%			
Oaktree Emerging Markets Equity Fund	Emerging Markets Equity - All Cap	\$165,723,130	1.3%			
	Emerging Markets		4.3%	4.8%	-0.5%	

		Market Value	Actual	Target	Delta	% Relative to Target
	<b>Global/Unconstrained Equity</b>	<b>\$365,578,128</b>	<b>2.9%</b>	<b>4.0%</b>	<b>-1.1%</b>	<b>71%</b>
Nikko Asset Management CIT	Global Equity	\$121,920,000	1.0%			
Artisan Partners Global Opportunities	Global Equity	\$127,422,292	1.0%			
Allspring Global Investments	Global Equity	\$84,529,159	0.7%			
Third Point Partners Qualified, LP	Event Driven	\$31,706,677	0.2%			

Table 3: Private Equity Asset Class

Allowable Range: 8-14%

Private Equity	Sub-Strategy	Market Value	Actual	Target	Delta	% Relative to Target
		<b>\$1,658,717,478</b>	<b>12.9%</b>	<b>11.0%</b>	<b>1.9%</b>	<b>118%</b>
Accel-KKR Capital Partners IV, LP	Buyout	\$0	0.0%			
Accel-KKR Capital Partners V, LP	Buyout	\$27,057,185	0.2%			
Accel-KKR Capital Partners VI, LP	Buyout	\$26,952,750	0.2%			
Accel-KKR Capital Partners VII, LP	Buyout	\$0	0.0%			
Accel-KKR Growth Capital Partners II, LP	Buyout	\$10,000,425	0.1%			
Accel-KKR Growth Capital Partners III, LP	Buyout	\$31,011,486	0.2%			
Accel-KKR Growth Capital Partners IV, LP	Buyout	\$9,866,567	0.1%			
Cortec Group Fund VII, LP	Buyout	\$26,271,276	0.0%			
Cortec Group Fund VIII, LP	Buyout	\$4,970,270	0.0%			
Gridiron Capital Fund IV, LP	Buyout	\$52,170,301	0.4%			
H.I.G. Capital Partners V, LP	Buyout	\$7,925,624	0.1%			
Linden Capital Partners III, LP	Buyout	\$28,942,131	0.2%			
Linden Capital Partners IV, LP	Buyout	\$52,190,304	0.4%			
Linden Capital Partners V, LP	Buyout	\$16,683,891	0.1%			
Marlin Equity Partners IV, LP	Buyout	\$8,453,740	0.1%			
Marlin Equity Partners V, LP	Buyout	\$30,166,546	0.2%			
Marlin Heritage Europe, LP	Buyout	\$18,748,799	0.1%			
Marlin Heritage, LP	Buyout	\$4,002,592	0.0%			
Marlin Heritage II, LP	Buyout	\$11,014,991	0.1%			
Marlin Heritage III, L.P.	Buyout	\$3,988,749	0.0%			
Oaktree Power Opportunities Fund VI, LP	Buyout	\$19,488,094	0.2%			
Shamrock Capital Growth Fund V, LP	Buyout	\$12,901,239	0.1%			
Thoma Bravo Fund XI, LP	Buyout	\$32,556,696	0.3%			
Thoma Bravo Fund XII, LP	Buyout	\$32,445,169	0.3%			
Thoma Bravo Fund XIII, LP	Buyout	\$68,037,669	0.5%			
TSG 7 A, LP	Buyout	\$17,552,000	0.1%			
TSG 7 B, LP	Buyout	\$4,071,713	0.0%			
TSG 8, LP	Buyout	\$38,953,284	0.3%			
TSG, LP	Buyout	\$5,212,285	0.0%			
Wynnchurch Capital Partners V, LP	Buyout	\$17,059,262	0.1%			
Wynnchurch Capital Partners VI, LP	Buyout	\$0	0.0%			
CVC Capital Partners IX, LP	Buyout	\$0	0.0%			
H.I.G. Europe Capital Partners II, LP	European Buyout	\$11,108,194	0.1%			
Waterland Private Equity Fund V, CV	European Buyout	\$1,102,307	0.0%			
Waterland Private Equity Fund VI, CV	European Buyout	\$18,056,236	0.1%			
RRJ Capital Master Fund II, LP	Asian Buyout/Special Situations	\$4,954,039	0.0%			
RRJ Capital Master Fund III, LP	Asian Buyout/Special Situations	\$8,261,077	0.1%			
Shamrock Capital Content Fund II, L.P.	Growth Equity	\$12,901,239	0.1%			
Shamrock Capital Content Fund III, L.P.	Growth Equity	\$319,480	0.0%			
Spectrum Equity Investors VII, LP	Growth Equity	\$37,200,895	0.3%			
Spectrum Equity Fund VIII, LP	Growth Equity	\$24,729,294	0.2%			
Spectrum Equity Fund IX, L.P.	Growth Equity	\$20,198,948	0.2%			
Spectrum Equity X, L.P.	Growth Equity	\$0	0.0%			
Summit Partners VC Fund III, LP	Growth Equity	\$3,608,520	0.0%			
Summit Partners Venture Capital Fund IV, LP	Growth Equity	\$53,518,381	0.4%			
Summit Partners Venture Capital V, L.P.	Growth Equity	\$10,746,923	0.1%			
Summit Partners Europe Growth Equity Fund II, LP	European Growth Equity	\$42,135,951	0.3%			
Summit Partners Europe Growth Equity Fund III, L.P.	European Growth Equity	\$18,142,320	0.1%			
Canvas 3, L.P.	Venture Capital	\$14,133,842	0.1%			
CRV XVIII, L.P.	Venture Capital	\$17,190,092	0.1%			
CRV XIX, LP	Venture Capital	\$5,815,265	0.0%			
CRV Select II, LP	Venture Capital	\$5,351,127	0.0%			
Khosla Ventures IV, LP	Venture Capital	\$14,755,815	0.1%			
Khosla Ventures V, L.P.	Venture Capital	\$38,923,182	0.3%			
Khosla Ventures VI, L.P.	Venture Capital	\$60,522,648	0.5%			
Khosla Ventures VII, L.P.	Venture Capital	\$16,523,576	0.1%			
Khosla Ventures VIII, L.P.	Venture Capital	\$2,100,000	0.0%			
New Enterprise Associates 14, LP	Venture Capital	\$36,100,481	0.3%			
New Enterprise Associates 15, LP	Venture Capital	\$26,993,312	0.2%			
New Enterprise Associates 16, LP	Venture Capital	\$38,188,678	0.3%			
New Enterprise Associates 17, LP	Venture Capital	\$21,122,538	0.2%			
OrbiMed Private Investments VIII, L.P.	Venture Capital	\$10,473,374	0.1%			
OrbiMed Private Investments IX, L.P.	Venture Capital	\$2,824,393	0.0%			
Threshold Ventures III, LP	Venture Capital	\$23,622,456	0.2%			
Threshold Ventures IV, LP	Venture Capital	\$4,106,562	0.0%			
Trinity Ventures XI, LP	Venture Capital	\$44,481,204	0.3%			
Trinity Ventures XII, LP	Venture Capital	\$49,553,177	0.4%			
Alchemy Special Opportunities Fund V, L.P.	Distressed Debt	\$0	0.0%			
Atalaya Special Opportunities Fund V, LP	Distressed Debt	\$465,305	0.0%			
Atalaya Special Opportunities Fund VI, LP	Distressed Debt	\$1,391,471	0.0%			
Davidson Kempner Distressed Opportunities Fund III, LP	Distressed Debt	\$17,567,038	0.1%			
Davidson Kempner Distressed Opportunities Fund IV, LP	Distressed Debt	\$30,692,777	0.2%			
Garrison Opportunity Fund III, LP	Distressed Debt	\$1,649,003	0.0%			
H.I.G. Bayside Loan Opportunity III (Europe), LP	Distressed Debt	\$3,811,813	0.0%			
Strategic Value Special Situations Fund V, L.P.	Distressed Debt	\$18,277,063	0.1%			
TPG Opportunities Partners III, LP	Distressed Debt	\$6,971,654	0.1%			
TSSP Opportunities Partners IV, LP	Distressed Debt	\$28,359,600	0.2%			
Sixth Street Opportunities Partners V, L.P.	Distressed Debt	\$14,797,055	0.1%			
Wayzata Opportunities Fund III, LP	Distressed Debt	\$3,513,317	0.0%			
Golden Capital Co-Investments, LP	Co-Investments	\$22,783,165	0.2%			
Dyal Capital Partners II, LP	Other	\$37,491,148	0.3%			
Dyal Capital Partners III, LP	Other	\$30,480,475	0.2%			
Abbott Capital ACE VI	Fund of Funds	\$25,298,681	0.2%			
Goldman Sachs PEP X	Fund of Funds	\$5,600,072	0.0%			
Harbourvest Partners Intl VI	Fund of Funds	\$5,959,038	0.0%			
HarbourVest Partners VIII	Fund of Funds	\$2,835,019	0.0%			
RCP Multi-Fund Feeder (SCERS), L.P.	Fund of Funds	\$82,313,221	0.6%			

Table 4: Public Credit Asset Class

Allowable Range: 1-3%

Public Credit	Sub-Strategy	Market Value	Actual	Target	Delta	% Relative to Target
		<b>\$217,785,650</b>	<b>1.7%</b>	<b>2.0%</b>	<b>-0.3%</b>	<b>84%</b>
Brigade Capital SC Opportunities Mandate	Public Credit	\$217,785,650	1.7%	2.0%		

Table 5: Private Credit Asset Class

Allowable Range: 3-7%

Private Credit	Sub-Strategy	Market Value	Actual	Target	Delta	% Relative to Target
		<b>\$412,797,493</b>	<b>3.2%</b>	<b>5.0%</b>	<b>-1.8%</b>	<b>64%</b>
Ares Capital Europe Fund V, LP	Direct Lending	\$30,281,115	0.2%			
Benefit Street Partners Senior Opportunities Fund, LP	Direct Lending	\$21,143,018	0.2%			
Benefit Street Partners Senior Opportunities Fund II, LP	Direct Lending	\$35,490,222	0.3%			
Brookfield Infrastructure Debt Fund III, LP	Direct Lending	\$17,812,021	0.1%			
IFM U.S. Infrastructure Debt Fund, LP	Direct Lending	\$35,366,987	0.3%			
Shamrock Capital Debt Opportunities Fund I, LP	Direct Lending	\$12,610,099	0.1%			
Summit Partners Credit Fund, LP	Direct Lending	\$236,935	0.0%			
Summit Partners Credit Fund II, LP	Direct Lending	\$10,600,989	0.1%			
Summit Partners Credit Fund III, LP	Direct Lending	\$11,837,813	0.1%			
Summit Partners Credit Fund IV, LP	Direct Lending	\$14,630,378	0.1%			
Tennenbaum Capital Partners Direct Lending Fund VIII (S), L	Direct Lending	\$114,140,038	0.9%			
Athyrium Opportunities Fund II, LP	Healthcare Opportunistic Lending	\$6,341,951	0.0%			
Athyrium Opportunities Fund III, LP	Healthcare Opportunistic Lending	\$7,686,235	0.1%			
OrbiMed Royalty and Credit Opportunities Fund III, LP	Healthcare Opportunistic Lending	\$16,907,609	0.1%			
OrbiMed Royalty & Credit Opportunities IV, LP	Healthcare Opportunistic Lending	\$7,016,618	0.1%			
MCP Private Capital Fund IV, SCSp	Opportunistic Lending	\$25,477,856	0.2%			
Silver Point Specialty Credit Fund II, L.P.	Opportunistic Lending	\$32,648,711	0.3%			
Silver Point Specialty Credit Fund III, L.P.	Opportunistic Lending	\$12,568,897	0.1%			

Table 6: Growth Absolute Return Asset Class

Allowable Range: 0%

Growth Absolute Return	Sub-Strategy	Market Value	Actual	Target	Delta	% Relative to Target
		<b>\$7,760,669</b>	<b>0.1%</b>	<b>0.0%</b>	<b>0.1%</b>	<b>N/A</b>
Grosvenor SCARF - Growth Series	Diversified Separate Account	\$7,760,669	0.1%			

Table 7: DIVERSIFYING ASSET CATEGORY

	Market Value	Actual	Target	Delta	% Relative to Target
<b>DIVERSIFYING ASSET CATEGORY:</b>	<b>\$2,866,322,314</b>	<b>22.4%</b>	<b>25.0%</b>	<b>-2.6%</b>	<b>89%</b>

Table 8: Fixed Income Asset Class

Allowable Range: 12-20%

Fixed Income	Sub-Strategy	Market Value	Actual	Target	Delta	% Relative to Target
		<b>\$1,795,753,347</b>	<b>14.0%</b>	<b>16.0%</b>	<b>-2.0%</b>	<b>88%</b>
Prudential Investment Management	Core Plus Active Fixed Income	\$344,043,332	2.7%	3.0%		
TCW	Core Plus Active Fixed Income	\$344,332,598	2.7%	3.0%		
Brandywine U.S. Fixed Income	Core Plus Active Fixed Income	\$338,175,158	2.6%	3.0%		
Reams	Core Plus Active Fixed Income	\$352,326,790	2.7%	3.0%		
	Core Plus		10.8%	12.0%	-1.2%	
Neuberger Berman	US Treasuries	\$416,875,469	3.3%	4.0%	-0.7%	

Table 9: Absolute Return Asset Class

Allowable Range: 5-9%

Absolute Return	Sub-Strategy	Market Value	Actual	Target	Delta	% Relative to Target
		<b>\$816,986,001</b>	<b>6.4%</b>	<b>7.0%</b>	<b>-0.6%</b>	<b>91%</b>
Grosvenor SCARF - Diversifying Series	Diversified Separate Account	\$233,776,309	1.8%			
Tudor BVI Global Fund Ltd	Discretionary Global Macro	\$51,233,850	0.4%			
Marshall Wace Global Opportunities Fund	Equity Long/Short	\$60,686,955	0.5%			
BlackRock Event Driven Equity Fund	Event Driven	\$55,283,494	0.4%			
Elliott Associates LP	Event Driven	\$80,306,854	0.6%			
Davidson Kempner Institutional Partners, LP	Event Driven	\$60,414,310	0.5%			
PSquared Event Opportunity Fund, L.P.	Event Driven	\$54,503,900	0.4%			
Aristeia Partners, L.P.	Fixed Income Relative Value	\$52,306,965	0.4%			
LMR Fund Ltd	Market Neutral, Multi-Strategy	\$56,807,910	0.4%			
Laurion Capital Management, LP	Volatility Arbitrage	\$59,636,021	0.5%			
Graham Tactical Trend Fund, L.P.	Systematic Global Macro	\$50,805,646	0.4%			
Sculptor Domestic Partners II, LP	Multi Strategy	\$1,223,787	0.0%			

Table 10: Dedicated Cash

Allowable Range: 0-2%

Dedicated Cash	Market Value	Actual	Target	Delta	% Relative to Target
	<b>\$253,582,967</b>	<b>2.0%</b>	<b>2.0%</b>	<b>0.0%</b>	<b>99%</b>
Dedicated Cash Account	\$253,582,967	2.0%	2.0%	0.0%	

Table 11: REAL RETURN ASSET CATEGORY

	Market Value	Actual	Target	Delta	% Relative to Target
<b>REAL RETURN ASSET CATEGORY:</b>	<b>\$2,189,267,543</b>	<b>17.1%</b>	<b>17.0%</b>	<b>0.1%</b>	<b>100%</b>

Table 12: Real Estate Asset Class

Allowable Range: 7-11%

Real Estate	Sub-Strategy	Market Value	Actual	Target	Delta	% Relative to Target
		<b>\$970,378,146</b>	<b>7.6%</b>	<b>9.0%</b>	<b>-1.4%</b>	<b>84%</b>
Brookfield Premier Real Estate Partners, LP	Core Real Estate	\$113,161,943	0.9%			
Clarion Lion Properties Fund, LP	Core Real Estate	\$115,417,842	0.9%			
MetLife Core Property Fund, LP	Core Real Estate	\$80,584,580	0.6%			
Principal US Property Account	Core Real Estate	\$56,654,710	0.4%			
Prologis Targeted Europe Logistics Fund, LP	Core Real Estate	\$62,812,651	0.5%			
Prologis Targeted US Logistics Fund, LP	Core Real Estate	\$83,429,858	0.7%			
Townsend Real Estate Fund, LP	Core Real Estate	\$158,676,096	1.2%			
Carlyle China Realty, L.P.	Non-Core Real Estate - Opportunistic	\$6,873,206	0.1%			
Carlyle China Rome Logistics, L.P.	Non-Core Real Estate - Opportunistic	\$30,407,876	0.2%			
KKR Real Estate Partners Americas, LP	Non-Core Real Estate - Opportunistic	\$1,583,715	0.0%			
LaSalle China Logistics Venture, LP	Non-Core Real Estate - Opportunistic	\$8,753,587	0.1%			
Sculptor Real Estate Fund III, LP	Non-Core Real Estate - Opportunistic	\$3,622,860	0.0%			
Sculptor Real Estate Fund IV, L.P.	Non-Core Real Estate - Opportunistic	\$19,023,210	0.1%			
Asana Partners Fund II, L.P.	Non-Core Real Estate - Value-Added	\$32,234,851	0.3%			
Asana Partners Fund III, L.P.	Non-Core Real Estate - Value-Added	\$14,474,432	0.1%			
CIM Opportunity Fund VIII, LP	Non-Core Real Estate - Value-Added	\$23,591,877	0.2%			
DRC European Real Estate Debt Fund II, LP	Non-Core Real Estate - Value-Added	\$472,401	0.0%			
ECE European Prime Shopping Centre Fund II, SCS-SIF	Non-Core Real Estate - Value-Added	\$33,869,689	0.3%			
Hammes Partners II, LP	Non-Core Real Estate - Value-Added	\$3,148,951	0.0%			
Hammes Partners III, LP	Non-Core Real Estate - Value-Added	\$20,317,785	0.2%			
Hammes Partners IV, LP	Non-Core Real Estate - Value-Added	\$1,214,115	0.0%			
NREP Nordic Strategies Fund, FCP-FIS	Non-Core Real Estate - Value-Added	\$136,969	0.0%			
NREP Nordic Strategies Fund II, FCP-FIS	Non-Core Real Estate - Value-Added	\$18,920,664	0.1%			
NREP Nordic Strategies Fund III, FCP-FIS	Non-Core Real Estate - Value-Added	\$35,423,871	0.3%			
NREP Nordic Strategies Fund IV, FCP-FIS	Non-Core Real Estate - Value-Added	\$24,845,254	0.2%			
NREP Nordic Strategies Fund V, SCSp	Non-Core Real Estate - Value-Added	\$9,074,556	0.1%			
Seven Seas Japan Opportunity Fund, GK	Non-Core Real Estate - Value-Added	\$11,650,598	0.1%			

Table 13: Real Assets Asset Class

Allowable Range: 5-9%

Real Assets	Sub-Strategy	Market Value	Actual	Target	Delta	% Relative to Target
		<b>\$1,066,863,432</b>	<b>8.3%</b>	<b>7.0%</b>	<b>1.3%</b>	<b>119%</b>
ACM Fund II, LP	Agriculture	\$14,983,672	0.1%			
Paine Schwartz Food Chain Fund V, L.P.	Agriculture	\$35,054,955	0.3%			
EnCap Energy Capital Fund IX, LP	Energy	\$9,808,856	0.1%			
EnCap Energy Capital Fund X, LP	Energy	\$22,257,429	0.2%			
NGP Royalty Partners, L.P.	Energy	\$27,475,306	0.2%			
NGP Royalty Partners II, L.P.	Energy	\$31,121,774	0.2%			
Tailwater Energy Fund III, LP	Energy	\$21,055,864	0.2%			
Tailwater Energy Fund IV, LP	Energy	\$25,494,476	0.2%			
Quantum Energy Partners VI, LP	Energy	\$25,495,939	0.2%			
Quantum Energy Partners VII, LP	Energy	\$36,774,776	0.3%			
Ara Partners Fund II, L.P.	Infrastructure	\$4,127,590	0.0%			
ArcLight Energy Partners Fund VI, LP	Infrastructure	\$14,163,837	0.1%			
Brookfield Infrastructure Fund III, LP	Infrastructure	\$42,061,973	0.3%			
Brookfield Infrastructure Fund IV, LP	Infrastructure	\$40,345,515	0.3%			
Brookfield Super-Core Infrastructure Partners	Infrastructure	\$102,004,307	0.8%			
Digital Colony Partners II, L.P.	Infrastructure	\$34,257,630	0.0%			
EnCap Flatrock Midstream Fund III, LP	Infrastructure	\$10,734,713	0.1%			
EnCap Flatrock Midstream Fund IV, LP	Infrastructure	\$12,805,498	0.1%			
EQT Infrastructure IV, SCSp	Infrastructure	\$37,919,285	0.3%			
First Reserve Energy Infrastructure Fund II, LP	Infrastructure	\$10,939,712	0.1%			
Harrison Street Social Infrastructure Fund LP	Infrastructure	\$107,956,940	0.8%			
IFM Global Infrastructure Fund	Infrastructure	\$164,122,993	1.3%			
ISQ Global Infrastructure Fund II, LP	Infrastructure	\$54,266,288	0.4%			
ISQ Global Infrastructure Fund III, L.P.	Infrastructure	\$20,190,094	0.2%			
KKR Asia Pacific Infrastructure Fund II SCSp	Infrastructure	\$0	0.0%			
Meridiam Infrastructure North America III, LP	Infrastructure	\$38,828,890	0.3%			
Meridiam Infrastructure North America IV, LP	Infrastructure	\$12,345,188	0.1%			
Meridiam Sustainable Infrastructure Europe IV, SLP	Infrastructure	\$10,134,796	0.1%			
Pantheon SCERS SIF, LLC	Infrastructure	\$37,382,320	0.3%			
Ridgewood Water & Strategic Infrastructure Fund II, LP	Infrastructure	\$16,637,066	0.1%			
Wastewater Opportunity Fund, LLC	Infrastructure	\$8,577,721	0.1%			
Atalaya SCERS SMA, LLC	Infrastructure Debt	\$0	0.0%			
Carlyle Power Partners II, LP	Power Generation	\$37,538,030	0.3%			

Table 14: Liquid Real Return Asset Class

Allowable Range: 0-3%

Liquid Real Return	Sub-Strategy	Market Value	Actual	Target	Delta	% Relative to Target
		<b>\$152,025,964</b>	<b>1.2%</b>	<b>1.0%</b>	<b>0.2%</b>	<b>119%</b>
SSGA Real Return Overlay Strategy	Passive Liquid Real Return Proxy	\$151,428,423	1.2%			
Brookfield Liquid Real Return	Active Liquid Real Return	\$597,541	0.0%			

Table 15: Other Cash/Overlay

Other Cash/Overlay	Market Value	Actual	Target	Delta	% Relative to Target
	<b>\$281,631,787</b>	<b>2.2%</b>	-	-	<b>N/A</b>
Other Cash	\$166,404,134	1.3%	-	-	
SSgA Overlay Account	\$115,176,004	0.9%			

## Appendix B: Overlay Proxies

Growth Asset Category Proxy		
	Policy Allocation	Overlay Implementation
Domestic Equities	20%	Basket of S&P 500, S&P 400, and Russell 2000 Futures
International Equities	20%	Basket of Local Index, EAFE, EM Futures plus currency
Private Equity	11%	Basket of 85% Global Equity and 15% US TSY
Public Credit	2%	Basket of 85% Global Equity and 15% US TSY
Private Credit	5%	Basket of 85% Global Equity and 15% US TSY

Diversifying Asset Category Proxy		
	Policy Allocation	Overlay Implementation
Fixed Income	16%	Basket of Treasury Futures and Mortgage TBAs (forwards)
Absolute Return	7%	Basket of Treasury Futures and Mortgage TBAs (forwards)
Cash	1%	+/- 15 bps of 1% cash target

Real Return Asset Category Proxy		
	Policy Allocation*	Overlay Implementation
Global Real Estate (REITs)	15%	FTSE EPRA/NAREIT Developed Liquid Index
Global Infrastructure Equity	25%	S&P Global Infrastructure Index
Global Natural Resources Equity	10%	S&P Global Large Mid Cap Commodity and Resources Index
Commodities	10%	Bloomberg Roll Select Commodity Index
US Intermediate TIPS	30%	Bloomberg Barclays 1-10 Year US TIPS Index
Floating Rate Notes	10%	Bloomberg Barclays US Dollar Floating Rate Note < 5 Years Index

\*Relative to Real Return Asset Category