Board of Retirement Regular Meeting

Sacramento County Employees' Retirement System

Agenda Item 13

MEETING DATE: **January 17, 2018**

SUBJECT: **Proposed Modifications to the Portfolio Overlay Program**

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

RECOMMENDATION

Staff and Verus recommend that the Board:

1) Approve the proposed Overlay Program structure, including asset category proxies, and bands around the targets, as recommended by State Street Global Advisors ('SSGA') for the Overlay Program;

2) Authorize the necessary amendments to the Investment Management Agreement with State Street Global Advisors to administer the Overlay Program as modified; and

3) Authorize Staff to determine the most efficient method of transitioning the assets within the Overlay Program to align with SCERS' strategic asset allocation; and

4) Adopt SCERS Resolution 2018-1 to effect the Board's approval of the recommendations.

PURPOSE

To conform SCERS' Overlay Program to the strategic asset allocation adopted by the Board in January 2017, by converting the Overlay Program structure from an asset class framework to an asset category framework with designated proxies and bands around the targets for each asset category.

STRATEGIC ASSET ALLOCATION RECAP

The Board approved a revised strategic asset allocation for SCERS in January 2017. The new strategic asset allocation took a multiple lens approach using a functional framework to re-group and re-classify segments of SCERS' prior asset allocation in order to link segments of the SCERS portfolio that are exposed to similar economic environments and risk factors, and which would be expected to have similar roles and outcomes in a portfolio. The functional regrouping took a simplified approach at the asset category level, by breaking the portfolio into three asset categories, with greater complexity reserved at the asset class level. These asset categories include: (1) Growth; (2) Diversifying; and (3) Real Return.

SCERS' strategic asset allocation is summarized in the table below:

Asset Category/Asset Class	Target Allocation
Growth	**59.0%**
Domestic Equity	21.0%
International Equity	20.0%
Private Equity	9.0%
Public Credit	2.0%
Private Credit	4.0%
Growth Absolute Return	3.0%
Diversifying	**25.0%**
Core/Core Plus Fixed Income	10.0%
US Treasury	5.0%
Global Fixed Income	3.0%
Diversifying Absolute Return	7.0%
Real Return	**16.0%**
Real Estate	7.0%
Real Assets	7.0%
Commodities	2.0%
SSGA Real Return Overlay Proxy	0.0%
Opportunities	**0.0%**

OVERLAY PROGRAM RECAP

SCERS employs an Overlay Program, which is managed by SSGA, to rebalance SCERS' asset allocation to policy targets, as defined by SCERS' asset allocation policy, and to 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; (3) and 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 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 due to the use of public market equity and fixed income derivative based proxies, which generate low tracking error compared to public market 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 'liquidity premium' or higher returns achieved historically by private equity and private real assets, and they are not as effective in replicating the 'absolute' return characteristics of absolute return funds, including their historic ability to outperform equity markets in times of distress. 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.

Target allocations for the Overlay Program are expressed as both a fixed number and a range around that number. The ranges 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. SCERS' asset class and sub-asset class targets for the prior asset allocation, and the proxy benchmarks and rebalancing ranges that are currently designated for the Overlay Program are shown below. Prior to the adoption of the new strategic asset allocation in 2017, SCERS' target asset allocation was expressed as asset classes and sub-assets classes. As described previously, asset categories (Growth; Diversifying; Real Return) were introduced for the 2017 strategic asset allocation.

Asset Class	Benchmark for Overlay	Target Allocation	Minimum Allocation	Maximum Allocation
Domestic Equity & Proxies		22.5%	20.3%	24.8%
US Large Cap Equity	Russell 1000 Index	18.2%	14.6%	21.8%
US Small Cap Equity	Russell 2000 Index	3.2%	2.6%	3.8%
REITs US	Russell 1000 Index	1.1%	0.9%	1.4%
International Equity & Proxies		22.5%	20.3%	24.8%
Non-US Developed Markets Large/ Mid	MSCI World ex US	13.8%	11.0%	16.5%
Non-US Developed Markets Small Cap Equity	MSCI World ex US	2.25%	1.8%	2.7%
Non-US Emerging Markets Equity	MSCI Emerging Markets Index	5.35%	4.3%	6.4%
REITs International	MSCI World ex US	1.1%	0.9%	1.3%
Fixed Income	Barclays Capital U.S. Aggregate Bond Index	20.0%	18.0%	22.0%
Private Equity	Russell 2000 Index	10.0%	8.0%	12.0%
Hedge Funds	35% R3000, 35% MSCI ACWI ex US, 30% Barclays Capital US Aggregate Index	10.0%	8.0%	12.0%
Real Assets	Custom Real Assets Blend (TIPS/REIT/GNR/COMM)	15.0%	12.0%	18.0%
Cash	90 Day T-Bill Rate	0.0%		2.0%

Source: SSGA

The rebalancing methodology that has been utilized by SSGA is quarterly rebalancing with 10% bands on traditional asset classes (Equities and Fixed Income) and 20% bands on alternative asset classes (Absolute Return, Private Equity and Real Assets). With this method, 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.

REVISED APPROACH TO THE OVERLAY PROGRAM

For the new strategic asset allocation, Staff, Verus and SSGA recommend transitioning the Overlay Program from the asset and sub-asset class levels to the asset category level. The primary objectives identified when modifying the Overlay Program in-line with SCERS' new strategic asset allocation include: (2) Replicate broad objectives of the primary components of SCERS' total portfolio at the asset category level; and (2) Simplify the structure of the Overlay program by not attempting to replicate all specific exposures at the asset class and sub-asset class level, unless there are effective proxies available for replication. Since the Overlay Program uses public market proxies to replicate SCERS' portfolio, whether traditional or alternative assets (or public or private market assets), it is not feasible to replicate all specific segments of SCERS' portfolio.

A characteristic of SCERS' current Overlay Program is that it is structured at the asset class level, and therefore uses separate proxies to replicate asset classes, even if effective proxies are not available. Examples include separate proxies for absolute return and private equity, which ultimately use similar proxies to SCERS' public equity and fixed income portfolios. Under the revised Overlay Program structure, there would be three primary proxies for the Overlay Program at SCERS' asset category level. This includes one aggregate proxy for each of the Growth, Diversifying and Real Return asset categories.

As a reminder, the current Overlay Program is structured and is currently being implemented around SCERS' prior asset allocation. As Board members may recall, compared to the new strategic asset allocation, the prior asset allocation has a higher allocation to growth assets such as equities, and a lower allocation to diversifying assets such as fixed income. This has benefitted SCERS over the past year, as growth assets, including equities, have produced very strong returns, and diversifying assets have generated more muted returns. An objective in the timing of the restructuring and implementation of the Overlay Program was to wait until all of the major asset classes had been restructured, policy benchmarks had been approved, and an implementation plan had been constructed within each, before converting the Overlay Program to the new strategic asset allocation.

PROPOSED OVERLAY STRUCTURE

GROWTH ASSET CATEGORY:

The objective of the Growth asset category is to perform best in a high growth and low/moderate inflationary environment. The asset category includes most of SCERS' equity and credit investments, both public and private, as well as growth-oriented absolute return strategies. Growth assets are primarily driven by the systematic risks associated with equities and credit spread risk.

The proposed structure for the Growth asset category is:

Overlay Proposal for Growth Allocation

Approach: Correct equity drift and then address residual asset class misweight

	New Policy Allocation (%)	Benchmark	Overlay Implementation
Domestic Equities	21.0	Russell 3000 Index	Basket of S&P 500; S&P 400, and Russell 2000 futures
International Equities	20.0	MSCI ACWI ex-US Index	Basket of Local Index, EAFE, EM Futures plus currency
Private Equities	9.0	Cambridge Associates PE/VC Index	Basket of 85% Global Equity and 15% US TSY
Public Credit	2.0	50% BofA High Yield/50% CS Leveraged Loan	Basket of 85% Global Equity and 15% US TSY
Private Credit	4.0	CS Leveraged Loan + 2%	Basket of 85% Global Equity and 15% US TSY
Growth Abs Return	3.0	HFRI FoF Composite Index + 1%	Basket of 85% Global Equity and 15% US TSY

The recommended Growth asset category proxy solution replicates specific public equity exposure, since public equites are very efficient to replicate in terms of cost and tracking error efficiency. However, the proxy solution moves away from attempting to replicate each of the non-public equity exposures with specific and separate proxies.

The Growth proxy solution replicates baskets of equities to correct for misweights between the Domestic and International Equity asset classes. SCERS' asset allocation distinctly segments the two, as opposed to having one global public equity allocation. The solution uses a basket of domestic equity futures (large capitalization and small capitalization stocks) to replicate the broad based Russell 3000 Index, which is SCERS' Policy Index benchmark for the Domestic Equity asset class. The Growth proxy solution also uses a basket of international equity futures (developed and emerging markets equities) to replicate the broad based MSCI ACWI ex-US Index, which is SCERS' Policy Index benchmark for the International Equity asset class. This approach allows SCERS to maintain separate weights to domestic and international equities at the designated target allocations.

Once the public equity misweights are corrected, the Growth proxy solution will calculate the residual misweight of the Growth asset category allocation relative to its policy target allocation and correct for this with a custom basket of 85% global equities (~ 85% US and 15% non-US) and 15% US Treasuries. This ratio equates to the aggregate exposure within the Growth asset category of approximately 85% equity risk and 15% credit risk.

The Growth asset category's non-public equity exposure (Private Equity; Public Credit; Private Credit and Growth Absolute Return) tend to, in aggregate, have a lower beta than public equity with more resiliency, in aggregate, to protect capital during a market drawdown. So, the residual proxy in the Growth proxy solution has a lower overall equity beta, that can potentially provide some downside protection to equities. The downside protection is attained through the small US Treasury allocation.

DIVERSIFYING ASSET CATEGORY:

The objective of the Diversifying asset category is to protect capital and perform better than the Growth asset category during dislocated and stressed market environments. The asset category includes SCERS' traditional fixed income investments and diversifying absolute return strategies.

The proposed structure for the Diversifying asset category is:

Overlay Proposal for Diversifying Allocation

Approach: Correct misweights at the asset class level

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

The proposed Diversifying Overlay proxy solution is similar to the fixed income proxy currently being used by the Overlay Program, which is based off of the Bloomberg Barclays Aggregate Index. The Bloomberg Barclays Aggregate Index is considered a universal proxy for fixed income, and includes a combination of US Treasuries, government agency bonds and investment grade corporate credit.

The proposed Diversifying proxy solution includes a basket of US Treasury futures and Mortgage TBAs to replicate the Bloomberg Barclays Aggregate Index. Mortgage TBAs are forward contracts on new mortgage pools of investments, and serve as a good proxy to the government agency bond component of the Barclays Aggregate.

Dedicated investment grade corporate credit (a component of the Bloomberg Barclays Aggregate Index) is not replicated within the Diversifying proxy solution, as there is not a good proxy solution available. Futures are not available within this segment, and SCERS would need to acquire physical exposure through an exchanged traded fund ('ETF'). An ETF solution requires a cash investment and is challenging to short. The ability to efficiently short is a necessary component of the Overlay Program, and is the mechanism by which the Overlay Program brings an overweight exposure back to the target allocation. Another consideration is that the majority of SCERS' credit exposure is intended to reside within the Growth asset category, not Diversifying.

As demonstrated in the stress testing for historical scenarios within the SSGA presentation, introducing credit exposure tends to increase downside risk. This includes the global financial crisis ('GFC'), where the Treasury futures/mortgage TBAs combination was up 11.12%, while the Bloomberg Barclays US Aggregate, which includes investment grade credit, was down

1.15%. While SCERS' actual exposures within the Diversifying asset category, particularly within the core plus fixed income mandates do contain credit exposure, for purposes of the Diversifying asset category Overlay proxy, Staff, Verus and SSGA believe that simplicity in fulfilling the overall objectives of the asset category should be emphasized, as well as efficiency and cost in implementing the Overlay Program.

It should be noted that there is not a good proxy to replicate SCERS' Diversifying Absolute Return exposure, which is a component of the Diversifying asset category, as most public market proxies do not replicate the unique 'absolute' return characteristics of hedge funds and absolute return strategies. The Treasury/TBA combination of the proposed proxy does do a good job of replicating a diversified absolute return strategy's ability to outperform equity markets in times of distress, but would not be as effective in replicating the return expectations of these strategies during more robust equity markets. As described in the 'Implementation' section of this memo, Staff is working on an interim solution to fill the gap between actual and target allocations within the Diversifying Absolute Return segment, while the direct portfolio is being built out.

REAL RETURN ASSET CATEGORY:

The objective of the Real Return asset category is to protect against inflation, generate cash flow and provide further portfolio diversification. The asset category primarily includes SCERS' Real Estate and Real Assets (infrastructure; energy; agriculture) asset classes, as well as a small allocation to Commodities investments.

The proposed structure for the Real Return asset category is:

Proposal for Real Return Allocation

Approach: Correct misweights at the asset class level and provide liquidity

Asset Class	Benchmark	Current	Proposal	Change
Global Real Estate (REITs)	FTSE EPRA/NAREIT Developed Liquid Index	10	15	+5
Global Infrastructure Equity	S&P Global Infrastructure Index	20	25	+5
Master Limited Partnerships (MLPs)	S&P MLP Index	10	0	-10
Global Natural Resources	MSCI World Natural Resources Custom Index	20	0	-20
Global Natural Resources	S&P Global Large Mid Cap Commodity and Resources Index	0	10	+10
Commodities	Bloomberg Roll Select Commodity Index	20	10	-10
US TIPS	Bloomberg Barclays US TIPS Index	10	0	-10
US Intermediate TIPS	Bloomberg Barclays 1–10 Year US TIPS Index	10	30	+20
Floating Rate Notes	Bloomberg Barclays US Dollar Floating Rate Note < 5 Years Index	0	10	+10
Infrastructure Debt	DJ Brookfield Global Infrastructure Broad Mkt. Corporate Bond Index	0	0	0
Total		**100**	**100**	**0**

It should be noted that SCERS had already been using an asset category solution for Real Return within the current Overlay Program structure, as the Real Return asset category was formerly an asset class that contained exposures to real estate, real assets and commodities.

The current Real Return Overlay proxy, which was restructured in 2015, is a series of commingled funds that provides diversified public markets exposure to a blend of global listed infrastructure stocks, commodities, global natural resource equities, real estate investment trusts ('REITs'), TIPS (Treasury Inflation Protected Securities) and midstream energy companies (through MLPs – master limited partnerships). Unlike the other segments of SCERS' Overlay Program, which use derivatives, the Real Return proxy represents physical exposure through a mix of commingled funds and separate accounts.

The Real Return proxy is primarily used to fill the gap between the actual and target allocation within the Real Assets asset class, which like other private markets asset classes takes several years to fully allocate to. The Real Return Overlay proxy will be drawn down as the asset category, particularly Real Assets, is built out.

Staff, Verus and SSGA believes there are some challenges with the current Real Return Overlay proxy, including high exposure to equity-like investments and high exposure to energy/commodity-like exposure.

The equity-like exposure currently makes up ~60% up the current proxy, through allocations to REITs, global infrastructure stocks, MLPs and global natural resource stocks. This translates to a beta of 0.69 with the MSCI ACWI Index and a predicted volatility measure of 9.2%. The proposed structure includes a greater level of fixed income investments through TIPS and floating rate notes ('FRN'). Within the proposed structure, the equity-like exposure decreases from ~60% to ~50%, and the beta to the MSCI ACWI Index moves from 0.69 to 0.51 (a 26% reduction). Predicted volatility also drops, from 9.2% to 6.6%

Commodity-like exposure (including that to energy) currently makes up ~50% of the current proxy, through allocations to commodities, MLPs, and global natural resource stocks. The high exposure to commodity-like investments is higher than what is intended within the target allocation within the Real Return asset category, and also has translated to increased correlation to volatile swings in the commodity markets. This was evidenced by the dramatic decline in energy prices in 2014 and 2015, which negatively affected SCERS. Energy prices have rebounded significantly from lows set in early 2015, which has benefitted SCERS; however, an objective of the proposed proxy is to decrease the commodity exposure to a more reasonable level. Within the proposed structure, commodity-like exposure decreases from ~50% to ~20%.

The proposed Real Return proxy adds an allocation to floating rate notes to increase fixed income exposure, and to complement the TIPS allocation. Floating rate notes tend to perform better than fixed rate bonds during rising interest rate environments, but do not capture inflation protection as well as TIPS. A consideration in the future is to replace a component of the TIPs allocation with infrastructure debt. Infrastructure debt would provide further fixed income diversification, as well as better correlation with infrastructure. A passive investable index is not currently available; however, there are some vendors that are in the process of creating such investment vehicles.

The proposed Real Return proxy structure also consolidates the TIPS exposure, which was broken out to a variety of durations, and also eliminates the MLP exposure, which has been an extremely volatility segment since SCERS allocated to it in 2015. Eliminating higher yielding MLP exposure does contribute toward a decrease in the proxy's overall yield from 3.1% to

2.6%; however, this is an acceptable tradeoff for reduced correlations and volatility to equity and commodity markets.

As demonstrated in the stress testing for historical scenarios within the SSGA presentation, the proposed Real Return Overlay proxy tends to perform better during shocks to equity and credit markets, and also during drawdowns in the commodity markets. The trade-off is that it tends to deliver lower performance than the current proxy during strong commodity markets and rising inflationary periods.

REBALANCING METHODOLOGY

As referenced earlier, SCERS' Overlay Program currently rebalances to SCERS' target allocations using a 'quarterly with bands' methodology. The bands that SCERS currently uses are 10% bands around the traditional asset classes (Domestic Equity; International Equity; and Fixed Income) combined with wider 20% bands around the alternative assets classes (Absolute Return; Private Equity; and Real Assets), which has been in place since 2013. With the 'quarterly with bands' method, rebalancing occurs by SSGA on a quarterly basis, unless the bands are breached on an intra-quarter basis.

SSGA recommends that SCERS continue to utilize a 'quarterly with bands' approach, as SCERS has historically, as it provides the best balance of maximizing returns and reducing tracking error. However, the bands will differ given the proposed Overlay Program structure moves toward asset category proxies rather than asset class proxies. The proposed bands are shown below:

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

The recommended bands are the sum of the minimum and maximum allocations defined for each asset class within a given asset category, as approved within SCERS' Master Investment Policy Statement ('IPS'). SCERS' asset allocation policy within the Master IPS is shown below:

APPENDIX I - SCERS' ASSET ALLOCATION POLICY

Asset Category	Asset Class	Minimum Allocation	Target Allocation	Maximum Allocation	Benchmark Proxy
Growth			59.0%		
	Domestic Equity	19.0%	21.0%	23.0%	Russell 3000 Index
	International Equity	18.0%	20.0%	22.0%	MSCI ACWI ex-US Index
	Private Equity	7.0%	9.0%	11.0%	Cambridge Associates PE/VC Index
	Public Credit	1.0%	2.0%	3.0%	50% BofA High Yield/50% CS Leveraged Loan
	Private Credit	2.0%	4.0%	6.0%	CS Leveraged Loan + 2%
	Growth Absolute Return	1.0%	3.0%	5.0%	TBD
Diversifying			25.0%		
	Core/Core Plus Fixed Income	8.0%	10.0%	12.0%	Barclays Aggregate Index
	US Treasury	3.0%	5.0%	7.0%	Barclays UST Index
	Global Fixed Income	2.0%	3.0%	4.0%	80% Citi WGBI/20% JPM GBI EM Global
	Diversifying Absolute Return	5.0%	7.0%	9.0%	TBD
Real Return			16.0%		
	Real Estate	5.0%	7.0%	9.0%	NFI-ODCE
	Real Assets	5.0%	7.0%	9.0%	TBD
	Commodities	0.0%	2.0%	3.0%	Bloomberg Commodities Index
	TIPS	0.0%	0.0%	3.0%	Barclays TIPS Index
Opportunities		0.0%	0.0%	5.0%	SCERS' Policy Index
			100.0%		

To provide an example, the proposed band for the Growth asset category is a minimum allocation of 48% and a maximum allocation of 70%, around the 59% target. The minimum allocation of 48% is the sum of the minimum allocations for the Domestic Equity, International Equity, Private Equity, Public Credit, Private Credit, and Growth Absolute Return asset classes. The maximum allocation of 70% is the sum of the maximum allocations for the aforementioned asset classes.

An asset category approach to the Overlay Program requires wider bands than those for individual asset classes, as the asset category will generally experience wider fluctuations in actual allocation values, given the number of components (asset classes) within the asset category.

IMPLEMENTATION

As referenced previously, the current Overlay Program is structured and is currently being implemented around SCERS' prior asset allocation. As you will recall, compared to the new strategic asset allocation, the prior asset allocation has a higher allocation to growth assets such as equities, and a lower allocation to diversifying assets such as fixed income. This has benefitted SCERS over the past year, as growth assets, including equities, have produced very strong returns, and diversifying assets have generated more muted returns.

An objective in the timing of the restructuring of the Overlay Program in accordance with SCERS' new strategic asset allocation was to wait until all of the major asset classes had been restructured, policy benchmarks had been approved, and an implementation plan had been constructed within each, before converting the Overlay Program to the new strategic asset allocation. The proposed public equity structure, which is also being presented at the January Board meeting, is the last of the asset class restructures. As referenced in the public equity structure agenda item at the January meeting, SCERS' Domestic and International Equity portfolios are meaningfully overweight relative to their target allocations, due to the strong equity market returns over the past couple of years, and will be rebalanced to target as part of the public equity implementation. The reduction in public equities will serve as the source of capital for several upcoming portfolio rebalances to align with the new strategic asset allocation, implementation of the restructured Overlay Program being one of them. As part of the implementation plan for the Overlay Program, Staff and Verus recommend rebalancing several segments of SCERS' portfolio prior to implementing the changes to the Overlay Program, as described below.

SCERS' current actual allocations are shown below (as of September 30, 2017), and are compared to the target allocations of the new strategic asset allocation.

Asset Category/Asset Class	Actual Allocation	Target Allocation	Required Overlay Adjustment
Growth	**62.3%**	**59.0%**	**-3.3%**
Domestic Equity	23.8%	21.0%	
International Equity	24.2%	20.0%	
Private Equity	7.0%	9.0%	
Public Credit	1.9%	2.0%	
Private Credit	0.6%	4.0%	
Growth Absolute Return	4.8%	3.0%	
Diversifying	**19.4%**	**25.0%**	**5.6%**
Core/Core Plus Fixed Income	12.9%	10.0%	
US Treasury	0.0%	5.0%	
Global Fixed Income	2.6%	3.0%	
Diversifying Absolute Return	3.9%	7.0%	
Real Return	**15.2%**	**16.0%**	**0.8%**
Real Estate	8.8%	7.0%	
Real Assets	3.1%	7.0%	
Commodities	0.7%	2.0%	
SSGA Real Return Overlay Proxy	2.6%	0.0%	
Opportunities	**0.1%**	**0.0%**	
Overlay	0.9%	0.0%	
Cash	2.1%	0.0%	
Total:	100.0%	100.0%	

GROWTH ASSET CATEGORY:

The Growth asset category is 3.3% overweight to its 59% target, as a result of the high public equity allocation (as described above) (the Overlay Program currently rebalances public equities to the prior asset allocation's target of 45%). Staff and Verus recommend conducting a physical rebalancing of the public equity portfolio towards its new aggregate target of 41% (21% Domestic Equity and 20% International Equity) prior to the implementation of the Overlay Program. This would bring SCERS' Growth asset category exposure down through physical equity sales (~$600 million in sales) rather than through the Overlay Program, and then the Overlay Program, using the proposed new structure, would rebalance any residual gap within the Growth asset category to target afterwards.

Please note that the underweights to Private Equity and Private Credit will be filled over the next few years as commitments are made to underlying funds which will draw down capital over time. The allocation to Growth Absolute Return will be reduced as implementation progresses on SCERS' overall Absolute Return portfolio, which includes adding exposure to the Diversifying Absolute Return segment.

DIVERSIFYING ASSET CATEGORY:

The Diversifying asset category is significantly underweight (5.6%) to its 25% target. However, similar to SCERS' public equity exposure, Staff and Verus recommend conducting several physical rebalances within the asset category prior to implementing the proposed Overlay Program structure.

Within the Diversifying asset category, SCERS is underweight to all of its legacy public fixed income investment managers (as of September 30, 2017), including:

- Core (which is in the process of being converted to a dedicated Treasury allocation) is ~1.1% underweight.
- Core Plus is ~1.0% underweight.
- Global Fixed Income is ~0.4% underweight.

The legacy fixed income underweights account for ~2.5% of the 5.6% asset category underweight. These underweights have occurred due to the strong performance of public equities versus fixed income over the past several years, which have caused SCERS' equity allocation to become overweight and the fixed income allocation to become underweight. The prior Core allocation is close to being in position to transition into SCERS' recently added US Treasury allocation. Staff plans on using the public equity rebalance described above to fund the underweight fixed income allocations, including the implementation of the US Treasury allocation to its target allocation, which would drop the 5.6% underweight within the Diversifying asset category to ~3.1%. This rebalance would occur at approximately the same time that the Overlay Program implementation takes place.

Staff also plans on making progress in adding exposure to the Diversifying Absolute Return allocation, which currently has a 3.9% allocation (as of September 30, 2017) compared to the target allocation of 7.0%. The build out of this allocation will occur over the long term through investments within SCERS' direct absolute return portfolio; however, an interim solution could be to utilize current absolute return strategic partner, Grosvenor Capital Management ('GCM'), to assist in filling the gap.

As a reminder, GCM manages two diversified absolute return strategies for SCERS, comprised of underlying absolute return managers (i.e., a fund of funds strategy). These include SCARF (long-term strategic allocation) and SCARF B (interim absolute return exposure while SCERS' direct absolute return portfolio is built out). Staff has spoken with GCM about restructuring the SCARF B portfolio to only include Diversifying Absolute Return strategies, and to increase the allocation to this strategy with an amount that will fill the allocation gap between SCERS' actual and target allocation for Diversifying Absolute Return. The SCARF B allocation would remain in place while the direct portfolio is built out over the next couple of years. Any restructure of SCARF B would be presented to the Board at a later date according to the implementation protocol for the alternative asset classes, as described in SCERS' Master IPS, with implementation targeted for early Q2'18.

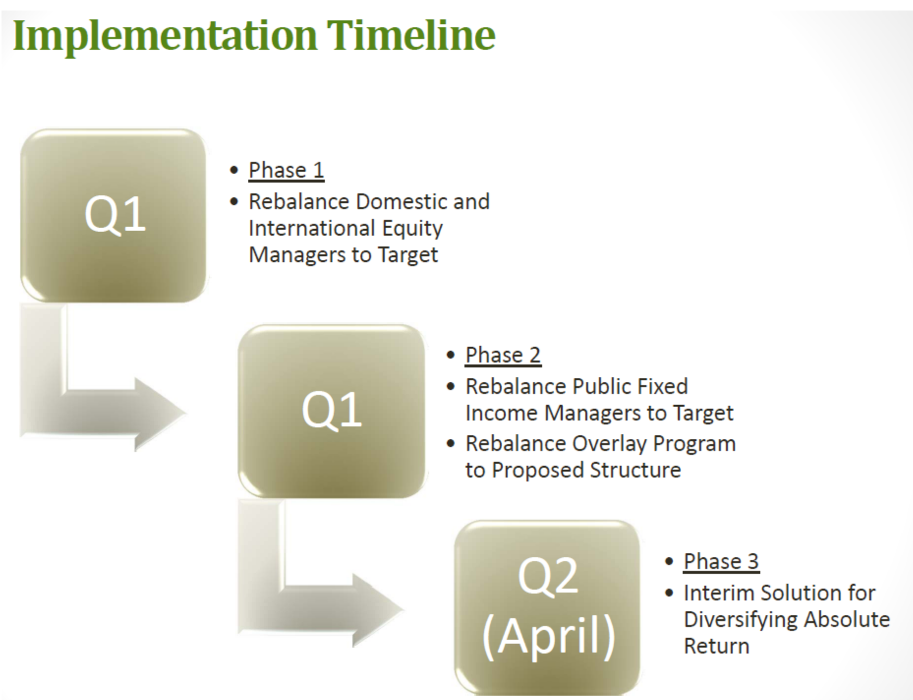
With a potential increased allocation to SCARF B within the Diversifying Absolute Return segment, the current Diversifying asset category allocation gap of ~5.6% would be filled, and the asset category's total physical allocation would be close to its 25% target allocation. The Overlay Diversifying proxy solution would then fill any remaining allocation gap, using the proposed proxy of US Treasuries and TBAs.

REAL RETURN ASSET CATEGORY:

The Real Return asset category, including the current Overlay proxy, is 0.8% underweight to the asset category's 16% allocation. Real Return increased from a 15% allocation to the 16% allocation within the new strategic asset allocation. Therefore, an additional 0.8% would need to be added to the revised Real Return Overlay proxy. Please note that the 0.8% addition would be added to the existing 2.6% allocation to the Overlay proxy, which is mostly being used to fill the gap within the Real Assets asset class as this is being built out. The physical public equity rebalance described above would also serve as the source of capital for this additional allocation to the Real Return Overlay proxy.

IMPLEMENTATION TIMELINE

As described above, Staff and Verus recommend rebalancing several segments of SCERS' portfolio prior to implementing the changes to the Overlay Program, including the public equity and fixed income segments. Below is an implementation timeline that summarizes the timing of the aforementioned implementation initiatives.



ATTACHMENTS

Overlay Program Solutions presentation by SCERS' Staff and State Street Global Advisors
SCERS Resolution 2018-1

Prepared by:	Reviewed by:
/S/	/S/
Steve Davis Chief Investment Officer	Eric Stern Chief Executive Officer

Sacramento County Employees' Retirement System

Proposed Modifications to SCERS' Overlay Program

January 17, 2018

SCERS

Introduction

- Background on the Overlay Program
- Recap of SCERS’ strategic asset allocation
- Present proposed structural changes to SCERS’ Overlay Program
  - Asset category proxies
  - Rebalancing methodology
- Present Overlay implementation plan and timeline

History of Overlay Program

- Managed by State Street Global Advisors ('SSGA') – inception of January 2006
  - Last modified in 2013 and 2015
- Primary Objective – Mitigate risk of straying from policy benchmarks
  - Rebalance SCERS' asset allocation to its policy targets, as defined by SCERS' strategic asset allocation
  - Eliminate performance drag from SCERS' unallocated cash, the cash balances in manager portfolios and cash held for previously committed to, but un-invested private market investments
  - Rebalance the assets in the most efficient and cost effective manner
- Implementation instruments – mostly futures and other derivatives
  - Also includes commingled funds (i.e., Real Return proxy)

SCERS Strategic Asset Allocation

Asset Category/Asset Class	Target Allocation
Growth	**59.0%**
Domestic Equity	21.0%
International Equity	20.0%
Private Equity	9.0%
Public Credit	2.0%
Private Credit	4.0%
Growth Absolute Return	3.0%
Diversifying	**25.0%**
Core/Core Plus Fixed Income	10.0%
US Treasury	5.0%
Global Fixed Income	3.0%
Diversifying Absolute Return	7.0%
Real Return	**16.0%**
Real Estate	7.0%
Real Assets	7.0%
Commodities	2.0%
SSGA Real Return Overlay Proxy	0.0%
Opportunities	**0.0%**

- Asset category approach
  - Links segments of the portfolio that are exposed to similar economic environments and risk factors
- Overlay Program is currently being implemented according to SCERS' prior asset allocation
  - Higher allocation to equities and lower allocation to fixed income – this has benefitted SCERS over the prior year
  - Timing of modifying the Overlay structure and implementation tied to asset category/asset class restructurings and implementation

Overlay Program Structure

- **Staff, Verus and SSGA recommend structuring the Overlay Program at the asset category level**
  - Current Overlay Program is structured at the asset class level
  - Revised structure would have separate proxies for:
    - Growth asset category
    - Diversifying asset category
    - Real Return asset category
- Represents a simplified Overlay structure
  - Avoid attempting to replicate all asset class exposures, especially for the alternative asset classes
  - Overlay proxies are more effective in rebalancing public market assets – less effective for alternative assets
    - Alternative assets typically use public market proxies; i.e., private equity and absolute return

SCERS

Developing an Overlay Solution

STATE STREET GLOBAL ADVISORS

SCERS Overlay

Evaluating the New Policy Allocation

	New Policy Allocation (%)
Growth	**59.0**
Public Equities	41.0
Private Equities	9.0
Public Credit	2.0
Private Credit	4.0
Growth Abs Return	3.0
Diversifying	**25.0**
Core Fixed Income	10.0
US Treasury	5.0
Global Fixed Income	3.0
Diversifying Abs Return	7.0
Real Return	**16.0**
Real Estate	7.0
Private Real Assets	7.0
Commodities	2.0

- Growth Assets are driven by the systematic risk from public equities and credit spread risk
- Diversifying Assets are driven by interest rate risk
- Real Return Assets are driven by inflation risk, but are highly diversified within this category when accounting for private investments

Source: SCERS Master IPS 2017, SSGA and Fact Set Research, as of October 13, 2017.

Overlay Proposal for Growth Allocation

Approach: Correct equity drift and then address residual asset class misweight

	New Policy Allocation (%)	Benchmark	Overlay Implementation
Domestic Equities	21.0	Russell 3000 Index	Basket of S&P 500; S&P 400, and Russell 2000 futures
International Equities	20.0	MSCI ACWI ex-US Index	Basket of Local Index, EAFE, EM Futures plus currency
Private Equities	9.0	Cambridge Associates PE/VC Index	Basket of 85% Global Equity and 15% US TSY
Public Credit	2.0	50% BofA High Yield/50% CS Leveraged Loan	Basket of 85% Global Equity and 15% US TSY
Private Credit	4.0	CS Leveraged Loan + 2%	Basket of 85% Global Equity and 15% US TSY
Growth Abs Return	3.0	HFRI FoF Composite Index + 1%	Basket of 85% Global Equity and 15% US TSY

- Employ replicating baskets for Russell 3000 and ACWI ex-US to correct misweights between Domestic and International Equities relative to their respective policy weights
  - Domestic Equity: S&P 500, S&P MidCap, and Russell 2000 indices have liquid contracts that can be combined to seek to replicate the Russell 3000 Index
  - International Equity: Combine Index futures with currency to attempt to replicate MSCI ACWI ex-US Index
- Once the equity misweights are corrected, calculate the residual misweight of the Growth allocation relative to its policy weight and correct with custom basket
  - The illiquid Growth asset classes in aggregate tend to have lower beta to publicly traded equity, so use a proxy that has lower overall equity beta with a bit of potential resiliency to equity drawdowns.
  - Basket proposed to replicate 85% Global Equity and 15% US TSY

Source: SCERS Master IPS 2017,and SSGA as of January 3, 2018.

Overlay Proposal for Diversifying Allocation

Approach: Correct misweights at the asset class level

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

- Diversifying assets attempt to preserve capital and manage to protect against large drawdowns.
- The known part of the policy benchmark is dominated by US core fixed income (60%).
- Attempt to replicate returns of the Bloomberg Barclays Aggregate Index by using treasury futures and TBAs.
- Did not add credit since the ETF would require a cash investment and can not be shorted.

Source: SCERS Master IPS 2017, SSGA and Fact Set Research, as of March 31, 2017.

Risk Analysis of Overlay for Diversifying Allocation

Expected Tracking Error Estimates Basket with Treasury Futures and TBAs

Total TEV	91.3
Systematic TEV	90.2
Idiosyncratic TEV	13.0
Default TEV	6.1

Market Stress Scenarios Returns (%)

Scenario Name	Treasury Futures and TBAs (%)	Bloomberg Barclays US Aggregate Index (%)
USD Yield Curve Level +100bps	-5.56	-5.06
US Equity Market -20%	1.70	0.77
USD Corporate Spreads +100%	4.18	1.61
Gold Price +30%	3.31	3.24
VIX Index +100%	0.16	-0.21
Oil Price +30%	-0.82	-0.42

Historical Scenarios Returns (%)

Scenario Name	Treasury Futures and TBAs (%)	Bloomberg Barclays US Aggregate Index (%)	Period
1987 Market Crash	-1.47	-1.23	10/13/1987–10/19/1987
1994 Peso Crisis	2.26	2.31	12/20/1994–03/09/1995
1997 Asian Financial Crisis	5.23	4.06	06/11/1997–01/15/1998
1998 Russian Crisis	3.22	2.46	08/17/1998–10/13/1998
LTCM Collapse	0.88	0.60	09/23/1998–10/08/1998
Dot-com Slowdown	18.54	15.83	03/10/2000–10/09/2002
September 11	1.29	0.35	09/10/2001–09/21/2001
2007–2008 Oil Price Run-up	5.30	2.77	01/18/2007–07/03/2008
2007–2009 Credit Crisis	11.12	0.60	02/22/2007–03/09/2009
Sep–Oct 2008	0.22	-9.75	09/12/2008–10/27/2008

As of September 12, 2017
Sources: SSGA and Barclays Point
The hypothetical results shown represent current results generated by Barra One. The results do not reflect actual trading and do not reflect the impact that material economic and market factors may have had on decision-making. The results shown were achieved by means of a mathematical formula, and are not indicative of actual future results which could differ substantially.

SCERS Real Return Assets

Assets that should perform well in periods of unexpectedly rising inflation while producing positive net real returns over complete market cycles.

Asset Class	New Policy Allocation (%)	Normalized Allocation (%)
Real Estate (Private)	7.0	43.8
Private Real Assets	7.0	43.8
Commodities	2.0	12.4
TIPS	0.0	0.0
Total		**100**

Additional Objectives:

1. Provide moderate levels of income and cash flow generation
2. Enhance diversification by exhibiting low or negative correlation with both equities and bonds

Source: SCERS Master IPS 2017

SCERS Real Return Proxy

SCERS Real Return proxy has evolved over time

Asset Class	Benchmark	Current
Global Real Estate (REITs)	FTSE EPRA/NAREIT Developed Liquid Index	10%
Global Infrastructure Equity	S&P Global Infrastructure Index	20%
Master Limited Partnerships (MLPs)	S&P MLP Index	10%
Global Natural Resources	MSCI World Natural Resources Custom Index	20%
Commodities	Bloomberg Roll Select Commodity Index	20%
US TIPS	Bloomberg Barclays US TIPS Bond Index	10%
US Intermediate TIPS	Bloomberg Barclays 1-10 Year US TIPS Bond Index	10%
Total		**100%**

Current concerns:

- Reduce equity beta – Current beta to MSCI ACWI is 0.69
- Seek to retain characteristics of private real assets – lower volatility and correlation
- Maintain cash flow/yield – current yield is 3.1%
- Consider reducing or eliminating commodity exposure – 50% weight across "commodity" complex
- Simplify – no allocations less than 10%

Source: SSGA and risk analysis run using MSCI Barra One BIM303L (with GEM3L Factors) as of 10/31/2017

Proposal for Real Return Allocation

Approach: Correct misweights at the asset class level and provide liquidity

Asset Class	Benchmark	Current	Proposal	Change
Global Real Estate (REITs)	FTSE EPRA/NAREIT Developed Liquid Index	10	15	+5
Global Infrastructure Equity	S&P Global Infrastructure Index	20	25	+5
Master Limited Partnerships (MLPs)	S&P MLP Index	10	0	-10
Global Natural Resources	MSCI World Natural Resources Custom Index	20	0	-20
Global Natural Resources	S&P Global Large Mid Cap Commodity and Resources Index	0	10	+10
Commodities	Bloomberg Roll Select Commodity Index	20	10	-10
US TIPS	Bloomberg Barclays US TIPS Index	10	0	-10
US Intermediate TIPS	Bloomberg Barclays 1–10 Year US TIPS Index	10	30	+20
Floating Rate Notes	Bloomberg Barclays US Dollar Floating Rate Note < 5 Years Index	0	10	+10
Infrastructure Debt	DJ Brookfield Global Infrastructure Broad Mkt. Corporate Bond Index	0	0	0
Total		**100**	**100**	**0**

- Reduction in Beta - 26% reduction in beta to MSCI ACWI (0.51)
- Predicted volatility declines to 6.6% from 9.2%
- Reduction in "commodity-like" exposure by 30%, liquidating MLPs and reducing Commodities and Global Natural Resource Stocks
- Reduced allocation to high yielding MLPs (7.9%) lowers overall current yield to 2.6%
- Consolidated TIPS exposure

Source: SSGA and risk analysis run using MSCI Barra One BIM303L (with GEM3L Factors) as of October 31, 2017
The results do not reflect actual trading and do not reflect the impact that material economic and market factors may have had on SSGA's decision-making. The results shown were achieved by means of a mathematical formula, and are not indicative of actual performance which could differ substantially.

Risk Analysis for Real Return Proxy

Hypothetical Stress Tests under Historical Scenarios

Scenario Description	Proposed Allocation (%)	Benchmark-PK63 (%)	Excess Return (%)
1987 Market Crash (Aug. to Nov.)	-9.02	-9.33	0.31
1994 Mexican Peso Crisis	1.53	2.00	-0.46
1994 US Rate Hike	-3.58	-1.38	-2.21
1997-1998 Asian Financial Crisis	1.50	0.18	1.32
1998 LTCM Collapse	-0.85	-1.38	0.53
1998 Russian Financial Crisis	-5.59	-7.05	1.45
2000-2003 Tech Crash & Recession	-4.60	-3.84	-0.75
2001 Sept 11	-6.21	-6.97	0.76
2008–2009 Global Financial Crisis	-21.66	-25.34	3.69
2008 Lehman Bust	-22.27	-24.74	2.46
2010 Peripheral European Bond Crisis	-3.35	-4.27	0.92
2011 Debt Ceiling Act	-6.47	-7.86	1.39
2016 Brexit	-1.58	-1.63	0.06

Predefined Scenarios

Scenario Description	Proposed Allocation (%)	Benchmark-PK63 (%)	Excess Return (%)
Crude Oil price up 30%	2.77	4.41	-1.64
Crude Oil price down 30%	-2.77	-4.41	1.64
Gold price up 30%	4.69	5.11	-0.42
Gold price down 30%	-4.66	-5.10	0.42
US Eq. drop by 20%	-7.52	-9.74	2.21
USD Corp Spreads up 100%	-9.16	-11.72	2.57
USD Yield Curve level up 100 bps	2.25	4.02	-1.77

Better performance during shocks to equities and corporate spreads

Worse performance during upward shocks to commodity markets and the yield curve

Source: SSGA and risk analysis run using MSCI Barra One BIM303L (with GEM3L Factors) as of October 31, 2017
Please reference slide 7 for proposed allocations and benchmarks.
The proposed allocation results do not reflect actual trading and do not reflect the impact that material economic and market factors may have had on SSGA's decision-making. The results shown were achieved by means of a mathematical formula, and are not indicative of actual performance which could differ substantially. The performance does not reflect management fees, transaction costs, and other fees expenses a client would have to pay.
Past performance is not a guarantee of future results. Index returns do reflect capital gains and losses, income, and the reinvestment of dividends. Performance is calculated in USD

Rationale for Additions to Real Return Proxy

Proposal includes allocations to Floating Rate Notes and a change to Natural Resources

Floating Rate Notes

- Short duration nature may lead to better performance than fixed rate bonds during rising rates environment
- Rising inflationary period may be captured, but not the explicit inflation protection of TIPS

Benchmark change for Global Natural Resources

- More diversified exposure across energy, metals & mining, and agriculture groups
  - Energy reduced to 33%
- Expanded global reach to include emerging markets
- Market capitalization extends reach to mid/small capitalization securities, approximately 10%

Asset Class for Future Consideration:

Infrastructure Debt

- Can provide diversification of infrastructure investment and more of the stability associated with direct infrastructure
- Brookfield index under consideration, however there are no passive vehicles available at this time

Source: SSGA
Diversification does not ensure a profit or guarantee against loss.

SCERS Overlay Rebalance Analysis

Simulation assumptions

– Publicly traded benchmarks only

– Strategic benchmark 59% MSC ACWI, 25% Bloomberg Barclay US Aggregate, 16% Real Return carried at 0% return

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

Historical analysis

– Rebalance policies triggered less frequently than monthly have yielded excess return over time but higher tracking error

– Outperformance a function of short-term momentum and reduced transaction costs

	Return (%)	Excess Return (%)	Tracking Error (%)	Average Annual Trans Costs	Average Trades/Year
Monthly Rebalance	2.11	-0.02	0.05	0.01%	12
Quarterly Rebalance	2.21	0.08	0.22	< 1 basis point	4
Annual Rebalance	2.39	0.22	0.61	< 1 basis point	1
Rebalance Using Ranges Only	2.60	0.47	0.80	< 1 basis point	< 1
Rebalance Quarterly w/ Ranges	2.21	0.08	0.22	< 1 basis point	4
Rebalance w/ Equity Trigger +/- 6%	2.31	0.18	0.43	< 1 basis point	1
Benchmark (as defined above)	2.13				

Recommendation: Quarterly with bands provides some potential upside with small increase in tracking error

Source: SSGA as of October 13, 2017. Time frame January 2001–August 2017.
Past performance is not a guarantee of future results. Returns do not represent those of a fund but were achieved by mathematically combining the actual performance data of 59% MSCI ACWI, 25% Bloomberg Barclays Aggregate, and 16% of a proxy with 0% returns. The performance assumes ~6 bps of transaction and rebalancing costs, so actual results will differ.
Performance is calculated in USD.

SCERS Overlay Proposal for New Asset Allocation

Summary

Growth assets are driven by equity and credit spread risk

- Overlay will seek to correct equity drift and then address residual asset class misweight
- Baskets will include US Equity, International Equity and a blend of Equity and US TSY

Diversifying assets are driven by interest rate risk

- Overlay will seek to correct misweights at the asset class level
- Utilize basket of TSY futures and Mortgage TBAs

Real Return assets are driven by inflation risk

- Overlay designed to address under allocations and as a liquid component to the asset class
- Proposed allocation should reduce equity beta and lower expected volatility
- Risk analysis suggests that it may produce positive returns during upward shocks to commodity prices and the yield curve

Rebalance quarterly and by bands to capture some return momentum, reduce cost and incur slightly more tracking error when compared to a monthly approach

Source: SSGA
As of January 3, 2018

Appendix A: Important Disclosures

CTA Disclosures

SSGA generally delegates commodities management for separately managed accounts to SSGA FM, a wholly owned subsidiary of State Street and an affiliate of SSGA. SSGA FM is registered as a commodity trading advisor ("CTA") with the Commodity Futures Trading Commission and National Futures Association and as an investment adviser with the US Securities and Exchange Commission.

This communication is not specifically directed to investors of separately managed accounts (SMA) utilizing futures, options on futures or swaps.
SSGA FM CTA clients should contact SSGA Relationship Management for important CTA materials.

Important Disclosures

Diversification does not ensure a profit or guarantee against loss.

Equity securities may fluctuate in value in response to the activities of individual companies and general market and economic conditions.

Bonds generally present less short-term risk and volatility than stocks, but contain interest rate risk (as interest rates raise, bond prices usually fall); issuer default risk; issuer credit risk; liquidity risk; and inflation risk. These effects are usually pronounced for longer-term securities. Any fixed income security sold or redeemed prior to maturity may be subject to a substantial gain or loss.

Derivative investments may involve risks such as potential illiquidity of the markets and additional risk of loss of principal.

Investing in futures is highly risky. Futures positions are considered highly leveraged because the initial margins are significantly smaller than the cash value of the contracts. The smaller the value of the margin in comparison to the cash value of the futures contract, the higher the leverage. There are a number of risks associated with futures investing including but not limited to counterparty credit risk, basis risk, currency risk, derivatives risk, foreign issuer exposure risk, sector concentration risk, leveraging and liquidity risks.

The trademarks and service marks referenced herein are the property of their respective owners. Third party data providers make no warranties or representations of any kind relating to the accuracy, completeness or timeliness of the data and have no liability for damages of any kind relating to the use of such data.

Investing involves risk including the risk of loss of principal.

All information has been obtained from sources believed to be reliable, but its accuracy is not guaranteed. There is no representation or warranty as to the current accuracy, reliability or completeness of, nor liability for, decisions based on such information and it should not be relied on as such.

State Street Global Advisors, One Lincoln Street, Boston, MA 02111-2900.

Web: www.ssga.com

Tracking Code: 1983641.1.4.NA.INST

Expiration Date: April 30, 2018

Appendix B: Biographies

Biographies

Michael O. Martel

Mike is a Managing Director of State Street Global Advisors and the Head of Portfolio Management in the Americas for SSGA's Investment Solutions Group (ISG). In this role, he is responsible for the design and management of multi-asset class strategies geared towards meeting the investment objectives of a broad and diverse client base. His work with clients includes aligning assets with long and short-term investment objectives, tactical asset allocation, and employing overlay strategies to enhance return and better manage risks. Prior to this role, Mike led ISG's Exposure Management Team.

He has been working in the investment management field since 1992.

Mike holds a Bachelor of Arts degree in Economics from the College of the Holy Cross and Master degrees in both Finance and Business Administration from the Carroll School of Management at Boston College.

Sonya K. Park

Sonya is a Vice President of State Street Global Advisors and a Senior Relationship Manager in the San Francisco Office. She is responsible for managing existing SSGA client relationships and driving new business development in the Western US Prior to joining State Street Global Advisors in 2011, Sonya was a Vice President at Dimensional Fund Advisors in the Institutional Sales & Services Group.

Prior to Dimensional Fund Advisors, Sonya was an Associate Director at Watson Pharmaceuticals. Sonya has also worked at Lehman Brothers as an Equity Research Analyst and began her career at SEI Corporation.

Sonya earned a BA from the University of Pennsylvania and an MBA from the NYU Stern School of Business and has been working in the financial services industry since 1993. Sonya holds the FINRA 7 and 63 registrations. Sonya also holds the NFA Series 3 and is an Associated Person of SSGA Funds Management, Inc. ('SSGA FM') SSGA FM is a Commodity Trading Advisor registered with the Commodity Futures Trading Commission.

Implementation

- Significant gaps between actual and target allocations
  - Especially within Growth and Diversifying asset categories

- Recommend a physical rebalance prior to implementing the proposed Overlay Program structure
  - **Growth**
    - Physically rebalance overweight domestic and international equity managers to target
  - **Diversifying**
    - Physically rebalance underweight public fixed income managers to target
    - Evaluate/construct interim solution for Diversifying Absolute Return

- Overlay Program (using proposed structure) would then rebalance any residual gaps

Asset Category/Asset Class	Actual Allocation	Target Allocation	Required Overlay Adjustment
Growth	**62.3%**	**59.0%**	**-3.3%**
Domestic Equity	23.8%	21.0%	
International Equity	24.2%	20.0%	
Private Equity	7.0%	9.0%	
Public Credit	1.9%	2.0%	
Private Credit	0.6%	4.0%	
Growth Absolute Return	4.8%	3.0%	
Diversifying	**19.4%**	**25.0%**	**5.6%**
Core/Core Plus Fixed Income	12.9%	10.0%	
US Treasury	0.0%	5.0%	
Global Fixed Income	2.6%	3.0%	
Diversifying Absolute Return	3.9%	7.0%	
Real Return	**15.2%**	**16.0%**	**0.8%**
Real Estate	8.8%	7.0%	
Real Assets	3.1%	7.0%	
Commodities	0.7%	2.0%	
SSGA Real Return Overlay Proxy	2.6%	0.0%	
Opportunities	**0.1%**	**0.0%**	
Overlay	0.9%	0.0%	
Cash	2.1%	0.0%	
Total:	100.0%	100.0%	

Implementation Timeline

Q1

- Phase 1
- Rebalance Domestic and International Equity Managers to Target

Q1

- Phase 2
- Rebalance Public Fixed Income Managers to Target
- Rebalance Overlay Program to Proposed Structure

Q2 (April)

- Phase 3
- Interim Solution for Diversifying Absolute Return

RESOLUTION NO. <u>SCERS 2018-1</u>

RESOLUTION OF THE BOARD OF RETIREMENT OF THE SACRAMENTO COUNTY EMPLOYEES' RETIREMENT SYSTEM TO AUTHORIZE AMENDMENT OF THE INVESTMENT MANAGEMENT AGREEMENT WITH STATE STREET GLOBAL ADVISORS

WHEREAS, SCERS and STATE STREET GLOBAL ADVISORS ("MANAGER") entered into an Investment Management Agreement on January 19, 2006 (the "Agreement"); and,

WHEREAS, the parties amended the Agreement in August 2015 to make changes to Exhibits A (Statement of Investment Guidelines and Objective For Strategic Overlay Services), A-1 (Statement of Investment Procedures For Strategic Overlay Services), and Appendices A, B and C; and

WHEREAS, in January 2017, the Board adopted Staff's recommendation to revise strategic asset allocations for SCERS' investment portfolio by re-grouping and re-classifying segments of SCERS' prior asset allocation to link segments of the portfolio to similar economic environments and risk factors. The re-grouping resulted in the portfolio being re-classified into three asset categories: Growth, Diversifying and Real Return; and

WHEREAS, as a necessary step to transition the portfolio to the revised strategic asset allocation, revisions to the Overlay Program are required

THEREFORE, BE IT RESOLVED AND ORDERED that:

1. Pending successful legal review and due diligence, the President or the Chief Executive Officer is authorized to execute documents necessary to effect the amendments to the Investment Management Agreement with State Street Global Advisors to transition the Overlay Program, and

2. Staff is authorized to determine the most efficient method of transitioning the assets within the Overlay Program to align with SCERS' revised strategic asset allocation

On motion made by Member ___________________, Seconded by Member ________________, the foregoing Resolution was passed and adopted by the Board of the Sacramento County Employees' Retirement System this 17th day of January, 2018 by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

____
President of the Board of the
Sacramento County Employees'
Retirement System

ATTEST: ______________________________
Secretary of the Board of the
Sacramento County Employees'
Retirement System