SCERS
SACRAMENTO COUNTY
EMPLOYEES' RETIREMENT SYSTEM

Board of Retirement Regular Meeting

Sacramento County Employees' Retirement System

Agenda Item 16

MEETING DATE: **September 18, 2019**

SUBJECT: **Portfolio Overlay Program Modifications**

SUBMITTED FOR: __ Consent _X_ Deliberation and Action __ Receive and File

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RECOMMENDATION

Staff and Verus recommend the Board approve the following modifications to SCERS' Overlay Program managed by State Street Global Advisors (SSGA):

1) Modify the Statement of Proxy Investment Vehicles to reflect recent changes to SCERS' strategic asset allocation, including: (1) reducing Domestic Equities from a target allocation of 21% to 20%, including a corresponding reduction in the Growth asset category from 59% to 58%; (2) adding a dedicated 1% cash allocation; and (3) converting the 2% Commodities allocation to a 2% Liquid Real Return allocation;

2) Modify the intra-quarter rebalancing bands to tighter bands for the Growth, Diversifying, and Real Return asset categories, and add a band for the Cash allocation, as follows:
   - Growth asset category: +/- 5% band around the target allocation of 58%
   - Diversifying asset category: +/- 3% band around the target allocation of 25%
   - Real Return asset category: +/- 2% band around the target allocation of 16%
   - Cash: +/- 1% band around the target allocation of 1%

3) Authorize the necessary amendments to the Investment Management Agreement with SSGA to administer the Overlay Program as modified.

PURPOSE

This agenda item supports the 2019 Annual Investment Plan to review rebalancing ranges within SCERS' Overlay Program, and make any modifications as necessary.

BACKGROUND

SCERS employs an Overlay Program managed by SSGA to rebalance the asset allocation to policy targets and minimize 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 structure replicates SCERS' asset category targets (Growth; Diversifying; Real Return) through underlying proxies for each asset class. There are bands/ranges around the asset category target allocations, which reflect the understanding that it is expected and permissible for the actual assets to fluctuate within a reasonable range around the target without materially altering the expected return and risk objectives. The rebalancing methodology that SSGA utilizes is quarterly rebalancing with bands, where rebalancing occurs on a quarterly basis, unless the bands are breached on an intra-quarter basis, in which case rebalancing occurs upon the breach of a band.

The Overlay Program uses proxies, typically in the form of derivatives (i.e., futures and swaps) to replicate physical asset exposure within a particular asset class. However, it can also use "physical" exposure as a proxy, including exchange traded funds (ETFs), commingled funds, and separately managed accounts (SMAs); the latter two are the investment vehicles currently being used for SCERS' Real Return Overlay proxy.

The Overlay Program is particularly effective in rebalancing public market assets, as the proxies efficiently replicate the exposures of underlying public market managers with minimal tracking error, high liquidity, and low cost. 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. The intent of SCERS' Overlay Program is not to generate excess returns, but rather to generate similar beta, or market exposures relative to the asset categories/classes that the underlying proxies are replicating.

ASSET ALLOCATION MODIFICATIONS

The SCERS Board approved two revisions to the strategic asset allocation at the June 2019 Board meeting, including:

1) *Dedicated Cash Allocation:*

The Board approved the establishment of a 1% dedicated cash allocation, to be funded from the U.S. large capitalization segment of the Domestic Equity asset class, and to be managed through State Street's interest-bearing demand deposit account. The approved dedicated cash allocation includes a policy range of 0-2%. With the addition of the dedicated 1% cash allocation, the Domestic Equity asset class target allocation moved from 21% to 20%, with a corresponding reduction in the Growth asset category, of which Domestic Equity is a segment, from 59% to 58%.

2) *Liquid Real Return Allocation:*

The Board approved converting SCERS' dedicated 2% Commodities allocation within the Real Return asset category into a 2% diversified Liquid Real Return allocation.

The Overlay Program's Statement of Proxy Investment Vehicles has been adjusted to reflect the aforementioned asset allocation changes, as shown in the Appendix section at the end of this memo.

REBALANCING MODIFICATIONS

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

The current bands (shown below) were set as the sum of the minimum and maximum allocations for each asset class within a given asset category, as defined within the strategic asset allocation of SCERS' Master Investment Policy Statement. While it is expected that on most occasions rebalancing should take place at quarter end rather than during a quarter, the bands should be set in a manner where intra-quarter rebalancing will take place during a large market dislocation. The bands as currently designed are too wide, and are unlikely to be triggered. The current bands are as follows, and are also shown in the table below:

- Growth asset category: +/- 11% band around the target allocation of 59%
- Diversifying asset category: +/- 7% band around the target allocation of 25%
- Real Return asset category: +13%/-6% band around the target allocation of 16%

To demonstrate, under the current bands, Growth assets would need to reduce or increase during a quarter by 11% in order to trigger a rebalancing event before quarter end. While Growth assets tend to experience the most movement during a quarter and require wider bands, it would be difficult to breach this band in most scenarios.

Current Overlay Bands:

Asset Category	Minimum Allocation (%)	Target Allocation (%)	Maximum Allocation (%)
Growth	48	**59**	70
Diversifying	18	**25**	32
Real Return	10	**16**	29

Staff asked SSGA to run an analysis comparing SCERS' current quarterly rebalancing approach to an approach using narrower bands. SSGA ran the analysis with several different variations, and ultimately recommended (with input from Staff and Verus) quarterly rebalancing with the following bands (and as shown in the table below):

- Growth asset category: +/- 5% band around the target allocation of 58%
- Diversifying asset category: +/- 3% band around the target allocation of 25%
- Real Return asset category: +/- 2% band around the target allocation of 16%
- Cash: +/- 1% band around the target allocation of 1%

Proposed Overlay Bands:

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

Growth assets tend to experience the most movement during a quarter and are the most likely trigger of an intra-quarter rebalance, as they are driven by more volatile publicly traded equities. Therefore Growth assets require wider bands than the other asset categories. Real Return assets are mostly illiquid and valued every quarter, without intra-quarter changes. Diversifying assets are a combination of fixed income, which are valued daily but don't typically have the level of price change as public equities, and absolute return, which are valued monthly and also do not generally have the level of price change as public equities.

The results of the analysis are shown below, and are simulated from November 2008 – August 2019. Using monthly rebalancing as the benchmark, and comparing the proposed tighter bands against the current approach, the proposed approach slightly increases the expected return, while slightly decreasing volatility (standard deviation). Over the 10-year period, the total number of rebalances, average number of rebalances per year, and average annual turnover increase slightly, while maximum drawdown marginally decreases.

Simulation Period: November 2008 - August 2019

Statistics	Benchmark (Monthly)	Current	Proposed
Compound Annual Return	5.31%	5.35%	5.36%
Compound Annual Alpha	0.00%	0.03%	0.05%
Cumulative Alpha	0.00%	0.31%	0.61%
Annual Standard Deviation	8.82%	8.79%	8.78%
Tracking Error	0.00%	0.18%	0.17%
Total # Rebalances	133	44	47
Avg # Rebalances Per Year	12.0	4.0	4.3
Avg Annual Turnover	8.4%	5.1%	5.4%
Avg Annual Transactional Cost	0.000%	0.002%	0.002%
Maximum Drawdown	-27.7%	-27.5%	-27.4%

Source: State Street Global Advisors

The overall results are de minimis; however, the primary objective of tightening the bands is to provide a higher level of probability that rebalancing will occur during significant intra-quarter market movements. Under the current approach, this is unlikely to happen, given that the average rebalances per year equates to 4.0 under the 10-year analysis, which is akin to having quarterly rebalancing without any bands.

Prepared by:

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Reviewed by:

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APPENDIX

Revised Statement of Proxy Investment Vehicles, which includes asset allocation targets and proposed rebalancing ranges, and underlying benchmark overlay proxies for each asset class:

Asset Class	Benchmark for Overlay	Target Allocation	Minimum Allocation	Maximum Allocation
Growth		58%	53%	63%
Domestic Equities	Russell 3000 Index	20.0%		
International Equities	MSCI ACWI ex US	20.0%		
Private Equities	72.5% Russell 3000 / 12.5% MSCI ACWI ex US / 15% US Treasury	9.0%		
Public Credit	72.5% Russell 3000 / 12.5% MSCI ACWI ex US / 15% US Treasury	2.0		
Private Credit	72.5% Russell 3000 / 12.5% MSCI ACWI ex US / 15% US Treasury	4.0		
Growth Absolute Return	72.5% Russell 3000 / 12.5% MSCI ACWI ex US / 15% US Treasury	3.0		
Diversifying		25%	22%	28%
Core/Core Plus Fixed Income	Bloomberg Barclays U.S. Aggregate Bond Index	10%		
US Treasury	Bloomberg Barclays U.S. Aggregate Bond Index	5.0%		
Global Fixed Income	Bloomberg Barclays U.S. Aggregate Bond Index	3.0%		
Diversifying Absolute Return	Bloomberg Barclays U.S. Aggregate Bond Index	7.0%		
Real Return		16.0%	14%	18%
Real Estate	Custom Real Return Blend*	7%		
Private Real Assets	Custom Real Return Blend*	7%		
Liquid Real Return	Custom Real Return Blend*	2%		
Cash	90 Day T-Bill Rate	1.0%	0.0	2.0%

**Custom Real Return Blend:*

Real Return Asset Category Proxy:

Sub-Asset Class	Policy Allocation (relative to Real Return Asset Category)	Benchmark/Overlay Implementation
Global Real Estate (REITs)	15.0%	FTSE EPRA/NAREIT Developed Liquid Index
Global Infrastructure Equity	25.0%	S&P Global Infrastructure Index
Global Natural Resources	10.0%	S&P Global Large Mid Cap Commodity and Resources Index
Commodities	10.0%	Bloomberg Roll Select Commodity Index
US Intermediate TIPS	30.0%	Bloomberg Barclays 1-10 Year US TIPS Index
Floating Rate Notes	10.0%	Bloomberg Barclays US Dollar Floating Rate Note < 5 Years Index