



INVESTMENT ADVISORY SERVICES

Los Angeles • New York

Alternative Investment Performance
Merced County Employees' Retirement Association

June 28, 2018

MCERA Private Equity Capital Budget & Implementation Plan

9% fund level target

- Annual capital budget target of \$20 million, range of \$10-\$30 million
- Target 3-6 investments, range of \$3-\$10 million per inv; average size of \$5 million per

Performance comparisons:

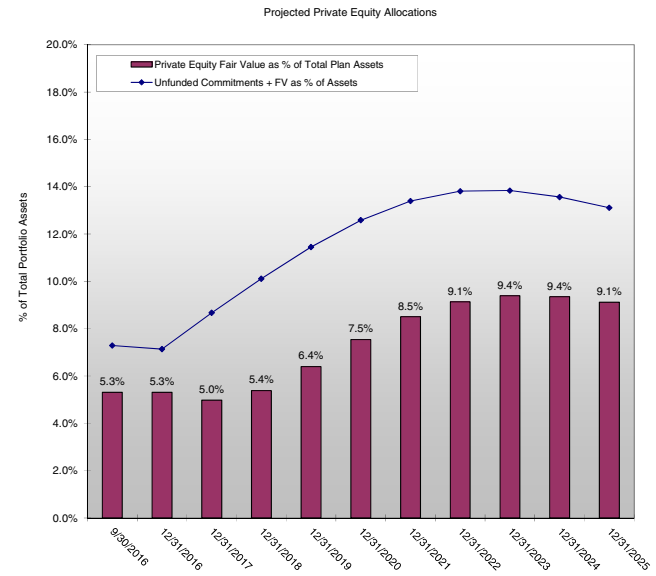
- *Long term investment objective:* Earn a return premium over public equity (Russell 3000 + 3%)
- *Recommended primary asset class benchmark:* Cambridge Associates Global Private Equity & VC Index
- *Recommended fund benchmarks:* Each fund will be compared to the Cambridge Associates strategy universe for the respective vintage years and each vintage year will be compared to Cambridge Associates Global Private Equity & VC Index

MCERA CY 2017 commitments (\$5 mm each):

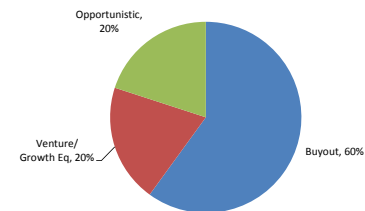
- *DK Long Term Opps IV* – a distressed credit fund (VY 2018)
- *GTCR XII* – a mid-market buyout fund (VY 2017)
- *Carrick III* – a mid-market buyout fund (VY 2018)

MCERA CY 2018 commitments (\$5 mm each):

- *Cressey VI* – a healthcare services buyout fund (VY 2018)



Target Strategy Diversification



	Target	Ranges
Buyout	60%	40-80%
Venture/Growth Eq	20%	10-30%
Opportunistic	20%	10-30%
	100%	

Note: MCERA’s existing private equity portfolio was modeled using vintage year drawdown/return of capital assumptions patterned after historical category averages. Total fund growth of 5.5%.

MCERA Private Equity Investment Structure & Portfolio Assessment

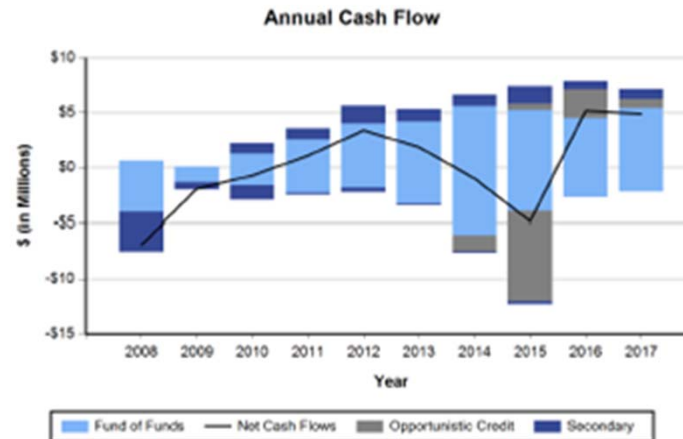
Investment structure (9% fund target; 4.3% invested as of Mar 2018):

- Current portfolio is barbelled with half of commitments in 2007 & earlier FoFs and half in 2011 & later FoFs
 - Overall portfolio has not met performance expectations; 2011 & later portfolio is still in development with the funds in VY 2017 and 2018 beginning to invest
 - Quarterly performance improvement due to VY 2007 FoFs; large quarterly distributions from the VY 2004 FoF
 - Portfolio is diversified by strategy but overall it is in a negative cash flow situation

Annual Summary

(in thousands)

	Total Partnerships	Total Commitments	(A) Contributions	(B) Distributions	(C) Fair Value	(B+C) Total Value	(B+C-A) Gain/Loss	Net IRR	Benchmark
December 31, 2016	19	\$ 68,771	\$ 56,692	\$ 40,403	\$ 34,577	\$ 74,979	\$ 18,288	7.01%	9.92%
December 31, 2017	22	\$ 84,125	\$ 59,008	\$ 47,514	\$ 35,203	\$ 82,717	\$ 23,709	7.85%	10.62%
Annual Change	3	\$ 15,354	\$ 2,316	\$ 7,111	\$ 626	\$ 7,738	\$ 5,421		



Note: Net cash flow is the for the respective calendar year.

MCERA Private Equity Performance – as of Dec 31, 2017

Partnership Name (\$000)	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 2004												
Invesco Partnership Fund IV, L.P.	Fund of Funds	10,000	2,417	7,898	76%	14,344	1,310	15,655	7,757	11.47%	7.22%	1.98
Vintage Year 2004 Total		10,000	2,417	7,898	76%	14,344	1,310	15,655	7,757	11.47%	7.85%	1.98
Vintage Year 2005												
ASP 2005 Non-US Fund	Fund of Funds	1,500	74	1,426	95%	1,517	452	1,970	544	5.19%	6.24%	1.38
ASP 2005 US Fund	Fund of Funds	3,500	177	3,323	95%	3,767	1,246	5,013	1,689	6.81%	8.49%	1.51
Pantheon Ventures Euro Fund IV	Fund of Funds	1,200	57	1,143	95%	1,403	205	1,608	465	4.72%	6.24%	1.30
Pantheon Ventures USA Fund VI	Fund of Funds	3,750	206	3,544	95%	4,206	1,224	5,430	1,886	6.91%	8.49%	1.53
Vintage Year 2005 Total		9,950	514	9,436	95%	10,893	3,127	14,021	4,585	6.53%	7.33%	1.47
Vintage Year 2006												
Pantheon Global Secondary Fund III "B"	Secondary	10,000	540	9,460	95%	9,070	1,417	10,487	1,027	1.94%	N/A	1.11
Vintage Year 2006 Total		10,000	540	9,460	95%	9,070	1,417	10,487	1,027	1.94%	7.20%	1.11
Vintage Year 2007												
ASP 2007 Direct Fund	Fund of Funds	450	14	436	97%	626	286	912	476	11.30%	10.98%	2.09
ASP 2007 Non-US Fund	Fund of Funds	1,575	78	1,497	95%	1,235	992	2,227	730	7.84%	7.37%	1.49
ASP 2007 US Fund	Fund of Funds	2,475	115	2,360	95%	2,622	1,477	4,100	1,740	11.77%	10.98%	1.74
Vintage Year 2007 Total		4,500	207	4,293	95%	4,483	2,756	7,239	2,946	10.45%	9.10%	1.69
Vintage Year 2011												
ASP 2011 Direct Fund	Fund of Funds	500	44	456	91%	374	432	806	350	16.52%	13.02%	1.77
ASP 2011 Emerging Markets Fund	Fund of Funds	500	109	391	78%	78	516	594	203	12.62%	12.36%	1.52
ASP 2011 Non-US Developed Fund	Fund of Funds	1,500	322	1,178	79%	573	1,067	1,640	462	11.90%	12.36%	1.39
ASP 2011 US Fund	Fund of Funds	2,500	356	2,145	86%	860	2,252	3,112	968	13.88%	13.02%	1.45
Pantheon Asia Fund VI	Fund of Funds	1,000	257	744	74%	204	889	1,093	348	11.33%	12.36%	1.47
Pantheon Euro Fund VII	Fund of Funds	1,674	372	1,303	78%	482	1,310	1,792	490	8.34%	12.36%	1.31
Pantheon Ventures USA Fund IX	Fund of Funds	2,000	496	1,504	75%	414	1,717	2,131	627	10.48%	13.02%	1.42
Vintage Year 2011 Total		9,674	1,956	7,721	80%	2,985	8,184	11,169	3,448	12.16%	13.61%	1.44

Note: The benchmark represents the Cambridge Associates LLC median for the respective strategy and vintage year. At the vintage year level, the Cambridge Associates LLC Global Private Equity & VC[®] median is used for the respective vintage year.

MCERA Private Equity Performance – as of Dec 31, 2017

Partnership Name (\$000)	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												
Invesco Partnership Fund VI, L.P.	Fund of Funds	5,000	1,833	3,674	63%	526	5,539	6,065	2,391	18.80%	11.47%	1.65
Vintage Year 2013 Total		5,000	1,833	3,674	63%	526	5,539	6,065	2,391	18.80%	12.51%	1.65
Vintage Year 2014												
Ocean Avenue Fund II	Fund of Funds	10,000	3,000	7,000	70%	1,197	7,940	9,137	2,137	11.66%	7.10%	1.31
Raven Asset-Based Opportunity Fund II	Opportunistic Cr	10,000	474	9,526	95%	4,015	4,929	8,945	-581	-2.93%	9.46%	0.94
Vintage Year 2014 Total		20,000	3,474	16,526	83%	5,212	12,869	18,081	1,555	4.06%	13.84%	1.09
Vintage Year 2017												
GTCR XII	Buyout	5,000	5,000	0	0%	0	0	0	0	N/M	N/M	N/A
Vintage Year 2017 Total		5,000	5,000	0	0%	0	0	0	0	N/M	N/M	N/A
Vintage Year 2018												
Carrick Capital Partners III, L.P.	Buyout	5,000	5,000	0	0%	0	0	0	0	N/M	N/M	N/A
Davidson Kempner Long-Term Distressed Opportunites Fund IV LP	Distressed Debt	5,000	5,000	0	0%	0	0	0	0	N/M	N/M	N/A
Vintage Year 2018 Total		10,000	10,000	0	0%	0	0	0	0	N/M	N/M	N/A
Total Portfolio:		84,125	25,941	59,008	69%	47,514	35,203	82,717	23,709	7.85%	10.62%	1.40

Note: The benchmark represents the Cambridge Associates LLC median for the respective strategy and vintage year. At the vintage year level, the Cambridge Associates LLC Global Private Equity & VC[®] median is used for the respective vintage year.

MCERA Real Estate Capital Budget & Implementation Plan

8% fund level target

- Annual capital budget target of \$15 million, range of \$5-\$25 million
- Target 2-4 investments, range of \$4-\$7 million per inv
 - Average investment size of \$5 million
 - If an average of 2-4 GP partnership commitments per year, expect a total of 8-16 GP relationships over a 4 year fund raising cycle
- Retain core real estate exposure but lower it to 25% of the portfolio due to current valuations; use it as a source of funding and substitute for private real estate investments (long term target of 75%)

Performance comparisons:

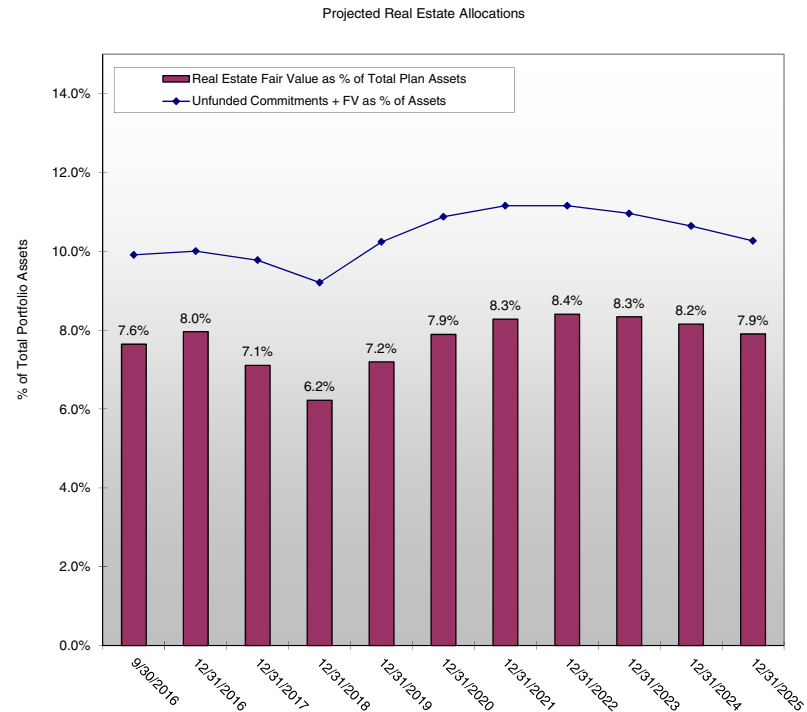
- *Long term investment objective:* Earn a return premium over inflation (CPI-U + 5%)
- *Recommended primary asset class benchmark:* NCREIF NFI-ODCE; revisit over time as the structure of the portfolio changes
- *Recommended fund benchmarks:* Each fund will be compared to the Cambridge Associates strategy universe for the respective vintage years and each vintage year will be compared to Cambridge Associates Global Real Estate Index

MCERA CY 2017 commitments (\$5 mm):

- *Carlyle RE VIII* – an opportunistic RE fund (VY 2017)

MCERA CY 2018 commitments (\$5 mm):

- *Taconic CRE II* – an opportunistic RE fund (VY 2018)



Note: MCERA’s existing real estate portfolio was modeled using vintage year drawdown/return of capital assumptions patterned after historical averages. Total fund growth rate of 5.5%.

MCERA Real Estate Investment Structure & Portfolio Assessment

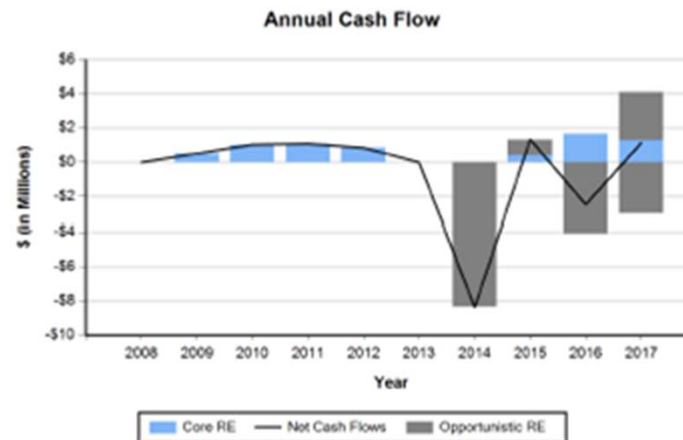
Real estate investment structure (8% target, 7.3% actual as of Mar 2018)

- MCERA invested in 1999 in a private core real estate fund; gains have been re-invested in the fund
- REITs were introduced in 2014 as were direct investment in opportunistic real estate funds; liquidated in 2017 with assets transferred to a SSgA real assets fund

Quarterly Summary

(in thousands)

	Total Partnerships	Total Commitments	(A) Contributions	(B) Distributions	(C) Fair Value	(B+C) Total Value	(B+C-A) Gain/Loss	Net IRR	Benchmark
December 31, 2016	3	\$ 42,525	\$ 30,155	\$ 20,299	\$ 54,685	\$ 74,984	\$ 44,829	9.45%	8.25%
December 31, 2017	4	\$ 49,283	\$ 31,592	\$ 22,638	\$ 58,130	\$ 80,768	\$ 49,175	9.39%	8.56%
Annual Change	1	\$ 6,758	\$ 1,437	\$ 2,339	\$ 3,445	\$ 5,784	\$ 4,346		



Note: Net cash flow is the for the respective calendar year.

MCERA Real Estate Performance – as of Dec 31, 2017

Real Estate Portfolio

- MCERA began investing in the UBS Trumbull core real estate fund in 1999 and this represents the bulk of the real estate portfolio
 - Opportunistic funds began being added in 2014 and they are in the early stages of development with the VY 2016 fund now out of it's “j-curve”
- Overall performance has met objectives, driven by the core RE fund; opportunistic fund performance is not meaningful

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
(in thousands)												
Vintage Year 1999												
UBS Trumbull Property Fund	Core RE	17,000	0	17,000	100%	19,715	42,265	61,980	44,980	9.27%	10.20%	3.65
Vintage Year 1999 Total		17,000	0	17,000	100%	19,715	42,265	61,980	44,980	9.27%	12.76%	3.65
Vintage Year 2014												
Greenfield Acquisition Partners VII, L.P.	Opportunistic RE	13,000	4,217	10,867	68%	2,789	12,161	14,949	4,082	14.11%	11.71%	1.38
Vintage Year 2014 Total		13,000	4,217	10,867	68%	2,789	12,161	14,949	4,082	14.11%	11.35%	1.38
Vintage Year 2016												
Patron Capital Fund V	Opportunistic RE	14,283	10,591	3,693	26%	134	3,688	3,822	128	N/M	N/M	1.09
Vintage Year 2016 Total		14,283	10,591	3,693	26%	134	3,688	3,822	128	N/M	N/M	1.09
Vintage Year 2017												
Carlyle Realty Partners VIII, L.P.	Opportunistic RE	5,000	4,968	32	1%	0	17	17	-15	N/M	N/M	0.53
Vintage Year 2017 Total		5,000	4,968	32	1%	0	17	17	-15	N/M	N/M	0.53
Total Portfolio:		49,283	19,775	31,592	60%	22,638	58,130	80,768	49,175	9.39%	8.56%	2.57

Note: The benchmark at the total portfolio level is NCREIF NFI-ODCE . Private real estate benchmark at the fund level is the Cambridge Value Add or Opportunistic RE Indices while the Cambridge Global Real Estate Index at the vintage year level.

MCERA Real Asset Capital Budget & Implementation Plan

6% fund level target

- Annual capital budget target of \$15 million, range of \$5-\$25 million
- Target 2-4 investments, range of \$4-\$7 million per inv
 - Average investment size of \$5 million
 - If an average of 2-4 GP partnership commitments per year, expect a total of 8-16 GP relationships over a 4 year fund raising cycle
- Portfolio targeted to be equally split between infrastructure and energy/natural resource funds

Performance comparisons:

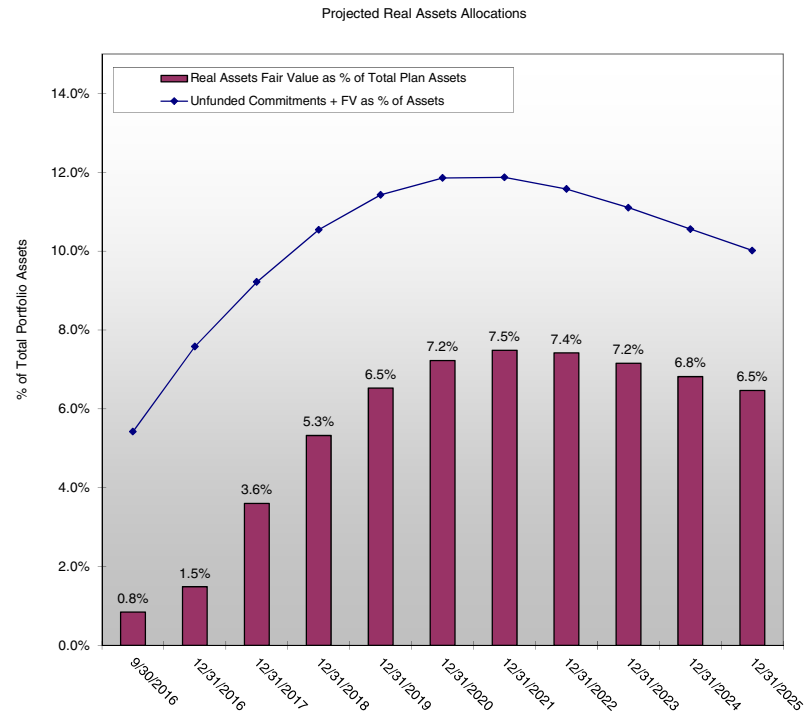
- *Long term investment objective:* Earn a return premium over inflation (CPI-U + 5%)
- *Recommended primary asset class benchmark:* 50/50 Cambridge Global Infrastructure/Cambridge Energy Upstream & Royalties and Private Energy Index
- *Recommended fund benchmarks:* Each fund will be compared to the Cambridge Associates strategy universe for the respective vintage years and each vintage year will be compared to the 50/50 index

MCERA CY 2017 commitments:

- *EnCap Energy Capital Fund XI* – an upstream energy fund (\$5 mm) (VY 2017)
- *EnCap Flatrock IV* – a midstream energy fund (\$3 mm) (VY 2018)

MCERA CY 2017 commitments (\$5 mm):

- *KKR Infrastructure III* – a global infrastructure fund (VY 2018)



Note: MCERA’s existing real asset portfolio was modeled using vintage year drawdown/return of capital assumptions patterned after historical category averages. Total fund growth rate of 5.5%.

MCERA Real Assets Investment Structure & Portfolio Assessment

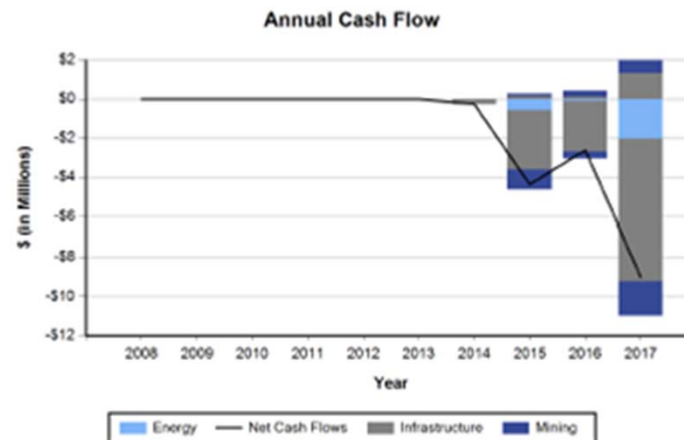
Real assets investment structure (6% target, 2.4% actual as of Mar 2018)

- Program is designed to be equally divided between private infrastructure and natural resource funds
- Private fund commitments began in 2014 to infrastructure and 2015 to natural resources
- The overall portfolio is immature with the funds in the early stage of development
 - Annual gains in the infrastructure funds

Annual Summary

(in thousands)

	Total Partnerships	Total Commitments	(A) Contributions	(B) Distributions	(C) Fair Value	(B+C) Total Value	(B+C-A) Gain/Loss	Net IRR	Benchmark
December 31, 2016	5	\$ 37,500	\$ 8,425	\$ 1,303	\$ 7,818	\$ 9,122	\$ 697	9.36%	5.12%
December 31, 2017	8	\$ 50,500	\$ 18,915	\$ 2,661	\$ 19,055	\$ 21,716	\$ 2,801	14.17%	5.58%
Annual Change	3	\$ 13,000	\$ 10,490	\$ 1,358	\$ 11,237	\$ 12,594	\$ 2,104		



Note: As of Dec 31, 2017. Net cash flow is the for the respective calendar year.

MCERA Real Assets Performance – as of Dec 31, 2017

Real Asset Portfolio

- MCERA began allocating to real assets in 2014 via direct fund commitments
 - Portfolio is approximately equally divided between infrastructure & energy/mining
- Portfolio is in its early stages of development so performance is not meaningful; both the infrastructure funds have come out of the “j-curve” and there was a large quarterly improvement in the VY 2014 & 2016 funds; the VY 2017 & 2018 funds have activated

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
(in thousands)												
Vintage Year 2014												
KKR Global Infrastructure II	Infrastructure	10,000	2,362	8,618	76%	823	8,784	9,606	989	12.93%	N/A	1.11
Vintage Year 2014 Total		10,000	2,362	8,618	76%	823	8,784	9,606	989	12.93%		1.11
Vintage Year 2015												
GSO Energy Select Opportunities Fund	Energy	7,500	4,986	2,514	34%	0	3,092	3,092	578	21.15%	21.75%	1.23
North Haven Infrastructure Partners II LP	Infrastructure	10,000	6,080	4,498	39%	742	4,536	5,278	780	11.61%	N/A	1.17
Taurus Mining Finance Fund	Mining	5,000	3,233	2,215	35%	865	1,716	2,581	366	15.47%	N/A	1.17
Vintage Year 2015 Total		22,500	14,299	9,227	36%	1,607	9,345	10,951	1,724	14.54%		1.19
Vintage Year 2016												
Taurus Mining Finance Annex Fund	Mining	5,000	4,256	892	15%	232	793	1,026	134	N/M	N/M	1.15
Vintage Year 2016 Total		5,000	4,256	892	15%	232	793	1,026	134	N/M	N/M	1.15
Vintage Year 2017												
EnCap Energy Capital Fund XI, L.P.	Energy	5,000	4,822	178	4%	0	133	133	-45	N/M	N/M	0.75
ISQ Global Infrastructure Fund II	Infrastructure	5,000	5,000	0	0%	0	0	0	0	N/M	N/M	0.00
Vintage Year 2017 Total		10,000	9,822	178	2%	0	133	133	-45	N/M		0.75
Vintage Year 2018												
EnCap Flatrock Midstream IV, L.P.	Energy	3,000	3,000	0	0%	0	0	0	0	N/M	N/M	0.00
Vintage Year 2018 Total		3,000	3,000	0	0%	0	0	0	0	N/M		0.00
Total Portfolio:		50,500	33,739	18,915	33%	2,661	19,055	21,716	2,801	14.17%	5.58%	1.15

Note: Benchmark is 50% S&P Natural Resources and 50% S&P Infrastructure. Benchmarks for individual funds are the respective Cambridge strategy benchmark.

MCERA Hedge Fund Performance – as of May 31, 2018

Macro environment has changed in 2018 with rising US interest rates and increased market volatility

– All managers, in particular global macro, have performed well in 2018

Fund	Market Value	Actual %	Returns						Std Dev	Sharpe Ratio	Incep Date
			May	QTD	YTD	1 Year	3 Year	Incep			
Market Neutral											
KLS Diversified Fund LP	5,124,207	11.2%	1.53%	1.75%	2.33%	-	-	2.97%	2.52%	-	Oct-17
Market Neutral - HF Total	5,124,207	11.2%	1.53%	1.75%	2.33%	-	-	2.97%	2.52%	-	Oct-17
HFRI Relative Value (Total) Index			0.92%	1.69%	2.05%	-	-	3.14%	2.12%	-	Oct-17
Credit/Distressed											
Silver Point Capital Fund, L.P.	7,232,571	15.8%	0.30%	1.77%	3.92%	-	-	4.51%	2.37%	-	Dec-17
Credit/Distressed - HF Total	7,232,571	15.8%	0.30%	1.77%	3.92%	-	-	4.51%	2.37%	-	Dec-17
HFRI ED: Distressed/Restructuring Index			0.47%	1.15%	1.41%	-	-	2.77%	2.77%	-	Dec-17
Equity Long/Short											
Archipelago Partners, L.P.	6,222,417	13.6%	1.86%	0.57%	5.09%	-	-	6.84%	5.72%	-	Sep-17
MW Eureka Fund Class B2	3,209,134	7.0%	2.04%	2.26%	6.23%	-	-	6.97%	5.36%	-	Dec-17
Equity Long/Short - HF Total	9,431,551	20.6%	1.92%	1.14%	5.38%	-	-	7.60%	5.10%	-	Sep-17
HFRI Equity Hedge (Total) Index			1.62%	2.03%	2.35%	-	-	7.26%	4.70%	-	Sep-17
Global Macro-Discretionary											
Graham Absolute Return Trading Ltd. - Class A	3,143,682	6.9%	0.50%	2.52%	5.88%	-	-	4.88%	8.75%	-	Sep-17
Global Macro-Discretionary - HF Total	3,143,682	6.9%	0.50%	2.52%	5.88%	-	-	4.88%	8.75%	-	Sep-17
HFRI Macro (Total) Index			-0.57%	-0.31%	-1.91%	-	-	-0.42%	6.37%	-	Sep-17
Global Macro-Systematic											
Winton Futures Fund Limited - Class B	3,082,689	6.7%	-0.28%	1.28%	0.16%	-	-	2.76%	10.23%	-	Nov-17
Global Macro-Systematic - HF Total	3,082,689	6.7%	-0.28%	1.28%	0.16%	-	-	2.76%	10.23%	-	Nov-17
HFRI Macro (Total) Index			-0.57%	-0.31%	-1.91%	-	-	-1.49%	6.65%	-	Nov-17
Multi-Strategy											
OZ Domestic Partners II, LP	17,857,330	38.9%	1.90%	1.72%	4.24%	10.11%	5.36%	6.41%	4.85%	1.14	Jul-14
Multi-Strategy - HF Total	17,857,330	38.9%	1.90%	1.72%	4.24%	10.11%	5.36%	6.41%	4.85%	1.14	Jul-14
HFRI Relative Value (Total) Index			0.92%	1.69%	2.05%	4.68%	3.70%	3.48%	2.68%	0.98	Jul-14
MCERA Hedge Fund Portfolio	45,872,030	100.0%	1.36%	1.64%	4.00%	9.85%	3.36%	4.52%	4.23%	0.87	Jul-14
Benchmarks											
HFRI Fund of Funds Composite Index			0.72%	0.94%	1.19%	5.64%	1.75%	2.62%	3.34%	0.54	Jul-14
Market Indices											
Libor3Month			0.20%	0.39%	0.89%	1.72%	1.05%	0.86%	0.18%	-	Jul-14
Bloomberg Barclays US Aggregate Bond Index			0.71%	-0.04%	-1.50%	-0.38%	1.40%	1.83%	2.81%	0.35	Jul-14
Bloomberg Barclays US High Yield Bond Index			-0.03%	0.62%	-0.24%	2.35%	4.87%	4.00%	5.41%	0.59	Jul-14
S&P 500 TR			2.41%	2.80%	2.02%	14.38%	10.97%	10.85%	9.97%	1.00	Jul-14
MSCI EAFE - Net			-2.25%	-0.02%	-1.55%	7.97%	4.33%	2.92%	11.72%	0.23	Jul-14
MSCI EMF (Emerging Markets Free) - Net			-3.54%	-3.97%	-2.61%	14.03%	6.17%	3.99%	15.47%	0.27	Jul-14

Cliffwater Disclosures

Important Notice

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