

Kern County Employees' Retirement Association

Investment Performance Review

Period Ending: June 30, 2022



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PITTSBURGH 412.784.6678

LOS ANGELES 310.297.1777

SAN FRANCISCO 415.362.3484

Total Fund
Portfolio Reconciliation

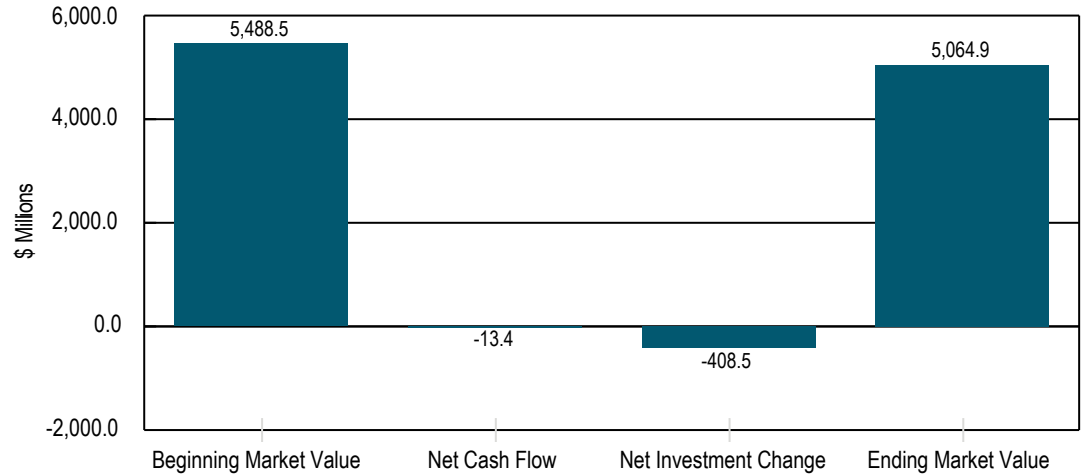
Kern County Employees' Retirement Association
Period Ending: June 30, 2022

Portfolio Reconciliation

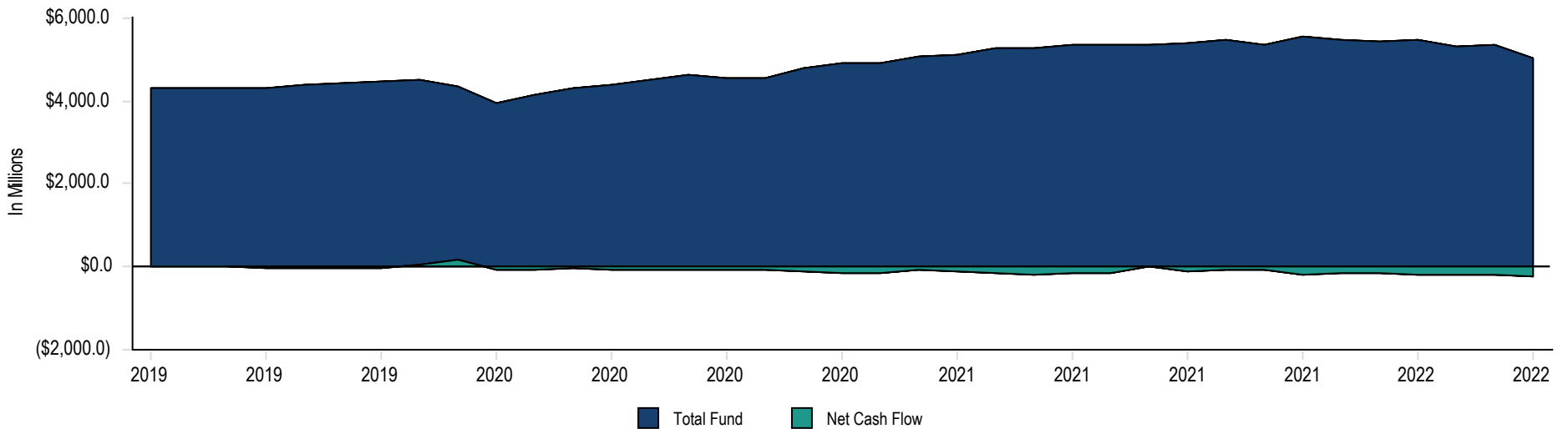
Last Three Months

Beginning Market Value	\$5,488,531,714
Net Cash Flows	-\$13,432,648
Net Investment Change	-\$408,496,783
Ending Market Value	\$5,064,923,983

Change in Market Value
Last Three Months



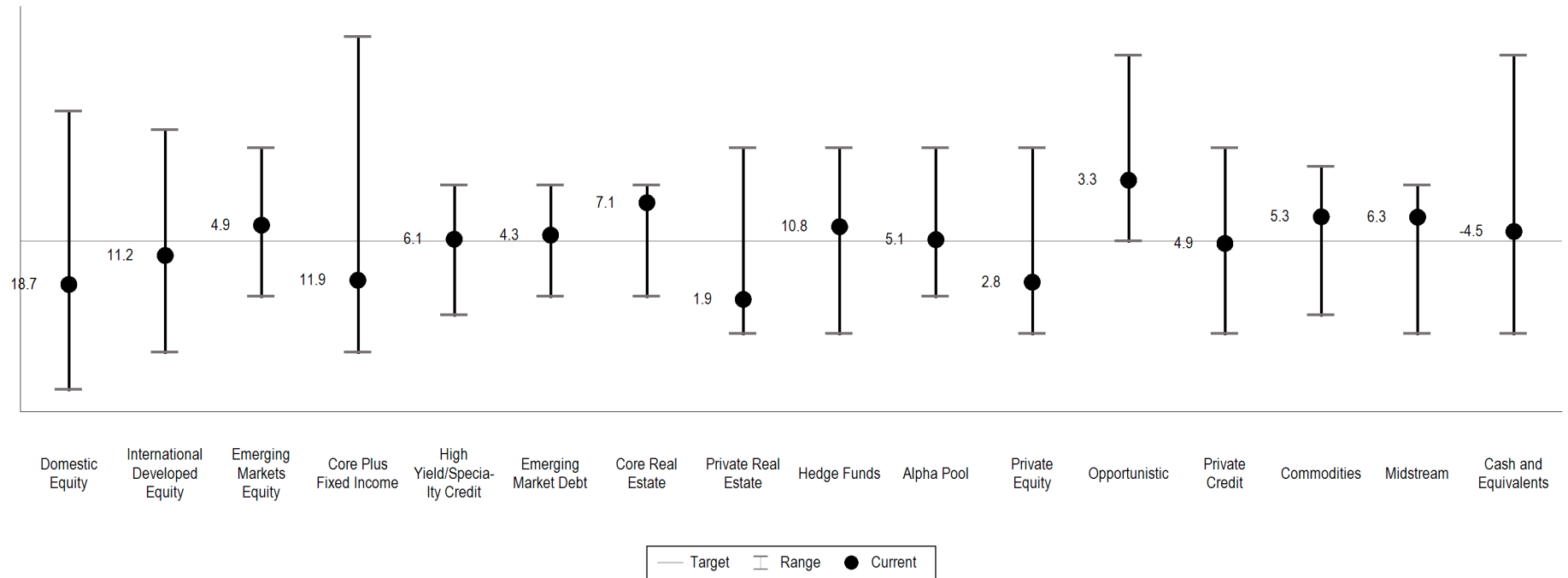
Market Value History



Total Fund
Asset Allocation vs. Policy

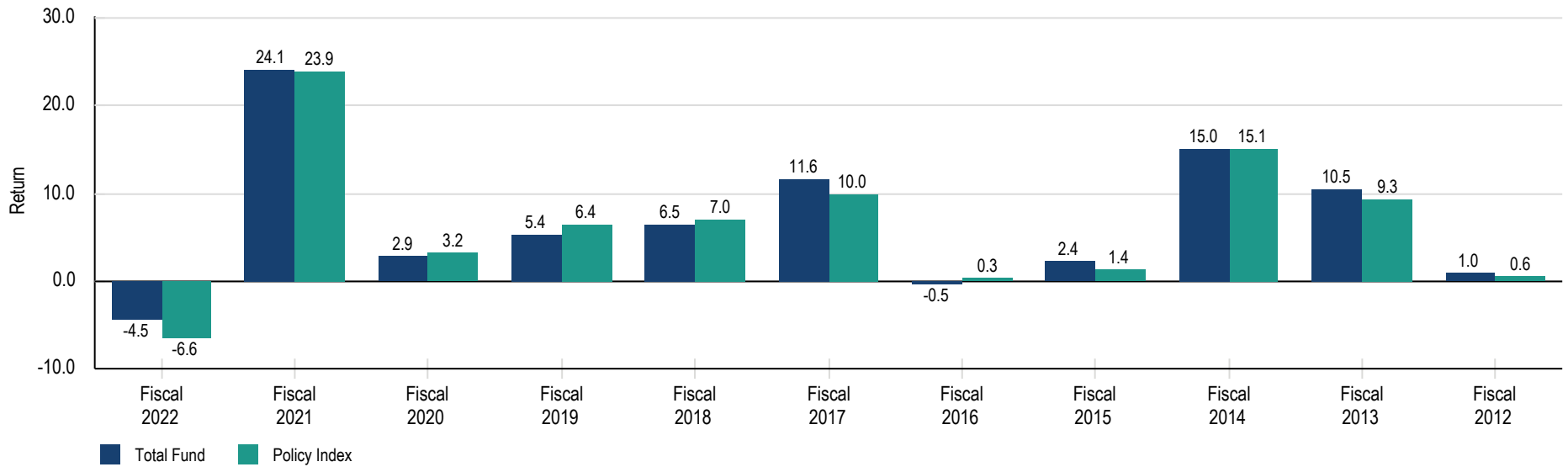
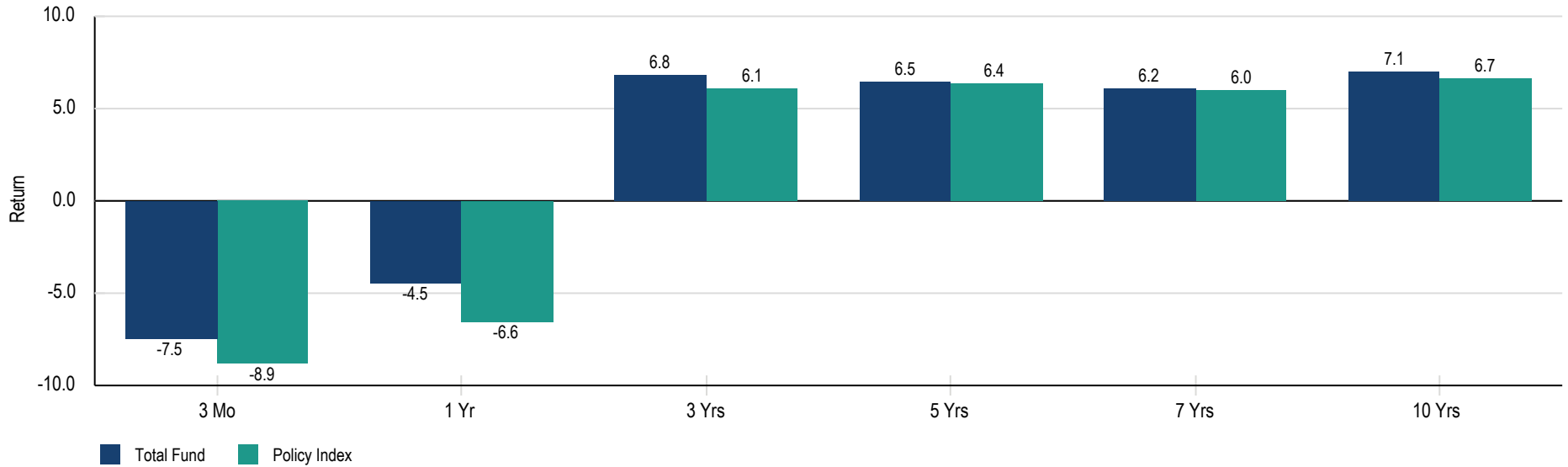
Kern County Employees' Retirement Association
Period Ending: June 30, 2022

	Current Balance	Current Allocation	Policy	Difference	Policy Range	Within IPS Range?
Equity	\$1,760,498,263	34.8%	37.0%	-\$113,255,059	26.0% - 48.0%	Yes
Fixed Income	\$1,130,869,301	22.3%	24.0%	-\$84,538,259	14.0% - 34.0%	Yes
Core Real Estate	\$358,380,234	7.1%	5.0%	\$105,170,326	2.0% - 8.0%	Yes
Hedge Funds	\$549,644,108	10.8%	10.0%	\$39,693,439	5.0% - 15.0%	Yes
Alpha Pool	\$257,534,903	5.1%	8.0%	-\$147,600,950	2.0% - 10.0%	Yes
Private Equity	\$139,043,110	2.8%	5.0%	-\$111,854,452	0.0% - 10.0%	Yes
Private Credit	\$247,247,651	4.9%	5.0%	-\$6,168,672	0.0% - 10.0%	Yes
Private Real Estate	\$94,350,728	1.9%	5.0%	-\$158,914,234	0.0% - 10.0%	Yes
Commodities	\$269,362,016	5.3%	4.0%	\$66,794,089	0.0% - 8.0%	Yes
Opportunistic	\$165,818,510	3.3%	0.0%	\$166,572,670	0.0% - 10.0%	Yes
Midstream Energy	\$318,886,871	6.3%	5.0%	\$65,676,963	0.0% - 8.0%	Yes
Cash and Equivalents	-\$226,711,713	-4.5%	-8.0%	\$178,424,140	-10.0% - 5.0%	Yes
Total	\$5,064,923,983	100.0%	100.0%			



Total Fund
Performance vs. Policy (Net of Fees)

Kern County Employees' Retirement Association
Period Ending: June 30, 2022



Total Fund
Executive Summary (Gross of Fees)

Kern County Employees' Retirement Association
Period Ending: June 30, 2022

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Fiscal 2021	Fiscal 2020	Fiscal 2019	Fiscal 2018	Fiscal 2017
Total Fund	5,064,923,983	100.0	-7.4	-4.2	-4.2	7.1	6.8	7.5	24.4	3.2	5.7	6.8	12.1
<i>Policy Index</i>			-8.9	-6.6	-6.6	6.1	6.4	6.7	23.9	3.2	6.4	7.0	10.0
<i>InvMetrics Public DB > \$1B Rank</i>			27	32	32	41	56	76	89	21	60	97	71
Equity	1,760,498,263	34.8	-14.9	-14.9	-14.9	6.5	7.4	10.0	41.2	0.7	5.3	12.4	20.6
<i>MSCI AC World IMI (Net)</i>			-15.8	-16.5	-16.5	6.0	6.7	8.7	40.9	1.2	4.6	11.1	19.0
Domestic Equity	945,302,016	18.7	-16.1	-12.0	-12.0	10.3	11.2	-	43.6	6.3	9.2	16.1	19.4
<i>MSCI USA IMI</i>			-16.8	-13.7	-13.7	10.0	10.7	12.6	44.4	6.7	9.0	14.9	18.4
International Developed Equity	568,735,057	11.2	-14.6	-17.2	-17.2	2.3	3.1	-	37.0	-5.5	-0.6	9.1	23.1
<i>MSCI World ex U.S. IMI Index (Net)</i>			-15.2	-17.7	-17.7	1.7	2.6	5.5	34.8	-5.1	0.2	7.7	19.7
Emerging Markets Equity	246,460,457	4.9	-11.2	-21.4	-21.4	-0.5	0.6	-	40.6	-10.9	0.4	4.0	20.4
<i>MSCI Emerging Markets IMI (Net)</i>			-12.1	-24.8	-24.8	1.1	2.3	-	43.2	-4.0	0.5	7.9	22.8
Fixed Income	1,130,869,301	22.3	-7.1	-12.7	-12.7	-0.6	1.2	2.1	5.4	6.6	7.9	0.2	4.6
<i>Fixed Income Custom Benchmark</i>			-6.4	-11.6	-11.6	-1.1	0.9	2.1	4.0	5.2	8.4	-0.1	3.3
Core Plus Fixed Income	602,307,543	11.9	-5.2	-11.2	-11.2	-0.6	1.2	-	1.0	9.5	8.0	0.0	1.4
<i>Bloomberg U.S. Aggregate Index</i>			-4.7	-10.3	-10.3	-0.9	0.9	1.5	-0.3	8.7	7.9	-0.4	-0.3
High Yield/ Specialty Credit	309,315,813	6.1	-8.2	-9.5	-9.5	0.9	2.7	-	13.6	0.0	7.5	3.3	10.4
<i>ICE BofA U.S. High Yield Index</i>			-10.0	-12.7	-12.7	-0.1	1.9	4.4	15.6	-1.1	7.6	2.5	12.8
Emerging Market Debt	219,139,871	4.3	-10.4	-19.6	-19.6	-4.6	-1.9	-	9.4	-1.2	8.5	-3.6	9.6
<i>50 JPM EMBI Global Div / 50 JPM GBI EM Global Div</i>			-10.0	-20.2	-20.2	-5.5	-1.7	0.4	7.1	-1.1	10.8	-1.9	6.3
Commodities	269,362,016	5.3	-6.7	20.1	20.1	15.4	10.4	-	43.5	-10.7	-6.2	13.7	-3.1
<i>Bloomberg Commodity Index Total Return</i>			-5.7	24.3	24.3	14.3	8.4	-0.8	45.6	-17.4	-6.8	7.3	-6.5
Hedge Funds	549,644,108	10.9	0.2	2.8	2.8	8.6	7.2	6.7	16.3	7.3	2.6	7.6	8.0
<i>75% 90 Day TBills +4% / 25% MSCI ACWI (Net)</i>			-3.2	-1.0	-1.0	5.4	5.9	5.8	12.2	5.2	6.5	6.8	7.9
Alpha Pool	257,534,903	5.1	-0.7	1.5	1.5	-	-	-	14.5	-	-	-	-
<i>90-Day T-Bill +4%</i>			1.1	4.2	4.2	-	-	-	4.1	-	-	-	-
Midstream Energy	318,886,871	6.3	-8.9	9.6	9.6	-	-	-	-	-	-	-	-
<i>Alerian Midstream Energy Index</i>			-8.6	11.4	11.4	-	-	-	-	-	-	-	-
Core Real Estate	358,380,234	7.1	4.6	25.6	25.6	11.0	9.3	-	6.6	2.3	6.1	7.4	6.1
<i>NCREIF ODCE</i>			4.8	29.5	29.5	12.7	10.5	11.2	8.0	2.2	6.4	8.4	7.9
Private Real Estate	94,350,728	1.9	3.3	31.3	31.3	15.4	12.0	12.9	12.1	4.4	9.0	5.4	6.4
			3.3	31.3	31.3	15.4	12.0	12.9	12.1	4.4	9.0	5.4	6.4
Private Equity	139,043,110	2.7	0.6	23.0	23.0	16.0	13.3	12.1	41.7	-10.5	10.9	7.8	14.8
			0.6	23.0	23.0	16.0	13.3	12.1	41.7	-10.5	10.9	7.8	14.8
Private Credit	247,247,651	4.9	1.2	1.2	1.2	3.8	6.1	-	4.8	5.5	9.7	9.3	10.2
			1.2	1.2	1.2	3.8	6.1	-	4.8	5.5	9.7	9.3	10.2

Total Fund
Executive Summary (Gross of Fees)

Kern County Employees' Retirement Association
Period Ending: June 30, 2022

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Fiscal 2021	Fiscal 2020	Fiscal 2019	Fiscal 2018	Fiscal 2017
Opportunistic	165,818,510	3.3	-9.8	-5.4	-5.4	-	-	-	59.9	-	-	-	-
<i>Assumed Rate of Return +3%</i>			1.8	7.2	7.2	-	-	-	7.2	-	-	-	-
Cash	-226,711,713	-4.5	-0.6	-0.7	-0.7	0.1	1.1	-3.0	0.1	1.0	2.0	3.2	2.7

Performance and Attribution

Total Fund
Performance (Net of Fees)

Kern County Employees' Retirement Association
Period Ending: June 30, 2022

	Notional Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Fiscal 2021	Fiscal 2020	Fiscal 2019	Fiscal 2018	Fiscal 2017	Inception	Inception Date
Total Fund	5,064,923,983	100.0	-7.5	-4.5	-4.5	6.8	6.5	7.1	24.1	2.9	5.4	6.5	11.6	6.4	Jun-11
<i>Policy Index</i>			-8.9	-6.6	-6.6	6.1	6.4	6.7	23.9	3.2	6.4	7.0	10.0	6.1	
Equity	1,760,498,263	34.8	-15.0	-15.1	-15.1	6.2	7.0	9.6	40.7	0.3	4.8	11.8	20.1	8.2	Jun-11
<i>MSCI AC World IMI (Net)</i>			-15.8	-16.5	-16.5	6.0	6.7	8.7	40.9	1.2	4.6	11.1	19.0	7.3	
Domestic Equity	945,302,016	18.7	-16.1	-12.2	-12.2	10.0	10.9	-	43.2	6.0	8.8	15.5	18.9	10.5	Jul-14
<i>MSCI USA IMI</i>			-16.8	-13.7	-13.7	10.0	10.7	-	44.4	6.7	9.0	14.9	18.4	10.1	
Equity Beta Exposure	425,371,375	8.4	-16.4	-11.0	-11.0	-	-	-	-	-	-	-	-	9.1	Aug-20
<i>S&P 500 Index</i>			-16.1	-10.6	-10.6	-	-	-	-	-	-	-	-	9.6	
Mellon DB SL Stock Index Fund	280,796,486	5.5	-16.1	-10.6	-10.6	10.6	-	-	40.8	7.5	10.4	-	-	10.7	Oct-17
<i>S&P 500 Index</i>			-16.1	-10.6	-10.6	10.6	-	-	40.8	7.5	10.4	-	-	10.6	
PIMCO StocksPLUS	97,925,248	1.9	-17.1	-12.8	-12.8	10.0	10.9	13.3	41.7	7.7	10.6	14.1	19.1	10.2	Jul-03
<i>S&P 500 Index</i>			-16.1	-10.6	-10.6	10.6	11.3	13.0	40.8	7.5	10.4	14.4	17.9	9.4	
AB US Small Cap Value Equity	82,210,920	1.6	-15.4	-16.1	-16.1	6.3	4.8	-	77.5	-19.4	-6.9	13.2	23.9	6.6	Jul-15
<i>Russell 2000 Value Index</i>			-15.3	-16.3	-16.3	6.2	4.9	-	73.3	-17.5	-6.2	13.1	24.9	6.5	
Geneva Capital Small Cap Growth	45,419,386	0.9	-13.0	-22.1	-22.1	5.4	9.3	-	37.6	9.3	8.6	22.7	21.2	9.4	Jul-15
<i>Russell 2000 Growth Index</i>			-19.3	-33.4	-33.4	1.4	4.8	-	51.4	3.5	-0.5	21.9	24.4	4.8	
International Developed Equity	568,735,057	11.2	-14.6	-17.3	-17.3	2.1	2.8	-	36.7	-5.7	-0.9	8.7	22.6	2.8	Jul-14
<i>MSCI World ex U.S. IMI Index (Net)</i>			-15.2	-17.7	-17.7	1.7	2.6	-	34.8	-5.1	0.2	7.7	19.7	2.0	
Mellon DB SL World ex-US Index Fund	471,376,354	9.3	-14.5	-16.1	-16.1	2.4	-	-	35.6	-5.5	-	-	-	2.1	Jul-18
<i>MSCI World ex U.S. IMI Index (Net)</i>			-15.2	-17.7	-17.7	1.7	-	-	34.8	-5.1	0.2	-	-	1.1	
Cevian Capital II	31,023,988	0.6	-8.7	-8.2	-8.2	7.4	3.9	-	46.8	-8.2	-5.0	2.9	32.9	5.3	Dec-14
<i>MSCI Europe (Net)</i>			-14.5	-17.6	-17.6	1.2	2.2	-	35.1	-6.8	1.9	5.3	21.1	2.9	
American Century Non-US Small Cap	66,087,970	1.3	-17.6	-27.4	-27.4	-	-	-	-	-	-	-	-	-10.9	Dec-20
<i>MSCI World ex U.S. Small Cap Growth Index (Net)</i>			-20.4	-28.6	-28.6	-	-	-	-	-	-	-	-	-13.3	
Emerging Markets Equity	246,460,457	4.9	-11.4	-21.9	-21.9	-1.3	-0.3	-	39.5	-11.8	-0.6	2.9	19.3	0.5	Jul-14
<i>MSCI Emerging Markets IMI (Net)</i>			-12.1	-24.8	-24.8	1.1	2.3	-	43.2	-4.0	0.5	7.9	22.8	1.8	
DFA Emerging Markets Value I	75,568,224	1.5	-10.7	-12.9	-12.9	1.9	2.7	-	47.6	-17.7	2.0	5.7	27.6	3.4	Mar-14
<i>MSCI Emerging Markets Value (Net)</i>			-10.8	-18.6	-18.6	-1.0	1.2	-	41.6	-15.7	5.0	4.3	21.6	1.5	
AB Emerging Markets Strategic Core Equity Collective Trust	87,939,424	1.7	-11.6	-25.2	-25.2	-1.8	-1.3	-	33.6	-5.1	-2.6	1.2	-	1.8	Dec-16
<i>MSCI Emerging Markets (Net)</i>			-11.4	-25.3	-25.3	0.6	2.2	-	40.9	-3.4	1.2	8.2	-	5.1	
Mellon Emerging Markets Stock Index Fund	82,952,809	1.6	-11.8	-25.5	-25.5	-	-	-	41.1	-	-	-	-	2.2	Jun-20
<i>MSCI Emerging Markets (Net)</i>			-11.4	-25.3	-25.3	-	-	-	40.9	-	-	-	-	6.0	
Fixed Income	1,130,869,301	22.3	-7.2	-13.0	-13.0	-0.9	0.9	1.9	5.1	6.3	7.6	-0.1	4.3	3.1	Jun-10
<i>Fixed Income Custom Benchmark</i>			-6.4	-11.6	-11.6	-1.1	0.9	2.1	4.0	5.2	8.4	-0.1	3.3	3.0	
Core Plus Fixed Income	602,307,543	11.9	-5.2	-11.4	-11.4	-0.8	1.0	-	0.8	9.3	7.9	-0.2	1.3	1.7	Jul-14
<i>Bloomberg U.S. Aggregate Index</i>			-4.7	-10.3	-10.3	-0.9	0.9	-	-0.3	8.7	7.9	-0.4	-0.3	1.5	
Fixed Income Beta Exposure	51,180,364	1.0	-	-	-	-	-	-	-	-	-	-	-	2.4	Jun-22
<i>Bloomberg U.S. Aggregate Index</i>			-	-	-	-	-	-	-	-	-	-	-	-1.6	
Mellon DB SL Aggregate Bond Index Fund	162,487,098	3.2	-4.9	-10.4	-10.4	-1.0	0.8	1.5	-0.4	8.8	7.9	-0.4	-0.3	2.2	Jan-11
<i>Bloomberg U.S. Aggregate Index</i>			-4.7	-10.3	-10.3	-0.9	0.9	1.5	-0.3	8.7	7.9	-0.4	-0.3	2.2	

Total Fund
Performance (Net of Fees)

Kern County Employees' Retirement Association
Period Ending: June 30, 2022

	Notional Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Fiscal 2021	Fiscal 2020	Fiscal 2019	Fiscal 2018	Fiscal 2017	Inception	Inception Date
PIMCO Core Plus	190,694,370	3.8	-5.0	-9.9	-9.9	-0.4	1.2	1.7	1.1	8.7	6.3	1.0	1.4	2.5	Feb-11
<i>Bloomberg U.S. Aggregate Index</i>			-4.7	-10.3	-10.3	-0.9	0.9	1.5	-0.3	8.7	7.9	-0.4	-0.3	2.2	
Western Asset Core Plus	197,945,711	3.9	-6.7	-14.5	-14.5	-1.5	0.8	2.2	2.4	9.3	9.4	-0.4	3.0	3.9	Jun-04
<i>Bloomberg U.S. Aggregate Index</i>			-4.7	-10.3	-10.3	-0.9	0.9	1.5	-0.3	8.7	7.9	-0.4	-0.3	3.4	
High Yield/ Specialty Credit	309,315,813	6.1	-8.4	-10.0	-10.0	0.4	2.2	-	13.1	-0.5	7.0	2.8	9.9	1.9	Jul-14
<i>ICE BofA U.S. High Yield Index</i>			-10.0	-12.7	-12.7	-0.1	1.9	-	15.6	-1.1	7.6	2.5	12.8	2.9	
Western Asset High Yield Fixed Income	183,851,907	3.6	-11.6	-14.1	-14.1	-0.7	1.6	4.1	16.5	-2.2	8.3	2.2	11.7	5.5	Jun-05
<i>50% Bloomberg US HY Ba 2%/50% Bloomberg US HY B 2% CAP</i>			-9.4	-12.4	-12.4	0.4	2.3	4.4	13.4	2.1	8.8	1.8	10.9	5.8	
TCW Securitized Opportunities	125,463,906	2.5	-3.4	-4.0	-4.0	1.4	2.7	-	6.4	2.2	5.2	4.3	6.3	3.2	Feb-16
<i>Bloomberg U.S. High Yield - 2% Issuer Cap</i>			-9.8	-12.8	-12.8	0.2	2.1	-	15.3	0.0	7.5	2.6	12.7	5.2	
Emerging Market Debt	219,139,871	4.3	-10.5	-19.8	-19.8	-4.9	-2.3	-	9.1	-1.7	7.9	-4.2	8.9	-1.0	Jul-14
<i>50 JPM EMBI Global Div / 50 JPM GBI EM Global Div</i>			-10.0	-20.2	-20.2	-5.5	-1.7	-	7.1	-1.1	10.8	-1.9	6.3	-0.6	
Stone Harbor Emerging Markets Debt Blend Portfolio	86,965,794	1.7	-10.8	-20.9	-20.9	-5.3	-2.3	-	9.5	-1.8	8.2	-3.1	6.3	-1.1	Aug-12
<i>50 JPM GBI-EM Global Div/ 40 JPM EMBI Global Div/ 10 JPM Corporate EM Bond Idx</i>			-9.5	-19.5	-19.5	-5.1	-1.5	-	7.2	-0.8	10.6	-1.7	6.3	0.2	
PIMCO EMD	132,174,077	2.6	-10.3	-19.2	-19.2	-	-	-	8.7	-	-	-	-	-6.9	Feb-20
<i>50 JPM EMBI Global Div / 50 JPM GBI EM Global Div</i>			-10.0	-20.2	-20.2	-	-	-	7.1	-	-	-	-	-8.3	
Commodities	269,362,016	5.3	-6.8	19.4	19.4	14.7	9.8	-	42.5	-11.3	-6.7	13.3	-3.7	0.4	Jul-13
<i>Bloomberg Commodity Index Total Return</i>			-5.7	24.3	24.3	14.3	8.4	-	45.6	-17.4	-6.8	7.3	-6.5	0.0	
Gresham MTAP Commodity Builder Fund	82,876,151	1.6	-2.6	24.7	24.7	15.3	9.4	-	46.8	-16.3	-9.0	12.4	-3.8	0.4	Oct-13
<i>Bloomberg Commodity Index Total Return</i>			-5.7	24.3	24.3	14.3	8.4	-	45.6	-17.4	-6.8	7.3	-6.5	-0.1	
WTC-CTF	186,485,865	3.7	-8.4	17.2	17.2	15.0	10.4	-	40.2	-7.5	-5.4	14.2	-3.3	0.9	Sep-13
<i>S&P GSCI Commodity Equal Weighted</i>			-7.5	19.0	19.0	13.7	9.8	-	40.9	-12.4	-3.5	12.6	-2.3	1.1	
Hedge Funds	549,644,108	10.9	0.5	3.0	3.0	8.6	7.1	6.1	16.1	7.0	2.5	7.6	7.1	5.8	Sep-10
<i>75% 90 Day TBills +4% / 25% MSCI ACWI (Net)</i>			-3.2	-1.0	-1.0	5.4	5.9	5.8	12.2	5.2	6.5	6.8	7.9	5.6	
Aristeia International Limited	67,235,553	1.3	0.1	1.8	1.8	10.4	8.6	-	21.6	8.7	9.2	2.6	13.1	5.3	May-14
Brevan Howard Fund	72,840,227	1.4	4.6	15.2	15.2	13.8	12.3	-	6.1	20.5	12.7	7.8	1.0	8.2	Sep-13
D.E. Shaw Composite Fund	62,844,042	1.2	7.2	30.6	30.6	21.6	17.4	-	19.0	15.6	11.5	11.3	8.0	14.8	Jul-13
HBK Fund II	55,719,468	1.1	-1.9	2.3	2.3	4.8	4.6	-	11.0	1.5	5.5	3.0	6.7	4.1	Nov-13
Hudson Bay Cap Structure Arbitrage Enhanced Fund	75,712,464	1.5	1.6	7.7	7.7	12.7	-	-	14.2	16.2	-	-	-	12.5	Jun-19
Indus Pacific Opportunities Fund	36,899,245	0.7	-1.4	-8.2	-8.2	13.6	6.5	-	38.0	15.8	-19.2	15.8	15.1	7.7	Jul-14
Magnetar Structured Credit Fund	7,860,049	0.2	-0.4	1.1	1.1	11.7	9.6	-	38.1	-0.2	5.4	7.7	8.6	8.0	May-14
Pharo Macro Fund	61,182,322	1.2	-2.8	-11.1	-11.1	-	-	-	3.5	-	-	-	-	-2.1	Dec-19
PIMCO Commodity Alpha Fund	65,294,254	1.3	4.8	8.6	8.6	9.1	8.6	-	14.2	4.8	5.2	10.4	16.9	10.0	Jun-16
Sculptor Domestic Partners II LP	44,056,485	0.9	-14.1	-19.9	-19.9	-0.1	-	-	16.8	6.5	-	-	-	4.0	Feb-19
Alpha Pool	257,534,903	5.1	-0.7	1.5	1.5	-	-	-	14.5	-	-	-	-	7.8	Jul-20
<i>90-Day T-Bill +4%</i>			1.1	4.2	4.2	-	-	-	4.1	-	-	-	-	4.1	
Hudson Bay	58,481,870	1.2	1.2	6.7	6.7	-	-	-	-	-	-	-	-	9.9	Aug-20
Davidson Kempner Institutional Partners	53,077,049	1.0	-3.0	-3.4	-3.4	-	-	-	-	-	-	-	-	3.1	Dec-20
HBK Fund II	53,527,255	1.1	-2.3	1.3	1.3	-	-	-	-	-	-	-	-	4.0	Dec-20
HBK Opportunities Platform – SPAC Series	39,536,750	0.8	-1.1	-2.5	-2.5	-	-	-	-	-	-	-	-	3.5	Nov-20
Garda Fixed Income Relative Value Opportunity Fund	52,911,979	1.0	1.9	-	-	-	-	-	-	-	-	-	-	5.2	Sep-21

Total Fund
Performance (Net of Fees)

Kern County Employees' Retirement Association
Period Ending: June 30, 2022

	Notional Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Fiscal 2021	Fiscal 2020	Fiscal 2019	Fiscal 2018	Fiscal 2017	Inception	Inception Date
Midstream Energy	318,886,871	6.3	-9.0	9.3	9.3	-	-	-	-	-	-	-	-	32.8	Sep-20
<i>Alerian Midstream Energy Index</i>			<i>-8.6</i>	<i>11.4</i>	<i>11.4</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>32.9</i>	
Harvest Midstream	185,157,607	3.7	-8.4	15.3	15.3	-	-	-	-	-	-	-	-	41.6	Aug-20
<i>Alerian Midstream Energy Index</i>			<i>-8.6</i>	<i>11.4</i>	<i>11.4</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>33.0</i>	
PIMCO Midstream	133,729,264	2.6	-9.9	2.2	2.2	-	-	-	-	-	-	-	-	25.4	Sep-20
<i>50/25/25 Alerian Midstream/ ICE BofA US Pipeline/ ICE BofA US HY Midstream</i>			<i>-8.5</i>	<i>-0.7</i>	<i>-0.7</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	
Core Real Estate	358,380,234	7.1	4.5	24.8	24.8	10.2	8.7	-	5.6	1.4	5.9	7.4	5.6	9.3	Oct-14
<i>NCREIF ODCE</i>			<i>4.8</i>	<i>29.5</i>	<i>29.5</i>	<i>12.7</i>	<i>10.5</i>	<i>-</i>	<i>8.0</i>	<i>2.2</i>	<i>6.4</i>	<i>8.4</i>	<i>7.9</i>	<i>10.8</i>	
ASB Allegiance Real Estate Fund	194,923,658	3.8	4.5	23.0	23.0	9.6	8.5	-	5.4	1.5	6.8	7.1	3.3	9.1	Sep-13
<i>NCREIF ODCE</i>			<i>4.8</i>	<i>29.5</i>	<i>29.5</i>	<i>12.7</i>	<i>10.5</i>	<i>-</i>	<i>8.0</i>	<i>2.2</i>	<i>6.4</i>	<i>8.4</i>	<i>7.9</i>	<i>10.9</i>	
JPMCB Strategic Property Fund	163,456,576	3.2	4.7	27.8	27.8	11.1	9.2	-	5.9	1.3	5.0	7.6	7.4	9.4	Jul-14
<i>NCREIF ODCE</i>			<i>4.8</i>	<i>29.5</i>	<i>29.5</i>	<i>12.7</i>	<i>10.5</i>	<i>-</i>	<i>8.0</i>	<i>2.2</i>	<i>6.4</i>	<i>8.4</i>	<i>7.9</i>	<i>10.8</i>	
Private Real Estate	94,350,728	1.9	3.3	31.3	31.3	15.4	12.0	12.3	12.1	4.4	9.0	5.4	5.7	12.9	Mar-11
			<i>3.3</i>	<i>31.3</i>	<i>31.3</i>	<i>15.4</i>	<i>12.0</i>	<i>12.9</i>	<i>12.1</i>	<i>4.4</i>	<i>9.0</i>	<i>5.4</i>	<i>6.4</i>	<i>12.9</i>	
Private Equity	139,043,110	2.7	0.6	22.9	22.9	16.0	13.3	11.6	41.7	-10.5	10.9	7.8	14.1	11.7	Sep-10
			<i>0.6</i>	<i>23.0</i>	<i>23.0</i>	<i>16.0</i>	<i>13.3</i>	<i>12.1</i>	<i>41.7</i>	<i>-10.5</i>	<i>10.9</i>	<i>7.8</i>	<i>14.8</i>	<i>11.9</i>	
Private Credit	247,247,651	4.9	1.2	1.2	1.2	3.8	6.1	-	4.8	5.5	9.7	9.3	10.2	-26.7	Dec-15
			<i>1.2</i>	<i>1.2</i>	<i>1.2</i>	<i>3.8</i>	<i>6.1</i>	<i>-</i>	<i>4.8</i>	<i>5.5</i>	<i>9.7</i>	<i>9.3</i>	<i>10.2</i>	<i>7.5</i>	
Opportunistic	165,818,510	3.3	-9.8	-5.4	-5.4	-	-	-	59.9	-	-	-	-	14.1	Jan-20
<i>Assumed Rate of Return +3%</i>			<i>1.8</i>	<i>7.2</i>	<i>7.2</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>7.2</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>7.3</i>	
River Birch International	7,827,043	0.2	-0.5	-0.2	-0.2	-7.4	-4.1	-	-0.7	-19.9	-0.5	2.8	9.5	-	Jul-15
<i>Assumed Rate of Return +3%</i>			<i>1.8</i>	<i>7.2</i>	<i>7.2</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>7.2</i>	<i>7.2</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	
DB Investors Fund IV	25,512,204	0.5	-36.0	-34.4	-34.4	-	-	-	95.1	-	-	-	-	10.2	Dec-19
<i>Assumed Rate of Return +3%</i>			<i>1.8</i>	<i>7.2</i>	<i>7.2</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>7.2</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>7.2</i>	
Sixth Street TAO Partners (D)	80,379,385	1.6	2.7	9.6	9.6	-	-	-	39.6	-	-	-	-	20.8	Mar-20
<i>Assumed Rate of Return +3%</i>			<i>1.8</i>	<i>7.2</i>	<i>7.2</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>7.2</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>7.2</i>	
Aristeia Select Opportunities II	52,099,878	1.0	0.6	-	-	-	-	-	-	-	-	-	-	4.8	Jul-21
<i>Assumed Rate of Return +3%</i>			<i>1.8</i>	<i>7.2</i>	<i>7.2</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>7.2</i>	
Cash	-226,711,713	-4.5	-0.7	-0.8	-0.8	0.1	1.1	-3.0	0.1	1.0	2.0	3.2	2.7	-2.6	Apr-11

Total Fund
Total Private Equity

Kern County Employees' Retirement Association
Period Ending: June 30, 2022

		IRR Analysis as of IRR date										
Vintage Year	Manager/Fund	Estimated Market Value as of 6/30/2022	Total Commitment	Capital Called	% Called	Remaining Commitment	Capital Returned	Market Value as of IRR date	Distrib./ Paid-In (DPI) ¹	Tot. Value/ Paid-In (TVPI) ²	Net IRR Since Inception ³	IRR Date
Private Equity												
2005	Abbott Capital PE V	\$3,100,331	\$65,000,000	\$62,790,000	97%	\$2,210,000	\$89,361,494	\$3,100,331	1.42x	1.47x	6.9%	12/31/21
2008	Abbott Capital PE VI	\$21,952,850	\$50,000,000	\$49,750,000	100%	\$250,000	\$75,850,074	\$22,959,156	1.52x	1.97x	13.6%	03/31/22
2006	Pantheon Global III	\$567,222	\$50,000,000	\$47,300,000	95%	\$2,700,000	\$52,000,000	\$1,080,477	1.10x	1.11x	1.9%	03/31/22
1998	Pantheon USA III	\$49,712	\$7,500,000	\$7,335,000	98%	\$165,000	\$8,197,500	\$51,595	1.12x	1.12x	1.9%	03/31/22
2002	Pantheon USA V	\$425,173	\$25,000,000	\$24,350,000	97%	\$650,000	\$37,950,000	\$425,173	1.56x	1.58x	9.0%	03/31/22
2004	Pantheon USA VI	\$361,594	\$35,000,000	\$33,075,000	95%	\$1,925,000	\$50,623,827	\$644,486	1.53x	1.54x	6.7%	03/31/22
2006	Pantheon USA VII	\$8,333,247	\$50,000,000	\$46,600,000	93%	\$3,400,000	\$78,425,000	\$10,298,427	1.68x	1.86x	10.3%	03/31/22
2020	Vista Foundation Fund IV	\$14,049,020	\$25,000,000	\$14,189,855	57%	\$10,810,145	\$30,252	\$9,694,960	0.00x	0.99x	-1.2%	03/31/22
2021	Crown Global Secondaries V Master S.	\$19,198,409	\$50,000,000	\$14,750,000	30%	\$35,250,000	\$0	N/A	N/A	N/A	N/A	N/A
2021	Brighton Park Capital Fund I	\$36,257,961	\$30,000,000	\$28,686,020	96%	\$1,313,980	\$1,167,799	N/A	0.04x	1.30x	N/A	N/A
2021	Warren Equity Partners Fund III	\$21,033,189	\$32,500,000	\$20,160,828	62%	\$12,339,172	\$508,290	N/A	0.03x	1.07x	N/A	N/A
2021	Peak Rock Capital Fund III	\$8,979,016	\$30,000,000	\$9,670,828	32%	\$20,329,172	\$1,452,276	N/A	N/A	N/A	N/A	N/A
2021	Level Equity Growth Partners V	\$3,105,937	\$15,000,000	\$3,315,369	22%	\$11,684,631	\$0	N/A	N/A	N/A	N/A	N/A
2021	Level Equity Opportunities Fund 2021	\$1,629,450	\$15,000,000	\$1,650,936	11%	\$13,349,064	\$0	N/A	N/A	N/A	N/A	N/A
Total Private Equity		\$139,043,110	\$480,000,000	\$363,623,836	76%	\$116,376,164	\$395,566,513	\$48,254,605	1.09x	1.47x		
% of Portfolio (Market Value)		2.8%										

¹(DPI) is equal to (capital returned / capital called)

²(TVPI) is equal to (market value + capital returned) / capital called

³Net IRR is calculated on the cash flows of all the limited partners of the fund and is net of all fees. Each IRR figure is provided by its respective manager.

IRR Analysis as of IRR date												
Vintage		Estimated Market Value	Total	Capital	%	Remaining	Capital	Market Value	Distrib./	Tot. Value/	Net IRR	IRR
Year	Manager/Fund	6/30/2022	Commitment	Called	Called	Commitment	Returned	as of IRR date	(DPI) ¹	(TVPI) ²	Since Inception ³	Date
Private Credit												
2015	DC Value Recovery Fund IV ⁴	\$34,822,903	\$60,000,000	\$73,340,099	122%	-\$5,500,870	\$24,003,132	\$34,822,903	0.33x	0.80x	N/A	3/31/22
2017	Brookfield Real Estate Finance Fund V	\$38,346,022	\$50,000,000	\$35,882,954	72%	\$14,117,046	\$25,823,610	\$20,769,822	0.72x	1.79x	7.8%	3/31/22
2017	Sixth Street TAO Partners (B)	\$19,481,686	\$50,000,000	\$64,546,356	129%	-\$14,546,356	\$39,836,112	\$38,363,232	0.62x	0.92x	11.4%	3/31/22
2018	Magnetar Constellation Fund V	\$35,302,607	\$60,000,000	\$64,905,493	108%	-\$4,905,493	\$35,077,469	\$37,069,321	0.54x	1.08x	26.6%	2/28/22
2019	H.I.G Bayside Loan Opportunity Fund V	\$44,209,221	\$60,000,000	\$33,496,503	56%	\$26,503,497	\$8,504,813	\$47,453,328	0.25x	1.57x	21.8%	3/31/22
2020	Blue Torch Credit Opportunities Fund II	\$16,765,419	\$20,000,000	\$16,613,092	83%	\$3,386,908	\$1,580,113	N/A	0.10x	1.10x	N/A	N/A
2022	Blue Torch Credit Opportunities Fund III	\$2,000,000	\$40,000,000	\$2,000,000	5%	\$38,000,000	\$0	N/A	0.00x	1.00x	N/A	N/A
2020	Fortress Credit Opportunites Fund V Expansio	\$12,983,908	\$40,000,000	\$11,647,375	29%	\$28,352,625	\$468,590	N/A	0.04x	1.15x	N/A	N/A
2021	Fortress Lending Fund II	\$29,374,059	\$40,000,000	\$30,137,851	75%	\$9,862,149	\$2,362,749	N/A	0.08x	1.05x	N/A	N/A
2022	Fortress Lending Fund III	\$13,961,826	\$40,000,000	\$14,000,000	35%	\$26,000,000	\$0	N/A	N/A	N/A	N/A	N/A
Total Private Credit		\$247,247,651	\$490,000,000	\$349,569,722	71%	\$148,269,507	\$137,656,589	\$178,478,606	0.39x	1.10x		
% of Portfolio (Market Value)		4.9%										

¹(DPI) is equal to (capital returned / capital called)

²(TVPI) is equal to (market value + capital returned) / capital called

³Net IRR is calculated on the cash flows of all the limited partners of the fund and is net of all fees. Each IRR figure is provided by its respective manager.

⁴Name changed from Colony Distressed Credit fund to DC Value Recovery Fund IV

IRR Analysis as of IRR date												
Vintage Year	Manager/Fund	Estimated Market Value 6/30/2022	Total Commitment	Capital Called	% Called	Remaining Commitment	Capital Returned	Market Value as of IRR date	Distrib./ Paid-In (DPI) ¹	Tot. Value/ Paid-In (TVPI) ²	Net IRR Since Inception ³	IRR Date
Private Real Estate												
2014	Invesco Real Estate Value-Add Fund IV	\$4,235,230	\$50,000,000	\$43,637,717	87%	\$6,362,283	\$55,590,259	\$4,235,230	1.27x	1.37x	11.9%	03/31/22
2017	Landmark Real Estate Partners VIII	\$30,330,288	\$80,000,000	\$36,127,951	80%	\$23,872,049	\$20,150,993	\$18,637,114	0.56x	1.40x	16.4%	09/30/21
2018	Long Wharf Real Estate Partners VI	\$27,660,734	\$50,000,000	\$33,072,349	68%	\$16,927,651	\$14,568,880	\$27,660,734	0.44x	1.28x	29.9%	06/30/22
2020	Covenant Apartment Fund X	\$24,357,028	\$30,000,000	\$17,700,000	59%	\$12,300,000	\$3,246,693	N/A	0.18x	1.56x	N/A	N/A
2021	Singeman Real Estate Opportunity Fund IV	\$3,770,201	\$35,000,000	\$3,815,000	11%	\$31,185,000	\$0	N/A	N/A	N/A	N/A	N/A
2022	LBA Logistics Value Fund IX, L.P.	\$3,997,249	\$40,000,000	\$4,230,769	5%	\$38,076,923	\$0	N/A	N/A	N/A	N/A	N/A
Total Private Real Estate		\$94,350,728	\$265,000,000	\$138,583,786	52%	\$128,723,906	\$93,556,825	\$50,533,078	0.68x	1.36x		
% of Portfolio (Market Value)		1.9%										

¹(DPI) is equal to (capital returned / capital called)

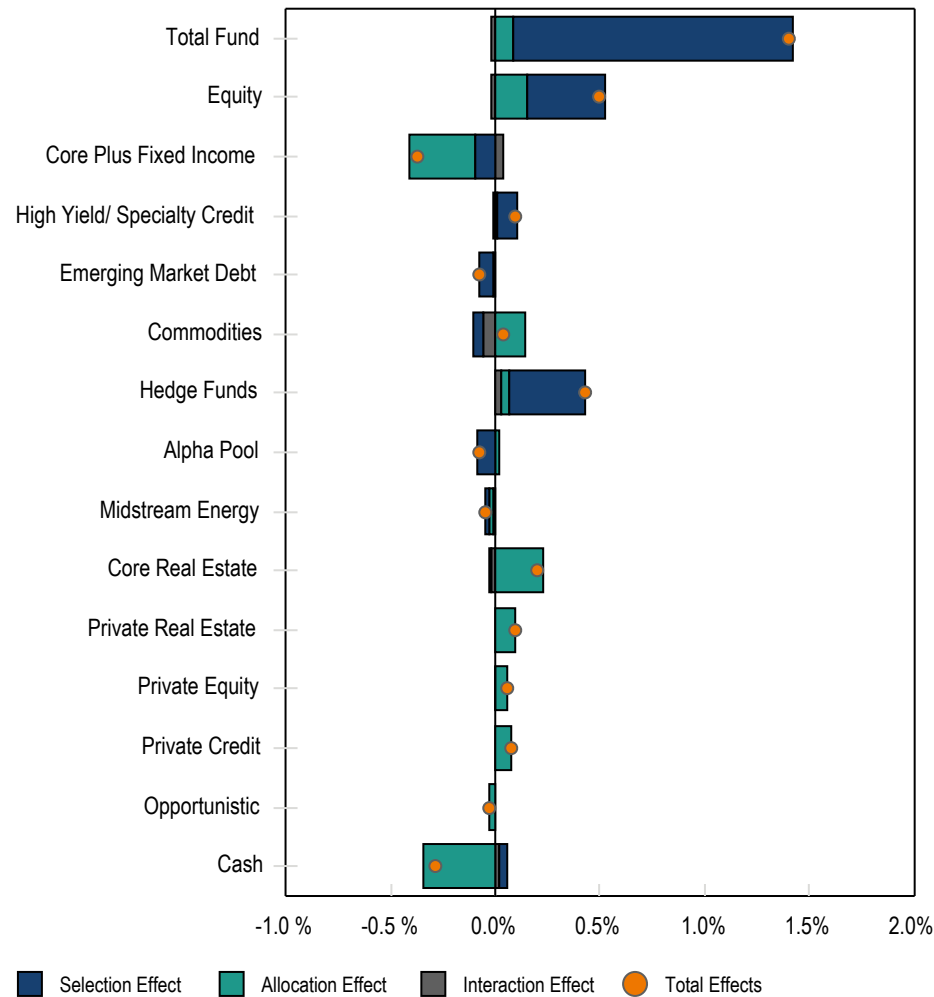
²(TVPI) is equal to (market value + capital returned) / capital called

³Net IRR is calculated on the cash flows of all the limited partners of the fund and is net of all fees. Each IRR figure is provided by its respective manager.

Total Fund
Attribution Analysis - Asset Class Level (Net of Fees)

Kern County Employees' Retirement Association
Period Ending: June 30, 2022

Attribution Effects
Last Three Months



Performance Attribution

	Last Three Months
Wtd. Actual Return	-7.45
Wtd. Index Return	-8.85
Excess Return	1.40
Selection Effect	1.34
Allocation Effect	0.08
Interaction Effect	-0.02

Attribution Summary
Last Three Months

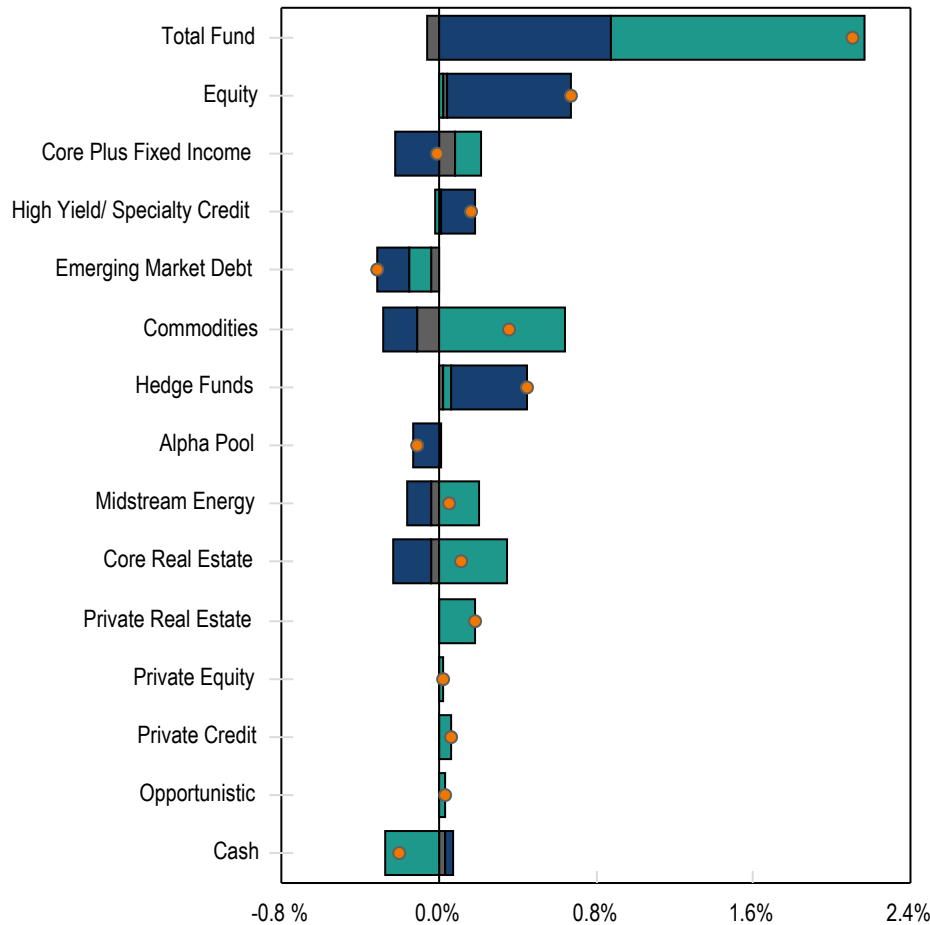
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Equity	-15.0	-15.8	0.9	0.3	0.1	0.0	0.5
Core Plus Fixed Income	-5.2	-4.7	-0.5	-0.1	-0.3	0.0	-0.4
High Yield/ Specialty Credit	-8.4	-10.0	1.6	0.1	0.0	0.0	0.1
Emerging Market Debt	-10.5	-9.0	-1.5	-0.1	0.0	0.0	-0.1
Commodities	-6.8	-5.7	-1.1	-0.1	0.1	-0.1	0.0
Hedge Funds	0.5	-3.2	3.8	0.4	0.0	0.0	0.4
Alpha Pool	-0.7	1.1	-1.8	-0.1	0.0	0.0	-0.1
Midstream Energy	-9.0	-8.6	-0.4	0.0	0.0	0.0	-0.1
Core Real Estate	4.5	4.8	-0.3	0.0	0.2	0.0	0.2
Private Real Estate	3.3	3.3	0.0	0.0	0.1	0.0	0.1
Private Equity	0.6	0.6	0.0	0.0	0.1	0.0	0.1
Private Credit	1.2	1.2	0.0	0.0	0.1	0.0	0.1
Opportunistic	-9.8	1.8	-11.6	0.0	0.0	0.0	0.0
Cash	-0.7	0.0	-0.7	0.1	-0.3	0.0	-0.3
Total Fund	-7.5	-8.9	1.4	0.5	0.1	0.0	1.4

Weighted returns shown in attribution analysis may differ from actual returns. Negative cash allocation unable to be shown in Attribution Summary table. Wtd. Index Returns calculated from benchmark returns and weightings of each component. Selection Effect includes Other Effect in the Performance Attribution table.

Total Fund
Attribution Analysis - Asset Class Level (Net of Fees)

Kern County Employees' Retirement Association
Period Ending: June 30, 2022

Attribution Effects
Fiscal YTD



Performance Attribution

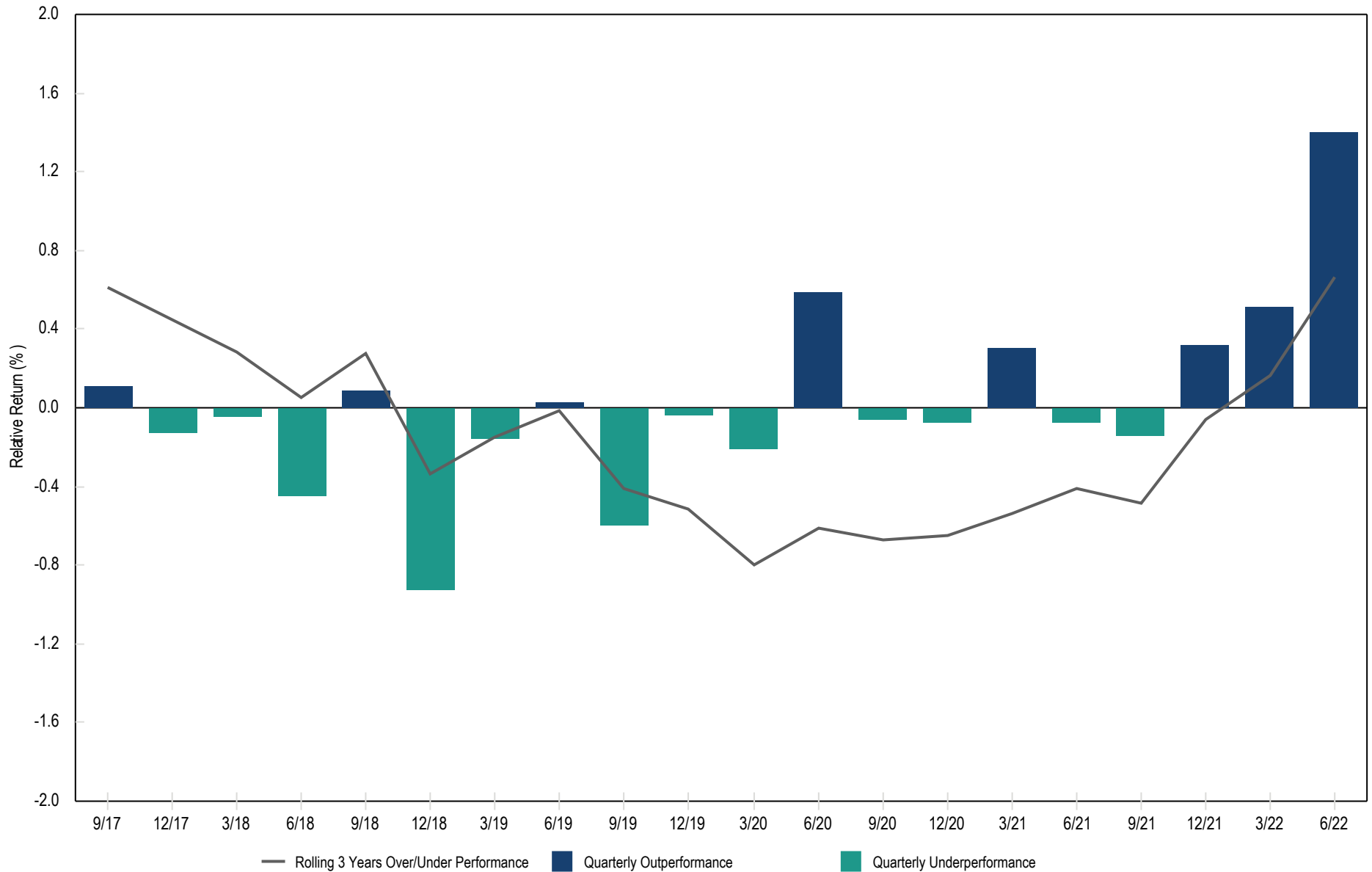
	Fiscal YTD
Wtd. Actual Return	-4.46
Wtd. Index Return	-6.57
Excess Return	2.11
Selection Effect	0.87
Allocation Effect	1.30
Interaction Effect	-0.07

Attribution Summary
Fiscal YTD

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Equity	-15.1	-16.5	1.4	0.7	0.0	0.0	0.7
Core Plus Fixed Income	-11.4	-10.3	-1.1	-0.1	0.1	0.1	0.0
High Yield/ Specialty Credit	-10.0	-12.7	2.7	0.2	0.0	0.0	0.2
Emerging Market Debt	-19.8	-16.4	-3.4	-0.2	-0.1	0.0	-0.3
Commodities	19.4	24.3	-4.9	-0.3	0.6	-0.1	0.4
Hedge Funds	3.0	-1.0	3.9	0.4	0.0	0.0	0.5
Alpha Pool	1.5	4.2	-2.7	-0.1	0.0	0.0	-0.1
Midstream Energy	9.3	11.4	-2.1	-0.2	0.2	0.0	0.0
Core Real Estate	24.8	29.5	-4.8	-0.2	0.4	0.0	0.1
Private Real Estate	31.3	31.3	0.0	0.0	0.2	0.0	0.2
Private Equity	22.9	23.0	0.0	0.0	0.0	0.0	0.0
Private Credit	1.2	1.2	0.0	0.0	0.1	0.0	0.1
Opportunistic	-5.4	7.2	-12.7	0.0	0.0	0.0	0.0
Cash	-0.8	0.0	-0.8	0.1	-0.3	0.0	-0.2
Total Fund	-4.5	-6.6	2.1	0.2	1.3	-0.1	2.1

Weighted returns shown in attribution analysis may differ from actual returns. Negative cash allocation unable to be shown in Attribution Summary table. Wtd. Index Returns calculated from benchmark returns and weightings of each component. Selection Effect includes Other Effect in the Performance Attribution table.

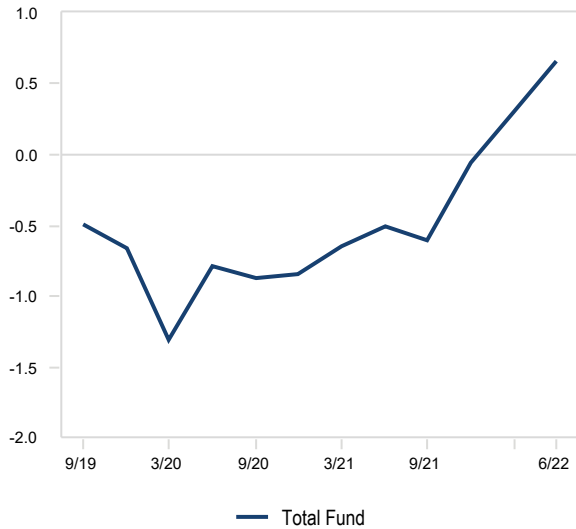
Rolling 3 Year Annualized Excess Performance



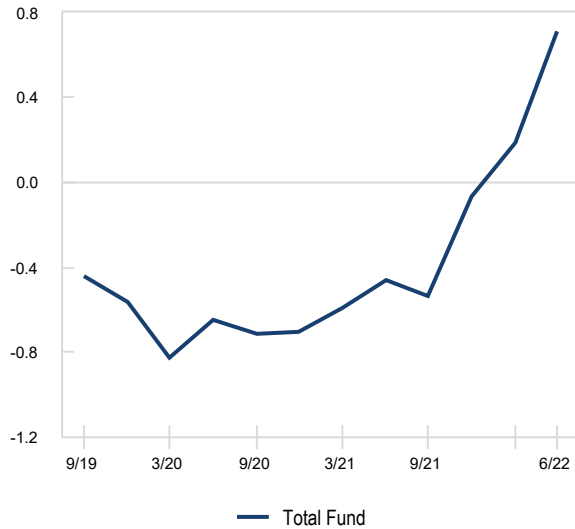
Total Fund
Rolling Risk Statistics: 3 Years (Net of Fees)

Kern County Employees' Retirement Association
Period Ending: June 30, 2022

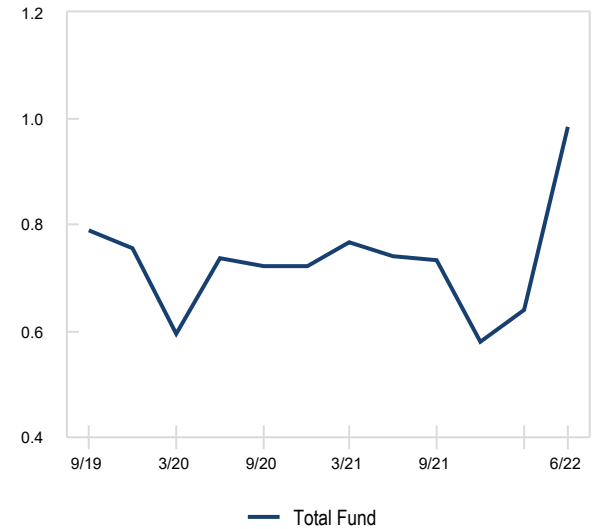
Rolling Information Ratio



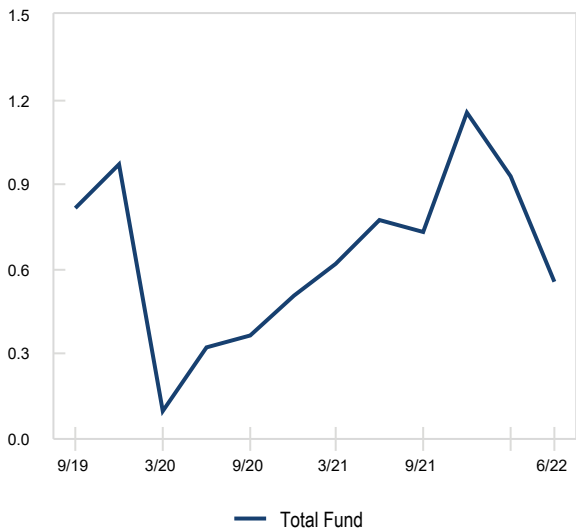
Rolling Annual Excess Benchmark Return



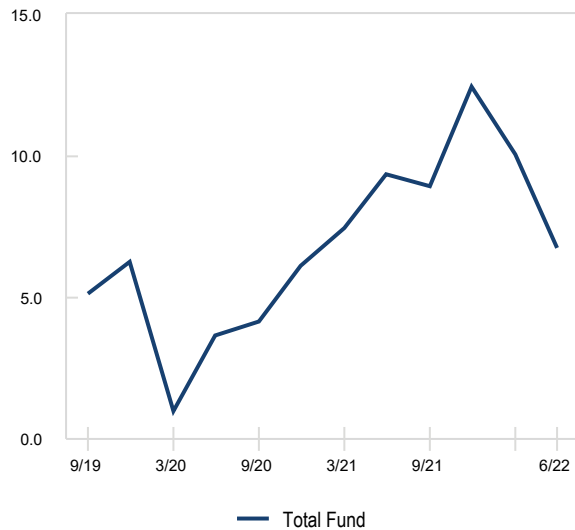
Rolling Tracking Error



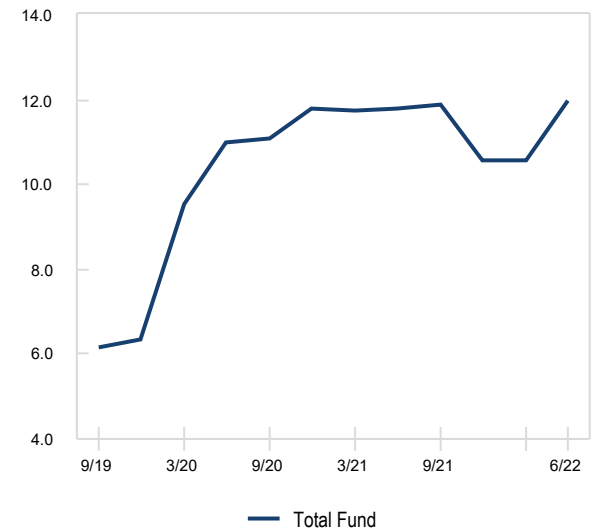
Rolling Sharpe Ratio



Rolling Annual Excess Risk Free Return



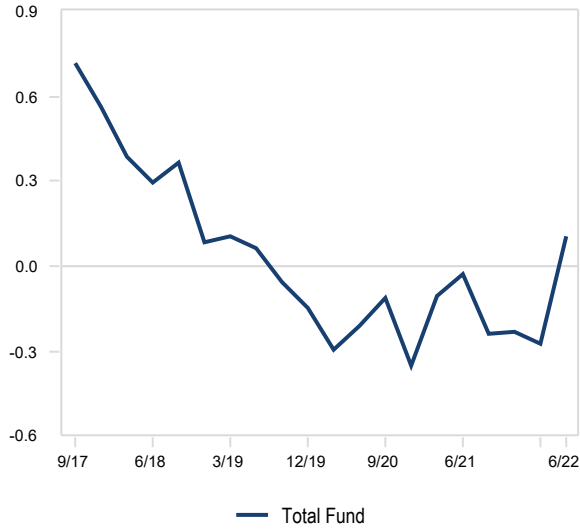
Rolling Annualized Standard Deviation



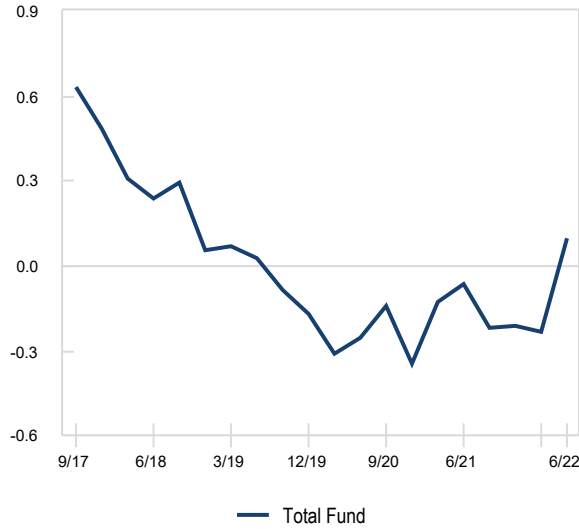
Total Fund
Rolling Risk Statistics: 5 Years (Net of Fees)

Kern County Employees' Retirement Association
Period Ending: June 30, 2022

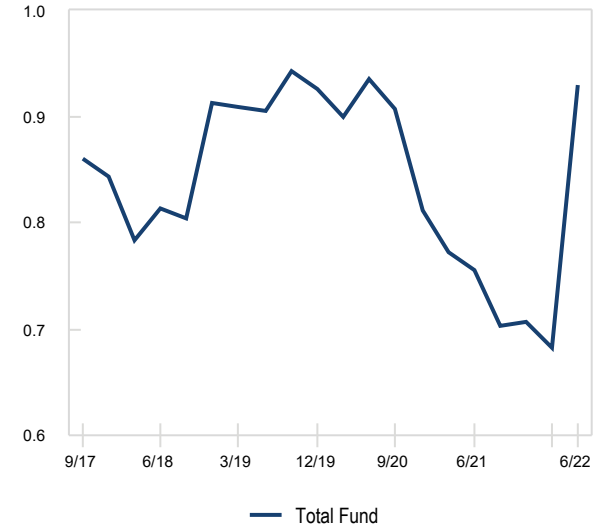
Rolling Information Ratio



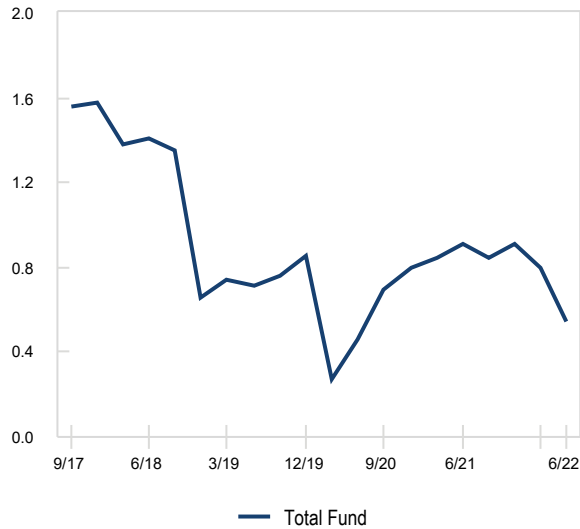
Rolling Annual Excess Benchmark Return



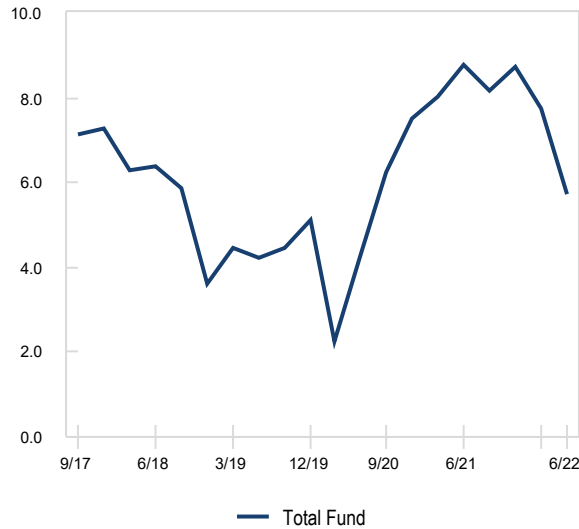
Rolling Tracking Error



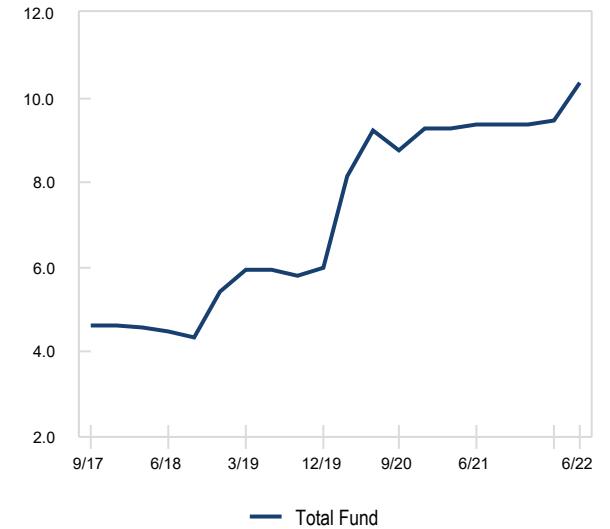
Rolling Sharpe Ratio



Rolling Annual Excess Risk Free Return



Rolling Annualized Standard Deviation



Cash Flows

Total Fund
Net Cash Flow: Last 1 Quarter

Kern County Employees' Retirement Association
Period Ending: June 30, 2022

	Beginning Market Value	Contributions	Withdrawals	Fees	Net Transfers	Net Investment Change	Ending Market Value
Equity	2,010,640,905	10,021,400		-335,722	40,000,000	-299,828,320	1,760,498,263
Equity Beta Exposure	448,770,788	10,021,400		-21,559	40,000,000	-73,399,254	425,371,375
Russell 2000 Overlay	16,427,880					-2,849,280	13,578,600
Mellon DB SL Stock Index Fund	334,684,458			-7,637		-53,880,334	280,796,486
PIMCO StocksPLUS	118,147,151			-44,770		-20,177,133	97,925,248
AB US Small Cap Value Equity	97,008,034			-64,185		-14,732,929	82,210,920
Geneva Capital Small Cap Growth	52,087,862			-29,412		-6,639,063	45,419,386
Mellon DB SL World ex-US Index Fund	551,232,061					-79,855,707	471,376,354
Fidelity Non-US Small Cap Equity	261,834					-15,089	246,745
Cevian Capital II	33,981,461					-2,957,473	31,023,988
American Century Non-US Small Cap	80,249,283			-19,831		-14,141,482	66,087,970
DFA Emerging Markets Value I	84,643,560			-36,350		-9,038,986	75,568,224
AB Emerging Markets Strategic Core Equity Collective Trust	99,106,335			-111,976		-11,054,935	87,939,424
Mellon Emerging Markets Stock Index Fund	94,039,515					-11,086,705	82,952,809
Transition Equity	685					49	733
Fixed Income	1,222,866,553	50,000,000		-187,141	-55,000,000	-86,810,112	1,130,869,301
Fixed Income Beta Exposure		50,000,000				1,180,364	51,180,364
Mellon DB SL Aggregate Bond Index Fund	227,866,012				-55,000,000	-10,378,915	162,487,098
PIMCO Core Plus	200,426,586					-9,732,216	190,694,370
Western Asset Core Plus	212,057,418					-14,111,707	197,945,711
Western Asset High Yield Fixed Income	207,777,536					-23,925,629	183,851,907
TCW Securitized Opportunities	129,823,534			-181,363		-4,178,266	125,463,906
Stone Harbor Emerging Markets Debt Blend Portfolio	97,517,056					-10,551,262	86,965,794
PIMCO EMD	147,284,155			-5,778		-15,104,300	132,174,077
Transition Fixed Income	114,255					-8,181	106,074
Commodities	347,789,751			-37,437	-60,000,000	-18,390,297	269,362,016
Gresham MTAP Commodity Builder Fund	94,868,223			-37,437	-10,000,000	-1,954,635	82,876,151
WTC-CTF	252,921,527				-50,000,000	-16,435,662	186,485,865
Hedge Funds	542,026,420		-1,160,101	-363,179		9,140,968	549,644,108
Aristeia International Limited	67,195,663					39,889	67,235,553
Brevan Howard Fund	68,928,340			-124,271		4,036,159	72,840,227
D.E. Shaw Composite Fund	55,816,950					7,027,092	62,844,042
HBK Fund II	56,778,731					-1,059,263	55,719,468

Total Fund
Net Cash Flow: Last 1 Quarter

Kern County Employees' Retirement Association
Period Ending: June 30, 2022

	Beginning Market Value	Contributions	Withdrawals	Fees	Net Transfers	Net Investment Change	Ending Market Value
Hudson Bay Cap Structure Arbitrage Enhanced Fund	74,505,348					1,207,116	75,712,464
Indus Pacific Opportunities Fund	37,438,472					-539,227	36,899,245
Magnetar Structured Credit Fund	9,020,150		-1,160,101	-9,777		9,777	7,860,049
Pharo Macro Fund	60,578,227					604,095	61,182,322
PIMCO Commodity Alpha Fund	60,367,071			-174,573		5,101,756	65,294,254
Sculptor Domestic Partners II LP	51,397,468			-54,557		-7,286,426	44,056,485
Alpha Pool	268,899,258	771,916		-20,999	-10,409,117	-1,706,155	257,534,903
Hudson Bay	57,549,476	136,858				795,536	58,481,870
Davidson Kempner Institutional Partners	54,621,168	126,604				-1,670,723	53,077,049
HBK Fund II	54,602,995	211,385				-1,287,125	53,527,255
HBK Opportunities Platform – SPAC Series	50,340,049	171,684		-20,999	-10,409,117	-544,867	39,536,750
Garda Fixed Income Relative Value Opportunity Fund	51,785,570	125,385				1,001,023	52,911,979
Midstream Energy	350,123,956			-437,827		-30,799,258	318,886,871
Harvest Midstream	201,971,779			-354,790		-16,459,382	185,157,607
PIMCO Midstream	148,152,177			-83,037		-14,339,876	133,729,264
Core Real Estate	323,231,741			-273,703	19,997,760	15,424,437	358,380,234
ASB Allegiance Real Estate Fund	186,488,399					8,435,260	194,923,658
JPMCB Strategic Property Fund	136,743,343			-273,703	19,997,760	6,989,177	163,456,576
Private Real Estate	91,788,040				-195,847	2,758,535	94,350,728
Invesco Real Estate Value-Add Fund IV	7,929,949				-3,983,659	288,940	4,235,230
Landmark Real Estate Partners VIII	27,852,686				824,254	1,653,346	30,330,286
Long Wharf Real Estate	28,674,828				-991,080	-23,014	27,660,734
Covenant Apartment Fund X	23,593,320				-278,054	1,041,762	24,357,028
Singerman Real Estate Opportunity Fund IV	1,814,180				1,925,000	31,021	3,770,201
LBA Logistics Value Fund IX, L.P.	1,923,077				2,307,692	-233,520	3,997,249
Private Equity	128,969,284		-2,012,612		11,883,802	202,637	139,043,110
Abbott V	3,166,776					-66,445	3,100,331
Abbott VI	24,055,620		-1,006,306			-1,096,464	21,952,850
Pantheon Secondary III	1,080,477				-500,000	-13,255	567,222
Pantheon III	51,595					-1,883	49,712
Pantheon V	425,173						425,173

Total Fund
Net Cash Flow: Last 1 Quarter

Kern County Employees' Retirement Association
Period Ending: June 30, 2022

	Beginning Market Value	Contributions	Withdrawals	Fees	Net Transfers	Net Investment Change	Ending Market Value
Pantheon VI	644,486				-245,000	-37,892	361,594
Pantheon VII	8,983,247				-650,000		8,333,247
Vista Foundation Fund IV	9,041,775				4,354,060	653,185	14,049,020
Crown Global Secondaries V Master S.C.Sp	17,305,948				1,500,000	392,461	19,198,409
Brighton Park Capital Fund I	36,438,508				153,789	-334,336	36,257,961
Warren Equity Partners Fund III	15,874,846				5,249,642	-91,299	21,033,189
Peak Rock Capital Fund III	9,348,402				-1,235,037	865,651	8,979,016
Level Equity Growth Partners V	1,544,021				1,626,898	-64,982	3,105,937
Level Equity Opportunities Fund 2021	-2,406				1,629,450	2,406	1,629,450
Linden Capital Partners V LP							
Private Credit	243,379,418		-1,810,141		4,733,571	944,804	247,247,651
DC Value Recovery Fund IV	36,956,023					-2,133,120	34,822,903
Sixth Street TAO Partners (B)	37,001,079				-17,210	1,362,153	38,346,022
Brookfield Real Estate Finance Fund V	23,059,142				-4,121,237	543,782	19,481,686
Magnetar Constellation Fund V	37,069,321		-1,578,487			-188,227	35,302,607
H.I.G. Bayside Loan Opportunity Fund V	47,114,733				-3,244,107	338,595	44,209,221
Blue Torch Credit Opportunities Fund II	16,280,915		-231,654			716,158	16,765,419
Fortress Credit Opportunites Fund V Expansion	11,826,948				795,428	361,532	12,983,908
Fortress Lending Fund II	30,071,257				-679,303	-17,895	29,374,059
Fortress Lending Fund III	4,000,000				10,000,000	-38,174	13,961,826
OrbiMed Royalty & Credit Opportunities IV							
Opportunistic	165,224,386				13,009,060	-12,414,936	165,818,510
DB Investors Fund IV	39,889,093					-14,376,889	25,512,204
Sixth Street TAO Partners (D)	72,450,649				5,956,816	1,971,920	80,379,385
Aristeia Select Opportunities II	52,106,107					-6,229	52,099,878
River Birch International	778,537				7,052,244	-3,739	7,827,043
Cash	-203,727,734	475,150,285	-544,393,395	-22,293	35,980,771	10,300,651	-226,711,713
Short Term Cash Account	1						1
Short Term Investment Funds	22,108,665	17,876,135	-27,222,823		47,513,493	175,431	60,450,901
Parametric Cash Overlay	123,168,935	188,286,266	-249,118,616		-11,532,721	11,513,211	62,317,076
Goldman Sachs Cash Account	-28,741,718	223,164,427	-199,008,258				-4,585,549
Futures Offset	-465,198,668	41,572,458	-65,839,698			-376,208	-489,842,116
Collateral Cash	25,963,000	4,251,000	-3,204,000				27,010,000

Total Fund
Net Cash Flow: Last 1 Quarter

Kern County Employees' Retirement Association
Period Ending: June 30, 2022

	Beginning Market Value	Contributions	Withdrawals	Fees	Net Transfers	Net Investment Change	Ending Market Value
BlackRock Short Duration Fund	118,972,050			-22,293		-1,011,783	117,937,974

Total Fund
Cash Flow History

Kern County Employees' Retirement Association
Period Ending: June 30, 2022

Portfolio Reconciliation

	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
Beginning Market Value	5,488,531,714	5,373,108,431	5,373,108,431	4,334,993,085	3,940,875,605	2,801,185,542
Contributions	804,511,180	3,520,549,185	3,520,549,185	8,666,010,680	10,687,078,728	16,643,549,578
Withdrawals	-817,943,827	-3,598,115,784	-3,598,115,784	-8,898,974,554	-11,023,626,595	-17,153,438,567
Fees	-1,678,300	-13,198,127	-13,198,127	-42,266,724	-68,015,904	-121,258,212
Net Cash Flows	-13,432,648	-77,566,598	-77,566,598	-232,963,873	-336,547,868	-509,888,988
Net Investment Change	-410,175,083	-230,617,849	-230,617,849	962,894,772	1,460,596,246	2,773,627,429
Ending Market Value	5,064,923,983	5,064,923,983	5,064,923,983	5,064,923,983	5,064,923,983	5,064,923,983
Net Change \$	-423,607,731	-308,184,448	-308,184,448	729,930,898	1,124,048,378	2,263,738,441

Contribution and withdrawals include transfers in and out of accounts. Ending market value is net of fees. Market value and flows do not include the Short Term Cash Account balance.

Risk Metrics

Total Fund
Actual Correlation Matrix

Kern County Employees' Retirement Association
Period Ending: June 30, 2022

Correlation Matrix
3 Years Ending June 30, 2022

	A	B	C	D	E	F	G	H	I	J	K	L
A	1.00											
B	0.98	1.00										
C	0.96	0.99	1.00									
D	0.97	0.98	0.94	1.00								
E	0.90	0.88	0.82	0.87	1.00							
F	0.78	0.74	0.73	0.70	0.70	1.00						
G	0.48	0.46	0.48	0.40	0.40	0.89	1.00					
H	0.89	0.84	0.81	0.81	0.84	0.87	0.59	1.00				
I	0.87	0.82	0.78	0.81	0.83	0.87	0.57	0.89	1.00			
J	0.70	0.61	0.54	0.67	0.65	0.33	-0.04	0.60	0.58	1.00		
K	0.80	0.76	0.72	0.73	0.81	0.66	0.38	0.82	0.75	0.56	1.00	
L	-0.21	-0.21	-0.19	-0.21	-0.25	-0.42	-0.46	-0.28	-0.29	0.00	-0.19	1.00

- A = Total Fund
- B = Equity
- C = Domestic Equity
- D = International Developed Equity
- E = Emerging Markets Equity
- F = Fixed Income
- G = Core Plus Fixed Income
- H = High Yield/ Specialty Credit
- I = Emerging Market Debt
- J = Commodities
- K = Hedge Funds
- L = Core Real Estate

- Low Interaction
- Moderate Interaction
- Moderate to High Interaction
- High Interaction

Total Fund
Risk Analysis - 3 Years (Net of Fees)

Kern County Employees' Retirement Association
Period Ending: June 30, 2022

	Alpha	Beta	R-Squared	Return	Information Ratio	Excess Performance	Tracking Error	Sharpe Ratio	Excess Return	Standard Deviation	Sortino Ratio	Up Capture	Down Capture
Total Fund	0.9	1.0	1.0	6.8	0.6	0.7	1.1	0.7	6.4	9.3	1.0	99.2	92.1
Equity	0.3	1.0	1.0	6.2	0.2	0.2	1.0	0.4	7.1	18.1	0.6	99.4	98.3
Domestic Equity	0.2	1.0	1.0	10.0	0.0	0.1	1.1	0.6	10.8	18.8	0.8	98.6	97.8
International Developed Equity	0.4	1.0	1.0	2.1	0.5	0.4	1.0	0.2	3.2	18.5	0.2	102.7	101.2
Emerging Markets Equity	-2.4	1.0	1.0	-1.3	-0.8	-2.5	3.1	0.0	-0.3	17.7	0.0	88.6	98.3
Fixed Income	0.3	1.1	1.0	-0.9	0.2	0.2	1.0	-0.2	-1.4	6.0	-0.3	110.9	106.8
Core Plus Fixed Income	0.3	1.1	0.9	-0.8	0.1	0.2	1.2	-0.3	-1.3	5.1	-0.3	117.4	112.1
High Yield/ Specialty Credit	0.4	0.8	1.0	0.4	0.1	0.5	2.4	0.0	0.1	8.3	0.0	78.8	74.9
Emerging Market Debt	1.0	1.1	1.0	-4.9	0.3	0.6	2.3	-0.4	-4.9	12.4	-0.5	110.0	102.8
Commodities	1.2	0.9	0.9	14.7	0.0	0.4	5.1	0.8	14.7	17.3	1.3	96.3	92.0
Hedge Funds	3.8	0.9	0.5	8.6	0.8	3.2	3.6	1.5	7.7	5.2	2.4	104.4	32.7
Core Real Estate	3.2	0.5	0.8	10.2	-0.6	-2.5	4.0	2.0	9.2	4.6	11.7	79.8	74.9
Private Real Estate	0.0	1.0	1.0	15.4	-	0.0	0.0	1.6	14.2	8.9	4.6	100.0	100.0
Private Equity	0.0	1.0	1.0	16.0	-0.6	0.0	0.0	1.1	15.2	13.4	2.3	100.0	100.2
Private Credit	0.0	1.0	1.0	3.8	-	0.0	0.0	0.7	3.2	4.6	1.2	100.0	100.0
Opportunistic	-	-	-	-	-	-	-	-	-	-	-	-	-
Midstream Energy	-	-	-	-	-	-	-	-	-	-	-	-	-
Alpha Pool	-	-	-	-	-	-	-	-	-	-	-	-	-

Data not available for time periods less than 3 years (Alpha Pool, Midstream, & Opportunistic added in 2020)

Risk Return Statistics: Last Three Years

Period Ending: June 30, 2022

	Equity	MSCI AC World IMI (Net)	Core Plus Fixed Income	Bloomberg U.S. Aggregate Index	High Yield/ Specialty Credit	ICE BofA U.S. High Yield Index	Emerging Market Debt	3 Years 50 JPM EMBI Global Div/ 50 JPM GBI EM Global Div	Commodities	Bloomberg Commodity Index Total Return	Hedge Funds	75% 90 Day TBills +4%/ 25% MSCI ACWI (Net)	Core Real Estate	NCREIF ODCE- monthly
RETURN SUMMARY STATISTICS														
Up Market Periods	23	23	17	17	26	26	18	18	24	24	25	25	35	35
Down Market Periods	13	13	19	19	10	10	18	18	12	12	11	11	1	1
Maximum Return	12.43	12.66	2.64	2.59	3.61	4.78	6.74	5.62	8.01	8.78	3.99	3.33	5.39	7.97
Minimum Return	-14.74	-14.39	-3.98	-3.79	-10.52	-11.76	-13.80	-12.46	-12.65	-12.81	-5.24	-2.91	-1.17	-1.56
Return	6.22	5.98	-0.78	-0.94	0.42	-0.05	-4.92	-5.47	14.71	14.34	8.56	5.36	10.16	12.66
Excess Return	7.08	6.87	-1.28	-1.46	0.15	-0.15	-4.86	-5.56	14.70	14.46	7.74	4.70	9.19	11.64
Excess Performance	0.24	0.00	0.15	0.00	0.47	0.00	0.55	0.00	0.37	0.00	3.20	0.00	-2.50	0.00
RISK SUMMARY STATISTICS														
Beta	0.99	1.00	1.10	1.00	0.81	1.00	1.06	1.00	0.93	1.00	0.86	1.00	0.54	1.00
Upside Risk	13.08	13.15	3.19	2.81	4.33	5.55	6.68	6.07	13.82	13.64	4.76	3.85	5.31	8.39
Downside Risk	12.64	12.77	3.93	3.51	7.04	8.40	10.51	9.84	11.31	12.16	3.14	2.58	0.73	0.90
RISK/RETURN SUMMARY STATISTICS														
Standard Deviation	18.05	18.20	5.06	4.49	8.26	10.07	12.39	11.47	17.30	17.75	5.17	4.38	4.55	7.66
Alpha	0.28	0.00	0.26	0.00	0.39	0.00	1.01	0.00	1.25	0.00	3.85	0.00	3.23	0.00
Sharpe Ratio	0.39	0.38	-0.26	-0.33	0.02	-0.02	-0.39	-0.48	0.84	0.81	1.46	1.05	2.00	1.51
Excess Risk	18.16	18.30	5.03	4.43	8.37	10.18	12.49	11.55	17.43	17.88	5.31	4.47	4.60	7.70
Tracking Error	1.02	0.00	1.23	0.00	2.37	0.00	2.28	0.00	5.11	0.00	3.58	0.00	3.99	0.00
Information Ratio	0.20	-	0.15	-	0.13	-	0.31	-	0.05	-	0.85	-	-0.61	-
CORRELATION STATISTICS														
R-Squared	1.00	1.00	0.95	1.00	0.97	1.00	0.97	1.00	0.92	1.00	0.53	1.00	0.83	1.00
Actual Correlation	1.00	1.00	0.97	1.00	0.99	1.00	0.98	1.00	0.96	1.00	0.73	1.00	0.91	1.00

Kern County Employees' Retirement Association
Period Ending: June 30, 2022

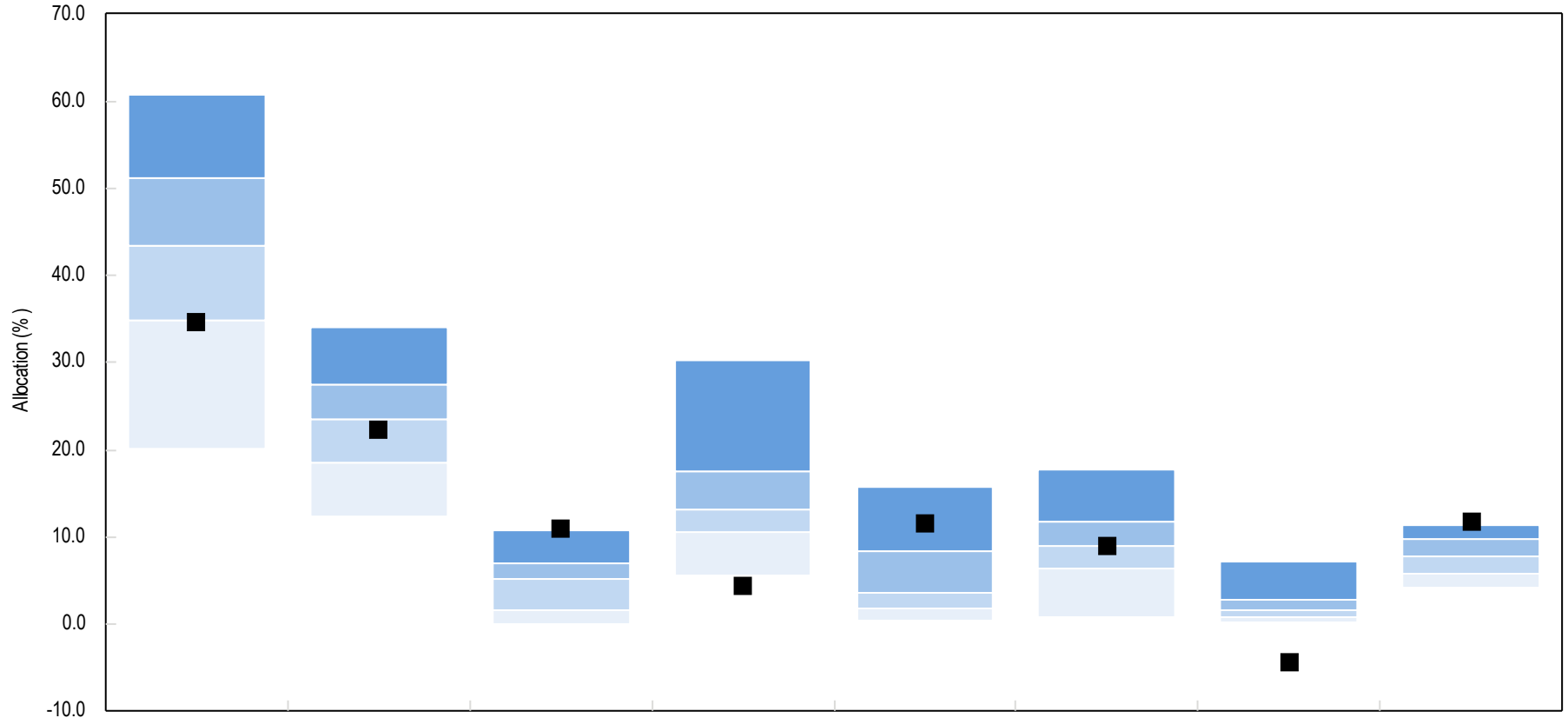
Risk Return Statistics: Last Two Years

	Midstream Energy	Alerian Midstream Energy Index	Opportunistic	Assumed Rate of Return +3%
2 Yrs				
RETURN SUMMARY STATISTICS				
Up Market Periods	-	17	24	24
Down Market Periods	-	7	0	0
Maximum Return	-	18.94	19.65	0.58
Minimum Return	-	-12.21	-4.04	0.58
Return	-	30.63	22.98	7.25
Excess Return	-	29.46	22.08	6.89
Excess Performance	-	0.00	15.73	0.00
RISK SUMMARY STATISTICS				
Beta	-	1.00	-	-
Upside Risk	-	20.65	17.55	2.03
Downside Risk	-	12.89	4.92	0.00
RISK/RETURN SUMMARY STATISTICS				
Standard Deviation	-	22.79	17.06	0.00
Alpha	-	0.00	-	-
Sharpe Ratio	-	1.29	1.29	137.48
Excess Risk	-	22.79	17.07	0.05
Tracking Error	-	0.00	17.06	0.00
Information Ratio	-	-	0.89	-
CORRELATION STATISTICS				
R-Squared	-	1.00	-	-
Actual Correlation	-	1.00	-	-

Data for unavailable for positions held for less than two years.

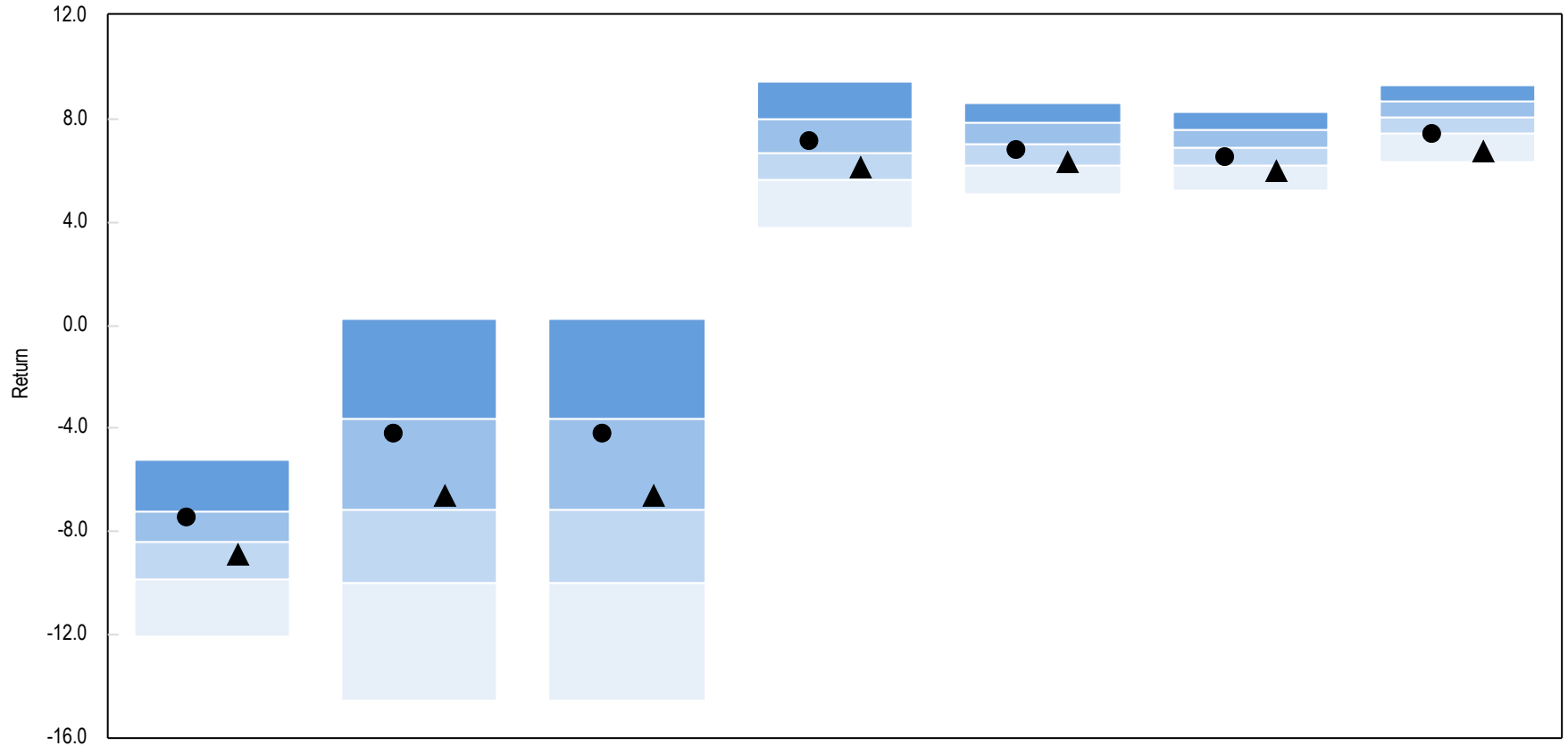
Peer Comparison

Total Plan Allocation vs. InvMetrics Public DB > \$1B
As of June 30, 2022



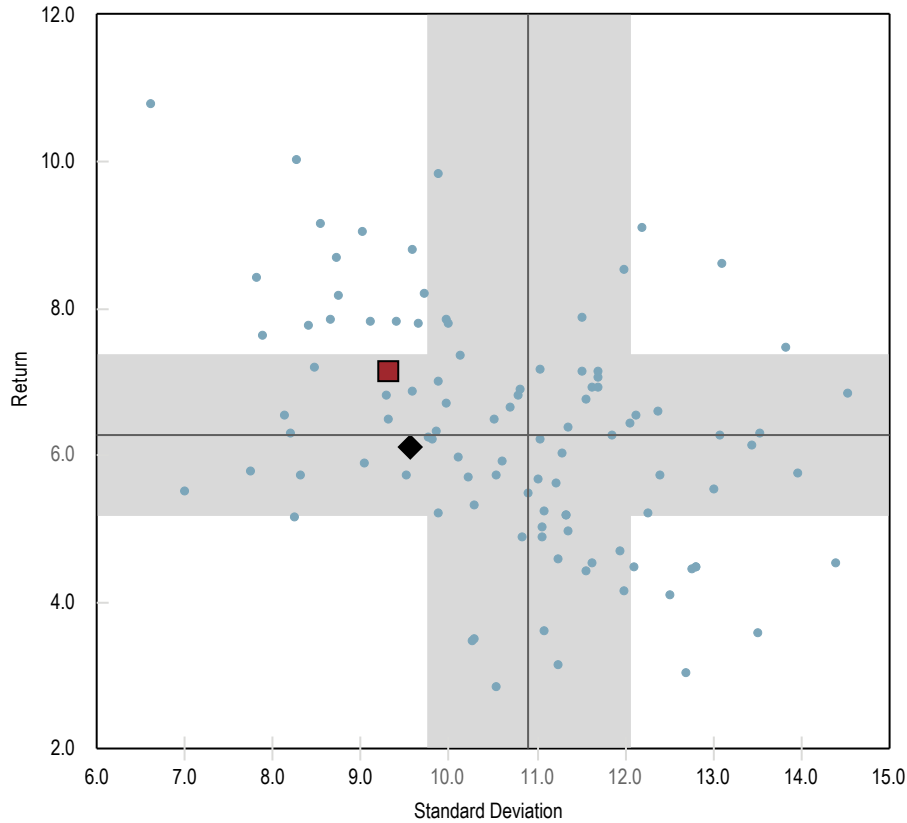
	Total Equity	Total Fixed Income	Hedge Funds	Private Equity	Real Assets/Commod	Real Estate - Private	Cash & Equivalents	Other
■ Total Fund	34.8 (76)	22.3 (56)	10.9 (5)	4.3 (97)	11.6 (17)	8.9 (50)	-4.5	11.7 (1)
5th Percentile	60.9	34.1	10.8	30.2	15.8	17.7	7.3	11.3
1st Quartile	51.2	27.6	6.9	17.6	8.4	11.7	2.7	9.7
Median	43.4	23.5	5.1	13.2	3.6	8.9	1.5	7.7
3rd Quartile	34.8	18.6	1.5	10.5	1.8	6.4	0.8	5.7
95th Percentile	20.1	12.3	0.0	5.7	0.3	0.8	0.2	4.1
Population	133	126	62	96	66	91	98	2

Total Fund vs. InvMetrics Public DB > \$1B



	Quarter	Fiscal YTD	1 Year	3 Years	5 Years	7 Years	10 Years
● Total Fund	-7.4 (27)	-4.2 (32)	-4.2 (32)	7.1 (41)	6.8 (56)	6.6 (60)	7.5 (76)
▲ Policy Index	-8.9 (56)	-6.6 (48)	-6.6 (48)	6.1 (63)	6.4 (71)	6.0 (83)	6.7 (91)
5th Percentile	-5.2	0.2	0.2	9.5	8.6	8.2	9.3
1st Quartile	-7.2	-3.6	-3.6	8.0	7.8	7.6	8.6
Median	-8.4	-7.1	-7.1	6.6	7.0	6.9	8.1
3rd Quartile	-9.9	-10.0	-10.0	5.6	6.2	6.2	7.5
95th Percentile	-12.1	-14.5	-14.5	3.8	5.1	5.2	6.3
Population	120	116	116	115	113	111	105

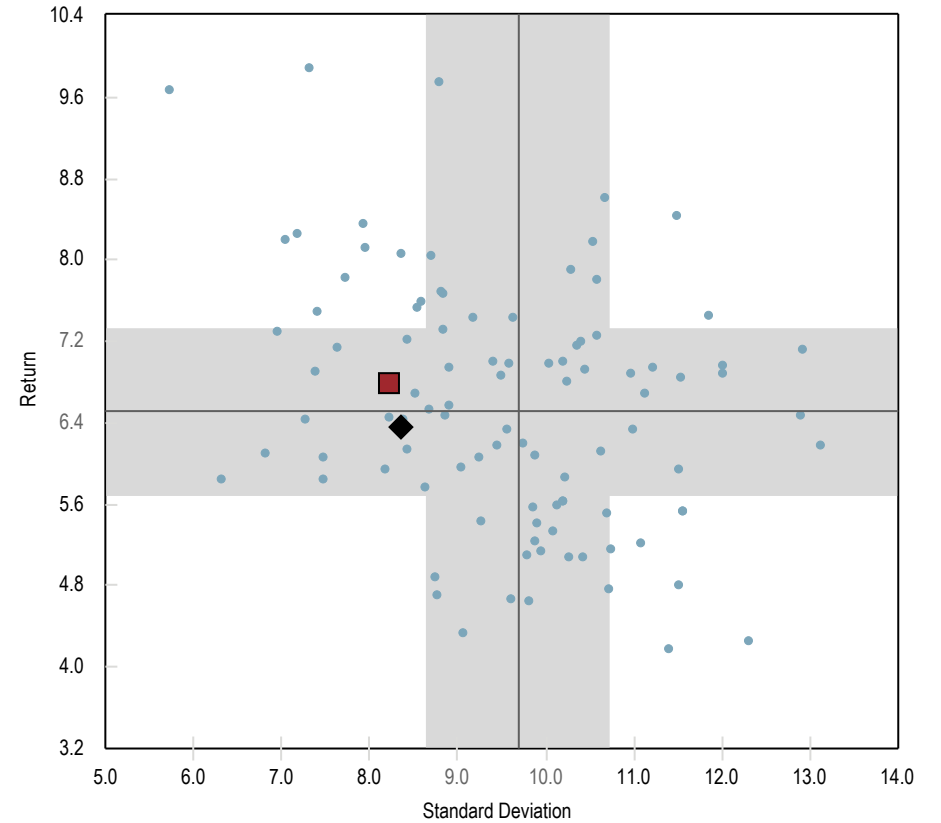
Annualized Return vs. Annualized Standard Deviation
3 Years Ending June 30, 2022



● InvMetrics Public DB > \$1B

	Return	Standard Deviation
■ Total Fund	7.15	9.30
◆ Policy Index	6.12	9.55
— Median	6.28	10.91
Population	101	101

Annualized Return vs. Annualized Standard Deviation
5 Years Ending June 30, 2022



● InvMetrics Public DB > \$1B

	Return	Standard Deviation
■ Total Fund	6.78	8.22
◆ Policy Index	6.36	8.36
— Median	6.51	9.68
Population	98	98

Other

Total Fund
Watchlist (Net of Fees)

Kern County Employees' Retirement Association
Period Ending: June 30, 2022

Fund Name	Allocation Group	Overall Status	Outperformed Universe 10th percentile (1yr)	Outperformed Universe 75th percentile (1yr)	Outperformed Index (1yr)	Outperformed Median Rank (3 yrs)	Outperformed Index (3yrs)	Outperformed Median Rank (5 yrs)	Outperformed Index (5yrs)	Concern	Index Fund Tracking Error over 0.25% (1yr)
Equity Beta Exposure	Equity	■	-	-	-	-	-	-	-	-	✓
Russell 2000 Overlay	Equity	■	-	-	-	-	-	-	-	-	-
Mellon DB SL Stock Index Fund	Equity	■	-	-	-	-	-	-	-	-	✓
PIMCO StocksPLUS	Equity	■	✓	✓	Ⓜ	✓	Ⓜ	✓	Ⓜ	-	-
AB US Small Cap Value Equity	Equity	■	✓	Ⓜ	✓	Ⓜ	✓	Ⓜ	Ⓜ	-	-
Geneva Capital Small Cap Growth	Equity	■	✓	✓	✓	✓	✓	✓	✓	-	-
Mellon DB SL World ex-US Index Fund	Equity	■	-	-	-	-	-	-	-	-	Ⓜ
Fidelity Non-US Small Cap Equity	Equity	■	Ⓜ	✓	✓	✓	✓	✓	✓	-	-
Cevian Capital II	Equity	■	-	-	-	-	-	-	-	-	Ⓜ
American Century Non-US Small Cap	Equity	■	✓	✓	✓	-	-	-	-	-	-
DFA Emerging Markets Value I	Equity	■	Ⓜ	✓	✓	✓	✓	✓	✓	-	-
AB Emerging Markets Strategic Core Equity Collective Trust	Equity	■	✓	✓	Ⓜ	Ⓜ	Ⓜ	Ⓜ	Ⓜ	-	-
Mellon Emerging Markets Stock Index Fund	Equity	■	-	-	-	-	-	-	-	-	Ⓜ
Mellon DB SL Aggregate Bond Index Fund	Fixed Income	■	-	-	-	-	-	-	-	-	✓
PIMCO Core Plus	Fixed Income	■	✓	✓	✓	✓	✓	Ⓜ	✓	-	-
Western Asset Core Plus	Fixed Income	■	✓	Ⓜ	Ⓜ	Ⓜ	Ⓜ	Ⓜ	Ⓜ	-	-
Western Asset High Yield Fixed Income	Fixed Income	■	✓	✓	Ⓜ	✓	Ⓜ	✓	Ⓜ	-	-
TCW Securitized Opportunities	Fixed Income	■	✓	✓	✓	✓	✓	✓	✓	-	-
Stone Harbor Emerging Markets Debt Blend Portfolio	Fixed Income	■	✓	✓	Ⓜ	Ⓜ	Ⓜ	Ⓜ	Ⓜ	P	-
PIMCO EMD	Fixed Income	■	✓	✓	✓	-	-	-	-	-	-
Gresham MTAP Commodity Builder Fund	Commodities	■	✓	✓	✓	Ⓜ	✓	Ⓜ	✓	-	-
WTC-CTF	Commodities	■	✓	Ⓜ	Ⓜ	Ⓜ	✓	✓	✓	-	-

Legend For Overall Status

No Issues	■
Watch	■
Terminate	■

Legend for Standards

Pass	✓
Fail	Ⓜ

Legend for Concern

Provisional	P
Restricted	R
No Issues	--

Total Fund
Watchlist (Net of Fees)

Kern County Employees' Retirement Association
Period Ending: June 30, 2022

Fund Name	Allocation Group	Overall Status	Outperformed Universe 10th percentile (1yr)	Outperformed Universe 75th percentile (1yr)	Outperformed Index (1yr)	Outperformed Median Rank (3 yrs)	Outperformed Index (3yrs)	Outperformed Median Rank (5 yrs)	Outperformed Index (5yrs)	Concern	Index Fund Tracking Error over 0.25% (1yr)
Aristeia International Limited	Hedge Funds	■	-	-	⚠	-	✓	-	✓	-	-
Brevan Howard Fund	Hedge Funds	■	-	-	✓	-	✓	-	✓	-	-
D.E. Shaw Composite Fund	Hedge Funds	■	-	-	✓	-	✓	-	✓	-	-
HBK Fund II	Hedge Funds	■	-	-	⚠	-	⚠	-	⚠	-	-
Hudson Bay Cap Structure Arbitrage Enhanced Fund	Hedge Funds	■	-	-	✓	-	✓	-	✓	-	-
Indus Pacific Opportunities Fund	Hedge Funds	■	-	-	⚠	-	✓	-	✓	-	-
Magnetar Structured Credit Fund	Hedge Funds	■	-	-	⚠	-	✓	-	✓	-	-
PIMCO Commodity Alpha Fund	Hedge Funds	■	✓	⚠	⚠	⚠	⚠	⚠	✓	-	-
River Birch International	Opportunistic	■	-	-	⚠	-	⚠	-	⚠	-	-
Sculptor Domestic Partners II LP	Hedge Funds	■	-	-	⚠	-	⚠	-	-	-	-
Harvest Midstream	Midstream	■	✓	✓	✓	-	-	-	-	-	-
PIMCO Midstream	Midstream	■	✓	✓	⚠	-	-	-	-	-	-
ASB Allegiance Real Estate Fund	Core Real Estate	■	-	-	⚠	-	⚠	-	⚠	-	-
JPMCB Strategic Property Fund	Core Real Estate	■	-	-	⚠	-	⚠	-	⚠	-	-
Invesco Real Estate Value-Add Fund IV	Private Real Estate	■	-	-	⚠	-	⚠	-	✓	-	-
Landmark Real Estate Partners VIII	Private Real Estate	■	-	-	-	-	-	-	-	-	⚠
DB Investors Fund IV	Opportunistic	■	-	-	⚠	-	-	-	-	-	-
Sixth Street TAO Partners (D)	Opportunistic	■	-	-	✓	-	-	-	-	-	-
Aristeia Select Opportunities II	Opportunistic	■	-	-	⚠	-	-	-	-	-	-

Legend For Overall Status

No Issues	■
Watch	■
Terminate	■

Legend for Standards

Pass	✓
Fail	⚠

Legend for Concern

Provisional	P
Restricted	R
No Issues	--

Total Fund
Quarterly Historical Analysis (net of fees)

Kern County Employees' Retirement Association
Period Ending: June 30, 2022

	2022 Q2	2022 Q1	2021 Q4	2021 Q3	2021 Q2	2021 Q1	2020 Q4	2020 Q3	2020 Q2	2020 Q1	2019 Q4	2019 Q3
Total Fund	-7.5	-0.8	3.6	0.5	5.5	3.5	8.8	4.4	10.7	-11.3	4.6	0.2
<i>Policy Index</i>	-8.9	-1.3	3.3	0.6	5.6	3.2	8.8	4.5	10.1	-11.1	4.6	0.8

	2019 Q2	2019 Q1	2018 Q4	2018 Q3	2018 Q2	2018 Q1	2017 Q4	2017 Q3	2017 Q2	2017 Q1	2016 Q4	2016 Q3
Total Fund	3.1	6.8	-6.4	2.3	0.3	-0.1	3.0	3.2	2.7	4.2	0.8	3.5
<i>Policy Index</i>	3.0	7.0	-5.5	2.2	0.7	-0.1	3.2	3.1	2.8	3.5	0.5	2.9

	2016 Q2	2016 Q1	2015 Q4	2015 Q3	2015 Q2	2015 Q1	2014 Q4	2014 Q3	2014 Q2	2014 Q1	2013 Q4	2013 Q3
Total Fund	1.9	1.1	2.2	-5.4	0.7	2.4	0.8	-1.5	3.6	2.1	4.1	4.4
<i>Policy Index</i>	2.2	1.8	1.4	-4.9	0.4	2.0	0.4	-1.4	3.4	2.4	4.0	4.6

Total Fund Data Sources and Methodology

Kern County Employees' Retirement Association Period Ending: June 30, 2022

Performance Return Calculations

Performance is calculated using a Time Weighted Rates of Return (TWRR) methodology. Monthly returns are linked geometrically and annualized for periods longer than one year.

Data Source

Verus is an independent third party consulting firm and calculates returns from best source book of record data. Returns calculated by Verus may deviate from those shown by the manager in part, but not limited to, differences in prices and market values reported by the custodian and manager, as well as significant cash flows into or out of an account. It is the responsibility of the manager and custodian to provide insight into the pricing methodologies and any difference in valuation.

Illiquid Alternatives

Due to the inability to receive final valuation prior to report production, closed end funds (including but are not limited to Real Estate, Hedge Funds, Private Equity, and Private Credit) performance is typically reported at a one-quarter lag. Valuation is reported at a one-quarter lag, adjusted for current quarter flow (cash flows are captured real time). Closed end fund performance is calculated using a time-weighted return methodology consistent with all portfolio and total fund performance calculations. For Private Markets, performance reports also include Verus-calculated multiples based on flows and valuations (e.g. DPI and TVPI) and manager-provided IRRs.

Manager Line Up

Manager	Fund Incepted	Data Source	Manager	Fund Incepted	Data Source
AB Emerging Markets Strategic Core	11/3/2016	Northern Trust	LGT Crown	2/1/2021	LGT
AB US Small Cap Value Equity	7/7/2015	Northern Trust	Long Wharf Real Estate	6/27/2019	Long Wharf
Abbott Capital PE IV	7/13/2001	Abbott Capital	Magnetar Constellation	11/14/2018	Magnetar
Abbott Capital PE V	5/25/2005	Abbott Capital	Magnetar Structured Credit	5/1/2014	Magnetar
Abbott Capital PE VI	3/31/2008	Abbott Capital	Mellon Aggregate Bond Index Fund	1/14/2011	Mellon
American Century Non-US Small Cap	12/15/2020	American Century	Mellon EB DV Stock Index	10/18/2017	Mellon
Aristeia International Limited	5/1/2014	Northern Trust	Mellon EB DV World ex-US Index	8/1/2018	Mellon
ASB Real Estate	9/30/2013	ASB	Myriad Opportunities Offshore	5/19/2016	Northern Trust
BlackRock Short Duration Fund	9/8/2021	BlackRock	Pantheon Global III		Pantheon
Blue Torch Credit Opportunities	7/24/2020	Blue Torch	Pantheon USA III		Pantheon
Brevan Howard	11/1/2013	Northern Trust	Pantheon USA V		Pantheon
Brighton Private Equity	3/28/2021	Brighton	Pantheon USA VI		Pantheon
Brookfield Real Estate Finance Fund V	12/18/2017	Northern Trust	Pantheon USA VII		Pantheon
Cevian Capital II	12/30/2014	Northern Trust	Parametric Overlay/ Cap Efficiency Program	7/31/2020	Parametric
Colony Distressed Debt IV	12/28/2015	Colony	Peak Rock Capital Fund III	7/13/2021	Peak Rock
Covenant Apartment Fund X	10/29/2020	Covenant	PIMCO Commodity Alpha	5/4/2016	PIMCO
DB Investors Fund IV	1/29/2020	DB	PIMCO Core Plus	1/21/2011	Northern Trust
D.E. Shaw	6/30/2013	Northern Trust	PIMCO EMD		Northern Trust
DFA Emerging Markets Value I	3/7/2014	Northern Trust	PIMCO Midstream	10/9/2020	PIMCO
Fortress Credit Opportunities	12/17/2020	Fortress	PIMCO StocksPLUS	7/14/2003	PIMCO
Fortress Lending Fund II	3/15/2021	Fortress	Fidelity Non-US Small Cap Equity	6/10/2008	Northern Trust
Garda Fixed Income Relative Value Opp	9/30/2021	Garda	River Birch	8/3/2015	Northern Trust
Geneva Capital Small Cap Growth	7/22/2015	Geneva	Singerman Real Estate Opportunity Fund IV	10/27/2021	Singerman
Gresham MTAP Commodity	9/3/2013	Gresham	Sculptor Enhanced Domestic Partners	3/26/2019	Sculptor
Harvest Midstream	9/28/2020	Harvest Midstream	Short Term Cash Account		Northern Trust
HBK Fund II	11/1/2013	Northern Trust	Short Term Investment Funds		Northern Trust
Henderson Smallcap Growth	7/22/2015	Northern Trust	Stone Harbor Emerging Markets Debt	8/8/2012	Stone Harbor
H.I.G Bayside Loan Opportunities Fund V	7/24/2019	H.I.G. Capital	TAO Contingent	4/16/2020	TPG Sixth Street
Hudson Bay	6/7/2019	Northern Trust	TCW Securitized Opportunities	2/3/2016	TCW
Indus Pacific Opportunities	6/30/2014	Northern Trust	Transition Equity		Northern Trust
Invesco Real Estate III	6/30/2013	Invesco	Transition Fixed Income		Northern Trust
Invesco Real Estate IV	12/18/2015	Invesco	TSSP Adjacent Opportunities Partners	11/17/2017	TPG Sixth Street
J.P. Morgan Strategic Property	7/2/2014	J.P. Morgan	Vista Equity Partners	7/24/2020	Vista Equity
Landmark Real Estate Partners VIII	4/29/2018	Landmark	Warren Equity	4/1/2021	Warren
LBA Logistics Value Fund IX, L.P.	2/22/2022	LBA	Wellington Commodities	9/10/2013	Wellington
Level Equity Growth Partners V	11/1/2021	Level Equity	Western Asset Core Plus	5/31/2004	Northern Trust
Level Equity Opportunities Fund 2021	11/1/2021	Level Equity	Western Asset High Yield Fixed income	5/31/2005	Northern Trust

Total Fund Data Sources and Methodology

Kern County Employees' Retirement Association Period Ending: June 30, 2022

Policy & Custom Index Composition	
Policy Index: 7/1/2021-Present	37% MSCI ACWI IMI, 14% Bloomberg US Aggregate, 6% Ice BofA ML High Yield Master II Index, 2% JPM Emerging Markets Bond Index Global Diversified, 2% JPM Government Bond Index-Emerging Markets, 4% Bloomberg Commodity Index, 7.5% 3-Month T-bill +400bps, 2.5% MSCI ACWI, 5% NCREIF-ODCE, 2% actual time-weighted Private Equity Returns*, 4% actual time-weighted Private Credit Returns*, 1% actual time-weighted Private Real Estate Returns*, 3% MSCI ACWI*, 1% Bloomberg US Aggregate*, 4% Bloomberg US Aggregate, 5% Alerian Midstream, 5% 3-Month T-bill +400bps, 91 Day T-Bills, -5% 3-Month T-bill.
Policy Index: 1/1/2021-6/30/2021	37% MSCI ACWI IMI, 14% Bloomberg US Aggregate, 6% Ice BofA ML High Yield Master II Index, 2% JPM Emerging Markets Bond Index Global Diversified, 2% JPM Government Bond Index-Emerging Markets, 4% Bloomberg Commodity Index, 7.5% 3-Month T-bill +400bps, 2.5% MSCI ACWI, 5% NCREIF-ODCE, 1% actual time-weighted Private Equity Returns*, 4% actual time-weighted Private Credit Returns*, 1% actual time-weighted Private Real Estate Returns*, 4% MSCI ACWI*, 1% Bloomberg US Aggregate*, 4% Bloomberg US Aggregate, 5% Alerian Midstream, 5% 3-Month T-bill +400bps, 91 Day T-Bills, -5% 3-Month T-bill.
Policy Index: 7/1/2020-12/31/2020	37% MSCI ACWI IMI, 14% Bloomberg US Aggregate, 6% Ice BofA ML High Yield Master II Index, 2% JPM Emerging Markets Bond Index Global Diversified, 2% JPM Government Bond Index-Emerging Markets, 4% Bloomberg Commodity Index, 7.5% 3-Month T-bill +400bps, 2.5% MSCI ACWI, 5% NCREIF-ODCE, 1% actual time-weighted Private Equity Returns*, 4% actual time-weighted Private Credit Returns*, 1% actual time-weighted Private Real Estate Returns*, 4% MSCI ACWI*, 5% Bloomberg US Aggregate, 1% Alerian Midstream, 4% Bloomberg US
Policy Index: 4/1/2020-6/30/2020	37% MSCI ACWI IMI, 19% Bloomberg US Aggregate, 6% Ice BofA ML High Yield Master II Index, 2% JPM Emerging Markets Bond Index Global Diversified, 2% JPM Government Bond Index-Emerging Markets, 4% Bloomberg Commodity Index, 7.5% 3-Month T-bill +400bps, 2.5% MSCI ACWI, 5% NCREIF-ODCE, 1% actual time-weighted Private Equity Returns*, 4% actual time-weighted Private Credit Returns*, 1% actual time-weighted Private Real Estate Returns*, 3% MSCI ACWI*, 5% Bloomberg US Aggregate*.
Policy Index: 1/1/2020-3/31/2020	37% MSCI ACWI IMI, 19% Bloomberg US Aggregate, 6% Ice BofA ML High Yield Master II Index, 2% JPM Emerging Markets Bond Index Global Diversified, 2% JPM Government Bond Index-Emerging Markets, 4% Bloomberg Commodity Index, 7.5% 3-Month T-bill +400bps, 2.5% MSCI ACWI, 5% NCREIF-ODCE, 2% actual time-weighted Private Equity Returns*, 4% actual time-weighted Private Credit Returns*, 1% actual time-weighted Private Real Estate Returns*, 3% MSCI ACWI*, 5% Bloomberg US Aggregate*.
Policy Index: 10/1/2019-12/31/2019	37% MSCI ACWI IMI, 19% Bloomberg US Aggregate, 6% Ice BofA ML High Yield Master II Index, 2% JPM Emerging Markets Bond Index Global Diversified, 2% JPM Government Bond Index-Emerging Markets, 4% Bloomberg Commodity Index, 7.5% 3-Month T-bill +400bps, 2.5% MSCI ACWI, 5% NCREIF-ODCE, 2% actual time-weighted Private Equity Returns*, 3% actual time-weighted Private Credit Returns*, 1% actual time-weighted Private Real Estate Returns*, 3% MSCI ACWI*, 6% Bloomberg US Aggregate*.
Policy Index: 7/1/2019-9/30/2019	37% MSCI ACWI IMI, 19% Bloomberg US Aggregate, 6% Ice BofA ML High Yield Master II Index, 2% JPM Emerging Markets Bond Index Global Diversified, 2% JPM Government Bond Index-Emerging Markets, 4% Bloomberg Commodity Index, 7.5% 3-Month T-bill +400bps, 2.5% MSCI ACWI, 5% NCREIF-ODCE, 2% actual time-weighted Private Equity Returns*, 4% actual time-weighted Private Credit Returns*, 1% actual time-weighted Private Real Estate Returns*, 3% MSCI ACWI*, 5% Bloomberg US Aggregate*.
Policy Index: 4/1/2019-6/30/2019	37% MSCI ACWI IMI, 19% Bloomberg US Aggregate, 6% Ice BofA ML High Yield Master II Index, 2% JPM Emerging Markets Bond Index Global Diversified, 2% JPM Government Bond Index-Emerging Markets, 4% Bloomberg Commodity Index, 7.5% 3-Month T-bill +400bps, 2.5% MSCI ACWI, 5% NCREIF-ODCE, 2% actual time-weighted Private Equity Returns*, 3% actual time-weighted Private Credit Returns*, 1% actual time-weighted Private Real Estate Returns*, 3% MSCI ACWI*, 6% Bloomberg US Aggregate*.
Policy Index: 1/1/2019-3/31/2019	37% MSCI ACWI IMI, 19% Bloomberg US Aggregate, 6% Ice BofA ML High Yield Master II Index, 2% JPM Emerging Markets Bond Index Global Diversified, 2% JPM Government Bond Index-Emerging Markets, 4% Bloomberg Commodity Index, 7.5% 3-Month T-bill +400bps, 2.5% MSCI ACWI, 5% NCREIF-ODCE, 2% actual time-weighted Private Equity Returns*, 3% actual time-weighted Private Credit Returns*, 2% actual time-weighted Private Real Estate Returns*, 3% MSCI ACWI*, 5% Bloomberg US Aggregate*.
Policy Index: 10/1/2018-12/31/2018	37% MSCI ACWI IMI, 19% Bloomberg US Aggregate, 6% Ice BofA ML High Yield Master II Index, 2% JPM Emerging Markets Bond Index Global Diversified, 2% JPM Government Bond Index-Emerging Markets, 4% Bloomberg Commodity Index, 7.5% 3-Month T-bill +400bps, 2.5% MSCI ACWI, 5% NCREIF-ODCE, 2% actual time-weighted Private Equity Returns*, 2% actual time-weighted Private Credit Returns*, 2% actual time-weighted Private Real Estate Returns*, 3% MSCI ACWI*, 6% Bloomberg US Aggregate*.
Policy Index: 7/1/2018-9/30/2018	37% MSCI ACWI IMI, 19% Bloomberg US Aggregate, 6% Ice BofA ML High Yield Master II Index, 2% JPM Emerging Markets Bond Index Global Diversified, 2% JPM Government Bond Index-Emerging Markets, 4% Bloomberg Commodity Index, 7.5% 3-Month T-bill +400bps, 2.5% MSCI ACWI, 5% NCREIF-ODCE, 3% actual time-weighted Private Equity Returns*, 2% actual time-weighted Private Credit Returns*, 1% actual time-weighted Private Real Estate Returns*, 2% MSCI ACWI*, 7% Bloomberg US Aggregate*.
Policy Index: 1/1/2017- 6/30/2018	19% Russell 3000 Index, 18% MSCI ACWI ex US, 29% Bloomberg US Aggregate, 10% NCREIF-ODCE, 4% Bloomberg Commodity Index, 7.5% 91-day T-bills + 400bps, 2.5% MSCI ACWI, 5% Russell 3000 Index + 300 bps, 5% ICE BofA ML High Yield + 200 bps.
Policy Index: 4/1/2014-12/31/2016	23% Russell 3000 Index, 29% Bloomberg US Aggregate, 22% MSCI ACWI ex US,

Other Disclosures

*Private Asset actual weights, rounded to 1%, and actual time-weighted returns of Private Equity, Private Credit, Private Real Estate used in policy with the difference in weight versus target allocated to private market's public market "equivalent". Private Equity to Global Equity, Private Credit and Private Real Estate to Core Plus.

All data prior to 2Q 2011 has been provided by the investment managers.

Effective 1/1/2017, only traditional asset class (public equity, public fixed income, REITs) investment manager fees will be included in the gross of fee return calculation

Fiscal year end: 6/30.

Glossary

Allocation Effect: An attribution effect that describes the amount attributable to the managers' asset allocation decisions, relative to the benchmark.

Alpha: The excess return of a portfolio after adjusting for market risk. This excess return is attributable to the selection skill of the portfolio manager. Alpha is calculated as: Portfolio Return - [Risk-free Rate + Portfolio Beta x (Market Return - Risk-free Rate)].

Benchmark R-squared: Measures how well the Benchmark return series fits the manager's return series. The higher the Benchmark R-squared, the more appropriate the benchmark is for the manager.

Beta: A measure of systematic, or market risk; the part of risk in a portfolio or security that is attributable to general market movements. Beta is calculated by dividing the covariance of a security by the variance of the market.

Book-to-Market: The ratio of book value per share to market price per share. Growth managers typically have low book-to-market ratios while value managers typically have high book-to-market ratios.

Capture Ratio: A statistical measure of an investment manager's overall performance in up or down markets. The capture ratio is used to evaluate how well an investment manager performed relative to an index during periods when that index has risen (up market) or fallen (down market). The capture ratio is calculated by dividing the manager's returns by the returns of the index during the up/down market, and multiplying that factor by 100.

Correlation: A measure of the relative movement of returns of one security or asset class relative to another over time. A correlation of 1 means the returns of two securities move in lock step, a correlation of -1 means the returns of two securities move in the exact opposite direction over time. Correlation is used as a measure to help maximize the benefits of diversification when constructing an investment portfolio.

Excess Return: A measure of the difference in appreciation or depreciation in the price of an investment compared to its benchmark, over a given time period. This is usually expressed as a percentage and may be annualized over a number of years or represent a single period.

Information Ratio: A measure of a manager's ability to earn excess return without incurring additional risk. Information ratio is calculated as: excess return divided by tracking error.

Interaction Effect: An attribution effect that describes the portion of active management that is contributable to the cross interaction between the allocation and selection effect. This can also be explained as an effect that cannot be easily traced to a source.

Portfolio Turnover: The percentage of a portfolio that is sold and replaced (turned over) during a given time period. Low portfolio turnover is indicative of a buy and hold strategy while high portfolio turnover implies a more active form of management.

Price-to-Earnings Ratio (P/E): Also called the earnings multiplier, it is calculated by dividing the price of a company's stock into earnings per share. Growth managers typically hold stocks with high price-to-earnings ratios whereas value managers hold stocks with low price-to-earnings ratios.

R-Squared: Also called the coefficient of determination, it measures the amount of variation in one variable explained by variations in another, i.e., the goodness of fit to a benchmark. In the case of investments, the term is used to explain the amount of variation in a security or portfolio explained by movements in the market or the portfolio's benchmark.

Selection Effect: An attribution effect that describes the amount attributable to the managers' stock selection decisions, relative to the benchmark.

Sharpe Ratio: A measure of portfolio efficiency. The Sharpe Ratio indicates excess portfolio return for each unit of risk associated with achieving the excess return. The higher the Sharpe Ratio, the more efficient the portfolio. Sharpe ratio is calculated as: Portfolio Excess Return / Portfolio Standard Deviation.

Sortino Ratio: Measures the risk-adjusted return of an investment, portfolio, or strategy. It is a modification of the Sharpe Ratio, but penalizes only those returns falling below a specified benchmark. The Sortino Ratio uses downside deviation in the denominator rather than standard deviation, like the Sharpe Ratio.

Standard Deviation: A measure of volatility, or risk, inherent in a security or portfolio. The standard deviation of a series is a measure of the extent to which observations in the series differ from the arithmetic mean of the series. For example, if a security has an average annual rate of return of 10% and a standard deviation of 5%, then two-thirds of the time, one would expect to receive an annual rate of return between 5% and 15%.

Style Analysis: A return based analysis designed to identify combinations of passive investments to closely replicate the performance of funds

Style Map: A specialized form or scatter plot chart typically used to show where a Manager lies in relation to a set of style indices on a two-dimensional plane. This is simply a way of viewing the asset loadings in a different context. The coordinates are calculated by rescaling the asset loadings to range from -1 to 1 on each axis and are dependent on the Style Indices comprising the Map.

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