



# Board of Retirement Regular Meeting

## Sacramento County Employees' Retirement System

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### Agenda Item 10

**MEETING DATE:** September 20, 2017

**SUBJECT:** Quarterly Investment Performance Report  
Alternative Assets

**SUBMITTED FOR:** \_\_\_ Consent      \_\_\_ Deliberation and Action       X  Receive and File

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#### **RECOMMENDATION**

Staff recommends the Board receive and file the Cliffwater Quarterly Performance Review presentation for the periods ending June 30, 2017 for the Absolute Return portfolio, and the periods ending March 31, 2017 for the Private Equity, 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, current market conditions and outlook, 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 June 30, 2017**

SCERS ASSET CLASS	Quarter*	1-Year*	3-Year*	5-Year*	Since Inception*	Since Inception Date*
<b>SCERS Absolute Return</b>	<b>0.6%</b>	<b>8.1%</b>	<b>1.9%</b>	<b>5.4%</b>	<b>4.3%</b>	Sep-04
91 Day T-Bill + 5%	1.4%	5.5%	5.2%	5.2%	6.3%	
<b>SCERS Private Equity</b>	<b>4.3%</b>	<b>15.1%</b>	<b>12.4%</b>	<b>12.7%</b>	<b>11.1%</b>	Feb-08
Cambridge All Private Equity	4.1%	14.9%	11.5%	13.4%	11.9%	
<b>SCERS Private Credit</b>	<b>3.4%</b>	<b>14.8%</b>	<b>9.5%</b>	<b>9.9%</b>	<b>9.9%</b>	Oct-11
Credit Suisse Leveraged Loan + 2%	1.7%	11.7%	5.7%	6.9%	7.5%	
<b>SCERS Real Assets</b>	<b>3.9%</b>	<b>25.4%</b>	<b>19.7%</b>	<b>NA</b>	<b>19.2%</b>	Jan-13
CPI + 5%	2.2%	7.4%	6.1%	NA	6.1%	
<b>SCERS Opportunities</b>	<b>3.5%</b>	<b>8.6%</b>	<b>9.3%</b>	<b>20.8%</b>	<b>18.7%</b>	Jan-08
Actuarial Rate of Return	1.9%	7.5%	7.5%	7.5%	7.5%	

*\*Note: Periods ending 3/31/17 for Private Equity, Private Credit, Real Assets, and Opportunities  
Periods ending 6/30/17 for Absolute Return*

### SCERS ABSOLUTE RETURN PORTFOLIO RETURNS

SCERS' Absolute Return portfolio is a combination of a direct absolute return portfolio and a diversified separate account fund-of-funds portfolio managed by Grosvenor. The SCERS Absolute Return portfolio is diversified by both positively and negatively correlated strategies to the public equity market. The Grosvenor SC Absolute Return Fund, LLC ('SCARF') separate account invests in a portfolio of absolute return funds diversified by strategy and across geographies. The Grosvenor SCARF B separate account is a multi-strategy absolute return portfolio, which serves to close the gap between SCERS' actual absolute return allocation and the target allocation. The SCARF B is an interim portfolio that is used to fund SCERS' direct investments and continues to decline over time. Long-term, Staff anticipates SCERS will retain the SCARF exposure.

SCERS ABSOLUTE RETURN Performance Summary for the periods ending 6/30/17	Quarter	1-Year	3-Year	5-Year	Since Inception	Since Inception Date
<b>SCERS Absolute Return</b>	<b>0.6%</b>	<b>8.1%</b>	<b>1.9%</b>	<b>5.4%</b>	<b>4.3%</b>	Sep-04
Direct Portfolio	0.5%	8.5%	3.3%	5.9%	5.9%	Jan-12
Fund-of-Funds	0.8%	8.0%	0.8%	4.9%	4.1%	Sep-04
90-Day T-Bills + 5%	1.4%	5.5%	5.2%	5.2%	6.3%	Sep-04
HFRI Fund-of-Funds Index	0.2%	5.9%	1.4%	3.8%	3.0%	Sep-04

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Quarter ended June 30, 2017:

- SCERS' Fund-of-Funds portfolio returned +0.8%:
  - Grosvenor SCARF: +0.9%
  - Grosvenor SCARF B Fund: +0.5%
- SCERS' Direct Absolute Return portfolio returned +0.5%:
  - Top performing managers:
    - Claren Road Credit partners, LP (credit/distressed): +4.6%
    - Third Point Partners Qualified, LP (event driven): +4.5%
    - OZ Domestic Partners II, LP (multi-strategy): +3.5%
  - Bottom performing managers:
    - Brevan Howard, LP (macro-discretionary): -2.8%
    - Winton Diversified Futures Fund, LP (macro-systematic): -2.4%
    - Graham Global Investment Fund II, Ltd (macro-systematic): -2.2%

One-year ended June 30, 2017:

- SCERS' Fund-of-Funds portfolio returned +8.0%:
  - Grosvenor SCARF: +9.0%
  - Grosvenor SCARF B Fund: +5.3%
- SCERS' Direct Absolute Return portfolio returned +8.5%:
  - Top performing managers:
    - Claren Road Credit Partners, LP (credit/distressed): +17.1%
    - JANA Partners Qualified, LP (event driven): +16.3%
    - Lakewood Capital Partners, LP (equity long/short): +15.4%
  - Bottom performing managers:
    - Brevan Howard, LP (macro-discretionary): -1.2%
    - Laurion Capital, Ltd. (market neutral): +2.1%

No new commitments to Absolute Return investments were made during the first and second quarter of 2017.

## SCERS PRIVATE EQUITY PORTFOLIO RETURNS

Page 8 of Cliffwater's quarterly report presents market values of SCERS' Private Equity investments across strategy and regions as of March 31, 2017. Pages 9 and 10 provide details for commitments by vintage years, cumulative contributions/distributions to date, percent of commitment drawn and net returns since inception.

SCERS' Private Equity returns continue to improve versus the Cambridge benchmark, 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. As of March 31, 2017:

- SCERS' actual Private Equity allocation is 7.2% versus the target allocation of 9.0% target.
- The fair value of SCERS' actual Private Equity portfolio is \$600.8 million, compared to the target allocation of \$771.4 million.
- SCERS' Private Equity portfolio drawdowns compared to SCERS' commitments:
  - Direct portfolio: \$413.7 million drawn versus \$838.2 million committed.
  - Fund-of-Funds: \$218.9 million drawn versus \$234.4 million committed.
- The Direct Private Equity portfolio, which includes the vintage year funds 2011 through 2014, are generating solid early since inception net returns. Vintage year fund net returns versus the respective benchmark:
  - 2011: +27.4% versus +11.8%.
  - 2012: +11.7% versus +11.0%.
  - 2013: +8.7% versus +10.3%.
  - 2014: +9.5% versus +9.4%.

SCERS PRIVATE EQUITY Performance Summary for the periods ending 3/31/17	Quarter	1-Year	3-Year	5-Year	Since Inception	Since Inception Date
SCERS Private Equity	4.3%	15.1%	12.4%	12.7%	11.1%	Feb-08
Cambridge All Private Equity	4.1%	14.9%	11.5%	13.4%	11.9%	

Quarter ended March 31, 2017:

- SCERS' Private Equity portfolio returned +4.3%:
  - Top performing managers:
    - Trinity Ventures XII, LP (venture capital): +37.0%
    - Accel-KKR Capital Partners IV, LP (buyout): +15.3%
    - Accel-KKR Capital Partners V, LP (buyout): +14.2%
  - Bottom performing managers, due to j-curve effect:
    - Waterland Private Equity Fund VI Overflow (buyout): -18.6%
    - Dyal III Pension Investors, LP (buyout): -10.1%
    - TSG7 B, LP (buyout): -6.0%

One-year ended March 31, 2017:

- SCERS' Private Equity portfolio returned +15.1%:
  - Top performing managers:
    - Waterland Private Equity Fund V (buyout): +71.0%.
    - Marlin Heritage, LP (buyout): +64.7%
    - H.I.G. Capital Partners V, LP (buyout): +36.7%
  - Bottom performing managers, due to j-curve effect:
    - Waterland Private Equity Fund VI Overflow (buyout): -52.3%
    - TSG7 B, LP (buyout): -29.7%
    - TSG7 A, LP (buyout): -21.5%

During the first quarter of 2017, SCERS committed \$25 million to Marlin Equity Partners V (middle market buyout) and \$10 million to Marlin Heritage II (small/middle market buyout). During the second quarter of 2017, SCERS committed \$35 million to NEA 16 (venture capital) and \$35 million to Summit Partners Europe Growth Equity Fund II, LP (growth equity).

**SCERS PRIVATE CREDIT PORTFOLIO RETURNS**

SCERS PRIVATE CREDIT Performance Summary for the periods ending 3/31/17	Quarter	1-Year	3-Year	5-Year	Since Inception	Since Inception Date
SCERS Private Credit	3.4%	14.8%	9.5%	9.9%	9.9%	Oct-11
Credit Suisse Leveraged Loan + 2%	1.7%	11.7%	5.7%	6.9%	7.5%	

Quarter ended March 31, 2017:

- SCERS' Private Credit portfolio returned +3.4%:
  - Top performing managers:
    - Summit Partners Credit Fund II, LP: +3.9%

One-year ended March 31, 2017:

- SCERS' Private Credit portfolio returned +14.8%:
  - Top performing managers:
    - Summit Partners Credit Fund II, LP: +15.5%

No new commitments to Private Credit investments were made during the first quarter of 2017. During the second quarter of 2017, SCERS committed \$25 million to Athyrium Opportunities Fund III, LP (opportunistic credit).

**SCERS REAL ASSETS PORTFOLIO RETURNS**

Page 13 of Cliffwater's quarterly report provides market values of SCERS' real assets investments across strategy, and page 14 provide details for commitments by vintage years, cumulative contributions/distributions to date, percent of commitment drawn and net returns since inception.

SCERS REAL ASSETS Performance Summary for the periods ending 3/31/17	Quarter	1-Year	3-Year	5-Year	Since Inception	Since Inception Date
SCERS Real Assets	3.9%	25.4%	19.7%	NA	19.2%	Jan-13
CPI + 5%	2.2%	7.4%	6.1%	NA	6.1%	

Quarter ended March 31, 2017:

- SCERS' Real Assets portfolio returned +3.9%:
  - Top performing managers:
    - First Reserve Energy Infrastructure Fund II, LP: +41.0%
    - ArcLight Energy Partners Fund IV, LP: +3.9%
  - Bottom performing managers, due to j-curve effect:
    - Wastewater Opportunity Fund, LLC: -4.7%
    - ACM Fund II, LLC: -1.7%

One-year ended March 31, 2017:

- SCERS' Real Assets portfolio returned +25.4%:
  - Top performing managers:
    - First Reserve Energy Infrastructure Fund II, LP: +118.4%
    - Quantum Energy Partners VI, LP: +51.9%
    - EnCap Energy Capital Fund IX, LP: +51.5%

No new commitments to Real Assets investments were made during the first quarter of 2017. During the second quarter of 2017, SCERS committed \$50 million to Meridiam Infrastructure North America III, LP (public-private 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 (2.2% actual versus 7% target). As of March 31, 2017, SCERS held \$327.0 million in the SSgA proxy. As additional commitments are made over time, the gap will begin to decrease. SCERS has committed approximately 5.9% towards the Real Assets allocation compared to 2.2% invested and target of 7.0%.

**SCERS OPPORTUNITIES PORTFOLIO RETURNS**

Prior to the current Cliffwater quarterly report, SCERS' Opportunities portfolio included non-core real estate commitments, which is now part of the real estate asset class and reported by Townsend.

SCERS OPPORTUNITIES Performance Summary for the periods ending 3/31/17	Quarter	1-Year	3-Year	5-Year	Since Inception	Since Inception Date
SCERS Opportunities	3.5%	8.6%	9.3%	20.8%	18.7%	Jan-08
Acturial Rate of Return	1.9%	7.5%	7.5%	7.5%	7.5%	

Quarter ended March 31, 2017:

- SCERS' Opportunities portfolio returned +3.5%:

One-year ended March 31, 2017:

- SCERS' Opportunities portfolio returned +8.6%:

No new commitments to investments for the Opportunities portfolio were made during the first or second quarter of 2017.

**MARKET RECAP**

Global equity markets showed considerable strength in the first half of the 2017, bolstered by broad-based economic growth and positive corporate earnings momentum. For the first time in several years, all of the major economies are growing at the same time. However, monetary policies remain divergent with the U.S., UK, Canada, and Australia raising interest rates, while the Eurozone and Japan have kept rates unchanged.

	Total Return (%)						
	Month	QTD	CYTD	FYTD	1 Year	3 Years	5 Years
S&P 500 Index	0.62	3.09	9.34	17.90	17.90	9.61	14.63
Russell 2000 Index	3.46	2.46	4.99	24.60	24.60	7.36	13.70
Russell 3000 Index	0.90	3.02	8.93	18.51	18.51	9.10	14.58
MSCI AC World Index	0.45	4.27	11.48	18.78	18.78	4.82	10.54
MSCI AC Asia Pacific Index	1.54	5.81	15.77	22.65	22.65	4.46	8.31
MSCI AC Europe Index	-1.07	7.19	14.93	21.02	21.02	-0.54	8.31
MSCI Emerging Markets Index	1.01	6.27	18.43	23.75	23.75	1.07	3.96

The U.S. equity markets moved higher during the year behind stronger-than-expected corporate earnings growth (6.8% year-over-year). Strong industrial sector growth in the Eurozone and the UK has sustained the momentum in the European equity markets. Japan's equity market momentum is being supported by sustained economic growth (2.0%) as government reforms begin to encourage better corporate earnings focus. The Emerging Markets were led by China, India, and Korea. China's higher-than-expected economic growth (6.9% versus 6.5%) and increasing domestic demand, as the economy is progressing towards being less export-driven to be more domestic consumption-driven, rallied investor sentiment. In its mid-year 2017 global market outlook, SSGA projected overall global growth to accelerate to 3.4% in 2017, up from 3.2%.



**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

September 20, 2017



## *Executive Summary*

## Absolute Return Portfolio Performance Summary – as of June 30, 2017

The Absolute Return portfolio returned 2.62% CYTD and 8.11% for the 1 year period ending June 30, 2017

- Seeing continued alpha generation across most strategies over these periods
  - Outperforming the HFRI Fund of Funds Index by 226 bps (1 year) and 3 bps (CYTD)
  - Also outperforming the long-term benchmark of T-bills + 5% by 262 bps over the last year

The direct portfolio was slightly ahead of the Grosvenor accounts over the last year

- +8.50% return for the direct portfolio
  - JANA (+16.3%), Lakewood (+15.4%), Third Point (+15.1%), and OZ (+14.8%) led performance over the last year
  - Laggards included Brevan Howard (-1.2%) and Laurion (+2.1%)
    - Global Macro performance has been challenging for the last few years
- +7.95% return for the Grosvenor separate accounts
  - SCARF A returned +9.0% while SCARF B returned +5.3%
  - The third Grosvenor portfolio is residual holdings from SCERS' previous fund of fund investment (results not meaningful)

Longer-term performance results remain positive as well

- 5 year annualized return of 5.40% for the Absolute Return portfolio
  - The HFRI Fund of Funds Index returned 3.75% over this period
  - 5.17% return for SCERS' long-term benchmark of T-bills + 5%

SCERS' staff and Cliffwater also track the portfolio's risk characteristics against the MSCI ACWI

- Expect AR portfolio to have half the volatility of the ACWI, with a correlation of 0.5 or less, over the long term
  - The AR portfolio is meeting its volatility objective; correlation is slightly higher than target
    - Portfolio standard deviation of 3.39% compared to the ACWI standard deviation of 10.86% since December 2011
    - Portfolio correlation with the ACWI has been 0.68, with a beta of only 0.21

# Absolute Return Portfolio Performance – as of June 30, 2017

Fund	Market Value	Actual %	Returns								Std Dev	Sharpe Ratio	Incep Date
			Jun	QTD	YTD	FYTD	1 Year	3 Year	5 Year	Incep			
<b>Market Neutral</b>													
Laurion Capital, Ltd.	41,370,309	5.4%	-0.01%	1.23%	-1.26%	2.05%	2.05%	6.28%	-	5.14%	5.41%	0.85	Mar-14
<b>Credit/Distressed</b>													
Claren Road Credit Partners, LP	2,286,500	0.3%	0.00%	4.59%	6.23%	17.11%	17.11%	-3.92%	-0.58%	-0.38%	10.08%	-0.04	Feb-12
<b>Event Driven</b>													
Elliott International Limited	50,486,750	6.6%	-0.07%	0.39%	3.42%	11.12%	11.12%	6.57%	8.83%	7.86%	3.57%	2.02	Apr-12
JANA Partners Qualified, L.P.	41,039,143	5.3%	1.23%	1.43%	6.70%	16.25%	16.25%	0.71%	-	4.06%	8.10%	0.47	Jul-13
Third Point Partners Qualified L.P.	46,327,817	6.0%	0.70%	4.54%	10.67%	15.11%	15.11%	5.49%	12.39%	11.42%	7.28%	1.46	May-12
<b>Equity Long/Short</b>													
Lakewood Capital Partners, LP	43,734,451	5.7%	0.73%	1.47%	4.16%	15.43%	15.43%	6.66%	-	7.84%	7.21%	1.02	Jul-13
<b>Macro-Discretionary</b>													
Brevan Howard LP	33,999,404	4.4%	-1.46%	-2.84%	-5.16%	-1.23%	-1.23%	-0.30%	-	-0.87%	5.76%	-0.22	Mar-14
<b>Macro-Systematic</b>													
Graham Global Investment Fund II Ltd. - Tactical Trend SF	32,805,585	4.3%	-3.80%	-2.15%	-	-	-	-	-	-6.27%	-	-	Feb-17
Winton Diversified Futures Fund L.P.	34,490,711	4.5%	-1.86%	-2.36%	-1.46%	-	-	-	-	-1.46%	4.69%	-	Jan-17
<b>Multi-Strategy</b>													
AQR DELTA Fund II, LP	69,408,073	9.0%	0.64%	-1.30%	-0.01%	4.85%	4.85%	6.93%	-	5.20%	5.22%	0.90	May-13
OZ Domestic Partners II, L.P.	45,085,426	5.9%	1.40%	3.51%	8.02%	14.75%	14.75%	4.65%	7.44%	7.69%	4.54%	1.56	Jan-12
<b>Direct Hedge Funds Portfolio</b>	<b>441,034,168</b>	<b>57.3%</b>	<b>-0.07%</b>	<b>0.48%</b>	<b>2.17%</b>	<b>8.50%</b>	<b>8.50%</b>	<b>3.28%</b>	<b>5.88%</b>	<b>5.85%</b>	<b>3.28%</b>	<b>1.61</b>	<b>Jan-12</b>
Grosvenor Institutional US Hedged Fund	404,857	0.1%	-0.19%	-0.75%	-0.95%	65.49%	65.49%	16.68%	11.93%	6.24%	22.09%	0.28	Sep-04
Grosvenor SC Absolute Return Fund LLC	258,882,063	33.6%	0.32%	0.93%	3.52%	9.01%	9.01%	0.87%	5.14%	5.18%	4.14%	1.13	Dec-11
Grosvenor SC Absolute Return Fund LLC Series B	69,958,427	9.1%	0.35%	0.52%	2.10%	5.32%	5.32%	0.38%	-	3.25%	3.38%	0.82	Feb-13
<b>Fund of Funds Portfolio</b>	<b>329,245,347</b>	<b>42.7%</b>	<b>0.32%</b>	<b>0.84%</b>	<b>3.21%</b>	<b>7.95%</b>	<b>7.95%</b>	<b>0.79%</b>	<b>4.94%</b>	<b>4.07%</b>	<b>6.00%</b>	<b>0.42</b>	<b>Sep-04</b>
<b>SCERS Absolute Return Portfolio</b>	<b>770,279,515</b>	<b>100.0%</b>	<b>0.10%</b>	<b>0.63%</b>	<b>2.62%</b>	<b>8.11%</b>	<b>8.11%</b>	<b>1.88%</b>	<b>5.40%</b>	<b>4.26%</b>	<b>5.91%</b>	<b>0.45</b>	<b>Sep-04</b>
<b>Benchmarks</b>													
3 Month T-Bills+5%			0.48%	1.41%	2.76%	5.49%	5.49%	5.23%	5.17%	6.31%	0.51%	-	Sep-04
HFRI Fund of Funds Composite Index			-0.62%	0.20%	2.59%	5.85%	5.85%	1.35%	3.75%	3.03%	5.15%	0.28	Sep-04
<b>Market Indices</b>													
Barclays Aggregate Bond Index			-0.10%	1.44%	2.28%	-0.31%	-0.31%	2.49%	2.22%	4.19%	3.16%	0.78	Sep-04
Barclays High Yield Credit Bond Index			0.14%	2.17%	4.94%	12.72%	12.72%	4.49%	6.90%	7.81%	9.63%	0.65	Sep-04
S&P 500 TR			0.62%	3.09%	9.34%	17.90%	17.90%	9.61%	14.63%	8.56%	13.83%	0.54	Sep-04
MSCI AC World Index Free - Net			0.45%	4.27%	11.48%	18.78%	18.78%	4.82%	10.54%	7.16%	15.49%	0.42	Sep-04
MSCI EAFE - Net			-0.18%	6.12%	13.81%	20.27%	20.27%	1.15%	8.69%	5.88%	17.14%	0.32	Sep-04
MSCI EMF (Emerging Markets Free) - Net			1.01%	6.27%	18.43%	23.75%	23.75%	1.07%	3.96%	9.27%	22.34%	0.44	Sep-04

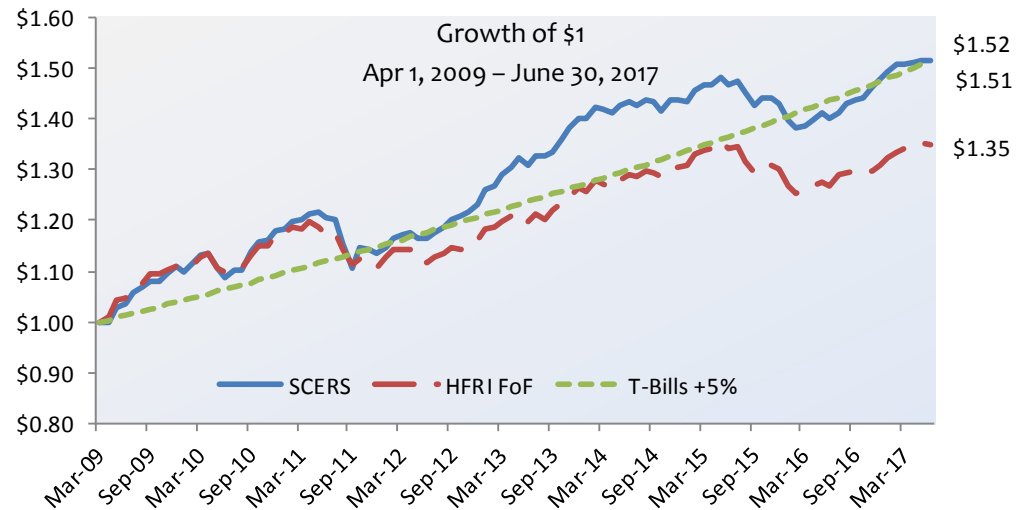
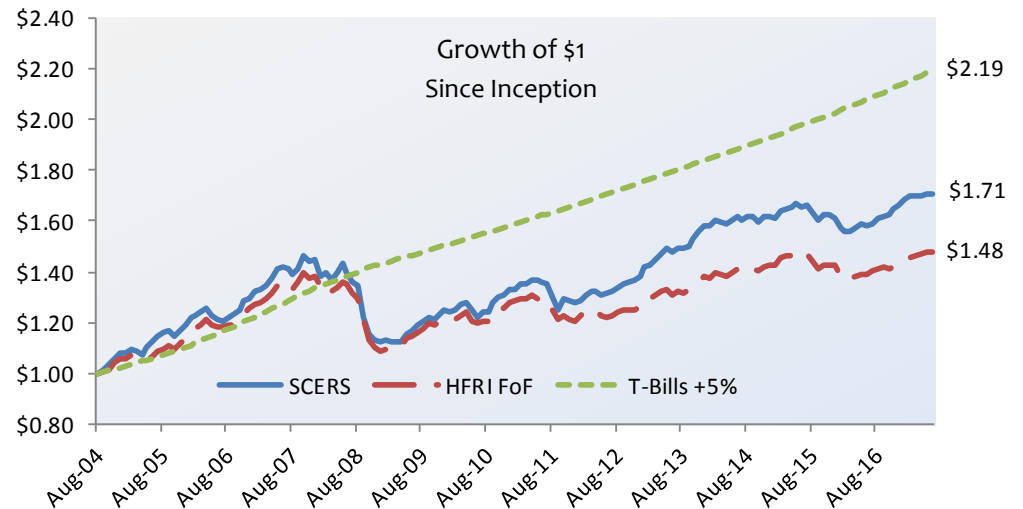
# Absolute Return Portfolio Performance – as of June 30, 2017

The Absolute Return portfolio has outperformed the Fund of Funds Index, with slightly higher volatility, since the program’s inception in 2004

- Outperformance has increased since redesigning the portfolio at the end of 2011

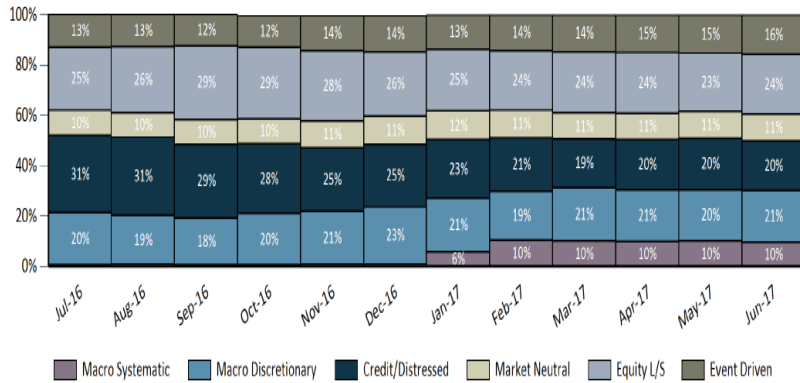
The Absolute Return portfolio has also outperformed its long-term T-bills + 5% benchmark since the ‘08 Financial Crisis

- The portfolio continued to outperform the Fund of Funds Index as well

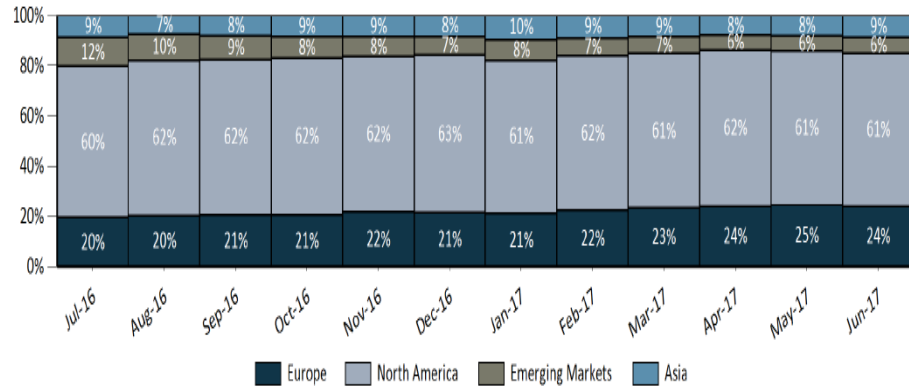


# Absolute Return Portfolio Characteristics – as of June 30, 2017

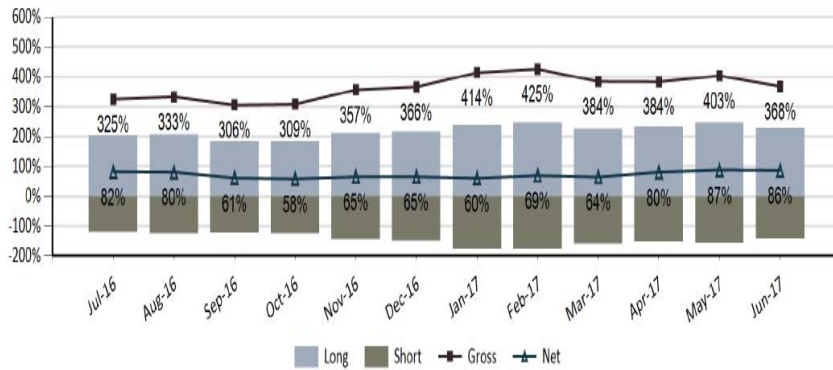
### Portfolio “Look Through” Strategy Allocations



### Portfolio Geographical Breakdown



### Portfolio Leverage



The SCERS Absolute Return portfolio is adequately diversified among strategies and geographies

- Strategy composition will change somewhat as SCERS implements the Growth Oriented and Diversifying portfolios

Portfolio leverage remains appropriate and in-line with leverage for other large institutional investors

- 368% gross exposure, 86% net exposure
- Recent increase in net exposure is driven primarily from global macro positioning and the Grosvenor portfolio

## Private Equity Portfolio – as of March 31, 2017

The Private Equity portfolio's net IRR since inception is 11.07%, versus the Cambridge Associates benchmark IRR of 11.85%

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

The private equity portfolio's meaningful gains during the quarter were in-line with the rise in global equity markets

- Strongest gains came among the venture capital and buyout funds
  - Accel-KKR, Marlin Heritage, Trinity Ventures, NEA 14 & 15, and Spectrum VII reported the largest gains during the quarter
- Continued meaningful distributions, particularly among the direct fund investments
  - RRJ II, Summit VC III and Atalaya SOF VI led distributions within directs; FoFs distributed \$6.8 million in Q1

Continued strong performance of the initial direct fund investments

- Double-digit net IRRs for the first vintage years of directs: 27.4% (2011) and 11.7% (2012)
  - Waterland V (36.8%), Marlin Heritage (35.9%), NEA 14 (18.3%), and Accel-KKR IV (17.0%) are leading performance

The fund of funds reported solid gains overall during the quarter

- Aggregate since inception net IRR increased to 10.58% from 10.09% during the quarter
  - The aggregate total value (TVPI) improved to 1.46x from 1.42x
- 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 across Marlin V and Heritage II (small/mid-sized turnaround funds) during Q1 2017
  - SCERS also committed \$35 million to NEA 16 (diversified venture capital, re-up with existing GP) in Q2 2017
- \$31.0 million in new contributions, \$12.4 million in distributions
- Total portfolio gain increased by \$24.7 million while the total portfolio IRR increased 0.50%
  - Changes are relative to the current structure of Private Equity, with values as of 12/31/16



## Private Equity Portfolio Characteristics as of March 31, 2017

The SCERS Private Equity portfolio is diversified by strategy and geography

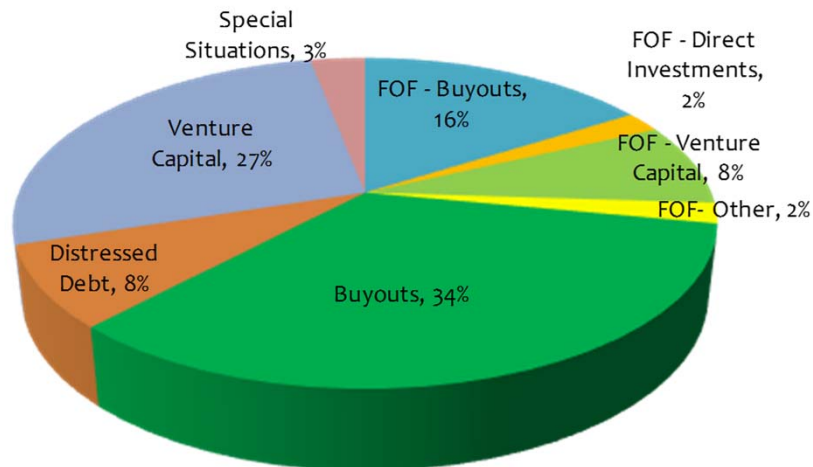
- Investments remain focused in North America, with meaningful exposure to Europe

Fund of funds exposure continues to decrease

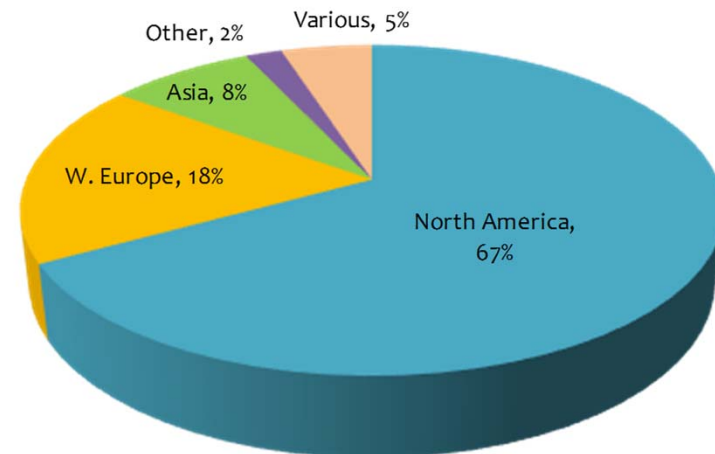
- Investments from direct private equity funds represent 71% of the total portfolio's value as of March 31, 2017

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 3/31/17.

## Private Equity Portfolio Performance Details – as of March 31, 2017

Partnership Name (\$ in thousands)	Strategy	(A)		(B)		(C)		(C+D)	(C+D-B)	IRR	TVPI	
		Commit. Amount	Unfund. Amount	Cumulat. Cont.	% Drawn	Cumulat. Dist.	(D) Fair Value	Total Value	Gain/Loss			Net IRR
<b>Vintage Year 2006</b>												
HarbourVest Partners VIII - Buyout Fund L.P.	Fund of Funds	37,500	2,250	35,250	94%	37,509	19,497	57,006	21,756	10.48%	7.45%	1.62
HarbourVest Partners VIII - Mezzanine and Distressed Debt Fund L.P.	Fund of Funds	5,000	200	4,800	96%	4,889	1,690	6,579	1,779	7.85%	7.45%	1.37
HarbourVest Partners VIII - Venture Fund L.P.	Fund of Funds	7,500	150	7,350	98%	6,717	5,637	12,354	5,004	10.18%	7.45%	1.68
<b>Vintage Year 2006 Total</b>		<b>50,000</b>	<b>2,600</b>	<b>47,400</b>	<b>95%</b>	<b>49,115</b>	<b>26,824</b>	<b>75,939</b>	<b>28,539</b>	<b>10.21%</b>	<b>7.54%</b>	<b>1.60</b>
<b>Vintage Year 2008</b>												
Abbott Capital Private Equity Fund VI, L.P.	Fund of Funds	75,000	6,750	68,250	91%	30,751	64,675	95,426	27,176	10.80%	12.50%	1.40
Goldman Sachs Private Equity Partners X, L.P.	Fund of Funds	75,000	12,838	68,340	83%	51,625	52,243	103,868	35,529	11.06%	12.50%	1.52
HarbourVest International Private Equity Partners VI-Partnership Fund L.P.	Fund of Funds	34,357	4,466	34,991	87%	12,328	33,215	45,544	10,553	9.67%	7.94%	1.30
<b>Vintage Year 2008 Total</b>		<b>184,357</b>	<b>24,055</b>	<b>171,581</b>	<b>87%</b>	<b>94,704</b>	<b>150,134</b>	<b>244,838</b>	<b>73,258</b>	<b>10.76%</b>	<b>8.54%</b>	<b>1.43</b>
<b>Vintage Year 2011</b>												
Waterland Private Equity Fund V C.V.	Buyout	17,072	4,314	14,655	75%	17,235	13,331	30,566	15,911	36.76%	9.05%	2.09
Khosla Ventures IV, L.P.	Venture Capital	10,000	330	9,670	97%	956	14,134	15,090	5,420	14.90%	14.13%	1.56
<b>Vintage Year 2011 Total</b>		<b>27,072</b>	<b>4,644</b>	<b>24,325</b>	<b>83%</b>	<b>18,191</b>	<b>27,465</b>	<b>45,656</b>	<b>21,331</b>	<b>27.37%</b>	<b>11.82%</b>	<b>1.88</b>
<b>Vintage Year 2012</b>												
Garrison Opportunity Fund III A LLC	Distressed Debt	20,000	0	20,000	100%	6,220	13,799	20,019	19	0.03%	9.25%	1.00
New Enterprise Associates 14, L.P.	Venture Capital	25,000	1,500	23,500	94%	2,637	35,681	38,318	14,818	18.26%	10.90%	1.63
Summit Partners Venture Capital III-A, LP	Venture Capital	16,350	1,189	18,183	93%	4,638	22,949	27,587	9,404	16.38%	10.90%	1.52
<b>Vintage Year 2012 Total</b>		<b>61,350</b>	<b>2,689</b>	<b>61,683</b>	<b>96%</b>	<b>13,495</b>	<b>72,429</b>	<b>85,924</b>	<b>24,241</b>	<b>11.70%</b>	<b>10.95%</b>	<b>1.39</b>
<b>Vintage Year 2013</b>												
Accel-KKR Capital Partners IV, L.P.	Buyout	15,000	3,713	11,287	75%	1,883	12,672	14,555	3,268	16.98%	11.87%	1.29
H.I.G. Capital Partners V, L.P.	Buyout	14,000	10,793	3,207	23%	0	3,847	3,847	640	9.62%	11.87%	1.20
Marlin Equity IV, L.P.	Buyout	20,000	9,270	10,730	54%	191	11,538	11,729	999	4.54%	11.87%	1.09
RRJ Capital Master Fund II, L.P.	Buyout	35,000	4,858	34,892	86%	16,330	25,036	41,366	6,473	9.06%	9.94%	1.19
H.I.G. Bayside Loan Opportunity Fund III (Europe-US\$), L.P.	Distressed Debt	30,000	11,054	18,946	63%	5,066	18,717	23,783	4,838	10.10%	5.68%	1.26
Wayzata Opportunities Fund III, L.P.	Distressed Debt	30,000	20,148	14,718	33%	4,893	9,969	14,863	145	0.53%	8.41%	1.01
Trinity Ventures XI, L.P.	Venture Capital	25,000	7,063	17,938	72%	0	22,395	22,395	4,457	9.90%	11.71%	1.25
<b>Vintage Year 2013 Total</b>		<b>169,000</b>	<b>66,899</b>	<b>111,718</b>	<b>60%</b>	<b>28,362</b>	<b>104,175</b>	<b>132,537</b>	<b>20,819</b>	<b>8.69%</b>	<b>10.29%</b>	<b>1.19</b>
<b>Vintage Year 2014</b>												
Dyal Capital Partners II	Buyout	35,000	24,360	11,239	30%	2,536	7,271	9,807	-1,432	-8.76%	13.36%	0.87
H.I.G. Europe Capital Partners II, L.P.	Buyout	14,938	14,757	232	1%	0	-533	-533	-765	N/A	N/A	-2.30
Marlin Heritage Fund	Buyout	10,000	2,437	7,563	76%	1,411	10,337	11,748	4,186	35.89%	13.36%	1.55
Thoma Bravo XI	Buyout	30,000	578	29,422	98%	0	35,221	35,221	5,799	10.76%	13.36%	1.20
TPG Opportunities Partners III	Distressed Debt	40,000	20,970	25,776	48%	7,274	21,202	28,476	2,700	9.48%	9.28%	1.10
Khosla Ventures V	Venture Capital	20,000	10,060	9,940	50%	0	10,996	10,996	1,056	6.60%	6.91%	1.11
Spectrum Equity Investors VII, L.P.	Venture Capital	25,000	9,500	15,500	62%	654	17,315	17,969	2,469	11.69%	6.91%	1.16
<b>Vintage Year 2014 Total</b>		<b>174,938</b>	<b>82,662</b>	<b>99,671</b>	<b>53%</b>	<b>11,875</b>	<b>101,808</b>	<b>113,683</b>	<b>14,012</b>	<b>9.46%</b>	<b>9.43%</b>	<b>1.14</b>

<sup>1</sup>Benchmarks:

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 March 31, 2017 (continued)

Partnership Name (\$ in thousands)	Strategy	(A)		(B)		(C)		(C+D)	(C+D-B)	Net IRR	IRR Bench.	TVPI
		Commit. Amount	Unfund. Amount	Cumulat. Cont.	% Drawn	Cumulat. Dist.	(D) Fair Value	Total Value	Gain/Loss			
<b>Vintage Year 2015</b>												
RRJ Capital Master Fund III, LP	Buyout	40,000	28,891	11,141	28%	112	11,230	11,342	201	N/M	N/M	1.02
WPEF VI Overflow Fund C.V.	Buyout	6,402	6,394	9	0%	0	1	1	-8	N/M	N/M	0.08
WPEF VI Feeder, L.P.	Buyout	25,608	19,692	5,964	23%	0	6,148	6,148	184	N/M	N/M	1.03
Accel-KKR Growth Capital Partners II	Mezzanine	15,000	10,557	4,443	30%	0	4,080	4,080	-363	-8.03%	12.73%	0.92
New Enterprise Associates 15, L.P.	Venture Capital	35,000	16,275	18,729	54%	0	22,868	22,868	4,139	N/M	N/M	1.22
Summit Partners Venture Capital Fund IV-A, L.P.	Venture Capital	35,000	26,263	8,737	25%	0	9,195	9,195	458	N/M	N/M	1.05
<b>Vintage Year 2015 Total</b>		<b>157,010</b>	<b>108,072</b>	<b>49,023</b>	<b>31%</b>	<b>112</b>	<b>53,522</b>	<b>53,634</b>	<b>4,611</b>	<b>11.20%</b>	<b>3.46%</b>	<b>1.09</b>
<b>Vintage Year 2016</b>												
Accel-KKR Capital Partners V, L.P.	Buyout	25,000	23,352	1,648	7%	0	1,387	1,387	-261	N/M	N/M	0.84
Dyal III Pension Investors LP	Buyout	35,000	27,077	9,410	23%	687	8,934	9,621	211	N/M	N/M	1.02
Linden Capital Partners III	Buyout	35,000	18,876	16,124	46%	0	17,597	17,597	1,473	N/M	N/M	1.09
Marlin Heritage Europe, L.P.	Buyout	13,871	13,871	0	0%	0	0	0	0	N/M	N/M	N/A
Thoma Bravo Fund XII, L.P.	Buyout	30,000	18,960	13,819	37%	2,781	10,484	13,266	-553	N/M	N/M	0.96
TSG7 A L.P.	Buyout	16,000	13,373	2,627	16%	0	2,310	2,310	-317	N/M	N/M	0.88
TSG7 B L.P.	Buyout	4,000	3,648	352	9%	0	239	239	-113	N/M	N/M	0.68
Atalaya Special Opportunities Fund VI, L.P.	Distressed Debt	25,000	7,180	19,003	71%	1,355	18,611	19,966	964	N/M	N/M	1.05
Trinity Ventures XII, L.P.	Venture Capital	30,000	25,650	4,350	15%	0	4,919	4,919	569	N/M	N/M	1.13
<b>Vintage Year 2016 Total</b>		<b>213,871</b>	<b>151,986</b>	<b>67,334</b>	<b>29%</b>	<b>4,824</b>	<b>64,481</b>	<b>69,305</b>	<b>1,971</b>	<b>N/M</b>	<b>N/M</b>	<b>1.03</b>
<b>Vintage Year 2017</b>												
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
<b>Vintage Year 2017 Total</b>		<b>35,000</b>	<b>35,000</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>N/M</b>	<b>N/M</b>	<b>N/A</b>
<b>Portfolio Total:</b>		<b>1,072,598</b>	<b>478,607</b>	<b>632,733</b>	<b>55%</b>	<b>220,679</b>	<b>600,838</b>	<b>821,516</b>	<b>188,783</b>	<b>11.07%</b>	<b>11.85%</b>	<b>1.30</b>
<b>Portfolio Strategy Totals</b>												
Buyout		456,891	284,215	184,321	38%	43,166	177,050	220,216	35,895	13.94%		1.19
Distressed Debt		145,000	59,352	98,442	59%	24,809	82,298	107,107	8,665	4.73%		1.09
Fund of Funds		234,357	26,655	218,981	89%	143,819	176,958	320,777	101,797	10.58%		1.46
Mezzanine		15,000	10,557	4,443	30%	0	4,080	4,080	-363	-8.03%		0.92
Venture Capital		221,350	97,829	126,547	56%	8,885	160,452	169,336	42,790	14.98%		1.34
<b>Portfolio Total:</b>		<b>1,072,598</b>	<b>478,607</b>	<b>632,733</b>	<b>55%</b>	<b>220,679</b>	<b>600,838</b>	<b>821,516</b>	<b>188,783</b>	<b>11.07%</b>	<b>11.85%</b>	<b>1.30</b>

<sup>1</sup> Benchmarks:

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 March 31, 2017

The Private Credit portfolio's net IRR since inception is 9.85%, versus the benchmark return of 7.61%

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

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

- Summit Credit I & II are Direct Lending strategies; Athyrium II is Opportunistic Credit
- All three funds have performed well since inception
  - Since inception net IRRs of between 9.4% and 10.6%
- All three funds continued to generate steady performance during Q1
  - Quarterly returns ranged from 2.8% to 3.9%

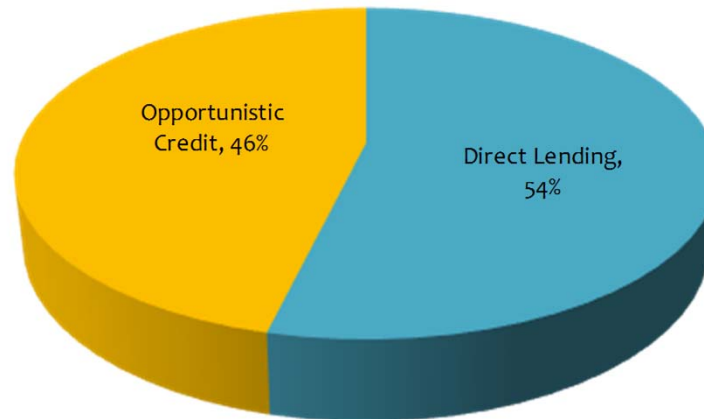
### Changes during the quarter

- SCERS made no new Private Credit commitments during Q1 2017
  - SCERS committed \$25 million to Athyrium III (Opportunistic Credit, re-up with existing GP) in Q2 2017
- \$2.1 million in new contributions, \$3.9 million in distributions
- Portfolio IRR increased 0.44% while the total portfolio gain increased by \$1.8 million

## Private Credit Portfolio Details – as of March 31, 2017

Partnership Name (\$ in thousands)	Strategy	(A)	Unfund. Amount	(B)	% Drawn	(C)	(D) Fair Value	(C+D)	(C+D-B)	Net IRR	IRR Bench.	TVPI
		Commit. Amount		Cumulat. Cont.		Cumulat. Dist.		Total Value	Gain/Loss			
<b>Vintage Year 2011</b>												
Summit Partners Credit Fund, LP	Direct Lending	20,000	0	20,697	100%	20,060	6,350	26,411	5,714	9.71%	9.74%	1.28
<b>Vintage Year 2011 Total</b>		<b>20,000</b>	<b>0</b>	<b>20,697</b>	<b>100%</b>	<b>20,060</b>	<b>6,350</b>	<b>26,411</b>	<b>5,714</b>	<b>9.71%</b>	<b>11.82%</b>	<b>1.28</b>
<b>Vintage Year 2014</b>												
Summit Partners Credit Fund II, L.P.	Direct Lending	35,000	16,023	24,494	54%	5,517	22,534	28,051	3,557	10.56%	8.28%	1.15
<b>Vintage Year 2014 Total</b>		<b>35,000</b>	<b>16,023</b>	<b>24,494</b>	<b>54%</b>	<b>5,517</b>	<b>22,534</b>	<b>28,051</b>	<b>3,557</b>	<b>10.56%</b>	<b>9.43%</b>	<b>1.15</b>
<b>Vintage Year 2015</b>												
Athyrium Opportunities Fund II	Opportunistic Credit	32,000	10,069	31,230	69%	9,191	24,822	34,013	2,784	N/M	N/M	1.09
<b>Vintage Year 2015 Total</b>		<b>32,000</b>	<b>10,069</b>	<b>31,230</b>	<b>69%</b>	<b>9,191</b>	<b>24,822</b>	<b>34,013</b>	<b>2,784</b>	<b>N/M</b>	<b>N/M</b>	<b>1.09</b>
<b>Portfolio Total:</b>		<b>87,000</b>	<b>26,092</b>	<b>76,420</b>	<b>70%</b>	<b>34,768</b>	<b>53,706</b>	<b>88,475</b>	<b>12,054</b>	<b>9.85%</b>	<b>7.61%</b>	<b>1.16</b>

Market Value Strategy Exposure\*



\* Exposures are based on the market values of investments as of 3/31/17

<sup>1</sup> Benchmarks:

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 March 31, 2017

The Real Assets portfolio’s net IRR since inception is 19.16%, versus the inflation benchmark return of 6.14% (CPI+5%)

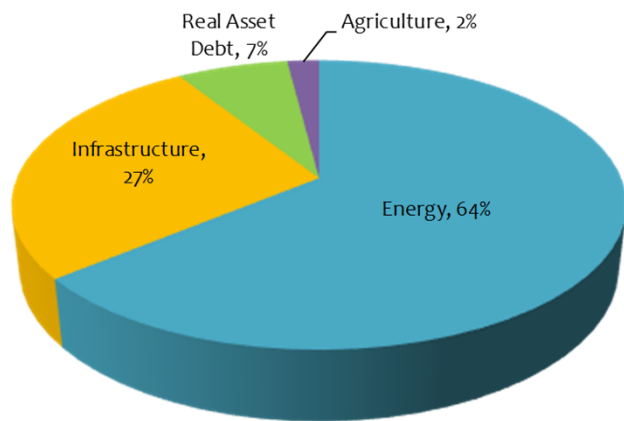
- The Real Assets portfolio now includes private Infrastructure, Energy, and Agriculture, Timber and Other
  - This is consistent with the recently approved new asset class structures
- Real Assets is part of the broader Real Return asset category

The Real Assets portfolio is primarily Energy and Infrastructure partnerships

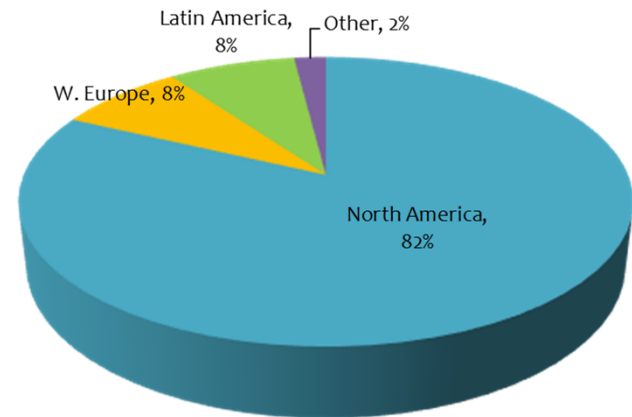
- Both Energy and Infrastructure partnerships have performed well since inception
  - Since inception net IRRs of 21.6% for Energy and 18.2% for Infrastructure
- Mixed performance across the Real Assets funds during the quarter
  - First Reserve Energy Infrastructure II was the strongest performing fund in Q1

Changes during the quarter

- SCERS made no new Real Assets commitments during Q1 2017
- \$22.7 million in new contributions, \$17.7 million in distributions (primarily from EnCap IX & X and ArcLight Energy)
- Portfolio IRR decreased 0.44% while the total portfolio gain increased by \$7.0 million



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



\* Exposures are based on the market values of investments as of 3/31/17

## Real Assets Portfolio Performance Details – as of March 31, 2017

Partnership Name (\$ in thousands)	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
<b>Vintage Year 2013</b>												
EnCap Energy Capital Fund IX, L.P.	Energy	33,000	7,213	31,643	78%	18,802	24,220	43,021	11,379	19.97%	6.21%	1.36
<b>Vintage Year 2013 Total</b>		<b>33,000</b>	<b>7,213</b>	<b>31,643</b>	<b>78%</b>	<b>18,802</b>	<b>24,220</b>	<b>43,021</b>	<b>11,379</b>	<b>19.97%</b>		<b>1.36</b>
<b>Vintage Year 2014</b>												
Carlyle Power Partners II, L.P.	Energy	40,000	25,399	15,304	37%	566	13,523	14,089	-1,215	N/M	N/M	0.92
EnCap Flatrock Midstream III	Energy	20,000	12,761	7,809	36%	1,597	7,190	8,787	977	16.01%	8.96%	1.13
First Reserve Energy Infrastructure Fund II	Energy	35,000	22,919	12,978	35%	897	20,790	21,687	8,709	68.64%	8.96%	1.67
Quantum Energy Partners VI, LP	Energy	35,000	22,623	13,101	35%	1,771	16,973	18,743	5,642	45.80%	8.96%	1.43
Pantheon SCERS SIRF MM, LLC	Infrastructure	100,000	72,100	27,900	28%	0	40,203	40,203	12,303	21.05%	8.96%	1.44
Wastewater Opportunity Fund	Infrastructure	25,000	21,300	3,708	15%	0	2,613	2,613	-1,094	N/M	N/M	0.70
<b>Vintage Year 2014 Total</b>		<b>255,000</b>	<b>177,102</b>	<b>80,800</b>	<b>31%</b>	<b>4,830</b>	<b>101,293</b>	<b>106,123</b>	<b>25,324</b>	<b>23.26%</b>		<b>1.31</b>
<b>Vintage Year 2015</b>												
ArcLight Energy Partners Fund VI	Energy	40,000	17,370	26,326	57%	4,872	23,020	27,892	1,567	N/M	N/M	1.06
EnCap Energy Capital Fund X, L.P.	Energy	40,000	27,157	15,275	32%	5,109	13,271	18,380	3,105	N/M	N/M	1.20
Atalaya Real Assets SMA	Real Asset Debt	100,000	86,814	18,200	13%	6,006	13,479	19,485	1,285	N/M	N/M	1.07
<b>Vintage Year 2015 Total</b>		<b>180,000</b>	<b>131,341</b>	<b>59,802</b>	<b>27%</b>	<b>15,988</b>	<b>49,770</b>	<b>65,758</b>	<b>5,957</b>	<b>N/M</b>		<b>1.10</b>
<b>Vintage Year 2016</b>												
ACM Fund II, LLC	Agriculture	25,000	20,727	7,176	17%	2,951	3,933	6,884	-293	N/M	N/M	0.96
Brookfield Infrastructure Fund III, L.P.	Infrastructure	40,000	33,175	6,814	17%	114	7,350	7,464	650	N/M	N/M	1.10
IFM Global Infrastructure Fund	Infrastructure	100,000	100,000	0	0%	0	0	0	0	N/M	N/M	
<b>Vintage Year 2016 Total</b>		<b>165,000</b>	<b>153,902</b>	<b>13,990</b>	<b>7%</b>	<b>3,064</b>	<b>11,283</b>	<b>14,347</b>	<b>357</b>	<b>N/M</b>		<b>1.03</b>
<b>Portfolio Total:</b>		<b>633,000</b>	<b>469,559</b>	<b>186,234</b>	<b>26%</b>	<b>42,684</b>	<b>186,566</b>	<b>229,250</b>	<b>43,016</b>	<b>19.16%</b>	<b>6.14%</b>	<b>1.23</b>
<b>Portfolio Strategy Totals</b>												
Agriculture		25,000	20,727	7,176	17%	2,951	3,933	6,884	-292	N/M		0.96
Energy		243,000	135,443	122,436	44%	33,613	118,987	152,600	30,164	21.56%		1.25
Infrastructure		265,000	226,575	38,421	15%	114	50,167	50,281	11,860	18.21%		1.31
Real Asset Debt		100,000	86,814	18,200	13%	6,006	13,479	19,485	1,285	N/M		1.07
<b>Portfolio Total:</b>		<b>633,000</b>	<b>469,559</b>	<b>186,234</b>	<b>26%</b>	<b>42,684</b>	<b>186,566</b>	<b>229,250</b>	<b>43,016</b>	<b>19.16%</b>	<b>6.14%</b>	<b>1.23</b>

<sup>1</sup> 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 March 31, 2017

### The Opportunities portfolio's net IRR since inception is 18.71%

- 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
  - 9.27% portfolio IRR v 4.45% 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 the recently approved 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 a 9.40% net IRR since inception

### Changes during the quarter

- SCERS made no new commitments categorized as Opportunities funds during Q1 2017
- No new contributions, \$0.8 million in distributions
- Portfolio IRR virtually unchanged, total portfolio gain increased by \$0.5 million

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

- Categorizations were made at the time of each investment



## Opportunities Portfolio Performance Details – as of March 31, 2017

Partnership Name (\$ in thousands)	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
<b>Vintage Year 2007</b>												
PIMCO Distressed Mortgage Fund, LP	Distressed Debt	18,000	0	18,000	100%	25,384	0	25,384	7,384	8.96%	7.78%	1.41
<b>Vintage Year 2007 Total</b>		<b>18,000</b>	<b>0</b>	<b>18,000</b>	<b>100%</b>	<b>25,384</b>	<b>0</b>	<b>25,384</b>	<b>7,384</b>	<b>8.96%</b>		<b>1.41</b>
<b>Vintage Year 2008</b>												
PIMCO Distressed Mortgage Fund II, L.P.	Distressed Debt	12,000	0	12,000	100%	35,277	0	35,277	23,277	34.39%	12.03%	2.94
<b>Vintage Year 2008 Total</b>		<b>12,000</b>	<b>0</b>	<b>12,000</b>	<b>100%</b>	<b>35,277</b>	<b>0</b>	<b>35,277</b>	<b>23,277</b>	<b>34.39%</b>		<b>2.94</b>
<b>Vintage Year 2009</b>												
MetWest Enhanced TALF Strategy Fund LP	Distressed Debt	20,000	0	20,000	100%	25,304	0	25,304	5,304	11.21%	17.90%	1.27
Stone Tower Structured Credit Recovery Fund LP	Distressed Debt	25,000	0	25,248	100%	43,383	0	43,383	18,135	25.30%	17.90%	1.72
<b>Vintage Year 2009 Total</b>		<b>45,000</b>	<b>0</b>	<b>45,248</b>	<b>100%</b>	<b>68,687</b>	<b>0</b>	<b>68,687</b>	<b>23,439</b>	<b>19.71%</b>		<b>1.52</b>
<b>Vintage Year 2013</b>												
Atalaya Special Opportunities Fund V, L.P.	Distressed Debt	25,000	1,117	24,875	96%	14,492	15,550	30,042	5,167	9.40%	8.41%	1.21
<b>Vintage Year 2013 Total</b>		<b>25,000</b>	<b>1,117</b>	<b>24,875</b>	<b>96%</b>	<b>14,492</b>	<b>15,550</b>	<b>30,042</b>	<b>5,167</b>	<b>9.40%</b>		<b>1.21</b>
<b>Portfolio Total</b>		<b>100,000</b>	<b>1,117</b>	<b>100,123</b>	<b>99%</b>	<b>143,840</b>	<b>15,550</b>	<b>159,390</b>	<b>59,268</b>	<b>18.71%</b>	<b>7.50%</b>	<b>1.59</b>

<sup>1</sup>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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