



Board of Retirement Regular Meeting

Sacramento County Employees' Retirement System

Agenda Item 11

MEETING DATE: February 21, 2018

SUBJECT: Portfolio Rebalancing Report – Fourth Quarter 2017

SUBMITTED FOR: X Consent Deliberation and Action Receive and File

RECOMMENDATION

Staff recommends that the Board receive and file the quarterly asset allocation and rebalancing report, including any physical rebalancing recommendations made therein.

PURPOSE

To provide the Board with a review of SCERS' current asset allocation as it compares to established targets and ranges, in addition to any recommended physical rebalancing adjustments.

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; (2) When there are strong benefits to active management; and (3) 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.

As you will recall, 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.

Up until now, this quarterly rebalancing report was based on SCERS' prior asset allocation, and is now being converted to the new strategic asset allocation, now that the Overlay Program has been approved. However, implementation of the Overlay Program will not take place until later in the first quarter of 2018, along with several physical rebalances within the portfolio, so several of the asset classes within the asset categories are over/underweight from their respective targets. This quarter's report should be viewed as more of a transitory report, as many of the over/underweights will converge on their targets upon completion of the aforementioned physical rebalances.

DISCUSSION

Since SCERS' Overlay Program rebalances SCERS' total fund, it is important to bear in mind that **Tables 1-16** reported below refer only to physical holdings compared to policy targets, and not the exposures provided through the Overlay Program, except for Tables 11-15 (Real Return asset category exposures), 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 historic ability to outperform equity markets in times of distress. Accordingly, it is beneficial for SCERS to continue to physically purchase alternative assets in achieving its asset allocation targets rather than to heavily rely 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 December 31, 2017)

	Market Value	Actual	Target	Delta %	Target Low	Target High
GROWTH ASSET CATEGORY:	\$5,813,734,700	63.8%	59.0%	4.8%	48.0%	70.0%

The Growth asset category currently has an allocation of 63.8%, which is above the new strategic asset allocation’s target allocation of 59%. The Overlay Program is currently rebalancing this to ~63%, and once the Overlay Program is switched to the new asset allocation it will be rebalanced to the 59% target allocation.

Domestic Equities:

As depicted in **Table 2** below, SCERS’ Domestic Equity asset class actual weighting of 24.9% is above SCERS’ prior policy target allocation of 22.5%, as well as the new policy target allocation of 21%. SCERS’ Domestic Equity exposure has become overweight due to continuing outperformance of U.S. equities over other asset classes, including fixed income. The Overlay Program is currently rebalancing Domestic Equities to 22.5%, and once the Overlay Program is switched to the new asset allocation it will be rebalanced to the 21% target allocation.

The SCERS Board approved a new structure for the Domestic Equity asset class at the January Board meeting, and implementation of the new structure will most likely take place in the second quarter of 2018, at which point investment manager exposures will be physically rebalanced toward the 21% Domestic Equity target.

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. As mentioned previously, these proxies are very effective in rebalancing domestic equities due to the low tracking error of the underlying proxies compared to public market investment managers.

Table 2: Domestic Equity Allocation (as of December 31, 2017)

Domestic Equity		Market Value	Actual	Target	Delta %	Target Low	Target High
		\$2,273,071,944	24.9%	21.0%	3.9%	19.0%	23.0%
AllianceBernstein	Equity Core Index	\$1,181,871,100	13.0%				
JP Morgan 130/30	Equity Core Active Short Extension (130/30)	\$119,786,423	1.3%				
Eagle Capital Management	Equity Large Cap Core	\$253,078,115	2.8%				
Brown Advisory	Equity Large Cap Growth	\$128,045,880	1.4%				
Huber Capital Management	Equity Large Cap Value	\$125,051,169	1.4%				
	Equity Large Cap		19.8%				
Dalton, Greiner, Hartman, Maher & Co.	Equity Small Cap Value	\$84,364,911	0.9%				
Wedge Capital Management	Equity Small Cap Value	\$92,684,039	1.0%				
M.A. Weatherbie & Co.	Equity Small Cap Growth	\$114,676,543	1.3%				
UBS Global Asset Management	Equity Small Cap Growth	\$73,688,547	0.8%				
	Equity Small Cap		4.0%				
CenterSquare Investments (formerly Urdang)	Domestic REIT	\$99,825,216	1.1%				

International Equities:

As depicted in **Table 3** below, SCERS' International Equity asset class actual weighting of 25.2% is above SCERS' prior policy target allocation of 22.5%, as well as the new policy target allocation of 20%. SCERS' International Equity exposure has become overweight due to continuing outperformance of International equities over other asset classes, including fixed income. The Overlay Program is currently rebalancing International Equities to 22.5%, and once the Overlay Program is switched to the new asset allocation it will be rebalanced to the 20% target allocation.

The SCERS Board approved a new structure for the International Equity asset class at the January Board meeting, and implementation of the new structure will most likely take place in the first quarter of 2018, at which point investment manager exposures will be physically rebalanced toward the 20% International Equity target.

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. As mentioned previously, these proxies are very effective in rebalancing domestic equities due to the low tracking error of the underlying proxies compared to public market investment managers.

Table 3: International Equity Allocation (as of December 31, 2017)

International Equity	Asset Class / Sub Asset Class	Market Value	Actual	Target	Delta %	Target Low	Target High
		\$2,300,625,067	25.2%	20.0%	5.2%	20.0%	22.0%
Lazard Asset Management	ACWI Ex-US	\$501,614,172	5.5%				
LSV Large Cap International Value	International Equity Large Cap Value	\$547,372,476	6.0%				
Walter Scott	International Equity Large Cap Growth	\$494,661,279	5.4%				
	International Equity Large Cap		16.9%				
William Blair & Co.	International Equity Small Cap Growth	\$133,815,453	1.5%				
Mondrian Investment Partners	International Equity Small Cap Value	\$114,386,852	1.3%				
	International Equity Small Cap		2.7%				
Baillie Gifford	Emerging Markets Equity - All Cap	\$196,468,461	2.2%				
Mondrian Emerging Markets Equity Fund, LP	Emerging Markets Equity - All Cap	\$160,438,190	1.8%				
William Blair Emerging Markets Small Cap Growth Fund	Emerging Markets Small Cap	\$32,680,115	0.4%				
Mondrian Emerging Markets Small Cap Equity Fund, LP	Emerging Markets Small Cap	\$27,208,934	0.3%				
	Emerging Markets		4.6%				
CBRE Clarion	International REIT	\$91,979,136	1.0%				

Private Equity:

As outlined in **Table 4** below, SCERS' Private Equity allocation is 6.9%, which is 2.1% below the new policy target allocation of 9.0%. Upon implementation of the new Overlay Structure, SSGA will utilize 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. However, the commitment schedule and cash flow forecast of Private Equity investments do not project SCERS achieving and maintaining the policy target until 2020.

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 \$9.9 million, which equates to a 0.1% allocation, and brings SCERS' total allocation in Private Equity to 7.0%.

Table 4: Private Equity Allocation (as of December 31, 2017)

Private Equity	Asset Class / Sub Asset Class	Market Value	Actual	Target	Delta %	Target Low
		\$629,994,124	6.9%	9.0%	-2.1%	7.0%
HarbourVest Partners VIII	Private Equity - FoF	\$21,593,660	0.2%			
Abbott Capital ACE VI	Private Equity - FoF	\$58,100,533	0.6%			
Goldman Sachs PEP X	Private Equity - FoF	\$35,488,122	0.4%			
Harbourvest Partners Intl VI	Private Equity - FoF	\$36,167,283	0.4%			
Khosla Ventures IV, LP	Private Equity - Venture Capital	\$13,587,952	0.1%			
Waterland Private Equity Fund V, CV	Private Equity - European Buyout	\$12,391,475	0.1%			
Summit Partners VC Fund II, LP	Private Equity - Growth Equity	\$13,497,883	0.1%			
Garrison Opportunity Fund III, LP	Private Equity - Distressed	\$13,770,215	0.2%			
Accel-KKR Capital Partners IV, LP	Private Equity - Buyout	\$9,280,767	0.1%			
New Enterprise Associates 14, LP	Private Equity - Venture Capital	\$36,007,222	0.4%			
H.I.G. Bayside Loan Opportunity III (Europe), LP	Private Equity - Distressed	\$21,738,941	0.2%			
Trinity Ventures XI, LP	Private Equity - Venture Capital	\$25,475,203	0.3%			
Wayzata Opportunities Fund III, LP	Private Equity - Distressed	\$7,152,774	0.1%			
H.I.G. Capital Partners V, LP	Private Equity - Buyout	\$8,706,257	0.1%			
RRJ Capital Master Fund II, LP	Private Equity - Asian Buyout/Special Situations	\$18,097,966	0.2%			
Marlin Equity Partners IV, LP	Private Equity - Buyout	\$17,327,557	0.2%			
H.I.G. Europe Capital Partners II, LP	Private Equity - European Buyout	\$7,417,721	0.1%			
Dyal Capital Partners II, LP	Private Equity - Other	\$8,376,978	0.1%			
TPG Opportunities Partners II, LP	Private Equity - Distressed	\$20,384,353	0.2%			
Marlin Heritage, LP	Private Equity - Buyout	\$6,287,738	0.1%			
Accel-KKR Structure Capital II, LP	Private Equity - Buyout	\$5,636,048	0.1%			
Thoma Bravo Fund XI, LP	Private Equity - Buyout	\$33,368,108	0.4%			
Spectrum Equity Investors VII, LP	Private Equity - Growth Equity	\$19,577,694	0.2%			
Khosla Ventures V, L.P.	Private Equity - Venture Capital	\$14,281,128	0.2%			
Linden Capital Partners III, LP	Private Equity - Buyout	\$30,105,351	0.3%			
New Enterprise Associates 15, LP	Private Equity - Venture Capital	\$32,092,006	0.4%			
Waterland Private Equity Fund VI, CV	Private Equity - European Buyout	\$11,514,485	0.1%			
Waterland Private Equity Fund VI Overflow, CV	Private Equity - European Buyout	\$1,852	0.0%			
RRJ Capital Master Fund III, LP	Private Equity - Asian Buyout/Special Situations	\$13,986,588	0.2%			
Accel-KKR Capital Partners V, LP	Private Equity - Buyout	\$4,469,652	0.0%			
Summit Partners Venture Capital Fund IV, LP	Private Equity - Growth Equity	\$10,105,021	0.1%			
Trinity Ventures XII, LP	Private Equity - Venture Capital	\$9,013,304	0.1%			
TSG7 A, LP	Private Equity - Buyout	\$5,015,276	0.1%			
TSG7 B, LP	Private Equity - Buyout	\$290,242	0.0%			
Atalaya Special Opportunities Fund VI, LP	Private Equity - Distressed	\$17,564,259	0.2%			
Thoma Bravo Fund XII, LP	Private Equity - Buyout	\$13,775,797	0.2%			
Marlin Heritage Europe, LP	Private Equity - Buyout	\$3,025,426	0.0%			
Dyal Capital Partners III, LP	Private Equity - Other	\$10,288,139	0.1%			
Marlin Equity Partners V, LP	Private Equity - Buyout	\$0	0.0%			
Marlin Heritage II, LP	Private Equity - Buyout	\$901,985	0.0%			
New Enterprise Associates 16, LP	Private Equity - Venture Capital	\$4,131,163	0.0%			
Summit Partners Europe Growth Equity Fund II, LP	Private Equity - European Growth Equity	\$0	0.0%			
Davidson Kempner Distressed Opportunities Fund III, LP	Private Equity - Distressed	\$0	0.0%			
Spectrum Equity Fund VIII, LP	Private Equity - Growth Equity	\$0	0.0%			

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%. Upon implementation of the new Overlay Structure, SSGA will utilize 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 December 31, 2017)

Public Credit	Asset Class / Sub Asset Class	Market Value	Actual	Target	Delta %	Target Low	Target High
		\$172,456,479	1.9%	2.0%	-0.1%	1.0%	3.0%
Brigade Capital SC Opportunities Mandate	Public Credit	\$172,456,479	1.9%	2.0%			

Private Credit:

As outlined in **Table 6** below, SCERS' Private Credit allocation is 0.6%, which is 3.4% below the new policy target allocation of 4.0%. Upon implementation of the new Overlay Structure, SSGA will utilize 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 December 31, 2017)

Private Credit	Asset Class / Sub Asset Class	Market Value	Actual	Target	Delta %	Target Low	Target High
		\$50,371,334	0.6%	4.0%	-3.4%	2.0%	6.0%
Summit Partners Credit Fund, LP	Private Credit - Direct Lending	\$5,846,235	0.1%				
Summit Partners Credit Fund II, LP	Private Credit - Direct Lending	\$22,038,004	0.2%				
Athyrium Opportunities Fund II, LP	Private Credit - Healthcare Opportunistic Credit	\$17,548,436	0.2%				
Athyrium Opportunities Fund III, LP	Private Credit - Healthcare Opportunistic Credit	\$4,938,659	0.1%				
Tennenbaum Capital Partners Direct Lending Fund VIII, LLC	Private Credit - Direct Lending	\$0	0.0%				
Benefit Street Partners Senior Opportunities Fund, LP	Private Credit - Direct Lending	\$0	0.0%				

Growth Absolute Return:

As outlined in **Table 7** below, SCERS' Growth Absolute Return allocation is 4.2%, which is above the new policy target allocation of 3.0%. This exposure will come down as SCERS transitions a greater portion of the aggregate absolute return allocation toward the Diversifying Absolute Return segment within the Diversifying asset category.

Upon implementation of the new Overlay Structure, SSGA will utilize 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 December 31, 2017)

Growth Absolute Return	Asset Class / Sub Asset Class	Market Value	Actual	Target	Delta %	Target Low	Target High
		\$387,215,750	4.2%	3.0%	1.2%	1.0%	5.0%
Grosvenor	Equity Long/Short	\$409,494	0.0%				
Grosvenor SC Absolute Return Fund, Series A - Growth	Diversified Separate Account	\$163,919,859	1.8%				
Grosvenor SC Absolute Return Fund, Series B - Growth	Diversified Separate Account	\$39,292,478	0.4%				
OZ Domestic Partners II, LP	Multi Strategy	\$47,265,390	0.5%				
Third Point Partners Qualified, LP	Event Driven	\$49,326,373	0.5%				
Lakewood Capital Partners, LP	Equity Long/Short	\$45,468,951	0.5%				
Jana Partners Qualified, LP	Equity Activist & Long/Short	\$41,533,205	0.5%				

DIVERSIFYING ASSET CATEGORY

Table 8: Diversifying Asset Category Allocation (as of December 31, 2017)

DIVERSIFYING ASSET CATEGORY:	Market Value	Actual	Target	Delta %	Target Low	Target High
	\$1,777,305,498	19.5%	25.0%	-5.5%	18.0%	32.0%

The Diversifying asset category currently has an allocation of 19.5%, which is below the new strategic asset allocation’s target allocation of 25%. The Overlay Program is currently rebalancing this to ~22%, and once the Overlay Program is switched to the new asset allocation it will be rebalanced to the 25% target allocation.

Public Fixed Income:

As depicted in **Table 9** below, SCERS’ Public Fixed Income allocation actual weighting of 15.0% is below SCERS’ new policy target allocation of 18%. SCERS’ Public Fixed Income exposure has become underweight due to continuing outperformance of public equities over fixed income. The Overlay Program is currently rebalancing Public Fixed Income to the 18% target allocation. Upon completion of the aforementioned public equity rebalances, SCERS’ public fixed income investment manager exposures will be physically rebalanced toward the 18% target. In addition, the recently approved dedicated U.S. Treasury allocation to be managed by Neuberger Berman is close to being transitioned from the existing Neuberger Berman Enhanced Index allocation.

Upon implementation of the new Overlay structure, SSGA will utilize 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. This is the same proxy as the prior fixed income Overlay proxy.

Table 9: Public Fixed Income Allocation (as of December 31, 2017)

Public Fixed Income	Asset Class / Sub Asset Class	Market Value	Actual	Target	Delta %	Target Low	Target High
		\$1,370,473,781	15.0%	18.0%	-3.0%	13.0%	23.0%
Neuberger Berman	Fixed Inc Enhanced Index	\$355,209,430	3.9%				
Prudential Investment Management	Fixed Inc Active Core Plus	\$419,071,362	4.6%				
TCW/MetWest	Fixed Inc Active Core Plus	\$369,899,742	4.1%				
	Core/Core Plus		12.6%				
Neuberger Berman	US Treasuries	\$0	0.0%				
Brandywine Global	Global Opportunistic Fixed Income	\$226,293,247	2.5%				

Diversifying Absolute Return:

As outlined in **Table 10** below, SCERS’ Growth Absolute Return allocation is 4.5%, which is below the new policy target allocation of 7.0%. This exposure will increase as SCERS transitions a greater portion of the aggregate absolute return allocation toward the Diversifying Absolute Return segment within the Diversifying asset category.

Upon implementation of the new Overlay Structure, SSGA will utilize 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. This is the same proxy as the prior fixed income Overlay proxy.

Table 10: Diversifying Absolute Return Allocation (as of December 31, 2017)

Diversifying Absolute Return	Asset Class / Sub Asset Class	Market Value	Actual	Target	Delta %	Target Low	Target High
		\$406,831,717	4.6%	7.0%	-2.5%	5.0%	9.0%
Grosvenor SC Absolute Return Fund, Series A - Diversifying	Diversified Separate Account	\$102,688,413	1.1%				
Grosvenor SC Absolute Return Fund, Series B - Diversifying	Diversified Separate Account	\$31,774,590	0.3%				
Elliott Associates LP	Event Driven	\$51,916,699	0.6%				
Claren Road Credit Partners, LP	Credit	\$235,388	0.0%				
AQR Delta Fund II, LP	Bottom Up Replication	\$71,559,540	0.8%				
Laurion Capital Management, LP	Volatility Arbitrage	\$42,223,730	0.5%				
Brevan Howard Master Fund, LP	Discretionary Global Macro	\$33,913,635	0.4%				
Winton Diversified Futures Fund, L.P.	Systematic Global Macro	\$37,216,076	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 December 31, 2017)

	Market Value	Actual	Target	Delta %	Target Low	Target High
REAL RETURN ASSET CATEGORY:	\$1,329,938,647	14.6%	16.0%	-1.4%	10.0%	29.0%

The Real Return asset category currently has an allocation of 14.6%, including the Real Return Overlay Program exposure, and 12.0% without the Overlay proxy, which are both below the new strategic asset allocation’s target allocation of 16.0%.

The Overlay Program had been using a series of liquid commingled funds across the real return universe, which was revised as part of the Overlay Program restructure. The revised Real Return Overlay proxy will utilize 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 category proxies (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 December 31, 2017)

Real Return Overlay Proxy	Sub-Asset Class	Market Value	Actual	Target	Delta %	Target Low	Target High
SSGA Real Return Overlay Strategy	Real Return Proxy	\$233,276,417	2.6%	0.0%	2.6%		

Real Estate:

As outlined in **Table 13** below, SCERS’ Real Estate allocation is 8.1%, which is above the new policy target allocation of 7.0%. Staff and Townsend are comfortable maintaining an above target real estate allocation while SCERS’ Real Assets portfolio is being built out. Upon implementation of the new Overlay Structure, SSGA will utilize the series of listed commingled funds described above to replicate Real Estate, as part of the broader Real Return asset category proxy.

Table 13: Real Estate Allocation (as of December 31, 2017)

Real Estate	Sub-Asset Class	Market Value	Actual	Target	Delta %	Target Low	Target High
		\$742,135,727	8.1%	7.0%	1.1%	5.0%	9.0%
Blackrock Realty Advisors Portfolio I	Core Real Estate	\$165,798,853	1.8%				
Blackrock Realty Advisors, Portfolio II	Core Real Estate	\$31,552	0.0%				
Cornerstone Realty Advisors	Core Real Estate	\$68,337,180	0.7%				
Morgan Stanley Prime Property Fund	Core Real Estate	\$53,488,655	0.6%				
MetLife Core Property Fund, LP	Core Real Estate	\$52,926,380	0.6%				
Jamestown Premier Property Fund LP	Core Real Estate	\$19,634,553	0.2%				
Prologis Targeted Europe Logistics Fund, LP	Core Real Estate	\$33,324,313	0.4%				
Prologis Targeted US Logistics Fund, LP	Core Real Estate	\$55,663,389	0.6%				
Principal US Property Account	Core Real Estate	\$42,198,450	0.5%				
Townsend Real Estate Fund, LP	Core Real Estate	\$97,820,495	1.1%				
KKR Real Estate Partners Americas, LP	Non-Core Real Estate - Opportunistic	\$15,255,511	0.2%				
Och-Ziff Real Estate Fund III, LP	Non-Core Real Estate - Opportunistic	\$12,745,477	0.1%				
Carlyle China Realty, L.P.	Non-Core Real Estate - Opportunistic	\$3,670,989	0.0%				
Carlyle China Rome Logistics, L.P.	Non-Core Real Estate - Opportunistic	\$10,752,818	0.1%				
UBS (Allegis Value Trust)	Non-Core Real Estate - Value-Added	\$14,844,711	0.2%				
A.E.W Value Investors II, LP	Non-Core Real Estate - Value-Added	\$321,592	0.0%				
Hines US Office Value Added Fund II, LP	Non-Core Real Estate - Value-Added	\$650,322	0.0%				
DRC European Real Estate Debt Fund II, LP	Non-Core Real Estate - Value-Added	\$12,115,382	0.1%				
NREP Nordic Strategies Fund, FCP-FIS	Non-Core Real Estate - Value-Added	\$12,917,055	0.1%				
CIM Opportunity Fund VIII, LP	Non-Core Real Estate - Value-Added	\$27,954,867	0.3%				
ECE European Prime Shopping Centre Fund II, SCS-SIF	Non-Core Real Estate - Value-Added	\$8,854,783	0.1%				
Hammes Partners II, LP	Non-Core Real Estate - Value-Added	\$16,516,207	0.2%				
NREP Nordic Strategies Fund II, FCP-FIS	Non-Core Real Estate - Value-Added	\$16,312,192	0.2%				
Hammes Partners III, LP	Non-Core Real Estate - Value-Added	\$0	0.0%				

Real Assets:

As outlined in **Table 14** below, SCERS’ Real Assets allocation is 3.7%, which is 3.3% below the new policy target allocation of 7.0%. Upon implementation of the new Overlay Structure, SSGA will utilize the series of listed commingled funds described above to replicate Real Assets, as part of the broader Real Return asset category 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. However, the commitment schedule and cash flow forecast of Real Assets investments do not project SCERS achieving and maintaining the policy target until 2020.

Table 14: Real Assets Allocation (as of December 31, 2017)

Real Assets	Sub-Asset Class	Market Value	Actual	Target	Delta %	Target Low	Target High
		\$334,090,368	3.7%	7.0%	-3.3%	5.0%	9.0%
EnCap Energy Capital Fund IX, LP	Energy	\$23,579,591	0.3%				
First Reserve Energy Infrastructure Fund II, LP	Infrastructure	\$13,081,581	0.1%				
EnCap Flatrock Midstream Fund III, LP	Infrastructure	\$9,820,066	0.1%				
Quantum Energy Partners VI, LP	Real Assets	\$19,319,369	0.2%				
Pantheon SCERS SIRF, LLC	Infrastructure	\$54,403,489	0.6%				
Atalaya SCERS SMA, LLC	Infrastructure Debt	\$22,735,501	0.2%				
EnCap Energy Capital Fund X, LP	Energy	\$24,179,871	0.3%				
ArcLight Energy Partners Fund VI, LP	Infrastructure	\$24,593,280	0.3%				
Carlyle Power Partners II, LP	Power Generation	\$11,757,917	0.1%				
IFM Global Infrastructure Fund	Infrastructure	\$98,968,115	1.1%				
Wastewater Opportunity Fund, LLC	Infrastructure	\$4,949,981	0.1%				
ACM Fund II, LP	Agriculture	\$6,915,774	0.1%				
Brookfield Infrastructure Fund III, LP	Infrastructure	\$11,825,484	0.1%				
Meridiam Infrastructure North America III, LP	Infrastructure	\$585,706	0.0%				
Quantum Energy Partners VII, LP	Energy	\$7,374,642	0.1%				

Commodities:

As outlined in **Table 15** below, SCERS’ Commodities allocation is 0.3%, which is below the policy target allocation of 2.0%. Upon implementation of the new Overlay Structure, SSGA will utilize the 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 December 31, 2017)

Commodities	Sub-Asset Class	Market Value	Actual	Target	Delta %	Target Low	Target High
		\$28,396,484	0.3%	2.0%	-1.7%	0.0%	3.0%
Blackstone Resources Select	Commodities	\$2,033,333	0.0%				
Gresham Strategic Commodities Fund	Commodities	\$26,363,151	0.3%				

OPPORTUNITIES SEGMENT

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%. As you will recall, 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 December 31, 2017)

OPPORTUNITIES:	Sub-Asset Class	Market Value	Actual	Target	%	Low	High	Capital Is Drawn From
		\$9,893,024	0.1%	0.0%	0.1%	0.0%	5.0%	
Atalaya Special Opportunities Fund V, LP	Opportunities - Credit	\$9,893,024	0.1%					Private Equity

CASH

SCERS’ cash balance is approximately 0.9% (as of February 13, 2018), which is above SCERS’ policy target of 0%. An excess cash balance is necessary to fund future drawdowns within the private markets segments of the portfolio. SCERS’ Overlay Program will rebalance the portfolio by eliminating any ‘cash drag’ and investing the cash into positions that replicate SCERS’ target portfolio.

In summary, several physical rebalances will occur in the SCERS portfolio over the next few months, in addition to implementation of the revised Overlay Program structure that was approved by the Board.

ATTACHMENTS

None

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