Board of Retirement Regular Meeting

Sacramento County Employees' Retirement System

Agenda Item 13

MEETING DATE: **August 17, 2022**

SUBJECT: **Portfolio Allocation and Rebalancing Report – Second Quarter 2022**

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

RECOMMENDATION

Staff recommends that the Board receive and file the Portfolio Allocation and Rebalancing Report – Second Quarter 2022.

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 invests available cash, in a manner which replicates SCERS' policy target strategic asset allocation.

SCERS' Overlay Program reduces the need for physical rebalancing, but it does not eliminate it. 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 information in this report reflects the changes to the strategic asset allocation (SAA) that were approved in 2021. During the first quarter of 2022, the Board approved revisions to the Overlay Program, including underlying proxy modifications, and the Overlay Program was transitioned to the revised SAA at the start of the second quarter.

Below is a summary of SCERS' asset category and asset class positioning relative to the target allocations as of June 30, 2022 (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.

Asset Category	Asset Class	Current Allocation	Target Allocation	Difference	% Relative to Target
GROWTH*		**53.5%**	**58.0%**	**-4.5%**	**92%**
	Global Equity	33.8%	40.0%	-6.2%	84%
	Private Equity	15.0%	11.0%	4.0%	136%
	Public Credit	1.7%	2.0%	-0.3%	87%
	Private Credit	2.8%	5.0%	-2.2%	56%
	Growth Absolute Return	0.2%	0.0%	0.2%	N/A
DIVERSIFYING*		**23.9%**	**24.0%**	**-0.1%**	**99%**
	Fixed Income	15.7%	16.0%	-0.3%	98%
	Diversifying Absolute Return	7.4%	7.0%	0.4%	105%
	Dedicated Cash	0.8%	1.0%	-0.2%	82%
REAL RETURN**		**18.9%**	**18.0%**	**0.9%**	**105%**
	Real Estate	8.9%	9.0%	-0.1%	98%
	Real Assets	7.2%	7.0%	0.2%	103%
	Liquid Real Return	2.8%	2.0%	0.8%	141%
OTHER CASH/OVERLAY		**2.8%**	**0.0%**	**2.8%**	**N/A**

* 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 second quarter of 2022, the following <u>Overlay Program rebalancing</u> occurred:

- Quarter-end rebalance:
    - Purchased $113 million in Growth proxy
    - No activity with the Diversifying proxy (physical fixed income rebalancing occurred during the quarter)
    - Sold $113 million in Real Return proxy
    - Increased cash allocation by $0.5 million

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

- **Global Equity** has a 33.8% allocation as of June 30, 2022, which is below the 40% target allocation, and below the bottom of the range.
    - **Domestic Equity** has a 17.5% allocation as of June 30, 2022, down from a 19.5% allocation as of March 31, 2022. The 17.5% allocation is below the 20% target allocation, and slightly out of range.
        - Equities have sold off significantly during 2022, which is why the allocation is so far below the target.
        - Staff is evaluating physical rebalancing to bring the Domestic Equity and broader Global Equity allocations closer to target and back within their respective ranges.

- **International Equity** has a 15.7% allocation as of June 30, 2022, down from a 17.8% allocation as of March 31, 2022. The 15.7% allocation is slightly below the 16% target allocation.
  - The International Equity target allocation was reduced to a 16% allocation (from 18%) within the recently approved Global Equity structure. The downturn in public equities in 2022 has brought the International Equity allocation in line with the new target, so no physical rebalancing is recommended at this time.
- **Global/Unconstrained** has a 0.6% allocation as of June 30, 2022, which is below the 4% target allocation.
  - Global/Unconstrained was newly formed in 2021, and a global equity search was conducted in 2022, resulting in the Board approval of two global equity mandates (Artisan and Nikko) in the amount of $240 million in aggregate (approximately 2% allocation).
    - The two mandates were funded in early August, which will bring the Global/Unconstrained segment toward the 4% target. The remaining allocation will be implemented over time.
  - No physical rebalancing is recommended at this time.

- **Fixed Income** has a 15.7% allocation as of June 30, 2022, up from a 13.3% allocation as of March 31, 2021. The 15.7% allocation is in line with the revised SAA's 16% target allocation to Fixed Income.
  - During the quarter, two new core plus fixed income mandates were funded (Brandywine and Reams), two existing core plus fixed income mandates were reduced (TCW and PGIM), and the global fixed income mandate was fully redeemed from (Brandywine).
  - These implementation measures brought the Fixed Income allocation to its 16% target allocation.
  - No physical rebalancing is recommended at this time.
- **Private Equity** has a 15% allocation as of June 30, 2022, up from a 13.6% allocation as of March 31, 2022. The 15% allocation is above the revised policy target allocation of 11%, and above the top of the range.
  - A key driver of the overweight is the sell-off in the public markets relative to private markets. Private market valuations are lagged a quarter, and they also typically experience a smoothing effect relative to public markets (they are not marketed to market), which has led to inflated private market weightings across most institutional investor portfolios, including Private Equity.
  - Staff and Cliffwater will evaluate going forward commitment pacing for Private Equity, and Staff and Cliffwater are also evaluating selling some legacy FoF private equity positions in the secondary market, which will help reduce the overweight.
- **Other Private Market Asset Classes** also saw their allocations increase due to the sell-off in public markets. Current weights vs. target include:
  - **Private Credit** – 2.8% vs. 5% target
  - **Real Assets** – 7.2% vs. 7% target
  - **Real Estate** – 8.9% vs. 9% target

- **Alternative Assets Activity** – the following investment activity occurred within SCERS' alternative assets asset classes during the quarter:
    - Absolute Return
        - None
    - Private Equity
        - $25 million commitment to OrbiMed Private Investments IX, LP
        - $30 million commitment to Shamrock Capital Content Fund III, LP
    - Private Credit
        - $40 million commitment to OrbiMed Royalty and Credit Opportunities IV, LP
    - Real Assets
        - $50 million commitment to NGP Royalty Partners II, LP
    - Real Estate
        - None

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 1% 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	21	24	27
Cash	*0*	*1*	*2*
Real Return	16	18	20

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.

As mentioned earlier, the Overlay Program transitioned to the revised strategic asset allocation at the start of the second quarter of 2022.

There can be some larger gaps between target and actual allocations within private market assets classes, which can take several years to fully execute given the unique capital pacing budgets for these segments of the portfolio. Some private market asset classes are mature and are at or above their target allocations (Private Equity, Real Assets, Real Estate), while others will take a few additional years to implement (i.e., Private Credit).

The underlying components of each asset category overlay proxy are shown at the end of this report (Appendix B).

DISCUSSION

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).

As noted, SCERS rebalances the fund via both the Overlay Program and physically purchasing or selling assets. The Overlay Program is particularly effective in rebalancing public market assets due to the low tracking error of the underlying proxies compared to public market managers and the higher expenses of purchasing and liquidating interests held by investment managers. On the other hand, the Overlay Program is not as effective in tracking alternative assets because it is limited to the use of public market proxies. Public market proxies will not, for example, be able to replicate the 'illiquidity premium' or higher returns achieved historically by private equity and private real assets, or the 'absolute' return characteristics of SCERS' Absolute Return portfolio, including its ability to outperform equity markets in times of distress. Accordingly, it is beneficial for SCERS to invest in alternative assets in a consistent manner to achieve its asset allocation targets rather than heavily relying on the Overlay Program to rebalance these assets to the target allocations.

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.

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 in the process of being wound down. As outlined in **Table 1 of Appendix A,** the Growth asset category currently has an allocation of 53.5%, which is lower than the strategic asset allocation's target of 58%, and the allocation is 92% relative to the target allocation. At a more granular level, the Private Equity exposure is above target while the remaining asset classes are 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, purchased approximately $113 million of overlay proxy exposure to rebalance the Growth asset category to its target allocation.

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 33.8%, which is well below SCERS' policy target allocation of 40%, and the allocation is 84% relative to the target allocation, and below the bottom of the range. Public equities have sold off significantly during 2022, which is why the allocation is so far below the target.

At the sub-asset class level, Domestic Equity has an actual allocation of 17.5%, which is below its target allocation of 20% (88% relative to the target). Staff is evaluating physical rebalancing to bring the Domestic Equity and broader Global Equity allocations closer to target and back within their respective ranges.

International Equity has an actual allocation of 15.7%, which is in line with its target allocation as of 16% (98% relative to the target). The International Equity target allocation was reduced to a 16% allocation (from 18%) within the recently approved Global Equity structure. The downturn in public equities in 2022 has brought the International Equity allocation in line with the new target.

The newly formed Global/Unconstrained segment has a 0.6% allocation, which is below the 4% target allocation. Two new global equity mandates were funded in early August, which will bring the Global/Unconstrained segment toward the 4% target. 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 to the policy target allocation, when physical rebalancing is not required. No physical rebalancing is recommended at this time.

Private Equity:

As outlined in **Table 3**, SCERS' Private Equity allocation of 15% is above the revised target allocation of 11%. The allocation is 136% relative to the target allocation.

A key driver of the overweight is the sell-off in the public markets relative to private markets. Private market valuations are lagged a quarter, and they also typically experience a smoothing effect relative to public markets (they are not marketed to market), which has led to inflated private market weightings across most institutional investor portfolios, including private equity. Staff and Cliffwater will evaluate going forward commitment pacing for Private Equity, and Staff and Cliffwater are also evaluating selling some legacy FoF private equity positions in the secondary market, which will help reduce the weight.

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 87% 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 2.8% is below the revised policy target allocation of 5%, and the allocation is 56% 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 2025; however, Private Credit has recently experienced a meaningful increase in its weighting, similar to other private market asset classes, due to the sell-off in the public markets.

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 0.2%. 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 will be unwound during the remainder of 2022.

DIVERSIFYING ASSET CATEGORY

The Diversifying asset category is comprised of the Fixed Income and Diversifying Absolute Return (renamed 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 23.9%, which is in line with the strategic asset allocation's target of 24%, and the allocation is 99% 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.

No quarter-end activity with the Diversifying proxy was implemented, as physical fixed income rebalancing occurred during the quarter to bring the Diversifying allocation in line with target.

Fixed Income:

As outlined in **Table 8**, SCERS' Fixed Income allocation of 15.7% is below SCERS' revised policy target allocation of 16%, and the allocation is 98% relative to the target allocation.

During the quarter, two new core plus fixed income mandates were funded (Brandywine and Reams), two existing core plus fixed income mandates were reduced (TCW and PGIM), and the global fixed income mandate was fully redeemed from (Brandywine). These implementation measures brought the Fixed Income allocation to its 16% 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.

Diversifying Absolute Return:

As outlined in **Table 9**, SCERS' Diversifying Absolute Return allocation of 7.4% is slightly above the policy target allocation of 7%, and the allocation is 105% relative to the target allocation. The segment was renamed Absolute Return within the revised SAA.

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 18.9%, which is slightly above the strategic asset allocation's target of 18%, and the allocation is 105% relative to the target allocation.

The Overlay Program rebalances the Real Return asset category to the 18% 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 sold approximately $113 million of overlay proxy exposure to rebalance the Real Return asset category to its target allocation.

Real Estate:

As outlined in **Table 12**, SCERS' Real Estate allocation of 8.9% is in line with the revised policy target allocation of 9%, and the allocation is 98% relative to the target allocation. The Real Estate target increased from 7% to 9% within the revised SAA; however, Real Estate has recently experienced a meaningful increase in its actual weighting, similar to other private market asset classes, due to the sell-off in the public markets. This has brought the weighting to the revised target allocation rather quickly. The 2022 Real Estate pacing plan budgeted adding core real estate exposure; however, the current Real Estate weighting will put this on hold.

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 7.2%, up from 6.3% last quarter, is now slightly above the policy target allocation of 7%, and the allocation is 103% relative to the target allocation. Private real asset valuations are lagged a quarter. The SAA's target allocation to Real Assets remains at 7%.

Real Assets has recently experienced a meaningful increase in its weighting, similar to other private market asset classes, due to the sell-off in the public markets, which has brought the weighting to the target allocation rather quickly.

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 2.8% is above the policy target allocation of 2%, and the allocation is 141% relative to the target allocation. The Liquid Real Return allocation is split between a strategic active mandate managed by Brookfield Asset Management and the SSGA Real Return Overlay proxy. The latter is used to adjust broad Real Return asset category exposures during quarterly overlay rebalancing, and accounts for the overweight to the segment.

CASH

As outlined in **Tables 10 and 15**, SCERS' total cash balance is approximately 3.6% (as of June 30, 2022), which includes a combination of the 0.8% dedicated cash allocation and 2.8% in other cash. The dedicated cash allocation of 0.8% is 82% relative to the 1% 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 an emergency source of cash during a market dislocation.

Most of the 2.8% other cash allocation was used to fund the recently implemented global equity mandates and remaining benefit payments for the year, prior to the 2022/2023 pre-funded annual employer contribution coming in during the third quarter. The other cash allocation is also used to fund drawdowns within the private markets segments of the portfolio. SCERS' Overlay Program rebalances the portfolio by eliminating cash drag by investing the non-dedicated cash allocation (2.8%) 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:	Reviewed by:
/S/	/S/
Steve Davis Chief Investment Officer	Eric Stern Chief Executive Officer

Retirement Board Order

Sacramento County Employees' Retirement System

Before the Board of Retirement
August 17, 2022

AGENDA ITEM:

Portfolio Allocation and Rebalancing Report – Second Quarter 2022

THE BOARD OF RETIREMENT hereby accepts the recommendation of staff to receive and file the Portfolio Allocation and Rebalancing Report - Second Quarter 2022.

I HEREBY CERTIFY that the above order was passed and adopted on August 17, 2022 by the following vote of the Board of Retirement, to wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

ALTERNATES (Present but not voting):

____
Board President

____
Eric Stern
Chief Executive Officer and
Board Secretary

APPENDIX A: Quarterly Portfolio Allocation and Rebalancing Detail (as of June 30, 2022)

Fund Name	Market Value	Actual	Target	Delta	% Relative to Target
Total Fund	**$11,775,680,989**				

Table 1: GROWTH ASSET CATEGORY

	Market Value	Actual	Target	Delta	% Relative to Target
GROWTH ASSET CATEGORY:	**$6,295,064,191**	**53.5%**	**58.0%**	**-4.5%**	**92%**

Table 2: Global Equity Asset Class — **Allowable Range: 36-44%**

Global Equity	Sub-Asset Class	Market Value	Actual	Target	Delta	% Relative to Target
		$3,975,389,751	**33.8%**	**40.0%**	**-6.2%**	**84%**

		Market Value	Actual	Target	Delta	to Target
	Domestic Equity	**$2,063,814,830**	**17.5%**	**20.0%**	**-2.5%**	**88%**
AllianceBernstein	Equity Core Index	$1,032,096,546	8.8%			
JP Morgan 130/30	Equity Core Active Short Extension (130/30)	$143,528,496	1.2%			
DE Shaw Broad Market Core Alpha Extension	Equity Core Active Short Extension (130/30)	$149,684,214	1.3%			
Eagle Capital Management	Equity Large Cap Core	$258,725,342	2.2%			
AQR US Enhanced Equity	Equity Systematic Multi-Factor Core	$284,047,128	2.4%			
	Equity Large Cap		15.9%	18.0%	-2.1%	
Snyder Capital Management	Equity Small Cap Value	$107,170,689	0.9%			
Weatherbie & Co.	Equity Small Cap Growth	$88,562,416	0.8%			
	Equity Small Cap		1.7%	2.0%	-0.3%	

		Market Value	Actual	Target	Delta	% Relative to Target
	International Equity	**$1,844,373,817**	**15.7%**	**16.0%**	**-0.3%**	**98%**
Lazard Asset Management	ACWI Ex-US	$302,788,242	2.6%			
LSV Large Cap International Value	International Equity Large Cap Value	$478,343,628	4.1%			
Walter Scott	International Equity Large Cap Growth	$522,439,223	4.4%			
William Blair & Co.	International Equity Small Cap Growth	$84,428,482	0.7%			
Mondrian Investment Partners	International Equity Small Cap Value	$91,845,522	0.8%			
	International Developed		12.6%	11.2%	1.4%	
Baillie Gifford	Emerging Markets Equity - All Cap	$190,061,464	1.6%			
Mondrian Emerging Markets Equity Fund, LP	Emerging Markets Equity - All Cap	$174,467,255	1.5%			
	Emerging Markets		3.1%	4.8%	-1.7%	

		Market Value	Actual	Target	Delta	% Relative to Target
	Global/Unconstrained Equity	**$67,201,104**	**0.6%**	**4.0%**	**-3.4%**	**14%**
Third Point Partners Qualified, LP	Event Driven	$67,201,104	0.6%			

Table 3: Private Equity Asset Class — **Allowable Range: 8-14%**

Private Equity	Sub-Strategy	Market Value	Actual	Target	Delta	% Relative to Target
		$1,765,016,236	15.0%	11.0%	4.0%	136%
Accel-KKR Capital Partners IV, LP	Buyout	$332,590	0.0%			
Accel-KKR Capital Partners V, LP	Buyout	$27,672,720	0.2%			
Accel-KKR Capital Partners VI, LP	Buyout	$12,473,691	0.1%			
Accel-KKR Growth Capital Partners II, LP	Buyout	$12,008,913	0.1%			
Accel-KKR Growth Capital Partners III, LP	Buyout	$34,022,545	0.3%			
Accel-KKR Growth Capital Partners IV, LP	Buyout	$1,681,735	0.0%			
Cortec Group Fund VII, LP	Buyout	$27,463,863	0.0%			
Gridiron Capital Fund IV, LP	Buyout	$36,495,641	0.3%			
H.I.G. Capital Partners V, LP	Buyout	$13,082,943	0.1%			
Linden Capital Partners III, LP	Buyout	$54,734,926	0.5%			
Linden Capital Partners IV, LP	Buyout	$49,725,357	0.4%			
Linden Capital Partners V, LP	Buyout	-$400,412	0.0%			
Marlin Equity Partners IV, LP	Buyout	$11,340,628	0.1%			
Marlin Equity Partners V, LP	Buyout	$28,643,879	0.2%			
Marlin Heritage Europe, LP	Buyout	$30,774,779	0.3%			
Marlin Heritage, LP	Buyout	$7,522,365	0.1%			
Marlin Heritage II, LP	Buyout	$13,855,385	0.1%			
Marlin Heritage III, L.P.	Buyout	$0	0.0%			
Oaktree Power Opportunities Fund VI, LP	Buyout	$4,988,084	0.0%			
Shamrock Capital Growth Fund V, LP	Buyout	$6,646,167	0.1%			
Thoma Bravo Fund XI, LP	Buyout	$51,799,168	0.4%			
Thoma Bravo Fund XII, LP	Buyout	$42,873,970	0.4%			
Thoma Bravo Fund XIII, LP	Buyout	$65,368,904	0.6%			
TSG 7 A, LP	Buyout	$28,798,865	0.2%			
TSG 7 B, LP	Buyout	$4,914,229	0.0%			
TSG 8, LP	Buyout	$27,799,285	0.2%			
TSG 8, LP	Buyout	$0	0.0%			
Wynnchurch Capital Partners V, LP	Buyout	$9,877,946	0.1%			
H.I.G. Europe Capital Partners II, LP	European Buyout	$9,785,529	0.1%			
Waterland Private Equity Fund V, CV	European Buyout	$3,808,267	0.0%			
Waterland Private Equity Fund VI, CV	European Buyout	$19,619,072	0.2%			
RRJ Capital Master Fund II, LP	Asian Buyout/Special Situations	$9,559,473	0.1%			
RRJ Capital Master Fund III, LP	Asian Buyout/Special Situations	$8,797,669	0.1%			
Shamrock Capital Content Fund II, L.P.	Growth Equity	$6,646,167	0.1%			
Shamrock Capital Content Fund III, L.P.	Growth Equity	$0	0.0%			
Spectrum Equity Investors VII, LP	Growth Equity	$63,365,633	0.5%			
Spectrum Equity Fund VIII, LP	Growth Equity	$33,567,563	0.3%			
Spectrum Equity Fund IX, L.P.	Growth Equity	$15,183,117	0.1%			
Summit Partners VC Fund III, LP	Growth Equity	$3,254,896	0.0%			
Summit Partners Venture Capital Fund IV, LP	Growth Equity	$59,733,668	0.5%			
Summit Partners Venture Capital V, L.P.	Growth Equity	$8,023,789	0.1%			
Summit Partners Europe Growth Equity Fund II, LP	European Growth Equity	$28,661,092	0.2%			
Summit Partners Europe Growth Equity Fund III, L.P.	European Growth Equity	$9,831,325	0.1%			
Canvas 3, L.P.	Venture Capital	$9,970,117	0.1%			
CRV XVIII, L.P.	Venture Capital	$18,296,148	0.2%			
CRV XIX, LP	Venture Capital	$2,025,000	0.0%			
CRV Select II, LP	Venture Capital	$3,410,845	0.0%			
Khosla Ventures IV, LP	Venture Capital	$21,025,785	0.2%			
Khosla Ventures V, L.P.	Venture Capital	$47,458,941	0.4%			
Khosla Ventures VI, L.P.	Venture Capital	$53,704,037	0.5%			
Khosla Ventures VII, L.P.	Venture Capital	$10,985,124	0.1%			
New Enterprise Associates 14, LP	Venture Capital	$55,298,766	0.5%			
New Enterprise Associates 15, LP	Venture Capital	$46,049,636	0.4%			
New Enterprise Associates 16, LP	Venture Capital	$46,060,914	0.4%			
New Enterprise Associates 17, LP	Venture Capital	$22,768,829	0.2%			
OrbiMed Private Investments VIII, L.P.	Venture Capital	$6,634,617	0.1%			
OrbiMed Private Investments IX, L.P.	Venture Capital	$0	0.0%			
Threshold Ventures III, LP	Venture Capital	$29,787,631	0.3%			
Threshold Ventures IV, LP	Venture Capital	$0	0.0%			
Trinity Ventures XI, LP	Venture Capital	$61,180,622	0.5%			
Trinity Ventures XII, LP	Venture Capital	$74,239,657	0.6%			
Atalaya Special Opportunities Fund V, LP	Distressed Debt	$1,498,547	0.0%			
Atalaya Special Opportunities Fund VI, LP	Distressed Debt	$3,856,259	0.0%			
Davidson Kempner Distressed Opportunities Fund III, LP	Distressed Debt	$41,510,186	0.4%			
Davidson Kempner Distressed Opportunities Fund IV, LP	Distressed Debt	$30,582,511	0.3%			
Garrison Opportunity Fund III, LP	Distressed Debt	$10,216,695	0.1%			
H.I.G. Bayside Loan Opportunity III (Europe), LP	Distressed Debt	$4,203,806	0.0%			
Strategic Value Special Situations Fund V, L.P.	Distressed Debt	$10,438,779	0.1%			
TPG Opportunities Partners III, LP	Distressed Debt	$11,638,258	0.1%			
TSSP Opportunities Partners IV, LP	Distressed Debt	$31,076,576	0.3%			
Sixth Street Opportunities Partners V, L.P.	Distressed Debt	$5,127,208	0.0%			
Wayzata Opportunities Fund III, LP	Distressed Debt	$3,705,784	0.0%			
Dyal Capital Partners II, LP	Other	$32,247,729	0.3%			
Dyal Capital Partners III, LP	Other	$24,158,491	0.2%			
Abbott Capital ACE VI	Fund of Funds	$35,341,832	0.3%			
Goldman Sachs PEP X	Fund of Funds	$23,562,012	0.2%			
Harbourvest Partners Intl VI	Fund of Funds	$26,486,701	0.2%			
HarbourVest Partners VIII	Fund of Funds	$8,872,346	0.1%			
RCP Multi-Fund Feeder (SCERS), L.P.	Fund of Funds	$67,260,423	0.6%			

Table 4: Public Credit Asset Class — **Allowable Range: 1-3%**

Public Credit	Sub-Strategy	Market Value	Actual	Target	Delta	% Relative to Target
		$205,108,056	**1.7%**	**2.0%**	**-0.3%**	**87%**
Brigade Capital SC Opportunities Mandate	Public Credit	$205,108,056	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
		$327,314,896	**2.8%**	**5.0%**	**-2.2%**	**56%**
Ares Capital Europe Fund V, LP	Direct Lending	$19,694,573	0.2%			
Benefit Street Partners Senior Opportunities Fund, LP	Direct Lending	$29,005,208	0.2%			
Benefit Street Partners Senior Opportunities Fund II, LP	Direct Lending	$27,957,484	0.2%			
IFM U.S. Infrastructure Debt Fund, LP	Direct Lending	$22,479,983	0.2%			
Shamrock Capital Debt Opportunities Fund I, LP	Direct Lending	$1,892,422	0.0%			
Summit Partners Credit Fund, LP	Direct Lending	$403,830	0.0%			
Summit Partners Credit Fund II, LP	Direct Lending	$14,650,452	0.1%			
Summit Partners Credit Fund III, LP	Direct Lending	$26,395,116	0.2%			
Summit Partners Credit Fund IV, LP	Direct Lending	$6,224,639	0.1%			
Tennenbaum Capital Partners Direct Lending Fund VIII (S), L	Direct Lending	$97,531,085	0.8%			
Athyrium Opportunities Fund II, LP	Healthcare Opportunistic Lending	$10,478,247	0.1%			
Athyrium Opportunities Fund III, LP	Healthcare Opportunistic Lending	$11,804,363	0.1%			
OrbiMed Royalty and Credit Opportunities Fund III, LP	Healthcare Opportunistic Lending	$10,934,984	0.1%			
OrbiMed Royalty & Credit Opportunities IV, LP	Healthcare Opportunistic Lending	$0	0.0%			
MCP Private Capital Fund IV, SCSp	Opportunistic Lending	$15,256,806	0.1%			
Silver Point Specialty Credit Fund II, L.P.	Opportunistic Lending	$32,605,703	0.3%			

Table 6: Growth Absolute Return Asset Class — **Allowable Range: 0%**

Growth Absolute Return	Sub-Strategy	Market Value	Actual	Target	Delta	% Relative to Target
		$22,235,252	**0.2%**	**0.0%**	**0.2%**	**N/A**
Grosvenor SCARF - Growth Series	Diversified Separate Account	$22,235,252	0.2%			

Table 7: DIVERSIFYING ASSET CATEGORY

	Market Value	Actual	Target	Delta	% Relative to Target
DIVERSIFYING ASSET CATEGORY:	**$2,810,248,732**	**23.9%**	**24.0%**	**-0.1%**	**99%**

Table 8: Fixed Income Asset Class — **Allowable Range: 12-20%**

Fixed Income	Sub-Strategy	Market Value	Actual	Target	Delta	% Relative to Target
		$1,844,447,752	**15.7%**	**16.0%**	**-0.3%**	**98%**
Prudential Investment Management	Core Plus Active Fixed Income	$351,556,775	3.0%	3.0%		
TCW	Core Plus Active Fixed Income	$353,659,436	3.0%	3.0%		
Brandywine U.S. Fixed Income	Core Plus Active Fixed Income	$354,149,213	3.0%	3.0%		
Reams	Core Plus Active Fixed Income	$352,080,544	3.0%	3.0%		
	Core Plus		12.0%	12.0%	0.0%	
Neuberger Berman	US Treasuries	$433,001,785	3.7%	4.0%	-0.3%	

Table 9: Diversifying Absolute Return Asset Class — **Allowable Range: 5-9%**

Diversifying Absolute Return	Sub-Strategy	Market Value	Actual	Target	Delta	% Relative to Target
		$869,222,381	**7.4%**	**7.0%**	**0.4%**	**105%**
Grosvenor SCARF - Diversifying Series	Diversified Separate Account	$218,228,947	1.9%			
Grosvenor SCARF Series B - Interim Diversifying	Diversified Separate Account	$106,745	0.0%			
Eisler Capital Fund, LP	Discretionary Global Macro	$41,657,535	0.4%			
Marshall Wace Global Opportunities Fund	Equity Long/Short	$52,960,230	0.4%			
BlackRock Event Driven Equity Fund	Event Driven	$52,641,147	0.4%			
Elliott Associates LP	Event Driven	$77,969,684	0.7%			
Davidson Kempner Institutional Partners, LP	Event Driven	$57,822,051	0.5%			
PSquared Event Opportunity Fund, L.P.	Event Driven	$52,484,100	0.4%			
KLS Diversified Fund, L.P.	Fixed Income Arbitrage	$0	0.0%			
Aristeia Partners, L.P.	Fixed Income Relative Value	$48,399,975	0.4%			
LMR Fund Ltd	Market Neutral, Multi-Strategy	$51,067,035	0.4%			
Laurion Capital Management, LP	Volatility Arbitrage	$56,883,089	0.5%			
Two Sigma Risk Premia Enhanced Fund, LP	Alternative Risk Premia	$49,358,295	0.4%			
Graham Tactical Trend Fund , L.P.	Systematic Global Macro	$49,547,367	0.4%			
Sculptor Domestic Partners II, LP	Multi Strategy	$60,096,180	0.5%			

Table 10: Dedicated Cash — **Allowable Range: 0-2%**

Dedicated Cash	Market Value	Actual	Target	Delta	% Relative to Target
	$96,578,599	**0.8%**	**1.0%**	**-0.2%**	**82%**
Dedicated Cash Account	$96,578,599	0.8%	1.0%	-0.2%	

Table 11: REAL RETURN ASSET CATEGORY

	Market Value	Actual	Target	Delta	% Relative to Target
REAL RETURN ASSET CATEGORY:	**$2,224,831,995**	**18.9%**	**18.0%**	**0.9%**	**105%**

Table 12: Real Estate Asset Class **Allowable Range: 7-11%**

Real Estate	Sub-Strategy	Market Value	Actual	Target	Delta	% Relative to Target
		$1,043,229,307	**8.9%**	**9.0%**	**-0.1%**	**98%**
Brookfield Premier Real Estate Partners, LP	Core Real Estate	$128,630,053	1.1%			
Clarion Lion Properties Fund, LP	Core Real Estate	$132,646,884	1.1%			
MetLife Core Property Fund, LP	Core Real Estate	$88,007,942	0.7%			
Principal US Property Account	Core Real Estate	$66,200,330	0.6%			
Prologis Targeted Europe Logistics Fund, LP	Core Real Estate	$71,036,500	0.6%			
Prologis Targeted US Logistics Fund, LP	Core Real Estate	$135,015,627	1.1%			
Townsend Real Estate Fund, LP	Core Real Estate	$157,277,122	1.3%			
Carlyle China Realty, L.P.	Non-Core Real Estate - Opportunistic	$8,496,987	0.1%			
Carlyle China Rome Logistics, L.P.	Non-Core Real Estate - Opportunistic	$37,741,354	0.3%			
KKR Real Estate Partners Americas, LP	Non-Core Real Estate - Opportunistic	$1,734,953	0.0%			
LaSalle China Logistics Venture, LP	Non-Core Real Estate - Opportunistic	$2,733,206	0.0%			
Sculptor Real Estate Fund III, LP	Non-Core Real Estate - Opportunistic	$4,674,244	0.0%			
Sculptor Real Estate Fund IV, L.P.	Non-Core Real Estate - Opportunistic	$7,691,040	0.1%			
Asana Partners Fund II, L.P.	Non-Core Real Estate - Value-Added	$23,877,309	0.2%			
Asana Partners Fund III, L.P.	Non-Core Real Estate - Value-Added	$1,250,290	0.0%			
CIM Opportunity Fund VIII, LP	Non-Core Real Estate - Value-Added	$30,246,426	0.3%			
DRC European Real Estate Debt Fund II, LP	Non-Core Real Estate - Value-Added	$1,761,016	0.0%			
ECE European Prime Shopping Centre Fund II, SCS-SIF	Non-Core Real Estate - Value-Added	$30,870,198	0.3%			
Hammes Partners II, LP	Non-Core Real Estate - Value-Added	$3,254,730	0.0%			
Hammes Partners III, LP	Non-Core Real Estate - Value-Added	$19,952,262	0.2%			
Hammes Partners IV, LP	Non-Core Real Estate - Value-Added	$0	0.0%			
NREP Nordic Strategies Fund, FCP-FIS	Non-Core Real Estate - Value-Added	$319,832	0.0%			
NREP Nordic Strategies Fund II, FCP-FIS	Non-Core Real Estate - Value-Added	$26,731,488	0.2%			
NREP Nordic Strategies Fund III, FCP-FIS	Non-Core Real Estate - Value-Added	$38,807,489	0.3%			
NREP Nordic Strategies Fund IV, FCP-FIS	Non-Core Real Estate - Value-Added	$14,383,096	0.1%			
Seven Seas Japan Opportunity Fund, GK	Non-Core Real Estate - Value-Added	$9,888,928	0.1%			

Table 13: Real Assets Asset Class **Allowable Range: 5-9%**

Real Assets	Sub-Strategy	Market Value	Actual	Target	Delta	% Relative to Target
		$850,160,314	**7.2%**	**7.0%**	**0.2%**	**103%**
ACM Fund II, LP	Agriculture	$17,685,496	0.2%			
Paine Schwartz Food Chain Fund V, L.P.	Agriculture	$33,986,375	0.3%			
EnCap Energy Capital Fund IX, LP	Energy	$14,722,903	0.1%			
EnCap Energy Capital Fund X, LP	Energy	$30,277,809	0.3%			
NGP Royalty Partners, L.P.	Energy	$24,793,053	0.2%			
NGP Royalty Partners II, L.P.	Energy	$0	0.0%			
Tailwater Energy Fund III, LP	Energy	$31,863,442	0.3%			
Tailwater Energy Fund IV, LP	Energy	$27,240,997	0.2%			
Quantum Energy Partners VI, LP	Energy	$45,013,051	0.4%			
Quantum Energy Partners VII, LP	Energy	$34,407,035	0.3%			
ArcLight Energy Partners Fund VI, LP	Infrastructure	$22,695,885	0.2%			
Brookfield Infrastructure Fund III, LP	Infrastructure	$37,185,312	0.3%			
Brookfield Infrastructure Fund IV, LP	Infrastructure	$32,503,461	0.0%			
Brookfield Super-Core Infrastructure Partners	Infrastructure	$0	0.0%			
Digital Colony Partners II, L.P.	Infrastructure	$21,290,147	0.0%			
EnCap Flatrock Midstream Fund III, LP	Infrastructure	$13,462,256	0.1%			
EnCap Flatrock Midstream Fund IV, LP	Infrastructure	$8,389,050	0.1%			
EQT Infrastructure IV, SCSp	Infrastructure	$31,457,266	0.3%			
First Reserve Energy Infrastructure Fund II, LP	Infrastructure	$13,834,930	0.1%			
Harrison Street Social Infrastructure Fund LP	Infrastructure	$79,042,029	0.7%			
IFM Global Infrastructure Fund	Infrastructure	$147,754,197	1.3%			
ISQ Global Infrastructure Fund II, LP	Infrastructure	$51,254,438	0.4%			
ISQ Global Infrastructure Fund III, L.P.	Infrastructure	$3,092,124	0.0%			
Meridiam Infrastructure North America III, LP	Infrastructure	$21,496,569	0.2%			
Meridiam Sustainable Infrastructure Europe IV, SLP	Infrastructure	$4,077,446	0.0%			
Pantheon SCERS SIRF, LLC	Infrastructure	$46,747,921	0.4%			
Ridgewood Water & Strategic Infrastructure Fund II, LP	Infrastructure	$0	0.0%			
Wastewater Opportunity Fund, LLC	Infrastructure	$20,403,903	0.2%			
Atalaya SCERS SMA, LLC	Infrastructure Debt	$0	0.0%			
Carlyle Power Partners II, LP	Power Generation	$35,483,219	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
		$331,442,374	**2.8%**	**2.0%**	**0.8%**	**141%**
SSGA Real Return Overlay Strategy	Passive Liquid Real Return Proxy	$224,539,397	1.9%			
Brookfield Liquid Real Return	Active Liquid Real Return	$106,902,977	0.9%			

Table 15: Other Cash/Overlay

Other Cash/Overlay	Market Value	Actual	Target	Delta	% Relative to Target
	$328,841,368	**2.8%**	**-**	**-**	**N/A**
Other Cash	$261,060,113	2.2%	-		
SSgA Overlay Account	$67,781,254	0.6%	-		

APPENDIX B: OVERLAY PROXIES

Growth Asset Category Proxy			
	Policy Allocation	Benchmark	Overlay Implementation
Global Equity	40%	MSCI ACWI IMI	Basket of S&P 500, S&P Midcap, Russell 2000, TSE 60, MSCIEA (NY), MSCIEM (NY) futures and currency
Private Equity	11%	Cambridge Associates PE/VC Index	Basket of 88% Global Equity and 12% US TSY
Public Credit	2%	50% BofA High Yield/50% CS Leveraged Loan	Basket of 88% Global Equity and 12% US TSY
Private Credit	5%	CS Leveraged Loan + 2%	Basket of 88% Global Equity and 12% US TSY

Diversifying Asset Category Proxy			
	Policy Allocation	Benchmark	Overlay Implementation
Fixed Income	16%	Bloomberg U.S. Aggregate Index	Basket of Treasury Futures and TBAs
Absolute Return	7%	Cambridge Associates PE/VC Index	Basket of Treasury Futures and TBAs
Cash	1%	Overnight Libor	+/- 15 bps of 1% target

Real Return Asset Category Proxy		
	Policy Allocation*	Benchmark/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*