Board of Retirement Regular Meeting

Sacramento County Employees' Retirement System

Agenda Item 8

MEETING DATE: February 16, 2022

SUBJECT: Portfolio Allocation and Rebalancing Report – Fourth Quarter 2021

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

RECOMMENDATION

Staff recommends that the Board receive and file the quarterly asset allocation and rebalancing report.

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 Board approved a revised strategic asset allocation (SAA) in August of 2021. The information in this report reflects SCERS' prior SAA, including SCERS' current allocations relative to the prior asset allocations' target allocations. Staff is working with SSGA on revisions to the Overlay Program, as well as underlying proxy modifications, and anticipates transitioning the Overlay Program to the revised SAA at the start of the second quarter of 2022. This quarterly Portfolio Allocation and Rebalancing Report will be reformatted to the revised asset allocation for the second quarter as well.

Below is a summary of SCERS' asset category and asset class positioning relative to the target allocations as of December 31, 2021 (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*		**60.3%**	**58.0%**	**2.3%**	**104%**
	Domestic Equity	23.0%	20.0%	3.0%	115%
	International Equity	18.7%	20.0%	-1.3%	94%
	Private Equity	12.5%	9.0%	3.5%	139%
	Public Credit	1.7%	2.0%	-0.3%	85%
	Private Credit	2.2%	4.0%	-1.8%	56%
	Growth Absolute Return	2.1%	3.0%	-0.9%	70%
DIVERSIFYING*		**19.8%**	**25.0%**	**-5.2%**	**79%**
	Public Fixed Income	13.7%	18.0%	-4.3%	76%
	Diversifying Absolute Return	6.1%	7.0%	-0.9%	87%
REAL RETURN**		**16.3%**	**16.0%**	**0.3%**	**102%**
	Real Estate	7.0%	7.0%	0.0%	101%
	Real Assets	5.8%	7.0%	-1.2%	83%
	Liquid Real Return	3.4%	2.0%	1.4%	172%
OPPORTUNITIES		**0.0%**	**0.0%**	**0.0%**	**N/A**
DEDICATED CASH		**0.7%**	**1.0%**	**-0.3%**	**74%**
OTHER CASH/OVERLAY		**1.7%**	**0.0%**	**1.7%**	**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

*** Represents prior SAA target allocations. This report will transiton to the revised SAA target allocations during Q2'22

During the fourth quarter of 2021, the following <u>Overlay Program rebalancing</u> occurred:

- Quarter-end rebalance:
  - Sold $22 million in Growth proxy
  - Purchased $48 million in Diversifying proxy
  - Sold $24 million in Real Return proxy
  - Sold/reduced cash allocation by $2 million

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

- **Domestic Equity** has a 23% allocation as of December 31, 2021, up meaningfully from a 21.9% allocation as of September 30, 2021. The 23% allocation is above the 20% target allocation, and also above the top of the range of 22%.
  - The large relative weight is due to the continued outperformance of domestic equities relative to other asset classes, particularly during the first quarter

  - o During January 2022, Staff implemented physical rebalancing, and reduced the Domestic Equity exposure by approximately $334 million, bringing the Domestic Equity allocation close to the 20% target allocation, which is the approved target allocation for Domestic Equity within the revised SAA.
- **International Equity** has an 18.7% allocation as of December 31, 2021, down slightly from a 19% allocation as of September 30, 2021. The 18.7% allocation is below the prior 20% target allocation.
  - o The International Equity target allocation was reduced to a 16% allocation within the recently approved Global Equity structure. Staff expects to transition exposure toward the 16% International Equity target over the next few quarters, as the newly formed Global/Unconstrained segment is implemented.
  - o No physical rebalancing is recommended at this time.
- **Private Equity** has a 12.5% allocation as of December 31, 2021, up from a 12.3% allocation as of September 30, 2021. The 12.5% allocation is above the revised policy target allocation of 11%. Private market valuations are lagged a quarter.
  - o Private Equity has generated exceptionally strong returns over the past year (58.4%), which accounts for the overweight.
  - o The Private Equity annual commitment budget forecasts the Private Equity allocation moving back toward the 11% target over the next year. Staff and Cliffwater are also exploring the secondary market as a tool to potentially sell certain mature funds to assist in managing the Private Equity allocation.
- **Fixed Income** has a 13.7% allocation as of December 31, 2021, slightly down from a 13.8% allocation as of September 30, 2021. The 13.7% allocation is below the 18% prior target allocation, but within the range, and is also below the revised SAA's 16% target allocation to Public Fixed Income.
  - o The continued underperformance of fixed income relative to other asset classes has moved the Public Fixed Income portfolio below the target.
  - o Staff and Verus are nearing the conclusion of a core plus fixed income manager search, with a recommendation for the Board scheduled over the next couple of months. Implementation of this mandate is expected to occur late in the first quarter/early second quarter, which will bring the Fixed Income allocation close to the new 16% target.
    - ▪ Existing Fixed Income mandates will be rebalanced concurrently at that time.
- **Alternative Assets** – the following investment activity occurred within SCERS' alternative assets asset classes during the quarter:
  - o Absolute Return
    - ▪ None
  - o Private Equity
    - ▪ $30 million commitment to Sixth Street Opportunities Partners V, LP
  - o Private Credit
    - ▪ $40 million commitment to Summit Partners Credit Fund IV, LP
  - o Real Assets
    - ▪ $100 million commitment to Brookfield Super-Core Infrastructure Partners
  - o Real Estate
    - ▪ $40 million commitment to Asana Partners Fund III, LP

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	22	**25**	28
Real Return	14	**16**	18
Cash	0	**1**	2

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.

Staff expects the Overlay Program to transition to the revised strategic asset allocation during the second quarter of 2022, with any adjustments to the overlay proxies to be presented to the Board at an upcoming Board meeting.

There remain some larger gaps between target and actual allocations within some private market assets classes. Private market asset class implementation (Private Credit; Real Assets) continues to make progress, but will take additional years to fully execute given the unique capital pacing budgets for these segments of the portfolio. Private Equity is more mature, and currently above its revised 11% target allocation.

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 1-16** 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 Domestic Equity, International Equity, Private Equity, Public Credit, Private Credit, and Growth Absolute Return segments of the portfolio. As outlined in **Table 1 of Appendix A,** the Growth asset category currently has an allocation of 60.3%, which is higher than the strategic asset allocation's target of 58%, and the allocation is 104% relative to the target allocation. At a more granular level, the Domestic Equity and Private Equity exposures are above target while the remaining asset classes are in line to slightly below target. The revised SAA's target allocation to the Growth asset category remains at 58%.

The Overlay Program rebalances the Growth asset category to the 58% target allocation by purchasing or selling global equity futures to bring the Domestic Equity and International Equity asset classes to their target allocations, and then adjusts the remainder of the asset category by using a combination of 85% global equity futures and 15% U.S. Treasury futures.

At the end of the quarter, SCERS' overlay manager, SSGA, sold approximately $22 million of overlay proxy exposure to rebalance the Growth asset category to its target allocation.

Domestic Equities:

As outlined in **Table 2**, SCERS' Domestic Equity asset class actual weighting of 23% is above SCERS' policy target allocation of 20%, and the allocation is 115% relative to the target allocation and is above the top of the range of 22%.

During January 2022, Staff implemented physical rebalancing, and reduced the Domestic Equity exposure by approximately $334 million, bringing the Domestic Equity allocation close to the 20% target allocation, which is the approved target allocation for Domestic Equity within the revised SAA.

SSGA buys and sells a basket of U.S. equity index futures to rebalance the Domestic Equity asset class to the policy target allocation, when physical rebalancing is not required.

At the sub-asset class level, U.S. large cap, at a 20.8% allocation is above the target allocation of 18%. U.S. small cap, at a 2.2% allocation is also above the target allocation of 2%.

International Equities:

As outlined in **Table 3**, SCERS' International Equity asset class actual weighting of 18.7% is below SCERS' prior policy target allocation of 20%, and the allocation is 94% relative to the target allocation.

The International Equity target allocation was reduced to a 16% allocation within the recently approved Global Equity structure. Staff expects to transition exposure toward the 16% target over the next few quarters, as the newly formed Global/Unconstrained segment is implemented.

SSGA buys and sells a basket of international equity index futures to rebalance the International Equity asset class to the policy target allocation, when physical rebalancing is not required. No physical rebalancing is recommended at this time.

At the sub-asset class level, international large cap, at a 13.3% allocation is below the target allocation of 14%. International small cap, at a 2.0% allocation is in line with the target allocation of 2%. Emerging markets equity, at a 3.5% allocation is below the policy target allocation of 4%.

Private Equity:

As outlined in **Table 4**, SCERS' Private Equity allocation of 12.5% is above the revised policy target allocation of 9%, and also above the revised Private Equity target allocation of 11%. The allocation is 139% relative to the target allocation and the asset class. Private market valuations are lagged a quarter.

Private Equity has generated exceptionally strong returns over the past year (58.4%), which accounts for the overweight. The Private Equity annual commitment budget forecasts the Private Equity allocation moving back toward the 11% target over the next year. Staff and Cliffwater are also exploring the secondary market as a tool to potentially sell certain mature funds to assist in managing the Private Equity allocation.

SSGA utilizes a basket of 85% global equities and 15% U.S. Treasuries to replicate Private Equity, as part of a broader non-public equity proxy within the Growth asset category.

Please note that there is an investment within the Opportunities portfolio (Atalaya Special Opportunities Fund V, LP) which draws capital from the Private Equity asset class, as this is the asset class with the closest risk and return profile of the opportunity being invested in by this fund. The market value of this investment is $4.9 million, less than 0.1% of the total portfolio. With the Opportunities portfolio eliminated from the revised SAA, this investment will be moved to the Private Equity asset class over the next couple of quarters.

Public Credit:

As outlined in **Table 5**, SCERS' Public Credit allocation of 1.7% is below the policy target allocation of 2%, and the allocation is 85% relative to the target allocation. SSGA utilizes a basket of 85% global equities and 15% 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 6**, SCERS' Private Credit allocation of 2.2% is below the prior policy target allocation of 4%, and the allocation is 56% relative to the target allocation. Private credit valuations are lagged a quarter. The Private Credit allocation increased to 5% within the revised SAA.

SSGA utilizes a basket of 85% global equities and 15% U.S. Treasuries to replicate Private Credit, as part of a broader non-public equity proxy within the Growth asset category. The commitment schedule and cash flow forecast of Private Credit investments projects SCERS achieving and maintaining the policy target in 2025.

Growth Absolute Return:

As outlined in **Table 7**, SCERS' Growth Absolute Return portfolio has a current allocation of 2.1%. The Growth Absolute Return Portfolio was eliminated from the revised SAA, and SCERS is in the process of unwinding underlying exposures within this portfolio. At the start of 2022, SCERS received redemption proceeds from one fund, and another was transferred to the Diversifying Absolute Return portfolio. Most of the remaining allocation will be unwound during the remainder of 2022.

SSGA utilizes a basket of 85% global equities and 15% U.S. Treasuries to replicate Growth Absolute Return, as part of a broader non-public equity proxy within the Growth asset category.

DIVERSIFYING ASSET CATEGORY

The Diversifying asset category is comprised of the Public Fixed Income and Diversifying Absolute Return segments of the portfolio. As outlined in **Table 8**, the Diversifying asset category currently has an allocation of 19.8%, which is below the prior strategic asset allocation's target of 25%, and the allocation is 79% relative to the target allocation. The revised SAA's target allocation to the Diversifying asset category was reduced to 24%, and will include the 1% dedicated cash allocation, in addition to Fixed Income and Diversifying Absolute Return (renamed Absolute Return).

The Overlay Program rebalances the Diversifying asset category to the 25% target allocation by purchasing or selling U.S. government bond futures.

At the end of the quarter, SCERS' overlay manager, SSGA, purchased approximately $48 million of overlay proxy exposure to rebalance the Diversifying asset category to its target allocation.

Public Fixed Income:

As outlined in **Table 9**, SCERS' Public Fixed Income allocation of 13.7% is below SCERS' policy target allocation of 18%, and the allocation is 76% relative to the target allocation. The allocation is also below the revised SAA's 16% target allocation to Public Fixed Income.

The continued underperformance of fixed income relative to other asset classes has moved the Public Fixed Income portfolio below the target. Staff and Verus are nearing the conclusion of a core plus fixed income manager search, with a recommendation for the Board scheduled over the next couple of months. Implementation of this mandate is expected to occur late in the first quarter/early second quarter, which will bring the Fixed Income allocation close to the new 16% target. Existing Fixed Income mandates will be rebalanced concurrently at that time.

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 10**, SCERS' Diversifying Absolute Return allocation of 6.1% is below the policy target allocation of 7%, and the allocation is 87% relative to the target allocation. The revised SAA's target allocation to Diversifying Absolute Return remains at 7%, and the segment was renamed Absolute Return.

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 16.3%, which is slightly above the prior strategic asset allocation's target of 16%, and therefore the allocation is 102% relative to the target allocation. The revised SAA's target allocation to the Real Return asset category was increased to 18%.

The Overlay Program rebalances the Real Return asset category to the 16% 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 $24 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 7% is in line with the policy target allocation of 7%, and the allocation is 101% relative to the target allocation. Non-core real estate valuations are lagged a quarter. The revised SAA's target allocation to Real Estate increased to 9%.

SSGA utilizes a series of listed commingled funds described above to replicate Real Estate, as part of the broader Real Return asset category proxy. The commitment schedule and cash flow forecast of Real Estate investments projects SCERS achieving and maintaining the policy target in 2026.

Real Assets:

As outlined in **Table 13**, SCERS' Real Assets allocation of 5.8% is below the policy target allocation of 7%, and the allocation is 83% relative to the target allocation. Private real asset valuations are lagged a quarter. The revised SAA's target allocation to Real Assets remains at 7%.

SSGA utilizes a series of listed commingled funds described above to replicate Real Assets, as part of the broader Real Return asset category proxy. The commitment schedule and cash flow forecast of Real Assets investments project SCERS achieving and maintaining the policy target in 2026.

Liquid Real Return:

As outlined in **Table 14**, SCERS' Liquid Real Return allocation of 3.4% is above the policy target allocation of 2%, and the allocation is 172% 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, which accounts for the overweight to the segment.

OPPORTUNITIES PORTFOLIO

The current allocation for SCERS' Opportunities portfolio, outlined in **Table 15**, is 0% (a $4.8 million allocation to one fund). The Opportunities Portfolio was eliminated from the revised SAA, and the one existing fund is expected to be moved to the Private Equity asset class over the few quarters.

CASH

As outlined in **Tables 16 and 17**, SCERS' total cash balance is approximately 2.4% (as of December 31, 2021), which includes a combination of the 0.7% dedicated cash allocation and 1.7% in other cash. The dedicated cash allocation of 0.7% is 74% 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.

The 1.7% other cash allocation is comprised mostly of the remaining pre-funded annual employer contribution from fiscal year 2021-22, and is used to fund monthly benefit payments. It 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 (1.7%) 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:
___________________________	___________________________
Steve Davis Chief Investment Officer	Eric Stern Chief Executive Officer

Retirement Board Order

Sacramento County Employees' Retirement System

Before the Board of Retirement
February 16, 2022

MOTION:

Portfolio Allocation and Rebalancing Report – Fourth Quarter 2021

THE BOARD OF RETIREMENT hereby accepts the recommendation of staff to receive and file the Portfolio Allocation and Rebalancing Report - Fourth Quarter 2021.

I HEREBY CERTIFY that the above order was passed and adopted on February 16, 2022 by the following vote of the Board of Retirement, to wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

ALTERNATES (Present but not voting):

Richard B. Fowler II Board President	Eric Stern Chief Executive Officer and Board Secretary

APPENDIX A: Quarterly Portfolio Allocation and Rebalancing Detail (as of December 31, 2021)

Fund Name	Market Value	Actual	Target	Delta	% Relative to Target
Total Fund	**$13,008,248,195**				

Table 1: Growth Asset Category

	Market Value	Actual	Target	Delta	% Relative to Target
GROWTH ASSET CATEGORY:	**$7,846,840,584**	**60.3%**	**58.0%**	**2.3%**	**104%**

Table 2: Domestic Equity Asset Class — **Allowable Range: 18-22%**

Domestic Equity	Sub-Asset Class	Market Value	Actual	Target	Delta	% Relative to Target
		$2,993,256,063	**23.0%**	**20.0%**	**3.0%**	**115%**
AllianceBernstein	Equity Core Index	$1,578,555,767	12.1%	10.8%	1.3%	
JP Morgan 130/30	Equity Core Active Short Extension (130/30)	$201,112,617	1.5%	1.2%	0.3%	
DE Shaw Broad Market Core Alpha Extension	Equity Core Active Short Extension (130/30)	$178,232,162	1.4%	1.2%	0.2%	
Eagle Capital Management	Equity Large Cap Core	$380,786,068	2.9%	2.4%	0.5%	
AQR US Enhanced Equity	Equity Systematic Multi-Factor Core	$369,732,093	2.8%	2.4%	0.4%	
	Equity Large Cap		20.8%	18.0%	2.8%	
Snyder Capital Management	Equity Small Cap Value	$123,950,700	1.0%	1.0%	0.0%	
Weatherbie & Co.	Equity Small Cap Growth	$160,886,656	1.2%	1.0%	0.2%	
	Equity Small Cap		2.2%	2.0%	0.2%	

Table 3: International Equity Asset Class — **Allowable Range: 18-22%**

International Equity	Sub-Asset Class	Market Value	Actual	Target	Delta	% Relative to Target
		$2,438,221,063	**18.7%**	**20.0%**	**-1.3%**	**94%**
Lazard Asset Management	ACWI Ex-US	$478,951,241	3.7%	4.0%	-0.3%	
LSV Large Cap International Value	International Equity Large Cap Value	$541,450,419	4.2%	5.0%	-0.8%	
Walter Scott	International Equity Large Cap Growth	$708,395,386	5.4%	5.0%	0.4%	
	International Equity Large Cap		13.3%	14.0%	-0.7%	
William Blair & Co.	International Equity Small Cap Growth	$136,691,030	1.1%	1.0%	0.1%	
Mondrian Investment Partners	International Equity Small Cap Value	$121,853,241	0.9%	1.0%	-0.1%	
	International Equity Small Cap		2.0%	2.0%	0.0%	
Baillie Gifford	Emerging Markets Equity - All Cap	$252,836,708	1.9%	2.0%	-0.1%	
Mondrian Emerging Markets Equity Fund, LP	Emerging Markets Equity - All Cap	$198,043,039	1.5%	2.0%	-0.5%	
	Emerging Markets		3.5%	4.0%	-0.5%	

Table 4: Private Equity Asset Class — **Allowable Range: 7-11%**

Private Equity	**Sub-Asset Class**	**Market Value**	**Actual**	**Target**	**Delta**	**% Relative to Target**
		$1,630,304,770	**12.5%**	**9.0%**	**3.5%**	**139%**
Accel-KKR Capital Partners IV, LP	Buyout	$15,727,734	0.1%			
Accel-KKR Capital Partners V, LP	Buyout	$24,579,052	0.2%			
Accel-KKR Capital Partners VI, LP	Buyout	$6,809,203	0.1%			
Accel-KKR Growth Capital Partners II, LP	Buyout	$10,286,941	0.1%			
Accel-KKR Growth Capital Partners III, LP	Buyout	$29,013,513	0.2%			
Cortec Group Fund VII, LP	Buyout	$26,391,852	0.0%			
Gridiron Capital Fund IV, LP	Buyout	$30,159,049	0.2%			
H.I.G. Capital Partners V, LP	Buyout	$10,437,854	0.1%			
Linden Capital Partners III, LP	Buyout	$48,304,617	0.4%			
Linden Capital Partners IV, LP	Buyout	$33,985,603	0.3%			
Linden Capital Partners V, LP	Buyout	$0	0.0%			
Marlin Equity Partners IV, LP	Buyout	$12,086,566	0.1%			
Marlin Equity Partners V, LP	Buyout	$23,087,690	0.2%			
Marlin Heritage Europe, LP	Buyout	$32,513,443	0.2%			
Marlin Heritage, LP	Buyout	$8,549,259	0.1%			
Marlin Heritage II, LP	Buyout	$11,734,507	0.1%			
Marlin Heritage III, L.P.	Buyout	$0	0.0%			
Shamrock Capital Growth Fund V, LP	Buyout	$5,393,796	0.0%			
Thoma Bravo Fund XI, LP	Buyout	$54,852,881	0.4%			
Thoma Bravo Fund XII, LP	Buyout	$49,277,586	0.4%			
Thoma Bravo Fund XIII, LP	Buyout	$61,230,575	0.5%			
TSG7 A, LP	Buyout	$18,571,330	0.1%			
TSG7 B, LP	Buyout	$5,426,685	0.0%			
TSG8, L.P.	Buyout	$22,346,344	0.2%			
Wynnchurch Capital Partners V, LP	Buyout	$7,028,857	0.1%			
H.I.G. Europe Capital Partners II, LP	European Buyout	$10,471,679	0.1%			
Waterland Private Equity Fund V, CV	European Buyout	$3,665,762	0.0%			
Waterland Private Equity Fund VI, CV	European Buyout	$18,842,508	0.1%			
RRJ Capital Master Fund II, LP	Asian Buyout/Special Situations	$9,965,179	0.1%			
RRJ Capital Master Fund III, LP	Asian Buyout/Special Situations	$12,365,243	0.1%			
Shamrock Capital Content Fund II, L.P.	Growth Equity	$5,393,796	0.0%			
Spectrum Equity Investors VII, LP	Growth Equity	$54,189,382	0.4%			
Spectrum Equity Fund VIII, LP	Growth Equity	$26,097,678	0.2%			
Spectrum Equity Fund IX, L.P.	Growth Equity	$9,408,428	0.1%			
Summit Partners VC Fund III, LP	Growth Equity	$3,162,464	0.0%			
Summit Partners Venture Capital Fund IV, LP	Growth Equity	$41,294,482	0.3%			
Summit Partners Venture Capital V, L.P.	Growth Equity	$5,114,913	0.0%			
Summit Partners Europe Growth Equity Fund II, LP	European Growth Equity	$32,522,168	0.3%			
Summit Partners Europe Growth Equity Fund III, L.P.	European Growth Equity	$7,169,000	0.1%			
Canvas 3, L.P.	Venture Capital	$6,937,183	0.1%			
CRV XVIII, L.P.	Venture Capital	$15,565,671	0.1%			
Khosla Ventures IV, LP	Venture Capital	$20,465,537	0.2%			
Khosla Ventures V, L.P.	Venture Capital	$41,451,574	0.3%			
Khosla Ventures VI, L.P.	Venture Capital	$36,455,952	0.3%			
Khosla Ventures VII, L.P.	Venture Capital	$6,822,165	0.1%			
New Enterprise Associates 14, LP	Venture Capital	$58,354,282	0.4%			
New Enterprise Associates 15, LP	Venture Capital	$72,363,084	0.6%			
New Enterprise Associates 16, LP	Venture Capital	$45,889,081	0.4%			
New Enterprise Associates 17, LP	Venture Capital	$22,478,479	0.2%			
OrbiMed Private Investments VIII, L.P.	Venture Capital	$5,369,847	0.0%			
Threshold Ventures III, LP	Venture Capital	$19,606,709	0.2%			
Trinity Ventures XI, LP	Venture Capital	$60,419,218	0.5%			
Trinity Ventures XII, LP	Venture Capital	$83,451,637	0.6%			
Atalaya Special Opportunities Fund VI, LP	Distressed Debt	$5,995,384	0.0%			
Davidson Kempner Distressed Opportunities Fund III, LP	Distressed Debt	$38,592,717	0.3%			
Davidson Kempner Distressed Opportunities Fund IV, LP	Distressed Debt	$25,897,223	0.2%			
Garrison Opportunity Fund III, LP	Distressed Debt	$8,294,844	0.1%			
H.I.G. Bayside Loan Opportunity III (Europe), LP	Distressed Debt	$4,232,966	0.0%			
Strategic Value Special Situations Fund V, L.P.	Distressed Debt	$7,500,000	0.1%			
TPG Opportunities Partners III, LP	Distressed Debt	$13,280,774	0.1%			
TSSP Opportunities Partners IV, LP	Distressed Debt	$29,223,604	0.2%			
Sixth Street Opportunities Partners V, L.P.	Distressed Debt	$0	0.0%			
Wayzata Opportunities Fund III, LP	Distressed Debt	$4,061,393	0.0%			
Dyal Capital Partners II, LP	Other	$29,111,390	0.2%			
Dyal Capital Partners III, LP	Other	$25,897,043	0.2%			
Abbott Capital ACE VI	Fund of Funds	$38,179,565	0.3%			
Goldman Sachs PEP X	Fund of Funds	$22,338,399	0.2%			
Harbourvest Partners Intl VI	Fund of Funds	$32,092,504	0.2%			
HarbourVest Partners VIII	Fund of Funds	$8,701,172	0.1%			
RCP Multi-Fund Feeder (SCERS), L.P.	Fund of Funds	$53,817,755	0.4%			

Table 5: Public Credit Asset Class — **Allowable Range: 1-3%**

Public Credit	Sub-Asset Class	Market Value	Actual	Target	Delta	% Relative to Target
		$220,110,751	**1.7%**	**2.0%**	**-0.3%**	**85%**
Brigade Capital SC Opportunities Mandate	Public Credit	$220,110,751	1.7%	2.0%		

Table 6: Private Credit Asset Class — **Allowable Range: 2-6%**

Private Credit	Sub-Asset Class	Market Value	Actual	Target	Delta	% Relative to Target
		$290,792,239	**2.2%**	**4.0%**	**-1.8%**	**56%**
Ares Capital Europe Fund V, LP	Direct Lending	$12,817,870	0.1%			
Benefit Street Partners Senior Opportunities Fund, LP	Direct Lending	$31,602,797	0.2%			
Benefit Street Partners Senior Opportunities Fund II, LP	Direct Lending	$23,298,872	0.2%			
IFM U.S. Infrastructure Debt Fund, LP	Direct Lending	$8,861,536	0.1%			
Shamrock Capital Debt Opportunities Fund I, LP	Direct Lending	$2,090,943	0.0%			
Summit Partners Credit Fund, LP	Direct Lending	$403,823	0.0%			
Summit Partners Credit Fund II, LP	Direct Lending	$12,071,754	0.1%			
Summit Partners Credit Fund III, LP	Direct Lending	$32,067,995	0.2%			
Summit Partners Credit Fund IV, LP	Direct Lending	$6,307,948	0.0%			
Tennenbaum Capital Partners Direct Lending Fund VIII (S), LLC	Direct Lending	$97,290,483	0.7%			
Athyrium Opportunities Fund II, LP	Healthcare Opportunistic Credit	$11,714,619	0.1%			
Athyrium Opportunities Fund III, LP	Healthcare Opportunistic Credit	$14,757,762	0.1%			
OrbiMed Royalty and Credit Opportunities Fund III, LP	Healthcare Opportunistic Credit	$11,300,496	0.1%			
MCP Private Capital Fund IV, SCSp	Opportunistic Credit	$11,403,344	0.1%			
Silver Point Specialty Credit Fund II, L.P.	Opportunistic Credit	$27,619,867	0.2%			

Table 7: Growth Absolute Return Asset Class — **Allowable Range: 1-5%**

Growth Absolute Return	Sub-Asset Class	Market Value	Actual	Target	Delta	% Relative to Target
		$274,155,698	**2.1%**	**3.0%**	**-0.9%**	**70%**
Grosvenor SCARF - Growth Series	Diversified Separate Account	$63,562,201	0.5%			
Lakewood Capital Partners, LP	Equity Long/Short	$56,175,504	0.4%			
Third Point Partners Qualified, LP	Event Driven	$85,925,652	0.7%			
Sculptor Domestic Partners II, LP	Multi Strategy	$68,492,340	0.5%			

Table 8: Diversifying Asset Category

	Market Value	Actual	Target	Delta	% Relative to Target
DIVERSIFYING ASSET CATEGORY:	**$2,577,524,146**	**19.8%**	**25.0%**	**-5.2%**	**79%**

Table 9: Public Fixed Income Asset Class — **Allowable Range: 13-23%**

Public Fixed Income	Sub-Asset Class	Market Value	Actual	Target	Delta	% Relative to Target
		$1,781,846,997	**13.7%**	**18.0%**	**-4.3%**	**76%**
Prudential Investment Management	Core Plus Active Fixed Income	$514,080,691	4.0%	5.0%		
TCW	Core Plus Active Fixed Income	$513,485,205	3.9%	5.0%		
	Core Plus		7.9%	10.0%		
Neuberger Berman	US Treasuries	$479,858,907	3.7%	5.0%		
Brandywine Global	Global Opportunistic Fixed Income	$274,422,195	2.1%	3.0%		

Table 10: Diversifying Absolute Return Asset Class — **Allowable Range: 5-9%**

Diversifying Absolute Return	Sub-Asset Class	Market Value	Actual	Target	Delta	% Relative to Target
		$795,677,149	**6.1%**	**7.0%**	**-0.9%**	**87%**
Grosvenor SCARF - Diversifying Series	Diversified Separate Account	$218,002,746	1.7%			
Grosvenor SCARF Series B - Interim Diversifying	Diversified Separate Account	$230,126	0.0%			
Eisler Capital Fund, LP	Discretionary Global Macro	$43,153,605	0.3%			
Marshall Wace Global Opportunities Fund	Equity Long/Short	$53,177,625	0.4%			
BlackRock Event Driven Equity Fund	Event Driven	$53,724,298	0.4%			
Elliott Associates LP	Event Driven	$69,061,620	0.5%			
Davidson Kempner Institutional Partners, LP	Event Driven	$58,681,617	0.5%			
PSquared Event Opportunity Fund, L.P.	Event Driven	$53,141,050	0.4%			
KLS Diversified Fund, L.P.	Fixed Income Arbitrage	$177,034	0.0%			
Aristeia Partners, L.P.	Fixed Income Relative Value	$48,591,900	0.4%			
LMR Fund Ltd	Market Neutral, Multi-Strategy	$48,720,600	0.4%			
Laurion Capital Management, LP	Volatility Arbitrage	$63,240,986	0.5%			
Two Sigma Risk Premia Enhanced Fund, LP	Alternative Risk Premia	$47,432,700	0.4%			
Graham Tactical Trend Fund , L.P.	Systematic Global Macro	$38,341,242	0.3%			

Table 11: Real Return Asset Category

	Market Value	Actual	Target	Delta	% Relative to Target
REAL RETURN ASSET CATEGORY:	**$2,122,500,533**	**16.3%**	**16.0%**	**0.3%**	**102%**

Table 12: Real Estate Asset Class — **Allowable Range: 5-9%**

Real Estate	Sub-Asset Class	Market Value	Actual	Target	Delta	% Relative to Target
		$916,168,977	**7.0%**	**7.0%**	**0.0%**	**101%**
Blackrock Realty Advisors Portfolio I	Core Real Estate	$0	0.0%			
Brookfield Premier Real Estate Partners, LP	Core Real Estate	$109,579,989	0.8%			
Clarion Lion Properties Fund, LP	Core Real Estate	$112,565,125	0.9%			
Cornerstone Realty Advisors	Core Real Estate	$0	0.0%			
Jamestown Premier Property Fund LP	Core Real Estate	$0	0.0%			
MetLife Core Property Fund, LP	Core Real Estate	$75,286,440	0.6%			
Morgan Stanley Prime Property Fund	Core Real Estate	$0	0.0%			
Principal US Property Account	Core Real Estate	$58,600,080	0.5%			
Prologis Targeted Europe Logistics Fund, LP	Core Real Estate	$68,697,553	0.5%			
Prologis Targeted US Logistics Fund, LP	Core Real Estate	$107,268,928	0.8%			
Townsend Real Estate Fund, LP	Core Real Estate	$134,360,665	1.0%			
Carlyle China Realty, L.P.	Non-Core Real Estate - Opportunistic	$8,707,175	0.1%			
Carlyle China Rome Logistics, L.P.	Non-Core Real Estate - Opportunistic	$38,686,850	0.3%			
KKR Real Estate Partners Americas, LP	Non-Core Real Estate - Opportunistic	$1,795,979	0.0%			
LaSalle China Logistics Venture, LP	Non-Core Real Estate - Opportunistic	$2,917,779	0.0%			
Sculptor Real Estate Fund III, LP	Non-Core Real Estate - Opportunistic	$8,610,782	0.1%			
Sculptor Real Estate Fund IV, L.P.	Non-Core Real Estate - Opportunistic	$4,239,602	0.0%			
A.E.W Value Investors II, LP	Non-Core Real Estate - Value-Added	$0	0.0%			
Asana Partners Fund II, L.P.	Non-Core Real Estate - Value-Added	$21,700,016	0.2%			
Asana Partners Fund III, L.P.	Non-Core Real Estate - Value-Added	$0	0.0%			
CIM Opportunity Fund VIII, LP	Non-Core Real Estate - Value-Added	$30,194,198	0.2%			
DRC European Real Estate Debt Fund II, LP	Non-Core Real Estate - Value-Added	$2,388,501	0.0%			
ECE European Prime Shopping Centre Fund II, SCS-SIF	Non-Core Real Estate - Value-Added	$33,365,237	0.3%			
Hammes Partners II, LP	Non-Core Real Estate - Value-Added	$2,714,689	0.0%			
Hammes Partners III, LP	Non-Core Real Estate - Value-Added	$19,123,736	0.1%			
Hines US Office Value Added Fund II, LP	Non-Core Real Estate - Value-Added	$0	0.0%			
NREP Nordic Strategies Fund, FCP-FIS	Non-Core Real Estate - Value-Added	$0	0.0%			
NREP Nordic Strategies Fund II, FCP-FIS	Non-Core Real Estate - Value-Added	$34,041,159	0.3%			
NREP Nordic Strategies Fund III, FCP-FIS	Non-Core Real Estate - Value-Added	$32,602,327	0.3%			
NREP Nordic Strategies Fund IV, FCP-FIS	Non-Core Real Estate - Value-Added	$8,722,169	0.1%			
UBS (Allegis Value Trust)	Non-Core Real Estate - Value-Added	$0	0.0%			

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

Real Assets	Sub-Asset Class	Market Value	Actual	Target	Delta	% Relative to Target
		$759,766,172	**5.8%**	**7.0%**	**-1.2%**	**83%**
ACM Fund II, LP	Agriculture	$17,981,577	0.1%			
Paine Schwartz Food Chain Fund V, L.P.	Agriculture	$19,415,539	0.1%			
EnCap Energy Capital Fund IX, LP	Energy	$15,071,631	0.1%			
EnCap Energy Capital Fund X, LP	Energy	$33,105,405	0.3%			
NGP Royalty Partners, L.P.	Energy	$15,817,196	0.1%			
Tailwater Energy Fund III, LP	Energy	$27,388,625	0.2%			
Tailwater Energy Fund IV, LP	Energy	$19,588,744	0.2%			
Quantum Energy Partners VI, LP	Energy	$42,941,961	0.3%			
Quantum Energy Partners VII, LP	Energy	$31,625,136	0.2%			
ArcLight Energy Partners Fund VI, LP	Infrastructure	$23,712,368	0.2%			
Brookfield Infrastructure Fund III, LP	Infrastructure	$32,983,213	0.3%			
Brookfield Infrastructure Fund IV, LP	Infrastructure	$26,156,223	0.0%			
Brookfield Super-Core Infrastructure Partners	Infrastructure	$0	0.0%			
Digital Colony Partners II, L.P.	Infrastructure	$15,701,238	0.0%			
EnCap Flatrock Midstream Fund III, LP	Infrastructure	$13,502,894	0.1%			
EnCap Flatrock Midstream Fund IV, LP	Infrastructure	$5,981,433	0.0%			
EQT Infrastructure IV, SCSp	Infrastructure	$30,018,901	0.2%			
First Reserve Energy Infrastructure Fund II, LP	Infrastructure	$14,884,260	0.1%			
Harrison Street Social Infrastructure Fund LP	Infrastructure	$73,870,196	0.6%			
IFM Global Infrastructure Fund	Infrastructure	$141,141,087	1.1%			
ISQ Global Infrastructure Fund II, LP	Infrastructure	$42,971,528	0.3%			
ISQ Global Infrastructure Fund III, L.P.	Infrastructure	$3,264,792	0.0%			
Meridiam Infrastructure North America III, LP	Infrastructure	$6,361,758	0.0%			
Meridiam Sustainable Infrastructure Europe IV, SLP	Infrastructure	$1,459,552	0.0%			
Pantheon SCERS SIRF, LLC	Infrastructure	$51,305,747	0.4%			
Wastewater Opportunity Fund, LLC	Infrastructure	$16,390,801	0.1%			
Atalaya SCERS SMA, LLC	Infrastructure Debt	$0	0.0%			
Carlyle Power Partners II, LP	Power Generation	$37,124,367	0.3%			

Table 14: Liquid Real Return Asset Class — **Allowable Range: 0-3%**

Liquid Real Return	Sub-Asset Class	Market Value	Actual	Target	Delta	% Relative to Target
		$446,565,384	**3.4%**	**2.0%**	**1.4%**	**172%**
SSGA Real Return Overlay Strategy	Passive Liquid Real Return Proxy	$329,257,514	2.5%			
Brookfield Liquid Real Return	Active Liquid Real Return	$117,307,870	0.9%			

Table 15: Opportunities Asset Category — **Allowable Range: 0-5%**

OPPORTUNITIES:	Sub-Asset Class	Market Value	Actual	Target	Delta	% Relative to Target
		$3,310,597	**0.0%**	**0.0%**	**0.0%**	**N/A**
Atalaya Special Opportunities Fund V, LP	Opportunities - Credit	$3,310,597	0.0%			

Table 16: Cash — **Allowable Range: 0-2%**

Cash	Sub-Asset Class	Market Value	Actual	Target	Delta	% Relative to Target
		$96,386,360	**0.7%**	**1.0%**	**-0.3%**	**74%**
Dedicated Cash Account		$96,386,360	0.7%	1.0%	-0.3%	

Table 17: Other Cash/Overlay

Other Cash/Overlay	Sub-Asset Class	Market Value	Actual	Target	Delta	% Relative to Target
		$334,049,902	**2.6%**	**-**	**-**	**N/A**
Other Cash		$224,440,928	1.7%	-		
SSgA Overlay Account		$109,608,975	0.8%	-		

Appendix B: Overlay Proxies

Growth Asset Category Proxy:

	Policy Allocation	Benchmark	Overlay Implementation
Domestic Equities	20%	Russell 3000 Index	Basket of S&P 500; S&P 400; and Russell 2000 futures
International Equities	20%	MSCI ACWI ex-US Index	Basket of Local Index, EAFE, EM Futures plus currency
Private Equity	9%	Cambridge Associates PE/VC Index	Basket of 85% Gobal Equity and 15% US TSY
Public Credit	2%	50% BofA High Yield/50% CS Leveraged Loan	Basket of 85% Gobal Equity and 15% US TSY
Private Credit	4%	CS Leveraged Loan + 2%	Basket of 85% Gobal Equity and 15% US TSY
Growth Absolute Return	3%	HFRI FoF Composite Index + 1%	Basket of 85% Gobal Equity and 15% US TSY

Diversifying Asset Category Proxy:

	Policy Allocation	Benchmark	Overlay Implementation
Core/Core Plus Fixed Income	10%	Bloomberg Barclays Aggregate Index	Baskets of Treasury Futures and TBAs
US Treasury	5%	Bloomberg Barclays UST Index	Baskets of Treasury Futures and TBAs
Global Fixed Income	3%	80% Citi WGBI/20% JPM GBI EM Global	Baskets of Treasury Futures and TBAs
Diversifying Absolute Return	7%	HFRI FoF Conservative Index	Baskets of Treasury Futures and TBAs

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	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