



Los Angeles County Employees Retirement Association

Investments Division

TOTAL FUND

PERFORMANCE REPORT

For the quarter ended
March 31, 2023



review

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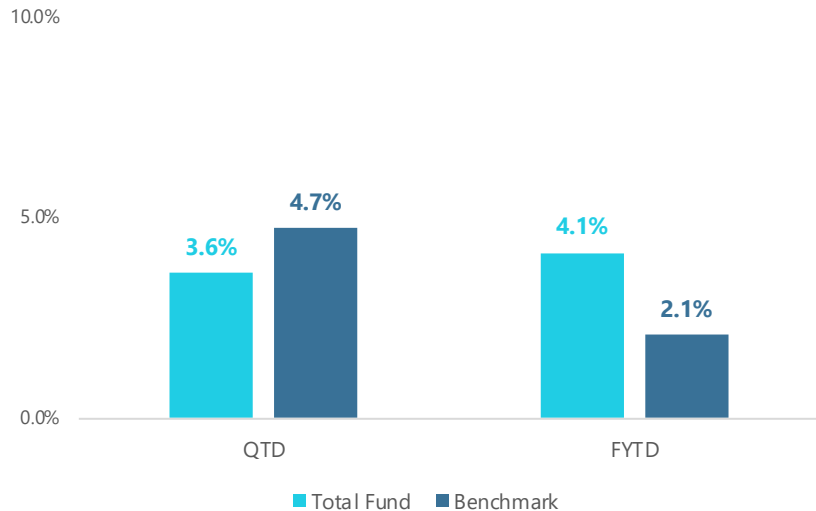
01	TOTAL FUND
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total fund

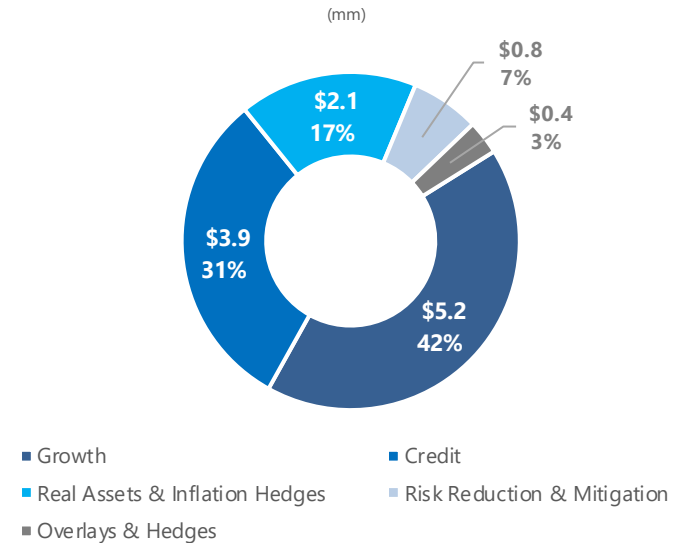
Quarterly Snapshot

for the quarter ended March 31, 2023

Performance (net)



Public Markets Fees¹



Ending Market Value

72,332

↑ **3%**
from prior quarter

Sharpe Ratio²

1.3

↑ **94%**
from prior quarter

Batting Average³

45%

↓ **-20%**
from prior quarter

Standard Deviation²

8.4

↓ **-12%**
from prior quarter

Tracking Error²

2.8

↑ **7%**
from prior quarter

¹ Reflects estimated investment management fees. Additional details found in the appendix.

² 3 Year Annualized.

³ Percentage of managers that outperformed the benchmark for the quarter.

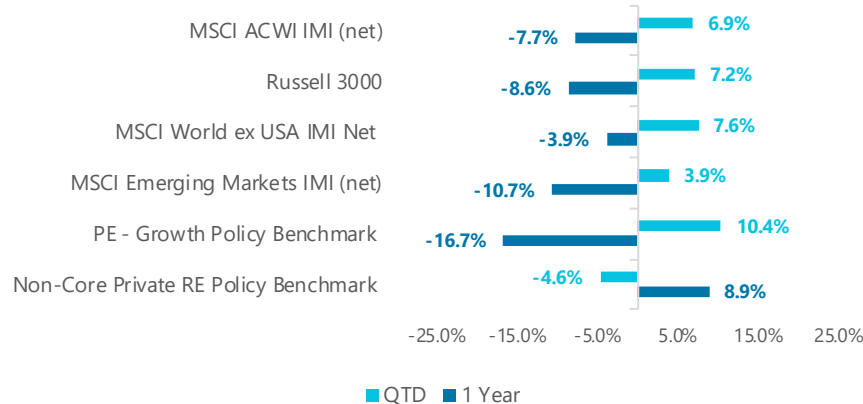
Market Environment

for the quarter ended March 31, 2023

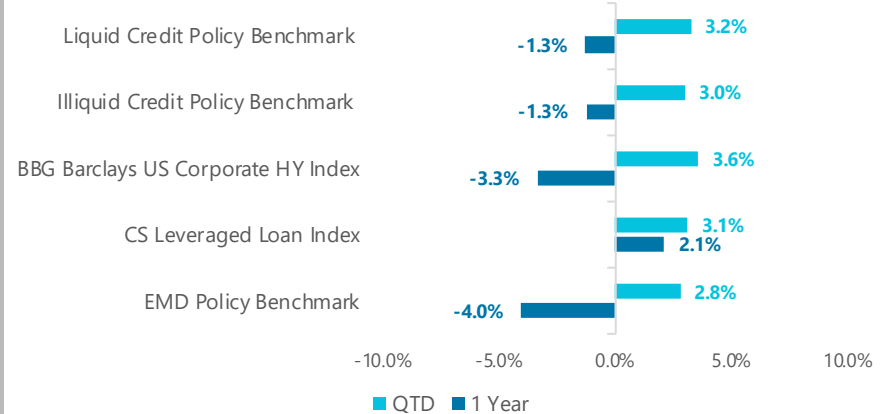


Los Angeles County Employees Retirement Association

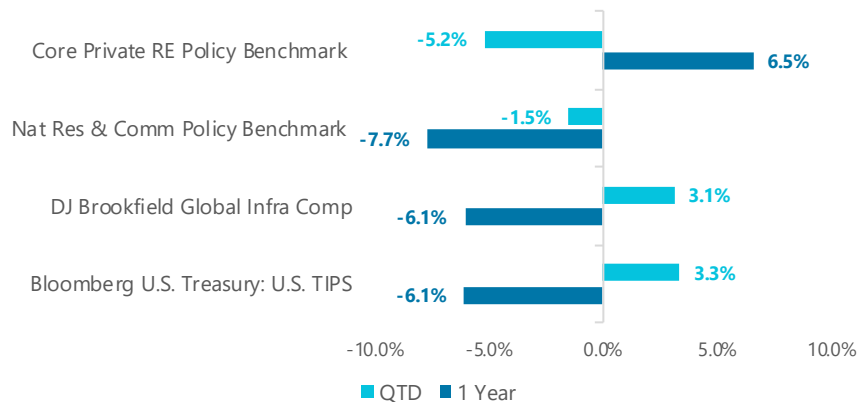
Growth



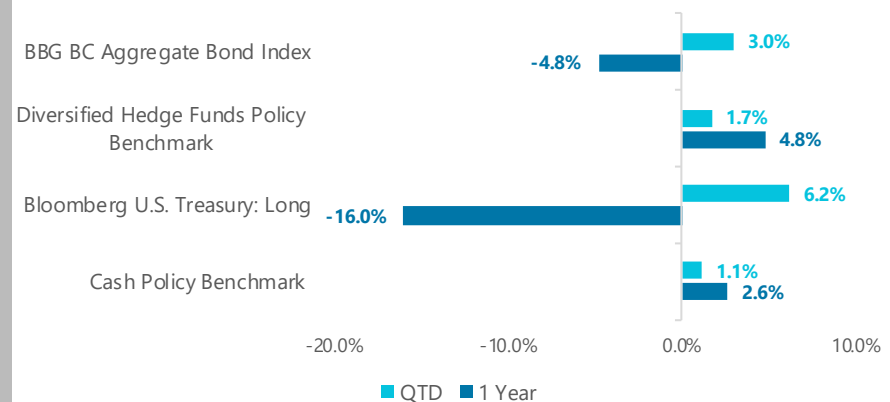
Credit



Real Assets & Inflation Hedges



Risk Reduction & Mitigation



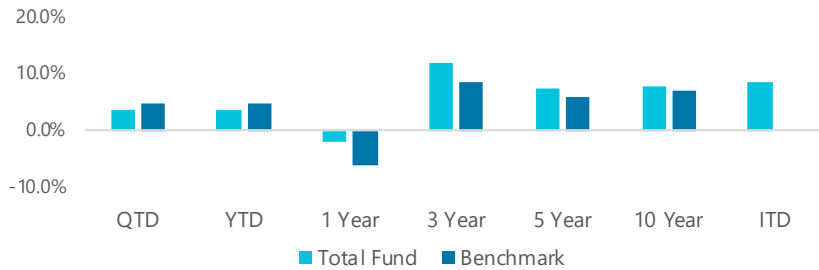
Summary

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

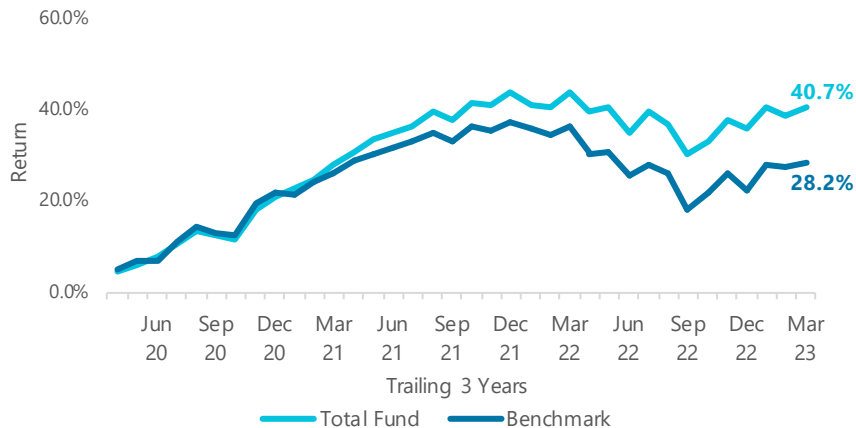
Performance (net)



	QTD	YTD	1 Year	3 Year	5 Year	10 Year	ITD
Total Fund	3.6%	3.6%	-2.0%	12.1%	7.5%	7.8%	8.6%
Benchmark	4.7%	4.7%	-6.0%	8.6%	6.1%	6.9%	--
Excess	-1.1%	-1.1%	4.0%	3.4%	1.4%	0.9%	--

	FY22	FY21	FY20	FY19	FY18
Total Fund	0.1%	25.2%	1.8%	6.4%	9.0%
Benchmark	-4.6%	23.1%	2.0%	8.6%	7.8%

Cumulative Return



Functional Category¹

	QTD	FYTD	1 Year	3 Year
Growth	4.9%	5.7%	-4.2%	18.4%
Growth Policy Benchmark	7.3%	2.1%	-9.7%	13.7%
Excess	-2.4%	3.6%	5.5%	4.7%
Credit	3.5%	5.2%	-0.3%	7.7%
Credit Policy Benchmark	3.1%	4.1%	-1.8%	4.5%
Excess	0.4%	1.1%	1.5%	3.2%
Real Assets & Inflation Hedges	-0.4%	1.3%	-0.4%	11.5%
RA & IH Policy Benchmark	-0.6%	1.5%	-1.8%	11.9%
Excess	0.1%	-0.2%	1.4%	-0.4%
Risk Reduction & Mitigation	3.7%	0.9%	-2.5%	-0.4%
RR & M Policy Benchmark	3.4%	0.3%	-3.6%	-1.7%
Excess	0.4%	0.6%	1.1%	1.3%
Overlays & Hedges	14.0%	15.7%	101.2%	--

¹ Cash Overlay composite returns reflect non-notionalized returns.

Peer Ranking (gross)

	QTD		1 Year		3 Year		5 Year		10 Year	
Total Fund	3.7%	54	-1.8%	30	12.4%	32	7.8%	33	8.1%	29
60/40 Portfolio	5.4%	4	-6.3%	96	8.2%	91	4.6%	89	5.5%	88
S&P 500 Index	7.5%	4	-7.7%	100	18.6%	6	11.2%	6	12.2%	6
5th Percentile	5.2%		-0.7%		13.6%		9.8%		9.6%	
25th Percentile	4.2%		-1.6%		12.6%		7.9%		8.6%	
50th Percentile	3.7%		-3.4%		11.5%		7.2%		7.7%	
75th Percentile	3.0%		-4.5%		11.0%		6.3%		7.1%	
95th Percentile	2.5%		-6.2%		0.9%		2.7%		3.2%	

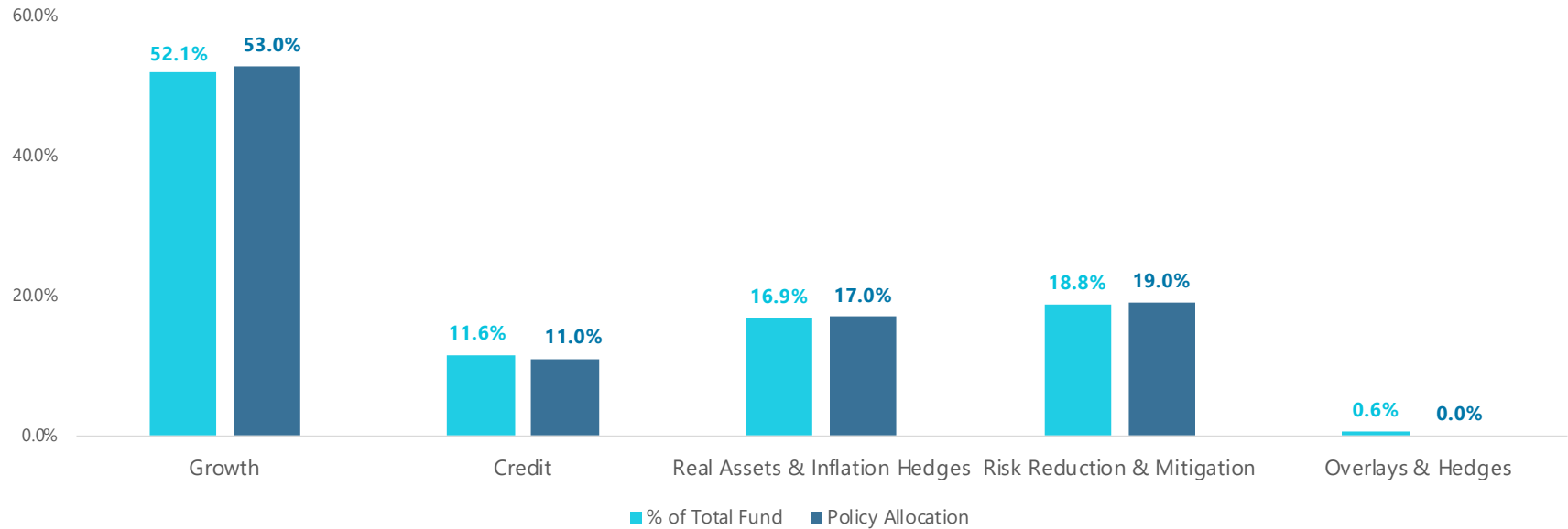
Asset Allocation

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

Actual vs. Policy

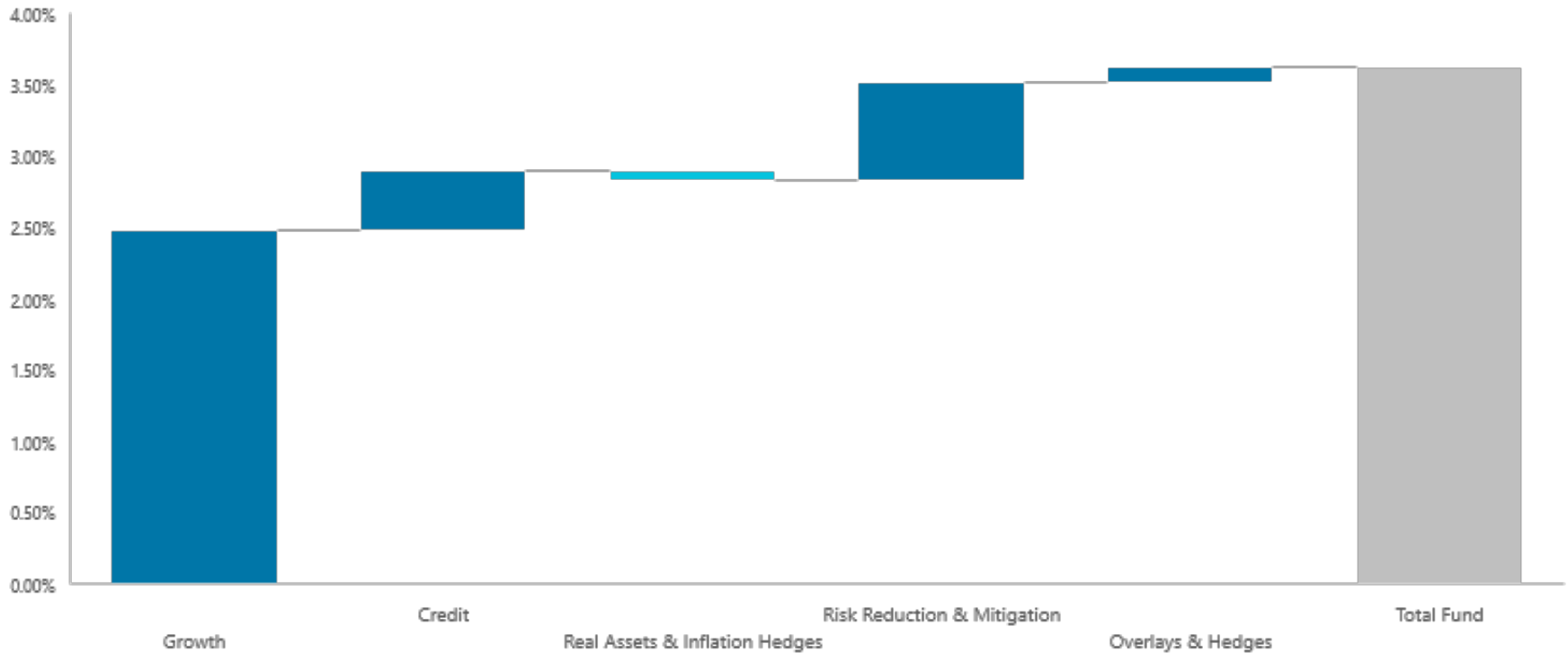


	Ending Market Value (mm)	% of Total Fund	Policy Allocation	Over/Under (%)	Over/Under (mm)
Total Fund	72,332	100.0%	100.0%		
Growth	37,704	52.1%	53.0%	-0.9%	-632
Credit	8,411	11.6%	11.0%	0.6%	454
Real Assets & Inflation Hedges	12,202	16.9%	17.0%	-0.1%	-94
Risk Reduction & Mitigation	13,598	18.8%	19.0%	-0.2%	-145
Overlays & Hedges	417	0.6%	0.0%	0.6%	417

Contribution to Return

for the quarter ended March 31, 2023

QTD Contribution to Return



Functional Category	Contributors	Detractors
Growth	2.48% SSGA MSCI ACWI IMI	1.44% Real Estate - Real Assets
Credit	0.42% JPMAM Strategic Beta US	0.42% Gresham (Comm. Assets)
Real Assets & Inflation Hedges	-0.07% Private Equity - Growth	0.29% Real Estate - Growth
Risk Reduction & Mitigation	0.70% BlackRock Long Treasury Bonds	0.25% Credit Suisse Commodity
Overlays & Hedges	0.10% BTC US Debt Index Fund	0.13% DWS Natural Resources
Total Fund	3.62%	-0.28%

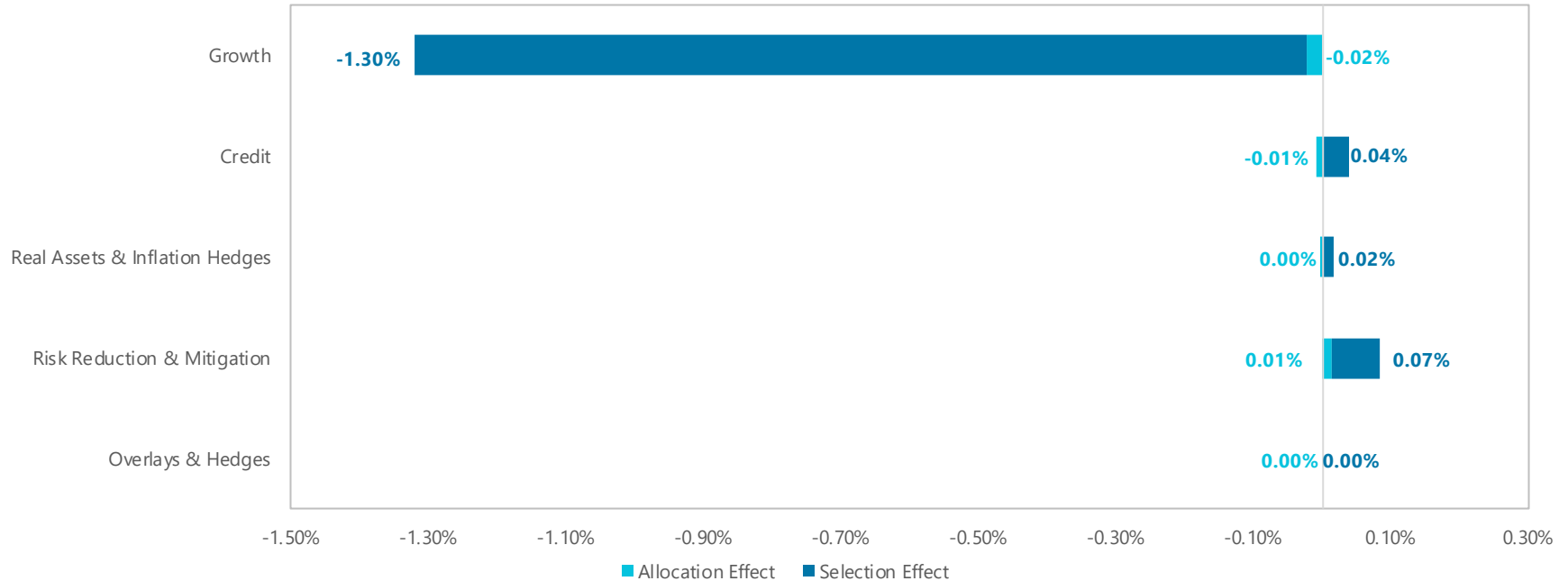
Return Attribution

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

QTD Performance Attribution¹



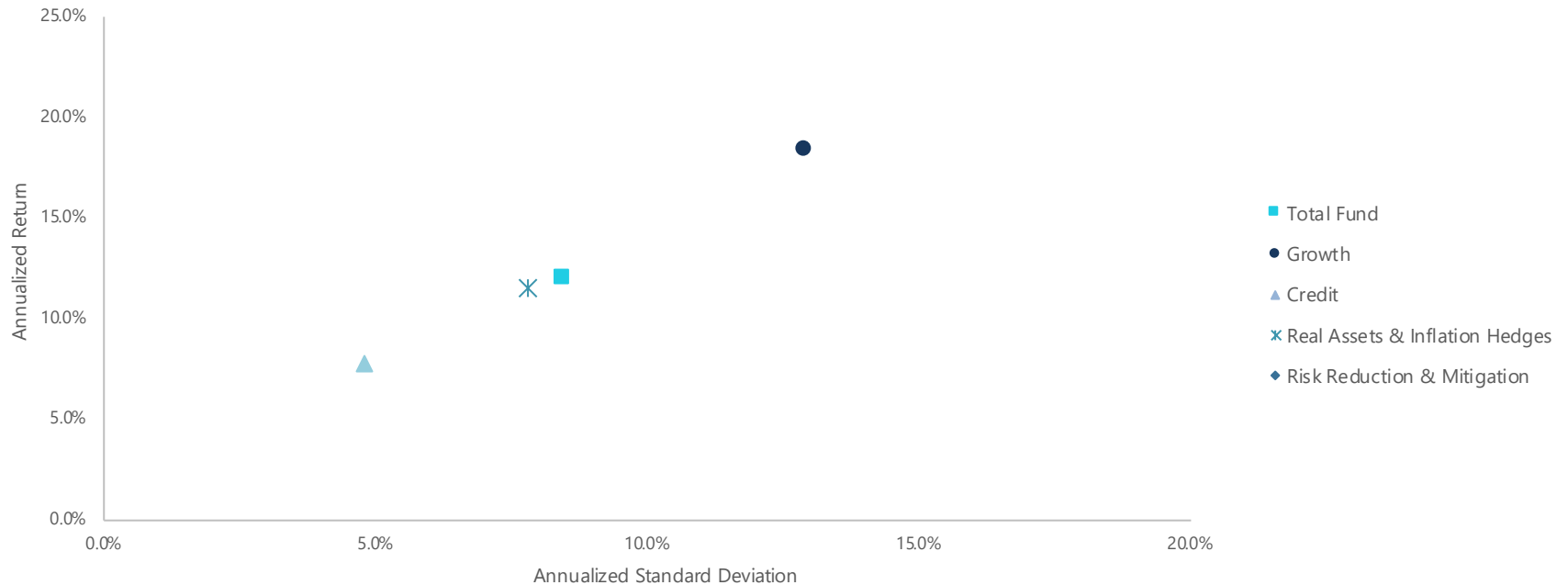
	Ending Market Value (mm)	% of Total Fund	Policy Allocation	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Total Value Add
Total Fund	72,332	100.0%	100.0%	3.6%	4.7%	-0.05%	-1.07%	-1.12%
Growth	37,704	52.1%	53.0%	4.9%	7.3%	-0.02%	-1.30%	-1.32%
Credit	8,411	11.6%	11.0%	3.5%	3.1%	-0.01%	0.04%	0.03%
Real Assets & Inflation Hedges	12,202	16.9%	17.0%	-0.4%	-0.6%	0.00%	0.02%	0.02%
Risk Reduction & Mitigation	13,598	18.8%	19.0%	3.7%	3.4%	0.01%	0.07%	0.09%
Overlays & Hedges	417	0.6%	0.0%	14.0%	--	--	--	--

¹ Total Value Add column includes Interaction Effect.

Risk vs. Return

for the quarter ended March 31, 2023

3 Year (Annualized)



	Annualized Return	Standard Deviation	Sharpe Ratio	Information Ratio	Beta	Tracking Error
Total Fund	12.1%	8.4%	1.29	1.09	0.89	2.8%
Growth	18.4%	12.9%	1.32	0.77	0.85	5.2%
Credit	7.7%	4.8%	1.42	0.87	0.68	3.7%
Real Assets & Inflation Hedges	11.5%	7.8%	1.34	(0.10)	0.90	2.6%
Risk Reduction & Mitigation	-0.4%	5.0%	(0.22)	1.72	0.93	0.8%
Overlays & Hedges	127.2%	58.4%				

Performance Detail

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

Annualized Net Returns¹

	% of Total Fund	Ending Market Value (mm)	Prior Quarter Ending MV (mm)	QTD	YTD	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date
Total Fund	100.0%	72,332	70,079	3.6%	3.6%	-2.0%	12.1%	7.5%	7.8%	8.6%	Dec-1988
Total Fund Policy Benchmark				4.7%	4.7%	-6.0%	8.6%	6.1%	6.9%	--	
Growth	52.1%	37,704	35,773	4.9%	4.9%	-4.2%	18.4%	--	--	11.8%	Apr-2019
Growth Policy Benchmark				7.3%	7.3%	-9.7%	13.7%	--	--	9.0%	
Global Equity	32.5%	23,521	21,969	7.1%	7.1%	-6.5%	16.4%	--	--	8.4%	Apr-2019
Global Equity Policy Benchmark				6.9%	6.9%	-7.7%	15.6%	--	--	7.8%	
Private Equity - Growth	18.0%	13,034	12,733	1.6%	1.6%	-0.8%	22.1%	--	--	19.0%	Jan-2019
PE - Growth Policy Benchmark				10.4%	10.4%	-16.7%	6.0%	--	--	7.1%	
Non-Core Private Real Estate	1.6%	1,149	1,071	-2.2%	-2.2%	9.4%	12.5%	11.8%	10.8%	4.7%	Jan-1996
Non-Core Private RE Policy Benchmark				-4.6%	-4.6%	8.9%	11.8%	10.7%	12.2%	11.3%	
Credit	11.6%	8,411	8,446	3.5%	3.5%	-0.3%	7.7%	--	--	4.2%	Apr-2019
Credit Policy Benchmark				3.1%	3.1%	-1.8%	4.5%	--	--	2.6%	
Liquid Credit	5.6%	4,076	4,709	3.1%	3.1%	-2.4%	--	--	--	-3.6%	Oct-2021
Liquid Credit Policy Benchmark				3.2%	3.2%	-1.3%	--	--	--	--	
Illiquid Credit	6.0%	4,335	3,736	3.6%	3.6%	2.5%	11.0%	--	--	9.7%	Apr-2019
Illiquid Credit Policy Benchmark				3.0%	3.0%	-1.3%	1.0%	--	--	4.2%	
Real Assets & Inflation Hedges	16.9%	12,202	12,222	-0.4%	-0.4%	-0.4%	11.5%	--	--	6.6%	Apr-2019
RA & IH Policy Benchmark				-0.6%	-0.6%	-1.8%	11.9%	--	--	7.3%	
Core Private Real Estate	5.7%	4,124	4,339	-4.5%	-4.5%	10.5%	9.1%	7.8%	8.5%	7.2%	Oct-1985
Core Private RE Policy Benchmark				-5.2%	-5.2%	6.5%	9.2%	8.1%	9.6%	7.0%	
Natural Resources & Commodities	3.0%	2,197	2,210	0.1%	0.1%	-5.2%	24.8%	6.3%	-0.5%	-0.8%	Jul-2007
Nat Res & Comm Policy Benchmark				-1.5%	-1.5%	-7.7%	25.3%	6.6%	-1.1%	-1.8%	
Infrastructure	5.5%	3,958	3,812	1.9%	1.9%	-5.7%	12.9%	--	--	7.3%	Jun-2019
DJ Brookfield Global Infra Comp				3.1%	3.1%	-6.1%	12.2%	--	--	4.1%	
TIPS	2.7%	1,924	1,861	3.4%	3.4%	-6.6%	1.7%	--	--	2.9%	May-2019
Bloomberg U.S. Treasury: U.S. TIPS				3.3%	3.3%	-6.1%	1.8%	--	--	3.0%	
Risk Reduction & Mitigation	18.8%	13,598	13,202	3.7%	3.7%	-2.5%	-0.4%	--	--	1.5%	Apr-2019
RR & M Policy Benchmark				3.4%	3.4%	-3.6%	-1.7%	--	--	0.6%	
Investment Grade Bonds	7.0%	5,083	5,003	3.1%	3.1%	-4.8%	-2.2%	1.0%	1.7%	5.2%	Nov-1994
BBG BC Aggregate Bond Index				3.0%	3.0%	-4.8%	-2.8%	0.9%	1.4%	4.7%	
Diversified Hedge Funds	6.3%	4,543	4,402	3.3%	3.3%	7.7%	7.7%	--	--	7.1%	Apr-2019
Diversified Hedge Funds Policy Benchmark				1.7%	1.7%	4.8%	3.4%	--	--	3.7%	
Long-Term Government Bonds	4.2%	3,032	2,857	6.1%	6.1%	-16.1%	--	--	--	-18.2%	Nov-2021
Bloomberg U.S. Treasury: Long				6.2%	6.2%	-16.0%	--	--	--	-19.2%	
Cash	1.3%	939	940	1.4%	1.4%	4.4%	2.0%	2.2%	1.4%	1.9%	Jun-2001
Cash Policy Benchmark				1.1%	1.1%	2.6%	1.0%	1.4%	0.9%	1.4%	
Overlays & Hedges	0.6%	417	436	14.0%	14.0%	101.2%	--	--	--	127.2%	Oct-2021
Cash Overlay	0.6%	412	591	9.2%	9.2%	44.0%	34.7%	--	--	1.4%	Aug-2019
Total Overlay Custom BM				5.3%	5.3%	-6.4%	8.7%	--	--	4.9%	
Currency Hedge	0.0%	5	-155	-0.1%	-0.1%	3.5%	--	--	--	3.4%	Oct-2021
50% FX Hedge Custom Benchmark				-0.1%	-0.1%	3.5%	--	--	--	3.5%	

¹ Cash Overlay composite returns reflect non-notionalized returns.

growth

Summary

for the quarter ended March 31, 2023

Performance (net)

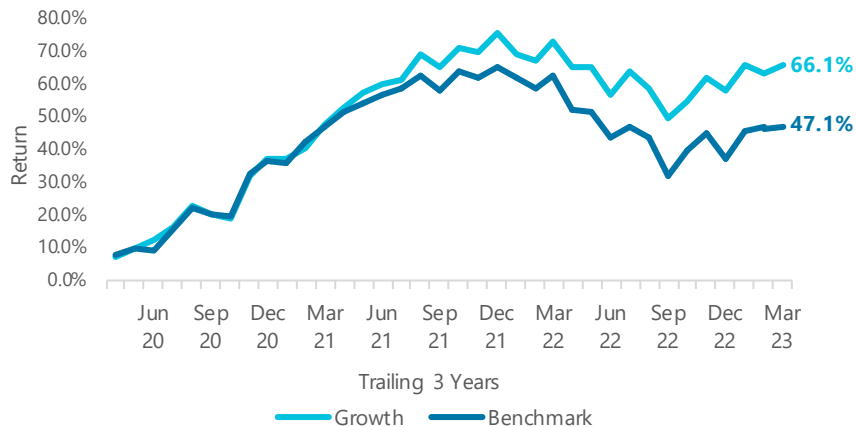


Functional Category

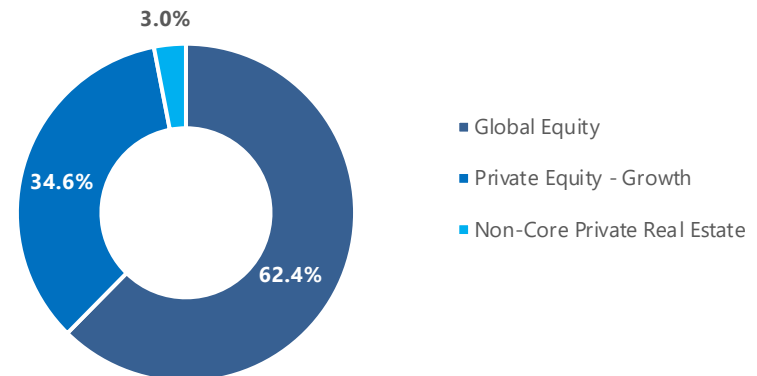
	QTD	FYTD	1 Year	3 Year
Global Equity	7.1%	10.2%	-6.5%	16.4%
Global Equity Policy Benchmark	6.9%	9.7%	-7.7%	15.6%
Excess	0.1%	0.5%	1.2%	0.8%
Private Equity - Growth	1.6%	-1.6%	-0.8%	22.1%
PE - Growth Policy Benchmark	10.4%	-12.4%	-16.7%	6.0%
Excess	-8.8%	10.7%	15.9%	16.1%
Non-Core Private Real Estate	-2.2%	4.4%	9.4%	12.5%
Non-Core Private RE Policy Benchmark	-4.6%	1.1%	8.9%	11.8%
Excess	2.5%	3.3%	0.4%	0.7%

	QTD	YTD	1 Year	3 Year	5 Year	10 Year	ITD
Growth	4.9%	4.9%	-4.2%	18.4%	--	--	11.8%
Benchmark	7.3%	7.3%	-9.7%	13.7%	--	--	9.0%
Excess	-2.4%	-2.4%	5.5%	4.7%	--	--	2.8%

Cumulative Return



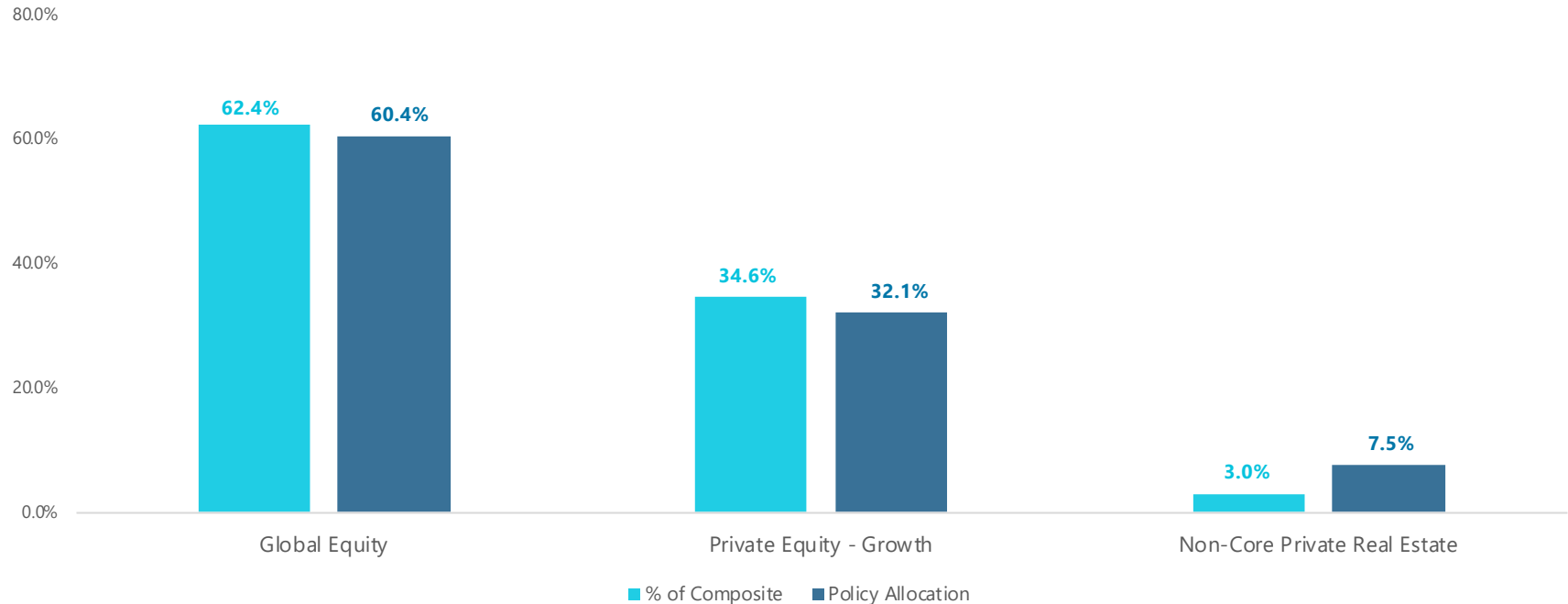
Exposure



Asset Allocation

for the quarter ended March 31, 2023

Actual vs. Policy

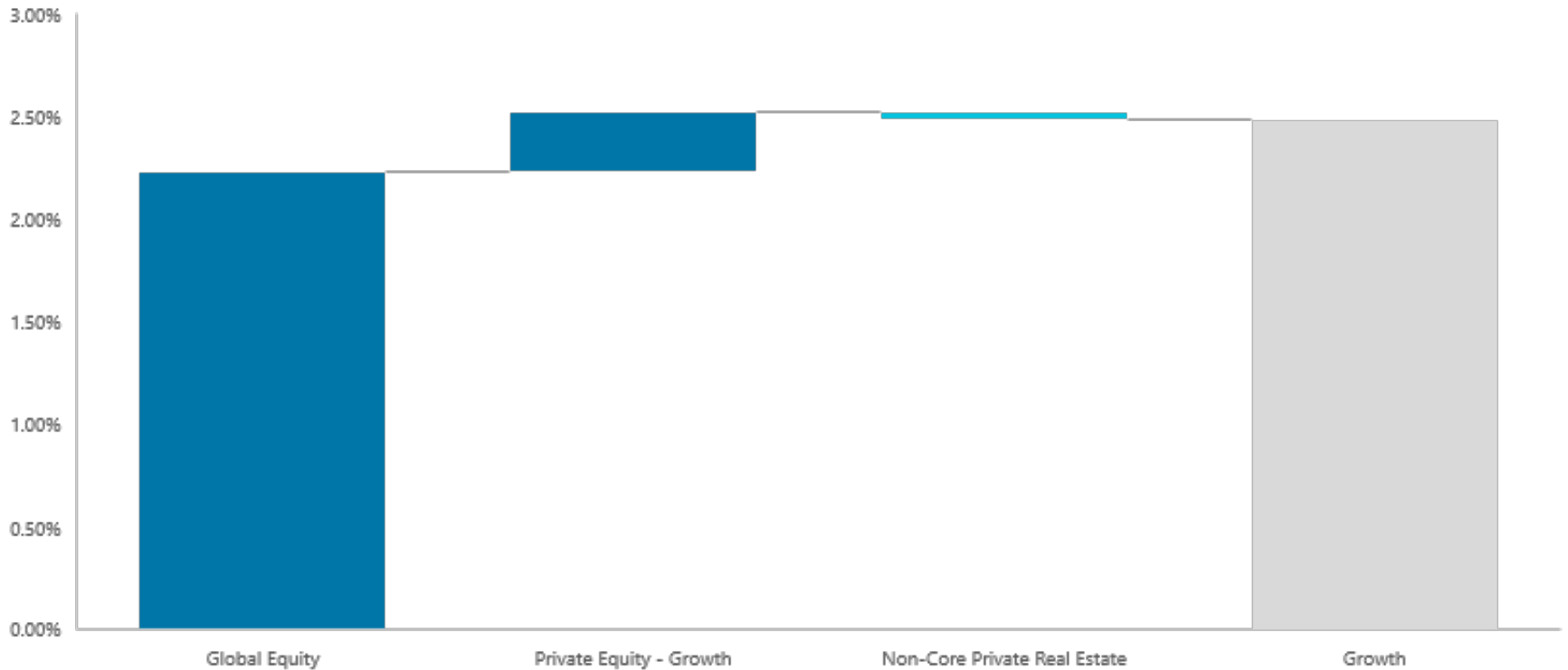


	Ending Market Value (mm)	% of Composite	Policy Allocation	Over / Under (%)	Over / Under (mm)
Growth	37,704	100.0%	100.0%		
Global Equity	23,521	62.4%	60.4%	2.0%	752
Private Equity - Growth	13,034	34.6%	32.1%	2.5%	937
Non-Core Private Real Estate	1,149	3.0%	7.5%	-4.5%	-1,694

Contribution to Return

for the quarter ended March 31, 2023

QTD Contribution to Return



Functional Category	Contributors	Detractors
Global Equity	2.23% SSGA MSCI ACWI IMI	1.44% Real Estate - Growth
Private Equity - Growth	0.29% JPMAM Strategic Beta US	-0.04%
Non-Core Private Real Estate	-0.04% Private Equity - Growth	
Growth	2.48% BTC Euro Tilts	
	Capital Group Developed Markets	0.06%

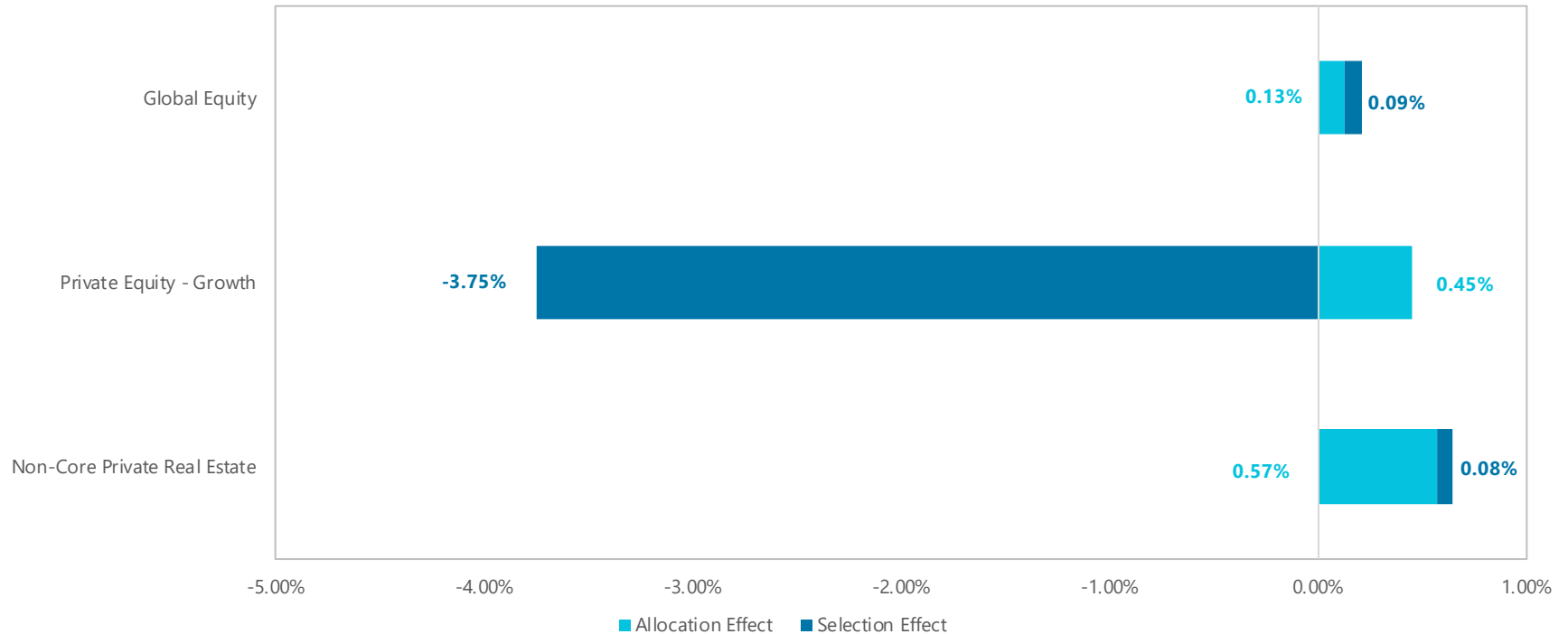
Return Attribution

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

QTD Performance Attribution¹



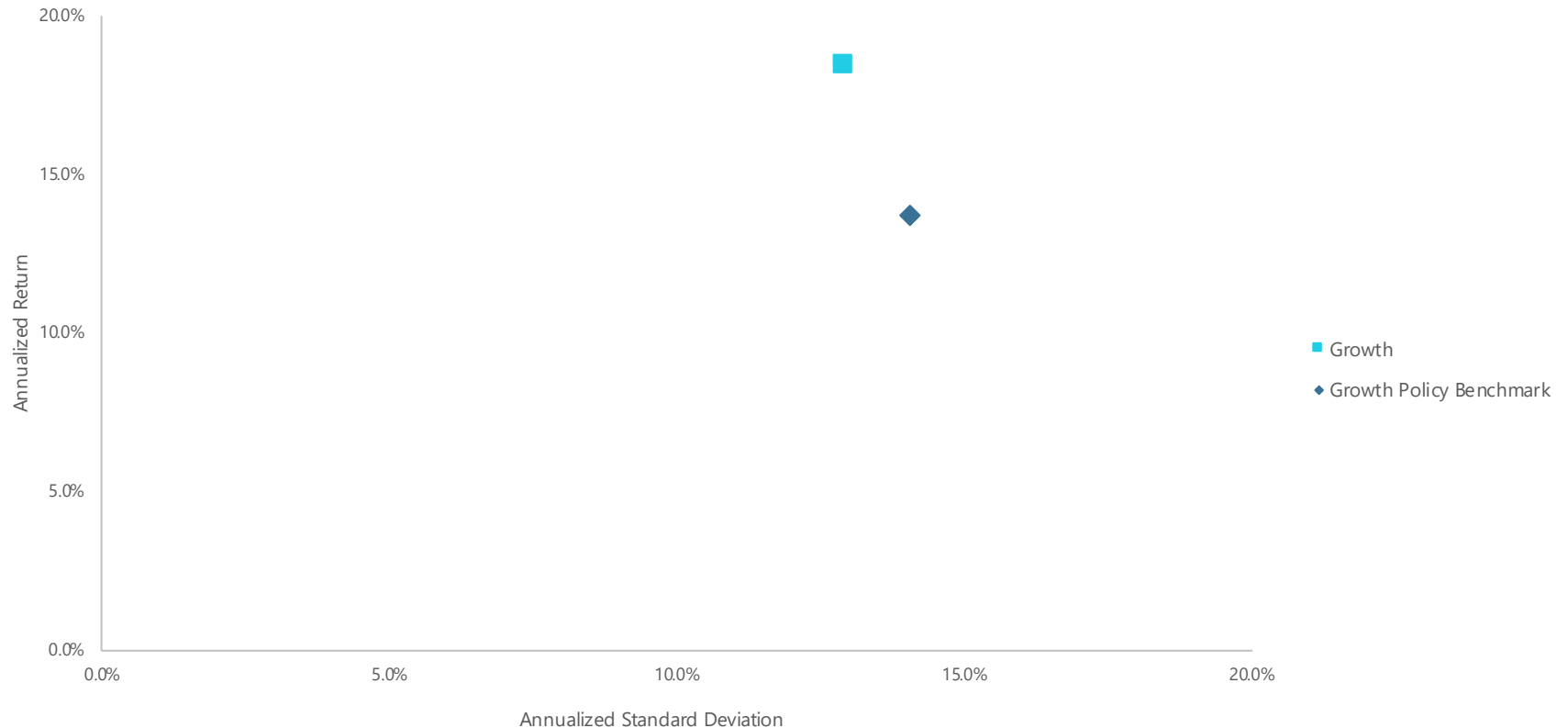
	Ending Market Value (mm)	% of Composite	Policy Allocation	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Total Value Add
Growth	37,704	100.0%	100.0%	4.9%	7.3%	1.14%	-3.58%	-2.44%
Global Equity	23,521	62.4%	60.4%	7.1%	6.9%	0.13%	0.09%	0.21%
Private Equity - Growth	13,034	34.6%	32.1%	1.6%	10.4%	0.45%	-3.75%	-3.30%
Non-Core Private Real Estate	1,149	3.0%	7.5%	-2.2%	-4.6%	0.57%	0.08%	0.65%

¹ Total Value Add column includes Interaction Effect.

Risk vs. Return

for the quarter ended March 31, 2023

3 Year (Annualized)



	Annualized Return	Standard Deviation	Sharpe Ratio	Information Ratio	Beta	Tracking Error
Growth	18.4%	12.9%				
Growth Policy Benchmark	13.7%	14.0%	1.32	0.77	0.85	5.2%

Performance Detail

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

Annualized Net Returns

	% of Composite	Ending Market Value (mm)	Prior Quarter Ending MV (mm)	QTD	YTD	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date
Growth	100.0%	37,704	35,773	4.9%	4.9%	-4.2%	18.4%	--	--	11.8%	Apr-2019
Growth Policy Benchmark				7.3%	7.3%	-9.7%	13.7%	--	--	9.0%	
Global Equity	62.4%	23,521	21,969	7.1%	7.1%	-6.5%	16.4%	--	--	8.4%	Apr-2019
Global Equity Policy Benchmark				6.9%	6.9%	-7.7%	15.6%	--	--	7.8%	
Passive											
SSGA MSCI ACWI IMI	40.5%	15,280	14,270	7.1%	7.1%	-7.1%	16.3%	--	--	6.3%	Jan-2020
Factor Based											
JPMAM Strategic Beta Non-US	1.6%	584	551	6.2%	6.2%	-5.4%	--	--	--	6.4%	Aug-2020
JPMAM Strategic Beta US	11.4%	4,292	3,998	7.4%	7.4%	-7.6%	--	--	--	13.0%	Jul-2020
Active											
Acadian Developed Markets	1.5%	582	560	3.8%	3.8%	-8.0%	14.3%	4.0%	7.3%	4.5%	Apr-2006
BTC Euro Tilts	1.5%	581	528	10.0%	10.0%	3.8%	17.8%	5.3%	7.1%	3.9%	Jan-2007
Cevian Capital II - Activist	1.2%	439	398	10.3%	10.3%	11.9%	24.6%	8.8%	--	9.0%	Oct-2016
CGT International Equity	1.1%	408	364	12.0%	12.0%	-1.6%	12.0%	5.7%	6.7%	5.6%	Nov-1994
Cornecap US Small Cap - EMP	0.2%	80	81	-0.7%	-0.7%	-6.6%	24.7%	--	--	6.7%	Oct-2018
Frontier US SMID Growth	0.7%	276	256	7.7%	7.7%	-7.4%	24.1%	7.1%	9.8%	10.0%	Jun-2002
Global Alpha	0.5%	181	166	9.5%	9.5%	-3.9%	14.4%	--	--	6.2%	Nov-2018
Lazard Emerging Markets	1.0%	384	368	4.3%	4.3%	-7.0%	10.4%	1.2%	2.8%	2.4%	Feb-2013
Parametric GE Market Cap	0.4%	136	100	17.6%	17.6%	-4.2%	--	--	--	12.6%	Oct-2021
Parametric GE Region	0.2%	69	89	-15.9%	-15.9%	-28.2%	--	--	--	-26.6%	Dec-2021
Systematic US Small Cap Value	0.5%	190	186	2.1%	2.1%	-3.2%	22.8%	--	--	5.5%	Jul-2018
Private Equity - Growth	34.6%	13,034	12,733	1.6%	1.6%	-0.8%	22.1%	--	--	19.0%	Jan-2019
PE - Growth Policy Benchmark				10.4%	10.4%	-16.7%	6.0%	--	--	7.1%	
Non-Core Private Real Estate	3.0%	1,149	1,071	-2.2%	-2.2%	9.4%	12.5%	11.8%	10.8%	4.7%	Jan-1996
Non-Core Private RE Policy Benchmark				-4.6%	-4.6%	8.9%	11.8%	10.7%	12.2%	11.3%	

Growth Risk Summary

for the quarter ended March 31, 2023

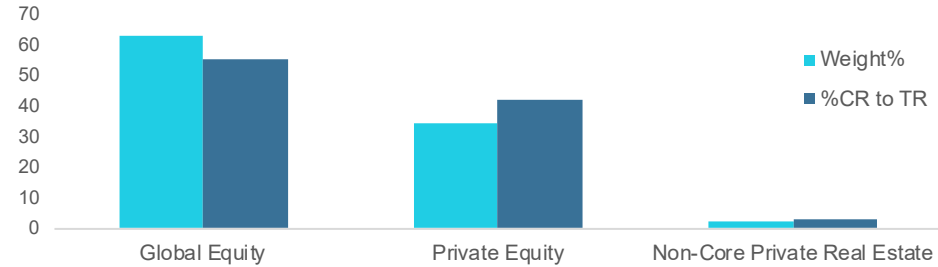
Risk Summary

	Value
Total Risk	20.50
Benchmark Risk	19.69
Active Risk	1.52
Portfolio Beta	1.04

Risk Decomposition

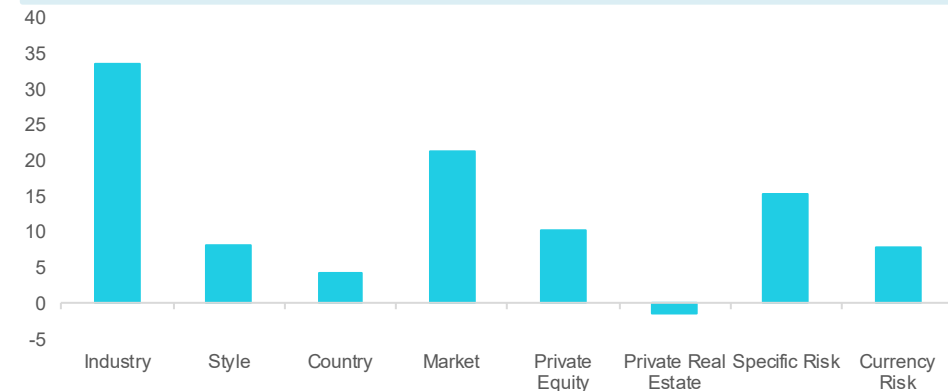
Risk Source	Portfolio		Active	
	Risk Contribution	%Risk	Risk Contribution	%Risk
Total Risk	20.50	100.00	1.52	100.00
Local Market Risk	19.41	94.69	1.40	91.97
Common Factor Risk	19.36	94.48	1.17	76.62
Specific Risk	0.04	0.21	0.23	15.35
Currency Risk	1.09	5.31	0.12	8.03

Contribution to Risk



	Mkt Value (mm)	Weight%	Total Risk	Risk Contribution	%CR to TR
Growth	37,225	100.00	20.50	20.50	100.00
Global Equity	23,441	62.97	18.70	11.26	54.94
Private Equity	12,843	34.50	26.95	8.57	41.83
Non-Core Private Real Estate	941	2.53	41.99	0.66	3.24

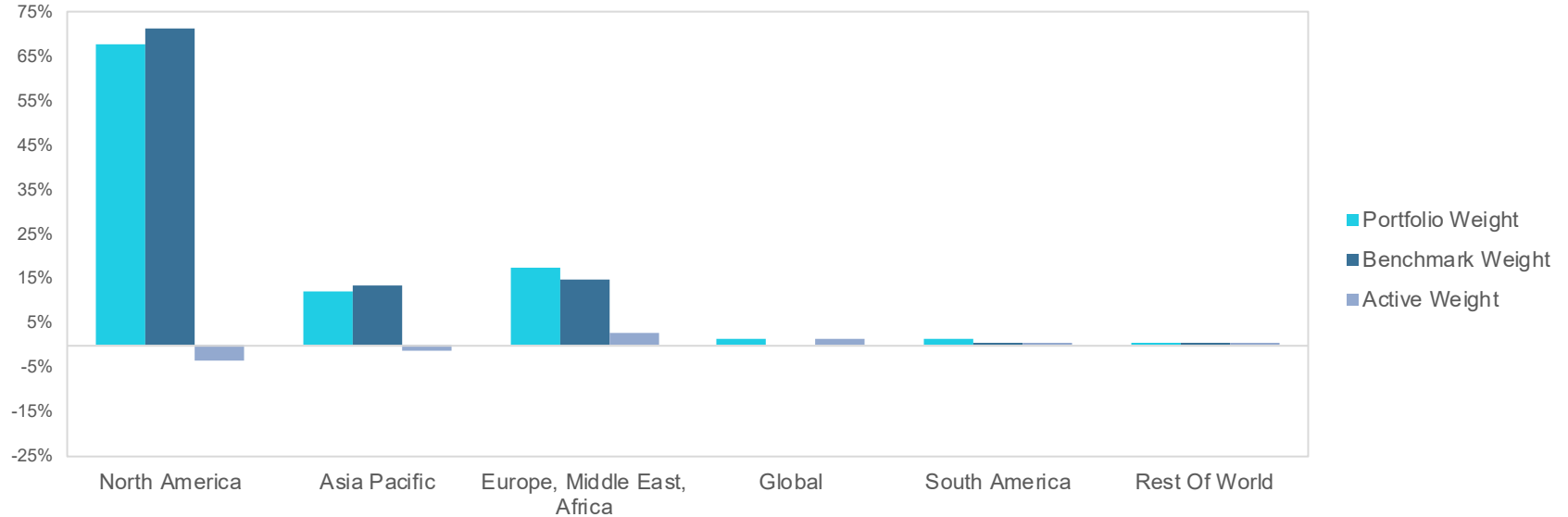
Active Risk from Common Factors



Growth Risk Summary

for the quarter ended March 31, 2023

Portfolio Allocation By Region

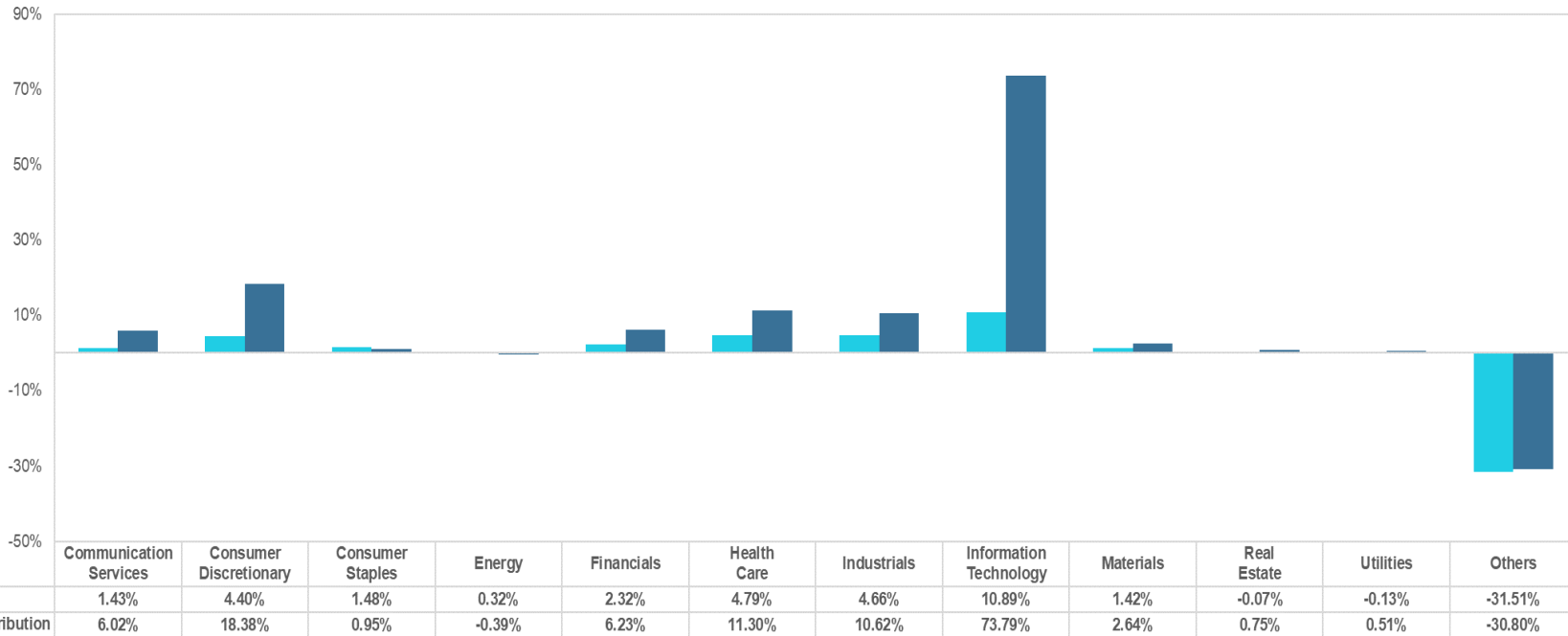


Region	Weight%			Total Risk	Active Risk CR	% of Active TR	MC to Total Tracking Error
	Portfolio	Benchmark	Active				
Growth	100.00%	100.00%	0.00%	20.50	1.52	100.00	0.02
North America	67.84%	71.17%	-3.33%	22.70	1.15	75.72	0.04
Asia Pacific	12.13%	13.34%	-1.22%	15.96	0.16	10.58	-0.04
Europe, Middle East, Africa	17.33%	14.73%	2.60%	21.49	0.20	12.97	0.02
Global	1.18%	0.00%	1.18%	20.92	-0.01	-0.70	-0.01
South America	1.18%	0.55%	0.63%	30.58	0.02	1.57	0.03
Rest Of World	0.34%	0.20%	0.14%	15.82	0.00	-0.13	-0.03

Growth Risk Summary

for the quarter ended December 31, 2023

Portfolio Allocation By GICS Sector



Growth – Global Equity Acadian Developed Markets

for the quarter ended March 31, 2023

Strategy

Seeks to capture mispriced opportunities through systematic stock, sector, and country valuation models that are customized to each market. The strategy may be suited to investors looking to gain exposure in non-U.S. developed markets and diversify portfolio through active quantitative investment approach.

Inception Date: April 2006

Portfolio Characteristics

	Portfolio	Benchmark
Market Cap Wtd Average (mm)	52,184.1	80,480.8
No. Of Issues	689.0	0.0
Dividend Yield	4.7	3.2
Return on Equity	24.2	17.1
Price to Sales	3.1	3.4
Price to Book	1.6	5.0
PE Ratio	11.2	16.0

Top Holdings (% of assets)

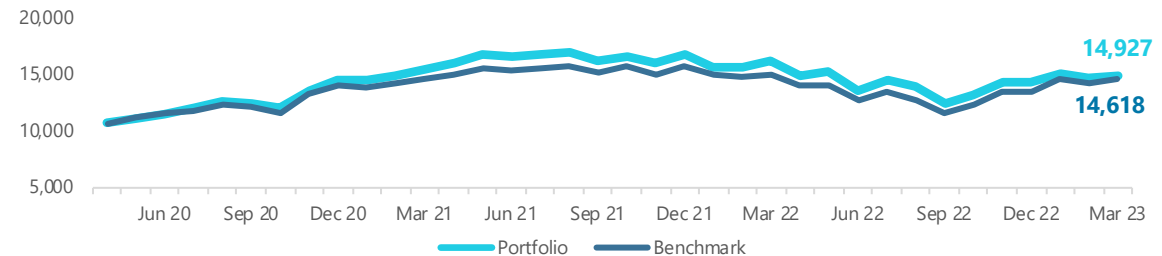
NOVO NORDISK A/S B	3.7%
BHP GROUP LTD	2.2%
WOLTERS KLUWER	2.2%
INDUSTRIA DE DISENO TEXTIL	1.9%
BP PLC SPONS ADR	1.8%
Top 5 Holdings	11.8%

Performance (net)¹

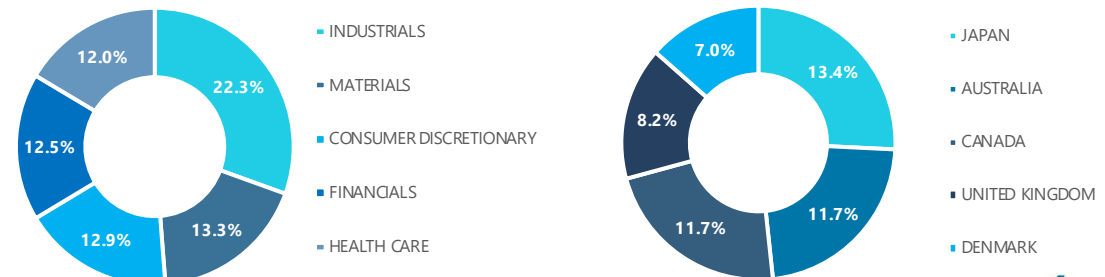
	Ending Market Value (mm)	QTD	1 Year	3 Year	5 Year
Acadian Developed Markets	581.5	3.8%	-8.0%	14.3%	4.0%
MSCI EAFE + Canada Net Index		8.0%	-2.7%	13.5%	3.8%
Growth Policy Benchmark		7.3%	-9.7%	13.7%	--

Universe data: Intl/Global Equity Funds - Core	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
Acadian Developed Markets	3.9%	91	-7.7%	67	14.7%	53	4.4%	50
Median	7.1%		-4.9%		15.7%		4.2%	

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Growth Risk Analysis – Global Equity

Acadian Developed Markets

for the quarter ended March 31, 2023

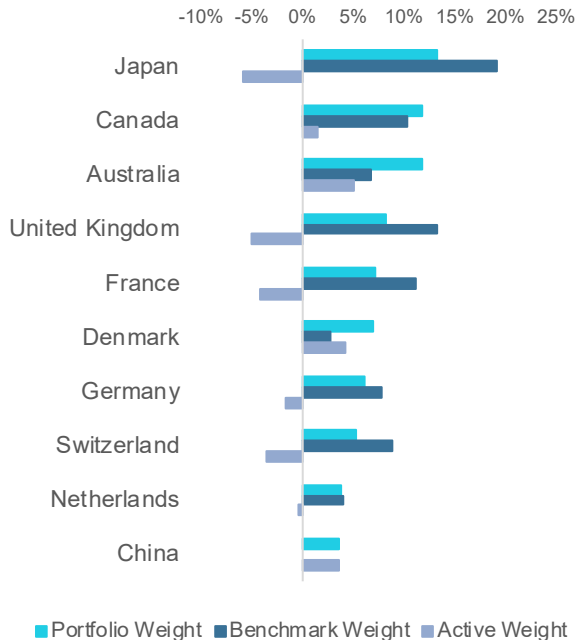


Los Angeles County Employees Retirement Association

Portfolio Risk Summary

	Value
Total Risk	19.16
Benchmark Risk	17.92
Active Risk	4.70
Portfolio Beta	1.04

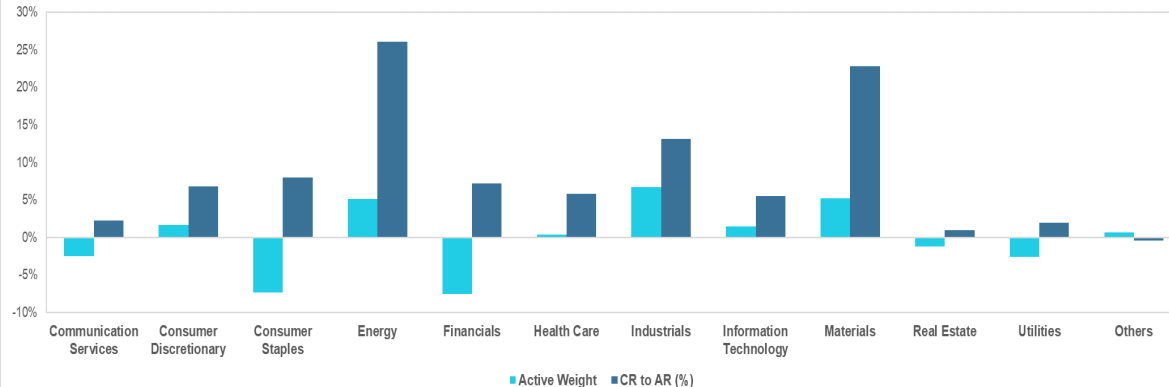
Top Countries by Weight%



Top 10 Assets by Contribution to Active Risk

Asset	Weight			Total Risk	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active			
SOUTH32 LIMITED	1.62%	0.08%	1.54%	41.63	5.14	0.182
MEG ENERGY CORP	0.80%	0.00%	0.80%	58.49	4.97	0.318
BHP GROUP LTD	2.18%	0.94%	1.24%	34.89	3.39	0.154
MINERAL RESOURCES LTD	0.86%	0.05%	0.81%	51.63	3.39	0.222
EQUINOR ASA	1.22%	0.16%	1.06%	39.79	3.31	0.172
BP PLC	1.82%	0.00%	1.82%	33.49	3.19	0.108
BLUESCOPE STEEL LTD	1.14%	0.04%	1.10%	37.88	3.05	0.155
CRESCENT POINT ENERGY CORP	0.48%	0.00%	0.48%	61.41	3.00	0.319
PILBARA MINERALS LTD	0.64%	0.04%	0.60%	59.48	2.64	0.232
NESTLE SA	0.03%	1.96%	-1.93%	18.85	2.45	-0.034

Portfolio Risk by GICS Sector



Growth – Global Equity BTC Europe Alpha Tilts

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

Strategy

Seeks to generate risk-controlled and consistent active returns by using a unique blend of bottom-up stock selection insights and broader top-down thematic insights. The strategy may be suited to investors looking to capture active return opportunities in European region.

Inception Date: January 2007

Risk Statistics (since inception)

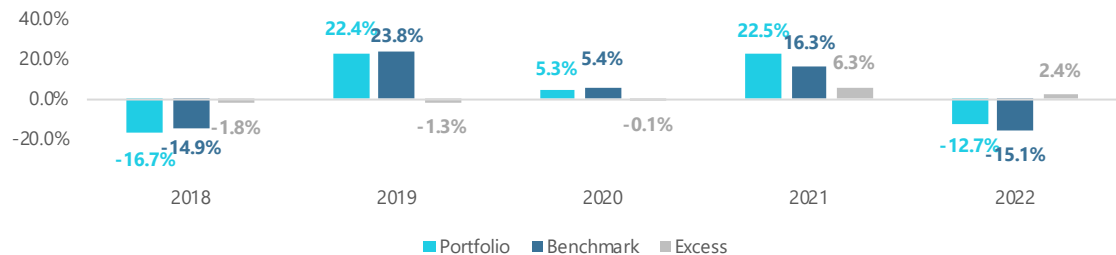
Standard Deviation	19.3%
Benchmark Standard Deviation	19.4%
Sharpe Ratio	0.24
Information Ratio	0.52
Beta	0.99
Tracking Error	1.9%

Performance (net)¹

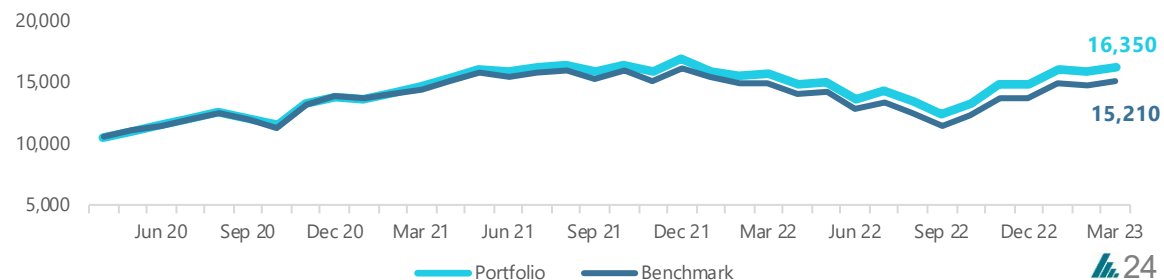
	Ending Market Value (mm)	QTD	1 Year	3 Year	5 Year
BTC Euro Tilts	581.0	10.0%	3.8%	17.8%	5.3%
MSCI EUROPE		10.6%	1.4%	15.0%	4.4%
Growth Policy Benchmark		7.3%	-9.7%	13.7%	--

Universe data: Intl Equity Developed Mkt Funds	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
BTC Euro Tilts	10.2%	24	4.2%	10	18.3%	15	5.7%	18
Median	8.2%		-1.4%		13.0%		3.7%	

Calendar Year Returns



Growth of \$10,000



Note: Commingled fund account with no position-level transparency.
¹ Universe data is gross-of-fees.

Growth Risk Analysis – Global Equity

BTC Europe Alpha Tilts

for the quarter ended March 31, 2023

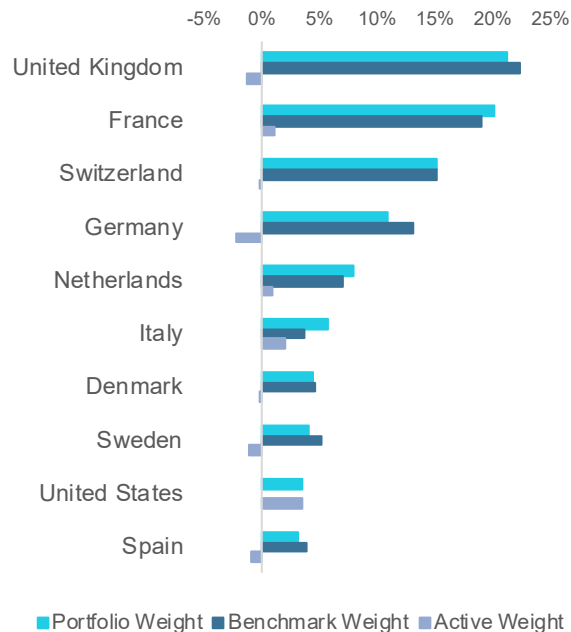


Los Angeles County Employees Retirement Association

Portfolio Risk Summary

	Value
Total Risk	19.47
Benchmark Risk	20.05
Active Risk	1.37
Portfolio Beta	0.97

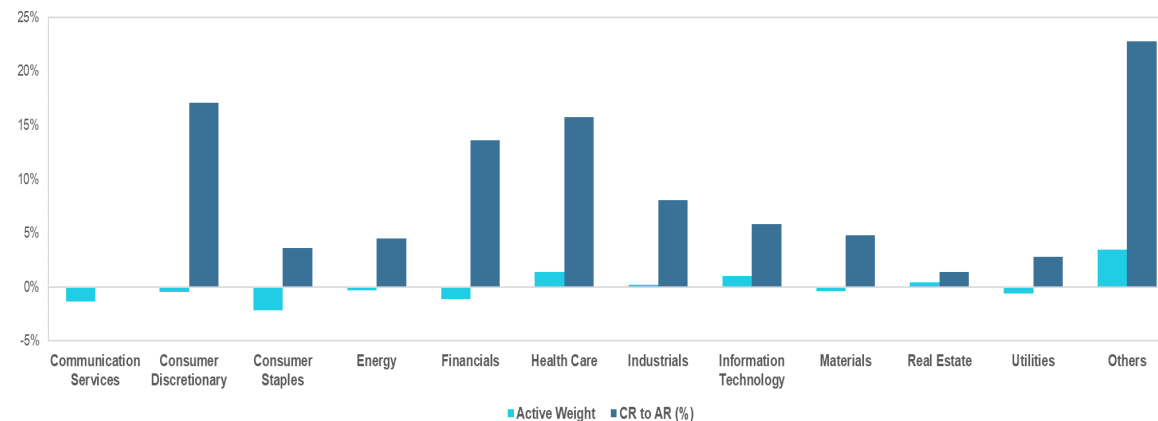
Top Countries by Weight%



Top 10 Assets by Contribution to Active Risk

Asset	Weight			Total Risk	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active			
G L OTHER	2.93%	0.00%	2.93%	0.00	19.19	0.000
ASTRAZENECA PLC	3.52%	2.13%	1.39%	26.33	7.13	-0.020
NOVARTIS AG	3.42%	1.97%	1.45%	20.52	6.46	-0.029
NESTLE SA	4.58%	3.32%	1.26%	18.85	3.64	-0.050
PROSUS NV	0.00%	0.62%	-0.62%	44.03	3.61	-0.170
TOTALENERGIES SE	0.00%	1.46%	-1.46%	33.01	2.89	-0.117
HERMES INTERNATIONAL SCA	1.86%	0.64%	1.22%	29.95	2.59	-0.061
COMPAGNIE FINANCIERE RICHEMONT	0.00%	0.83%	-0.83%	32.82	2.07	-0.124
ADYEN NV	0.00%	0.34%	-0.34%	47.08	2.04	-0.172
EDENRED SE	0.83%	0.15%	0.69%	28.34	2.02	-0.052

Portfolio Risk by GICS Sector



Growth – Global Equity Capital Group Developed Markets

for the quarter ended March 31, 2023

Strategy

Seeks to generate long-term capital appreciation through fundamental research and proprietary models for earnings estimates and valuations. The strategy may be suited to investors looking to gain exposures in non-U.S. developed markets with emphasis on bottom-up, fundamental investment analysis.

Inception Date: October 1987

Portfolio Characteristics

	Portfolio	Benchmark
Market Cap Wtd Average (mm)	126,344.2	80,480.8
No. Of Issues	161.0	0.0
Dividend Yield	1.9	3.2
Return on Equity	19.9	17.1
Price to Sales	5.8	3.4
Price to Book	6.8	5.0
PE Ratio	25.5	16.0

Top Holdings (% of assets)

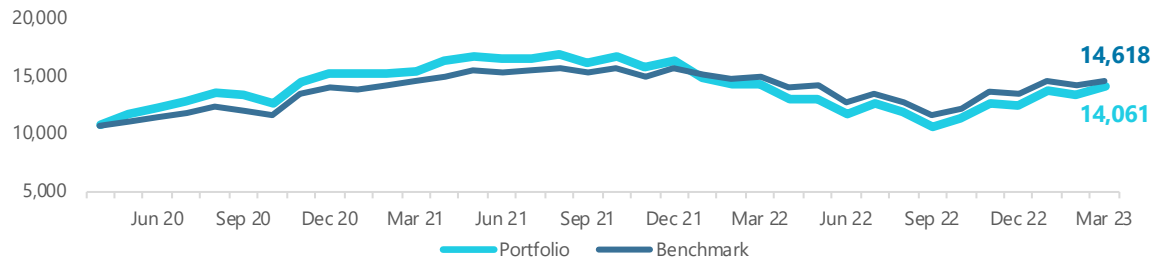
ASML HOLDING NV	4.8%
LVMH MOET HENNESSY LOUIS VUI	3.6%
NOVO NORDISK A/S B	3.5%
EVOLUTION AB	3.3%
SAFRAN SA	2.7%
Top 5 Holdings	17.9%

Performance (net)¹

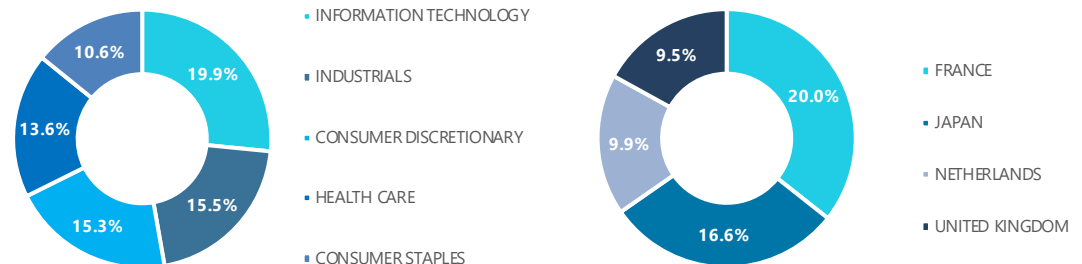
	Ending Market Value (mm)	QTD	1 Year	3 Year	5 Year
Capital Group Developed Markets	407.7	12.0%	-1.6%	12.0%	5.7%
EAFE Custom Benchmark		8.0%	-2.7%	13.5%	3.8%
Growth Policy Benchmark		7.3%	-9.7%	13.7%	--

Universe data: Intl/Global Equity Funds - Core	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
Capital Group Developed Markets	12.1%	4	-1.3%	17	12.4%	65	6.1%	44
Median	7.1%		-4.9%		15.7%		4.2%	

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

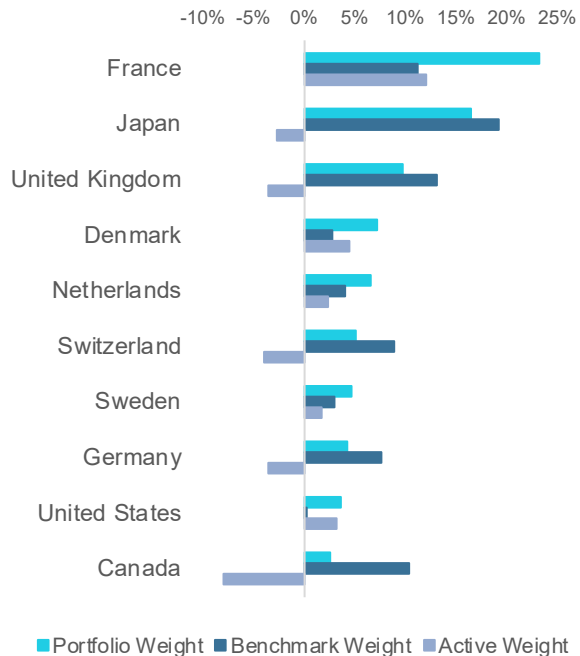
Growth Risk Analysis – Global Equity Capital Group Developed Markets

for the quarter ended March 31, 2023

Portfolio Risk Summary

	Value
Total Risk	18.70
Benchmark Risk	17.92
Active Risk	4.18
Portfolio Beta	1.02

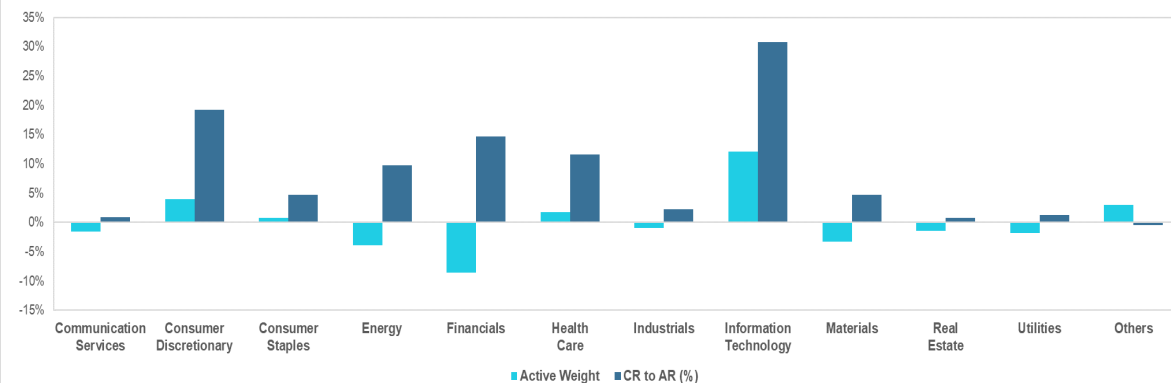
Top Countries by Weight%



Top 10 Assets by Contribution to Active Risk

Asset	Weight			Total Risk	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active			
ASML HOLDING NV	4.77%	0.00%	4.77%	40.27	17.14	0.163
EVOLUTION AB (PUBL)	3.33%	0.14%	3.19%	46.10	12.05	0.171
KEYENCE CORP	2.13%	0.55%	1.58%	28.98	3.54	0.107
GENMAB A/S	1.78%	0.15%	1.64%	30.80	3.45	0.101
HAMAMATSU PHOTONICS KK	1.96%	0.04%	1.92%	25.92	3.27	0.084
NOVO NORDISK A/S	3.45%	1.53%	1.91%	28.03	3.16	0.082
SHELL PLC	0.00%	1.18%	-1.18%	31.80	3.11	-0.097
OCADO GROUP PLC	1.13%	0.02%	1.10%	62.10	3.05	0.129
TOKYO ELECTRON LTD	1.26%	0.32%	0.94%	37.63	2.98	0.145
LVMH MOET HENNESSY LOUIS VUITTON	3.64%	1.49%	2.15%	26.73	2.91	0.070

Portfolio Risk by GICS Sector



Growth – Global Equity

Cevian Capital II

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

Strategy

Seeks to generate long-term returns by researching and investing in European companies that have profitable businesses and significant improvement potential. The strategy may be suited to investors looking to increase portfolio diversification through differentiated investment approach and take advantage of return opportunities in Europe.

Inception Date: October 2016

Risk Statistics (since inception)

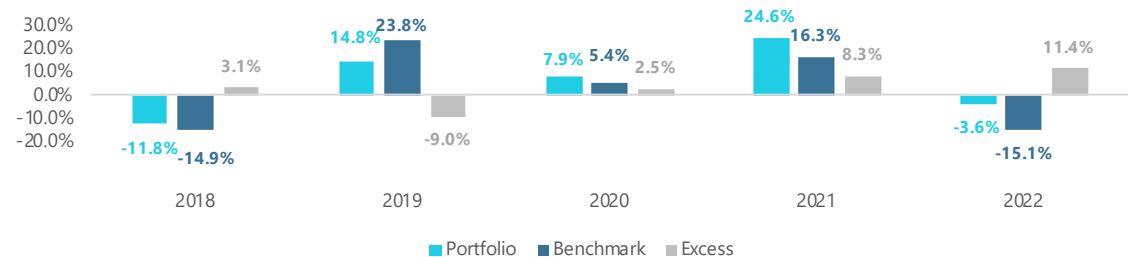
Standard Deviation	16.7%
Benchmark Standard Deviation	17.5%
Sharpe Ratio	0.53
Information Ratio	0.24
Beta	0.79
Tracking Error	10.0%

Performance (net)¹

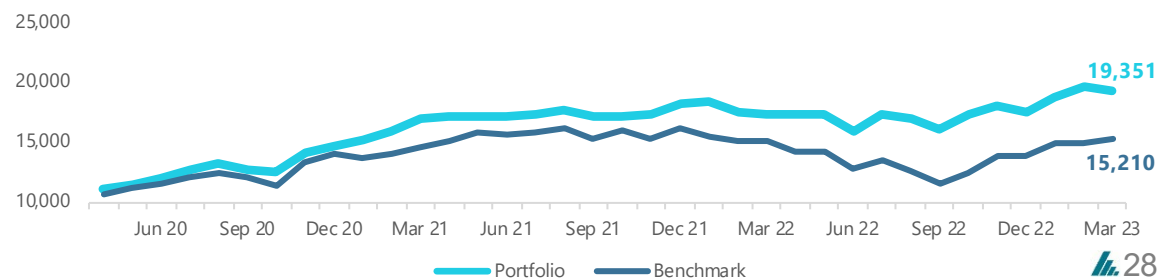
	Ending Market Value (mm)	QTD	1 Year	3 Year	5 Year
Cevian Capital II - Activist	439.3	10.3%	11.9%	24.6%	8.8%
MSCI EUROPE		10.6%	1.4%	15.0%	4.4%
Growth Policy Benchmark		7.3%	-9.7%	13.7%	--

Universe data: Europe Equity	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
Cevian Capital II - Activist	10.6%	22	13.1%	1	26.0%	2	10.1%	6
Median	8.2%		-1.4%		13.0%		3.7%	

Calendar Year Returns



Growth of \$10,000



Note: Commingled fund account with no position-level transparency.
¹ Universe data is gross-of-fees.

Growth Risk Analysis – Global Equity

Cevian Capital II

for the quarter ended March 31, 2023

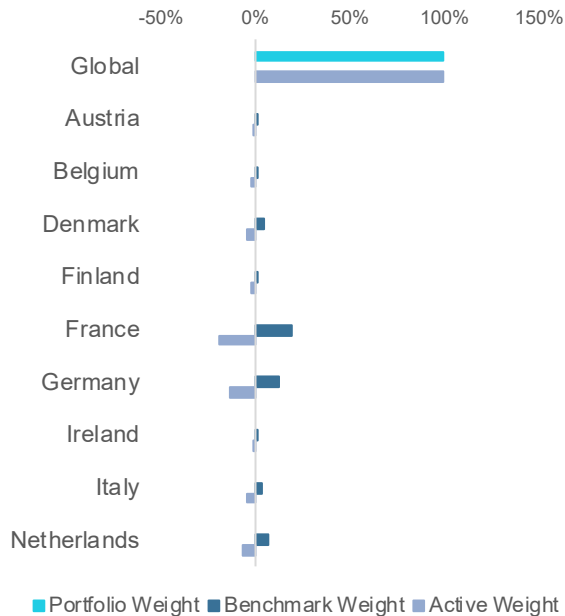


Los Angeles County Employees Retirement Association

Portfolio Risk Summary

	Value
Total Risk	20.96
Benchmark Risk	20.05
Active Risk	9.57
Portfolio Beta	0.93

Top Countries by Weight%

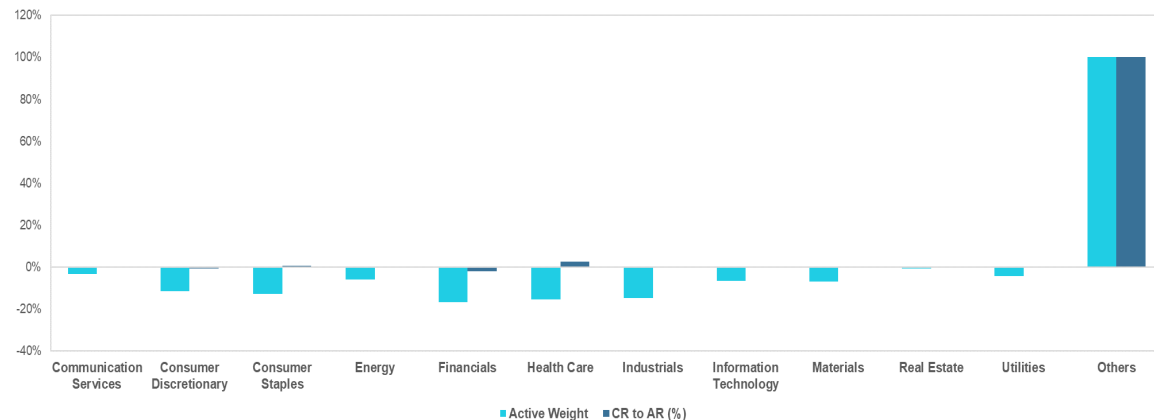


Note: Commingled fund account with no position-level transparency.

Top 10 Assets by Contribution to Active Risk

Asset	Weight			Total Risk	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active			
CEVIAN CAPITAL II - ACTIVIST	100.00%	0.00%	100.00%	20.96	100.00	0.067
NOVO NORDISK A/S	0.00%	2.60%	-2.60%	28.03	0.86	-0.060
ASTRAZENECA PLC	0.00%	2.13%	-2.13%	26.33	0.69	-0.060
ROCHE HOLDING AG	0.00%	1.99%	-1.99%	24.13	0.31	-0.043
NOVARTIS AG	0.00%	1.97%	-1.97%	20.52	0.28	-0.042
NESTLE SA	0.00%	3.32%	-3.32%	18.85	0.25	-0.035
ASML HOLDING NV	0.00%	2.71%	-2.71%	40.27	0.24	-0.037
UNILEVER PLC	0.00%	1.30%	-1.30%	21.09	0.21	-0.044
GSK PLC	0.00%	0.71%	-0.71%	25.99	0.16	-0.050
DIAGEO PLC	0.00%	1.01%	-1.01%	22.77	0.13	-0.041

Portfolio Risk by GICS Sector



Growth – Global Equity CornerCap US Small Cap

for the quarter ended March 31, 2023

Strategy

Seeks to exploit small cap market inefficiencies by using proprietary fundamental factors. The strategy may be suited to investors looking to increase U.S. small cap exposure and diversify portfolio through an active quantitative investment approach.

Inception Date: October 2018

Portfolio Characteristics

	Portfolio	Benchmark
Market Cap Wtd Average (mm)	2,489.8	2,920.7
No. Of Issues	350.0	0.0
Dividend Yield	1.7	1.4
Return on Equity	13.7	11.4
Price to Sales	2.7	13.8
Price to Book	2.2	6.5
PE Ratio	14.1	31.3

Top Holdings (% of assets)

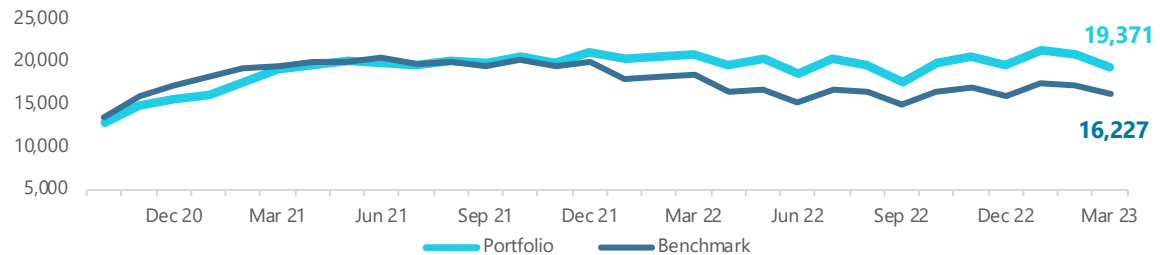
IRADIMED CORP	0.6%
BGC PARTNERS INC CL A	0.5%
ALLISON TRANSMISSION HOLDING	0.5%
BLACKBAUD INC	0.5%
AMPHASTAR PHARMACEUTICALS IN	0.5%
Top 5 Holdings	2.6%

Performance (net)¹

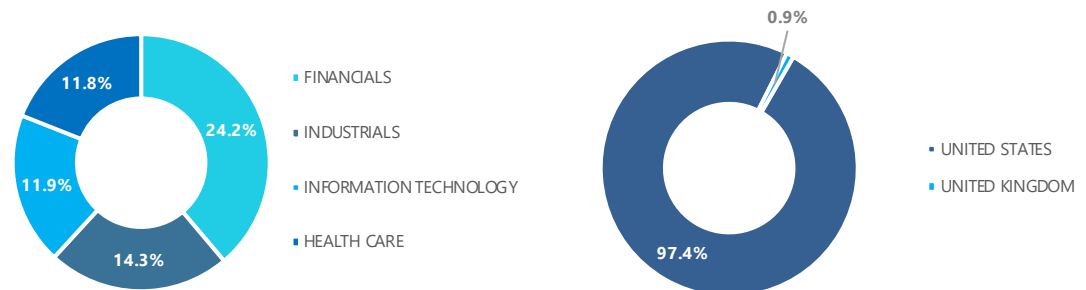
	Ending Market Value (mm)	QTD	1 Year	3 Year	5 Year
Cornercap US Small Cap - EMP	80.0	-0.7%	-6.6%	24.7%	--
RUSSELL 2000		2.7%	-11.6%	17.5%	--
Growth Policy Benchmark		7.3%	-9.7%	13.7%	--

Universe data: US Equity Funds - Small Cap	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
Cornercap US Small Cap - EMP	-0.6%	97	-6.1%	53	25.3%	22	--	--
Median	3.4%		-5.8%		22.1%		--	

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Growth Risk Analysis – Global Equity

CornerCap US Small Cap

for the quarter ended March 31, 2023

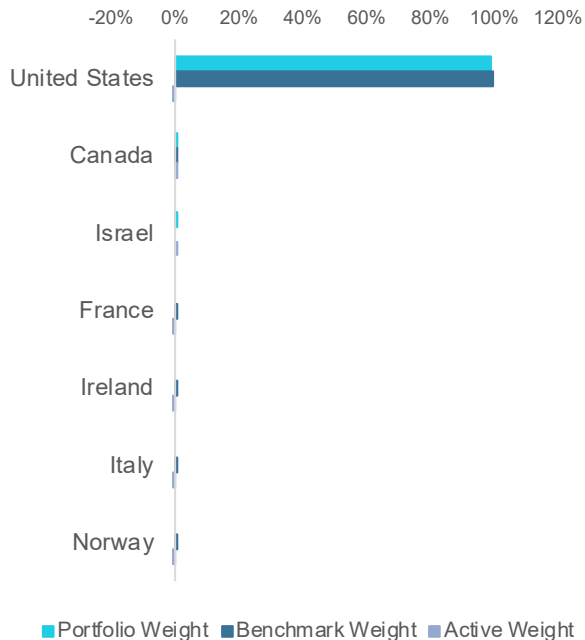


Los Angeles County Employees Retirement Association

Portfolio Risk Summary

	Value
Total Risk	24.09
Benchmark Risk	25.58
Active Risk	4.44
Portfolio Beta	0.93

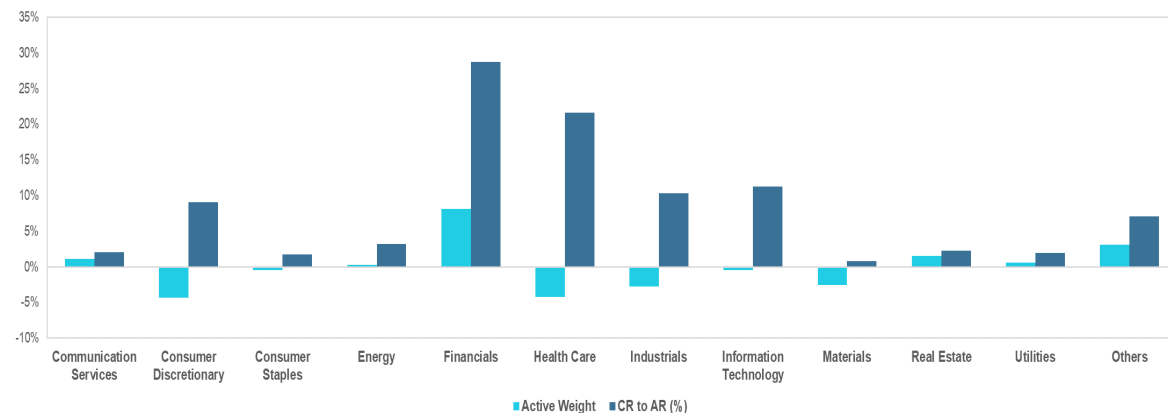
Top Countries by Weight%



Top 10 Assets by Contribution to Active Risk

Asset	Weight			Total Risk	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active			
COLUMBIA BANKING SYSTEM INC	0.40%	0.00%	0.40%	39.91	1.29	0.039
MERCANTILE BANK CORP	0.40%	0.02%	0.38%	32.13	1.20	0.036
PINNACLE FINANCIAL PARTNERS INC	0.39%	0.00%	0.39%	40.32	1.13	0.023
OCEANFIRST FINANCIAL CORP	0.41%	0.05%	0.36%	34.02	1.10	0.028
BYLINE BANCORP INC	0.39%	0.02%	0.37%	32.60	1.08	0.024
BROOKLINE BANCORP INC	0.38%	0.04%	0.34%	33.57	1.07	0.034
PREFERRED BK LOS ANGELES	0.33%	0.03%	0.30%	33.51	1.05	0.050
SHOCKWAVE MEDICAL INC	0.00%	0.33%	-0.33%	51.52	1.01	-0.240
INDEPENDENT BANK GROUP INC	0.39%	0.07%	0.32%	35.81	0.98	0.030
PROMETHEUS BIOSCIENCES INC	0.00%	0.16%	-0.16%	63.66	0.94	-0.285

Portfolio Risk by GICS Sector



Growth – Global Equity Frontier US SMID Growth

for the quarter ended March 31, 2023

Strategy

Seeks to invest in high quality companies at attractive valuations and sustainable secular growth through fundamental analysis. The strategy may be suited to investors looking to increase U.S. mid and small cap exposures and generate returns through stock selection and low turnover.

Inception Date: June 2002

Portfolio Characteristics

	Portfolio	Benchmark
Market Cap Wtd Average (mm)	7,546.2	6,298.5
No. Of Issues	140.0	0.0
Dividend Yield	0.6	1.5
Return on Equity	10.4	15.2
Price to Sales	2.9	3.0
Price to Book	3.2	3.2
PE Ratio	15.6	16.4

Top Holdings (% of assets)

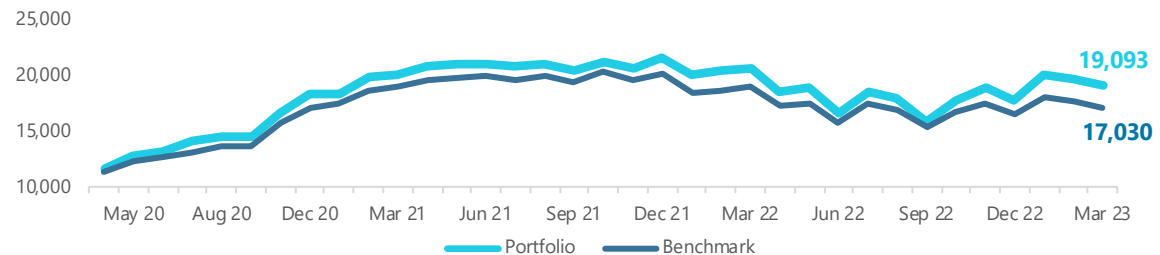
BUILDERS FIRSTSOURCE INC	2.0%
ATI INC	2.0%
ARRAY TECHNOLOGIES INC	1.9%
JABIL INC	1.8%
MRC GLOBAL INC	1.6%
Top 5 Holdings	9.3%

Performance (net)¹

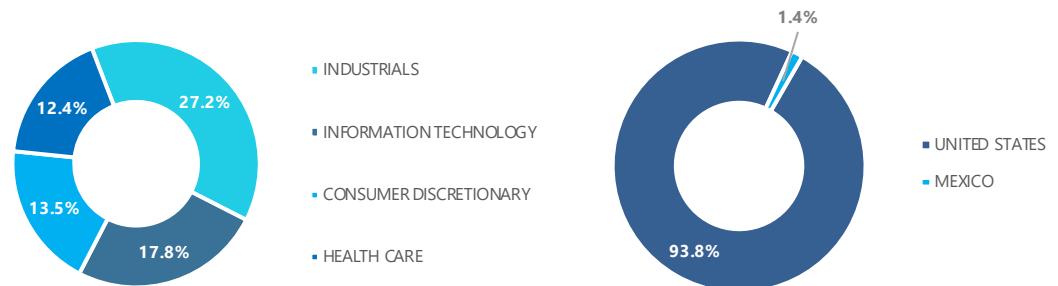
	Ending Market Value (mm)	QTD	1 Year	3 Year	5 Year
Frontier US SMID Growth	275.9	7.7%	-7.4%	24.1%	7.1%
RUSSELL 2500		3.4%	-10.4%	19.4%	6.6%
Growth Policy Benchmark		7.3%	-9.7%	13.7%	--

Universe data: US Equity Funds - Small Cap	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
Frontier US SMID Growth	7.9%	10	-6.8%	58	25.0%	27	7.9%	39
Median	3.4%		-5.8%		22.1%		7.7%	

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Growth Risk Analysis – Global Equity

Frontier US SMID Growth

for the quarter ended March 31, 2023

Portfolio Risk Summary

	Value
Total Risk	27.08
Benchmark Risk	24.54
Active Risk	4.66
Portfolio Beta	1.09

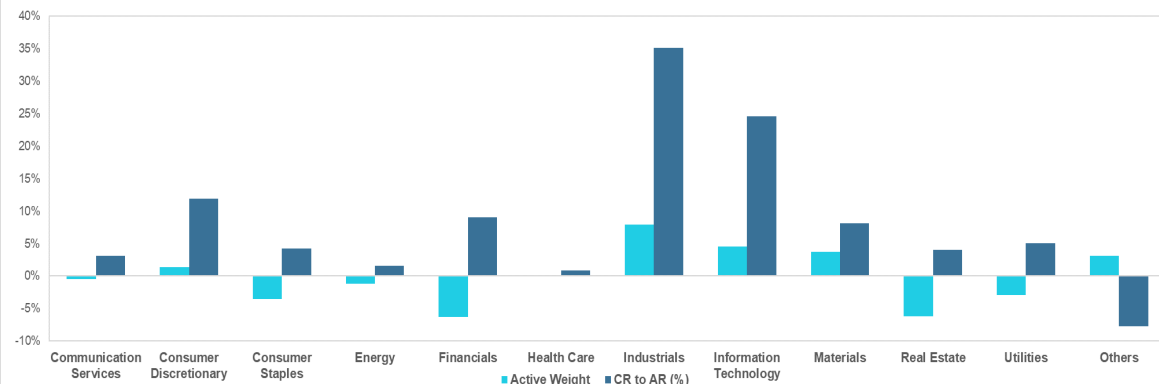
Top Countries by Weight%



Top 10 Assets by Contribution to Active Risk

Asset	Weight			Total Risk	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active			
ARRAY TECHNOLOGIES INC	1.89%	0.06%	1.83%	71.29	10.40	0.381
WOLFSPEED INC	1.46%	0.15%	1.31%	58.33	5.60	0.317
SITIME CORPORATION	1.09%	0.04%	1.05%	60.83	4.69	0.325
CONTROLADORA VUELA	1.37%	0.00%	1.37%	57.94	4.58	0.273
MRC GLOBAL INC	1.62%	0.02%	1.60%	54.84	4.31	0.242
AZUL SA	1.00%	0.00%	1.00%	85.47	4.20	0.312
CAESARS ENTERTAINMENT INC	1.40%	0.00%	1.40%	52.13	3.73	0.241
DANA INC	1.22%	0.04%	1.19%	49.54	3.16	0.241
MONOLITHIC POWER SYSTEMS INC	0.95%	0.00%	0.95%	45.12	2.78	0.254
ALBEMARLE CORP	1.22%	0.00%	1.22%	45.73	2.72	0.221

Portfolio Risk by GICS Sector



Growth – Global Equity

Global Alpha

for the quarter ended March 31, 2023

Strategy

Seeks to identify mispriced companies with high rates of growth, strong balance sheets, and high insider ownership using a bottom-up, research-based approach coupled with investment themes. The strategy may be suited to investors looking to increase exposure to international small cap stocks.

Inception Date: November 2018

Portfolio Characteristics

	Portfolio	Benchmark
Market Cap Wtd Average (mm)	2,791.3	2,655.1
No. Of Issues	58.0	0.0
Dividend Yield	3.0	3.9
Return on Equity	12.1	12.4
Price to Sales	2.0	4.9
Price to Book	2.4	3.1
PE Ratio	16.9	15.8

Top Holdings (% of assets)

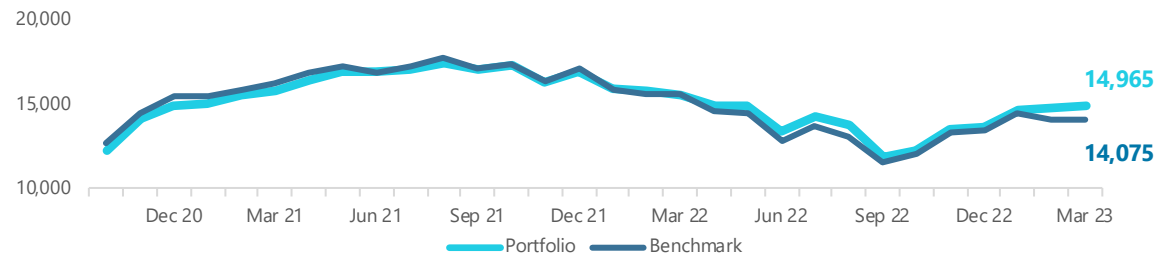
SOPRA STERIA GROUP	4.3%
RAFFLES MEDICAL GROUP LTD	3.5%
SEGA SAMMY HOLDINGS INC	3.4%
MELIA HOTELS INTERNATIONAL	3.4%
ASICS CORP	3.3%
Top 5 Holdings	17.9%

Performance (net)¹

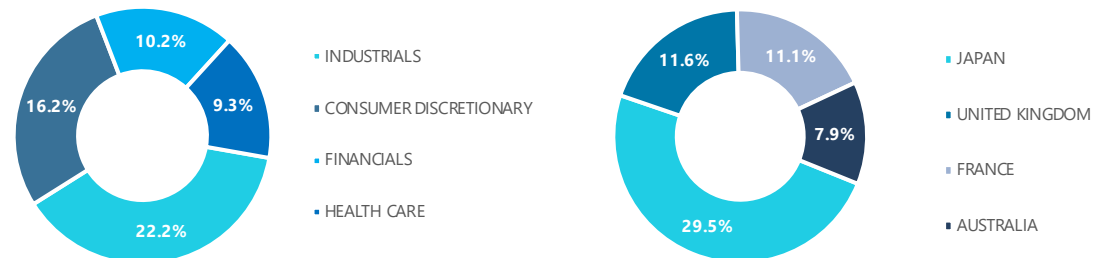
	Ending Market Value (mm)	QTD	1 Year	3 Year	5 Year
Global Alpha	181.2	9.5%	-3.9%	14.4%	--
MSCI EAFE SMALL CAP NET		4.9%	-9.8%	12.1%	--
Growth Policy Benchmark		7.3%	-9.7%	13.7%	--

Universe data: International Equity Funds Core	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
Global Alpha	9.7%	13	-3.2%	32	15.2%	52	--	--
Median	7.1%		-4.9%		15.7%		--	

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Growth Risk Analysis – Global Equity

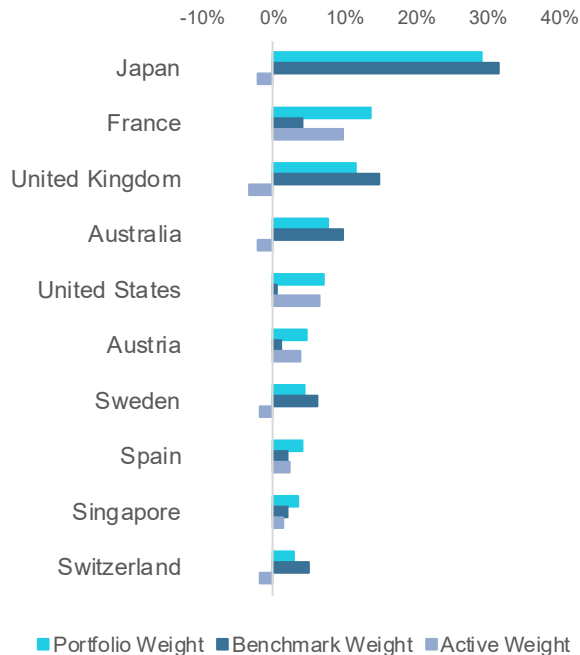
Global Alpha

for the quarter ended March 31, 2023

Portfolio Risk Summary

	Value
Total Risk	18.81
Benchmark Risk	19.78
Active Risk	4.28
Portfolio Beta	0.93

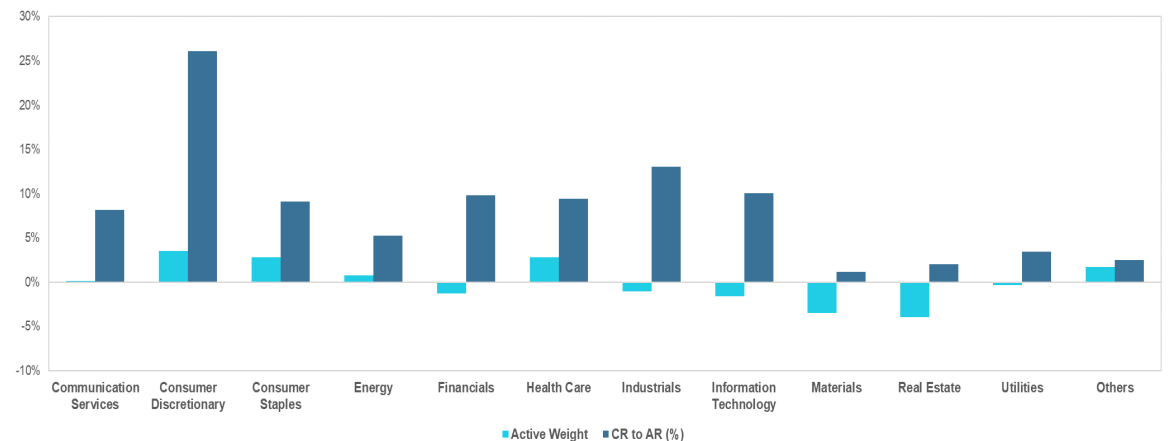
Top Countries by Weight%



Top 10 Assets by Contribution to Active Risk

Asset	Weight			Total Risk	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active			
ASICS CORP	3.29%	0.18%	3.10%	40.66	8.81	0.056
SEGA SAMMY HOLDINGS INC	3.42%	0.12%	3.30%	31.97	8.45	0.045
SOPRA STERIA GROUP SA	4.35%	0.13%	4.22%	30.97	6.31	-0.001
RAFFLES MEDICAL GROUP LTD	3.47%	0.04%	3.43%	27.89	5.83	0.008
INTERNET INITIATIVE JAPAN INC	2.53%	0.09%	2.44%	33.07	5.54	0.032
L'OCCITANE INTERNATIONAL SA	2.57%	0.00%	2.57%	39.38	5.00	0.018
ROTHSCHILD & CO	3.43%	0.00%	3.43%	31.16	4.65	-0.007
ORMAT TECHNOLOGIES INC	2.75%	0.00%	2.75%	32.04	3.95	-0.004
SAMSONITE INTERNATIONAL SA	2.05%	0.00%	2.05%	45.21	3.51	0.008
OZ MINERALS LTD	2.21%	0.00%	2.21%	41.48	3.36	-0.000

Portfolio Risk by GICS Sector



Growth – Global Equity

JPMorgan Strategic Beta Non-US

for the quarter ended March 31, 2023

Strategy

Seeks to capture incremental alpha through investing in equity factors that are rule-based, transparent, and academically proven. This strategy may be suited to investors looking to gain equity factor exposures in non-U.S. markets at lower volatility and cost than active strategies.

Inception Date: August 2020

Portfolio Characteristics

	Portfolio	Benchmark
Market Cap Wtd Average (mm)	77,909.6	74,783.0
No. Of Issues	1,803.0	0.0
Dividend Yield	3.9	3.4
Return on Equity	18.2	16.6
Price to Sales	3.5	3.9
Price to Book	4.2	4.6
PE Ratio	12.9	14.9

Top Holdings (% of assets)

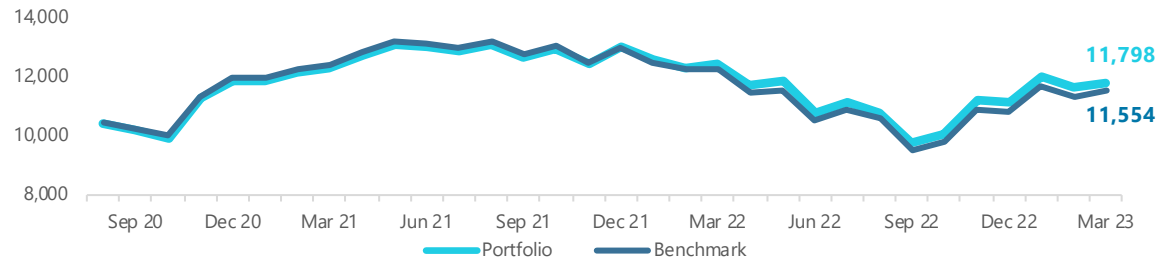
ISHARES MSCI INDIA ETF	3.6%
TAIWAN SEMICONDUCTOR MANUFAC	1.5%
NESTLE SA REG	1.2%
TENCENT HOLDINGS LTD	1.1%
ASML HOLDING NV	1.0%
Top 5 Holdings	8.4%

Performance (net)¹

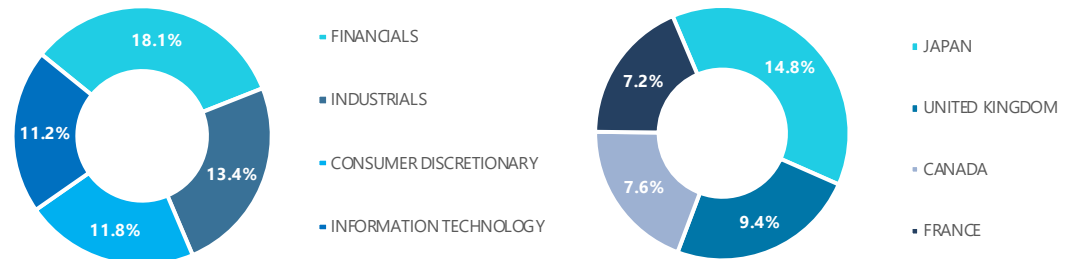
	Ending Market Value (mm)	QTD	1 Year	3 Year	5 Year
JPMAM Strategic Beta Non-US	584.4	6.2%	-5.4%	--	--
MSCI ACWI ex USA IMI Net		6.6%	-5.8%	--	--
Growth Policy Benchmark		7.3%	-9.7%	13.7%	--

Universe data: International Equity	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
JPMAM Strategic Beta Non-US	6.2%	74	-5.4%	68	--	--	--	--
Median	7.4%		-4.0%		--	--	--	

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Growth Risk Analysis – Global Equity

JPMorgan Strategic Beta Non-US

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

Portfolio Risk Summary

	Value
Total Risk	17.51
Benchmark Risk	17.61
Active Risk	0.70
Portfolio Beta	0.99

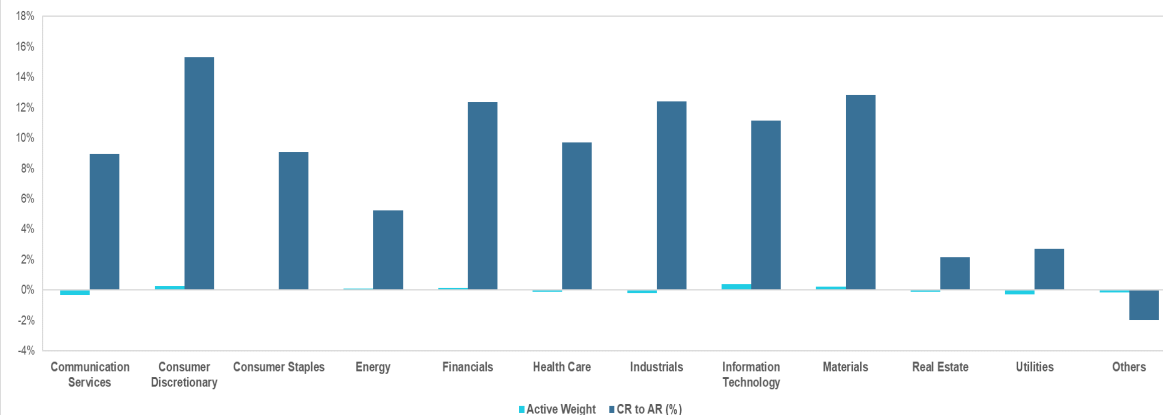
Top Countries by Weight%



Top 10 Assets by Contribution to Active Risk

Asset	Weight			Total Risk	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active			
ALIBABA GROUP HOLDING LTD	0.00%	0.69%	-0.69%	52.24	19.29	-0.228
ASML HOLDING NV	0.00%	1.00%	-1.00%	40.27	4.50	-0.063
VALE SA	0.25%	0.00%	0.25%	47.01	2.95	0.054
NETEASE INC	0.00%	0.13%	-0.13%	42.56	2.29	-0.159
UNILEVER PLC	0.43%	0.00%	0.43%	21.09	1.42	-0.008
KUAISHOU TECHNOLOGY	0.02%	0.05%	-0.03%	61.67	1.16	-0.294
LI AUTO INC	0.02%	0.05%	-0.03%	61.07	1.09	-0.277
SEA LIMITED	0.08%	0.11%	-0.04%	57.93	1.05	-0.231
DAIMLER AG REGISTERED SHARES	0.25%	0.00%	0.25%	32.72	0.99	-0.003
BAYERISCHE MOTORENWERKE AG	0.16%	0.00%	0.16%	29.06	0.89	-0.008

Portfolio Risk by GICS Sector



Growth – Global Equity

JPMorgan Strategic Beta US

for the quarter ended March 31, 2023

Strategy

Seeks to capture incremental alpha through investing in equity factors that are rule-based, transparent, and academically proven. This strategy may be suited to investors looking to gain equity factor exposures in the U.S. at lower volatility and cost than active strategies.

Inception Date: July 2020

Portfolio Characteristics

	Portfolio	Benchmark
Market Cap Wtd Average (mm)	469,564.7	542,555.8
No. Of Issues	951.0	0.0
Dividend Yield	1.3	1.3
Return on Equity	30.1	30.3
Price to Sales	5.2	5.3
Price to Book	11.9	12.4
PE Ratio	20.9	23.2

Top Holdings (% of assets)

APPLE INC	6.5%
MICROSOFT CORP	5.1%
AMAZON.COM INC	2.3%
NVIDIA CORP	1.7%
ALPHABET INC CL A	1.6%

Top 5 Holdings

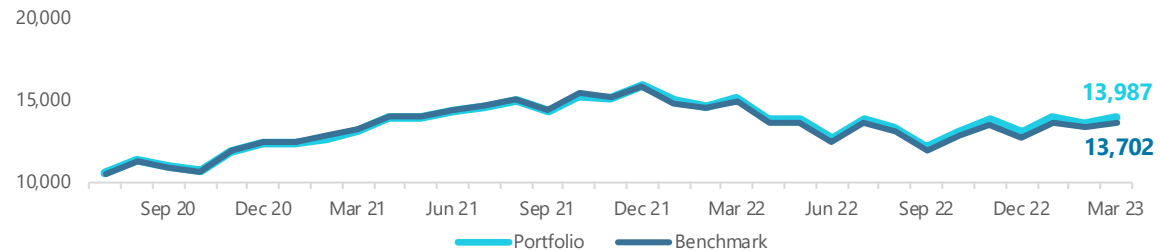
17.1%

Performance (net)¹

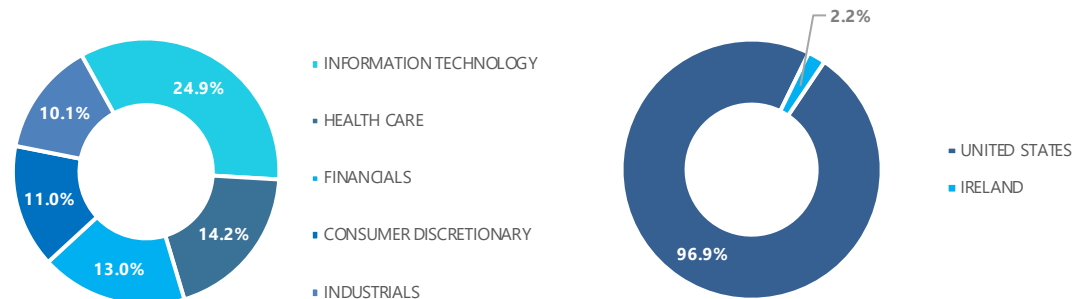
	Ending Market Value (mm)	QTD	1 Year	3 Year	5 Year
JPMAM Strategic Beta US	4,292.1	7.4%	-7.6%	--	--
MSCI USA IMI Gross		7.3%	-8.5%	--	--
Growth Policy Benchmark		7.3%	-9.7%	13.7%	--

Universe data: U.S. Equities Total Large Cap	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
JPMAM Strategic Beta US	7.4%	53	-7.5%	48	--	--	--	--
Median	7.4%		-7.6%		--	--	--	--

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Growth Risk Analysis – Global Equity

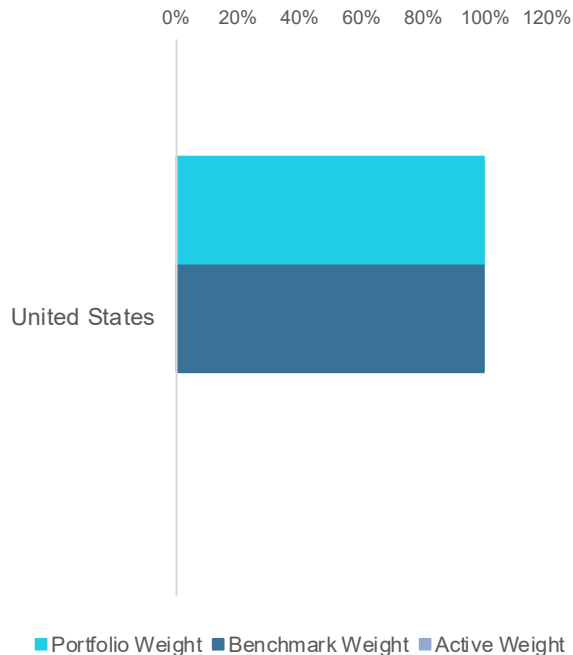
JPMorgan Strategic Beta US

for the quarter ended March 31, 2023

Portfolio Risk Summary

	Value
Total Risk	20.47
Benchmark Risk	20.66
Active Risk	0.56
Portfolio Beta	0.99

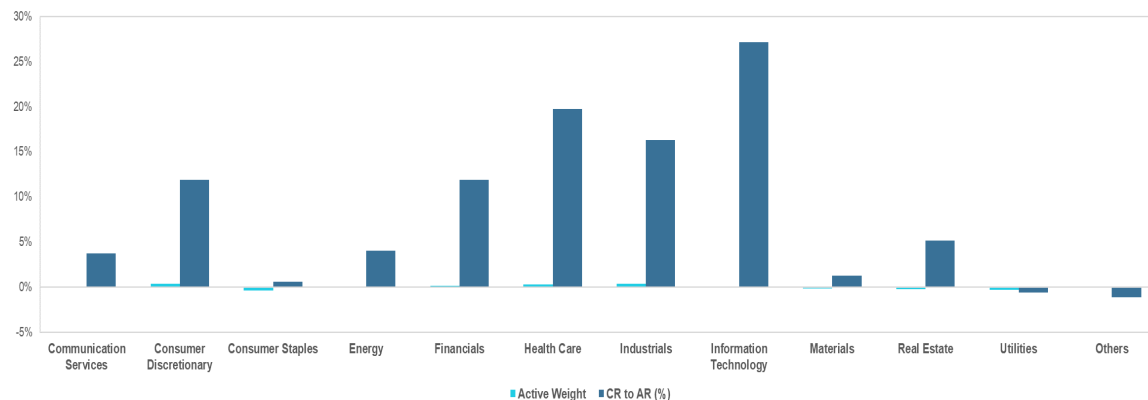
Top Countries by Weight%



Top 10 Assets by Contribution to Active Risk

Asset	Weight			Total Risk	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active			
JPMORGAN CHASE & CO	0.00%	0.95%	-0.95%	27.91	8.52	-0.122
MONGODB INC	0.00%	0.04%	-0.04%	61.49	1.60	-0.298
CLOUDFLARE INC	0.00%	0.04%	-0.04%	63.63	1.58	-0.297
CROWDSTRIKE HOLDINGS INC	0.02%	0.07%	-0.05%	50.00	1.41	-0.229
WARNER BROS DISCOVERY INC	0.04%	0.09%	-0.04%	53.04	1.41	-0.258
SNOWFLAKE INC	0.05%	0.09%	-0.04%	55.11	1.38	-0.264
DATADOG INC	0.01%	0.04%	-0.04%	52.75	1.12	-0.245
OKTA INC	0.00%	0.03%	-0.03%	56.47	1.10	-0.263
DOORDASH INC	0.00%	0.04%	-0.04%	54.98	1.08	-0.235
HUBSPOT INC	0.01%	0.05%	-0.04%	47.26	1.06	-0.193

Portfolio Risk by GICS Sector



Growth – Global Equity Lazard Emerging Markets

for the quarter ended March 31, 2023

Strategy

Seeks to provide long-term capital appreciation by investing in funds trading at a discount to their estimated net asset value, sum of the parts valuation, and/or underlying investments/businesses. The strategy may be suited to investors looking to capture growth opportunities in emerging markets and increase portfolio diversification.

Inception Date: February 2013

Portfolio Characteristics

	Portfolio	Benchmark
Market Cap Wtd Average (mm)	38,327.8	101,532.8
No. Of Issues	49.0	0.0
Dividend Yield	3.6	3.7
Return on Equity	2.0	17.3
Price to Sales	24.4	4.3
Price to Book	0.9	3.5
PE Ratio	13.1	12.3

Top Holdings (% of assets)

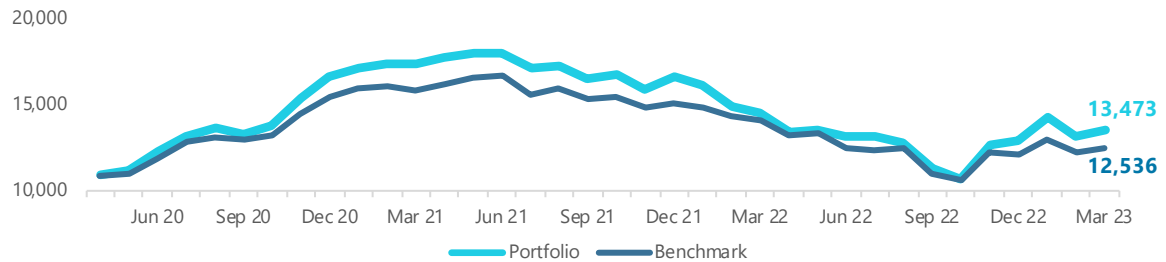
PROSUS NV	9.6%
CITIC SECURITIES CO LTD H	6.5%
JPMORGAN EMERGING MARKETS INVE	6.5%
FIDELITY CHINA SPECIAL SITUATI	5.9%
TEMPLETON EMERGING MARKETS INV	5.8%
Top 5 Holdings	34.3%

Performance (net)¹

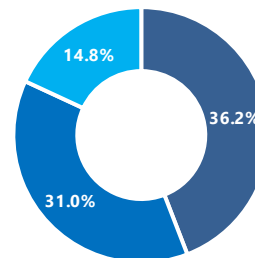
	Ending Market Value (mm)	QTD	1 Year	3 Year	5 Year
Lazard Emerging Markets	383.9	4.3%	-7.0%	10.4%	1.2%
MSCI EMERGING MARKETS		4.0%	-10.7%	7.8%	-0.9%
Growth Policy Benchmark		7.3%	-9.7%	13.7%	--

Universe data: Intl Equity Emerging Mkt Funds	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
Lazard Emerging Markets	4.5%	49	-6.4%	28	11.2%	49	1.9%	30
Median	4.4%		-9.0%		10.9%		0.8%	

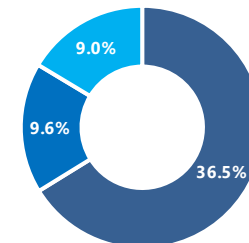
Growth of \$10,000



Top Exposures (% of assets)²



- COMINGLED FUND
- FINANCIALS
- CONSUMER DISCRETIONARY



- UNITED KINGDOM
- NETHERLANDS
- CHINA

¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

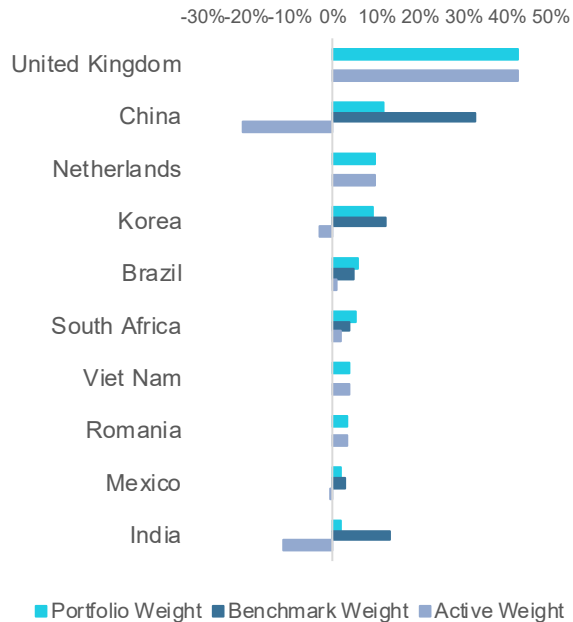
Growth Risk Analysis – Global Equity Lazard Emerging Markets

for the quarter ended March 31, 2023

Portfolio Risk Summary

	Value
Total Risk	20.56
Benchmark Risk	18.81
Active Risk	11.09
Portfolio Beta	0.92

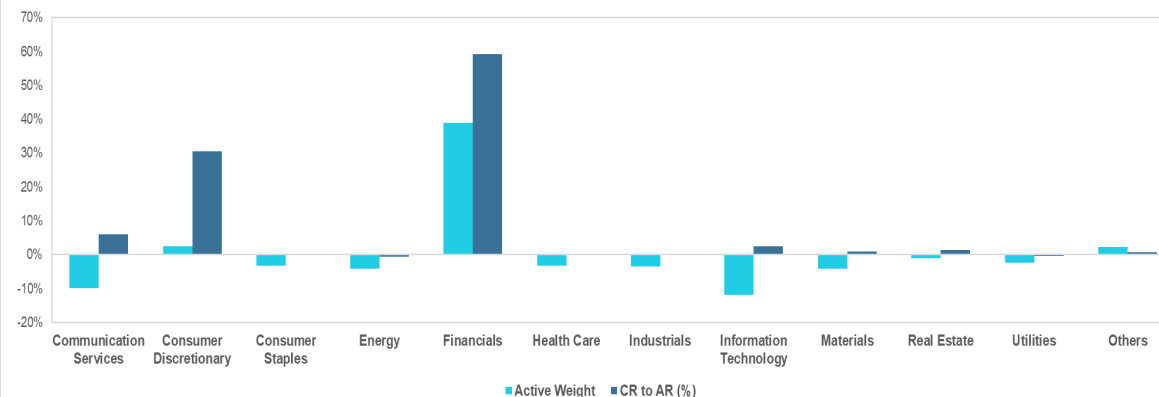
Top Countries by Weight%



Top 10 Assets by Contribution to Active Risk

Asset	Weight			Total Risk	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active			
PROSUS NV	9.58%	0.00%	9.58%	44.03	17.82	0.182
FIDELITY CHINA SPECIAL SITUATIONS PLC	5.89%	0.00%	5.89%	41.26	10.75	0.178
JPMORGAN EMERGING MKTS INV TRUST	6.50%	0.00%	6.50%	30.56	9.75	0.142
TEMPLETON EMERGING MKTS INV TRUST	5.78%	0.00%	5.78%	29.85	8.25	0.134
NASPERS	5.23%	0.62%	4.62%	47.16	5.97	0.119
SCHRODER ASIAPACIFIC FUND PLC	2.80%	0.00%	2.80%	29.40	3.80	0.126
ASIA DRAGON TRUST PLC	2.53%	0.00%	2.53%	32.73	3.63	0.135
FIDELITY EMERGING MARKETS LTD	2.08%	0.00%	2.08%	30.55	2.91	0.131
TAIWAN SEMICONDUCTOR MANUFACT CO	0.37%	6.57%	-6.20%	30.71	2.62	-0.047
ABRDN CHINA INVESTMENT COMPANY	2.00%	0.00%	2.00%	35.49	2.46	0.136

Portfolio Risk by GICS Sector



Note: Weights represent country of domicile of closed-end fund and not country of underlying fund holdings.

Growth – Global Equity

SSGA MSCI ACWI IMI

for the quarter ended March 31, 2023

Strategy

Seeks to provide global equity market exposure and passive index returns. This strategy may be suited to investors looking to gain passive, global equity exposures with low tracking error.

Inception Date: January 2020

Portfolio Characteristics

	Portfolio	Benchmark
Market Cap Wtd Average (mm)	309,693.9	309,819.9
No. Of Issues	6,428.0	0.0
Dividend Yield	2.1	2.1
Return on Equity	23.5	23.4
Price to Sales	5.0	5.0
Price to Book	8.9	8.9
PE Ratio	19.0	19.2

Top Holdings (% of assets)

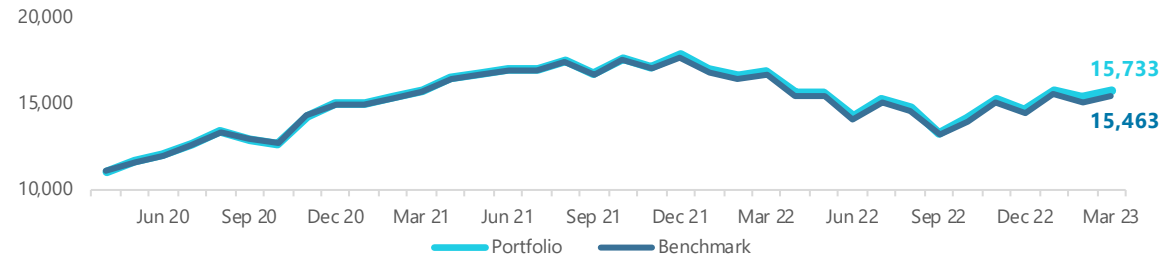
APPLE INC	3.8%
MICROSOFT CORP	3.0%
AMAZON.COM INC	1.4%
ALPHABET INC CL C	0.9%
ALPHABET INC CL A	0.9%
Top 5 Holdings	9.9%

Performance (net)¹

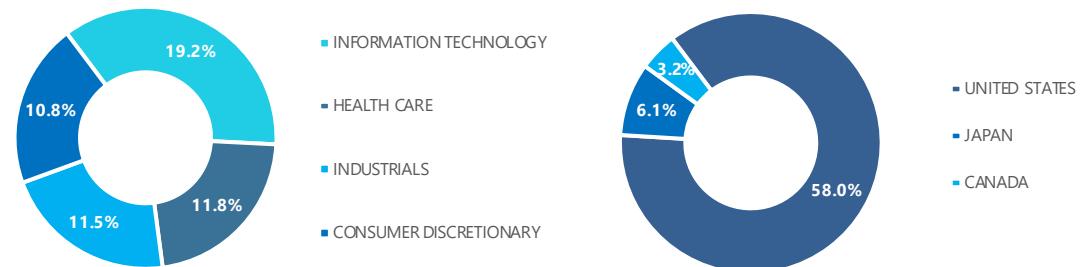
	Ending Market Value (mm)	QTD	1 Year	3 Year	5 Year
SSGA MSCI ACWI IMI	15,279.8	7.1%	-7.1%	16.3%	--
MSCI ACWI IMI Net		6.9%	-7.7%	15.6%	--
Growth Policy Benchmark		7.3%	-9.7%	13.7%	--

Universe data: Global Equity Funds	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
SSGA MSCI ACWI IMI	7.1%	41	-7.1%	71	16.3%	30	--	--
Median	6.1%		-3.3%		14.5%		--	

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Growth Risk Analysis – Global Equity

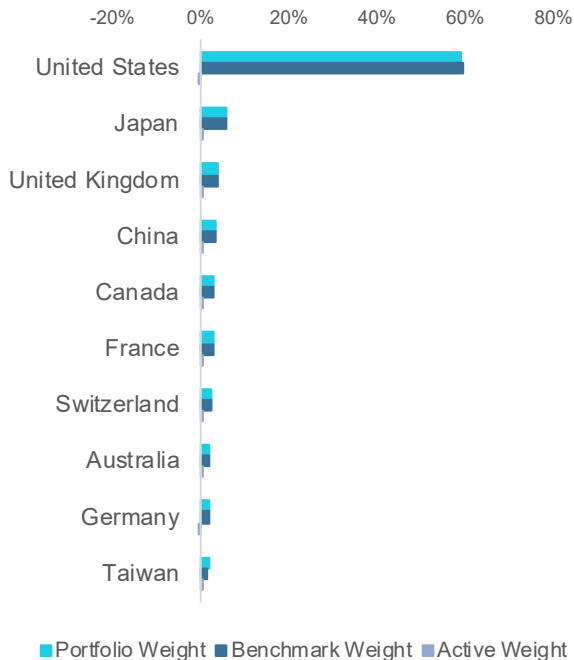
SSGA MSCI ACWI IMI

for the quarter ended March 31, 2023

Portfolio Risk Summary

	Value
Total Risk	18.81
Benchmark Risk	18.74
Active Risk	0.17
Portfolio Beta	1.00

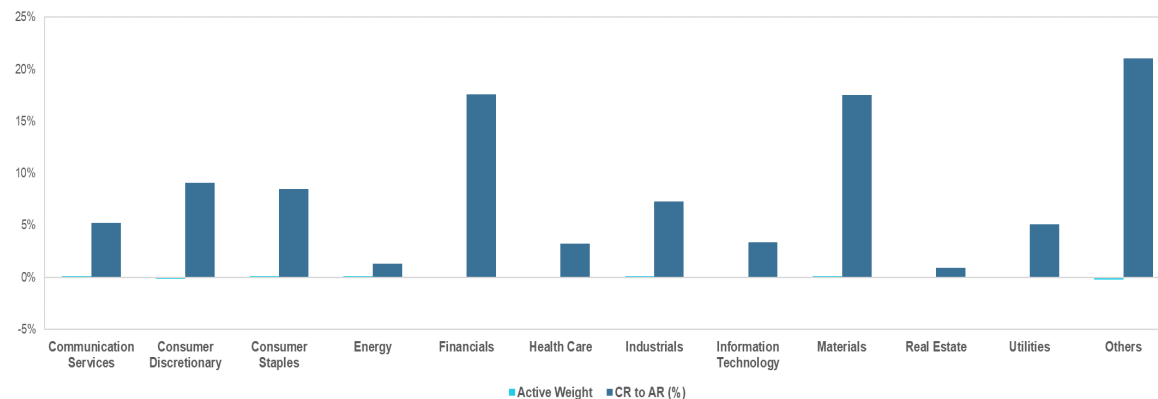
Top Countries by Weight%



Top 10 Assets by Contribution to Active Risk

Asset	Weight			Total Risk	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active			
ASML HOLDING NV	0.39%	0.00%	0.39%	40.27	12.09	0.129
RELIANCE INDUSTRIES LTD	0.00%	0.13%	-0.13%	29.22	6.63	-0.016
HOUSING DEVELOPMENT FINANCE CORP	0.00%	0.08%	-0.08%	29.71	4.65	-0.025
ICICI BANK LTD	0.00%	0.08%	-0.08%	27.98	3.50	0.000
AL RAJHI BANK	0.00%	0.06%	-0.06%	27.45	3.12	-0.022
TATA CONSULTANCY SERVICES	0.00%	0.05%	-0.05%	23.83	2.72	-0.016
HINDUSTAN UNILEVER LTD	0.00%	0.04%	-0.04%	25.09	2.64	-0.047
AXIS BANK LTD	0.00%	0.04%	-0.03%	33.59	2.43	-0.047
SAUDI NATIONAL BANK SJSC	0.00%	0.04%	-0.04%	30.93	2.40	-0.032
VALE SA	0.08%	0.00%	0.08%	47.01	2.28	0.122

Portfolio Risk by GICS Sector



Growth – Global Equity Systematic US Small Cap Value

for the quarter ended March 31, 2023

Strategy

Seeks to identify high quality small cap companies capable of generating high rates of return with attractive valuations. The strategy may be suited for investors looking to increase U.S. small cap exposure with defensive characteristics.

Inception Date: July 2018

Portfolio Characteristics

	Portfolio	Benchmark
Market Cap Wtd Average (mm)	4,145.6	2,920.7
No. Of Issues	148.0	0.0
Dividend Yield	3.6	1.4
Return on Equity	16.8	11.4
Price to Sales	1.8	13.8
Price to Book	2.4	6.5
PE Ratio	13.4	31.3

Top Holdings (% of assets)

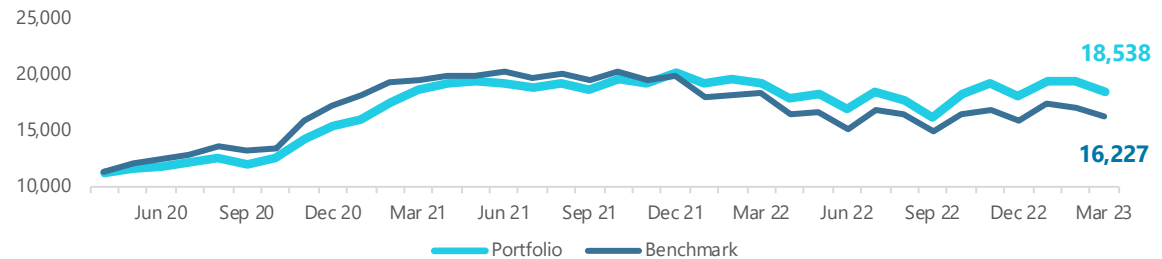
FIRST CITIZENS BCSHS CL A	3.1%
MAGNOLIA OIL + GAS CORP A	1.9%
EMCOR GROUP INC	1.8%
NORTHWESTERN CORP	1.6%
KBR INC	1.5%
Top 5 Holdings	9.9%

Performance (net)¹

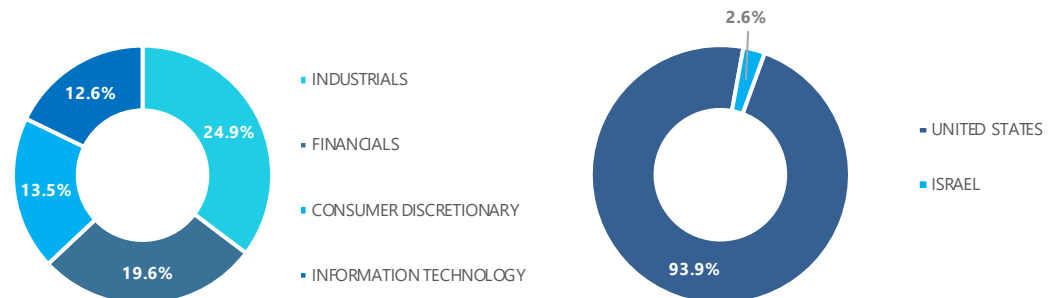
	Ending Market Value (mm)	QTD	1 Year	3 Year	5 Year
Systematic US Small Cap Value	190.3	2.1%	-3.2%	22.8%	--
RUSSELL 2000		2.7%	-11.6%	17.5%	--
Growth Policy Benchmark		7.3%	-9.7%	13.7%	--

Universe data: US Equity Funds - Small Cap	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
Systematic US Small Cap Value	2.3%	71	-2.7%	18	23.5%	37	--	--
Median	3.4%		-5.8%		22.1%		--	

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Growth Risk Analysis – Global Equity Systematic US Small Cap Value

for the quarter ended March 31, 2023

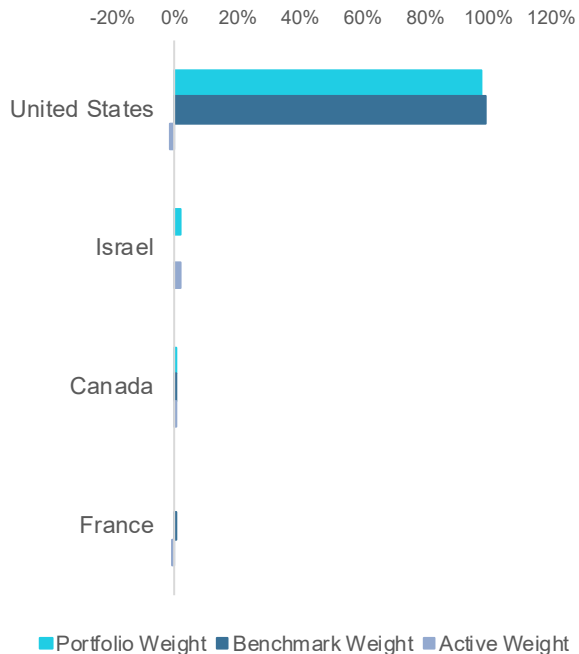


Los Angeles County Employees Retirement Association

Portfolio Risk Summary

	Value
Total Risk	22.26
Benchmark Risk	25.58
Active Risk	5.55
Portfolio Beta	0.86

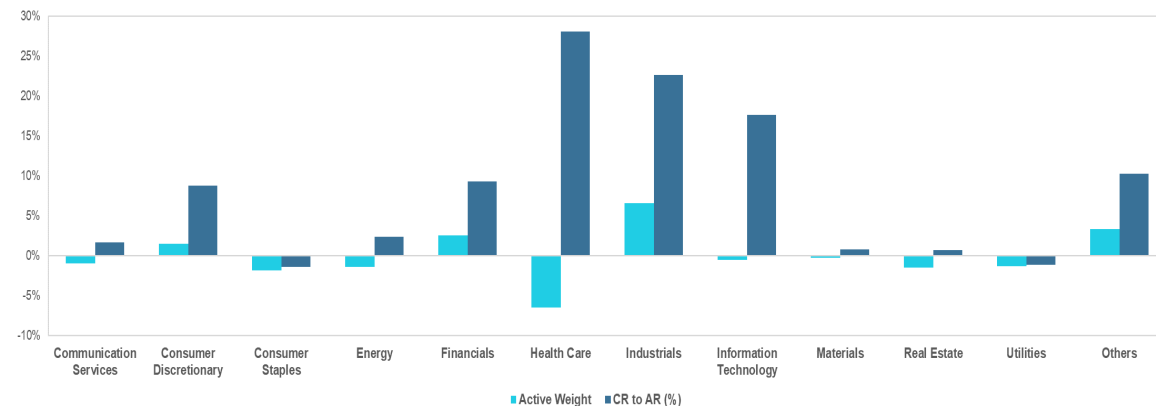
Top Countries by Weight%



Top 10 Assets by Contribution to Active Risk

Asset	Weight			Total Risk	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active			
NORTHWESTERN CORP	1.63%	0.15%	1.48%	23.37	3.36	-0.045
CURTISS-WRIGHT CORP	1.27%	0.00%	1.27%	25.52	2.29	-0.071
EMCOR GROUP INC	1.75%	0.33%	1.42%	26.41	2.24	-0.083
SILICON MOTION TECHNOLOGY CORP	1.03%	0.00%	1.03%	39.77	2.10	-0.058
KBR INC	1.53%	0.00%	1.53%	29.61	2.00	-0.098
PERRIGO CO PLC	1.19%	0.00%	1.19%	32.11	1.94	-0.080
EVEREST RE GROUP LTD	1.22%	0.00%	1.22%	28.83	1.93	-0.082
ICF INTERNATIONAL INC	1.35%	0.09%	1.26%	28.62	1.91	-0.086
CROSS COUNTRY HEALTHCARE INC	1.45%	0.03%	1.42%	54.32	1.77	-0.101
WORKIVA INC	0.00%	0.21%	-0.21%	44.72	1.69	-0.258

Portfolio Risk by GICS Sector

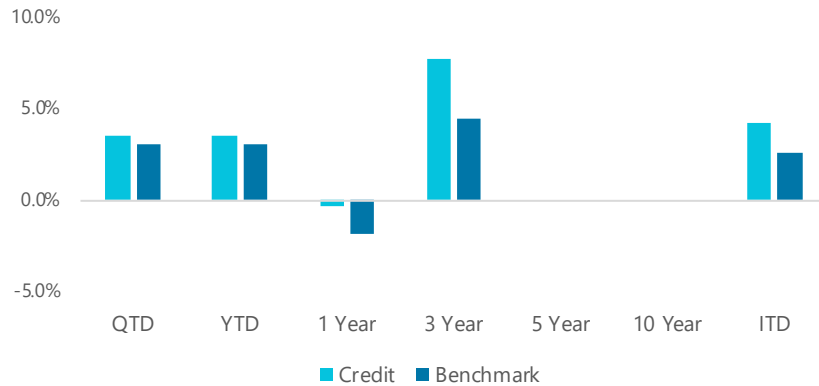


credit

Summary

for the quarter ended March 31, 2023

Performance (net)

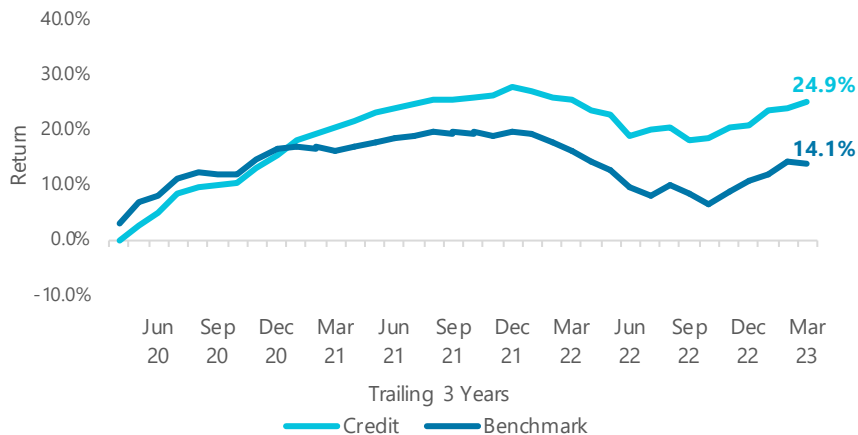


Functional Category

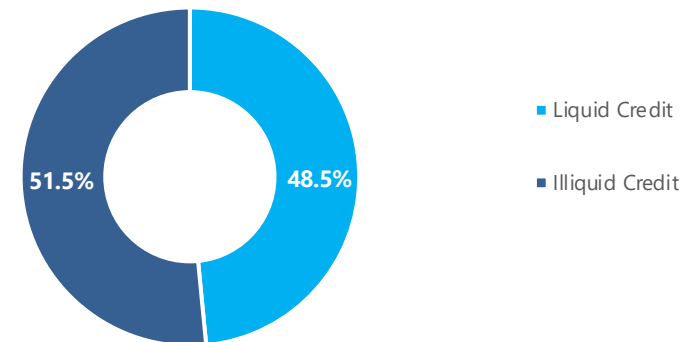
	QTD	FYTD	1 Year	3 Year
Liquid Credit	3.1%	6.0%	-2.4%	--
Liquid Credit Policy Benchmark	3.2%	6.8%	-1.3%	--
Excess	-0.1%	-0.8%	-1.1%	--
Illiquid Credit	3.6%	3.5%	2.5%	11.0%
Illiquid Credit Policy Benchmark	3.0%	2.3%	-1.3%	1.0%
Excess	0.6%	1.2%	3.8%	9.9%

	QTD	YTD	1 Year	3 Year	5 Year	10 Year	ITD
Credit	3.5%	3.5%	-0.3%	7.7%	--	--	4.2%
Benchmark	3.1%	3.1%	-1.8%	4.5%	--	--	2.6%
Excess	0.4%	0.4%	1.5%	3.2%	--	--	1.6%

Cumulative Return



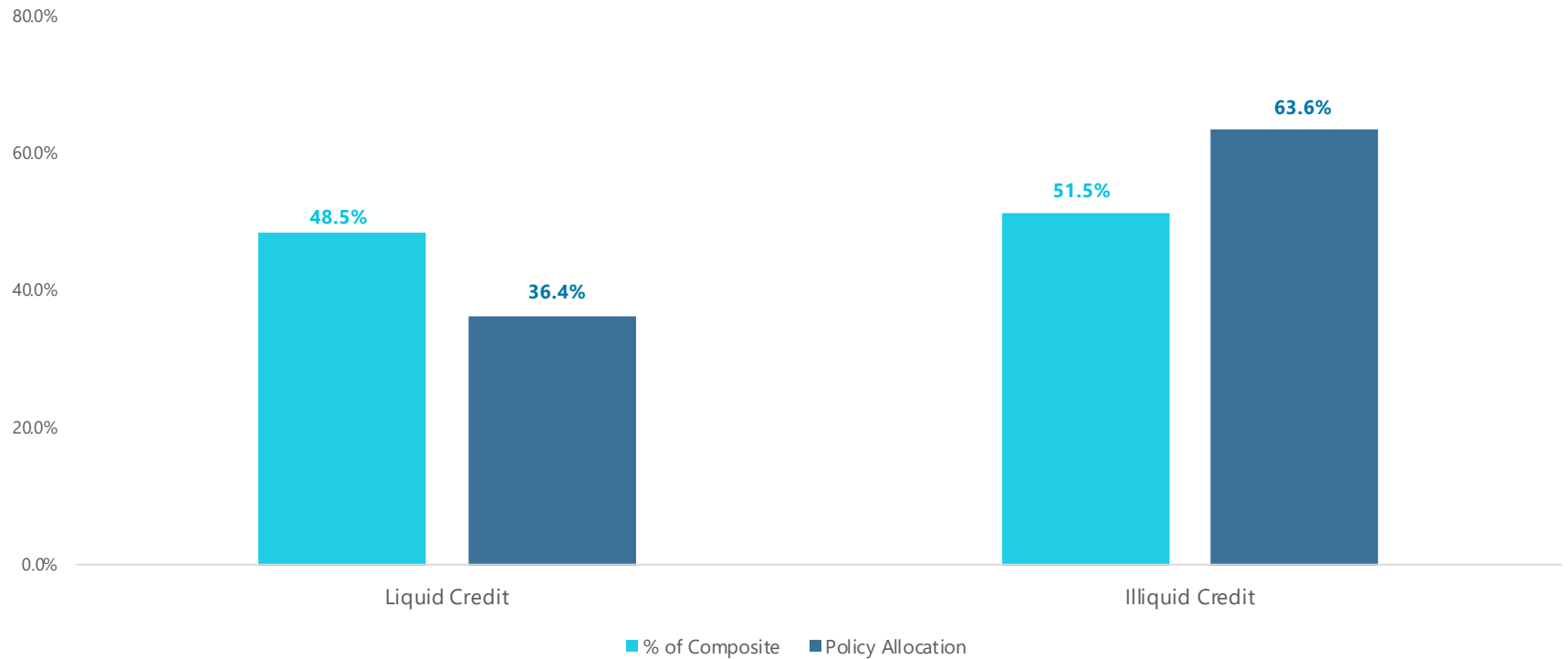
Exposure



Asset Allocation

for the quarter ended March 31, 2023

Actual vs. Policy

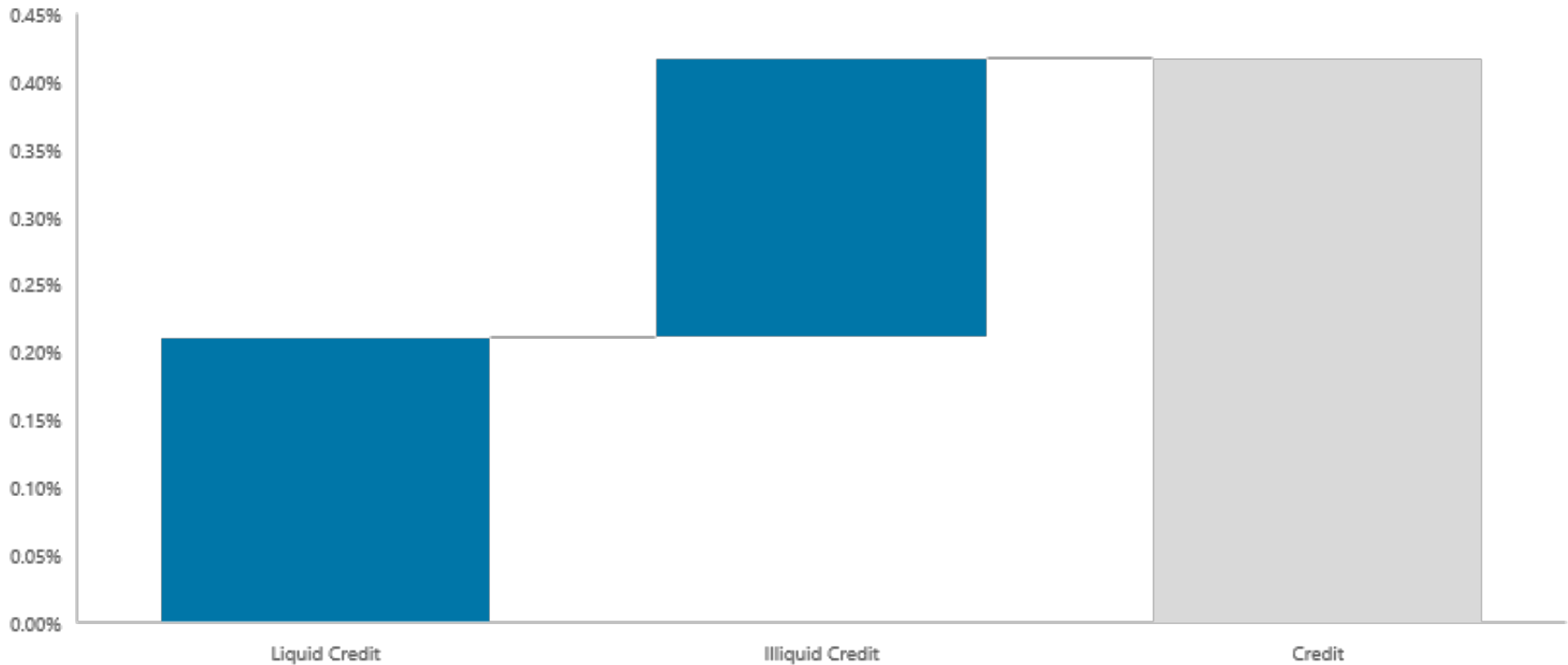


	Ending Market Value (mm)	% of Composite	Policy Allocation	Over / Under (%)	Over / Under (mm)
Credit	8,411	100.0%	100.0%		
Liquid Credit	4,076	48.5%	36.4%	12.1%	1,018
Illiquid Credit	4,335	51.5%	63.6%	-12.1%	-1,018

Contribution to Return

for the quarter ended March 31, 2023

QTD Contribution to Return



Functional Category	Contributors	Detractors
Liquid Credit	0.21% Napier Park	0.09%
Illiquid Credit	0.21% Credit Suisse Bank Loans	0.06%
Credit	0.42% Magnetar	0.04%
	Brigade Cap Mgmt	0.02%
	Pinebridge Investments	0.02%

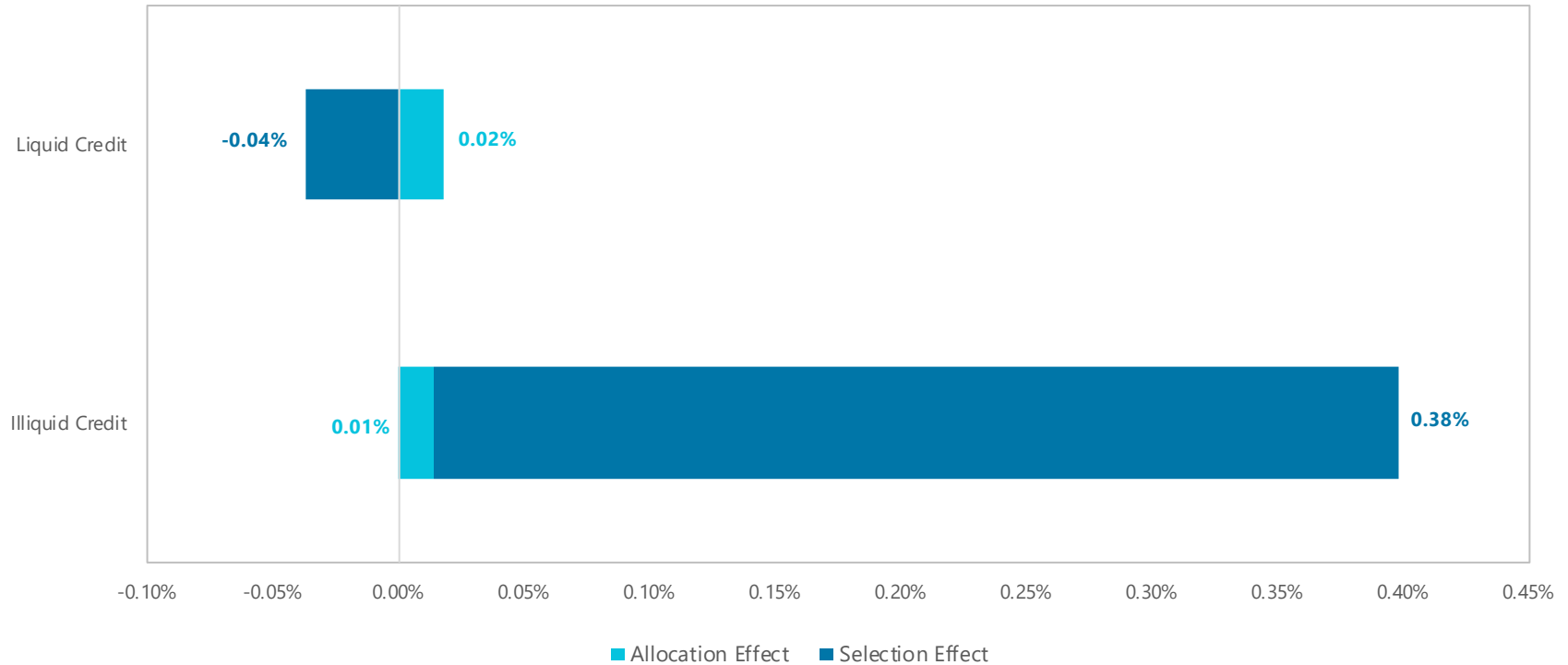
Return Attribution

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

QTD Performance Attribution¹



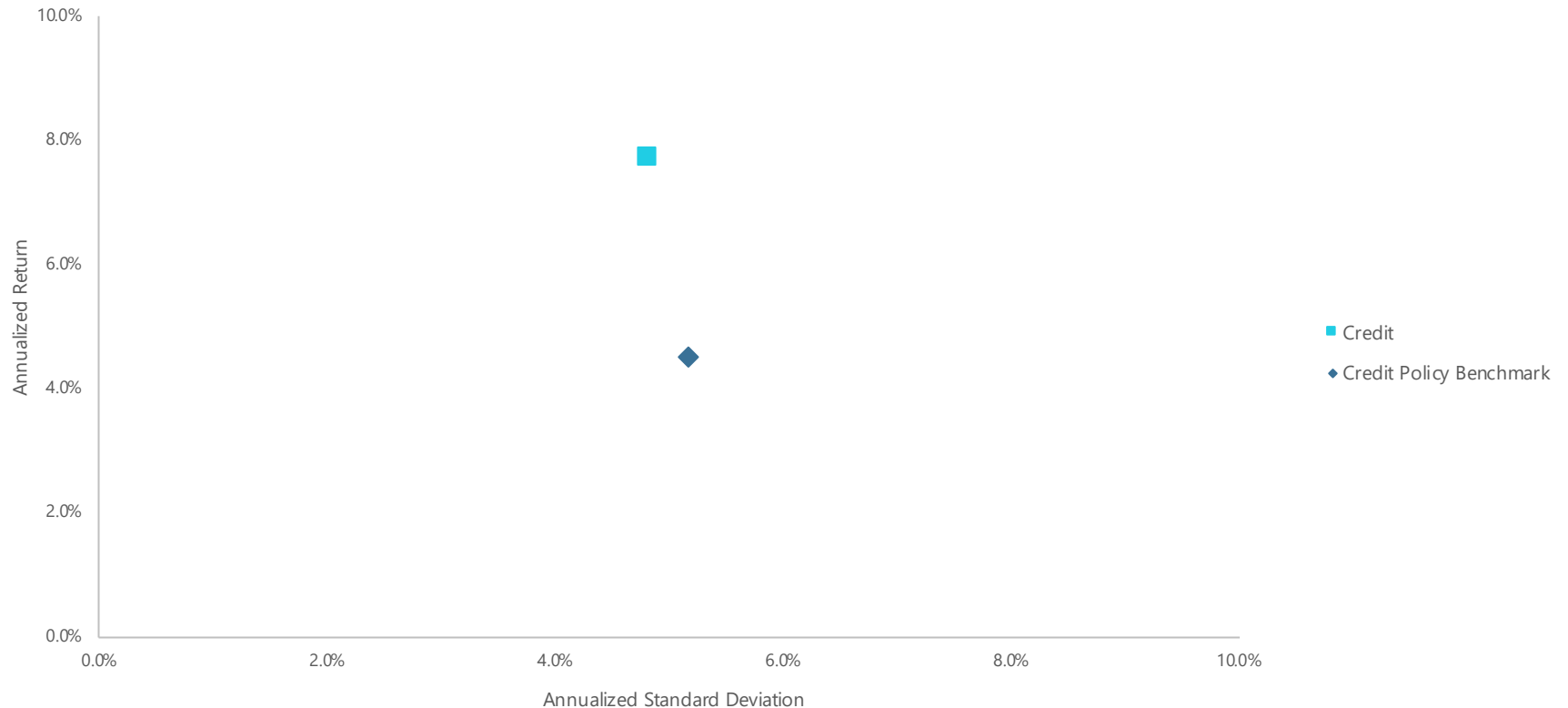
	Ending Market Value (mm)	% of Composite	Policy Allocation	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Total Value Add
Credit	8,411	100.0%	100.0%	3.5%	3.1%	0.03%	0.35%	0.38%
Liquid Credit	4,076	48.5%	36.4%	3.1%	3.2%	0.02%	-0.04%	-0.02%
Illiquid Credit	4,335	51.5%	63.6%	3.6%	3.0%	0.01%	0.38%	0.40%

¹ Total Value Add column includes Interaction Effect.

Risk vs. Return

for the quarter ended March 31, 2023

3 Year (Annualized)



	Annualized Return	Standard Deviation	Sharpe Ratio	Information Ratio	Beta	Tracking Error
Credit	7.7%	4.8%				
Credit Policy Benchmark	4.5%	5.2%	1.42	0.87	0.68	3.7%

Performance Detail

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

Annualized Net Returns

	% of Composite	Ending Market Value (mm)	Prior Quarter Ending MV (mm)	QTD	YTD	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date
Credit	100.0%	8,411	8,446	3.5%	3.5%	-0.3%	7.7%	--	--	4.2%	Apr-2019
Credit Policy Benchmark				3.1%	3.1%	-1.8%	4.5%	--	--	2.6%	
Liquid Credit	48.5%	4,076	4,709	3.1%	3.1%	-2.4%	--	--	--	-3.6%	Oct-2021
Liquid Credit Policy Benchmark				3.2%	3.2%	-1.3%	--	--	--	-3.1%	
abrdn	4.5%	380	373	1.9%	1.9%	-5.2%	1.0%	-1.3%	--	-0.5%	Jul-2017
Ashmore Investment Management	4.2%	351	341	2.9%	2.9%	-6.7%	1.7%	-3.3%	--	-1.8%	Jun-2017
Bain Capital	5.1%	432	417	3.7%	3.7%	2.3%	9.6%	4.3%	--	3.8%	Jun-2014
Beach Point	3.5%	291	281	3.6%	3.6%	-4.4%	5.1%	2.9%	--	4.2%	Mar-2014
BlackRock HY ETF	0.0%	0	579	0.2%	0.2%	-6.2%	4.2%	--	--	-0.4%	Feb-2020
Brigade Cap Mgmt	7.6%	641	624	2.8%	2.8%	-7.9%	8.6%	2.6%	3.7%	5.7%	Jul-2010
Credit Suisse Bank Loans	12.0%	1,006	1,154	3.7%	3.7%	3.4%	7.0%	--	--	7.0%	Apr-2020
Crescent Capital	6.0%	508	491	3.4%	3.4%	-1.8%	8.6%	3.9%	--	3.4%	May-2014
Pinebridge Investments	5.5%	466	450	3.7%	3.7%	-3.6%	--	--	--	-4.7%	Sep-2021
Illiquid Credit	51.5%	4,335	3,736	3.6%	3.6%	2.5%	11.0%	--	--	9.7%	Apr-2019
Illiquid Credit Policy Benchmark				3.0%	3.0%	-1.3%	1.0%	--	--	4.2%	
Beach Point - Fund II	0.2%	15	13	--	--	--	--	--	--	--	Jun-2014
Beach Point - Fund III	1.9%	161	154	4.3%	4.3%	-6.3%	13.1%	10.1%	--	10.4%	Jun-2017
BlackRock/Tennenbaum	7.8%	659	647	1.7%	1.7%	5.6%	7.1%	6.9%	--	7.1%	Nov-2014
Grosvenor OPCR2 HFOF	0.3%	21	23	--	--	--	--	--	--	--	Mar-2016
Lake Cascade	3.6%	300	0	--	--	--	--	--	--	0.0%	Jan-2023
Lake Cottage	3.8%	317	237	1.9%	1.9%	--	--	--	--	1.9%	Nov-2022
Lake Vineyard	5.0%	421	363	3.1%	3.1%	2.0%	--	--	--	2.0%	Apr-2022
Magnetar	11.1%	933	904	3.2%	3.2%	3.8%	--	--	--	17.7%	Aug-2020
Napier Park	10.5%	885	800	7.4%	7.4%	1.4%	16.4%	--	--	16.4%	Apr-2020
PIMCO Tac Opps	3.2%	273	273	0.0%	0.0%	-5.9%	4.6%	--	--	5.0%	Nov-2018
Private Equity - Credit	2.7%	228	215	7.6%	7.6%	16.0%	18.9%	--	--	14.8%	Jan-2019
Real Estate - Credit	0.9%	74	83	1.8%	1.8%	6.9%	9.9%	9.6%	8.8%	9.0%	Oct-2011
Stable Asset Management - IC	0.6%	49	23	0.4%	0.4%	--	--	--	--	0.4%	Nov-2022

Liquid Credit Risk Summary

for the quarter ended March 31, 2023

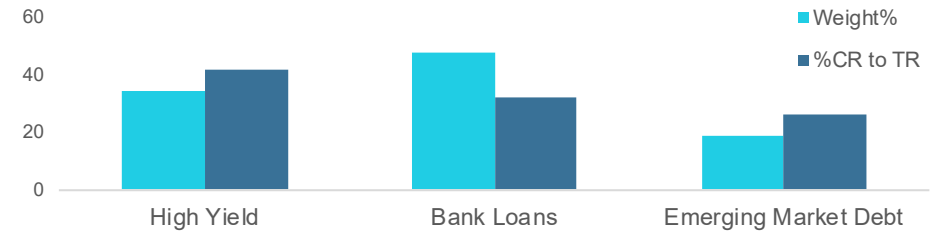
Risk Summary

	Value
Total Risk	6.38
Benchmark Risk	5.78
Active Risk	0.90
Portfolio Beta	1.10
Cont. to Eff. Duration	2.60
Convexity	0.12
Yield to Worst (%)	8.85
OAS to Sw ap (bp)	484

Risk Decomposition

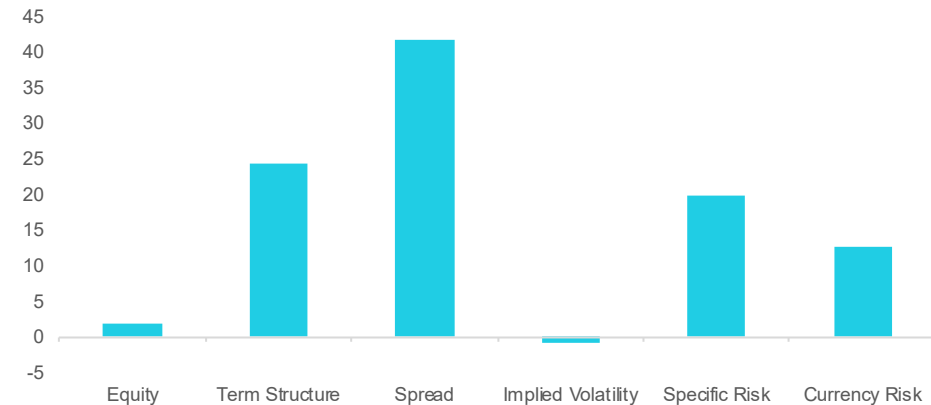
Risk Source	Portfolio		Active	
	Risk Contribution	%Risk	Risk Contribution	%Risk
Total Risk	6.38	100.00	0.90	100.00
Local Market Risk	6.04	94.63	0.79	87.47
Common Factor Risk	6.01	94.17	0.61	67.70
Specific Risk	0.03	0.47	0.18	19.77
Currency Risk	0.34	5.37	0.11	12.53

Contribution to Risk



	Mkt Value (mm)	Weight%	Total Risk	Risk Contribution	%CR to TR
Liquid Credit	3,910	100.00	6.38	6.38	100.00
High Yield	1,331	34.03	8.13	2.66	41.59
Bank Loans	1,848	47.26	4.93	2.06	32.28
Emerging Market Debt	732	18.71	10.21	1.67	26.13

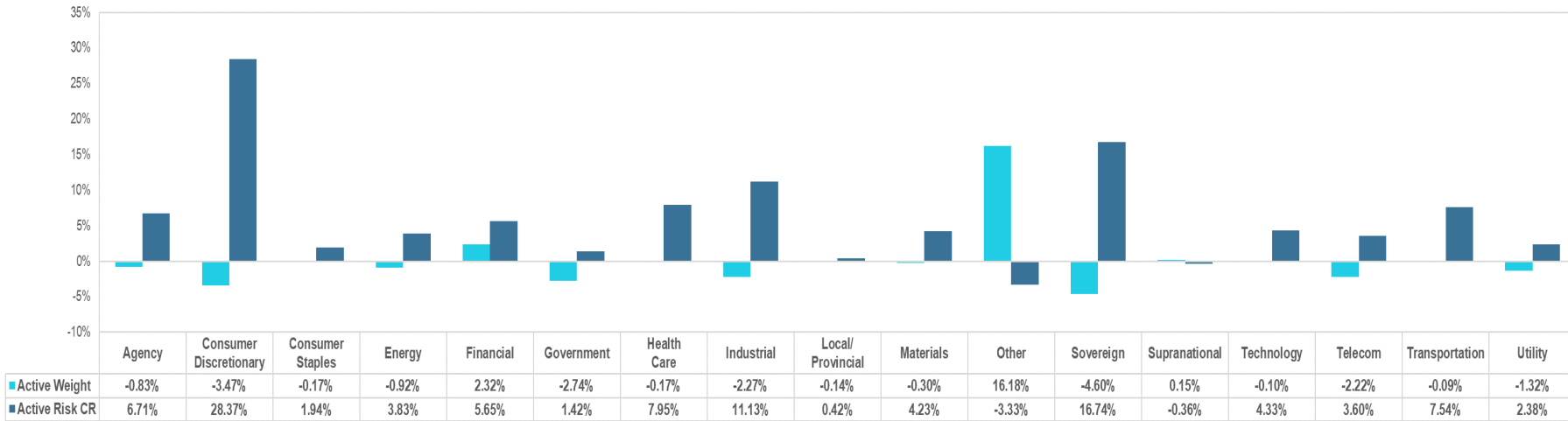
Active Risk from Common Factors



Liquid Credit Risk Summary

for the quarter ended March 31, 2023

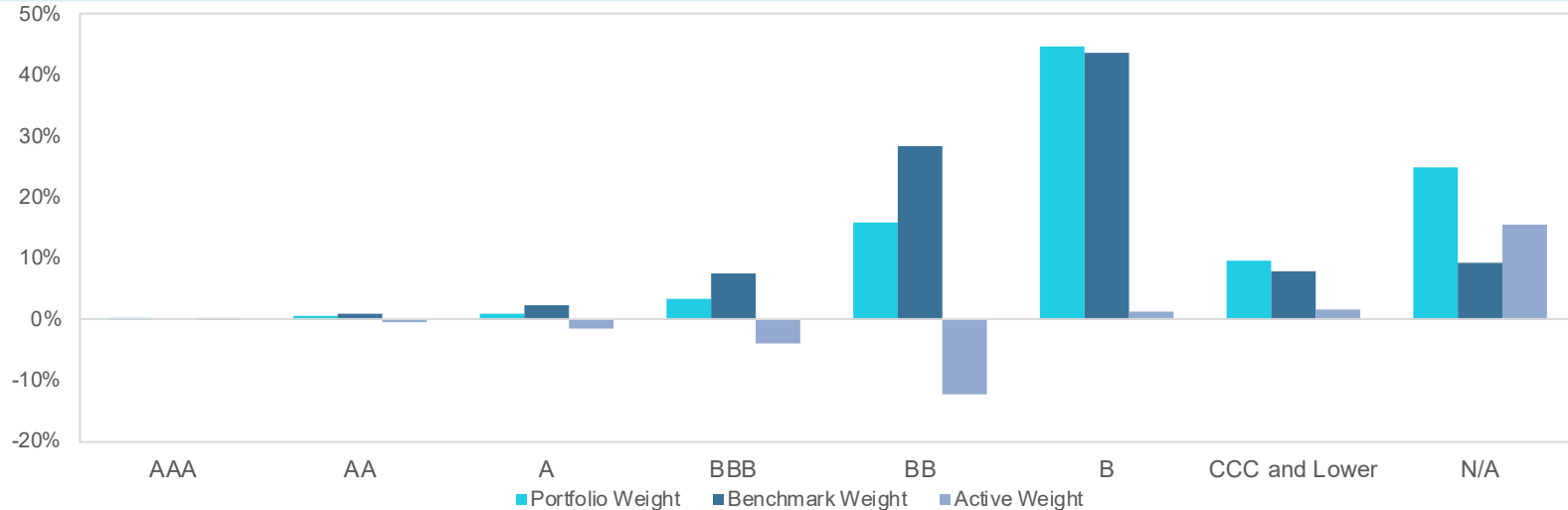
Portfolio Allocation By Bond Sector



Liquid Credit Risk Summary

for the quarter ended March 31, 2023

Portfolio Allocation By Moody's Rating



Rating	Weight%			Total Risk	Active Risk CR	% of Active TR	CR to Effective Duration
	Portfolio	Benchmark	Active				
Liquid Credit	100.00%	100.00%	0.00%	6.38	0.90	100.00%	2.60
AAA	0.31%	0.00%	0.31%	8.49	-0.01	-1.1%	0.03
AA	0.38%	1.02%	-0.64%	11.58	0.03	2.8%	0.04
A	0.78%	2.46%	-1.67%	11.21	0.06	6.6%	0.09
BBB	3.48%	7.60%	-4.11%	7.99	0.11	11.7%	0.23
BB	15.78%	28.24%	-12.46%	6.04	0.25	27.8%	0.55
B	44.80%	43.60%	1.20%	6.45	0.37	40.7%	0.67
CCC and Lower	9.45%	7.70%	1.75%	12.24	0.12	13.2%	0.20
N/A	25.02%	9.39%	15.63%	5.36	-0.02	-1.7%	0.79

Credit – Liquid Credit abrdn

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

Strategy

An emerging market debt strategy that invests in sovereigns, quasi-sovereigns, and corporate bonds denominated in US Dollar or local currencies.

Inception Date: July 2017

Risk Statistics (since inception)

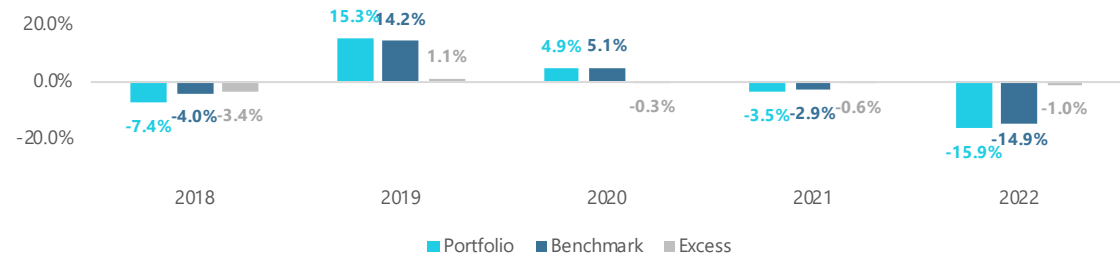
Standard Deviation	11.2%
Benchmark Standard Deviation	9.5%
Sharpe Ratio	-0.12
Information Ratio	-0.33
Beta	1.16
Tracking Error	2.7%

Performance (net)¹

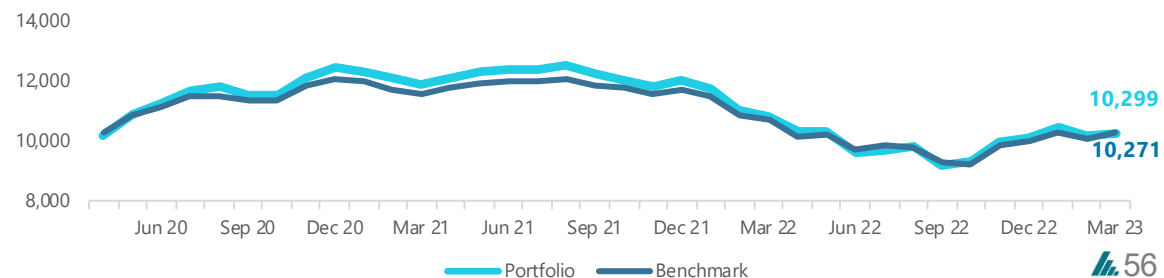
	Ending Market Value (mm)	QTD	1 Year	3 Year	5 Year
abrdn	379.9	1.9%	-5.2%	1.0%	-1.3%
EMD Custom Benchmark		2.8%	-4.0%	0.9%	-0.4%
Credit Policy Benchmark		3.1%	-1.8%	4.5%	--

Universe data: US Fixed Income Funds	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
abrdn	2.0%	62	-4.8%	72	1.4%	37	-1.0%	96
Median	2.6%		-2.3%		0.0%		1.6%	

Calendar Year Returns



Growth of \$10,000



Note: Commingled fund account with no position-level transparency.
¹ Universe data is gross-of-fees.

Credit Risk Analysis – Liquid Credit abrdn

for the quarter ended March 31, 2023

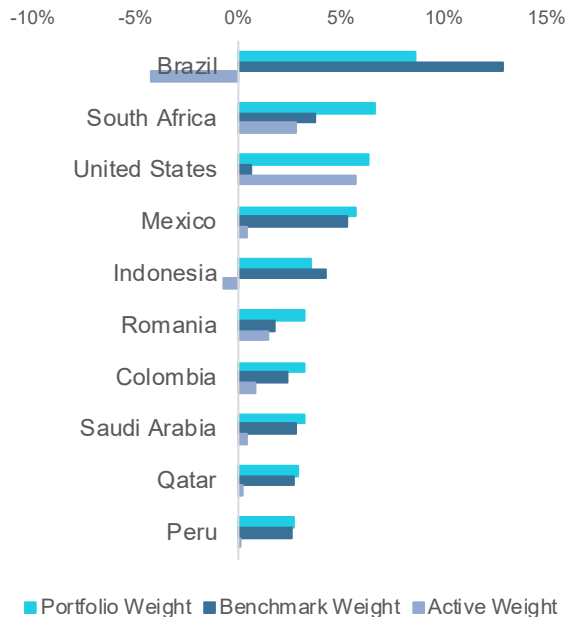


Los Angeles County Employees Retirement Association

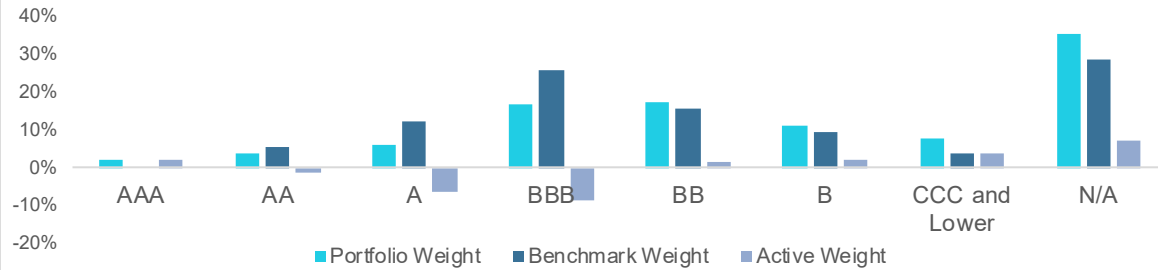
Portfolio Risk Summary

	Value
Total Risk	10.87
Benchmark Risk	7.84
Active Risk	3.98
Portfolio Beta	1.33
Cont. to Eff. Duration	5.76
Yield to Worst (%)	9.44
OAS to Sw ap (bp)	409

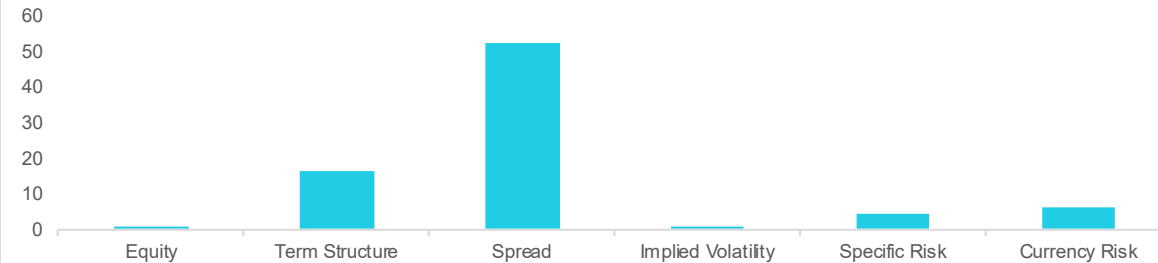
Top Countries by Weight%



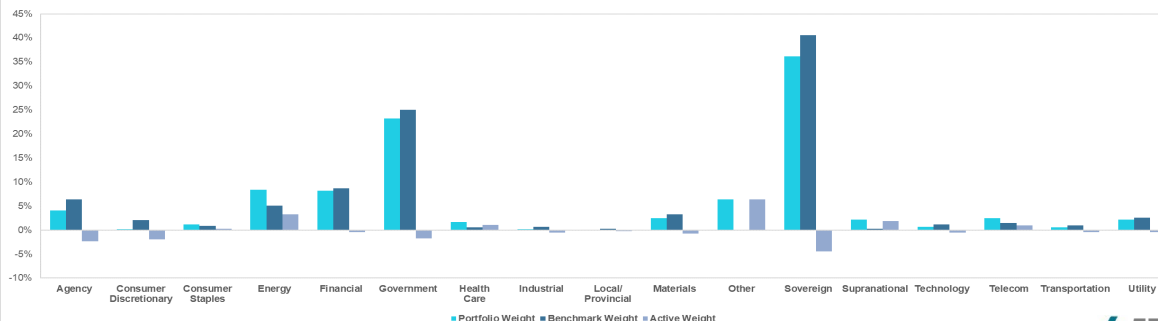
Allocation by Moody's Rating



Active Risk from Common Factors



Portfolio Risk by Bond Sector



Credit – Liquid Credit Ashmore

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

Strategy

A value-driven emerging market debt strategy that applies a macro, top-down approach to build a well-diversified portfolio that adds value through asset rotation, security selection, and currency positioning utilizing a committee driven, systematic risk mitigating process.

Inception Date: June 2017

Risk Statistics (since inception)

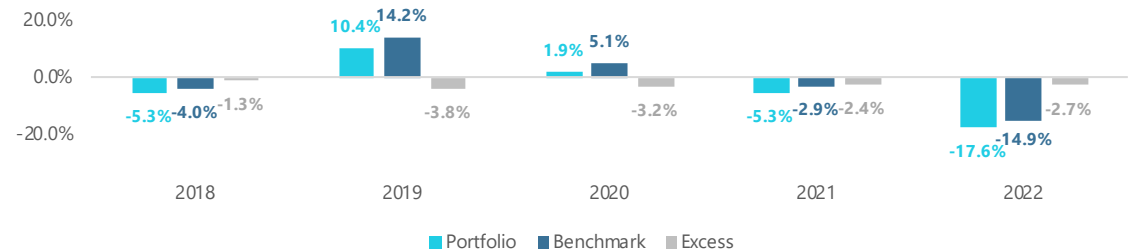
Standard Deviation	13.3%
Benchmark Standard Deviation	9.5%
Sharpe Ratio	-0.16
Information Ratio	-0.45
Beta	1.37
Tracking Error	4.5%

Performance (net)¹

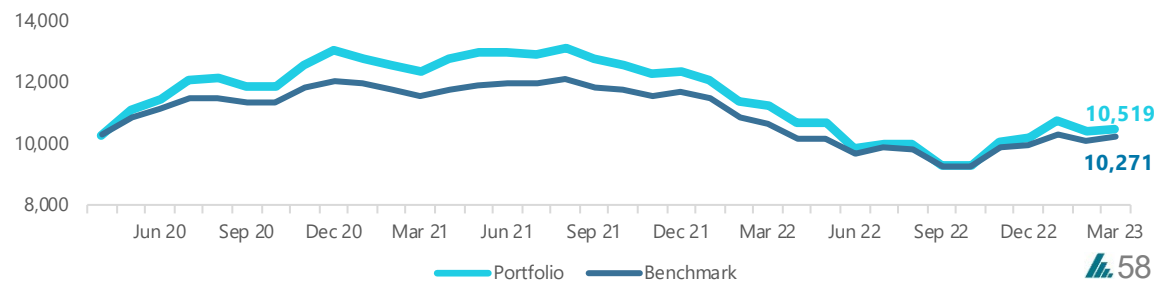
	Ending Market Value (mm)	QTD	1 Year	3 Year	5 Year
Ashmore Investment Management	351.2	2.9%	-6.7%	1.7%	-3.3%
EMD Custom Benchmark		2.8%	-4.0%	0.9%	-0.4%
Credit Policy Benchmark		3.1%	-1.8%	4.5%	--

Universe data: US Fixed Income Funds	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
Ashmore Investment Management	3.1%	38	-6.3%	82	2.3%	32	-2.7%	98
Median	2.6%		-2.3%		0.0%		1.6%	

Calendar Year Returns



Growth of \$10,000



Note: Commingled fund account with no position-level transparency.
¹ Universe data is gross-of-fees.

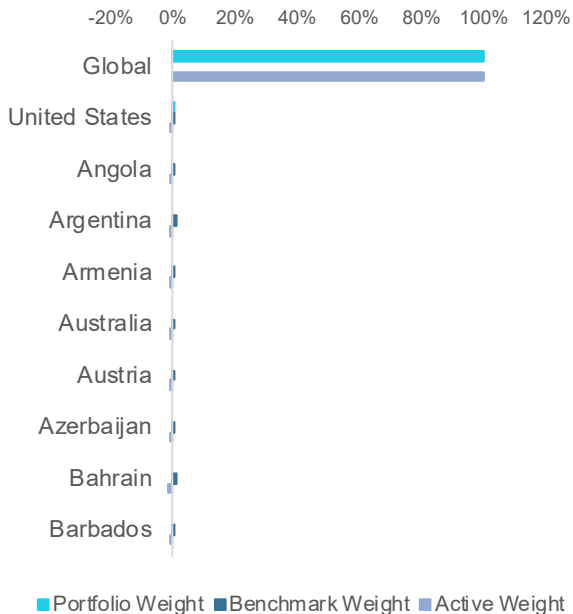
Credit Risk Analysis – Liquid Credit Ashmore

for the quarter ended March 31, 2023

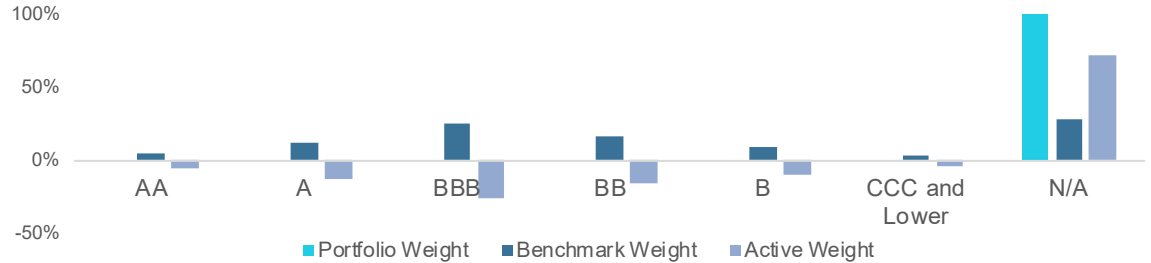
Portfolio Risk Summary

	Value
Total Risk	10.47
Benchmark Risk	7.84
Active Risk	5.46
Portfolio Beta	1.15
Cont. to Eff. Duration	6.04
Yield to Worst (%)	0.00
OAS to Sw ap (bp)	-405

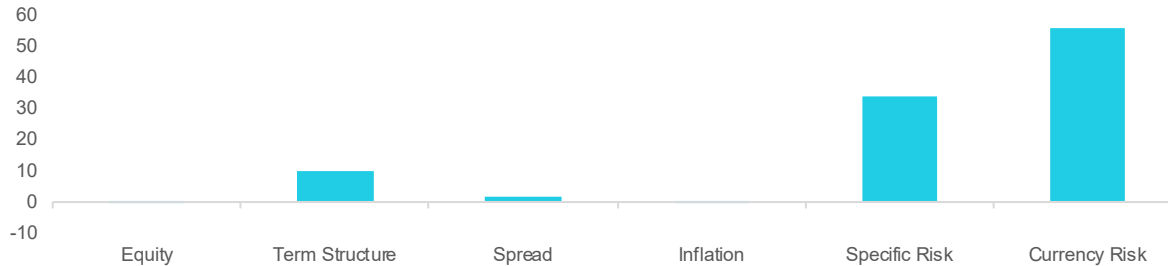
Top Countries by Weight%



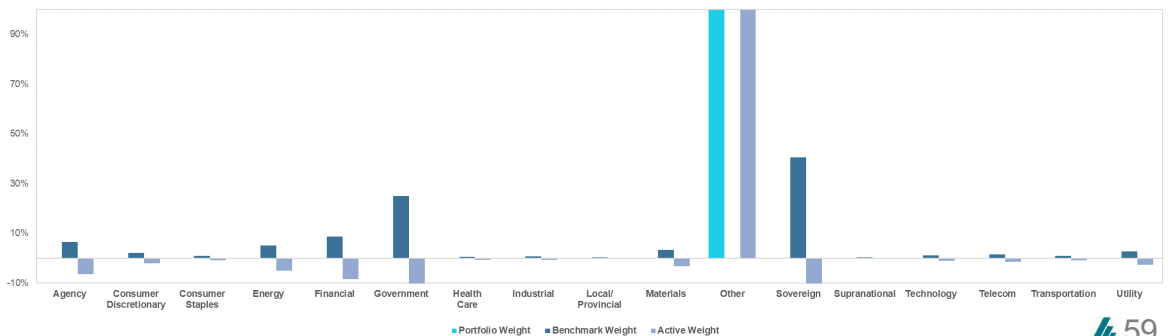
Allocation by Moody's Rating



Active Risk from Common Factors



Portfolio Risk by Bond Sector



Credit – Liquid Credit Bain Capital

for the quarter ended March 31, 2023

Strategy

A long-only strategy designed to provide exposure to senior secured, floating-rate bank loans. The strategy takes a fundamental, active, and global approach to investing, capitalizing on opportunities in an inefficient asset class. The return objective is to outperform the Index through strong credit selection and active portfolio management.

Inception Date: June 2014

Portfolio Characteristics

	Portfolio	Benchmark
No. of Issues	524.0	0.0
Effective Duration	0.2	3.7
Convexity	0.0	0.0
Coupon Rate	7.9	5.9
Yield to Maturity	7.5	8.3
Current Yield	8.2	6.6
Rating – Moody's	B-2	B-1
Rating – S & P	B	B+

Top Holdings (% of assets)

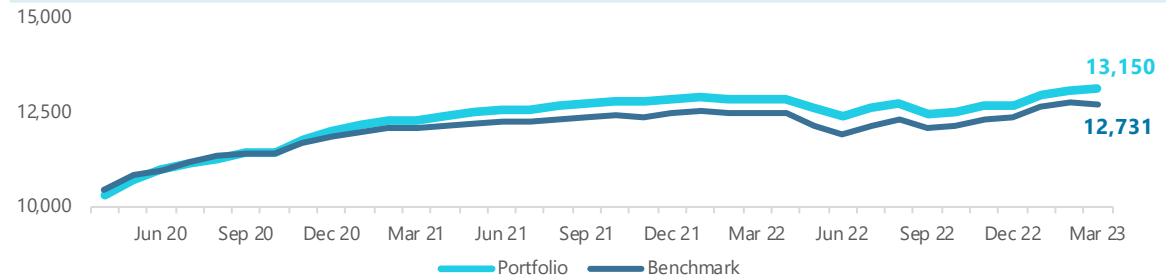
CPS GROUP HOLDINGS INC	0.8%
NAVICURE INC	0.7%
AQGEN ISLAND HOLDINGS, INC.	0.6%
CHAMBER BIDCO LIMITED	0.6%
PMHC II INC	0.6%
Top 5 Holdings	3.4%

Performance (net)¹

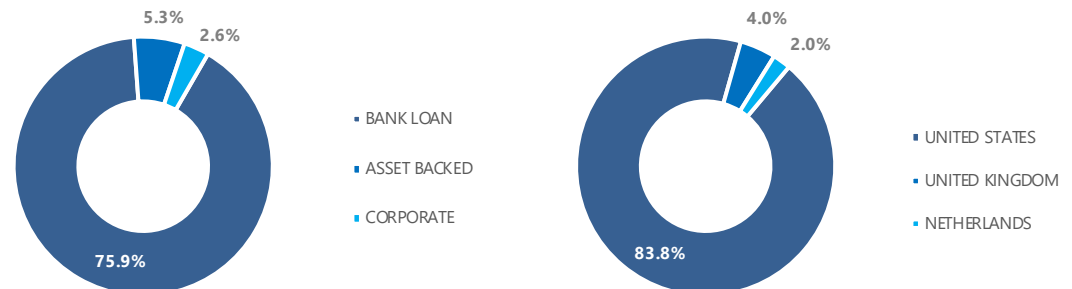
	Ending Market Value (mm)	QTD	1 Year	3 Year	5 Year
Bain Capital	432.0	3.7%	2.3%	9.6%	4.3%
Bank Loans Custom Benchmark		3.1%	2.1%	8.4%	4.1%
Credit Policy Benchmark		3.1%	-1.8%	4.5%	--

Universe data: U.S. Fixed Income Funds	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
Bain Capital	3.8%	20	2.8%	19	10.2%	13	5.0%	14
Median	2.6%		-2.3%		0.0%		1.6%	

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

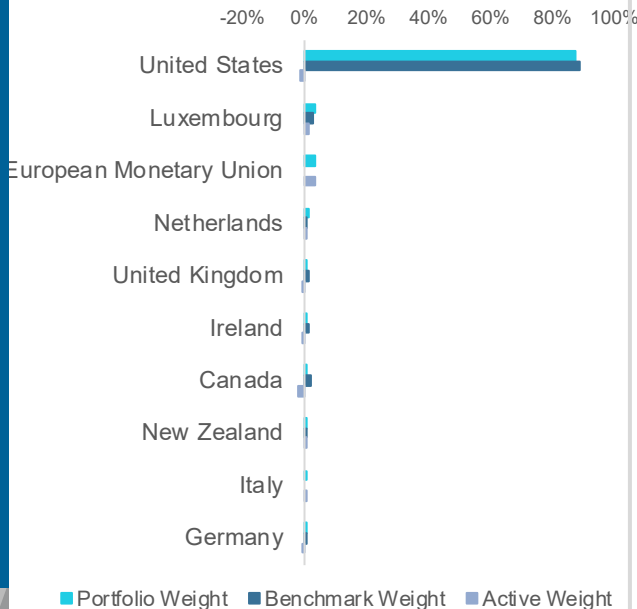
Credit Risk Analysis – Liquid Credit Bain Capital

for the quarter ended March 31, 2023

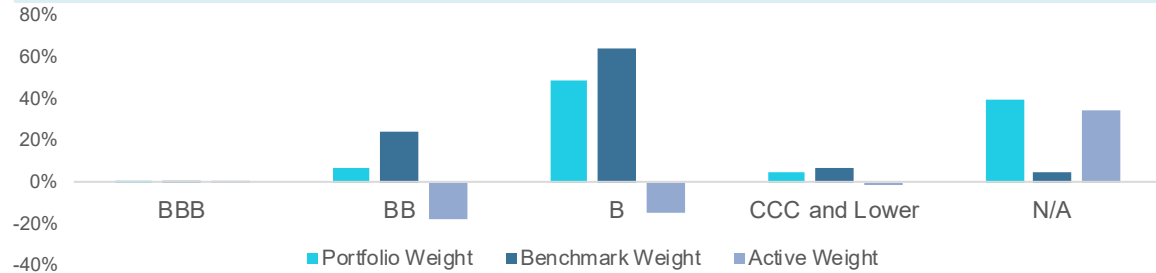
Portfolio Risk Summary

	Value
Total Risk	3.62
Benchmark Risk	5.22
Active Risk	1.82
Portfolio Beta	0.68
Cont. to Eff. Duration	0.49
Yield to Worst (%)	6.91
OAS to Sw ap (bp)	447

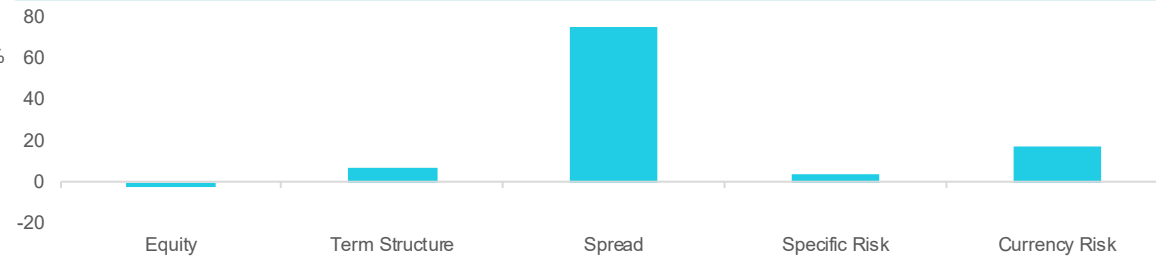
Top Countries by Weight%



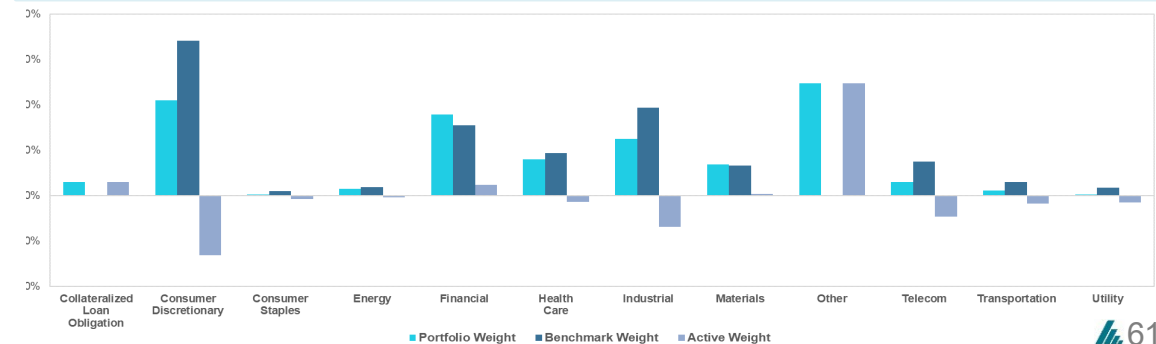
Allocation by Moody's Rating



Active Risk from Common Factors



Portfolio Risk by Bond Sector



Credit – Liquid Credit Beach Point

for the quarter ended March 31, 2023

Strategy

A fundamental, value oriented high yield bond strategy that utilizes legal skills to identify market anomalies in bond covenants and indentures. The primary investment goal is to generate superior returns while controlling risk to minimize the possibility of capital impairment.

Inception Date: March 2014

Portfolio Characteristics

	Portfolio	Benchmark
No. of Issues	269.0	0.0
Effective Duration	3.7	3.7
Convexity	0.0	0.0
Coupon Rate	5.9	5.9
Yield to Maturity	8.7	8.3
Current Yield	6.8	6.6
Rating – Moody's	B-2	B-1
Rating – S & P	B	B+

Top Holdings (% of assets)

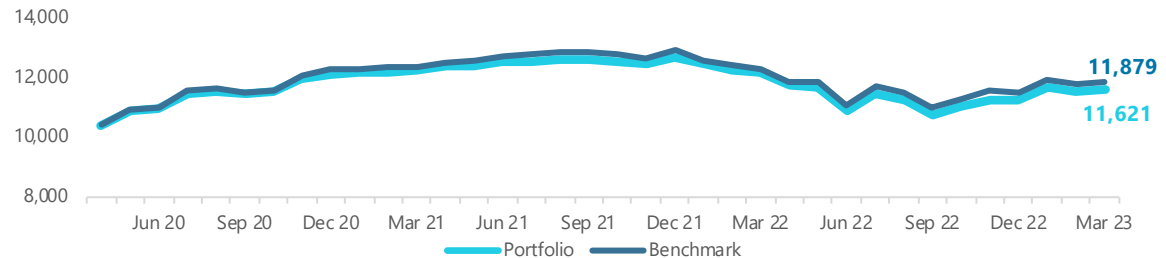
DEALER TIRE LLC/DT ISSR	1.5%
AMERICAN GREETINGS CORP	1.4%
COMPASS GROUP DIVERSIFIE	1.4%
MPH ACQUISITION HOLDINGS	1.3%
FORTRESS TRANS + INFRAST	1.1%
Top 5 Holdings	6.7%

Performance (net)¹

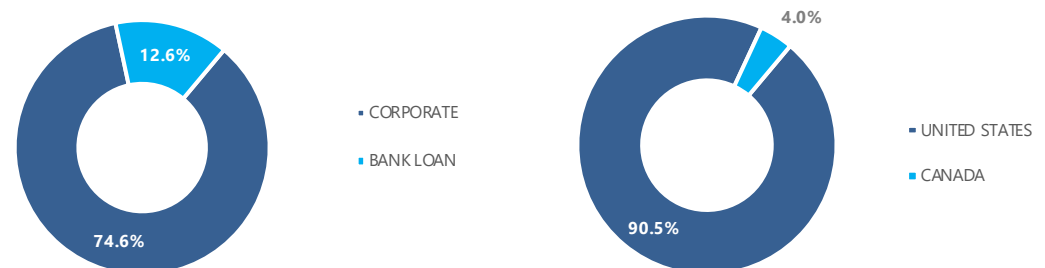
	Ending Market Value (mm)	QTD	1 Year	3 Year	5 Year
Beach Point	290.8	3.6%	-4.4%	5.1%	2.9%
Beachpoint Custom Benchmark		3.6%	-3.3%	5.9%	2.7%
Credit Policy Benchmark		3.1%	-1.8%	4.5%	--

Universe data: US Fixed Income Funds	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
Beach Point	3.7%	22	-4.0%	63	5.6%	24	3.4%	19
Median	2.6%		-2.3%		0.0%		1.6%	

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

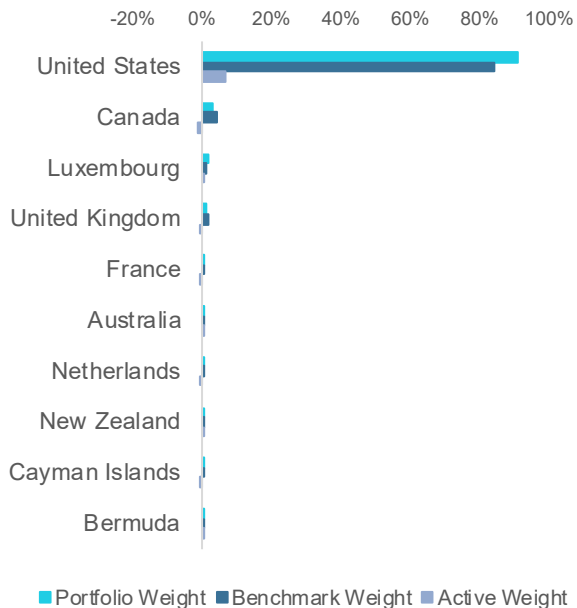
Credit Risk Analysis – Liquid Credit Beach Point

for the quarter ended March 31, 2023

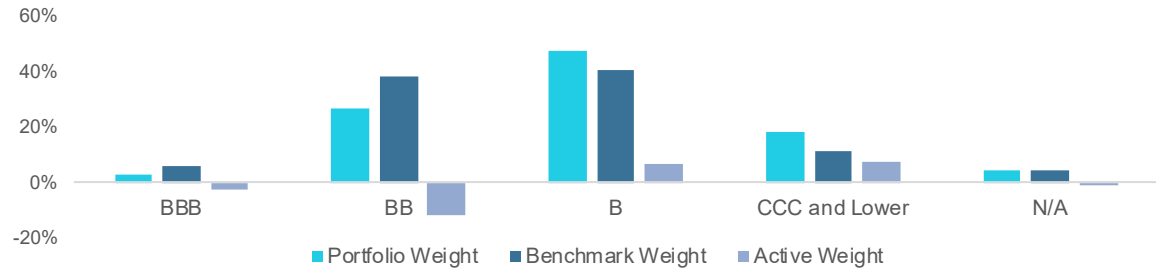
Portfolio Risk Summary

	Value
Total Risk	8.41
Benchmark Risk	6.98
Active Risk	1.83
Portfolio Beta	1.19
Cont. to Eff. Duration	3.78
Yield to Worst (%)	8.37
OAS to Sw ap (bp)	458

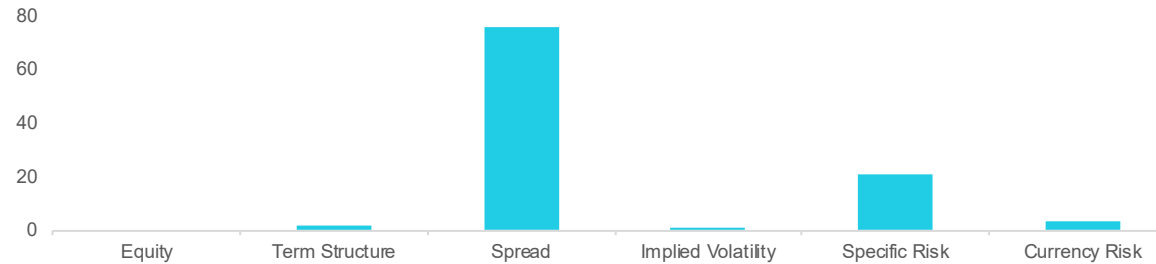
Top Countries by Weight%



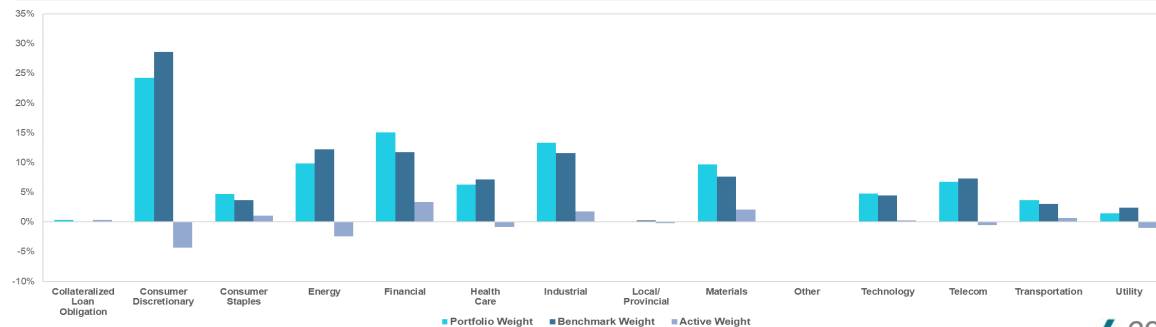
Allocation by Moody's Rating



Active Risk from Common Factors



Portfolio Risk by Bond Sector



Credit – Liquid Credit Brigade Capital

for the quarter ended March 31, 2023

Strategy

A strategy that focuses on identifying attractive companies within the high yield bond marketplace. The strategy invests in companies that have a lower likelihood of default or are better able to recover from economic downturns because of their substantial asset value relative to debt.

Inception Date: July 2010

Portfolio Characteristics

	Portfolio	Benchmark
No. of Issues	320.0	0.0
Effective Duration	3.7	3.7
Convexity	0.2	0.0
Coupon Rate	6.8	5.9
Yield to Maturity	11.5	8.3
Current Yield	8.5	6.6
Rating – Moody's	B-2	B-1
Rating – S & P	B+	B+

Top Holdings (% of assets)

CORNERSTONE CHEMICAL CO	2.1%
EPIC Y GRADE SERVICES, LP	1.9%
LIFESCAN GLOBAL CORP	1.2%
OCCIDENTAL PETROLEUM COR	1.1%
BAFFINLAND IRON CORP/LP	1.0%

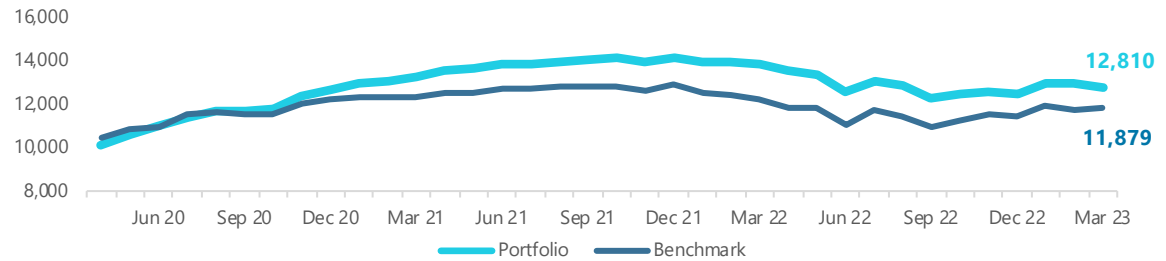
Top 5 Holdings **7.2%**

Performance (net)¹

	Ending Market Value (mm)	QTD	1 Year	3 Year	5 Year
Brigade Cap Mgmt	641.4	2.8%	-7.9%	8.6%	2.6%
Brigade Custom Benchmark		3.6%	-3.3%	5.9%	2.9%
Credit Policy Benchmark		3.1%	-1.8%	4.5%	--

Universe data: US Fixed Income Funds	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
Brigade Cap Mgmt	2.9%	44	-7.5%	85	9.1%	15	3.2%	21
Median	2.6%		-2.3%		0.0%		1.6%	

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

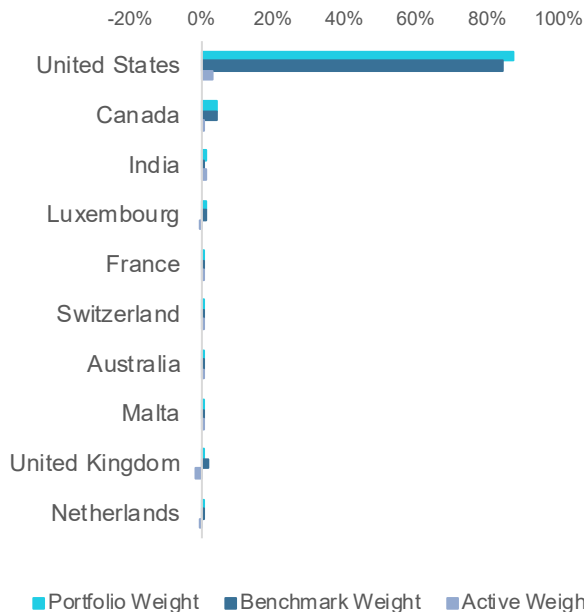
Credit Risk Analysis – Liquid Credit Brigade Capital

for the quarter ended March 31, 2023

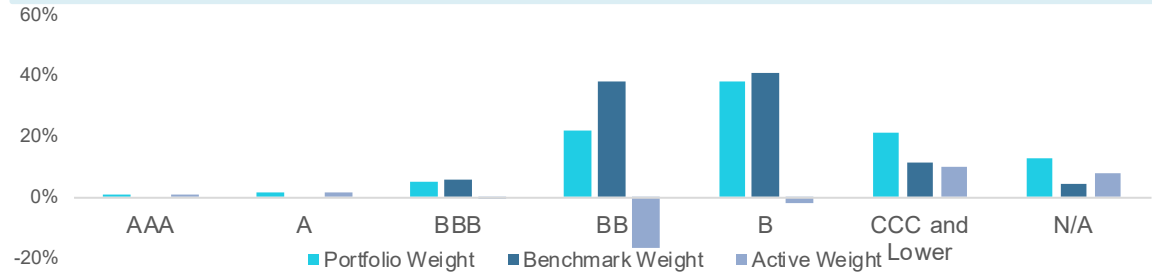
Portfolio Risk Summary

	Value
Total Risk	8.95
Benchmark Risk	6.98
Active Risk	2.71
Portfolio Beta	1.25
Cont. to Eff. Duration	3.78
Yield to Worst (%)	9.59
OAS to Sw ap (bp)	563

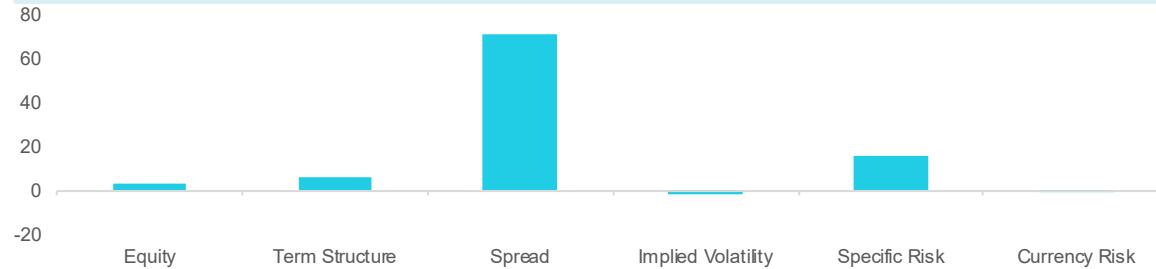
Top Countries by Weight%



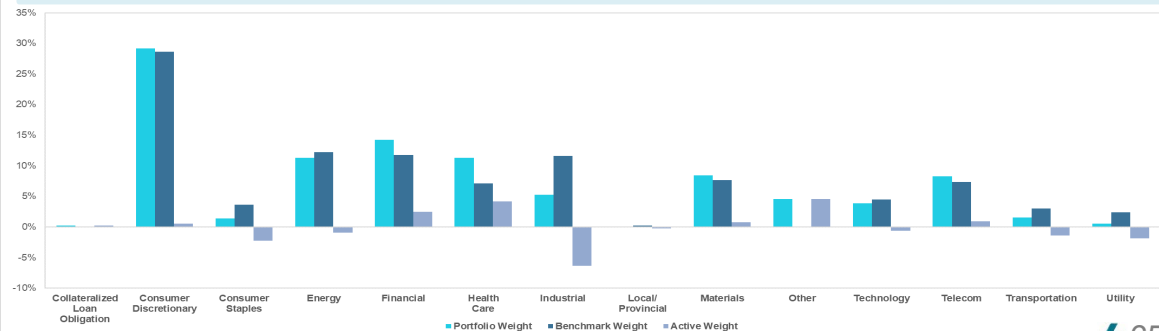
Allocation by Moody's Rating



Active Risk from Common Factors



Portfolio Risk by Bond Sector



Credit – Liquid Credit

Credit Suisse

for the quarter ended March 31, 2023

Strategy

A bank loan strategy that invests in senior floating rate loans whose primary performance objective is to generate alpha while mitigating loss, utilizing bottom-up, fundamental credit analysis emphasizing a relative value approach.

Inception Date: April 2020

Portfolio Characteristics

	Portfolio	Benchmark
No. of Issues	453.0	0.0
Effective Duration	0.1	3.7
Convexity	0.0	0.0
Coupon Rate	8.4	5.9
Yield to Maturity	8.5	8.3
Current Yield	8.8	6.6
Rating – Moody's	B-2	B-1
Rating – S & P	B	B+

Top Holdings (% of assets)

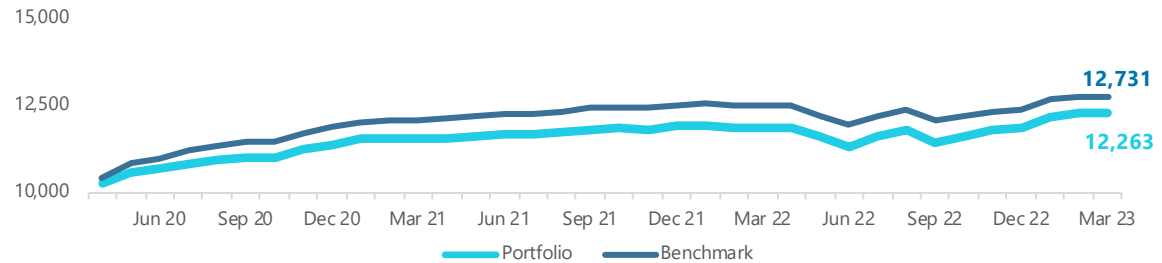
HYLAND SOFTWARE INC	1.0%
MEDLINE BORROWER, LP	0.9%
FINASTRA USA, INC.	0.9%
POLARIS NEWCO, LLC	0.8%
MH SUB I LLC	0.8%
Top 5 Holdings	4.4%

Performance (net)¹

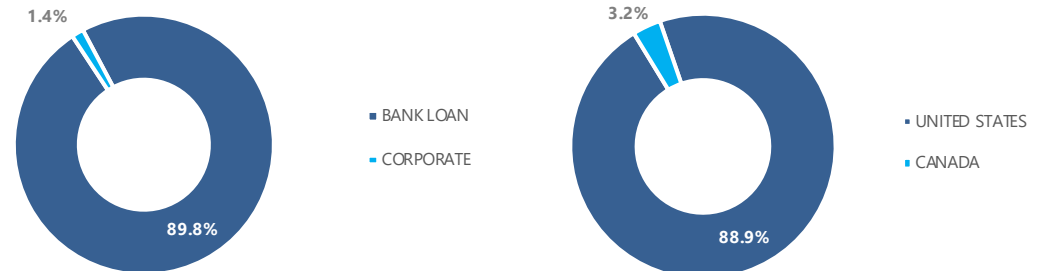
	Ending Market Value (mm)	QTD	1 Year	3 Year	5 Year
Credit Suisse Bank Loans	1,006.3	3.7%	3.4%	7.0%	--
CS Leveraged Loan Index		3.1%	2.1%	8.4%	--
Credit Policy Benchmark		3.1%	-1.8%	4.5%	--

Universe data: US Fixed Income Funds	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
Credit Suisse Bank Loans	3.7%	22	3.5%	17	7.2%	20	--	--
Median	2.6%		-2.3%		0.0%		--	

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Credit Risk Analysis – Liquid Credit

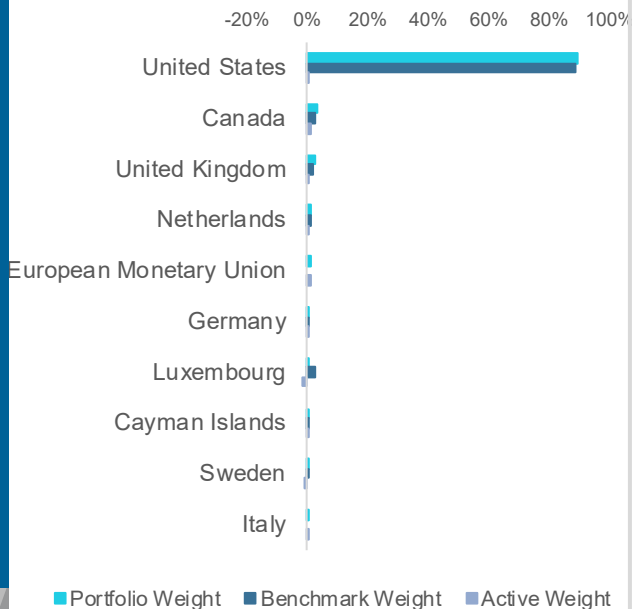
Credit Suisse

for the quarter ended March 31, 2023

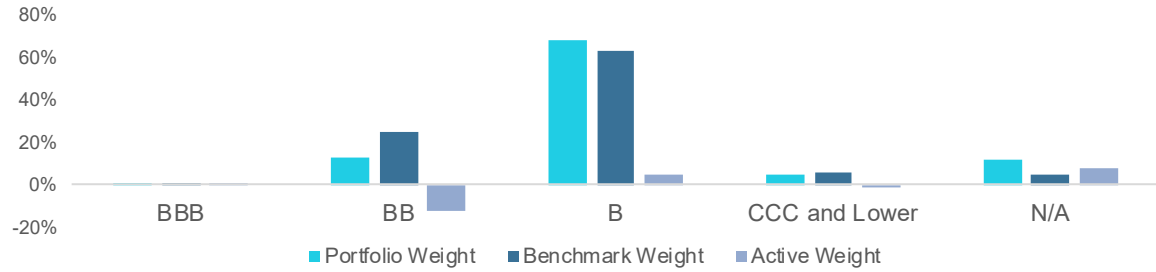
Portfolio Risk Summary

	Value
Total Risk	4.56
Benchmark Risk	5.22
Active Risk	0.83
Portfolio Beta	0.87
Cont. to Eff. Duration	0.29
Yield to Worst (%)	7.99
OAS to Sw ap (bp)	513

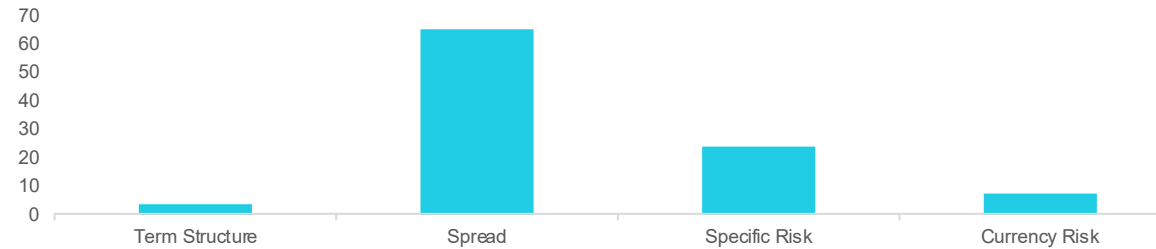
Top Countries by Weight%



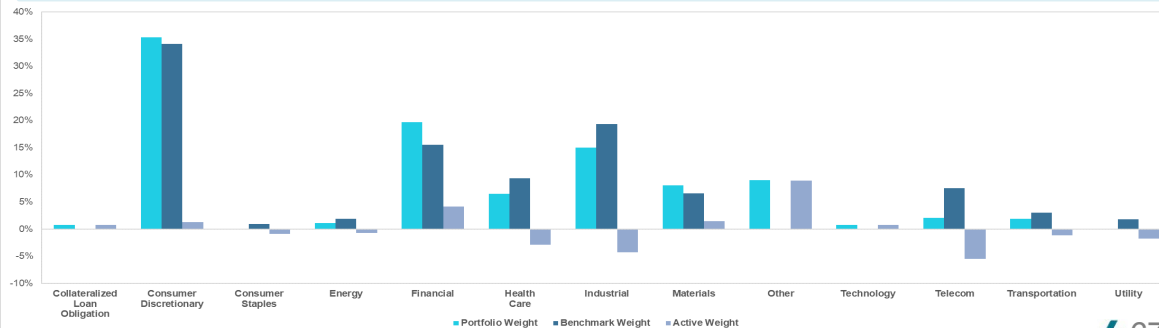
Allocation by Moody's Rating



Active Risk from Common Factors



Portfolio Risk by Bond Sector



Credit – Liquid Credit Crescent Capital

for the quarter ended March 31, 2023

Strategy

A bank loan strategy that invests in privately negotiated, below investment grade, secured corporate debt. The primary target is U.S. based middle market companies whose EBITDA falls between \$31M to \$100M. The strategy's bottom-up credit research process emphasizes high current income and principal preservation.

Inception Date: May 2014

Portfolio Characteristics

	Portfolio	Benchmark
No. of Issues	139.0	0.0
Effective Duration	0.3	3.7
Convexity	0.0	0.0
Coupon Rate	9.6	5.9
Yield to Maturity	11.0	8.3
Current Yield	10.5	6.6
Rating – Moody's	B-2	B-1
Rating – S & P	B-	B+

Top Holdings (% of assets)

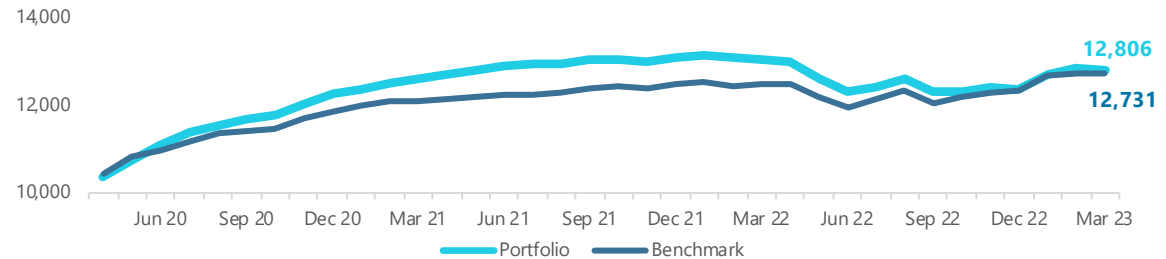
THE KNOT WORLDWIDE INC	1.9%
MAGNATE WORLDWIDE LLC	1.8%
ARCLINE FM HOLDINGS, LLC	1.7%
CTC HOLDINGS LP	1.7%
LASERAWAY INTERM HOLD II LLC	1.7%
Top 5 Holdings	8.9%

Performance (net)¹

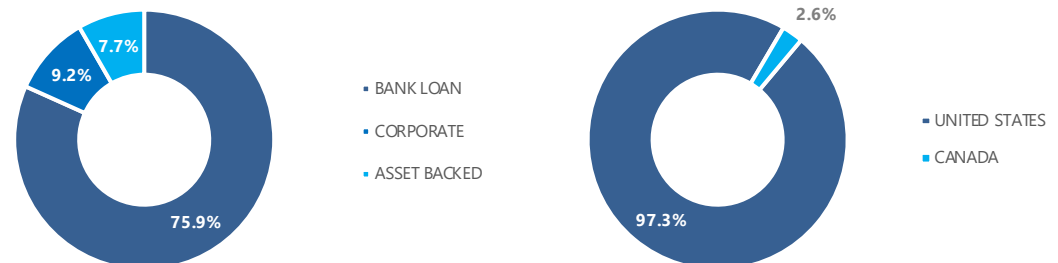
	Ending Market Value (mm)	QTD	1 Year	3 Year	5 Year
Crescent Capital	507.7	3.4%	-1.8%	8.6%	3.9%
Bank Loans Custom Benchmark		3.1%	2.1%	8.4%	4.1%
Credit Policy Benchmark		3.1%	-1.8%	4.5%	--

Universe data: U.S. Fixed Income Funds	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
Crescent Capital	3.5%	24	-1.3%	44	9.1%	15	4.4%	15
Median	2.6%		-2.3%		0.0%		1.6%	

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

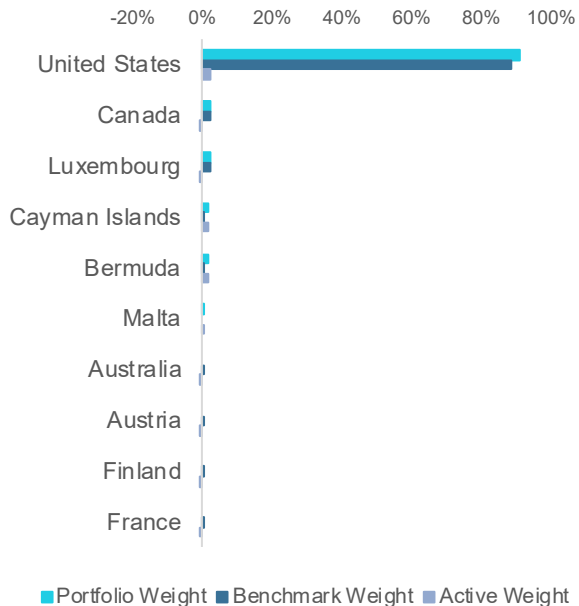
Credit Risk Analysis – Liquid Credit Crescent Capital

for the quarter ended March 31, 2023

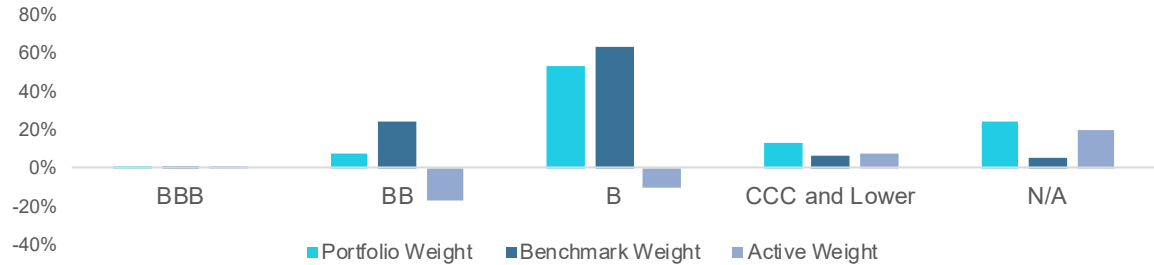
Portfolio Risk Summary

	Value
Total Risk	6.84
Benchmark Risk	5.22
Active Risk	2.09
Portfolio Beta	1.28
Cont. to Eff. Duration	0.65
Yield to Worst (%)	7.12
OAS to Sw ap (bp)	579

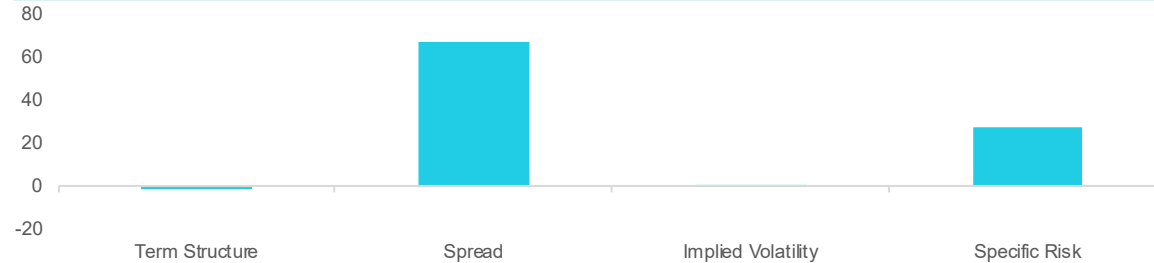
Top Countries by Weight%



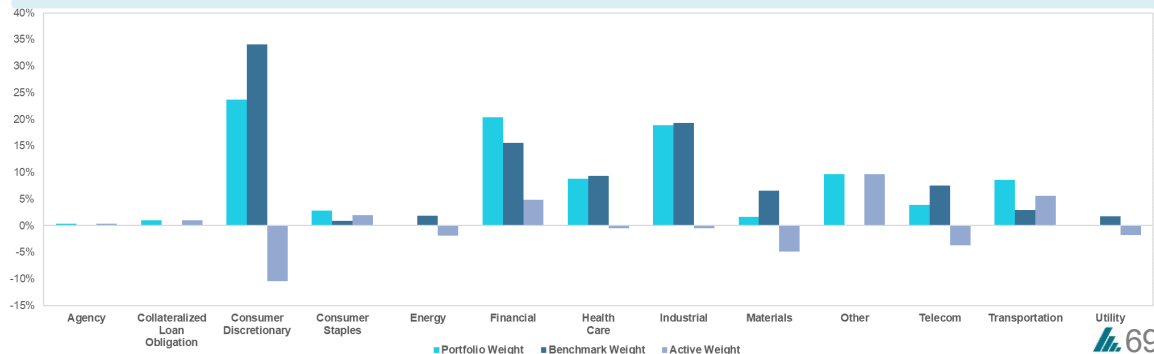
Allocation by Moody's Rating



Active Risk from Common Factors



Portfolio Risk by Bond Sector



Credit – Liquid Credit Pinebridge

for the quarter ended March 31, 2023

Strategy

Active manager of a broadly diversified portfolio primarily of U.S. dollar denominated high yield securities.

Inception Date: August 2021

Portfolio Characteristics

	Portfolio	Benchmark
No. of Issues	296.0	0.0
Effective Duration	6.3	6.2
Convexity	0.6	0.6
Coupon Rate	3.5	2.8
Yield to Maturity	4.4	4.2
Current Yield	3.7	3.0
Rating – Moody's	AA-3	AA-2
Rating – S & P	AA-	AA-

Top Holdings (% of assets)

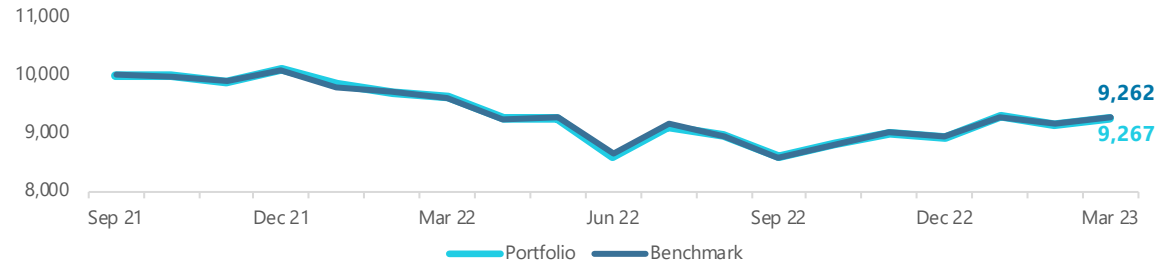
AMERICAN AIRLINES INC	1.1%
CARNIVAL CORP	1.0%
OCCIDENTAL PETROLEUM COR	1.0%
ALTICE FINANCING SA	0.8%
CCO HLDGS LLC/CAP CORP	0.8%
Top 5 Holdings	4.8%

Performance (net)¹

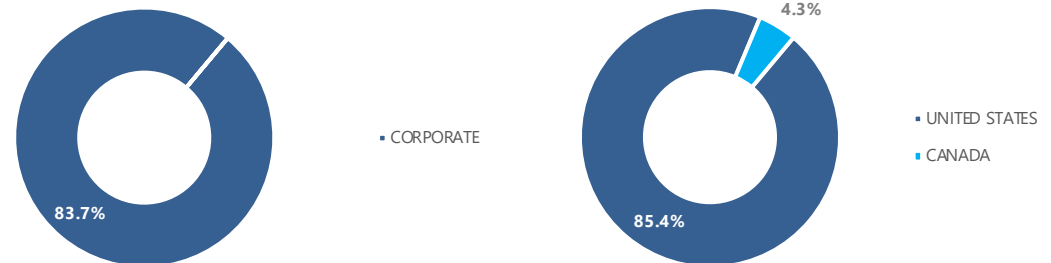
	Ending Market Value (mm)	QTD	1 Year	3 Year	5 Year
Pinebridge Investments	466.4	3.7%	-3.6%	--	--
BBG BARC US Corp HY Idx		3.6%	-3.3%	--	--
Credit Policy Benchmark		3.1%	-1.8%	4.5%	--

Universe data: US Fixed Income Pools	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
Pinebridge Investments	3.8%	24	-3.3%	47	--	--	--	--
Median	2.9%		-3.9%		--	--	--	--

Growth of \$10,000



Top Exposures (% of assets)



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

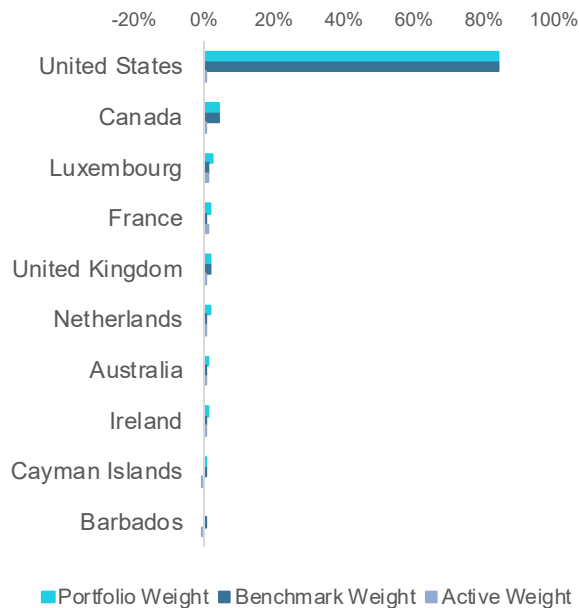
Credit Risk Analysis – Liquid Credit Pinebridge

for the quarter ended March 31, 2023

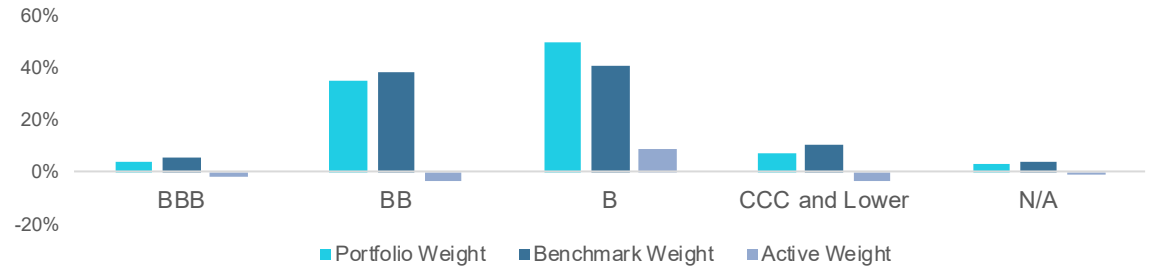
Portfolio Risk Summary

	Value
Total Risk	7.14
Benchmark Risk	6.98
Active Risk	0.76
Portfolio Beta	1.02
Cont. to Eff. Duration	3.83
Yield to Worst (%)	8.16
OAS to Sw ap (bp)	417

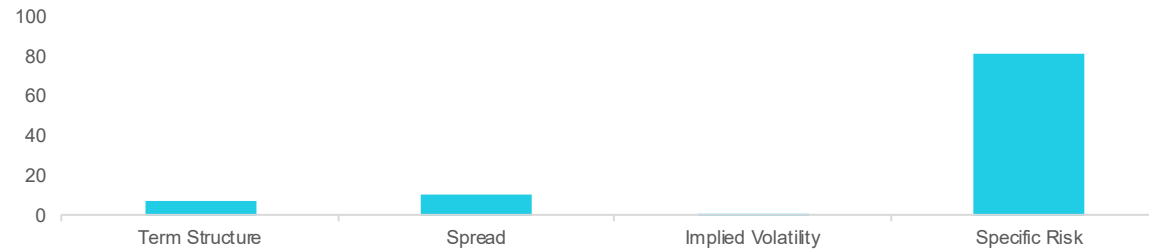
Top Countries by Weight%



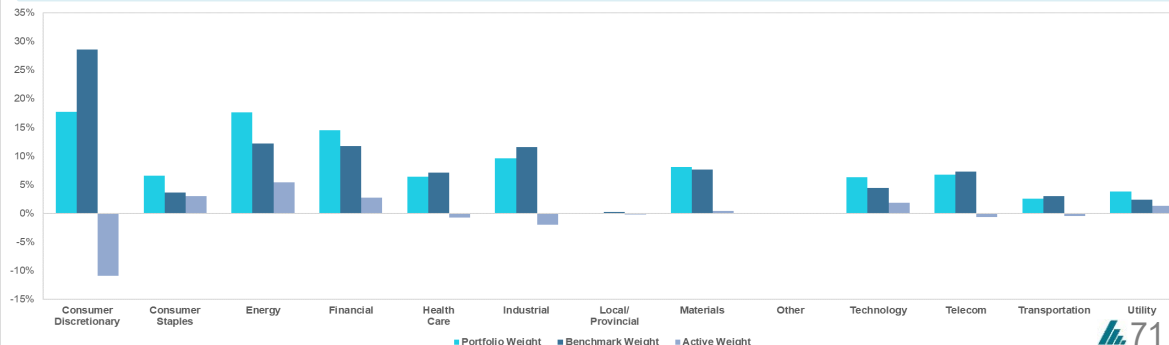
Allocation by Moody's Rating



Active Risk from Common Factors



Portfolio Risk by Bond Sector

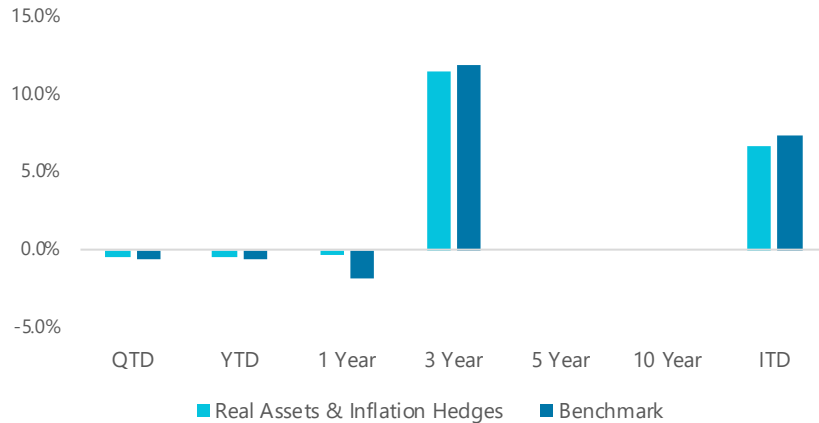


real assets & inflation hedges

Summary

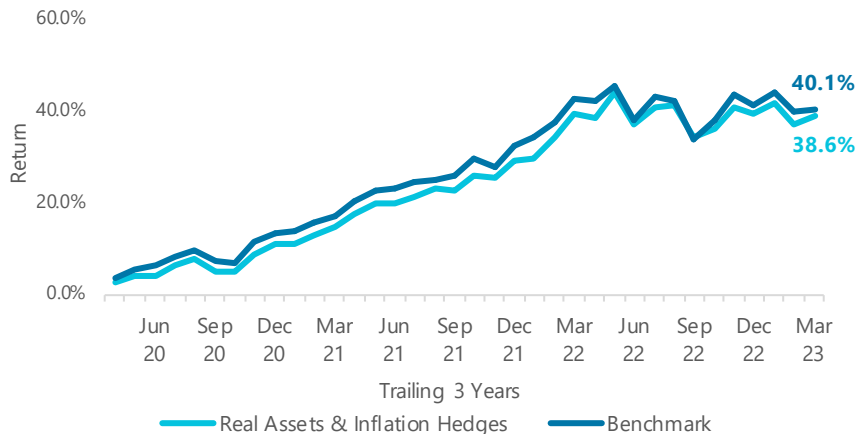
for the quarter ended March 31, 2023

Performance (net)



	QTD	YTD	1 Year	3 Year	5 Year	10 Year	ITD
Real Assets & Inflation Hedges	-0.4%	-0.4%	-0.4%	11.5%	--	--	6.6%
Benchmark	-0.6%	-0.6%	-1.8%	11.9%	--	--	7.3%
Excess	0.1%	0.1%	1.4%	-0.4%	--	--	-0.7%

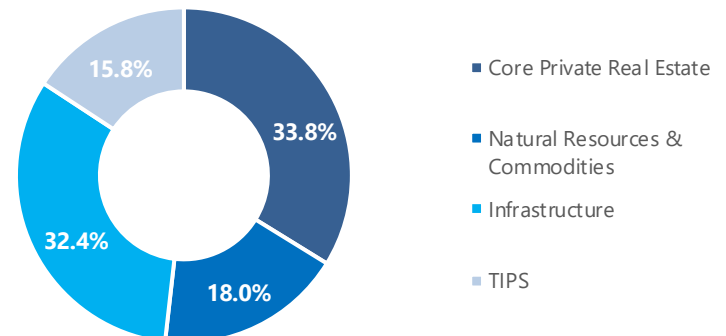
Cumulative Return



Functional Category

	QTD	FYTD	1 Year	3 Year
Core Private Real Estate	-4.5%	2.0%	10.5%	9.1%
Core Private RE Policy Benchmark	-5.2%	-0.6%	6.5%	9.2%
Excess	0.6%	2.5%	3.9%	-0.1%
Natural Resources & Commodities	0.1%	0.9%	-5.2%	24.8%
Nat Res & Comm Policy Benchmark	-1.5%	5.4%	-7.7%	25.3%
Excess	1.6%	-4.4%	2.5%	-0.5%
Infrastructure	1.9%	0.9%	-5.7%	12.9%
DJ Brookfield Global Infra Comp	3.1%	1.2%	-6.1%	12.2%
Excess	-1.2%	-0.3%	0.3%	0.7%
TIPS	3.4%	-0.4%	-6.6%	1.7%
Bloomberg U.S. Treasury: U.S. TIPS	3.3%	0.0%	-6.1%	1.8%
Excess	0.0%	-0.4%	-0.5%	-0.1%

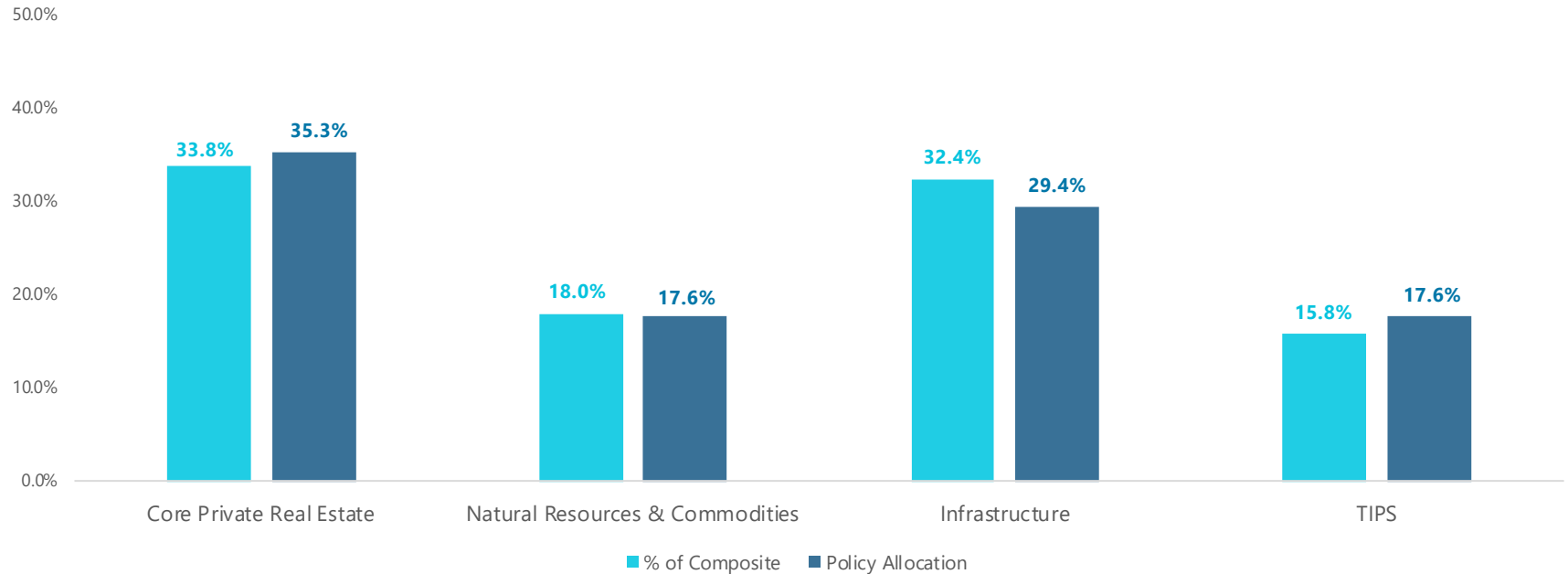
Exposure



Asset Allocation

for the quarter ended March 31, 2023

Actual vs. Policy

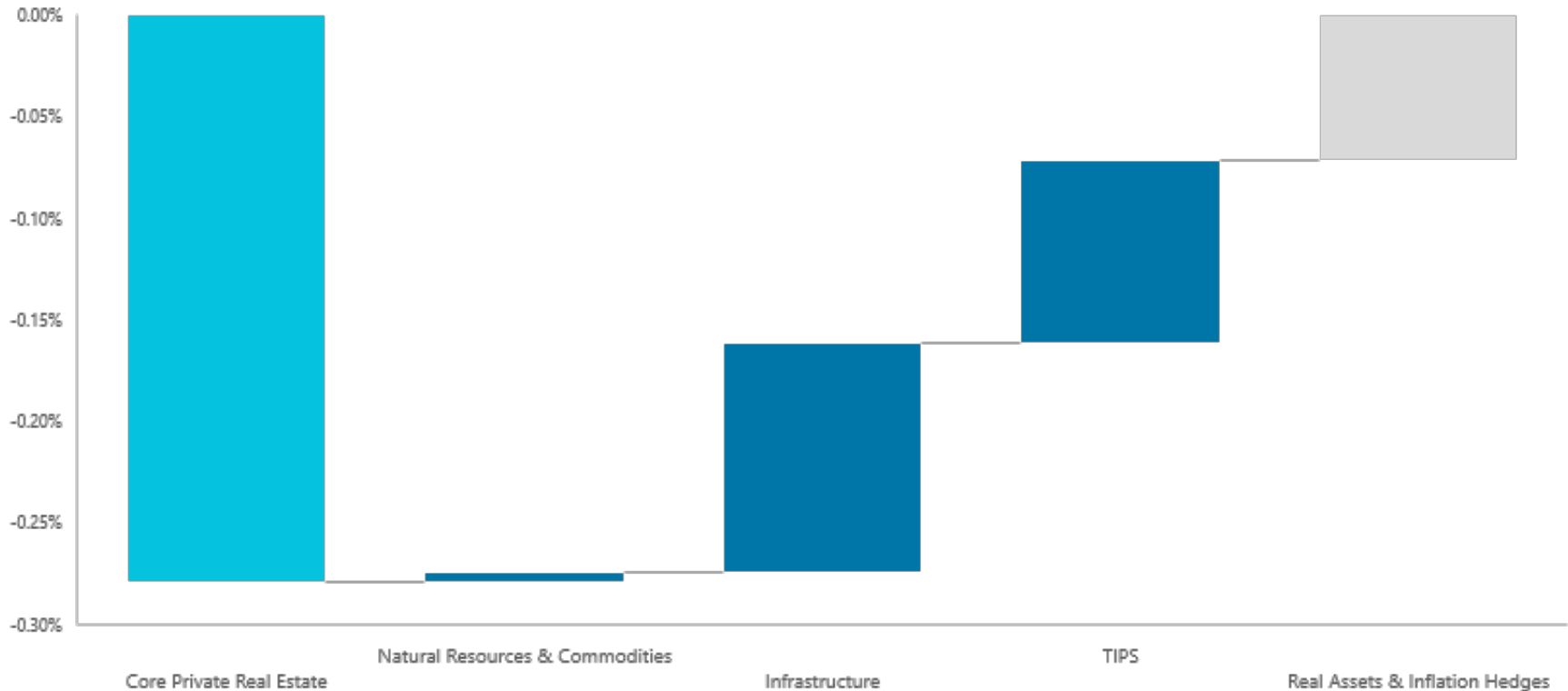


	Ending Market Value (mm)	% of Composite	Policy Allocation	Over / Under (%)	Over / Under (mm)
Real Assets & Inflation Hedges	12,202	100.0%	100.0%		
Core Private Real Estate	4,124	33.8%	35.3%	-1.5%	-183
Natural Resources & Commodities	2,197	18.0%	17.6%	0.4%	44
Infrastructure	3,958	32.4%	29.4%	3.0%	369
TIPS	1,924	15.8%	17.6%	-1.9%	-230

Contribution to Return

for the quarter ended March 31, 2023

QTD Contribution to Return



Functional Category	Contributors	Detractors
Core Private Real Estate	-0.28% BlackRock TIPS	0.09% Real Estate - Real Assets
Natural Resources & Commodities	0.00% DWS Infrastructure	0.05% Credit Suisse Commodity
Infrastructure	0.11% TIAA-CREF Global Agriculture I	0.03% DWS Natural Resources
TIPS	0.09% Grain Spectrum Holdings III	
Real Assets & Inflation Hedges	-0.07% TIAA-CREF Global Agriculture II	0.03%

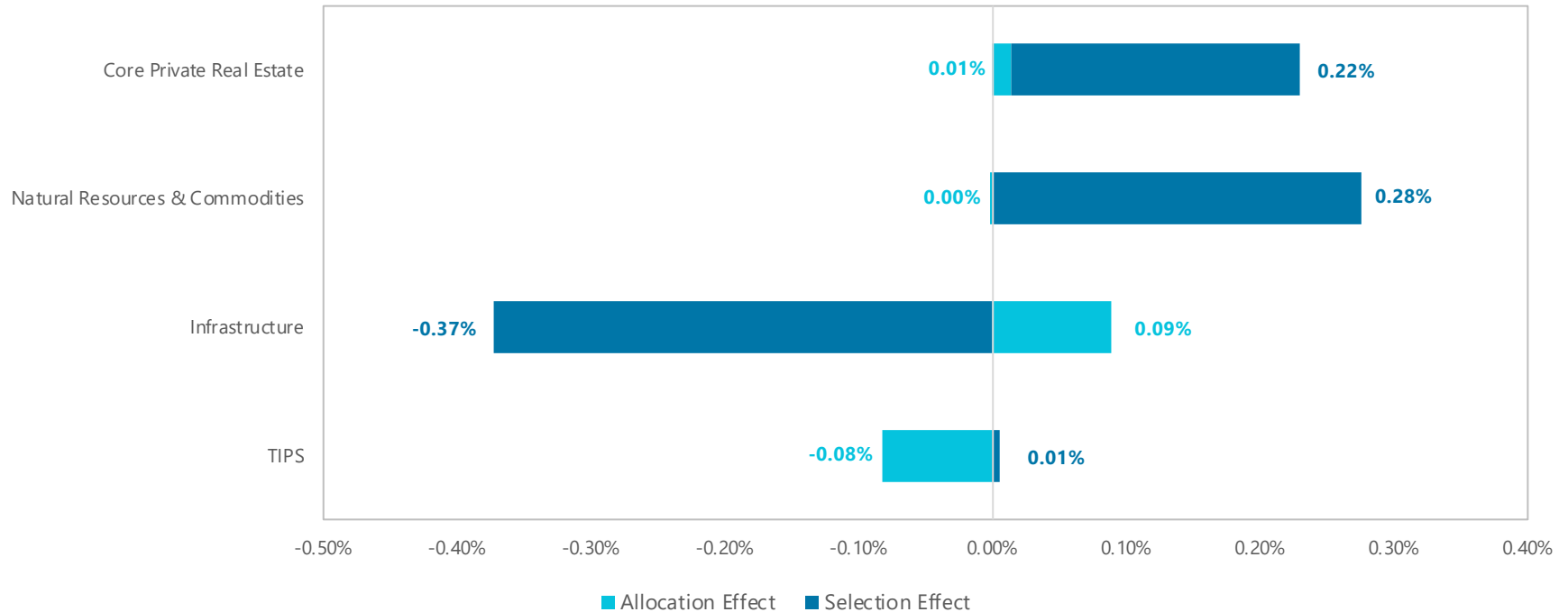
Return Attribution

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

QTD Performance Attribution¹



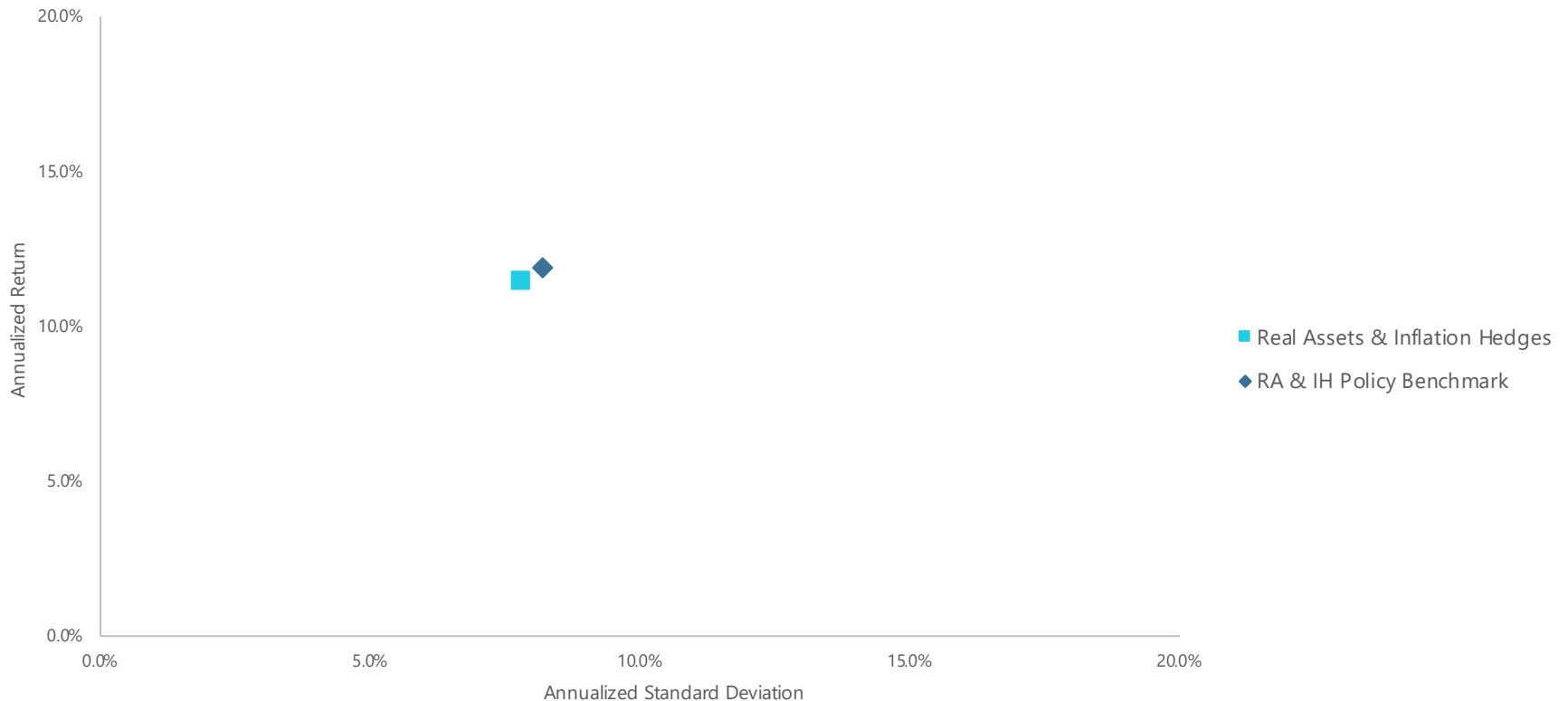
	Ending Market Value (mm)	% of Composite	Policy Allocation	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Total Value Add
Real Assets & Inflation Hedges	12,202	100.0%	100.0%	-0.4%	-0.6%	0.02%	0.12%	0.14%
Core Private Real Estate	4,124	33.8%	35.3%	-4.5%	-5.2%	0.01%	0.22%	0.23%
Natural Resources & Commodities	2,197	18.0%	17.6%	0.1%	-1.5%	0.00%	0.28%	0.28%
Infrastructure	3,958	32.4%	29.4%	1.9%	3.1%	0.09%	-0.37%	-0.28%
TIPS	1,924	15.8%	17.6%	3.4%	3.3%	-0.08%	0.01%	-0.08%

¹ Total Value Add column includes Interaction Effect.

Risk vs. Return

for the quarter ended March 31, 2023

3 Year (Annualized)



	Annualized Return	Standard Deviation	Sharpe Ratio	Information Ratio	Beta	Tracking Error
Real Assets & Inflation Hedges	11.5%	7.8%				
RA & IH Policy Benchmark	11.9%	8.2%	1.34	(0.10)	0.90	2.6%

Performance Detail

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

Annualized Net Returns¹

	% of Composite	Ending Market Value (mm)	Prior Quarter Ending MV (mm)	QTD	YTD	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date
Real Assets & Inflation Hedges	100.0%	12,202	12,222	-0.4%	-0.4%	-0.4%	11.5%	--	--	6.6%	Apr-2019
RA & IH Policy Benchmark				-0.6%	-0.6%	-1.8%	11.9%	--	--	7.3%	
Core Private Real Estate	33.8%	4,124	4,339	-4.5%	-4.5%	10.5%	9.1%	7.8%	8.5%	7.2%	Oct-1985
Core Private RE Policy Benchmark				-5.2%	-5.2%	6.5%	9.2%	8.1%	9.6%	7.0%	
Natural Resources & Commodities	18.0%	2,197	2,210	0.1%	0.1%	-5.2%	24.8%	6.3%	-0.5%	-0.8%	Jul-2007
Nat Res & Comm Policy Benchmark				-1.5%	-1.5%	-7.7%	25.3%	6.6%	-1.1%	-1.8%	
Cibus Enterprise II	0.0%	4	4	3.3%	3.3%	--	--	--	--	-8.6%	Jun-2022
Cibus Fund II	0.1%	18	16	-1.8%	-1.8%	--	--	--	--	-13.6%	Jun-2022
Co-Investments - Natural Resources	0.1%	15	15	-0.1%	-0.1%	--	--	--	--	0.0%	Oct-2022
Credit Suisse Commodity	2.4%	295	312	-5.6%	-5.6%	-12.0%	21.7%	5.9%	-1.2%	-2.5%	Mar-2011
DWS Natural Resources	5.2%	632	671	-2.3%	-2.3%	-11.3%	26.4%	--	--	11.7%	Jun-2019
HiTecVision New Energy	0.7%	86	67	13.6%	13.6%	--	--	--	--	23.2%	Sep-2022
Neuberger Berman/Gresham	2.8%	344	366	-6.0%	-6.0%	-12.6%	22.4%	5.2%	-1.1%	-1.0%	Jul-2007
Orion Mine Finance Fund III	1.0%	126	122	0.0%	0.0%	5.4%	--	--	--	5.3%	Sep-2021
Orion Mining Royalty Fund I	0.2%	24	20	0.0%	0.0%	-11.4%	--	--	--	-1.0%	Sep-2021
Private Equity - Real Assets	0.7%	83	82	2.1%	2.1%	9.8%	-1.8%	--	--	-7.7%	Jan-2019
Sprott	0.2%	19	0	--	--	--	--	--	--	0.0%	Mar-2023
TIAA-CREF Global Agriculture I	2.3%	279	256	9.0%	9.0%	22.6%	--	--	--	22.6%	Dec-2021
TIAA-CREF Global Agriculture II	2.2%	272	257	8.5%	8.5%	19.2%	--	--	--	19.2%	Dec-2021
Infrastructure	32.4%	3,958	3,812	1.9%	1.9%	-5.7%	12.9%	--	--	7.3%	Jun-2019
DJ Brookfield Global Infra Comp				3.1%	3.1%	-6.1%	12.2%	--	--	4.1%	
Antin Mid Cap	0.3%	40	38	5.2%	5.2%	11.9%	--	--	--	-4.6%	Dec-2021
Axiom Infrastructure	2.1%	259	254	1.9%	1.9%	7.2%	--	--	--	3.3%	Dec-2021
Axiom Infrastructure Canada	1.2%	146	59	1.1%	1.1%	--	--	--	--	-100.0%	Nov-2021
Co-Investments - Infrastructure	0.2%	26	0	--	--	--	--	--	--	0.0%	Mar-2023
DIF CIF III	0.3%	34	40	-7.2%	-7.2%	--	--	--	--	-3.3%	Jun-2022
DIF Infrastructure VI	0.8%	100	103	-2.4%	-2.4%	11.0%	--	--	--	18.6%	Mar-2021
DWS Infrastructure	21.3%	2,593	2,782	1.2%	1.2%	-8.4%	12.3%	--	--	6.9%	Jun-2019
Grain Communications Opportunity III	0.3%	38	33	2.2%	2.2%	-7.8%	--	--	--	-100.0%	Feb-2021
Grain Spectrum Holdings III	0.6%	70	48	46.6%	46.6%	46.1%	--	--	--	16.2%	Nov-2020
KKR DCIF	4.1%	506	327	1.5%	1.5%	3.4%	--	--	--	3.4%	Apr-2022
Pan-European Infrastructure Fund III	0.6%	68	65	4.1%	4.1%	5.4%	--	--	--	4.4%	Nov-2020
Partners Grp Direct Infra 2020	0.6%	76	63	5.6%	5.6%	10.9%	--	--	--	9.2%	Jan-2022
TIPS											
Blackrock TIPS	15.8%	1,924	1,861	3.4%	3.4%	-6.6%	1.7%	--	--	2.9%	May-2019
Bloomberg U.S. Treasury: U.S. TIPS				3.3%	3.3%	-6.1%	1.8%	--	--	3.0%	

¹ Private natural resources and infrastructure funds reflect early-stage life cycle performance.

Real Assets & Inflation Hedges

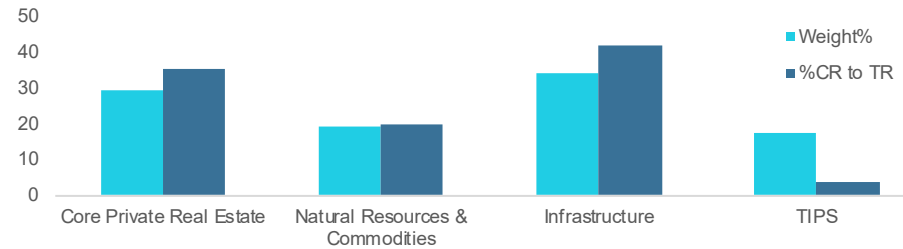
Risk Summary

for the quarter ended March 31, 2023

Risk Summary

	Value
Total Risk	14.97
Benchmark Risk	14.16
Active Risk	3.50
Portfolio Beta	1.03

Contribution to Risk

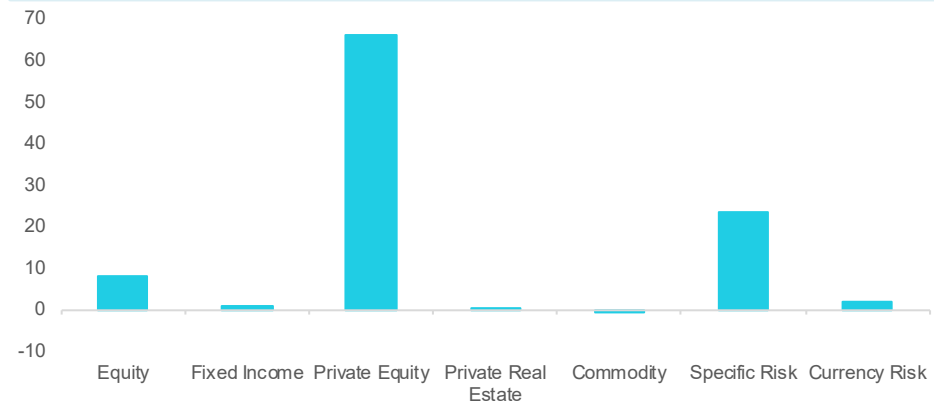


	Mkt Value (mm)	Weight%	Total Risk	Risk Contribution	%CR to TR
Real Assets & Inflation Hedges	11,229	100.00	14.97	14.97	100.00
Core Private Real Estate	3,291	29.31	21.57	5.24	35.03
Natural Resources & Commodities	2,154	19.18	18.37	2.96	19.78
Infrastructure	3,852	34.30	19.59	6.22	41.56
TIPS	1,932	17.21	6.93	0.54	3.62

Risk Decomposition

Risk Source	Portfolio		Active	
	Risk Contribution	%Risk	Risk Contribution	%Risk
Total Risk	14.97	100.00	3.50	100.00
Common Factor Risk	13.74	91.82	2.62	74.90
Specific Risk	0.09	0.58	0.81	23.12
Currency Risk	1.14	7.60	0.07	1.98

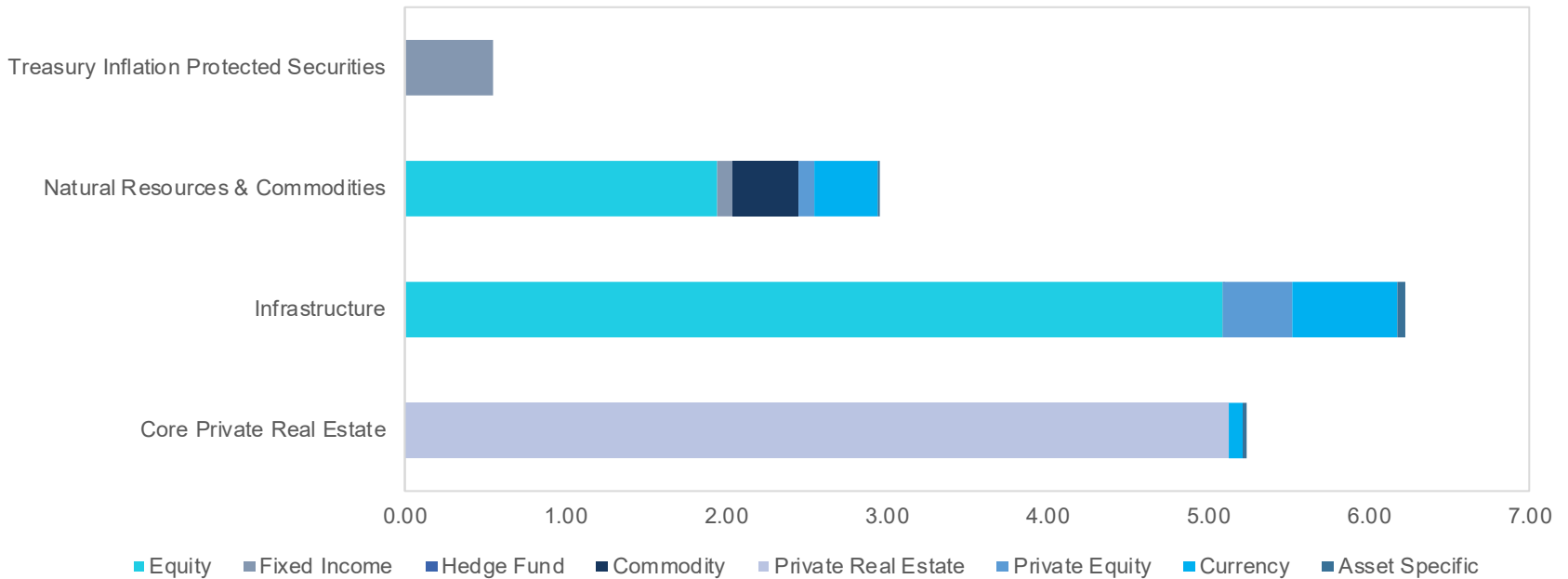
Active Risk from Common Factors



Real Assets & Inflation Hedges Risk Summary

for the quarter ended March 31, 2023

Risk Contribution Breakdown by Risk Type

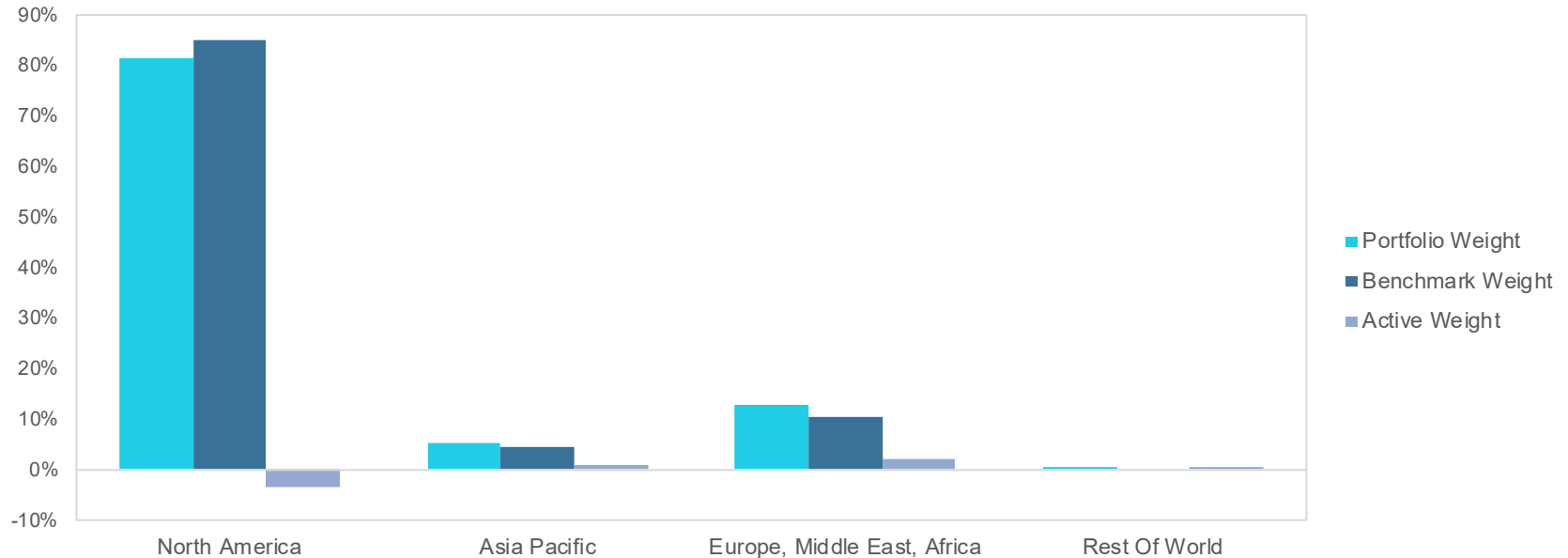


Functional Category	Port Risk Contribution	Equity	Fixed Income	Commodity	Private Real Estate	Private Equity	Currency	Asset Specific
Real Assets & Inflation Hedges	14.97	7.03	0.63	0.41	5.12	0.54	1.14	0.09
Core Private Real Estate	5.24	0.00	0.00	0.00	5.12	0.00	0.09	0.03
Infrastructure	6.22	5.09	0.00	0.00	0.00	0.44	0.65	0.05
Natural Resources and Commodities	2.96	1.95	0.09	0.41	0.00	0.10	0.40	0.01
Treasury Inflation Protected Securities	0.54	0.00	0.54	0.00	0.00	0.00	0.00	0.00

Real Assets & Inflation Hedges Risk Summary

for the quarter ended March 31, 2023

Portfolio Allocation By Region



Region	Weight%			Total Risk	Active Risk CR	% of Active TR	MC to Total Tracking Error
	Portfolio	Benchmark	Active				
Real Assets & Inflation Hedges	100.00%	100.00%	0.00%	14.97	3.50	100.00	0.04
North America	81.54%	85.03%	-3.49%	14.29	2.35	67.09	0.01
Asia Pacific	5.37%	4.34%	1.03%	18.08	0.02	0.60	0.02
Europe, Middle East, Africa	12.90%	10.62%	2.28%	24.91	1.10	31.45	0.10
Rest Of World	0.18%	0.00%	0.18%	38.16	0.03	0.86	0.17

Real Assets & Inflation Hedges

Natural Resources & Commodities

Credit Suisse

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

Strategy

Seeks to provide a hedge against inflation and exposure to commodities markets such as energy, agriculture and timber, and metals and mining.

Inception Date: March 2011

Risk Statistics (since inception)

Standard Deviation	15.7%
Benchmark Standard Deviation	16.0%
Sharpe Ratio	0.33
Information Ratio	0.62
Beta	0.98
Tracking Error	1.0%

Top Holdings (% of assets)

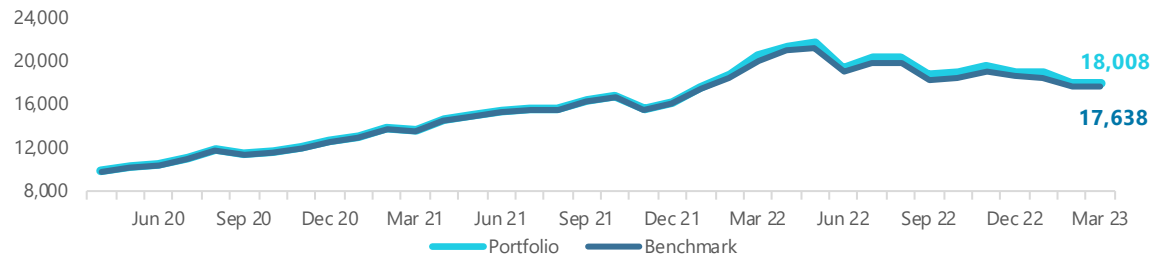
US TREASURY FRN	18.8%
US TREASURY FRN	14.0%
GOLD 100 OZ FUTR AUG23	12.9%
US TREASURY FRN	10.9%
FEDERAL FARM CREDIT BANK	7.0%
Top 5 Holdings	63.6%

Performance (net)¹

	Ending Market Value (mm)	QTD	1 Year	3 Year	5 Year
Credit Suisse Commodity	294.8	-5.6%	-12.0%	21.7%	5.9%
Bloomberg Commodity Index Total Return		-5.4%	-12.5%	20.8%	5.4%
RA & IH Policy Benchmark		-0.6%	-1.8%	11.9%	--

Universe data: Commodity Funds	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
Credit Suisse Commodity	-5.5%	93	-11.8%	79	22.0%	39	6.2%	70
Median	1.5%		0.1%		14.7%		11.3%	

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Real Assets & Inflation Hedges Risk Analysis

Natural Resources & Commodities

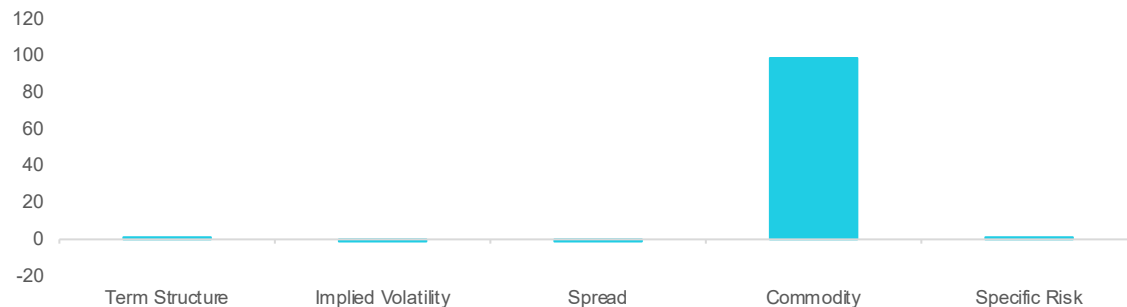
Credit Suisse

for the quarter ended March 31, 2023

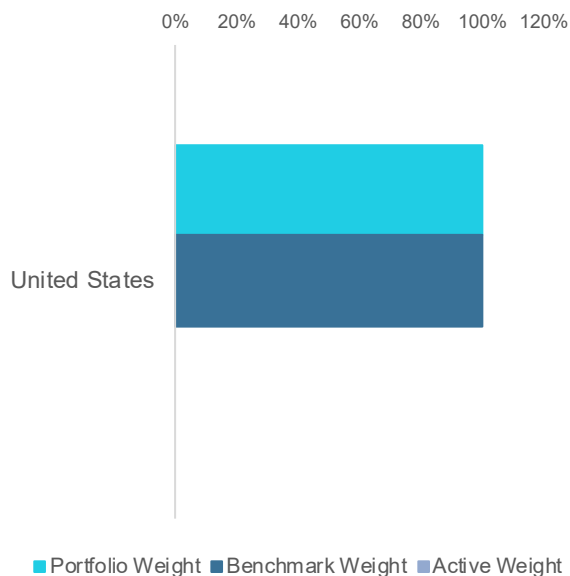
Portfolio Risk Summary

	Value
Total Risk	14.44
Benchmark Risk	18.50
Active Risk	5.89
Portfolio Beta	0.75

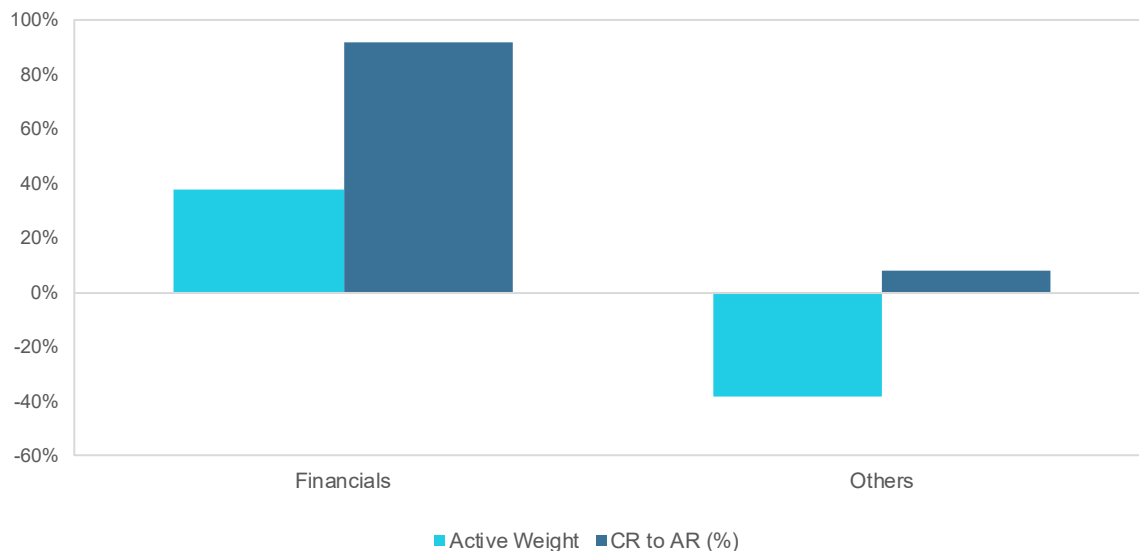
Active Risk from Common Factors



Top Countries by Weight%



Portfolio Risk by Sector



Real Assets & Inflation Hedges

Natural Resources & Commodities

DWS

for the quarter ended March 31, 2023

Strategy

Seeks to provide capital appreciation and a hedge to inflation. A diversified approach within infrastructure to gain exposure to infrastructure related to telecommunication, transportation, utilities, waste and energy.

Inception Date: June 2019

Risk Statistics (since inception)

Standard Deviation	24.4%
Benchmark Standard Deviation	24.3%
Sharpe Ratio	0.53
Information Ratio	-0.54
Beta	0.99
Tracking Error	4.2%

Top Holdings (% of assets)

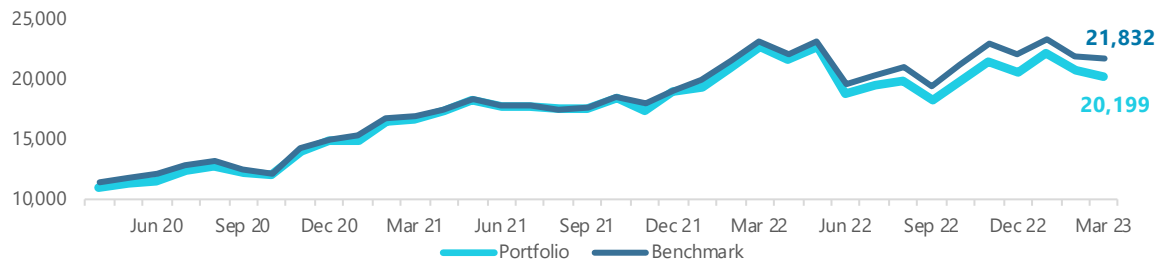
BP PLC	8.8%
NUTRIEN LTD	6.6%
SHELL PLC	5.5%
ARCHER DANIELS MIDLAND CO	4.9%
AGNICO EAGLE MINES LTD	4.8%
Top 5 Holdings	30.5%

Performance (net)¹

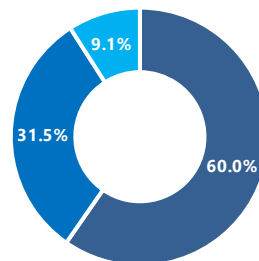
	Ending Market Value (mm)	QTD	1 Year	3 Year	5 Year
DWS Natural Resources	632.3	-2.3%	-11.3%	26.4%	--
S&P Glb LargeMidCap Commod & Resources		-1.3%	-5.8%	29.7%	--
RA & IH Policy Benchmark		-0.6%	-1.8%	11.9%	--

Universe data: Commodity Funds	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
DWS Natural Resources	-2.3%	84	-11.2%	78	26.6%	24	--	--
Median	1.5%		0.1%		14.7%		--	

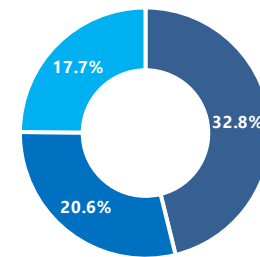
Growth of \$10,000



Top Exposures (% of assets)²



- MATERIALS
- ENERGY
- CONSUMER STAPLES



- UNITED STATES
- CANADA
- UNITED KINGDOM

¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Real Assets & Inflation Hedges Risk Analysis

Natural Resources & Commodities

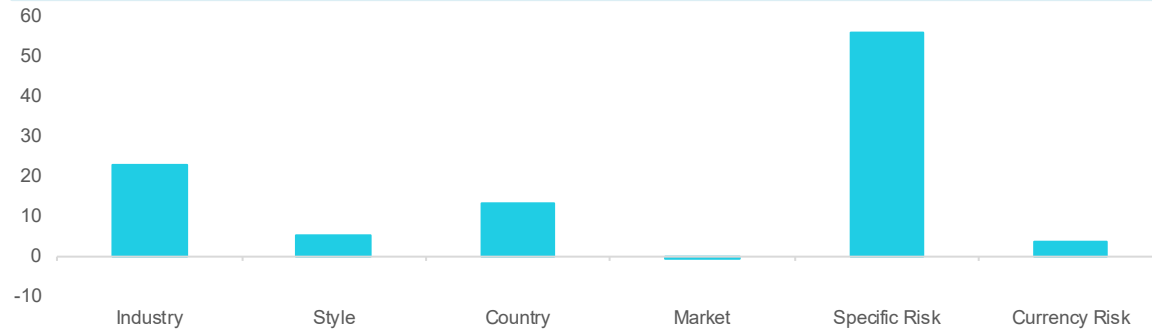
DWS

for the quarter ended March 31, 2023

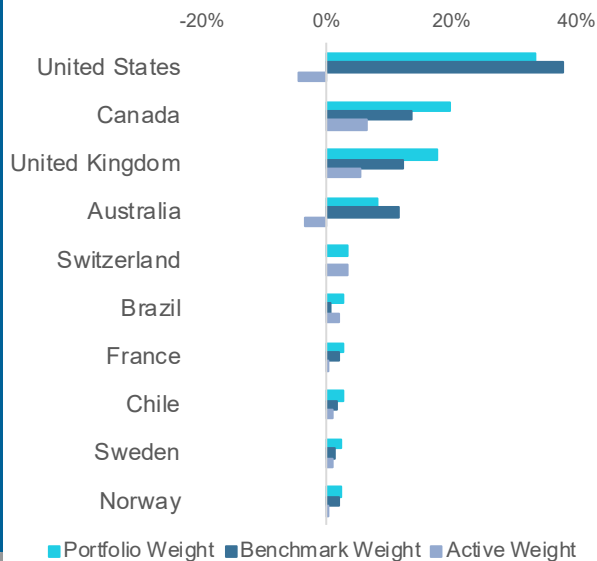
Portfolio Risk Summary

	Value
Total Risk	24.14
Benchmark Risk	23.97
Active Risk	4.03
Portfolio Beta	0.99

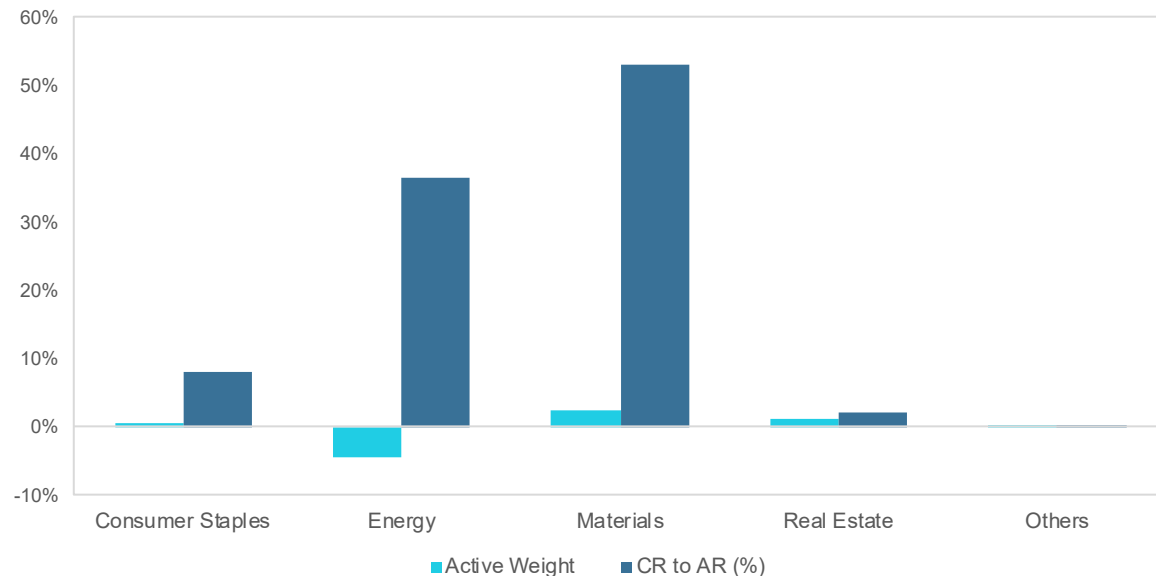
Active Risk from Common Factors



Top Countries by Weight%



Portfolio Risk by Sector



Real Assets & Inflation Hedges

Natural Resources & Commodities

Neuberger Berman / Gresham

for the quarter ended March 31, 2023

Strategy

Seeks to provide a hedge against inflation and exposure to commodities markets such as energy, agriculture and timber, and metals and mining. The collateral portfolio provides income with conservative fixed income exposure.

Inception Date: July 2007

Risk Statistics (since inception)

Standard Deviation	18.3%
Benchmark Standard Deviation	16.9%
Sharpe Ratio	0.13
Information Ratio	0.47
Beta	1.04
Tracking Error	4.9%

Top Holdings (% of assets)

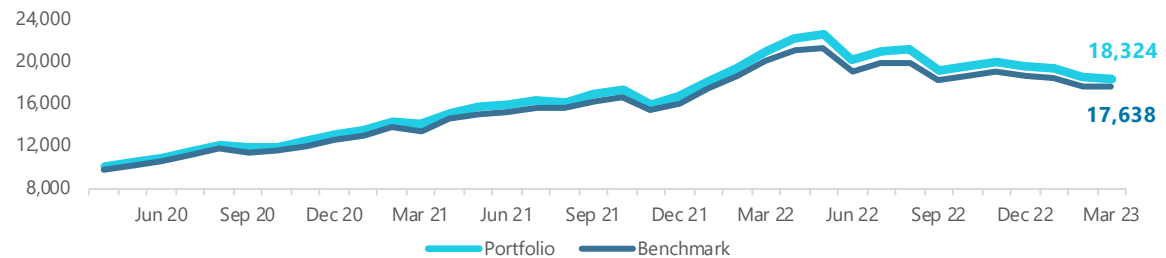
GOLD 100 OZ FUTR JUN23	14.3%
WTI CRUDE FUTURE MAY23	6.2%
BRENT CRUDE FUTR JUL23	6.1%
NATURAL GAS FUTR MAY23	5.9%
LIVE CATTLE FUTR JUN23	5.0%
Top 5 Holdings	37.5%

Performance (net)¹

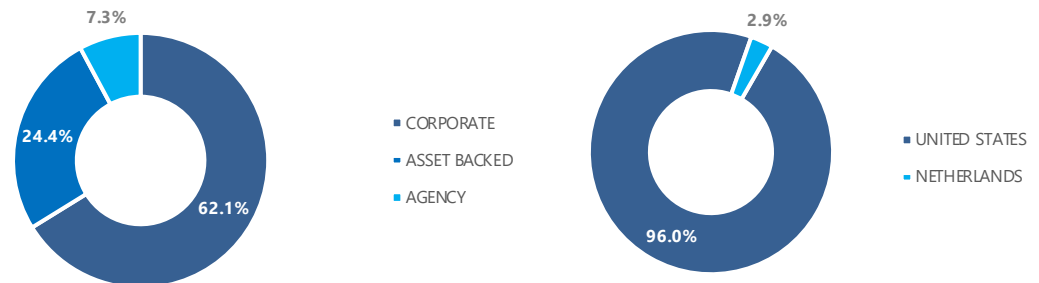
	Ending Market Value (mm)	QTD	1 Year	3 Year	5 Year
Neuberger Berman/Gresham	344.2	-6.0%	-12.6%	22.4%	5.2%
Bloomberg Commodity Index Total Return		-5.4%	-12.5%	20.8%	5.4%
RA & IH Policy Benchmark		-0.6%	-1.8%	11.9%	--

Universe data: Commodities Funds	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
Neuberger Berman/Gresham	-6.0%	93	-12.4%	80	22.8%	38	5.6%	78
Median	1.5%		0.1%		14.7%		11.3%	

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Real Assets & Inflation Hedges Risk Analysis

Natural Resources & Commodities

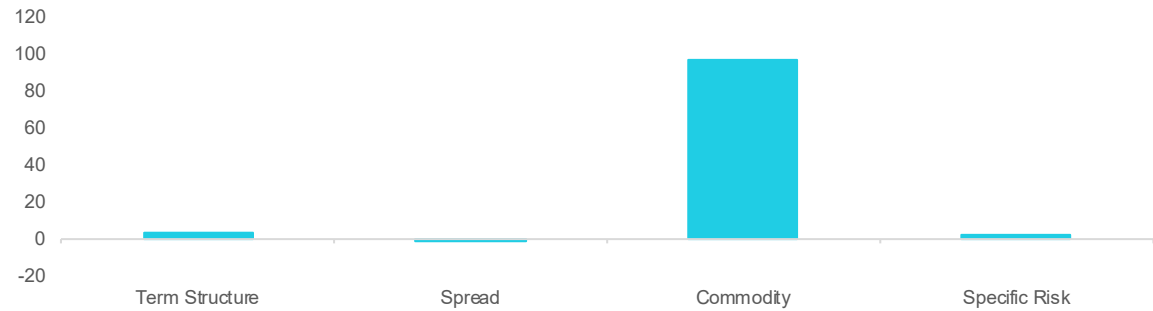
Neuberger Berman / Gresham

for the quarter ended March 31, 2023

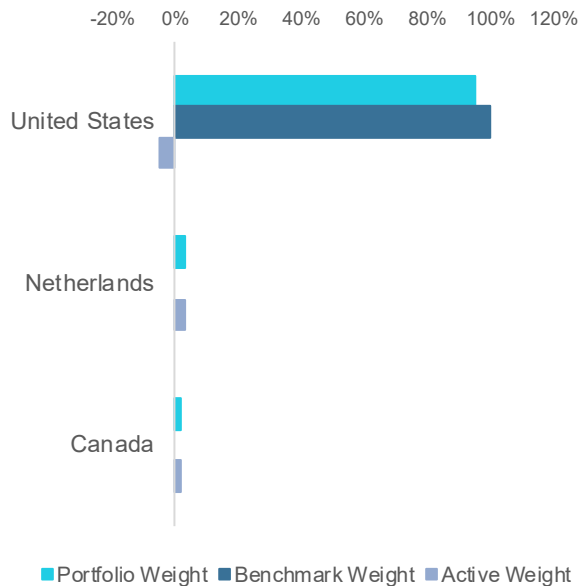
Portfolio Risk Summary

	Value
Total Risk	13.99
Benchmark Risk	17.49
Active Risk	4.47
Portfolio Beta	0.79

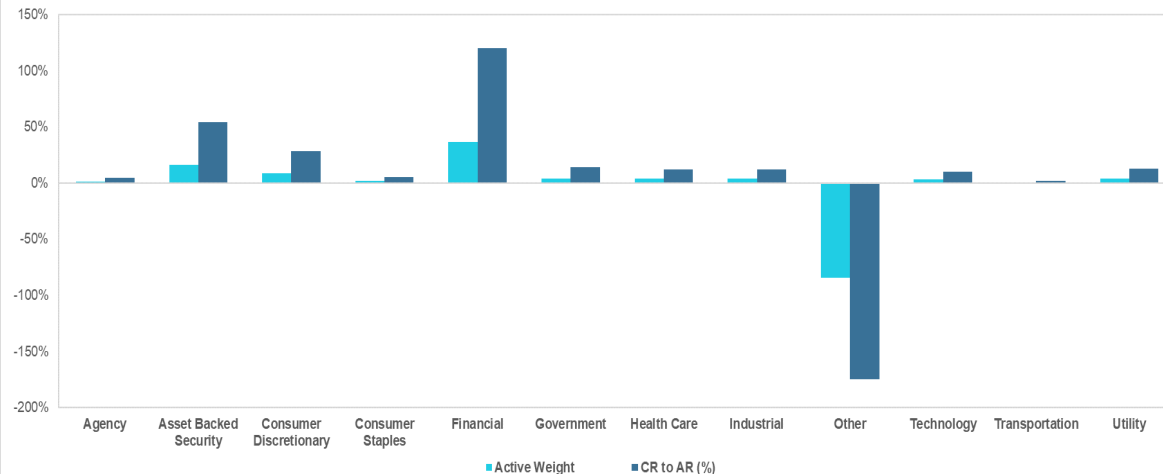
Active Risk from Common Factors



Top Countries by Weight%



Portfolio Risk by Sector



Real Assets & Inflation Hedges

Infrastructure

DWS

for the quarter ended March 31, 2023

Strategy

Seeks to provide capital appreciation and income with global infrastructure securities. The strategy takes a diversified approach within infrastructure to gain exposure to infrastructure related to telecommunication, transportation, utilities, waste and energy.

Inception Date: June 2019

Portfolio Characteristics

	Portfolio	Benchmark
Market Cap Wtd Average (mm)	41,033.9	38,413.7
No. Of Issues	47.0	0.0
Dividend Yield	2.9	3.2
Return on Equity	12.3	11.3
Price to Sales	3.8	4.3
Price to Book	2.9	3.1
PE Ratio	21.4	22.4

Top Holdings (% of assets)

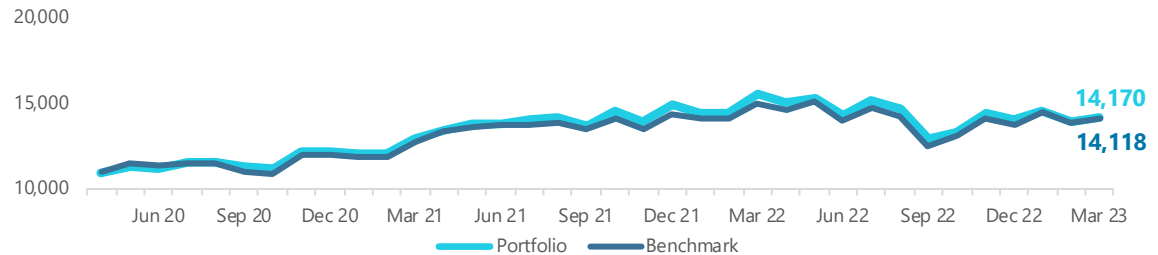
ENBRIDGE INC	7.2%
AMERICAN TOWER CORP	5.4%
NATIONAL GRID PLC	5.2%
SEMPRA ENERGY	4.2%
VINCI SA	4.0%
Top 5 Holdings	25.9%

Performance (net)¹

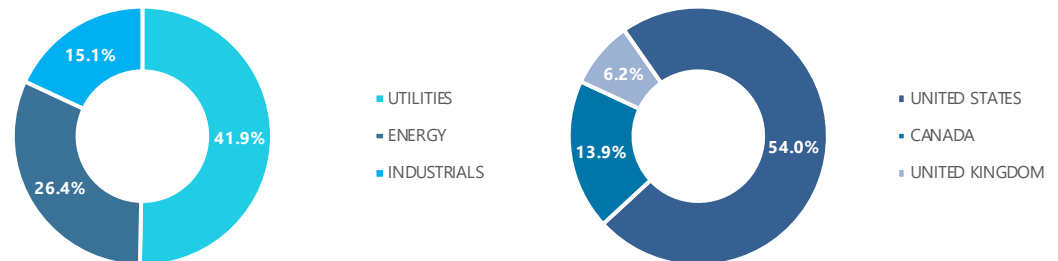
	Ending Market Value (mm)	QTD	1 Year	3 Year	5 Year
DWS Infrastructure	2,593.1	1.2%	-8.4%	12.3%	--
DJ Brookfield Global Infra Comp		3.1%	-6.1%	12.2%	--
RA & IH Policy Benchmark		-0.6%	-1.8%	11.9%	--

Universe data: Infrastructure	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
DWS Infrastructure	1.3%	86	-8.3%	100	12.5%	--	--	--
Median	2.4%		7.6%		--	--	--	

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Real Assets & Inflation Hedges Risk Analysis

Infrastructure

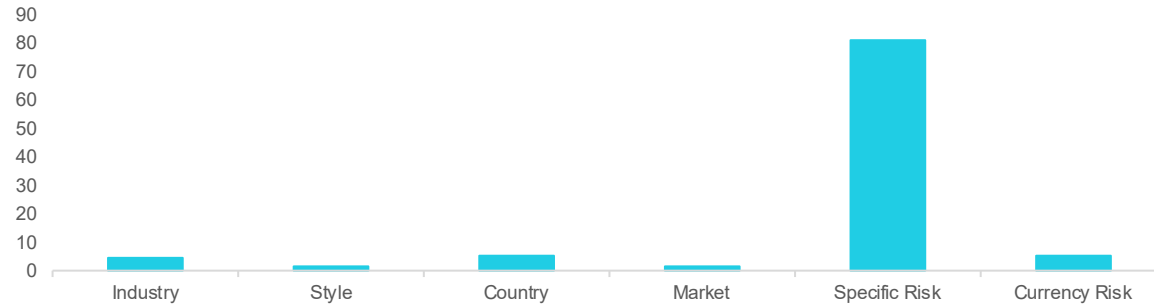
DWS

for the quarter ended March 31, 2023

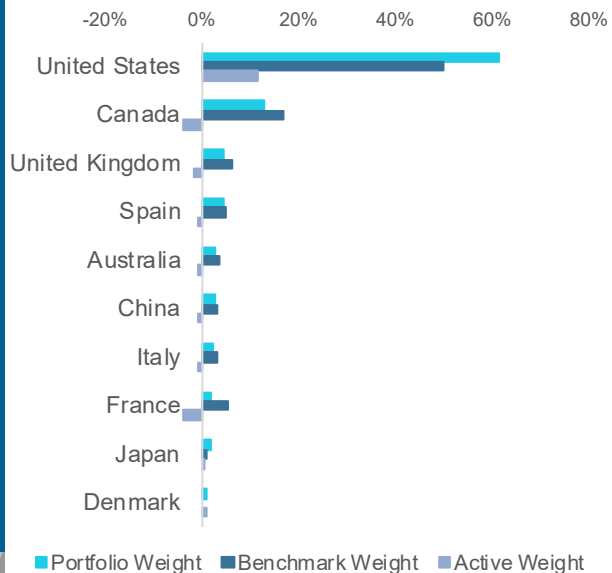
Portfolio Risk Summary

	Value
Total Risk	18.00
Benchmark Risk	18.39
Active Risk	1.72
Portfolio Beta	0.97

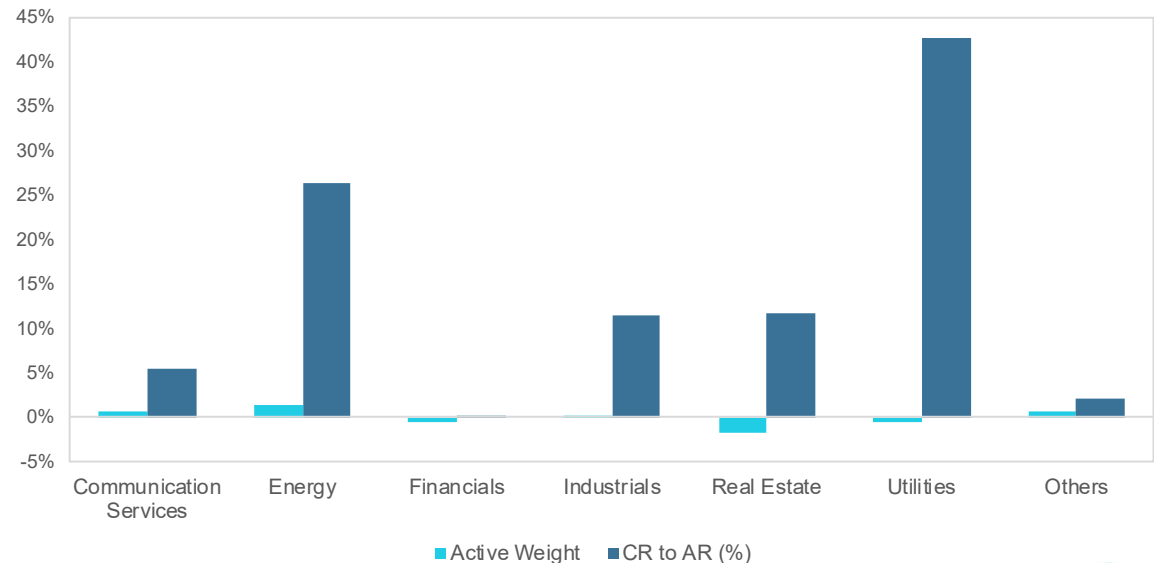
Active Risk from Common Factors



Top Countries by Weight%



Portfolio Risk by Sector



Real Assets & Inflation Hedges

TIPS

BlackRock

for the quarter ended March 31, 2023

Strategy

Seeks to provide income and a hedge against inflation with passive TIPS exposure.

Inception Date: May 2019

Risk Statistics (since inception)

Standard Deviation	6.5%
Benchmark Standard Deviation	6.6%
Sharpe Ratio	0.29
Information Ratio	-0.07
Beta	0.99
Tracking Error	0.8%

Top Holdings (% of assets)

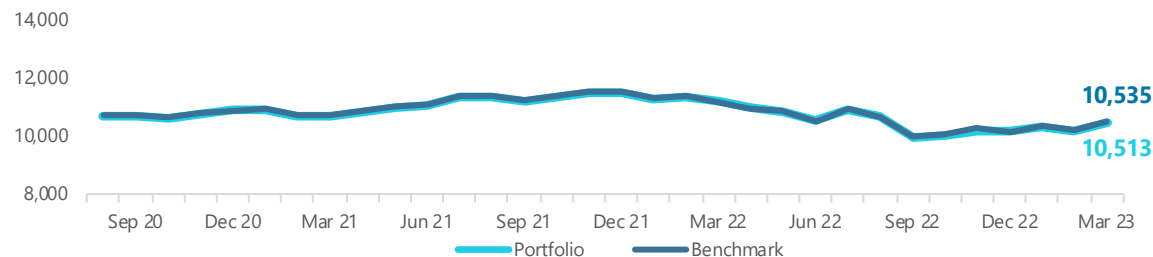
TSY INFL IX N/B	4.3%
TSY INFL IX N/B	3.7%
TSY INFL IX N/B	3.6%
TSY INFL IX N/B	3.6%
TSY INFL IX N/B	3.5%
Top 5 Holdings	18.7%

Performance (net)¹

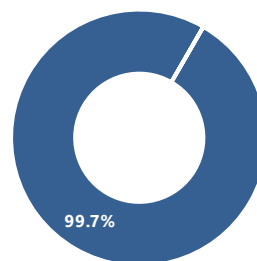
	Ending Market Value (mm)	QTD	1 Year	3 Year	5 Year
BlackRock TIPS	1,923.7	3.4%	-6.6%	1.7%	--
Bloomberg U.S. Treasury: U.S. TIPS		3.3%	-6.1%	1.8%	--
Real Assets & Inflation Hedges Policy BM		-0.6%	-1.8%	11.9%	--

Universe data: Inflation Linked Bond Funds	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
BlackRock TIPS	3.4%	--	-6.6%	--	1.7%	--	--	--
Median	--	--	--	--	--	--	--	--

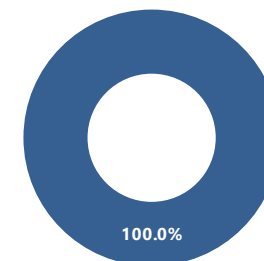
Growth of \$10,000



Top Exposures (% of assets)²



US TREASURY



UNITED STATES

¹ Universe data for TIPS is not available.

² Charts display top exposures and may not add up to 100%.

Real Assets & Inflation Hedges Risk Analysis

TIPS

BlackRock

for the quarter ended March 31, 2023

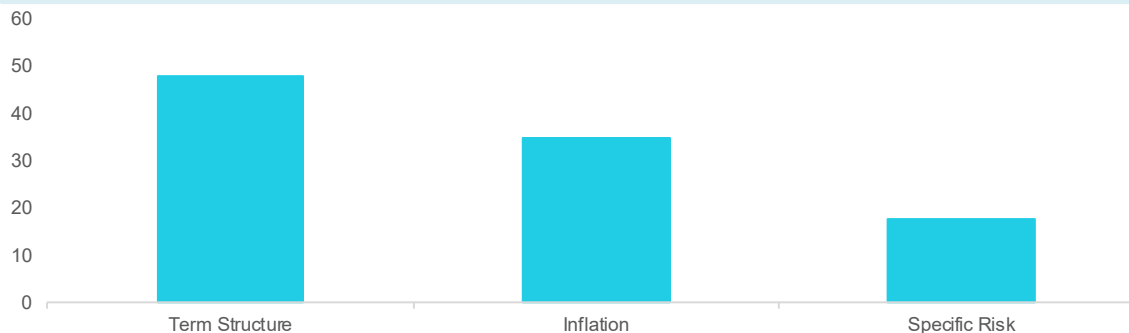


Los Angeles County Employees Retirement Association

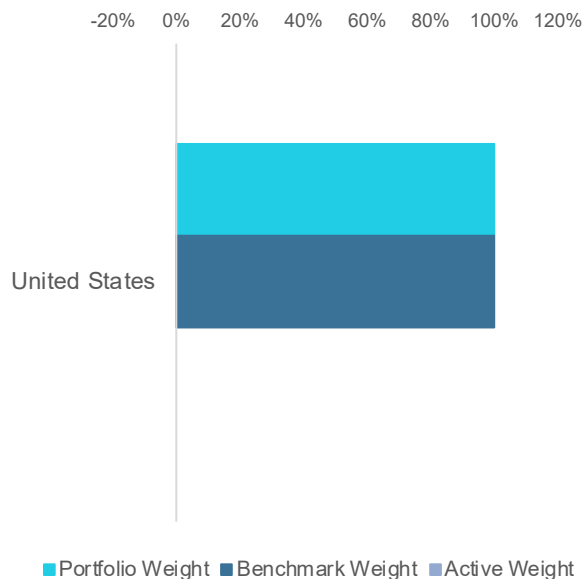
Portfolio Risk Summary

	Value
Total Risk	6.93
Benchmark Risk	6.97
Active Risk	0.05
Portfolio Beta	0.99

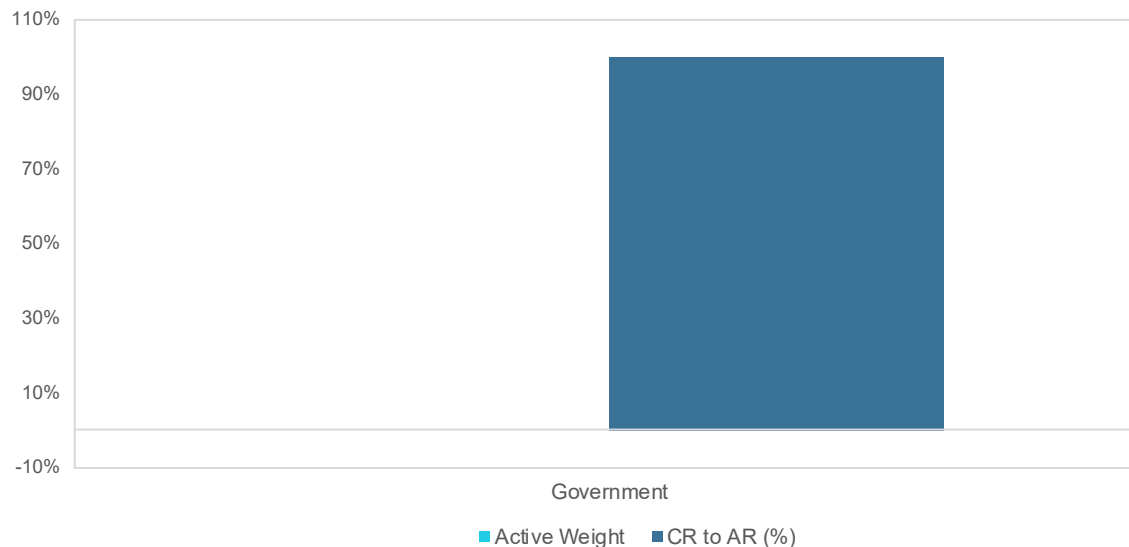
Active Risk from Common Factors



Top Countries by Weight%



Portfolio Risk by Sector



risk reduction & mitigation

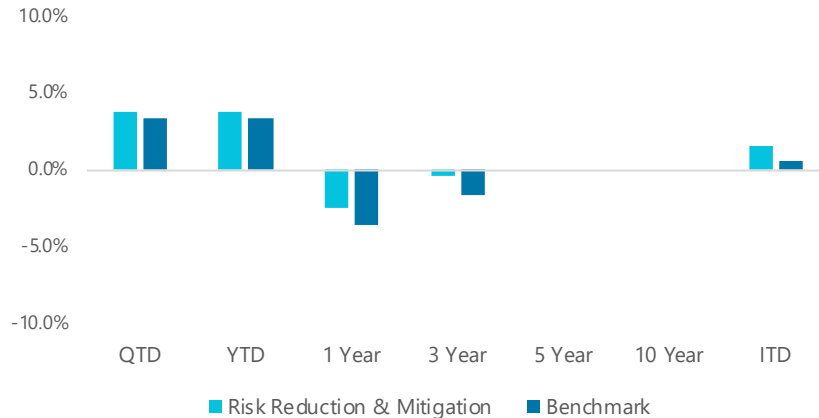
Summary

for the quarter ended March 31, 2023



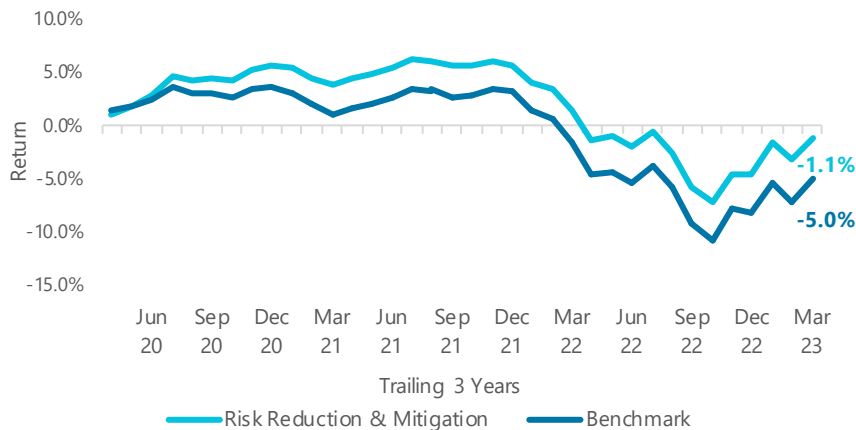
Los Angeles County Employees Retirement Association

Performance (net)



	QTD	YTD	1 Year	3 Year	5 Year	10 Year	ITD
Risk Reduction & Mitigation	3.7%	3.7%	-2.5%	-0.4%	--	--	1.5%
Benchmark	3.4%	3.4%	-3.6%	-1.7%	--	--	0.6%
Excess	0.4%	0.4%	1.1%	1.3%	--	--	0.9%

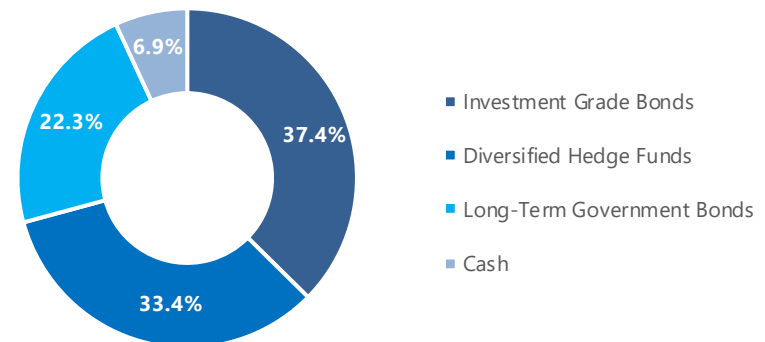
Cumulative Return



Functional Category

	QTD	FYTD	1 Year	3 Year
Investment Grade Bonds	3.1%	0.0%	-4.8%	-2.2%
BBG BC Aggregate Bond Index	3.0%	-0.1%	-4.8%	-2.8%
Excess	0.2%	0.1%	0.0%	0.5%
Diversified Hedge Funds	3.3%	6.1%	7.7%	7.7%
Diversified Hedge Funds Policy Benchmark	1.7%	4.0%	4.8%	3.4%
Excess	1.6%	2.1%	2.9%	4.4%
Long-Term Government Bonds	6.1%	-5.2%	-16.1%	--
Bloomberg U.S. Treasury: Long	6.2%	-4.6%	-16.0%	--
Excess	0.0%	-0.6%	-0.1%	--
Cash	1.4%	3.7%	4.4%	2.0%
Cash Policy Benchmark	1.1%	2.5%	2.6%	1.0%
Excess	0.3%	1.3%	1.8%	1.1%

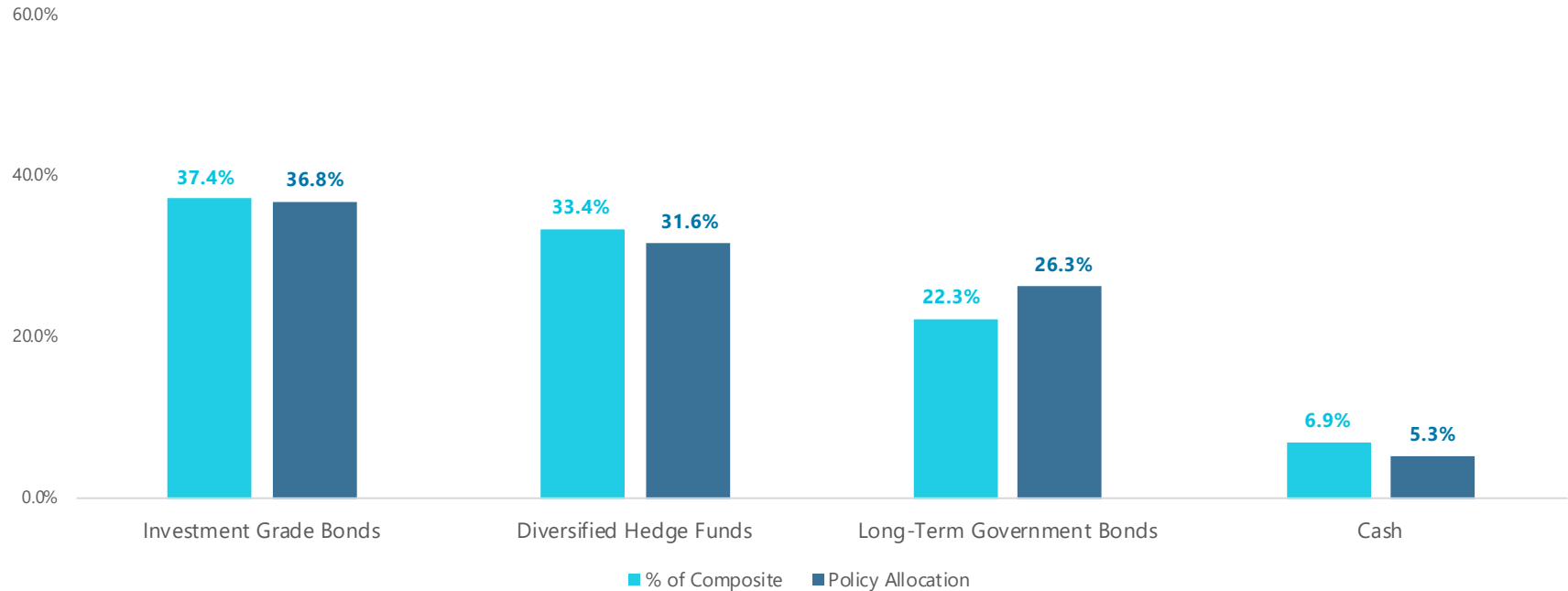
Exposure



Asset Allocation

for the quarter ended March 31, 2023

Actual vs. Policy

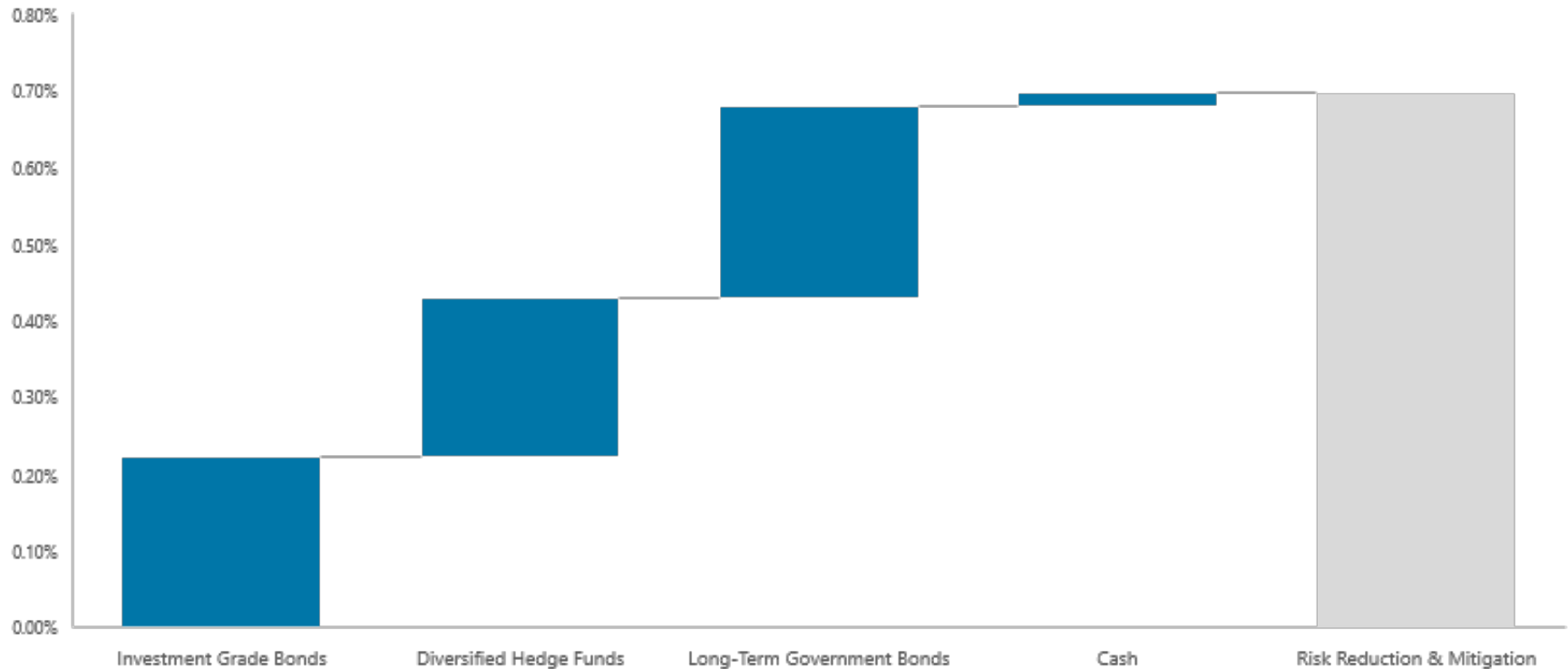


	Ending Market Value (mm)	% of Composite	Policy Allocation	Over / Under (%)	Over / Under (mm)
Risk Reduction & Mitigation	13,598	100.0%	100.0%		
Investment Grade Bonds	5,083	37.4%	36.8%	0.5%	73
Diversified Hedge Funds	4,543	33.4%	31.6%	1.8%	249
Long-Term Government Bonds	3,032	22.3%	26.3%	-4.0%	-546
Cash	939	6.9%	5.3%	1.6%	224

Contribution to Return

for the quarter ended March 31, 2023

QTD Contribution to Return



Functional Category	Contributors	Detractors
Investment Grade Bonds	0.22% BlackRock Long Treasury Bonds	0.25% Clear Sky -0.01%
Diversified Hedge Funds	0.21% BTC US Debt Index Fund	0.13%
Long-Term Government Bonds	0.25% AM Asia Strategies	0.07%
Cash	0.02% Allspring/Wells	0.06%
Risk Reduction & Mitigation	0.70% Pugh Capital Mgmt	0.04%

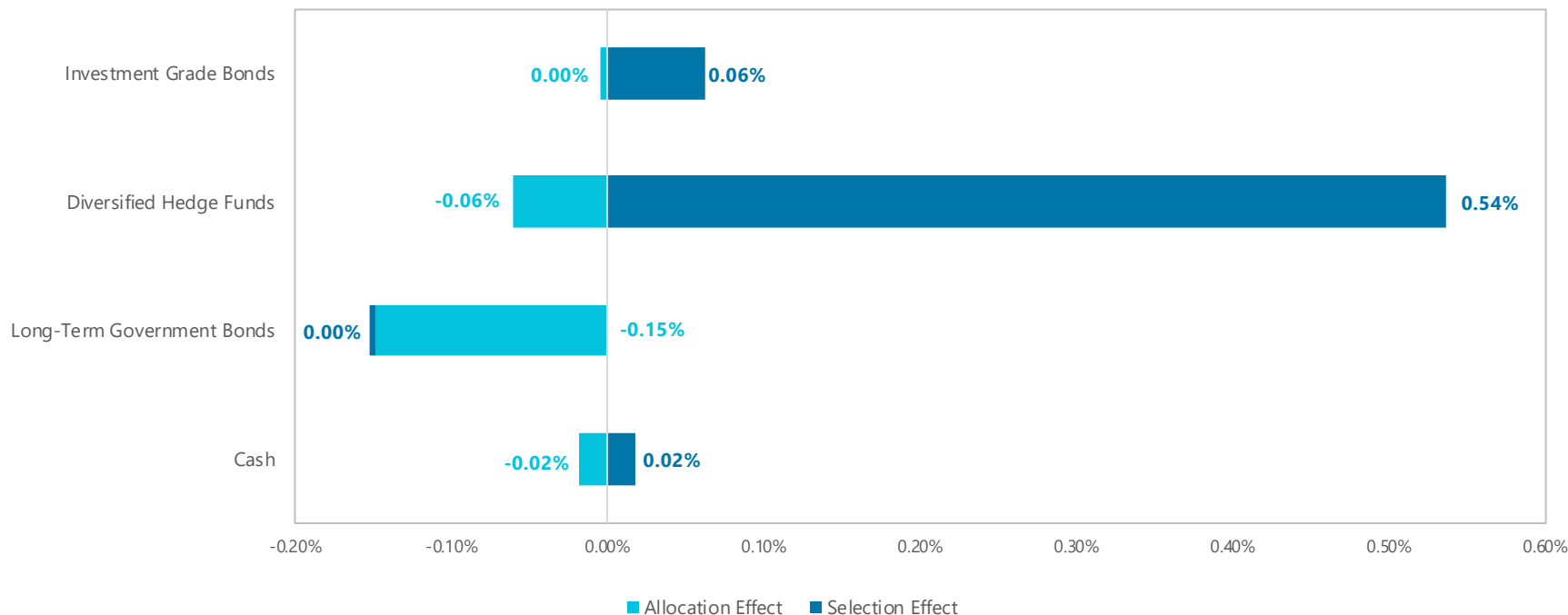
Return Attribution

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

QTD Performance Attribution¹



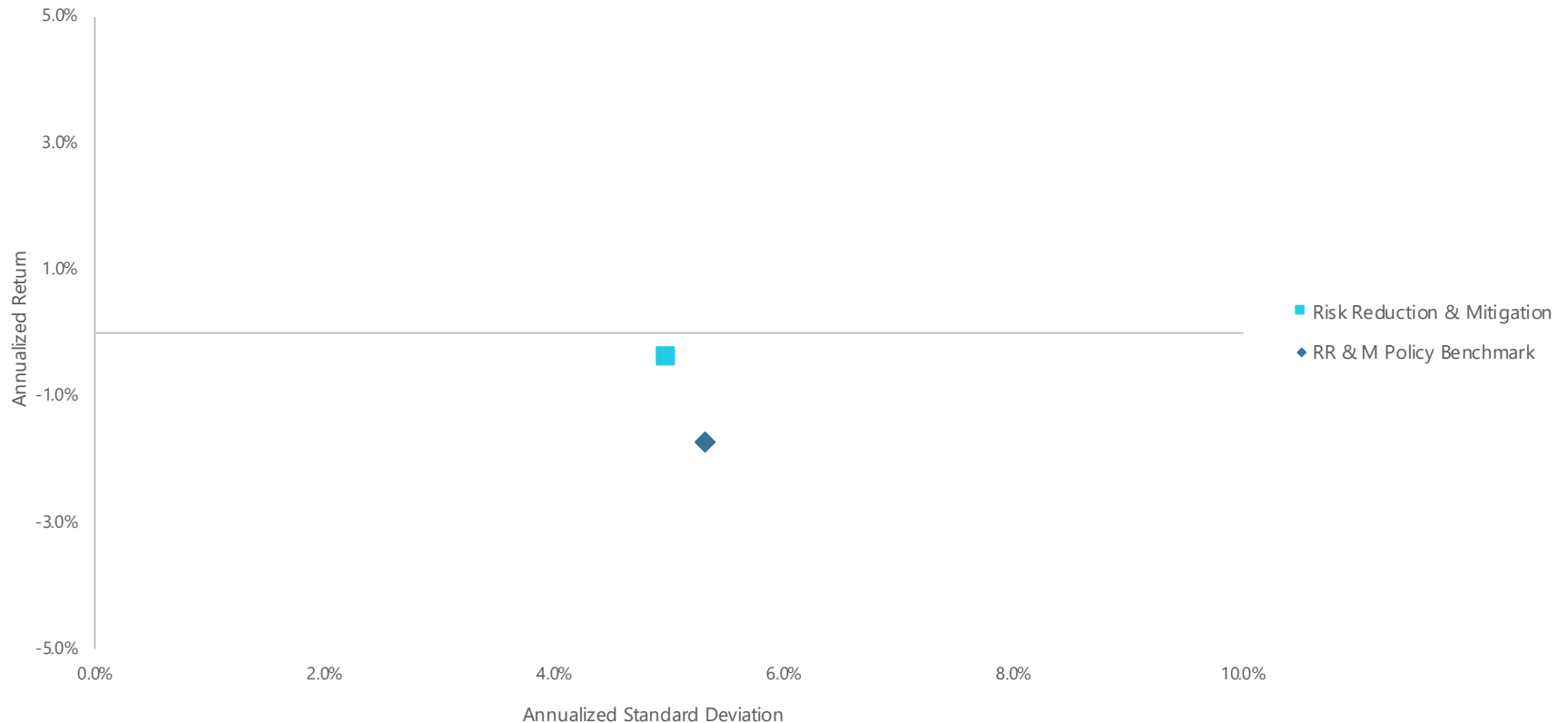
	Ending Market Value (mm)	% of Composite	Policy Allocation	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Total Value Add
Risk Reduction & Mitigation	13,598	100.0%	100.0%	3.7%	3.4%	-0.23%	0.61%	0.38%
Investment Grade Bonds	5,083	37.4%	36.8%	3.1%	3.0%	0.00%	0.06%	0.06%
Diversified Hedge Funds	4,543	33.4%	31.6%	3.3%	1.7%	-0.06%	0.54%	0.48%
Long-Term Government Bonds	3,032	22.3%	26.3%	6.1%	6.2%	-0.15%	0.00%	-0.15%
Cash	939	6.9%	5.3%	1.4%	1.1%	-0.02%	0.02%	0.00%

¹ Total Value Add column includes Interaction Effect.

Risk vs. Return

for the quarter ended March 31, 2023

3 Year (Annualized)



	Annualized Return	Standard Deviation	Sharpe Ratio	Information Ratio	Beta	Tracking Error
Risk Reduction & Mitigation	-0.4%	5.0%				
RR & M Policy Benchmark	-1.7%	5.3%	(0.22)	1.72	0.93	0.8%

Performance Detail

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

Annualized Net Returns

	% of Composite	Ending Market Value (mm)	Prior Quarter Ending MV (mm)	QTD	YTD	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date
Risk Reduction & Mitigation	100.0%	13,598	13,202	3.7%	3.7%	-2.5%	-0.4%	--	--	1.5%	Apr-2019
RR & M Policy Benchmark				3.4%	3.4%	-3.6%	-1.7%	--	--	0.6%	
Investment Grade Bonds	37.4%	5,083	5,003	3.1%	3.1%	-4.8%	-2.2%	1.0%	1.7%	5.2%	Nov-1994
BBG BC Aggregate Bond Index				3.0%	3.0%	-4.8%	-2.8%	0.9%	1.4%	4.7%	
Allspring/Wells	9.5%	1,291	1,252	3.2%	3.2%	-4.5%	-1.9%	1.3%	1.7%	3.9%	Mar-2004
BTC US Debt Index Fund	21.5%	2,921	2,905	3.1%	3.1%	-4.7%	-2.7%	1.0%	1.4%	3.9%	Nov-1999
MHLP	0.1%	10	11	1.2%	1.2%	4.9%	5.1%	5.9%	5.4%	5.4%	Apr-2005
Pugh Capital Mgmt	6.3%	860	835	3.0%	3.0%	-4.8%	-2.4%	1.0%	1.4%	3.3%	Jul-2005
Diversified Hedge Funds	33.4%	4,543	4,402	3.3%	3.3%	7.7%	7.7%	--	--	7.1%	Apr-2019
Diversified Hedge Funds Policy Benchmark				1.7%	1.7%	4.8%	3.4%	--	--	3.7%	
AM Asia Strategies	1.9%	263	217	21.2%	21.2%	14.9%	--	--	--	9.1%	Jun-2021
Brevan Howard Master Fund	4.9%	669	650	2.9%	2.9%	18.3%	--	--	--	9.8%	Apr-2021
Capula GRV	4.9%	663	642	3.2%	3.2%	12.0%	6.8%	--	--	7.0%	Dec-2018
Caxton Global Investments	2.2%	302	297	1.8%	1.8%	10.5%	--	--	--	9.8%	Feb-2021
DK Institutional Partners	3.7%	500	486	2.9%	2.9%	1.0%	5.6%	--	--	5.0%	May-2018
Grosvenor HFOF	0.2%	27	31	--	--	--	--	--	--	--	Nov-2011
HBK Multi-strategy	4.3%	585	578	1.3%	1.3%	5.0%	6.9%	--	--	5.5%	Jun-2018
Hudson Bay	4.9%	669	650	2.8%	2.8%	6.0%	--	--	--	10.8%	Jul-2020
Polar	3.5%	481	467	2.9%	2.9%	3.6%	--	--	--	10.6%	May-2020
Stable Asset Management	2.8%	385	384	0.2%	0.2%	1.0%	--	--	--	-0.1%	Aug-2021
Long-Term Government Bonds	22.3%	3,032	2,857	6.1%	6.1%	-16.1%	--	--	--	-18.2%	Nov-2021
Bloomberg U.S. Treasury: Long				6.2%	6.2%	-16.0%	--	--	--	-19.2%	Nov-2021
BlackRock Long Treasury Bonds	22.3%	3,032	2,857	6.1%	6.1%	-16.1%	--	--	--	-18.2%	Nov-2021
Cash	6.9%	939	940	1.4%	1.4%	4.4%	2.0%	2.2%	1.4%	1.9%	Jun-2001
Cash Policy Benchmark				1.1%	1.1%	2.6%	1.0%	1.4%	0.9%	1.4%	

Risk Reduction & Mitigation

Risk Summary

for the quarter ended March 31, 2023

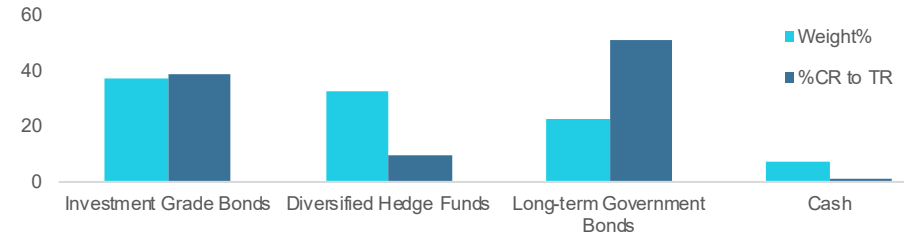
Risk Summary

	Value
Total Risk	6.38
Benchmark Risk	6.26
Active Risk	1.18
Portfolio Beta	1.00
Cont. to Eff. Duration	6.61
Convexity	1.55
Yield to Worst (%)	4.00
OAS to Sw ap (bp)	56

Risk Decomposition

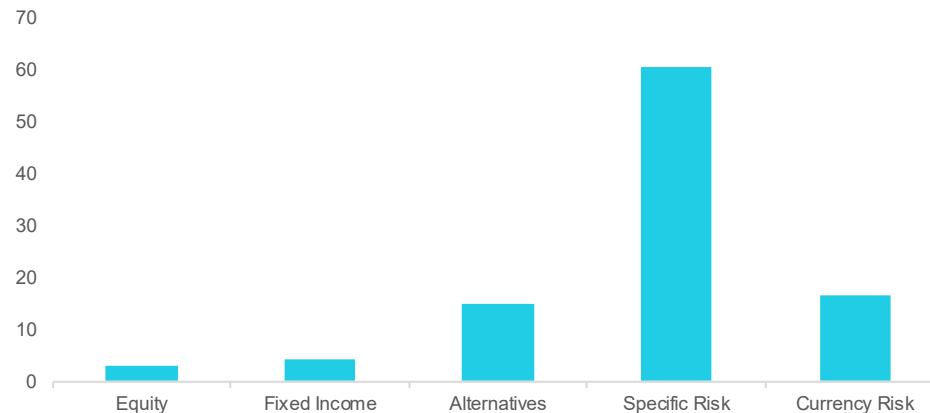
Risk Source	Portfolio		Active	
	Risk Contribution	%Risk	Risk Contribution	%Risk
Total Risk	6.38	100.00	1.18	100.00
Local Market Risk	6.21	97.40	0.99	83.18
Common Factor Risk	6.08	95.31	0.27	22.61
Specific Risk	0.13	2.09	0.72	60.58
Currency Risk	0.17	2.60	0.20	16.82

Contribution to Risk



	Mkt Value (mm)	Weight%	Total Risk	Risk Contribution	%CR to TR
Risk Reduction & Mitigation	13,185	100.00	6.38	6.38	100.00
Investment Grade Bonds	4,929	37.38	6.81	2.48	38.83
Diversified Hedge Funds	4,283	32.49	3.80	0.64	9.96
Long-term Government Bonds	3,031	22.99	14.72	3.27	51.21
Cash	941	7.13	0.00	0.00	0.00

Active Risk from Common Factors

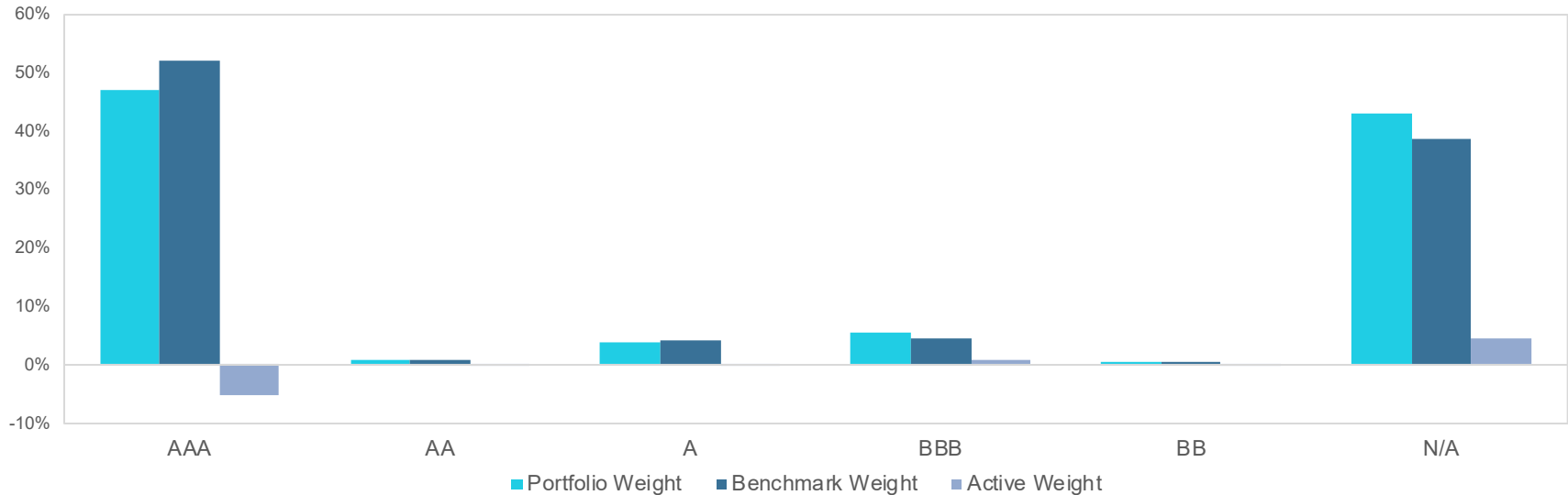


Risk Reduction & Mitigation

Risk Summary

for the quarter ended March 31, 2023

Portfolio Allocation By Moody's Rating



Rating	Weight%			Total Risk	Active Risk CR	% of Active TR	CR to Effective Duration
	Portfolio	Benchmark	Active				
Risk Reduction & Mitigation	100.00%	100.00%	0.00%	6.38	1.18	100%	6.61
AAA	46.98%	52.07%	-5.09%	10.56	0.01	1.04%	5.20
AA	0.68%	0.79%	-0.11%	7.90	0.00	0.0%	0.06
A	3.88%	4.10%	-0.22%	6.89	0.00	-0.1%	0.27
BBB	5.34%	4.38%	0.95%	7.15	0.01	0.7%	0.37
BB	0.10%	0.14%	-0.04%	9.43	0.00	-0.1%	0.01
N/A	43.02%	38.52%	4.51%	3.12	1.17	98.4%	0.70

Risk Reduction & Mitigation

Investment Grade Bonds

Allspring/Wells

for the quarter ended March 31, 2023

Strategy

A core fixed income strategy focusing on bottom-up quantitative and qualitative security selection and comprehensive risk management. Value is added primarily through security selection and sector rotation.

Inception Date: March 2004

Portfolio Characteristics

	Portfolio	Benchmark
No. of Issues	900.0	0.0
Effective Duration	6.4	6.2
Convexity	0.7	0.6
Coupon Rate	3.3	2.8
Yield to Maturity	4.4	4.2
Current Yield	3.5	3.0
Rating – Moody's	AA-2	AA-2
Rating – S & P	AA	AA-

Top Holdings (% of assets)

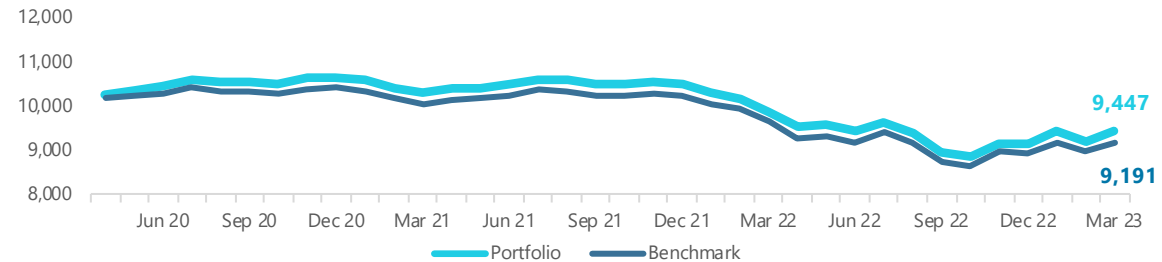
US TREASURY N/B	3.8%
US TREASURY N/B	1.8%
US TREASURY N/B	1.6%
US TREASURY N/B	1.6%
US TREASURY N/B	1.5%
Top 5 Holdings	10.2%

Performance (net)¹

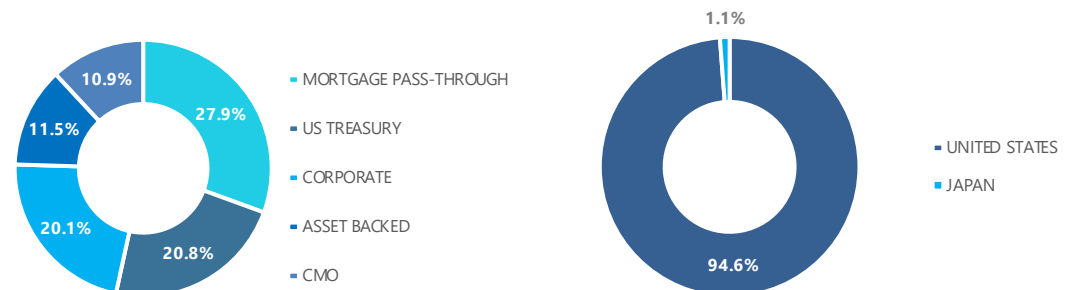
	Ending Market Value (mm)	QTD	1 Year	3 Year	5 Year
Allspring/Wells	1,291.3	3.2%	-4.5%	-1.9%	1.3%
BBG BARC Agg		3.0%	-4.8%	-2.8%	0.9%
RR & M Policy Benchmark		3.4%	-3.6%	-1.7%	--

Universe data: US Fixed Income Pools	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
Allspring/Wells	3.2%	41	-4.4%	59	-1.8%	66	1.4%	54
Median	2.9%		-3.9%		-0.2%		1.5%	

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Risk Reduction & Mitigation Risk Analysis

Investment Grade Bonds

Allspring/Wells

for the quarter ended March 31, 2023

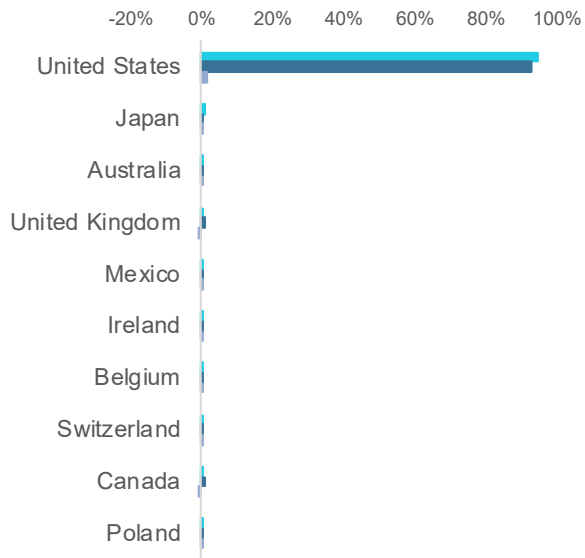


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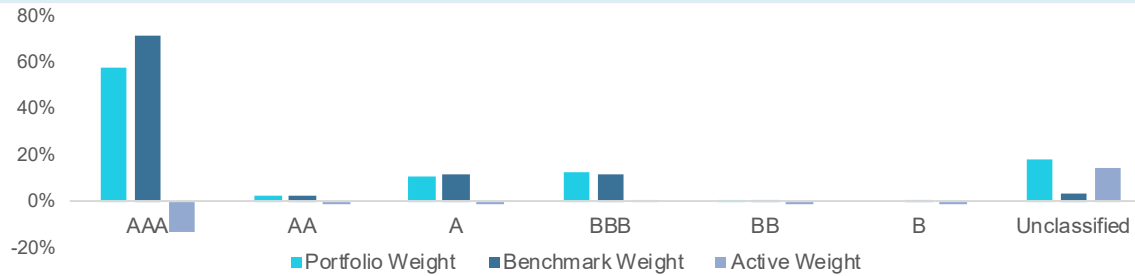
Portfolio Risk Summary

	Value
Total Risk	7.21
Benchmark Risk	6.66
Active Risk	0.72
Portfolio Beta	1.08
Cont. to Eff. Duration	7.15
Yield to Worst (%)	4.27
OAS to Sw ap (bp)	72

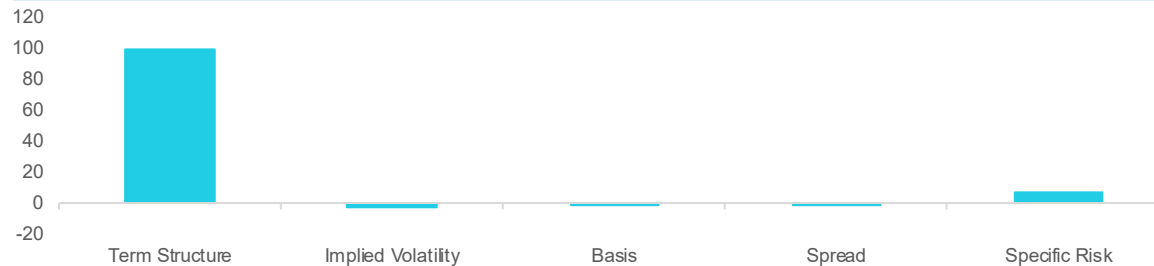
Top Countries by Weight%



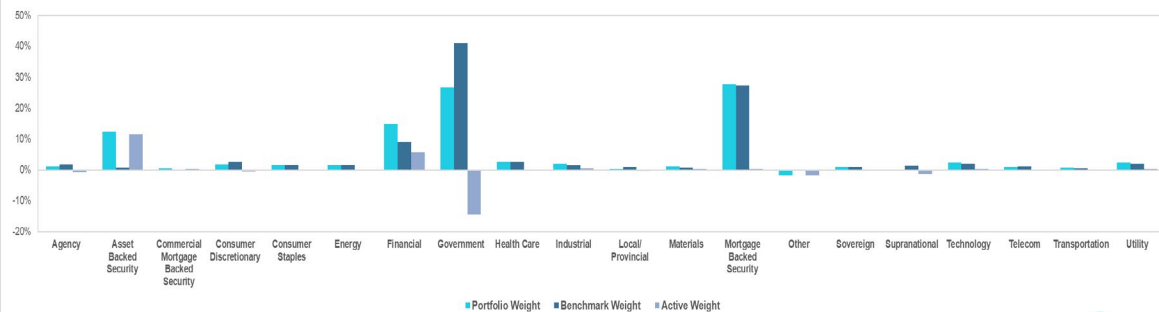
Allocation by Moody's Rating



Active Risk from Common Factors



Portfolio Risk by Bond Sector



■ Portfolio Weight ■ Benchmark Weight ■ Active Weight

■ Portfolio Weight ■ Benchmark Weight ■ Active Weight

Risk Reduction & Mitigation

Investment Grade Bonds

Pugh Capital

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

Strategy

A core fixed income strategy that invests in investment-grade securities, with an emphasis on higher credit quality and mortgage-backed securities. The strategy seeks to add value relative to the Index by minimizing downside risk across the portfolio while adding incremental return through issue selection.

Inception Date: July 2005

Portfolio Characteristics

	Portfolio	Benchmark
No. of Issues	296.0	0.0
Effective Duration	6.3	6.2
Convexity	0.6	0.6
Coupon Rate	3.5	2.8
Yield to Maturity	4.4	4.2
Current Yield	3.7	3.0
Rating – Moody's	AA-3	AA-2
Rating – S & P	AA-	AA-

Top Holdings (% of assets)

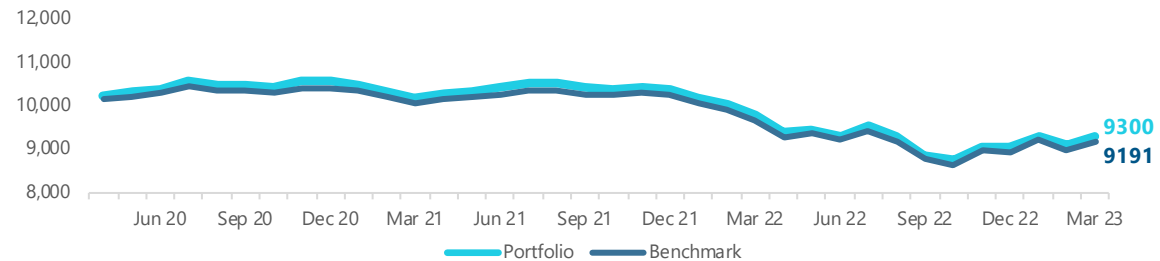
US TREASURY N/B	3.2%
US TREASURY N/B	2.8%
US TREASURY N/B	2.3%
GNMA II POOL MA8151	1.6%
FORD CREDIT AUTO OWNER TRUST/F	1.6%
Top 5 Holdings	11.4%

Performance (net)¹

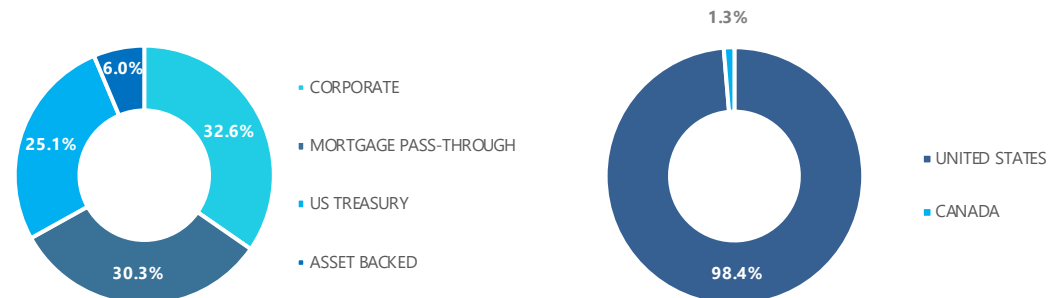
	Ending Market Value (mm)	QTD	1 Year	3 Year	5 Year
Pugh Capital Mgmt	860.3	3.0%	-4.8%	-2.4%	1.0%
BBG BARC Agg		3.0%	-4.8%	-2.8%	0.9%
RR & M Policy Benchmark		3.4%	-3.6%	-1.7%	--

Universe data: US Fixed Income Pools	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
Pugh Capital Mgmt	3.1%	44	-4.7%	62	-2.3%	72	1.2%	69
Median	2.9%		-3.9%		-0.2%		1.5%	

Growth of \$10,000



Top Exposures (% of assets)²



¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Risk Reduction & Mitigation Risk Analysis

Investment Grade Bonds

Pugh Capital

for the quarter ended March 31, 2023

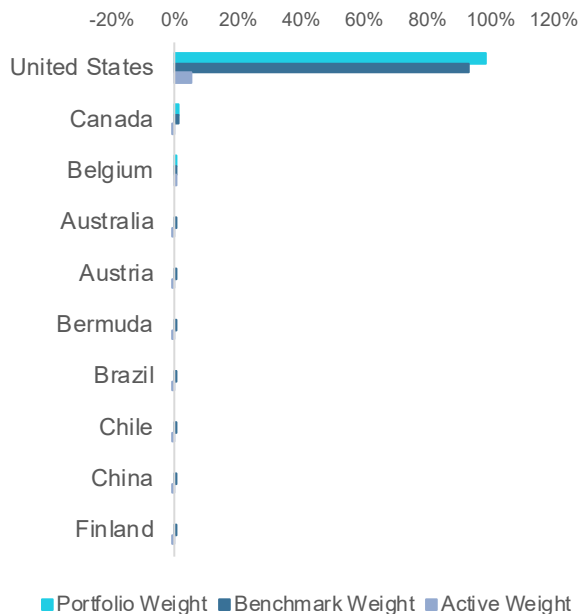


Los Angeles County Employees Retirement Association

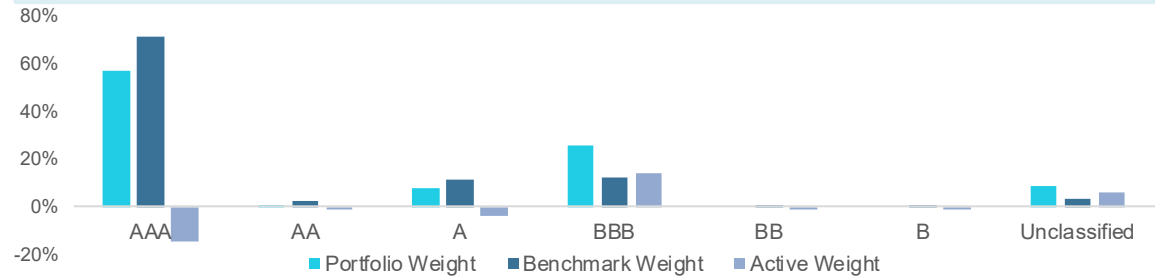
Portfolio Risk Summary

	Value
Total Risk	6.88
Benchmark Risk	6.66
Active Risk	0.45
Portfolio Beta	1.03
Cont. to Eff. Duration	6.52
Yield to Worst (%)	4.41
OAS to Swap (bp)	78

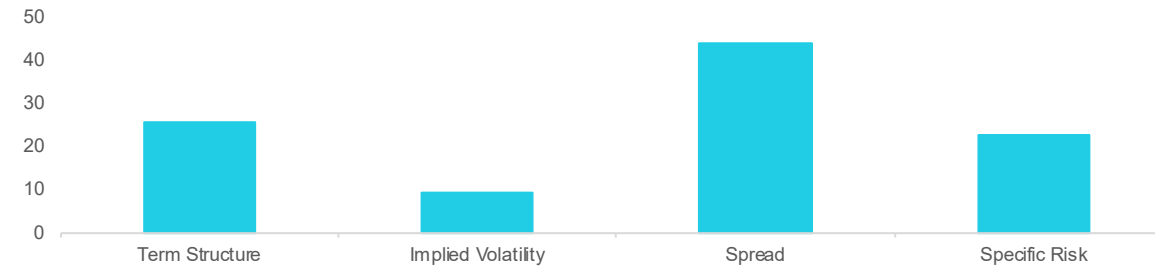
Top Countries by Weight%



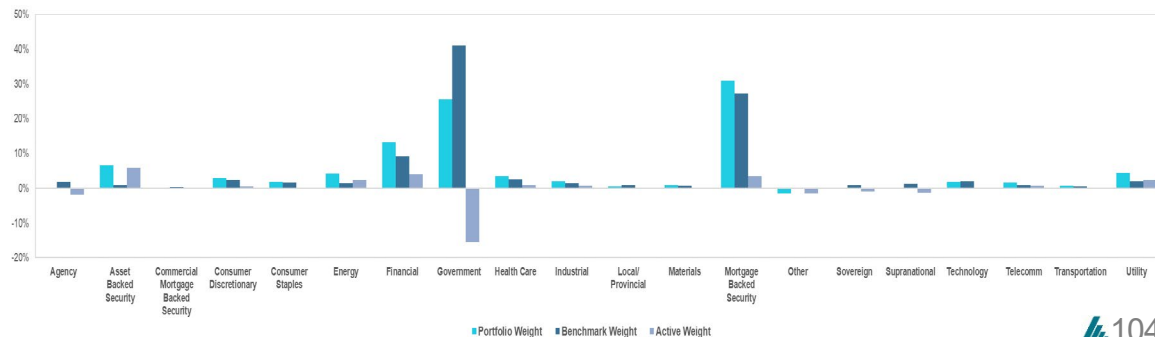
Allocation by Moody's Rating



Active Risk from Common Factors



Portfolio Risk by Bond Sector



Risk Reduction & Mitigation

Long-term Government Bonds

BlackRock

for the quarter ended March 31, 2023

Strategy

Seeks investment results that correspond generally to the price and yield performance of long duration U.S. government bonds.

Inception Date: Nov 2021

Portfolio Characteristics

Standard Deviation	16.5%
Benchmark Standard Deviation	16.5%
Sharpe Ratio	-1.21
Information Ratio	-0.20
Beta	1.00
Tracking Error	1.3%

Top Holdings (% of assets)

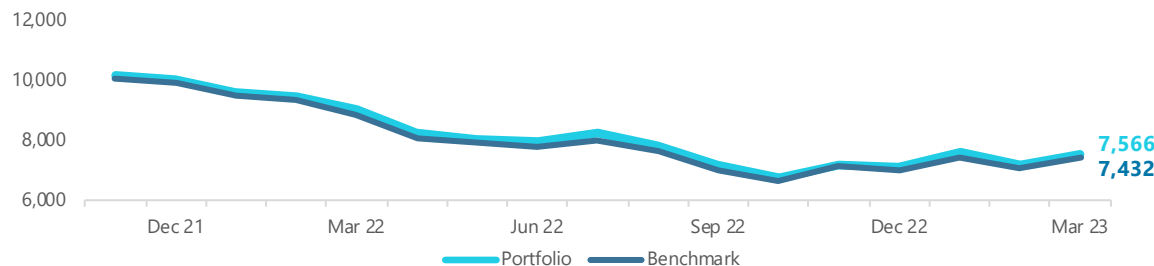
US TREASURY N/B	2.9%
US TREASURY N/B	2.8%
US TREASURY N/B	2.7%
US TREASURY N/B	2.7%
US TREASURY N/B	2.6%
Top 5 Holdings	13.3%

Performance (net)¹

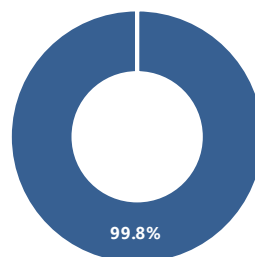
	Ending Market Value (mm)	QTD	1 Year	3 Year	5 Year
BlackRock Long Treasury Bonds	3,032.5	6.1%	-16.1%	--	--
Bloomberg U.S. Treasury: Long RR & M Policy Benchmark		6.2%	-16.0%	--	--
		3.4%	-3.6%	-1.7%	--

Universe data: US Fixed Income Pools	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
BlackRock Long Treasury Bonds	6.2%	13	-16.1%	94	--	--	--	--
Median	2.9%		-3.9%		--	--	--	--

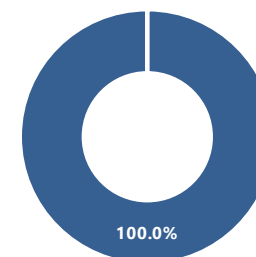
Growth of \$10,000



Top Exposures (% of assets)²



■ US TREASURY



■ UNITED STATES

¹ Universe data is gross-of-fees.

² Charts display top exposures and may not add up to 100%.

Risk Reduction & Mitigation Risk Analysis

Long-term Government Bonds

BlackRock

for the quarter ended March 31, 2023

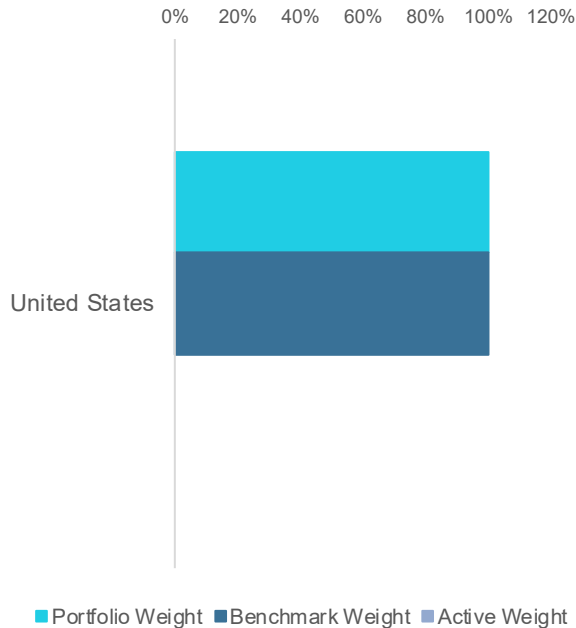


Los Angeles County Employees Retirement Association

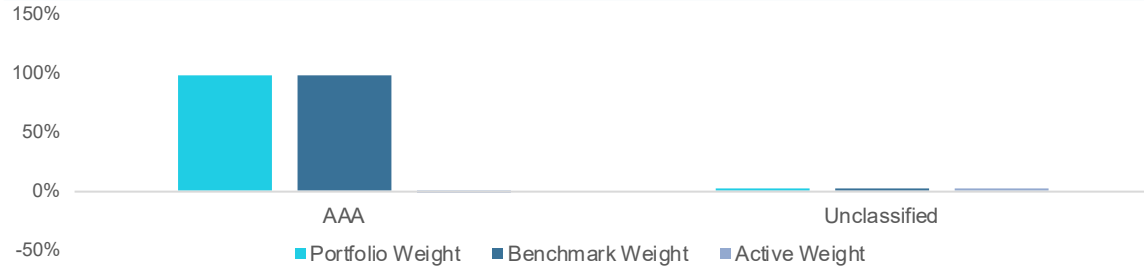
Portfolio Risk Summary

	Value
Total Risk	14.72
Benchmark Risk	14.72
Active Risk	0.03
Portfolio Beta	1.00
Cont. to Eff. Duration	16.31
Yield to Worst (%)	3.78
OAS to Sw ap (bp)	44

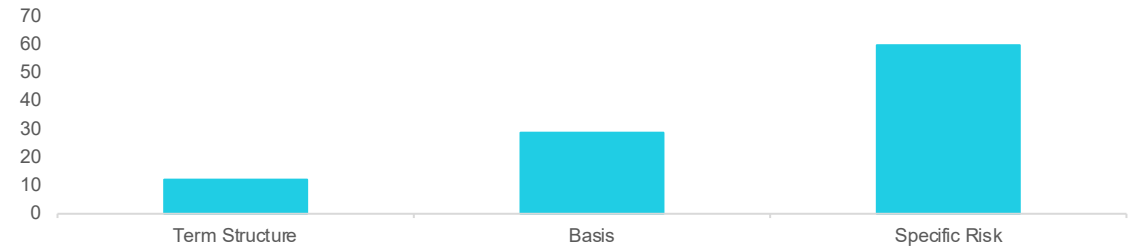
Top Countries by Weight%



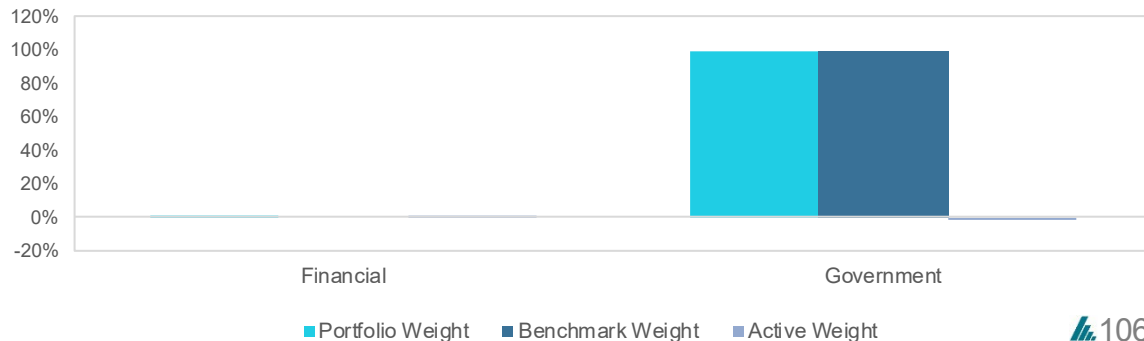
Allocation by Moody's Rating



Active Risk from Common Factors



Portfolio Risk by Bond Sector



private markets

Summary

Private Equity

for the quarter ended March 31, 2023



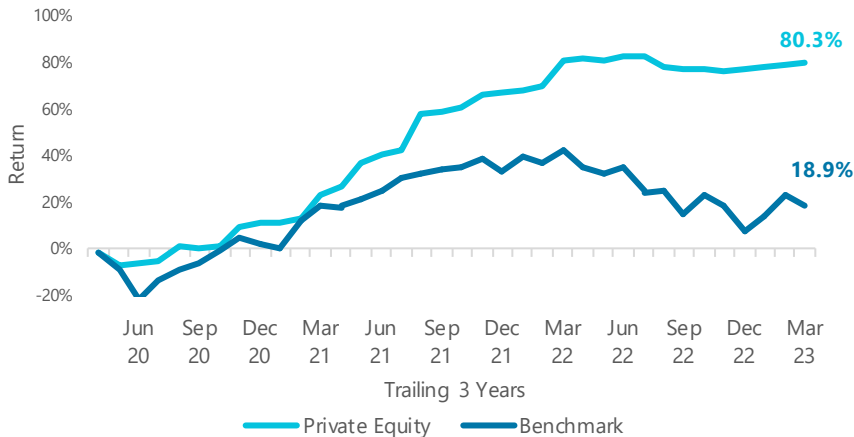
Los Angeles County Employees Retirement Association

Performance (net)



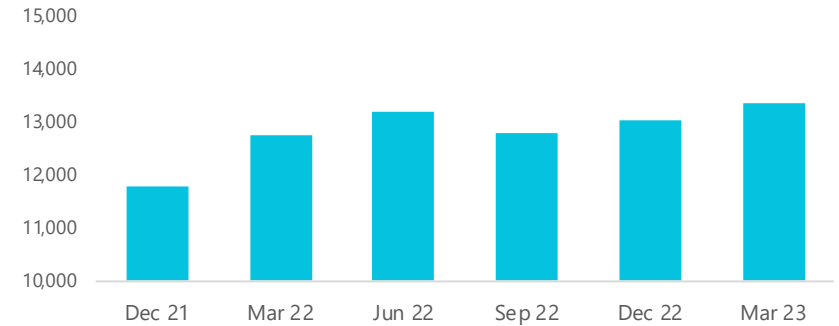
	QTD	YTD	1 Year	3 Year	5 Year	10 Year	ITD
Private Equity	1.7%	1.7%	-0.5%	21.7%	18.4%	16.8%	15.3%
Benchmark	10.3%	10.3%	-16.4%	5.9%	12.2%	12.7%	--
Excess	-8.6%	-8.6%	16.0%	15.8%	6.2%	4.1%	--

Cumulative Return

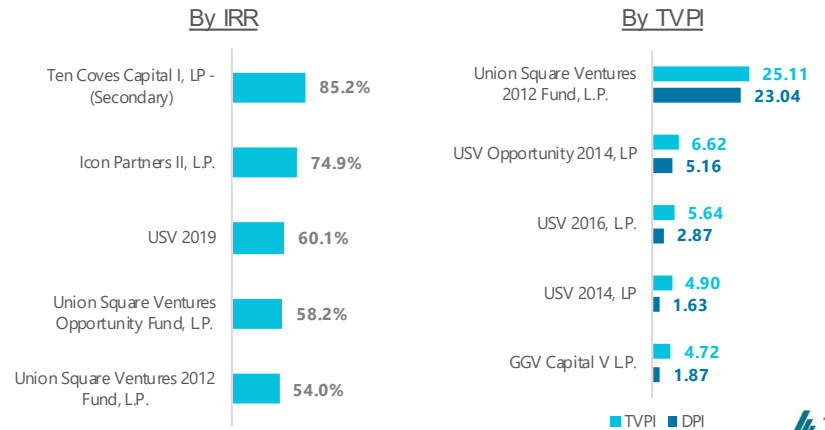


Asset Growth (mm)

	QTD	1 Year	3 Year
Beginning Market Value	13,030	12,751	6,881
Net Cash Flow	95	651	689
Gain/Loss	221	-57	5,776
Ending Market Value	13,345	13,345	13,345



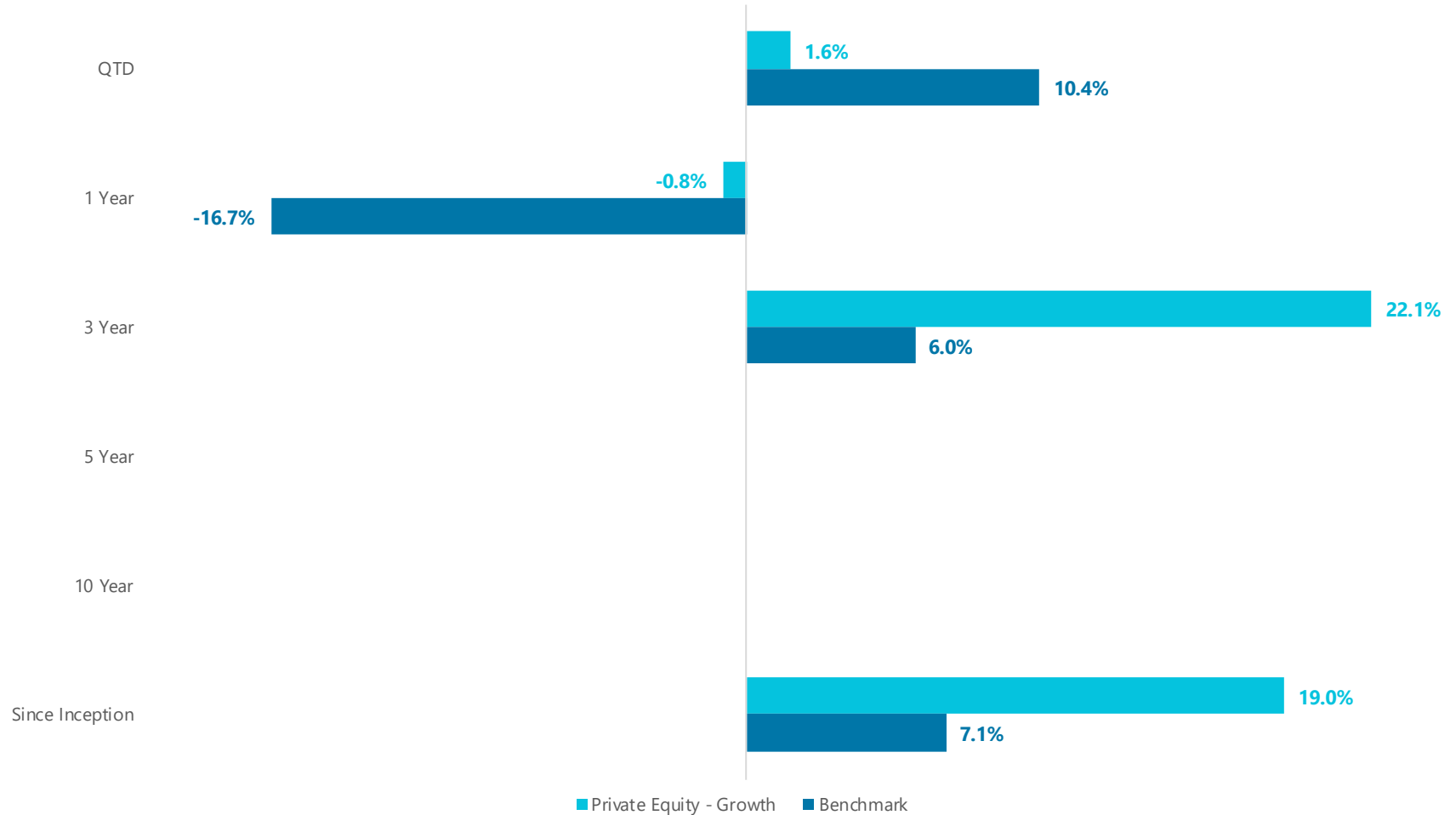
Top Performing Investments (since inception)



Historical Returns

Private Equity – Growth
for the quarter ended March 31, 2023

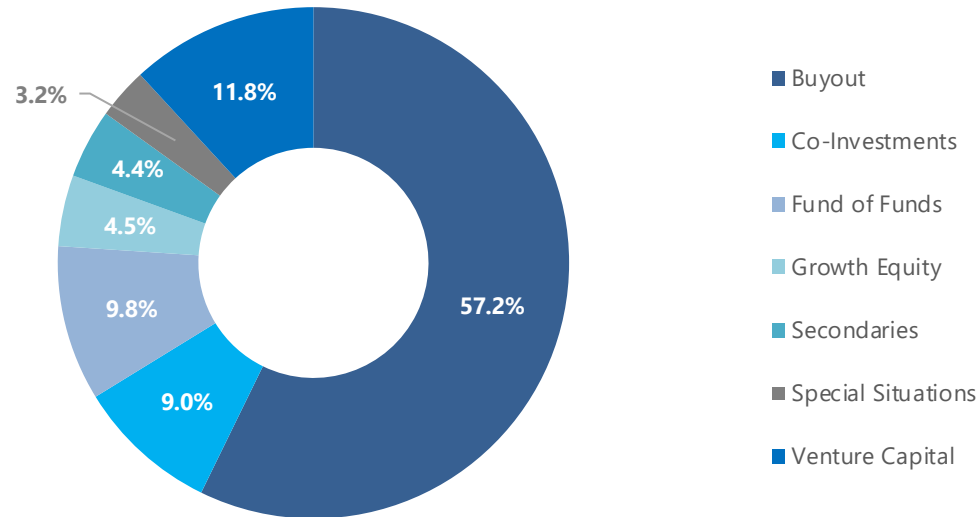
Time-Weighted Returns (net)



Performance by Strategy

Private Equity – Growth
for the quarter ended March 31, 2023

By Strategy^{1,2}



	Number of Investments	Commitments (mm)	Cumulative Contributions (mm)	Cumulative Distributions (mm)	Market Value (mm)	Total Value (mm)	Total Gain / Loss (mm)	Distributed to Paid-In	Total Value to Paid-In	Since Inception Net IRR	Since Inception PME
Buyout	206	14,766.3	13,166.9	14,504.4	7,544.9	22,049.3	8,882.4	1.10x	1.67x	14.0%	1.57
Co-Investments	11	1,557.3	1,351.3	1,030.5	1,185.9	2,216.5	865.2	0.72x	1.56x	18.2%	1.42
Fund of Funds	15	1,863.6	1,344.7	1,566.5	1,293.9	2,860.4	1,515.7	1.16x	2.13x	14.4%	1.54
Growth Equity	23	1,347.1	1,143.3	1,519.5	593.6	2,113.2	969.9	1.33x	1.85x	86.9%	1.68
Secondaries	20	886.7	711.8	369.8	576.8	946.6	234.8	0.52x	1.33x	17.4%	1.29
Special Situations	22	1,172.8	1,018.6	1,073.5	426.3	1,499.8	481.2	1.05x	1.47x	9.7%	1.17
Venture Capital	107	2,253.4	1,942.6	2,611.4	1,561.3	4,172.7	2,230.1	1.34x	2.15x	21.7%	2.00
Total Private Equity - Growth	404	23,847.0	20,679.1	22,675.6	13,182.9	35,858.5	15,179.3	1.09x	1.73x	16.4%	1.69

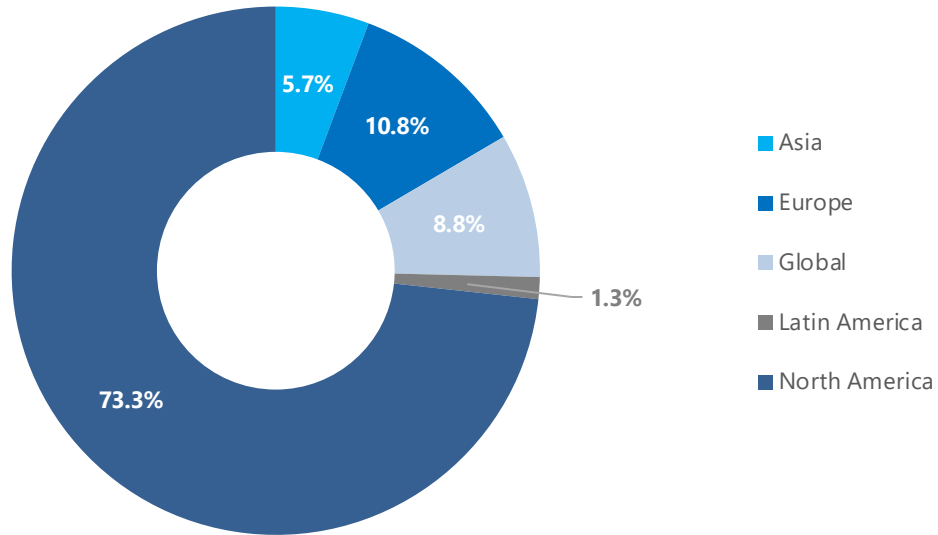
¹ Based on best available cash flow adjusted market values.

² Investment counts for Co-Investments and Fund of Funds do not include underlying funds.

Performance by Geography

Private Equity – Growth
for the quarter ended March 31, 2023

By Geography^{1,2}



	Number of Investments	Commitments (mm)	Cumulative Contributions (mm)	Cumulative Distributions (mm)	Market Value (mm)	Total Value (mm)	Total Gain / Loss (mm)	Distributed to Paid-In	Total Value to Paid-In	Since Inception Net IRR	Since Inception PME
Asia	14	826.0	720.0	459.9	752.8	1,212.8	492.8	0.64x	1.68x	14.3%	1.27
Europe	36	2,741.2	2,439.2	2,362.2	1,428.5	3,790.7	1,351.5	0.97x	1.55x	15.7%	1.35
Global	27	2,162.7	1,359.6	820.1	1,164.9	1,985.0	625.4	0.60x	1.46x	15.7%	1.31
Latin America	2	200.0	188.7	52.7	176.3	229.0	40.3	0.28x	1.21x	6.9%	0.98
North America	325	17,917.2	15,971.7	18,980.7	9,660.3	28,641.0	12,669.3	1.18x	1.79x	16.4%	1.73
Total Private Equity - Growth	404	23,847.0	20,679.1	22,675.6	13,182.9	35,858.5	15,179.3	1.09x	1.73x	16.4%	1.69

¹ Based on best available cash flow adjusted market values.

² Investment counts for Co-Investments and Fund of Funds do not include underlying funds.

Performance by Vintage Year

Private Equity – Growth
for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

By Vintage Year^{1,2,3}

	Number of Investments	Commitments (mm)	Cumulative Contributions (mm)	Cumulative Distributions (mm)	Market Value (mm)	Total Value (mm)	Total Gain / Loss (mm)	Distributed to Paid-In	Total Value to Paid-In	Since Inception IRR	Since Inception PME	Quartile Ranking
1986	3	80.0	80.0	267.5	0.0	267.5	187.5	3.34x	3.34x	15.7%	--	1st
1987	1	25.0	25.0	40.3	0.0	40.3	15.3	1.61x	1.61x	7.3%	--	3rd
1988	2	200.0	216.6	466.9	0.0	466.9	250.3	2.16x	2.16x	15.5%	89.91	2nd
1989	0	--	--	--	--	--	--	--	--	--	--	N/A
1990	1	7.5	7.5	16.7	0.0	16.7	9.2	2.22x	2.22x	13.0%	9.13	3rd
1991	0	--	--	--	--	--	--	--	--	--	--	N/A
1992	10	116.0	111.0	242.5	0.0	242.5	131.6	2.19x	2.19x	29.1%	3.78	1st
1993	8	68.0	64.8	239.5	0.0	239.5	174.7	3.70x	3.70x	39.7%	3.22	1st
1994	5	56.9	58.8	237.6	0.0	237.6	178.8	4.04x	4.04x	54.1%	2.82	1st
1995	7	100.5	102.3	362.6	0.0	362.6	260.2	3.54x	3.54x	43.2%	2.58	1st
1996	12	222.9	225.2	608.8	0.0	608.8	383.6	2.70x	2.70x	37.5%	2.15	1st
1997	11	397.5	410.4	606.4	0.0	606.4	196.0	1.48x	1.48x	7.7%	1.20	3rd
1998	22	644.4	655.2	945.3	0.6	945.9	290.7	1.44x	1.44x	7.3%	1.19	2nd
1999	21	363.1	369.7	436.6	0.1	436.6	66.9	1.18x	1.18x	3.4%	0.96	2nd
2000	25	375.3	387.3	575.0	0.2	575.2	187.9	1.48x	1.49x	8.7%	1.07	2nd
2001	15	411.1	442.6	835.5	2.4	838.0	395.4	1.89x	1.89x	21.7%	1.38	1st
2002	8	220.4	230.3	537.4	0.0	537.4	307.1	2.33x	2.33x	19.0%	1.64	2nd
2003	8	309.8	339.2	701.6	0.4	701.9	362.7	2.07x	2.07x	21.3%	1.60	1st
2004	7	344.4	392.2	746.7	(1.5)	745.3	353.1	1.90x	1.90x	19.5%	1.58	1st
2005	15	505.1	506.2	1,040.0	4.5	1,044.5	538.3	2.05x	2.06x	13.4%	1.64	1st
2006	28	1,517.9	1,607.3	2,561.0	10.7	2,571.7	964.4	1.59x	1.60x	8.8%	1.25	2nd
2007	11	517.0	461.9	784.0	30.3	814.3	352.4	1.70x	1.76x	11.4%	1.20	2nd
2008	10	640.9	700.4	1,233.6	26.7	1,260.2	559.8	1.76x	1.80x	13.2%	1.21	2nd
2009	0	--	--	--	--	--	--	--	--	--	--	N/A
2010	2	450.0	472.5	702.7	277.0	979.7	507.2	1.49x	2.07x	15.8%	1.44	2nd
2011	7	391.0	414.8	803.2	153.9	957.2	542.4	1.94x	2.31x	18.4%	1.48	2nd
2012	7	435.0	582.0	1,071.5	98.4	1,170.0	588.0	1.84x	2.01x	21.7%	1.67	1st
2013	10	896.5	983.9	1,274.2	497.0	1,771.3	787.4	1.30x	1.80x	15.1%	1.31	2nd
2014	11	1,250.4	1,387.4	1,494.3	1,221.7	2,716.0	1,328.6	1.08x	1.96x	17.4%	1.44	2nd
2015	10	1,087.0	1,241.0	1,322.4	1,491.8	2,814.2	1,573.2	1.07x	2.27x	23.1%	1.72	2nd
2016	12	1,129.9	1,289.2	1,090.7	1,231.0	2,321.7	1,032.5	0.85x	1.80x	17.9%	1.35	3rd
2017	8	594.0	577.4	371.4	683.6	1,055.0	477.5	0.64x	1.83x	20.1%	1.42	3rd
2018	9	1,273.5	1,158.8	381.5	1,465.1	1,846.6	687.8	0.33x	1.59x	21.3%	1.42	3rd
2019	30	2,118.1	1,847.0	394.9	2,302.9	2,697.7	850.8	0.21x	1.46x	19.3%	1.31	3rd
2020	10	1,173.0	874.6	157.7	1,033.1	1,190.8	316.2	0.18x	1.36x	22.1%	1.37	2nd
2021	30	3,068.4	1,685.3	97.4	1,815.5	1,912.9	227.6	0.06x	1.14x	12.1%	1.17	2nd
2022	18	2,006.3	772.5	28.3	765.8	794.1	21.6	0.04x	1.03x	-2.3%	0.96	1st
2023	10	850.0	(1.2)	--	71.6	--	--	0.00x	1.00x	0.0%	0.98	N/A
Total Private Equity - Growth	404	23,847.0	20,679.1	22,675.6	13,182.9	35,858.5	15,179.3	1.09x	1.73x	16.4%	1.69	

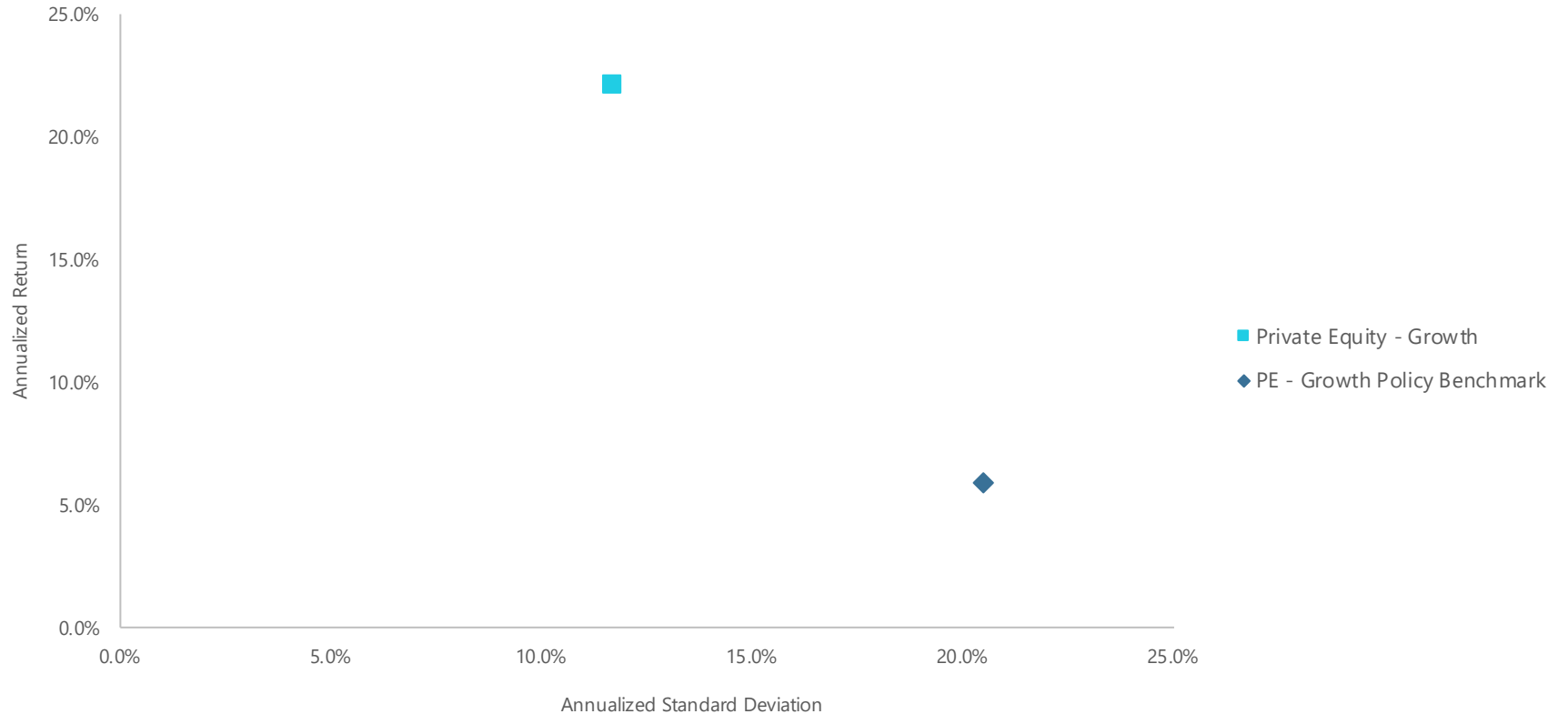
1. Based on best available cash flow adjusted market values.
2. Investment counts for Co-Investments and Fund of Funds do not include underlying funds.
3. Benchmark data used is latest available by Burgiss Private IQ. Quartile rankings are reported as not applicable (N/A) if commitment date is within 3 years of reporting date or if no commitments were made for the respective vintage year.

Risk vs. Return

Private Equity – Growth

for the quarter ended March 31, 2023

3 Year (Annualized)



	Annualized Return	Standard Deviation	Sharpe Ratio	Information Ratio	Beta	Tracking Error
Private Equity - Growth	22.1%	11.7%				
PE - Growth Policy Benchmark	6.0%	20.5%	1.70	0.66	0.21	19.7%

Annual Cash Flow Activity

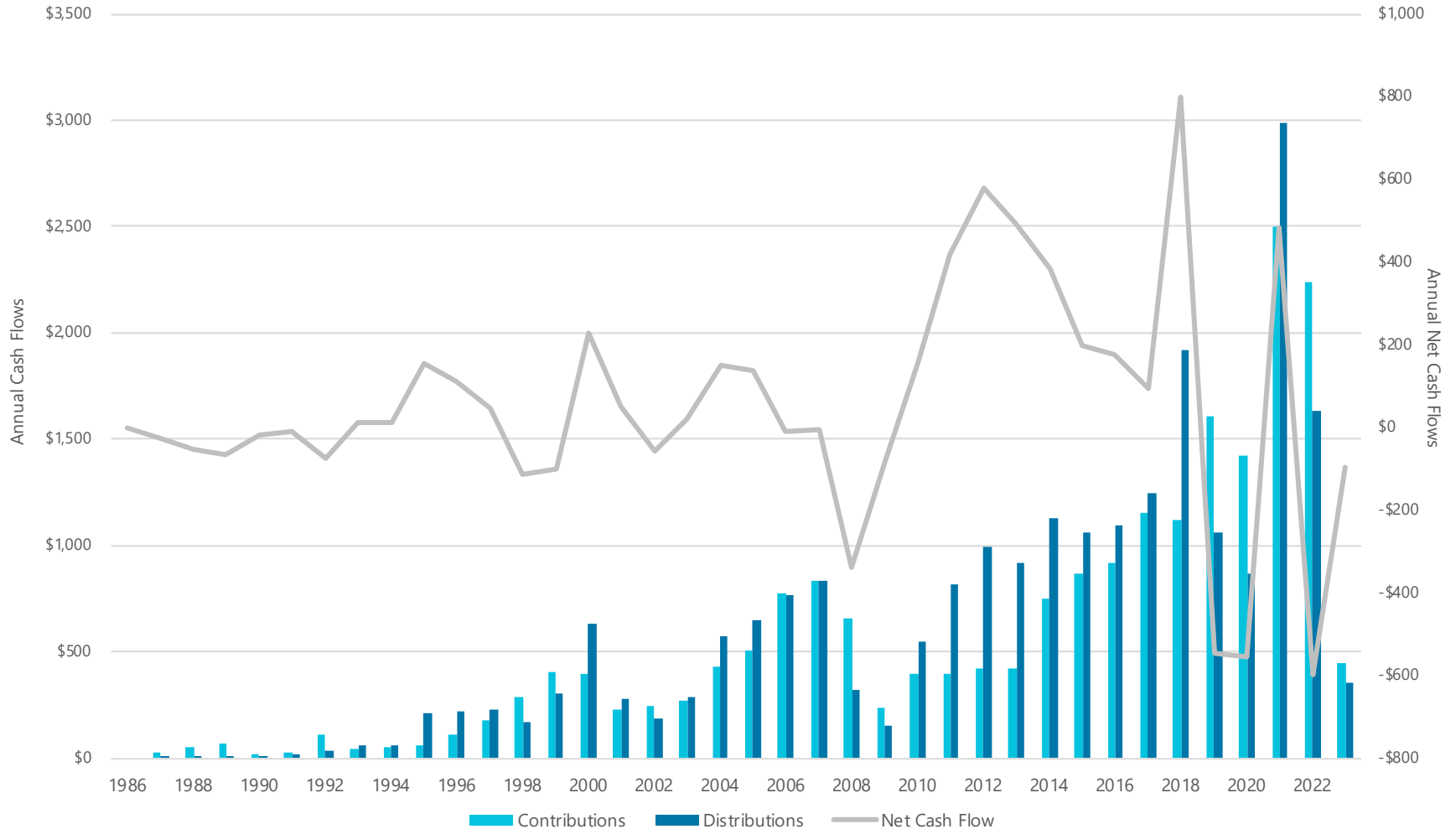
Private Equity

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

By Year (mm)



Summary

Real Estate

for the quarter ended March 31, 2023



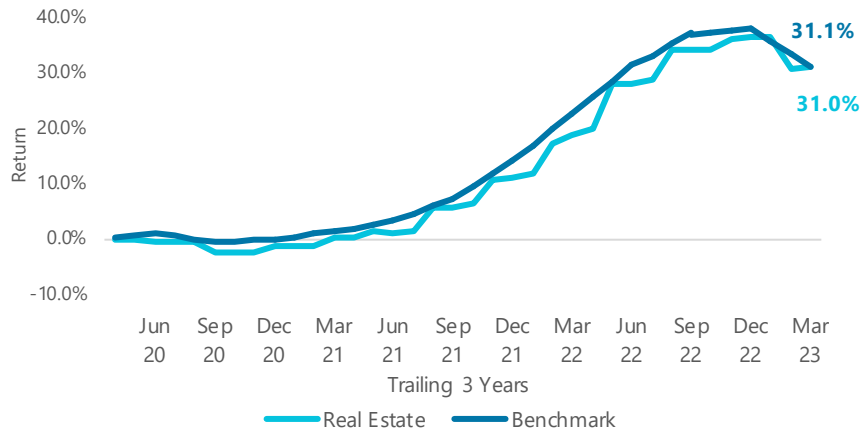
Los Angeles County Employees Retirement Association

Performance (net)



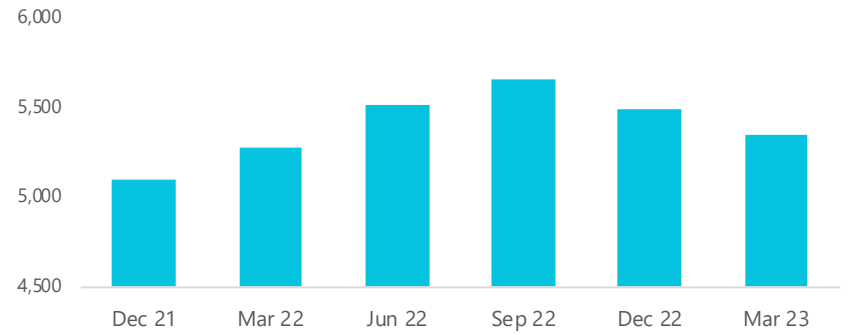
	QTD	YTD	1 Year	3 Year	5 Year	10 Year	ITD
Real Estate	-4.0%	-4.0%	10.2%	9.4%	8.3%	8.8%	8.0%
Benchmark	-4.9%	-4.9%	6.8%	9.4%	8.3%	9.5%	--
Excess	1.0%	1.0%	3.3%	0.0%	0.1%	-0.7%	--

Cumulative Return

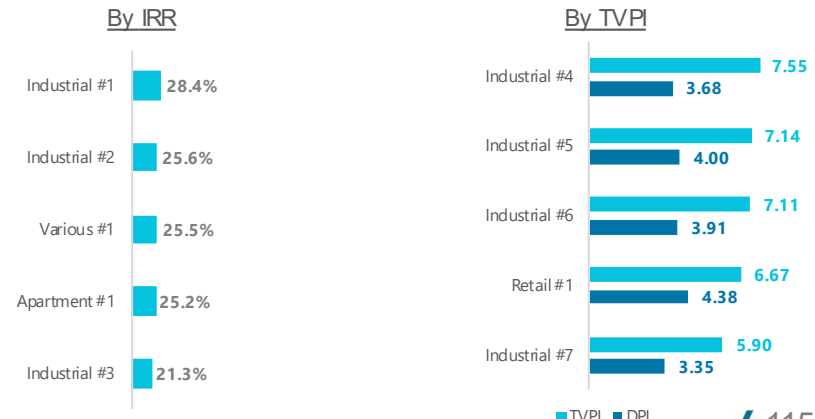


Asset Growth (mm)

	QTD	1 Year	3 Year
Beginning Market Value	5,493	5,274	6,023
Net Cash Flow	71	-462	-2,119
Gain/Loss	-219	534	1,443
Ending Market Value	5,346	5,346	5,346



Top Performing Investments (since inception)¹



¹ Property names removed due to confidentiality reasons.

TVPI | DPI

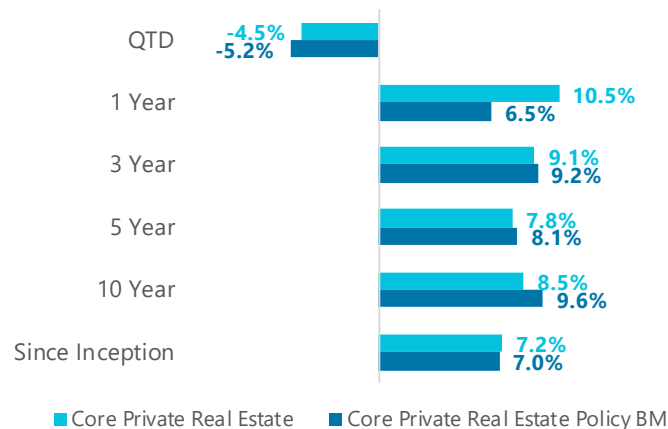
Historical Returns

Real Estate

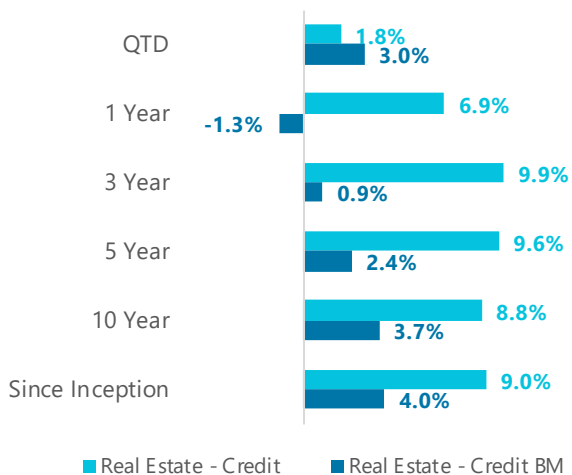
for the quarter ended March 31, 2023

Time-Weighted Returns (net)

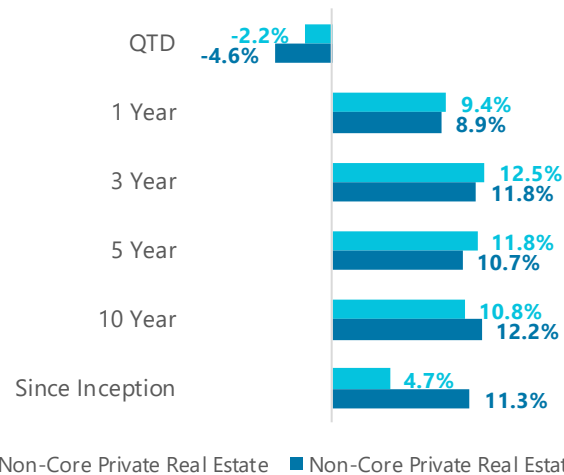
Core



Debt



Non-Core

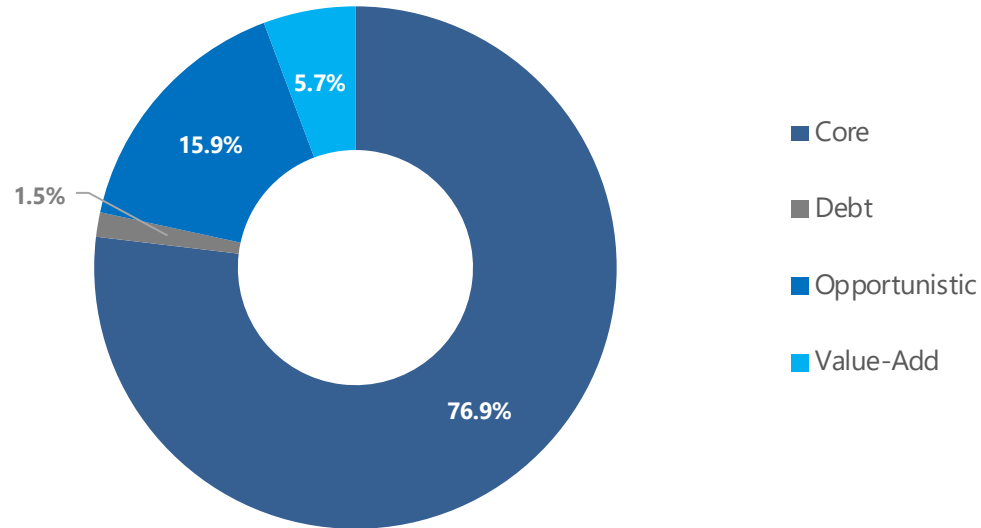


Performance by Strategy

Real Estate

for the quarter ended March 31, 2023

By Strategy^{1,2}



	Number of Investments	Commitments (mm)	Cumulative Contributions (mm)	Cumulative Distributions (mm)	Market Value (mm)	Total Value (mm)	Total Gain / (Loss) (mm)	Distributed to Paid-In	Total Value to Paid-In	Since Inception Net IRR	Since Inception PME
Core	79	433.6	7,421.7	6,825.9	4,001.5	10,827.4	3,405.7	0.92x	1.46x	8.4%	1.15
Debt	7	0.0	158.5	121.9	78.9	200.8	42.3	0.77x	1.27x	8.9%	1.19
Opportunistic	18	1,549.4	1,234.4	785.8	827.6	1,613.4	379.0	0.64x	1.31x	6.5%	1.00
Value-Add	12	471.4	615.1	234.5	296.6	531.1	(84.0)	0.38x	0.86x	-3.4%	0.61
Total Real Estate	116	2,454.4	9,429.6	7,968.1	5,204.5	13,172.7	3,743.0	0.85x	1.40x	7.8%	1.10

¹ Based on best available cash flow adjusted market values and includes only active investments and sold assets with balance sheet residuals.

² Commitment amounts reflect only commingled fund investments.

Performance by Property Type

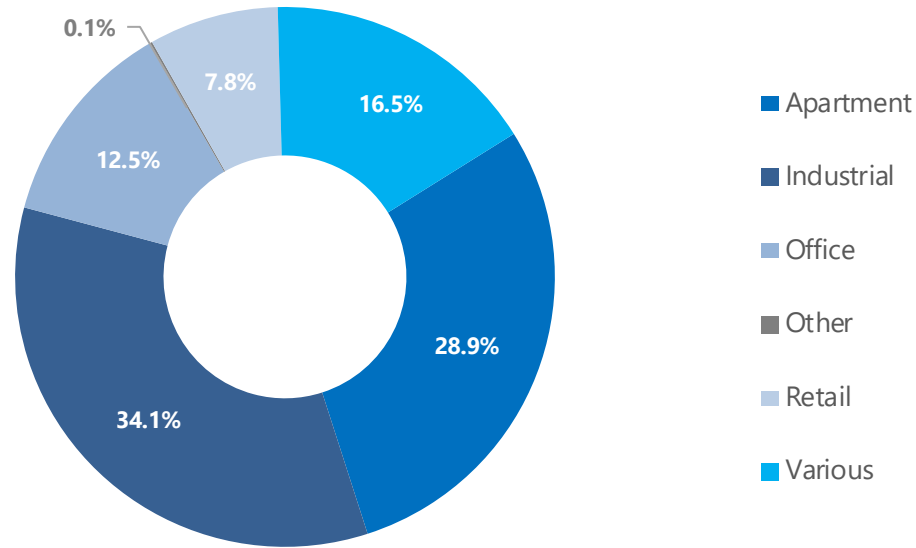
Real Estate

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

By Property Type^{1,2,3}



	Number of Investments	Commitments (mm)	Cumulative Contributions (mm)	Cumulative Distributions (mm)	Market Value (mm)	Total Value (mm)	Total Gain / (Loss) (mm)	Distributed to Paid-In	Total Value to Paid-In	Since Inception Net IRR	Since Inception PME
Apartment	36	384.0	3,086.5	2,579.5	1,505.9	4,085.3	998.9	0.84x	1.32x	7.6%	1.11
Industrial	21	233.6	1,694.9	1,559.0	1,774.7	3,333.7	1,638.8	0.92x	1.97x	13.1%	1.68
Office	19	0.0	2,011.9	1,892.2	651.6	2,543.8	531.9	0.94x	1.26x	5.7%	1.06
Other	4	100.0	170.8	199.0	7.1	206.1	35.3	1.17x	1.21x	4.1%	0.76
Retail	15	0.0	1,279.9	1,274.2	404.5	1,678.8	398.9	1.00x	1.31x	6.3%	0.83
Various	21	1,736.8	1,185.7	464.2	860.7	1,325.0	139.2	0.39x	1.12x	2.6%	0.83
Total Real Estate	116	2,454.4	9,429.6	7,968.1	5,204.5	13,172.7	3,743.0	0.85x	1.40x	7.8%	1.10

¹ Based on best available cash flow adjusted market values and includes only active investments and sold assets with balance sheet residuals.

² Commitment amounts reflect only commingled fund investments.

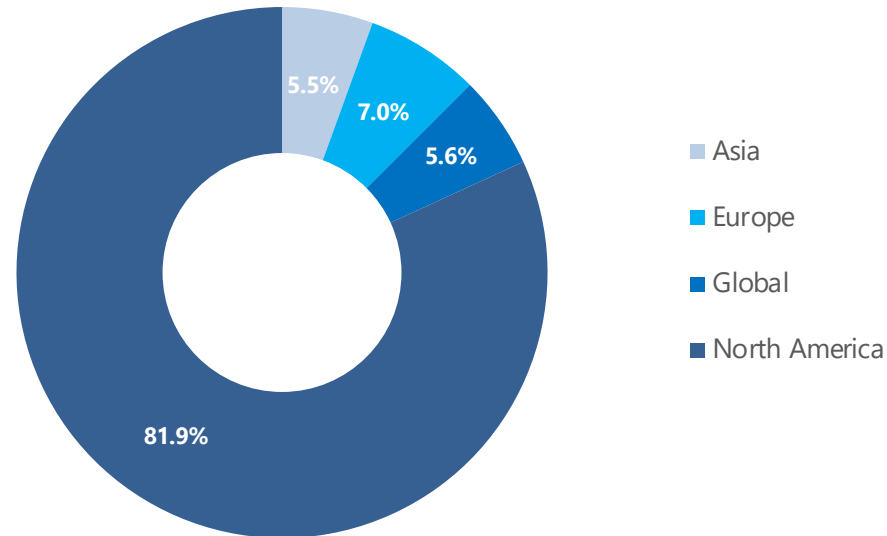
³ Various refers to commingled fund investments with more than one property type; Other refers to hotel and fund level market values for the debt program.

Performance by Geography

Real Estate

for the quarter ended March 31, 2023

By Geography (non-US)^{1,2}



	Number of Investments	Commitments (mm)	Cumulative Contributions (mm)	Cumulative Distributions (mm)	Market Value (mm)	Total Value (mm)	Total Gain / (Loss) (mm)	Distributed to Paid-In	Total Value to Paid-In	Since Inception Net IRR	Since Inception PME
Asia	4	300.0	307.8	119.5	288.5	408.0	100.2	0.39x	1.33x	6.2%	1.09
Europe	10	476.7	617.5	373.6	362.7	736.2	118.8	0.61x	1.19x	4.2%	0.87
Global	7	1,068.8	388.5	222.1	293.4	515.5	127.0	0.57x	1.33x	11.8%	1.10
North America	95	609.0	8,115.9	7,253.0	4,260.0	11,512.9	3,397.1	0.89x	1.42x	7.9%	1.11
Total Real Estate	116	2,454.4	9,429.6	7,968.1	5,204.5	13,172.7	3,743.0	0.85x	1.40x	7.8%	1.10

¹ Based on best available cash flow adjusted market values and includes only active investments and sold assets with balance sheet residuals.

² Commitment amounts reflect only commingled fund investments.

Performance by Geography

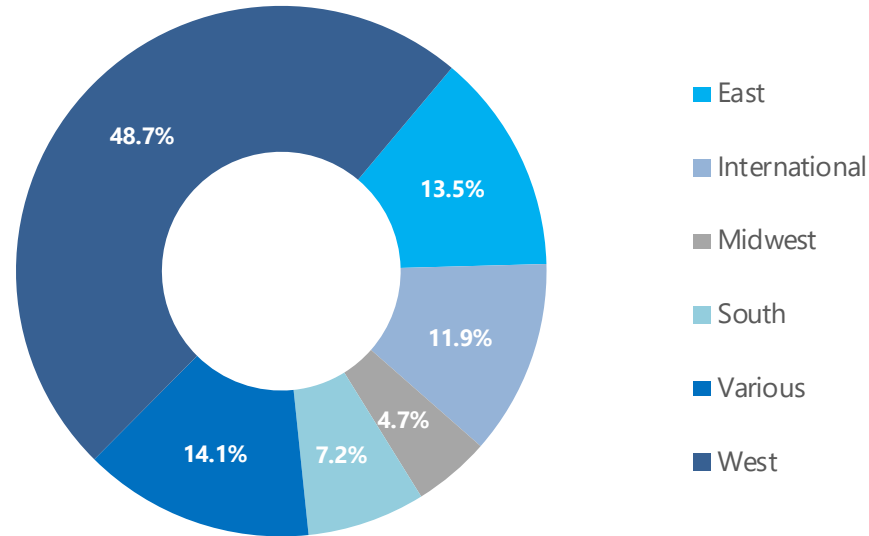
Real Estate

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

By Geography (US NCREIF)^{1,2}



	Number of Investments	Commitments (mm)	Cumulative Contributions (mm)	Cumulative Distributions (mm)	Market Value (mm)	Total Value (mm)	Total Gain / (Loss) (mm)	Distributed to Paid-In	Total Value to Paid-In	Since Inception Net IRR	Since Inception PME
East	26	0.0	2,475.0	2,293.0	700.5	2,993.4	518.4	0.93x	1.21x	5.5%	0.88
International	13	722.4	884.9	493.1	618.9	1,112.0	227.1	0.56x	1.26x	5.1%	0.94
Midwest	10	0.0	592.4	494.5	244.2	738.6	146.2	0.83x	1.25x	4.9%	0.83
South	11	0.0	1,196.1	1,257.0	374.9	1,631.9	435.8	1.05x	1.36x	8.2%	0.99
Various	13	1,348.1	808.5	358.9	733.3	1,092.2	283.6	0.44x	1.35x	6.6%	1.01
West	43	384.0	3,472.7	3,071.7	2,532.7	5,604.4	2,131.8	0.88x	1.61x	9.4%	1.41
Total Real Estate	116	2,454.4	9,429.6	7,968.1	5,204.5	13,172.7	3,743.0	0.85x	1.40x	7.8%	1.10

¹ Based on best available cash flow adjusted market values and includes only active investments and sold assets with balance sheet residuals.

² Commitment amounts reflect only commingled fund investments.

Performance by Vintage Year

Real Estate

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

By Vintage Year^{1,2,3}

	Number of Investments	Commitments (mm)	Cumulative Contributions (mm)	Cumulative Distributions (mm)	Market Value (mm)	Total Value (mm)	Total Gain / (Loss) (mm)	Distributed to Paid-In	Total Value to Paid-In	Since Inception Net IRR	Since Inception PME	Quartile Ranking
1990	1	0.0	249.9	303.6	116.6	420.3	170.3	1.21x	1.68x	6.3%	4.58	N/A
1991	3	0.0	33.0	124.6	100.5	225.1	192.1	3.78x	6.83x	12.4%	13.97	N/A
1992	0	0.0	--	--	--	--	--	--	--	--	--	N/A
1993	0	0.0	--	--	--	--	--	--	--	--	--	N/A
1994	1	0.0	15.4	67.7	35.3	103.0	87.5	4.38x	6.67x	12.8%	1.44	N/A
1995	1	0.0	67.1	112.0	97.3	209.3	142.1	1.67x	3.12x	11.5%	1.22	N/A
1996	1	0.0	24.1	38.8	27.5	66.3	42.2	1.61x	2.75x	7.4%	0.78	N/A
1997	1	0.0	18.4	67.6	70.6	138.2	119.8	3.68x	7.51x	15.8%	2.10	N/A
1998	1	0.0	48.9	66.3	45.7	112.0	63.1	1.36x	2.29x	6.2%	0.69	N/A
1999	0	0.0	--	--	--	--	--	--	--	--	--	N/A
2000	0	0.0	--	--	--	--	--	--	--	--	--	N/A
2001	1	0.0	143.5	78.2	89.3	167.6	24.0	0.54x	1.17x	4.1%	0.72	N/A
2002	0	0.0	--	--	--	--	--	--	--	--	--	N/A
2003	1	0.0	142.8	132.2	61.0	193.1	50.3	0.93x	1.35x	4.0%	0.69	N/A
2004	0	0.0	--	--	--	--	--	--	--	--	--	N/A
2005	0	0.0	--	--	--	--	--	--	--	--	--	N/A
2006	0	0.0	--	--	--	--	--	--	--	--	--	N/A
2007	3	37.4	454.6	401.9	0.9	402.8	(51.8)	0.88x	0.89x	-5.4%	0.54	3rd
2008	1	0.0	150.0	96.0	0.0	96.0	(53.9)	0.64x	0.64x	-5.7%	0.34	4th
2009	1	18.8	22.5	28.8	0.2	29.0	6.5	1.28x	1.29x	8.2%	0.84	3rd
2010	1	100.0	97.1	152.0	6.3	158.3	61.1	1.57x	1.63x	9.6%	0.92	3rd
2011	4	17.4	222.1	117.4	18.9	136.4	(85.8)	0.53x	0.61x	-51.7%	0.27	4th
2012	3	134.0	439.0	187.9	160.4	348.3	(90.6)	0.43x	0.79x	-5.5%	0.62	4th
2013	7	100.0	472.7	582.8	101.2	684.0	211.2	1.23x	1.45x	8.5%	1.00	3rd
2014	15	263.0	992.6	815.6	662.0	1,477.7	485.1	0.82x	1.49x	8.4%	1.16	2nd
2015	9	0.0	954.3	755.9	699.4	1,455.3	501.0	0.79x	1.53x	11.8%	1.40	2nd
2016	7	150.0	486.4	222.4	549.2	771.5	285.1	0.46x	1.59x	12.6%	1.40	2nd
2017	12	179.3	1,341.6	927.8	827.6	1,755.4	413.8	0.69x	1.31x	9.4%	1.17	3rd
2018	10	150.0	378.3	194.4	272.3	466.7	88.4	0.51x	1.23x	7.9%	1.13	3rd
2019	25	413.1	2,412.5	2,408.3	1,062.6	3,470.9	1,058.4	1.00x	1.44x	8.8%	1.03	3rd
2020	2	0.0	71.8	81.2	0.0	81.2	9.4	1.13x	1.13x	5.2%	1.13	3rd
2021	2	181.5	74.9	2.9	80.3	83.2	8.2	0.04x	1.11x	9.9%	1.22	3rd
2022	3	710.0	116.0	1.7	119.6	121.3	5.3	0.01x	1.05x	10.1%	1.11	1st
2023	0	0.0	--	--	--	--	--	--	--	--	--	N/A
Total Real Estate	116	2,454.4	9,429.6	7,968.1	5,204.5	13,172.7	3,743.0	0.85x	1.40x	7.8%	1.10	

1. Based on best available cash flow adjusted market values.
2. Commitment amounts reflect only commingled fund investments.
3. Benchmark data used is latest available by Burgiss Private IQ. Quartile rankings exclude IMAs and Core Funds.

Leverage Exposure

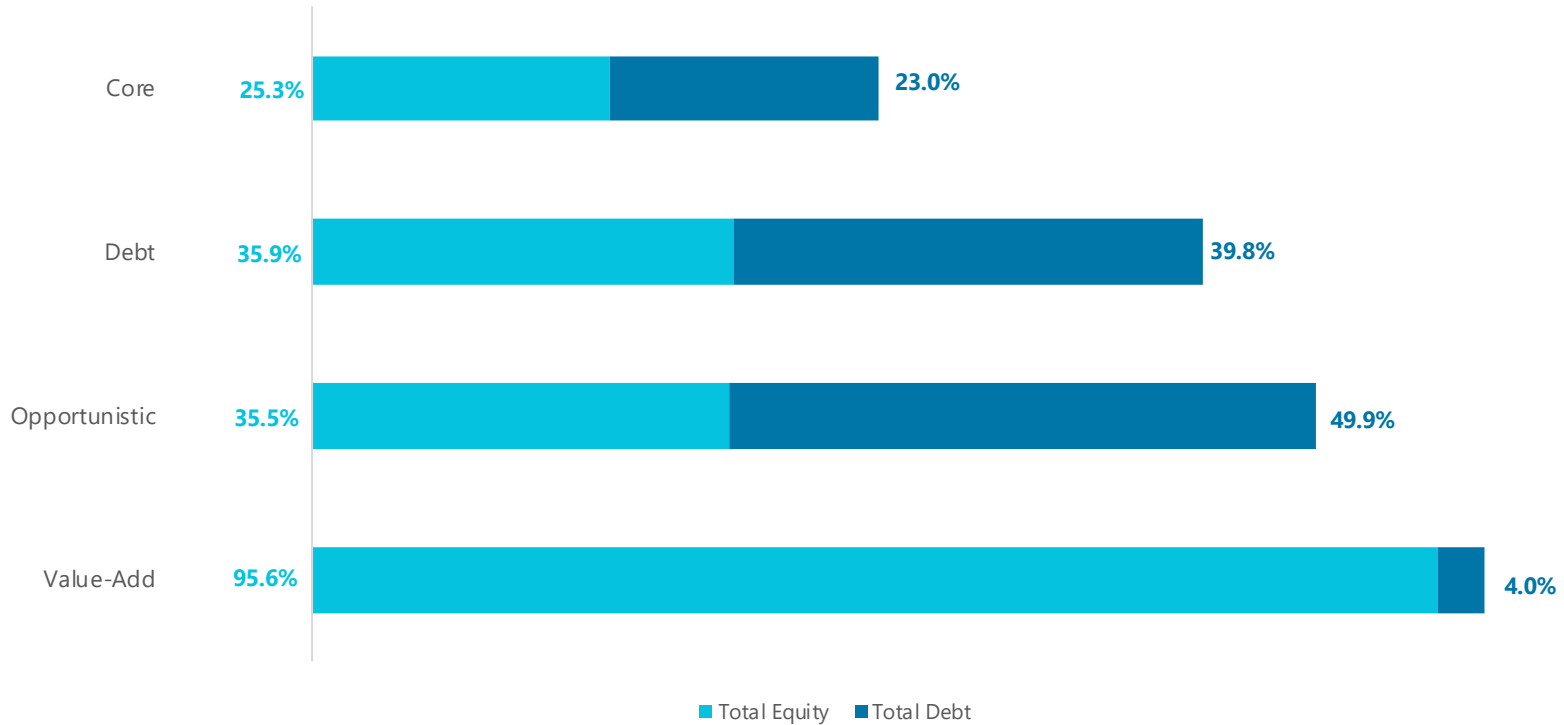
Real Estate

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

Leverage Exposure^{1,2}



	Number of Investments	Commitments (mm)	Cumulative Contributions (mm)	Cumulative Distributions (mm)	Market Value (mm)	Total Value (mm)	Total Gain / (Loss) (mm)	Distributed to Paid-In	Total Value to Paid-In	Since Inception Net IRR	Since Inception PME	Total Debt-Fund Level (mm)	Total Equity-Fund Level (mm)	Total Debt-Fund Level (%)	Total Equity-Fund Level (%)
Core	79	433.6	7,421.7	6,825.9	4,001.5	10,827.4	3,405.7	0.92x	1.46x	8.4%	1.15	8,447.7	9,289.3	23.0%	25.3%
Debt	7	0.0	158.5	121.9	78.9	200.8	42.3	0.77x	1.27x	8.9%	1.19	109.3	98.5	39.8%	35.9%
Opportunistic	18	1,549.4	1,234.4	785.8	827.6	1,613.4	379.0	0.64x	1.31x	6.5%	1.00	15,525.4	11,064.6	49.9%	35.5%
Value-Add	12	471.4	615.1	234.5	296.6	531.1	(84.0)	0.38x	0.86x	-3.4%	0.61	5,888.8	142,299.4	4.0%	95.6%
Total Real Estate	116	2,454.4	9,429.6	7,968.1	5,204.5	13,172.7	3,743.0	0.85x	1.40x	7.8%	1.10	29,971.2	162,751.7	13.8%	75.0%

¹ Based on best available cash flow adjusted market values and includes only active investments and sold assets with balance sheet residuals.

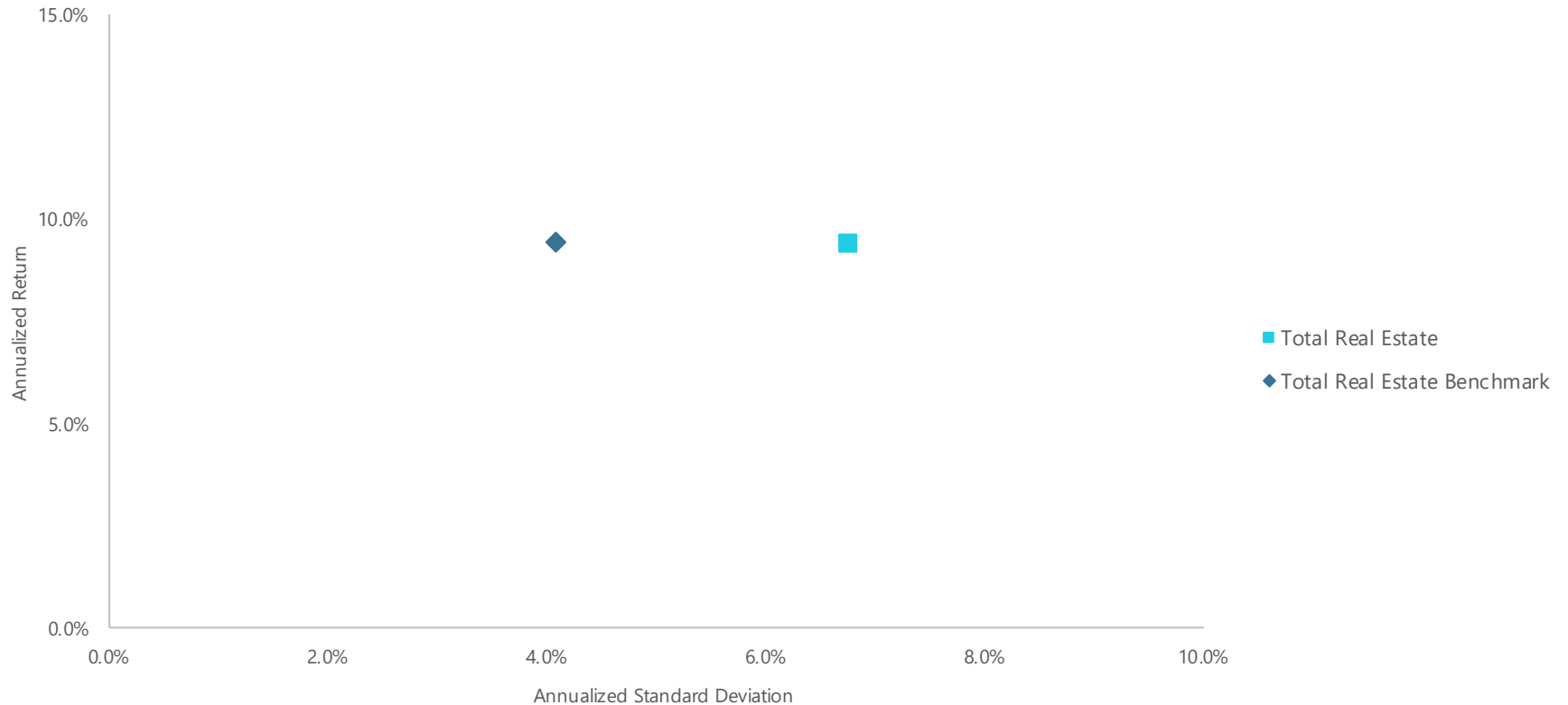
² Commitment amounts reflect only commingled fund investments.

Risk vs. Return

Real Estate

for the quarter ended March 31, 2023

3 Year (Annualized)



	Annualized Return	Standard Deviation	Sharpe Ratio	Information Ratio	Beta	Tracking Error
Total Real Estate	9.4%	6.8%				
Total Real Estate Benchmark	9.4%	4.1%	1.24	(0.00)	0.92	19.4%

Annual Cash Flow Activity

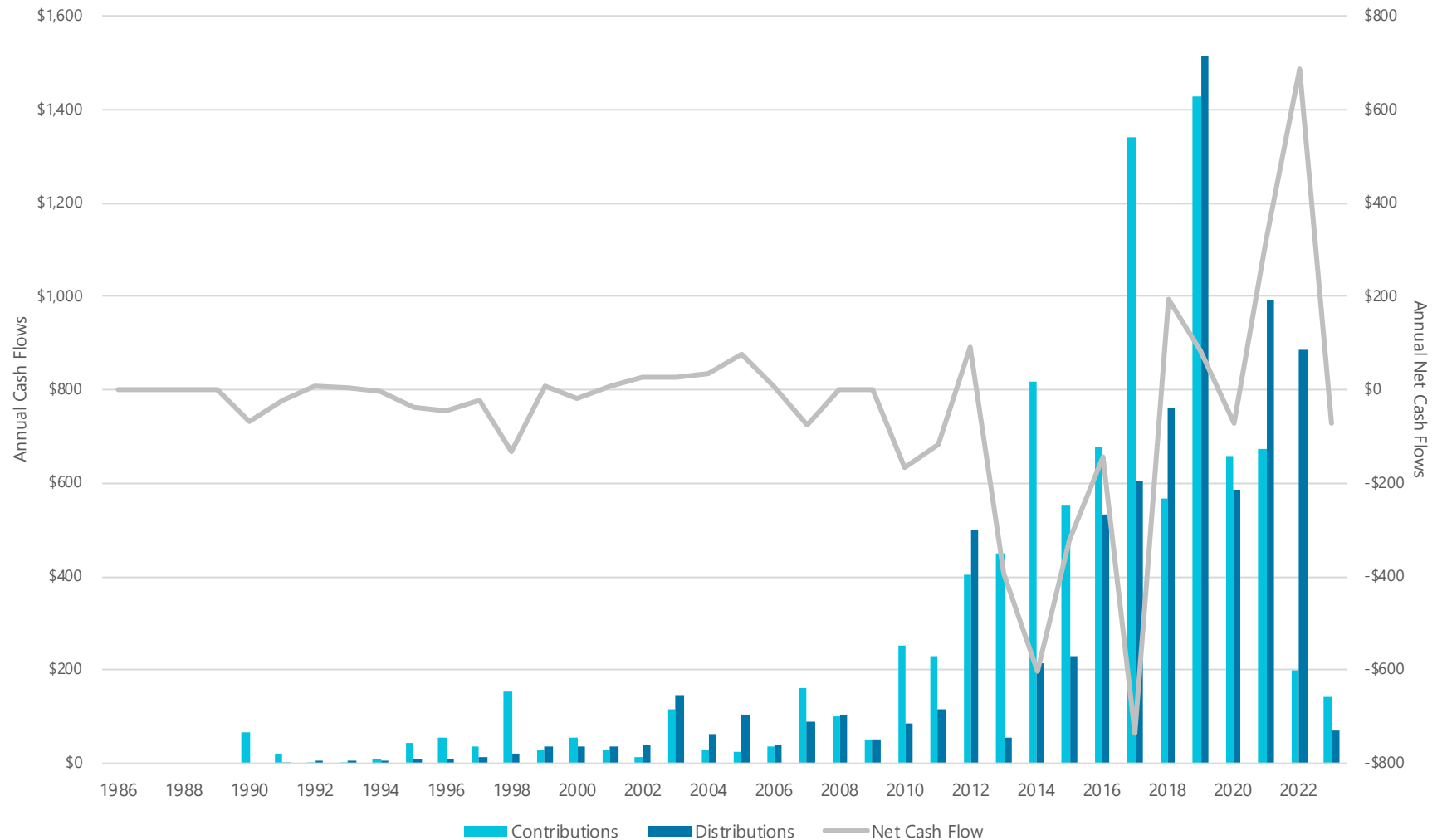
Real Estate

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

By Year (mm)



Summary

Private Real Assets ex. Real Estate
for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

Performance (net)¹



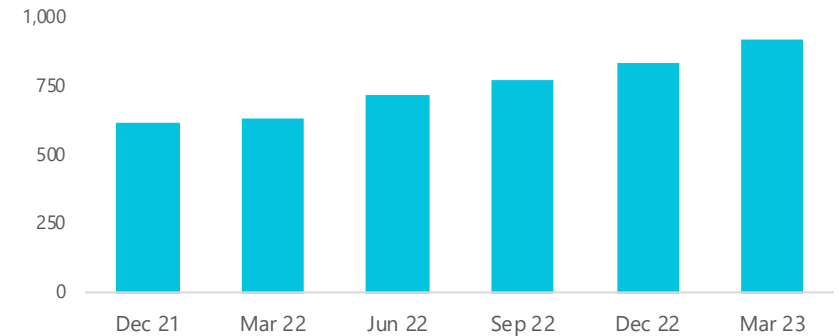
	QTD	YTD	1 Year	3 Year	5 Year	10 Year	ITD
Private Natural Resources & Commodities	6.5%	6.5%	16.7%	-1.6%	--	--	-5.9%
Benchmark	14.0%	14.0%	15.5%	16.2%	--	--	16.3%
Excess	-7.5%	-7.5%	1.2%	-17.8%	--	--	-22.2%

Cumulative Return¹

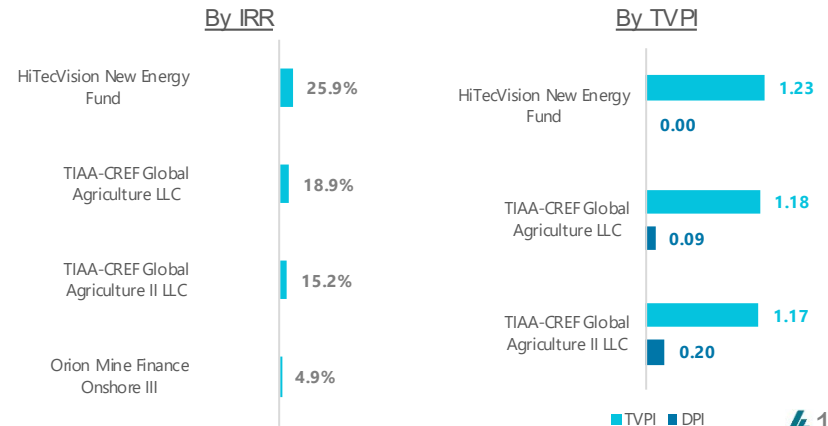


Asset Growth (mm)

	QTD	1 Year	3 Year
Beginning Market Value	839	631	94
Net Cash Flow	30	176	723
Gain/Loss	56	118.1	108.1
Ending Market Value	925	925	925



Top Performing Investments (since inception)¹



¹ Private natural resources & commodities funds reflect early-stage life cycle performance.

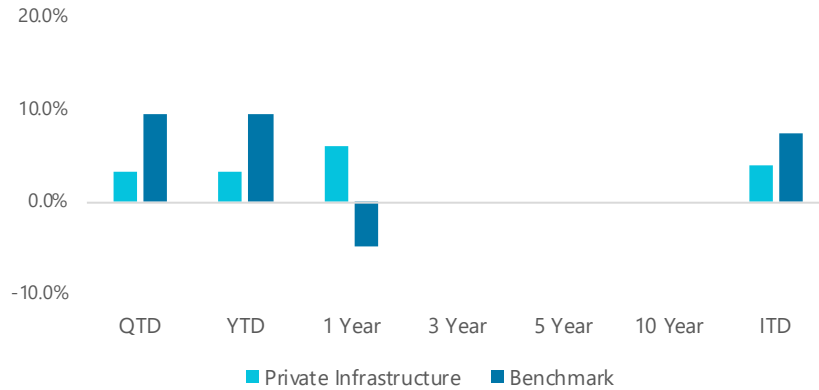
Summary

Private Real Assets ex. Real Estate
for the quarter ended March 31, 2023



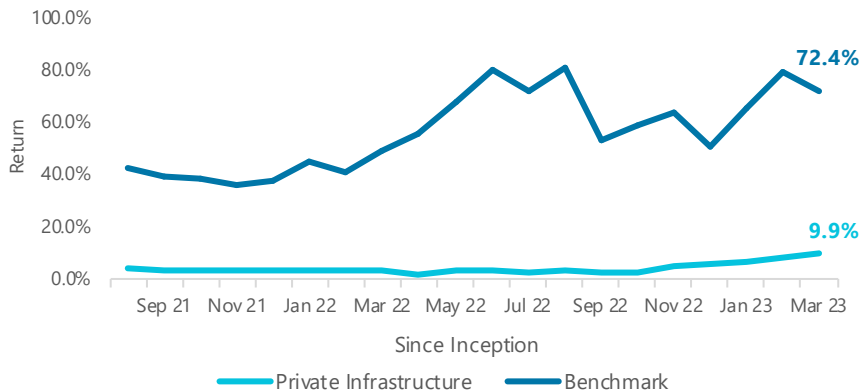
Los Angeles County Employees Retirement Association

Performance (net)¹



	QTD	YTD	1 Year	3 Year	5 Year	10 Year	ITD
Private Infrastructure	3.3%	3.3%	6.1%	--	--	--	4.0%
Benchmark	9.4%	9.4%	-4.9%	--	--	--	7.5%
Excess	-6.1%	-6.1%	11.0%	--	--	--	-3.5%

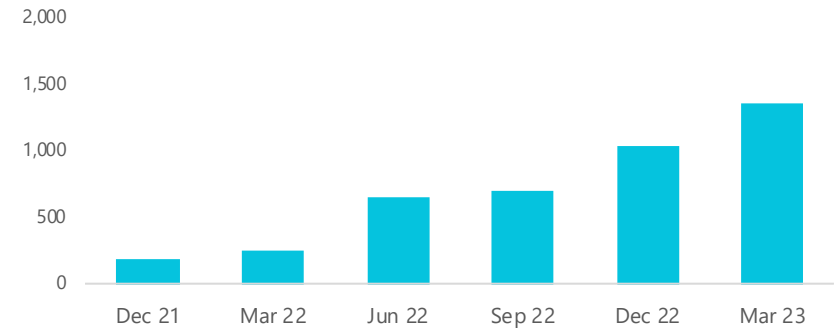
Cumulative Return¹



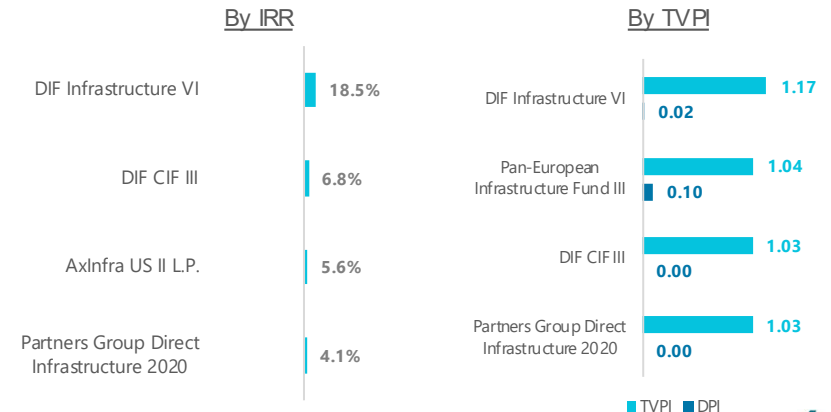
¹ Private infrastructure funds reflect early-stage life cycle performance.

Asset Growth (mm)

	QTD	1 Year	3 Year
Beginning Market Value	1,030	257	--
Net Cash Flow	292	1,037	--
Gain/Loss	42	71	--
Ending Market Value	1,365	1,365	--



Top Performing Investments (since inception)¹



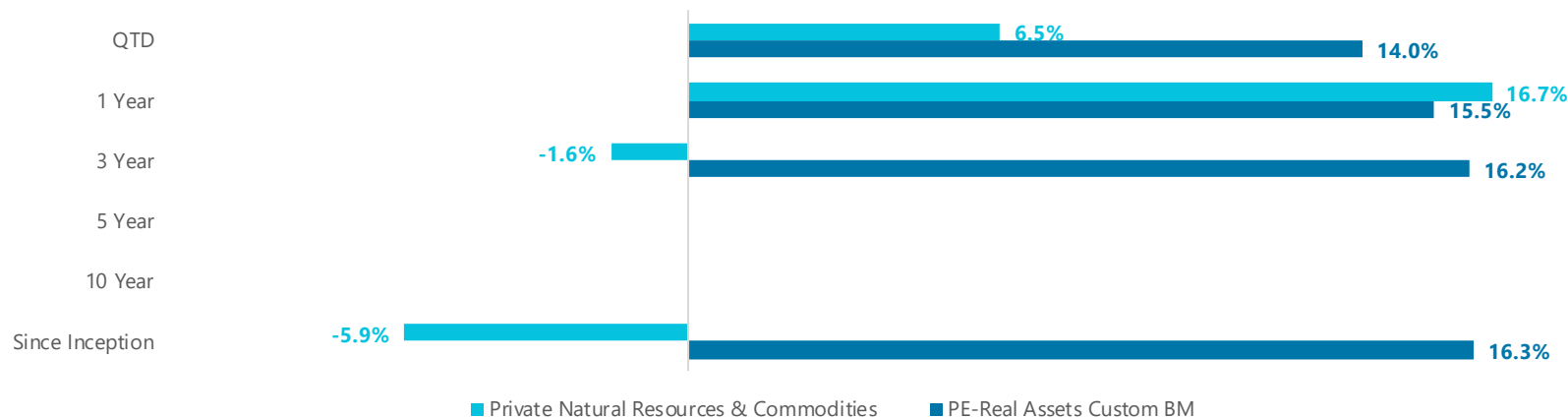
TVPI DPI

Historical Returns

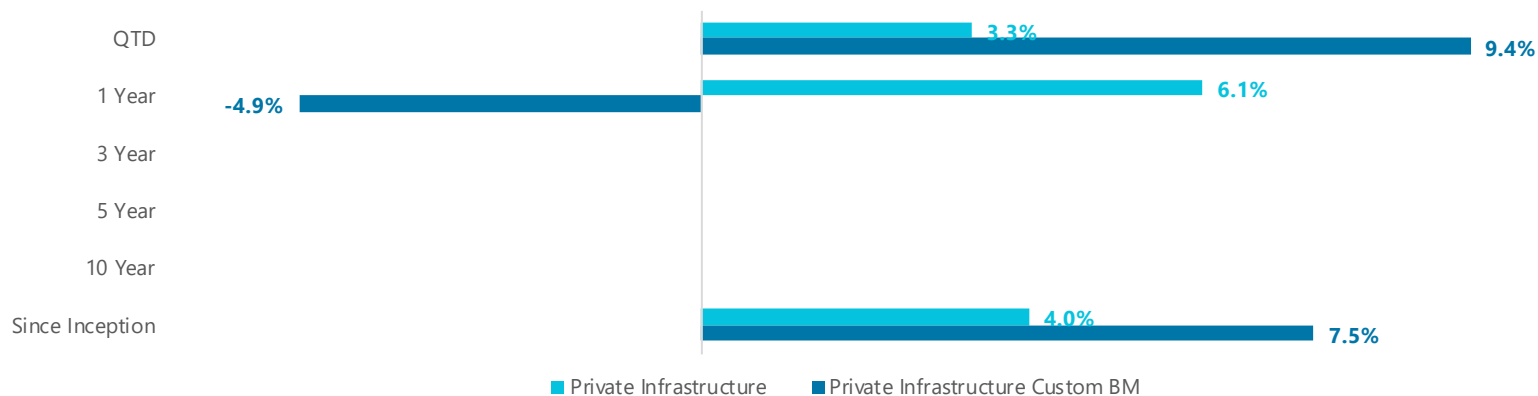
Private Real Assets ex. Real Estate
for the quarter ended March 31, 2023

Time-Weighted Returns (net)¹

Private Natural Resources & Commodities



Private Infrastructure



¹ Private natural resources and infrastructure funds reflect early-stage life cycle performance.

Performance by Strategy

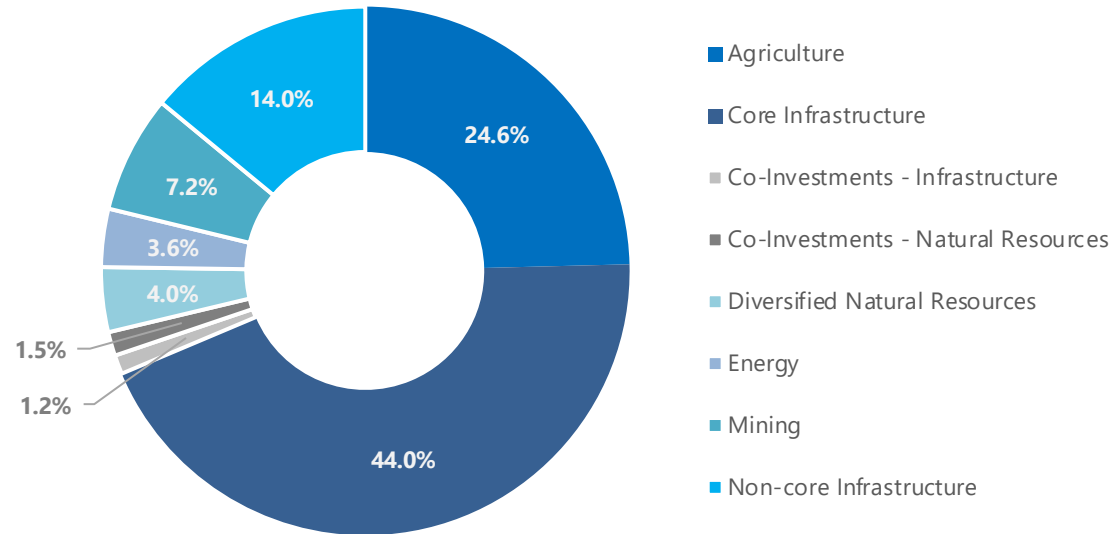
Private Real Assets ex. Real Estate

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

By Strategy¹



	Number of Investments	Commitments (mm)	Cumulative Contributions (mm)	Cumulative Distributions (mm)	Market Value (mm)	Total Value (mm)	Total Gain / Loss (mm)	Distributed to Paid-In	Total Value to Paid-In	Since Inception Net IRR	Since Inception PME
Agriculture	4	650.0	561.6	80.2	572.6	652.7	91.1	0.14x	1.16x	15.8%	1.08
Core Infrastructure	4	1,060.7	993.3	21.6	1,025.2	1,046.8	53.5	0.02x	1.05x	8.5%	1.03
Co-Investments - Infrastructure	2	100.0	26.8	0.0	27.1	27.1	0.3	0.00x	1.01x	1.6%	1.04
Co-Investments - Natural Resources	2	115.1	34.0	0.0	34.0	34.0	(0.0)	0.00x	1.00x	-0.1%	0.94
Diversified Natural Resources	1	135.8	70.3	0.0	92.2	92.2	21.9	0.00x	1.31x	35.2%	1.22
Energy	2	200.0	205.3	117.7	82.8	200.5	(4.8)	0.57x	0.98x	-0.7%	0.75
Mining	2	250.0	151.2	7.7	167.3	175.1	23.8	0.05x	1.16x	13.8%	1.05
Non-core Infrastructure	6	707.8	305.5	9.1	326.3	335.4	29.9	0.03x	1.10x	8.4%	0.98
Total Private Real Assets ex. Real Estate	23	3,219.4	2,348.1	236.2	2,327.5	2,563.7	215.6	0.10x	1.09x	8.2%	1.00

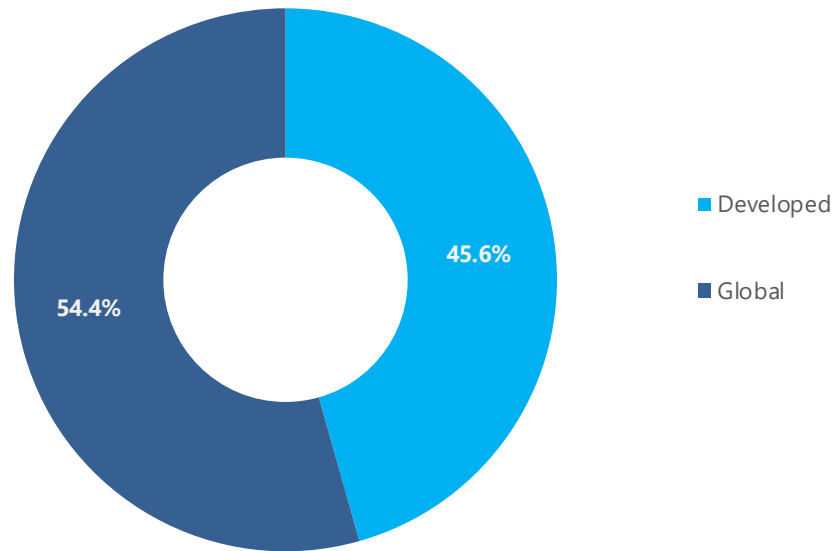
¹ Based on best available cash flow adjusted market values.

Performance by Geography

Private Real Assets ex. Real Estate

for the quarter ended March 31, 2023

By Geography¹



	Number of Investments	Commitments (mm)	Cumulative Contributions (mm)	Cumulative Distributions (mm)	Market Value (mm)	Total Value (mm)	Total Gain / Loss (mm)	Distributed to Paid-In	Total Value to Paid-In	Since Inception Net IRR	Since Inception PME
Developed	12	1,491.2	1,149.7	194.0	1,061.7	1,255.6	105.9	0.17x	1.09x	6.5%	0.97
Global	11	1,728.1	1,198.4	42.2	1,265.9	1,308.1	109.7	0.04x	1.09x	11.5%	1.03
Total Private Real Assets ex. Real Estate	23	3,219.4	2,348.1	236.2	2,327.5	2,563.7	215.6	0.10x	1.09x	8.2%	1.00

¹ Based on best available cash flow adjusted market values.

Performance by Vintage Year

Private Real Assets ex. Real Estate

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

By Vintage Year¹

	Number of Investments	Commitments (mm)	Cumulative Contributions (mm)	Cumulative Distributions (mm)	Market Value (mm)	Total Value (mm)	Total Gain / Loss (mm)	Distributed to Paid-In	Total Value to Paid-In	Since Inception Net IRR	Since Inception PME
2004	1	50.0	50.0	91.4	0.0	91.4	41.4	1.83x	1.83x	31.1%	1.40
2011	1	250.0	--	--	--	--	--	--	--	--	--
2014	2	450.0	435.4	82.4	354.6	437.0	1.6	0.19x	1.00x	0.1%	0.79
2020	3	331.6	207.8	8.7	238.2	246.9	39.1	0.04x	1.19x	12.8%	1.02
2021	6	823.9	635.9	20.8	657.4	678.2	42.3	0.03x	1.07x	8.7%	1.02
2022	7	1,113.8	716.4	8.9	752.4	761.3	44.8	0.01x	1.06x	10.5%	1.03
2023	3	200.0	45.7	0.0	46.0	46.0	0.3	0.00x	1.01x	1.4%	1.00
Total Private Real Assets ex. Real Estate	23	3,219.4	2,348.1	236.2	2,327.5	2,563.7	215.6	0.10x	1.09x	8.2%	1.00

¹ Based on best available cash flow adjusted market values.

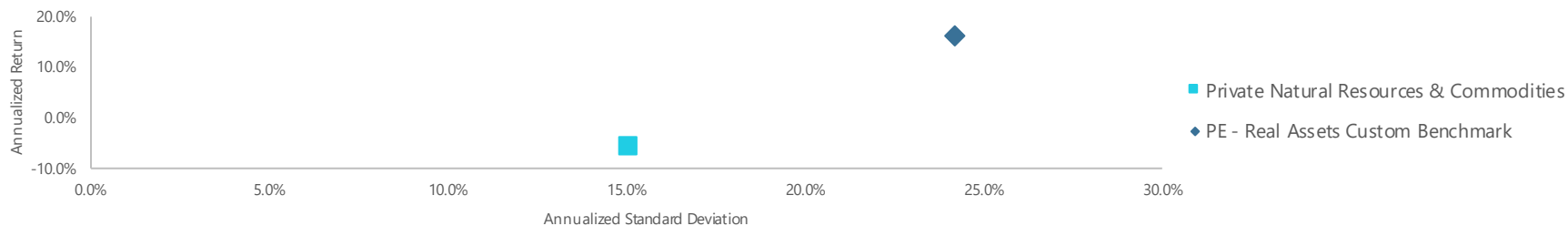
Risk vs. Return

Private Real Assets ex. Real Estate

for the quarter ended March 31, 2023

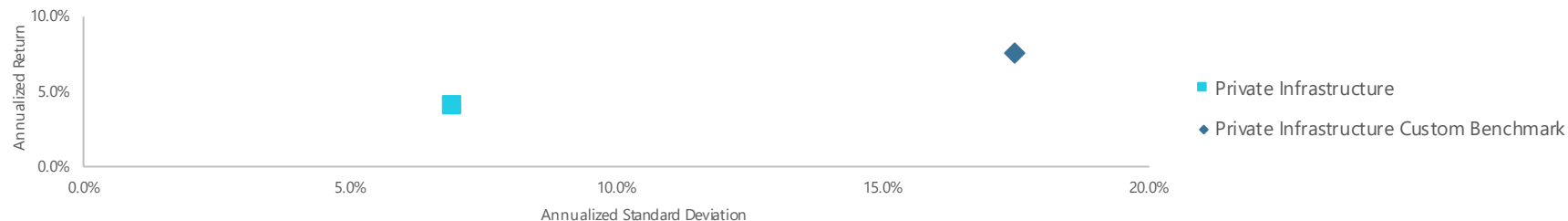
Since Inception (Annualized)

Private Natural Resources & Commodities



	Annualized Return	Standard Deviation	Sharpe Ratio	Information Ratio	Beta	Tracking Error
Private Natural Resources & Commodities	-5.8%	15.1%				
PE - Real Assets Custom Benchmark	16.3%	24.2%	(0.40)	(0.87)	0.15	25.5%

Private Infrastructure



	Annualized Return	Standard Deviation	Sharpe Ratio	Information Ratio	Beta	Tracking Error
Private Infrastructure	4.0%	7.0%				
Private Infrastructure Custom Benchmark	7.5%	17.5%	0.39	(0.18)	(0.04)	19.6%

Annual Cash Flow Activity

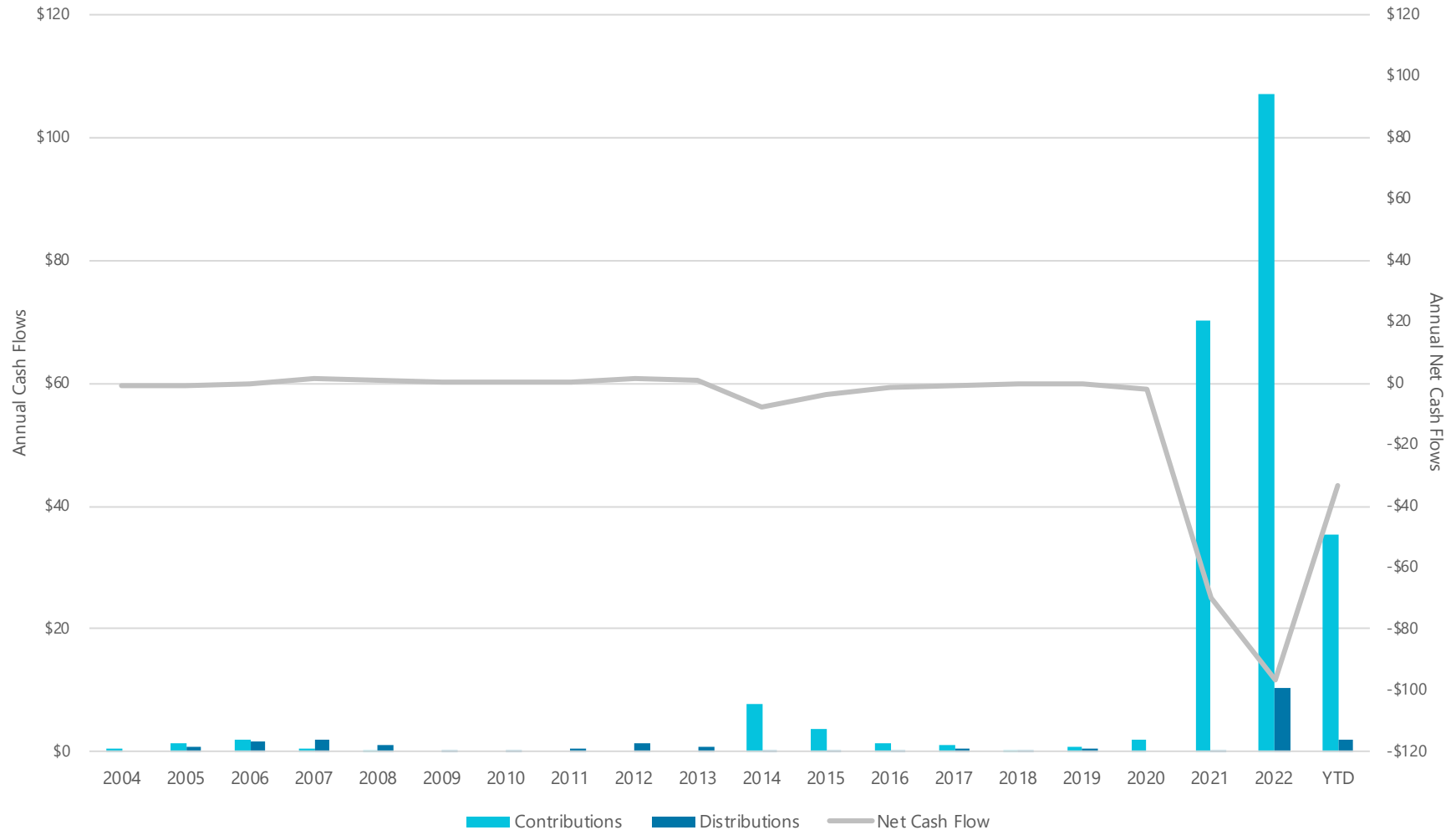
Private Real Assets ex. Real Estate

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

By Year (mm)



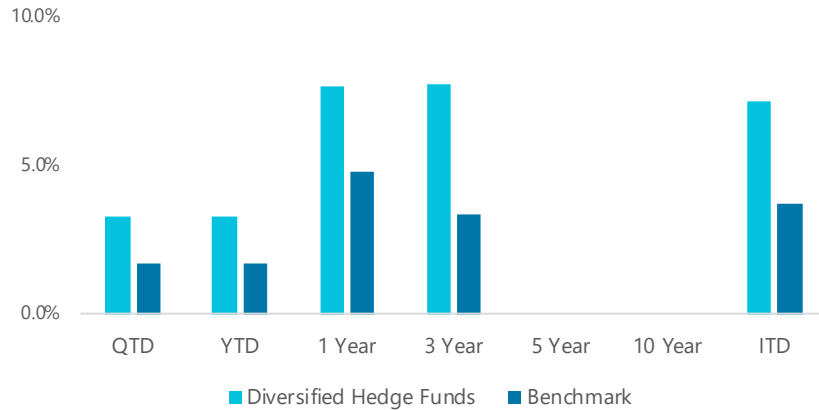
Summary

Diversified Hedge Funds
for the quarter ended March 31, 2023



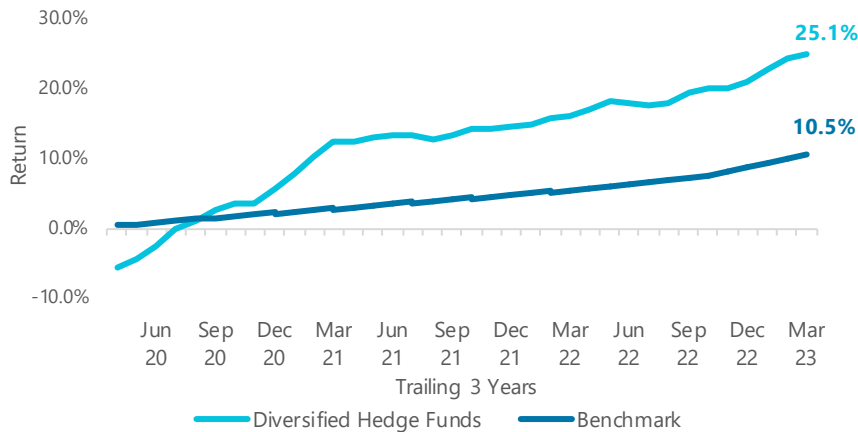
Los Angeles County Employees Retirement Association

Performance (net)



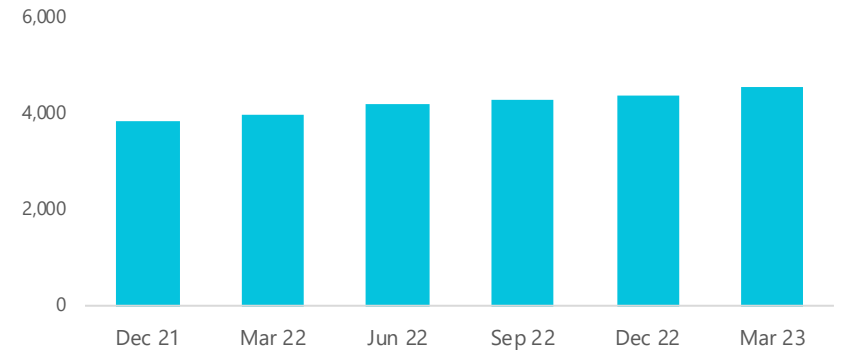
	QTD	YTD	1 Year	3 Year	5 Year	10 Year	ITD
Diversified Hedge Funds	3.3%	3.3%	7.7%	7.7%	--	--	7.1%
Benchmark	1.7%	1.7%	4.8%	3.4%	--	--	3.7%
Excess	1.6%	1.6%	2.9%	4.4%	--	--	3.4%

Cumulative Return

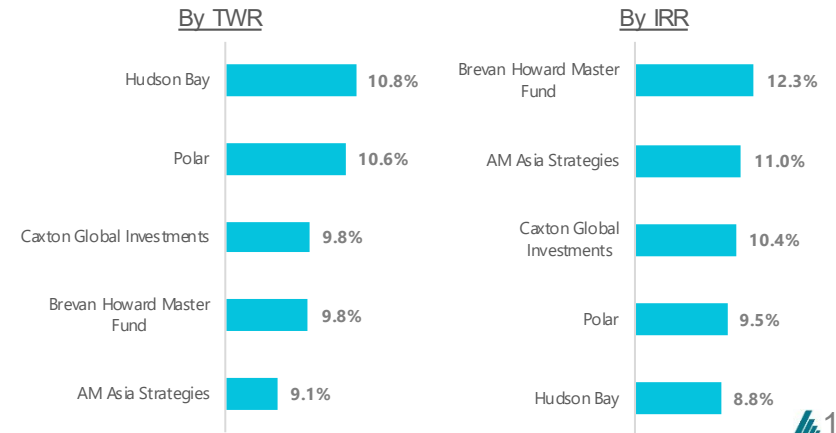


Asset Growth (mm)

	QTD	1 Year	3 Year
Beginning Market Value	4,402	4,001	1,334
Net Cash Flow	-4	221	2,527
Gain/Loss	145	321	682
Ending Market Value	4,543	4,543	4,543



Top Performing Investments (since inception)

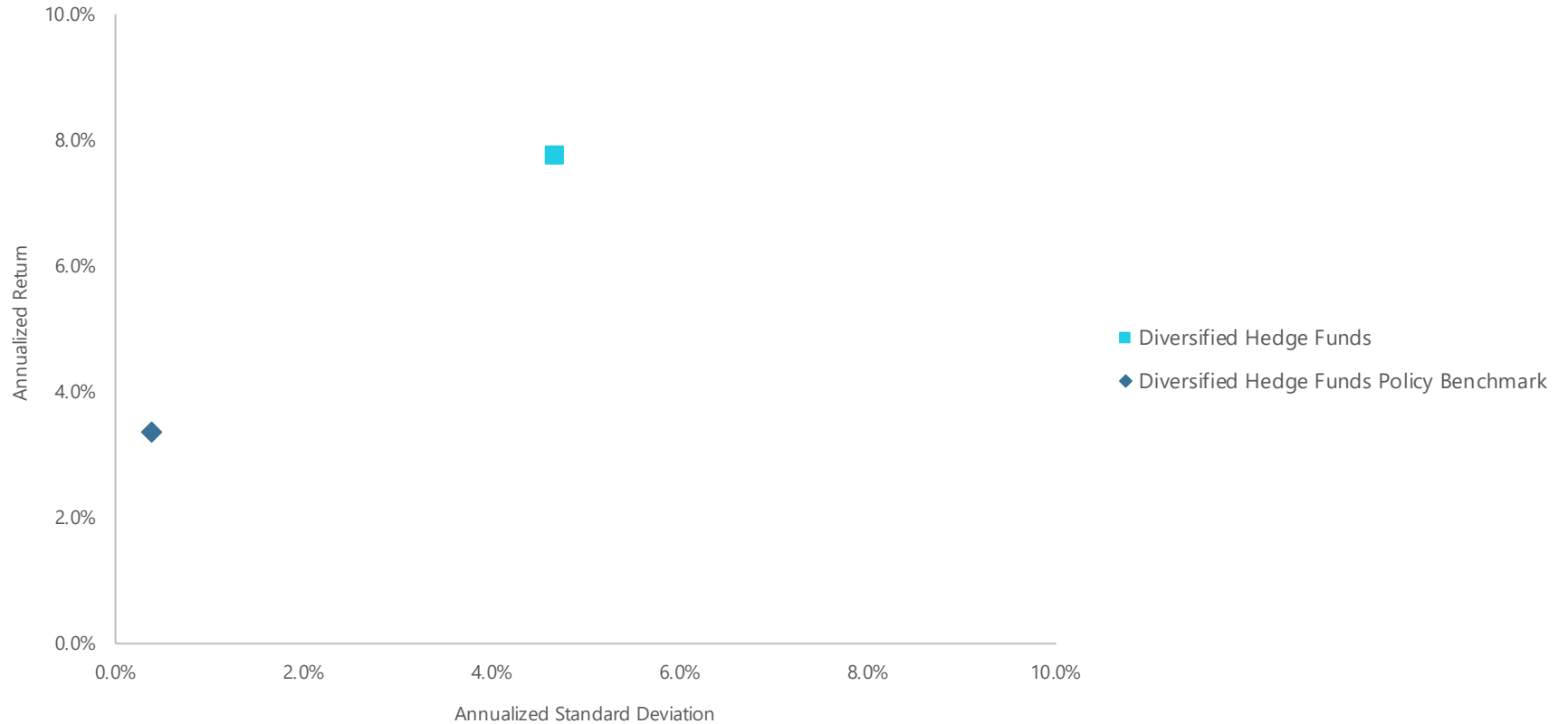


Risk vs. Return

Diversified Hedge Funds

for the quarter ended March 31, 2023

3 Year (Annualized)



	Annualized Return	Standard Deviation	Sharpe Ratio	Information Ratio	Beta	Tracking Error
Diversified Hedge Funds	7.7%	4.7%				
Diversified Hedge Funds Policy Benchmark	3.4%	0.4%	1.43	0.90	(10.55)	4.7%

Performance Detail

Diversified Hedge Funds
for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

Annualized Net Returns

	% of Composite	Ending Market Value (mm)	Prior Quarter Ending MV (mm)	QTD	YTD	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date
Diversified Hedge Funds	100.0%	4,543	4,402	3.3%	3.3%	7.7%	7.7%	--	--	7.1%	Apr-2019
Diversified Hedge Funds Policy Benchmark				1.7%	1.7%	4.8%	3.4%	--	--	3.7%	
LACERA HF Direct	90.9%	4,132	3,987	3.6%	3.6%	8.5%	8.1%	--	--	5.6%	May-2018
Custom Hedge Fund Benchmark				1.7%	1.7%	4.8%	3.4%	--	--	4.3%	
AM Asia Strategies	5.8%	263	217	21.2%	21.2%	14.9%	--	--	--	9.1%	Jun-2021
Brevan Howard Master Fund	14.7%	669	650	2.9%	2.9%	18.3%	--	--	--	9.8%	Apr-2021
Capula GRV	14.6%	663	642	3.2%	3.2%	12.0%	6.8%	--	--	7.0%	Dec-2018
Caxton Global Investments	6.6%	302	297	1.8%	1.8%	10.5%	--	--	--	9.8%	Feb-2021
DK Institutional Partners	11.0%	500	486	2.9%	2.9%	1.0%	5.6%	--	--	5.0%	May-2018
HBK Multi-strategy	12.9%	585	578	1.3%	1.3%	5.0%	6.9%	--	--	5.5%	Jun-2018
Hudson Bay	14.7%	669	650	2.8%	2.8%	6.0%	--	--	--	10.8%	Jul-2020
Polar	10.6%	481	467	2.9%	2.9%	3.6%	--	--	--	10.6%	May-2020
HF Emerging Managers Program	8.5%	385	384	0.2%	0.2%	1.0%	--	--	--	-0.1%	Aug-2021
Custom Hedge Fund Benchmark				1.7%	1.7%	4.8%	--	--	--	3.9%	
Stable Asset Management	8.5%	385	384	0.2%	0.2%	1.0%	--	--	--	-0.1%	Aug-2021
Stable Fund Investments	8.5%	385	384	0.2%	0.2%	1.0%	--	--	--	0.0%	Aug-2021
Amundsen	1.4%	62	63	-2.1%	-2.1%	-1.1%	--	--	--	-3.2%	Sep-2021
Clear Sky	1.9%	87	92	-5.0%	-5.0%	-2.5%	--	--	--	-2.5%	Apr-2022
Linear B	1.6%	71	70	0.9%	0.9%	8.2%	--	--	--	5.8%	Aug-2021
Quarry	1.8%	81	82	-1.1%	-1.1%	--	--	--	--	-1.7%	Sep-2022
Sparta	1.2%	53	48	12.4%	12.4%	5.3%	--	--	--	4.3%	Sep-2021
Trutino	0.7%	30	29	3.1%	3.1%	4.6%	--	--	--	0.6%	Aug-2021

emerging manager program

Emerging Manager Program

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

Annualized Net Returns

	Ending Market Value (mm)	QTD	1 Year	3 Year	5 Year	ITD TWR	ITD MWR	Inception Date
Growth								
Global Equity								
Cornercap	80.0	-0.7%	-6.6%	24.7%	--	6.7%	6.7%	Oct-2018
Global Equity Policy Benchmark		6.9%	-7.7%	15.6%	--	7.8%	7.8%	
Private Equity								
J.P. Morgan Emerging Managers Program	86.7	0.0%	8.5%	38.4%	24.8%	26.6%	22.8%	Jan-2010
J.P. Morgan Emerging Managers Program II	77.6	0.3%	-11.4%	27.3%	13.3%	28.2%	36.7%	Apr-2014
J.P. Morgan Emerging Managers Program III	103.6	0.1%	-0.6%	36.4%	29.2%	29.5%	33.2%	Jan-2017
J.P. Morgan Emerging Managers Program IV	217.4	0.7%	6.9%	23.8%	--	19.0%	17.1%	Nov-2018
Total Private Equity Custom Benchmark		10.3%	-16.4%	5.9%	12.2%	13.5%	13.5%	
Non-Core Private Real Estate								
Cityview Bay Area Fund II	77.0	0.0%	-3.9%	3.7%	3.3%	--	10.5%	Oct-2012
Cityview Western Fund I, L.P	210.2	0.2%	16.1%	14.6%	16.5%	-48.9%	13.5%	Jun-2016
CVBAF II Union City Co-Invest	21.5	0.2%	-9.3%	2.9%	-1.6%	3.8%	4.3%	Nov-2015
Non-Core Private RE Policy Benchmark		-4.6%	8.9%	11.8%	10.7%	11.3%	11.3%	
Credit								
Illiquid Credit								
Stable Asset Management - IC	48.7	0.4%	--	--	--	0.4%	1.0%	Nov-2022
Illiquid Credit Policy Benchmark		3.0%	--	--	--	10.1%	10.1%	
Real Assets & Inflation Hedges								
Core Private Real Estate								
Cityview Core I.M.A	202.7	0.1%	-3.9%	1.3%	4.6%	4.7%	4.9%	Jun-2014
Core Private RE Policy Benchmark		-5.2%	6.5%	9.2%	8.1%	7.0%	7.0%	
Risk Reduction & Mitigation								
Hedge Funds								
Stable Asset Management	384.9	0.2%	1.0%	--	--	-0.1%	0.5%	Aug-2021
Custom Hedge Fund Benchmark		1.7%	4.8%	--	--	3.9%	3.9%	

risk reports

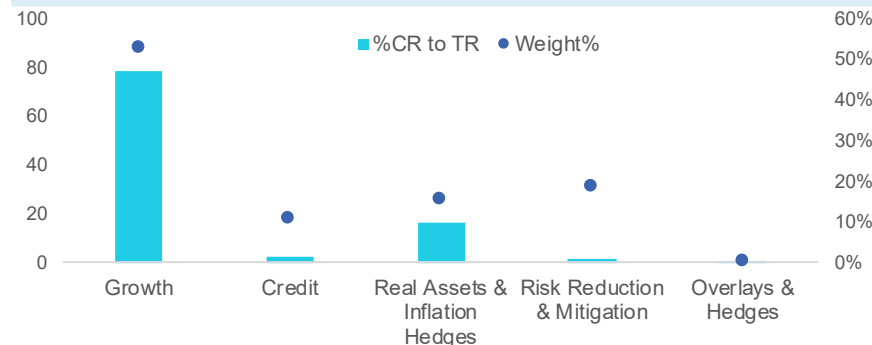
Summary

for the quarter ended March 31, 2023

Risk Summary

	Value
Total Risk	13.78
Benchmark Risk	13.14
Active Risk	1.27
Portfolio Beta	1.04
Effective Duration	1.65

Contribution to Risk

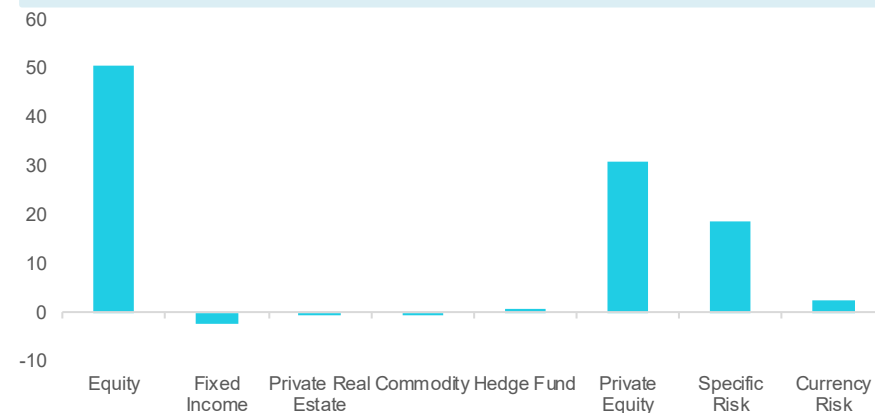


	Mkt Value (mm)	Weight%	Total Risk	Risk Contribution	%CR to TR
Total Fund	69,891	100.0%	13.78	13.78	100.00
Growth	37,225	53.3%	20.50	10.82	78.52
Credit	7,869	11.3%	4.46	0.38	2.77
Real Assets & Inflation Hedges	11,229	16.1%	14.97	2.23	16.20
Risk Reduction & Mitigation	13,185	18.9%	6.34	0.25	1.79
Overlays & Hedges	382	0.5%	57.31	0.10	0.73

Risk Decomposition

Risk Source	Portfolio			Active		
	Risk Contribution	%Risk	Correlation	Risk Contribution	%Risk	Correlation
Total Risk	13.78	100.00	1.00	1.27	100.00	1.00
Local Market Risk	13.04	94.67	1.00	1.24	97.64	0.99
Common Factor Risk	13.02	94.48	1.00	1.00	79.13	0.90
Equity	10.39	75.44	0.95	0.64	50.73	0.63
Fixed Income	0.62	4.53	0.40	-0.03	-2.37	-0.18
Private Real Estate	1.05	7.59	0.67	0.00	-0.32	-0.01
Commodity	0.06	0.40	0.39	0.00	-0.14	-0.03
Hedge Fund	0.00	0.01	0.01	0.01	0.63	0.08
Private Equity	0.89	6.44	0.25	0.39	30.79	0.55
Specific Risk	0.03	0.19	0.04	0.23	18.51	0.43
Currency Risk	0.73	5.33	0.59	0.03	2.36	0.20

Active Risk from Risk Factors



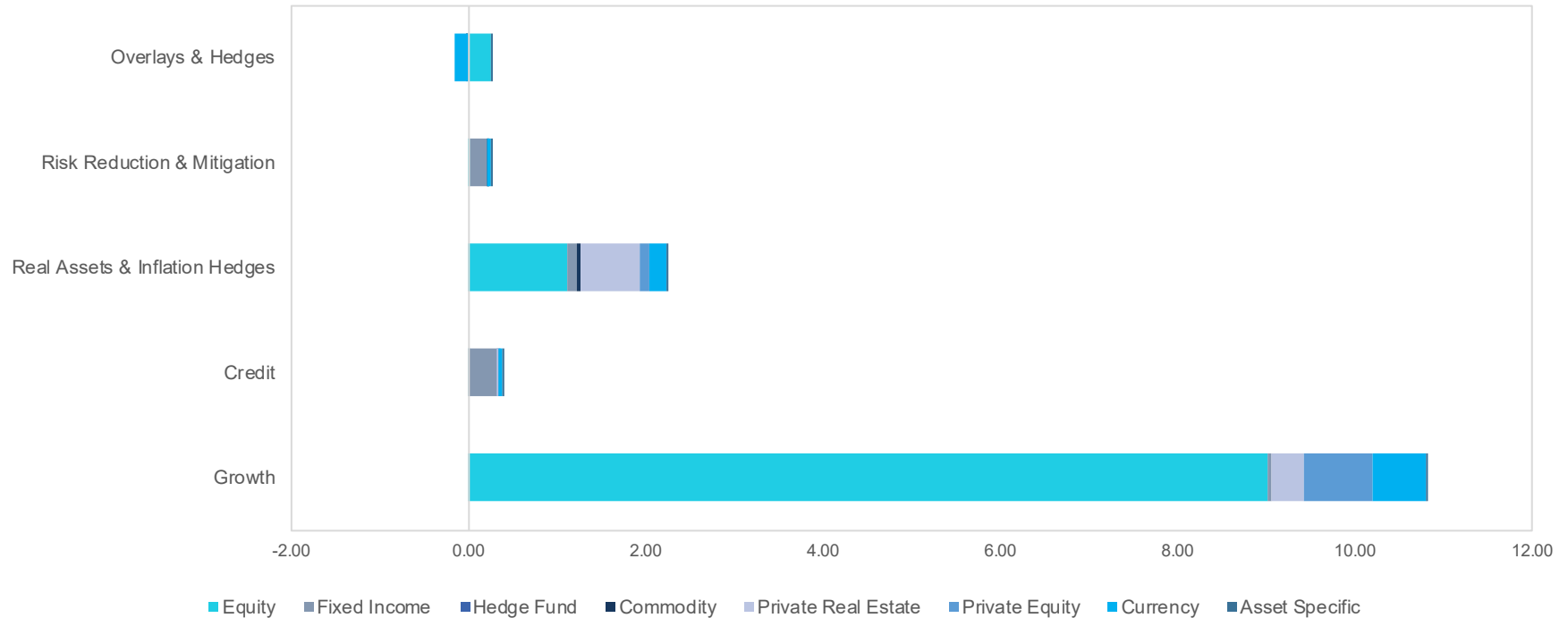
Risk Contribution Breakdown

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

By Risk Type

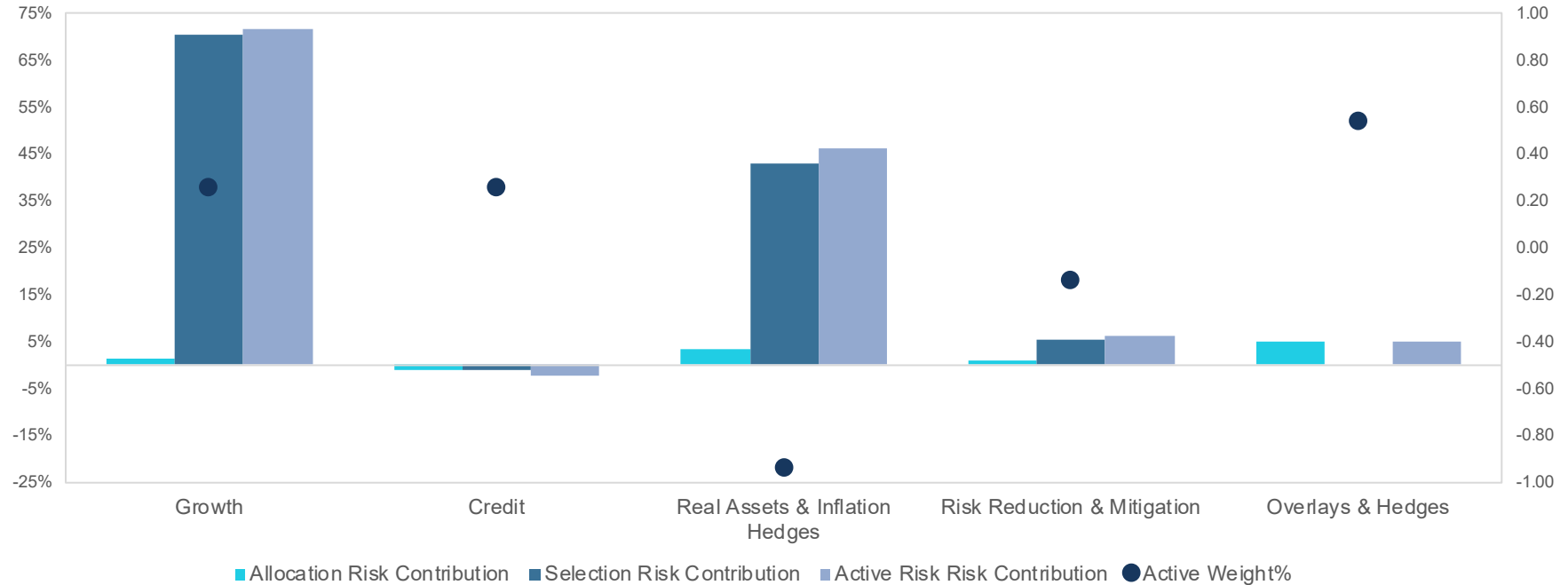


Functional Category	Mkt Value	Weight%	Total Risk	%CR to Total Risk	Port Risk Contribution	Equity	Fixed Income	Commodity	Private Real Estate	Private Equity	Currency	Asset Specific
Total Fund	69,891	100.0%	13.78	100.00	13.78	10.39	0.63	0.06	1.05	0.89	0.73	0.03
Growth	37,225	53.3%	20.50	78.52	10.82	9.01	0.04	0.00	0.37	0.77	0.61	0.02
Credit	7,869	11.3%	4.46	2.77	0.38	0.00	0.32	0.00	0.01	0.00	0.05	0.00
Real Assets & Inflation Hedges	11,229	16.1%	14.97	16.20	2.23	1.12	0.10	0.05	0.67	0.11	0.18	0.00
Risk Reduction & Mitigation	13,185	18.9%	6.34	1.79	0.25	0.02	0.18	0.01	0.00	0.00	0.04	0.00
Overlays & Hedges	382	0.6%	57.31	0.73	0.10	0.25	0.00	-0.01	0.00	0.00	-0.14	0.00

Allocation Selection

for the quarter ended March 31, 2023

Active Total Risk



Functional Category	Active Weight%	Allocation			Selection			Active Risk Contribution
		Volatility	Correlation	Risk Contribution	Volatility	Correlation	Risk Contribution	
Active Total Risk				0.09			1.17	1.27
Growth	0.26	7.03	0.64	0.01	1.52	0.87	0.70	0.71
Credit	0.26	9.43	-0.50	-0.01	2.14	-0.05	-0.01	-0.02
Real Assets & Inflation Hedges	-0.93	6.21	-0.61	0.04	3.50	0.76	0.43	0.46
Risk Reduction & Mitigation	-0.13	13.63	-0.47	0.01	1.15	0.25	0.05	0.06
Overlays & Hedges	0.55	54.70	0.17	0.05	0.00	0.00	0.00	0.05

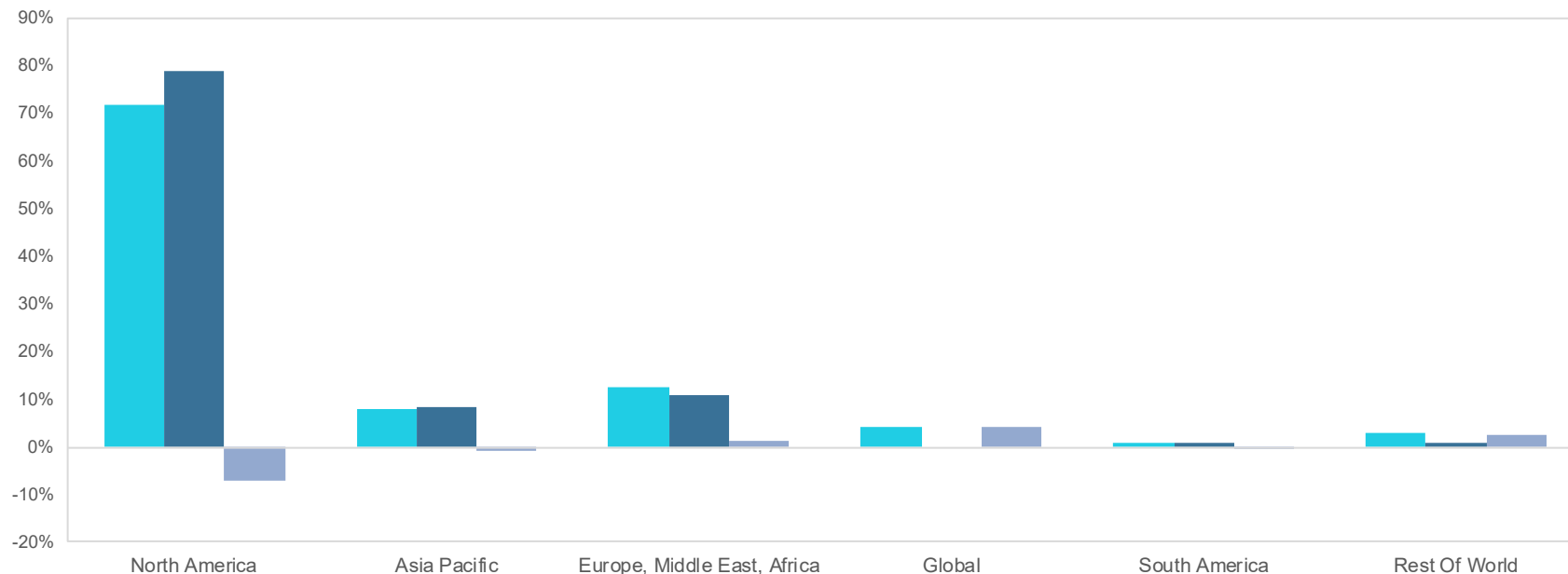
Portfolio Allocation

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

By Region



■ Portfolio Weight ■ Benchmark Weight ■ Active Weight

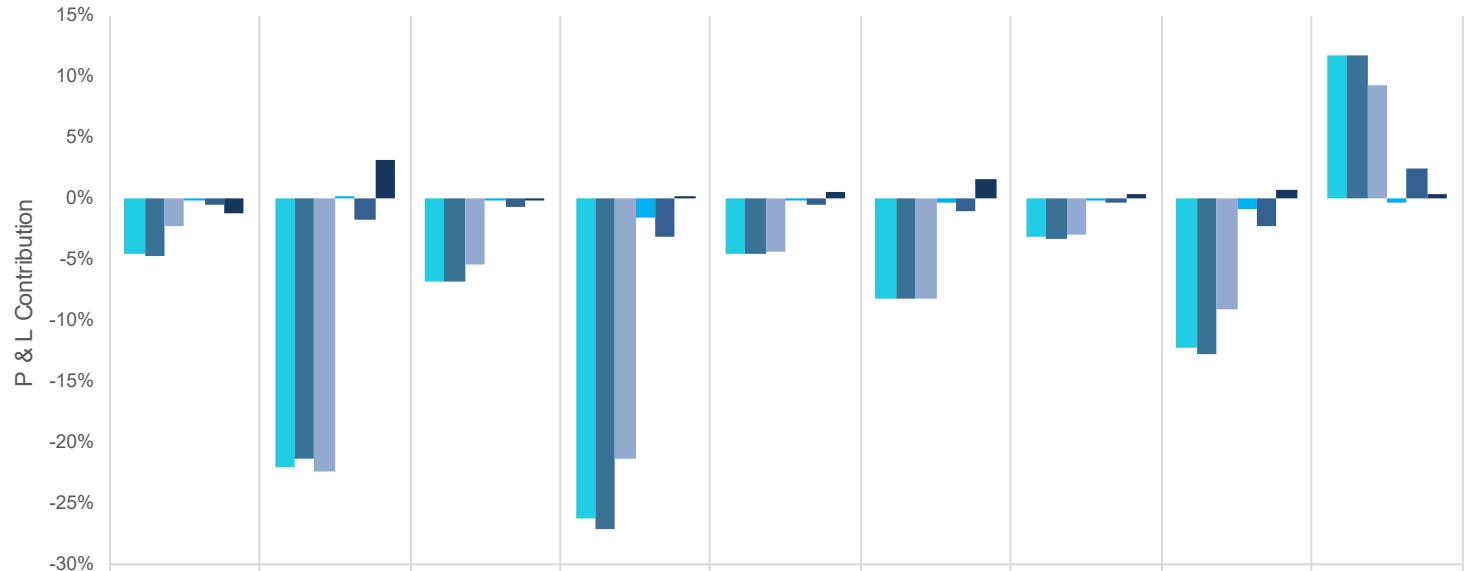
Region	Weight%			Total Risk	Active Risk Contribution	% of Active TR	MC to Total Tracking Error
	Portfolio	Benchmark	Active				
Total Fund	100.00%	100.00%	0.00%	13.78	1.27	100.00	0.01
North America	71.74%	78.69%	-6.95%	14.16	1.10	86.30	0.02
Asia Pacific	7.81%	8.55%	-0.74%	15.96	0.05	4.12	-0.02
Europe, Middle East, Africa	12.32%	11.03%	1.29%	21.16	0.33	25.78	0.05
Global	4.14%	0.00%	4.14%	7.03	-0.15	-12.18	-0.04
South America	0.85%	0.97%	-0.12%	25.89	0.06	4.77	0.01
Rest Of World	3.13%	0.75%	2.38%	6.20	-0.11	-8.80	-0.05

Stress Tests

for the quarter ended March 31, 2023

Scenarios by Asset Category

■ Total Fund ■ Policy Benchmark ■ Growth ■ Credit ■ Real Assets & Inflation Hedges ■ Risk Reduction & Mitigation



	1994 US Rate Hike	2000-2003 Tech Crash & Recession	2001 Sept 11th	2008-2009 Global Financial Crisis	2010 Peripheral European Bond Crisis	2011 US Debt Ceiling Act	2016 Brexit	2020 COVID March Selloff	2020 COVID Volatility Spike
■ Total Fund	-4.53%	-22.11%	-6.93%	-26.24%	-4.55%	-8.31%	-3.23%	-12.27%	11.73%
■ Policy Benchmark	-4.76%	-21.38%	-6.92%	-27.11%	-4.58%	-8.26%	-3.41%	-12.75%	11.75%
■ Growth	-2.32%	-22.51%	-5.53%	-21.46%	-4.42%	-8.25%	-3.01%	-9.23%	9.30%
■ Credit	-0.25%	0.00%	-0.26%	-1.61%	-0.13%	-0.40%	-0.10%	-0.98%	-0.36%
■ Real Assets & Inflation Hedges	-0.61%	-1.83%	-0.75%	-3.19%	-0.63%	-1.08%	-0.44%	-2.34%	2.39%
■ Risk Reduction & Mitigation	-1.19%	3.13%	-0.17%	0.18%	0.50%	1.58%	0.29%	0.71%	0.31%

Stress Tests

for the quarter ended March 31, 2023

Scenario Descriptions

Historical Scenario	Description	Stock Market	Interest Rates	Bond Market	Commodity Market
1994 US Rate Hike	In combating inflation, the US Federal Reserve raised rates from 3.25% in February to 5.5% in November 1994.				
2000-2003 Tech Crash & Recession	Period of crisis and slow down for technological firms due to a rapid jump in stock prices when tech bubble began to burst.				
2001 September 11th	The US stock market was closed for a week upon a series of coordinated suicide attacks upon the US on September 11, 2001.				
2008-2009 Global Financial Crisis	Major financial crisis starting with the failure of several US-based financial firms. Extended into 2009, when stock markets reached their lowest.				
2010 European Bond Crisis	During crisis, the liquidity access for peripheral countries was affected by budget deficits, high borrowing costs, and failing banking systems.				
2011 US Debt Ceiling Act	Political deadlock on appropriate level of US government spending and its impacts. Debt and equity markets experienced significant volatility.				
2016 Brexit	The referendum by British voters to exit the European Union roiled global markets causing the pound to fall to its lowest level in decades.				
2020 COVID March Selloff	Peak and Valley of the MSCI ACWI index when Covid became a Global Pandemic.				
2020 COVID Volatility Spike	Period it took for the Cboe Volatility Index (VIX) to revert to pre-pandemic levels.				

Market Trend Signals

Slightly Up
 Neutral
 Down
 Slightly Down

manager scorecards



Los Angeles County Employees Retirement Association

PUBLIC MARKETS MANAGER SCORECARD

1st Quarter 2023

Performance	Organization & Operations	ESG	Partnership	Fees & Terms
1 to 5 (with 5 the best)	S+, S, or S- (with S+ the best)	1 to 5 (with 5 the best)	A, B, or C (with A the best)	1 to 5 (with 5 the best)
SCORE	SCORE	SCORE	SCORE	SCORE

Manager	Market Value (in \$ millions)	% of Total Fund
---------	----------------------------------	--------------------

	Manager	Market Value (in \$ millions)	% of Total Fund	Performance		Organization & Operations		ESG		Partnership		Fees & Terms		
				SCORE	Visual	SCORE	Visual	SCORE	Visual	SCORE	Visual	SCORE	Visual	
GROWTH	GLOBAL EQUITY													
		Acadian Developed Markets	581.5	0.8%	4	●	S-	●	3	●	B	●	3	●
		BTC Euro Tilts	581.0	0.8%	5	●	S+	●	4	●	B	●	3	●
		Capital Group Developed Markets	407.7	0.6%	2	●	S	●	2	●	B	●	3	●
		Cevian Capital II - Activist	439.3	0.6%	3	●	S	●	4	●	B	●	1	●
		Cornercap US SC - EMP	80.0	0.1%	5	●	S-	●	1	●	A	●	3	●
		Frontier US SMID Growth	275.9	0.4%	3	●	S	●	2	●	A	●	1	●
		Global Alpha	181.2	0.3%	4	●	S+	●	3	●	A	●	3	●
		JPMAM Strategic Beta Non-U.S.	584.4	0.8%	*	●	S	●	2	●	B	●	3	●
		JPMAM Strategic Beta U.S.	4,292.1	5.9%	*	●	S	●	2	●	B	●	3	●
		Lazard Emerging Markets	383.9	0.5%	1	●	S-	●	3	●	B	●	1	●
		Parametric GE Cash Overlay	204.3	0.3%	—	●	S	●	—	●	B	●	5	●
		SSGA MSCI ACWI IMI	15,279.8	21.1%	4	●	S	●	—	●	B	●	5	●
	Systematic US Small Cap Value	190.3	0.3%	4	●	S	●	2	●	A	●	3	●	
CREDIT	HIGH YIELD													
		Beach Point	290.8	0.4%	5	●	S	●	3	●	B	●	3	●
		Brigade Cap Mgmt	641.4	0.9%	3	●	S	●	2	●	B	●	3	●
		Pinebridge Investments	466.4	0.6%	*	●	S	●	4	●	B	●	3	●
		BANK LOANS												
		Bain Capital Credit	432.0	0.6%	5	●	S	●	2	●	B	●	1	●
		Credit Suisse Bank Loans	1,006.3	1.4%	*	●	S-	●	3	●	B	●	5	●
		Crescent Capital	507.7	0.7%	4	●	S	●	2	●	B	●	3	●
		EMERGING MARKET DEBT												
		Aberdeen Asset Management	379.9	0.5%	1	●	S	●	3	●	B	●	3	●
	Ashmore Investment Management	351.2	0.5%	1	●	S	●	3	●	B	●	3	●	
REAL ASSETS & INFLATION HEDGES	NATURAL RESOURCES & COMMODITIES													
		Credit Suisse Commodity	294.8	0.4%	4	●	S-	●	1	●	A	●	3	●
		DWS Natural Resources	632.3	0.9%	2	●	S+	●	2	●	A	●	5	●
		Neuberger Berman/Gresham	344.2	0.5%	4	●	S	●	1	●	A	●	1	●
		INFRASTRUCTURE												
		DWS Infrastructure	2,593.1	3.6%	3	●	S+	●	2	●	A	●	5	●
	TIPS													
	Blackrock TIPS	1,923.7	2.7%	3	●	S+	●	—	●	B	●	5	●	

PUBLIC MARKETS MANAGER SCORECARD

1st Quarter 2023

			Performance	Organization & Operations	ESG	Partnership	Fees & Terms
			1 to 5 <i>(with 5 the best)</i>	S+, S, or S- <i>(with S+ the best)</i>	1 to 5 <i>(with 5 the best)</i>	A, B, or C <i>(with A the best)</i>	1 to 5 <i>(with 5 the best)</i>
			SCORE	SCORE	SCORE	SCORE	SCORE
Manager	Market Value (in \$ millions)	% of Total Fund					

RISK REDUCTION & MITIGATION	INVESTMENT GRADE BONDS								
	Allspring/Wells	1,291.3	1.8%	5	●	S	3	B	5
	BTC US Debt Index Fund	2,920.9	4.0%	4	●	S+	—	B	5
	Pugh Capital Mgmt	860.3	1.2%	3	●	S	1	A	3
OVERLAYS & HEDGES	LONG-TERM GOVERNMENT BONDS								
	BlackRock	3,032.5	4.2%	* 3	●	S+	—	B	5
	CASH								
SSGA Cash	638.9	0.9%	* 3	●	S+	—	A	5	
OVERLAYS									
Parametric Cash Overlay	411.8	0.6%	—		S	—	B	5	
HEDGES									
BTC Passive Currency Hedge	5.4	0.0%	—		S+	—	B	5	

- Exceeds 3-Year Net Excess Return
- Meets 3-Year Net Excess Return
- Below 3-Year Net Excess Return

- For Organization, ESG, and Partnership**
- Downgrade from the prior quarter
 - Upgrade from the prior quarter

Footnotes

Pillar methodologies in refinement and may evolve over time

Category Descriptions

Performance

Quarterly score based on Sharpe and Information Ratios, which provide insight into a manager's risk-adjusted performance and performance relative to its benchmark, respectively

*' denotes a manager with an inception date of less than 3 years, resulting in a neutral score of 3

Circle icons reflect trailing 3-year net excess returns against the manager's benchmark above or below a specified range

Organization & Operations

Includes factors such as organization, professional staff, diversity & inclusion, investment philosophy & process, risk management, legal & compliance framework

'S' stands for Satisfactory

ESG

Evaluates the extent to which material ESG factors are identified, assessed, and incorporated into risk/return analysis and portfolio construction

'—' denotes passive index funds and cash where ESG scores are not relevant and/or reflect strategies that do not incorporate active decisions, including ESG considerations, in portfolio construction

'+' denotes mandates where ESG scores are currently under review

Partnership

Blended score based on:

- Value added services – e.g., providing education, distributing research, and performing analytics on portfolio
- Client service – e.g., responsiveness, timeliness, competency, and approach
- Size of LACERA's investment relative to the firm's assets under management

Fees & Terms

Compared to a benchmark of median fees by asset category and/or investment structure

PRIVATE MARKETS MANAGER SCORECARD

1st Quarter 2023

			Performance <i>1 to 5 (with 5 the best)</i>	Organization & Operations <i>S+, S, or S- (with S+ the best)</i>	ESG <i>1 to 5 (with 5 the best)</i>	Partnership <i>A, B, or C (with A the best)</i>	Fees & Terms <i>1 to 5 (with 5 the best)</i>
			SCORE	SCORE	SCORE	SCORE	SCORE
Manager	Market Value (in \$ millions)	% of Total Fund					
GLOBAL/LARGE BUYOUT							
Advent International Group	127.0	0.2%	5	S+	3	C	4
Blackstone Management	215.3	0.3%	2	S	4	B	5
CVC Capital Partners	573.6	0.8%	4	S	4	A	4
Green Equity Investors	366.2	0.5%	5	S+	3	A	4
Hellman & Friedman	414.4	0.6%	1	S+	3	B	4
MBK	197.9	0.3%	1	S	4	A	2
Silver Lake Partners	503.4	0.7%	3	S+	3	A	5
Thoma Bravo LLC	203.1	0.3%	*	S+	3	B	3
Vista Equity Partners	815.3	1.1%	3	S-	3	A	2
MID-MARKET BUYOUT							
Accel-KKR Capital Partners	217.8	0.3%	3	S+	4	A	3
BlackFin Capital Partners	51.2	0.1%	1	S	3	B	3
Carlyle Group	234.5	0.3%	3	S+	4	B	4
Clearlake Capital	508.0	0.7%	5	S	4	A	4
GHO Capital	113.1	0.2%	*	S	3	A	3
Gilde Partners	36.1	0.0%	5	S	2	A	5
Harvest Partners	60.6	0.1%	5	S	1	C	3
Marlin Equity	26.1	0.0%	1	S-	2	C	3
Novacap	14.9	0.0%	*	S	3	B	3
Onex Partners	313.2	0.4%	2	S	4	A	5
PAI	157.5	0.2%	4	S-	2	B	4
Revelstoke	166.7	0.2%	3	S	4	A	2
Riverside Capital	106.3	0.1%	1	S	3	B	3
Siris Capital Group	161.0	0.2%	2	S	3	B	4
Sterling Partners	134.0	0.2%	4	S	3	A	4
STG Partners	45.6	0.1%	*	S	3	A	3
Triton	139.9	0.2%	4	S-	3	C	5
TSG	-0.8	0.0%	*	S+	3	C	2
Veritas Capital	55.5	0.1%	*	S+	3	B	3
Vinci Partners	73.1	0.1%	2	S	4	B	5
Webster Equity Partners	68.2	0.1%	*	S	3	B	3
Wynnchurch Capital	50.4	0.1%	*	S+	3	C	3
SMALL BUYOUT							
AE Industrial Partners	119.5	0.2%	5	S+	3	A	3
Atlantic Street Capital	45.7	0.1%	5	S	3	A	3
Clarion	28.9	0.0%	3	S+	2	B	4
Excellere Partners	118.0	0.2%	2	S-	3	A	3
Incline Equity Partners	41.0	0.1%	5	S	2	C	4
Insignia Capital Partners	239.7	0.3%	3	S	1	B	5
Juggernaut Capital Partners	302.5	0.4%	4	S	3	A	4
Lightyear Capital	227.6	0.3%	4	S	2	A	5
Livingbridge	55.3	0.1%	1	S+	4	A	3
Montefiore Investment	21.0	0.0%	*	S+	4	B	4
One Rock Capital Partners	218.5	0.3%	1	S	3	A	4
Palladium Equity Partners	89.0	0.1%	2	S-	4	C	2

PRIVATE EQUITY

PRIVATE MARKETS MANAGER SCORECARD

1st Quarter 2023

			Performance	Organization & Operations	ESG	Partnership	Fees & Terms
			1 to 5 (with 5 the best)	S+, S, or S- (with S+ the best)	1 to 5 (with 5 the best)	A, B, or C (with A the best)	1 to 5 (with 5 the best)
			SCORE	SCORE	SCORE	SCORE	SCORE
Manager	Market Value (in \$ millions)	% of Total Fund					
GROWTH EQUITY							
Australis Partners	99.5	0.1%	1	S-	4	B	5
Great Hill Partners	-1.0	0.0%	*	S	4	A	4
JMI Equity	4.3	0.0%	3	S	3	C	2
RedBird Capital Partners	167.2	0.2%	3	S	4	A	3
Summit Partners	79.0	0.1%	2	S	4	A	4
TA Associates	162.8	0.2%	5	S+	4	B	4
Technology Crossover Ventures	4.1	0.0%	5	S	2	B	3
VENTURE CAPITAL							
BlueRun Ventures	110.4	0.2%	2	S	2	B	2
Canaan Partners	165.9	0.2%	5	S	3	A	4
GGV Capital	482.6	0.7%	3	S	3	A	3
Institutional Venture Partners	162.0	0.2%	4	S	1	C	4
Joy Capital	78.8	0.1%	1	S-	2	B	4
Lilly Asia Ventures	155.8	0.2%	4	S	4	B	2
Primary Ventures	0.0	0.0%	*	S	2	C	4
Sinovation Ventures	93.7	0.1%	1	S-	2	C	2
Storm Ventures LLC	235.5	0.3%	2	S	3	A	4
Union Square	101.2	0.1%	5	S-	1	B	5
SPECIAL SITUATIONS							
Alchemy Partners	40.8	0.1%	1	S	3	B	4
Black Diamond	159.8	0.2%	5	S	3	B	4
Centerbridge	176.1	0.2%	3	S	4	A	2
FUND OF FUNDS							
Gateway	814.0	1.1%	5	S	3	C	4
MS GTB Capital Partners	317.5	0.4%	1	S	4	A	2
J.P. Morgan	494.0	0.7%	3	S+	+	B	4

PRIVATE EQUITY
(continued)

PRIVATE MARKETS MANAGER SCORECARD

1st Quarter 2023

			Performance	Organization & Operations	ESG	Partnership	Fees & Terms
			1 to 5 (with 5 the best)	S+, S, or S- (with S+ the best)	1 to 5 (with 5 the best)	A, B, or C (with A the best)	1 to 5 (with 5 the best)
			SCORE	SCORE	SCORE	SCORE	SCORE
Manager	Market Value (in \$ millions)	% of Total Fund					
COMMINGLED FUNDS							
AERMONT Real Estate Fund IV	26.0	0.0%	2	S	4	B	3
AEW Value Investors Asia III	30.0	0.0%	2	S	4	B	4
AG Asia Realty Fund IV	78.0	0.1%	*	S-	2	B	4
AG Europe Realty Fund II	47.0	0.1%	2	S-	2	B	3
Bain Capital Real Estate Fund I	76.0	0.1%	5	S	3	A	3
Bain Capital Real Estate Fund II	39.0	0.1%	*	S	3	A	3
Blackstone Real Estate Partners Fund X	0.6	0.0%	*	S	3	B	3
Brookfield Strategic Real Estate Partners Fund IV	7.8	0.0%	*	S	3	B	3
CapMan Nordic Real Estate Fund II	43.0	0.1%	3	S	3	A	4
CapMan Nordic Real Estate Fund III	24.0	0.0%	*	S	3	A	4
CityView Bay Area Fund II	82.0	0.1%	1	S	3	B	3
CityView Western Fund I, L.P.	215.0	0.3%	4	S	3	B	4
Core Property Index Fund	130.0	0.2%	4	S	2	A	5
Europa Fund IV	9.0	0.0%	1	S	3	B	2
Heitman Asia-Pacific Property Investors	35.0	0.0%	3	S	3	B	4
Invesco Real Estate Asia Fund	144.0	0.2%	3	S	4	B	5
Prologis European Logistics Fund (PELF)	197.0	0.3%	4	S	4	A	1
RREEF Core Plus Industrial Fund (CPIF)	307.0	0.4%	5	S-	3	B	5
Starwood Capital Hospitality Fund	6.0	0.0%	1	S	3	C	4
TPG Real Estate Partners III	45.0	0.1%	5	S	2	B	3
TPG Real Estate Partners IV	5.0	0.0%	*	S	2	B	3
SEPARATE ACCOUNTS							
Cityview Core I.M.A.	208.0	0.3%	1	S	3	B	2
Clarion I.M.A.	534.0	0.7%	5	S	3	A	4
Clarion Takeover Core IMA	360.0	0.5%	*	S	3	A	4
Clarion Takeover Value IMA	16.0	0.0%	*	S	3	A	3
Heitman I.M.A.	431.0	0.6%	4	S	3	B	4
RREEF Core/High Return I.M.A. III	863.0	1.2%	2	S-	3	C	5
RREEF Takeover I.M.A.	724.0	1.0%	2	S-	3	C	4
Stockbridge I.M.A.	644.0	0.9%	3	S	2	B	4
Stockbridge High I.M.A. Vintage 2014	113.0	0.2%	*	S	2	B	5
Stockbridge Value I.M.A. Vintage 2014	22.0	0.0%	*	S	2	B	3

REAL ESTATE



Los Angeles County Employees Retirement Association

PRIVATE MARKETS MANAGER SCORECARD

1st Quarter 2023

			Performance	Organization & Operations	ESG	Partnership	Fees & Terms
			1 to 5 (with 5 the best)	S+, S, or S- (with S+ the best)	1 to 5 (with 5 the best)	A, B, or C (with A the best)	1 to 5 (with 5 the best)
			SCORE	SCORE	SCORE	SCORE	SCORE
Manager	Market Value (in \$ millions)	% of Total Fund					
NATURAL RESOURCES & COMMODITIES							
Cibus Enterprise II	4.3	0.0%	*	S	3	B	3
Cibus Fund II	17.6	0.0%	*	S	3	B	3
EMG	83.2	0.1%	2	S	3	B	1
HiTecVision	86.4	0.1%	*	S	3	A	3
Orion Mine Finance Onshore III	137.5	0.2%	*	S	4	B	4
Orion Mineral Royalty Fund I	22.9	0.0%	*	S	4	B	4
Sprott	18.9	0.0%	*	S	3	B	5
TIAA-CREF Global Agriculture	279.0	0.4%	5	S+	4	A	5
TIAA-CREF Global Agriculture II	271.7	0.4%	5	S+	4	A	5
INFRASTRUCTURE							
Antin Mid Cap	40.0	0.1%	*	S	3	B	2
Axiom Infrastructure Canada II	146.0	0.2%	*	S	4	A	3
Axiom Infrastructure US II	258.8	0.4%	*	S	4	A	3
DIF CIF III	34.3	0.0%	*	S	3	A	4
DIF Infrastructure VI	100.4	0.1%	5	S	3	A	2
Grain Communications Opportunity Fund III	38.5	0.1%	*	S-	3	C	2
Grain Spectrum Holdings III	66.2	0.1%	3	S-	3	C	2
Guardian Smart Infrastructure	0.0	0.0%	*	S	3	C	4
KKR Diversified Core Infrastructure Fund	505.6	0.7%	*	S	3	A	4
Pan-European Infrastructure Fund III	68.0	0.1%	2	S-	3	B	3
Partners Group Direct Infrastructure 2020	76.4	0.1%	*	S	3	A	3

PRIVATE REAL ASSETS
(ex. Real Estate)



Los Angeles County Employees Retirement Association

PRIVATE MARKETS MANAGER SCORECARD

1st Quarter 2023

			Performance	Organization & Operations	ESG	Partnership	Fees & Terms
			1 to 5 (with 5 the best)	S+, S, or S- (with S+ the best)	1 to 5 (with 5 the best)	A, B, or C (with A the best)	1 to 5 (with 5 the best)
			SCORE	SCORE	SCORE	SCORE	SCORE
Manager	Market Value (in \$ millions)	% of Total Fund					
HEDGE FUNDS							
AM Asia	263.1	0.4%	4	S	2	A	5
Brevan Howard	668.9	0.9%	4	S+	2	A	2
Capula GRV	663.0	0.9%	5	S	1	A	3
Caxton	302.0	0.4%	4	S	3	B	3
DK Institutional Partners	500.1	0.7%	5	S	1	B	3
HBK Multistrategy	585.4	0.8%	5	S	1	B	3
Hudson Bay	668.5	0.9%	5	S	1	B	3
Polar	480.7	0.7%	5	S	2	B	4
Stable	384.9	0.5%	*	S	2	A	5
ILLIQUID CREDIT							
Barings	49.0	0.1%	2	S-	3	C	4
Beach Point	173.6	0.2%	3	S	1	B	3
BlackRock/Tennenbaum	658.7	0.9%	1	S-	2	C	4
Glendon	125.6	0.2%	4	S	1	B	2
Magnetar	933.1	1.3%	*	S	2	A	3
Napier Park	884.7	1.2%	*	S	2	A	3
Oaktree	101.9	0.1%	5	S	2	B	2
PIMCO Tac Opps	272.8	0.4%	1	S-	1	C	3
Quadrant	25.0	0.0%	5	S	1	B	4
Silver Rock	421.1	0.6%	*	S	2	A	4
Stable - IC	48.7	0.1%	*	S	2	A	4
Varde	317.2	0.4%	*	S	2	B	4
Waterfall	300.1	0.4%	*	S	2	B	4

HEDGE FUNDS & ILLIQUID CREDIT

For Organization, ESG, and Partnership
Downgrade from the prior quarter
Upgrade from the prior quarter

Footnotes

Pillar methodologies in refinement and may evolve over time

Category Descriptions

Performance

Quarterly score based on risk-adjusted performance metrics over time
 *' denotes a manager with an inception date of less than 3 years

Organization & Operations

Includes factors such as organization, professional staff, investment philosophy & process, risk management, legal & compliance framework, diversity & inclusion
 'S' stands for Satisfactory

ESG

Evaluates the extent to which material ESG factors are identified, assessed, and incorporated into risk/return analysis and portfolio construction
 '+' denotes mandates where ESG scores are currently under review

Partnership

Assesses the quality of investment manager relationships both quantitatively and qualitatively

Fees & Terms

Compares various fees and terms within each asset category, strategy and/or investment structure

appendix

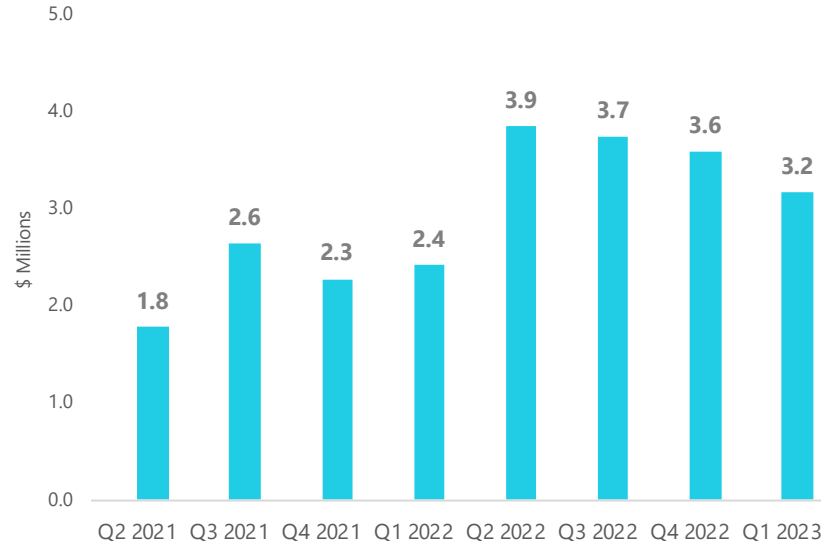
Summary

Securities Lending Income
for the quarter ended March 31, 2023

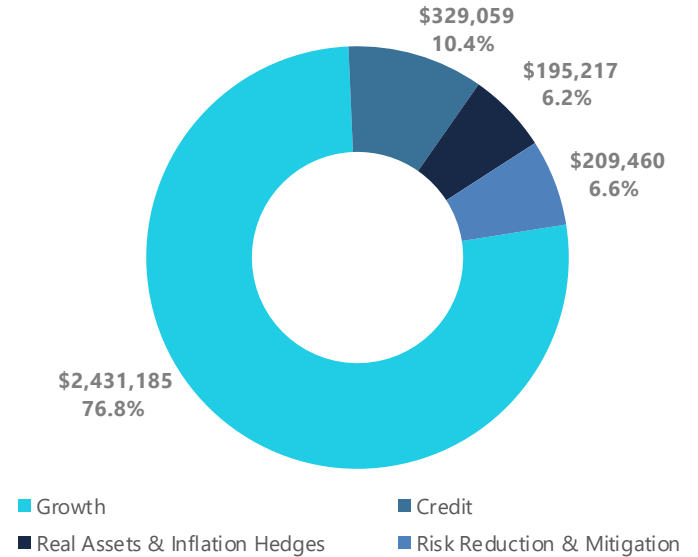


Los Angeles County Employees Retirement Association

Earnings by Quarter



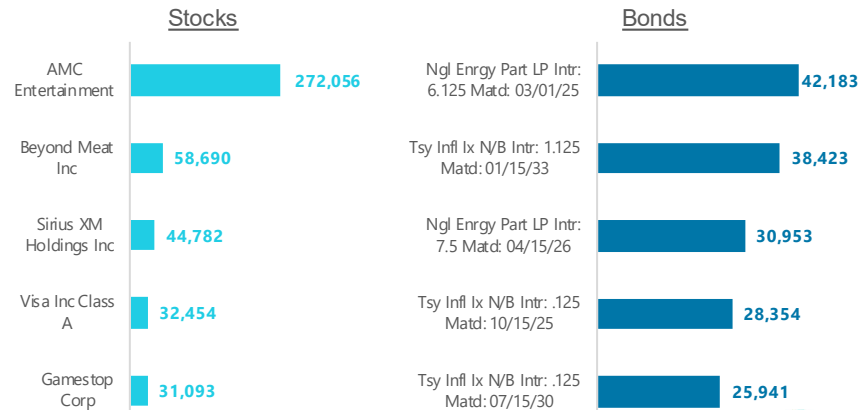
Earnings by Functional Category



Top Earning Funds

Fund	% of Total Fund Earnings	Total Earnings	Cash Earnings	Non-Cash Earnings
SSGA MSCI ACWI IMI	54.8%	1,735,470	1,026,725	708,745
JPMAM Strategic Beta US	13.9%	439,903	330,461	109,443
Brigade Cap Mgmt	5.6%	176,338	164,445	11,894
BlackRock TIPS	5.4%	170,788	68,399	102,389
Pinebridge Investments	4.2%	134,018	110,348	23,670

Top Earning Securities



Public Markets Manager Fees

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

Growth

	Average Market Value (\$ mm)	Fees ¹	Annualized Effective Rate (bps)
Active			
Acadian Asset Management	\$580.5	\$545,453	37.6
BTC Europe Alpha Tilts	\$575.7	\$496,833	34.5
Capital Guardian	\$376.0	\$326,096	34.7
Cevian Capital	\$437.8	\$1,197,507	109.4
CornerCap	\$84.7	\$111,453	52.7
Frontier Capital Management	\$283.6	\$531,759	75.0
Global Alpha	\$179.7	\$319,450	71.1
Lazard Asset Management	\$389.4	\$621,576	63.9
Parametric GE Market Cap	\$912.0	\$60,478	2.7
Parametric GE Region	\$592.0	\$39,256	2.7
Systematic	\$196.3	\$269,912	55.0
Subtotal:	\$4,607.6	\$4,519,773	39.2
Factor-Based			
JPMAM Strategic Beta Non-US	\$584.5	\$49,890	3.4
JPMAM Strategic Beta US	\$4,244.2	\$362,263	3.4
Subtotal:	\$4,828.7	\$412,153	3.4
Passive			
SSGA MSCI ACWI IMI	\$15,039.9	\$281,499	0.7
Subtotal:	\$15,039.9	\$281,499	0.7

¹ Reflects estimated investment management fees.

Public Markets Manager Fees

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

Credit

	Average Market Value (\$ mm)	Fees ¹	Annualized Effective Rate (bps)
Liquid Credit			
Aberdeen Standard Investments	\$381.0	\$354,922	37.3
Ashmore Investment Management	\$351.2	\$426,722	48.6
Bain Capital	\$432.0	\$584,262	54.1
Beach Point Capital	\$290.2	\$326,431	45.0
Brigade Capital Management	\$647.1	\$659,947	40.8
Credit Suisse Bank Loan	\$1,089.6	\$540,306	19.8
Crescent Capital Group	\$507.1	\$588,331	46.4
Pinebridge	\$464.5	\$383,229	33.0
Subtotal:	\$4,162.7	\$3,864,150	37.1

¹ Reflects estimated investment management fees.

Public Markets Manager Fees

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

Real Assets & Inflation Hedges

	Average Market Value (\$ mm)	Fees ¹	Annualized Effective Rate (bps)
Natural Resources & Commodities			
Credit Suisse	\$300.1	\$202,543	27.0
DWS Natural Resources	\$659.9	\$306,865	18.6
Neuberger Berman/Gresham	\$354.5	\$322,962	36.4
Subtotal:	\$1,314.5	\$832,370	25.3
Infrastructure			
DWS Infrastructure	\$2,670.6	\$1,241,885	18.6
Subtotal:	\$2,670.6	\$1,241,885	18.6
Treasury Inflation-Protected Securities			
BlackRock TIPS	\$1,896.7	\$46,767	1.0
Subtotal:	\$1,896.7	\$46,767	1.0

¹ Reflects estimated investment management fees.

Public Markets Manager Fees

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

Risk Reduction & Mitigation

	Average Market Value (\$ mm)	Fees ¹	Annualized Effective Rate (bps)
Investment Grade Bonds			
Allspring/Wells	\$1,281.3	\$337,662	10.5
Pugh Capital Management	\$853.8	\$284,519	13.3
Subtotal:²	\$5,082.3	\$683,951	5.4
Long-Term Government Bonds			
BlackRock	\$2,988.6	\$72,529	1.0
Subtotal:	\$2,988.6	\$72,529	1.0
Cash			
SSGA Cash	\$614.3	\$61,433	4.0
Subtotal:	\$614.3	\$61,433	4.0

¹ Reflects estimated investment management fees.

² Includes BTC US Debt Index account.

Public Markets Manager Fees

for the quarter ended March 31, 2023



Los Angeles County Employees Retirement Association

Overlays & Hedges

	Average Market Value (\$ mm)	Fees ¹	Annualized Effective Rate (bps)
Overlays			
Parametric Cash Overlay	\$2,250.6	\$149,247	2.7
Subtotal:	\$2,250.6	\$149,247	2.7
Hedges			
BlackRock Developed Markets Currency Hedge	\$6,903.5	\$255,335	1.5
Subtotal:	\$6,903.5	\$255,335	1.5

¹ Reflects estimated investment management fees.

Benchmark Definitions

Current Composition

	Weight	Component
Total Fund		
Total Fund Policy Benchmark		
	53%	Growth Policy Benchmark
	11%	Credit Policy Benchmark
	17%	RA & IH Policy Benchmark
	19%	RR & M Policy Benchmark
Growth		
Growth Policy Benchmark		
	60%	Global Equity Policy Benchmark
	32%	Private Equity – Growth Policy BM
	8%	Non-Core Private RE Policy Benchmark
Global Equity Policy Benchmark		
	100%	MSCI ACWI IMI Net
Private Equity – Growth Policy BM		
	100%	MSCI ACWI IMI Net + 200 bps (3-month lagged)
Non-Core Private RE Policy Benchmark		
	100%	NFI ODCE + 225 bps (3-month lagged)
<hr/>		
EAFE Custom Index	100%	MSCI EAFE + Canada Net Index

Benchmark Definitions

Current Composition

	Weight	Component
Credit		
Credit Policy Benchmark		
	36%	Liquid Credit Policy Benchmark
	64%	Illiquid Credit Policy Benchmark
Liquid Credit Policy Benchmark		
	40%	Bloomberg U.S. Corporate High Yield
	40%	CS Leveraged Loan Index
	10%	JPMorgan EMBI Global Diversified Index
	5%	JPM GBI-EM Global Diversified Index
	5%	JPM CEMBI Broad Diversified
Illiquid Credit Policy Benchmark		
	100%	Liquid Credit Policy BM + 150 bps (1-month lagged)
Bank Loans Custom Benchmark	100%	CS Leveraged Loan Index
Beachpoint Custom Benchmark	100%	Bloomberg U.S. Corporate High Yield
Brigade Custom Index	100%	Bloomberg U.S. Corporate High Yield
EMD Custom Benchmark		
	50%	JPMorgan EMBI Global Diversified Index
	25%	JPM CEMBI Broad Diversified
	25%	JPM GBI-EM Global Diversified Index

Benchmark Definitions

Current Composition

	Weight	Component
Real Assets & Inflation Hedges		
RA & IH Policy Benchmark		
	35%	Core Private RE Policy Benchmark
	18%	Nat Res & Comm Policy Benchmark
	29%	DJ Brookfield Global Infra Comp
	18%	Bloomberg U.S. Treasury: U.S. TIPS
Core Private RE Policy Benchmark		
	100%	NFI ODCE (3-month lagged)
Nat Res & Comm Policy Benchmark		
	33%	Bloomberg Commodity Index Total Return
	66%	S&P Global Natural Resources Index
<hr/>		
Private Equity – Real Assets Custom BM	100%	S&P Glb LargeMidCap Commod & Resources (3-month lagged)
Private Infrastructure Custom BM	100%	DJ Brookfield Global Infra Comp (3-month lagged)
Risk Reduction & Mitigation		
RR & M Policy Benchmark		
	37%	Bloomberg U.S. Aggregate
	32%	Diversified Hedge Funds Policy Benchmark
	26%	Bloomberg U.S. Treasury: Long
	5%	FTSE 3-Month US Treasury Bill
Diversified Hedge Funds Policy Benchmark		
	100%	FTSE 3-Month US Treasury Bill + 250 bps (1-month lagged)
Cash Policy Benchmark		
	100%	FTSE 3-Month US Treasury Bill
<hr/>		
Custom Hedge Fund BM	100%	Diversified Hedge Funds Policy Benchmark

A

ANNUAL RETURN

The total return of a security over a specified period, expressed as an annual rate of interest.

ACTIVE RISK

The expected standard deviation of the differential return between the portfolio and the benchmark. Active total risk arises from active management, and it is the result of active weights (deviations from the benchmark at the asset level) and therefore active exposures; for passively managed portfolios, it is referred to as “total tracking error.”

ACTIVE RISK CONTRIBUTION

Percent contribution to active total risk (or tracking error). The percent of active total risk that an individual asset or risk source contributes. For example, a % CR to Active Total Risk of 10% indicates that 10% of the portfolio’s active total risk is arising from the active position in that particular asset.

B

BASIS POINTS (BPS)

One one-hundredth of one percent. One hundred basis points equal one percent.

BETA

A measure of the volatility of a stock relative to the overall market. A beta of less than one indicates lower risk than the market; a beta of more than one indicates higher risk than the market.

D

DURATION

A measure of the price sensitivity of a bond portfolio to changes in interest rates.

DISTRIBUTED TO PAID-IN (DPI)

A measure of distributions received relative to contributed capital.

F

FUTURES CONTRACT

Agreement to buy or sell a specific amount of a commodity or financial instrument at a particular price and a stipulated future date.

H

HIGH YIELD BOND

A bond with a low investment quality and credit worthiness, usually with a rating of BB or less.

I

INFORMATION RATIO

The excess return (alpha) per unit of active risk (tracking error).

INTERNAL RATE OF RETURN (IRR)

A total rate of return that gives full weight to the size and timing of cash flows over the period measured and fully reflects unrealized gains and losses in addition to realized gains and losses, interest and dividend income.

K

KAPLAN & SCHOAR PUBLIC MARKET EQUIVALENT (KS-PME)

A ratio that benchmarks the performance of a fund against an appropriate public market index while accounting for the timing of a fund's cash flows.

M

MC TO TOTAL TRACKING ERROR

This value represents the change in the active risk of an asset's portfolio or group that would result from a one percent increase in the asset's effective position plus an equal short position in the benchmark.

S

SHARPE RATIO

Measures the performance of an investment compared to a risk-free asset, after adjusting for its risk. It is the difference between the returns of the investment and the risk-free return, divided by the standard deviation of the investment.

STANDARD DEVIATION

Statistical measure of the degree to which an individual value in a probability distribution tends to vary from the mean of the distribution. The greater the degree of dispersion, the greater the risk.

T

TIME-WEIGHTED RATE OF RETURN (TWR)

A measure of the compound rate of growth in a portfolio. Often used to compare the returns of investment managers because it eliminates the distorting effects on growth rates created by inflows and outflows of money.

TOTAL RISK

The total (gross) risk to an asset (or portfolio), which is the standard deviation of the asset's total return distribution, expressed in percent. Total risk is forecasted using MSCI Barra's multiple factor models. The total risk for an asset depends on the asset's exposures to the risk factors, the factor variance/covariance matrix, and the forecast selection risk of the asset.

TOTAL RISK CONTRIBUTION

The percent of total risk that an individual asset or risk source contributes. For example, a % CR to Total Risk of 10% indicates that 10% of the portfolio's total risk is arising from the portfolio's position in that particular asset.

TOTAL VALUE TO PAID-IN (TVPI)

A measure of total value created relative to capital invested.

TRACKING ERROR

The volatility of a manager's excess return. It is measured by subtracting the benchmark return from the manager's return and calculating the standard deviation.

Y

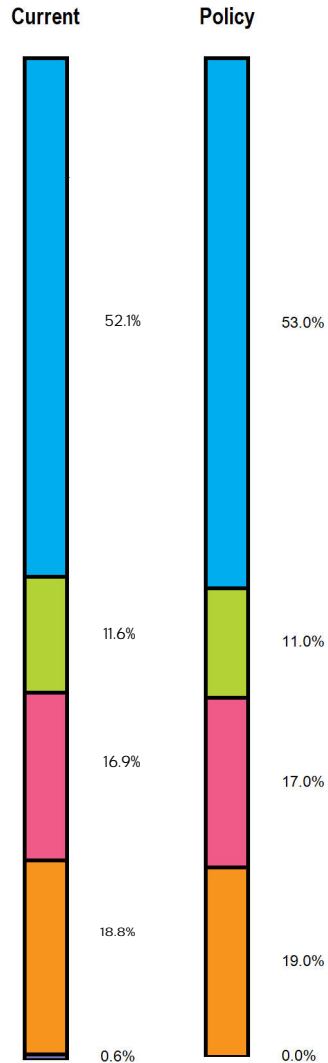
YIELD TO MATURITY

The return a bond earns on the price at which it was purchased if it were held to maturity. It assumes that coupon payments can be reinvested at the yield to maturity.

Los Angeles County Employees Retirement Association

March 31, 2023

Fund Evaluation Report



Allocation vs. Targets and Policy							
	Current Balance	Current Allocation	Policy	Difference	Policy Range	Within IPS Range?	
Growth	\$37,704,100,996	52.1%	53.0%	-0.9%	45.0% - 61.0%	Yes	
Global Equity	\$23,520,825,163	32.5%	32.0%	0.5%	25.0% - 39.0%	Yes	
Private Equity	\$13,034,329,367	18.0%	17.0%	1.0%	12.0% - 20.0%	Yes	
Non-Core Private Real Estate	\$1,148,946,467	1.6%	4.0%	-2.4%	2.0% - 6.0%	No	
Credit	\$8,410,894,849	11.6%	11.0%	0.6%	8.0% - 14.0%	Yes	
Liquid Credit ¹	\$4,076,063,978	5.6%	4.0%	1.6%	1.0% - 7.0%	Yes	
Illiquid Credit ²	\$4,334,830,836	6.0%	7.0%	-1.0%	4.0% - 10.0%	Yes	
Real Assets and Inflation Hedges	\$12,202,086,893	16.9%	17.0%	-0.1%	14.0% - 20.0%	Yes	
Core Real Estate	\$4,123,500,240	5.7%	6.0%	-0.3%	3.0% - 9.0%	Yes	
Natural Resources & Commodities	\$2,197,045,831	3.0%	3.0%	0.0%	1.0% - 5.0%	Yes	
Infrastructure	\$3,957,805,929	5.5%	5.0%	0.5%	2.0% - 6.0%	Yes	
TIPS	\$1,923,734,893	2.7%	3.0%	-0.3%	0.0% - 6.0%	Yes	
Risk Reduction and Mitigation	\$13,597,615,233	18.8%	19.0%	-0.2%	13.0% - 25.0%	Yes	
Investment Grade Bonds	\$5,082,662,035	7.0%	7.0%	0.0%	1.0% - 13.0%	Yes	
Diversified Hedge Funds	\$4,543,313,064	6.3%	6.0%	0.3%	2.0% - 8.0%	Yes	
Long-Term Government Bonds	\$3,032,464,981	4.2%	5.0%	-0.8%	0.0% - 10.0%	Yes	
Cash	\$1,578,042,500	2.2%	1.0%	1.2%	0.0% - 3.0%	Yes	
Overlays and Hedges	\$417,185,438	0.6%	0.0%	0.6%	0.0% - 1.0%	Yes	
Cash Overlay	\$411,801,073	0.6%					
Currency Hedge	\$5,384,365	0.0%					
Total³	\$72,331,883,408	100.0%	100.0%				

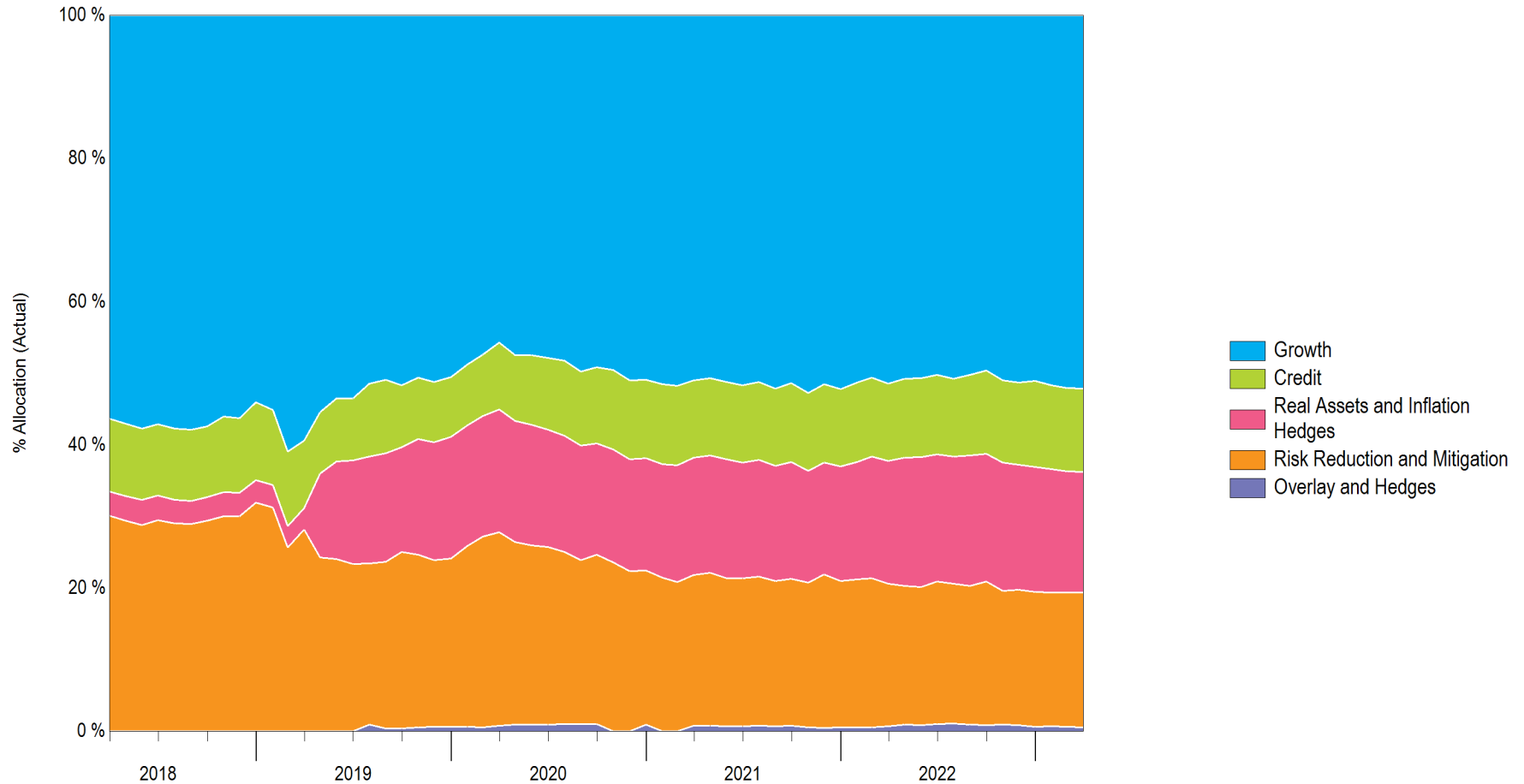
¹ Liquid Credit contains high yield, bank loans, and EM debt.

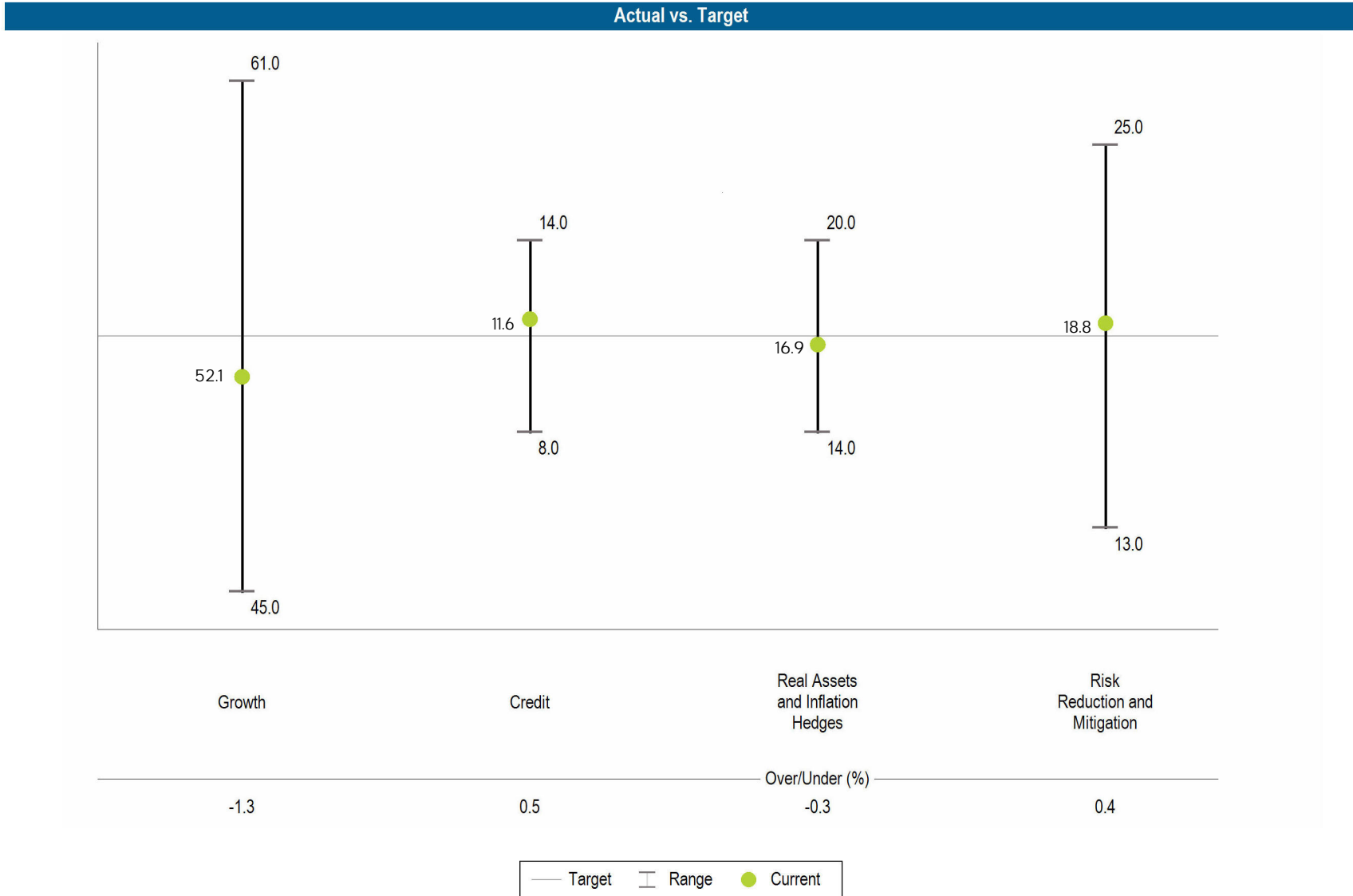
² Illiquid Credit contains credit hedge funds, real estate debt, private debt strategies and private equity-related debt.

³ Totals may not add up due to rounding.

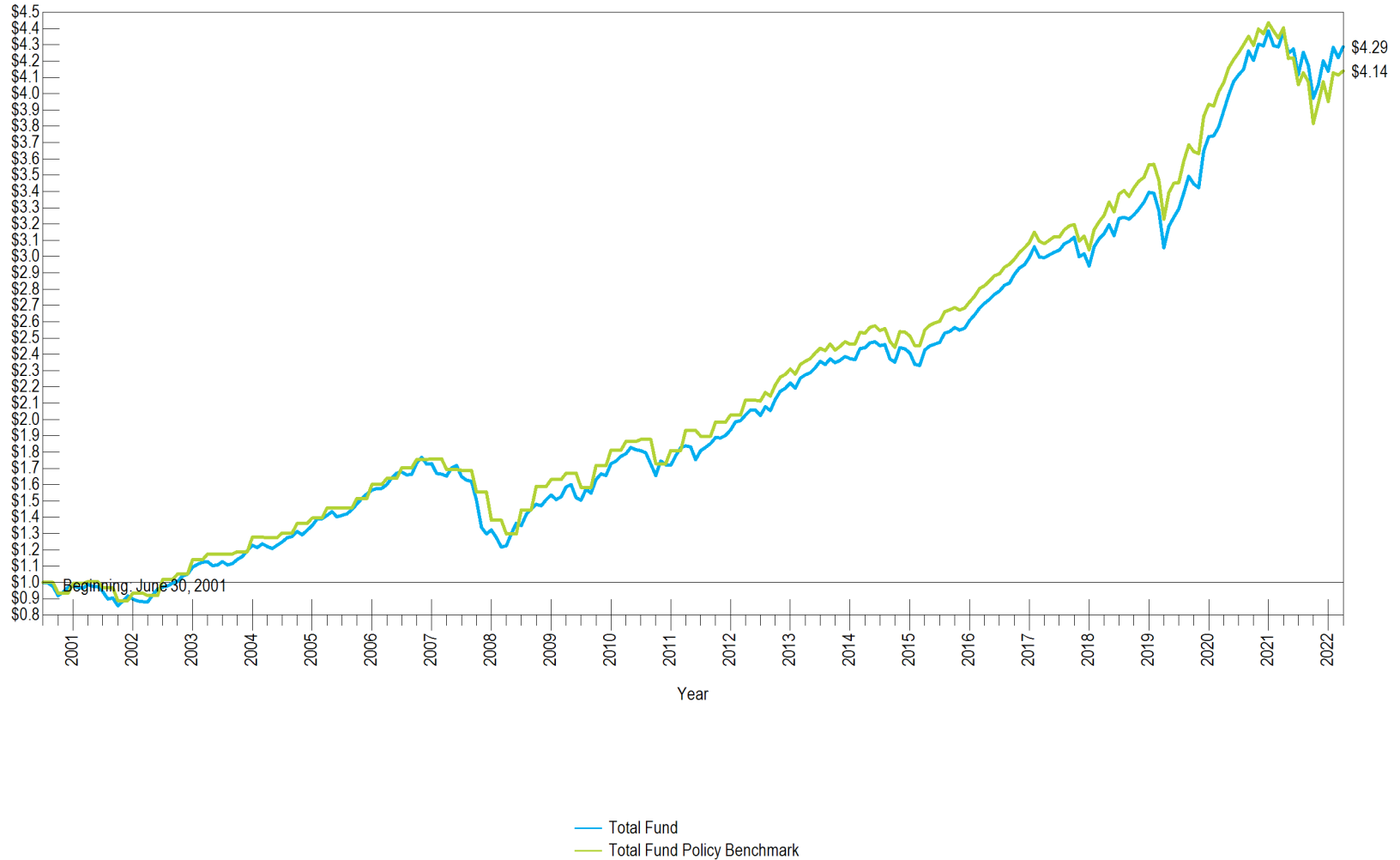
* The Functional Framework became effective April 1, 2019.

Asset Allocation History
5 Years Ending March 31, 2023





Growth of a Dollar



Asset Class Performance Summary (Net)									
	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD ¹ (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Total Fund (Net)	72,331,883,408	100.0	1.6	3.6	4.1	-2.0	12.1	7.5	7.8
<i>Total Fund Policy Benchmark</i>			<u>0.6</u>	<u>4.7</u>	<u>2.1</u>	<u>-6.0</u>	<u>8.6</u>	<u>6.1</u>	<u>6.9</u>
Excess Return			1.0	-1.1	2.0	4.0	3.5	1.4	0.9
Growth (Net)	37,704,100,996	52.1	1.7	4.9	5.7	-4.2	18.4	--	--
<i>Growth Custom Blended Benchmark</i>			<u>0.2</u>	<u>7.3</u>	<u>2.1</u>	<u>-9.7</u>	<u>13.7</u>	<u>--</u>	<u>--</u>
Excess Return			1.5	-2.4	3.6	5.5	4.7		
Credit (Net)	8,410,894,849	11.6	0.8	3.5	5.2	-0.3	7.7	--	--
<i>Credit Custom Blended Benchmark</i>			<u>-0.1</u>	<u>3.1</u>	<u>4.1</u>	<u>-1.8</u>	<u>4.5</u>	<u>--</u>	<u>--</u>
Excess Return			0.9	0.4	1.1	1.5	3.2		
Real Assets and Inflation Hedges (Net)	12,202,086,893	16.9	1.3	-0.4	1.3	-0.4	11.5	--	--
<i>Real Assets & Inflation Hedges Custom BM</i>			<u>0.4</u>	<u>-0.6</u>	<u>1.5</u>	<u>-1.8</u>	<u>11.9</u>	<u>--</u>	<u>--</u>
Excess Return			0.9	0.2	-0.2	1.4	-0.4		
Risk Reduction and Mitigation (Net)	13,597,615,233	18.8	2.2	3.7	0.9	-2.5	-0.4	--	--
<i>Risk Reduction and Mitigation Custom Blended Benchmark</i>			<u>2.4</u>	<u>3.4</u>	<u>0.3</u>	<u>-3.6</u>	<u>-1.7</u>	<u>--</u>	<u>--</u>
Excess Return			-0.2	0.3	0.6	1.1	1.3		
Overlay and Hedges (Net)	417,185,438	0.6	-7.5	14.0	15.7	101.2	--	--	--

¹ Fiscal Year begins July 1.

* See Glossary for all custom index definitions.

Trailing Performance									
	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Total Fund (Net)	72,331,883,408	100.0	1.6	3.6	4.1	-2.0	12.1	7.5	7.8
Total Fund (Gross)			1.6	3.7	4.3	-1.8	12.4	7.8	8.1
<i>Total Fund Policy Benchmark</i>			<u>0.6</u>	<u>4.7</u>	<u>2.1</u>	<u>-6.0</u>	<u>8.6</u>	<u>6.1</u>	<u>6.9</u>
Excess Return (vs. Net)			1.0	-1.1	2.0	4.0	3.5	1.4	0.9
Growth (Net)¹	37,704,100,996	52.1	1.7	4.9	5.7	-4.2	18.4	--	--
Growth (Gross)			1.8	5.0	6.0	-3.8	19.0	--	--
<i>Growth Custom Blended Benchmark</i>			<u>0.2</u>	<u>7.3</u>	<u>2.1</u>	<u>-9.7</u>	<u>13.7</u>	--	--
Excess Return (vs. Net)			1.5	-2.4	3.6	5.5	4.7		
Global Equity (Net)	23,520,825,163	32.5	2.4	7.1	10.2	-6.5	16.4	--	--
Global Equity (Gross)			2.4	7.1	10.3	-6.4	16.6	--	--
<i>Global Equity Custom BM</i>			<u>2.5</u>	<u>6.9</u>	<u>9.7</u>	<u>-7.7</u>	<u>15.6</u>	--	--
Excess Return (vs. Net)			-0.1	0.2	0.5	1.2	0.8		
Acadian Developed Markets (Net)	581,545,795	0.8	1.5	3.8	9.4	-8.0	14.3	4.0	7.3
Acadian Developed Markets (Gross)			1.5	3.9	9.7	-7.7	14.7	4.4	7.7
<i>EAFE Custom Benchmark</i>			<u>2.2</u>	<u>8.0</u>	<u>14.0</u>	<u>-2.7</u>	<u>13.5</u>	<u>3.8</u>	<u>4.9</u>
Excess Return (vs. Net)			-0.7	-4.2	-4.6	-5.3	0.8	0.2	2.4
BTC Euro Tilts (Net)	581,028,593	0.8	2.3	10.0	20.3	3.8	17.8	5.3	7.1
BTC Euro Tilts (Gross)			2.4	10.2	20.6	4.2	18.3	5.7	7.5
<i>MSCI EUROPE</i>			<u>2.4</u>	<u>10.6</u>	<u>18.6</u>	<u>1.4</u>	<u>15.0</u>	<u>4.4</u>	<u>5.2</u>
Excess Return (vs. Net)			-0.1	-0.6	1.7	2.4	2.8	0.9	1.9

¹ Includes accounts that are lagged by 3-months and latest available adjusted for cash flows.

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Capital Guardian (Net)	407,725,337	0.6	4.7	12.0	18.9	-1.6	12.0	5.7	6.7
Capital Guardian (Gross)			4.7	12.0	19.2	-1.3	12.4	6.1	7.1
<i>EAFE Custom Benchmark</i>			<u>2.2</u>	<u>8.0</u>	<u>14.0</u>	<u>-2.7</u>	<u>13.5</u>	<u>3.8</u>	<u>4.9</u>
Excess Return (vs. Net)			2.5	4.0	4.9	1.1	-1.5	1.9	1.8
Cevian Capital (Net)	439,332,299	0.6	-1.6	10.3	22.4	11.9	24.6	8.8	--
Cevian Capital (Gross)			-1.5	10.6	23.4	13.1	26.0	10.1	--
<i>MSCI EUROPE</i>			<u>2.4</u>	<u>10.6</u>	<u>18.6</u>	<u>1.4</u>	<u>15.0</u>	<u>4.4</u>	--
Excess Return (vs. Net)			-4.0	-0.3	3.8	10.5	9.6	4.4	
CornerCap (Net)	80,018,254	0.1	-7.0	-0.7	4.5	-6.6	24.7	--	--
CornerCap (Gross)			-7.0	-0.6	4.9	-6.1	25.3	--	--
<i>Russell 2000</i>			<u>-4.8</u>	<u>2.7</u>	<u>6.8</u>	<u>-11.6</u>	<u>17.5</u>	--	--
Excess Return (vs. Net)			-2.2	-3.4	-2.3	5.0	7.2		
Frontier Capital Management (Net)	275,854,180	0.4	-2.7	7.7	14.1	-7.4	24.1	7.1	9.8
Frontier Capital Management (Gross)			-2.7	7.9	14.7	-6.8	25.0	7.9	10.6
<i>Russell 2500</i>			<u>-3.7</u>	<u>3.4</u>	<u>7.9</u>	<u>-10.4</u>	<u>19.4</u>	<u>6.6</u>	<u>9.1</u>
Excess Return (vs. Net)			1.0	4.3	6.2	3.0	4.7	0.5	0.7

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Global Alpha IE EMP (Net)	181,216,958	0.3	0.8	9.5	11.8	-3.9	14.4	--	--
Global Alpha IE EMP (Gross)			0.9	9.7	12.4	-3.2	15.2	--	--
<i>MSCI EAFE Small Cap</i>			<u>-0.2</u>	<u>4.9</u>	<u>9.5</u>	<u>-9.8</u>	<u>12.1</u>	--	--
Excess Return (vs. Net)			1.0	4.6	2.3	5.9	2.3		
JPMAM Strategic BETA NON-U.S. (Net)	584,446,245	0.8	1.6	6.2	9.7	-5.4	--	--	--
JPMAM Strategic BETA NON-U.S. (Gross)			1.6	6.2	9.8	-5.4	--	--	--
<i>MSCI ACWI ex USA IMI</i>			<u>2.1</u>	<u>6.6</u>	<u>9.9</u>	<u>-5.8</u>	--	--	--
Excess Return (vs. Net)			-0.5	-0.4	-0.2	0.4			
JPMAM Strategic BETA U.S. (Net)	4,292,050,919	5.9	2.9	7.4	10.0	-7.6	--	--	--
JPMAM Strategic BETA U.S. (Gross)			2.9	7.4	10.1	-7.5	--	--	--
<i>MSCI USA IMI Gross</i>			<u>2.7</u>	<u>7.3</u>	<u>10.0</u>	<u>-8.5</u>	--	--	--
Excess Return (vs. Net)			0.2	0.1	0.0	0.9			
Lazard Emerging Markets (Net)	383,919,824	0.5	2.0	4.3	2.6	-7.0	10.4	1.2	2.8
Lazard Emerging Markets (Gross)			2.0	4.5	3.1	-6.4	11.1	1.9	3.6
<i>MSCI Emerging Markets</i>			<u>3.0</u>	<u>4.0</u>	<u>0.8</u>	<u>-10.7</u>	<u>7.8</u>	<u>-0.9</u>	<u>2.0</u>
Excess Return (vs. Net)			-1.0	0.3	1.8	3.7	2.6	2.1	0.8

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Parametric GE Market Cap (Net)	135,549,394	0.2	39.6	17.6	-0.8	-4.2	--	--	--
Parametric GE Market Cap (Gross)			39.6	17.7	-0.6	-3.9	--	--	--
Parametric GE Region (Net)	68,793,465	0.1	0.5	-15.9	-4.8	-28.2	--	--	--
Parametric GE Region (Gross)			0.5	-15.9	-4.7	-28.0	--	--	--
SSGA MSCI ACWI IMI (Net)	15,279,798,768	21.1	2.4	7.1	9.9	-7.1	16.3	--	--
SSGA MSCI ACWI IMI (Gross)			2.4	7.1	9.9	-7.1	16.3	--	--
<i>MSCI ACWI IMI Net (DAILY)</i>			<u>2.5</u>	<u>6.9</u>	<u>9.7</u>	<u>-7.7</u>	<u>15.6</u>	--	--
Excess Return (vs. Net)			-0.1	0.2	0.2	0.6	0.7		
Systematic Financial Management (Net)	190,319,649	0.3	-4.2	2.1	9.7	-3.2	22.8	--	--
Systematic Financial Management (Gross)			-4.1	2.3	10.1	-2.6	23.5	--	--
<i>Russell 2000</i>			<u>-4.8</u>	<u>2.7</u>	<u>6.8</u>	<u>-11.6</u>	<u>17.5</u>	--	--
Excess Return (vs. Net)			0.6	-0.6	2.9	8.4	5.3		

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Private Equity - Growth (Net)	13,034,329,367	18.0	0.7	1.6	-1.6	-0.8	22.1	--	--
Private Equity - Growth (Gross)			0.8	1.8	-1.0	0.0	23.5	--	--
<i>Private Equity - Growth Custom BM</i>			<u>-3.7</u>	<u>10.4</u>	<u>-12.4</u>	<u>-16.7</u>	<u>6.0</u>	--	--
Excess Return (vs. Net)			4.4	-8.8	10.8	15.9	16.1		
Non-Core Private Real Estate (Net)	1,148,946,467	1.6	0.5	-2.2	4.4	9.4	12.5	11.8	11.0
Non-Core Private Real Estate (Gross)			0.6	-2.0	4.8	9.8	13.4	13.2	12.9
<i>Non-Core Private RE Policy BM</i>			<u>-1.6</u>	<u>-4.6</u>	<u>1.1</u>	<u>8.9</u>	<u>11.8</u>	<u>10.7</u>	<u>12.2</u>
Excess Return (vs. Net)			2.1	2.4	3.3	0.5	0.7	1.1	-1.2
Credit (Net)¹	8,410,894,849	11.6	0.8	3.5	5.2	-0.3	7.7	--	--
Credit (Gross)			0.9	3.3	4.9	-0.4	8.0	--	--
<i>Credit Custom Blended Benchmark</i>			<u>-0.1</u>	<u>3.1</u>	<u>4.1</u>	<u>-1.8</u>	<u>4.5</u>	--	--
Excess Return (vs. Net)			0.9	0.4	1.1	1.5	3.2		
Liquid Credit (Net)	4,076,063,979	5.6	0.2	3.1	6.0	-2.4	--	--	--
Liquid Credit (Gross)			0.2	3.2	6.2	-2.1	--	--	--
<i>Liquid Credit Custom BM</i>			<u>0.7</u>	<u>3.2</u>	<u>6.8</u>	<u>-1.3</u>	--	--	--
Excess Return (vs. Net)			-0.5	-0.1	-0.8	-1.1			

¹ Includes accounts that are lagged by 1-month, 3-months, and latest available adjusted for cash flows.

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
High Yield (Net)	1,399,024,135	1.9	0.1	2.8	4.7	-5.5	6.0	--	--
High Yield (Gross)			0.2	2.8	4.9	-5.3	6.3	--	--
<i>BBgBarc US High Yield TR</i>			<u>1.1</u>	<u>3.6</u>	<u>7.2</u>	<u>-3.3</u>	<u>5.9</u>	--	--
Excess Return (vs. Net)			-1.0	-0.8	-2.5	-2.2	0.1		
Beach Point (Net)	290,849,969	0.4	1.0	3.6	6.7	-4.4	5.1	2.9	--
Beach Point (Gross)			1.0	3.7	7.0	-4.0	5.6	3.4	--
<i>Beach Point Custom BM</i>			<u>1.1</u>	<u>3.6</u>	<u>7.2</u>	<u>-3.3</u>	<u>5.9</u>	<u>2.7</u>	--
Excess Return (vs. Net)			-0.1	0.0	-0.5	-1.1	-0.8	0.2	
BlackRock HY ETF (Net)	326,838	0.0	-0.8	0.2	3.5	-6.2	4.2	--	--
BlackRock HY ETF (Gross)			-0.8	0.2	3.5	-6.2	4.2	--	--
<i>BBgBarc US High Yield TR</i>			<u>1.1</u>	<u>3.6</u>	<u>7.2</u>	<u>-3.3</u>	<u>5.9</u>	--	--
Excess Return (vs. Net)			-1.9	-3.4	-3.7	-2.9	-1.7		
Brigade Capital Management (Net)	641,423,773	0.9	-1.1	2.8	1.5	-7.9	8.6	2.6	3.7
Brigade Capital Management (Gross)			-1.0	2.9	1.8	-7.5	9.1	3.2	4.4
<i>Brigade Custom Index</i>			<u>1.1</u>	<u>3.6</u>	<u>7.2</u>	<u>-3.3</u>	<u>5.9</u>	<u>2.9</u>	<u>3.7</u>
Excess Return (vs. Net)			-2.2	-0.8	-5.7	-4.6	2.7	-0.3	0.0
Pinebridge Investments (Net)	466,378,047	0.6	1.4	3.7	8.0	-3.6	--	--	--
Pinebridge Investments (Gross)			1.4	3.8	8.2	-3.3	--	--	--
<i>BBgBarc US High Yield TR</i>			<u>1.1</u>	<u>3.6</u>	<u>7.2</u>	<u>-3.3</u>	--	--	--
Excess Return (vs. Net)			0.3	0.1	0.8	-0.3			

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Bank Loans (Net)	1,945,933,306	2.7	0.0	3.6	6.9	1.9	7.0	--	--
Bank Loans (Gross)			0.1	3.7	7.1	2.2	7.4	--	--
<i>CS Leveraged Loan Index</i>			<u>-0.1</u>	<u>3.1</u>	<u>6.8</u>	<u>2.1</u>	<u>8.4</u>	--	--
Excess Return (vs. Net)			0.1	0.5	0.1	-0.2	-1.4		
Bain Capital (Net)	432,013,272	0.6	0.3	3.7	6.0	2.3	9.6	4.3	--
Bain Capital (Gross)			0.4	3.8	6.4	2.8	10.2	4.9	--
<i>Bank Loans Custom Index</i>			<u>-0.1</u>	<u>3.1</u>	<u>6.8</u>	<u>2.1</u>	<u>8.4</u>	<u>4.1</u>	--
Excess Return (vs. Net)			0.4	0.6	-0.8	0.2	1.2	0.2	
Credit Suisse Bank Loans (Net)	1,006,257,569	1.4	0.1	3.7	8.5	3.4	7.0	--	--
Credit Suisse Bank Loans (Gross)			0.1	3.7	8.7	3.5	7.2	--	--
<i>CS Leveraged Loan Index</i>			<u>-0.1</u>	<u>3.1</u>	<u>6.8</u>	<u>2.1</u>	<u>8.4</u>	--	--
Excess Return (vs. Net)			0.2	0.6	1.7	1.3	-1.4		
Crescent Capital Group (Net)	507,662,466	0.7	-0.4	3.4	3.9	-1.8	8.6	3.9	--
Crescent Capital Group (Gross)			-0.3	3.5	4.2	-1.3	9.1	4.4	--
<i>Bank Loans Custom Index</i>			<u>-0.1</u>	<u>3.1</u>	<u>6.8</u>	<u>2.1</u>	<u>8.4</u>	<u>4.1</u>	--
Excess Return (vs. Net)			-0.3	0.3	-2.9	-3.9	0.2	-0.2	

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
EM Debt (Net)	731,106,538	1.0	0.8	2.4	6.6	-5.9	1.3	-2.3	--
EM Debt (Gross)			0.9	2.5	7.0	-5.5	1.8	-1.8	--
<i>EMD Custom</i>			<u>1.7</u>	<u>2.8</u>	<u>5.8</u>	<u>-4.0</u>	<u>0.9</u>	<u>-0.4</u>	--
Excess Return (vs. Net)			-0.9	-0.4	0.8	-1.9	0.4	-1.9	
Aberdeen Asset Management (Net)	379,863,165	0.5	0.8	1.9	6.8	-5.2	1.0	-1.3	--
Aberdeen Asset Management (Gross)			0.9	2.0	7.1	-4.8	1.4	-0.9	--
<i>EMD Custom</i>			<u>1.7</u>	<u>2.8</u>	<u>5.8</u>	<u>-4.0</u>	<u>0.9</u>	<u>-0.4</u>	--
Excess Return (vs. Net)			-0.9	-0.9	1.0	-1.2	0.1	-0.9	
Ashmore Investment Management (Net)	351,243,373	0.5	0.8	2.9	6.4	-6.7	1.7	-3.3	--
Ashmore Investment Management (Gross)			0.9	3.1	6.8	-6.3	2.2	-2.7	--
<i>EMD Custom</i>			<u>1.7</u>	<u>2.8</u>	<u>5.8</u>	<u>-4.0</u>	<u>0.9</u>	<u>-0.4</u>	--
Excess Return (vs. Net)			-0.9	0.1	0.6	-2.7	0.8	-2.9	

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Illiquid Credit (Net)	4,334,830,836	6.0	1.5	3.6	3.5	2.5	11.0	--	--
Illiquid Credit (Gross)			1.5	3.0	2.7	1.8	11.1	--	--
<i>Illiquid Credit Custom BM</i>			<u>-0.6</u>	<u>3.0</u>	<u>2.3</u>	<u>-1.3</u>	<u>1.0</u>	--	--
Excess Return (vs. Net)			2.1	0.6	1.2	3.8	10.0		
Beach Point - Fund III (Net)	161,075,597	0.2	1.3	4.3	-3.3	-6.3	13.1	10.1	--
Beach Point - Fund III (Gross)			1.3	-8.6	-17.6	-19.6	11.6	10.9	--
<i>Opportunistic Custom Index 1 Month Lag</i>			<u>-0.3</u>	<u>2.7</u>	<u>1.8</u>	<u>-1.6</u>	<u>2.6</u>	<u>3.3</u>	--
Excess Return (vs. Net)			1.6	1.6	-5.1	-4.7	10.5	6.8	
Lake Cascade (Net)	300,134,871	0.4	0.0	--	--	--	--	--	--
Lake Cascade (Gross)			0.0	--	--	--	--	--	--
<i>Illiquid Credit Custom BM</i>			<u>-0.6</u>	--	--	--	--	--	--
Excess Return (vs. Net)			0.6						
Lake Cottage (Net)	317,206,558	0.4	1.4	1.9	--	--	--	--	--
Lake Cottage (Gross)			1.4	1.9	--	--	--	--	--
<i>Illiquid Credit Custom BM</i>			<u>-0.6</u>	<u>3.0</u>	--	--	--	--	--
Excess Return (vs. Net)			2.0	-1.1					
Lake Vineyard (Net)	421,140,854	0.6	0.1	3.1	1.3	2.0	--	--	--
Lake Vineyard (Gross)			0.1	3.1	1.3	2.0	--	--	--
<i>Illiquid Credit Custom BM</i>			<u>-0.6</u>	<u>3.0</u>	<u>2.3</u>	<u>-1.3</u>	--	--	--
Excess Return (vs. Net)			0.7	0.1	-1.0	3.3			

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Magnetar Credit Fund (Net)	933,089,014	1.3	0.2	3.2	3.2	3.8	--	--	--
Magnetar Credit Fund (Gross)			0.2	3.2	3.2	3.8	--	--	--
<i>Illiquid Credit Custom BM</i>			<u>-0.6</u>	<u>3.0</u>	<u>2.3</u>	<u>-1.3</u>	--	--	--
Excess Return (vs. Net)			0.8	0.2	0.9	5.1			
Napier Park (Net)	884,725,127	1.2	5.9	7.4	6.9	1.4	16.4	--	--
Napier Park (Gross)			5.9	7.4	6.9	1.4	16.4	--	--
<i>Illiquid Credit Custom BM</i>			<u>-0.6</u>	<u>3.0</u>	<u>2.3</u>	<u>-1.3</u>	<u>1.0</u>	--	--
Excess Return (vs. Net)			6.5	4.4	4.6	2.7	15.4		
PIMCO Tac Opps (Net)	272,834,325	0.4	0.0	0.0	-3.3	-5.9	4.6	--	--
PIMCO Tac Opps (Gross)			0.0	0.0	-3.3	-5.9	4.6	--	--
<i>PIMCO Tac Opps Custom BM</i>			<u>-0.6</u>	<u>3.0</u>	<u>2.3</u>	<u>-1.3</u>	<u>0.2</u>	--	--
Excess Return (vs. Net)			0.6	-3.0	-5.6	-4.6	4.4		
Private Equity - Credit (Net)	227,804,665	0.3	0.4	7.6	10.1	16.0	18.9	--	--
Private Equity - Credit (Gross)			0.4	7.6	10.1	16.0	18.9	--	--
<i>PE-Credit Custom Benchmark</i>			<u>-0.2</u>	<u>2.5</u>	<u>-5.8</u>	<u>-10.8</u>	<u>-0.3</u>	--	--
Excess Return (vs. Net)			0.6	5.1	15.9	26.8	19.2		
Real Estate - Credit (Net)	73,528,245	0.1	0.6	1.8	6.0	6.9	9.9	9.6	8.8
Real Estate - Credit (Gross)			0.6	1.9	6.3	7.6	10.6	10.6	9.8
<i>RE Credit BM</i>			<u>-0.6</u>	<u>3.0</u>	<u>2.3</u>	<u>-1.3</u>	<u>0.9</u>	<u>2.4</u>	<u>3.7</u>
Excess Return (vs. Net)			1.2	-1.2	3.7	8.3	9.0	7.2	5.1

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Tennenbaum Capital (Net)	658,689,754	0.9	0.8	1.7	4.6	5.6	7.1	6.9	--
Tennenbaum Capital (Gross)			0.8	1.7	5.0	6.2	7.8	7.7	--
<i>CSFB Leveraged Loan Index 1 Month Lagged</i>			<u>0.6</u>	<u>3.6</u>	<u>4.7</u>	<u>2.3</u>	<u>3.7</u>	<u>3.6</u>	--
Excess Return (vs. Net)			0.2	-1.9	-0.1	3.3	3.4	3.3	
IC EM Program (Net)	48,720,472	0.1	0.4	0.4	--	--	--	--	--
IC EM Program (Gross)			0.4	0.4	--	--	--	--	--
<i>Illiquid Credit Custom BM</i>			<u>-0.6</u>	<u>3.0</u>	--	--	--	--	--
Excess Return (vs. Net)			1.0	-2.6					
Stable Asset Management - IC (Net)	48,720,472	0.1	0.4	0.4	--	--	--	--	--
Stable Asset Management - IC (Gross)			0.4	0.4	--	--	--	--	--
<i>Illiquid Credit Custom BM</i>			<u>-0.6</u>	<u>3.0</u>	--	--	--	--	--
Excess Return (vs. Net)			1.0	-2.6					
Stable Fund Investments - IC (Net)	48,720,472	0.1	0.4	0.4	--	--	--	--	--
Stable Fund Investments - IC (Gross)			0.4	0.4	--	--	--	--	--
<i>Illiquid Credit Custom BM</i>			<u>-0.6</u>	<u>3.0</u>	--	--	--	--	--
Excess Return (vs. Net)			1.0	-2.6					
HarbourView (Net)	48,720,472	0.1	0.4	0.4	--	--	--	--	--
HarbourView (Gross)			0.4	0.4	--	--	--	--	--
<i>Illiquid Credit Custom BM</i>			<u>-0.6</u>	<u>3.0</u>	--	--	--	--	--
Excess Return (vs. Net)			1.0	-2.6					

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Real Assets and Inflation Hedges (Net)¹	12,202,086,893	16.9	1.3	-0.4	1.3	-0.4	11.5	--	--
Real Assets and Inflation Hedges (Gross)			1.3	-0.4	1.5	0.0	11.9	--	--
<i>Real Assets & Inflation Hedges Custom BM</i>			<u>0.4</u>	<u>-0.6</u>	<u>1.5</u>	<u>-1.8</u>	<u>11.9</u>	--	--
Excess Return (vs. Net)			0.9	0.2	-0.2	1.4	-0.4		
Core Private Real Estate (Net)	4,123,500,240	5.7	0.1	-4.5	2.0	10.5	9.1	7.8	8.5
Core Private Real Estate (Gross)			0.2	-4.4	2.5	11.2	9.7	8.4	9.1
<i>Core Private Real Estate Custom BM</i>			<u>-1.8</u>	<u>-5.2</u>	<u>-0.6</u>	<u>6.6</u>	<u>9.2</u>	<u>8.1</u>	<u>9.6</u>
Excess Return (vs. Net)			1.9	0.7	2.6	3.9	-0.1	-0.3	-1.1
Natural Resources and Commodities (Net)	2,197,045,831	3.0	1.5	0.1	0.9	-5.2	24.8	6.3	-0.5
Natural Resources and Commodities (Gross)			1.5	0.2	1.1	-4.9	25.2	6.7	-0.2
<i>Natural Resources & Commodities Custom BM</i>			<u>-0.8</u>	<u>-1.5</u>	<u>5.4</u>	<u>-7.7</u>	<u>25.3</u>	<u>6.6</u>	<u>-1.1</u>
Excess Return (vs. Net)			2.3	1.6	-4.5	2.5	-0.5	-0.3	0.6
Public Natural Resources and Commodities (Net)	1,271,745,431	1.8	-1.9	-4.0	-2.0	-11.9	24.3	--	--
Public Natural Resources and Commodities (Gross)			-1.9	-4.0	-1.8	-11.7	24.6	--	--
<i>Natural Resources & Commodities Custom BM</i>			<u>-0.8</u>	<u>-1.5</u>	<u>5.4</u>	<u>-7.7</u>	<u>25.3</u>	--	--
Excess Return (vs. Net)			-1.1	-2.5	-7.4	-4.2	-1.0		

¹ Includes accounts that are lagged by 3-months and latest available adjusted for cash flows.

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	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Credit Suisse Commodity (Net)	294,837,613	0.4	-0.2	-5.6	-7.5	-12.0	21.7	5.9	-1.2
Credit Suisse Commodity (Gross)			-0.2	-5.5	-7.3	-11.8	22.0	6.2	-0.9
<i>Bloomberg Commodity Index TR USD</i>			<u>-0.2</u>	<u>-5.4</u>	<u>-7.2</u>	<u>-12.5</u>	<u>20.8</u>	<u>5.4</u>	<u>-1.7</u>
Excess Return (vs. Net)			0.0	-0.2	-0.3	0.5	0.9	0.5	0.5
DWS Natural Resources (Net)	632,348,292	0.9	-3.1	-2.3	6.8	-11.3	26.4	--	--
DWS Natural Resources (Gross)			-3.1	-2.3	6.9	-11.2	26.6	--	--
<i>S&P Global Large/MidCap Commodities & Resources</i>			<u>-0.4</u>	<u>-1.3</u>	<u>10.9</u>	<u>-5.8</u>	<u>29.7</u>	--	--
Excess Return (vs. Net)			-2.7	-1.0	-4.1	-5.5	-3.3		
Neuberger Berman/ Gresham (Net)	344,206,110	0.5	-0.9	-6.0	-9.3	-12.6	22.4	5.2	-1.1
Neuberger Berman/ Gresham (Gross)			-0.9	-6.0	-9.1	-12.3	22.8	5.6	-0.7
<i>Bloomberg Commodity Index TR USD</i>			<u>-0.2</u>	<u>-5.4</u>	<u>-7.2</u>	<u>-12.5</u>	<u>20.8</u>	<u>5.4</u>	<u>-1.7</u>
Excess Return (vs. Net)			-0.7	-0.6	-2.1	-0.1	1.6	-0.2	0.6
Private Natural Resources and Commodities (Net)	925,300,400	1.3	6.6	6.5	4.2	16.7	-1.6	--	--
Private Natural Resources and Commodities (Gross)			6.6	6.5	4.3	17.4	0.1	--	--
<i>PE - Real Assets Custom BM</i>			<u>-3.7</u>	<u>14.0</u>	<u>-4.5</u>	<u>15.5</u>	<u>16.2</u>	--	--
Excess Return (vs. Net)			10.3	-7.5	8.7	1.2	-17.8		
Cibus Enterprise II (Net)	4,318,980	0.0	--	--	--	--	--	--	--
Cibus Enterprise II (Gross)			--	--	--	--	--	--	--

Private natural resources and infrastructure funds reflect early-stage life cycle performance.

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	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Co-Investments - Natural Resources (Net)	15,042,249	0.0	-0.1	-0.1	--	--	--	--	--
Co-Investments - Natural Resources (Gross)			-0.1	-0.1	--	--	--	--	--
<i>PE - Real Assets Custom BM</i>			<u>-3.7</u>	<u>14.0</u>	--	--	--	--	--
Excess Return (vs. Net)			3.6	-14.1					
Cibus Fund II (Net)	17,559,341	0.0	0.0	-1.8	-13.6	--	--	--	--
Cibus Fund II (Gross)			0.0	-1.8	-13.6	--	--	--	--
<i>PE - Real Assets Custom BM</i>			<u>-3.7</u>	<u>14.0</u>	<u>-4.5</u>	--	--	--	--
Excess Return (vs. Net)			3.7	-15.8	-9.1				
HiTecVision New Energy (Net)	86,419,380	0.1	14.3	13.6	--	--	--	--	--
HiTecVision New Energy (Gross)			14.3	13.6	--	--	--	--	--
<i>PE - Real Assets Custom BM</i>			<u>-3.7</u>	<u>14.0</u>	--	--	--	--	--
Excess Return (vs. Net)			18.0	-0.4					
Orion Mine Finance Fund III (Net)	125,844,385	0.2	0.0	0.0	-1.2	5.4	--	--	--
Orion Mine Finance Fund III (Gross)			0.0	0.0	-1.2	5.4	--	--	--
<i>PE - Real Assets Custom BM</i>			<u>-3.7</u>	<u>14.0</u>	<u>-4.5</u>	<u>15.5</u>	--	--	--
Excess Return (vs. Net)			3.7	-14.0	3.3	-10.1			
Orion Mining Royalty Fund I (Net)	23,593,626	0.0	0.0	0.0	-12.4	-11.4	--	--	--
Orion Mining Royalty Fund I (Gross)			0.0	0.0	-12.4	-11.4	--	--	--
<i>PE - Real Assets Custom BM</i>			<u>-3.7</u>	<u>14.0</u>	<u>-4.5</u>	<u>15.5</u>	--	--	--
Excess Return (vs. Net)			3.7	-14.0	-7.9	-26.9			

Private natural resources and infrastructure funds reflect early-stage life cycle performance.

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
PE - Real Assets & Inflation Hedges (Net)	83,177,573	0.1	2.1	2.1	1.9	9.8	-1.8	--	--
PE - Real Assets & Inflation Hedges (Gross)			2.5	2.5	3.1	15.7	-0.1	--	--
<i>PE - Real Assets Custom BM</i>			<u>-3.7</u>	<u>14.0</u>	<u>-4.5</u>	<u>15.5</u>	<u>16.2</u>	--	--
Excess Return (vs. Net)			5.8	-11.9	6.4	-5.7	-18.0		
TIAA-CREF Global Agriculture (Net)	278,963,908	0.4	9.0	9.0	5.0	22.6	--	--	--
TIAA-CREF Global Agriculture (Gross)			9.0	9.0	5.0	22.6	--	--	--
<i>PE - Real Assets Custom BM</i>			<u>-3.7</u>	<u>14.0</u>	<u>-4.5</u>	<u>15.5</u>	--	--	--
Excess Return (vs. Net)			12.7	-5.0	9.5	7.1			
TIAA-CREF Global Agriculture II (Net)	271,727,430	0.4	8.5	8.5	6.1	19.2	--	--	--
TIAA-CREF Global Agriculture II (Gross)			8.5	8.5	6.1	19.2	--	--	--
<i>PE - Real Assets Custom BM</i>			<u>-3.7</u>	<u>14.0</u>	<u>-4.5</u>	<u>15.5</u>	--	--	--
Excess Return (vs. Net)			12.2	-5.5	10.6	3.7			
Sprott (Net)	18,653,528	0.0	--	--	--	--	--	--	--
Sprott (Gross)			--	--	--	--	--	--	--
<i>PE - Real Assets Custom BM</i>			<u>-3.7</u>	--	--	--	--	--	--
Excess Return (vs. Net)									
Infrastructure (Net)	3,957,805,929	5.5	1.7	1.9	0.9	-5.7	12.9	--	--
Infrastructure (Gross)			1.8	2.0	1.0	-5.5	13.1	--	--
<i>DJ Brookfield Global Infrastructure Comp TR</i>			<u>2.1</u>	<u>3.1</u>	<u>1.2</u>	<u>-6.1</u>	<u>12.2</u>	--	--
Excess Return (vs. Net)			-0.4	-1.2	-0.3	0.4	0.7		

Private natural resources and infrastructure funds reflect early-stage life cycle performance.

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Public Infrastructure (Net)	2,593,055,133	3.6	1.8	1.2	-0.5	-8.5	12.3	--	--
Public Infrastructure (Gross)			1.8	1.3	-0.4	-8.3	12.5	--	--
<i>DJ Brookfield Global Infrastructure Comp TR</i>			<u>2.1</u>	<u>3.1</u>	<u>1.2</u>	<u>-6.1</u>	<u>12.2</u>	--	--
Excess Return (vs. Net)			-0.3	-1.9	-1.7	-2.4	0.1		
DWS Infrastructure (Net)	2,593,055,133	3.6	1.8	1.2	-0.5	-8.5	12.3	--	--
DWS Infrastructure (Gross)			1.8	1.3	-0.4	-8.3	12.5	--	--
<i>DJ Brookfield Global Infrastructure Comp TR</i>			<u>2.1</u>	<u>3.1</u>	<u>1.2</u>	<u>-6.1</u>	<u>12.2</u>	--	--
Excess Return (vs. Net)			-0.3	-1.9	-1.7	-2.4	0.1		
Private Infrastructure (Net)	1,364,750,796	1.9	1.7	3.3	6.3	6.1	--	--	--
Private Infrastructure (Gross)			1.7	3.4	6.4	6.2	--	--	--
<i>Private Infrastructure Policy BM</i>			<u>-3.3</u>	<u>9.4</u>	<u>-8.9</u>	<u>-4.9</u>	--	--	--
Excess Return (vs. Net)			5.0	-6.1	15.2	11.0			
Antin Mid Cap (Net)	39,950,485	0.1	5.8	5.2	10.5	11.9	--	--	--
Antin Mid Cap (Gross)			5.8	5.2	10.5	11.9	--	--	--
<i>DJ Brookfield Global Infrastructure Comp TR</i>			<u>2.1</u>	<u>3.1</u>	<u>1.2</u>	<u>-6.1</u>	--	--	--
Excess Return (vs. Net)			3.7	2.1	9.3	18.0			
Axium Infrastructure (Net)	258,846,193	0.4	1.9	1.9	5.3	7.2	--	--	--
Axium Infrastructure (Gross)			2.2	2.2	6.0	8.0	--	--	--
<i>Private Infrastructure Policy BM</i>			<u>-3.3</u>	<u>9.4</u>	<u>-8.9</u>	<u>-4.9</u>	--	--	--
Excess Return (vs. Net)			5.2	-7.5	14.2	12.1			

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	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Axium Infrastructure Canada (Net)	146,010,566	0.2	1.0	1.1	2.5	--	--	--	--
Axium Infrastructure Canada (Gross)			1.0	1.3	2.9	--	--	--	--
<i>Private Infrastructure Policy BM</i>			<u>-3.3</u>	<u>9.4</u>	<u>-8.9</u>	--	--	--	--
Excess Return (vs. Net)			4.3	-8.3	11.4				
DIF CIF III (Net)	34,375,653	0.0	3.3	-7.2	-2.4	--	--	--	--
DIF CIF III (Gross)			3.3	-7.2	-2.4	--	--	--	--
<i>Private Infrastructure Policy BM</i>			<u>-3.3</u>	<u>9.4</u>	<u>-8.9</u>	--	--	--	--
Excess Return (vs. Net)			6.6	-16.6	6.5				
DIF Infrastructure VI (Net)	100,412,759	0.1	2.4	-2.4	9.0	11.0	--	--	--
DIF Infrastructure VI (Gross)			2.4	-2.5	8.6	10.4	--	--	--
<i>Private Infrastructure Policy BM</i>			<u>-3.3</u>	<u>9.4</u>	<u>-8.9</u>	<u>-4.9</u>	--	--	--
Excess Return (vs. Net)			5.7	-11.8	17.9	15.9			
Grain Communications Opportunity III (Net)	38,489,208	0.1	0.0	2.2	-0.3	-7.8	--	--	--
Grain Communications Opportunity III (Gross)			0.0	2.2	-0.3	-7.8	--	--	--
<i>Private Infrastructure Policy BM</i>			<u>-3.3</u>	<u>9.4</u>	<u>-8.9</u>	<u>-4.9</u>	--	--	--
Excess Return (vs. Net)			3.3	-7.2	8.6	-2.9			
Grain Spectrum Holdings III (Net)	70,118,102	0.1	0.0	46.6	46.2	46.1	--	--	--
Grain Spectrum Holdings III (Gross)			0.0	46.6	46.2	46.1	--	--	--
<i>Private Infrastructure Policy BM</i>			<u>-3.3</u>	<u>9.4</u>	<u>-8.9</u>	<u>-4.9</u>	--	--	--
Excess Return (vs. Net)			3.3	37.2	55.1	51.0			

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
KKR DCIF (Net)	505,623,000	0.7	1.5	1.5	3.4	3.4	--	--	--
KKR DCIF (Gross)			1.5	1.5	3.4	3.4	--	--	--
<i>Private Infrastructure Policy BM</i>			<u>-3.3</u>	<u>9.4</u>	<u>-8.9</u>	<u>-4.9</u>	--	--	--
Excess Return (vs. Net)			4.8	-7.9	12.3	8.3			
Pan European Infrastructure Fund III (Net)	68,006,976	0.1	4.7	4.1	9.1	5.4	--	--	--
Pan European Infrastructure Fund III (Gross)			4.7	4.1	9.6	5.9	--	--	--
<i>Private Infrastructure Policy BM</i>			<u>-3.3</u>	<u>9.4</u>	<u>-8.9</u>	<u>-4.9</u>	--	--	--
Excess Return (vs. Net)			8.0	-5.3	18.0	10.3			
Partners Grp Direct Infra 2020 (Net)	76,449,185	0.1	0.0	5.6	8.6	10.9	--	--	--
Partners Grp Direct Infra 2020 (Gross)			-0.1	5.6	8.3	9.8	--	--	--
<i>Private Infrastructure Policy BM</i>			<u>-3.3</u>	<u>9.4</u>	<u>-8.9</u>	<u>-4.9</u>	--	--	--
Excess Return (vs. Net)			3.3	-3.8	17.5	15.8			
Private Infrastrucutre Co-Investments (Net)	26,468,668	0.0	--	--	--	--	--	--	--
Private Infrastrucutre Co-Investments (Gross)			--	--	--	--	--	--	--
TIPS (Net)	1,923,734,893	2.7	2.9	3.4	-0.4	-6.6	1.7	--	--
TIPS (Gross)			2.9	3.4	-0.3	-6.6	1.7	--	--
<i>BBgBarc US TIPS TR</i>			<u>2.9</u>	<u>3.3</u>	<u>0.0</u>	<u>-6.1</u>	<u>1.8</u>	--	--
Excess Return (vs. Net)			0.0	0.1	-0.4	-0.5	-0.1		

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	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Blackrock TIPS (Net)	1,923,734,893	2.7	2.9	3.4	-0.4	-6.6	1.7	--	--
Blackrock TIPS (Gross)			2.9	3.4	-0.3	-6.6	1.7	--	--
<i>BBgBarc US TIPS TR</i>			<u>2.9</u>	<u>3.3</u>	<u>0.0</u>	<u>-6.1</u>	<u>1.8</u>	--	--
Excess Return (vs. Net)			0.0	0.1	-0.4	-0.5	-0.1		
Risk Reduction and Mitigation (Net)	13,597,615,233	18.8	2.2	3.7	0.9	-2.5	-0.4	--	--
Risk Reduction and Mitigation (Gross)			2.2	3.7	1.0	-2.4	-0.3	--	--
<i>Risk Reduction and Mitigation Custom Blended Benchmark</i>			<u>2.4</u>	<u>3.4</u>	<u>0.3</u>	<u>-3.6</u>	<u>-1.7</u>	--	--
Excess Return (vs. Net)			-0.2	0.3	0.6	1.1	1.4		
Investment Grade Bonds (Net)	5,082,662,036	7.0	2.5	3.1	0.0	-4.8	-2.2	1.0	1.7
Investment Grade Bonds (Gross)			2.5	3.1	0.1	-4.7	-2.2	1.1	1.8
<i>BBgBarc US Aggregate TR</i>			<u>2.5</u>	<u>3.0</u>	<u>-0.1</u>	<u>-4.8</u>	<u>-2.8</u>	<u>0.9</u>	<u>1.4</u>
Excess Return (vs. Net)			0.0	0.1	0.1	0.0	0.6	0.1	0.3
Allspring/Wells (Net)	1,291,341,908	1.8	2.5	3.2	0.3	-4.5	-1.9	1.3	1.7
Allspring/Wells (Gross)			2.5	3.2	0.3	-4.4	-1.8	1.4	1.9
<i>BBgBarc US Aggregate TR</i>			<u>2.5</u>	<u>3.0</u>	<u>-0.1</u>	<u>-4.8</u>	<u>-2.8</u>	<u>0.9</u>	<u>1.4</u>
Excess Return (vs. Net)			0.0	0.2	0.4	0.3	0.9	0.4	0.3

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
BTC US Debt Index (Net)	2,920,873,608	4.0	2.5	3.1	0.0	-4.7	-2.7	1.0	1.4
BTC US Debt Index (Gross)			2.5	3.1	0.0	-4.7	-2.7	1.0	1.5
<i>BBgBarc US Aggregate TR</i>			<u>2.5</u>	<u>3.0</u>	<u>-0.1</u>	<u>-4.8</u>	<u>-2.8</u>	<u>0.9</u>	<u>1.4</u>
Excess Return (vs. Net)			0.0	0.1	0.1	0.1	0.1	0.1	0.0
Member Home Loan Program (MHLP) (Net)	10,132,185	0.0	0.4	1.2	3.7	4.9	5.1	5.9	5.4
Member Home Loan Program (MHLP) (Gross)			0.4	1.3	3.9	5.2	5.4	6.2	5.7
Pugh Capital Management (Net)	860,314,329	1.2	2.5	3.0	0.0	-4.8	-2.4	1.0	1.4
Pugh Capital Management (Gross)			2.5	3.0	0.1	-4.7	-2.3	1.2	1.6
<i>BBgBarc US Aggregate TR</i>			<u>2.5</u>	<u>3.0</u>	<u>-0.1</u>	<u>-4.8</u>	<u>-2.8</u>	<u>0.9</u>	<u>1.4</u>
Excess Return (vs. Net)			0.0	0.0	0.1	0.0	0.4	0.1	0.0
Long-Term Government Bonds (Net)	3,032,464,981	4.2	4.8	6.1	-5.2	-16.1	--	--	--
Long-Term Government Bonds (Gross)			4.8	6.2	-5.2	-16.1	--	--	--
<i>Bloomberg U.S. Treasury: Long</i>			<u>4.7</u>	<u>6.2</u>	<u>-4.6</u>	<u>-16.0</u>	--	--	--
Excess Return (vs. Net)			0.1	-0.1	-0.6	-0.1			
Blackrock Long Treasury Bonds (Net)	3,032,464,981	4.2	4.8	6.1	-5.2	-16.1	--	--	--
Blackrock Long Treasury Bonds (Gross)			4.8	6.2	-5.2	-16.1	--	--	--
<i>Bloomberg U.S. Treasury: Long</i>			<u>4.7</u>	<u>6.2</u>	<u>-4.6</u>	<u>-16.0</u>	--	--	--
Excess Return (vs. Net)			0.1	-0.1	-0.6	-0.1			

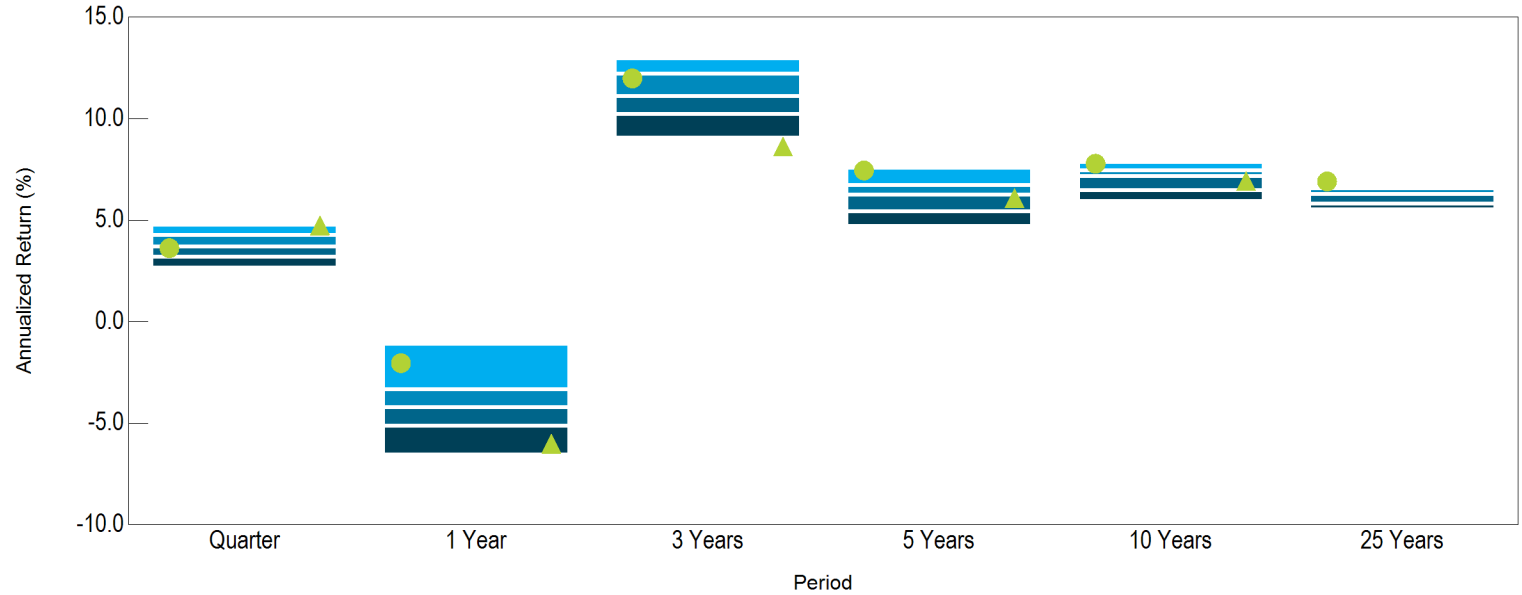
	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Diversified Hedge Fund Portfolio (Net)	4,543,313,064	6.3	0.6	3.3	6.1	7.7	7.7	--	--
Diversified Hedge Fund Portfolio (Gross)			0.6	3.3	6.1	7.7	7.8	--	--
<i>Diversified Hedge Funds Custom BM</i>			<u>0.6</u>	<u>1.7</u>	<u>4.0</u>	<u>4.8</u>	<u>3.4</u>	--	--
Excess Return (vs. Net)			0.0	1.6	2.1	2.9	4.4		
LACERA HF Direct (Net)	4,131,809,741	5.7	0.7	3.6	6.8	8.5	8.1	--	--
LACERA HF Direct (Gross)			0.7	3.6	6.8	8.5	8.1	--	--
<i>Hedge Fund Custom BM</i>			<u>0.6</u>	<u>1.7</u>	<u>4.0</u>	<u>4.8</u>	<u>3.4</u>	--	--
Excess Return (vs. Net)			0.1	1.9	2.8	3.7	4.7		
AM Asia Strategies Fund (Net)	263,115,675	0.4	0.8	21.2	19.6	14.9	--	--	--
AM Asia Strategies Fund (Gross)			0.8	21.2	19.6	14.9	--	--	--
<i>Hedge Fund Custom BM</i>			<u>0.6</u>	<u>1.7</u>	<u>4.0</u>	<u>4.8</u>	--	--	--
Excess Return (vs. Net)			0.2	19.5	15.6	10.1			
Brevan Howard Master Fund (Net)	668,857,200	0.9	-0.4	2.9	7.0	18.3	--	--	--
Brevan Howard Master Fund (Gross)			-0.4	2.9	7.0	18.3	--	--	--
<i>Hedge Fund Custom BM</i>			<u>0.6</u>	<u>1.7</u>	<u>4.0</u>	<u>4.8</u>	--	--	--
Excess Return (vs. Net)			-1.0	1.2	3.0	13.5			
Capula GRV (Net)	663,033,016	0.9	1.0	3.2	9.1	12.0	6.8	--	--
Capula GRV (Gross)			1.0	3.2	9.1	12.0	6.8	--	--
<i>Hedge Fund Custom BM</i>			<u>0.6</u>	<u>1.7</u>	<u>4.0</u>	<u>4.8</u>	<u>3.4</u>	--	--
Excess Return (vs. Net)			0.4	1.5	5.1	7.2	3.4		

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Caxton Global Investments (Net)	301,998,750	0.4	0.4	1.8	4.3	10.5	--	--	--
Caxton Global Investments (Gross)			0.4	1.8	4.3	10.5	--	--	--
<i>Hedge Fund Custom BM</i>			<u>0.6</u>	<u>1.7</u>	<u>4.0</u>	<u>4.8</u>	--	--	--
Excess Return (vs. Net)			-0.2	0.1	0.3	5.7			
DK Institutional Partners (Net)	500,125,950	0.7	0.2	2.9	2.8	1.0	5.6	--	--
DK Institutional Partners (Gross)			0.2	2.9	2.8	1.0	5.6	--	--
<i>Hedge Fund Custom BM</i>			<u>0.6</u>	<u>1.7</u>	<u>4.0</u>	<u>4.8</u>	<u>3.4</u>	--	--
Excess Return (vs. Net)			-0.4	1.2	-1.2	-3.8	2.2		
HBK Multistrategy (Net)	585,430,500	0.8	0.7	1.3	6.6	5.0	6.9	--	--
HBK Multistrategy (Gross)			0.7	1.3	6.6	5.0	6.9	--	--
<i>Hedge Fund Custom BM</i>			<u>0.6</u>	<u>1.7</u>	<u>4.0</u>	<u>4.8</u>	<u>3.4</u>	--	--
Excess Return (vs. Net)			0.1	-0.4	2.6	0.2	3.5		
Hudson Bay Fund (Net)	668,504,650	0.9	1.7	2.8	5.8	6.0	--	--	--
Hudson Bay Fund (Gross)			1.7	2.8	5.8	6.0	--	--	--
<i>Hedge Fund Custom BM</i>			<u>0.6</u>	<u>1.7</u>	<u>4.0</u>	<u>4.8</u>	--	--	--
Excess Return (vs. Net)			1.1	1.1	1.8	1.2			
Polar (Net)	480,744,000	0.7	0.6	2.9	4.7	3.6	--	--	--
Polar (Gross)			0.6	2.9	4.7	3.6	--	--	--
<i>Hedge Fund Custom BM</i>			<u>0.6</u>	<u>1.7</u>	<u>4.0</u>	<u>4.8</u>	--	--	--
Excess Return (vs. Net)			0.0	1.2	0.7	-1.2			

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Hedge Fund Emerging Managers Program (Net)	384,876,731	0.5	0.0	0.2	-0.3	1.0	--	--	--
Hedge Fund Emerging Managers Program (Gross)			0.1	0.3	-0.1	1.3	--	--	--
<i>Hedge Fund Custom BM</i>			<u>0.6</u>	<u>1.7</u>	<u>4.0</u>	<u>4.8</u>	--	--	--
Excess Return (vs. Net)			-0.6	-1.5	-4.3	-3.8			
Stable Asset Management (Net)	384,876,731	0.5	0.0	0.2	-0.3	1.0	--	--	--
Stable Asset Management (Gross)			0.1	0.3	-0.1	1.3	--	--	--
<i>Hedge Fund Custom BM</i>			<u>0.6</u>	<u>1.7</u>	<u>4.0</u>	<u>4.8</u>	--	--	--
Excess Return (vs. Net)			-0.6	-1.5	-4.3	-3.8			
Stable Fund Investments (Net)	384,876,731	0.5	0.0	0.2	-0.3	1.0	--	--	--
Stable Fund Investments (Gross)			0.0	0.2	-0.3	1.0	--	--	--
<i>Hedge Fund Custom BM</i>			<u>0.6</u>	<u>1.7</u>	<u>4.0</u>	<u>4.8</u>	--	--	--
Excess Return (vs. Net)			-0.6	-1.5	-4.3	-3.8			
Cash (Net)	939,189,051	1.3	0.5	1.4	3.7	4.4	2.0	2.2	1.4
Cash (Gross)			0.5	1.5	3.8	4.5	2.1	2.2	1.5
<i>Cash Custom BM</i>			<u>0.4</u>	<u>1.1</u>	<u>2.5</u>	<u>2.6</u>	<u>1.0</u>	<u>1.4</u>	<u>0.9</u>
Excess Return (vs. Net)			0.1	0.3	1.2	1.8	1.0	0.8	0.5
SSGA Cash (Net)			0.0	0.0	1.1	1.3	--	--	--
SSGA Cash (Gross)			0.0	0.0	1.2	1.4	--	--	--
<i>Cash Custom BM</i>			<u>0.4</u>	<u>1.1</u>	<u>2.5</u>	<u>2.6</u>	--	--	--
Excess Return (vs. Net)			-0.4	-1.1	-1.4	-1.3			

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Overlay and Hedges (Net)	417,185,438	0.6	-7.5	14.0	15.7	101.2	--	--	--
Overlay and Hedges (Gross)			-7.5	14.1	16.0	101.7	--	--	--
Cash Overlay (Net)	411,801,073	0.6	4.7	9.2	22.9	44.0	--	--	--
Cash Overlay (Gross)			4.7	9.2	23.0	44.2	--	--	--
Cash Overlay (Net)	411,801,073	0.6	4.7	9.2	22.9	44.0	--	--	--
Cash Overlay (Gross)			4.7	9.2	23.0	44.2	--	--	--
<i>Total Overlay Policy BM</i>			<u>2.5</u>	<u>5.3</u>	<u>5.8</u>	<u>-6.4</u>	--	--	--
Excess Return (vs. Net)			2.2	3.9	17.1	50.4			
Currency Hedge (Net)	5,384,365	0.0	-0.8	-0.1	-0.1	3.5	--	--	--
Currency Hedge (Gross)			-0.8	-0.1	-0.1	3.5	--	--	--
Currency Hedge (Net)	5,384,365	0.0	-0.8	-0.1	-0.1	3.5	--	--	--
Currency Hedge (Gross)			-0.8	-0.1	-0.1	3.5	--	--	--

InvMetrics Public DB > \$1B Net Return Comparison Ending March 31, 2023



	Quarter		1 Year		3 Years		5 Years		10 Years		25 Years	
Return (Rank)	4.8		-1.1		13.0		7.6		7.9		6.8	
5th Percentile	4.8		-1.1		13.0		7.6		7.9		6.8	
25th Percentile	4.3		-3.3		12.2		6.8		7.5		6.6	
Median	3.7		-4.2		11.1		6.3		7.2		6.3	
75th Percentile	3.2		-5.1		10.2		5.4		6.5		5.8	
95th Percentile	2.7		-6.5		9.1		4.7		6.0		5.5	
# of Portfolios	58		58		58		58		55		34	
● Total Fund	3.6	(58)	-2.0	(9)	12.0	(30)	7.5	(7)	7.8	(8)	6.9	(1)
▲ Total Fund Policy Benchmark	4.7	(6)	-6.0	(89)	8.6	(99)	6.1	(54)	6.9	(55)	--	(--)

Benchmark History

As of March 31, 2023

Total Fund		
10/1/2021	Present	51% Growth Custom Blended Benchmark / 11% Credit Custom Blended Benchmark / 17% Real Assets & Inflation Hedges Custom BM / 21% Risk Reduction and Mitigation Custom Blended Benchmark
10/1/2019	9/30/2021	35% Global Equity Custom BM / 10% PE-Credit Custom Benchmark / 2% Non-Core Private RE Policy BM / 3% Bloomberg U.S. High Yield / 4% Credit Suisse Leveraged Loans / 2% EMD Custom / 3% Illiquid Credit Custom BM / 7% Core Private Real Estate Custom BM / 4% Natural Resources & Commodities Custom BM / 3% DJ Brookfield Global Infrastructure Comp TR / 3% Bloomberg U.S. TIPS Index / 19% Bloomberg US Aggregate TR / 4% Diversified Hedge Funds Custom BM / 1% Citigroup 3-Month U.S. Treasury Bill Index
1/1/2019	9/30/2019	41% Global Equity Custom BM / 10% PE-Credit Custom Benchmark / 1% Non-Core Private RE Policy BM / 4% Bloomberg U.S. High Yield / 3% Credit Suisse Leveraged Loans / 1% EMD Custom / 2% Illiquid Credit Custom BM / 8% Core Private Real Estate Custom BM / 3% Natural Resources & Commodities Custom BM / 2% DJ Brookfield Global Infrastructure Comp TR / 2% Bloomberg U.S. TIPS Index / 19% Bloomberg US Aggregate TR / 3% Diversified Hedge Funds Custom BM / 1% Citigroup 3-Month U.S. Treasury Bill Index
10/1/2018	12/31/2018	22.7% Russell 3000 / 18.7% Custom MSCI ACWI IMI Net 50% Hedge / 27.8% Bloomberg US Universal TR / 10% Private Equity Target / 11% Real Estate Target / 5.0% Hedge Fund Custom Index / 2.8% Bloomberg Commodity Index TR USD / 2% FTSE T-Bill 6 Months TR
7/1/2018	9/30/2018	23.1% Russell 3000 / 20.3% Custom MSCI ACWI IMI Net 50% Hedge / 26.6% Bloomberg US Universal TR / 10% Private Equity Target / 11% Real Estate Target / 4.2% Hedge Fund Custom Index / 2.8% Bloomberg Commodity Index TR USD / 2% FTSE T-Bill 6 Months TR
1/1/2018	6/30/2018	22.4% Russell 3000 / 21.0% Custom MSCI ACWI IMI Net 50% Hedge / 26.6% Bloomberg US Universal TR / 10% Private Equity Target / 11% Real Estate Target / 4.2% Hedge Fund Custom Index / 2.8% Bloomberg Commodity Index TR USD / 2% FTSE T-Bill 6 Months TR
10/1/2017	12/31/2017	23.5% Russell 3000 / 21.9% Custom MSCI ACWI IMI Net 50% Hedge / 25.4% Bloomberg US Universal TR / 10% Private Equity Target / 11% Real Estate Target / 3.4% Hedge Fund Custom Index / 2.8% Bloomberg Commodity Index TR USD / 2% FTSE T-Bill 6 Months TR
7/1/2017	9/30/2017	23.7% Russell 3000 / 21.7% Custom MSCI ACWI IMI Net 50% Hedge / 25.4% Bloomberg US Universal TR / 10% Private Equity Target / 11% Real Estate Target / 3.4% Hedge Fund Custom Index / 2.8% Bloomberg Commodity Index TR USD / 2% FTSE T-Bill 6 Months TR
4/1/2017	6/30/2017	24.1% Russell 3000 / 21.3% Custom MSCI ACWI IMI Net 50% Hedge / 25.4% Bloomberg US Universal TR / 10% Private Equity Target / 11% Real Estate Target / 3.4% Hedge Fund Custom Index / 2.8% Bloomberg Commodity Index TR USD / 2% FTSE T-Bill 6 Months TR
1/1/2017	3/31/2017	24.4% Russell 3000 / 21.0% Custom MSCI ACWI IMI Net 50% Hedge / 25.4% Bloomberg US Universal TR / 10% Private Equity Target / 11% Real Estate Target / 3.4% Hedge Fund Custom Index / 2.8% Bloomberg Commodity Index TR USD / 2% FTSE T-Bill 6 Months TR
10/1/2016	12/31/2016	23.8% Russell 3000 / 21.6% Custom MSCI ACWI IMI Net 50% Hedge / 25.4% Bloomberg US Universal TR / 10% Private Equity Target / 11% Real Estate Target / 3.4% Hedge Fund Custom Index / 2.8% Bloomberg Commodity Index TR USD / 2% FTSE T-Bill 6 Months TR
7/1/2016	9/30/2016	24.5% Russell 3000 / 21.4% Custom MSCI ACWI IMI Net 50% Hedge / 25.1% Bloomberg US Universal TR / 10% Private Equity Target / 11% Real Estate Target / 3.2% Hedge Fund Custom Index / 2.8% Bloomberg Commodity Index TR USD / 2% FTSE T-Bill 6 Months TR
10/1/2015	6/30/2016	3% Bloomberg Commodity Index TR USD / 25.5% Russell 3000 / 10% Real Estate Target / 2% FTSE T-Bill 6 Months TR / 22.5% Bloomberg US Universal TR / 11% Private Equity Target / 23% Custom MSCI ACWI IMI Net 50% Hedge / 3% 3-month U.S. T-Bill Index + 5% (1M-lag)

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4/1/2015	9/30/2015	3% Bloomberg Commodity Index TR USD / 25% Russell 3000 / 10% Real Estate Target / 2% FTSE T-Bill 6 Months TR / 22.5% Bloomberg US Universal TR / 11% Private Equity Target / 23.5% Custom MSCI ACWI IMI Net 50% Hedge / 3% 3-month U.S. T-Bill Index + 5% (1M-lag)
1/1/2015	3/31/2015	3% Bloomberg Commodity Index TR USD / 25.5% Russell 3000 / 10% Real Estate Target / 2% FTSE T-Bill 6 Months TR / 22.5% Bloomberg US Universal TR / 11% Private Equity Target / 23% Custom MSCI ACWI IMI Net 50% Hedge / 3% 3-month U.S. T-Bill Index + 5% (1M-lag)
10/1/2014	12/31/2014	3% Bloomberg Commodity Index TR USD / 25% Russell 3000 / 10% Real Estate Target / 2% FTSE T-Bill 6 Months TR / 23% Bloomberg US Universal TR / 11% Private Equity Target / 24% Custom MSCI ACWI IMI Net 50% Hedge / 2% 3-month U.S. T-Bill Index + 5% (1M-lag)
1/1/2014	9/30/2014	3% Bloomberg Commodity Index TR USD / 24% Russell 3000 / 10% Real Estate Target / 2% FTSE T-Bill 6 Months TR / 23% Bloomberg US Universal TR / 11% Private Equity Target / 25% Custom MSCI ACWI IMI Net 50% Hedge / 2% 3-month U.S. T-Bill Index + 5% (1M-lag)
10/1/2013	12/31/2013	3% Bloomberg Commodity Index TR USD / 24% Russell 3000 / 10% Real Estate Target / 2% FTSE T-Bill 6 Months TR / 24% Bloomberg US Universal TR / 10% Private Equity Target / 26% Custom MSCI ACWI IMI Net 50% Hedge / 1% 3-month U.S. T-Bill Index + 5% (1M-lag)
4/1/2013	9/30/2013	3% Bloomberg Commodity Index TR USD / 24% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 24% Bloomberg US Universal TR / 10% Private Equity Target / 26% Custom MSCI ACWI IMI Net 50% Hedge / 1% 3-month U.S. T-Bill Index + 5% (1M-lag)
1/1/2013	3/31/2013	3% Bloomberg Commodity Index TR USD / 23% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 24% Bloomberg US Universal TR / 10% Private Equity Target / 27% Custom MSCI ACWI IMI Net 50% Hedge / 1% 3-month U.S. T-Bill Index + 5% (1M-lag)
10/1/2012	12/31/2012	3% Bloomberg Commodity Index TR USD / 24% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 24% Bloomberg US Universal TR / 10% Private Equity Target / 26% Custom MSCI ACWI IMI Net 50% Hedge / 1% 3-month U.S. T-Bill Index + 5% (1M-lag)
1/1/2012	9/30/2012	3% Bloomberg Commodity Index TR USD / 24% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 26% Bloomberg US Universal TR / 7% Private Equity Target / 27% Custom MSCI ACWI IMI Net 50% Hedge / 1% 3-month U.S. T-Bill Index + 5% (1M-lag)
10/1/2011	12/31/2011	3% Bloomberg Commodity Index TR USD / 23% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 26% Bloomberg US Universal TR / 7% Private Equity Target / 28% Custom MSCI ACWI IMI Net 50% Hedge / 1% 3-month U.S. T-Bill Index + 5% (1M-lag)
4/1/2011	9/30/2011	3% Bloomberg Commodity Index TR USD / 23% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 26% Bloomberg US Universal TR / 7% Private Equity Target / 29% Custom MSCI ACWI IMI Net 50% Hedge
1/1/2011	3/31/2011	3% Bloomberg Commodity Index TR USD / 22% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 26% Bloomberg US Universal TR / 7% Private Equity Target / 30% Custom MSCI ACWI IMI Net 50% Hedge
10/1/2010	12/31/2010	3% Bloomberg Commodity Index TR USD / 23% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 26% Bloomberg US Universal TR / 7% Private Equity Target / 29% Custom MSCI ACWI IMI Net 50% Hedge
7/1/2010	9/30/2010	3% Bloomberg Commodity Index TR USD / 26% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 26% Bloomberg US Universal TR / 7% Private Equity Target / 26% Custom MSCI ACWI IMI Net 50% Hedge
4/1/2010	6/30/2010	3% Bloomberg Commodity Index TR USD / 26% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 26% Bloomberg US Universal TR / 7% Private Equity Target / 26% MSCI ACWI ex USA IMI
1/1/2010	3/31/2010	3% Bloomberg Commodity Index TR USD / 29% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 26% Bloomberg US Universal TR / 7% Private Equity Target / 23% MSCI ACWI ex USA IMI
4/1/2009	12/31/2009	2% Bloomberg Commodity Index TR USD / 30% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 28% Bloomberg US Universal TR / 7% Private Equity Target / 21% MSCI ACWI ex USA IMI
10/1/2008	3/31/2009	2% Bloomberg Commodity Index TR USD / 30% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 1.96% Bloomberg US High Yield BA/B TR / 26.04% Bloomberg US Aggregate TR / 7% Private Equity Target / 21% MSCI ACWI ex USA IMI
3/1/2001	9/30/2008	100% LACERA TF Blended Benchmark

Bank Loans Custom Index: Credit Suisse Leveraged Loan Index.

Beach Point Custom BM: BBg Barc US Corporate High Yield Index

Brigade Custom Index: BBg Barc US Corporate High Yield Index.

Cash Custom BM: FTSE 3-month Treasury Bill.

Core & Value-Added Real Estate Custom BM: NFI ODCE + 50 bps (3-month lag).

Custom Liquid Credit BM: 40% BBg Barc US Corporate High Yield Index / 40% Credit Suisse Leveraged Loans / 10% JP Morgan EMBI GD / 5% JP Morgan GBI – EM GD / 5% JP Morgan CEMBI BD.

Diversified Hedge Funds Custom BM: FTSE 3-Month U.S. Treasury Bill Index + 250 bps (1-month lag).

EAFE Custom Index: MSCI EAFE + Canada (Net).

EMD Custom: 50% JP Morgan EMBI + 25% JP Morgan GBI-EM GD + 25% JP Morgan CEMBI BD.

Global Equity Custom BM: MSCI ACWI IMI Index

Grosvenor Custom BM: 100% Illiquid Credit Custom BM.

Growth Custom Blended BM: ~74.5% Global Equity Custom BM/ 21.3% Private Equity- Growth Custom BM/ 4.3% Opportunistic Real Estate Custom BM.

Hedge Fund Custom Index: 100% Diversified Hedge Funds Custom BM.

Illiquid Credit Custom BM: Custom Liquid Credit BM + 150 bps (1-month lag).

MSCI EM IMI Custom Index: MSCI EM IMI (Net)

Natural Resources & Commodities Custom BM: 50% Bloomberg Commodity Index / 50% S&P Global Large MidCap Commodity and Resources Index.

Opportunistic Real Estate Custom BM: NFI ODCE + 300 bps (3-month lag).

PE – Credit Custom Benchmark: BBgBarc US Agg Index + 250bps (3-month lag).

Private Equity - Growth Custom BM: MSCI ACWI IMI Index + 200 bps (3-month lag).

PE – Real Assets Custom BM: S&P Global Large MidCap Commodity and Resources (3-month lag).

Real Assets and Inflation Hedges Custom Blended BM: ~41.2% Core & Value-Added Real Estate Custom BM/ 23.5% Natural Resources & Commodities Custom BM / 17.6% DJ Brookfield Global Infrastructure / 17.6% BBg Barc US TSY TIPS.

Risk Reduction and Mitigation Custom Blended BM: ~79.2% BBg Barc Agg / 16.7% Diversified Hedge Funds Custom BM / 4.2% FTSE 3-month Treasury Bill.

Securitized Custom Index: Barclays Securitized Bond Index + 400 bps.

Opportunistic Custom Index 1-Month Lag: 50% Barclays U.S. High Yield Index / 50% Credit Suisse Leveraged Loan Index (1-month lag).

50% FX Hedge Index: 50% MSCI World ex US IMI FX Hedged index 50% Zero Return.

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