



Board of Retirement Regular Meeting

Sacramento County Employees' Retirement System

Agenda Item 4

MEETING DATE: November 5, 2018

SUBJECT: Portfolio Allocation and Rebalancing Report –
Third Quarter 2018

SUBMITTED FOR: X Consent ___ Deliberation and Action ___ Receive and File

RECOMMENDATION

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

PURPOSE

This item does not specifically support the 2018-19 Strategic Management Plan, but 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.

BACKGROUND

SCERS employs an Overlay Program, which is managed by State Street Global Advisors (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.

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: (1) when there is low correlation between the overlay proxies designed to replicate the underlying asset classes and managers, as is the case with many alternative assets; and (2) 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.

SCERS changed its strategic asset allocation in 2017, and a restructured Overlay Program was approved at the January 2018 Board meeting to align the Overlay Program with SCERS' strategic asset allocation. The approved 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, unless the bands are breached on an intra-quarter basis, in which case rebalancing occurs upon the breach of a band.

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

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

The Overlay Program was converted to the new strategic asset allocation during the latter part of the first quarter of 2018; therefore, this rebalancing report reflects the new strategic asset allocation and the revised Overlay Program structure. While the revised Overlay structure has been implemented, there remain some larger gaps between target and actual allocations within some underlying asset classes. Remaining gaps within the Absolute Return segments will close as implementation continues toward reducing the exposure to Growth-Oriented Absolute Return strategies, and increasing exposure to Diversifying Absolute Return strategies. Private market asset class implementation (Private Equity; Private Credit; Real Assets) continues to make good progress, but takes multiple years to execute given the unique capital pacing budgets for these segments of the portfolio.

SCERS' asset category overlay proxies are shown in Appendix 1.

DISCUSSION

Because SCERS' Overlay Program rebalances SCERS' total fund, it is important to note that **Tables 1-16** reported below 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, which is the proxy for this asset category, and is implemented through physical exposures.

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 the ability to outperform equity markets in times of distress. Accordingly, it is beneficial for SCERS to continue physically investing in alternative assets 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

Table 1: Growth Asset Category Allocation (as of September 30, 2018)

	Market Value	Actual	Target	Delta %	Target Low	Target High
GROWTH ASSET CATEGORY:	\$5,293,191,416	56.1%	59.0%	-2.9%	48.0%	70.0%

The Growth asset category currently has an allocation of 56.1%, which is below the strategic asset allocation's target allocation of 59%. The Overlay Program rebalances this to the 59% target allocation. 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. The underweights to Private Equity and Private Credit are the reason for the Growth asset category underweight.

Domestic Equities:

As depicted in **Table 2** below, SCERS' Domestic Equity asset class actual weighting of 22.4% is above SCERS' policy target allocation of 21.0%, as of September 30, 2018. The Overlay Program rebalances the Domestic Equity overweight to the 21% target allocation. During the quarter, Staff implemented the new manager structure for the Domestic Equity asset class, which included physically rebalancing exposures toward the 21% target allocation.

The implementation of the domestic equity portfolio included the following transactions:

- 1) Reduction in the allocation to the fundamental large cap active engagement with Eagle Capital Management by ~\$23 million.
- 2) Termination of the ~\$148 million large cap growth engagement with Brown Advisory.
- 3) Termination of the ~\$122 million large cap value engagement with Huber Capital Management.
- 4) Implementation of a ~\$235 million systematic, multi-factor engagement with AQR Capital Management (AQR U.S. Enhanced Equity strategy).
- 5) Increase in the allocation to the small cap value engagement with Dalton, Greiner, Hartman, Maher & Co. (DGHM) by ~\$17 million.
- 6) Termination of the ~\$96 million small cap value engagement with Wedge Capital Management.
- 7) Reduction in the allocation to the small cap growth engagement with Weatherbie Capital by ~\$38 million.
- 8) Termination of the ~\$86 million small cap growth engagement with UBS Asset Management.

SCERS' overlay manager, 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.

Table 2: Domestic Equity Allocation (as of September 30, 2018)

Domestic Equity	Sub-Asset Class	Market Value	Actual	Target	Delta %	Target Low	Target High
		\$2,109,749,980	22.4%	21.0%	1.4%	19.0%	23.0%
AllianceBernstein	Equity Core Index	\$1,278,215,873	13.5%				
JP Morgan 130/30	Equity Core Active Short Extension (130/30)	\$132,715,325	1.4%				
Eagle Capital Management	Equity Large Cap Core	\$254,293,361	2.7%				
AQR US Enhanced Equity	Equity Systematic Multi-Factor Core	\$238,404,240	2.5%				
	Equity Large Cap		20.2%				
Dalton, Greiner, Hartman, Maher & Co.	Equity Small Cap Value	\$101,742,499	1.1%				
M.A. Weatherbie & Co.	Equity Small Cap Growth	\$104,378,682	1.1%				
	Equity Small Cap		2.2%				

International Equities:

As depicted in **Table 3** below, SCERS' International Equity asset class actual weighting of 19.6% is slightly below SCERS' policy target allocation of 20.0%. This asset class was physically rebalanced during the first quarter of 2018 as part of the implementation of the International Equity manager structure. No physical rebalancing activity took place within the International Equity asset class during the third quarter.

At the sub-asset class level, international large cap, at a 14.0% allocation is in-line with the target allocation of 14.0%. International small cap, at a 2.0% allocation is in-line with the target allocation of 2.0%. Emerging markets equity, at a 3.6% allocation is slightly below the policy target allocation of 4.0%.

The Overlay Program rebalances the current International Equity 0.4% underweight to the 20% target allocation. SCERS' overlay manager, 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.

Table 3: International Equity Allocation (as of September 30, 2018)

International Equity	Sub-Asset Class	Market Value	Actual	Target	Delta %	Target Low	Target High
		\$1,851,128,741	19.6%	20.0%	-0.4%	18.0%	22.0%
Lazard Asset Management	ACWI Ex-US	\$373,675,894	4.0%	4.0%	0.0%		
LSV Large Cap International Value	International Equity Large Cap Value	\$457,312,330	4.8%	5.0%	-0.2%		
Walter Scott	International Equity Large Cap Growth	\$491,239,574	5.2%	5.0%	0.2%		
	International Equity Large Cap		14.0%	14.0%			
William Blair & Co.	International Equity Small Cap Growth	\$90,290,236	1.0%	1.0%	0.0%		
Mondrian Investment Partners	International Equity Small Cap Value	\$96,637,011	1.0%	1.0%	0.0%		
	International Equity Small Cap		2.0%	2.0%			
Baillie Gifford	Emerging Markets Equity - All Cap	\$181,000,837	1.9%	2.0%	-0.1%		
Mondrian Emerging Markets Equity Fund, LP	Emerging Markets Equity - All Cap	\$160,972,860	1.7%	2.0%	-0.3%		
	Emerging Markets		3.6%	4.0%			

Private Equity:

As outlined in **Table 4** below, SCERS' Private Equity allocation is 7.5%, which is 1.5% below the policy target allocation of 9.0%. 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. As previously mentioned, public market proxies such as these are less than optimal in replicating private equity, and it would be better to invest capital into physical private equity holdings. The commitment schedule and cash flow forecast of Private Equity investments project SCERS achieving and maintaining the policy target in 2020.

During the second quarter, SCERS made a \$35 million commitment to TSSP Opportunities Partners IV, L.P., and a commitment of \$33.5 million to Accel-KKR Growth Capital Partners III, L.P.

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 \$8.7 million, which equates to a 0.1% allocation, and brings SCERS' total allocation in Private Equity to 7.6%.

Table 4: Private Equity Allocation (as of September 30, 2018)

Private Equity	Sub-Asset Class	Market Value	Actual	Target	Delta %	Target Low	Target High
		\$710,281,502	7.5%	9.0%	-1.5%	7.0%	11.0%
RRJ Capital Master Fund II, LP	Private Equity - Asian Buyout/Special Situations	\$18,575,312	0.2%				
RRJ Capital Master Fund III, LP	Private Equity - Asian Buyout/Special Situations	\$28,858,856	0.3%				
Accel-KKR Capital Partners IV, LP	Private Equity - Buyout	\$7,341,578	0.1%				
Accel-KKR Capital Partners V, LP	Private Equity - Buyout	\$7,628,085	0.1%				
Accel-KKR Growth Capital Partners II, LP	Private Equity - Buyout	\$7,805,636	0.1%				
Accel-KKR Growth Capital Partners III, LP	Private Equity - Buyout	\$0	0.0%				
H.I.G. Capital Partners V, LP	Private Equity - Buyout	\$9,111,823	0.1%				
Linden Capital Partners III, LP	Private Equity - Buyout	\$36,473,490	0.4%				
Linden Capital Partners IV, LP	Private Equity - Buyout	-\$1,886,101	0.0%				
Marlin Equity Partners IV, LP	Private Equity - Buyout	\$12,331,378	0.1%				
Marlin Equity Partners V, LP	Private Equity - Buyout	\$4,700,359	0.0%				
Marlin Heritage Europe, LP	Private Equity - Buyout	\$4,966,949	0.1%				
Marlin Heritage II, LP	Private Equity - Buyout	\$3,388,895	0.0%				
Marlin Heritage, LP	Private Equity - Buyout	\$8,487,060	0.1%				
Thoma Bravo Fund XI, LP	Private Equity - Buyout	\$33,916,605	0.4%				
Thoma Bravo Fund XII, LP	Private Equity - Buyout	\$26,010,852	0.3%				
TSG7 A, LP	Private Equity - Buyout	\$8,541,178	0.1%				
TSG7 B, LP	Private Equity - Buyout	\$944,902	0.0%				
Atalaya Special Opportunities Fund VI, LP	Private Equity - Distressed	\$21,220,692	0.2%				
Davidson Kempner Distressed Opportunities Fund III, LP	Private Equity - Distressed	\$9,112,785	0.1%				
Garrison Opportunity Fund III, LP	Private Equity - Distressed	\$12,936,703	0.1%				
H.I.G. Bayside Loan Opportunity III (Europe), LP	Private Equity - Distressed	\$19,717,662	0.2%				
TPG Opportunities Partners III, LP	Private Equity - Distressed	\$21,546,217	0.2%				
TSSP Opportunities Partners IV, LP	Private Equity - Distressed	\$0	0.0%				
Wayzata Opportunities Fund III, LP	Private Equity - Distressed	\$6,874,142	0.1%				
H.I.G. Europe Capital Partners II, LP	Private Equity - European Buyout	\$9,611,385	0.1%				
Waterland Private Equity Fund V, CV	Private Equity - European Buyout	\$10,602,958	0.1%				
Waterland Private Equity Fund VI Overflow, CV	Private Equity - European Buyout	\$1,035	0.0%				
Waterland Private Equity Fund VI, CV	Private Equity - European Buyout	\$16,204,594	0.2%				
Summit Partners Europe Growth Equity Fund II, LP	Private Equity - European Growth Equity	\$1,511,543	0.0%				
Abbott Capital ACE VI	Private Equity - FoF	\$52,723,775	0.6%				
Goldman Sachs PEP X	Private Equity - FoF	\$30,584,379	0.3%				
Harbourvest Partners Intl VI	Private Equity - FoF	\$33,792,211	0.4%				
HarbourVest Partners VIII	Private Equity - FoF	\$17,836,230	0.2%				
Spectrum Equity Investors VII, LP	Private Equity - Growth Equity	\$25,123,551	0.3%				
Spectrum Equity Fund VIII, LP	Private Equity - Growth Equity	\$437,500	0.0%				
Summit Partners VC Fund III, LP	Private Equity - Growth Equity	\$16,128,959	0.2%				
Summit Partners Venture Capital Fund IV, LP	Private Equity - Growth Equity	\$18,343,677	0.2%				
Dyal Capital Partners II, LP	Private Equity - Other	\$14,601,148	0.2%				
Dyal Capital Partners III, LP	Private Equity - Other	\$9,590,985	0.1%				
Khosla Ventures IV, LP	Private Equity - Venture Capital	\$6,012,050	0.1%				
Khosla Ventures V, L.P.	Private Equity - Venture Capital	\$14,255,043	0.2%				
Khosla Ventures VI, L.P.	Private Equity - Venture Capital	\$2,205,000	0.0%				
New Enterprise Associates 14, LP	Private Equity - Venture Capital	\$32,684,888	0.3%				
New Enterprise Associates 15, LP	Private Equity - Venture Capital	\$38,282,290	0.4%				
New Enterprise Associates 16, LP	Private Equity - Venture Capital	\$9,543,055	0.1%				
Trinity Ventures XI, LP	Private Equity - Venture Capital	\$25,985,010	0.3%				
Trinity Ventures XII, LP	Private Equity - Venture Capital	\$15,615,176	0.2%				

Public Credit:

As outlined in **Table 5** below, SCERS' Public Credit allocation is 1.9%, which is in-line with the policy target allocation of 2.0%. 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.

Table 5: Public Credit Allocation (as of September 30, 2018)

Public Credit	Sub-Asset Class	Market Value	Actual	Target	Delta %	Target Low	Target High
		\$180,174,565	1.9%	2.0%	-0.1%	1.0%	3.0%
Brigade Capital SC Opportunities Mandate	Public Credit	\$180,174,565	1.9%	2.0%			

Private Credit:

As outlined in **Table 6** below, SCERS' Private Credit allocation is 1.2%, which is 2.8% below the policy target allocation of 4.0%. 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 2020.

Table 6: Private Credit Allocation (as of September 30, 2018)

Private Credit	Sub-Asset Class	Market Value	Actual	Target	Delta %	Target Low	Target High
		\$111,693,985	1.2%	4.0%	-2.8%	2.0%	6.0%
Benefit Street Partners Senior Opportunities Fund, LP	Private Credit - Direct Lending	\$38,107,102	0.4%				
Summit Partners Credit Fund, LP	Private Credit - Direct Lending	\$3,218,598	0.0%				
Summit Partners Credit Fund II, LP	Private Credit - Direct Lending	\$20,736,553	0.2%				
Summit Partners Credit Fund III, LP	Private Credit - Direct Lending	\$0	0.0%				
Tennenbaum Capital Partners Direct Lending Fund VIII (S), LLC	Private Credit - Direct Lending	\$26,642,391	0.3%				
Athyrium Opportunities Fund II, LP	Private Credit - Healthcare Opportunistic Credit	\$13,629,533	0.1%				
Athyrium Opportunities Fund III, LP	Private Credit - Healthcare Opportunistic Credit	\$9,359,807	0.1%				

Growth Absolute Return:

As outlined in **Table 7** below, SCERS' Growth Absolute Return allocation is 3.5%, which is above the policy target allocation of 3.0%. 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.

Table 7: Growth Absolute Return Allocation (as of September 30, 2018)

Growth Absolute Return	Sub-Asset Class	Market Value	Actual	Target	Delta %	Target Low	Target High
		\$330,162,643	3.5%	3.0%	0.5%	1.0%	5.0%
Grosvenor SC Absolute Return Fund - Growth Series	Diversified Separate Account	\$143,201,663	1.5%				
Jana Partners Qualified, LP	Equity Activist & Long/Short	\$44,802,590	0.5%				
Lakewood Capital Partners, LP	Equity Long/Short	\$44,032,098	0.5%				
Third Point Partners Qualified, LP	Event Driven	\$49,654,872	0.5%				
OZ Domestic Partners II, LP	Multi Strategy	\$48,471,420	0.5%				

DIVERSIFYING ASSET CATEGORY

Table 8: Diversifying Asset Category Allocation (as of September 30, 2018)

	Market Value	Actual	Target	Delta	Target	Target
		%	%	%	Low	High
DIVERSIFYING ASSET CATEGORY:	\$2,048,295,903	21.7%	25.0%	-3.3%	18.0%	32.0%

The Diversifying asset category currently has an allocation of 21.7%, which is 3.3% below the strategic asset allocation's target allocation of 25%. The Overlay Program rebalances this to the 25% target allocation. The Diversifying asset category is comprised of the Public Fixed Income and Diversifying Absolute Return segments of the portfolio.

Public Fixed Income:

As depicted in **Table 9** below, SCERS' Public Fixed Income allocation actual weighting of 15.7% is below SCERS' policy target allocation of 18%. No physical rebalancing activity took place within the Public Fixed Income portfolio during the third quarter.

All of SCERS' public fixed income managers are slightly underweight their respective targets. During the fourth quarter, Staff plans on working with the managers to physically rebalance these underweights to their target allocations.

The Overlay Program rebalances the remaining Public Fixed Income underweight to the 18% target allocation. SSGA utilizes a combination of U.S. Treasury futures and Mortgage TBAs to rebalance this segment of the portfolio to its policy target allocation, as part of a broader Diversifying asset category proxy.

Table 9: Public Fixed Income Allocation (as of September 30, 2018)

Public Fixed Income	Sub-Asset Class	Market Value	Actual	Target	Delta	Target	Target
			%	%	%	Low	High
		\$1,485,721,194	15.7%	18.0%	-2.3%	13.0%	23.0%
Prudential Investment Management	Core Plus Active Fixed Income	\$440,491,738	4.7%				
TCW/MetWest	Core Plus Active Fixed Income	\$411,580,208	4.4%				
	Core Plus		9.0%				
Neuberger Berman	US Treasuries	\$416,531,476	4.4%				
Brandywine Global	Global Opportunistic Fixed Income	\$217,117,772	2.3%				

Diversifying Absolute Return:

As outlined in **Table 10** below, SCERS' Diversifying Absolute Return allocation is 6.0%, which is below the policy target allocation of 7.0%.

Earlier in the year, SCERS made a \$100 million additional commitment in the existing Grosvenor SCARF B portfolio, which was restructured to invest only in diversifying absolute return strategies. Staff and Cliffwater expect to make two direct Diversifying Absolute Return investments at year-end to bring the underweight allocation closer to target.

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.

Table 10: Diversifying Absolute Return Allocation (as of September 30, 2018)

Diversifying Absolute Return	Sub-Asset Class	Market Value	Actual	Target	Delta %	Target Low	Target High
		\$562,574,709	6.0%	7.0%	-1.0%	5.0%	9.0%
Grosvenor SC Absolute Return Fund - Diversifying Series	Diversified Separate Account	\$126,810,469	1.3%				
Grosvenor SC Absolute Return Fund, Series B - Interim Diversifying	Diversified Separate Account	\$168,779,822	1.8%				
Elliott Associates LP	Event Driven	\$54,616,433	0.6%				
Claren Road Credit Partners, LP	Credit	\$3,679,435	0.0%				
AQR Delta Fund II, LP	Bottom Up Replication	\$63,905,520	0.7%				
Laurion Capital Management, LP	Volatility Arbitrage	\$45,209,328	0.5%				
Brevan Howard Master Fund, LP	Discretionary Global Macro	\$27,053,997	0.3%				
Winton Diversified Futures Fund, L.P.	Systematic Global Macro	\$37,216,060	0.4%				
Graham Tactical Trend Fund, L.P.	Systematic Global Macro	\$35,303,646	0.4%				

REAL RETURN ASSET CATEGORY

Table 11: Real Return Asset Category Allocation (as of September 30, 2018)

	Market Value	Actual	Target	Delta %	Target Low	Target High
REAL RETURN ASSET CATEGORY:	\$1,505,683,040	16.0%	16.0%	0.0%	10.0%	29.0%

The Real Return asset category currently has an allocation of 16.0%, including the Real Return Overlay Program exposure, and 13.2% without the Overlay proxy, which compares to the strategic asset allocation’s target allocation of 16.0%. The Real Return asset category is comprised of the Real Estate, Real Assets, and Commodities segments of the portfolio.

The Overlay Program utilizes a series of liquid commingled funds across global REITs, global infrastructure stocks, global natural resource stocks, commodities, US TIPS, and floating rate notes. These commingled funds represent physical exposure, as opposed to the proxies for the other asset categories (Growth and Diversifying), which utilize derivatives, so the exposure is counted as part of the Real Return exposure. The Real Return Overlay proxy exposure is shown below in **Table 12** below:

Table 12: Real Return Overlay Proxy Allocation (as of September 30, 2018)

Real Return Overlay Proxy	Sub-Asset Class	Market Value	Actual	Target	Delta %	Target Low	Target High
SSGA Real Return Overlay Strategy	Real Return Proxy	\$260,717,038	2.8%	0.0%	2.8%		

Real Estate:

As outlined in **Table 13** below, SCERS’ Real Estate allocation is 8.6%, which is above the policy target allocation of 7.0%. Staff and Townsend are comfortable maintaining an above target real estate allocation while SCERS’ Real Assets asset class is built out, but given that the allocation has recently been near and above the maximum allocation of 9.0%, a rebalancing plan is currently being created by Townsend and Staff to ensure the allocation stays below the maximum allocation. If needed, SSGA utilizes a series of listed commingled funds described above to replicate Real Estate, as part of the broader Real Return asset category proxy.

Late in the third quarter, and early in the fourth quarter, SCERS completed the sale of its \$252 million core real estate separate account portfolio to Clarion Lion Properties Fund for approximately \$152 million in shares in the Clarion Lion Properties Fund, L.P. and \$100 million in cash which was invested in Brookfield Premier Real Estate Partners, L.P. This transaction will be fully reflected in the fourth quarter rebalancing report.

Table 13: Real Estate Allocation (as of September 30, 2018)

Real Estate	Sub-Asset Class	Market Value	Actual	Target	Delta %	Target Low	Target High
		\$816,372,339	8.6%	7.0%	1.6%	5.0%	9.0%
Blackrock Realty Advisors Portfolio I	Core Real Estate	\$68,409,679	0.7%				
Blackrock Realty Advisors, Portfolio II	Core Real Estate	\$0	0.0%				
Brookfield Premier Real Estate Partners, LP	Core Real Estate	\$0	0.0%				
Clarion Lion Properties Fund, LP	Core Real Estate	\$150,000,000	1.6%				
Cornerstone Realty Advisors	Core Real Estate	\$25,601,105	0.3%				
Jamestown Premier Property Fund LP	Core Real Estate	\$17,283,960	0.2%				
MetLife Core Property Fund, LP	Core Real Estate	\$56,141,392	0.6%				
Morgan Stanley Prime Property Fund	Core Real Estate	\$56,940,399	0.6%				
Principal US Property Account	Core Real Estate	\$44,986,725	0.5%				
Prologis Targeted Europe Logistics Fund, LP	Core Real Estate	\$36,058,244	0.4%				
Prologis Targeted US Logistics Fund, LP	Core Real Estate	\$62,694,742	0.7%				
Townsend Real Estate Fund, LP	Core Real Estate	\$105,428,460	1.1%				
Carlyle China Realty, L.P.	Non-Core Real Estate - Opportunistic	\$5,907,117	0.1%				
Carlyle China Rome Logistics, L.P.	Non-Core Real Estate - Opportunistic	\$27,515,709	0.3%				
KKR Real Estate Partners Americas, LP	Non-Core Real Estate - Opportunistic	\$10,295,100	0.1%				
Och-Ziff Real Estate Fund III, LP	Non-Core Real Estate - Opportunistic	\$14,321,913	0.2%				
A.E.W Value Investors II, LP	Non-Core Real Estate - Value-Added	\$45,482	0.0%				
CIM Opportunity Fund VIII, LP	Non-Core Real Estate - Value-Added	\$32,145,401	0.3%				
DRC European Real Estate Debt Fund II, LP	Non-Core Real Estate - Value-Added	\$14,656,562	0.2%				
ECE European Prime Shopping Centre Fund II, SCS-SIF	Non-Core Real Estate - Value-Added	\$16,644,738	0.2%				
Hammes Partners II, LP	Non-Core Real Estate - Value-Added	\$21,568,411	0.2%				
Hammes Partners III, LP	Non-Core Real Estate - Value-Added	\$0	0.0%				
Hines US Office Value Added Fund II, LP	Non-Core Real Estate - Value-Added	\$523,967	0.0%				
NREP Nordic Strategies Fund, FCP-FIS	Non-Core Real Estate - Value-Added	\$14,725,953	0.2%				
NREP Nordic Strategies Fund II, FCP-FIS	Non-Core Real Estate - Value-Added	\$25,439,837	0.3%				
NREP Nordic Strategies Fund III, FCP-FIS	Non-Core Real Estate - Value-Added	\$1,657,919	0.0%				
UBS (Allegis Value Trust)	Non-Core Real Estate - Value-Added	\$7,379,523	0.1%				

Real Assets:

As outlined in **Table 14** below, SCERS' Real Assets allocation is 4.3%, which is 2.7% below the policy target allocation of 7.0%. SSGA utilizes a series of listed commingled funds described above to replicate Real Assets, as part of the broader Real Return asset category overlay proxy. Similar to private equity, public market proxies such as these are less than optimal in replicating real assets, and it would be better to invest capital into physical private real assets holdings. The commitment schedule and cash flow forecast of Real Assets investments project SCERS achieving and maintaining the policy target in 2020.

During the quarter, SCERS made a \$50 million commitment to ISQ Global Infrastructure Fund II, L.P. and a \$32 million commitment to Tailwater Energy Fund III, L.P.

Table 14: Real Assets Allocation (as of September 30, 2018)

Real Assets	Sub-Asset Class	Market Value	Actual	Target	Delta %	Target Low	Target High
		\$401,823,956	4.3%	7.0%	-2.7%	5.0%	9.0%
ACM Fund II, LP	Agriculture	\$13,042,122	0.1%				
EnCap Energy Capital Fund IX, LP	Energy	\$22,092,247	0.2%				
EnCap Energy Capital Fund X, LP	Energy	\$30,131,530	0.3%				
Tailwater Energy Fund III, LP	Energy	\$14,404,694	0.2%				
Quantum Energy Partners VI, LP	Energy	\$26,291,233	0.3%				
Quantum Energy Partners VII, LP	Energy	\$12,374,182	0.1%				
ArcLight Energy Partners Fund VI, LP	Infrastructure	\$28,172,197	0.3%				
Brookfield Infrastructure Fund III, LP	Infrastructure	\$17,279,630	0.2%				
EnCap Flatrock Midstream Fund III, LP	Infrastructure	\$17,314,396	0.2%				
EnCap Flatrock Midstream Fund IV, LP	Infrastructure	\$1,398,988	0.0%				
First Reserve Energy Infrastructure Fund II, LP	Infrastructure	\$20,129,405	0.2%				
IFM Global Infrastructure Fund	Infrastructure	\$86,174,741	0.9%				
ISQ Global Infrastructure Fund II, LP	Infrastructure	\$0	0.0%				
Meridiam Infrastructure North America III, LP	Infrastructure	\$535,286	0.0%				
Pantheon SCERS SIRF, LLC	Infrastructure	\$69,000,266	0.7%				
Wastewater Opportunity Fund, LLC	Infrastructure	\$11,770,567	0.1%				
Atalaya SCERS SMA, LLC	Infrastructure Debt	\$17,386,888	0.2%				
Carlyle Power Partners II, LP	Power Generation	\$14,325,585	0.2%				

Commodities:

As outlined in **Table 15** below, SCERS' Commodities allocation is 0.3%, which is below the policy target allocation of 2.0%. SSGA utilizes a series of listed commingled funds described above to replicate Commodities, as part of the broader Real Return asset category proxy.

Table 15: Commodities Allocation (as of September 30, 2018)

Commodities	Sub-Asset Class	Market Value	Actual	Target	Delta %	Target Low	Target High
		\$26,769,707	0.3%	2.0%	-1.7%	0.0%	3.0%
Gresham Strategic Commodities Fund	Commodities	\$26,769,707	0.3%				

OPPORTUNITIES PORTFOLIO

The allocation for SCERS’ Opportunities portfolio, outlined in **Table 16** below, is 0.1% compared to the 0% target allocation, and within the policy range of 0% to 5%. Any investments made within the Opportunities portfolio draw capital from the asset class with the closest risk and return profile as the opportunity being invested in. The asset class where capital is drawn from is listed in the chart below for each investment. Since the target allocation for Opportunities is 0%, the Overlay Program does not utilize a proxy allocation for the Opportunities portfolio, like it does for the other asset categories.

Table 16: Opportunities Allocation (as of September 30, 2018)

OPPORTUNITIES:	Sub-Asset Class	Market Value	Actual	Target	%	Low	High	Capital Is Drawn From
Atalaya Special Opportunities Fund V, LP	Opportunities - Credit	\$8,721,846	0.1%	0.0%	0.1%	0.0%	5.0%	Private Equity

CASH

SCERS’ cash balance is approximately 6.0% (as of September 30, 2018), which is above SCERS’ policy target of 0%. During the third quarter, SCERS’ cash balance increased due to the rebalancing of the Domestic Equity asset class and the receipt of the annual County benefit pre-payment to SCERS. An excess cash balance is necessary to make the monthly SCERS benefit payments, and to fund future drawdowns within the private markets segments of the portfolio. SCERS’ Overlay Program rebalances the portfolio by eliminating any ‘cash drag’ and investing the cash into positions that replicate SCERS’ target portfolio.

ATTACHMENTS

Appendix 1: SCERS Overly Proxies

Prepared by:

/S/

 Steve Davis
 Chief Investment Officer

Reviewed by:

/S/

 Eric Stern
 Chief Executive Officer

Appendix 1: SCERS Overlay Proxies

Growth Asset Category Proxy:			
	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 Equity	9.0%	Cambridge Associates PE/VC Index	Basket of 85% Goba Equity and 15% US TSY
Public Credit	2.0%	50% BofA High Yield/50% CS Leveraged Loan	Basket of 85% Goba Equity and 15% US TSY
Private Credit	4.0%	CS Leveraged Loan + 2%	Basket of 85% Goba Equity and 15% US TSY
Growth Absolute Return	3.0%	HFRI FoF Composite Index + 1%	Basket of 85% Goba Equity and 15% US TSY

Diversifying Asset Category Proxy:			
	Policy Allocation	Benchmark	Overlay Implementation
Core/Core Plus Fixed Income	10.0%	Bloomberg Barclays Aggregate Index	Baskets of Treasury Futures and TBAs
US Treasury	5.0%	Bloomberg Barclays UST Index	Baskets of Treasury Futures and TBAs
Global Fixed Income	3.0%	80% Citi WGBI/20% JPM GBI EM Global	Baskets of Treasury Futures and TBAs
Diversifying Absolute Return	7.0%	HFRI FoF Conservative Index	Baskets of Treasury Futures and TBAs

Real Return Asset Category Proxy:		
	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 Commodities	10.0%	S&P Global Large Mid Cap Commodity and Resources Index
US Intermediate TIPS	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