



INVESTMENT ADVISORY SERVICES

Los Angeles • New York

Sacramento County Employees' Retirement System Quarterly Performance Review

December 9, 2020



Executive Summary

Absolute Return Portfolio Performance Summary – as of September 30, 2020

Growth Oriented Strategies

- The Growth Oriented Portfolio returned 6.33% in Q3 and 3.88% for the 1 year period ending September 30, 2020
 - Outperforming the HFRI FoF Index + 1% benchmark by 197 bps in Q3 though trailing by 275 bps for the 1 year period
 - Trailing the T-bills + 5% long term objective by 187 bps (annualized) over the 5 year period ending September 30, 2020
 - Outperforming the HFRI FoF Index + 1% benchmark by 26 bps (annualized) over the 5 year period
- All funds generated positive returns in Q3, led by Third Point (+11.97%)
- Though most funds generated positive returns over the 1 yr period, led by Sculptor (+18.22%), Lakewood returned -17.41%

Diversifying Strategies

- The Diversifying Portfolio returned 2.14% in Q3 and 0.37% for the 1 year period ending September 30, 2020
 - Underperforming the HFRI Conservative FoF Index benchmark by 26 bps in Q3 and 159 bps for the 1 year period
 - Underperforming the T-bills + 2% long term objective by 242 bps (annualized) over the trailing 5 year period
- Most funds reported solidly positive returns in Q3, other than Laurion, Two Sigma, and Winton
- Large performance dispersion among funds over the 1 year period, ranging from +20.46 (Laurion) to -20.67% (Winton)

Elevated volatility across asset classes during Q1 pushed some portfolio characteristics above their targeted values

- Growth Oriented Portfolio
 - Target standard deviation < 50% of global equities, with an equity beta < 0.5 and equity correlation < 0.8
 - Standard deviation of 7.35% compared to the ACWI standard deviation of 13.03% since December 2011 (56% ratio)
 - Portfolio equity beta of 0.48 with an equity correlation of 0.86
- Diversifying Portfolio
 - Target standard deviation < 25% of global equities, with an equity beta < 0.1 and equity correlation < 0.1
 - Standard deviation of 2.99% compared to the ACWI standard deviation of 13.03% since December 2011 (23% ratio)
 - Portfolio equity beta of 0.10 with an equity correlation of 0.42

Growth Oriented Absolute Return Portfolio Performance – as of September 30, 2020

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													
Third Point Partners Qualified L.P.	54,132,356	5.9%	-0.70%	11.97%	4.76%	11.97%	8.78%	4.16%	7.29%	8.86%	9.71%	0.82	May-12
Event Driven - HF Total	54,132,356	5.9%	-0.70%	11.97%	4.76%	11.97%	8.78%	3.28%	5.55%	7.33%	9.75%	0.67	May-12
Equity Long/Short													
Lakewood Capital Partners, LP	38,122,838	4.1%	-3.08%	1.98%	-22.28%	1.98%	-17.41%	-5.68%	1.29%	2.30%	13.54%	0.16	Jul-13
Equity Long/Short - HF Total	38,122,838	4.1%	-3.08%	1.98%	-22.28%	1.98%	-17.41%	-5.68%	1.29%	2.30%	13.54%	0.16	Jul-13
Multi-Strategy													
Sculptor Domestic Partners II, L.P.	59,195,316	6.4%	0.04%	5.79%	11.94%	5.79%	18.22%	8.62%	8.34%	8.08%	6.46%	1.09	Jan-12
Multi-Strategy - HF Total	59,195,316	6.4%	0.04%	5.79%	11.94%	5.79%	18.22%	8.62%	8.34%	8.08%	6.46%	1.09	Jan-12
Fund of Funds													
Grosvenor SC Absolute Return Fund LLC (Growth)	83,579,749	9.1%	-0.05%	5.27%	0.33%	5.27%	4.00%	2.76%	4.07%	5.24%	6.45%	0.67	Dec-11
Fund of Funds - HF Total	83,579,749	9.1%	-0.05%	5.27%	0.33%	5.27%	4.00%	2.65%	3.98%	4.32%	6.78%	0.41	Sep-04
Growth-Oriented Portfolio Total	235,030,259	25.5%	-0.68%	6.33%	-0.51%	6.33%	3.88%	2.37%	4.33%	4.57%	7.31%	0.42	Sep-04
HFRI FoF Composite + 1%			-0.25%	4.36%	3.15%	4.36%	6.63%	3.85%	4.07%	4.14%	5.36%	0.47	Sep-04
3 Month T-Bills+5%			0.42%	1.26%	4.34%	1.26%	6.10%	6.69%	6.20%	6.38%	0.47%	-	Sep-04
Market Indices													
Libor3Month			0.02%	0.06%	0.55%	0.06%	1.02%	1.86%	1.47%	1.70%	0.48%	-	Sep-04
Bloomberg Barclays US Aggregate Bond Index			-0.05%	0.62%	6.79%	0.62%	6.98%	5.25%	4.19%	4.38%	3.18%	0.83	Sep-04
Bloomberg Barclays US High Yield Bond Index			-1.03%	4.60%	0.62%	4.60%	3.25%	4.20%	6.79%	7.14%	9.45%	0.60	Sep-04
S&P 500 TR			-3.80%	8.93%	5.57%	8.93%	15.15%	12.28%	14.15%	9.40%	14.50%	0.58	Sep-04
MSCI AC World Index Free - Net			-3.22%	8.13%	1.37%	8.13%	10.44%	7.12%	10.30%	7.37%	15.61%	0.43	Sep-04
MSCI EAFE - Net			-2.60%	4.80%	-7.09%	4.80%	0.49%	0.62%	5.26%	5.13%	16.69%	0.28	Sep-04
MSCI EMF (Emerging Markets Free) - Net			-1.60%	9.56%	-1.16%	9.56%	10.54%	2.42%	8.97%	8.32%	21.58%	0.40	Sep-04

Diversifying Absolute Return Portfolio Performance – as of September 30, 2020

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.	57,251,925	6.2%	-2.35%	-2.77%	19.94%	-2.77%	20.46%	11.31%	8.20%	7.76%	6.34%	1.03	Mar-14
LMR Fund Limited	40,771,163	4.4%	1.77%	5.13%	-11.17%	5.13%	-	-	-	-9.40%	28.53%	-	Nov-19
KLS Diversified Fund LP	35,579,987	3.9%	1.53%	3.91%	-11.57%	3.91%	-11.81%	-	-	-6.47%	14.92%	-0.48	Jan-19
Two Sigma Risk Premia Enhanced Fund, LP	38,042,432	4.1%	-0.37%	-2.23%	-15.83%	-2.23%	-15.46%	-	-	-14.36%	8.36%	-1.93	Sep-19
Market Neutral - HF Total	171,645,507	18.6%	-0.16%	0.49%	-4.14%	0.49%	-3.61%	3.07%	3.32%	4.05%	5.97%	0.50	Mar-14
Event Driven													
Blackrock Event Driven Equity Fund (BILPX)	44,721,362	4.8%	-0.10%	2.09%	-	2.09%	-	-	-	2.51%	9.65%	-	Mar-20
Davidson Kempner Institutional Partners LP	47,789,764	5.2%	1.02%	4.37%	4.72%	4.37%	6.63%	-	-	5.56%	6.90%	0.61	May-19
Elliott International Limited - Class A & B	62,902,214	6.8%	0.70%	2.93%	8.97%	2.93%	10.05%	6.61%	7.63%	7.53%	3.28%	1.92	Apr-12
PSquared US Feeder Fund LP	44,970,383	4.9%	-0.85%	-	-	-	-	-	-	-	-	-	Aug-20
Event Driven - HF Total	200,383,723	21.7%	0.57%	3.23%	6.39%	3.23%	7.77%	5.60%	7.02%	7.17%	3.53%	1.69	Apr-12
Equity Long/Short													
Marshall Wace Funds LP - MW Global Opportunities (US) Fund	46,309,964	5.0%	-0.31%	4.52%	8.65%	4.52%	12.53%	-	-	8.73%	4.87%	1.40	Jan-19
Equity Long/Short - HF Total	46,309,964	5.0%	-0.31%	4.52%	8.65%	4.52%	12.53%	8.73%	8.73%	8.73%	4.87%	1.40	Apr-12
Macro-Systematic													
Graham Global Investment Fund II SPC Ltd. - Tactical Trend Segregated	33,561,888	3.6%	-4.23%	3.14%	-6.15%	3.14%	-6.91%	1.33%	-	-1.14%	12.74%	-0.16	Feb-17
Winton Diversified Futures Fund L.P.	31,200,688	3.4%	-0.20%	-4.96%	-18.65%	-4.96%	-20.67%	-3.52%	-	-3.02%	8.32%	-0.54	Jan-17
Macro-Systematic - HF Total	64,762,576	7.0%	-2.33%	-0.93%	-12.62%	-0.93%	-14.09%	-1.13%	-	-2.16%	9.33%	-0.37	Jan-17
Fund of Funds													
Grosvenor SC Absolute Return Fund LLC (Diversifying)	201,924,397	21.9%	0.69%	3.65%	4.14%	3.65%	5.76%	1.93%	0.76%	2.04%	3.65%	0.31	Dec-11
Grosvenor SC Absolute Return Fund LLC Series B	2,605,311	0.3%	1.02%	2.73%	4.16%	2.73%	6.00%	1.92%	-0.26%	1.29%	3.40%	0.09	Feb-13
Fund of Funds - HF Total	204,529,708	22.2%	0.69%	3.52%	4.23%	3.52%	5.95%	1.83%	0.35%	1.90%	3.46%	0.28	Dec-11
Diversifying Portfolio Total	687,631,477	74.5%	-0.01%	2.14%	-0.41%	2.14%	0.37%	0.72%	0.78%	1.85%	3.28%	0.28	Dec-11
HFRI FOF: Conservative Index			-0.23%	2.40%	0.33%	2.40%	1.96%	2.27%	2.32%	3.00%	3.40%	0.60	Dec-11
3 Month T-Bills+2%			0.18%	0.53%	2.12%	0.53%	3.10%	3.69%	3.20%	2.70%	0.25%	-	Dec-11

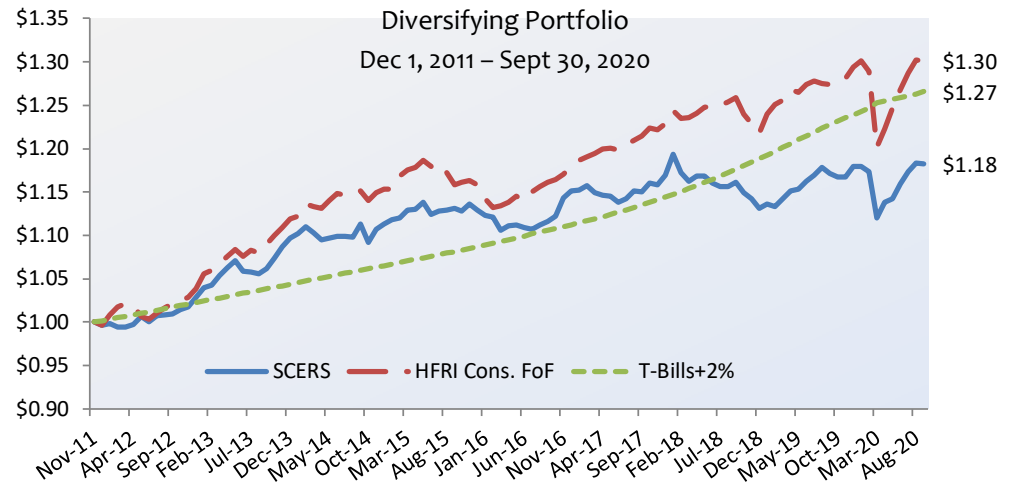
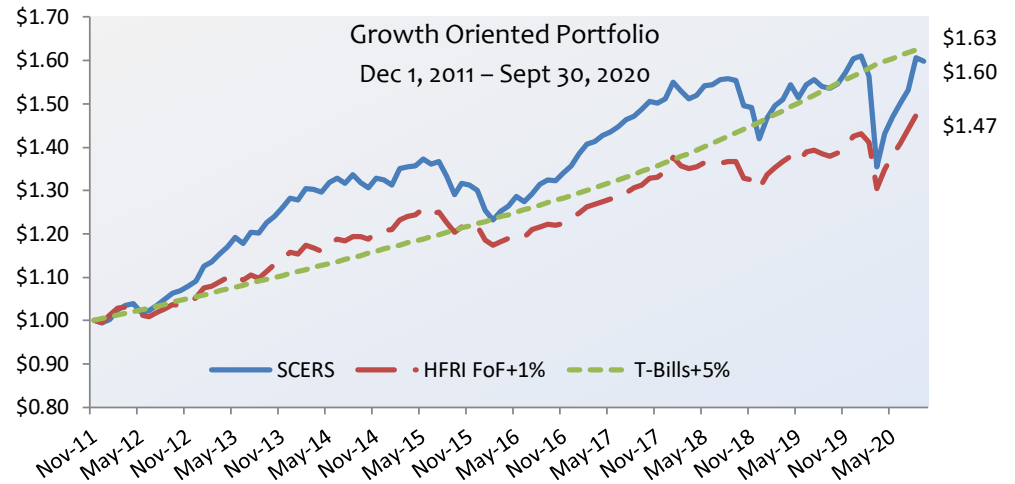
Absolute Return Portfolios Cumulative Performance – December 2011 to Sept. 2020

Despite the sharp downturn in Q1, the Growth Oriented portfolio is again near the T-bills + 5% long term objective; the portfolio remains ahead of the Fund of Funds Index + 1% benchmark

The Diversifying portfolio is trailing both the T-bills + 2% long term objective and the HFRI Fund of Funds Conservative Index over this period

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

- The prior exposure of the Absolute Return portfolio was only Equity Long/Short fund of funds investments



Private Equity Portfolio – as of June 30, 2020

The Private Equity portfolio's net IRR since inception is 14.63%, versus the Cambridge Associates benchmark IRR of 12.28%

- The long-term Policy objective (Russell 3000 + 3%) has a 14.66% IRR over this period

The private equity portfolio gained 9.4% in Q2 as financial markets rallied strongly following the pandemic-driven Q1 sell-off

- Gains were broad-based with several funds generating returns of more than 15% in Q2
 - Thoma Bravo XI & XIII, Gridiron IV, Cortec VII, RRJ II, and Summit VC IV reported the largest gains
- Distributions remained modest as transaction activity was slow to resume following the Q1 market turmoil
 - \$27.9 million in distributions, coming mostly from Thoma Bravo XI, Dyal III, and TOP III

Longer-term performance remains quite strong across most of the private equity funds

- Double-digit net IRRs for all vintage years prior to 2018, with almost all vintage years exceeding peer universes
- Summit VC IV (39.3%), Spectrum VII (39.1%), Marlin Heritage (35.4%), and Accel-KKR IV (35.2%) are leading performance among SCERS' more mature funds

The legacy fund of funds generally reported solid gains during the quarter

- Aggregate since inception net IRR increased from 10.68% to 11.10% during the quarter
 - The aggregate total value (TVPI) increased from 1.60x to 1.63x
- The legacy fund of funds comprise only 10.5% of the current fair value of the Private Equity portfolio

Changes during the quarter

- SCERS committed \$25 million and \$20 million, respectively, to Spectrum IX and Summit VC V (both venture capital, reups with existing GPs) and \$20 million to Shamrock Capital Content Fund II (opportunistic credit) during Q2
 - SCERS committed \$35 million in total to two venture capital funds in Q3 2020
- \$65.4 million in new contributions, \$27.9 million in distributions
- Total portfolio gain increased by \$91.3 million while the total portfolio IRR increased by 0.90%

Private Equity Portfolio Characteristics as of June 30, 2020

The SCERS Private Equity portfolio is diversified by strategy and geography

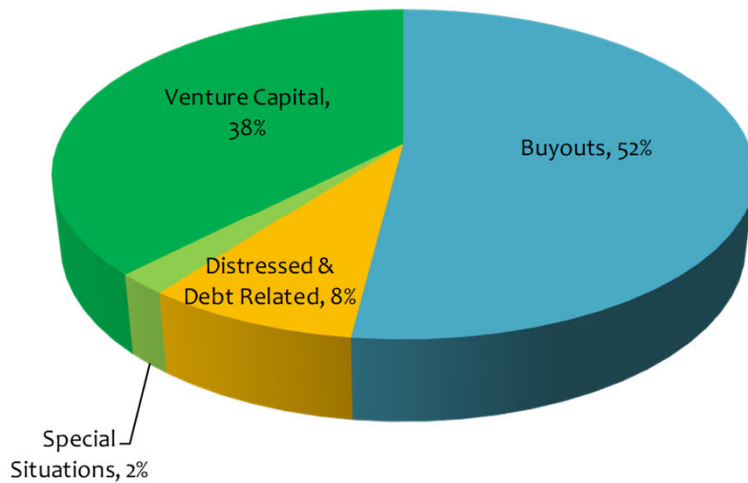
- Investments remain focused in North America, with meaningful exposure to Europe

The legacy fund of funds exposure remains relatively small as a percentage of the total portfolio's value

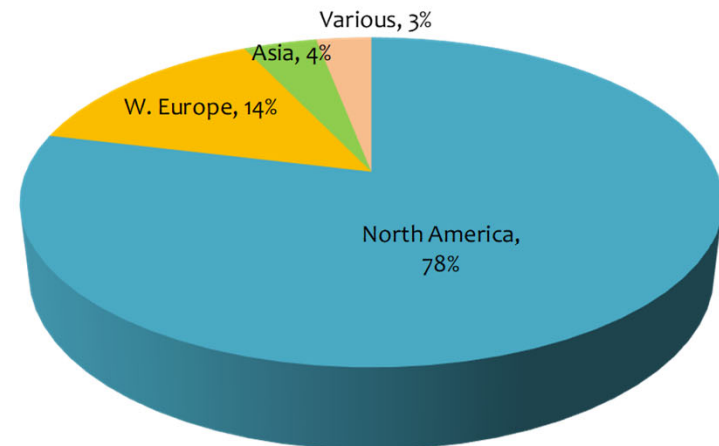
- Represents 10% of the total portfolio's value as of June 30, 2020

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 6/30/20.

Private Equity Portfolio Performance Details – as of June 30, 2020

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	1,125	36,375	97%	54,226	8,697	62,923	26,548	10.63%	7.47%	1.73x
HarbourVest Partners VIII - Mezzanine and Distressed Debt Fund L.P.	Fund of Funds	5,000	200	4,800	96%	6,023	481	6,504	1,704	6.97%	7.47%	1.36x
HarbourVest Partners VIII - Venture Fund L.P.	Fund of Funds	7,500	150	7,350	98%	10,890	3,532	14,422	7,072	10.83%	7.47%	1.96x
Vintage Year 2006 Total		50,000	1,475	48,525	97%	71,138	12,711	83,849	35,324	10.39%	6.96%	1.73x
Vintage Year 2008												
Abbott Capital Private Equity Fund VI, L.P.	Fund of Funds	75,000	750	74,250	99%	81,671	44,796	126,467	52,217	12.13%	13.16%	1.70x
Goldman Sachs Private Equity Partners X, L.P.	Fund of Funds	75,000	13,234	68,958	82%	93,427	21,459	114,886	45,928	11.07%	13.16%	1.67x
HarbourVest International Private Equity Partners VI-Partnership Fund L.P.	Fund of Funds	36,170	1,808	37,980	95%	29,457	33,314	62,771	24,791	11.25%	5.42%	1.65x
Vintage Year 2008 Total		186,170	15,792	181,188	92%	204,555	99,569	304,125	122,937	11.52%	8.21%	1.68x
Vintage Year 2011												
Waterland Private Equity Fund V C.V.	Buyout	17,972	3,263	15,934	82%	30,070	11,157	41,227	25,294	34.99%	10.96%	2.59x
Khosla Ventures IV, L.P.	Venture Capital	10,000	190	9,810	98%	15,153	14,140	29,292	19,482	21.51%	15.33%	2.99x
Vintage Year 2011 Total		27,972	3,453	25,744	88%	45,223	25,297	70,520	44,776	28.21%	12.41%	2.74x
Vintage Year 2012												
Garrison Opportunity Fund III A LLC	Distressed Debt	20,000	0	20,000	100%	7,660	11,449	19,110	-890	-0.86%	13.63%	0.96x
New Enterprise Associates 14, L.P.	Venture Capital	25,000	1,125	23,875	96%	23,001	29,585	52,586	28,711	16.35%	14.03%	2.20x
Summit Partners Venture Capital III-A, LP	Venture Capital	16,350	1,649	19,528	90%	20,972	18,799	39,770	20,242	18.09%	14.03%	2.04x
Vintage Year 2012 Total		61,350	2,774	63,403	95%	51,633	59,833	111,467	48,063	11.98%	11.89%	1.76x
Vintage Year 2013												
Accel-KKR Capital Partners IV, L.P.	Buyout	15,000	318	14,682	98%	23,270	13,921	37,190	22,509	35.22%	13.69%	2.53x
H.I.G. Capital Partners V, L.P.	Buyout	14,000	1,636	12,364	88%	4,890	14,041	18,931	6,567	18.56%	13.69%	1.53x
Marlin Equity IV, L.P.	Buyout	20,000	103	19,897	99%	10,243	15,542	25,785	5,887	8.00%	13.69%	1.30x
RRJ Capital Master Fund II, L.P.	Buyout	35,000	3,917	36,010	89%	32,391	12,493	44,884	8,874	7.28%	12.12%	1.25x
H.I.G. Bayside Loan Opportunity Fund III (Europe-US\$), L.P.	Distressed Debt	30,000	5,769	24,231	81%	24,500	7,019	31,519	7,288	7.56%	5.29%	1.30x
Wayzata Opportunities Fund III, L.P.	Distressed Debt	30,000	24,103	14,718	20%	8,849	5,129	13,978	-740	-1.56%	8.19%	0.95x

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, 2020 (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	2,438	22,563	90%	4,835	32,723	37,559	14,996	11.36%	12.77%	1.66x
Vintage Year 2013 Total		169,000	38,284	144,464	77%	108,978	100,868	209,846	65,382	11.21%	11.24%	1.45x
Vintage Year 2014												
Dyal Capital Partners II	Buyout	35,000	8,628	29,610	75%	5,517	20,090	25,607	-4,002	-6.12%	16.96%	0.86x
H.I.G. Europe Capital Partners II, L.P.	Buyout	15,726	3,817	12,379	76%	2,624	10,566	13,191	811	2.98%	12.60%	1.07x
Marlin Heritage Fund	Buyout	10,000	2,293	10,430	77%	15,749	7,974	23,724	13,294	35.37%	16.96%	2.27x
Thoma Bravo XI	Buyout	30,000	3,203	32,531	89%	49,399	53,807	103,206	70,675	31.99%	16.96%	3.17x
TPG Opportunities Partners III	Distressed Debt	40,000	13,468	48,449	66%	39,538	16,787	56,326	7,876	8.45%	7.50%	1.16x
Khosla Ventures V	Venture Capital	20,000	700	19,300	97%	1,013	25,823	26,836	7,536	10.01%	15.90%	1.39x
Spectrum Equity Investors VII, L.P.	Venture Capital	25,000	1,625	23,375	94%	29,634	37,019	66,653	43,278	39.07%	15.90%	2.85x
Vintage Year 2014 Total		175,726	33,735	176,075	81%	143,476	172,067	315,543	139,468	22.27%	13.53%	1.79x
Vintage Year 2015												
* WPEF VI Overflow Fund C.V.	Buyout	6,740	6,730	10	0%	0	0	0	-10	0.00%	8.77%	0.00x
RRJ Capital Master Fund III, LP	Buyout	40,000	9,633	33,604	76%	29,873	11,058	40,932	7,328	10.82%	8.77%	1.22x
WPEF VI Feeder, L.P.	Buyout	26,959	9,642	20,309	64%	6,092	25,841	31,933	11,625	20.50%	8.77%	1.57x
Accel-KKR Growth Capital Partners II	Mezzanine	15,000	880	14,120	94%	9,537	10,053	19,590	5,469	17.92%	8.07%	1.39x
New Enterprise Associates 15, L.P.	Venture Capital	35,000	2,975	32,029	92%	7,499	45,939	53,438	21,408	16.20%	14.60%	1.67x
Summit Partners Venture Capital Fund IV-A, L.P.	Venture Capital	35,000	26,674	28,376	24%	20,050	26,408	46,458	18,082	39.34%	14.60%	1.64x
Vintage Year 2015 Total		158,698	56,533	128,448	64%	73,051	119,299	192,350	63,902	19.11%	12.24%	1.50x
Vintage Year 2016												
Accel-KKR Capital Partners V, L.P.	Buyout	25,000	9,708	15,292	61%	7,343	13,480	20,824	5,532	21.90%	10.17%	1.36x
Dyal III Pension Investors LP	Buyout	35,000	22,040	21,125	37%	12,017	17,888	29,905	8,780	17.19%	10.17%	1.42x
Linden Capital Partners III	Buyout	35,000	8,057	33,943	77%	25,982	41,390	67,371	33,429	28.86%	10.17%	1.98x
Marlin Heritage Europe, L.P.	Buyout	14,603	3,326	11,434	77%	0	16,303	16,303	4,868	23.61%	5.90%	1.43x
Thoma Bravo Fund XII, L.P.	Buyout	30,000	1,691	36,885	94%	8,578	42,112	50,691	13,805	15.32%	10.17%	1.37x
TSG7 A L.P.	Buyout	16,000	3,881	12,119	76%	178	14,701	14,879	2,760	8.37%	10.17%	1.23x
TSG7 B L.P.	Buyout	4,000	1,113	3,061	72%	288	2,725	3,014	-47	-1.07%	10.17%	0.98x

¹Benchmarks:

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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

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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	2,454	28,940	90%	21,662	15,812	37,474	8,534	11.41%	7.56%	1.29x
Trinity Ventures XII, L.P.	Venture Capital	30,000	5,625	24,375	81%	0	42,688	42,688	18,313	26.87%	15.00%	1.75x
Vintage Year 2016 Total		214,603	57,896	187,174	73%	76,048	207,100	283,147	95,974	19.77%	10.94%	1.51x
Vintage Year 2017												
Marlin Heritage II	Buyout	10,000	1,894	8,106	81%	0	9,010	9,010	904	8.00%	12.45%	1.11x
Summit Partners Europe Growth Equity Fund II, SCSP	Buyout	33,698	21,441	28,698	36%	16,601	22,937	39,538	10,840	71.13%	7.80%	1.38x
New Enterprise Associates 16, L.P.	Venture Capital	35,000	9,625	25,375	73%	627	29,834	30,461	5,086	12.52%	11.01%	1.20x
Vintage Year 2017 Total		78,698	32,960	62,179	58%	17,228	61,781	79,009	16,830	24.61%	10.23%	1.27x
Vintage Year 2018												
Linden Capital Partners IV LP	Buyout	44,330	32,057	14,266	28%	1,993	11,612	13,604	-661	N/M	N/M	0.95x
Marlin Equity V	Buyout	25,000	14,603	10,544	42%	521	13,069	13,590	3,046	19.90%	1.45%	1.29x
TSG8 L.P.	Buyout	45,000	38,368	6,632	15%	0	3,352	3,352	-3,280	N/M	N/M	0.51x
Davidson Kempner Long-Term Distressed Opportunities Fund IV LP	Distressed Debt	35,000	5,497	30,100	84%	597	31,062	31,660	1,560	3.96%	N/A	1.05x
TSSP Opportunities Partners IV (A), L.P.	Distressed Debt	35,000	22,763	14,311	35%	2,234	12,600	14,834	523	N/M	N/M	1.04x
RCP Fund XIII	Fund of Funds	50,000	39,500	10,500	21%	0	8,737	8,737	-1,763	N/M	N/M	0.83x
RCPDirect III	Fund of Funds	25,000	16,114	8,886	36%	386	9,698	10,085	1,198	N/M	N/M	1.13x
Accel-KKR Growth Capital Partners III	Mezzanine	33,320	24,827	8,493	25%	0	8,045	8,045	-448	N/M	N/M	0.95x
Khosla Ventures VI, L.P.	Venture Capital	35,000	17,920	17,080	49%	0	16,795	16,795	-285	N/M	N/M	0.98x
Spectrum Equity VIII, L.P.	Venture Capital	25,000	3,063	21,938	88%	0	20,317	20,317	-1,620	-9.08%	10.27%	0.93x
Vintage Year 2018 Total		352,650	214,712	142,749	39%	5,732	135,287	141,019	-1,730	-1.32%	5.78%	0.99x
Vintage Year 2019												
Cortec Group Fund VII, L.P.	Buyout	30,000	21,532	10,605	28%	2,137	9,966	12,103	1,498	N/M	N/M	1.14x
Gridiron Capital Fund IV, L.P.	Buyout	30,000	22,279	7,721	26%	0	7,711	7,711	-10	N/M	N/M	1.00x
Thoma Bravo Fund XIII, LP	Buyout	45,000	12,447	32,553	72%	0	49,103	49,103	16,550	N/M	N/M	1.51x
New Enterprise Associates 17, L.P.	Venture Capital	25,000	20,250	4,764	19%	0	4,856	4,856	93	N/M	N/M	1.02x
Threshold Ventures III, L.P.	Venture Capital	20,000	15,000	5,000	25%	0	4,537	4,537	-463	N/M	N/M	0.91x
Vintage Year 2019 Total		150,000	91,508	60,642	39%	2,137	76,173	78,310	17,668	N/M	N/M	1.29x

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, 2020 (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
Vintage Year 2020												
Accel-KKR Capital Partners VI, LP	Buyout	30,000	30,000	0	0%	0	0	0	0	N/M	N/M	N/A
Summit Partners Europe Growth Equity Fund III, SCSp	Buyout	22,466	22,466	0	0%	0	0	0	0	N/M	N/M	N/A
Wynnchurch Capital Partners V	Buyout	20,000	19,478	522	3%	0	434	434	-88	N/M	N/M	0.83x
Davidson Kempner Long-Term Distressed Opportunities Fund V LP	Distressed Debt	30,000	28,520	1,480	5%	0	1,471	1,471	-9	N/M	N/M	0.99x
Shamrock Capital Content Fund II, L.P.	Opportunistic Credit	20,000	20,000	0	0%	0	-249	-249	-249	N/M	N/M	N/A
Spectrum Equity IX-A, L.P.	Venture Capital	25,000	25,000	0	0%	0	0	0	0	N/M	N/M	N/A
Summit Partners Venture Capital Fund V-A, L.P.	Venture Capital	20,000	20,000	0	0%	0	0	0	0	N/M	N/M	N/A
Vintage Year 2020 Total		167,466	165,463	2,002	1%	0	1,656	1,656	-346	N/M	N/M	0.83x
Portfolio Total :		1,792,333	714,587	1,222,593	60%	799,200	1,071,641	1,870,841	648,248	14.63%	12.28%	1.53x
Portfolio Strategy Totals												
Buyout		761,493	339,565	491,265	55%	285,759	472,283	758,042	266,777	21.02%		1.54x
Distressed Debt		245,000	102,575	182,229	58%	105,040	101,331	206,371	24,143	5.07%		1.13x
Fund of Funds		311,170	72,881	249,099	77%	276,080	130,715	406,796	157,696	11.10%		1.63x
Mezzanine		48,320	25,707	22,613	47%	9,537	18,098	27,635	5,022	14.97%		1.22x
Opportunistic Credit		20,000	20,000	0	0%	0	-249	-249	-249	N/M		N/A
Venture Capital		406,350	153,859	277,387	62%	122,784	349,463	472,247	194,859	19.01%		1.70x
Portfolio Total :		1,792,333	714,587	1,222,593	60%	799,200	1,071,641	1,870,841	648,248	14.63%	12.28%	1.53x
Portfolio Geography Totals												
US		1,513,000	622,775	1,002,004	59%	627,591	920,951	1,548,542	546,538	14.68%		1.55x
Non-US		279,333	91,812	220,589	67%	171,609	150,690	322,299	101,710	14.31%		1.46x
Portfolio Total		1,792,333	714,587	1,222,593	60%	799,200	1,071,641	1,870,841	648,248	14.63%	12.28%	1.53x

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, 2020

The Private Credit portfolio's net IRR since inception is 6.47%, versus the benchmark return of 6.26%

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

The Private Credit funds reported strong gains in Q2 following the downturn experienced in Q1

- The portfolio returned 5.4% in Q2 and 3.2% for the trailing 1 year period ending June 30, 2020
 - Most of the funds were up between 2% and 9% during Q2, reversing much of the Q1 downturn
- Longer term performance is also regaining lost ground following the sizeable sell-off in Q1
 - 5.2% net IRR for the 3 year period and 6.2% net IRR for the 5 year period
 - The portfolio was generating annualized returns of 7% - 8% over multi-year periods prior to the Q1 downturn

Changes during the quarter

- SCERS made no new commitments to Private Credit funds during Q2
 - SCERS committed \$40 million to an opportunistic credit fund in Q3 2020
- \$8.4 million in new contributions, \$14.6 million in distributions
- Total portfolio gain increased by \$11.1 million while the total portfolio IRR increased by 1.57%

Private Credit Portfolio Details – as of June 30, 2020

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	2,125	20,697	89%	26,198	501	26,699	6,003	8.82%	N/A	1.29x
Vintage Year 2011 Total		20,000	2,125	20,697	89%	26,198	501	26,699	6,003	8.82%	12.41%	1.29x
Vintage Year 2014												
Summit Partners Credit Fund II, L.P.	Direct Lending	35,000	4,715	47,382	87%	30,162	23,950	54,112	6,730	6.46%	2.91%	1.14x
Vintage Year 2014 Total		35,000	4,715	47,382	87%	30,162	23,950	54,112	6,730	6.46%	13.53%	1.14x
Vintage Year 2015												
Athyrium Opportunities Fund II	Opportunistic Credit	32,000	4,313	40,593	87%	32,591	15,569	48,160	7,567	9.10%	8.07%	1.19x
Vintage Year 2015 Total		32,000	4,313	40,593	87%	32,591	15,569	48,160	7,567	9.10%	12.24%	1.19x
Vintage Year 2017												
Athyrium Opportunities Fund III	Opportunistic Credit	25,000	10,727	22,105	57%	7,797	15,848	23,645	1,540	5.00%	7.89%	1.07x
Vintage Year 2017 Total		25,000	10,727	22,105	57%	7,797	15,848	23,645	1,540	5.00%	10.23%	1.07x
Vintage Year 2018												
Benefit Street Partners Senior Secured Opportunities Fund L.P.	Direct Lending	50,000	0	50,953	100%	9,599	43,188	52,788	1,835	1.87%	1.63%	1.04x
Summit Partners Credit Fund III, L.P.	Direct Lending	50,000	27,309	34,984	45%	12,294	26,524	38,818	3,833	N/M	N/M	1.11x
TCP Direct Lending Fund VIII-S, LLC	Direct Lending	100,000	28,567	71,433	71%	8,899	67,418	76,317	4,884	4.81%	1.63%	1.07x
Vintage Year 2018 Total		200,000	55,876	157,370	72%	30,792	137,130	167,922	10,552	4.59%	5.78%	1.07x
Vintage Year 2019												
BSP Levered US SOF II (Senior Secured Opportunities) Fund L.P.	Direct Lending	50,000	46,950	3,050	6%	0	3,564	3,564	515	N/M	N/M	1.17x
OrbiMed Royalty & Credit Opportunities III, LP	Opportunistic Credit	35,000	28,726	6,993	18%	726	6,393	7,119	126	N/M	N/M	1.02x
Vintage Year 2019 Total		85,000	75,676	10,043	11%	726	9,957	10,683	640	N/M	N/M	1.06x
Vintage Year 2020												
IFM USIDF (Offshore) B Feeder	Direct Lending	40,000	40,000	0	0%	0	0	0	0	N/M	N/M	N/A
MCP Private Capital Fund IV (Feeder) SCSp	Direct Lending	35,496	33,239	2,215	6%	0	2,248	2,248	34	N/M	N/M	1.02x
Vintage Year 2020 Total		75,496	73,239	2,215	3%	0	2,248	2,248	34	N/M	N/M	1.02x

¹Benchmarks:

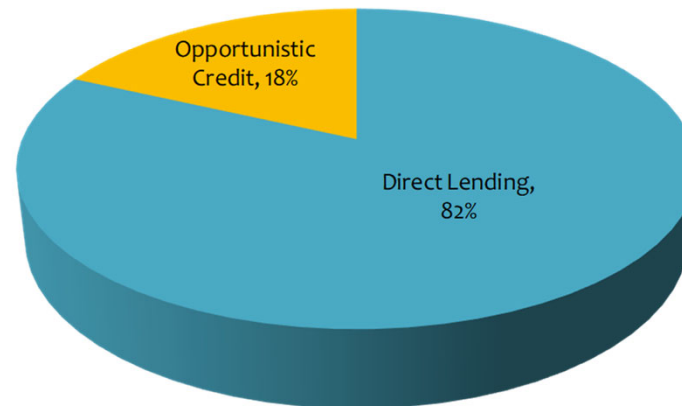
Private Credit Investments: Cambridge Associates median return for the respective debt strategies and vintage years

Private Credit Portfolio: Credit Suisse Leveraged Loan Index + 2%

Private Credit Portfolio Details – as of June 30, 2020 (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
Portfolio Strategy Totals												
Direct Lending		380,496	182,906	230,713	52%	87,152	167,394	254,546	23,833	6.02%		1.10x
Opportunistic Credit		92,000	43,765	69,691	52%	41,113	37,811	78,924	9,233	7.99%		1.13x
Portfolio Total :		472,496	226,671	300,404	52%	128,265	205,205	333,470	33,066	6.47%	6.26%	1.11x

Market Value Strategy Exposure*



* Exposures are based on the market values of investments as of 6/30/20.

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, 2020

The Real Assets portfolio's net IRR since inception is 6.36%, versus the blended benchmark return of 5.01%

- The Real Assets portfolio includes private Infrastructure, Energy, and Agriculture, Timber and Other
- Real Assets is part of the broader Real Return asset category

The Real Assets portfolio is primarily Infrastructure and Energy partnerships

- Recent and longer-term performance of the Energy partnerships was materially impacted by significant Q1 markdowns; Infrastructure partnerships saw smaller declines in Q1 and have maintained good performance since inception
 - Since inception net IRRs of 8.9% for Infrastructure and 4.2% for Energy
- The Real Asset Debt separate account has also performed well with a 10.2% since inception net IRR
 - That separate account market value remains small at \$17.6 million, with very few new investments

The Real Assets portfolio generated a 2.6% net return in Q2

- The portfolio's largest gains came from the Energy funds
 - The Energy funds saw a partial rebound from their downturn in Q1
- The Infrastructure funds generally reported solid gains during the quarter, led by EQT IV

Changes during the quarter

- SCERS made no new commitments to Real Assets funds during Q2
 - SCERS committed \$40 million to an energy-related royalties fund and \$50 million to a social infrastructure fund in Q3 2020
- \$8.8 million in new contributions, \$4.4 million in distributions
- Portfolio IRR increased by 0.39% while the total portfolio gain increased by \$13.9 million

Real Assets Portfolio Performance Details – as of June 30, 2020

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	1,857	37,421	94%	28,609	9,024	37,633	212	0.25%	2.22%	1.01x
Vintage Year 2013 Total		33,000	1,857	37,421	94%	28,609	9,024	37,633	212	0.25%		1.01x
Vintage Year 2014												
Carlyle Power Partners II, L.P.	Energy	40,000	14,139	33,565	65%	7,547	27,541	35,088	1,523	2.02%	2.92%	1.05x
EnCap Flatrock Midstream III	Energy	20,000	1,092	23,147	95%	9,818	16,053	25,871	2,724	6.99%	2.92%	1.12x
Global Energy & Power Infrastructure Fund II	Energy	35,000	2,644	35,993	92%	27,249	22,213	49,463	13,470	23.74%	2.92%	1.37x
Quantum Energy Partners VI, LP	Energy	35,000	9,572	31,268	73%	18,740	29,373	48,113	16,845	22.23%	2.92%	1.54x
Pantheon SCERS SIRF MM, LLC	Infrastructure	100,000	33,968	70,332	66%	28,400	64,468	92,868	22,536	9.19%	6.17%	1.32x
Wastewater Opportunity Fund	Infrastructure	25,000	1,253	23,755	95%	1,998	18,245	20,243	-3,512	-8.49%	6.17%	0.85x
Vintage Year 2014 Total		255,000	62,669	218,059	75%	93,753	177,892	271,645	53,585	10.08%		1.25x
Vintage Year 2015												
ArcLight Energy Partners Fund VI	Energy	40,000	5,604	42,665	86%	17,220	26,561	43,781	1,116	1.03%	1.46%	1.03x
EnCap Energy Capital Fund X, L.P.	Energy	40,000	5,939	36,707	85%	7,896	25,299	33,195	-3,512	-4.11%	1.46%	0.90x
Atalaya Real Assets SMA	Real Asset Debt	100,000	84,789	36,169	15%	26,527	17,552	44,078	7,910	10.23%	N/A	1.22x
Vintage Year 2015 Total		180,000	96,332	115,541	46%	51,643	69,411	121,054	5,513	2.05%		1.05x
Vintage Year 2016												
ACM Fund II, LLC	Agriculture	25,000	4,744	24,402	81%	4,581	16,324	20,905	-3,497	-8.71%	5.62%	0.86x
Brookfield Infrastructure Fund III, L.P.	Infrastructure	40,000	7,322	32,530	82%	8,748	30,610	39,358	6,828	9.52%	N/A	1.21x
IFM Global Infrastructure Fund	Infrastructure	125,053	0	125,053	100%	34,893	125,019	159,912	34,860	11.94%	N/A	1.28x
Vintage Year 2016 Total		190,053	12,066	181,985	94%	48,223	171,953	220,176	38,190	9.47%		1.21x
Vintage Year 2017												
Quantum Energy Partners VII, LP	Energy	40,000	19,610	22,748	51%	2,415	17,354	19,770	-2,978	-8.28%	-6.79%	0.87x
Meridiam Infrastructure North America Fund III	Infrastructure	50,000	47,065	2,935	6%	1	1,034	1,035	-1,901	-61.31%	N/A	0.35x
Vintage Year 2017 Total		90,000	66,674	25,683	26%	2,416	18,388	20,804	-4,879	-12.51%		0.81x
Vintage Year 2018												
Paine Schwartz Food Chain Fund V, LP	Agriculture	40,000	35,531	4,469	11%	0	3,270	3,270	-1,199	N/M	N/M	0.73x

¹Benchmarks:

Real Assets Portfolio: 45% Cambridge Infrastructure, 35% Cambridge Energy, 10% NCREIF Timberland, 10% NCREIF Farland
 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 Performance Details – as of June 30, 2020 (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
EnCap Flatrock Midstream IV, L.P.	Energy	22,500	14,867	8,218	34%	588	8,438	9,026	808	6.20%	-1.27%	1.10x
Tailwater Energy Fund III, LP	Energy	32,000	7,486	26,569	77%	1,662	22,561	24,223	-2,346	N/M	N/M	0.91x
ISQ Global Infrastructure Fund II	Infrastructure	50,000	20,018	33,679	60%	3,697	33,242	36,939	3,260	N/M	N/M	1.10x
Vintage Year 2018 Total		144,500	77,901	72,936	46%	5,947	67,511	73,458	522	0.64%		1.01x
Vintage Year 2019												
Tailwater Energy Fund IV, LP	Energy	35,000	28,881	6,109	17%	0	3,809	3,809	-2,300	N/M	N/M	0.62x
Brookfield Infrastructure Fund IV	Infrastructure	40,000	24,009	16,032	40%	511	15,030	15,542	-490	N/M	N/M	0.97x
EQT Infrastructure IV (No.2) USD SCSp	Infrastructure	35,000	14,334	21,494	59%	876	21,241	22,117	623	N/M	N/M	1.03x
Vintage Year 2019 Total		110,000	67,225	43,635	39%	1,388	40,080	41,468	-2,167	N/M		0.95x
Portfolio Total :		1,002,553	384,724	695,260	62%	231,978	554,260	786,238	90,978	6.36%	5.01%	1.13x
Portfolio Strategy Totals												
Agriculture		65,000	40,275	28,871	38%	4,581	19,594	24,175	-4,696	-11.59%		0.84x
Energy		372,500	111,691	304,410	70%	121,745	208,226	329,971	25,562	4.17%		1.08x
Infrastructure		465,053	147,968	325,811	68%	79,125	308,888	388,013	62,203	8.91%		1.19x
Real Asset Debt		100,000	84,789	36,169	15%	26,527	17,552	44,078	7,910	10.23%		1.22x
Portfolio Total :		1,002,553	384,724	695,260	62%	231,978	554,260	786,238	90,978	6.36%	5.01%	1.13x
Portfolio Geography Totals												
US		712,500	319,041	466,472	55%	183,252	329,118	512,370	45,898	4.55%		1.10x
Non-US		290,053	65,683	228,789	77%	48,726	225,142	273,868	45,080	11.02%		1.20x
Portfolio Total		1,002,553	384,724	695,260	62%	231,978	554,260	786,238	90,978	6.36%	5.01%	1.13x

¹Benchmarks:

Real Assets Portfolio: 45% Cambridge Infrastructure, 35% Cambridge Energy, 10% NCREIF Timberland, 10% NCREIF Farmland

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 Characteristics as of June 30, 2020

The SCERS Real Assets portfolio is primarily Infrastructure and Energy

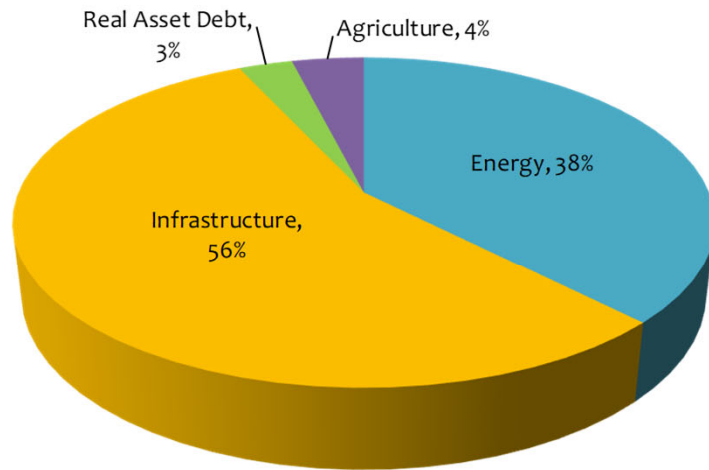
- Other strategies such as Agriculture represent much smaller allocations in the portfolio

The portfolio is focused on North America, though is diversified globally

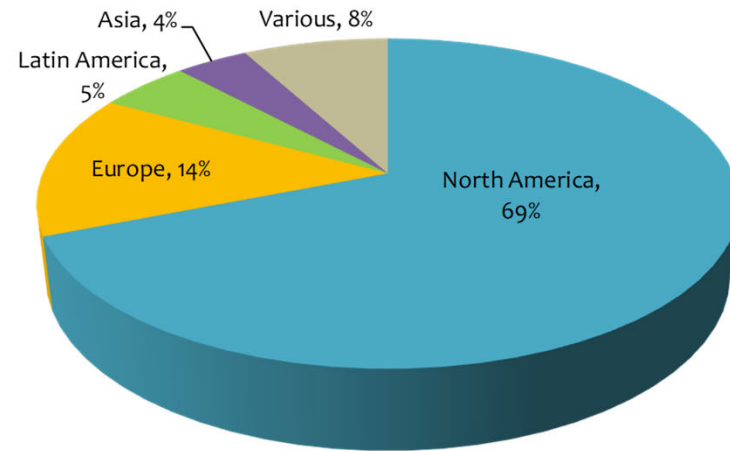
- The portfolio has exposure to Europe, Latin America, and Asia

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 6/30/20.

Opportunities Portfolio – as of June 30, 2020

The Opportunities portfolio's net IRR since inception is 18.29%

- The long-term benchmark is SCERS' 7.00% total portfolio actuarial return objective
- Also tracking the portfolio's 3 year IRR versus an intermediate-term benchmark
 - 2.96% portfolio IRR v 5.61% 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)
 - The 3 year comparison, for example, reflects only the performance of Atalaya V

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 7.41% net IRR since inception

Changes during the quarter

- SCERS made no new commitments categorized as Opportunities funds during Q2 2020
- No new contributions, \$0.2 million in distributions
- Portfolio IRR decreased 0.04%, total portfolio gain decreased \$0.2 million

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

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

Opportunities Portfolio Performance Details – as of June 30, 2020

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%	9.83%	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%	12.18%	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%	14.33%	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%	14.33%	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%	24,667	6,190	30,857	5,982	7.41%	8.19%	1.24x
Vintage Year 2013 Total		25,000	1,117	24,875	96%	24,667	6,190	30,857	5,982	7.41%		1.24x
Portfolio Total :		100,000	1,117	100,123	99%	154,015	6,190	160,205	60,082	18.29%	7.00%	1.60x

* Liquidated partnership

¹ Benchmarks:

Opportunities Investments: Cambridge Associates median return for the respective strategies and vintage years
Opportunities Portfolio: 7.00% actuarial return objective

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