



# Chief Investment Officer Monthly Report

Jonathan Grabel – Chief Investment Officer 

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Board of Investments Meeting  
May 14, 2025

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Complete list of slide footnotes are included in the Appendix.



01

# Market Environment



# Notable Items and Market Themes to Watch



## Notable Items



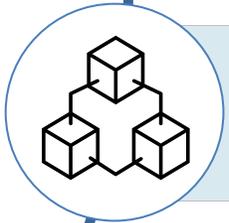
### Interest rates and central bank actions

- The Federal Reserve implemented its previously announced slowdown in the pace of quantitative tightening.



### Economic data and trends

- Inflation, supply chains, & labor developments



### Artificial intelligence

- Research developments, applications, and infrastructure investment



### Stewardship and ESG-related developments

- Business Roundtable and certain legislators renew calls for revised regulation of proxy research and analysis firms that investors use to assess and vote on corporate proxies of shareholder meetings

## Market Themes

- **Tariff Impacts:** Concerns about the economic impact of tariffs and related policy uncertainty continue to result in significant market volatility and have impacted business sentiment, inflation expectations, and economic growth forecasts. The likelihood of a US recession has reportedly increased
- **Inflation Concerns:** While recent official inflation data eased slightly, projected increases remain due to rising inflation expectations in the latter half of 2025, influenced by tariffs
- **Federal Reserve Policy:** The Federal Reserve is widely anticipated to hold interest rates steady at its upcoming mid-May meeting, continuing to reflect its cautious approach to managing inflation and supporting economic growth
- **Geopolitical Uncertainty:** Geopolitical uncertainty was a significant undercurrent influencing economic forecasts, central bank policy considerations, and market behavior in April
- **Corporate Earnings:** Despite economic headwinds, corporate earnings have shown resilience, with mid-single-digit revenue growth and margin expansion driving positive earnings forecasts overall for 2025

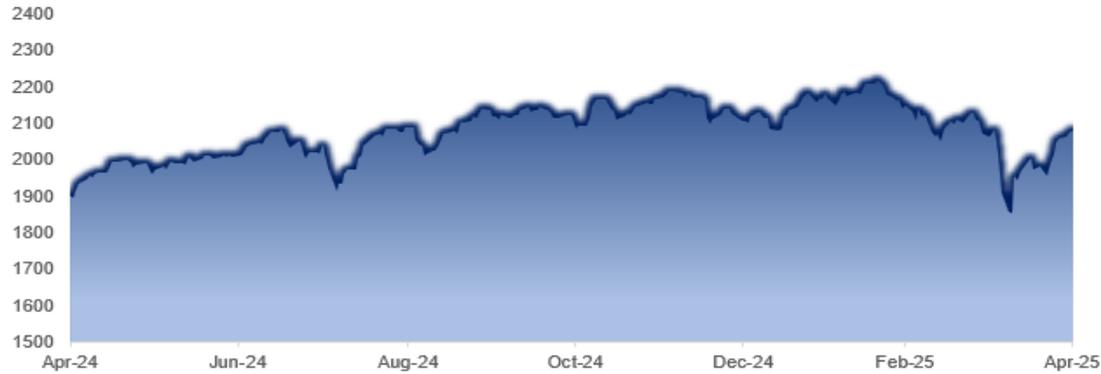
# Global Market Performance as of April 30, 2025



## MSCI ACWI IMI Index (Global Equity Market)\*

Trailing Returns (%)				Annualized Returns (%)			
1-Month	3-Month	FYTD	YTD	1Y	3Y	5Y	10Y
0.9	-3.8	4.8	-0.7	11.1	9.6	12.8	8.4

1 Year

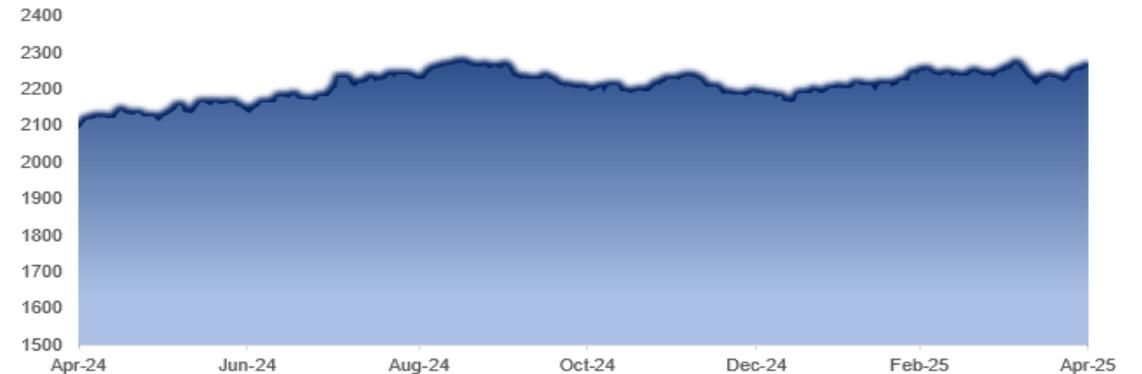


\*Global Equity Policy Benchmark - MSCI ACWIIMI Index

## Bloomberg U.S. Aggregate Bond Index\*\*

Trailing Returns (%)				Annualized Returns (%)			
1-Month	3-Month	FYTD	YTD	1Y	3Y	5Y	10Y
0.4	2.6	5.2	3.2	8.0	2.0	-0.7	1.5

1 Year



\*\*Investment Grade Bonds Policy Benchmark - Barclays U.S. Aggregate Bond Index

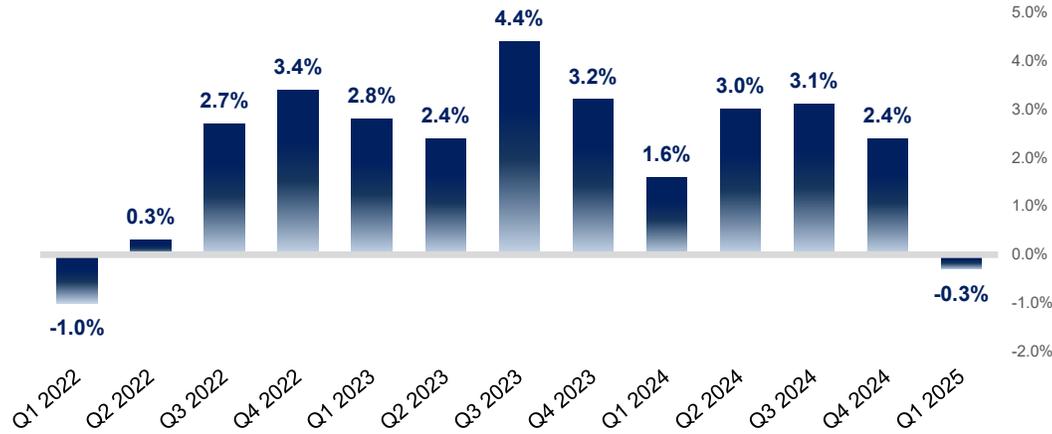
Market	Sub-Category	Index Name	1 M	3 M	FYTD	YTD	1 Y	3 Y	5 Y	10 Y
Reference Portfolio	60:40 Equity:Bond Portfolio	60% MSCI ACWI IMI/ 40% Bloomberg U.S. Aggregate Index	0.7	-1.3	5.0	0.9	9.9	6.7	7.4	5.8
Global Equity	U.S. Large Cap	S&P 500 Total Return	-0.7	-7.5	3.1	-4.9	12.1	12.2	15.6	12.3
	U.S. Small Cap	Russell 2000 Total Return	-2.3	-13.8	-3.0	-11.6	0.9	3.3	9.9	6.3
	Non-U.S. All Cap	MSCI ACWI-ex U.S. IMI Total Return	3.8	4.7	8.5	8.5	11.4	7.6	10.1	4.9
	Emerging Markets	MSCI Emerging Markets Total Return	1.3	2.4	4.3	4.3	9.0	3.8	6.3	3.1
Private Equity	Private Equity Buyout	Thomson Reuters PE Buyout Index	-0.3	-11.3	-0.5	-7.0	11.4	7.4	12.1	9.7
Fixed Income	U.S. Corporate High Yield Bonds	Bloomberg U.S. Corporate High Yield Total Return	0.0	-0.4	6.5	1.0	8.7	6.2	6.3	4.9
	U.S. Long Term Treasury Bonds	Bloomberg Long Term U.S. Treasury Total Return Index	-1.1	3.1	2.0	3.5	6.7	-4.6	-8.5	-0.4
	Developed Markets Leveraged Loans	Credit Suisse Leveraged Loan Total Return	-0.1	-0.2	5.0	0.5	6.2	7.0	8.0	4.9
Real Assets & Inflation Hedges	Natural Resources	S&P Global Natural Resources Total Return Index	-3.0	-1.6	-5.1	3.9	-6.7	-0.7	12.5	5.3
	Global Infrastructure	Dow Jones Brookfield Global Infrastructure Composite Index	2.5	9.1	21.9	9.9	25.1	6.7	10.0	5.0
	Treasury Inflation-Protected Securities	Bloomberg U.S. Treasury TIPS 0-5 Years Total Return	0.8	2.9	6.3	3.9	8.0	3.5	4.0	2.8
	Real Estate	NCREIF Fund Index - ODCE (Net) <sup>1</sup>	—	1.0	1.0	—	-2.3	-3.1	2.0	4.9

Source: Bloomberg, State Street

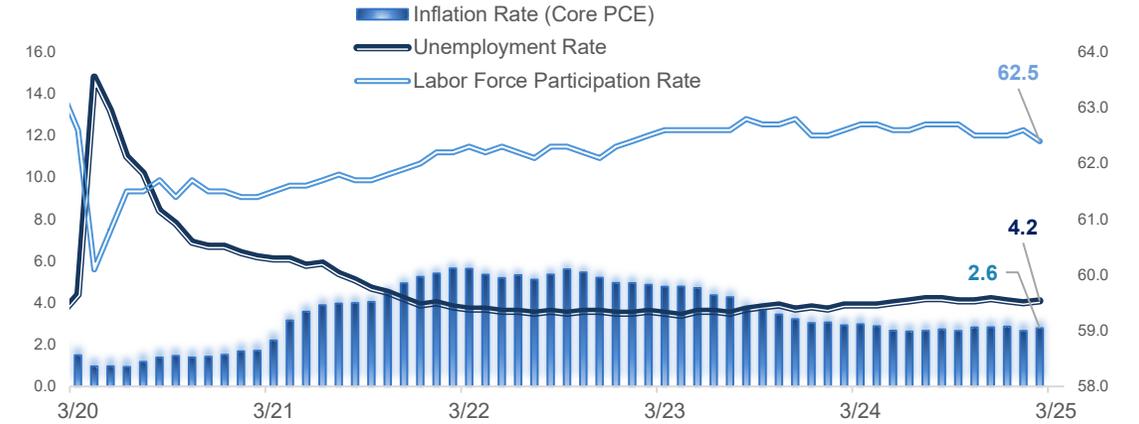
# Key Macro Indicators<sup>2</sup>



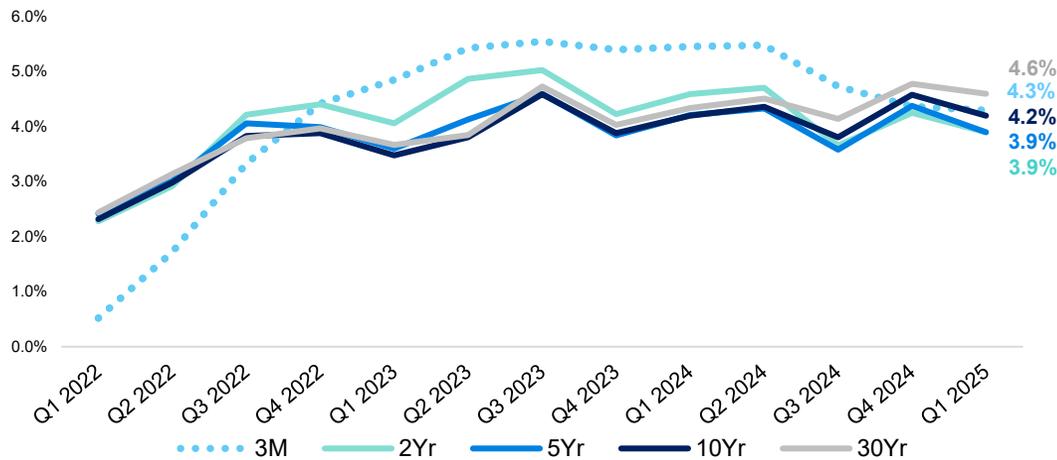
## Quarterly Real GDP Growth



## Inflation, Unemployment, and Labor Participation

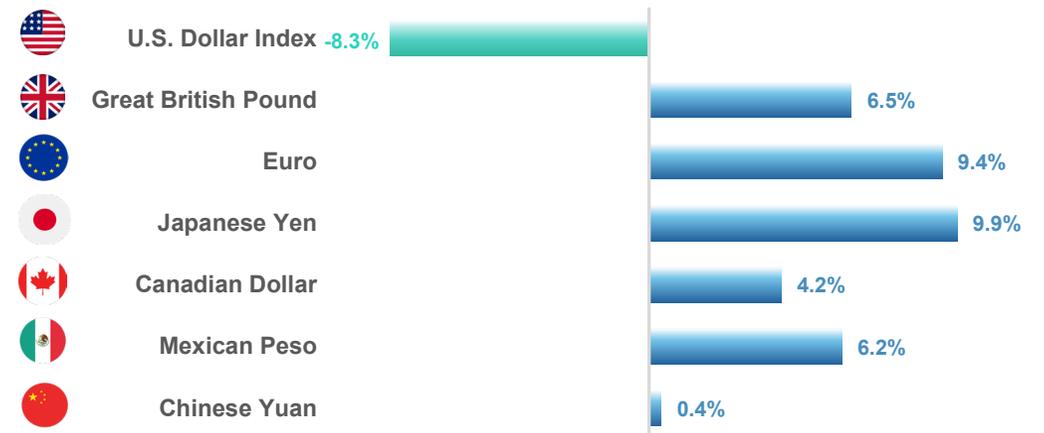


## Market Yields on U.S. Treasury Securities



## U.S. Dollar and Major Currency Performance

(Year-to-Date as of 4/30/2025)



Sources: Bloomberg, St. Louis Federal Reserve



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# Total Fund Performance & Risk

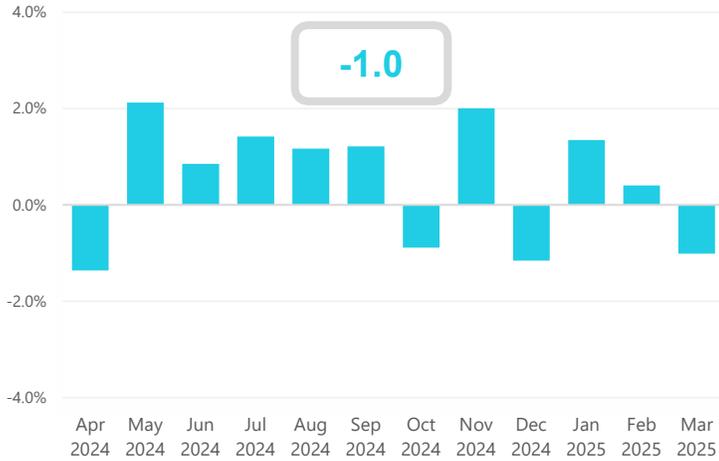


# Total Fund

## Performance Summary as of March 2025



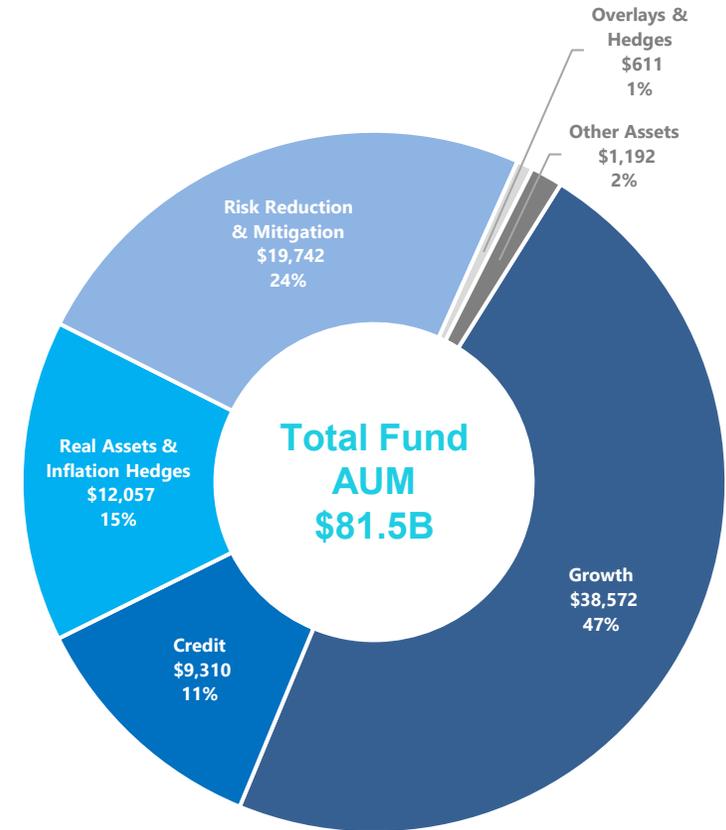
Monthly Return (net)



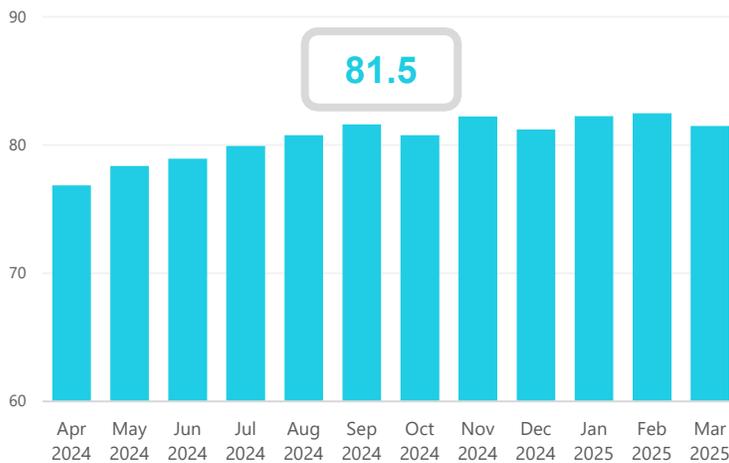
Growth of a Dollar (trailing 5Y)<sup>3</sup>



Asset Allocation (in millions)<sup>4</sup>



Total Market Value (in billions)



Cash (in millions)

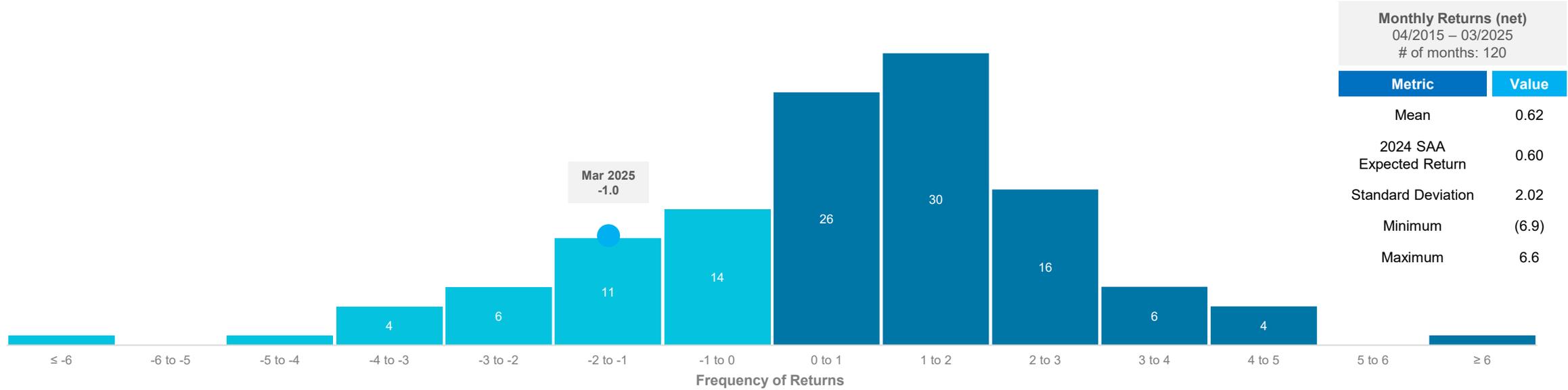


# Total Fund

## Historical Net Performance as of March 2025



### LACERA Pension Fund<sup>5</sup>



Monthly Returns (net) 04/2015 – 03/2025 # of months: 120	
Metric	Value
Mean	0.62
2024 SAA Expected Return	0.60
Standard Deviation	2.02
Minimum	(6.9)
Maximum	6.6

	Market Value (\$ mm)	% of Total Fund	Target	1 Month	3 Month	FYTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Total Fund</b>	<b>81,485</b>	<b>100.0%</b>	<b>100.0%</b>	<b>-1.0%</b>	<b>0.7%</b>	<b>4.5%</b>	<b>0.7%</b>	<b>6.2%</b>	<b>4.5%</b>	<b>10.4%</b>	<b>7.5%</b>
Total Fund Policy Benchmark				-1.8%	0.1%	5.4%	0.1%	7.6%	4.2%	9.1%	7.0%
Total Fund Actuarial Hurdle				0.6%	1.7%	5.2%	1.7%	7.0%	7.0%	7.0%	7.0%
<b>Growth</b>	<b>38,572</b>	<b>47.3%</b>	<b>48.0%</b>	<b>-2.3%</b>	<b>-0.6%</b>	<b>3.5%</b>	<b>-0.6%</b>	<b>5.5%</b>	<b>5.2%</b>	<b>15.1%</b>	
Growth Policy Benchmark				-3.2%	-1.1%	5.8%	-1.1%	9.9%	6.2%	14.3%	
<b>Credit</b>	<b>9,310</b>	<b>11.4%</b>	<b>13.0%</b>	<b>0.2%</b>	<b>1.4%</b>	<b>8.3%</b>	<b>1.4%</b>	<b>12.6%</b>	<b>8.4%</b>	<b>9.8%</b>	
Credit Policy Benchmark				0.4%	1.8%	7.3%	1.8%	9.2%	6.3%	6.9%	
<b>Real Assets &amp; Inflation Hedges</b>	<b>12,057</b>	<b>14.8%</b>	<b>15.0%</b>	<b>1.0%</b>	<b>2.5%</b>	<b>4.0%</b>	<b>2.5%</b>	<b>3.4%</b>	<b>0.4%</b>	<b>7.1%</b>	
RA & IH Policy Benchmark				-2.2%	-1.3%	2.6%	-1.3%	1.7%	-0.9%	6.7%	
<b>Risk Reduction &amp; Mitigation</b>	<b>19,742</b>	<b>24.2%</b>	<b>24.0%</b>	<b>0.0%</b>	<b>2.4%</b>	<b>4.8%</b>	<b>2.4%</b>	<b>5.5%</b>	<b>1.3%</b>	<b>1.1%</b>	
RR & M Policy Benchmark				0.1%	2.5%	4.6%	2.5%	4.9%	1.0%	0.3%	
<b>Overlays &amp; Hedges</b>	<b>611</b>	<b>0.7%</b>									
<b>Other Assets</b>	<b>1,192</b>	<b>1.5%</b>									

# Total Fund

## Forecast Volatility as of March 2025<sup>6</sup>



### VOLATILITY

Measures how much a portfolio can fluctuate over 1Y

TOTAL FUND VOLATILITY

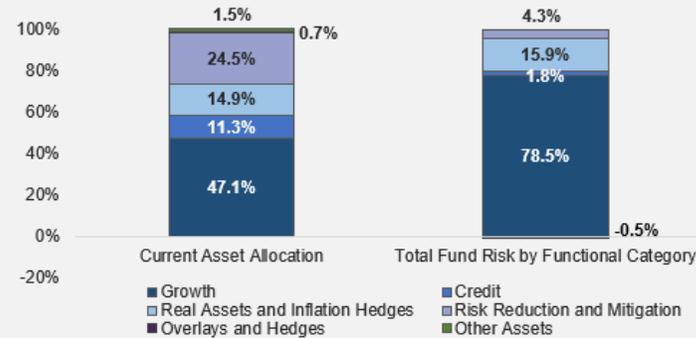
9.1%

BENCHMARK VOLATILITY

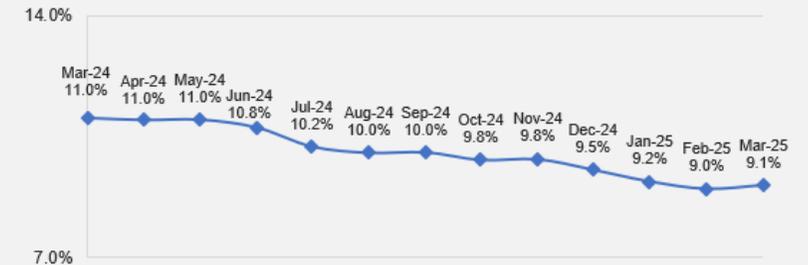
9.0%

### Total Fund Asset Allocation

Capital-based versus Risk-based



### Forecasted Total Fund Volatility Trend



### ACTIVE RISK

1Y forecast that measures how closely the portfolio tracks the benchmark

TOTAL FUND ACTIVE RISK

0.88%

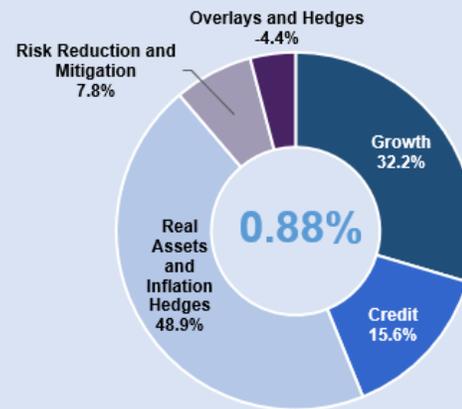
ALLOCATION RISK

-0.04%

SELECTION RISK

0.92%

### Functional Category Contributions to Active Risk



### Forecasted Active Risk Trend



Source: MSCI BarraOne

# Total Fund



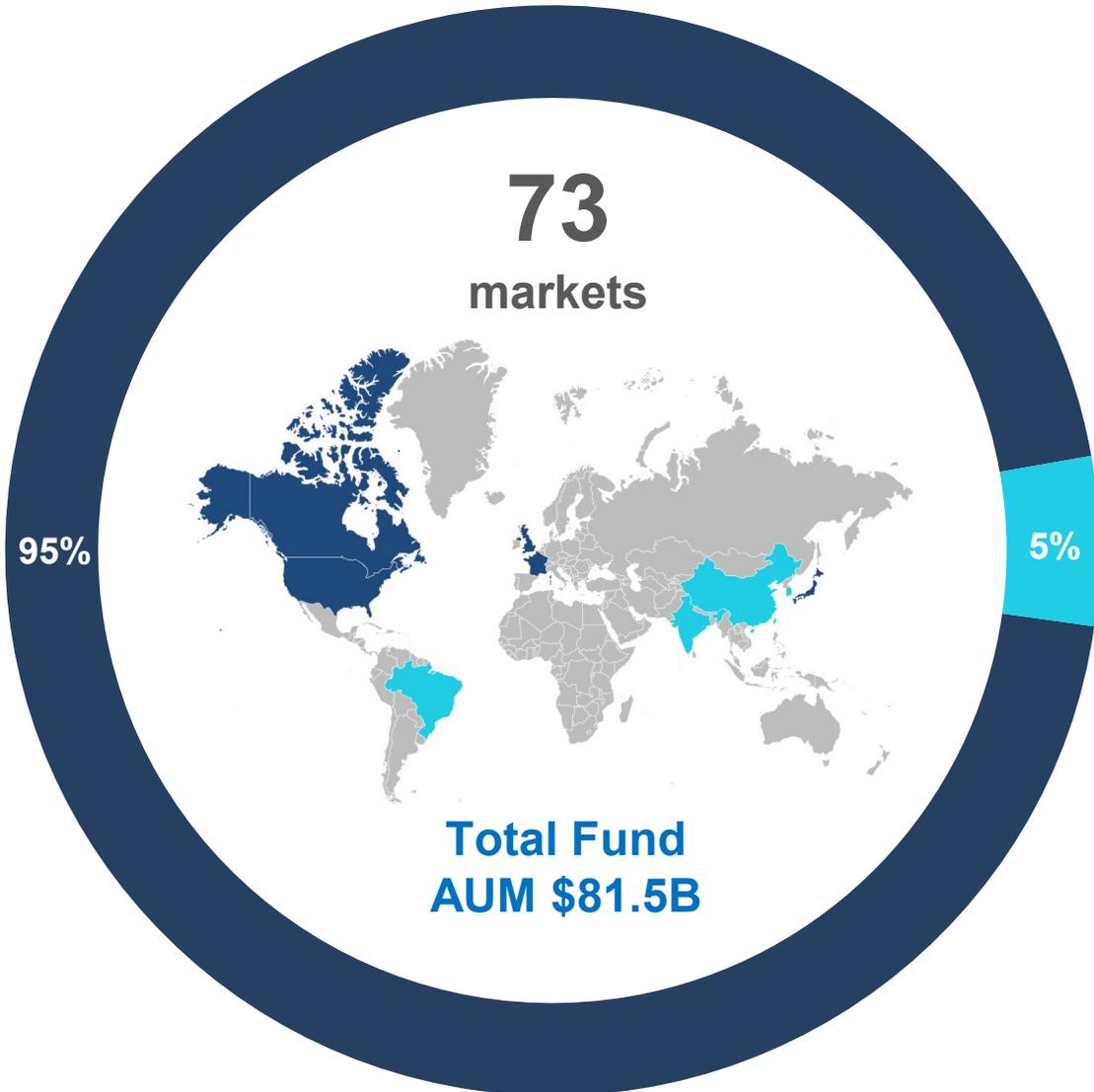
## Geographic Exposure by AUM as of March 2025<sup>7,8</sup>

**25**  
developed  
markets

**73**  
markets

**48**  
emerging &  
frontier markets

Top 5 Countries	Portfolio
United States	76.6%
United Kingdom	4.7%
Canada	2.4%
France	1.7%
Japan	1.6%



Top 5 Countries	Portfolio
China	1.9%
Taiwan	0.6%
India	0.5%
Brazil	0.4%
South Korea	0.3%

**Total Fund  
AUM \$81.5B**



03



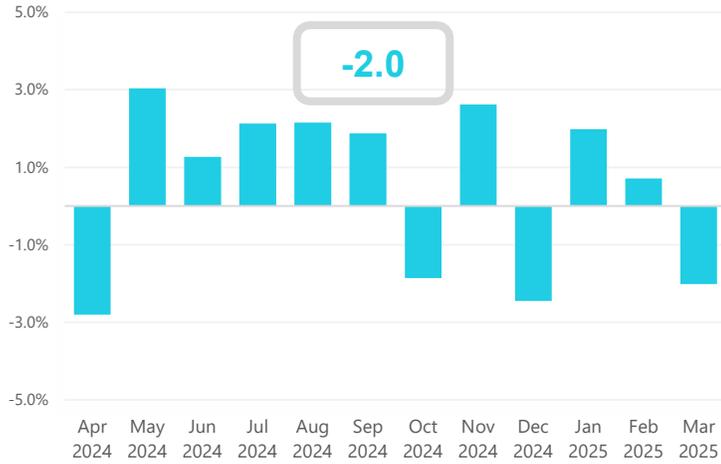
# OPEB Trust Performance & Risk

# OPEB Trust

## Performance Summary as of March 2025



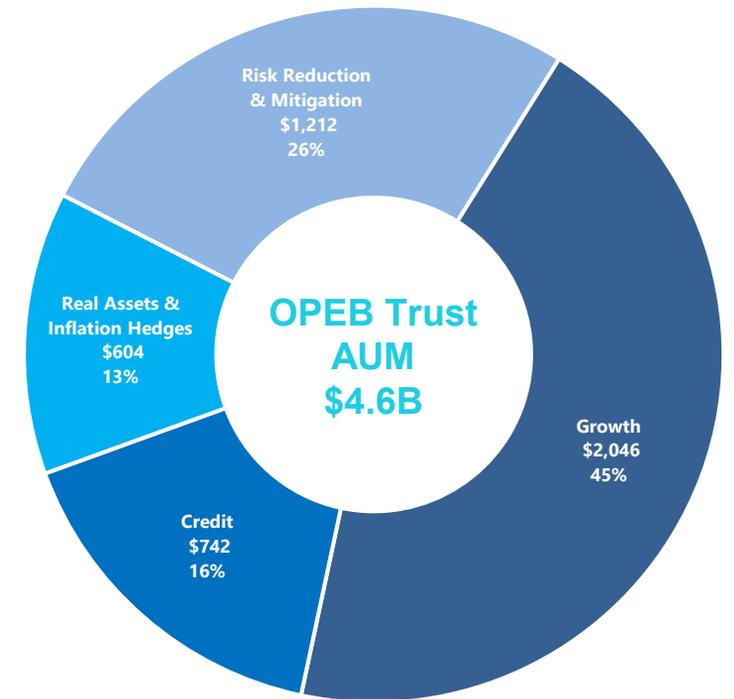
Monthly Return (net)



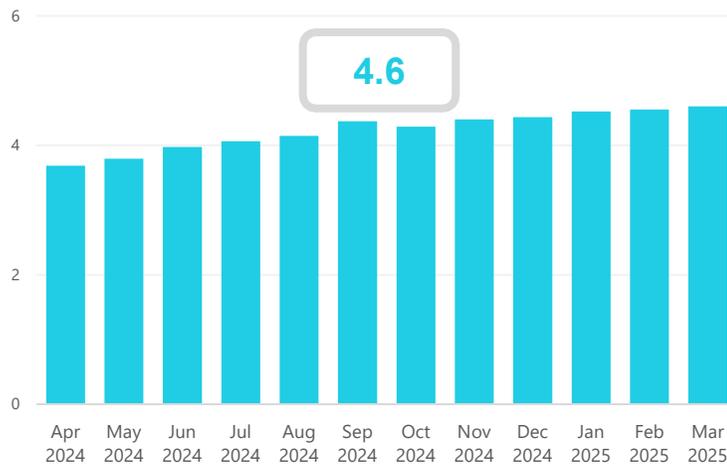
Growth of a Dollar (trailing 5Y)<sup>9</sup>



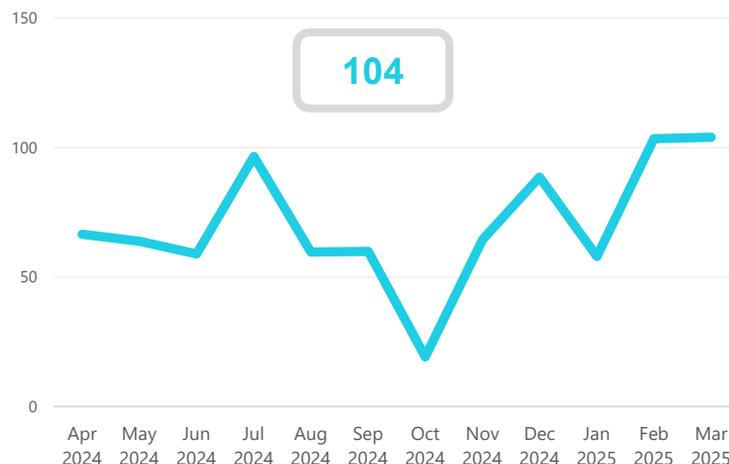
Asset Allocation (in millions)



Total Market Value (in billions)



Cash (in millions)

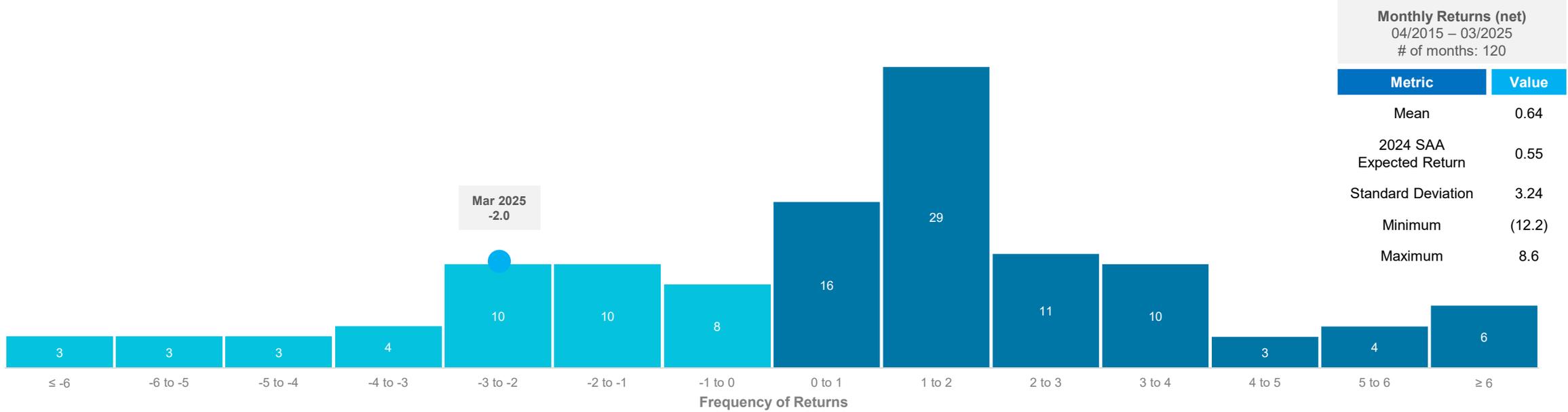


# OPEB Trust

## Historical Net Performance as of March 2025



### OPEB Trust



	Market Value (\$ mm)	% of Master Trust	Target	1 Month	3 Month	FYTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>OPEB Master Trust</b>	<b>4,604</b>			<b>-2.0%</b>	<b>0.6%</b>	<b>5.1%</b>	<b>0.6%</b>	<b>6.6%</b>	<b>3.8%</b>	<b>10.6%</b>	<b>7.3%</b>
OPEB Master Trust Policy Benchmark				-1.7%	0.7%	4.8%	0.7%	6.4%	3.2%	10.1%	6.2%
OPEB Actuarial Hurdle				0.5%	1.5%	4.7%	1.5%	6.2%	6.1%	6.0%	6.0%
<b>OPEB Growth</b>	<b>2,046</b>	<b>44.4%</b>	<b>45.0%</b>	<b>-3.7%</b>	<b>-1.3%</b>	<b>4.2%</b>	<b>-1.3%</b>	<b>6.9%</b>	<b>6.6%</b>	<b>15.3%</b>	
OPEB Growth Policy Benchmark				-3.7%	-1.5%	4.5%	-1.5%	7.7%	6.5%	15.1%	
<b>OPEB Credit</b>	<b>742</b>	<b>16.1%</b>	<b>16.0%</b>	<b>-0.8%</b>	<b>0.6%</b>	<b>5.1%</b>	<b>0.6%</b>	<b>6.1%</b>	<b>5.4%</b>	<b>6.5%</b>	
OPEB Credit Policy Benchmark				0.4%	1.8%	7.3%	1.8%	9.0%	6.4%	7.6%	
<b>OPEB Real Assets &amp; Inflation Hedges</b>	<b>604</b>	<b>13.1%</b>	<b>13.0%</b>	<b>-1.5%</b>	<b>2.2%</b>	<b>7.3%</b>	<b>2.2%</b>	<b>8.0%</b>	<b>-2.3%</b>	<b>8.9%</b>	
OPEB RA & IH Policy Benchmark				-0.2%	2.1%	3.0%	2.1%	2.6%	-4.2%	6.9%	
<b>OPEB Risk Reduction &amp; Mitigation</b>	<b>1,212</b>	<b>26.3%</b>	<b>26.0%</b>	<b>-0.1%</b>	<b>3.1%</b>	<b>4.4%</b>	<b>3.1%</b>	<b>4.4%</b>	<b>0.6%</b>	<b>-0.1%</b>	
OPEB RR & M Policy Benchmark				-0.1%	3.0%	4.3%	3.0%	4.0%	-0.1%	-0.6%	
<b>OPEB HL PM Cash</b>	<b>0</b>	<b>0.0%</b>									

# OPEB Trust

## Forecast Volatility as of March 2025<sup>10</sup>



### VOLATILITY

Measures how much a portfolio can fluctuate over 1Y

OPEB TRUST  
VOLATILITY

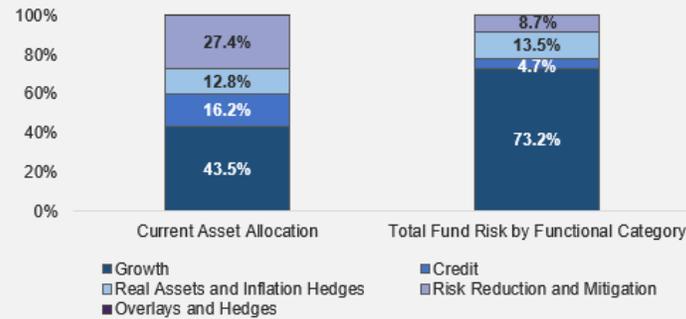
8.1%

BENCHMARK  
VOLATILITY

8.2%

### OPEB Trust Asset Allocation

Capital-based versus Risk-based



### Forecasted OPEB Trust Volatility Trend



### ACTIVE RISK

1Y forecast that measures how closely the portfolio tracks the benchmark

OPEB TRUST  
ACTIVE RISK

0.80%

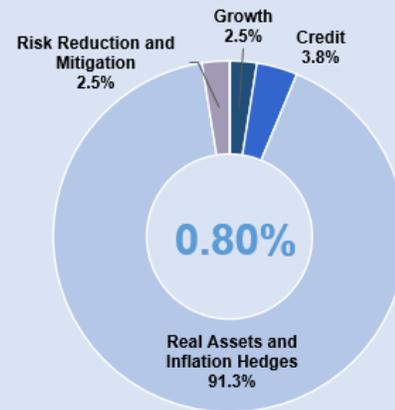
ALLOCATION  
RISK

0.06%

SELECTION  
RISK

0.74%

### Functional Category Contributions to Active Risk



### Forecasted Active Risk Trend



Source: MSCI BarraOne

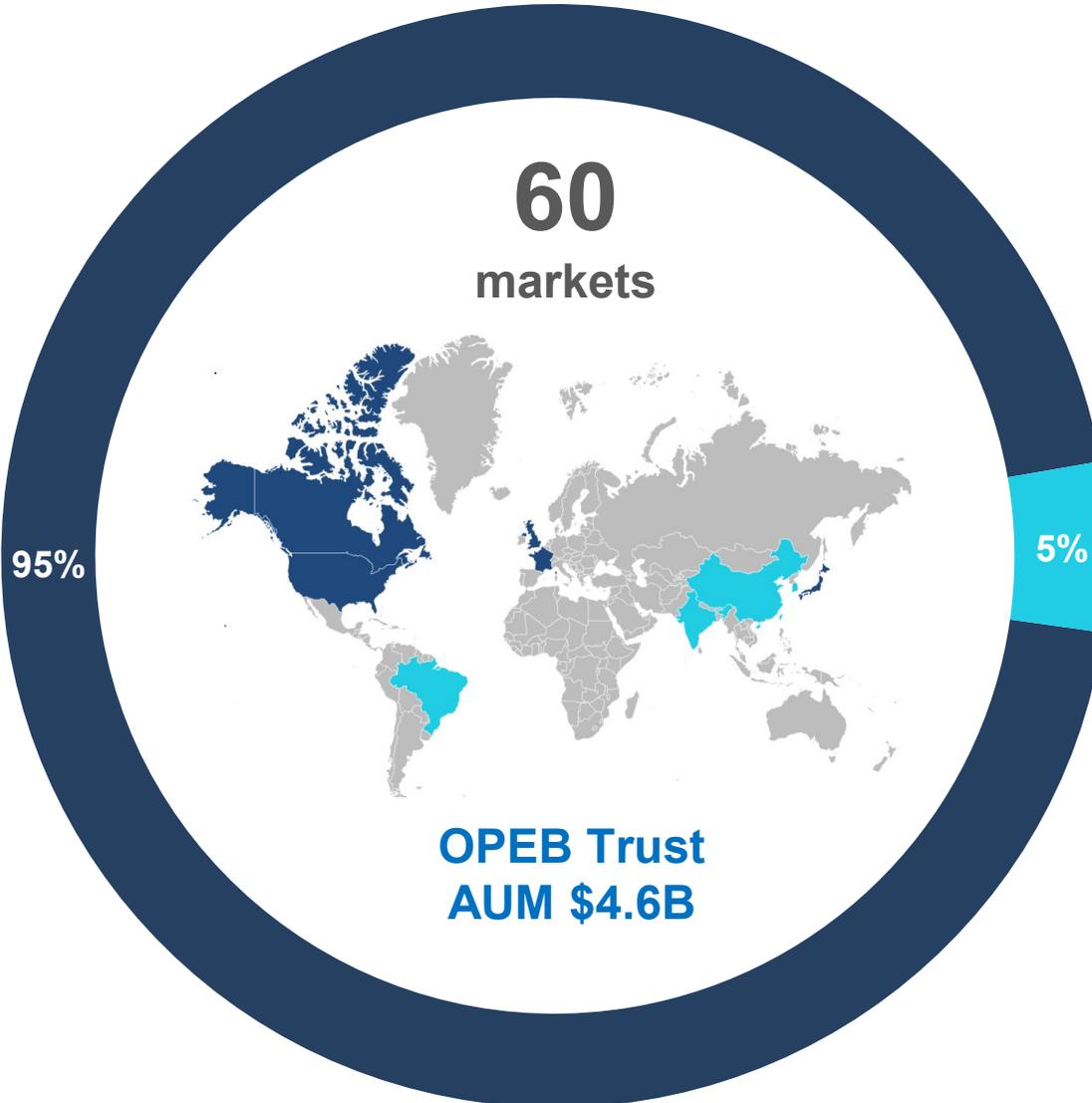
# OPEB Trust

Geographic Exposure by AUM as of March 2025<sup>11,12</sup>



**25**  
developed  
markets

Top 5 Countries	Portfolio
United States	80.4%
Japan	2.6%
Canada	2.3%
United Kingdom	2.2%
France	1.2%



**35**  
emerging &  
frontier markets

Top 5 Countries	Portfolio
China	1.4%
India	0.9%
Taiwan	0.8%
South Korea	0.5%
Brazil	0.2%



04

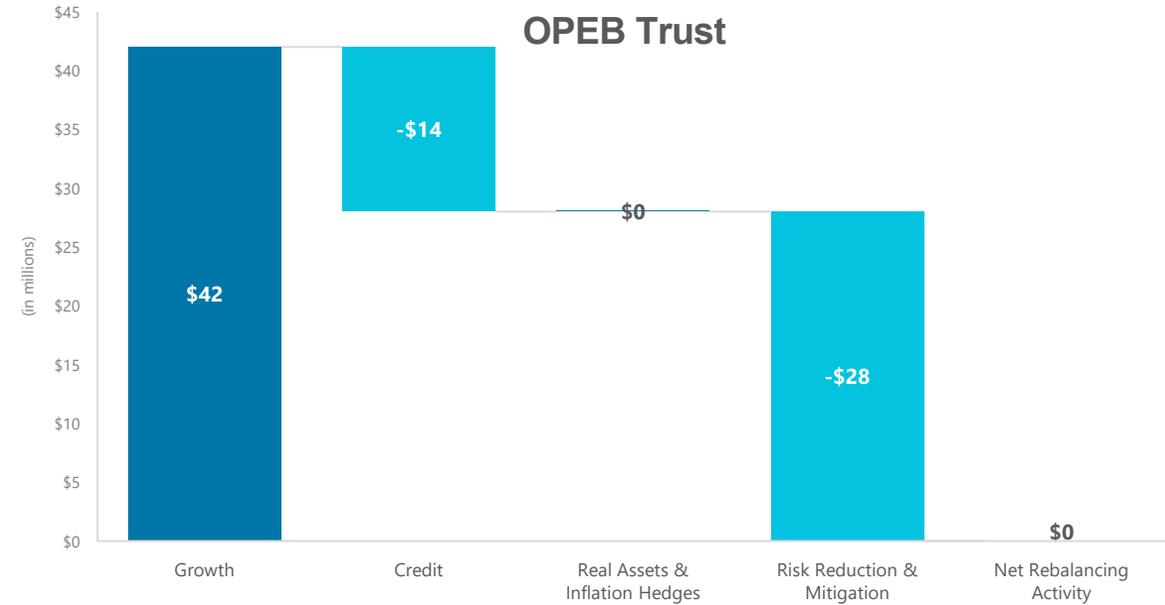
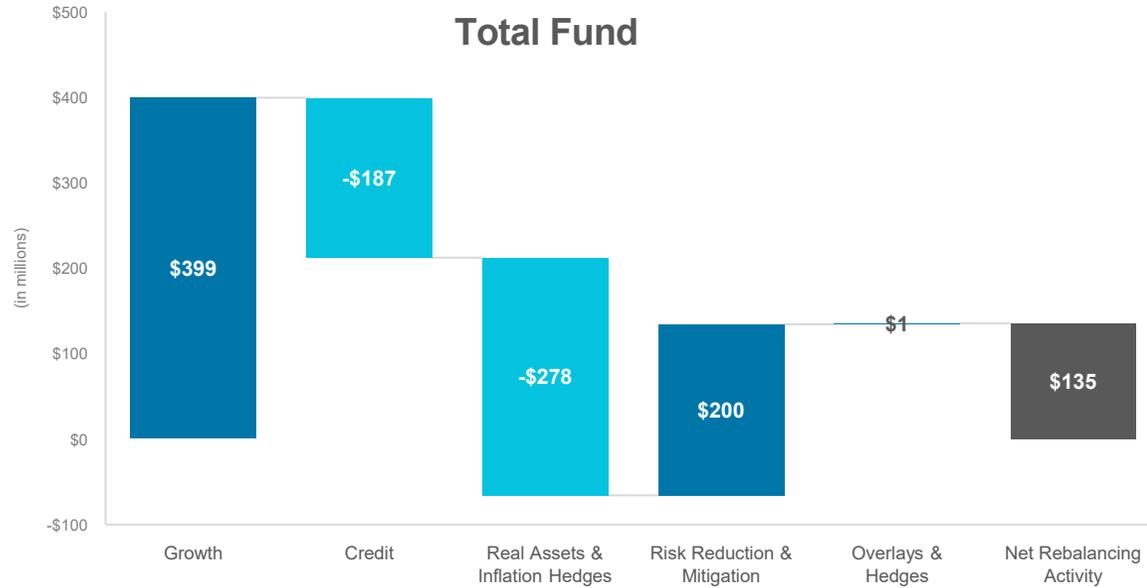
# Portfolio & Structural Updates



# Portfolio Updates



## Rebalancing Activity



## Overlays & Hedges

Program	March Gain / (Loss) in \$ millions	Since Inception Gain / (Loss) in \$ millions
Currency Hedge	1.2	1,691.1
Cash / Rebalance Overlay	(2.5)	577.9

# Key Initiatives and Operational Updates



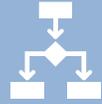
## Key Initiatives & Operational Updates

	Status
<b>Total Fund</b>	
April 2024 approved Strategic Asset Allocation implementation	In Progress
Adhering to the BOI-approved 2025 Strategic Framework	In Progress
Risk system onboarding	In Progress
Finance Analyst I program	In Progress
<b>OPEB Trust</b>	
April 2024 approved Strategic Asset Allocation implementation	In Progress
Risk system onboarding	In Progress



## Open Personnel Searches

	Status
<b>Investments Division</b>	
Principal Investment Officer – 1 position	In Development
Finance Analyst III – 3 positions	In Development
Finance Analyst II – 3 positions	In Development
Finance Analyst I – 2 positions	In Progress



## Manager / Consultant Updates

**No Manager/Consultant Updates to Report**

# Change In Fiduciary Net Position<sup>13</sup>

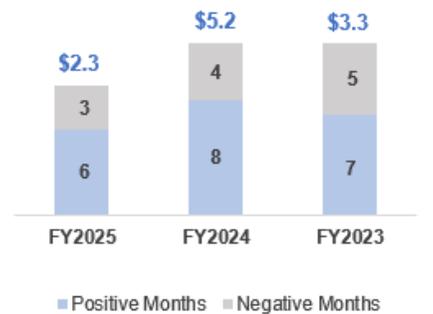


**FIDUCIARY NET POSITION**  
 Additions  
 +  
 Deductions

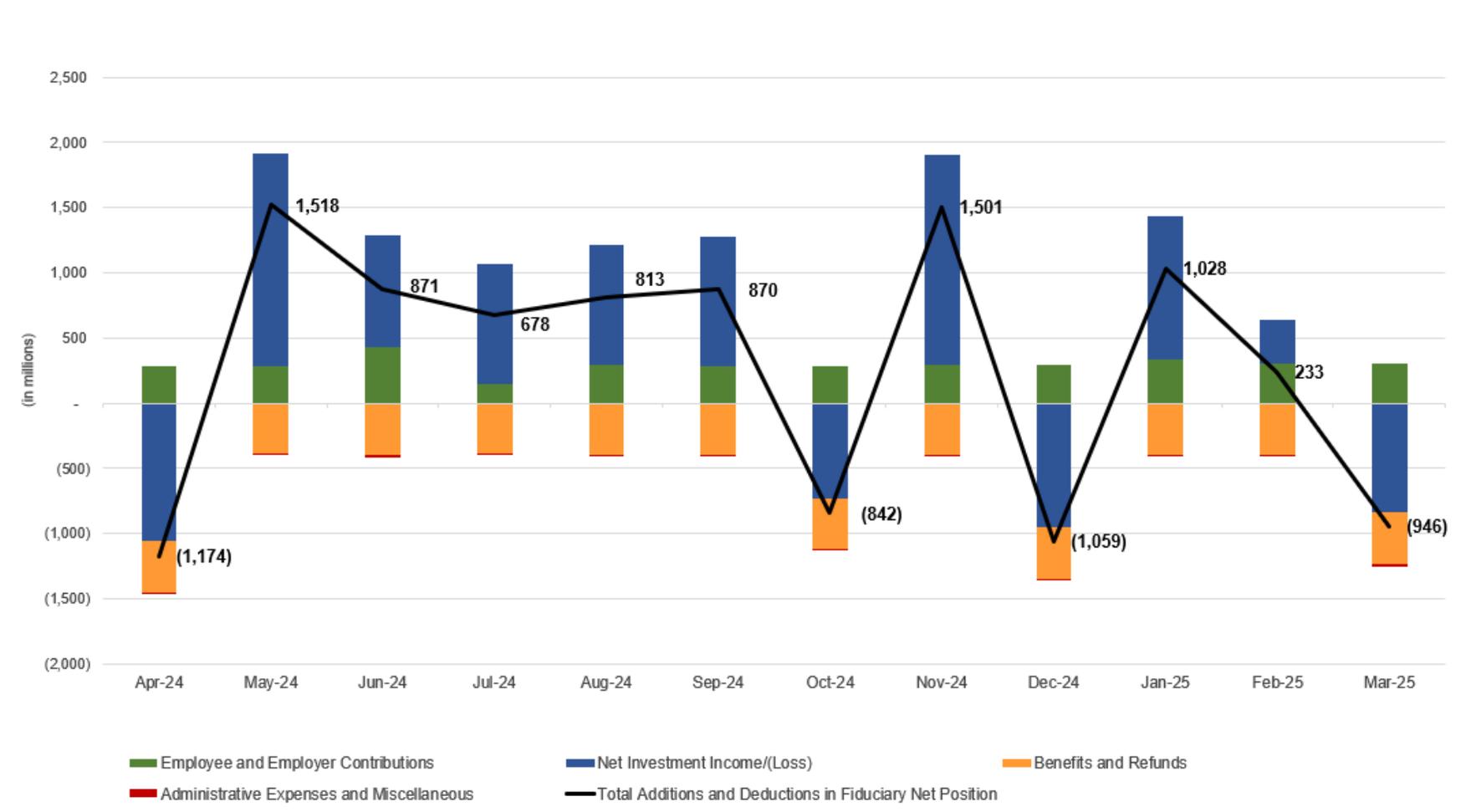
**ADDITIONS**  
 Employer and Employee Contributions  
 Net Investment Income/(Loss)

**DEDUCTIONS**  
 Benefits and Refunds  
 Administrative Expenses

**Total Net Position Change Trend**  
 (in billions)



**Additions and Deductions in Net Fiduciary Position (Unaudited)**





05

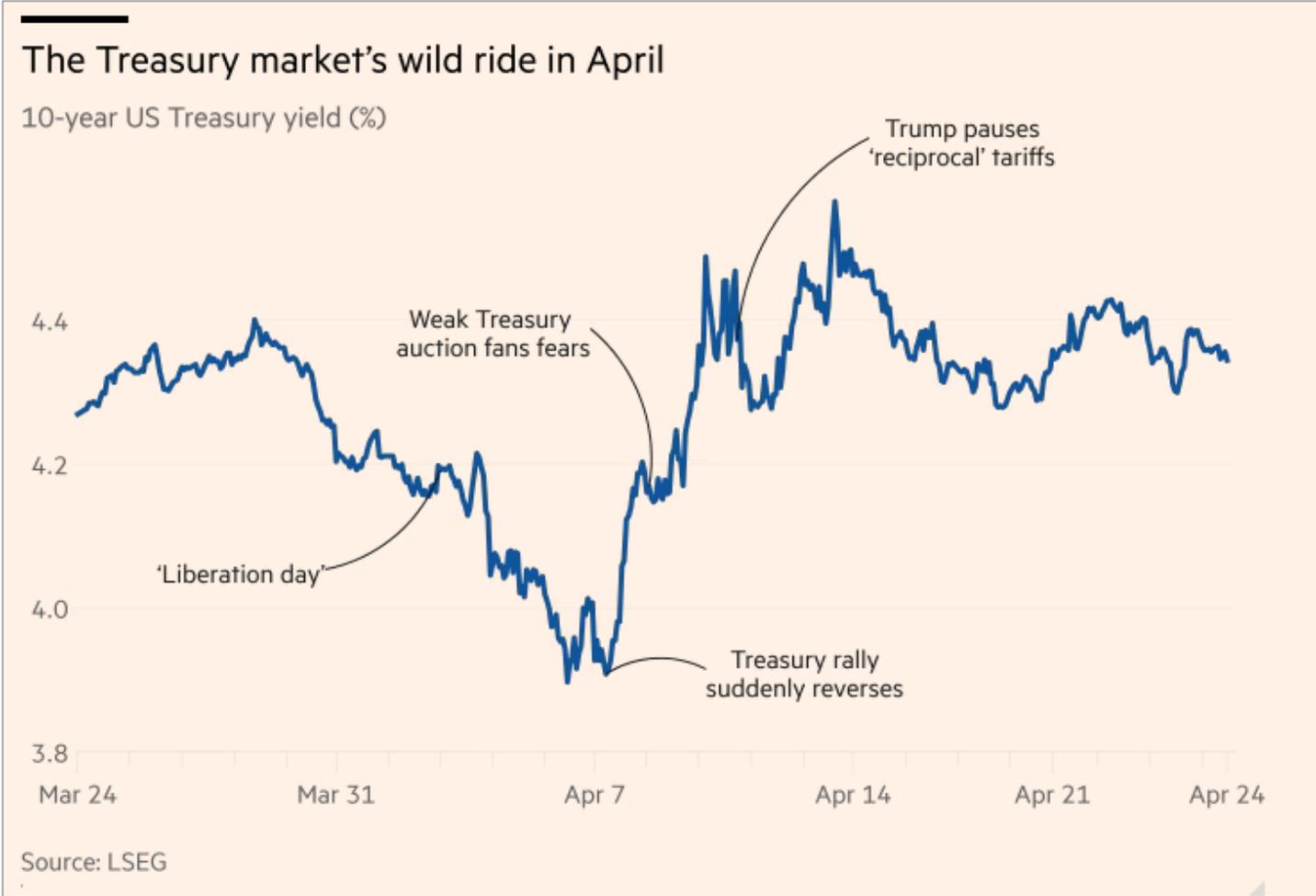


# Appendix

# Staff Chart of the Month



## U.S. Treasury Market Volatility in April 2025



Source: Financial Times

# Quiet Period for Search Respondents



## Real Assets Emerging Manager Program Discretionary Separate Account Manager



▪ Artemis Real Estate Partners	▪ ORG Portfolio Management
▪ Aether Investment Partners	▪ Barings
▪ Neuberger Berman Group	▪ Belay Investment Group
▪ The Townsend Group	▪ Hamilton Lane
▪ BGO Strategic Capital Partners	▪ Cambridge Associates
▪ BlackRock	▪ Seed Partners
▪ StepStone	▪ Stable Asset Management
▪ GCM Grosvenor	▪ Wafra Inc.

# Disclosures & Definitions



Page / Footnote	Disclosure
Page 5 / Footnote 1	NCREIF Fund Index – ODCE (Net) returns represent the latest available quarterly performance.
Page 6 / Footnote 2	The information on the “Key Macro Indicators” charts is the best available data and may not reflect the current market and economic environment.
Page 8, 13 / Footnote 3, 9	Reference portfolio = 60% MSCI ACWI IMI / 40% Bloomberg US Aggregate Bond Index.
Page 8, 9 / Footnote 4, 5	Other Assets include receivables due to deferred sales and rebalancing activity pending settlement.
Page 10, 15 / Footnote 6, 10	Real estate and private equity data is based on best available cash flow adjusted market values. Exposure data is based on security level holdings and/or proxies.
Page 11, 16 / Footnote 7, 11	Geographic exposure ex-overlays and hedges is based on the domicile country of a given security/asset.
Page 11, 16 / Footnote 8, 12	Information displayed represents best available holdings level transparency. Based on MSCI Market Classification Framework.
Page 21 / Footnote 13	Includes unrealized and realized net investment income.

Term	Definition
Active risk	Risk that a managed portfolio creates to outperform the benchmark returns.
Allocation risk	Investment manager’s decision to overweight or underweight sector weights in the portfolio versus the benchmark.
Mean	Expected return of an asset over a specified period.
Selection risk	Investment manager’s selection of securities within the portfolio versus the benchmark.
Standard deviation	Statistical measure of dispersion around the mean.
Volatility	Statistical measure of dispersion of returns for a portfolio.