



Board of Retirement Regular Meeting

Sacramento County Employees' Retirement System

Agenda Item 16

MEETING DATE: September 21, 2022

SUBJECT: Quarterly Investment Performance Review—
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 periods ending June 30, 2022 for the Absolute Return portfolio, and the periods ending March 31, 2022 for the Private Equity, Private Credit, and Real Assets portfolios.

PURPOSE

This item complies with SCERS' investment policy statement reporting requirements and contributes to the effective management and oversight of investment activities.

SCERS ALTERNATIVE ASSETS PORTFOLIO RETURNS

This memorandum provides a summarized table of SCERS' Alternative Assets period returns, which complements Cliffwater's Quarterly Performance Review, and highlights notable manager performance, along with any recent alternative investments made by SCERS. The returns for the private market asset classes shown in the table below, and provided within Cliffwater's reports, are lagged a quarter and reflect valuations as of March 31, 2022.

SCERS' alternative asset class returns are as follows:

SCERS ALTERNATIVE ASSETS PERFORMANCE SUMMARY
Quarter Reporting Periods Ending June 30, 2022

SCERS ASSET CLASS	Quarter*	1-Year*	3-Year*	5-Year*	Since Inception*	Since Inception Date*
SCERS Absolute Return	-0.8%	1.1%	5.4%	4.0%	4.2%	Sep-04
HFRI FoF Conservative	-2.0%	-0.2%	4.5%	4.0%	3.6%	
HFRI FoF Composite + 1%	-3.4%	-4.2%	5.1%	4.7%	4.3%	
SCERS Private Equity	-1.3%	22.5%	28.7%	26.1%	19.0%	Feb-08
Cambridge Private Equity/Venture Capital	-1.2%	23.6%	24.7%	21.2%	15.7%	
SCERS Private Credit	0.6%	8.2%	9.8%	9.0%	9.2%	Oct-11
Credit Suisse Leveraged Loan + 2%	0.4%	5.2%	6.1%	6.1%	6.8%	
SCERS Real Assets	5.3%	28.2%	10.7%	11.4%	12.3%	Jan-13
(60%) Cambridge Private Infrastructure; (30%) Cambridge Private Energy; (10%) NCREIF Farmland	6.3%	22.0%	9.1%	8.6%	7.9%	
<p>*Note: Periods ending 3/31/22 for Private Equity, Private Credit, Real Assets, and Opportunities Periods ending 6/30/22 for Absolute Return All returns are time-weighted, except Private Equity which is net IRR</p>						

SCERS PORTFOLIO RESULTS

For the reporting quarter ended March 31, 2022:

- SCERS' Private Equity portfolio underperformed against its benchmark, -1.3% versus -1.2%. The relative underperformance was broad based but primarily in SCERS' venture capital strategies, as the public markets pulled back significantly from growth stocks.
- Although SCERS' Private Credit portfolio outperformed on a relative basis against its benchmark return, 0.6% versus 0.4%, the absolute return was underwhelming as a number of SCERS' opportunistic strategies were impacted by rising interest rates and declining public market values.
- SCERS' Real Assets portfolio generated a strong absolute return of 5.3% but underperformed against the benchmark return of 6.3%. SCERS' energy and power strategies benefited from high energy prices during the quarter, with robust returns ranging from 6.4%-29.1% among the top 10 performers.

For the reporting quarter ended June 30, 2022, SCERS' Absolute Return portfolio outperformed, on a relative basis, against the HFRI Fund of Funds Conservative Index return, -0.8% versus -2.0%, with the Diversifying Portfolio outperforming on a relative basis (-0.7% versus -2.0%), and in particular the Macro Systematic strategy (+11.2%). The Growth-Oriented portfolio is being

liquidated over the course of the year as it was eliminated from SCERS' revised strategic asset allocation.

Below are notable top and bottom performing funds among SCERS' alternative assets managers for the quarterly reporting period:

- Top performing funds:
 - Absolute Return:
 - Graham Global Investment Fund II (macro-systematic): +11.2%
 - PSquared (event driven): +2.6%
 - LMR Fund Ltd (market neutral): +0.8%
 - Private Equity portfolio:
 - Threshold Ventures III (venture capital): +26.3%
 - Garrison Opportunity Fund III A (distressed debt): +14.4%
 - Davidson Kempner Long-term Distressed Opportunities Fund IV (distressed debt): +11.2%
 - Summit Partners Europe Growth Equity Fund II (growth equity): +10.5%
 - Private Credit portfolio:
 - Summit Partners Credit Fund IV (direct lending): +2.8%
 - Ares Capital Europe V (direct lending): +2.6%
 - BSP Levered U.S. Senior Secured Opportunities Fund (direct lending): +2.4%
 - Real Assets portfolio:
 - Meridiam Infrastructure North America Fund III (infrastructure): +32.8%
 - NGP Royalty Partners (energy and power): +29.1%
 - EnCap Energy Capital Fund X (energy and power): +28.4%
 - EnCap Energy Capital Fund IX (energy and power): +19.6%
- Bottom performing funds:
 - Absolute Return portfolio:
 - Sculptor Domestic Partners II (multi-strategy): -9.5%
 - Eisler Capital Fund (macro discretionary): -4.6%
 - Davidson Kempner Institutional Partners (event driven): -2.9%

-
- Private Equity portfolio:
 - RRJ Capital Master Fund III (buyout): -38.0%
 - Khosla Ventures IV (venture capital): -19.9%
 - Spectrum Equity Investors VII (growth equity): -14.5%
 - Atalaya Special Opportunities Fund VI (distressed debt): -13.7%

 - Private Credit portfolio:
 - Athyrium Opportunities Fund III (opportunistic): -8.6%
 - OrbiMed Royalty & Credit Opportunities III (opportunistic): -3.6%
 - Summit Partners Credit Fund II (direct lending): -1.2%
 - Athyrium Opportunities Fund II (opportunistic): -1.0%

 - Real Assets portfolio:
 - Meridiam Sustainable Infrastructure Europe IV (infrastructure): -8.2%
 - Blackrock Global Energy & Power Infrastructure Fund II (energy and power): -1.8%
 - Wastewater Opportunity Fund (infrastructure): -0.4%

NEW INVESTMENTS

During the quarter ended June 30, 2022, SCERS made the following new investments:

- NGP Royalty Partners II (Real Assets – energy): \$50 million
- Ridgewood Water & Strategic Infrastructure Fund II (Real Assets - infrastructure): \$50 million
- OrbiMed Royalty & Credit Opportunities IV (Private Credit – direct lending): \$40 million
- Shamrock Capital Content Fund III (Private Equity – buyout): \$30 million
- Spectrum Equity X (Private Equity – buyout): \$25 million

After the quarter, SCERS made the following new investments:

- None

ATTACHMENT

- Board Order
- Cliffwater's Quarterly Performance Review for Alternative Assets for the Quarter ended June 30, 2022.

Prepared by:

/S/

JR Pearce
Senior Investment Officer

Reviewed by:

/S/

Steve Davis
Chief Investment Officer

/S/

Eric Stern
Chief Executive Officer



Retirement Board Order

Sacramento County Employees' Retirement System

Before the Board of Retirement
September 21, 2022

AGENDA ITEM:

Quarterly Investment Performance Review—Alternative Assets

THE BOARD OF RETIREMENT hereby accepts the recommendation of Staff for the Board to receive and file the Cliffwater Quarterly Investment Performance Review – Alternative Assets.

I HEREBY CERTIFY that the above order was passed and adopted on September 21, 2022 by the following vote of the Board of Retirement, to wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

ALTERNATES (Present but not voting):

Keith DeVore
Board President

Eric Stern
Chief Executive Officer and
Board Secretary



INVESTMENT ADVISORY SERVICES

Los Angeles • New York

Sacramento County Employees' Retirement System Quarterly Performance Review

September 21, 2022

Absolute Return Portfolio Performance Summary – as of June 30, 2022

Diversifying Strategies

- The Diversifying Portfolio returned -0.73% in Q2 and 1.77% for the one-year period ending June 30, 2022
 - Outperformed the HFRI Conservative FoF Index benchmark by 128 bps in Q2 and 198 bps for the one-year period
 - Outperformed the T-bills + 2% long term objective by 42 bps (annualized) over the trailing 5-year period
- Graham Tactical Trend led performance in Q2 (+11.16%), followed by PSquared (+2.65%) and LMR (+0.85%)
 - Sculptor (-9.49%) and Eisler (-4.57%) were the biggest detractors in Q2
- Graham Tactical Trend (+32.34%), Elliott (+12.78%), and Two Sigma (+11.29%) led performance for the one-year period
 - Laurion (-15.25%) and Sculptor (-12.58%) suffered the largest declines over this period

Growth Oriented Strategies

- The Growth Oriented Portfolio returned -2.18% in Q2 and -8.17% for the one-year period ending June 30, 2022
 - Exceeded the HFRI FoF Index + 1% benchmark by 118 bps in Q2 but trailed by 398 bps for the one-year period
- The portfolio was significantly downsized in Q1 '22 following the 2021 decision to eliminate the Growth Oriented Portfolio
 - The only investments in the portfolio are the remaining holdings of the Grosvenor Growth portfolio
 - Grosvenor Growth will continue to wind-down as that portfolio's liquidity allows

Portfolio risk and market sensitivity are near expectations for the Diversifying portfolio

- Diversifying Portfolio
 - Target standard deviation < 25% of global equities, with an equity beta < 0.2 and equity correlation < 0.5
 - Standard deviation of 3.47% compared to the ACWI standard deviation of 13.60% since December 2011 (26% ratio)
 - Portfolio equity beta of 0.14 with an equity correlation of 0.54
- The Growth Oriented portfolio is being eliminated in connection with the 2021 asset liability study

Diversifying Absolute Return Portfolio Performance – as of June 30, 2022

Fund	Market Value	Actual %	Returns								Std Dev	Sharpe Ratio	Incep Date
			Jun	QTD	YTD	FYTD	1 Year	3 Year	5 Year	Incep			
Diversifying Portfolio													
Market Neutral													
Aristeia Partners, L.P.	48,443,546	5.4%	0.09%	0.07%	-0.49%	1.80%	1.80%	-	-	5.04%	5.47%	0.83	Jan-21
Laurion Capital, Ltd.	57,975,244	6.5%	1.92%	0.15%	-7.00%	-15.25%	-15.25%	11.98%	10.50%	8.32%	10.16%	0.74	Mar-14
LMR Fund Limited	51,261,093	5.7%	0.38%	0.85%	3.10%	9.20%	9.20%	-	-	5.01%	16.79%	0.35	Nov-19
Two Sigma Risk Premia Enhanced Fund, LP	49,358,286	5.5%	-2.69%	-1.33%	0.54%	11.29%	11.29%	-	-	3.32%	10.70%	0.29	Sep-19
Market Neutral - HF Total	207,038,169	23.2%	-0.02%	-0.05%	-1.33%	-0.10%	-0.10%	4.58%	5.78%	5.53%	6.01%	0.75	Mar-14
Event Driven													
BlackRock Event Driven Equity Fund (BILPX)	52,641,147	5.9%	-1.12%	-2.11%	-1.92%	-2.64%	-2.64%	-	-	4.00%	5.80%	0.62	Mar-20
Davidson Kempner Institutional Partners LP	57,035,693	6.4%	-1.36%	-2.95%	-2.85%	-2.87%	-2.87%	5.49%	-	5.33%	5.34%	0.83	May-19
Elliott International Limited - Class A & B	77,888,132	8.7%	-1.20%	-0.11%	4.96%	12.78%	12.78%	11.24%	9.04%	8.44%	3.28%	2.19	Apr-12
PSquared US Feeder Fund LP	53,584,337	6.0%	2.10%	2.65%	1.85%	5.34%	5.34%	-	-	3.79%	4.77%	0.72	Aug-20
Event Driven - HF Total	241,149,309	27.0%	-0.51%	-0.65%	0.82%	3.63%	3.63%	6.82%	6.27%	7.09%	3.33%	1.78	Apr-12
Equity Long/Short													
Marshall Wace Funds LP - MW Global Opportunities (US) Fund	52,960,214	5.9%	-0.77%	-1.87%	1.17%	2.27%	2.27%	5.30%	-	5.25%	8.19%	0.54	Jan-19
Equity Long/Short - HF Total	52,960,214	5.9%	-0.77%	-1.87%	1.17%	2.27%	2.27%	5.30%	5.25%	5.25%	8.19%	0.54	Apr-12
Macro-Discretionary													
Eisler Capital Fund LP - Class A	41,136,798	4.6%	-1.25%	-4.57%	-3.68%	-8.58%	-8.58%	-	-	-8.58%	4.14%	-2.27	Jul-21
Macro-Discretionary - HF Total	41,136,798	4.6%	-1.25%	-4.57%	-3.68%	-8.58%	-8.58%	-8.58%	0.42%	-0.11%	4.41%	-0.21	May-12
Macro-Systematic													
Graham Global Investment Fund II SPC Ltd. - Tactical Trend Segregated Por	51,246,842	5.7%	3.43%	11.16%	37.36%	32.34%	32.34%	14.98%	9.33%	7.29%	13.02%	0.50	Feb-17
Macro-Systematic - HF Total	51,246,842	5.7%	3.43%	11.16%	37.36%	32.34%	32.34%	11.07%	7.66%	6.10%	10.92%	0.48	Jan-17
Multi-Strategy													
Sculptor Domestic Partners II, L.P.	58,161,078	6.5%	-3.22%	-9.49%	-11.93%	-12.58%	-12.58%	4.21%	5.21%	6.51%	6.84%	0.83	Jan-12
Multi-Strategy - HF Total	58,161,078	6.5%	-3.22%	-9.49%	-11.93%	-12.58%	-12.58%	0.86%	-0.48%	3.55%	6.61%	0.42	May-13
Fund of Funds													
Grosvenor SC Absolute Return Fund LLC (Diversifying)	218,779,861	24.5%	0.34%	-0.35%	-0.37%	2.61%	2.61%	4.90%	2.93%	2.48%	3.69%	0.44	Dec-11
Fund of Funds - HF Total	218,779,861	24.5%	0.34%	-0.35%	-0.37%	2.60%	2.60%	4.87%	2.82%	2.35%	3.54%	0.42	Dec-11
Diversifying Portfolio Total	870,472,271	97.5%	-0.19%	-0.73%	0.40%	1.77%	1.77%	4.89%	3.53%	3.43%	3.47%	0.73	Dec-11
HFRI FOF: Conservative Index			-1.32%	-2.01%	-1.86%	14.77%	-0.21%	4.53%	3.96%	3.61%	3.45%	0.78	Dec-11
3 Month T-Bills+2%			0.18%	0.60%	1.14%	4.31%	2.17%	2.63%	3.11%	2.61%	0.24%	-	Dec-11

Growth Oriented Absolute Return Portfolio Performance – as of June 30, 2022

Fund	Market Value	Actual %	Returns								Std Dev	Sharpe Ratio	Incep Date
			Jun	QTD	YTD	FYTD	1 Year	3 Year	5 Year	Incep			
Growth-Oriented Portfolio													
Fund of Funds													
Grosvenor SC Absolute Return Fund LLC (Growth)	22,184,737	2.5%	-0.27%	-2.18%	-6.91%	-6.98%	-6.98%	2.40%	3.08%	4.76%	6.64%	0.60	Dec-11
Fund of Funds - HF Total	22,184,737	2.5%	-0.27%	-2.18%	-6.91%	-6.98%	-6.98%	2.40%	2.99%	4.13%	6.86%	0.40	Sep-04
Growth-Oriented Portfolio Total	22,184,737	2.5%	-0.27%	-2.18%	-11.67%	-8.17%	-8.17%	5.19%	4.15%	4.71%	7.98%	0.42	Sep-04
HFRI FoF Composite + 1%			-0.78%	-3.36%	-5.78%	14.30%	-4.19%	5.06%	4.69%	4.26%	5.39%	0.51	Sep-04
3 Month T-Bills+5%			0.42%	1.35%	2.63%	10.56%	5.20%	5.64%	6.11%	6.25%	0.46%	-	Sep-04
Market Indices													
Libor3Month			0.19%	0.42%	0.57%	0.85%	0.65%	0.78%	1.34%	1.57%	0.47%	-	Sep-04
Bloomberg US Aggregate Bond Index			-1.57%	-4.69%	-10.35%	-10.59%	-10.29%	-0.93%	0.88%	3.25%	3.45%	0.49	Sep-04
Bloomberg US High Yield Bond Index			-6.73%	-9.83%	-14.19%	0.58%	-12.82%	0.20%	2.10%	6.18%	9.30%	0.52	Sep-04
S&P 500 TR			-8.25%	-16.10%	-19.96%	25.85%	-10.62%	10.60%	11.31%	9.32%	14.73%	0.57	Sep-04
MSCI AC World Index Free - Net			-8.43%	-15.66%	-20.18%	17.33%	-15.75%	6.21%	7.00%	7.11%	15.66%	0.42	Sep-04
MSCI EAFE - Net			-9.28%	-14.51%	-19.57%	8.83%	-17.77%	1.07%	2.20%	4.84%	16.76%	0.27	Sep-04
MSCI EMF (Emerging Markets Free) - Net			-6.65%	-11.45%	-17.63%	5.28%	-25.29%	0.57%	2.18%	7.23%	20.98%	0.37	Sep-04

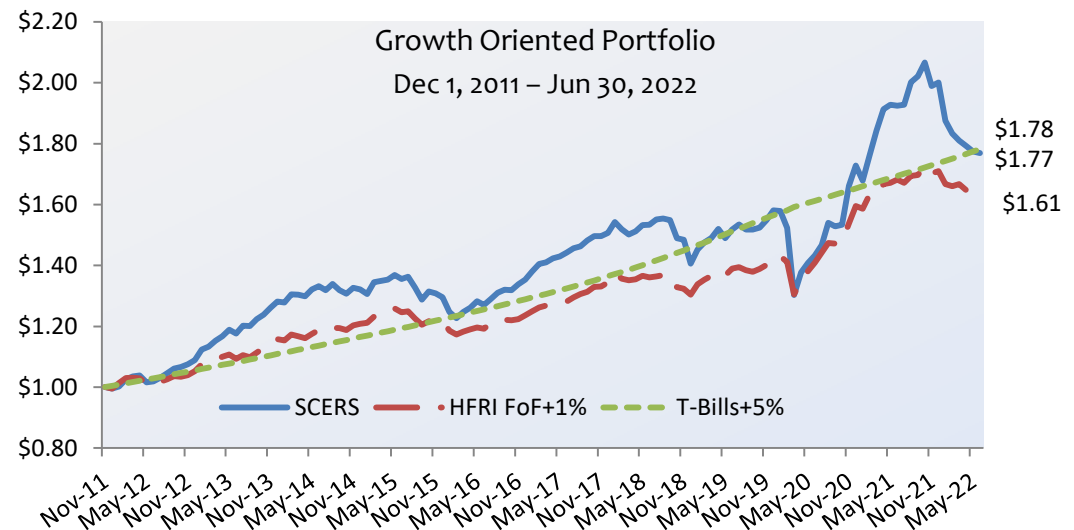
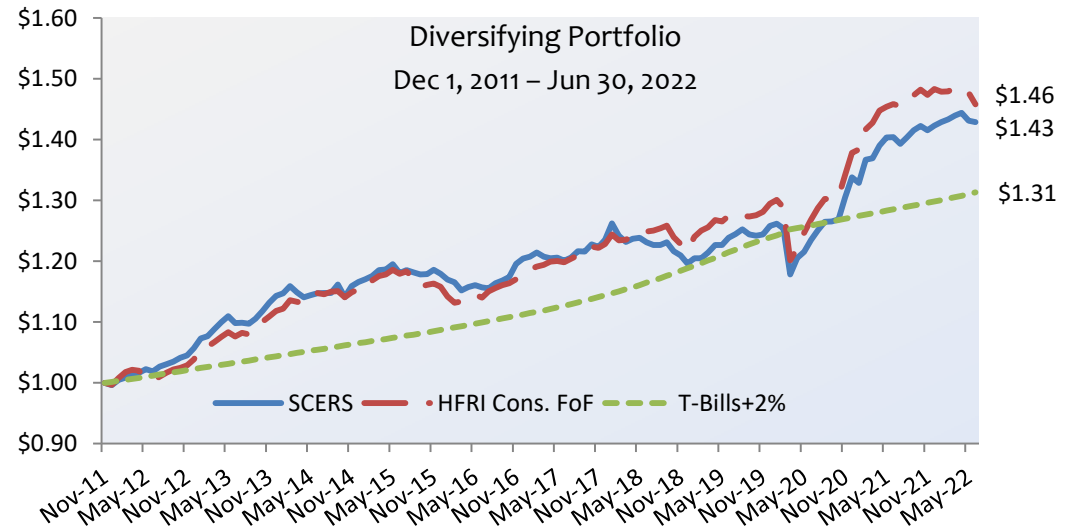
Absolute Return Portfolios Cumulative Performance – December 2011 to June 2022

The Diversifying portfolio is above its T-bills + 2% long term objective though trails the HFRI Fund of Funds Conservative Index over this period

Despite sharp downturns in Q1 2020 and 2022, the Growth Oriented portfolio continued to meet the T-bills + 5% long term objective and remained ahead of the Fund of Funds Index + 1% benchmark

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 March 31, 2022

The Private Equity portfolio's net IRR since inception is 18.96%, versus the Cambridge Associates benchmark IRR of 15.71%

- The long-term Policy objective (Russell 3000 + 3%) has a 17.21% IRR over this period

The portfolio returned -1.3% in Q1 as global equity markets fell with increased geopolitical and economic concerns (ACWI -5.4%)

- The largest declines came from some of the portfolio's Venture Capital and other Technology-focused funds
 - RRJ III, Khosla Ventures IV and V, Spectrum VII, Thoma Bravo XI, and Atalaya SOF VI reported the largest declines in Q1
 - However, several of the portfolio's funds did report positive returns for the quarter
- Distributions slowed somewhat during the quarter though remained relatively strong
 - \$67.0 million in distributions, led by Summit Europe II, NEA 15, Abbott VI, and Waterland VI

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

- Double-digit net IRRs for all vintage years prior to 2020, with all vintage years exceeding peer universes
- Summit VC IV (47.9%), Spectrum VII (43.8%), Trinity Ventures XII (42.2%), Waterland V (40.3%), AKKR IV (39.0%), Linden III (37.0%), AKKR V (34.5%), and Marlin Heritage (33.8%) are leading performance among SCERS' more mature funds

The legacy fund of funds, comprising 5.3% of the Private Equity portfolio, were generally down 5 – 6% during the quarter

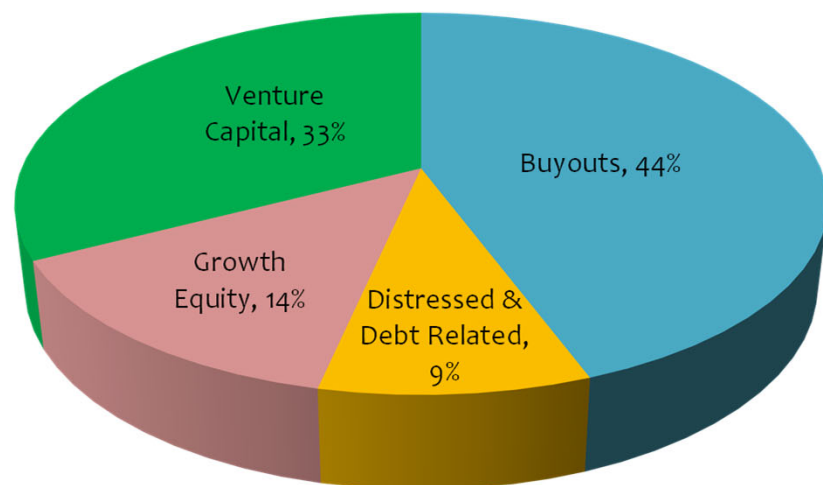
- The legacy fund of funds distributed \$7.9 million during the quarter

Changes during the quarter

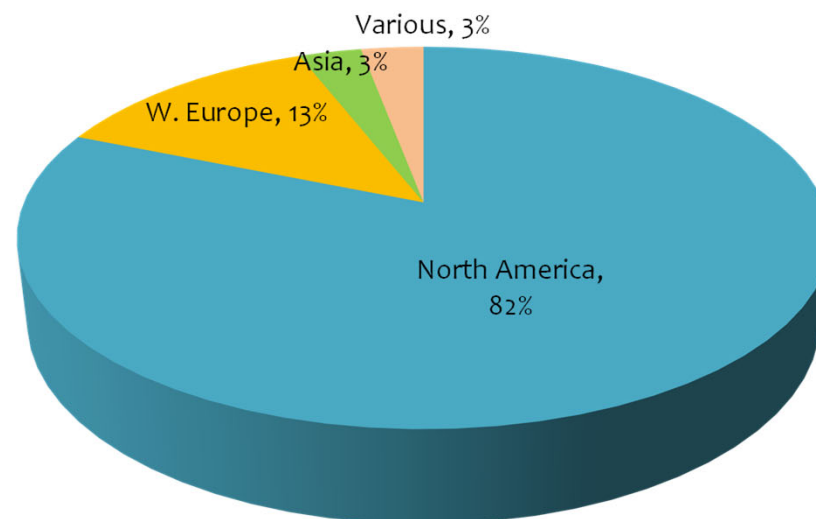
- SCERS committed \$77.5 million in total across two VC funds and one Growth Equity fund (all re-ups) during Q1
 - SCERS also committed \$107.5 million in total across four funds (all re-ups, included Buyout, VC, and Credit strategies) in Q2 2022
- \$39.7 million in new contributions, \$67.0 million in distributions
- Total portfolio gain decreased by \$23.0 million while the total portfolio IRR decreased by 0.68%

Private Equity Portfolio Exposures as of March 31, 2022

Private Equity Portfolio Strategy Exposure*



Private Equity Portfolio Geographic Exposure*



Portfolio Strategy Totals	(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	TVPI Bench.
Buyout	784,502	269,051	620,222	66%	503,370	673,683	1,177,053	556,830	24.44%		1.90x	
Distressed Debt	330,000	110,949	273,023	66%	193,137	155,196	348,333	75,310	8.92%		1.28x	
Fund of Funds	310,805	41,169	281,061	87%	344,890	161,941	506,830	225,769	12.42%		1.80x	
Growth Equity	280,268	147,963	209,974	47%	227,053	255,707	482,760	272,786	35.51%		2.30x	
Opportunistic Credit	20,000	13,160	9,178	34%	2,333	6,991	9,323	145	N/M		1.02x	
Venture Capital	402,500	110,957	291,561	72%	133,014	530,083	663,097	371,536	23.76%		2.27x	
Portfolio Total :	2,128,075	693,249	1,685,019	67%	1,403,796	1,783,601	3,187,397	1,502,377	18.96%	15.71%	1.89x	

* Exposures are based on the market values of investments as of 3/31/22.

Private Equity Portfolio Performance Details – as of March 31, 2022

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	TVPI Bench.
Vintage Year 2006													
HarbourVest Partners VIII - Buyout Fund L.P.	Fund of Funds	37,500	1,125	36,375	97%	61,272	5,267	66,539	30,164	11.06%	7.94%	1.83x	1.74x
HarbourVest Partners VIII - Mezzanine and Distressed Debt Fund L.P.	Fund of Funds	5,000	200	4,800	96%	6,241	330	6,571	1,771	7.00%	7.94%	1.37x	1.74x
HarbourVest Partners VIII - Venture Fund L.P.	Fund of Funds	7,500	150	7,350	98%	12,974	3,668	16,642	9,292	11.90%	7.94%	2.26x	1.74x
Vintage Year 2006 Total		50,000	1,475	48,525	97%	80,488	9,266	89,753	41,228	10.93%	7.20%	1.85x	1.48x
Vintage Year 2008													
Abbott Capital Private Equity Fund VI, L.P.	Fund of Funds	75,000	375	74,625	100%	113,776	34,980	148,756	74,131	13.68%	13.74%	1.99x	2.18x
Goldman Sachs Private Equity Partners X, L.P.	Fund of Funds	75,000	13,433	69,027	82%	102,497	22,203	124,700	55,673	11.68%	13.74%	1.81x	2.18x
HarbourVest International Private Equity Partners VI-Partnership Fund L.P.	Fund of Funds	35,805	1,790	37,980	95%	44,388	28,100	72,488	34,508	12.12%	1.06%	1.91x	1.04x
Vintage Year 2008 Total		185,805	15,599	181,632	92%	260,661	85,282	345,943	164,311	12.56%	8.68%	1.90x	1.52x
Vintage Year 2011													
Waterland Private Equity Fund V C.V.	Buyout	17,791	2,916	16,235	84%	43,025	4,345	47,370	31,135	35.00%	10.85%	2.92x	1.65x
Khosla Ventures IV, L.P.	Venture Capital	10,000	190	9,810	98%	27,022	21,386	48,408	38,598	26.47%	18.45%	4.93x	2.89x
Vintage Year 2011 Total		27,791	3,106	26,045	89%	70,048	25,731	95,778	69,734	30.37%	13.23%	3.68x	1.82x
Vintage Year 2012													
Garrison Opportunity Fund III A LLC	Distressed Debt	20,000	0	20,000	100%	13,627	10,682	24,308	4,308	3.05%	15.89%	1.22x	1.66x
Summit Partners Venture Capital III-A, LP	Growth Equity	16,350	1,849	19,764	89%	37,774	4,033	41,807	22,043	17.81%	14.44%	2.12x	2.04x
New Enterprise Associates 14, L.P.	Venture Capital	25,000	875	24,125	97%	25,788	55,299	81,086	56,961	20.48%	19.31%	3.36x	2.76x
Vintage Year 2012 Total		61,350	2,724	63,889	96%	77,188	70,014	147,202	83,313	14.89%	13.72%	2.30x	1.75x
Vintage Year 2013													
Accel-KKR Capital Partners IV, L.P.	Buyout	15,000	318	15,501	98%	35,781	19,659	55,440	39,939	38.97%	17.16%	3.58x	1.91x
H.I.G. Capital Partners V, L.P.	Buyout	14,000	431	13,569	97%	16,392	13,762	30,153	16,584	24.65%	17.16%	2.22x	1.91x
Marlin Equity IV, L.P.	Buyout	20,000	0	20,070	100%	16,955	12,217	29,171	9,101	9.20%	17.16%	1.45x	1.91x
RRJ Capital Master Fund II, L.P.	Buyout	35,000	3,824	35,989	89%	43,482	9,577	53,059	17,069	10.62%	14.79%	1.47x	1.73x

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 March 31, 2022 (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	TVPI Bench.
Atalaya Special Opportunities Fund V, L.P.	Distressed Debt	25,000	1,117	24,875	96%	30,017	1,916	31,933	7,058	7.84%	8.60%	1.28x	1.37x
H.I.G. Bayside Loan Opportunity Fund III (Europe-US\$), L.P.	Distressed Debt	30,000	5,400	24,600	82%	28,963	3,943	32,906	8,306	7.76%	2.91%	1.34x	1.11x
Wayzata Opportunities Fund III, L.P.	Distressed Debt	30,000	25,318	14,718	16%	10,063	3,706	13,769	-949	-1.70%	8.60%	0.94x	1.37x
Trinity Ventures XI, L.P.	Venture Capital	25,000	375	24,625	99%	4,835	61,181	66,016	41,391	17.40%	18.06%	2.68x	2.58x
Vintage Year 2013 Total		194,000	36,783	173,947	81%	186,487	125,960	312,447	138,500	14.31%	14.19%	1.80x	1.69x
Vintage Year 2014													
Dyal Capital Partners II	Buyout	35,000	9,081	34,264	74%	11,933	32,647	44,580	10,316	7.65%	19.55%	1.30x	2.06x
H.I.G. Europe Capital Partners II, L.P.	Buyout	15,567	3,391	15,054	78%	11,559	10,408	21,967	6,913	12.86%	17.56%	1.46x	1.82x
Marlin Heritage Fund	Buyout	10,000	2,211	10,513	78%	18,276	8,422	26,697	16,185	33.77%	19.55%	2.54x	2.06x
Thoma Bravo XI	Buyout	30,000	3,203	32,531	89%	61,926	46,444	108,370	75,839	28.57%	19.55%	3.33x	2.06x
TPG Opportunities Partners III	Distressed Debt	40,000	11,819	50,098	70%	50,190	12,943	63,133	13,035	10.44%	9.63%	1.26x	1.36x
Spectrum Equity Investors VII, L.P.	Growth Equity	25,000	1,625	23,375	94%	54,675	55,040	109,715	86,340	43.75%	24.50%	4.69x	2.43x
Khosla Ventures V	Venture Capital	20,000	700	19,300	97%	21,634	49,971	71,606	52,306	28.51%	22.81%	3.71x	2.81x
Vintage Year 2014 Total		175,567	32,029	185,136	82%	230,193	215,875	446,068	260,932	25.82%	18.73%	2.41x	1.93x
Vintage Year 2015													
* WPEF VI Overflow Fund C.V.	Buyout	6,672	6,662	10	0%	0	0	0	-10	0.00%	17.90%	0.00x	1.84x
RRJ Capital Master Fund III, LP	Buyout	40,000	4,392	39,069	89%	35,534	8,855	44,389	5,320	6.83%	17.90%	1.14x	1.84x
WPEF VI Feeder, L.P.	Buyout	26,687	16,424	24,125	38%	30,207	23,011	53,217	29,093	27.26%	17.90%	2.21x	1.84x
Accel-KKR Growth Capital Partners II	Growth Equity	15,000	220	15,445	99%	24,284	11,469	35,752	20,307	32.46%	24.40%	2.31x	2.41x
Summit Partners Venture Capital Fund IV-A, L.P.	Growth Equity	35,000	34,921	38,991	0%	38,912	54,365	93,277	54,286	47.91%	24.40%	2.39x	2.41x
New Enterprise Associates 15, L.P.	Venture Capital	35,000	1,925	33,079	95%	21,723	51,102	72,826	39,746	17.94%	22.81%	2.20x	2.46x
Vintage Year 2015 Total		158,359	64,544	150,719	59%	150,660	148,802	299,461	148,742	24.69%	17.56%	1.99x	1.74x
Vintage Year 2016													
Accel-KKR Capital Partners V, L.P.	Buyout	25,000	270	24,730	99%	18,460	29,424	47,884	23,154	34.50%	22.66%	1.94x	1.92x
Dyal III Pension Investors LP	Buyout	35,000	21,793	22,721	38%	19,529	24,790	44,320	21,599	23.47%	22.66%	1.95x	1.92x
Linden Capital Partners III	Buyout	35,000	2,157	39,843	94%	60,797	55,166	115,963	76,120	37.04%	22.66%	2.91x	1.92x

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 March 31, 2022 (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	TVPI Bench.
Marlin Heritage Europe, L.P.	Buyout	14,455	1,685	13,138	88%	1,677	39,225	40,902	27,764	41.08%	16.23%	3.11x	1.66x
Thoma Bravo Fund XII, L.P.	Buyout	30,000	7,578	40,687	75%	20,525	50,417	70,942	30,255	17.79%	22.66%	1.74x	1.92x
TSG7 A L.P.	Buyout	16,000	3,255	12,745	80%	6,670	31,099	37,769	25,024	29.86%	22.66%	2.96x	1.92x
TSG7 B L.P.	Buyout	4,000	180	3,994	96%	1,498	4,904	6,402	2,408	19.61%	22.66%	1.60x	1.92x
Atalaya Special Opportunities Fund VI, L.P.	Distressed Debt	25,000	2,454	28,940	90%	38,137	4,250	42,388	13,447	13.94%	8.72%	1.46x	1.22x
Trinity Ventures XII, L.P.	Venture Capital	30,000	4,275	25,725	86%	25,510	75,393	100,904	75,179	42.17%	28.75%	3.92x	2.40x
Vintage Year 2016 Total		214,455	43,646	212,523	80%	192,804	314,669	507,473	294,950	29.55%	18.19%	2.39x	1.56x
Vintage Year 2017													
Marlin Heritage II	Buyout	10,000	-78	10,078	101%	2,117	13,696	15,813	5,735	18.90%	26.60%	1.57x	1.93x
Summit Partners Europe Growth Equity Fund II, SCSP	Growth Equity	33,359	30,106	35,796	10%	50,657	41,569	92,226	56,430	86.43%	18.86%	2.58x	1.49x
New Enterprise Associates 16, L.P.	Venture Capital	35,000	4,375	30,625	88%	4,566	44,836	49,402	18,777	17.75%	33.22%	1.61x	2.32x
Vintage Year 2017 Total		78,359	34,403	76,499	56%	57,340	100,101	157,441	80,942	38.18%	21.00%	2.06x	1.50x
Vintage Year 2018													
Linden Capital Partners IV LP	Buyout	44,330	12,010	36,029	73%	7,749	41,731	49,480	13,451	22.89%	24.40%	1.37x	1.58x
Marlin Equity V	Buyout	25,000	4,117	21,030	84%	7,998	26,717	34,715	13,685	29.75%	24.40%	1.65x	1.58x
TSG8 L.P.	Buyout	45,000	22,067	22,986	51%	132	22,470	22,602	-384	-1.19%	24.40%	0.98x	1.58x
Davidson Kempner Long-Term Distressed Opportunities Fund IV LP	Distressed Debt	35,000	2,400	33,198	93%	6,809	43,951	50,760	17,563	16.06%	20.01%	1.53x	1.39x
TSSP Opportunities Partners IV (A), L.P.	Distressed Debt	35,000	8,287	40,478	76%	15,056	32,541	47,597	7,120	17.35%	20.01%	1.18x	1.39x
RCP Fund XIII	Fund of Funds	50,000	20,107	29,893	60%	1,904	36,407	38,311	8,418	21.09%	34.42%	1.28x	1.58x
RCPDirect III	Fund of Funds	25,000	3,989	21,011	84%	1,837	30,986	32,823	11,812	27.20%	11.30%	1.56x	1.25x
Accel-KKR Growth Capital Partners III	Growth Equity	33,320	5,527	27,793	83%	0	32,162	32,162	4,369	12.68%	27.13%	1.16x	1.79x
Spectrum Equity VIII, L.P.	Growth Equity	25,000	2,500	22,500	90%	20,752	31,332	52,084	29,584	47.13%	27.13%	2.31x	1.79x
Khosla Ventures VI, L.P.	Venture Capital	35,000	2,380	32,620	93%	0	53,074	53,074	20,454	26.35%	37.61%	1.63x	2.14x
Vintage Year 2018 Total		352,650	83,383	287,537	76%	62,238	351,371	413,609	126,072	23.29%	21.15%	1.44x	1.32x
Vintage Year 2019													
Cortec Group Fund VII, L.P.	Buyout	30,000	10,610	25,865	65%	6,478	27,464	33,942	8,077	30.67%	29.69%	1.31x	1.42x

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

Private Equity Portfolio Performance Details – as of March 31, 2022 (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	TVPI Bench.
Gridiron Capital Fund IV, L.P.	Buyout	30,000	6,021	25,416	80%	1,493	36,496	37,989	12,573	N/M	N/M	1.49x	1.42x
Thoma Bravo Fund XIII, LP	Buyout	45,000	9,278	49,289	79%	23,173	65,137	88,311	39,021	42.36%	29.69%	1.79x	1.42x
New Enterprise Associates 17, L.P.	Venture Capital	25,000	7,750	17,264	69%	1,935	22,783	24,718	7,454	30.40%	36.57%	1.43x	1.57x
Threshold Ventures III, L.P.	Venture Capital	20,000	4,700	15,300	77%	0	29,788	29,788	14,488	60.92%	36.57%	1.95x	1.57x
Vintage Year 2019 Total		150,000	38,359	133,134	74%	33,080	181,667	214,748	81,614	41.16%	23.13%	1.61x	1.24x
Vintage Year 2020													
Accel-KKR Capital Partners VI, LP	Buyout	30,000	22,524	7,476	25%	0	7,476	7,476	0	N/M	N/M	1.00x	1.31x
Wynnchurch Capital Partners V	Buyout	20,000	14,104	5,896	29%	0	7,644	7,644	1,748	N/M	N/M	1.30x	1.31x
Davidson Kempner Long-Term Distressed Opportunities Fund V LP	Distressed Debt	30,000	3,904	26,367	87%	274	30,583	30,856	4,490	N/M	N/M	1.17x	1.15x
Spectrum Equity IX-A, L.P.	Growth Equity	25,000	12,750	12,250	49%	0	11,728	11,728	-522	N/M	N/M	0.96x	1.27x
Summit Partners Europe Growth Equity Fund III, SCSp	Growth Equity	22,239	15,139	7,385	32%	0	7,396	7,396	11	N/M	N/M	1.00x	1.10x
Summit Partners Venture Capital Fund V-A, L.P.	Growth Equity	20,000	13,325	6,675	33%	0	6,882	6,882	206	N/M	N/M	1.03x	1.27x
Shamrock Capital Content Fund II, L.P.	Opportunistic Credit	20,000	13,160	9,178	34%	2,333	6,991	9,323	145	N/M	N/M	1.02x	1.19x
Canvas Ventures 3, L.P.	Venture Capital	20,000	12,322	7,678	38%	0	9,011	9,011	1,333	N/M	N/M	1.17x	1.32x
OrbiMed Private Investments VIII, LP	Venture Capital	15,000	8,513	6,488	43%	0	6,635	6,635	147	N/M	N/M	1.02x	1.32x
Vintage Year 2020 Total		202,239	115,740	89,393	43%	2,607	94,344	96,951	7,558	N/M	N/M	1.08x	1.08x
Vintage Year 2021													
Linden Capital Partners V LP	Buyout	30,000	30,000	0	0%	0	-400	-400	-400	N/M	N/M	N/A	N/A
Marlin Heritage III, L.P.	Buyout	30,000	30,000	0	0%	0	0	0	0	N/M	N/M	N/A	N/A
Shamrock Capital Growth Fund V, L.P.	Buyout	20,000	18,630	1,370	7%	3	883	886	-484	N/M	N/M	0.65x	1.02x
Strategic Value Special Situations Fund V, L.P.	Distressed Debt	30,000	20,250	9,750	33%	0	10,682	10,682	932	N/M	N/M	1.10x	1.08x
CRV Select Fund I, LP	Venture Capital	20,000	2,500	17,500	88%	0	18,983	18,983	1,483	N/M	N/M	1.08x	1.01x
CRV XVIII, LP	Venture Capital	20,000	4,850	15,150	76%	0	17,846	17,846	2,696	N/M	N/M	1.18x	1.01x
Khosla Ventures VII, L.P.	Venture Capital	20,000	11,440	8,560	43%	0	9,385	9,385	825	N/M	N/M	1.10x	1.01x

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 March 31, 2022 (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	TVPI Bench.
Vintage Year 2021 Total		170,000	117,670	52,330	31%	3	57,378	57,381	5,051	N/M	N/M	1.10x	N/A
Vintage Year 2022													
Sixth Street Opportunities Partners V (A), L.P.	Distressed Debt	30,000	30,000	0	0%	0	0	0	0	N/M	N/M	N/A	N/A
Accel-KKR Growth Capital Partners IV	Growth Equity	30,000	30,000	0	0%	0	-269	-269	-269	N/M	N/M	N/A	N/A
CRV Select Fund II, LP	Venture Capital	22,500	18,788	3,713	17%	0	3,411	3,411	-302	N/M	N/M	0.92x	0.96x
Threshold Ventures IV, L.P.	Venture Capital	25,000	25,000	0	0%	0	0	0	0	N/M	N/M	N/A	N/A
Vintage Year 2022 Total		107,500	103,788	3,713	3%	0	3,142	3,142	-570	N/M	N/M	0.85x	N/A
Portfolio Total :		2,128,075	693,249	1,685,019	67%	1,403,796	1,783,601	3,187,397	1,502,377	18.96%	15.71%	1.89x	

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 March 31, 2022

The Private Credit portfolio's net IRR since inception is 9.16%, versus the benchmark return of 6.80%

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

The Private Credit funds reported another quarter of gains, despite increased market volatility

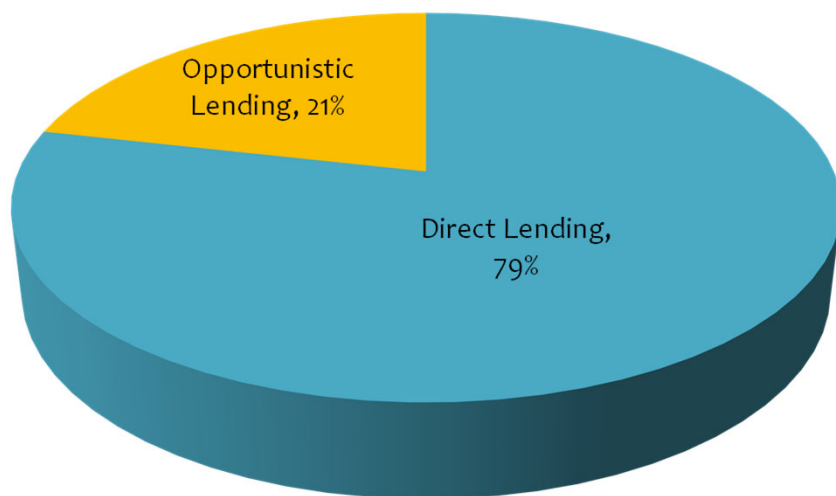
- The portfolio returned 0.6% in Q1 and 8.2% for the trailing 1-year period ending March 31, 2022
 - Most of the funds showed positive returns of 1% - 3% for the quarter
 - However, the healthcare-focused Athyrium funds and OrbiMed Royalty III reported declines in Q1
 - The declines ranged from -1.0% to -8.6% for these funds
 - Summit Credit II also declined in Q1, returning -1.2% for the quarter
- Longer term performance remains steady despite the modest sell-off in Q1 2020
 - 9.8% net IRR for the 3-year period and 9.0% net IRR for the 5-year period

Changes during the quarter

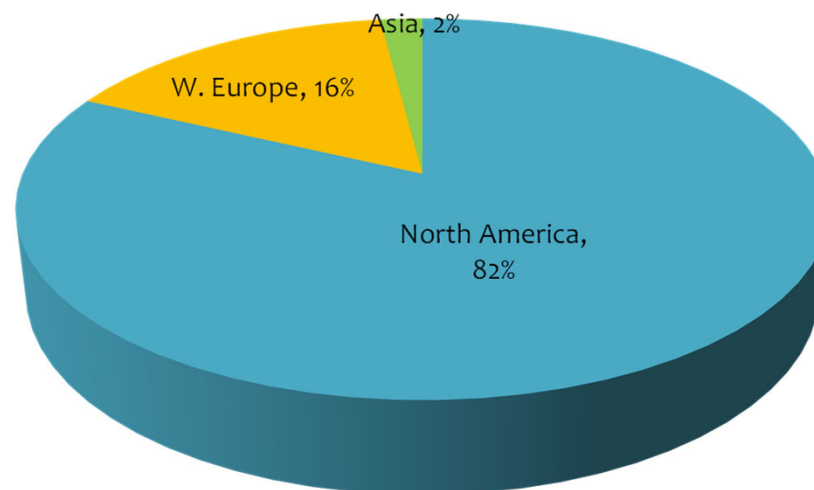
- SCERS made no new commitments to Private Credit funds during the quarter
 - SCERS committed \$40 million (re-up) to an Opportunistic Lending fund in Q2 2022
- \$14.4 million in new contributions, \$18.1 million in distributions
- Total portfolio gain increased by \$2.0 million while the total portfolio IRR declined by 0.45%

Private Credit Portfolio Exposures as of March 31, 2022

Private Credit Portfolio Strategy Exposure*



Private Credit Portfolio Geographic Exposure*



Portfolio Strategy Totals	(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	TVPI Bench.
Direct Lending	485,138	208,397	351,056	57%	168,765	250,875	419,640	68,584	8.98%		1.20x	
Opportunistic Lending	152,000	65,565	123,283	57%	78,486	65,547	144,033	20,750	9.78%		1.17x	
Portfolio Total :	637,138	273,962	474,339	57%	247,251	316,422	563,673	89,333	9.16%	6.80%	1.19x	

* Exposures are based on the market values of investments as of 3/31/22.

Private Credit Portfolio Details – as of March 31, 2022

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	TVPI Bench.
Vintage Year 2011													
Summit Partners Credit Fund, LP	Direct Lending	20,000	2,125	20,697	89%	26,391	404	26,795	6,098	8.84%	N/A	1.29x	N/A
Vintage Year 2011 Total		20,000	2,125	20,697	89%	26,391	404	26,795	6,098	8.84%	13.23%	1.29x	1.82x
Vintage Year 2014													
Summit Partners Credit Fund II, L.P.	Direct Lending	35,000	3,040	49,057	91%	44,139	14,806	58,945	9,887	6.98%	4.45%	1.20x	N/A
Vintage Year 2014 Total		35,000	3,040	49,057	91%	44,139	14,806	58,945	9,887	6.98%	18.73%	1.20x	1.93x
Vintage Year 2015													
Athyrium Opportunities Fund II	Opportunistic Lending	32,000	2,671	42,702	92%	41,768	10,386	52,154	9,452	8.95%	9.83%	1.22x	1.41x
Vintage Year 2015 Total		32,000	2,671	42,702	92%	41,768	10,386	52,154	9,452	8.95%	17.56%	1.22x	1.74x
Vintage Year 2017													
Athyrium Opportunities Fund III	Opportunistic Lending	25,000	6,629	27,628	73%	17,951	11,910	29,861	2,234	3.84%	13.29%	1.08x	1.32x
Vintage Year 2017 Total		25,000	6,629	27,628	73%	17,951	11,910	29,861	2,234	3.84%	21.00%	1.08x	1.50x
Vintage Year 2018													
Benefit Street Partners Senior Secured Opportunities Fund L.P.	Direct Lending	50,000	14,052	50,953	72%	31,127	29,927	61,054	10,102	5.94%	4.07%	1.20x	N/A
Summit Partners Credit Fund III, L.P.	Direct Lending	50,000	29,819	57,401	40%	41,476	29,316	70,792	13,390	16.68%	4.07%	1.23x	N/A
TCP Direct Lending Fund VIII-S, LLC	Direct Lending	125,000	25,070	99,930	80%	20,997	101,631	122,629	22,698	9.52%	4.07%	1.23x	N/A
Vintage Year 2018 Total		225,000	68,940	208,284	69%	93,600	160,874	254,475	46,191	9.38%	21.15%	1.22x	1.32x
Vintage Year 2019													
BSP Levered US SOF II (Senior Secured Opportunities) Fund L.P.	Direct Lending	50,000	27,513	23,232	45%	2,064	24,424	26,488	3,257	13.47%	6.09%	1.14x	N/A
OrbiMed Royalty & Credit Opportunities III, LP	Opportunistic Lending	35,000	26,964	22,393	23%	15,709	11,561	27,270	4,877	27.53%	26.03%	1.22x	1.35x
Vintage Year 2019 Total		85,000	54,477	45,625	36%	17,773	35,985	53,759	8,134	19.61%	23.13%	1.18x	1.24x
Vintage Year 2020													
MCP Private Capital Fund IV (Feeder)	Direct Lending	35,138	22,153	13,546	37%	133	13,712	13,845	300	N/M	N/M	1.02x	N/A

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 March 31, 2022 (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	TVPI Bench.
Silver Point Specialty Credit Fund II, L.P.	Opportunistic Lending	40,000	11,403	28,458	71%	3,057	29,643	32,699	4,241	N/M	N/M	1.15x	1.19x
Vintage Year 2020 Total		75,138	33,556	42,004	55%	3,190	43,355	46,545	4,541	N/M	N/M	1.11x	1.08x
Vintage Year 2021													
Ares Capital Europe V	Direct Lending	40,000	23,252	16,748	42%	282	17,948	18,230	1,481	N/M	N/M	1.09x	N/A
IFM USIDF (Offshore) B Feeder	Direct Lending	40,000	27,682	13,185	31%	2,156	12,308	14,464	1,280	N/M	N/M	1.10x	N/A
Summit Partners Credit Fund IV, L.P.	Direct Lending	40,000	33,692	6,308	16%	0	6,398	6,398	90	N/M	N/M	1.01x	N/A
Shamrock Capital Debt Opportunities Fund I, L.P.	Opportunistic Lending	20,000	17,898	2,102	11%	0	2,047	2,047	-55	N/M	N/M	0.97x	1.05x
Vintage Year 2021 Total		140,000	102,523	38,343	27%	2,438	38,701	41,139	2,796	N/M	N/M	1.07x	1.01x
Portfolio Total :		637,138	273,962	474,339	57%	247,251	316,422	563,673	89,333	9.16%	6.80%	1.19x	

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 March 31, 2022

The Real Assets portfolio's net IRR since inception is 12.32%, versus the blended benchmark return of 7.92%

- The Real Assets portfolio includes private Infrastructure, Energy and Power, 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 and Power partnerships

- Performance of the Energy and Power partnerships was materially impacted by significant markdowns in Q1 2020
 - However, most of the Energy and Power (particularly upstream energy) partnerships have rebounded sharply since Q3 2020
- Infrastructure partnerships saw smaller declines in Q1 2020 and have maintained good performance since inception
- Since inception net IRRs of 12.5% for Infrastructure and 13.0% for Energy and Power

The Real Assets portfolio generated a 5.3% net return in Q1

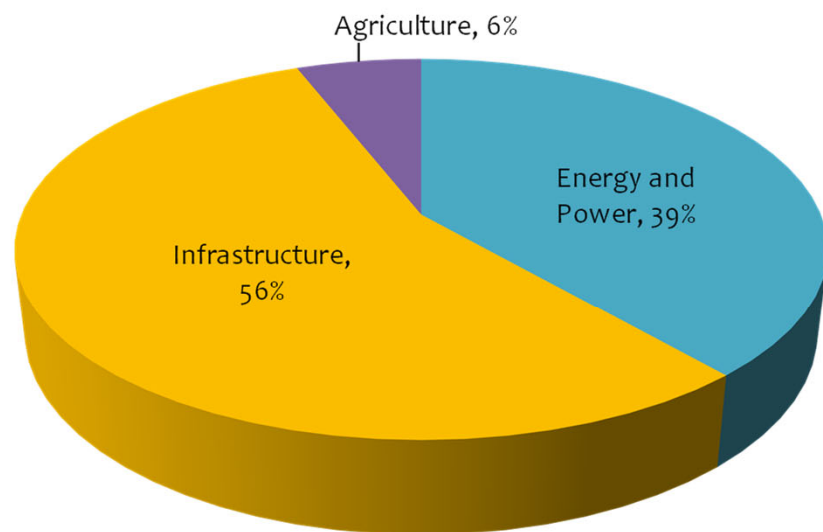
- The portfolio's Energy and Power funds led performance during the quarter
 - Most of the Energy and Power funds reported returns between 5% and 20% in Q1 on continued oil price strength
- The Infrastructure funds also reported good performance during the quarter, generally returning 4% to 7% in Q1
- EnCap IX and X (energy), NGP Royalty (energy), and Meridiam N. America III (infrastructure) each gained 20%+ in Q1

Changes during the quarter

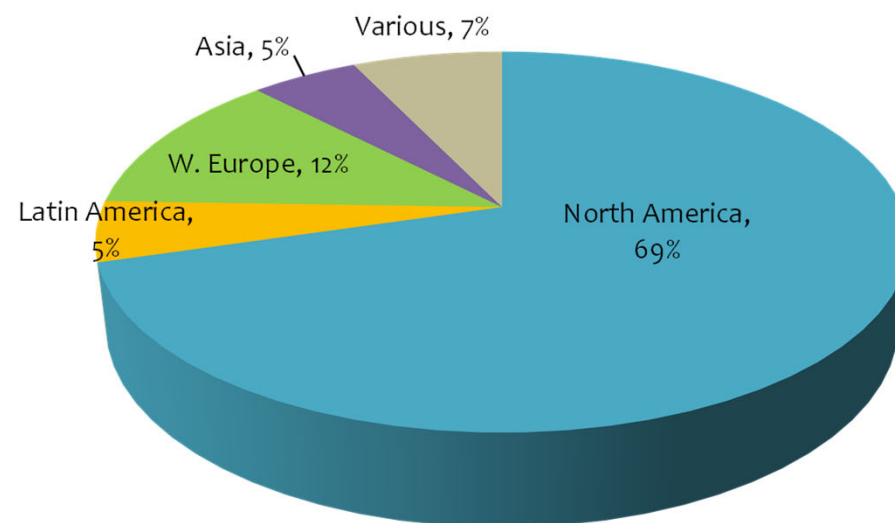
- SCERS made no new commitments to Real Assets funds during the quarter
- \$27.6 million in new contributions, \$21.7 million in distributions
- Portfolio IRR increased by 0.60% while the total portfolio gain increased by \$44.1 million

Real Assets Portfolio Exposures as of March 31, 2022

Real Assets Portfolio Strategy Exposure*



Real Assets Portfolio Geographic Exposure*



Portfolio Strategy Totals	(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
Agriculture	65,000	18,505	52,564	72%	6,892	49,070	55,962	3,398	3.16%		1.06x
Energy and Power	412,500	81,008	383,262	80%	201,614	341,545	543,158	159,897	12.99%		1.42x
Infrastructure	669,531	215,070	480,002	68%	157,398	496,113	653,511	173,509	12.53%		1.36x
Real Asset Debt	100,000	84,789	36,169	15%	45,101	0	45,101	8,932	10.27%		1.25x
Portfolio Total :	1,247,031	399,372	951,996	68%	411,004	886,728	1,297,732	345,736	12.32%	7.92%	1.36x

* Exposures are based on the market values of investments as of 3/31/22.

Real Assets Portfolio Performance Details – as of March 31, 2022

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 and Power	33,000	1,373	37,908	96%	35,025	16,762	51,787	13,879	9.66%	2.69%	1.37x
Vintage Year 2013 Total		33,000	1,373	37,908	96%	35,025	16,762	51,787	13,879	9.66%		1.37x
Vintage Year 2014												
Carlyle Power Partners II, L.P.	Energy and Power	40,000	6,919	45,671	83%	18,169	39,418	57,587	11,917	8.05%	8.14%	1.26x
EnCap Flatrock Midstream III	Energy and Power	20,000	920	23,532	95%	15,131	14,015	29,146	5,614	8.32%	8.14%	1.24x
Global Energy & Power Infrastructure Fund II	Energy and Power	35,000	842	38,561	98%	35,354	15,198	50,552	11,991	15.60%	8.14%	1.31x
Quantum Energy Partners VI, LP	Energy and Power	35,000	7,917	33,066	77%	23,673	49,632	73,306	40,240	27.26%	8.14%	2.22x
Pantheon SCERS SIRF MM, LLC	Infrastructure	100,000	27,668	76,632	72%	69,900	52,831	122,731	46,099	12.24%	10.47%	1.60x
Wastewater Opportunity Fund	Infrastructure	25,000	1,205	25,739	95%	9,371	20,314	29,685	3,946	4.69%	10.47%	1.15x
Vintage Year 2014 Total		255,000	45,472	243,200	82%	171,598	191,409	363,007	119,807	13.29%		1.49x
Vintage Year 2015												
ArcLight Energy Partners Fund VI	Energy and Power	40,000	5,604	42,665	86%	18,944	27,271	46,215	3,550	2.23%	9.20%	1.08x
EnCap Energy Capital Fund X, L.P.	Energy and Power	40,000	2,146	40,531	95%	24,251	46,065	70,316	29,785	15.75%	9.20%	1.73x
* Atalaya Real Assets SMA	Real Asset Debt	100,000	84,789	36,169	15%	45,101	0	45,101	8,932	10.27%	N/A	1.25x
Vintage Year 2015 Total		180,000	92,539	119,365	49%	88,296	73,336	161,632	42,267	9.57%		1.35x
Vintage Year 2016												
ACM Fund II, LLC	Agriculture	25,000	1,694	27,453	93%	4,581	17,365	21,946	-5,506	-7.66%	N/A	0.80x
Brookfield Infrastructure Fund III, L.P.	Infrastructure	40,000	6,655	35,406	83%	13,511	37,944	51,455	16,049	12.17%	9.76%	1.45x
IFM Global Infrastructure Fund	Infrastructure	125,053	0	125,053	100%	43,616	148,094	191,709	66,657	12.75%	9.76%	1.53x
Vintage Year 2016 Total		190,053	8,349	187,912	96%	61,708	203,402	265,111	77,199	10.63%		1.41x
Vintage Year 2017												
Quantum Energy Partners VII, LP	Energy and Power	40,000	11,728	32,799	71%	11,061	41,541	52,603	19,804	20.16%	12.36%	1.60x
Meridiam Infrastructure North America Fund III	Infrastructure	50,000	37,206	12,794	26%	1	20,403	20,404	7,610	39.05%	8.59%	1.59x
Vintage Year 2017 Total		90,000	48,934	45,593	46%	11,062	61,945	73,007	27,414	23.04%		1.60x

¹Benchmarks:

Real Assets Portfolio: 60% Cambridge Infrastructure, 30% Cambridge Energy, 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 Performance Details – as of March 31, 2022 (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
Paine Schwartz Food Chain Fund V, LP	Agriculture	40,000	16,811	25,111	58%	2,311	31,705	34,016	8,905	36.95%	N/A	1.35x
EnCap Flatrock Midstream IV, L.P.	Energy and Power	22,500	11,207	11,883	50%	5,492	8,647	14,138	2,256	7.89%	8.01%	1.19x
Tailwater Energy Fund III, LP	Energy and Power	32,000	1,689	32,365	95%	2,133	32,382	34,516	2,150	2.38%	8.01%	1.07x
ISQ Global Infrastructure Fund II	Infrastructure	50,000	13,013	46,577	74%	10,083	51,402	61,486	14,909	15.64%	11.98%	1.32x
Vintage Year 2018 Total		144,500	42,721	115,936	70%	20,019	124,136	144,155	28,219	11.53%		1.24x
Vintage Year 2019												
Tailwater Energy Fund IV, LP	Energy and Power	35,000	14,176	20,814	59%	0	27,241	27,241	6,427	20.44%	27.54%	1.31x
Brookfield Infrastructure Fund IV	Infrastructure	40,000	13,310	27,962	67%	3,816	30,531	34,347	6,385	13.66%	10.00%	1.23x
EQT Infrastructure IV (No.2) USD SCSp	Infrastructure	35,000	8,570	31,190	76%	5,162	34,528	39,691	8,501	16.05%	10.00%	1.27x
Vintage Year 2019 Total		110,000	36,056	79,966	67%	8,978	92,300	101,278	21,312	16.22%		1.27x
Vintage Year 2020												
NGP Royalty Partners, L.P.	Energy and Power	40,000	16,485	23,467	59%	12,380	23,371	35,752	12,285	N/M	N/M	1.52x
Vintage Year 2020 Total		40,000	16,485	23,467	59%	12,380	23,371	35,752	12,285	N/M		1.52x
Vintage Year 2021												
DigitalBridge Partners II, LP	Infrastructure	35,000	19,571	16,966	44%	1,642	15,991	17,633	667	N/M	N/M	1.04x
Harrison Street Social Infrastructure Fund, L.P.	Infrastructure	75,000	1,972	73,028	97%	296	77,073	77,369	4,341	N/M	N/M	1.06x
ISQ Global Infrastructure Fund III (UST), L.P.	Infrastructure	50,000	46,072	3,927	8%	0	3,229	3,229	-699	N/M	N/M	0.82x
Meridiam Sustainable Infrastructure Europe IV	Infrastructure	44,478	39,827	4,728	10%	0	3,774	3,774	-954	N/M	N/M	0.80x
Vintage Year 2021 Total		204,478	107,443	98,649	47%	1,937	100,067	102,004	3,355	N/M		1.03x
Portfolio Total :		1,247,031	399,372	951,996	68%	411,004	886,728	1,297,732	345,736	12.32%	7.92%	1.36x

¹Benchmarks:

Real Assets Portfolio: 60% Cambridge Infrastructure, 30% Cambridge Energy, 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.

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