



Board of Retirement Regular Meeting

Sacramento County Employees' Retirement System

Agenda Item 15

MEETING DATE: December 20, 2017

SUBJECT: Quarterly Investment Performance Report
Alternative Assets

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

RECOMMENDATION

Staff recommends the Board receive and file the Cliffwater Quarterly Performance Review presentation for the period ending September 30, 2017 for the Absolute Return portfolio, and the period ending June 30, 2017 for the Private Equity, Private Credit, Real Assets and Opportunities portfolios.

PURPOSE

This agenda item complies with SCERS' investment policy statement reporting requirements and provides a summary of SCERS' Alternative Assets portfolio returns, and Cliffwater's quarterly alternative assets portfolio performance report.

SCERS ALTERNATIVE ASSETS PORTFOLIO RETURNS

This memorandum will provide a recap of SCERS' Alternative Assets period returns as presented within Cliffwater's Quarterly Performance Review. This memorandum will also highlight any recent alternative asset class investments made by SCERS. You will note the Cliffwater report has been reformatted to conform to SCERS' revised asset classes as contained in the Board's current strategic asset allocation.

SCERS' alternative asset class period returns are as follows:

SCERS ALTERNATIVE ASSETS PERFORMANCE SUMMARY
Quarter Reporting Periods Ending September 30, 2017

SCERS ASSET CLASS	Quarter*	1-Year*	3-Year*	5-Year*	Since Inception*	Since Inception Date*
SCERS Absolute Return	1.9%	7.5%	2.5%	5.2%	4.3%	Sep-04
91 Day T-Bill + 5%	0.8%	2.7%	2.3%	2.2%	2.2%	
SCERS Private Equity	4.4%	17.2%	12.2%	13.4%	11.5%	Feb-08
Cambridge All Private Equity	4.7%	17.0%	11.2%	14.4%	12.1%	
SCERS Private Credit	1.4%	12.2%	9.0%	9.4%	9.5%	Oct-11
Credit Suisse Leveraged Loan + 2%	1.3%	9.5%	5.5%	6.8%	7.5%	
SCERS Real Assets	2.7%	21.2%	16.8%	NA	17.8%	Jan-13
CPI + 5%	2.3%	7.3%	6.3%	NA	6.4%	
SCERS Opportunities	0.4%	8.4%	9.7%	27.7%	18.6%	Jan-08
Actuarial Rate of Return	1.9%	7.5%	7.5%	7.5%	7.5%	

**Note: Periods ending 6/30/17 for Private Equity, Private Credit, Real Assets, and Opportunities
Periods ending 9/30/17 for Absolute Return
All returns are net IRR, except Absolute Return which is time-weighted*

SCERS ABSOLUTE RETURN PORTFOLIO

SCERS' Absolute Return portfolio is broken up into two segments: (1) Growth-Oriented Absolute Return; and (2) Diversifying Absolute Return. The distinction is to separate growth-oriented strategies that typically do well during a more favorable economic environment, and have higher correlations and betas to equity and credit markets, from diversifying strategies that have low to negative correlation to equity markets and serve as a diversifier to SCERS' broader portfolio.

SCERS takes a diversified approach to implementing the Absolute Return portfolio, by investing through: (1) A direct absolute return portfolio; and (2) A diversified separate account managed by Grosvenor Capital Management ('GCM'). The direct absolute return portfolio is a diversified portfolio of individual absolute return/hedge funds that is managed by SCERS and SCERS' alternative assets consultant, Cliffwater. The GCM separate account, named SC Absolute Return Fund, LLC ('SCARF'), is a diversified multi-strategy absolute return fund of funds ('FoFs') portfolio managed by GCM.

In addition to SCARF, GCM also manages an additional FoFs portfolio for SCERS, SCARF B, which is a more liquid version of SCARF, and is intended to provide SCERS with interim underlying absolute return exposure while SCERS' direct absolute return portfolio is being built out, rather than relying on SCERS' Overlay Program to fill the gap between actual and target Absolute Return exposures. Since its creation in February of 2013, SCARF B has been significantly sold off as SCERS' direct program has been developed, and it is anticipated that the SCARF B portfolio will complete liquidation over the next year. While SCRAF B is intended

to be a liquidating portfolio, SCARF is considered a long-term strategic allocation within SCERS' Absolute Return portfolio.

SCERS ABSOLUTE RETURN Performance Summary for the periods ending 9/30/17	Quarter	1-Year	3-Year	5-Year	Since Inception	Since Inception Date
SCERS ABSOLUTE RETURN PORTFOLIO	1.9%	7.5%	2.5%	5.2%	4.3%	Sep-04
91 Day T-Bill + 5%	0.8%	2.7%	2.3%	2.2%	2.2%	
Growth-Oriented Funds	2.7%	12.3%	4.1%	6.9%	5.1%	Sep-04
HFRI FoF Composite + 1%	2.5%	7.5%	3.2%	4.9%	4.2%	
Diversifying-Oriented Funds	1.1%	3.1%	1.1%	2.7%	2.4%	Dec-11
HFRI FoF Conservative Index	1.3%	4.6%	1.8%	3.5%	3.4%	

Quarter ended September 30, 2017:

- SCERS' Growth Absolute Return portfolio returned +2.7%:
 - Top performing managers:
 - Lakewood Capital Partners, LP (equity long/short): +3.9%
 - Third Point Partners Qualified, LP (event driven): +3.3%
 - Bottom performing managers:
 - JANA Partners Qualified, LP (event driven): +0.8%
- SCERS' Diversified Absolute Return portfolio returned +1.1%:
 - Top performing managers:
 - AQR Delta Fund II, LP (multi-strategy): +3.5%
 - Elliott International Limited (event driven): +2.7%
 - Bottom performing managers:
 - Claren Road Credit Partners, LP (credit/distressed): -2.4%
 - Graham Global Investment Fund II, Ltd. (macro-systematic): -1.7%

One-year ended September 30, 2017:

- SCERS' Growth Absolute Return portfolio returned +12.3%:
 - Top performing managers:
 - Lakewood Capital Partners, LP (equity long/short): +14.9%
 - OZ Domestic Partners II, LP (multi-strategy): +13.5%

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- SCERS' Diversified Absolute Return portfolio returned +3.0%:
 - Top performing managers:
 - Claren Road Credit Partners, LP (credit/distressed): +24.3%
 - Elliott International Limited (event driven): +10.9%
 - Bottom performing managers:
 - Brevan Howard, LP (macro-discretionary): +1.7%
 - Laurion Capital, Ltd. (market neutral): +1.8%

No new investments were made in the SCERS Absolute Return portfolio during Q3 2017.

SCERS PRIVATE EQUITY PORTFOLIO

Page 8 of Cliffwater's quarterly report presents market values of SCERS' Private Equity investments across strategy and regions as of June 30, 2017. Pages 9 and 11 provide details for commitments by vintage years, cumulative contributions/distributions to date, percent of commitment drawn and net returns since inception.

SCERS' net IRR since inception for Private Equity is +11.5%. SCERS' Private Equity returns continue to improve versus the Cambridge policy index benchmark net IRR of +12.1%, but as you will recall, SCERS' Private Equity portfolio is still maturing (j-curve effect), compared to the index, especially for the direct program, which was initiated in 2011. SCERS Private Equity portfolio also contains several legacy Fund-of-Funds ('FoFs') investments that were made in 2006-2008. As of June 30, 2017:

- SCERS' actual Private Equity allocation is 7.5% versus the target allocation of 9.0% target.
- The fair value of SCERS' actual Private Equity portfolio is \$645.7 million, compared to the target allocation of \$771.5 million.
- SCERS' Private Equity portfolio drawdowns compared to SCERS' commitments:
 - Direct portfolio: \$455.4 million drawn versus \$878.7 million committed.
 - Fund-of-Funds: \$220.1 million drawn versus \$236.8 million committed.

It is also common to measure private equity returns over vintage years. SCERS' vintage years returns are as follows:

- Fund-of-Funds net IRRs since inception versus the respective Cambridge Associates vintage year benchmarks:
 - 2006: +10.4% versus +7.5%
 - 2008: +11.1% versus +8.6%

- Direct portfolio net IRRs since inception versus the respective Cambridge Associates vintage year benchmarks:
 - 2011: +28.1% versus +12.4%
 - 2012: +11.5% versus +12.2%
 - 2013: +8.8% versus +11.0%
 - 2014: +11.2% versus +11.0%
 - 2015: +14.6% versus +7.8%

Though private equity returns are typically evaluated since inception, Cliffwater has also provided SCERS' Private Equity net IRRs over multiple time periods, as follows:

SCERS PRIVATE EQUITY Performance Summary for the periods ending 6/30/17	Quarter	1-Year	3-Year	5-Year	Since Inception	Since Inception Date
SCERS Private Equity	4.4%	17.2%	12.2%	13.4%	11.5%	Feb-08
Cambridge All Private Equity	4.7%	17.0%	11.2%	14.4%	12.1%	

In Q3 2017, SCERS made a \$35 million commitment to Summit Partners Europe Growth Equity Fund II, LP (growth equity) and a \$35 million to Davidson Kempner Long-Term Distressed Opportunities Fund IV, LP (distress credit). After the quarter, SCERS made a \$35 million to Spectrum Equity Fund VIII, LP (growth equity).

SCERS PRIVATE CREDIT PORTFOLIO

Page 12 of Cliffwater's quarterly report presents market values of SCERS' Private Credit investments across strategy as of June 30, 2017. Page 13 provides details for commitments by vintage years, cumulative contributions/distributions to date, percent of commitment drawn and net returns since inception.

SCERS' Private Credit portfolio is early in its development; however, it has less of a j-curve effect compared to Private Equity, given the faster cash flow characteristics of the asset class. SCERS' net IRR since inception for Private Credit is +9.5%, which compares to SCERS' policy index benchmark (Credit Suisse Leverage Loan Index + 2%) return of +7.5%. As of June 30, 2017:

- SCERS' actual Private Credit allocation is 0.6% versus the target allocation of 4.0% target.
- The fair value of SCERS' actual Private Credit portfolio is \$49.7 million, compared to the target allocation of \$342.9 million.
- SCERS' Private Credit portfolio drawdowns compared to SCERS' commitments are \$81.3 million versus \$112.0 million.

It is also common to measure private credit returns over vintage years. SCERS' net IRRs since inception versus the respective Cambridge Associates vintage year benchmarks returns are as follows:

- 2011: +9.8% versus +12.4%
- 2014: +10.4% versus +11.0%
- 2015: +8.7% versus +7.8%

Though private credit returns are typically evaluated since inception, Cliffwater has also provided SCERS' Private Credit net IRRs over multiple time periods, as follows:

SCERS PRIVATE CREDIT Performance Summary for the periods ending 6/30/17	Quarter	1-Year	3-Year	5-Year	Since Inception	Since Inception Date
SCERS Private Credit	1.4%	12.2%	9.0%	9.4%	9.5%	Oct-11
Credit Suisse Leveraged Loan + 2%	1.3%	9.5%	5.5%	6.8%	7.5%	

No new commitments were made in the SCERS Private Credit portfolio during Q3 2017. After the quarter, SCERS made a \$50 million commitment to Benefit Street Partners Senior Secured Opportunities Fund, LP (direct lending) and a \$100 million separate account commitment to Tennenbaum Capital Partners Direct Lending Fund VIII-S (direct lending).

SCERS REAL ASSETS PORTFOLIO

Page 15 of Cliffwater's quarterly report provides details for commitments by vintage years, cumulative contributions/distributions to date, percent of commitment drawn and net returns since inception for SCERS' Real Assets portfolio.

SCERS' net IRR since inception for Real Assets is +17.8%, which compares to the policy index benchmark (CPI + 5%) net IRR of +6.3%. Please note that a new policy index benchmark for Real Assets was approved during Q3'17, and will be reflected in future Cliffwater Real Assets performance reports. SCERS' Real Assets results are strong, especially since the portfolio, which was initiated in 2011, is still maturing (j-curve effect). As of June 30, 2017:

- SCERS' actual Real Assets allocation is 3.1% versus the target allocation of 7.0% target.
- The fair value of SCERS' actual Real Assets portfolio is \$269.4 million, compared to the target allocation of \$600.0 million.
- SCERS' Real Assets portfolio drawdowns compared to SCERS' commitments are \$281.9 million versus \$633.0 million.

It is also common to measure real assets returns over vintage years. SCERS' net IRRs since inception are as follows (Cliffwater does not provide vintage year IRR benchmarks for real assets):

- 2013: +16.7%
- 2014: +23.8%
- 2015: +9.2%

Though private real asset returns are typically evaluated since inception, Cliffwater has also provided SCERS' Real Assets net IRRs over multiple time periods, as follows:

SCERS REAL ASSETS Performance Summary for the periods ending 6/30/17	Quarter	1-Year	3-Year	5-Year	Since Inception	Since Inception Date
SCERS Real Assets	2.7%	21.2%	16.8%	NA	17.8%	Jan-13
CPI + 5%	2.3%	7.3%	6.3%	NA	6.4%	

In Q3 2017, SCERS made a \$50 million commitment to Meridiam Infrastructure North America III, LP (public-private infrastructure), and a \$50 million commitment to Quantum Energy Partners VII, LP (energy infrastructure).

SCERS REAL ASSETS PROXY

The SSgA Real Assets proxy within the Overlay Program is used to close the gap between SCERS' Real Assets actual and target allocation (3.1% actual versus 7% target). As of September 30, 2017, SCERS held \$233.8 million in the SSgA proxy. As additional commitments are made over time, the gap will begin to decrease. SCERS has committed approximately 7.0% towards the Real Assets allocation compared to 3.1% invested and 7.0% target.

SCERS OPPORTUNITIES PORTFOLIO

SCERS' Opportunities portfolio excludes non-core real estate commitments, which were formerly part of the Opportunities portfolio, but which are now part of the Real Estate asset class and reported separately by Townsend.

SCERS' net IRR since inception for Opportunities is +18.6%, which compares to the policy index benchmark net IRR of +7.5%. Cliffwater has also provided SCERS' Real Assets net IRRs over multiple time periods, as follows:

SCERS OPPORTUNITIES Performance Summary for the periods ending 6/30/17	Quarter	1-Year	3-Year	5-Year	Since Inception	Since Inception Date
SCERS Opportunities	0.4%	8.4%	9.7%	27.7%	18.6%	Jan-08
Actuarial Rate of Return	1.9%	7.5%	7.5%	7.5%	7.5%	

No new commitments were made in the SCERS Opportunities portfolio during Q3 2017.

ATTACHMENT

Cliffwater's Quarterly Performance Report for Alternative Assets

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INVESTMENT ADVISORY SERVICES

Los Angeles • New York

Sacramento County Employees' Retirement System Quarterly Performance Review

December 20, 2017



Executive Summary

Absolute Return Portfolio Performance Summary – as of September 30, 2017

Growth Oriented Strategies

- The Growth Oriented Portfolio returned 9.64% CYTD and 12.34% for the 1 year period ending September 30, 2017
 - Outperforming the HFRI Fund of Funds Index + 1% benchmark by 337 bps (CYTD) and 483 bps (1 year)
 - Also outperforming the T-bills + 5% long term objective by 171 bps over the trailing 5 year period
- Good performance across all funds and strategies over the last year and CYTD period

Diversifying Strategies

- The Diversifying Portfolio returned -0.10% CYTD and 3.07% for the 1 year period ending September 30, 2017
 - Trailing the HFRI Conservative FoF Index benchmark by 305 bps (CYTD) and 157 bps (1 year)
 - Outperforming the T-bills + 2% long term objective by 43 bps over the trailing 5 year period
- Performance was primarily hurt by Global Macro funds and the Grosvenor portfolios over this period

Portfolio risk and market sensitivity has been within expectations for the Growth Oriented and Diversifying portfolios

- Growth Oriented
 - Portfolio standard deviation of 4.64% compared to the ACWI standard deviation of 10.66% since December 2011
 - Portfolio equity beta of 0.35 with an equity correlation of 0.79
 - Target standard deviation < 50% of global equities, with an equity beta < 0.5 and equity correlation < 0.8
- Diversifying
 - Portfolio standard deviation of 2.38% compared to the ACWI standard deviation of 10.66% since December 2011
 - Portfolio equity beta of -0.01 with an equity correlation of -0.03
 - Target standard deviation < 25% of global equities, with an equity beta < 0.1 and equity correlation < 0.1

Relative differences between the Growth Oriented and Diversifying portfolios reflect objectives and design

- Expect higher returns over the long-term from the Growth Oriented portfolio, though with more volatility
 - Both portfolios expected to provide diversification and risk reduction benefits for the overall SCERS portfolio

Growth Oriented Absolute Return Portfolio Performance – as of September 30, 2017

Fund	Market Value	Actual %	Returns								Std Dev	Sharpe Ratio	Incep Date
			Sep	QTD	YTD	FYTD	1 Year	3 Year	5 Year	Incep			
Growth-Oriented Portfolio													
Event Driven													
JANA Partners Qualified, L.P.	41,356,826	10.9%	0.11%	0.77%	7.53%	0.77%	11.54%	1.88%	-	4.00%	7.86%	0.47	Jul-13
Third Point Partners Qualified L.P.	47,897,675	12.6%	1.14%	3.34%	14.42%	3.34%	13.36%	6.52%	11.68%	11.54%	7.11%	1.51	May-12
Event Driven - HF Total	89,254,501	23.5%	0.66%	2.14%	11.12%	2.14%	12.51%	4.27%	9.61%	9.64%	7.16%	1.26	May-12
Equity Long/Short													
Lakewood Capital Partners, LP	45,434,049	12.0%	1.75%	3.89%	8.21%	3.89%	14.95%	8.41%	-	8.33%	7.01%	1.10	Jul-13
Equity Long/Short - HF Total	45,434,049	12.0%	1.75%	3.89%	8.21%	3.89%	14.95%	8.41%	-	8.33%	7.01%	1.10	Jul-13
Multi-Strategy													
OZ Domestic Partners II, L.P.	46,185,424	12.2%	-0.05%	2.35%	10.66%	2.35%	13.53%	5.29%	7.16%	7.79%	4.47%	1.60	Jan-12
Multi-Strategy - HF Total	46,185,424	12.2%	-0.05%	2.35%	10.66%	2.35%	13.53%	5.29%	7.16%	7.79%	4.47%	1.60	Jan-12
Fund of Funds													
Grosvenor Institutional US Hedged Fund	410,856	0.1%	0.15%	2.33%	0.52%	2.33%	72.23%	15.32%	11.87%	6.24%	21.89%	0.28	Sep-04
Grosvenor SC Absolute Return Fund LLC	161,039,074	42.4%	1.68%	2.90%	9.24%	2.90%	11.80%	3.14%	6.13%	6.53%	4.55%	1.31	Dec-11
Grosvenor SC Absolute Return Fund LLC Series B	37,666,637	9.9%	0.55%	2.16%	8.58%	2.16%	10.36%	3.20%	-	5.12%	4.24%	1.08	Feb-13
Fund of Funds - HF Total	199,116,567	52.4%	1.46%	2.75%	9.10%	2.75%	11.53%	3.24%	6.03%	4.70%	6.15%	0.51	Sep-04
Growth-Oriented Portfolio Total	379,990,541	100.0%	1.12%	2.70%	9.64%	2.70%	12.34%	4.10%	6.93%	5.08%	6.25%	0.56	Sep-04
HFRI FoF Composite + 1%			0.54%	2.53%	6.27%	2.53%	7.51%	3.24%	4.85%	4.20%	5.06%	0.51	Sep-04
3 Month T-Bills+5%			0.50%	1.47%	4.28%	1.47%	5.66%	5.32%	5.22%	6.30%	0.51%	-	Sep-04
Market Indices													
Libor3Month			0.11%	0.33%	0.90%	0.33%	1.14%	0.69%	0.51%	1.66%	0.52%	-	Sep-04
Barclays Aggregate Bond Index			-0.48%	0.85%	3.14%	0.85%	0.07%	2.72%	2.07%	4.18%	3.15%	0.78	Sep-04
Barclays High Yield Credit Bond Index			0.90%	1.98%	7.01%	1.98%	8.90%	5.84%	6.37%	7.82%	9.54%	0.66	Sep-04
S&P 500 TR			2.06%	4.48%	14.24%	4.48%	18.61%	10.81%	14.22%	8.75%	13.71%	0.56	Sep-04
MSCI AC World Index Free - Net			1.93%	5.18%	17.25%	5.18%	18.65%	7.43%	10.20%	7.43%	15.36%	0.44	Sep-04
MSCI EAFE - Net			2.49%	5.40%	19.96%	5.40%	19.10%	5.04%	8.38%	6.19%	17.00%	0.34	Sep-04
MSCI EMF (Emerging Markets Free) - Net			-0.40%	7.89%	27.78%	7.89%	22.46%	4.90%	3.99%	9.72%	22.17%	0.46	Sep-04

Diversifying Absolute Return Portfolio Performance – as of September 30, 2017

Fund	Market Value	Actual %	Returns								Std Dev	Sharpe Ratio	Incep Date
			Sep	QTD	YTD	FYTD	1 Year	3 Year	5 Year	Incep			
Diversifying Portfolio													
Market Neutral													
Laurion Capital, Ltd.	41,516,694	10.3%	0.73%	0.37%	-0.91%	0.37%	1.85%	6.78%	-	4.88%	5.29%	0.81	Mar-14
Market Neutral - HF Total	41,516,694	10.3%	0.73%	0.37%	-0.91%	0.37%	1.85%	6.78%	-	4.88%	5.29%	0.81	Mar-14
Credit/Distressed													
Claren Road Credit Partners, LP	1,847,958	0.5%	-1.11%	-2.42%	4.95%	-2.42%	24.26%	-3.80%	-0.55%	-0.57%	9.93%	-0.06	Feb-12
Credit/Distressed - HF Total	1,847,958	0.5%	-1.11%	-2.42%	4.95%	-2.42%	24.26%	-3.80%	-0.55%	-0.57%	9.93%	-0.06	Feb-12
Event Driven													
Elliott International Limited	51,900,802	12.8%	1.13%	2.71%	6.32%	2.71%	10.94%	6.76%	8.38%	8.03%	3.50%	2.09	Apr-12
Event Driven - HF Total	51,900,802	12.8%	1.13%	2.71%	6.32%	2.71%	10.94%	6.76%	8.38%	8.03%	3.50%	2.09	Apr-12
Macro-Discretionary													
Brevan Howard LP	34,222,430	8.5%	-0.88%	0.66%	-4.54%	0.66%	1.71%	-1.50%	-	-0.63%	5.62%	-0.19	Mar-14
Macro-Discretionary - HF Total	34,222,430	8.5%	-0.88%	0.66%	-4.54%	0.66%	1.71%	-2.09%	-0.97%	-0.47%	4.34%	-0.20	May-12
Macro-Systematic													
Graham Global Investment Fund II Ltd. - Tactical Trend SF	32,256,098	8.0%	-2.56%	-1.67%	-	-1.67%	-	-	-	-7.84%	7.40%	-	Feb-17
Winton Diversified Futures Fund L.P.	34,743,900	8.6%	-1.69%	0.73%	-0.73%	0.73%	-	-	-	-0.73%	5.33%	-	Jan-17
Macro-Systematic - HF Total	66,999,997	16.6%	-2.11%	-0.44%	-4.66%	-0.44%	-	-	-	-4.66%	5.44%	-	Jan-17
Multi-Strategy													
AQR DELTA Fund II, LP	71,808,438	17.8%	1.64%	3.46%	3.45%	3.46%	6.09%	7.08%	-	5.71%	5.11%	1.01	May-13
Multi-Strategy - HF Total	71,808,438	17.8%	1.64%	3.46%	3.45%	3.46%	6.09%	7.08%	-	5.71%	5.11%	1.01	May-13
Fund of Funds													
Grosvenor SC Absolute Return Fund LLC	103,113,020	25.5%	-0.26%	0.67%	-0.15%	0.67%	2.33%	-0.79%	2.15%	2.09%	3.25%	0.50	Dec-11
Grosvenor SC Absolute Return Fund LLC Series B	33,037,325	8.2%	-0.26%	-0.22%	-2.66%	-0.22%	-1.82%	-2.00%	-	0.88%	2.80%	0.14	Feb-13
Fund of Funds - HF Total	136,150,345	33.7%	-0.26%	0.45%	-0.79%	0.45%	1.02%	-1.18%	1.96%	1.93%	2.98%	0.49	Dec-11
Diversifying Portfolio Total													
HFRI FOF: Conservative Index			0.39%	1.34%	2.95%	1.34%	4.64%	1.82%	3.52%	3.39%	2.16%	1.32	Dec-11
3 Month T-Bills+2%			0.25%	0.75%	2.06%	0.75%	2.65%	2.32%	2.22%	2.20%	0.08%	-	Dec-11
SCERS Absolute Return Portfolio													
3 Month T-Bills+5%	784,437,205		0.53%	1.87%	4.56%	1.87%	7.46%	2.51%	5.17%	4.33%	5.85%	0.47	Sep-04
HFRI Fund of Funds Composite Index			0.50%	1.47%	4.28%	1.47%	5.66%	5.32%	5.22%	6.30%	0.51%	-	Sep-04
			0.45%	2.32%	5.60%	2.32%	6.51%	2.24%	3.85%	3.20%	5.10%	0.32	Sep-04

* Included the SCERS Total Absolute Return Portfolio performance for reference

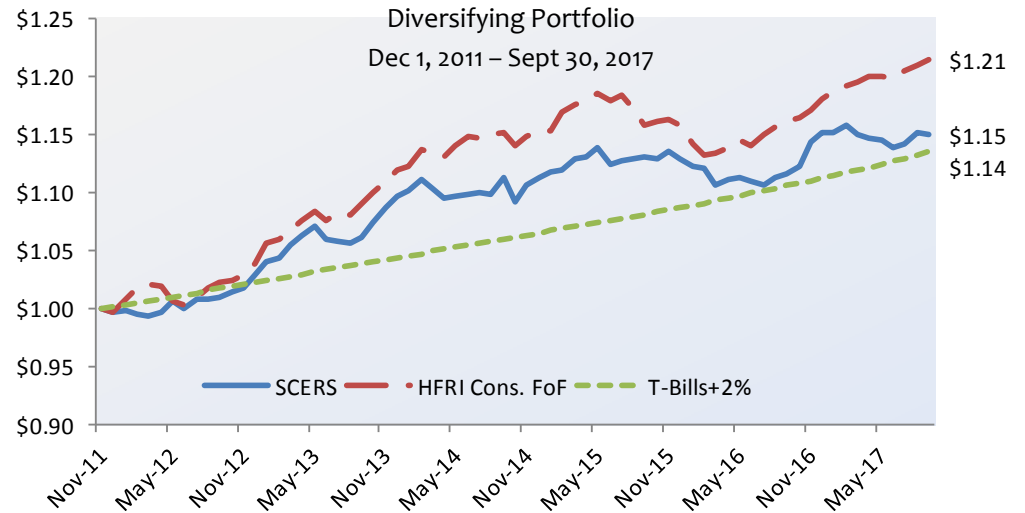
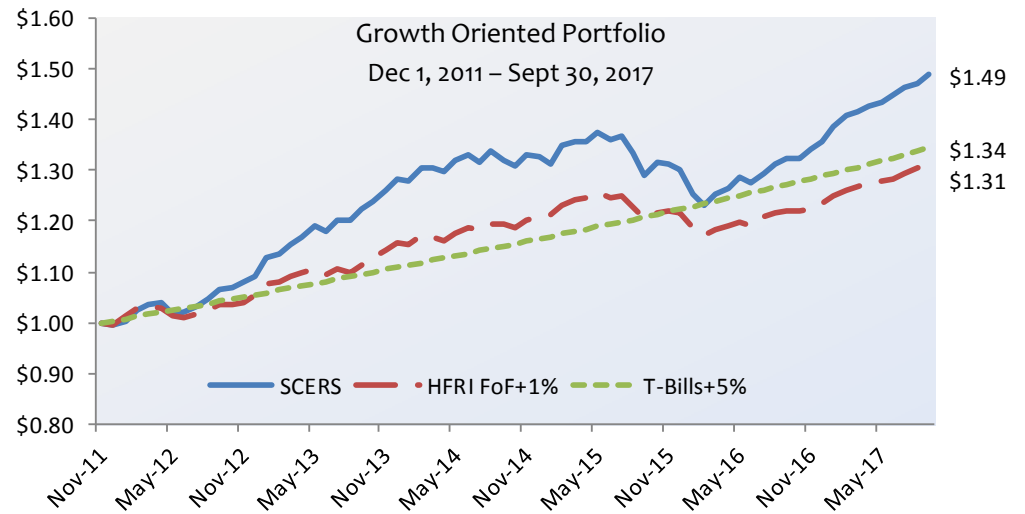
Absolute Return Portfolios Cumulative Performance – Dec. 2011 to Sept. 2017

The Growth Oriented portfolio has outperformed the Fund of Funds Index + 1% benchmark and the T-bills + 5% long term objective

The Diversifying portfolio has outperformed the T-bills + 2% long term objective, but underperformed the HFRI Fund of Funds Conservative Index

Showing cumulative performance (growth of \$1) for each portfolio since the initial restructuring of the Absolute Return portfolio in December 2011

- The prior exposure was only Equity Long/Short fund of funds investments



Private Equity Portfolio – as of June 30, 2017

The Private Equity portfolio's net IRR since inception is 11.51%, versus the Cambridge Associates benchmark IRR of 12.07%

- The long-term Policy benchmark (Russell 3000 + 3%) has a 15.48% IRR over this period

The private equity portfolio once again generated meaningful gains during the quarter

- Several of the buyout and venture capital funds generated quarterly returns greater than 5%
 - Khosla IV, Thoma Bravo XI, Linden III, NEA 15, Summit VC IV, and Spectrum VII reported the largest gains during the quarter
- Continued meaningful distributions, particularly among the direct fund investments
 - TOP III, Summit VC III, Accel-KKR IV and Wayzata III led distributions within direct; FoFs distributed \$12.2 million in Q2

Continued strong performance of the initial direct fund investments

- Double-digit net IRRs for the first vintage years of direct: 28.1% (2011) and 11.5% (2012)
- Strong early performance from more recent vintage years as well: 11.2% (2014) and 14.6% (2015)
- Waterland V (36.6%), Marlin Heritage (33.4%), NEA 15 (20.8%), and Accel-KKR IV (17.7%) are leading performance

The fund of funds also reported gains during the quarter

- Aggregate since inception net IRR increased to 10.88% from 10.58% during the quarter
 - The aggregate total value (TVPI) improved to 1.50x from 1.46x
- HarbourVest VIII has generated the best relative performance, HarbourVest International also leads its benchmark
- Abbott Capital and Goldman Sachs improved but continue to lag peer vintage year fund of funds
- The fund of funds comprise less than 30% of the current fair value of the Private Equity portfolio

Changes during the quarter

- SCERS committed \$35 million to NEA 16 (diversified venture capital, re-up with existing GP) during Q2 2017
 - SCERS also committed \$65 million across a European growth equity and a distressed opportunities fund in Q3 2017
- \$42.8 million in new contributions, \$24.3 million in distributions
- Total portfolio gain increased by \$26.4 million while the total portfolio IRR increased 0.44%

Private Equity Portfolio Characteristics as of June 30, 2017

The SCERS Private Equity portfolio is diversified by strategy and geography

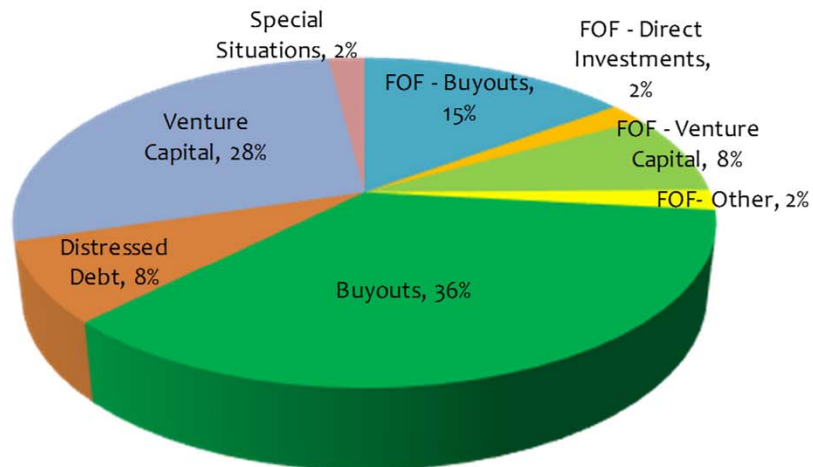
- Investments remain focused in North America, with meaningful exposure to Europe

Fund of funds exposure continues to decrease

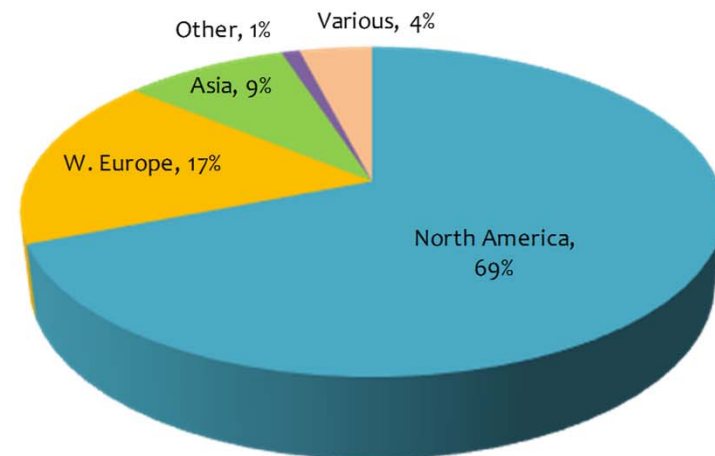
- Investments from direct private equity funds represent 73% of the total portfolio's value as of June 30, 2017

Portfolio strategy and geographic allocations, based on fair market value of invested capital, shown below

Market Value Strategy Exposure*



Market Value Geographic Exposure*



* Exposures are based on the market values of investments as of 6/30/17.

Private Equity Portfolio Performance Details – as of June 30, 2017

Partnership Name	Strategy	(A) Commit. Amount	Unfund. Amount	(B) Cumulat. Cont.	% Drawn	(C) Cumulat. Dist.	(D) Fair Value	(C+D) Total Value	(C+D-B) Gain/Loss	Net IRR	IRR Bench.	TVPI
Vintage Year 2006												
HarbourVest Partners VIII - Buyout Fund L.P.	Fund of Funds	37,500	2,250	35,250	94%	38,913	19,100	58,014	22,764	10.65%	7.74%	1.65x
HarbourVest Partners VIII - Mezzanine and Distressed Debt Fund L.P.	Fund of Funds	5,000	200	4,800	96%	4,976	1,637	6,613	1,813	7.86%	7.74%	1.38x
HarbourVest Partners VIII - Venture Fund L.P.	Fund of Funds	7,500	150	7,350	98%	7,149	5,336	12,485	5,135	10.18%	7.74%	1.70x
Vintage Year 2006 Total		50,000	2,600	47,400	95%	51,038	26,073	77,112	29,712	10.34%	7.49%	1.63x
Vintage Year 2008												
Abbott Capital Private Equity Fund VI, L.P.	Fund of Funds	75,000	6,375	68,625	92%	35,251	63,726	98,976	30,351	11.25%	12.50%	1.44x
Goldman Sachs Private Equity Partners X, L.P.	Fund of Funds	75,000	12,935	68,433	83%	56,790	48,810	105,599	37,166	11.13%	12.50%	1.54x
HarbourVest International Private Equity Partners VI-Partnership Fund L.P.	Fund of Funds	36,777	4,229	35,670	89%	12,958	35,768	48,726	13,056	10.92%	9.00%	1.37x
Vintage Year 2008 Total		186,777	23,539	172,728	87%	104,999	148,303	253,302	80,574	11.13%	8.55%	1.47x
Vintage Year 2011												
Waterland Private Equity Fund V C.V.	Buyout	18,274	4,367	14,907	76%	18,046	13,662	31,709	16,802	36.55%	12.65%	2.13x
Khosla Ventures IV, L.P.	Venture Capital	10,000	330	9,670	97%	956	15,927	16,883	7,213	17.43%	14.81%	1.75x
Vintage Year 2011 Total		28,274	4,697	24,577	83%	19,002	29,589	48,592	24,015	28.09%	12.44%	1.98x
Vintage Year 2012												
Garrison Opportunity Fund III A LLC	Distressed Debt	20,000	0	20,000	100%	6,220	13,770	19,990	-10	-0.01%	11.57%	1.00x
New Enterprise Associates 14, L.P.	Venture Capital	25,000	1,500	23,500	94%	2,637	36,550	39,187	15,687	17.67%	12.85%	1.67x
Summit Partners Venture Capital III-A, LP	Venture Capital	16,350	2,195	18,304	87%	6,588	21,802	28,390	10,087	16.15%	12.85%	1.55x
Vintage Year 2012 Total		61,350	3,695	61,804	94%	15,445	72,123	87,568	25,764	11.52%	12.24%	1.42x
Vintage Year 2013												
Accel-KKR Capital Partners IV, L.P.	Buyout	15,000	3,713	11,287	75%	3,288	11,908	15,196	3,908	17.72%	14.19%	1.35x
H.I.G. Capital Partners V, L.P.	Buyout	14,000	10,793	3,207	23%	636	3,016	3,652	445	6.07%	14.19%	1.14x
Marlin Equity IV, L.P.	Buyout	20,000	6,624	13,376	67%	191	14,566	14,756	1,380	5.49%	14.19%	1.10x
RRJ Capital Master Fund II, L.P.	Buyout	35,000	4,848	34,902	86%	16,771	24,860	41,632	6,730	8.72%	12.82%	1.19x
H.I.G. Bayside Loan Opportunity Fund III (Europe-US\$), L.P.	Distressed Debt	30,000	9,308	20,692	69%	5,434	20,208	25,642	4,950	9.53%	7.37%	1.24x
Wayzata Opportunities Fund III, L.P.	Distressed Debt	30,000	21,400	14,718	29%	6,146	8,588	14,733	15	0.05%	8.50%	1.00x

¹Benchmarks:

Private Equity Investments: Cambridge Associates median return for the respective strategies and vintage years

Vintage Year Comparison: Cambridge Associates Global Private Equity & Venture Capital median return for the respective vintage years

Private Equity Portfolio: Cambridge Associates Global Private Equity & Venture Capital pooled internal rate of return

Private Equity Portfolio Performance Details – as of June 30, 2017 (continued)

Partnership Name	Strategy	(A) Commit. Amount	Unfund. Amount	(B) Cumulat. Cont.	% Drawn	(C) Cumulat. Dist.	(D) Fair Value	(C+D) Total Value	(C+D-B) Gain/Loss	Net IRR	IRR Bench.	TVPI
Trinity Ventures XI, L.P.	Venture Capital	25,000	6,563	18,438	74%	0	24,222	24,222	5,784	11.30%	12.23%	1.31x
Vintage Year 2013 Total		169,000	63,249	116,620	63%	32,466	107,367	139,833	23,213	8.78%	11.00%	1.20x
Vintage Year 2014												
Dyal Capital Partners II	Buyout	35,000	22,786	12,865	35%	2,856	8,499	11,355	-1,510	-8.27%	14.85%	0.88x
H.I.G. Europe Capital Partners II, L.P.	Buyout	15,990	13,764	2,227	14%	0	1,732	1,732	-495	-65.00%	12.36%	0.78x
Marlin Heritage Fund	Buyout	10,000	1,981	8,019	80%	1,411	11,224	12,635	4,616	33.43%	14.85%	1.58x
Thoma Bravo XI	Buyout	30,000	168	29,832	99%	0	38,585	38,585	8,753	13.80%	14.85%	1.29x
TPG Opportunities Partners III	Distressed Debt	40,000	20,864	28,061	48%	9,559	21,665	31,224	3,163	9.42%	9.56%	1.11x
Khosla Ventures V	Venture Capital	20,000	10,060	9,940	50%	0	11,217	11,217	1,277	6.83%	9.70%	1.13x
Spectrum Equity Investors VII, L.P.	Venture Capital	25,000	6,625	18,375	74%	1,474	20,617	22,091	3,716	14.42%	9.70%	1.20x
Vintage Year 2014 Total		175,990	76,248	109,319	57%	15,301	113,539	128,839	19,520	11.16%	10.97%	1.18x
Vintage Year 2015												
RRJ Capital Master Fund III, LP	Buyout	40,000	27,208	12,824	32%	196	13,328	13,524	700	N/M	N/M	1.05x
WPEF VI Feeder, L.P.	Buyout	27,412	17,759	9,284	35%	0	9,764	9,764	480	N/M	N/M	1.05x
WPEF VI Overflow Fund C.V.	Buyout	6,853	6,844	9	0%	0	1	1	-8	N/M	N/M	0.07x
Accel-KKR Growth Capital Partners II	Mezzanine	15,000	10,260	4,740	32%	0	4,521	4,521	-219	-3.85%	11.38%	0.95x
New Enterprise Associates 15, L.P.	Venture Capital	35,000	11,900	23,104	66%	0	29,097	29,097	5,992	20.77%	2.60%	1.26x
Summit Partners Venture Capital Fund IV-A, L.P.	Venture Capital	35,000	26,263	8,737	25%	0	9,848	9,848	1,111	N/M	N/M	1.13x
Vintage Year 2015 Total		159,265	100,234	58,699	37%	196	66,559	66,755	8,056	14.58%	7.81%	1.14x
Vintage Year 2016												
Accel-KKR Capital Partners V, L.P.	Buyout	25,000	23,352	1,648	7%	0	1,394	1,394	-254	N/M	N/M	0.85x
Dyal III Pension Investors LP	Buyout	35,000	22,520	14,551	36%	1,271	13,574	14,845	294	N/M	N/M	1.02x
Linden Capital Partners III	Buyout	35,000	15,284	19,716	56%	22	22,589	22,610	2,895	N/M	N/M	1.15x
Marlin Heritage Europe, L.P.	Buyout	14,848	14,848	0	0%	0	0	0	0	N/M	N/M	N/A
Thoma Bravo Fund XII, L.P.	Buyout	30,000	17,850	14,929	40%	2,781	12,163	14,945	15	N/M	N/M	1.00x
TSG7 A L.P.	Buyout	16,000	10,592	5,408	34%	0	5,122	5,122	-286	N/M	N/M	0.95x
TSG7 B L.P.	Buyout	4,000	3,594	406	10%	0	270	270	-136	N/M	N/M	0.66x

¹Benchmarks:

Private Equity Investments: Cambridge Associates median return for the respective strategies and vintage years

Vintage Year Comparison: Cambridge Associates Global Private Equity & Venture Capital median return for the respective vintage years

Private Equity Portfolio: Cambridge Associates Global Private Equity & Venture Capital pooled internal rate of return

Private Equity Portfolio Performance Details – as of June 30, 2017 (continued)

Partnership Name	Strategy	(A) Commit. Amount	Unfund. Amount	(B) Cumulat. Cont.	% Drawn	(C) Cumulat. Dist.	(D) Fair Value	(C+D) Total Value	(C+D-B) Gain/Loss	Net IRR	IRR Bench.	TVPI
Atalaya Special Opportunities Fund VI, L.P.	Distressed Debt	25,000	7,863	19,003	69%	2,446	17,879	20,324	1,322	N/M	N/M	1.07x
Trinity Ventures XII, L.P.	Venture Capital	30,000	22,350	7,650	26%	0	8,239	8,239	589	N/M	N/M	1.08x
Vintage Year 2016 Total		214,848	138,253	83,311	36%	6,520	81,229	87,749	4,438	N/M	N/M	1.05x
Vintage Year 2017												
Marlin Equity V	Buyout	25,000	25,000	0	0%	0	0	0	0	N/M	N/M	N/A
Marlin Heritage II	Buyout	10,000	10,000	0	0%	0	0	0	0	N/M	N/M	N/A
New Enterprise Associates 16, L.P.	Venture Capital	35,000	33,950	1,050	3%	0	968	968	-82	N/M	N/M	0.92x
Vintage Year 2017 Total		70,000	68,950	1,050	2%	0	968	968	-82	N/M	N/M	0.92x
Portfolio Total :		1,115,505	481,466	675,507	57%	244,966	645,751	890,718	215,211	11.51%	12.07%	1.32x
Portfolio Strategy Totals												
Buyout		462,377	263,896	209,397	43%	47,469	206,257	253,726	44,329	14.63%		1.21x
Distressed Debt		145,000	59,435	102,474	59%	29,805	82,109	111,914	9,440	4.65%		1.09x
Fund of Funds		236,777	26,139	220,128	89%	156,037	174,377	330,414	110,286	10.88%		1.50x
Mezzanine		15,000	10,260	4,740	32%	0	4,521	4,521	-219	-3.85%		0.95x
Venture Capital		256,350	121,736	138,768	53%	11,655	178,487	190,142	51,374	15.71%		1.37x
Portfolio Total :		1,115,505	481,466	675,507	57%	244,966	645,751	890,718	215,211	11.51%	12.07%	1.32x

¹Benchmarks:

Private Equity Investments: Cambridge Associates median return for the respective strategies and vintage years

Vintage Year Comparison: Cambridge Associates Global Private Equity & Venture Capital median return for the respective vintage years

Private Equity Portfolio: Cambridge Associates Global Private Equity & Venture Capital pooled internal rate of return

Private Credit Portfolio – as of June 30, 2017

The Private Credit portfolio's net IRR since inception is 9.50%, versus the benchmark return of 7.49%

- The benchmark is the Credit Suisse Leveraged Loan Index + 2%

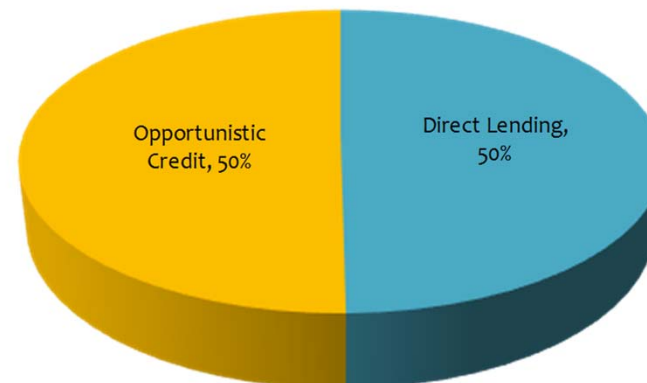
The Private Credit portfolio includes four lending-oriented funds; three were previously included within Private Equity

- Summit Credit I & II are Direct Lending strategies; Athyrium II & III are Opportunistic Credit
 - Athyrium III is a new commitment made in May 2017
- The Private Credit funds continued to generate steady performance during Q2
 - Overall return of 1.4% in Q2, performance somewhat held back by the new commitment to Athyrium III

Changes during the quarter

- SCERS committed \$25 million to Athyrium III (Opportunistic Credit, re-up with existing GP) in Q2 2017
- \$5.0 million in new contributions, \$9.6 million in distributions
- Portfolio IRR decreased 0.35% while the total portfolio gain increased by \$0.7 million

*Market Value Strategy Exposure
(based on fair value of investments)
as of June 30, 2017*



Private Credit Portfolio Details – as of June 30, 2017

Partnership Name	Strategy	(A) Commit. Amount	Unfund. Amount	(B) Cumulat. Cont.	% Drawn	(C) Cumulat. Dist.	(D) Fair Value	(C+D) Total Value	(C+D-B) Gain/Loss	Net IRR	IRR Bench.	TVPI
Vintage Year 2011												
Summit Partners Credit Fund, LP	Direct Lending	20,000	0	20,697	100%	20,304	6,288	26,592	5,895	9.75%	9.44%	1.28x
Vintage Year 2011 Total		20,000	0	20,697	100%	20,304	6,288	26,592	5,895	9.75%	12.44%	1.28x
Vintage Year 2014												
Summit Partners Credit Fund II, L.P.	Direct Lending	35,000	18,232	26,785	48%	12,336	18,483	30,819	4,035	10.42%	8.24%	1.15x
Vintage Year 2014 Total		35,000	18,232	26,785	48%	12,336	18,483	30,819	4,035	10.42%	10.97%	1.15x
Vintage Year 2015												
Athyrium Opportunities Fund II	Opportunistic Credit	32,000	12,512	31,315	61%	11,718	22,644	34,362	3,048	8.66%	12.77%	1.10x
Vintage Year 2015 Total		32,000	12,512	31,315	61%	11,718	22,644	34,362	3,048	8.66%	7.81%	1.10x
Vintage Year 2017												
Athyrium Opportunities Fund III	Opportunistic Credit	25,000	22,464	2,578	10%	0	2,349	2,349	-229	N/M	N/M	0.91x
Vintage Year 2017 Total		25,000	22,464	2,578	10%	0	2,349	2,349	-229	N/M	N/M	0.91x
Portfolio Total :		112,000	53,207	81,374	52%	44,358	49,764	94,122	12,749	9.50%	7.49%	1.16x

¹Benchmarks:

Private Credit Investments: Cambridge Associates median return for the respective debt strategies and vintage years
Private Credit Portfolio: Credit Suisse Leveraged Loan Index + 2%

Real Assets Portfolio – as of June 30, 2017

The Real Assets portfolio's net IRR since inception is 17.76%, versus the inflation benchmark return of 6.32% (CPI+5%)

- The Real Assets portfolio includes private Infrastructure, Energy, and Agriculture, Timber and Other
 - This is consistent with SCERS' new asset class structures
- Real Assets is part of the broader Real Return asset category

The Real Assets portfolio is primarily Energy and Infrastructure partnerships

- Both Energy and Infrastructure partnerships have performed well since inception
 - Since inception net IRRs of 19.6% for Energy and 17.8% for Infrastructure
- Generally positive performance across the Real Assets funds during the quarter, with downturns in some Energy funds
 - Quantum Energy VI was the strongest performing fund in Q2
 - EnCap Flatrock Midstream III and the Pantheon infrastructure fund also produced returns greater than 5% in Q2
 - EnCap's upstream energy funds saw modest declines in Q2, though longer term performance remains strong
 - EnCap IX net returns of 22.4% (1 year) and 16.7% (since inception)
 - EnCap X net returns of 33.0% (1 year) and 17.5% (since inception)

Changes during the quarter

- SCERS made no new Real Assets commitments during Q2 2017
 - SCERS committed \$90 million across an infrastructure and an upstream energy fund in Q3 2017
- \$95.6 million in new contributions (largely for IFM infrastructure), \$19.5 million in distributions
- Portfolio IRR decreased 1.40% while the total portfolio gain increased by \$6.7 million

Real Assets Portfolio Performance Details – as of June 30, 2017

Partnership Name	Strategy	(A) Commit. Amount	Unfund. Amount	(B) Cumulat. Cont.	% Drawn	(C) Cumulat. Dist.	(D) Fair Value	(C+D) Total Value	(C+D-B) Gain/Loss	Net IRR	IRR Bench.	TVPI
Vintage Year 2013												
EnCap Energy Capital Fund IX, L.P.	Energy	33,000	6,128	32,756	81%	20,796	22,099	42,895	10,139	16.71%	2.35%	1.31x
Vintage Year 2013 Total		33,000	6,128	32,756	81%	20,796	22,099	42,895	10,139	16.71%		1.31x
Vintage Year 2014												
Carlyle Power Partners II, L.P.	Energy	40,000	27,435	15,666	31%	2,964	11,758	14,722	-945	N/M	N/M	0.94x
EnCap Flatrock Midstream III	Energy	20,000	11,759	8,812	41%	1,597	8,780	10,376	1,565	19.76%	8.37%	1.18x
First Reserve Energy Infrastructure Fund II	Energy	35,000	22,452	13,764	36%	14,166	8,239	22,406	8,641	56.83%	8.37%	1.63x
Quantum Energy Partners VI, LP	Energy	35,000	19,028	17,312	46%	2,925	22,901	25,826	8,514	51.94%	8.37%	1.49x
Pantheon SCERS SIRF MM, LLC	Infrastructure	100,000	70,000	30,000	30%	0	44,744	44,744	14,744	21.66%	N/A	1.49x
Wastewater Opportunity Fund	Infrastructure	25,000	18,832	6,175	25%	0	4,950	4,950	-1,225	N/M	N/M	0.80x
Vintage Year 2014 Total		255,000	169,506	91,729	34%	21,652	101,372	123,024	31,294	23.83%		1.34x
Vintage Year 2015												
ArLight Energy Partners Fund VI	Energy	40,000	17,370	26,326	57%	4,872	23,253	28,126	1,800	N/M	N/M	1.07x
EnCap Energy Capital Fund X, L.P.	Energy	40,000	21,680	20,820	46%	5,444	18,030	23,473	2,654	17.49%	21.65%	1.13x
Atalaya Real Assets SMA	Real Asset Debt	100,000	86,814	18,200	13%	6,006	13,708	19,714	1,514	7.27%	N/A	1.08x
Vintage Year 2015 Total		180,000	125,864	65,346	30%	16,322	54,991	71,313	5,967	9.18%		1.09x
Vintage Year 2016												
ACM Fund II, LLC	Agriculture	25,000	20,727	7,176	17%	2,951	3,817	6,768	-408	N/M	N/M	0.94x
Brookfield Infrastructure Fund III, L.P.	Infrastructure	40,000	30,116	9,873	25%	431	10,123	10,554	680	N/M	N/M	1.07x
IFM Global Infrastructure Fund	Infrastructure	100,000	25,000	75,000	75%	0	77,012	77,012	2,012	N/M	N/M	1.03x
Vintage Year 2016 Total		165,000	75,842	92,049	54%	3,381	90,952	94,334	2,284	N/M		1.02x
Portfolio Total :		633,000	377,341	281,880	40%	62,152	269,414	331,566	49,685	17.76%	6.32%	1.18x

¹ Benchmarks:

Energy Investments: Cambridge Associates median return for the respective vintage years.

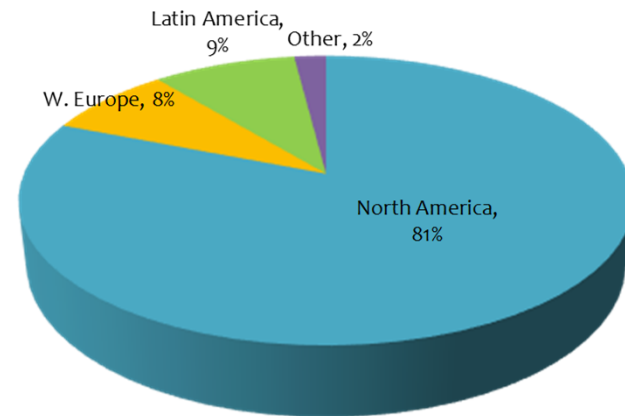
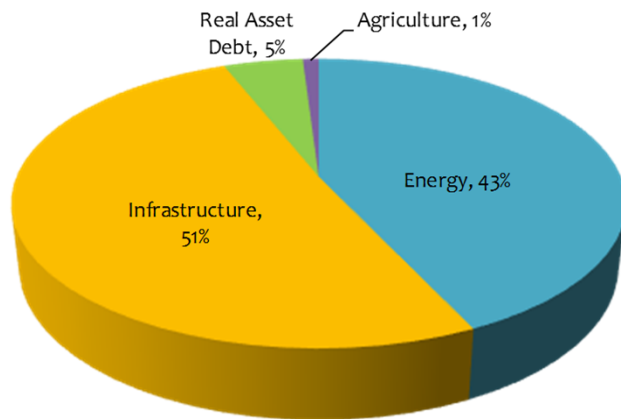
Infrastructure Investments: Cambridge Associates median return for the respective vintage years.

Real Assets Portfolio: CPI + 5%

Real Assets Portfolio Performance Details – as of June 30, 2017 (continued)

Partnership Name	(A) Commit. Amount	Unfund. Amount	(B) Cumulat. Cont.	% Drawn	(C) Cumulat. Dist.	(D) Fair Value	(C+D) Total Value	(C+D-B) Gain/Loss	Net IRR	IRR Bench.	TVPI
Portfolio Strategy Totals											
Agriculture	25,000	20,727	7,176	17%	2,951	3,817	6,768	-408	N/M		0.94x
Energy	243,000	125,852	135,455	48%	52,764	115,060	167,824	32,368	19.61%		1.24x
Infrastructure	265,000	143,948	121,048	46%	431	136,829	137,260	16,211	17.79%		1.13x
Real Asset Debt	100,000	86,814	18,200	13%	6,006	13,708	19,714	1,514	7.27%		1.08x
Portfolio Total :	633,000	377,341	281,880	40%	62,152	269,414	331,566	49,685	17.76%	6.32%	1.18x

Portfolio Exposures*
Strategy Exposure (left graph)
Geographic Exposure (right graph)



* Exposures are based on the market values of investments as of 6/30/17

¹ Benchmarks:

Energy Investments: Cambridge Associates median return for the respective vintage years.

Infrastructure Investments: Cambridge Associates median return for the respective vintage years.

Real Assets Portfolio: CPI + 5%

Opportunities Portfolio – as of June 30, 2017

The Opportunities portfolio's net IRR since inception is 18.64%

- The long-term benchmark is SCERS' 7.50% total portfolio actuarial return objective
- Also tracking the portfolio's 3 year IRR versus an intermediate-term benchmark
 - 9.71% portfolio IRR v 5.20% IRR for the SCERS' total portfolio policy weighted benchmark over the last 3 years
- The portfolio only includes legacy distressed debt funds (fully liquidated) and one post-2009 distressed fund (Atalaya V)
 - Previously-reported real estate funds are now included within Real Estate
 - This is consistent with SCERS' new asset class structures

The legacy distressed funds performed very well, the current fund is performing at expectations

- SCERS' earlier vintage distressed debt funds are liquidated and have distributed significant capital back to SCERS
 - Stone Tower, MetWest TALF, and PIMCO have distributed \$129.3 million
- Atalaya SOF V, a vintage 2013 fund, has produced an 8.98% net IRR since inception

Changes during the quarter

- SCERS made no new commitments categorized as Opportunities funds during Q2 2017
- No new contributions, \$2.7 million in distributions
- Portfolio IRR decreased 0.07%, total portfolio gain increased slightly

As mentioned, the Opportunities portfolio only includes certain distressed debt funds

- Categorizations were made at the time of each investment
- SCERS has additional distressed debt investments within its Private Equity portfolio

Opportunities Portfolio Performance Details – as of June 30, 2017

Partnership Name	Strategy	(A) Commit. Amount	Unfund. Amount	(B) Cumulat. Cont.	% Drawn	(C) Cumulat. Dist.	(D) Fair Value	(C+D) Total Value	(C+D-B) Gain/Loss	Net IRR	IRR Bench.	TVPI
Vintage Year 2007												
* PIMCO Distressed Mortgage Fund, LP	Distressed Debt	18,000	0	18,000	100%	25,384	0	25,384	7,384	8.96%	7.99%	1.41x
Vintage Year 2007 Total		18,000	0	18,000	100%	25,384	0	25,384	7,384	8.96%		1.41x
Vintage Year 2008												
* PIMCO Distressed Mortgage Fund II, L.P.	Distressed Debt	12,000	0	12,000	100%	35,277	0	35,277	23,277	34.39%	12.05%	2.94x
Vintage Year 2008 Total		12,000	0	12,000	100%	35,277	0	35,277	23,277	34.39%		2.94x
Vintage Year 2009												
* MetWest Enhanced TALF Strategy Fund LP	Distressed Debt	20,000	0	20,000	100%	25,304	0	25,304	5,304	11.21%	17.26%	1.27x
* Stone Tower Structured Credit Recovery Fund LP	Distressed Debt	25,000	0	25,248	100%	43,383	0	43,383	18,135	25.30%	17.26%	1.72x
Vintage Year 2009 Total		45,000	0	45,248	100%	68,687	0	68,687	23,439	19.71%		1.52x
Vintage Year 2013												
Atalaya Special Opportunities Fund V, L.P.	Distressed Debt	25,000	1,117	24,875	96%	17,208	12,897	30,105	5,230	8.98%	8.50%	1.21x
Vintage Year 2013 Total		25,000	1,117	24,875	96%	17,208	12,897	30,105	5,230	8.98%		1.21x
Portfolio Total :		100,000	1,117	100,123	99%	146,556	12,897	159,453	59,330	18.64%	7.50%	1.59x

* Liquidated partnership

¹ Benchmarks:

Opportunities Investments: Cambridge Associates median return for the respective strategies and vintage years

Opportunities Portfolio: 7.50% actuarial return objective

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