



# Chief Investment Officer Monthly Report

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Jonathan Grabel – Chief Investment Officer

Board of Investments Meeting  
February 8, 2023

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# 01 Market Environment

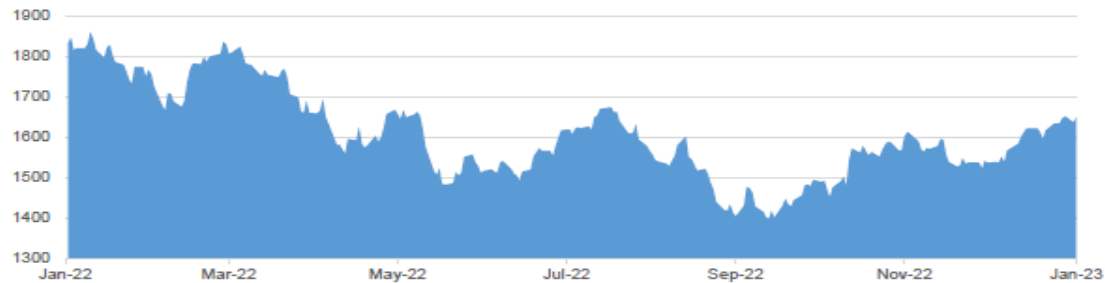
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# Global Market Performance as of January 31, 2023

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

Trailing Returns (%)			Annualized Returns (%)				
1-month	3-month	YTD	1Y	3Y	5Y	10Y	
7.4	11.1	7.4	-7.6	6.9	5.4	8.2	

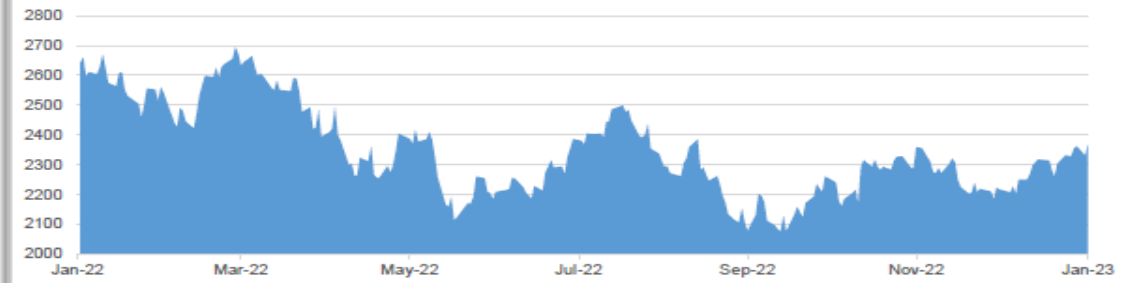
### MSCI ACWI IMI Index 1-Year Performance



## Russell 3000 Index (U.S. Equity Market)

Trailing Returns (%)			Annualized Returns (%)				
1-month	3-month	YTD	1Y	3Y	5Y	10Y	
6.9	5.9	6.9	-8.2	9.5	9.1	12.3	

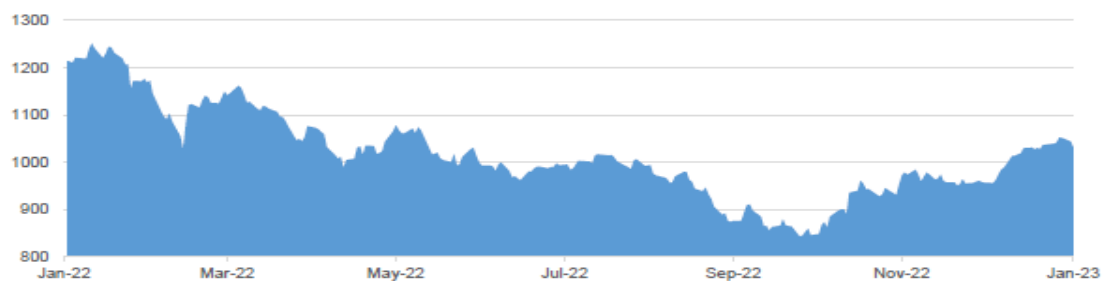
### Russell 3000 1-Year Performance



## MSCI Emerging Market Index

Trailing Returns (%)			Annualized Returns (%)				
1-month	3-month	YTD	1Y	3Y	5Y	10Y	
7.9	22.2	7.9	-12.1	1.4	-1.5	2.1	

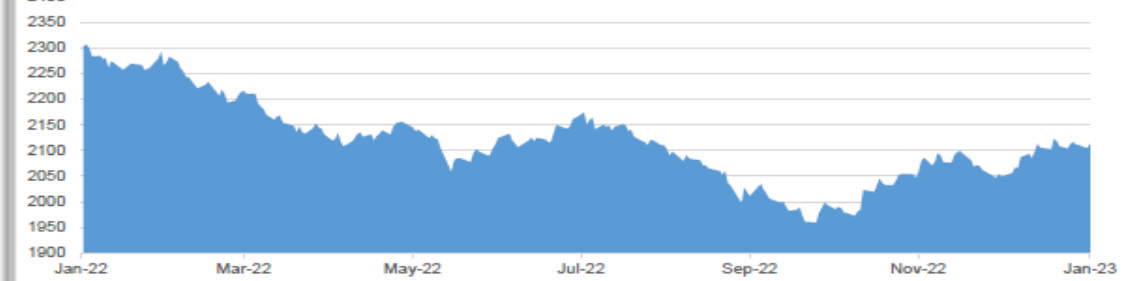
### MSCI Emerging Markets 1-Year Performance



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

Trailing Returns (%)			Annualized Returns (%)				
1-month	3-month	YTD	1Y	3Y	5Y	10Y	
3.1	6.4	3.1	-8.4	-2.3	0.9	1.4	

### Barclays U.S. Aggregate Bond Index 1-Year Performance



\*Global Equity Policy Benchmark - MSCI ACWI IMI Index

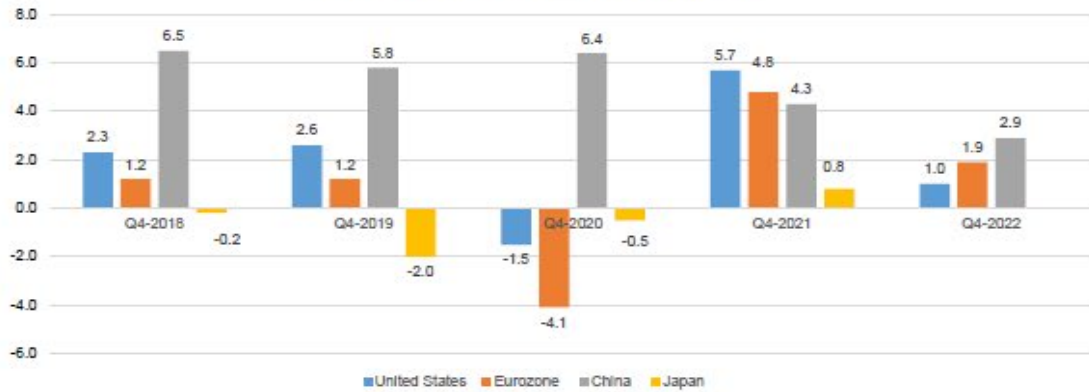
\*\*Investment Grade Bonds Policy Benchmark - Barclays U.S. Aggregate Bond Index

# Key Macro Indicators\*



## GDP Growth of Major Economies<sup>1</sup>

### Real GDP Growth YoY (%) - Last Five Years



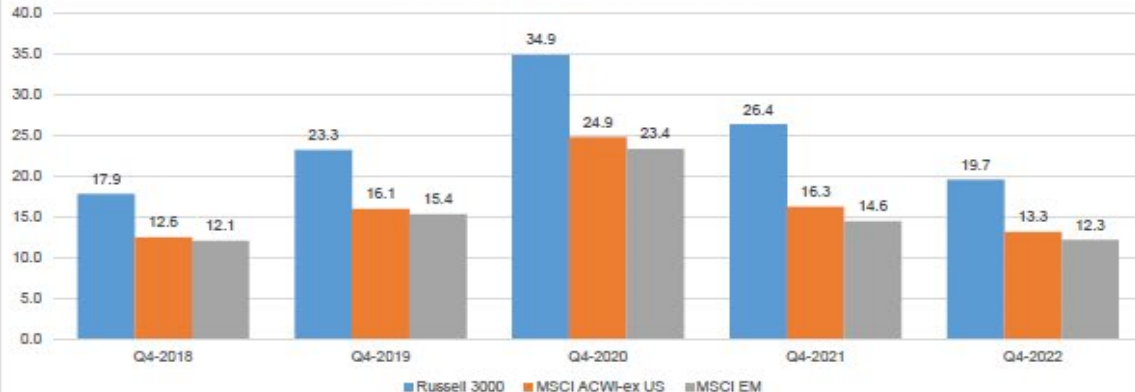
## 10-Year Treasury Yield<sup>2</sup>

### Historical 10-Year Treasury Yield



## World Equity Valuation<sup>3</sup>

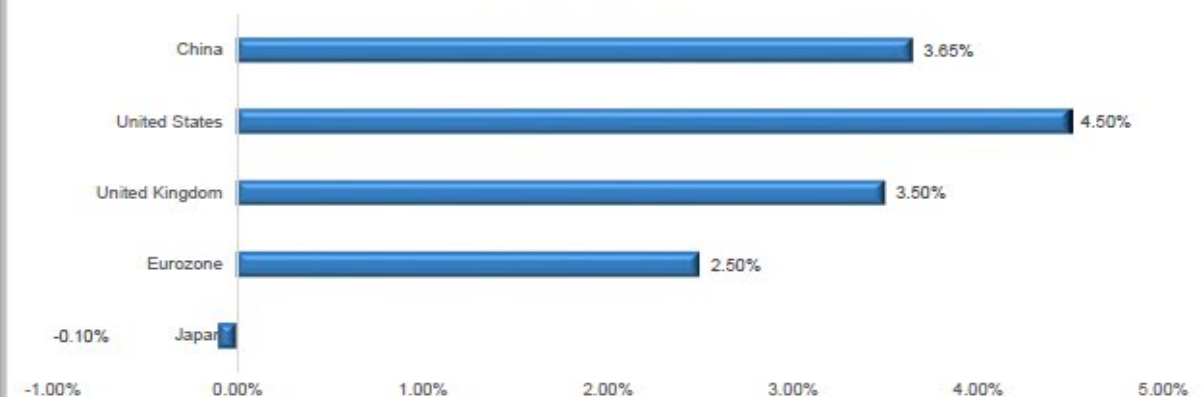
### Price-to-Earnings - Last Five Years



## Central Bank Rates<sup>4</sup>

(as of 1/31/2023)

### Central Bank Rates



\*The information on the "Key Macro Indicators" charts is the best available data as of 1/31/23 and may not reflect the current market and economic environment.

# Key Macro Indicators\*



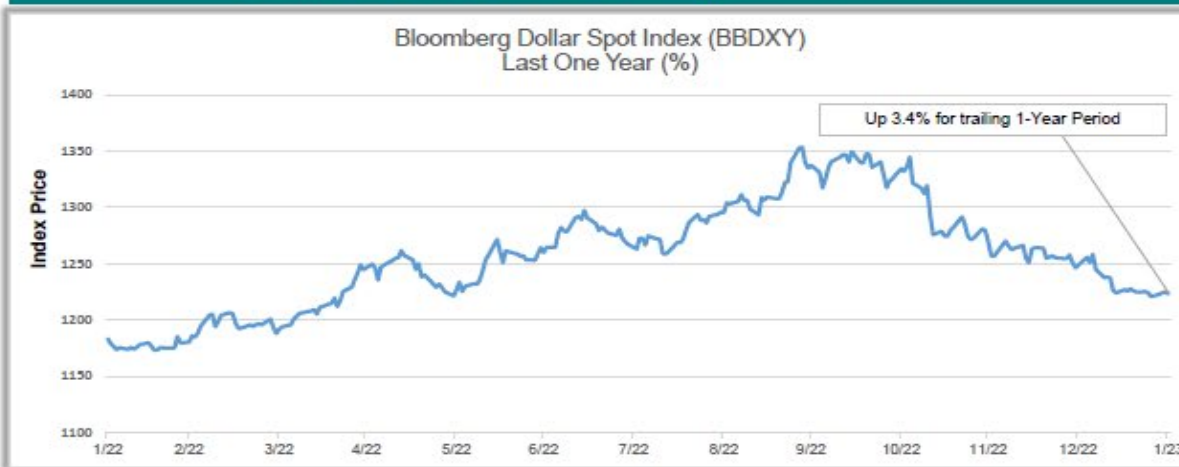
Consumer Confidence & ISM Manufacturing<sup>1</sup>



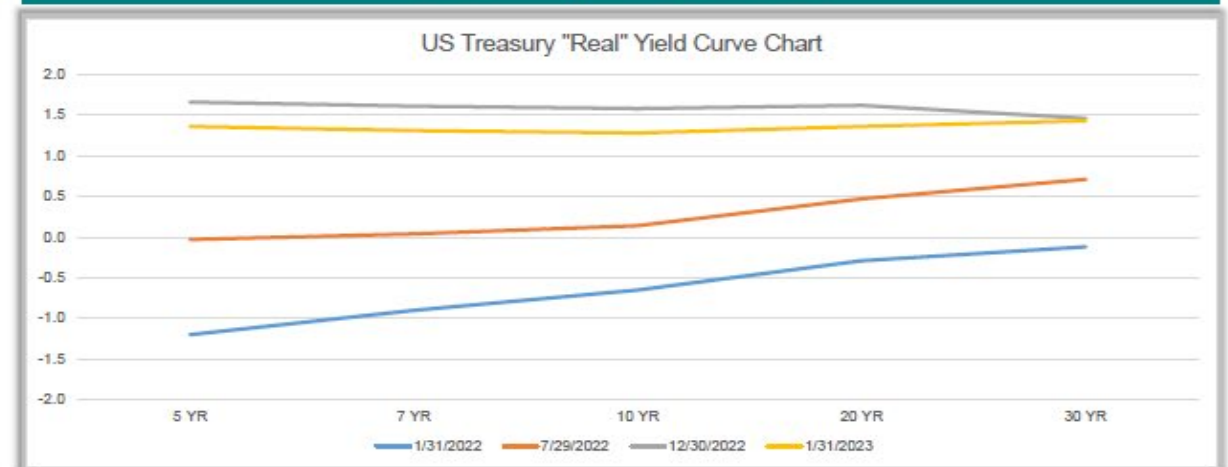
U.S. Inflation, Unemployment, & Labor Force Participation<sup>2</sup>



Performance of US Dollar vs. Leading Global Currencies<sup>3</sup>



U.S. Treasury "Real" Yield Curve<sup>4</sup>



\*The information on the "Key Macro Indicators" charts is the best available data as of 1/31/23 and may not reflect the current market and economic environment.



# Market Themes and Notable Items to Watch



## Recent Themes

- The International Monetary Fund updated its world economic outlook and upped its global growth forecast to 2.9% in 2023. Strong labor markets, increased household consumption and business investment, and China's economic reopening were cited as contributors to the improved forecast
- Whether or not inflation is cooling remains integral to the Federal Reserve being able to downshift its pace of interest rate increases
- The U.S. 10-year Treasury yield ended January at 3.52%, after being 3.88% at the end of 2022, 1.52% at the end of 2021 and 0.93% at the end of 2020
- Global equities (MSCI All Country World Investable Market Index) gained 7.4% in January after declining 18.4% in 2022

## What to Watch

- Interest rates and central bank actions
- Economic data and trends
  - Inflation, supply chains, and labor developments
- Macro conditions and geopolitical risks
- Environmental, social, and governance
  - Federal Trade Commission proposed new rule to ban non-complete clauses
  - Former McDonald's Chief Executive Officer Stephen Easterbrook banned by Securities and Exchange Commission from public company executive or director service for five years for making false and misleading statements regarding his termination
- Covid-19
  - The Biden administration announced its plan to end both the COVID-19 national emergency and public health emergency on May 11



# 02 Portfolio Performance & Risk Updates

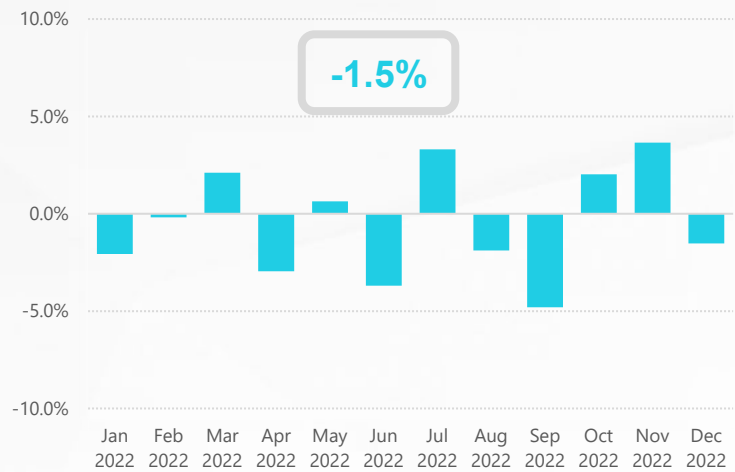
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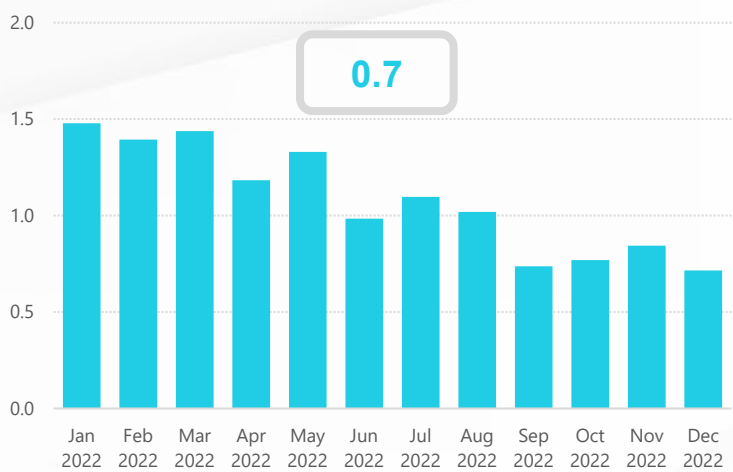
# Total Fund Summary as of December 2023



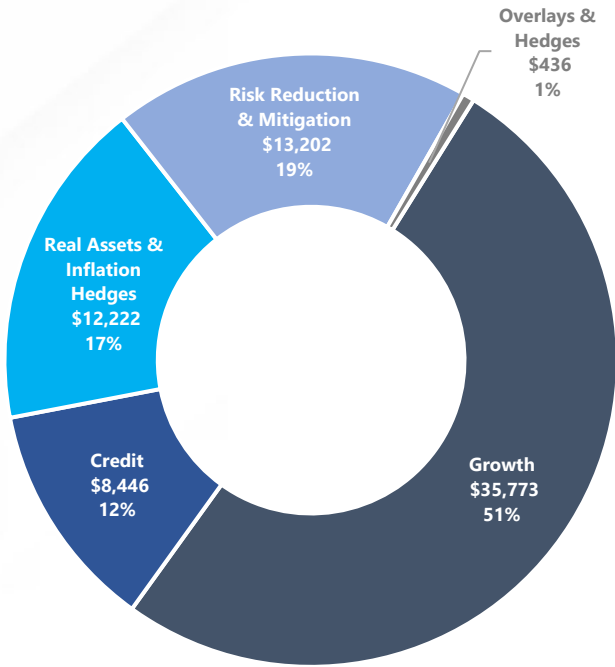
Monthly Return (net)



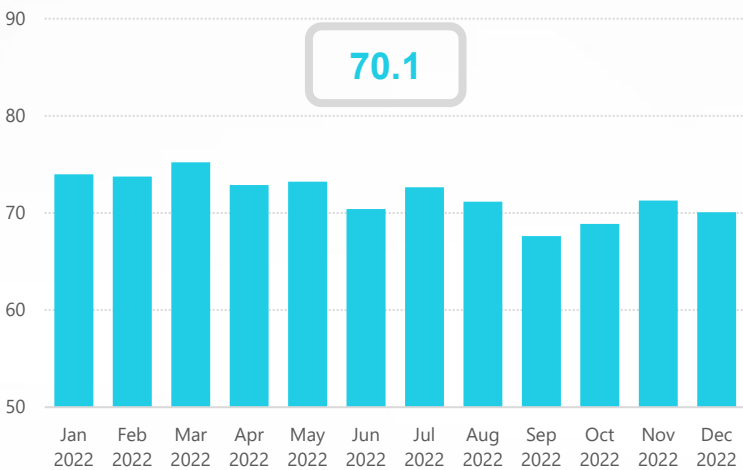
Sharpe Ratio (3-year annualized)



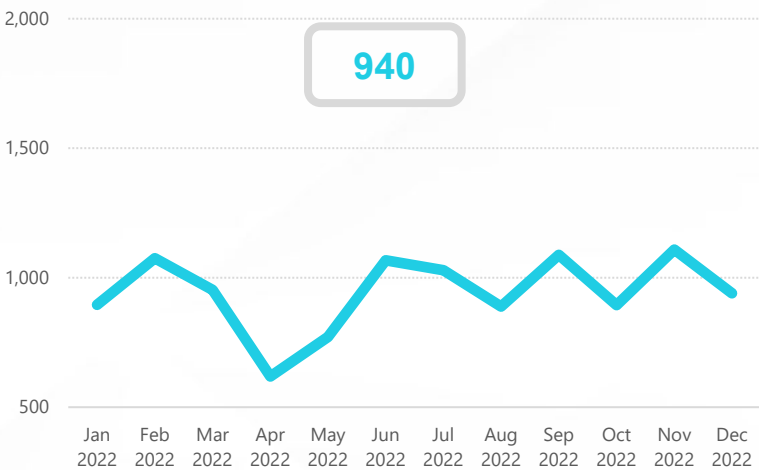
Asset Allocation (\$ millions)



Total Market Value (\$ billions)



Cash (\$ millions)

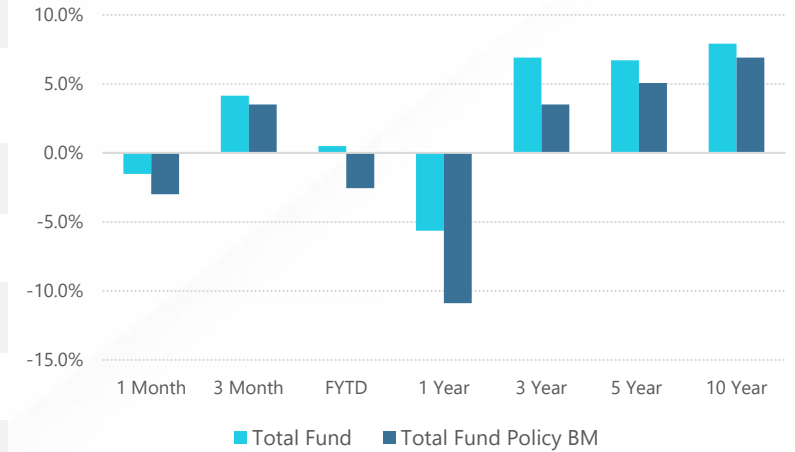


# Historical Net Performance as of December 2023



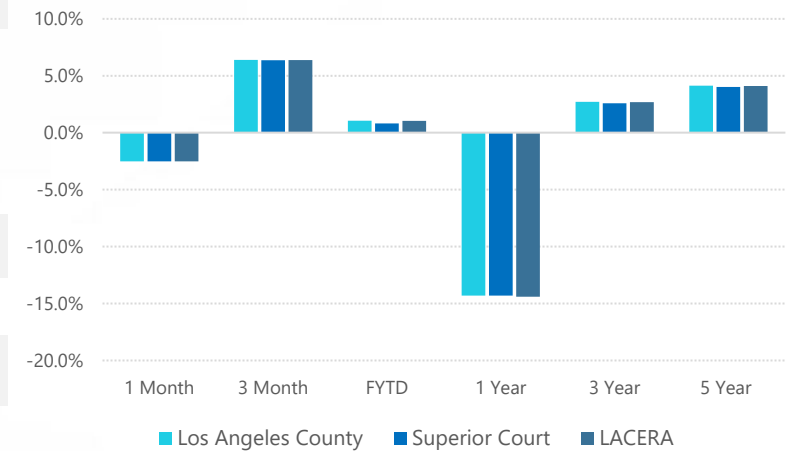
## LACERA Pension Fund

	Market Value (\$ millions)	% of Total Fund	Interim Target	1 Month	3 Month	FYTD	1 Year	3 Year	5 Year	10 Year
<b>Total Fund</b>	<b>70,079</b>	<b>100.0%</b>	<b>100.0%</b>	<b>-1.5%</b>	<b>4.1%</b>	<b>0.5%</b>	<b>-5.6%</b>	<b>6.9%</b>	<b>6.7%</b>	<b>7.9%</b>
Total Fund Policy BM				-3.0%	3.5%	-2.5%	-10.9%	3.5%	5.1%	6.9%
7% Annual Hurdle Rate				0.6%	1.7%	3.4%	7.0%	7.0%	7.0%	7.0%
<b>Growth</b>	<b>35,773</b>	<b>51.0%</b>	<b>53.0%</b>	<b>-2.2%</b>	<b>6.0%</b>	<b>0.8%</b>	<b>-9.7%</b>	<b>10.0%</b>		
Growth Policy BM				-5.3%	4.0%	-4.8%	-17.0%	5.2%		
<b>Credit</b>	<b>8,446</b>	<b>12.1%</b>	<b>11.0%</b>	<b>0.2%</b>	<b>2.2%</b>	<b>1.6%</b>	<b>-5.5%</b>	<b>2.8%</b>		
Credit Policy BM				1.8%	1.9%	1.0%	-7.4%	0.3%		
<b>Real Assets &amp; Inflation Hedges</b>	<b>12,222</b>	<b>17.4%</b>	<b>17.0%</b>	<b>-1.0%</b>	<b>3.9%</b>	<b>1.7%</b>	<b>7.8%</b>	<b>8.1%</b>		
Real Assets & Inflation Hedges Policy BM				-1.6%	5.4%	2.1%	6.4%	8.3%		
<b>Risk Reduction &amp; Mitigation</b>	<b>13,202</b>	<b>18.8%</b>	<b>19.0%</b>	<b>-0.1%</b>	<b>1.1%</b>	<b>-2.7%</b>	<b>-9.8%</b>	<b>-1.0%</b>		
Risk Reduction & Mitigation Policy BM				-0.4%	1.1%	-2.9%	-11.0%	-1.9%		
<b>Overlays &amp; Hedges</b>	<b>436</b>	<b>0.6%</b>		<b>-26.4%</b>	<b>-10.6%</b>					

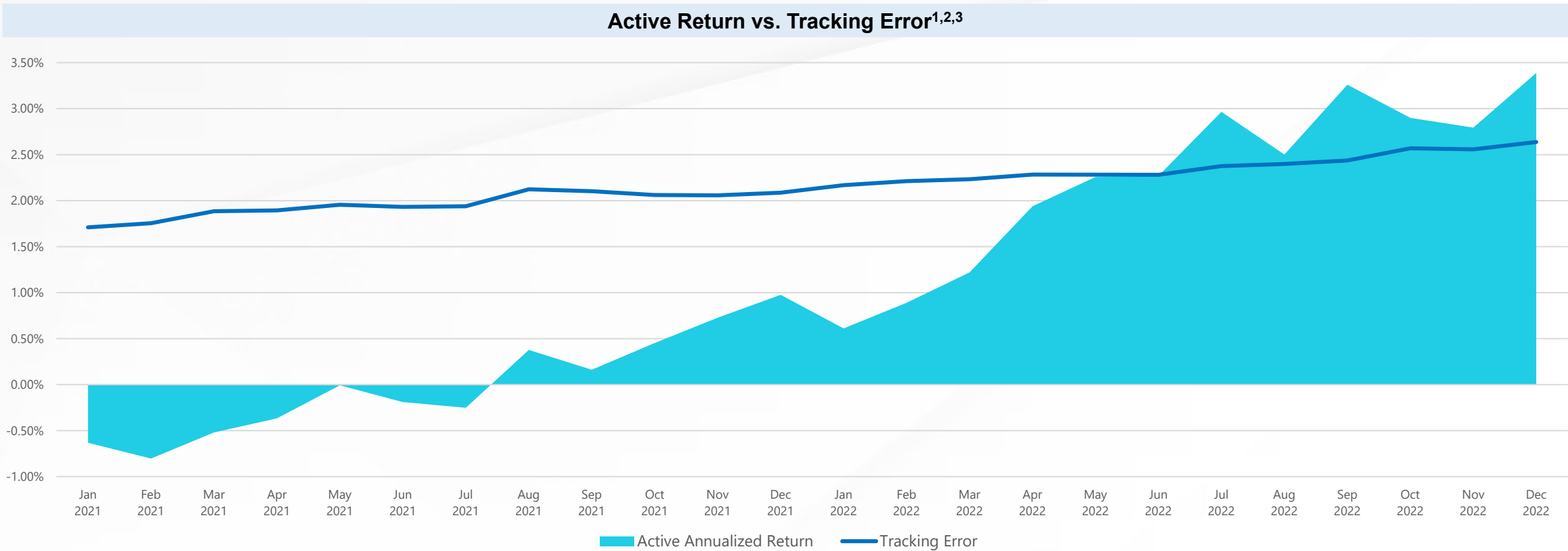


## OPEB Master Trust

	Market Value (\$ millions)	% of Master Trust	Interim Target	1 Month	3 Month	FYTD	1 Year	3 Year	5 Year
<b>OPEB Master Trust</b>	<b>2,641</b>			<b>-2.5%</b>	<b>6.4%</b>	<b>1.0%</b>	<b>-14.3%</b>	<b>2.7%</b>	<b>4.1%</b>
Los Angeles County	2,572	97.4%	—	-2.5%	6.4%	1.1%	-14.3%	2.7%	4.1%
Superior Court	56	2.1%	—	-2.5%	6.4%	0.8%	-14.3%	2.6%	4.0%
LACERA	12	0.4%	—	-2.5%	6.4%	1.0%	-14.4%	2.7%	4.1%
<b>LACERA Master OPEB Trust Fund</b>	<b>2,529</b>			<b>-2.5%</b>	<b>6.4%</b>	<b>0.8%</b>	<b>-14.3%</b>	<b>2.7%</b>	<b>4.2%</b>
OPEB Master Trust Policy Benchmark				-2.2%	5.6%	0.7%	-14.7%	2.4%	3.7%
<b>OPEB Growth</b>	<b>1,199</b>	<b>47.4%</b>	<b>47.5%</b>	<b>-3.8%</b>	<b>9.9%</b>	<b>2.7%</b>	<b>-18.2%</b>	<b>4.1%</b>	<b>5.2%</b>
OPEB Growth Policy Benchmark				-4.1%	9.0%	1.3%	-19.4%	3.5%	4.7%
<b>OPEB Credit</b>	<b>484</b>	<b>19.2%</b>	<b>19.0%</b>	<b>0.4%</b>	<b>4.5%</b>	<b>4.2%</b>	<b>-6.0%</b>	<b>-0.4%</b>	<b>--</b>
OPEB Credit Policy Benchmark				0.4%	3.4%	3.1%	-7.5%	-0.3%	--
<b>OPEB Real Assets &amp; Inflation Hedges</b>	<b>504</b>	<b>19.9%</b>	<b>20.0%</b>	<b>-3.5%</b>	<b>3.4%</b>	<b>-4.6%</b>	<b>-14.0%</b>	<b>2.9%</b>	<b>--</b>
OPEB RA & IH Policy Benchmark				-1.5%	2.9%	0.4%	-9.9%	4.4%	--
<b>OPEB Risk Reduction &amp; Mitigation</b>	<b>342</b>	<b>13.5%</b>	<b>13.5%</b>	<b>-0.5%</b>	<b>1.5%</b>	<b>-2.3%</b>	<b>-10.3%</b>	<b>-2.0%</b>	<b>0.8%</b>
OPEB RR & M Policy Benchmark				-0.6%	1.3%	-3.7%	-11.7%	-2.5%	0.4%



# Performance Based Risk as of December 2022



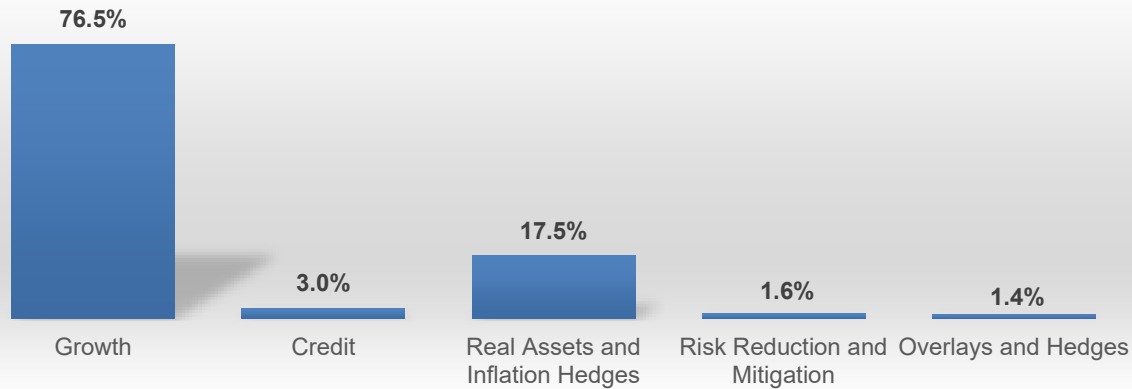
Period Ending	Annualized Return	Annualized Benchmark Return	Annualized Active Return	Tracking Error
December 2022	6.9%	3.5%	3.4%	2.6%

<sup>1</sup> Rolling 36 months.  
<sup>2</sup> Active return equals the difference in return between a portfolio and its benchmark.  
<sup>3</sup> Tracking error (or active risk) measures the volatility of active returns.

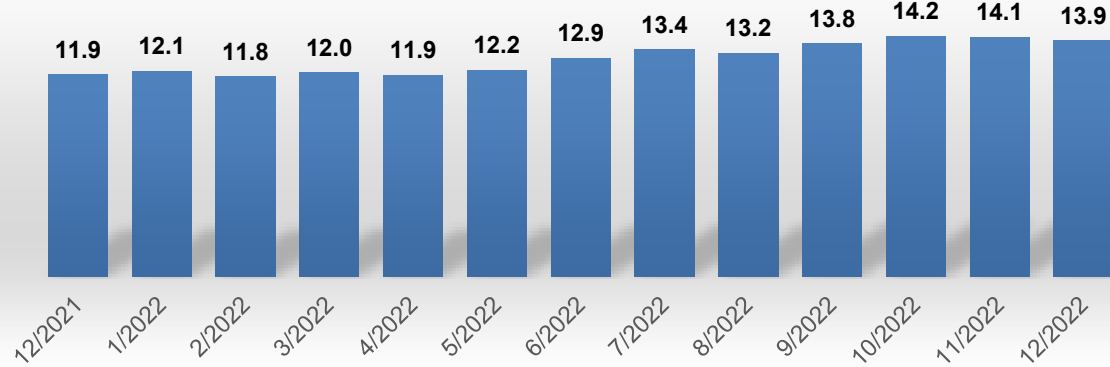
# Total Fund Forecast Risk\* as of December 2022 (Preliminary)



%Contribution to Total Risk



Total Risk



	%Weight	% Cont. to Total Risk	Standalone Total Risk	Standalone BMK Risk**
<b>Total Fund</b>			<b>13.9</b>	<b>13.3</b>
<b>Growth</b>	<b>51.0%</b>	<b>76.5%</b>	<b>21.1</b>	<b>19.9</b>
Global Equity	31.8%	40.7%	18.7	18.9
Private Equity	17.7%	32.5%	28.9	27.3
Non-Core Private Real Estate	1.5%	3.2%	43.6	20.1
<b>Credit</b>	<b>12.1%</b>	<b>3.0%</b>	<b>4.6</b>	<b>5.6</b>
Liquid Credit	6.6%	2.2%	6.1	5.6
Illiquid Credit	5.4%	0.8%	3.8	5.6
<b>Real Assets &amp; Inflation Hedges</b>	<b>17.6%</b>	<b>17.5%</b>	<b>15.3</b>	<b>14.5</b>
Core Private Real Estate	6.3%	7.2%	22.4	20.1
Natural Resources & Commodities	3.2%	3.2%	18.1	20.7
Infrastructure	5.4%	6.6%	18.5	18.6
TIPS	2.7%	0.5%	6.6	6.7
<b>Risk Reduction and Mitigation</b>	<b>18.6%</b>	<b>1.6%</b>	<b>6.2</b>	<b>6.2</b>
Investment Grade Bonds	7.1%	0.7%	6.6	6.5
Diversified Hedge Funds	6.1%	0.5%	3.9	0.2
Long-Term Government Bonds	4.1%	0.4%	14.6	14.6
Cash	1.4%	0.0%	-	-
<b>Overlays and Hedges</b>	<b>0.7%</b>	<b>1.4%</b>	<b>-</b>	<b>-</b>

\*Implementation of the MSCI Risk Platform is ongoing; reconciliation and refinement of the data is progressing and subject to change. Real estate and private equity data used is as of 6/30/2022

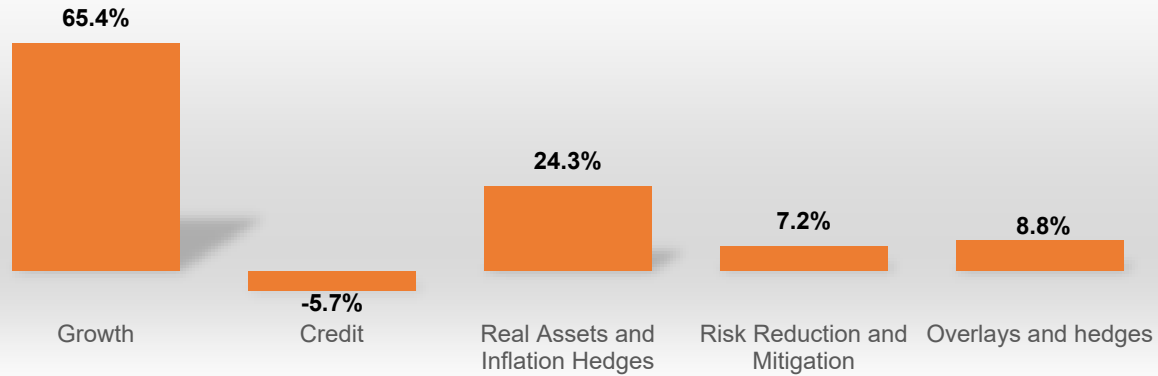
\*\*BMK Risk stands for Benchmark Risk

SOURCE: MSCI BarraOne

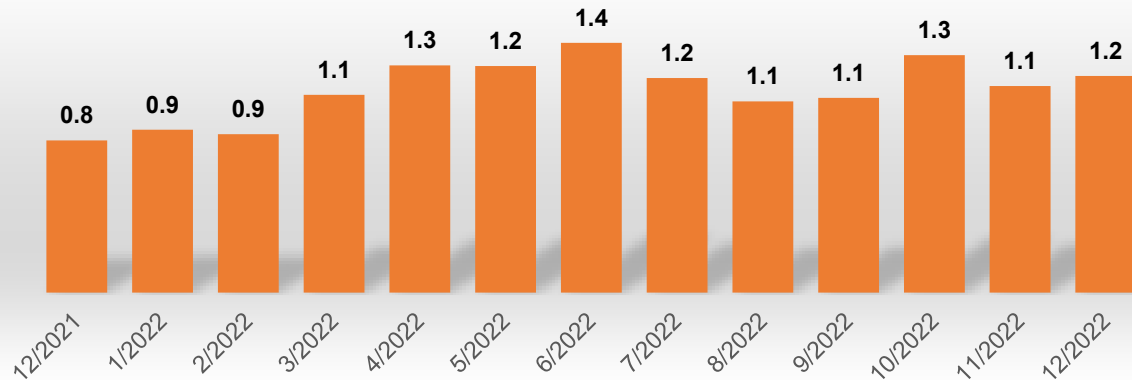
# Total Fund Forecast Active Risk\* as of December 2022 (Preliminary)



Active Risk Contribution



Active Risk



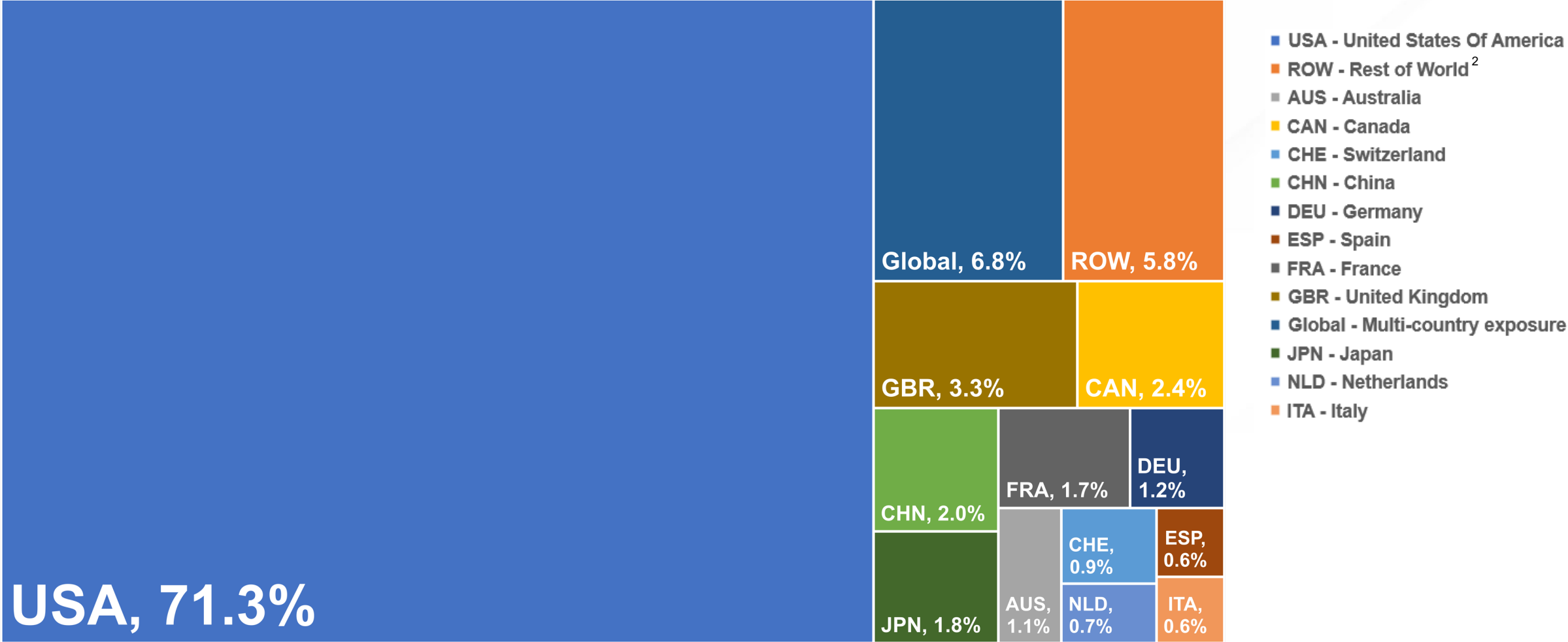
	%Weight	Active Weight%	Active Risk	Active Risk Allocation	Active Risk Selection
<b>Total Fund</b>			<b>1.20</b>	<b>-0.04</b>	<b>1.23</b>
<b>Growth</b>	<b>51.0%</b>	<b>-2.03%</b>	<b>0.78</b>	<b>-0.09</b>	<b>0.87</b>
Global Equity	31.8%				
Private Equity	17.7%				
Non-Core Private Real Estate	1.5%				
<b>Credit</b>	<b>12.1%</b>	<b>1.08%</b>	<b>-0.07</b>	<b>-0.06</b>	<b>-0.01</b>
Liquid Credit	6.6%				
Illiquid Credit	5.4%				
<b>Real Assets &amp; Inflation Hedges</b>	<b>17.6%</b>	<b>0.63%</b>	<b>0.29</b>	<b>-0.02</b>	<b>0.31</b>
Core Private Real Estate	6.3%				
Natural Resources & Commodities	3.2%				
Infrastructure	5.4%				
TIPS	2.7%				
<b>Risk Reduction and Mitigation</b>	<b>18.6%</b>	<b>-0.35%</b>	<b>0.09</b>	<b>0.03</b>	<b>0.06</b>
Investment Grade Bonds	7.1%				
Diversified Hedge Funds	6.1%				
Long-Term Government Bonds	4.1%				
Cash	1.4%				
<b>Overlays and Hedges</b>	<b>0.7%</b>	<b>0.68%</b>	<b>0.10</b>	<b>0.10</b>	<b>-</b>

\*Implementation of the MSCI Risk Platform is ongoing; reconciliation and refinement of the data is progressing and subject to change. Real estate and private equity data used is as of 6/30/2022

SOURCE: MSCI BarraOne

# Geographic Exposures by AUM\* - Total Fund

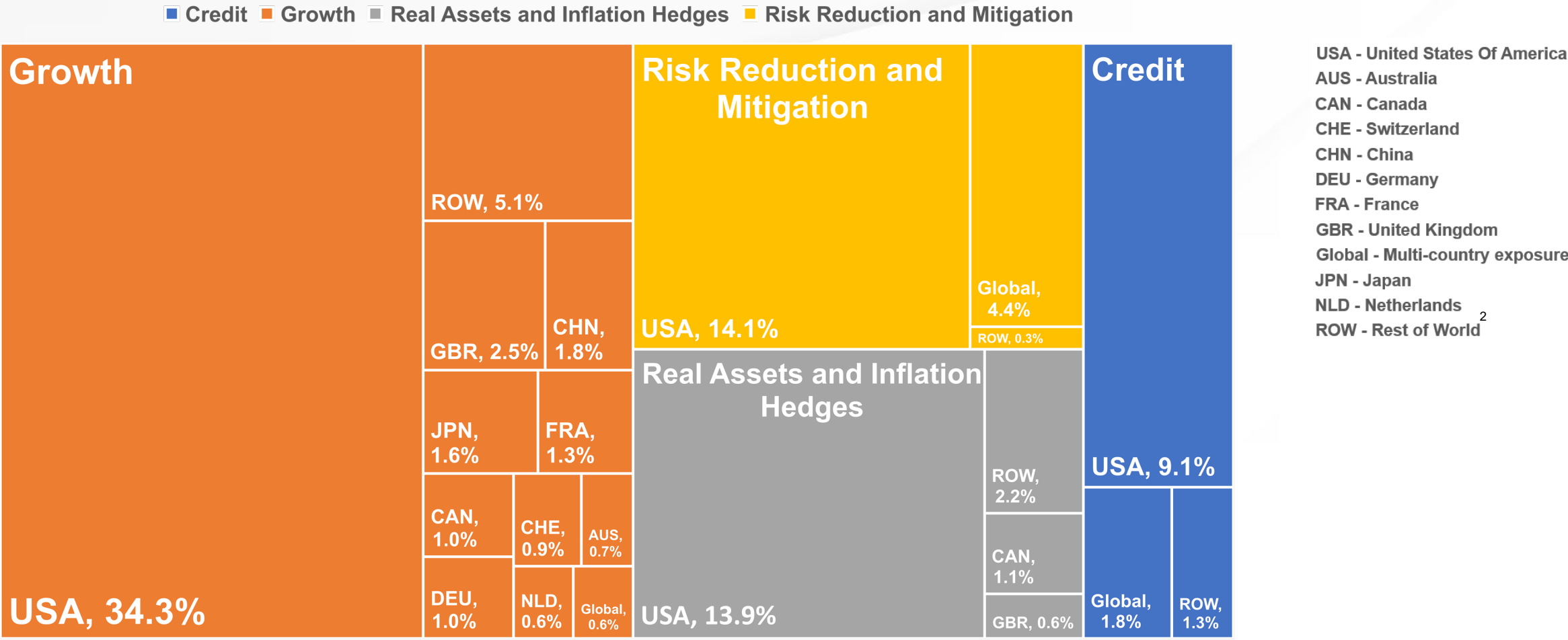
## as of December 2022 (Preliminary) ex-overlays & hedges



\*AUM = assets under management  
<sup>1</sup> \*Implementation of the MSCI Risk Platform is ongoing; reconciliation and refinement of the data is progressing and subject to change. Real estate and private equity data used is as of 6/30/2022  
<sup>2</sup> "ROW - Rest of World" is sum of countries with weight below 0.5%  
<sup>3</sup> Geographic exposure is based on the domicile country of a given security/asset

SOURCE: MSCI BarraOne

# Geographic Exposures by AUM\* - Asset Categories as of December 2022 (Preliminary) ex-overlays & hedges



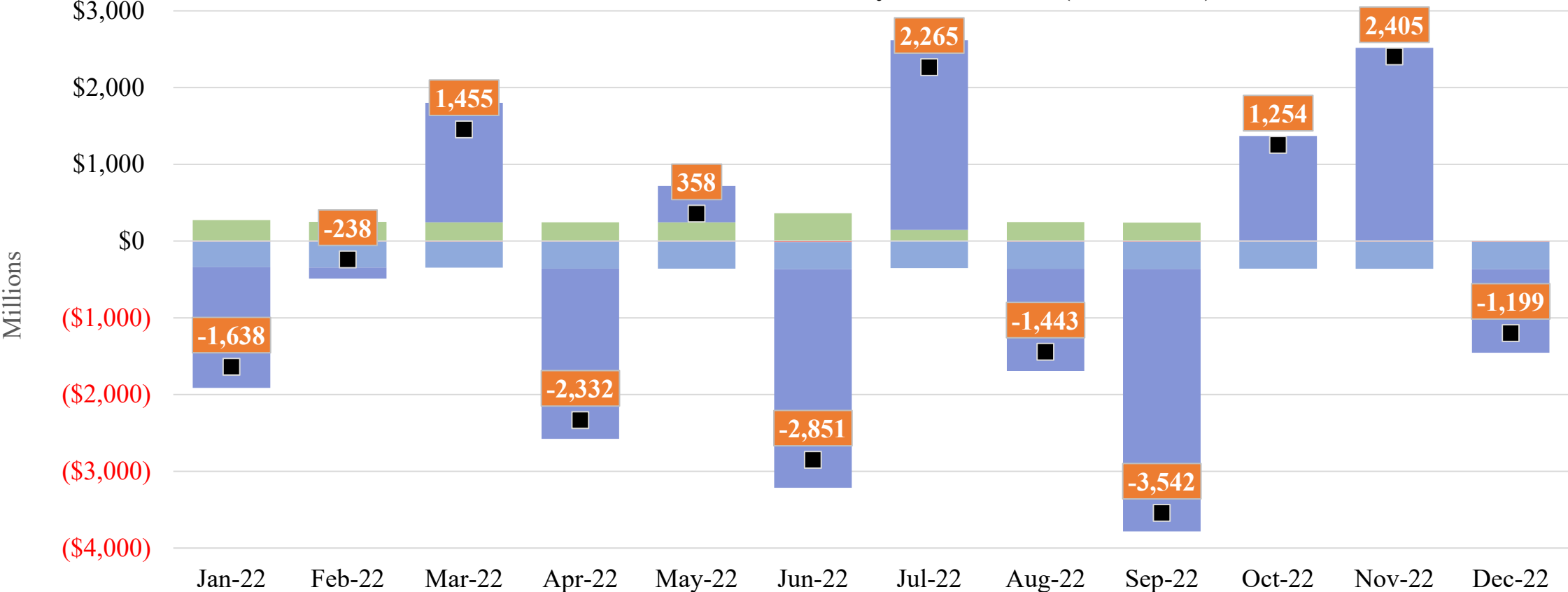
\*AUM = assets under management  
<sup>1</sup> \*Implementation of the MSCI Risk Platform is ongoing; reconciliation and refinement of the data is progressing and subject to change. Real estate and private equity data used is as of 6/30/2022  
<sup>2</sup> "ROW - Rest of World" is sum of countries with weight below 0.5%  
<sup>3</sup> Geographic exposure is based on the domicile country of a given security/asset



# Change In Fiduciary Net Position



Additions and Deductions in Fiduciary Net Position (Unaudited)



■ Employee and Employer Contributions  
■ Benefits and Refunds  
■ Administrative Expenses and Miscellaneous  
■ Net Investment Income/(Loss)\*  
■ Total Additions and Deductions in Fiduciary Net Position

\*Includes unrealized & realized net investment income

Fiscal Year	Negative Months	Positive Months	Total Net Position Change \$
FY-21	2	10	\$13.8 billion
FY-22	7	5	(\$2.5 billion)
FY-23	3	3	(\$259.5 million)



# 03 Portfolio Structural Updates

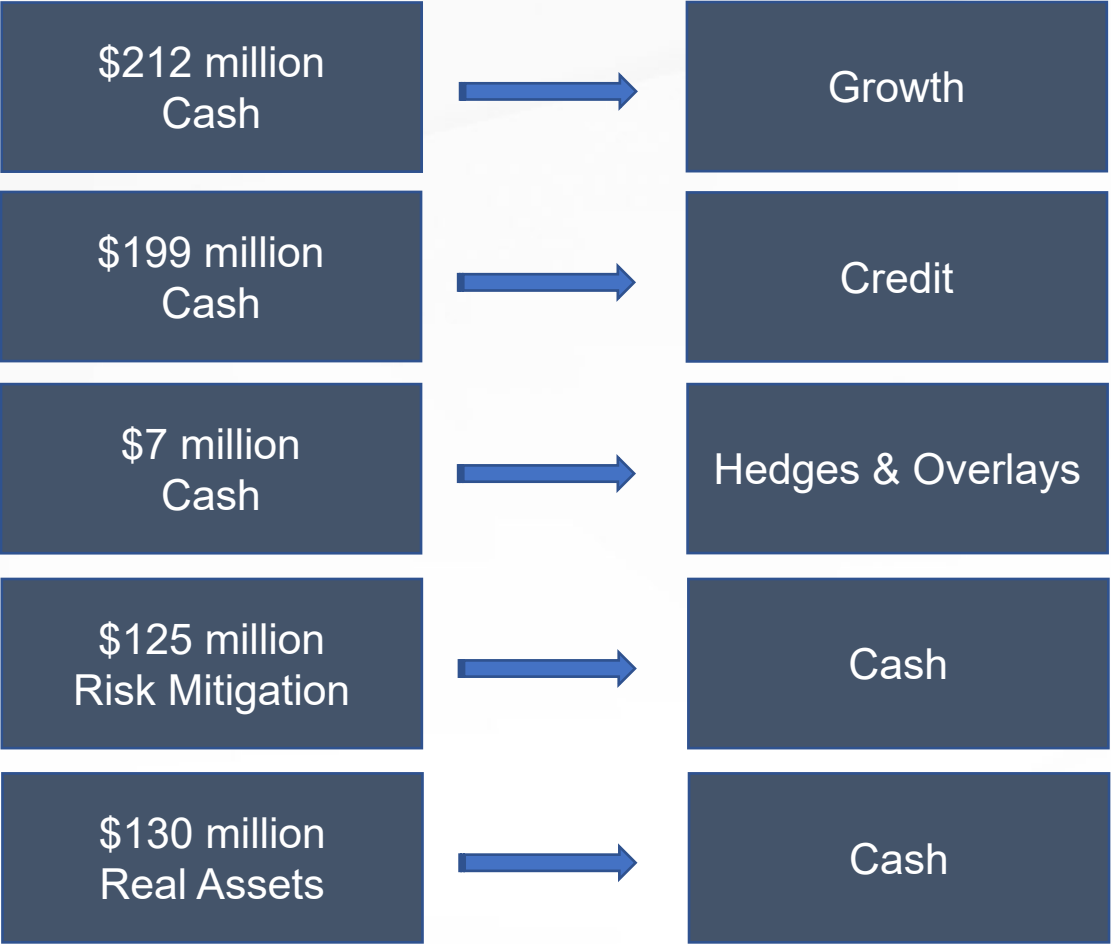
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# Portfolio Structural Updates



## Portfolio Movements

### Rebalancing Activity



## Hedges & Overlays

### Monthly Activity

Program	December Return	December Gain/(Loss)	Inception* Gain/(Loss)
Currency Hedge**	-1.3%	\$(6.9) Million	\$1.5 Billion
Cash/Rebalance Overlay***	-2.7%	\$(69.9) Million	\$223.4 Million

\* Currency and overlay program inception dates are 8/2010 & 7/2019, respectively.  
\*\* LACERA's currency hedge program's 1-month return is calculated monthly whereas the monthly gain/loss amount for the same period is the net realized dollar amount at contract settlement over three monthly tranches.  
\*\*\* LACERA's overlay program's 1-month return includes interest earned on the cash that supports the futures contracts.

## Current Search Activity

### Status of Active Searches – Subject to Change

Name	RFP Issued	Due Diligence	BOI Review
Real Assets Emerging Manager Program Search	✓		Anticipated Q3 2023



# 04 Key Initiatives and Operational Updates

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# Notable Initiatives and Operational Updates



## Key Initiative Updates

- Implementation is ongoing for the new strategic asset allocation final policy targets and benchmarks

## Operational Updates

- Annual contract compliance review is complete
- Operational due diligence review in progress

## Manager/Consultant Updates

Capital Group – Growth - announced that Mr. Tim Armour, Chairman and CEO and Mr. Rob Lovelace, Vice-Chair and President will both step down from Capital Group's management committee. As part of the succession planning, Mr. Michael Gitlin, Mr. Martin Romo, and Ms. Jody Jonsson have been identified as leadership to take on the roles of CEO, CIO, and Vice Chair of Capital Group. The transition will be effective on October 24, 2023.

## Team Searches and Open Positions

- Working on launching new searches
  - 1 – Deputy Chief Investment Officer
    - Search in progress
  - 1 – Principal Investment Officer
  - 2 – Senior Investment Officer
    - 1 search in progress
  - 2 – Financial Analyst-III
    - 2 searches in progress
  - 3 – Financial Analyst-II
  - 1 – Financial Analyst-I



# 05 Commentary

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# Staff Chart of the Month

## U.S. Inflation Rate Showing Signs of Easing



### US inflation at 6.5%

Consumer Price Index for all urban consumers,  
% change from a year ago



Source: US Bureau of Labor Statistics

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# 06 Appendix

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# Compliance Monitor

This report highlights operational and compliance metrics monitored by the Investment Division  
As of December 2022\*

## LACERA PENSION FUND

9		
GROWTH		
Total # of Advisory		

GROWTH
Global Equity
Asset Allocation Policy Compliance
Investment Guideline Compliance
Emerging Manager Program
# of Sudan/Iran Holdings Held by Managers
Private Equity - Growth**
Asset Allocation Policy Compliance
Guideline Compliance by Strategy
Guideline Compliance by Geographic Location
Investment Exposure Limit
Non-Core Private Real Estate**
(See Real Assets & Inflation Hedges - Core Private Real Estate section)

Quarterly Review Status	# of Advisory	Notes
✓		
✓	1	A manager briefly held a security listed as non-eligible due to a change its country of incorporation. The manager was back within compliance by month-end.
✓		
✓	8	8 issuers held, totaling \$28.8 mm in market value
✓		
✓		
✓		
✓		

2		
CREDIT		
Total # of Advisory		

CREDIT
Liquid Credit, Illiquid Credit**
Asset Allocation Policy Compliance
Investment Guideline Compliance
Emerging Manager Program
# of Sudan/Iran Holdings Held by Managers

Quarterly Review Status	# of Advisory	Notes
✓		
✓		
✓		
✓	2	2 issuers held, totaling \$4.8 mm in market value

# Compliance Monitor

This report highlights operational and compliance metrics monitored by the Investment Division  
As of December 2022\*

## LACERA PENSION FUND

1

### REAL ASSETS & INFLATION HEDGES

Total # of Advisory

#### REAL ASSETS & INFLATION HEDGES\*\*\*\*

##### Core Private Real Estate\*\*

Asset Allocation Policy Compliance

✓

Guideline Compliance by Strategy (Core/Non-Core)

✓

Guideline Compliance by Manager

✓

Guideline Compliance by Property Type

✓

Guideline Compliance by Geographic Location

✓

Guideline Compliance by Leverage

✓

1

One manager is 36% of the core risk category which exceeds the 35% limit. The actual allocations of the portfolio may fall outside of the ranges as the portfolio makes its Board approved strategic transition.

##### Natural Resources & Commodities\*\*\*

Asset Allocation Policy Compliance

✓

Investment Guideline Compliance

✓

# of Sudan/Iran Holdings Held by Managers

✓

##### Infrastructure

Asset Allocation Policy Compliance

✓

Investment Guideline Compliance

✓

# of Sudan/Iran Holdings Held by Managers

✓

##### TIPS

Asset Allocation Policy Compliance

✓

Investment Guideline Compliance

✓

# of Sudan/Iran Holdings Held by Managers

✓

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6

### RISK REDUCTION & MITIGATION

Total # of Advisory

RISK REDUCTION & MITIGATION	Quarterly Review Status	# of Advisory	Notes
Investment Grade Bonds			
Asset Allocation Policy Compliance	✓		
Investment Guideline Compliance	✓		
Emerging Manager Program	✓		
# of Sudan/Iran Holdings Held by Managers	✓	6	6 issuers held, totaling \$4.3 mm in market value
Diversified Hedge Funds**			
Asset Allocation Policy Compliance	✓		
Portfolio Level Compliance	✓		
Direct Portfolio Manager Guideline Compliance	✓		
Long-term Government Bonds			
Asset Allocation Policy Compliance	✓		
Investment Guideline Compliance	✓		
Emerging Manager Program	✓		
# of Sudan/Iran Holdings Held by Managers	✓		
Cash			
Asset Allocation Policy Compliance	✓		
Investment Guideline Compliance	✓		
# of Sudan/Iran Holdings Held by Managers	✓		

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## INVESTMENT OPERATIONS

6			
INVESTMENT OPERATIONS			
Total # of Advisory			
INVESTMENT OPERATIONS	Quarterly Review Status	# Advisory	Notes
<b>Securities Lending</b>			
Investment Guideline Compliance	✓		
\$ Value on Loan	✓	1	State Street \$3,169.2 mm
\$ Value of Cash/Non-Cash Collaterals	✓	1	State Street \$3,380.3 mm
Total Income - Calendar YTD	✓	1	State Street \$12.9 mm
<b>Total Fund Overlays and Hedges</b>			
Investment Guideline Compliance	✓		
<b>Proxy Voting</b>			
Number of Meetings Voted	✓	1	918 meetings voted
<b>Tax Reclaims</b>			
Total Paid Reclaims - Calendar YTD	✓	1	\$13.7 mm
Total Pending Reclaims	✓	1	\$25.4 mm in process; timing of recovery is unique to each country
<b>Fee Validation</b>			
Fee Reconciliation Project	✓		
AB 2833	✓		
<b>Investment Manager Meetings*****</b>			
Manager Meeting Requests	✓		

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## OPEB MASTER TRUST

Functional Asset Categories (Growth, Credit, Inflation Hedges, Risk Reduction & Mitigation)	Quarterly Review Status	# Advisory	Notes
	✓		
	✓		
Asset Allocation Policy Compliance			
Investment Guideline Compliance	✓		
# of Sudan/Iran Holdings Held by Managers	✓		

\* This list is not exhaustive as various compliance processes are completed throughout the year. Each quarter, different items may appear on the compliance monitor.

\*\* Represents the comprehensive Private Equity (3-month lag), Real Estate (3-month lag), Illiquid Credit (1- and 3-month lags), and Hedge Funds (1-month lag) programs across the total plan.

\*\*\* Investment guideline compliance based on public market exposure.

\*\*\*\* Reflects the most recent data available.

\*\*\*\*\* Advisory 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.