



Los Angeles County Employees Retirement Association

# Investments Division

## OPEB TRUST

## PERFORMANCE REPORT

For the quarter ended  
September 30, 2024

An aerial photograph of Los Angeles at sunset. The city skyline is visible in the background, with the sun setting behind the mountains, creating a warm orange and pink glow in the sky. The foreground shows residential buildings, palm trees, and a river or canal.

review

# Table of Contents

**01** PERFORMANCE

---

**02** RISK

---

**03** MANAGER PAGES

---

**04** COMPLIANCE MONITOR

---

**05** MANAGER SCORECARD

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**06** APPENDIX

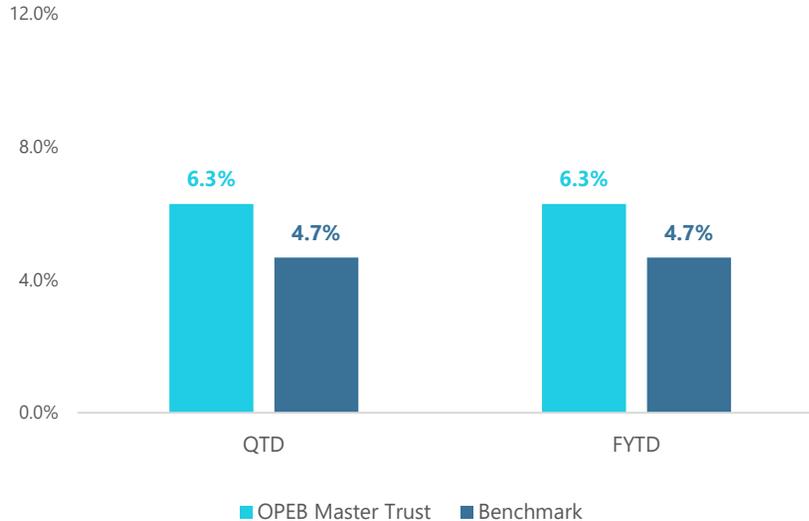
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# performance

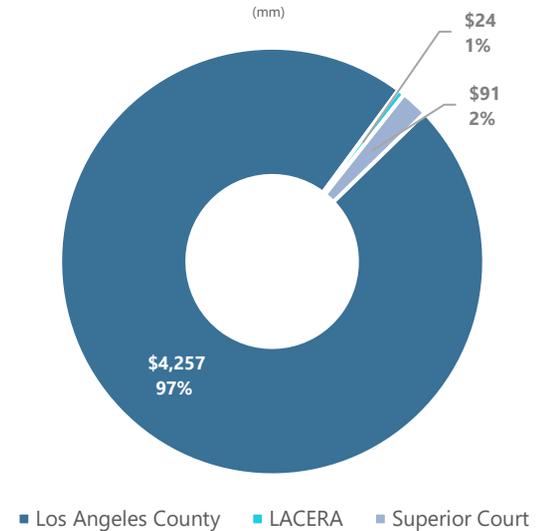
# Quarterly Snapshot

for the quarter ended September 30, 2024

## Performance (net)



## Sub-Trust Ownership



### Ending Market Value

4,371

↑ 10%  
from prior quarter

### Sharpe Ratio<sup>1</sup>

0.15

—  
from prior quarter

### Manager Batting Average<sup>2</sup>

.533

—  
from prior quarter

### Standard Deviation<sup>1</sup>

12.3

—  
from prior quarter

### Tracking Error<sup>1</sup>

1.8

↑ 4%  
from prior quarter

<sup>1</sup> 3-year annualized.

<sup>2</sup> Percentage of managers that outperformed their assigned benchmark for the quarter.

# Summary

for the quarter ended September 30, 2024



Los Angeles County Employees Retirement Association

## Performance (net)



	QTD	FYTD	YTD	1 Year	3 Year	5 Year	10 Year	ITD
<b>OPEB Master Trust</b>	<b>6.3%</b>	<b>6.3%</b>	<b>11.5%</b>	<b>21.3%</b>	<b>4.6%</b>	<b>7.8%</b>	<b>7.7%</b>	<b>7.0%</b>
Benchmark	4.7%	4.7%	10.1%	18.1%	3.6%	7.0%	6.5%	6.0%
Excess	1.6%	1.6%	1.4%	3.3%	1.0%	0.8%	1.2%	1.0%
Sub-Trusts								
Los Angeles County	6.3%	6.3%	11.5%	21.3%	4.6%	7.8%	7.2%	6.6%
LACERA	6.2%	6.2%	11.4%	21.3%	4.5%	7.7%	7.1%	6.6%
Superior Court	6.2%	6.2%	11.5%	21.4%	4.6%	7.7%	--	8.0%

## Cumulative Return



## Functional Category

	QTD	FYTD	YTD	1 Year	3 Year	5 Year
<b>OPEB Growth</b>	<b>6.7%</b>	<b>6.7%</b>	<b>17.8%</b>	<b>31.0%</b>	<b>7.6%</b>	<b>12.1%</b>
OPEB Growth Policy Benchmark	6.4%	6.4%	18.6%	30.0%	7.2%	11.7%
Excess	0.3%	0.3%	-0.8%	0.9%	0.4%	0.3%
<b>OPEB Credit</b>	<b>4.1%</b>	<b>4.1%</b>	<b>6.3%</b>	<b>11.9%</b>	<b>4.0%</b>	<b>4.0%</b>
OPEB Credit Policy Benchmark	2.8%	2.8%	6.9%	11.8%	3.8%	4.2%
Excess	1.4%	1.4%	-0.6%	0.2%	0.2%	-0.2%
<b>OPEB Real Assets &amp; Inflation Hedges</b>	<b>8.7%</b>	<b>8.7%</b>	<b>9.5%</b>	<b>18.2%</b>	<b>1.9%</b>	<b>3.9%</b>
OPEB RA & IH Policy Benchmark	1.0%	1.0%	-0.5%	2.9%	-1.4%	2.2%
Excess	7.7%	7.7%	10.0%	15.4%	3.3%	1.7%
<b>OPEB Risk Reduction &amp; Mitigation</b>	<b>5.5%</b>	<b>5.5%</b>	<b>4.1%</b>	<b>12.2%</b>	<b>-0.6%</b>	<b>0.7%</b>
OPEB RR & M Policy Benchmark	5.4%	5.4%	3.8%	12.0%	-1.3%	0.2%
Excess	0.1%	0.1%	0.3%	0.2%	0.7%	0.5%

## Exposure



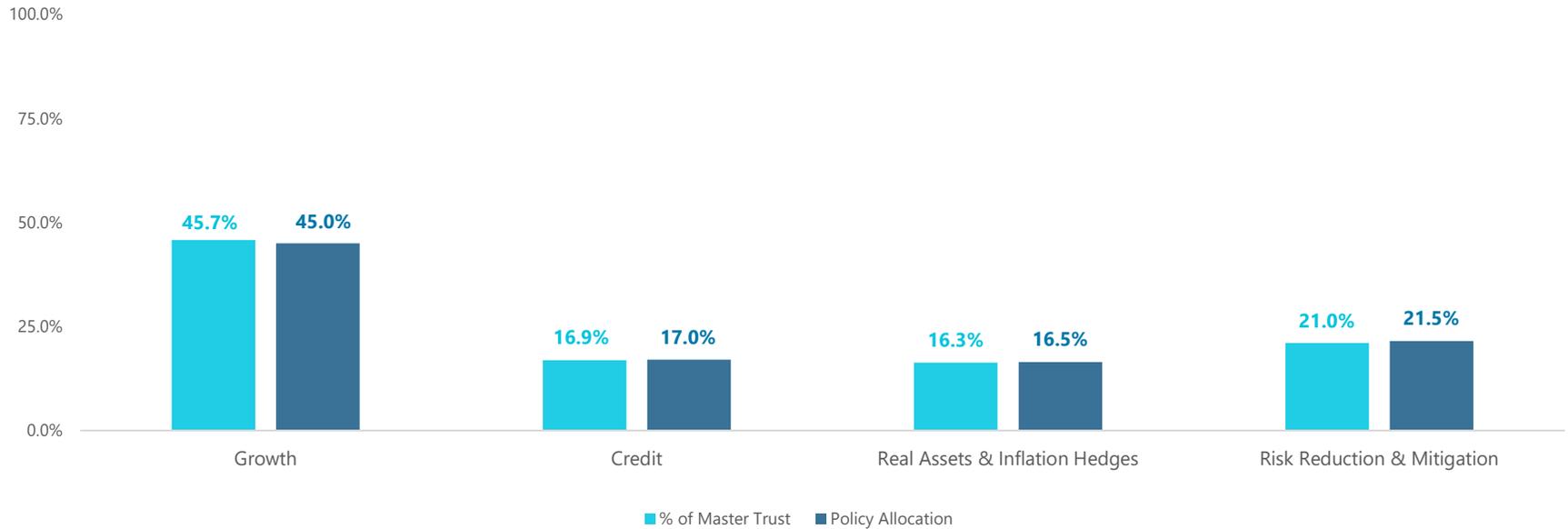
# Asset Allocation

for the quarter ended September 30, 2024



Los Angeles County Employees Retirement Association

## Actual vs. Policy<sup>1</sup>



	Ending Market Value (mm)	% of Master Trust	Policy Allocation	Over / Under (%)	Over / Under (mm)
<b>LACERA Master OPEB Trust Fund</b>	<b>4,370</b>	<b>100.0%</b>	<b>100.0%</b>		
Growth	1,999	45.7%	45.0%	0.7%	32
Credit	739	16.9%	17.0%	-0.1%	-4
Real Assets & Inflation Hedges	713	16.3%	16.5%	-0.2%	-8
Risk Reduction & Mitigation	919	21.0%	21.5%	-0.5%	-20
OPEB HL PM Cash	0	0.0%			

<sup>1</sup> LACERA Master OPEB Trust Fund composite excludes cash balances held in ownership funds.

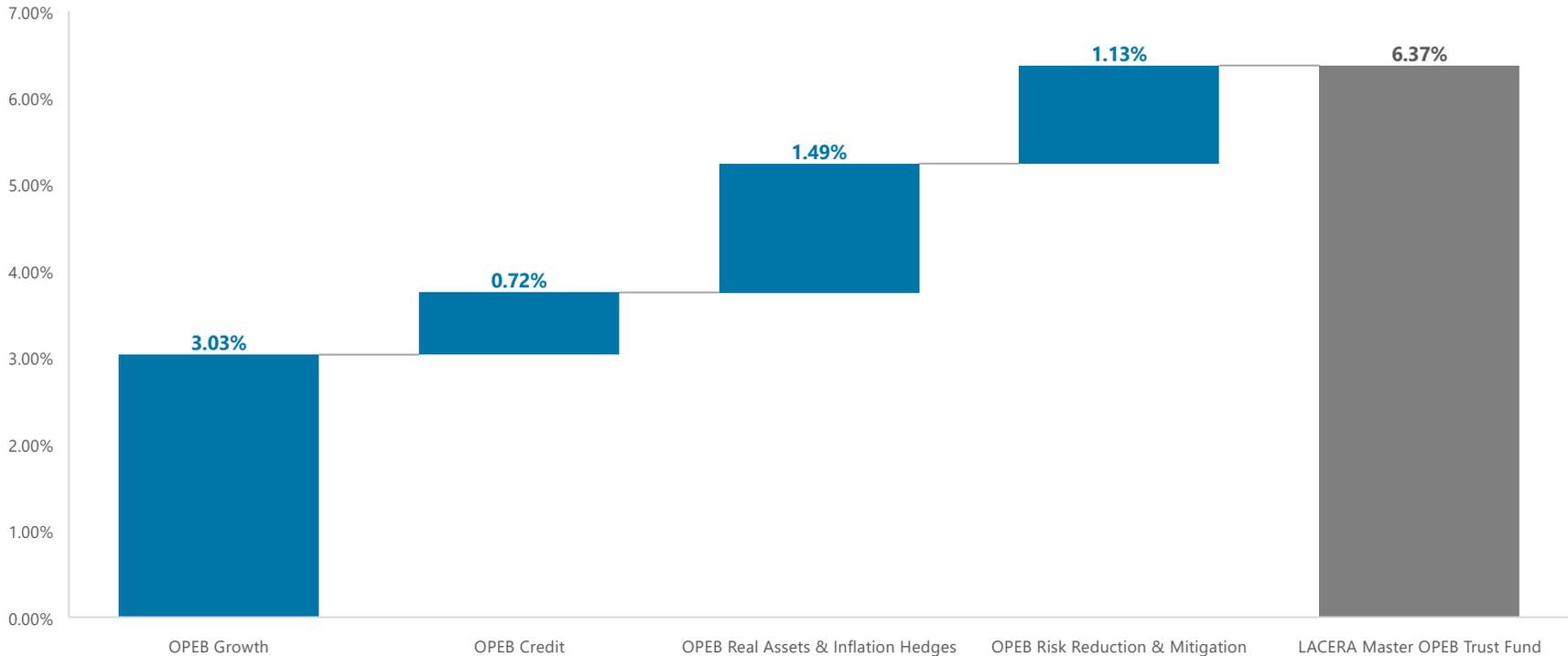
# Contribution to Return

for the quarter ended September 30, 2024



Los Angeles County Employees Retirement Association

## QTD Contribution to Return<sup>1</sup>



Functional Category	Contributors	Detractors
OPEB Growth	OPEB BLK Global Equities 3.03%	OPEB BLK Commodities CTF -0.10%
OPEB Credit	OPEB BLK REITS 0.72%	
OPEB Real Assets & Inflation Hedges	OPEB BLK IG Bonds 0.77%	
OPEB Risk Reduction & Mitigation	OPEB BLK High Yield 0.35%	
LACERA Master OPEB Trust Fund	OPEB BLK LTG Bonds 0.34%	

<sup>1</sup> LACERA Master OPEB Trust Fund composite excludes cash balances held in ownership funds.

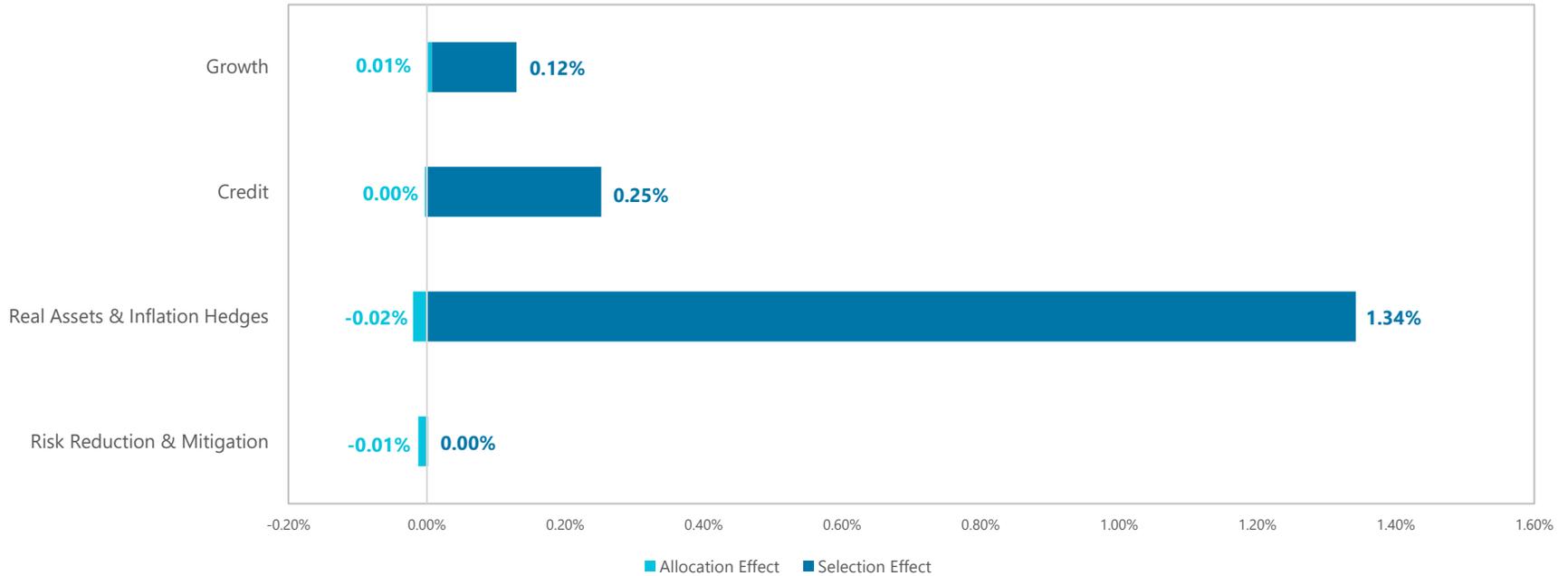
# Return Attribution

for the quarter ended September 30, 2024



Los Angeles County Employees Retirement Association

## QTD Performance Attribution<sup>1,2</sup>



	Ending Market Value (mm)	% of Master Trust	Policy Allocation	Portfolio Return	Benchmark Return	Allocation Effect	Selection Effect	Total Value Add
<b>LACERA Master OPEB Trust Fund</b>	<b>4,370</b>	<b>100.0%</b>	<b>100.0%</b>	<b>6.4%</b>	<b>4.7%</b>	<b>-0.03%</b>	<b>1.72%</b>	<b>1.69%</b>
Growth	1,999	45.7%	45.0%	6.7%	6.4%	0.01%	0.12%	0.13%
Credit	739	16.9%	17.0%	4.1%	2.8%	0.00%	0.25%	0.25%
Real Assets & Inflation Hedges	713	16.3%	16.5%	8.7%	1.0%	-0.02%	1.34%	1.32%
Risk Reduction & Mitigation	919	21.0%	21.5%	5.5%	5.4%	-0.01%	0.00%	-0.01%
OPEB HL PM Cash	0	0.0%						

<sup>1</sup> LACERA Master OPEB Trust Fund composite excludes cash balances held in ownership funds.

<sup>2</sup> Total Value Add column includes Interaction Effect.

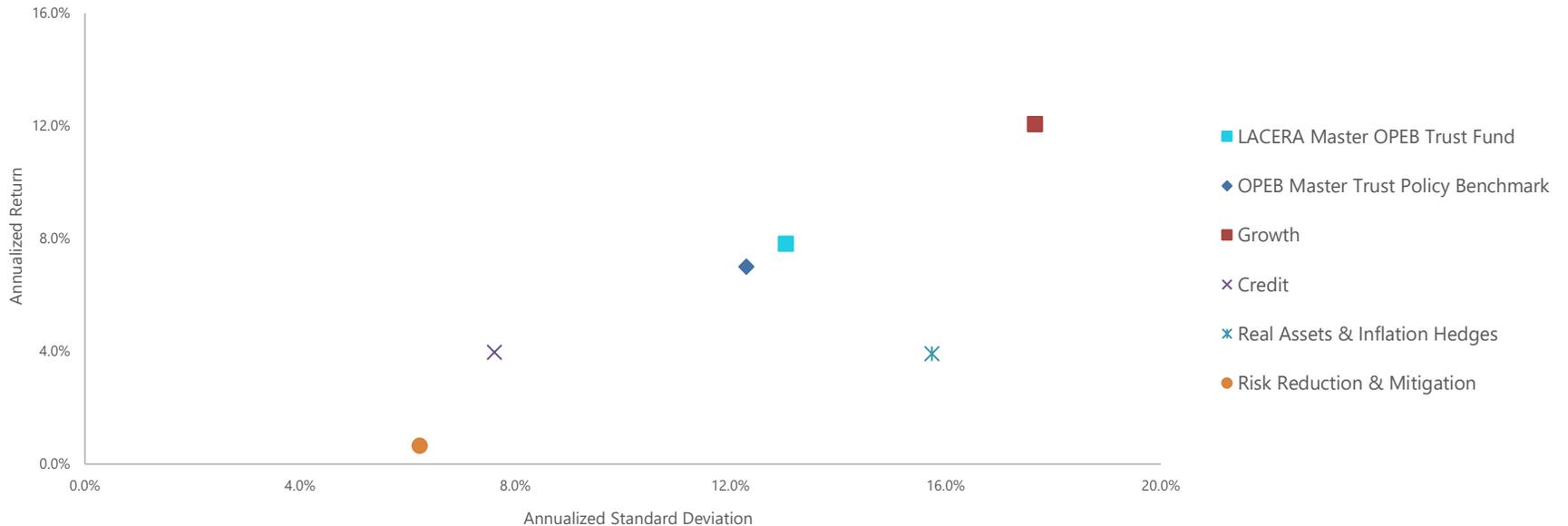
# Risk vs. Return

for the quarter ended September 30, 2024



Los Angeles County Employees Retirement Association

## 5 Year (Annualized)



	Annualized Return	Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
<b>LACERA Master OPEB Trust Fund</b>	<b>7.8%</b>	<b>13.0%</b>	<b>0.47</b>	<b>0.56</b>	<b>1.5%</b>
OPEB Master Trust Policy Benchmark	7.0%	12.3%			
Growth	12.1%	17.7%	0.61	0.26	1.3%
Credit	4.0%	7.6%	0.25	-0.14	1.4%
Real Assets & Inflation Hedges	3.9%	15.7%	0.18	0.28	5.9%
Risk Reduction & Mitigation	0.7%	6.2%	-0.23	0.63	0.7%

<sup>1</sup> LACERA Master OPEB Trust Fund composite excludes cash balances held in ownership funds.

# Performance Detail

for the quarter ended September 30, 2024



Los Angeles County Employees Retirement Association

## Annualized Net Returns<sup>1,2</sup>

	% of Total	Ending Market Value (mm)	Prior Quarter Ending MV (mm)	QTD	FYTD	YTD	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date
<b>OPEB Master Trust</b>	<b>100.0%</b>	<b>4,371</b>	<b>3,977</b>	<b>6.3%</b>	<b>6.3%</b>	<b>11.5%</b>	<b>21.3%</b>	<b>4.6%</b>	<b>7.8%</b>	<b>7.7%</b>	<b>7.0%</b>	<b>Feb-2013</b>
OPEB Master Trust Policy Benchmark				4.7%	4.7%	10.1%	18.1%	3.6%	7.0%	6.5%	6.0%	
Excess Return (vs. OPEB Master Trust Policy Benchmark)				1.6%	1.6%	1.4%	3.3%	1.0%	0.8%	1.2%	1.0%	
Sub-Trusts												
LACERA	0.5%	24	22	6.2%	6.2%	11.4%	21.3%	4.5%	7.7%	7.1%	6.6%	Feb-2013
Los Angeles County	97.4%	4,257	3,870	6.3%	6.3%	11.5%	21.3%	4.6%	7.8%	7.2%	6.6%	Feb-2013
Superior Court	2.1%	91	85	6.2%	6.2%	11.5%	21.4%	4.6%	7.7%	--	8.0%	Jul-2016
<b>OPEB Growth</b>	<b>45.7%</b>	<b>1,999</b>	<b>1,790</b>	<b>6.7%</b>	<b>6.7%</b>	<b>17.8%</b>	<b>31.0%</b>	<b>7.6%</b>	<b>12.1%</b>	<b>--</b>	<b>11.5%</b>	<b>Jul-2016</b>
Excess Return (vs. OPEB Master Trust Policy Benchmark)				2.0%	2.0%	7.7%	12.9%	4.0%	5.1%	--	--	
Excess Return (vs. OPEB Growth Policy Benchmark)				0.3%	0.3%	-0.8%	0.9%	0.4%	0.3%	--	0.3%	
OPEB BLK Global Equities	45.3%	1,980	1,772	6.7%	6.7%	17.9%	31.0%	7.6%	12.0%	9.5%	9.2%	Mar-2014
Excess Return (vs. OPEB Growth Policy Benchmark)				0.3%	0.3%	-0.7%	1.0%	0.3%	0.3%	--	--	
Excess Return (vs. MSCI ACWI IMI Net)				-0.1%	-0.1%	0.0%	0.1%	0.1%	0.2%	0.3%	0.3%	
OPEB HL Private Equity	0.4%	18	18	0.0%	0.0%	8.7%	23.5%	--	--	--	NM	Oct-2023
Excess Return (vs. OPEB Growth Policy Benchmark)				-6.4%	-6.4%	-9.9%	-6.5%	--	--	--	--	
Excess Return (vs. OPEB Private Equity Policy Benchmark)				-2.9%	-2.9%	-15.7%	2.8%	--	--	--	--	
<b>OPEB Credit</b>	<b>16.9%</b>	<b>739</b>	<b>720</b>	<b>4.1%</b>	<b>4.1%</b>	<b>6.3%</b>	<b>11.9%</b>	<b>4.0%</b>	<b>4.0%</b>	<b>--</b>	<b>4.2%</b>	<b>Jul-2018</b>
Excess Return (vs. OPEB Master Trust Policy Benchmark)				-0.5%	-0.5%	-3.8%	-6.1%	0.4%	-3.0%	--	--	
Excess Return (vs. OPEB Credit Policy Benchmark)				1.4%	1.4%	-0.6%	0.2%	0.2%	-0.2%	--	-0.2%	
OPEB BLK Bank Loans	7.6%	331	325	1.9%	1.9%	6.1%	9.3%	6.1%	5.2%	--	5.0%	Jul-2018
Excess Return (vs. OPEB Credit Policy Benchmark)				-0.9%	-0.9%	-0.9%	-2.5%	2.3%	1.1%	--	1.8%	
Excess Return (vs. OPEB Bank Loans Custom Benchmark)				-0.2%	-0.2%	-0.6%	-0.4%	-0.2%	-0.4%	--	-0.3%	
OPEB BLK EM Debt CTF	2.1%	93	113	9.1%	9.1%	4.9%	13.7%	0.4%	0.3%	--	1.3%	Jul-2018
Excess Return (vs. OPEB Credit Policy Benchmark)				6.4%	6.4%	-2.1%	2.0%	-3.5%	-3.9%	--	-1.8%	
Excess Return (vs. JPM GBI-EM Global Diversified Index)				0.1%	0.1%	-0.1%	0.3%	-0.2%	-0.3%	--	-0.4%	
OPEB BLK High Yield Bonds	6.9%	303	268	5.2%	5.2%	7.8%	15.5%	2.8%	4.2%	--	4.8%	Jul-2018
Excess Return (vs. OPEB Credit Policy Benchmark)				2.5%	2.5%	0.9%	3.7%	-1.1%	0.1%	--	1.6%	
Excess Return (vs. BBG BARC US Corp HY Idx)				0.0%	0.0%	-0.2%	-0.3%	-0.3%	-0.5%	--	-0.4%	
OPEB HL Illiquid Credit	0.3%	13	13	0.0%	0.0%	1.5%	--	--	--	--	NM	Dec-2023
Excess Return (vs. OPEB Credit Policy Benchmark)				-2.8%	-2.8%	-5.4%	--	--	--	--	--	
Excess Return (vs. OPEB Illiquid Credit Custom Benchmark)				-2.8%	-2.8%	-7.7%	--	--	--	--	--	
<b>OPEB Real Assets &amp; Inflation Hedges</b>	<b>16.3%</b>	<b>713</b>	<b>796</b>	<b>8.7%</b>	<b>8.7%</b>	<b>9.5%</b>	<b>18.2%</b>	<b>1.9%</b>	<b>3.9%</b>	<b>--</b>	<b>4.9%</b>	<b>Jul-2018</b>
Excess Return (vs. OPEB Master Trust Policy Benchmark)				4.1%	4.1%	-0.7%	0.2%	-1.7%	-3.1%	--	--	
Excess Return (vs. OPEB RA & IH Policy Benchmark)				7.7%	7.7%	10.0%	15.4%	3.3%	1.7%	--	1.8%	
OPEB BLK Commodities CTF	0.9%	38	147	0.4%	0.4%	5.7%	0.8%	3.6%	7.8%	--	4.7%	Jul-2018
Excess Return (vs. OPEB RA & IH Policy Benchmark)				-0.6%	-0.6%	6.2%	-2.1%	5.1%	5.5%	--	1.5%	
Excess Return (vs. Bloomberg Commodity Index Total Return)				-0.3%	-0.3%	-0.2%	-0.2%	0.0%	0.0%	--	0.0%	

<sup>1</sup> NM = not meaningful

<sup>2</sup> Annualized net return tables omit inception-to-date benchmark returns prior to the conversion to a functional framework.

# Performance Detail

for the quarter ended September 30, 2024



Los Angeles County Employees Retirement Association

## Annualized Net Returns<sup>1,2</sup>

	% of Total	Ending Market Value (mm)	Prior Quarter Ending MV (mm)	QTD	FYTD	YTD	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date
<b>OPEB BLK TIPS</b>	4.9%	216	280	3.4%	3.4%	4.4%	8.9%	-0.8%	2.5%	--	3.0%	Jul-2018
Excess Return (vs. OPEB RA & IH Policy Benchmark)				2.4%	2.4%	4.9%	6.1%	0.6%	0.3%	--	-0.1%	
Excess Return (vs. OPEB TIPS Policy Benchmark)				0.9%	0.9%	1.2%	0.9%	0.3%	0.2%	--	0.2%	
<b>OPEB HL Infrastructure</b>	0.3%	11	11	1.5%	1.5%	-0.4%	-0.4%	--	--	--	NM	Oct-2023
Excess Return (vs. OPEB RA & IH Policy Benchmark)				0.5%	0.5%	0.1%	-3.3%	--	--	--	--	
Excess Return (vs. OPEB Infrastructure Policy Benchmark)				1.8%	1.8%	-0.3%	-11.5%	--	--	--	--	
<b>OPEB HL Natural Resources</b>	0.1%	5	5	4.1%	4.1%	-1.1%	-1.5%	--	--	--	NM	Oct-2023
Excess Return (vs. OPEB RA & IH Policy Benchmark)				3.1%	3.1%	-0.6%	-4.3%	--	--	--	--	
Excess Return (vs. S&P GLOBAL NATURAL RESOURCES INDEX)				0.7%	0.7%	-4.5%	-8.5%	--	--	--	--	
<b>OPEB Real Estate</b>	10.1%	443	353	15.4%	15.4%	14.6%	33.2%	4.3%	4.3%	--	6.1%	Jul-2018
Excess Return (vs. OPEB RA & IH Policy Benchmark)				14.4%	14.4%	15.1%	30.4%	5.7%	2.0%	--	2.9%	
Excess Return (vs. OPEB Real Estate Policy Benchmark)				15.8%	15.8%	20.6%	37.0%	10.2%	6.2%	--	5.1%	
<b>OPEB BLK REITS</b>	10.1%	440	350	15.5%	15.5%	14.7%	33.4%	4.3%	4.3%	--	6.1%	Jul-2018
Excess Return (vs. OPEB RA & IH Policy Benchmark)				14.5%	14.5%	15.2%	30.5%	5.7%	2.0%	--	2.9%	
Excess Return (vs. DJ US SELECT REAL ESTATE SECURITIES)				0.0%	0.0%	-0.1%	-0.2%	0.0%	-0.1%	--	-0.1%	
<b>OPEB HL Private Real Estate</b>	0.1%	2	2	0.0%	0.0%	--	--	--	--	--	NM	Feb-2024
Excess Return (vs. OPEB RA & IH Policy Benchmark)				-1.0%	-1.0%	--	--	--	--	--	--	
Excess Return (vs. Core Private RE Policy Benchmark)				0.7%	0.7%	--	--	--	--	--	--	
<b>OPEB Risk Reduction &amp; Mitigation</b>	<b>21.0%</b>	<b>919</b>	<b>663</b>	<b>5.5%</b>	<b>5.5%</b>	<b>4.1%</b>	<b>12.2%</b>	<b>-0.6%</b>	<b>0.7%</b>	<b>--</b>	<b>1.8%</b>	<b>Jul-2016</b>
Excess Return (vs. OPEB Master Trust Policy Benchmark)				0.8%	0.8%	-6.0%	-5.8%	-4.3%	-6.3%	--	-4.2%	
Excess Return (vs. OPEB RR & M Policy Benchmark)				0.1%	0.1%	0.3%	0.2%	0.7%	0.5%	--	0.4%	
<b>OPEB BLK IG Bonds</b>	16.2%	706	429	5.3%	5.3%	4.7%	11.7%	-1.3%	0.4%	--	1.9%	Jul-2018
Excess Return (vs. OPEB RR & M Policy Benchmark)				-0.1%	-0.1%	0.9%	-0.3%	0.0%	0.2%	--	0.5%	
Excess Return (vs. BBG BARC Agg)				0.1%	0.1%	0.3%	0.1%	0.1%	0.1%	--	0.1%	
<b>OPEB BLK LTG Bonds</b>	3.5%	153	174	7.9%	7.9%	3.0%	15.9%	--	--	--	3.3%	Dec-2022
Excess Return (vs. OPEB RR & M Policy Benchmark)				2.5%	2.5%	-0.8%	3.9%	--	--	--	1.9%	
Excess Return (vs. Bloomberg U.S. Treasury: Long)				0.1%	0.1%	0.6%	0.5%	--	--	--	0.3%	
<b>OPEB Cash</b>	1.4%	60	59	1.8%	1.8%	6.4%	8.1%	4.7%	3.1%	2.3%	2.0%	Feb-2013
Excess Return (vs. OPEB RR & M Policy Benchmark)				-3.6%	-3.6%	2.6%	-3.9%	6.0%	3.0%	--	0.6%	
Excess Return (vs. OPEB Cash Policy Benchmark)				0.4%	0.4%	2.2%	2.5%	1.1%	0.7%	0.6%	0.5%	
<b>OPEB HL PM Cash</b>	0.0%	0	0									

<sup>1</sup> NM = not meaningful

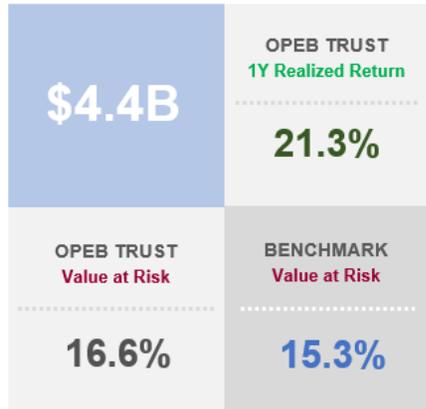
<sup>2</sup> Annualized net return tables omit inception-to-date benchmark returns prior to the conversion to a functional framework.

risk

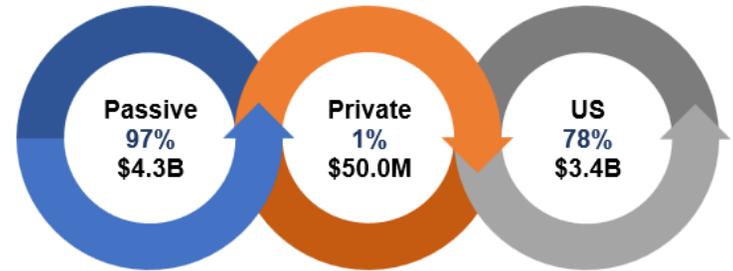
# Risk Summary

for the quarter ended September 30, 2024

## Realized Risks



## Exposures (%)

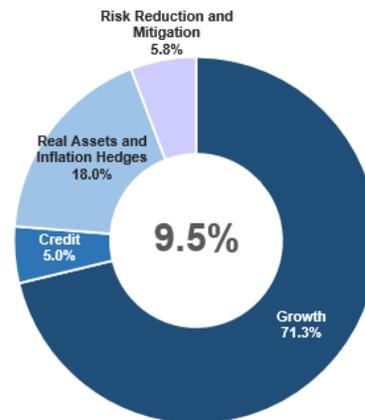


## Market Values (\$)

## Projected Risks

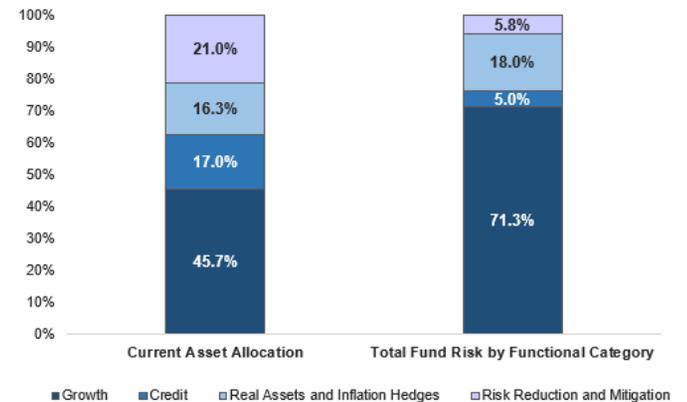


## Functional Category Contributions to OPEB Trust Risk



## OPEB Master Trust Asset Allocation

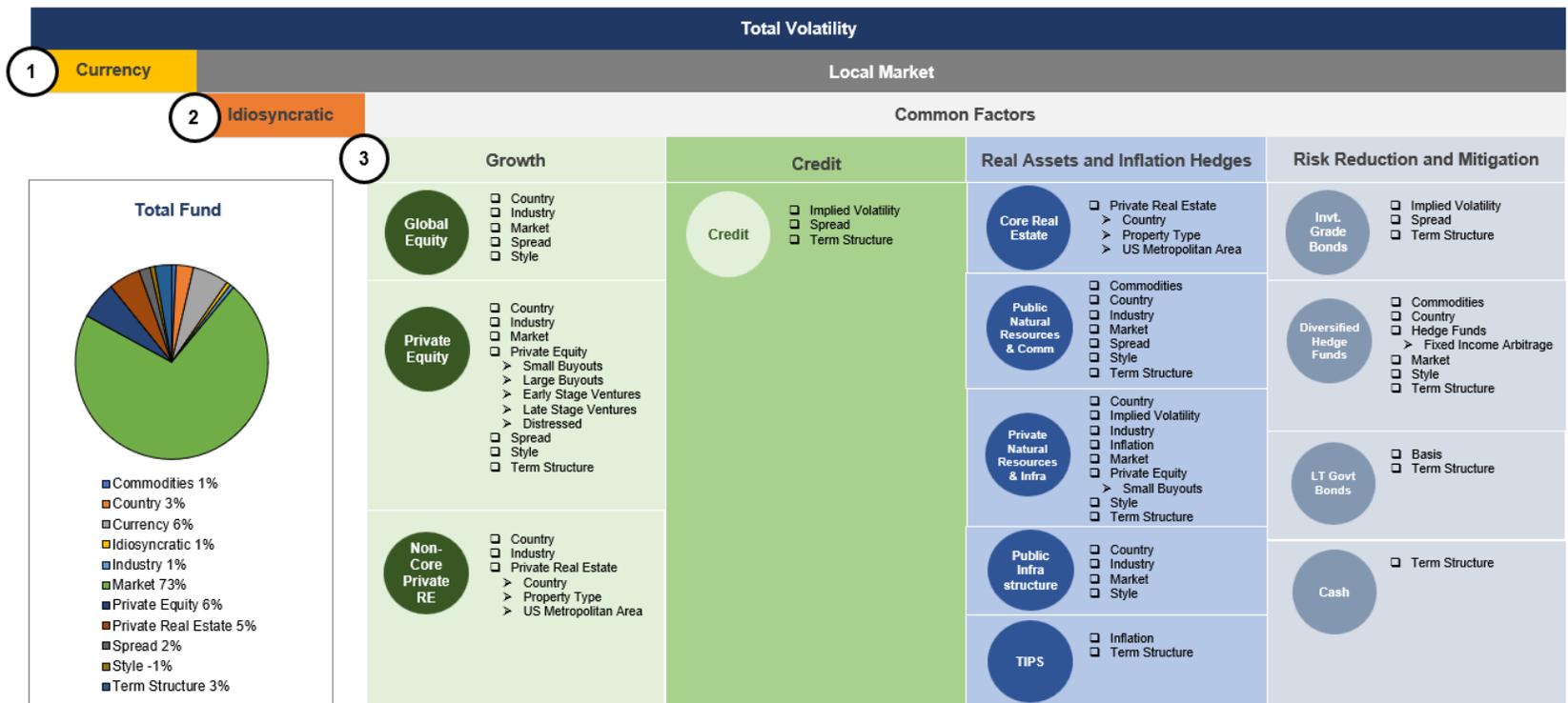
Capital-based versus Risk-based



# Risk Summary

for the quarter ended September 30, 2024

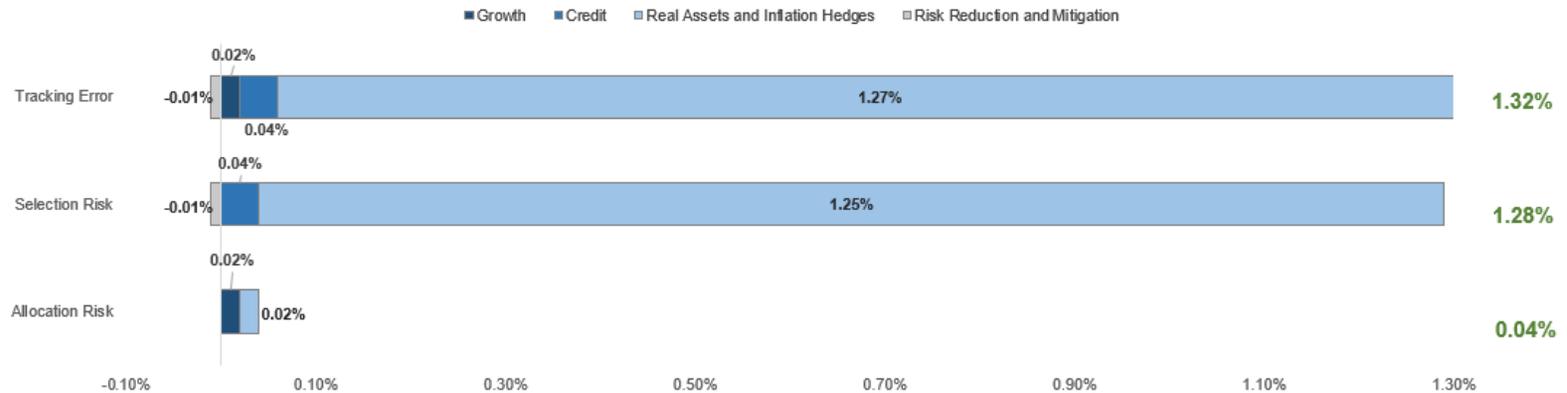
## Decomposition of MSCI Risk Factors



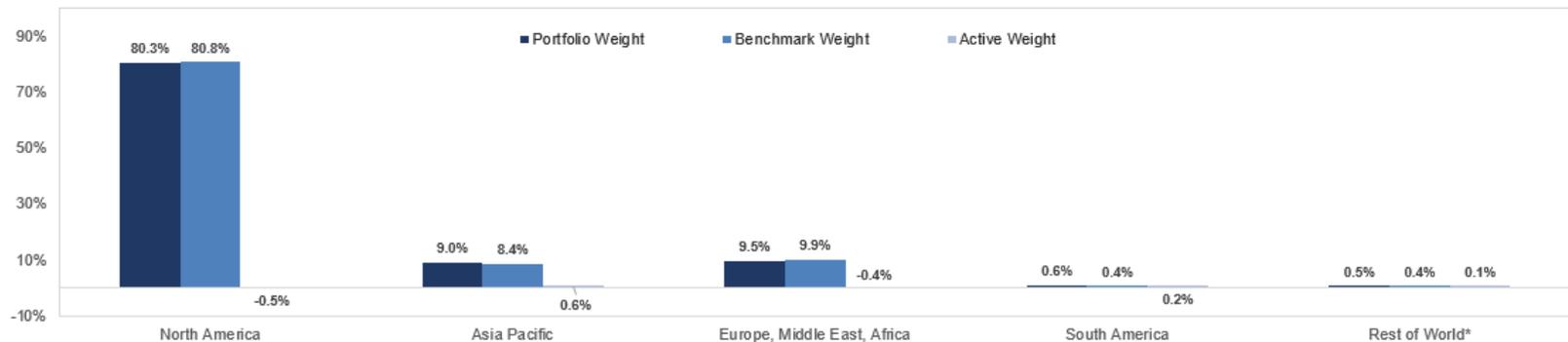
# Risk Summary

for the quarter ended September 30, 2024

## Functional Category Contributions to Tracking Error



## Portfolio Allocation by Region<sup>1</sup>

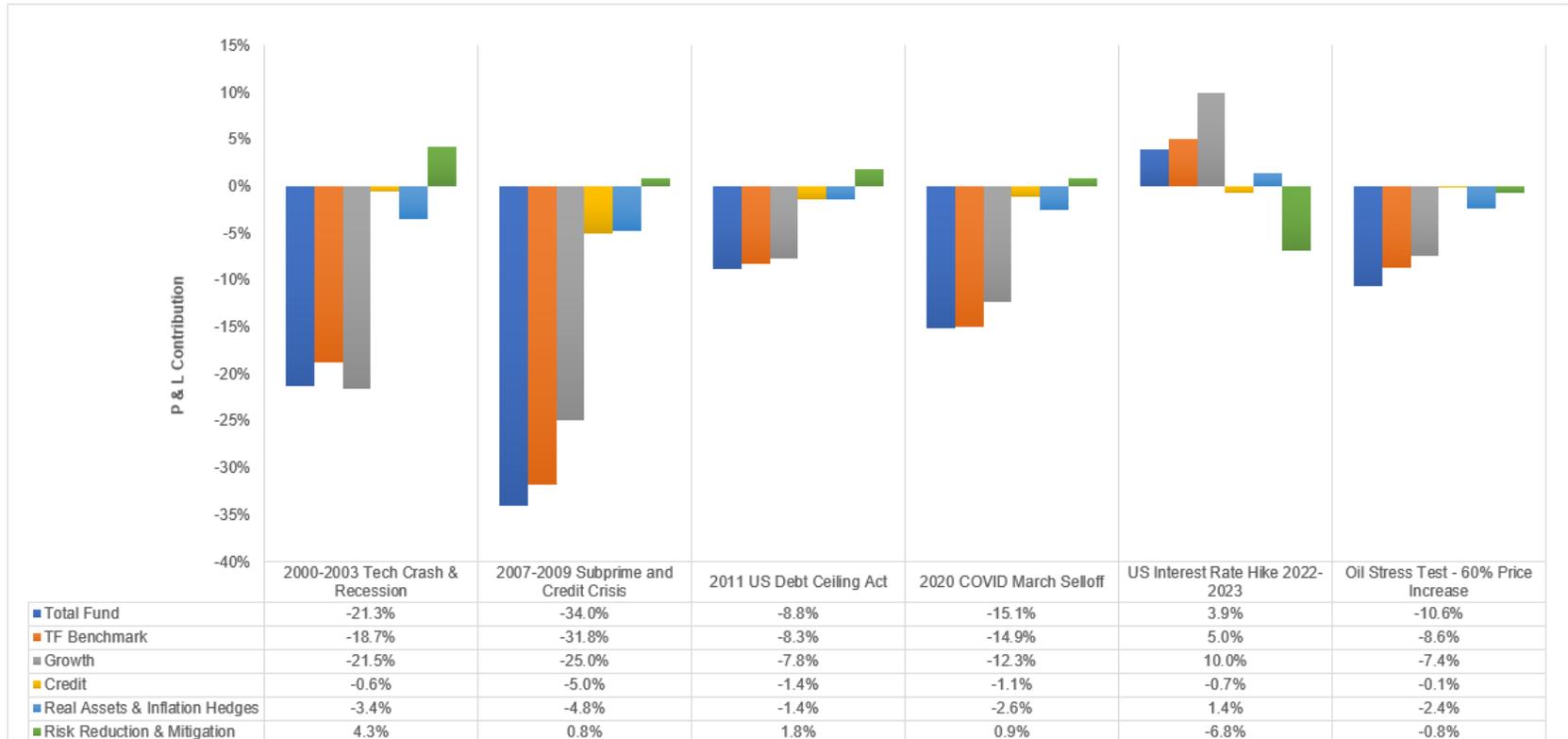


\* Rest of World is sum of countries with weights below 0.5%.

# Stress Tests

for the quarter ended September 30, 2024

## Scenarios by Asset Category



# manager pages

# Growth – Global Equity

## BlackRock MSCI ACWI IMI

for the quarter ended September 30, 2024



Los Angeles County Employees Retirement Association

### 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: June 2014

Manager Scorecard Profile				
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)
4	S	—	A	5

### Performance

	Market Value	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
<b>OPEB BLK Global Equities (Gross)</b>	<b>1,980.3</b>	<b>6.7%</b>	<b>47</b>	<b>31.0%</b>	<b>28</b>	<b>7.6%</b>	<b>44</b>	<b>12.1%</b>	<b>31</b>
Peer Universe Median		6.5%		25.7%		7.0%		10.0%	
<b>OPEB BLK Global Equities (Net)</b>		<b>6.7%</b>		<b>31.0%</b>		<b>7.6%</b>		<b>12.0%</b>	
Excess Return (vs. MSCI ACWI IMI Net)		-0.1%		0.1%		0.1%		0.2%	
Excess Return (vs. OPEB Growth Policy Benchmark)		0.3%		1.0%		0.3%		0.3%	



Wilshire TUCS Peer Universe

Global Equity Funds

Number of observations

107

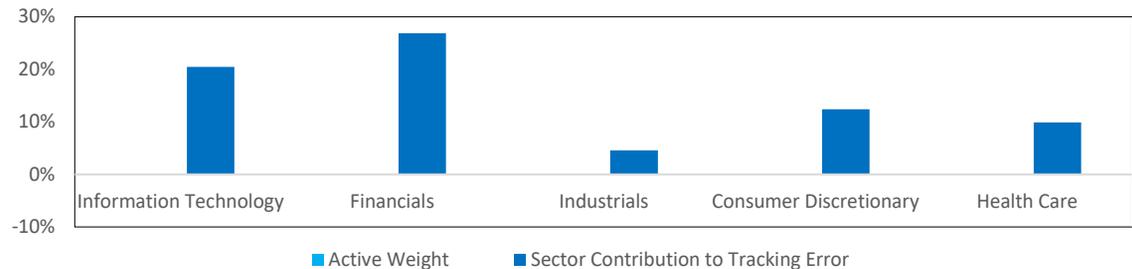
■ Portfolio ■ Excess Return (vs. MSCI ACWI IMI Net) ■ Excess Return (vs. OPEB Growth Policy Benchmark)

### Risk

#### Largest Sector Contributions to Tracking Error by GICS Sector

Risk Summary	Portfolio	Benchmark
Forecast Volatility	15.2%	15.2%
Forecast Tracking Error	0.1%	
Beta	1.00	

Top Countries by Weight	Portfolio Weight	Benchmark Weight	Active Weight
United States	63.2%	63.1%	0.1%
Japan	5.7%	5.6%	0.0%
United Kingdom	3.4%	3.4%	0.0%
Canada	2.8%	2.8%	0.0%
China	2.7%	2.8%	-0.1%



# Credit Bank Loans BlackRock

for the quarter ended September 30, 2024



Los Angeles County Employees Retirement Association

## Strategy

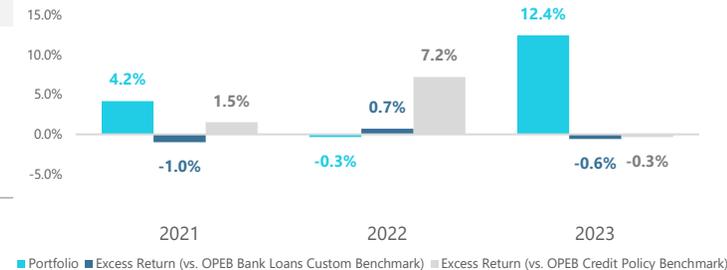
Seeks to preserve capital and provide income by outperforming the bank loan benchmark that tracks the investable market of the US dollar denominated leveraged loan market.

Inception Date: July 2018

Manager Scorecard Profile				
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)
4	S	—	A	3

## Performance

	Market Value	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
<b>OPEB BLK Bank Loans (Gross)</b>	<b>330.5</b>	<b>2.0%</b>	<b>66</b>	<b>9.6%</b>	<b>58</b>	<b>6.2%</b>	<b>20</b>	<b>5.3%</b>	<b>20</b>
Peer Universe Median		3.8%		10.5%		1.0%		1.7%	
<b>OPEB BLK Bank Loans (Net)</b>		<b>1.9%</b>		<b>9.3%</b>		<b>6.1%</b>		<b>5.2%</b>	
Excess Return (vs. OPEB Bank Loans Custom Benchmark)		-0.2%		-0.4%		-0.2%		-0.4%	
Excess Return (vs. OPEB Credit Policy Benchmark)		-0.9%		-2.5%		2.3%		1.1%	



Wilshire TUCS Peer Universe

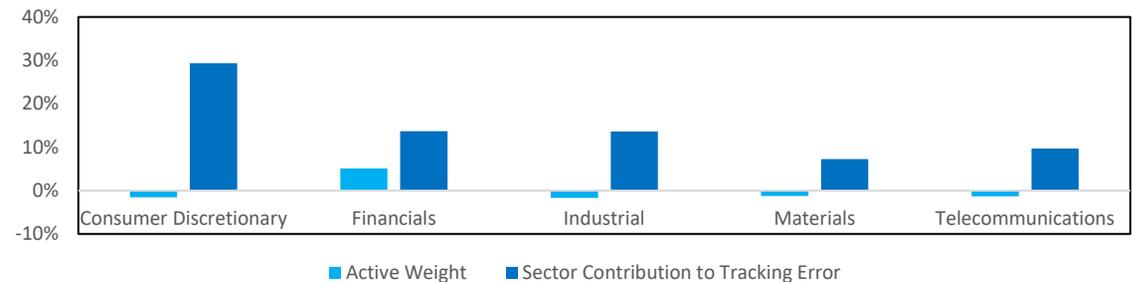
US Fixed Income Funds

Number of observations

772

## Risk

### Largest Sector Contributions to Tracking Error by Bond Sector



Risk Summary	Portfolio	Benchmark
Forecast Volatility	2.9%	3.6%
Forecast Tracking Error	0.8%	
Beta	0.80	

Top Countries by Weight	Portfolio Weight	Benchmark Weight	Active Weight
United States	90.1%	89.8%	0.3%
Canada	2.8%	2.7%	0.2%
United Kingdom	1.7%	1.6%	0.1%
Ireland	1.4%	0.8%	0.6%
Luxembourg	1.2%	2.0%	-0.8%

# Credit High Yield BlackRock

for the quarter ended September 30, 2024



Los Angeles County Employees Retirement Association

## Strategy

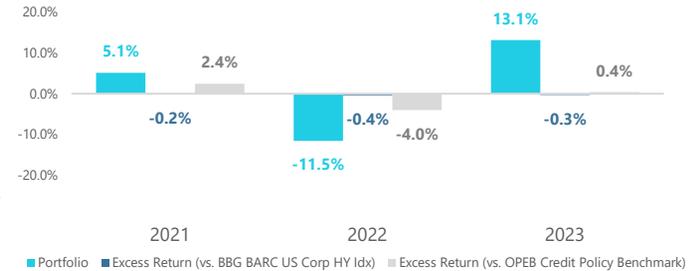
Tracks the Bloomberg US Corporate High Yield index, a broadly diversified portfolio, primarily composed of US dollar denominated high yield securities.

Inception Date: July 2018

Manager Scorecard Profile				
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)
3	S	—	A	5

## Performance

	Market Value	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
<b>OPEB BLK High Yield (Gross)</b>	<b>302.9</b>	<b>5.3%</b>	<b>26</b>	<b>15.6%</b>	<b>19</b>	<b>2.9%</b>	<b>33</b>	<b>4.3%</b>	<b>24</b>
Peer Universe Median		3.8%		10.5%		1.0%		1.7%	
<b>OPEB BLK High Yield (Net)</b>		<b>5.2%</b>		<b>15.5%</b>		<b>2.8%</b>		<b>4.2%</b>	
Excess Return (vs. BBG BARC US Corp HY Idx)		0.0%		-0.3%		-0.3%		-0.5%	
Excess Return (vs. OPEB Credit Policy Benchmark)		2.5%		3.7%		-1.1%		0.1%	



Wilshire TUCS Peer Universe

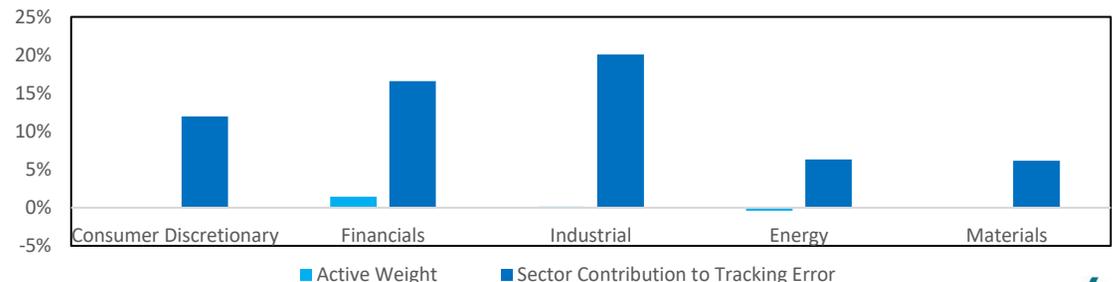
US Fixed Income Funds

Number of observations

772

## Risk

### Largest Sector Contributions to Tracking Error by Bond Sector



Risk Summary	Portfolio	Benchmark
Forecast Volatility	4.7%	4.7%
Forecast Tracking Error	0.1%	
Beta	1.02	

Top Countries by Weight	Portfolio Weight	Benchmark Weight	Active Weight
United States	82.6%	82.7%	-0.1%
Canada	4.7%	4.5%	0.1%
United Kingdom	2.4%	2.7%	-0.2%
Luxembourg	1.5%	1.4%	0.1%
Ireland	1.4%	1.2%	0.2%

# Credit Emerging Market Debt BlackRock

for the quarter ended September 30, 2024

## Strategy

Seeks to approximate the total return of an index composed of local currency denominated, emerging market sovereign bonds.

Inception Date: July 2018

Manager Scorecard Profile				
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)
<b>3</b>	<b>S</b>	<b>—</b>	<b>A</b>	<b>5</b>

## Performance

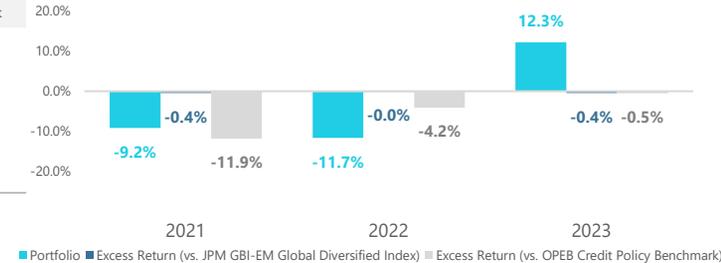
	Market Value	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
<b>OPEB BLK EM Debt CTF (Gross)</b>	<b>92.5</b>	<b>9.1%</b>	<b>5</b>	<b>13.8%</b>	<b>25</b>	<b>0.5%</b>	<b>54</b>	<b>0.4%</b>	<b>82</b>
Peer Universe Median		3.8%		10.5%		1.0%		1.7%	
<b>OPEB BLK EM Debt CTF (Net)</b>		<b>9.1%</b>		<b>13.7%</b>		<b>0.4%</b>		<b>0.3%</b>	
Excess Return (vs. JPM GBI-EM Global Diversified Index)		0.1%		0.3%		-0.2%		-0.3%	
Excess Return (vs. OPEB Credit Policy Benchmark)		6.4%		2.0%		-3.5%		-3.9%	

Wilshire TUCS Peer Universe

US Fixed Income Funds

Number of observations

772



## Risk

### Largest Sector Contributions to Tracking Error by Bond Sector

<sup>1</sup> Commingled fund account with no position-level transparency.

Risk Summary	Portfolio	Benchmark
Forecast Volatility	5.4%	9.0%
Forecast Tracking Error	6.5%	
Beta	0.42	

Top Countries by Weight	Portfolio Weight	Benchmark Weight	Active Weight
Commingled Fund <sup>1</sup>	100%	0%	100%

# Real Assets & Inflation Hedges

REITs

BlackRock

for the quarter ended September 30, 2024



Los Angeles County Employees Retirement Association

## Strategy

Invests primarily in a portfolio of US securities with the objective of approximating the total rate of return of the REIT benchmark. The index is designed to track the performance of REITs and other companies that invest directly or indirectly in real estate through development, management, or ownership, including property agencies.

Inception Date: July 2018

Manager Scorecard Profile				
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)
4	S	—	A	5

## Performance



## Risk

### Largest Sector Contributions to Tracking Error by GICS Sector

Risk Summary	Portfolio	Benchmark
Forecast Volatility	18.4%	18.0%
Forecast Tracking Error	2.3%	
Beta	1.01	

Top Countries by Weight	Portfolio Weight	Benchmark Weight	Active Weight
United States	100%	100%	0%



# Real Assets & Inflation Hedges

## Commodities

### BlackRock

for the quarter ended September 30, 2024



Los Angeles County Employees Retirement Association

## Strategy

Invests in two strategies, approximately equally. One strategy focuses on commodity-linked derivatives, while the other focuses on equity investments in commodity-related companies, including mining, energy, and agricultural companies.

Inception Date: July 2018

Manager Scorecard Profile				
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)
2	S	—	A	5

## Performance

	Market Value	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
<b>OPEB BLK Commodities CTF (Gross)</b>	<b>38.4</b>	<b>0.4%</b>	<b>39</b>	<b>0.9%</b>	<b>67</b>	<b>3.8%</b>	<b>80</b>	<b>7.9%</b>	<b>69</b>
Peer Universe Median		0.0%		3.9%		6.7%		9.2%	
<b>OPEB BLK Commodities CTF (Net)</b>		<b>0.4%</b>		<b>0.8%</b>		<b>3.6%</b>		<b>7.8%</b>	
Excess Return (vs. Bloomberg Commodity Index)		-0.3%		-0.2%		0.0%		0.0%	
Excess Return (vs. OPEB RA & IH Policy Benchmark)		-0.6%		-2.1%		5.1%		5.5%	

Wilshire TUCS Peer Universe

Commodity Funds

Number of observations

11



## Risk

### Largest Sector Contributions to Tracking Error by GICS Sector

<sup>1</sup> Commingled fund account with no position-level transparency.

Risk Summary	Portfolio	Benchmark
Forecast Volatility	8.5%	15.2%
Forecast Tracking Error	17.0%	
Beta	0.03	

Top Countries by Weight	Portfolio Weight	Benchmark Weight	Active Weight
Commingled Fund <sup>1</sup>	100%	0%	100%

<sup>1</sup> Commingled fund account with no position-level transparency.

# Real Assets & Inflation Hedges

TIPS

BlackRock

for the quarter ended September 30, 2024



Los Angeles County Employees Retirement Association

## Strategy

Invests in inflation-protected public obligations of the US Treasury that have a remaining maturity greater than or equal to 1 year and less than 10 years.

Inception Date: July 2018

Manager Scorecard Profile				
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)
<b>2</b>	<b>S</b>	<b>—</b>	<b>A</b>	<b>5</b>

## Performance

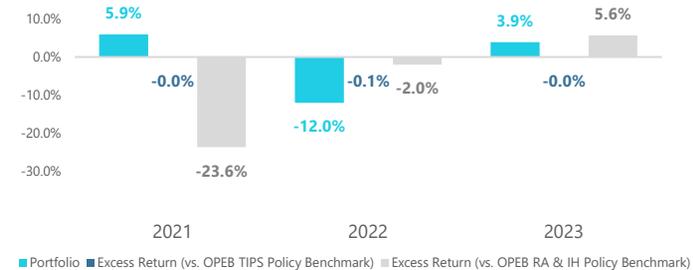
	Market Value	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
<b>OPEB BLK TIPS (Gross)</b>	<b>216.0</b>	<b>3.4%</b>	<b>54</b>	<b>9.0%</b>	<b>62</b>	<b>-0.8%</b>	<b>74</b>	<b>2.6%</b>	<b>34</b>
Peer Universe Median		3.8%		10.5%		1.0%		1.7%	
<b>OPEB BLK TIPS (Net)</b>		<b>3.4%</b>		<b>8.9%</b>		<b>-0.8%</b>		<b>2.5%</b>	
Excess Return (vs. OPEB TIPS Policy Benchmark)		0.9%		0.9%		0.3%		0.2%	
Excess Return (vs. OPEB RA & IH Policy Benchmark)		2.4%		6.1%		0.6%		0.3%	

Wilshire TUCS Peer Universe

US Fixed Income Funds

Number of observations

772



## Risk

Risk Summary	Portfolio	Benchmark
Forecast Volatility	2.7%	6.4%
Forecast Tracking Error	4.1%	
Beta	0.38	

Top Countries by Weight	Portfolio Weight	Benchmark Weight	Active Weight
United States	100%	100%	0%

### Largest Sector Contributions to Tracking Error by Bond Sector



# Risk Reduction & Mitigation

## Investment Grade Bonds

### BlackRock

for the quarter ended September 30, 2024



Los Angeles County Employees Retirement Association

## Strategy

Tracks the Bloomberg US Aggregate Bond index, a broad, market capitalization-weighted bond market index representing investment grade bonds traded in the US.

Inception Date: July 2018

Manager Scorecard Profile				
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)
3	S	—	A	5

## Performance

	Market Value	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
<b>OPEB BLK IG Bonds (Gross)</b>	<b>706.4</b>	<b>5.3%</b>	<b>24</b>	<b>11.7%</b>	<b>42</b>	<b>-1.3%</b>	<b>82</b>	<b>0.4%</b>	<b>81</b>
Peer Universe Median		3.8%		10.5%		1.0%		1.7%	
<b>OPEB BLK IG Bonds (Net)</b>		<b>5.3%</b>		<b>11.7%</b>		<b>-1.3%</b>		<b>0.4%</b>	
Excess Return (vs. BBG BARC Agg)		0.1%		0.1%		0.1%		0.1%	
Excess Return (vs. OPEB RR & M Policy Benchmark)		-0.1%		-0.3%		0.0%		0.2%	



Wilshire TUCS Peer Universe

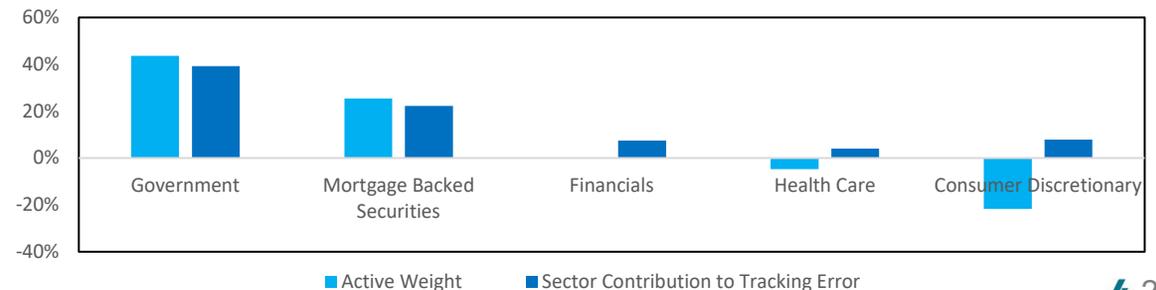
US Fixed Income Funds

Number of observations

772

## Risk

### Largest Sector Contributions to Tracking Error by Bond Sector



Risk Summary	Portfolio	Benchmark
Forecast Volatility	6.3%	4.7%
Forecast Tracking Error	5.0%	
Beta	0.83	

Top Countries by Weight	Portfolio Weight	Benchmark Weight	Active Weight
United States	92.8%	82.7%	10.0%
United Kingdom	1.3%	2.7%	-1.3%
Canada	1.1%	4.5%	-3.4%
Japan	0.7%	0.4%	0.2%
Germany	0.3%	0.4%	-0.1%

# Risk Reduction & Mitigation

## Long-Term Government Bonds

### BlackRock

for the quarter ended September 30, 2024



Los Angeles County Employees Retirement Association

## Strategy

Seeks to approximate the return of US dollar-denominated, fixed rate, nominal debt issued by the US Treasury with a maturity greater than 10 years.

Inception Date: December 2022

Manager Scorecard Profile				
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)
3	S	—	A	5

## Performance

	Market Value	QTD	Rank	1 Year	Rank	3 Year	Rank	5 Year	Rank
<b>OPEB BLK LTG Bonds (Gross)</b>	<b>152.6</b>	<b>7.9%</b>	<b>9</b>	<b>15.9%</b>	<b>18</b>	--	--	--	--
Peer Universe Median		3.8%		10.5%		--	--	--	--
<b>OPEB BLK LTG Bonds (Net)</b>		<b>7.9%</b>		<b>15.9%</b>		--	--	--	--
Excess Return (vs. Bloomberg U.S. Treasury: Long)		0.1%		0.5%		--	--	--	--
Excess Return (vs. OPEB RR & M Policy Benchmark)		2.5%		3.9%		--	--	--	--



Wilshire TUCS Peer Universe

US Fixed Income Funds

Number of observations

772

## Risk

### Largest Sector Contributions to Tracking Error by Bond Sector

Risk Summary	Portfolio	Benchmark
Forecast Volatility	14.1%	14.1%
Forecast Tracking Error	0.0%	
Beta	1.00	

Top Countries by Weight	Portfolio Weight	Benchmark Weight	Active Weight
United States	100%	100%	0%

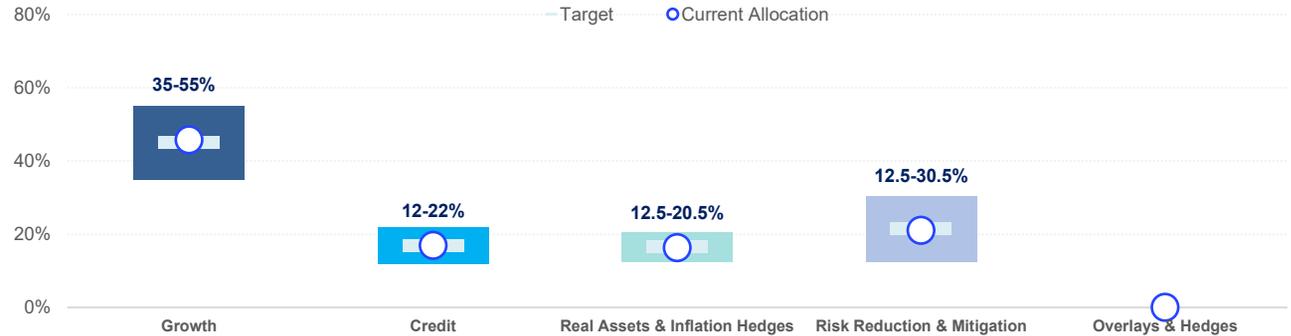
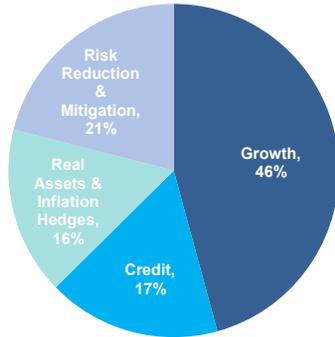


# compliance monitor

# Compliance Monitor

for the quarter ended September 30, 2024

## OPEB Master Trust Asset Allocation, Policy Ranges, and Targets<sup>1</sup>



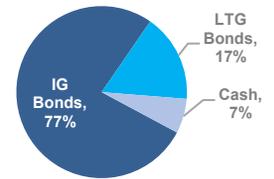
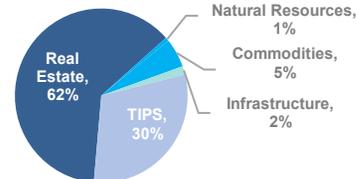
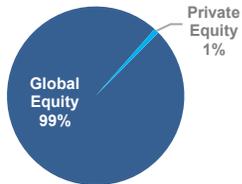
## Q3 2024 Compliance Overview by Functional and Sub-asset Category

**Growth**  
3 Advisories  
1 Exception

**Credit**  
1 Advisory  
0 Exceptions

**Real Assets & Inflation Hedges**  
0 Advisories  
1 Exception

**Risk Reduction & Mitigation**  
2 Advisories  
0 Exceptions



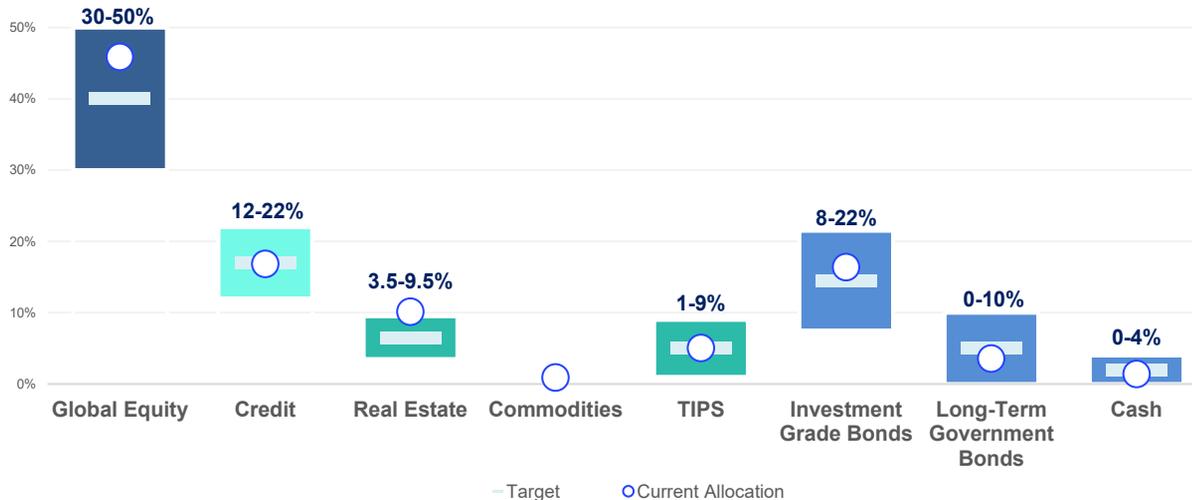
<sup>1</sup> Targets and policy ranges reflect interim strategic asset allocation weights.

# Compliance Monitor

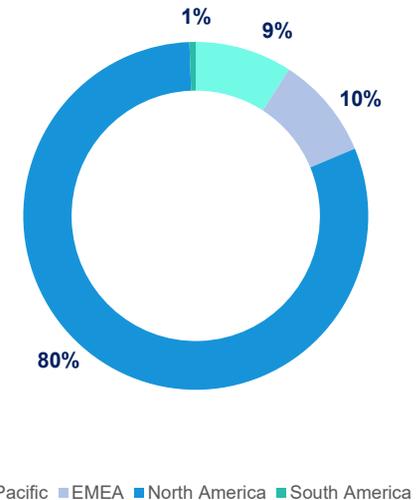
for the quarter ended September 30, 2024

## OPEB Master Trust – Public Markets

OPEB Master Trust Public Market Allocation<sup>1</sup>  
(by functional sub-asset category)



Region Exposure



## Q3 2024 Compliance Review Status

Advisories Reviewed?	Count	Exceptions Y/N?	Count	Notes
✓	—	Y	1	<b>Asset Allocation Compliance</b> Exception 1: Total Real Estate was above the 9.5% upper bound of the policy range by 0.6%. Allocations fell outside of the defined ranges as capital is deployed from public to private markets, reflecting the Board-approved strategic transition.
✓	—	N	—	<b>Investment Manager Compliance</b>
✓	3	N	—	Economic Substitution (Iran, Sudan, Tobacco) Advisory 1: 15 Iran issuers totaling 8.9 million in market value (8 issuers in Global Equity, 7 issuers in Investment-Grade Bonds). Advisory 2: 2 Sudan issuers totaling 581.6 thousand in market value in Global Equity. Advisory 3: 18 Tobacco issuers totalling 12.0 million in market value (10 issuers in Global Equity, 3 issuers in High Yield Bonds, 5 in Investment Grade Bonds).
✓	—	N	—	Restricted Investments (Los Angeles County, District and Agency)

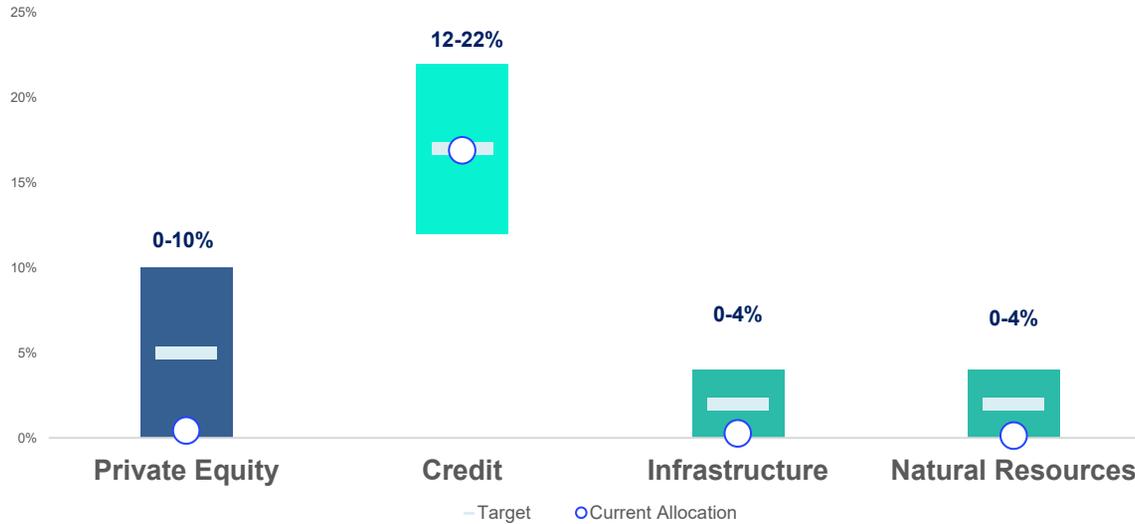
<sup>1</sup> Total Real Estate (including public and private) is shown, representing updated Board-approved strategic asset allocation ranges.

# Compliance Monitor

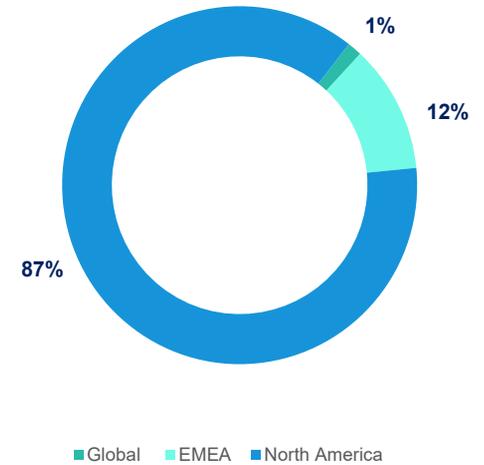
for the quarter ended September 30, 2024

## OPEB Master Trust – Private Markets

OPEB Master Trust Private Market Allocation



Region Exposure



## Q3 2024 Compliance Review Status

Advisories Reviewed?	Count	Exceptions Y/N?	Count	Notes
✓	—	N	—	<b>Asset Allocation Compliance</b> <b>Program Guideline Compliance</b> Manager Concentration Exception 1: Private markets advisor manager concentration was above the 50% investment guideline limit by 13%. Allocations fell outside of defined ranges in early stages of capital deployment as the program develops.
		N	—	
		Y	1	
✓	—	N	—	<b>Investment Manager Compliance</b> Restricted Investments (Privatization) Strategy
✓	—	N	—	
✓	—	N	—	

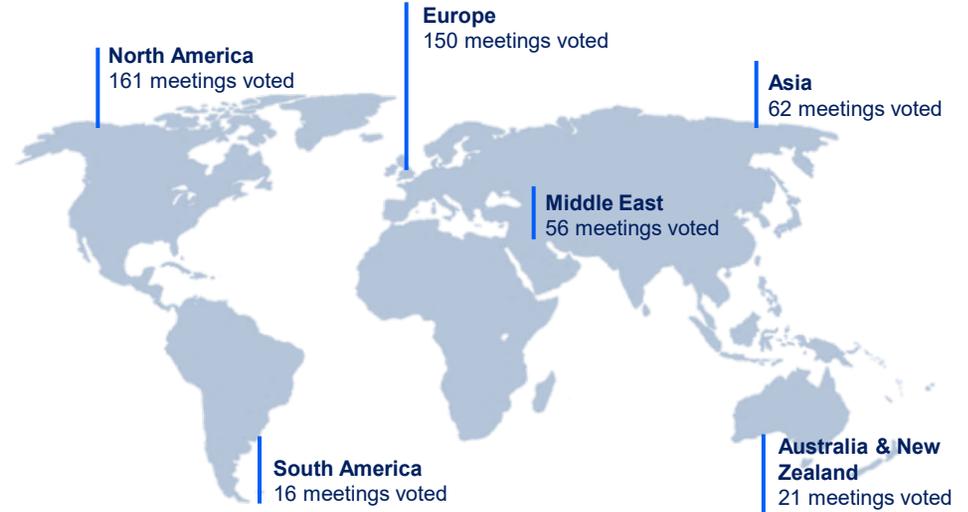
# Compliance Monitor

for the quarter ended September 30, 2024

## Special Programs and Investment Operations

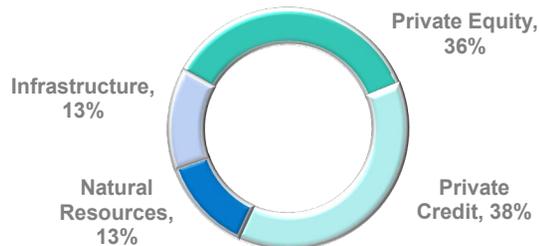
### Proxy Voting

**100%**  
OPEB Master Trust proxies  
voted in Q3 2024



### OPEB Private Market Program

**YTD Commitments by Asset Class**  
(as of September 30, 2024)



### Paid Tax Reclaims

**\$17,029**  
YTD Total

### Pending Tax Reclaims

**\$478,387**  
YTD Total

### Special Projects

	Strategic Asset Allocation Implementation	In Progress
	Annual Contract Compliance	In Progress
	Fee Reconciliation Project	Complete
	Investment Manager Meeting Requests	No Advisory Noted
	Annual Assessment of IC meetings	Complete

## Reference Guide

### General Information

**Overview and Purpose:** This report is delivered to the Board of Investments every quarter as a means of oversight; ensuring that asset category and investment manager activity align with established guidelines. It is a tool to monitor adherence, ensure transparency, and facilitate communication of investment and operational activities.

### Methodology

- Data collected from multiple sources including: LACERA's custodian, MSCI BarraOne Risk platform, Investment Consultant and Manager reports.
- Analysis period for private market allocations may exhibit a lag and is reported based on best available data.
- Region Exposure graphs based on country of domicile.

### Terms

- "Advisory" is a monitoring measure and does not equate to a compliance exception.
- "Exception" refers to instances where investment activity falls outside of predefined guidelines, prompting a need for further review.
- "Asset Allocation Compliance" measures actual asset allocation versus investment policy target weights and ranges.
- "Program Guideline Compliance" assesses asset category level guidelines.
- "Investment Guideline Compliance" measures investment manager guideline compliance as established in investment manager agreements.
- "Economic Substitution Policy" LACERA policy on Iran, Sudan, Tobacco: Manager should refrain from purchasing securities when the same investment goals concerning risk, return, and diversification can be achieved through the purchase of another security.
- For Investment Manager Meeting Requests, an "Advisory" is noted if the CEO or a Board member recommends staff to meet with a specific manager three or more times in a year.  
The purpose of notifying the activity is to promote transparency and governance best practices designed to preserve the integrity of the decision-making process.

# manager scorecard

# OPEB TRUST MANAGER SCORECARD

3rd Quarter 2024

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)

Manager	Market Value (in \$ millions)	% of Trust	SCORE	SCORE	SCORE	SCORE	SCORE	
<b>PUBLIC MARKETS</b>								
<b>BLACKROCK</b>								
Bank Loans SMA	330.5	7.6%	4	●	S	—	A	3
Commodities CTF	38.4	0.9%	2	●	S	—	A	5
EM Debt CTF	92.5	2.1%	3	●	S	—	A	5
Global Equities SMA	1,980.3	45.3%	4	●	S	—	A	5
High Yield SMA	302.9	6.9%	3	●	S	—	A	5
Investment Grade Bonds SMA	706.4	16.2%	3	●	S	—	A	5
Long-Term Government Bonds SMA	152.6	3.5%	* 3	●	S	—	A	5
REITs SMA	440.1	10.1%	4	●	S	—	A	5
TIPS SMA	216.0	4.9%	2	●	S	—	A	5
<b>STATE STREET GLOBAL ADVISORS</b>								
Enhanced Cash SMA	60.2	1.4%	3	●	S	—	B	5
<b>PRIVATE MARKETS</b>								
<b>HAMILTON LANE</b>								
HL PM Program	50.0	1.1%	* 3	●	S	+	B	3

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

<b>For Organization, ESG, and Partnership</b>	
●	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 a manager's performance relative to its benchmark

\*' 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

# appendix

# Benchmark Definitions

## Current Composition

	Weight	Component
<b>OPEB Master Trust</b>		
OPEB Master Trust Policy Benchmark		
	45%	OPEB Growth Policy Benchmark
	17%	OPEB Credit Policy Benchmark
	17%	OPEB RA & IH Policy Benchmark
	22%	OPEB RR & M Policy Benchmark
<b>Growth</b>		
OPEB Growth Policy Benchmark		
	89%	MSCI ACWI IMI Net
	11%	OPEB Private Equity Policy Benchmark
OPEB Private Equity Policy Benchmark		
	100%	MSCI ACWI IMI Net + 200 bps (3-month lagged)
<b>Credit</b>		
OPEB Credit Policy Benchmark		
	70%	Credit Suisse Leveraged Loans Index
	30%	Bloomberg US Corporate High Yield Index + 100 bps (1-month lagged)
OPEB Bank Loans Custom Benchmark		
	100%	CS Leveraged Loan Index
OPEB Illiquid Credit Custom Benchmark		
	70%	Credit Suisse Leveraged Loans Index
	30%	Bloomberg US Corporate High Yield Index + 100 bps (1-month lagged)

# Benchmark Definitions

## Current Composition

	Weight	Component
<b>Real Assets &amp; Inflation Hedges</b>		
OPEB RA & IH Policy Benchmark		
	39%	OPEB Real Estate Policy Benchmark
	12%	S&P Global Natural Resources Index
	6%	Bloomberg Commodity Index Total Return
	12%	DJ Brookfield Global Infra Comp
	30%	Bloomberg U.S. Treasury: U.S. TIPS
OPEB Real Estate Policy Benchmark		
	100%	NFI ODCE Net (3-month lagged)
OPEB Infrastructure Policy Benchmark		
	100%	DJ Brookfield Global Infrastructure Composite (3-month lagged)
OPEB TIPS Policy Benchmark		
	100%	Bloomberg US TIPS (0-5YRS) Index
<b>Risk Reduction &amp; Mitigation</b>		
OPEB RR & M Policy Benchmark		
	67%	Bloomberg U.S. Aggregate
	23%	Bloomberg U.S. Treasury: Long
	9%	OPEB Cash Policy Benchmark
OPEB Cash Policy Benchmark		
	100%	FTSE 3-Month US Treasury Bill

## 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.

## 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.

## 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

Average return earned in excess of the risk-free rate per unit of total risk.

### 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 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.

## V

### VALUE AT RISK

The maximum loss that a portfolio can lose in 1 year with a 95% level of confidence based on 1,000 simulations.

## 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.