



# QUARTERLY PERFORMANCE REPORT

**SAN BERNARDINO COUNTY  
EMPLOYEES' RETIREMENT  
ASSOCIATION**

SEPTEMBER 30, 2023

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# MARKET ENVIRONMENT

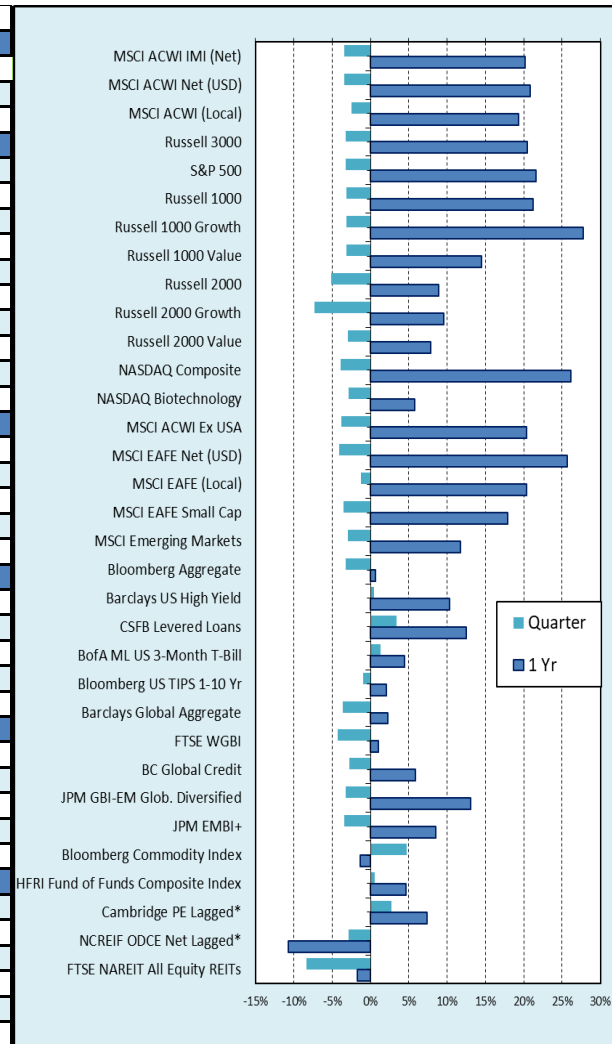
# ECONOMIC ENVIRONMENT

- **Q2 Real GDP (third estimate) increased at an annual rate of 2.1%.**
  - Retail sales ended August at +2.9% on a YoY basis. In the same period last year the YoY growth rate was +8.8%.
  - Corporate profits as a percent of GDP ended March 2023 at 10.7%, down from 12.3% in the same period last year and remain elevated relative to historical levels.
  - The inventory-to-sales ratio ended July at 1.37 up from 1.36 one year ago. Levels have remained relatively constant since early 2010 with a spike to 1.7 in April 2020.
  - The U.S. trade deficit contracted ended August as exports increased. The trade deficit is the lowest since September 2020.
- **The unemployment rate was 3.8% ended Q3, up from 3.5% in Q2; U-6, a broader measure of unemployment, increased to 7.0% in Q3 from 6.9% in Q2.**
  - The labor force participation rate ended Q3 at 62.8%, up from 62.6% in Q2. Labor force participation declined to 60.2% in April 2020 and is at levels below the 10 year pre-pandemic average of 63.0%.
- **The Case-Shiller Home Price Index (ended July) increased to 310.2 up from 297.3 in Q1 and remains at levels higher than that of pre-financial crisis levels of 150.9.**
- **Rolling 12-month seasonally-adjusted CPI ended Q3 at 3.69 up from 3.09% in Q2. In the same period last year, it was 8.21%; Capacity Utilization increased to 79.7 from 78.9 in Q2.**
- **Fed Funds rate increased in Q3 by 0.25% to a targeted range of 5.25%-to-5.50%. The 10-year Treasury Yield (constant maturity) finished Q3 at 4.38% up from 3.75% in Q2.**
- **The Fed continues scaling back asset purchases. The Fed continues to reduce the size of its balance sheet after a period of rapid growth post-pandemic.**
- **S&P valuations (using Shiller CAPE ratio) decreased in Q3 to 29.31x from 31.08x in Q2 and are lower than the 10-year average of 29.46x.**
  - Cyclically adjusted Shiller PE ratio remains above the long-term average of 17.05x.

# MARKET ENVIRONMENT

## Q3 2023 OVERVIEW

		Qtr.	1 Yr.	3 Yr.	5 Yr.	10 Yr.
<b>World Equity Benchmarks</b>						
MSCI ACWI IMI (Net)	World with Small Cap	-3.40%	20.16%	6.88%	6.09%	7.38%
MSCI ACWI Net (USD)	World W/O Small Cap	-3.40%	20.80%	6.89%	6.46%	7.56%
MSCI ACWI (Local)	World (Local Currency)	-2.50%	19.36%	8.41%	7.33%	8.89%
<b>Domestic Equity Benchmarks</b>						
Russell 3000	Domestic All Cap	-3.25%	20.46%	9.38%	9.14%	11.28%
S&P 500	Large Core	-3.27%	21.62%	10.15%	9.92%	11.91%
Russell 1000	Large Core	-3.15%	21.19%	9.53%	9.63%	11.63%
Russell 1000 Growth	Large Growth	-3.13%	27.72%	7.97%	12.42%	14.48%
Russell 1000 Value	Large Value	-3.17%	14.44%	11.05%	6.23%	8.45%
Russell 2000	Small Core	-5.13%	8.93%	7.16%	2.39%	6.65%
Russell 2000 Growth	Small Growth	-7.32%	9.59%	1.09%	1.55%	6.72%
Russell 2000 Value	Small Value	-2.96%	7.84%	13.32%	2.59%	6.19%
NASDAQ Composite	Large Growth	-3.94%	26.11%	6.60%	11.41%	14.52%
NASDAQ Biotechnology	Biotech	-2.82%	5.78%	-1.68%	1.31%	6.65%
<b>International Equity Benchmarks</b>						
MSCI ACWI Ex USA	World ex-US	-3.77%	20.39%	3.74%	2.58%	3.35%
MSCI EAFE Net (USD)	Int'l Developed	-4.11%	25.65%	5.75%	3.24%	3.82%
MSCI EAFE (Local)	Int'l Developed (Local Currency)	-1.27%	20.32%	10.81%	5.65%	6.75%
MSCI EAFE Small Cap	Small Cap Int'l	-3.51%	17.90%	1.10%	0.76%	4.30%
MSCI Emerging Markets	Emerging Equity	-2.93%	11.70%	-1.73%	0.55%	2.07%
<b>Domestic Fixed Income Benchmarks</b>						
Bloomberg Aggregate	Core Bonds	-3.23%	0.64%	-5.21%	0.10%	1.13%
Barclays US High Yield	High Yield	0.46%	10.28%	1.76%	2.96%	4.24%
CSFB Levered Loans	Bank Loans	3.37%	12.47%	5.91%	4.31%	4.33%
BofA ML US 3-Month T-Bill	Cash	1.31%	4.47%	1.70%	1.72%	1.12%
Bloomberg US TIPS 1-10 Yr	Inflation	-1.00%	2.11%	-0.02%	2.63%	1.78%
<b>Global Fixed Income Benchmarks</b>						
Barclays Global Aggregate	Global Core Bonds	-3.59%	2.24%	-6.93%	-1.62%	-0.44%
FTSE WGBI	World Gov. Bonds	-4.27%	1.04%	-8.72%	-2.57%	-1.19%
BC Global Credit	Global Bonds	-2.81%	5.82%	-5.63%	-0.43%	0.78%
JPM GBI-EM Glob. Diversified	Em. Mkt. Bonds (Local Currency)	-3.26%	13.10%	-2.70%	0.00%	-0.84%
JPM EMBI+	Em. Mkt. Bonds	-3.43%	8.47%	-8.82%	-2.98%	0.56%
<b>Alternative Benchmarks</b>						
Bloomberg Commodity Index	Commodities	4.71%	-1.30%	16.23%	6.13%	-0.75%
HFRI Fund of Funds Composite Index	Fund of Hedge Funds	0.51%	4.59%	3.77%	3.38%	3.28%
Cambridge PE Lagged*	Private Equity	2.77%	7.38%	21.36%	15.40%	14.54%
NCREIF ODCE Net Lagged*	Real Estate	-2.88%	-10.73%	7.04%	5.56%	7.77%
FTSE NAREIT All Equity REITs	REIT	-8.33%	-1.71%	2.68%	2.79%	6.17%
CPI + 2%	Inflation/Real Assets	1.70%	5.76%	7.86%	6.13%	4.84%

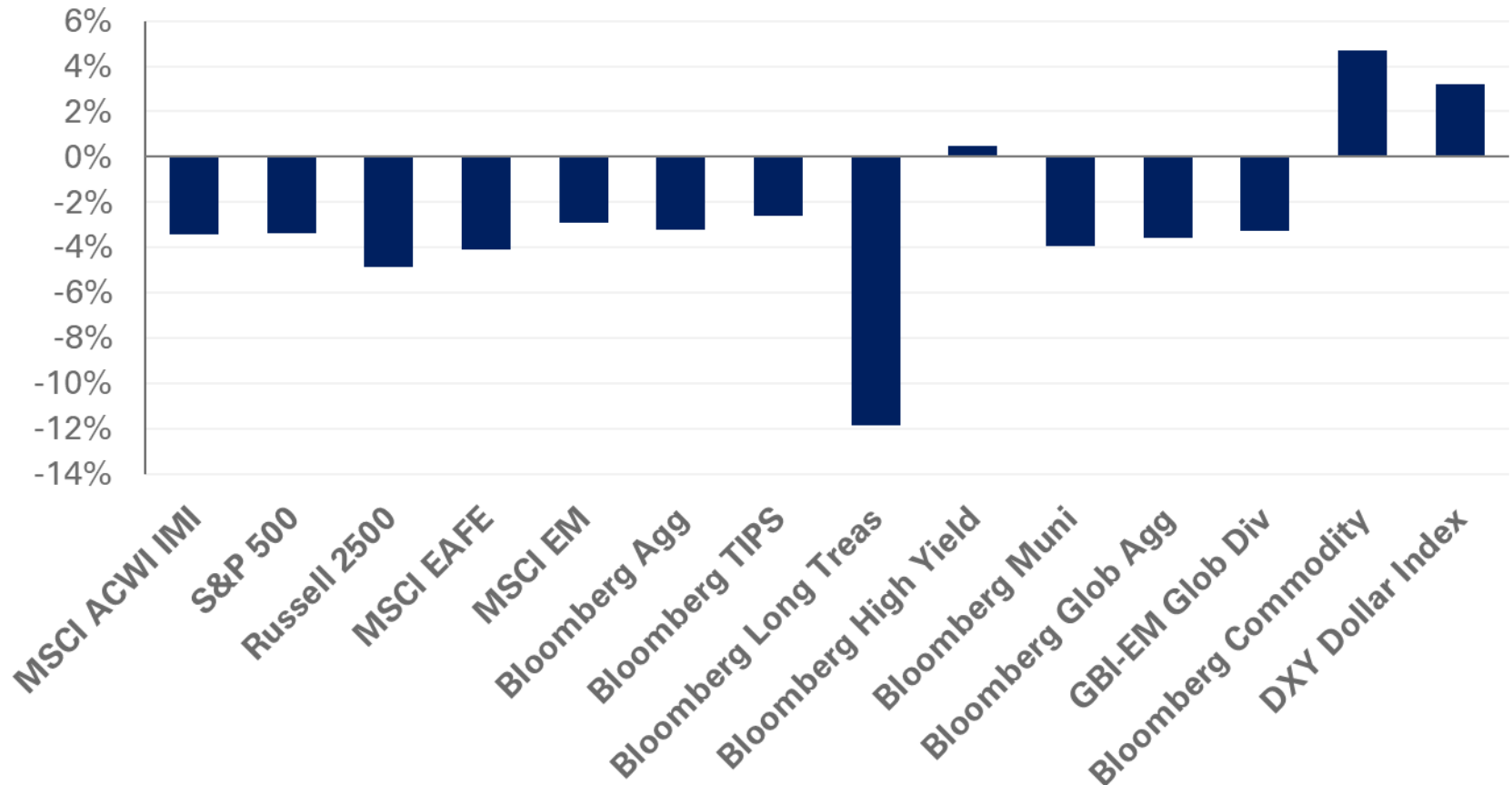


\* As of 6/30/2023



# STOCKS AND BONDS SOLD OFF SHARPLY

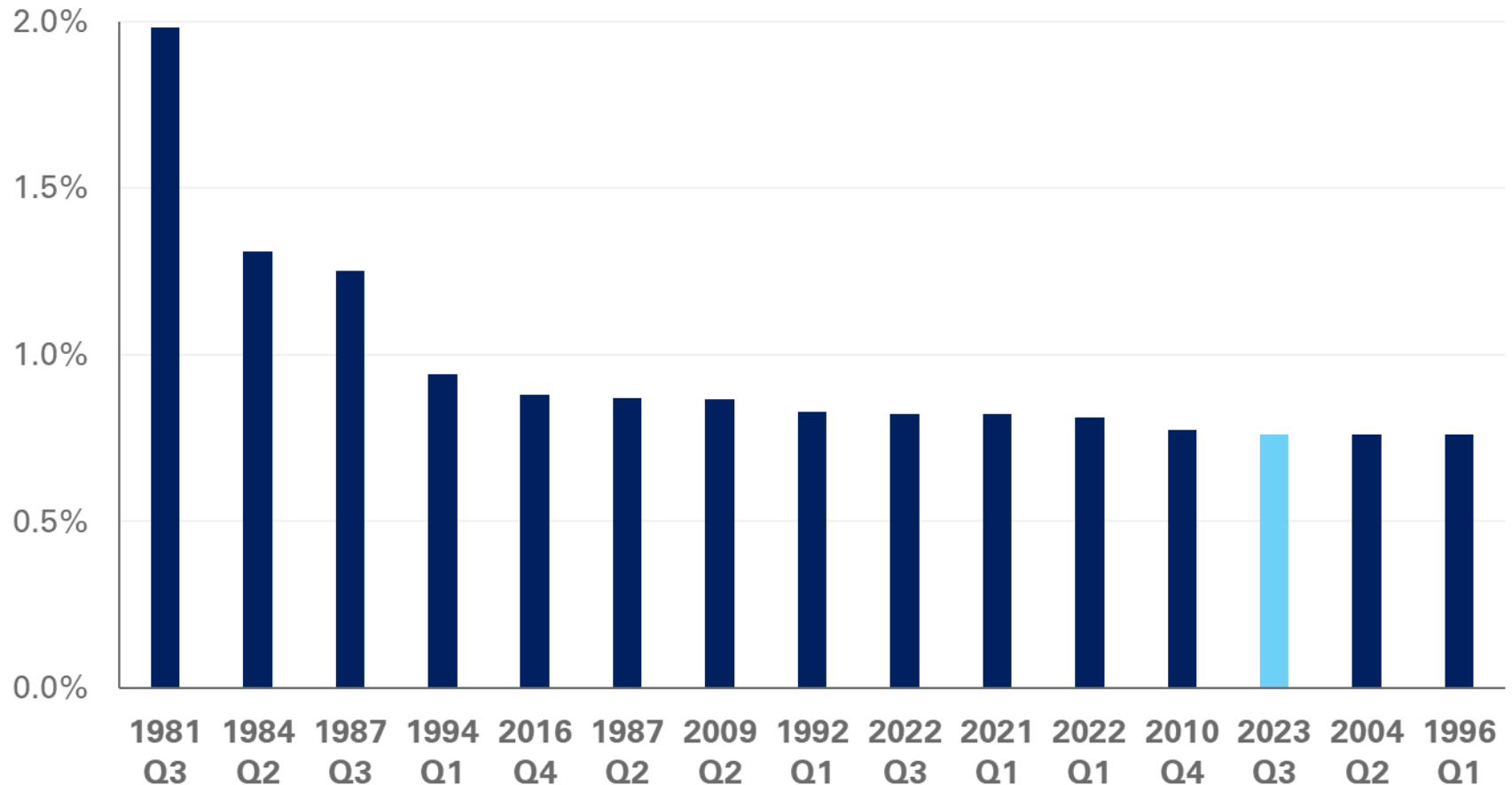
## QUARTERLY TOTAL RETURNS





# 10-YEAR YIELDS ROSE SIGNIFICANTLY

TOP 15 QUARTERLY CHANGE: 10-YEAR U.S. TREASURY YIELD

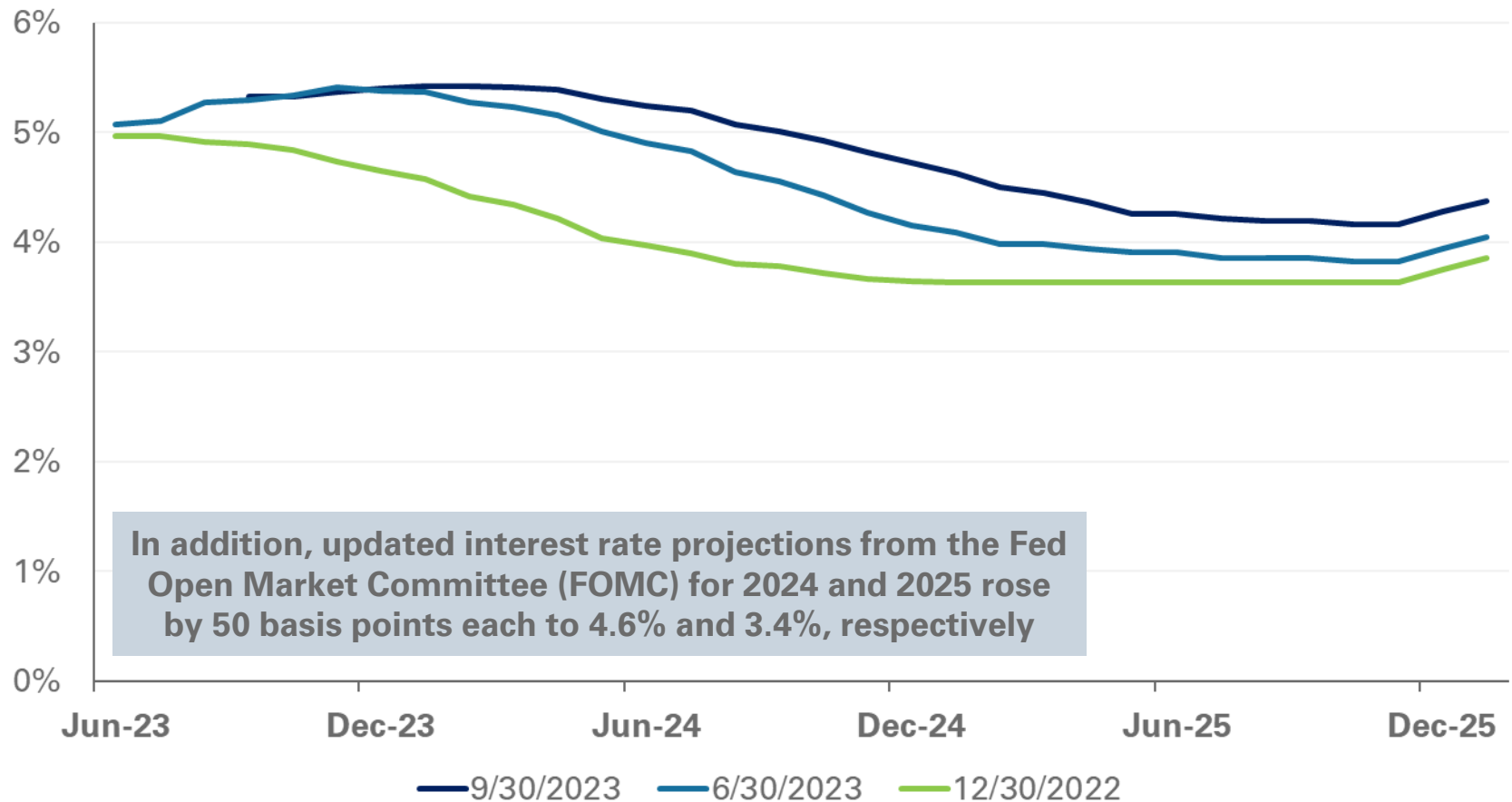


Calculated based on data as of 12/31/1980  
Source: FactSet



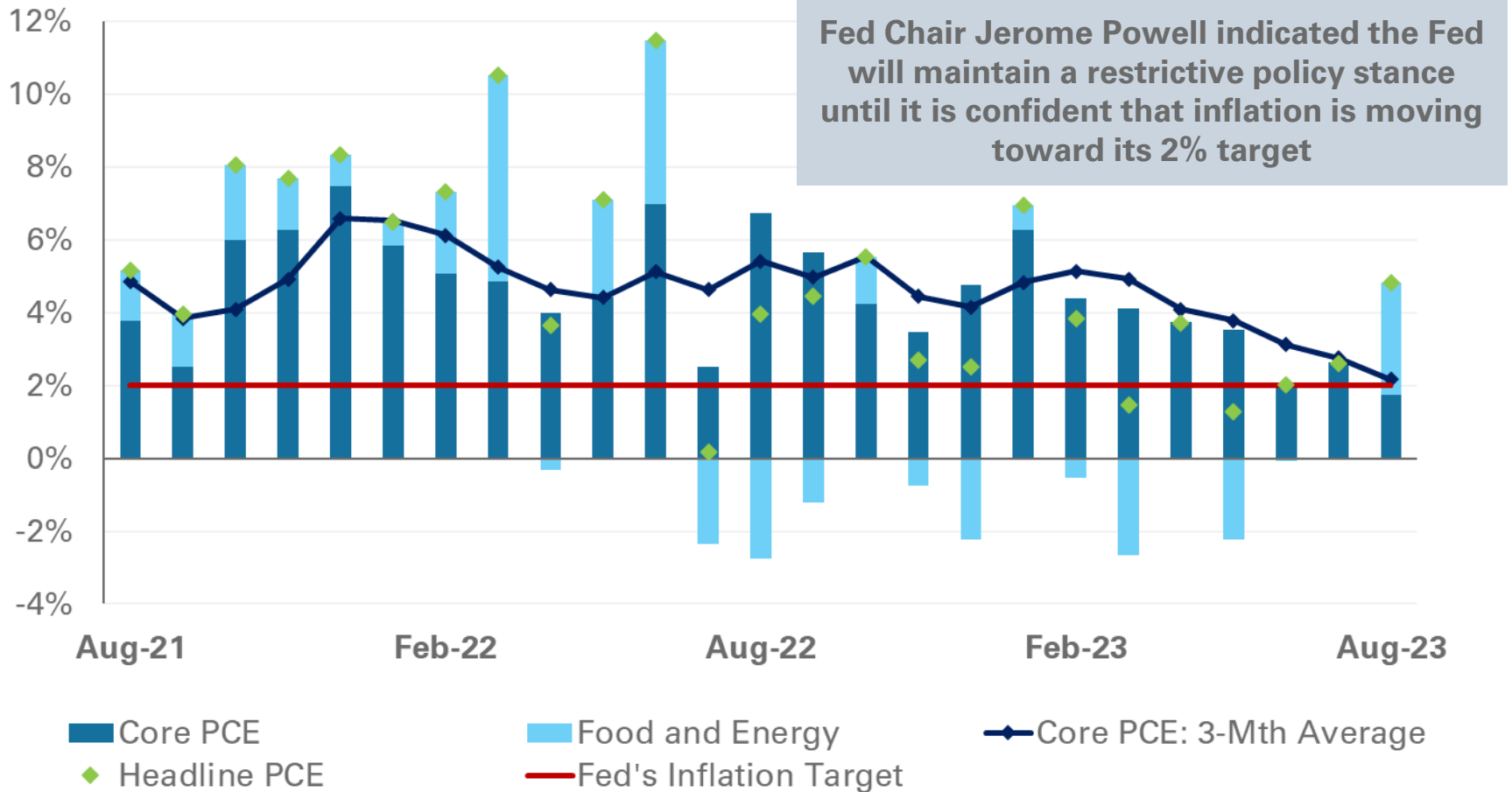
# THE MARKET IS PRICING IN “HIGHER FOR LONGER”

## FEDERAL FUND FUTURES



# CORE INFLATION NEAR FED'S INFLATION TARGET

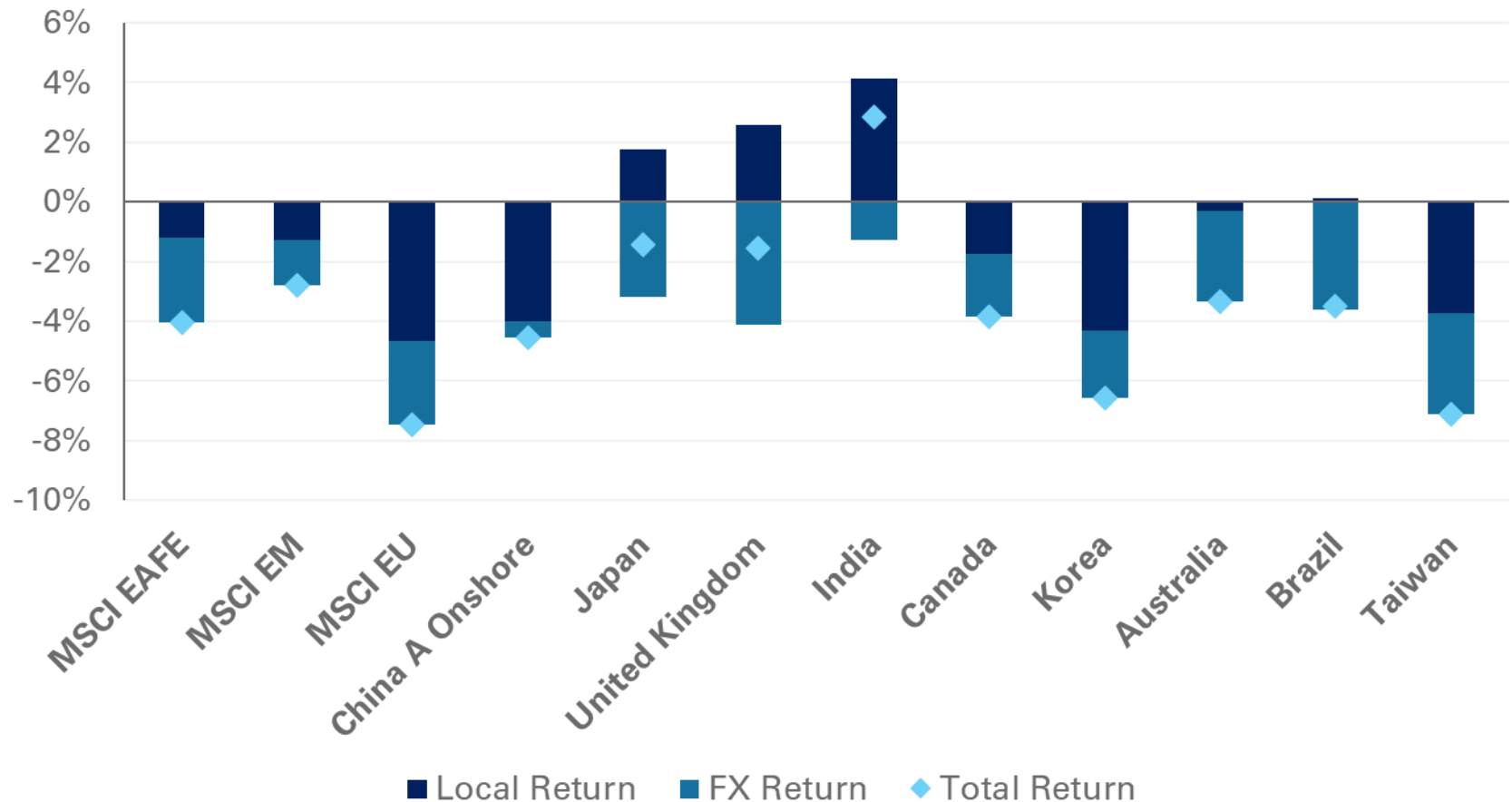
## ANNUALIZED MONTHLY U.S. PCE PRICE INDEX CHANGES





# A STRONGER USD WEIGHED ON NON-U.S. ASSETS

## QUARTERLY TOTAL RETURNS



# TOTAL FUND PERFORMANCE

# TOTAL FUND PERFORMANCE SUMMARY

## NET OF FEES

	Allocation	Performance (%)					
	Market Value (\$)	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>Total Fund</b>	<b>14,308,394,879</b>	<b>1.0 (1)</b>	<b>5.7 (9)</b>	<b>9.6 (67)</b>	<b>10.1 (1)</b>	<b>7.0 (7)</b>	<b>7.1 (24)</b>
<i>Policy Index</i>		-2.5 (74)	4.2 (58)	10.8 (31)	1.9 (98)	3.7 (97)	4.8 (100)
<i>S&amp;P 500 Index</i>		-3.3 (94)	13.1 (1)	21.6 (1)	10.2 (1)	9.9 (1)	11.9 (1)
<i>Blmbg. U.S. Aggregate Index</i>		-3.2 (93)	-1.2 (100)	0.6 (100)	-5.2 (100)	0.1 (99)	1.1 (100)
<i>60% MSCI World/40% FTSE WGBI</i>		-3.7 (97)	5.7 (8)	13.7 (3)	1.5 (99)	3.9 (91)	5.0 (100)
<i>InvMetrics Public DB &gt; \$1 Billion Median</i>		-2.1	4.5	9.7	5.9	5.2	6.1

### 3 Years Ending September 30, 2023

	Return	Standard Deviation	Sharpe Ratio	Sortino Ratio
<b>Total Fund</b>	<b>10.10 (1)</b>	<b>7.11 (2)</b>	<b>1.14 (1)</b>	<b>2.26 (1)</b>
<i>Policy Index</i>	1.89 (98)	10.70 (59)	0.07 (98)	0.10 (98)
<i>InvMetrics Public DB &gt; \$1 Billion Median</i>	5.93	9.88	0.45	0.71

### 5 Years Ending September 30, 2023

	Return	Standard Deviation	Sharpe Ratio	Sortino Ratio
<b>Total Fund</b>	<b>7.05 (7)</b>	<b>7.62 (1)</b>	<b>0.70 (1)</b>	<b>1.06 (2)</b>
<i>Policy Index</i>	3.70 (97)	10.42 (37)	0.24 (92)	0.33 (90)
<i>InvMetrics Public DB &gt; \$1 Billion Median</i>	5.22	10.97	0.35	0.49

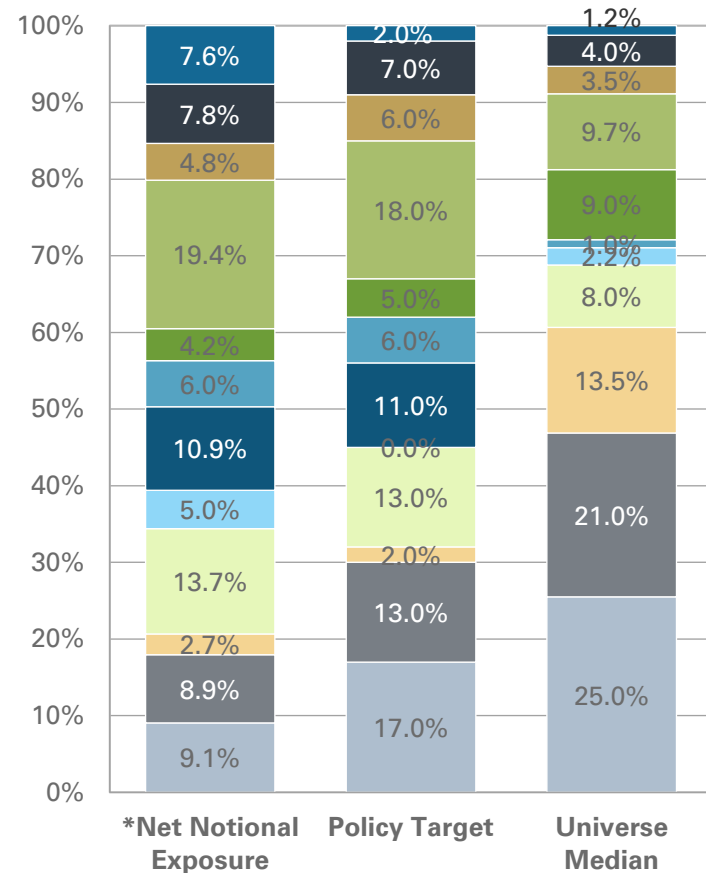
### 10 Years Ending September 30, 2023

	Return	Standard Deviation	Sharpe Ratio	Sortino Ratio
<b>Total Fund</b>	<b>7.07 (24)</b>	<b>5.82 (1)</b>	<b>1.00 (1)</b>	<b>1.57 (1)</b>
<i>Policy Index</i>	4.80 (100)	8.09 (29)	0.48 (98)	0.71 (94)
<i>InvMetrics Public DB &gt; \$1 Billion Median</i>	6.11	8.74	0.59	0.88



Note: Risk statistics are measured on a monthly basis.

# ASSET ALLOCATION COMPLIANCE



Asset Class	*Net Notional Exposure	Net Notional Exposure	Policy Target	Difference	Policy Ranges	Within Range
US Equities	1,296,680	9.1%	17.0%	-7.9%	10%-27%	No
Int'l Equities	1,268,461	8.9%	13.0%	-4.1%	8%-18%	Yes
U.S. Core Fixed Income	393,299	2.7%	2.0%	0.7%	-3%-7%	Yes
US Credit	1,963,041	13.7%	13.0%	0.7%	8%-18%	Yes
Non-US Core Fixed Income	715,420	5.0%	0.0%	5.0%	-5%-5%	Yes
Non-US Credit	1,559,427	10.9%	11.0%	-0.1%	6%-16%	Yes
Emerging Market Debt	859,042	6.0%	6.0%	0.0%	1%-10%	Yes
Real Estate	597,808	4.2%	5.0%	-0.8%	0%-10%	Yes
Private Equity	2,775,009	19.4%	18.0%	1.4%	6%-23%	Yes
Real Assets	682,517	4.8%	6.0%	-1.2%	0%-10%	Yes
Absolute Return	1,109,971	7.8%	7.0%	0.8%	0%-12%	Yes
Cash	1,087,720	7.6%	2.0%	5.6%	0%-10%	Yes
<b>Total</b>	<b>14,308,395</b>	<b>100.00%</b>	<b>100.00%</b>			

- US Equities
- Int'l Equities
- U.S. Core
- US Credit
- Non-US Core Fixed Income
- Non-US Credit
- Emerging Market Debt
- Real Estate
- Private Equity
- Real Assets
- Absolute Return
- Cash

Note: Notional values are sourced from Russell Investments. Net synthetic exposure applied to Non-US Core Fixed Income and Non-US Credit.

# INVESTMENT EXPOSURE SUMMARY

## OVERLAY AS OF SEPTEMBER 30, 2023

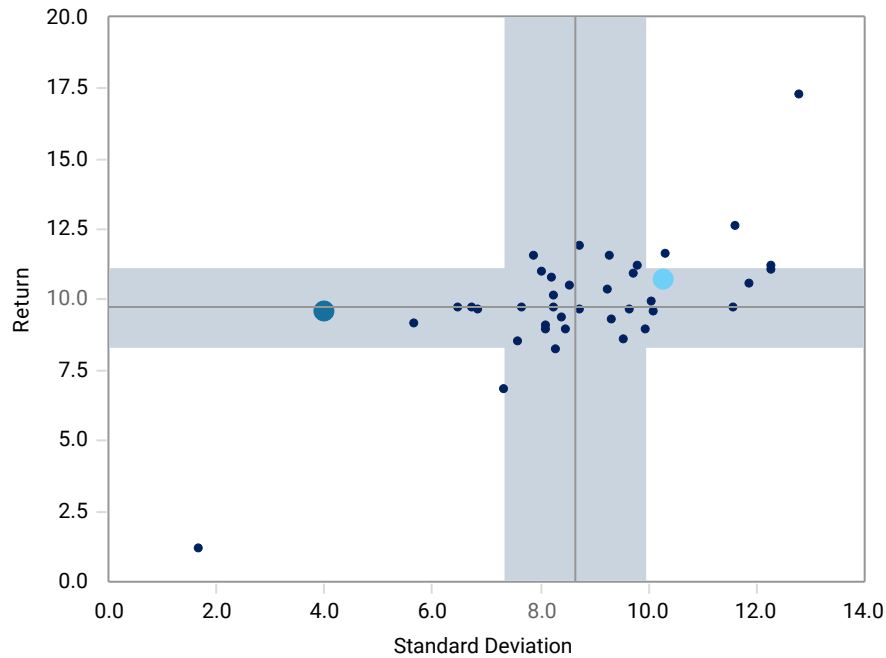
<u>Asset Class</u>	<u>Physical Exposure</u>		<u>Delta Adjusted Synthetic Exposure</u>		<u>Net Position</u>		<u>Overlay Target</u>		<u>Policy Target</u>	
<b>Total Market Value</b>	<b>14,228.8</b>	<b>100.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>14,228.8</b>	<b>100.0 %</b>	<b>14,228.8</b>	<b>100.0 %</b>	<b>14,228.8</b>	<b>100.00 %</b>
<b>Cash</b>	<b>1,800.0</b>	<b>12.7 %</b>	<b>-1,853.4</b>	<b>-13.0 %</b>	<b>-53.4</b>	<b>-0.4 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>0.0</b>	<b>0.00 %</b>
Cash	1,800.0	12.7 %	-1,853.4	-13.0 %	-53.4	-0.4 %	0.0	0.0 %	0.0	0.00 %
<b>Equity</b>	<b>2,232.3</b>	<b>15.7 %</b>	<b>327.4</b>	<b>2.3 %</b>	<b>2,559.7</b>	<b>18.0 %</b>	<b>2,964.0</b>	<b>20.8 %</b>	<b>3,002.3</b>	<b>21.10 %</b>
Emerging Markets	303.2	2.1 %	325.6	2.3 %	628.8	4.4 %	618.1	4.3 %	626.1	4.40 %
International Developed	393.2	2.8 %	244.9	1.7 %	638.1	4.5 %	660.2	4.6 %	668.8	4.70 %
US Large Cap	1,535.6	10.8 %	-341.4	-2.4 %	1,194.2	8.4 %	1,545.2	10.9 %	1,565.2	11.00 %
US Small Cap	0.3	0.0 %	98.3	0.7 %	98.6	0.7 %	140.5	1.0 %	142.3	1.00 %
<b>Fixed</b>	<b>4,073.2</b>	<b>28.6 %</b>	<b>1,526.0</b>	<b>10.7 %</b>	<b>5,599.2</b>	<b>39.4 %</b>	<b>5,141.4</b>	<b>36.1 %</b>	<b>5,207.8</b>	<b>36.60 %</b>
Global ex US Fixed Income	1,992.3	14.0 %	1,132.7	8.0 %	3,124.9	22.0 %	3,090.5	21.7 %	3,130.3	22.00 %
High Yield	1,734.5	12.2 %	0.0	0.0 %	1,734.5	12.2 %	1,320.5	9.3 %	1,337.5	9.40 %
US Fixed Income	346.5	2.4 %	393.3	2.8 %	739.8	5.2 %	730.5	5.1 %	739.9	5.20 %
<b>Other</b>	<b>6,123.4</b>	<b>43.0 %</b>	<b>0.0</b>	<b>0.0 %</b>	<b>6,123.4</b>	<b>43.0 %</b>	<b>6,123.4</b>	<b>43.0 %</b>	<b>6,018.8</b>	<b>42.30 %</b>
Alternatives	4.2	0.0 %	0.0	0.0 %	4.2	0.0 %	4.2	0.0 %	0.0	0.00 %
Commodities	597.1	4.2 %	0.0	0.0 %	597.1	4.2 %	597.1	4.2 %	597.6	4.20 %
Infrastructure	105.4	0.7 %	0.0	0.0 %	105.4	0.7 %	105.4	0.7 %	71.1	0.50 %
Private Equity	2,765.9	19.4 %	0.0	0.0 %	2,765.9	19.4 %	2,765.9	19.4 %	2,717.7	19.10 %
Real Estate	577.4	4.1 %	0.0	0.0 %	577.4	4.1 %	577.4	4.1 %	569.2	4.00 %
Tactical Cash	2,073.3	14.6 %	0.0	0.0 %	2,073.3	14.6 %	2,073.3	14.6 %	2,063.2	14.50 %



Source: Russell Investments

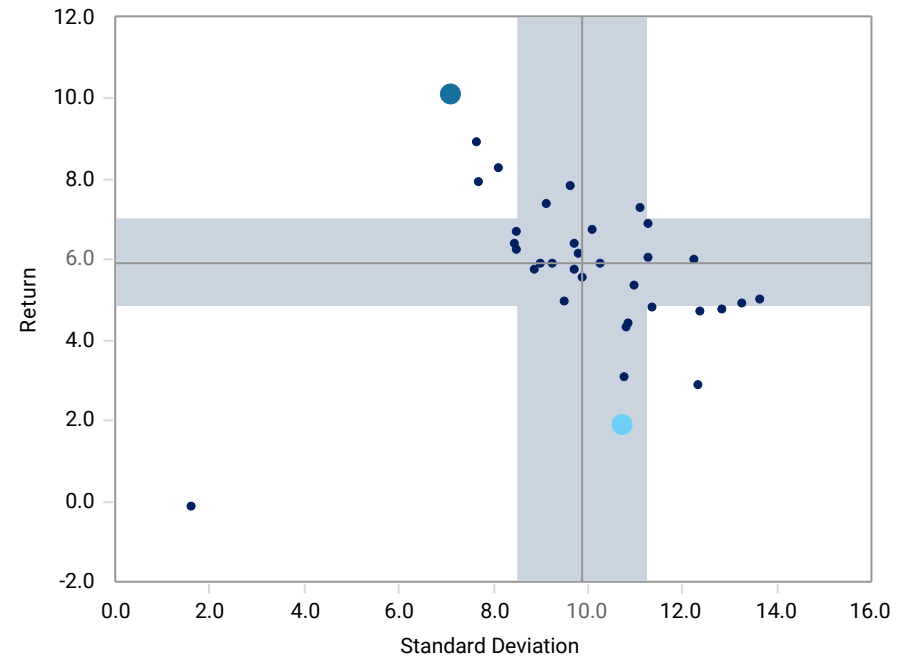
# RISK VS. RETURN

1 Year Ending September 30, 2023



● InvMetrics Public DB > \$1 Billion ● Total Fund  
● Policy Index

3 Years Ending September 30, 2023



● InvMetrics Public DB > \$1 Billion ● Total Fund  
● Policy Index

1 Year Ending September 30, 2023

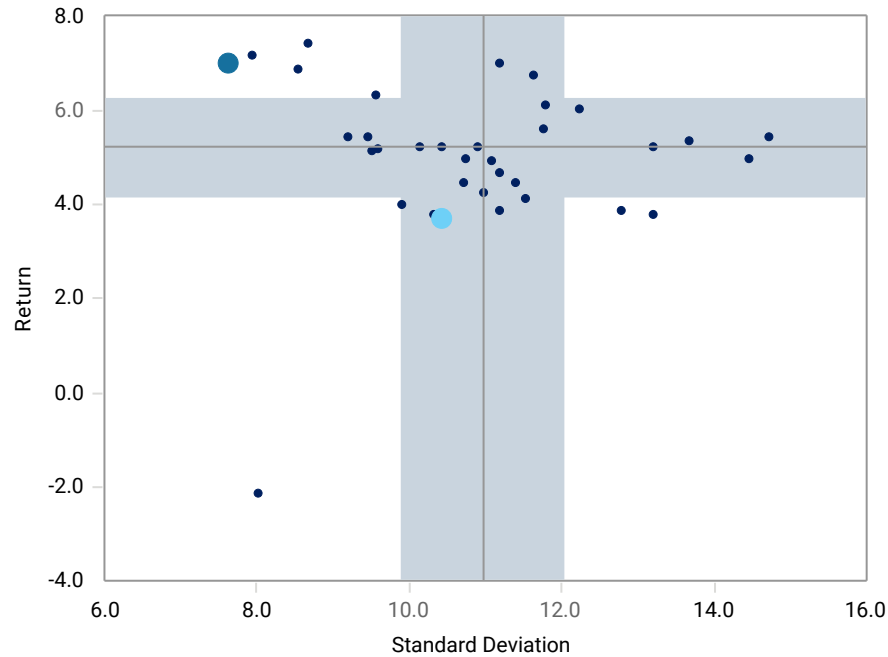
	Return	Standard Deviation	Sharpe Ratio	Sortino Ratio
Total Fund	9.6 (67)	4.0 (1)	1.2 (1)	2.8 (1)
Policy Index	10.8 (31)	10.3 (83)	0.6 (50)	1.0 (52)
Population	38	38	38	38

3 Years Ending September 30, 2023

	Return	Standard Deviation	Sharpe Ratio	Sortino Ratio
Total Fund	10.1 (1)	7.1 (2)	1.1 (1)	2.3 (1)
Policy Index	1.9 (98)	10.7 (59)	0.1 (98)	0.1 (98)
Population	33	33	33	33

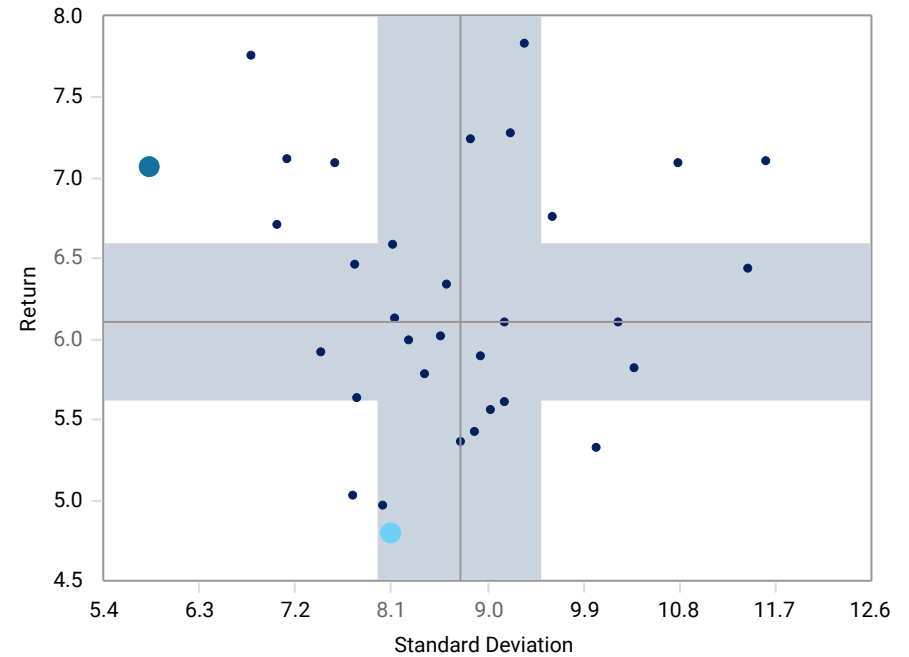
# RISK VS. RETURN

5 Years Ending September 30, 2023



● InvMetrics Public DB > \$1 Billion ● Total Fund  
● Policy Index

10 Years Ending September 30, 2023



● InvMetrics Public DB > \$1 Billion ● Total Fund  
● Policy Index

5 Years Ending September 30, 2023

	Return	Standard Deviation	Sharpe Ratio	Sortino Ratio
Total Fund	7.0 (7)	7.6 (1)	0.7 (1)	1.1 (2)
Policy Index	3.7 (97)	10.4 (37)	0.2 (92)	0.3 (90)
Population	33	33	33	33

10 Years Ending September 30, 2023

	Return	Standard Deviation	Sharpe Ratio	Sortino Ratio
Total Fund	7.1 (24)	5.8 (1)	1.0 (1)	1.6 (1)
Policy Index	4.8 (100)	8.1 (29)	0.5 (98)	0.7 (94)
Population	31	31	31	31



# RISK STATISTICS VS. PEER UNIVERSE

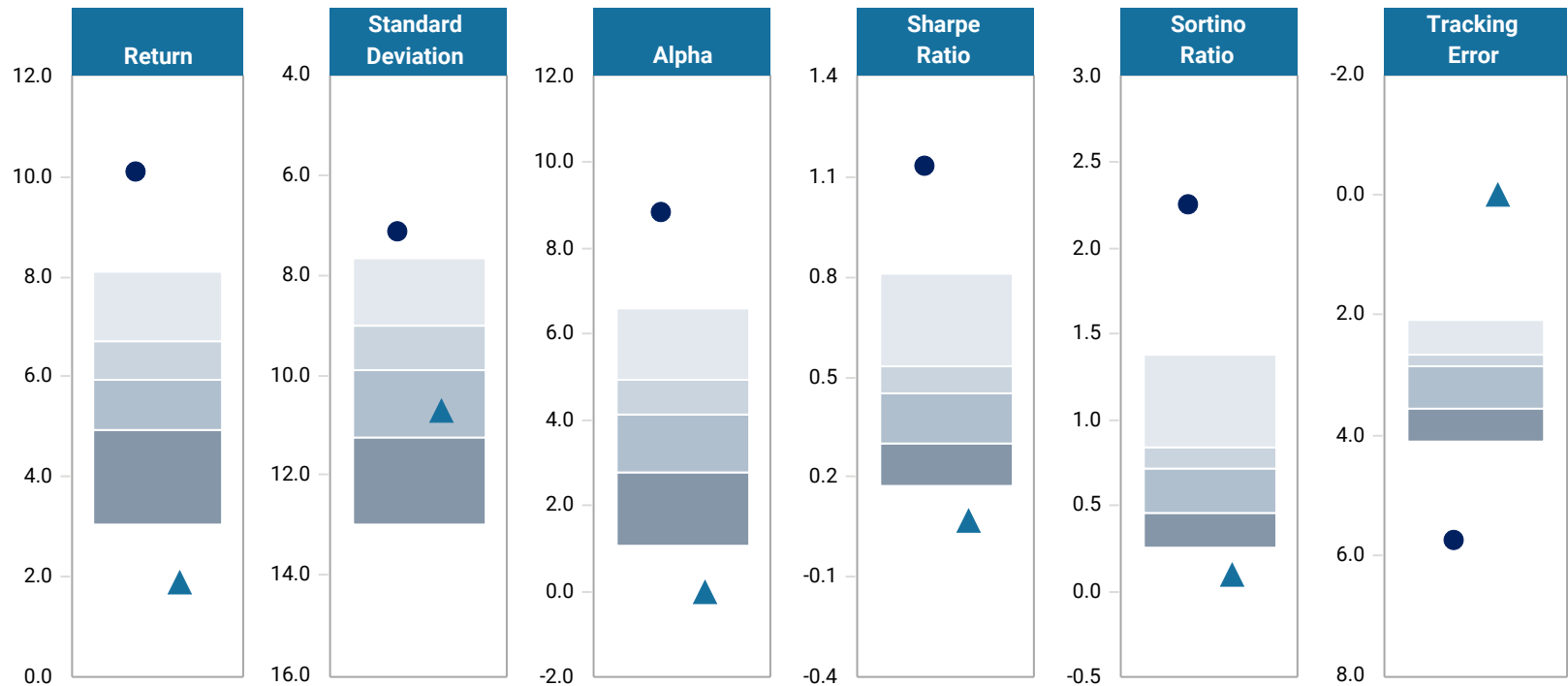
## Total Fund vs. InvMetrics Public DB > \$1 Billion



	1 Yr (%)	1 Yr (%)	1 Yr (%)	1 Yr (%)	1 Yr (%)	1 Yr (%)
● Total Fund	9.6 (67)	4.0 (1)	5.5 (1)	1.2 (1)	2.8 (1)	6.6 (98)
▲ Policy Index	10.8 (31)	10.3 (83)	0.0 (70)	0.6 (50)	1.0 (52)	0.0 (1)
5th Percentile	12.1	6.3	3.2	0.8	1.5	1.5
1st Quartile	11.0	8.0	1.8	0.7	1.3	2.0
Median	9.7	8.6	0.7	0.6	1.1	2.6
3rd Quartile	9.2	9.9	-0.2	0.5	0.9	2.9
95th Percentile	8.1	12.3	-1.3	0.4	0.7	4.1
Population	38	38	38	38	38	38

# RISK STATISTICS VS. PEER UNIVERSE

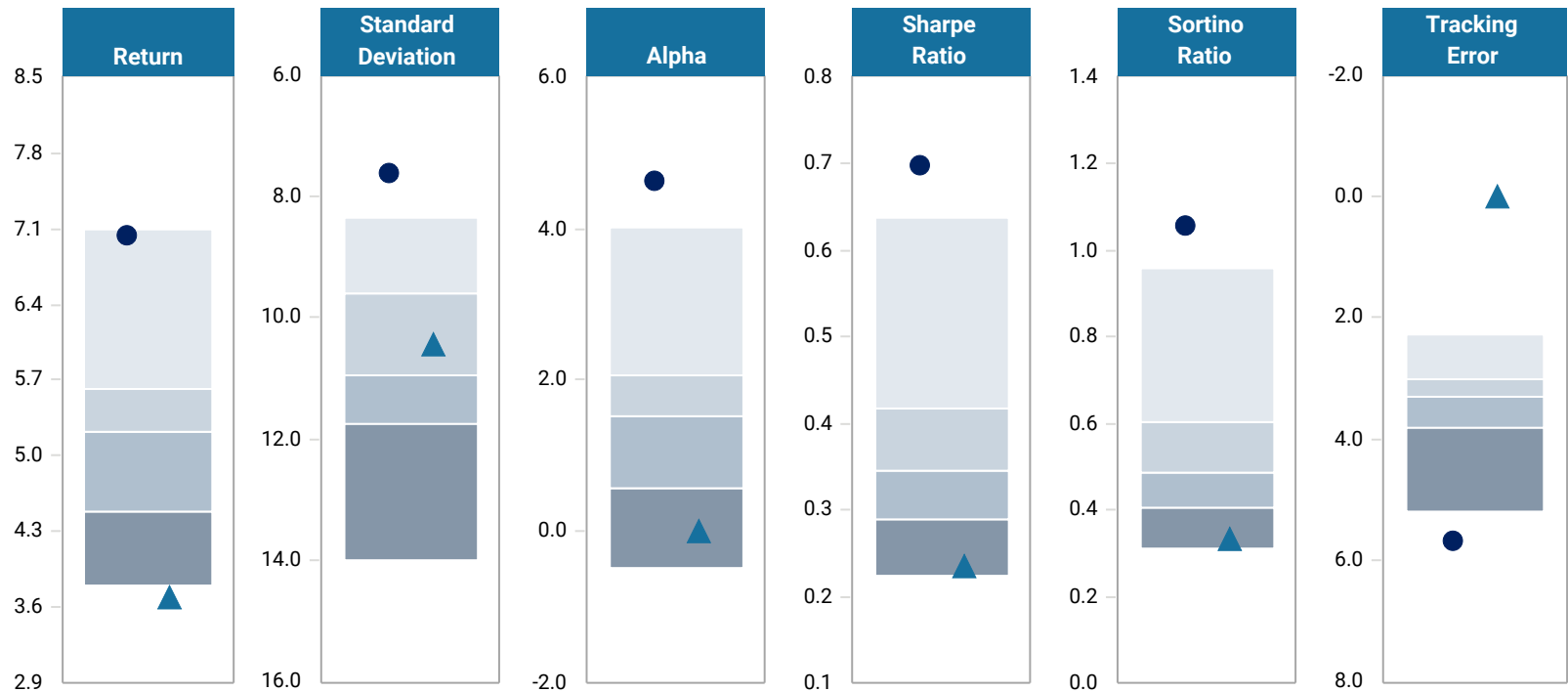
Total Fund vs. InvMetrics Public DB > \$1 Billion



	3 Yrs (%)	3 Yrs (%)	3 Yrs (%)	3 Yrs (%)	3 Yrs (%)	3 Yrs (%)
● Total Fund	10.1 (1)	7.1 (2)	8.8 (1)	1.1 (1)	2.3 (1)	5.8 (97)
▲ Policy Index	1.9 (98)	10.7 (59)	0.0 (100)	0.1 (98)	0.1 (98)	0.0 (1)
5th Percentile	8.1	7.7	6.6	0.8	1.4	2.1
1st Quartile	6.7	9.0	4.9	0.5	0.8	2.7
Median	5.9	9.9	4.1	0.4	0.7	2.8
3rd Quartile	4.9	11.3	2.8	0.3	0.5	3.6
95th Percentile	3.0	13.0	1.1	0.2	0.2	4.1
Population	33	33	33	33	33	33

# RISK STATISTICS VS. PEER UNIVERSE

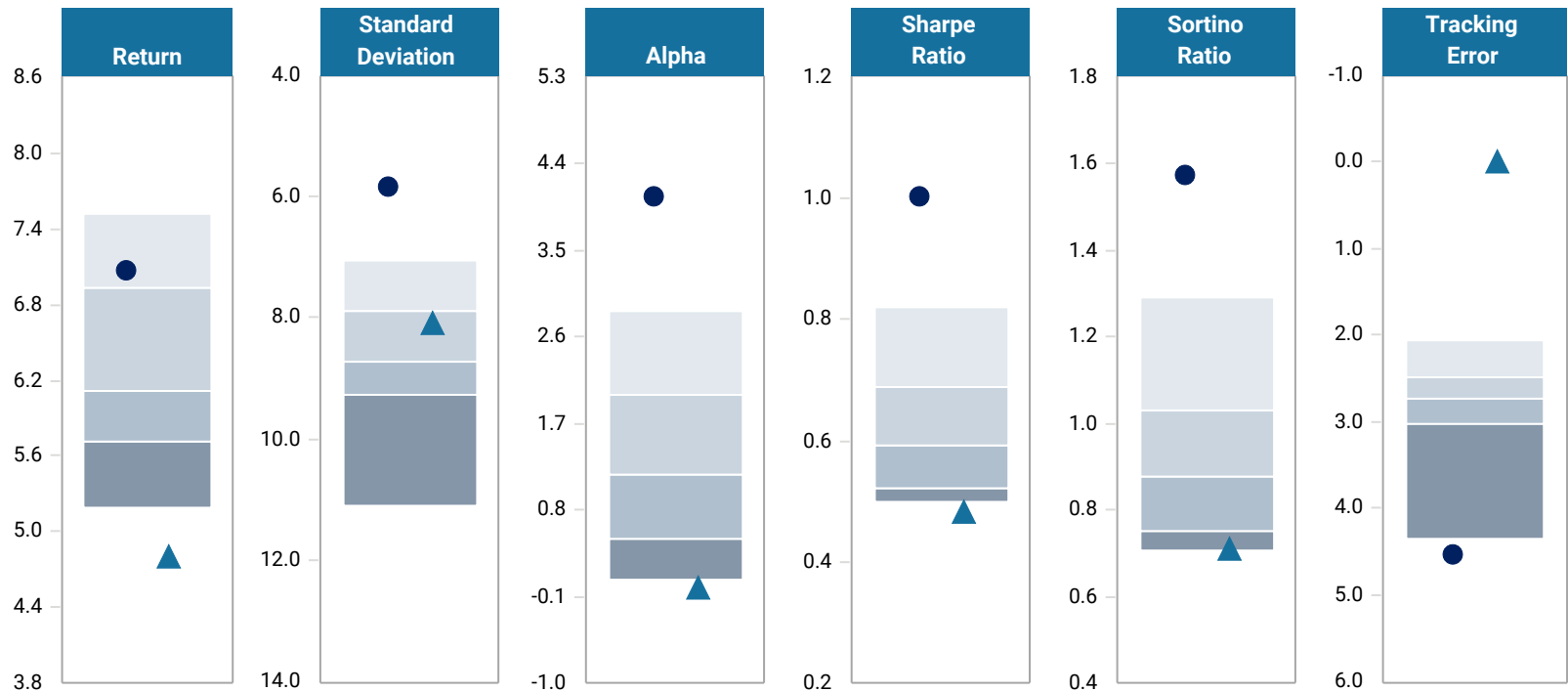
## Total Fund vs. InvMetrics Public DB > \$1 Billion



	5 Yrs (%)	5 Yrs (%)	5 Yrs (%)	5 Yrs (%)	5 Yrs (%)	5 Yrs (%)
● Total Fund	7.0 (7)	7.6 (1)	4.6 (1)	0.7 (1)	1.1 (2)	5.7 (97)
▲ Policy Index	3.7 (97)	10.4 (37)	0.0 (91)	0.2 (92)	0.3 (90)	0.0 (1)
5th Percentile	7.1	8.3	4.0	0.6	1.0	2.3
1st Quartile	5.6	9.6	2.1	0.4	0.6	3.0
Median	5.2	11.0	1.5	0.3	0.5	3.3
3rd Quartile	4.5	11.8	0.6	0.3	0.4	3.8
95th Percentile	3.8	14.0	-0.5	0.2	0.3	5.2
Population	33	33	33	33	33	33

# RISK STATISTICS VS. PEER UNIVERSE

## Total Fund vs. InvMetrics Public DB > \$1 Billion



	10 Yrs (%)	10 Yrs (%)	10 Yrs (%)	10 Yrs (%)	10 Yrs (%)	10 Yrs (%)
● Total Fund	7.1 (24)	5.8 (1)	4.1 (1)	1.0 (1)	1.6 (1)	4.5 (97)
▲ Policy Index	4.8 (100)	8.1 (29)	0.0 (97)	0.5 (98)	0.7 (94)	0.0 (1)
5th Percentile	7.5	7.1	2.9	0.8	1.3	2.1
1st Quartile	6.9	7.9	2.0	0.7	1.0	2.5
Median	6.1	8.7	1.2	0.6	0.9	2.7
3rd Quartile	5.7	9.3	0.5	0.5	0.8	3.0
95th Percentile	5.2	11.1	0.1	0.5	0.7	4.4
Population	31	31	31	31	31	31

# TOTAL PLAN RISK STATISTICS

1 Years Ending September 30, 2023				
	Return	Standard Deviation	Tracking Error	Information Ratio
<b>Domestic Equity With Beta Overlay</b>	<b>14.6</b>	<b>15.2</b>	<b>2.6</b>	<b>-2.0</b>
<i>Russell 3000 Index</i>	<i>20.5</i>	<i>16.3</i>	<i>0.0</i>	
<b>International Equity With Beta Overlay</b>	<b>12.6</b>	<b>13.5</b>	<b>4.3</b>	<b>-1.8</b>
<i>MSCI AC World ex USA index</i>	<i>21.0</i>	<i>17.5</i>	<i>0.0</i>	
<b>Global Fixed Income With Beta Overlay</b>	<b>7.5</b>	<b>3.2</b>	<b>7.3</b>	<b>0.7</b>
<i>Blmbg. Global Aggregate</i>	<i>2.2</i>	<i>8.7</i>	<i>0.0</i>	
<b>U.S. Credit Strategies</b>	<b>9.4</b>	<b>2.1</b>	<b>4.0</b>	<b>-0.4</b>
<i>50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index</i>	<i>11.1</i>	<i>3.9</i>	<i>0.0</i>	
<b>Non-U.S. Credit Composite</b>	<b>14.2</b>	<b>9.0</b>	<b>13.7</b>	<b>-0.4</b>
<i>ICE BofA Euro High Yield Constrained TR</i>	<i>20.0</i>	<i>11.3</i>	<i>0.0</i>	
<b>Emerging Markets Debt Composite</b>	<b>7.7</b>	<b>5.2</b>	<b>9.6</b>	<b>-0.4</b>
<i>50% JPM EMBI Global Diversified/50% JPM GBI - EM Global Diversified</i>	<i>11.6</i>	<i>10.5</i>	<i>0.0</i>	
<b>Alpha Pool Composite</b>	<b>10.9</b>	<b>2.3</b>	<b>2.3</b>	<b>1.3</b>
<i>91 Day T-Bill + 3%</i>	<i>7.6</i>	<i>0.3</i>	<i>0.0</i>	
<b>Private Equity Composite</b>	<b>6.1</b>	<b>3.2</b>	<b>3.8</b>	<b>0.8</b>
<i>CJA Global All PE (Qtr Lag)</i>	<i>2.8</i>	<i>3.1</i>	<i>0.0</i>	
<b>Real Estate Composite</b>	<b>-3.0</b>	<b>2.3</b>	<b>4.9</b>	<b>0.7</b>
<i>NCREIF Property Index 1 Qtr. Lag</i>	<i>-6.6</i>	<i>4.2</i>	<i>0.0</i>	
<b>Real Assets Composite</b>	<b>8.1</b>	<b>3.4</b>	<b>11.2</b>	<b>0.0</b>
<i>Real Assets Custom Blend</i>	<i>7.9</i>	<i>11.2</i>	<i>0.0</i>	

# TOTAL PLAN RISK STATISTICS

3 Years Ending September 30, 2023				
	Return	Standard Deviation	Tracking Error	Information Ratio
<b>Domestic Equity With Beta Overlay</b>	<b>6.7</b>	<b>17.2</b>	<b>2.8</b>	<b>-0.9</b>
<i>Russell 3000 Index</i>	9.4	18.2	0.0	
<b>International Equity With Beta Overlay</b>	<b>4.1</b>	<b>13.9</b>	<b>4.4</b>	<b>-0.1</b>
<i>MSCI AC World ex USA index</i>	4.2	17.2	0.0	
<b>Global Fixed Income With Beta Overlay</b>	<b>8.6</b>	<b>4.6</b>	<b>6.6</b>	<b>2.3</b>
<i>Blmbg. Global Aggregate</i>	-6.9	7.9	0.0	
<b>U.S. Credit Strategies</b>	<b>10.3</b>	<b>5.2</b>	<b>4.9</b>	<b>1.3</b>
<i>50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index</i>	3.6	5.4	0.0	
<b>Non-U.S. Credit Composite</b>	<b>13.1</b>	<b>6.8</b>	<b>12.3</b>	<b>1.2</b>
<i>ICE BofA Euro High Yield Constrained TR</i>	-2.6	12.8	0.0	
<b>Emerging Markets Debt Composite</b>	<b>1.1</b>	<b>4.8</b>	<b>8.8</b>	<b>0.5</b>
<i>50% JPM EMBI Global Diversified/50% JPM GBI - EM Global Diversified</i>	-3.6	10.3	0.0	
<b>Alpha Pool Composite</b>	<b>7.7</b>	<b>5.1</b>	<b>5.1</b>	<b>0.6</b>
<i>91 Day T-Bill + 3%</i>	4.8	0.6	0.0	
<b>Private Equity Composite</b>	<b>20.1</b>	<b>8.1</b>	<b>13.4</b>	<b>0.1</b>
<i>CJA Global All PE (Qtr Lag)</i>	18.3	14.0	0.0	
<b>Real Estate Composite</b>	<b>8.7</b>	<b>4.5</b>	<b>8.5</b>	<b>0.2</b>
<i>NCREIF Property Index 1 Qtr. Lag</i>	6.8	6.7	0.0	
<b>Real Assets Composite</b>	<b>17.1</b>	<b>5.9</b>	<b>11.8</b>	<b>0.4</b>
<i>Real Assets Custom Blend</i>	11.5	12.1	0.0	

# TOTAL PLAN RISK STATISTICS

5 Years Ending September 30, 2023				
	Return	Standard Deviation	Tracking Error	Information Ratio
<b>Domestic Equity With Beta Overlay</b>	<b>6.3</b>	<b>19.2</b>	<b>3.0</b>	<b>-0.9</b>
<i>Russell 3000 Index</i>	9.1	19.6	0.0	
<b>International Equity With Beta Overlay</b>	<b>2.3</b>	<b>15.5</b>	<b>3.7</b>	<b>-0.3</b>
<i>MSCI AC World ex USA index</i>	3.1	17.7	0.0	
<b>Global Fixed Income With Beta Overlay</b>	<b>5.0</b>	<b>6.5</b>	<b>8.0</b>	<b>0.8</b>
<i>Blmbg. Global Aggregate</i>	-1.6	6.9	0.0	
<b>U.S. Credit Strategies</b>	<b>7.0</b>	<b>7.0</b>	<b>6.1</b>	<b>0.5</b>
<i>50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index</i>	3.7	7.7	0.0	
<b>Non-U.S. Credit Composite</b>	<b>5.9</b>	<b>8.7</b>	<b>12.2</b>	<b>0.5</b>
<i>ICE BofA Euro High Yield Constrained TR</i>	-0.5	13.2	0.0	
<b>Emerging Markets Debt Composite</b>	<b>0.4</b>	<b>6.2</b>	<b>9.4</b>	<b>0.0</b>
<i>50% JPM EMBI Global Diversified/50% JPM GBI - EM Global Diversified</i>	-0.1	11.0	0.0	
<b>Alpha Pool Composite</b>	<b>4.4</b>	<b>6.3</b>	<b>6.3</b>	<b>0.0</b>
<i>91 Day T-Bill + 3%</i>	4.8	0.5	0.0	
<b>Private Equity Composite</b>	<b>15.9</b>	<b>8.3</b>	<b>12.8</b>	<b>0.1</b>
<i>CJA Global All PE (Qtr Lag)</i>	14.0	12.9	0.0	
<b>Real Estate Composite</b>	<b>7.2</b>	<b>3.8</b>	<b>7.0</b>	<b>0.2</b>
<i>NCREIF Property Index 1 Qtr. Lag</i>	5.9	5.4	0.0	
<b>Real Assets Composite</b>	<b>9.6</b>	<b>9.8</b>	<b>10.4</b>	<b>0.3</b>
<i>Real Assets Custom Blend</i>	5.8	11.6	0.0	



# TOTAL PLAN RISK STATISTICS

10 Years Ending September 30, 2023				
	Return	Standard Deviation	Tracking Error	Information Ratio
<b>Domestic Equity</b>	<b>4.6</b>	<b>13.1</b>	<b>8.5</b>	<b>-0.8</b>
<i>Russell 3000 Index</i>	<i>11.3</i>	<i>15.4</i>	<i>0.0</i>	
<b>International Equity</b>	<b>1.4</b>	<b>15.5</b>	<b>8.4</b>	<b>-0.7</b>
<i>MSCI AC World Index (Net)</i>	<i>7.6</i>	<i>14.5</i>	<i>0.0</i>	
<b>International Emerging</b>	<b>0.0</b>	<b>14.9</b>	<b>5.2</b>	<b>-0.5</b>
<i>MSCI Emerging Markets (Net)</i>	<i>2.1</i>	<i>17.0</i>	<i>0.0</i>	
<b>U.S. Credit Strategies</b>	<b>6.8</b>	<b>5.4</b>	<b>5.0</b>	<b>0.5</b>
<i>50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index</i>	<i>4.3</i>	<i>5.9</i>	<i>0.0</i>	
<b>Non-U.S. Credit Composite</b>	<b>6.6</b>	<b>6.5</b>	<b>10.9</b>	<b>0.5</b>
<i>ICE BofA Euro High Yield Constrained TR</i>	<i>0.7</i>	<i>11.4</i>	<i>0.0</i>	
<b>Emerging Markets Debt Composite</b>	<b>2.1</b>	<b>5.9</b>	<b>7.6</b>	<b>0.1</b>
<i>50% JPM EMBI Global Diversified/50% JPM GBI - EM Global Diversified</i>	<i>0.9</i>	<i>9.6</i>	<i>0.0</i>	
<b>Alpha Pool Composite</b>	<b>4.6</b>	<b>5.0</b>	<b>5.0</b>	<b>0.1</b>
<i>91 Day T-Bill + 3%</i>	<i>4.1</i>	<i>0.4</i>	<i>0.0</i>	
<b>Private Equity Composite</b>	<b>14.7</b>	<b>6.5</b>	<b>10.4</b>	<b>0.1</b>
<i>CJA Global All PE (Qtr Lag)</i>	<i>13.6</i>	<i>10.2</i>	<i>0.0</i>	
<b>Real Estate Composite</b>	<b>8.3</b>	<b>3.6</b>	<b>6.1</b>	<b>0.1</b>
<i>NCREIF Property Index 1 Qtr. Lag</i>	<i>7.8</i>	<i>4.8</i>	<i>0.0</i>	
<b>Real Assets Composite</b>	<b>5.8</b>	<b>7.9</b>	<b>8.5</b>	<b>0.4</b>
<i>Real Assets Custom Blend</i>	<i>2.6</i>	<i>9.2</i>	<i>0.0</i>	

# INVESTMENT MANAGER TOP 10

ASSETS UNDER MANAGEMENT AS OF SEPTEMBER 30, 2023

Manager	Market Value	Portfolio %
SSGA	\$1,600,240,825.26	11.18%
Pathway	\$800,138,989.42	5.59%
Russell	\$796,106,419.29	5.56%
Ares	\$733,317,350.63	5.13%
Alcentra	\$708,861,337.00	4.95%
GoldenTree	\$666,089,409.10	4.66%
Partners Group	\$653,272,275.63	4.57%
Zais	\$646,851,633.08	4.52%
Tobam	\$641,342,286.55	4.48%
Gramercy	\$641,115,654.52	4.48%
<b>Total</b>	<b>\$7,887,336,180.48</b>	<b>55.12%</b>

# PUBLIC EQUITY PORTFOLIO

Public Equity Portfolio (30% Target)	US Equities (17% Target)	<b>Large Cap (14.5%)</b>	Russell Investments Russell 1000 Index	Overlay exposure to an index of largest 1,000 stocks (by market cap) in the Russell 3000
			SSGA S&P500 Index Fund	Index of 500 of the largest US publicly-traded companies in US
			TOBAM Anti-Benchmark US Equity Fund	Rules-based index focused on a more efficiently diversified benchmark vs. MSCI US
	International Equities (13% Target)	<b>Small Cap (2.5%)</b>	Russell Investments Russell 2000 Index	Overlay exposure to an index of smallest 2,000 stocks (by market cap) in the Russell 3000
		<b>Developed Markets (7%)</b>	Russell Investments MSCI EAFE Index	Overlay exposure to an index of large/mid-cap stocks across 21 developed markets ex-US/Canada
			SSGA MSCI World ex-USA Index Fund	Index of publicly-traded large-cap and mid-cap equities in 22 developed countries ex-US
		<b>Emerging Markets (6%)</b>	TOBAM Anti-Benchmark World ex-US Fund	Rules-based index focused on a more efficiently diversified benchmark vs. MSCI World ex-US
			Russell Investments MSCI EM Index	Overlay exposure to an index of large/mid-cap stocks across 27 emerging markets
			TOBAM Anti-Benchmark EM Equity Fund	Rules-based index focused on a more efficiently diversified benchmark vs. MSCI Emerging Markets
			William Blair EM Growth Fund	Diversified, all-cap portfolio investing in high quality growth companies in emerging markets
			Wasatch EM Select Fund	Concentrated portfolio investing in emerging market opportunities over a 3-5 year investment horizon

# GLOBAL EQUITY STRATEGIES - NET

	Allocation		Performance (%)					
	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>Total Equity</b>	<b>2,235,119,379</b>	<b>15.6</b>	<b>-3.9</b>	<b>5.2</b>	<b>14.7</b>	<b>4.0</b>	<b>4.9</b>	<b>4.0</b>
MSCI AC World Index (Net)			<u>-3.4</u>	<u>10.1</u>	<u>20.8</u>	<u>6.9</u>	<u>6.5</u>	<u>7.6</u>
Over/Under			-0.5	-4.9	-6.1	-2.9	-1.6	-3.6
<b>Domestic Equity With Beta Overlay</b>	<b>1,296,680,422</b>	<b>9.1</b>	<b>-3.7</b>	<b>6.3</b>	<b>14.6</b>	<b>6.7</b>	<b>6.3</b>	
Russell 3000 Index			<u>-3.3</u>	<u>12.4</u>	<u>20.5</u>	<u>9.4</u>	<u>9.1</u>	
Over/Under			-0.4	-6.1	-5.9	-2.7	-2.8	
<b>Domestic Equity</b>	<b>1,537,751,531</b>	<b>10.7</b>	<b>-3.7</b>	<b>7.3</b>	<b>16.3</b>	<b>7.2</b>	<b>7.8</b>	<b>4.6</b>
Russell 3000 Index			<u>-3.3</u>	<u>12.4</u>	<u>20.5</u>	<u>9.4</u>	<u>9.1</u>	<u>11.3</u>
Over/Under			-0.4	-5.1	-4.2	-2.2	-1.3	-6.7
Tobam AB US Equity	378,490,200	2.6	-4.9 (72)	-7.2 (99)	2.8 (96)	1.2 (91)	4.0 (82)	
Russell 3000 Index			<u>-3.3</u> (43)	<u>12.4</u> (23)	<u>20.5</u> (28)	<u>9.4</u> (51)	<u>9.1</u> (23)	
Over/Under			-1.6	-19.6	-17.7	-8.2	-5.1	
<b>Large Cap Equity</b>	<b>1,158,998,505</b>	<b>8.1</b>	<b>-3.3 (44)</b>	<b>13.0 (20)</b>	<b>21.6 (22)</b>	<b>9.8 (47)</b>	<b>9.8 (16)</b>	<b>6.3 (91)</b>
S&P 500 Index			<u>-3.3</u> (44)	<u>13.1</u> (20)	<u>21.6</u> (22)	<u>10.2</u> (44)	<u>9.9</u> (14)	<u>11.9</u> (14)
Over/Under			0.0	-0.1	0.0	-0.4	-0.1	-5.6
SSgA S&P500	1,158,004,872	8.1	-3.3 (44)	13.0 (20)	21.6 (22)	10.0 (45)	10.1 (12)	9.1 (51)
S&P 500 Index			<u>-3.3</u> (44)	<u>13.1</u> (20)	<u>21.6</u> (22)	<u>10.2</u> (44)	<u>9.9</u> (14)	<u>11.9</u> (14)
Over/Under			0.0	-0.1	0.0	-0.2	0.2	-2.8
Russell US Large Cap Volatility	993,633	0.0						
<b>Small Cap Equity</b>	<b>262,826</b>	<b>0.0</b>						
Russell US Small Cap Volatility	262,826	0.0	1.4	3.9	4.9	1.9	1.8	-15.8

# GLOBAL EQUITY STRATEGIES - NET

	Allocation		Performance (%)					
	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>International Equity With Beta Overlay</b>	<b>1,268,461,088</b>	<b>8.9</b>	<b>-3.9</b>	<b>3.3</b>	<b>12.6</b>	<b>4.1</b>	<b>2.3</b>	
MSCI AC World ex USA index			<u>-3.7</u>	<u>5.8</u>	<u>21.0</u>	<u>4.2</u>	<u>3.1</u>	
Over/Under			-0.2	-2.5	-8.4	-0.1	-0.8	
<b>International Equity</b>	<b>697,367,848</b>	<b>4.9</b>	<b>-4.2</b>	<b>1.5</b>	<b>10.6</b>	<b>-2.3</b>	<b>-0.8</b>	<b>1.4</b>
MSCI AC World Index (Net)			<u>-3.4</u>	<u>10.1</u>	<u>20.8</u>	<u>6.9</u>	<u>6.5</u>	<u>7.6</u>
Over/Under			-0.8	-8.6	-10.2	-9.2	-7.3	-6.2
<b>International Developed</b>	<b>394,756,423</b>	<b>2.8</b>	<b>-3.6</b>	<b>5.2</b>	<b>21.2</b>	<b>-0.9</b>	<b>-0.1</b>	<b>1.8</b>
MSCI EAFE (Net)			<u>-4.1</u>	<u>7.1</u>	<u>25.6</u>	<u>5.8</u>	<u>3.2</u>	<u>3.8</u>
Over/Under			0.5	-1.9	-4.4	-6.7	-3.3	-2.0
Russell International Volatility	17,392	0.0						
Tobam AB World Ex-US Equity	169,836,539	1.2	-3.0 (33)	2.8 (78)	17.3 (76)	-2.5 (83)	-1.8 (98)	
MSCI AC World ex USA (Net)			<u>-3.8</u> (39)	<u>5.3</u> (51)	<u>20.4</u> (55)	<u>3.7</u> (44)	<u>2.6</u> (64)	
Over/Under			0.8	-2.5	-3.1	-6.2	-4.4	
SSGA MSCI World Ex-US Equity	224,902,491	1.6	-4.1 (43)	7.1 (35)	24.4 (28)			
MSCI World ex U.S.			<u>-4.0</u> (43)	<u>7.3</u> (32)	<u>24.7</u> (27)			
Over/Under			-0.1	-0.2	-0.3			
<b>International Emerging</b>	<b>302,611,425</b>	<b>2.1</b>	<b>-4.9</b>	<b>-1.4</b>	<b>3.0</b>	<b>-4.4</b>	<b>-2.2</b>	<b>0.0</b>
MSCI Emerging Markets (Net)			<u>-2.9</u>	<u>1.8</u>	<u>11.7</u>	<u>-1.7</u>	<u>0.6</u>	<u>2.1</u>
Over/Under			-2.0	-3.2	-8.7	-2.7	-2.8	-2.1
Tobam	93,015,547	0.7	-6.5 (94)	-6.5 (99)	-3.4 (100)	-6.7 (92)	-4.0 (100)	
MSCI Emerging Markets (Net)			<u>-2.9</u> (47)	<u>1.8</u> (65)	<u>11.7</u> (66)	<u>-1.7</u> (61)	<u>0.6</u> (75)	
Over/Under			-3.6	-8.3	-15.1	-5.0	-4.6	
Wasatch EM Select	106,991,663	0.7	-4.0	5.5				
MSCI Emerging Markets (Net)			<u>-2.9</u>	<u>1.8</u>				
Over/Under			-1.1	3.7				
William Blair EM Growth	102,604,214	0.7	-4.1	1.2				
MSCI Emerging Markets (Net)			<u>-2.9</u>	<u>1.8</u>				
Over/Under			-1.2	-0.6				

# GLOBAL DEBT STRATEGIES

Global Debt Strategies (32% Target)	US Fixed Income (15% Target)	<b>Core Fixed Income (2%)</b>	Russell Investments Bloomberg Barclays US Agg Bond TR Index	Broad-based bond market index of intermediate-term investment grade bonds in US
		<b>Credit Strategies/ High Yield Strategies (13%)</b>	<p>Apollo Atlas Warehouse Co (MCA)          Apollo Asset-Backed Finance Fund (MCA)          Apollo Credit Strategies Fund LP (MCA)          Apollo Offshore Credit Fund LTD (MCA)          Bardin Hill Direct Portfolio (MCA)          Bardin Hill Opportunistic Credit Fund (MCA)          Bardin Hill Opportunistic Credit Fund II (MCA)          Bardin Hill Solutions Fund LP (MCA)          Beach Point Select Fund LP          GoldenTree Distressed Debt Fund 2010</p> <p>GoldenTree Asset Management SMA          Kayne Anderson BDC (MCA)          Manulife Asset Management SMA          Waterfall Ready Capital Corp. (MCA)          Waterfall Asset Management SMA (MCA)          Waterfall Mortgage Loan Opportunity Fund (MCA)          Waterfall Victoria Fund LP (MCA)</p>	<p>Global lending franchise (formerly CSFB securitized products group) originating warehouse assets          Diversified portfolio of asset-backed products across consumer finance, resi/commercial, and hard/financial assets          Long/short credit fund focused on capital structure arbitrage, defensive credit, stressed credit and distressed credit          Global credit fund focused on bank loans, structured credit, and bonds          Co-investments in event-driven/special situation and mispriced credit opportunities          Investments in quality, stable businesses trading at discounts and/or creative structured situations          Investments in quality, stable businesses trading at discounts and/or creative structured situations          Credit fund with focus on event-driven/special situations          Credit fund with focus on mispriced credit opportunities          Fund focused on global distressed, restructuring and turnaround opportunities</p> <p>SMA with opportunistic relative-value approach to bonds, loans, structured credit, distressed debt and emerging markets          BDC investing in third-party and secondary market CLO opportunities          Long/short SMA specializing in securitized assets (commercial and residential MBS and agency derivatives)          Publicly traded REIT specializing in small balance commercial real estate loans          Separate account focused on multi-sector high yield loans and bonds          Fund investing in assets sold by non-bank mortgage companies given interest rate-related liquidity stress          Fund investing in ABS, primarily residential whole loans originated on a primary or secondary basis</p>
	Global Fixed Income (17% Target)	<b>International Core (0%)</b>	Russell Investments (Barclays Global Aggregate ex-US Unhedged)	Broad-based bond market index of investment grade debt from 24 local currency markets ex-USD
		<b>International Credit (11%)</b>	<p>Alcentra Limited SMA          Alcentra European Direct Lending Fund          Alcentra Strategic Credit Fund          Alcentra Structured Credit Opportunity Fund III          Alcentra Viaduct Fund LP          Cairn Capital Limited SMA          Cairn Capstone Special Opportunities Fund          Cairn Loan Investments          Cairn Loan Investments II          Cairn Pathfinder I          Cairn Pathfinder III</p> <p>Marathon Asset Management SMA          Marathon CLO Equity Fund          Marathon European Credit Opportunity Fund III          Marathon Structured Product Strategies Fund II          Marathon Structured Product Strategies Fund III</p>	<p>SMA investing in European and US performing and non-performing bonds/loans, and CLO equity          2013 fund investing in European direct lending opportunities          2015 fund investing in European CLOs and stressed/distressed credit opportunities          2017 fund investing in European CLO opportunities          2018 fund investing in European CLO opportunities including CLO warehousing, risk retention, and equity          SMA focused on opportunistic European credit, private asset backed, regulatory risk transfer, European CLOs          Fund focused on cash-flow oriented regulatory risk transfer, private asset backed loans, and structured credit          European CLO Risk Retention vehicle          European CLO Risk Retention vehicle          Barclays regulatory capital risk transfer on UK mid cap corporate RCF          Barclays regulatory capital risk transfer on global (70% US) large cap corporate RCF</p> <p>SMA focused on opportunistic global stressed and distressed credit, restructured real estate, and credit-related real assets          Legacy risk retention vehicle that maintains an economic interest in Marathon issued CLO equity          Fund focused on European commercial real estate credit          Fund focused on private asset-backed secured debt across multiple sectors          Fund focused on private asset-backed secured debt across multiple sectors (transports, real estate, healthcare, etc.)</p>
		<b>Emerging Market Debt (6%)</b>	<p>Finisterre EM Debt Total Return Fund          Gramercy Capital Solutions Fund (MCA)          Gramercy Capital Solutions Fund II (MCA)          Gramercy Distressed Argentina Fund III Private (MCA)          Gramercy Distressed Argentina Fund IV Private (MCA)          Gramercy Distressed Opportunity Fund II (MCA)          Gramercy Distressed Opportunity Fund III (MCA)          Gramercy Separate Account (MCA)          Gramercy Venezuela Opportunity Fund (MCA)          Gramercy Emerging Markets Dynamic Credit Fund (MCA)          Gramercy Venezuela Opportunity Fund II (MCA)          Gramercy Venezuela Special Situations Fund (MCA)          PGIM Emerging Market Debt Opportunities Fund</p>	<p>Fund focused on an all-weather strategy across the cycle in emerging markets          2018 fund engaged in emerging markets corporate direct lending          2021 fund engaged in emerging markets corporate direct lending          Fund engaged in Argentina-focused corporate direct lending          Fund engaged in opportunistic Argentina focused sovereign positions          Diversified emerging markets hedge fund          Diversified emerging markets hedge fund          Stressed and distressed emerging market credit investments in public and private assets.          Venezuelan sovereign-focused fund          Performing and opportunistic credit in public and private markets weighted with a top-down view          OFAC-compliant distressed credit related to Venezuela          Litigation financing (e.g. ICSID claims) related to Venezuela          Fund investing in sovereign bonds, local bonds, corporate bonds and currencies in emerging economies.</p>

# GLOBAL DEBT STRATEGIES - NET

	Allocation		Performance (%)					
	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>Global Fixed Income With Beta Overlay</b>	<b>5,502,667,627</b>	<b>38.5</b>	<b>1.3</b>	<b>5.9</b>	<b>7.5</b>	<b>8.6</b>	<b>5.0</b>	
Blmbg. Global Aggregate			-3.6	-2.2	2.2	-6.9	-1.6	
Over/Under			4.9	8.1	5.3	15.5	6.6	
<b>Total Fixed</b>	<b>3,976,686,139</b>	<b>27.8</b>	<b>2.4</b>	<b>8.1</b>	<b>7.7</b>	<b>7.9</b>	<b>4.3</b>	<b>5.3</b>
Blmbg. U.S. Aggregate Index			-3.2	-1.2	0.6	-5.2	0.1	1.1
Over/Under			5.6	9.3	7.1	13.1	4.2	4.2
<b>U.S. Credit Strategies</b>	<b>1,762,919,190</b>	<b>12.3</b>	<b>3.5 (1)</b>	<b>8.2 (2)</b>	<b>9.4 (21)</b>	<b>10.3 (1)</b>	<b>7.0 (1)</b>	<b>6.8 (1)</b>
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index			1.8 (5)	7.5 (2)	11.1 (18)	3.6 (3)	3.7 (2)	4.3 (1)
Over/Under			1.7	0.7	-1.7	6.7	3.3	2.5
Stone Tower Offshore Credit (Apollo)	284,207,941	2.0	4.0	11.0	8.3	7.1	5.3	5.6
Beach Point Capital (Formerly Post)	251,548,074	1.8	2.9	9.2	6.2	8.8	7.1	7.6
Mackay / Gold Coast	1,622	0.0						
Stone Tower Credit (Apollo)	141,549,318	1.0	1.8	9.1	7.1	7.5	9.4	7.6
Gold Coast Capital IV	100,874,078	0.7	2.1	5.8	6.2	3.3	3.2	
Waterfall Asset Management	55,019,258	0.4	-4.6	2.7	14.6	13.6	5.7	
Waterfall Victoria	72,826,791	0.5	-2.6	-8.9	-10.1	2.1	2.6	
KAYNE ANDERSON BDC, LLC	65,138,181	0.5	17.6	10.7	13.5			
Golden Tree Asset Management	661,906,943	4.6	2.9	10.0	14.4	14.7	9.9	10.0



## GLOBAL DEBT STRATEGIES - NET

	Allocation		Performance (%)					
	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>Non-U.S. Fixed Income Composite</b>	<b>2,213,766,949</b>	<b>15.5</b>	<b>1.5</b>	<b>7.8</b>	<b>11.5</b>	<b>7.9</b>	<b>3.5</b>	<b>4.9</b>
Blmbg. Global Aggregate Ex USD			<u>-4.0</u>	<u>-3.2</u>	<u>3.4</u>	<u>-8.4</u>	<u>-3.1</u>	<u>-1.7</u>
Over/Under			5.5	11.0	8.1	16.3	6.6	6.6
<b>Non-U.S. Credit Composite</b>	<b>1,354,725,116</b>	<b>9.5</b>	<b>2.3</b>	<b>9.8</b>	<b>14.2</b>	<b>13.1</b>	<b>5.9</b>	<b>6.6</b>
ICE BofA Euro High Yield Constrained TR			<u>-1.3</u>	<u>5.3</u>	<u>20.0</u>	<u>-2.6</u>	<u>-0.5</u>	<u>0.7</u>
Over/Under			3.6	4.5	-5.8	15.7	6.4	5.9
Marathon/Gold Coast	224,821,688	1.6	-0.1	-1.6	-2.1	7.1	7.0	7.9
ICE BofA Euro High Yield Constrained TR			<u>-1.3</u>	<u>5.3</u>	<u>20.0</u>	<u>-2.6</u>	<u>-0.5</u>	<u>0.7</u>
Over/Under			1.2	-6.9	-22.1	9.7	7.5	7.2
Halcyon Asset Management	224,199,549	1.6	2.8 (1)	6.3 (3)	4.1 (87)	16.9 (1)	3.6 (2)	
ICE BofA Euro High Yield Constrained TR			<u>-1.3</u> (37)	<u>5.3</u> (5)	<u>20.0</u> (1)	<u>-2.6</u> (25)	<u>-0.5</u> (83)	
Over/Under			4.1	1.0	-15.9	19.5	4.1	
Cairn Composite	196,842,543	1.4	2.8 (1)	15.2 (1)	22.0 (1)	10.5 (1)	6.9 (1)	5.8 (1)
ICE BofA Euro High Yield Constrained TR			<u>-1.3</u> (37)	<u>5.3</u> (5)	<u>20.0</u> (1)	<u>-2.6</u> (25)	<u>-0.5</u> (83)	<u>0.7</u> (84)
Over/Under			4.1	9.9	2.0	13.1	7.4	5.1
Alcentra - KT1	584,005,425	4.1	2.9	14.9	24.5	17.2	6.2	
ICE BofA Euro High Yield Constrained TR			<u>-1.3</u>	<u>5.3</u>	<u>20.0</u>	<u>-2.6</u>	<u>-0.5</u>	
Over/Under			4.2	9.6	4.5	19.8	6.7	
Alcentra SP1 - KT1	1,020,300	0.0	-0.2	5.7	6.8	26.5	-6.8	
ICE BofA Euro High Yield Constrained TR			<u>-1.3</u>	<u>5.3</u>	<u>20.0</u>	<u>-2.6</u>	<u>-0.5</u>	
Over/Under			1.1	0.4	-13.2	29.1	-6.3	
Alcentra SP2 - KT1	14,267,996	0.1	-7.9	-4.1	-0.5	7.0	-5.2	
ICE BofA Euro High Yield Constrained TR			<u>-1.3</u>	<u>5.3</u>	<u>20.0</u>	<u>-2.6</u>	<u>-0.5</u>	
Over/Under			-6.6	-9.4	-20.5	9.6	-4.7	
Alcentra SP3 - KT1	21,094,554	0.1	9.8	25.9	27.2	19.5	8.0	
ICE BofA Euro High Yield Constrained TR			<u>-1.3</u>	<u>5.3</u>	<u>20.0</u>	<u>-2.6</u>	<u>-0.5</u>	
Over/Under			11.1	20.6	7.2	22.1	8.5	
Alcentra SP4 - KT1	88,473,062	0.6	2.2	5.3	10.0	12.9		
ICE BofA Euro High Yield Constrained TR			<u>-1.3</u>	<u>5.3</u>	<u>20.0</u>	<u>-2.6</u>		
Over/Under			3.5	0.0	-10.0	15.5		

# GLOBAL DEBT STRATEGIES - NET

	Allocation		Performance (%)					
	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Emerging Markets Debt Composite	859,041,832	6.0	0.3 (10)	4.9 (15)	7.7 (81)	1.1 (5)	0.4 (55)	2.1 (45)
50% JPM EMBI Global Diversified/50% JPM GBI - EM Global Diversified			-2.7 (66)	3.0 (43)	11.6 (40)	-3.6 (75)	-0.1 (73)	0.9 (70)
Over/Under			3.0	1.9	-3.9	4.7	0.5	1.2
Ashmore Emerging Markets Liquid Investments	6,618	0.0						
JP Morgan GBI - EM Global Diversified Index			-3.3 (76)	4.3 (23)	13.1 (25)	-2.7 (55)	0.0 (71)	-0.8 (91)
Over/Under								
Gramercy Funds Management LLC	641,115,655	4.5	0.6 (6)	5.0 (14)	7.2 (86)	3.0 (2)	0.5 (51)	3.7 (5)
JP Morgan ELMI+ TR USD			-0.9 (28)	3.0 (43)	10.5 (57)	-0.6 (20)	0.1 (69)	-0.5 (88)
Over/Under			1.5	2.0	-3.3	3.6	0.4	4.2
PGIM Fixed Income	107,776,560	0.8	1.3 (2)	7.4 (3)	8.2 (76)	0.5 (8)	3.8 (2)	
50% JPM EMBI Global Diversified/ 50% JPM GBI-EM Global Diversified			-2.7 (66)	3.0 (43)	11.6 (40)	-3.6 (75)	-0.1 (73)	
Over/Under			4.0	4.4	-3.4	4.1	3.9	
Finisterre EM Debt Total Return Fund	110,143,000	0.8	-2.7	2.7				
50% JPM EMBI Global Diversified/ 50% JPM GBI-EM Global Diversified			-2.7	3.0				
Over/Under			0.0	-0.3				

# ABSOLUTE RETURN (ALPHA POOL)

Absolute Return (Alpha Pool) (7% Target)	Apollo Global SMA (MCA)	Credit focused separate account investing in bespoke credit opportunities
	Apollo Accord+ (MCA)	2021 credit fund focused on opportunities across structured credits, special situations, performing credit and origination
	Ares ECO Master Fund II, LTD (MCA)	Corporate debt investments in non-investment grade companies, with a focus on senior bank debt
	Birch Grove Credit Strategies Fund	All-weather approach to credit/portfolio construction across capital structure and across all market cycles
	Core & Credit Strategies (7%)	Corrum Capital Global Credit Opportunities Fund
		Corrum Capital GCO Co-Invest Fund
		SSGA Short-Term Treasury Strategy SMA
		Zais Group SMA
		Zais Opportunity Fund, LTD
		Zais Zephyr A-8, LP
		Zais Zephyr A-9, LP
		2022 closed-end fund focused on CLO equity post risk retention requirements

**ALPHA POOL STRATEGIES - NET**

	Allocation		Performance (%)					
	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>Alpha Pool Composite</b>	<b>2,182,780,828</b>	<b>15.3</b>	<b>3.3</b>	<b>8.6</b>	<b>10.9</b>	<b>7.7</b>	<b>4.4</b>	<b>4.6</b>
91 Day T-Bill + 3%			<u>2.1</u>	<u>5.9</u>	<u>7.6</u>	<u>4.8</u>	<u>4.8</u>	<u>4.1</u>
Over/Under			1.2	2.7	3.3	2.9	-0.4	0.5
Alpha Liquidity (Ssga)	217,333,462	1.5	1.4	3.7	4.7	1.7	1.9	1.3
Apollo Global Management	2,320,730	0.0						
Ares Eco Master Fund II	590,042,417	4.1	2.8	8.1	11.0	5.5	4.4	
Birch Grove Credit Strategies	250,304,056	1.7	6.1	7.5	4.0	7.1	5.4	5.5
Corrum Capital	329,802,478	2.3	0.6	4.6	14.3	5.6	0.4	3.4
Zais	141,948,855	1.0	5.1	9.8	8.5	9.6	1.1	3.5
Zais Group Invest Advisors	434,590,988	3.0	5.4	13.4	18.3	15.1	7.6	7.9
Zais Zephyr 8	36,662,686	0.3	0.0	3.3	1.6	6.6		
Zais Zephyr 9	33,649,104	0.2	0.0	22.1	16.5			
Apollo Accord+	146,126,053	1.0	5.2	14.5	15.7			

Private Assets (18% Target)	Private Equity	<b>Diversified</b>	Adams Street SMA (MCA) Industry Ventures Arrowhead LP (MCA) Partners Group SMA (MCA) Pathway Capital SMA (MCA) Pathway PE Fund VII LLC SL Capital European Strategic Partners 2008	Global investment opportunities in venture, growth equity, buyout, and private credit Fund investing in direct and secondary co-investments across the venture and buyout sectors Global SMA in private markets; primarily in private equity but also includes infrastructure and real estate Private equity investments in primary/secondary funds and co-investment opportunities Fund of funds focused on mid/large buyout funds in the US 2008 fund of funds investing in European-focused primary funds
		<b>Buyout Funds</b>	Industry Ventures Tech Buyout, LP (MCA) Industry Ventures Tech Buyout II, LP (MCA) Kayne Partners Fund IV LP (MCA) Kayne Partners Fund V LP (MCA) Kayne Growth Co-Investments (MCA) Partners Group Direct Equity 2016 (MCA) Partners Group Direct Equity Fund IV (MCA) Partners Group Direct Investments 2012 LP (MCA) Waterfall PE Co-Investments (MCA) Waterfall Sentinel Fund (MCA)	2018 fund investing in small high growth tech companies 2022 fund investing in small high growth tech companies 2016 fund investing in middle market growth equity opportunities in US companies 2020 fund investing in middle market growth equity opportunities in US companies Co-investment commitments (2022 and later) invested alongside Kayne Partners Funds Global portfolio of direct private equity deals Global portfolio of direct private equity deals (previously Direct Equity 2019) Global portfolio of direct private equity deals Co-investment opportunities in US lower middle market specialty finance companies 2019 fund investing in US lower middle market specialty finance focused companies
		<b>Venture Funds</b>	Industry Ventures Direct LP (MCA) Industry Ventures Direct II LP (MCA) Industry Ventures Direct III LP (MCA) Industry Ventures Fund V LP (MCA) Industry Ventures Fund VI LP (MCA) Industry Ventures Partnership Holdings II LP (MCA) Industry Ventures Partnership Holdings III LP (MCA) Industry Ventures Partnership Holdings III-A LP (MCA) Industry Ventures Partnership Holdings IV LP (MCA) Industry Ventures Partnership Holdings V LP (MCA) Industry Ventures Partnership Holdings VI LP (MCA) Industry Ventures Special Opportunities Fund II-A LP (MCA)	2016 fund investing in venture capital opportunities 2019 fund investing in venture capital opportunities 2021 fund investing in venture capital opportunities Fund of funds focused on small but well-established US venture capital funds Fund of funds focused on small but well-established US venture capital funds 2011 fund investing in venture capital primary funds, secondary funds and direct investments, and direct investments 2013 fund investing in venture capital primary funds, secondary funds and direct investments, and direct investments 2014 fund investing in venture capital primary funds, secondary funds and direct investments, and direct investments 2016 fund investing in venture capital primary funds, secondary funds and direct investments, and direct investments 2019 fund investing in venture capital primary funds, secondary funds and direct investments, and direct investments 2021 fund investing in venture capital primary funds, secondary funds and direct investments, and direct investments 2016 fund investing in venture capital opportunistic transactions in the secondary market
		<b>Secondary Funds</b>	Aberdeen Standard Secondary Opportunities Fund IV Industry Ventures Secondary VII LP (MCA) Industry Ventures Secondary VIII LP (MCA) Industry Ventures Secondary IX LP (MCA) Industry Ventures Secondary X LP (MCA) Lexington Capital Partners VII Lexington Middle Market Investors II SL Capital Secondary Opportunities Fund III	2020 fund investing in secondary purchases of PE fund of funds and other complex transactions 2013 fund investing in secondary transactions in venture capital opportunities 2017 fund investing in secondary transactions in venture capital opportunities 2021 fund investing in secondary transactions in venture capital opportunities 2023 fund investing in secondary transactions in venture capital opportunities Fund of funds focused mainly on buyout funds in US and Western Europe Fund of funds focused on secondary interest in US middle-market buyouts Fund of funds focused on secondary purchase of mid and large-cap buyout funds in Europe
		<b>Sector Specific Funds</b>	Kayne Anderson Energy Fund VII LP Kayne Anderson Private Energy Income Fund II (MCA) Kayne Anderson Private Energy Income Fund III (MCA) Tennenbaum Energy Opportunities Fund LP (MCA)	2017 fund investing in US upstream energy companies with a focus on growing enterprise value 2018 fund investing in US upstream energy companies, focused on income from large asset acq/development 2023 fund investing in US upstream energy companies, focused on income from large asset acq/development 2015 fund investing in senior secured notes and first/second lien debt of US companies in the energy sector
		<b>Direct Lending</b>	Ares Private Credit Solutions Fund (MCA) Ares Private Credit Solutions Fund 2 (MCA) Ares Senior Direct Lending Fund III (MCA) Irradiant Renewables Opportunities Partners Tennenbaum Direct Lending Fund VIII, LLC (MCA) Tennenbaum Direct Lending Fund IX, LLC Tennenbaum Waterman Fund LP (MCA)	Junior debt investments in large private companies Junior debt investments in large private companies Senior secured 1L loans to primarily sponsor-backed private companies 2020 fund investing in the equity and debt of renewable power generating companies Privately-originated, performing senior secured debt in mid-market (100mm-1.5bn) companies in NA (levered share class) Privately-originated, performing senior secured debt in mid-market (100mm-1.5bn) companies in NA (unlevered share class)
	Private Debt	<b>Credit/Distressed/ Opportunistic/ Special Situations</b>	Ares ICOF II (MCA) Ares ICOF III (MCA) Ares SMA (MCA) Ares Special Situations Fund IV (MCA) Catalyst Fund LP II Crestline Portfolio Financing Fund Crestline Portfolio Financing Fund II Irradiant CLO Partners II (MCA) Irradiant CLO Partners III (MCA) Irradiant Partners Climate Co (MCA) Irradiant Solutions Fund (MCA) Irradiant Solutions Fund II (MCA) LuminArx Opportunistic Alternative Solutions Fund Siguler Guff Distressed Opportunity Fund III LP Tennenbaum Co-Investments (MCA) Tennenbaum Special Situations Fund IX LLC (MCA)	Structured credit in CLO vehicles and private asset-backed credits Structured credit in CLO vehicles and private asset-backed credits Separate account in liquid credit and income-focused opportunities Global distressed debt and special situations 2006 fund investing in Canadian stressed/distressed investment opportunities Financing to late-stage private equity funds and GPs Financing to late-stage private equity funds and GPs 2020 fund investing in CLOs issued by Irradiant 2023 fund investing in CLOs issued by Irradiant 2023 fund investing in climate-oriented solutions focused on energy transition opportunity 2017 fund investing in special situation opportunities in US credit 2023 fund investing in special situation opportunities in US credit Hybrid fund investing in capital solutions opportunities globally, with a focus on the US 2009 fund of funds investing in US and international opportunistic credit funds and co-investments Co-investment opportunities driven from Tennenbaum funds Distressed and rescue-financing in mid-market companies in NA

# REAL ESTATE PORTFOLIO

Real Estate Portfolio (5% Target)	Core Real Estate (2.5%)	<b>Core Real Estate</b> 348 West Hospitality Lane Invesco Real Estate Asia Fund Kayne Anderson Real Estate Debt III (MCA) Kayne Anderson Real Estate Debt IV (MCA) Kayne Anderson Commercial Real Estate Debt (MCA) Marathon Real Estate Debt Fund PGIM Real Estate Capital VI LP PGIM Real Estate Capital VII LP PRISA II	SBCERA headquarters Asia-focused open-ended core real estate fund 2018 fund investing in first-lien US residential mortgage debt 2020 fund investing in first-lien US residential mortgage debt Open-ended fund investing in direct loan origination and Freddie-Mac structured products Fund investing in senior secured first mortgage loans in the US European (UK and Germany focused) mezzanine lending fund for value-add real estate projects European (UK and Germany focused) mezzanine lending fund for value-add real estate projects US core-plus open-ended real estate equity fund with low leverage
	Non-Core Real Estate (2.5%)	<b>Enhanced Real Estate/ High Return</b> Apollo Real Estate Fund II LP (MCA) Apollo Real Estate Fund III LP (MCA) Fortress Japan Opportunity Fund II Invesco US Real Estate VI Kayne Anderson Real Estate Partners V LP (MCA) Kayne Anderson Real Estate Partners VI LP (MCA) Morgan Stanley RE Fund V International PRISA III	2015 fund investing in value-add US real estate opportunities 2020 fund investing in value-add US real estate opportunities 2011 fund investing in value-add Japanese real estate opportunities 2020 fund investing in value-add US real estate opportunities 2017 fund investing in value-add US real estate opportunities 2021 fund investing in value-add US real estate opportunities 2005 fund investing in value-add International real estate opportunities Value-add US real estate equity fund
		<b>Real Estate Secondaries</b> Partners Group Real Estate Secondary 2013 A LP (MCA) Partners Group Real Estate Secondary 2017 A LP (MCA)	Global private real estate fund interests purchased on the secondary market at discounts to intrinsic value Global private real estate fund interests purchased on the secondary market at discounts to intrinsic value

# REAL ASSETS PORTFOLIO

Real Asset Portfolio (6% Target)	<b>Commodities (4% Target)</b>	Pinnacle Natural Resources LP	Commodity fund of funds with both directional and relative value exposure across multiple commodities
		Pinnacle Physicals & Financing LTD	Multi-manager fund focused on physical commodities (livestock, metals, energy and agriculture)
	<b>Infrastructure (2%)</b>	Kayne Anderson MLP Strategy (MCA)	Separate account opportunistically investing in publicly traded US MLP securities
		<b>Timber (0% Target)</b> Domain Environmental Investors II	Fund focused on acquiring, developing, and operating a variety of environmental assets (wetlands, fisheries, restorations)



**ALTERNATIVES - NET**

	Allocation		Performance (%)					
	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>Private Equity Composite</b>	<b>2,775,008,963</b>	<b>19.4</b>	<b>2.9</b>	<b>4.5</b>	<b>6.1</b>	<b>20.1</b>	<b>15.9</b>	<b>14.7</b>
CJA Global All PE (Qtr Lag)			<u>1.5</u>	<u>4.5</u>	<u>2.8</u>	<u>18.3</u>	<u>14.0</u>	<u>13.6</u>
Over/Under			1.4	0.0	3.3	1.8	1.9	1.1
Russell 3000 Index			<u>-3.3</u>	<u>12.4</u>	<u>20.5</u>	<u>9.4</u>	<u>9.1</u>	<u>11.3</u>
Over/Under			6.2	-7.9	-14.4	10.7	6.8	3.4
CJA US All PE (1 Qtr Lag)			<u>2.8</u>	<u>6.8</u>	<u>7.4</u>	<u>21.4</u>	<u>15.4</u>	<u>14.5</u>
Over/Under			0.1	-2.3	-1.3	-1.3	0.5	0.2
<b>Real Estate Composite</b>	<b>597,808,114</b>	<b>4.2</b>	<b>-0.6</b>	<b>-3.8</b>	<b>-3.0</b>	<b>8.7</b>	<b>7.2</b>	<b>8.3</b>
NCREIF Property Index 1 Qtr. Lag			<u>-2.0</u>	<u>-7.1</u>	<u>-6.6</u>	<u>6.8</u>	<u>5.9</u>	<u>7.8</u>
Over/Under			1.4	3.3	3.6	1.9	1.3	0.5
<b>Real Assets Composite</b>	<b>682,517,187</b>	<b>4.8</b>	<b>1.7</b>	<b>6.2</b>	<b>8.1</b>	<b>17.1</b>	<b>9.6</b>	<b>5.8</b>
Real Assets Custom Blend			<u>9.7</u>	<u>4.8</u>	<u>7.9</u>	<u>11.5</u>	<u>5.8</u>	<u>2.6</u>
Over/Under			-8.0	1.4	0.2	5.6	3.8	3.2
<b>Infrastructure</b>	<b>80,148,927</b>	<b>0.6</b>	<b>5.0</b>	<b>10.7</b>	<b>22.1</b>	<b>31.3</b>	<b>10.3</b>	<b>6.2</b>
Real Assets Custom Blend			<u>9.7</u>	<u>4.8</u>	<u>7.9</u>	<u>11.5</u>	<u>5.8</u>	<u>2.6</u>
Over/Under			-4.7	5.9	14.2	19.8	4.5	3.6
<b>Commodities</b>	<b>598,208,227</b>	<b>4.2</b>	<b>1.2</b>	<b>5.8</b>	<b>6.6</b>	<b>12.2</b>	<b>12.2</b>	<b>6.8</b>
S&P GSCI Composite TR Index			<u>16.0</u>	<u>7.2</u>	<u>10.9</u>	<u>29.5</u>	<u>5.6</u>	<u>-2.5</u>
Over/Under			-14.8	-1.4	-4.3	-17.3	6.6	9.3

# APPENDIX: PERFORMANCE SUMMARY

Real Estate

Real Assets

Private Equity

# REAL ESTATE PERFORMANCE

## AS OF MARCH 31, 2023

Investment Name	Vintage Year	Commitment Amount	Paid in Capital	Capital to be Funded	Additional Fees	Cumulative Distributions	Valuation	Total Value	TVPI Ratio	IRR
American Realty Advisors	1996	128,009,773	128,009,773	0	0	278,446,295	0	278,446,295	2.18	6.89%
Tuckerman Multi-Family Development Fund III	2002	10,000,000	10,219,311	0	0	16,939,699	0	16,939,699	1.66	26.67%
CBRE Strategic Partners III	2003	10,000,000	10,000,000	0	0	12,698,783	0	12,698,783	1.27	8.02%
Prudential PRISA III	2003	75,000,000	68,971,338	6,028,662	3,778,589	72,405,442	73,300,155	145,705,598	2.00	17.47%
Walton Street Real Estate Fund IV, LP	2003	10,000,000	9,770,890	0	0	15,987,617	0	15,987,617	1.64	10.71%
Bryanston Retail Opportunity Fund, L.P.	2004	20,000,000	8,228,165	11,771,835	0	39,932,161	126,349	40,058,510	4.87	70.73%
Prudential PRISA II	2004	140,000,000	140,000,000	0	6,102,942	66,672,720	197,645,459	264,318,180	1.81	7.86%
RREEF America REIT III	2004	20,000,000	20,539,309	0	0	23,658,675	0	23,658,675	1.15	3.00%
BlackRock Diamond Property Fund	2005	25,000,000	25,000,000	0	0	15,233,347	0	15,233,347	0.61	-9.31%
CBRE Strategic Partners IV	2005	40,000,000	40,000,000	0	0	2,609,685	0	2,609,685	0.07	-27.76%
INVESCO Real Estate Fund I	2005	10,000,000	9,248,390	0	0	10,015,656	0	10,015,656	1.08	1.54%
LaSalle Income & Growth Fund IV	2005	20,000,000	19,469,417	0	0	13,482,024	0	13,482,024	0.69	-5.51%
North Haven Real Estate Fund V International	2005	27,500,000	27,377,414	122,586	86,449	33,112,232	278,067	33,390,299	1.22	6.84%
Prologis Japan Fund	2005	25,290,819	25,290,819	0	0	33,126,118	0	33,126,118	1.31	4.81%
Tri Continental Capital VII	2005	23,000,000	22,277,928	722,072	0	3,168,198	437,329	3,605,527	0.16	-14.71%
American Realty Value Add	2006	13,125,215	13,125,215	0	0	32,080,321	0	32,080,321	2.44	10.92%
Beacon Capital Strategic Partners IV, L.P.	2006	38,000,000	38,000,000	0	0	31,424,699	0	31,424,699	0.83	-3.26%
Fillmore East Fund	2006	25,000,000	31,403,818	0	0	20,777,177	0	20,777,177	0.66	-9.78%
Starwood Capital Hospitality Fund I-2	2006	30,000,000	30,000,000	0	0	27,879,087	2,567,266	30,446,353	1.01	0.19%
Starwood Opportunity Fund VII - A	2006	25,000,000	25,000,000	0	0	19,517,190	529,682	20,046,872	0.80	-2.38%
Walton Street Real Estate Fund V, LP	2006	40,000,000	40,000,000	0	0	27,259,862	1,326,142	28,586,004	0.71	-3.64%
Beacon Capital Strategic Partners V, L.P.	2007	18,000,000	18,000,000	0	0	11,174,695	0	11,174,695	0.62	-7.87%
Invesco Asian Real Estate Partners II (USD), LP	2007	20,000,000	8,412,833	0	-11,533	11,465,147	0	11,465,147	1.36	7.52%
Invesco High Yield Debt Fund I	2007	20,000,000	20,000,000	0	0	8,567,605	0	8,567,605	0.43	-35.57%
Square Mile Partners II	2007	19,831,232	19,831,232	0	0	5,311,330	0	5,311,330	0.27	-19.11%
Fillmore West Fund	2008	20,000,000	19,561,557	0	0	21,175,799	0	21,175,799	1.08	1.14%
Square Mile Partners III LP	2008	20,000,000	19,730,190	0	0	28,873,622	0	28,873,622	1.46	11.52%
Starwood Debt Fund II, LP	2008	20,000,000	17,599,882	0	0	21,912,511	0	21,912,511	1.25	6.45%
Structured Real Estate III, LP (Guggenheim)	2008	20,000,000	20,000,000	0	0	16,320,664	0	16,320,664	0.82	-4.99%
Bryanston Real Estate Opportunity Fund II, L.P.	2009	20,000,000	8,589,256	0	0	11,851,333	0	11,851,333	1.38	10.20%
Fortress Japan Opportunity Fund II	2012	21,739,130	2,878,408	18,860,722	302,777	24,319,116	3,903,497	28,222,613	8.87	25.37%
Oaktree Real Estate Opportunities V	2012	25,000,000	25,000,000	0	497,783	39,407,074	201,355	39,608,429	1.55	12.70%
Invesco Real Estate Asia Fund	2014	51,732,500	51,732,500	0	2,601,837	15,976,245	64,966,110	80,942,354	1.49	5.42%
Partners Group RE Secondary 2013 (USD) A	2014	65,000,000	49,541,590	15,458,410	-349,081	35,861,822	33,299,554	69,161,376	1.41	7.54%
Apollo US Real Estate Fund II	2015	20,000,000	16,422,684	3,577,316	29,763	8,004,085	17,472,842	25,476,927	1.55	10.87%
Pramerica Real Estate Capital VI	2016	24,890,077	22,583,937	2,306,140	58,392	14,775,416	9,419,991	24,195,407	1.07	3.09%
Kayne Anderson Real Estate Fund V, L.P.	2017	20,000,000	18,815,873	1,184,127	-179,377	13,814,886	18,447,982	32,262,868	1.73	19.43%
Partners Group RE Secondary 2017 (USD) A	2017	75,000,000	45,071,281	29,928,719	44,125	753,447	64,071,663	64,825,110	1.44	10.17%
Kayne Anderson Real Estate Debt III	2018	20,000,000	19,947,473	0	45,464	25,318,141	0	25,318,141	1.27	11.24%
Apollo US Real Estate Fund III	2021	50,000,000	21,588,687	28,411,313	415,331	3,598,829	25,524,980	29,123,809	1.32	25.94%
Kayne Anderson Real Estate Debt IV	2021	30,000,000	21,880,616	8,119,384	0	7,506,266	16,218,214	23,724,480	1.08	9.06%
Kayne Anderson Real Estate Fund VI	2021	20,000,000	4,477,049	15,522,951	0	5,504,329	5,504,329	5,504,329	1.23	18.10%
Pramerica Real Estate Capital VII	2021	53,327,719	19,475,295	33,852,424	118,086	112,508	18,201,540	18,314,048	0.93	-6.58%
<b>Total: San Bernardino</b>		<b>1,409,446,466</b>	<b>1,213,072,131</b>	<b>175,866,660</b>	<b>13,541,547</b>	<b>1,122,527,533</b>	<b>553,442,505</b>	<b>1,675,970,038</b>	<b>1.37</b>	<b>4.69%</b>



# REAL ASSETS PERFORMANCE

## AS OF MARCH 31, 2023

Investment Name	Vintage Year	Commitment Amount	Paid in Capital	Capital to be Funded	Additional Fees	Cumulative Distributions	Valuation	Total Value	TVPI Ratio	IRR
Hancock Timberland VII	2005	90,000,000	90,000,000	0	0	101,142,900	0	101,142,900	1.12	0.01
Hancock Timberland VIII	2006	40,000,000	40,000,000	0	200	45,071,725	860,657	45,932,382	1.15	0.01
Highstar Capital III, L.P.	2007	60,000,000	59,119,119	0	0	63,302,361	0	63,302,361	1.07	0.01
RREEF North American Infrastructure Fund	2007	50,000,000	50,000,000	0	846,289	55,238,754	0	55,238,754	1.09	0.12
Timbervest Partners II, L.P.	2007	50,000,000	50,000,000	0	0	51,855,967	0	51,855,967	1.04	0.00
Pinnacle Natural Resources Offshore Fund Ltd.	2008	135,000,000	135,000,000	0	0	0	259,981,402	259,981,402	1.93	0.08
Timbervest Environmental Investments II, L.P.	2008	30,000,000	30,000,000	0	50,548	20,894,831	4,738,495	25,633,326	0.85	-0.02
Pinnacle Physicals and Financing Master, Ltd	2009	205,800,000	205,800,000	0	15,984	2,018,221	332,374,660	334,392,881	1.62	0.08
Fortress Transportation Infrastructure LLC	2015	45,403,354	45,403,354	0	0	41,902,882	0	41,902,882	0.92	-0.02
<b>Total: San Bernardino</b>		<b>706,203,354</b>	<b>705,322,473</b>	<b>0</b>	<b>913,021</b>	<b>381,427,641</b>	<b>597,955,214</b>	<b>979,382,854</b>	<b>1.39</b>	<b>4.18%</b>



# PRIVATE EQUITY PERFORMANCE

## AS OF MARCH 31, 2023

Investment	Vintage Year	Commitment Amount	Paid in Capital	Capital to be Funded	Additional Fees	Cumulative Distributions	Valuation	Total Value	TVPI Ratio	IRR
European Strategic Partners 2004	2004	238,652,127	221,611,324	17,040,804	88,078	280,078,373	662,844	280,741,217	1.27	3.95%
Partners Group MCA	2004	1,000,000,000	993,958,735	6,041,265	0	895,394,497	634,287,732	1,529,682,229	1.54	9.17%
Pathway Private Equity Fund VII, L.P.	2004	904,500,000	862,221,022	42,278,978	0	1,471,022,559	204,664,049	1,675,686,608	1.94	11.58%
Aurora Equity Partners III, L.P.	2005	25,000,000	23,544,536	0	1,422,824	41,738,196	0	41,738,196	1.67	13.61%
Lexington Middle Market I	2005	25,000,000	24,771,942	228,058	0	40,309,398	243,421	40,552,819	1.64	11.39%
NB Secondary Opportunities I, LP	2005	20,000,000	18,500,843	0	0	24,330,105	0	24,330,105	1.32	6.49%
Lexington Capital Partners VI-B	2006	25,000,000	24,591,319	408,681	3,012	34,911,743	225,653	35,137,396	1.43	6.87%
Siguler Guff DOF II	2006	30,000,000	30,000,000	0	-43,638	42,440,278	0	42,440,278	1.42	8.64%
TCW/Crescent Mezzanine IV, L.P.	2006	40,000,000	39,590,976	0	-81,547	45,049,090	0	45,049,090	1.14	3.03%
Catalyst Fund II, L.P.	2007	10,000,000	9,956,944	43,056	65,604	3,859,103	33,899,074	37,758,177	3.77	11.61%
Tennenbaum Opportunities Fund V, L.P.	2007	10,000,000	10,000,000	0	0	14,435,464	814,933	15,250,397	1.53	5.72%
Apollo Investment Fund VII, L.P.	2008	10,000,000	8,789,116	1,210,884	-15,638	17,798,007	113,013	17,911,020	2.04	22.79%
Aurora Resurgence Fund, L.P.	2008	15,000,000	5,653,009	0	40,630	10,350,965	0	10,350,965	1.82	17.60%
Industry Ventures Fund V	2008	10,000,000	9,500,000	0	0	27,399,602	0	27,399,602	2.88	29.29%
Lexington Middle Market II - Offshore	2008	10,000,000	9,773,736	226,264	40,771	15,929,894	2,113,311	18,043,205	1.84	14.53%
NB Secondary Opportunities II, LP	2008	20,000,000	17,080,642	0	430,639	26,888,038	0	26,888,038	1.54	14.40%
Siguler Guff DOF III	2008	10,000,000	9,700,000	300,000	-234	14,641,863	1,425,446	16,067,309	1.66	10.55%
TCW/Crescent Mezzanine V, L.P.	2008	20,000,000	19,949,723	50,277	-51,494	27,301,678	154,414	27,456,092	1.38	9.81%
Apollo European Principal Finance Fund (Feeder), LP	2009	53,001,432	46,434,825	6,566,607	13,022	69,417,013	129,076	69,546,089	1.50	11.81%
DRI II, L.P.	2009	20,000,000	19,917,669	0	-100,096	26,302,807	0	26,302,807	1.33	19.64%
Apollo PCPL Webb V	2010	4,844,398	4,844,398	0	0	5,196,757	0	5,196,757	1.07	6.04%
Apollo PCPL Webb VIII	2010	4,734,303	4,734,303	0	32	12,146,258	0	12,146,258	2.57	46.47%
European Strategic Partners 2008	2010	31,213,747	29,629,636	1,584,111	160,998	40,016,130	3,427,666	43,443,796	1.46	8.26%
Industry Ventures Fund VI	2011	20,000,000	18,400,000	1,600,000	0	24,850,771	250,842	25,101,613	1.36	7.99%
Lexington Capital Partners VII (Offshore)	2011	25,000,000	20,453,173	4,546,827	118,325	31,390,903	3,049,484	34,440,387	1.67	14.66%
Tennenbaum Opportunities Fund VI, L.P.	2011	20,000,000	7,882,885	12,117,115	0	16,804,926	29,189	16,834,115	2.14	8.04%
Aurora Equity Partners IV, L.P.	2012	20,000,000	17,262,661	2,737,339	2,654,902	40,094,037	490,694	40,584,731	2.04	18.11%
BNY Mellon - Alcentra Mezzanine III	2012	25,000,000	23,254,658	0	0	26,736,979	0	26,736,979	1.15	12.73%
Industry Ventures Partnership Holdings Fund II, L.P.	2012	25,000,000	23,500,000	1,500,000	0	55,544,399	50,982,812	106,527,211	4.53	23.29%
Tennenbaum Waterman Fund, LP	2012	70,000,000	70,000,000	0	1,081	69,753,734	59,433,402	129,187,136	1.85	9.96%
Industry Ventures Partnership Holdings Fund III, L.P.	2013	25,000,000	23,277,042	1,722,958	0	42,166,060	36,120,797	78,286,857	3.36	23.52%
Industry Ventures Secondary VII, L.P.	2013	25,000,000	23,175,000	1,825,000	0	37,680,549	7,644,924	45,325,473	1.96	16.42%
Industry Ventures Partnership Holdings Fund III-A, L.P.	2014	12,500,000	11,162,500	1,337,500	0	7,375,723	5,918,772	13,294,495	1.19	3.56%



# PRIVATE EQUITY PERFORMANCE

## AS OF MARCH 31, 2023

Investment	Vintage Year	Commitment Amount	Paid in Capital	Capital to be Funded	Additional Fees	Cumulative Distributions	Valuation	Total Value	TVPI Ratio	IRR
Pathway SBCERA MCA	2014	300,000,000	295,730,822	4,269,178	0	110,909,445	585,364,956	696,274,401	2.35	20.60%
SL Capital SOF I LP	2014	25,000,000	21,382,263	3,617,737	0	26,953,337	2,880,274	29,833,611	1.40	10.07%
ARES European Loan Opp Fund	2015	15,000,000	8,413,136	0	0	7,613,498	0	7,613,498	0.90	-6.02%
Ares Special Situations Fund IV, LP	2015	50,000,000	47,686,469	2,313,531	0	34,826,540	36,892,102	71,718,642	1.50	8.24%
Tennenbaum Special Situations Fund IX	2015	50,000,000	32,057,933	17,942,067	85,183	32,877,330	21,041,222	53,918,552	1.68	10.81%
Industry Ventures Direct, LP	2016	25,000,000	23,420,425	1,579,575	0	11,577,501	40,233,710	51,811,211	2.21	21.17%
Industry Ventures Partnership Holdings IV, LP	2016	25,000,000	22,575,000	2,425,000	0	8,419,172	45,726,105	54,145,277	2.40	23.43%
Industry Ventures Special Opportunities II-A	2016	12,500,000	1,694,029	10,805,971	0	2,112,302	2,594,881	4,707,183	2.78	38.76%
TCP Direct Lending Fund VIII-L, LLC	2016	40,000,000	21,606,919	18,393,081	148,810	9,707,238	21,291,765	30,999,003	1.42	6.37%
Tennenbaum Energy Opportunities Fund, LP	2016	20,000,000	4,170,678	15,829,322	0	6,435,114	4,100,309	10,535,423	2.53	11.05%
Apollo Accord Fund, LP	2017	30,000,000	7,500,000	0	-7,580	8,310,474	0	8,310,474	1.11	7.44%
Industry Ventures Secondary VIII	2017	25,000,000	22,525,000	2,475,000	0	20,853,153	24,105,507	44,958,660	2.00	29.06%
Kayne Anderson Energy Fund VII, L.P.	2017	10,000,000	8,638,804	1,361,196	0	599,181	5,228,064	5,827,245	0.67	-7.28%
Kayne Partners Fund IV (QP), LP	2017	20,000,000	19,508,621	491,379	127,793	17,322,762	19,094,971	36,417,733	1.85	21.20%
Kayne SBCERA MLP	2017	130,000,000	126,225,037	3,774,963	0	65,959,303	71,737,412	137,696,715	1.09	2.00%
SL Capital SOF III LP	2017	25,000,000	17,018,589	7,981,411	-440	11,169,043	24,775,316	35,944,358	2.11	23.44%
Crestline Portfolio Financing Fund	2018	50,000,000	31,199,460	18,800,540	0	21,639,887	21,070,382	42,710,269	1.37	9.89%
Industry Ventures Partnership Holdings V, LP	2018	25,000,000	21,500,000	3,500,000	0	626,933	45,235,262	45,862,195	2.13	34.38%
Industry Ventures Tech Buyout LP	2018	50,000,000	41,859,623	8,140,377	0	0	55,102,802	55,102,802	1.32	14.84%
Kayne Anderson Private Energy Income Fund II, L.P.	2018	20,000,000	17,127,193	2,872,807	0	6,837,543	19,072,651	25,910,194	1.51	34.58%
Kayne Flywheel Co-investment LLC	2018	8,000,000	6,600,000	1,400,000	0	9,070,254	9,992,581	19,062,835	2.89	38.17%
Kayne SBCERA (D.I.)	2018	45,000,000	40,660,422	4,339,578	0	44,373,775	4,138,537	48,512,312	1.19	16.30%
Kayne Solutions Fund LP	2018	20,000,000	9,809,659	0	19,174	10,797,587	0	10,797,587	1.10	9.14%
Industry Ventures Direct II, LP	2019	50,000,000	42,668,033	7,331,967	0	0	71,950,790	71,950,790	1.69	29.16%
Kayne Renewable Opportunities Partners (TE), LP	2019	100,000,000	20,704,033	0	0	27,857,425	0	27,857,425	1.35	21.72%
Waterfall Sentinel Co-Investments	2019	30,000,000	23,890,124	6,109,877	140,580	18,331,939	40,627,897	58,959,836	2.45	30.73%
Waterfall Sentinel Fund	2019	30,000,000	25,462,442	4,537,558	0	7,164,448	31,082,480	38,246,928	1.50	14.92%
Adams Street SBCERA	2020	150,000,000	108,042,754	41,957,246	0	19,168,594	113,731,015	132,899,609	1.23	17.75%
Kayne Anderson FRG	2020	30,000,000	30,000,000	0	0	45,283,966	0	45,283,966	1.51	44.79%
Kayne CLO Partners II, LP	2020	50,000,000	44,721,625	0	-97,167	52,848,194	0	52,848,194	1.18	13.44%
Industry Ventures Partnership Holdings VI, LP	2021	40,000,000	12,409,022	27,590,978	0	67,097	13,252,392	13,319,489	1.07	7.79%
Industry Ventures Secondary IX, LP	2021	50,000,000	32,041,225	17,958,775	-578	978,722	40,885,749	41,864,471	1.31	25.19%
Industry Ventures Direct III, L.P.	2022	40,000,000	4,832,678	35,167,322	-1,408	0	4,103,591	4,103,591	0.85	-20.44%
Industry Ventures IV Arrowhead, L.P.	2022	25,000,000	5,000,000	20,000,000	0	0	5,119,039	5,119,039	1.02	2.38%
Industry Ventures Tech Buyout II, L.P.	2022	100,000,000	10,000,000	90,000,000	0	0	10,551,504	10,551,504	1.06	7.27%
<b>Total : San Bernardino</b>		<b>4,519,946,007</b>	<b>3,891,804,633</b>	<b>486,332,160</b>	<b>5,161,637</b>	<b>4,180,047,651</b>	<b>2,437,064,813</b>	<b>6,617,112,464</b>	<b>1.70</b>	<b>10.97%</b>





# APPENDIX

# POLICY INDEX COMPOSITION

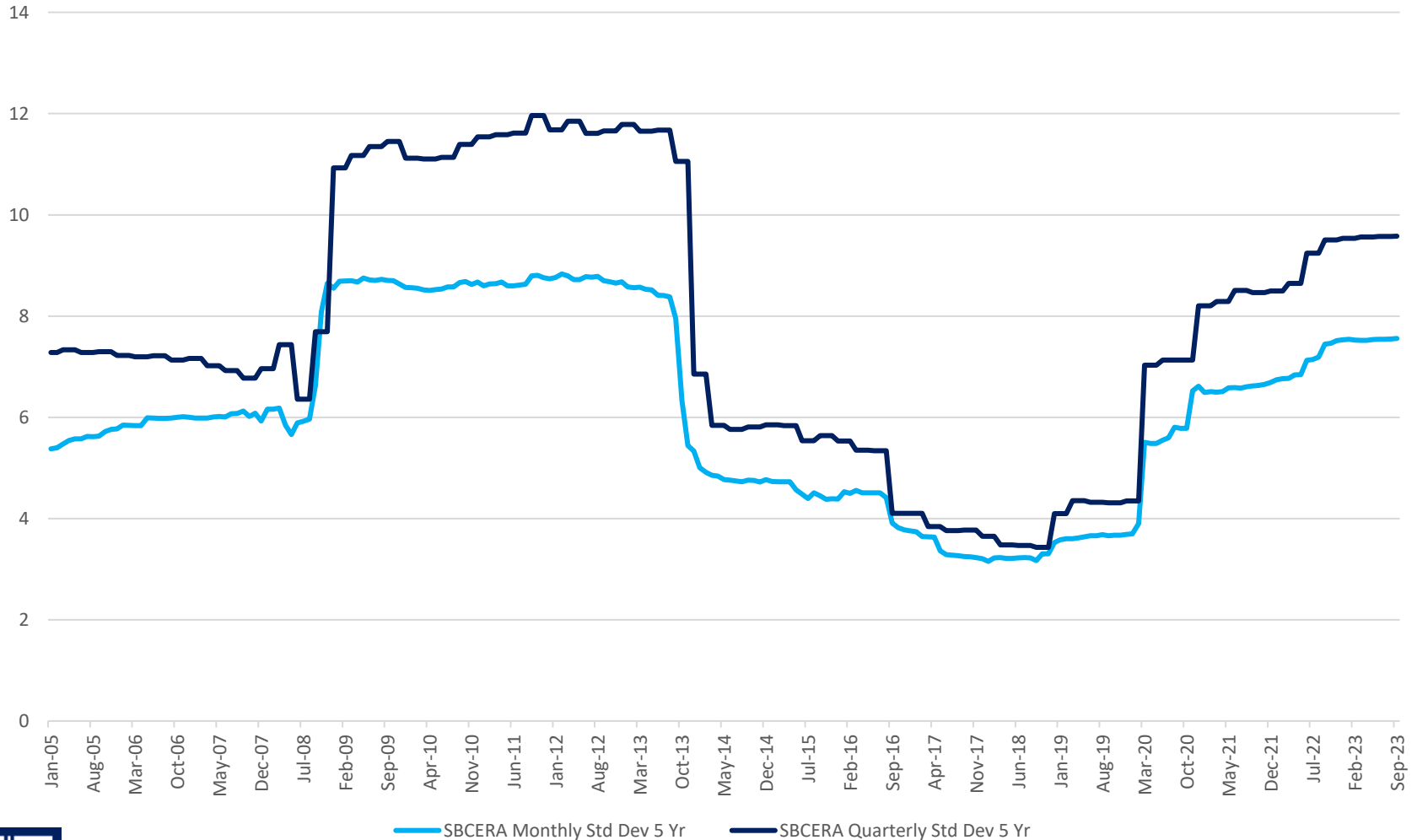
Index	7/1/ 2022	7/1/ 2021	7/1/ 2019	7/1/ 2018	7/1/ 2014	7/1/ 2012	6/1/ 2012	6/1/ 2010	6/1/ 2009	6/1/ 2008	9/1/ 2006	7/1/ 2005	4/1/ 2004	6/1/ 2002
Russell 3000 Index	35	31	29	29	29	30	29	29	28	34	38	38	43	43
MSCI ACWI ex USA Index	13	15	15	15	15	13	7	7	7	11	13	13	18	18
MSCI Emerging Markets Index							4	4	3	4	3	3		
Bloomberg US Aggregate Bond Index	22	22	22	22	22	24	13	13	18	15	21	21	18	26
Bloomberg Global Aggregate Bond ex US Index	17	19	20	20	18	16	10	10	9	8	5			
Bloomberg Global Aggregate Bond Index Hedged												5	5	5
Merrill Lynch High Yield Master II Index							13	13	13	8	8	8	8	
JP Morgan EMBI Global Diversified Index							6	6	4	4	2	2		
NCREIF Property Index	5	5	7	7	9	9	12.5	12.5	13	11	10	10	8	8
67% S&P GSCI + 33% BBG US TIPS Index	6													
67% Bloomberg Commodity Index+ 33% BBG US TIPS Index		6	5											
NCREIF Timberland 1Q Lag				2.5	2.5	3								
Bloomberg Commodity Index				2.5	2.5	3	3.5	3.5	3	3				
91 Day T-Bill Index	2	2	2	2	2	2	2	2	2	2				



# 5 YEAR STANDARD DEVIATION

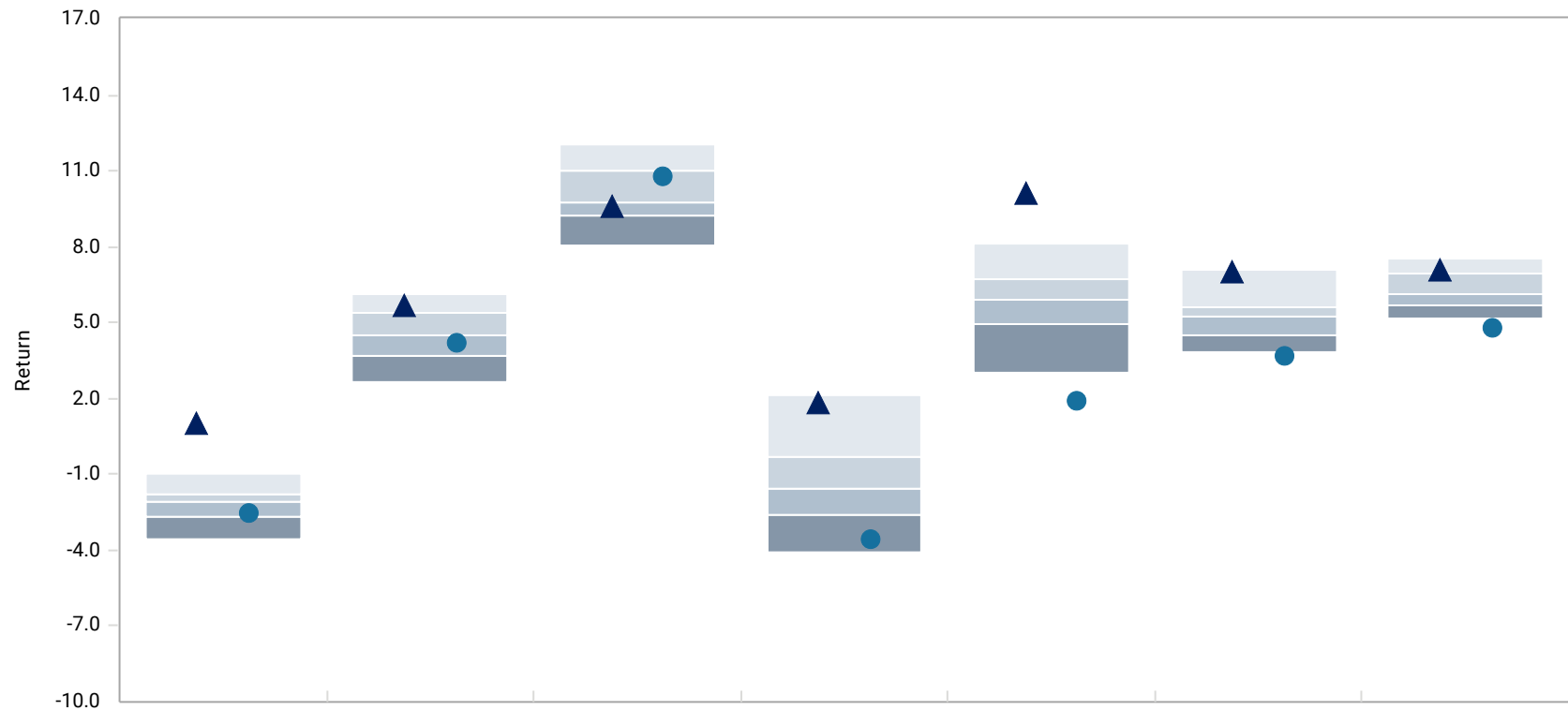
## MONTHLY TIME SERIES VS. QUARTERLY TIME SERIES

Standard Deviation Rolling 5 Yr



# RETURN SUMMARY VS. PEER UNIVERSE

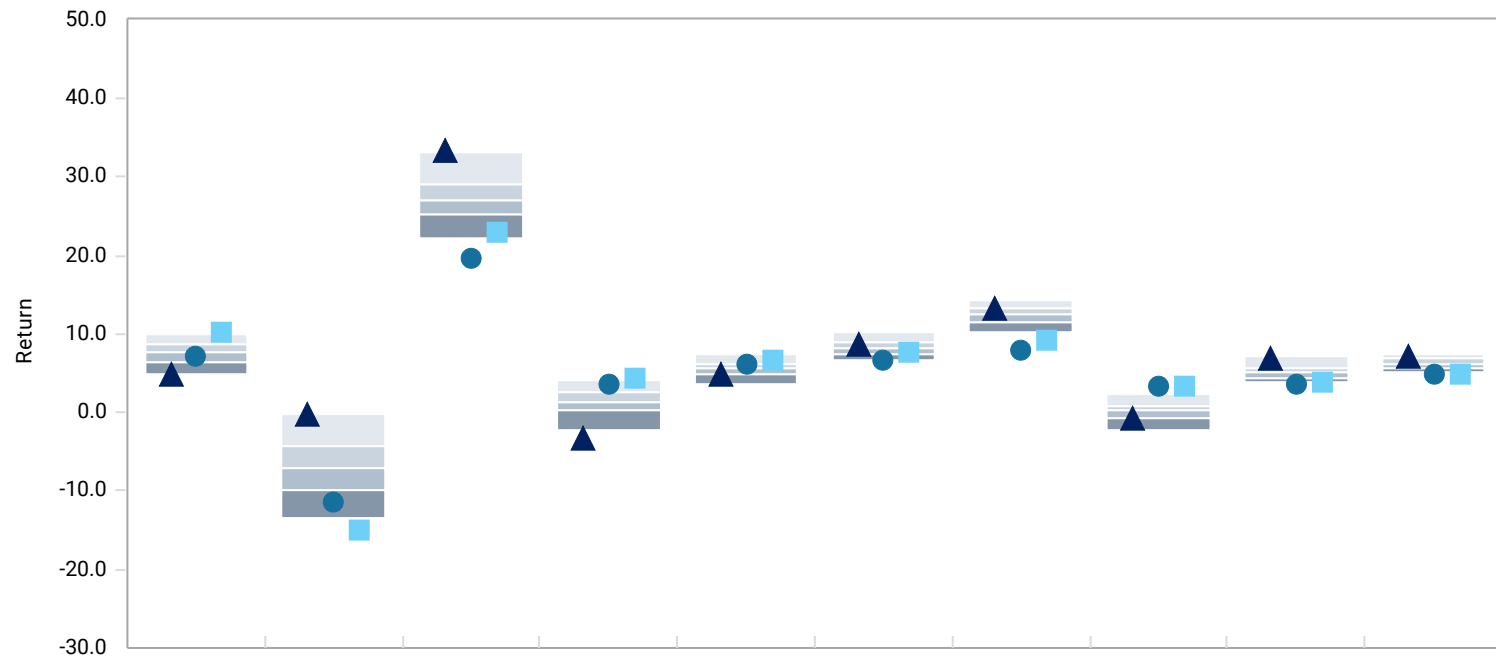
Total Fund vs. InvMetrics Public DB > \$1 Billion



	3 Mo	YTD	1 Year	2 Years	3 Years	5 Years	10 Years
▲ Total Fund	1.0 (1)	5.7 (9)	9.6 (67)	1.9 (7)	10.1 (1)	7.0 (7)	7.1 (24)
● Policy Index	-2.5 (74)	4.2 (58)	10.8 (31)	-3.6 (90)	1.9 (98)	3.7 (97)	4.8 (100)
5th Percentile	-1.0	6.1	12.1	2.1	8.1	7.1	7.5
1st Quartile	-1.8	5.4	11.0	-0.3	6.7	5.6	6.9
Median	-2.1	4.5	9.7	-1.6	5.9	5.2	6.1
3rd Quartile	-2.7	3.7	9.2	-2.6	4.9	4.5	5.7
95th Percentile	-3.6	2.7	8.1	-4.1	3.0	3.8	5.2
Population	41	38	38	34	33	33	31

# RETURN SUMMARY VS. PEER UNIVERSE

Total Fund vs. InvMetrics Public DB &gt; \$1 Billion

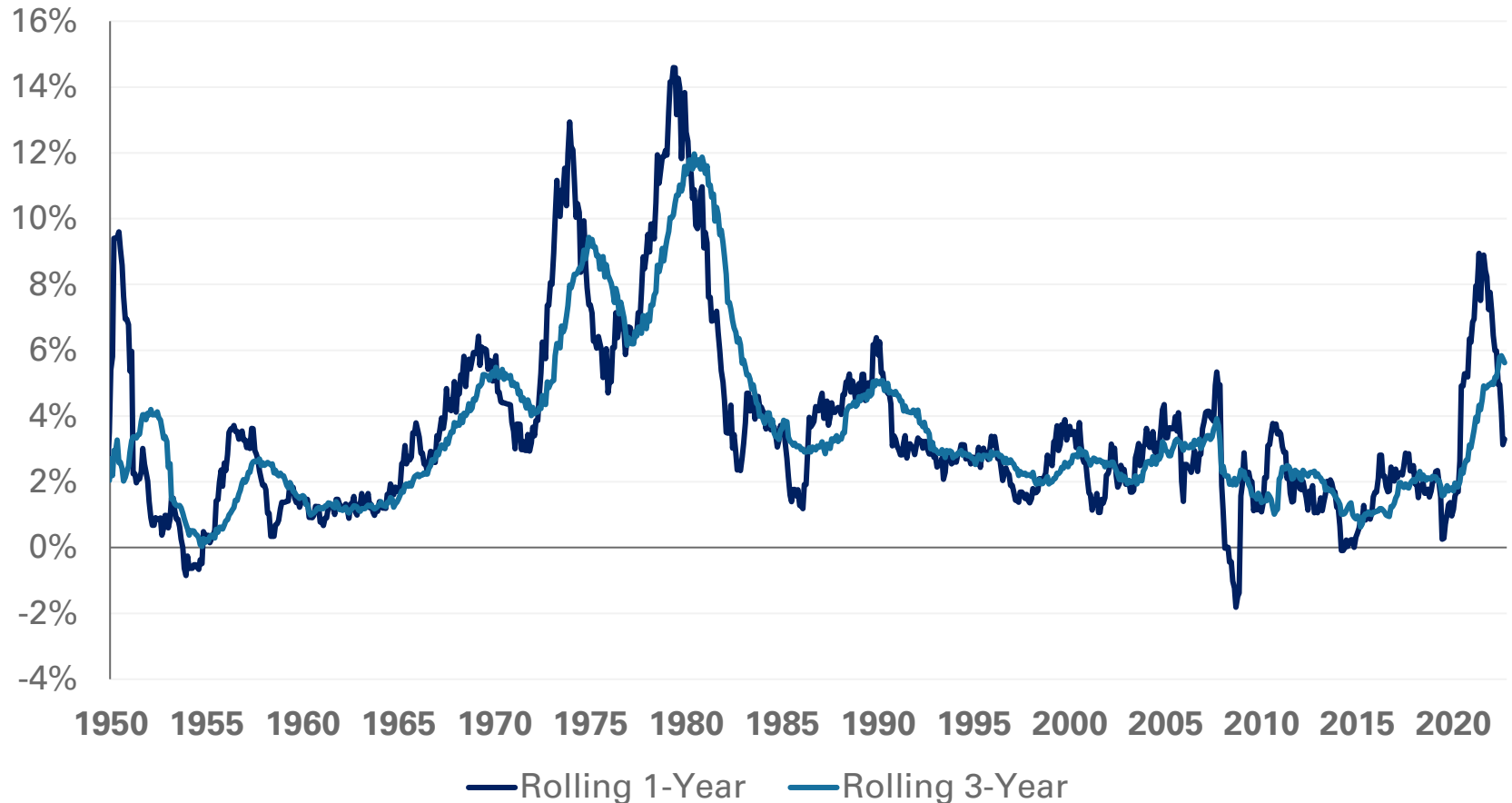


	Fiscal 2023 (%)	Fiscal 2022 (%)	Fiscal 2021 (%)	Fiscal 2020 (%)	Fiscal 2019 (%)	Fiscal 2018 (%)	Fiscal 2017 (%)	Fiscal 2016 (%)	5 Yrs (%)	10 Yrs (%)
▲ Total Fund	5.0 (94)	-0.1 (5)	33.3 (5)	-3.2 (97)	4.8 (75)	8.8 (32)	13.3 (29)	-0.8 (78)	7.0 (7)	7.1 (24)
● Policy Index	7.2 (63)	-11.3 (88)	19.7 (100)	3.7 (11)	6.2 (27)	6.8 (94)	8.0 (100)	3.4 (1)	3.7 (97)	4.8 (100)
■ 60% MSCI World/40% FTSE WGBI	10.2 (5)	-14.9 (99)	23.0 (92)	4.4 (4)	6.7 (16)	7.8 (68)	9.2 (99)	3.3 (1)	3.9 (91)	5.0 (100)
5th Percentile	10.0	-0.2	33.2	4.1	7.4	10.2	14.4	2.3	7.1	7.5
1st Quartile	8.8	-4.2	29.2	2.6	6.3	9.0	13.4	0.9	5.6	6.9
Median	7.7	-7.0	27.0	1.3	5.7	8.1	12.5	0.2	5.2	6.1
3rd Quartile	6.5	-9.9	25.3	0.2	4.8	7.4	11.6	-0.7	4.5	5.7
95th Percentile	4.9	-13.4	22.2	-2.1	3.7	6.7	10.4	-2.3	3.8	5.2
Population	105	105	148	133	102	80	79	75	33	31

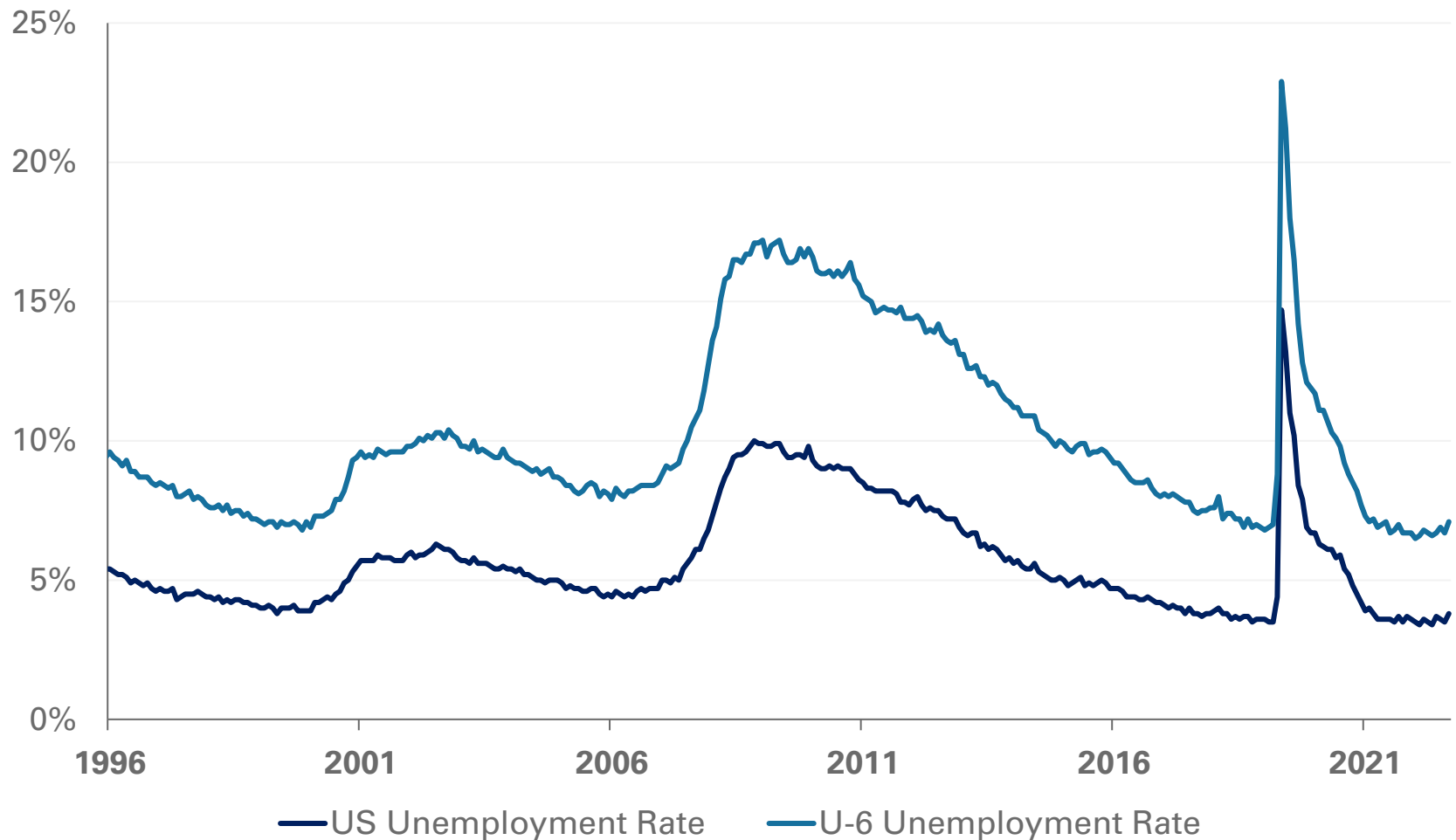
# MACRO

# INFLATION

## U.S. CONSUMER PRICE INDEX

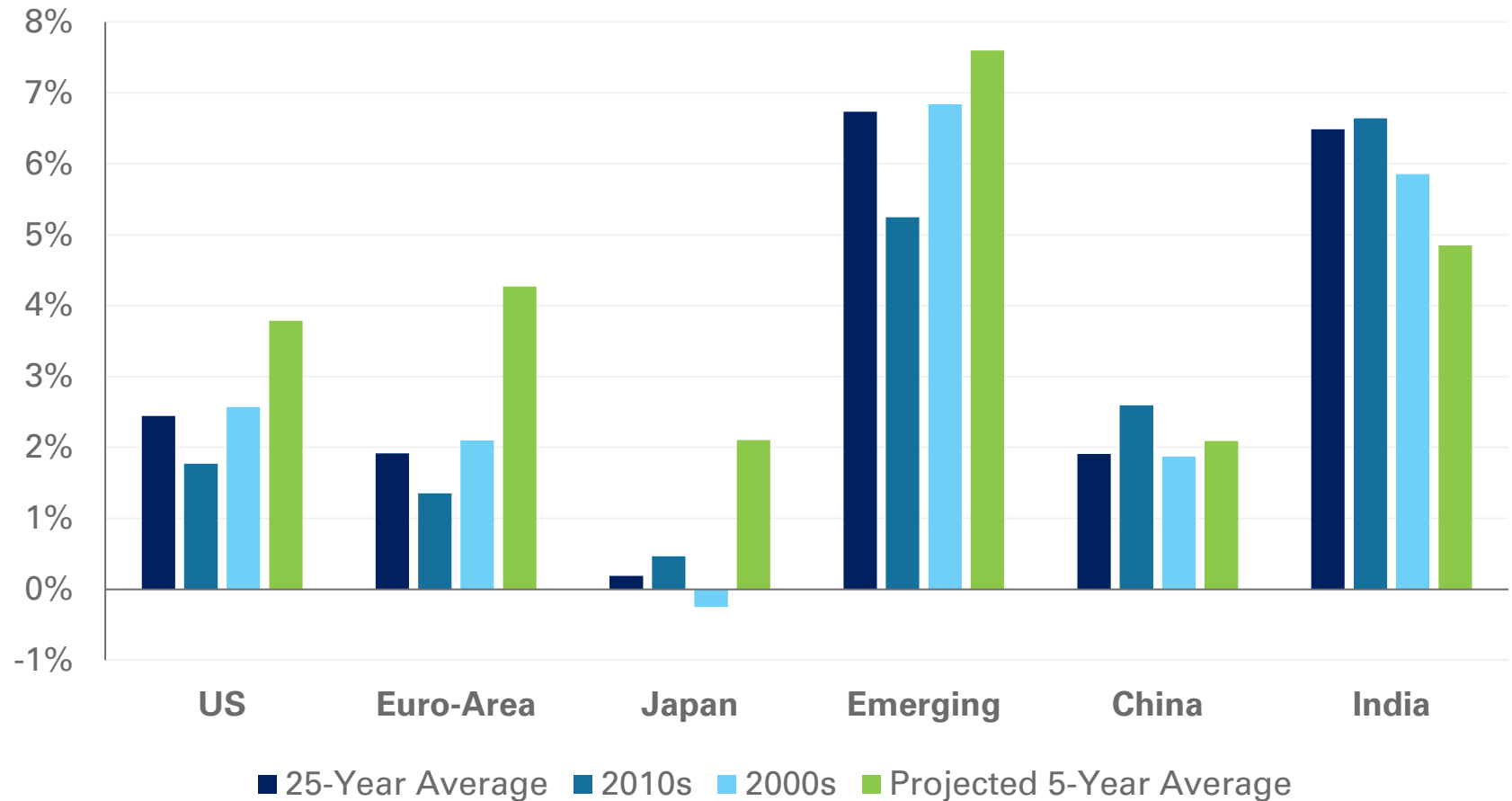


# U.S. UNEMPLOYMENT RATES

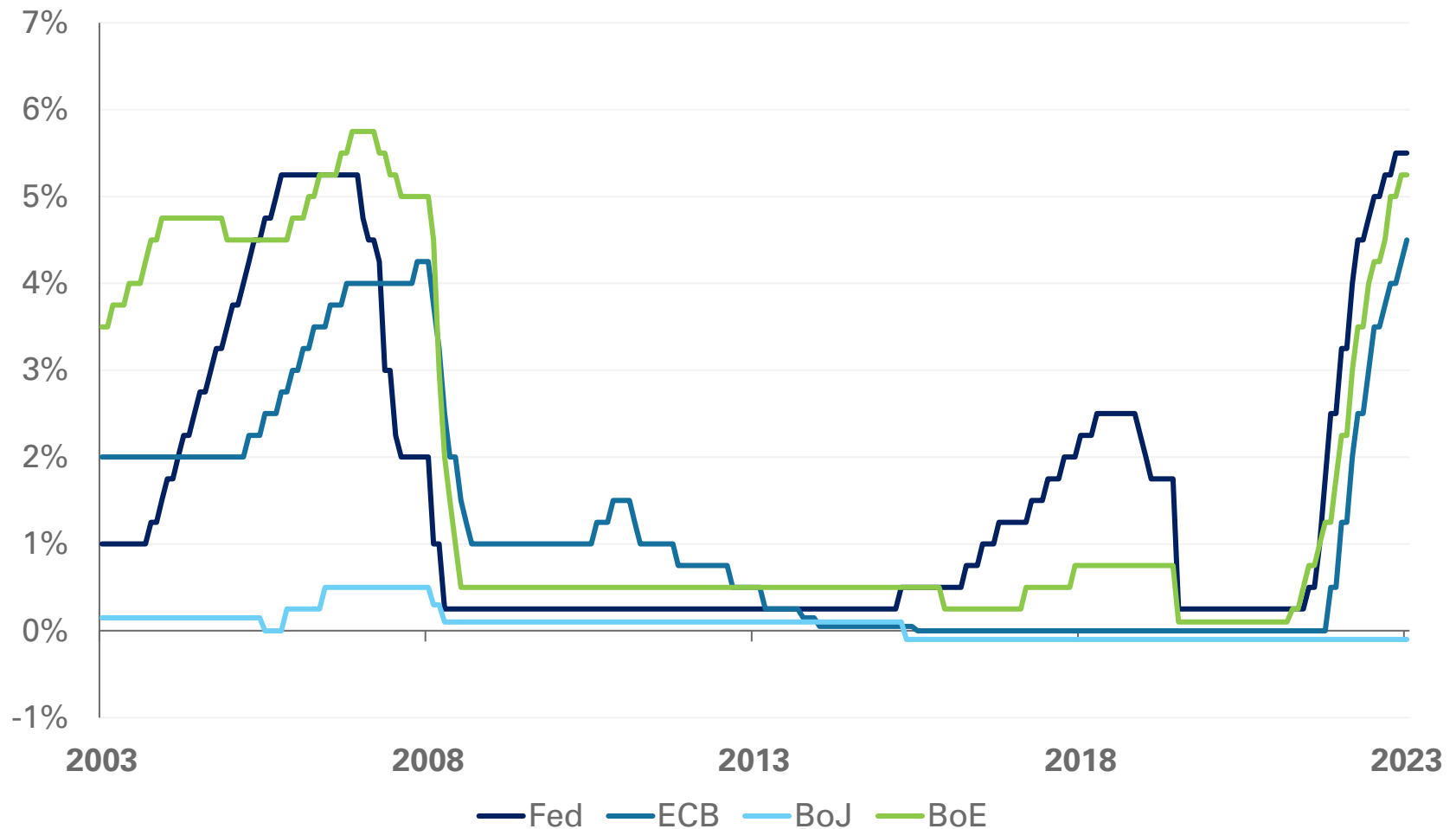


# HISTORICAL INFLATION

## IMF PROJECTIONS



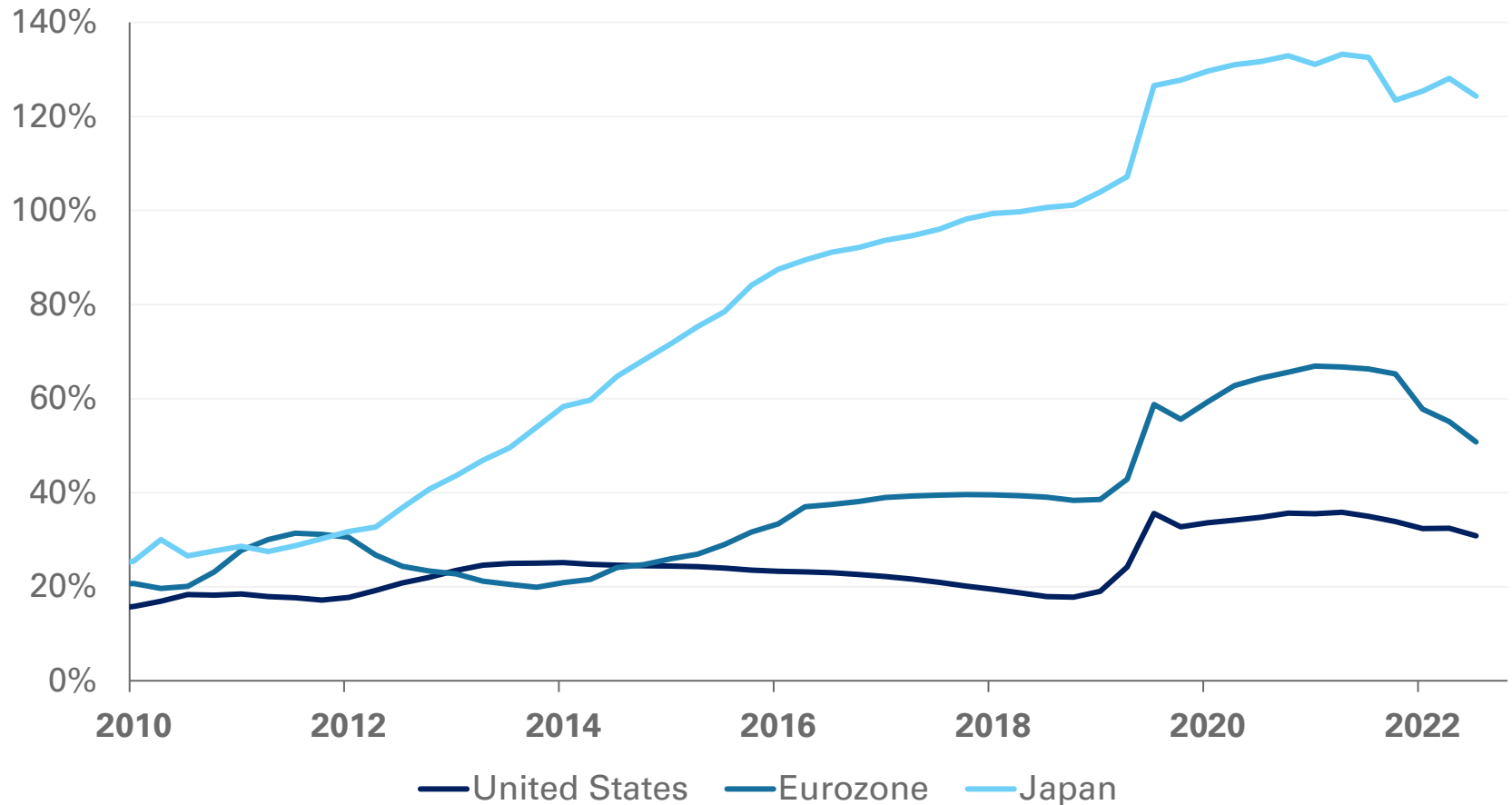
# CENTRAL BANK POLICY RATES





# CENTRAL BANK BALANCE SHEETS

AS A PERCENTAGE OF GDP



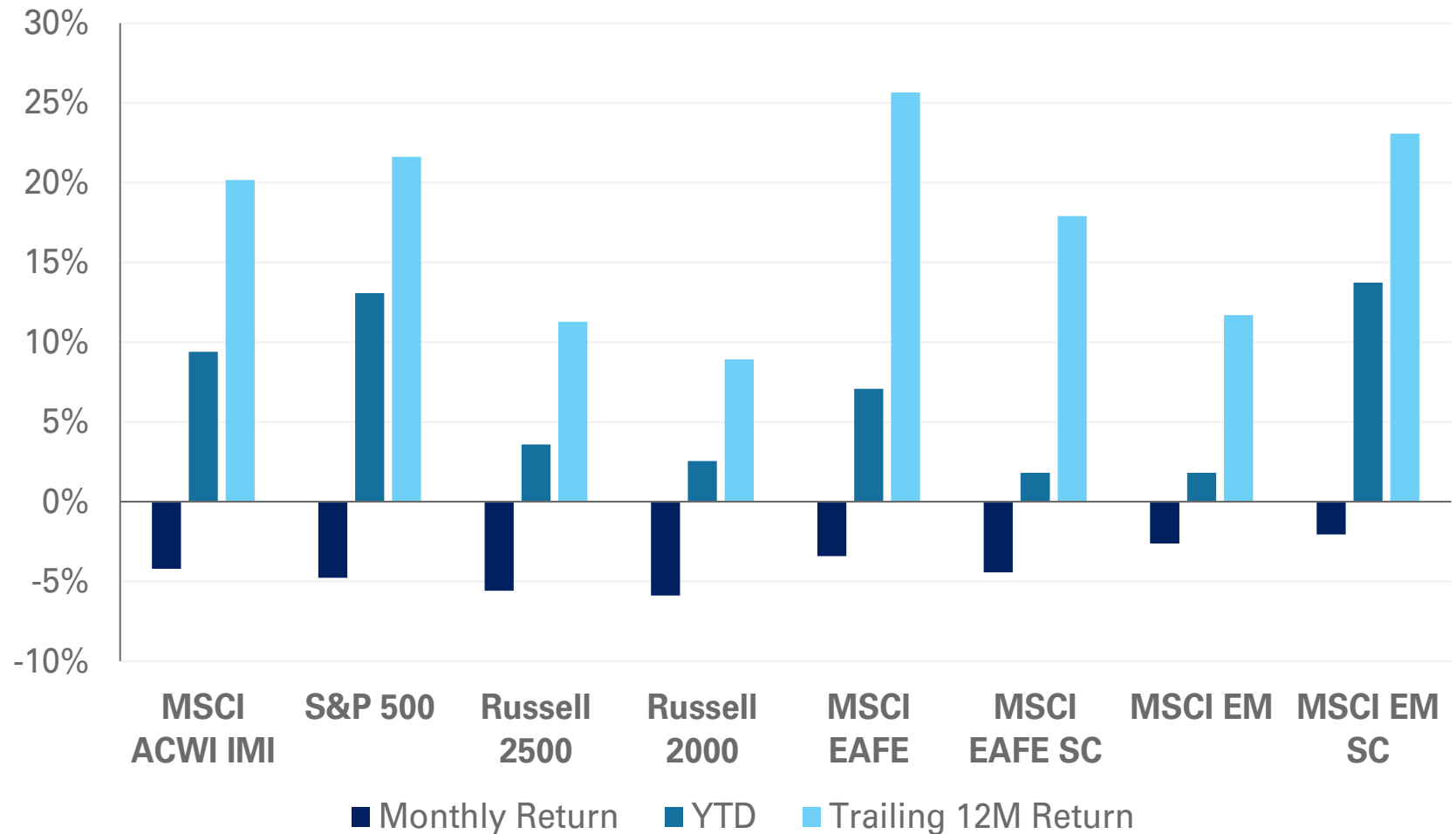
# CURRENCIES

## RELATIVE TO THE U.S. DOLLAR

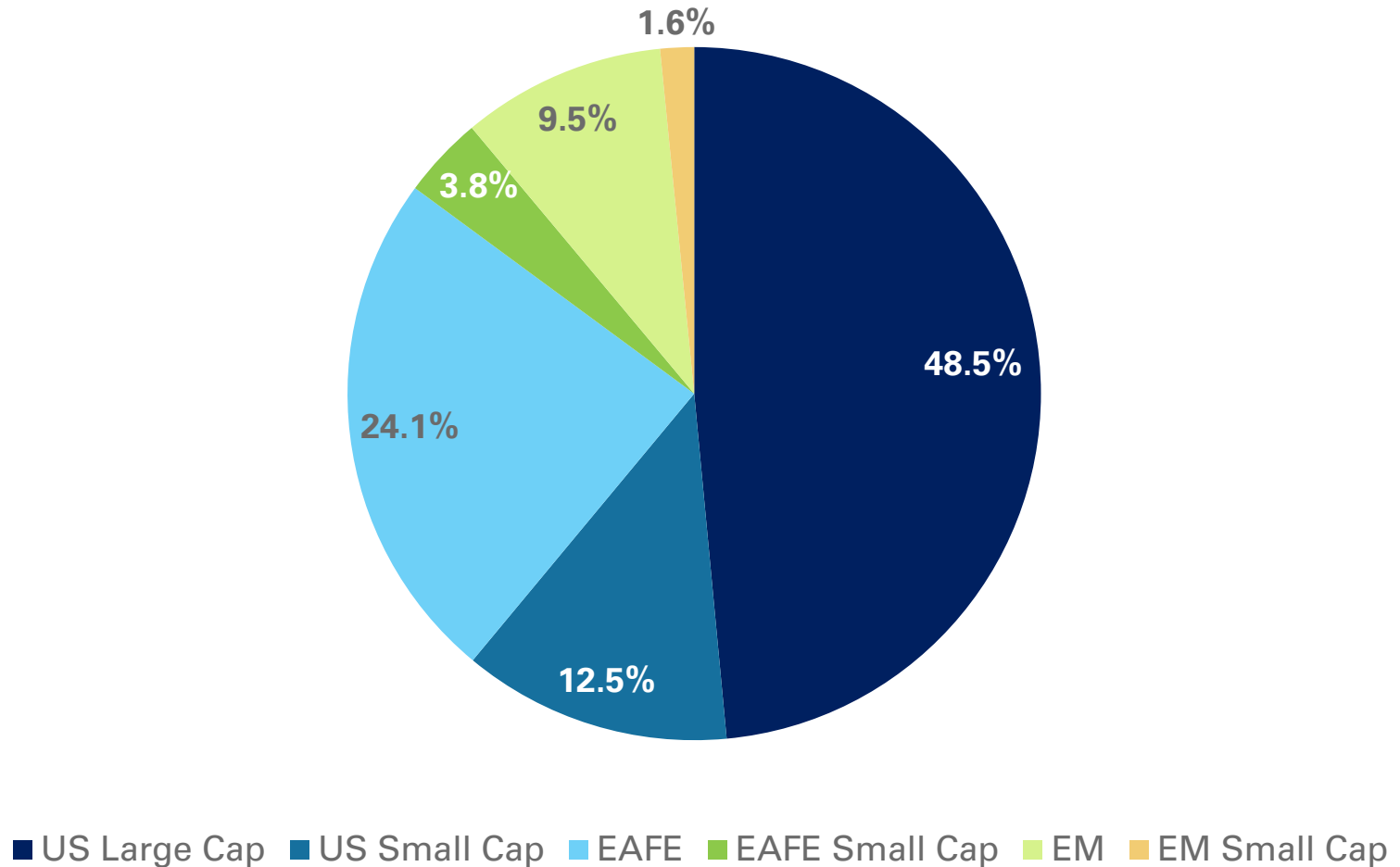
Currencies	Spot	1 Month	YTD	1 Year
<b>Euro</b>	<b>1.06</b>	-2.5%	-0.8%	8.4%
<b>British Pound</b>	<b>1.22</b>	-3.7%	1.5%	10.6%
<b>Japanese Yen</b>	<b>149.23</b>	-2.4%	-11.6%	-3.1%
<b>Swiss Franc</b>	<b>0.91</b>	-3.4%	1.1%	7.2%
<b>Australian Dollar</b>	<b>0.65</b>	-0.3%	-4.8%	-0.3%
<b>New Zealand Dollar</b>	<b>1.66</b>	0.9%	-5.0%	5.7%
<b>Canadian Dollar</b>	<b>1.35</b>	0.1%	0.2%	1.4%
<b>Chinese Yuan</b>	<b>7.30</b>	-0.2%	-4.8%	-1.4%
<b>Taiwanese Dollar</b>	<b>32.28</b>	-1.3%	-4.8%	-1.3%
<b>Korean Won</b>	<b>1349</b>	-2.0%	-6.3%	6.6%
<b>Vietnamese Dong</b>	<b>24305</b>	-0.9%	-3.0%	-2.2%
<b>Thai Baht</b>	<b>36.41</b>	-3.8%	-4.9%	4.6%
<b>Philippines Peso</b>	<b>56.58</b>	0.1%	-1.5%	4.2%
<b>Indian Rupee</b>	<b>83.04</b>	-0.3%	-0.4%	-1.4%
<b>Russian Ruble</b>	<b>97.60</b>	-1.6%	-25.2%	-40.2%
<b>Mexican Peso</b>	<b>17.38</b>	-3.1%	12.1%	16.3%
<b>Brazilian Real</b>	<b>5.01</b>	-1.1%	5.5%	8.0%
<b>Chilean Peso</b>	<b>0.03</b>	-5.9%	-2.4%	13.1%
<b>Argentine Peso</b>	<b>350.03</b>	0.0%	-49.4%	-58.0%
<b>South African Rand</b>	<b>18.84</b>	0.5%	-9.7%	-4.3%

# EQUITY

# EQUITY INDEX PERFORMANCE

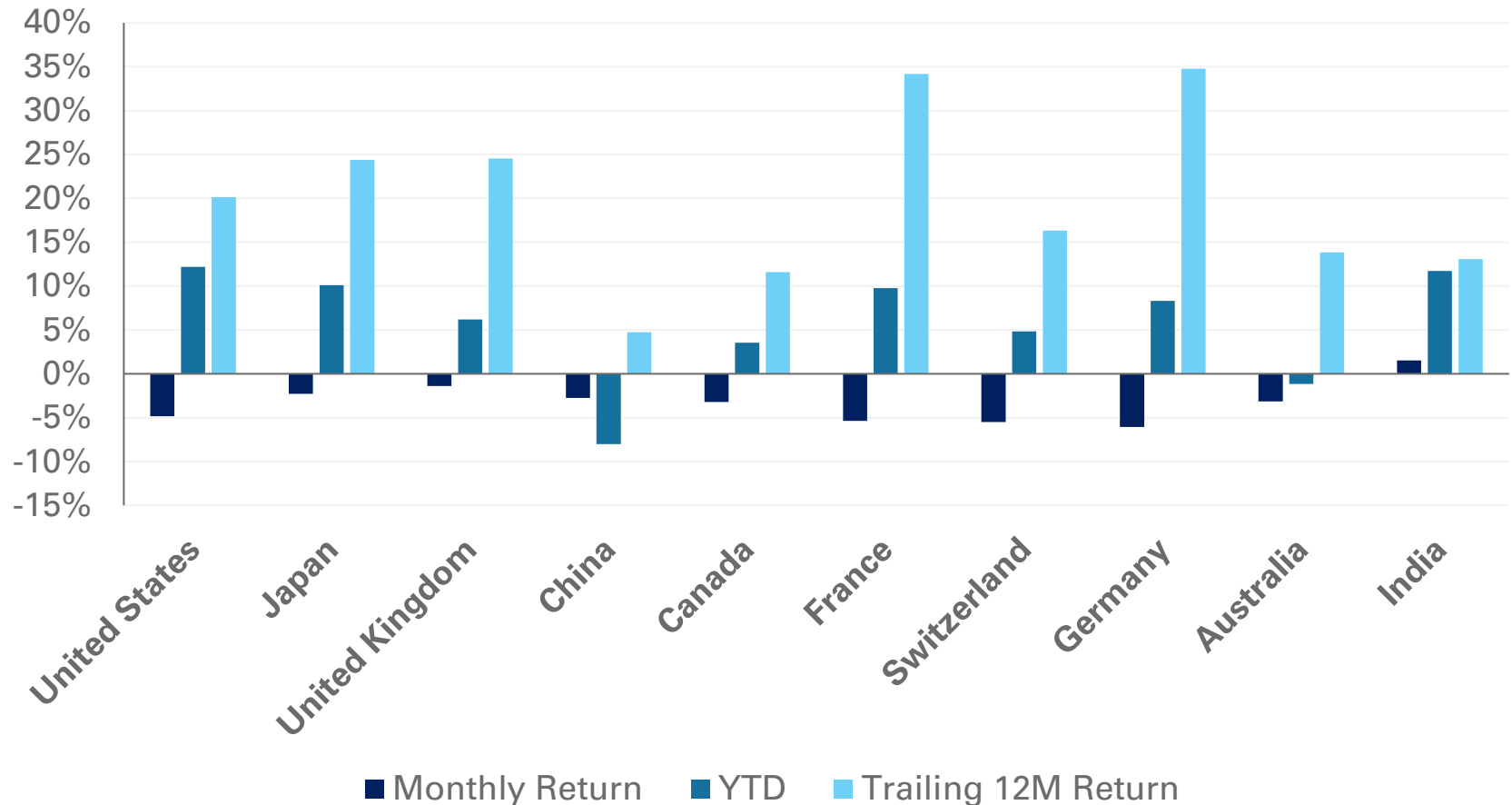


# MSCI ACWI IMI WEIGHTS

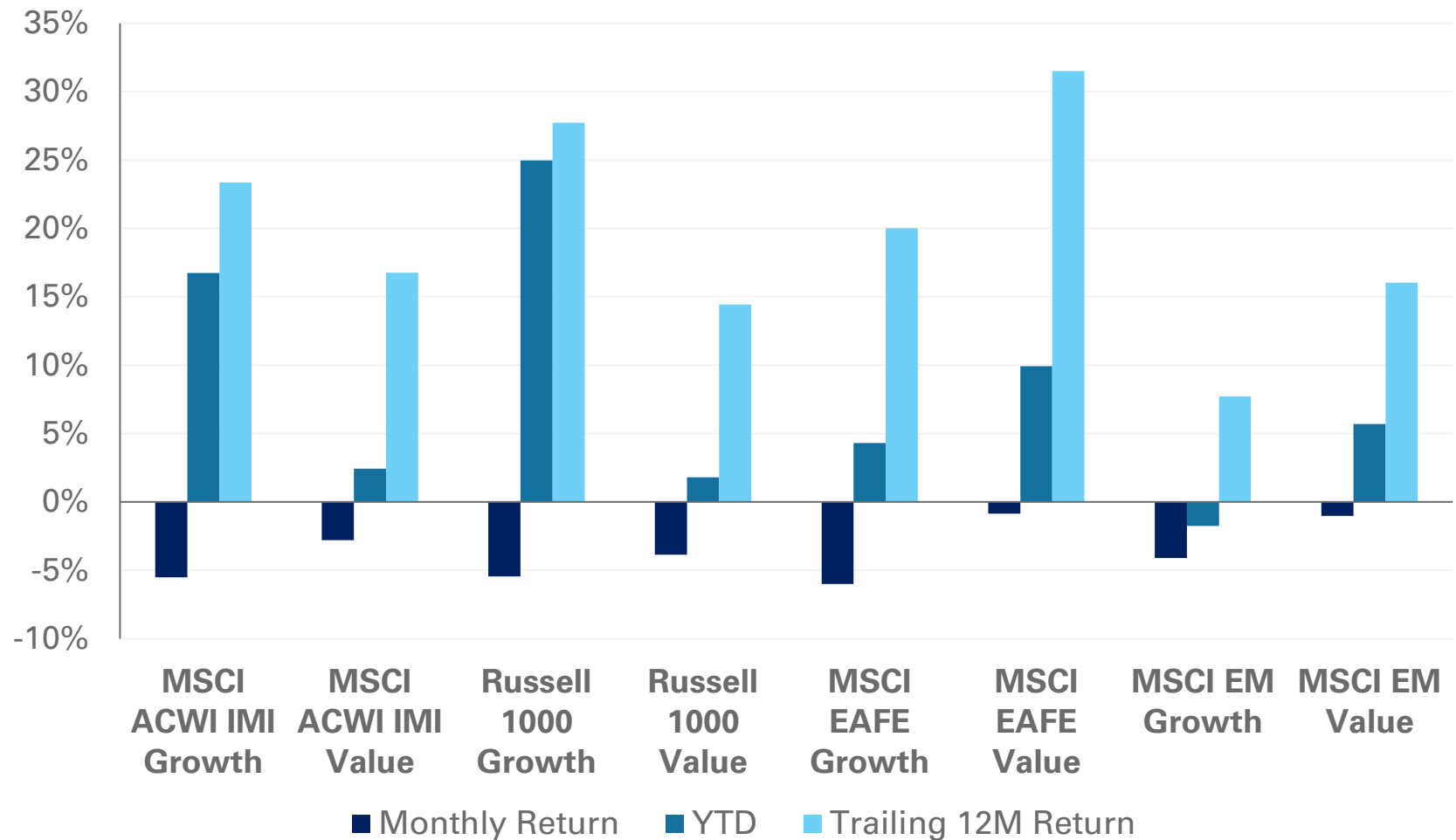


# EQUITY INDEX PERFORMANCE

## TOP 10 COUNTRIES BY MARKET CAP IN MSCI ACWI IMI INDEX



# STYLE INDEX PERFORMANCE



# SECTOR INDEX PERFORMANCE

	Monthly Return	YTD	Trailing 12M Return	Index Weight
<b>MSCI ACWI IMI</b>	<b>-4.2%</b>	<b>9.4%</b>	<b>20.2%</b>	<b>100.0%</b>
Communication Services	-3.2%	24.4%	27.7%	7.1%
Consumer Discretionary	-5.3%	16.1%	17.1%	11.4%
Consumer Staples	-4.6%	-2.2%	8.8%	6.9%
Energy	2.6%	8.7%	27.5%	5.2%
Financials	-2.1%	2.3%	16.6%	15.5%
Health Care	-3.6%	-2.5%	9.2%	11.6%
Industrials	-5.0%	8.3%	26.4%	11.4%
Information Technology	-6.4%	27.6%	35.2%	20.5%
Materials	-4.2%	1.3%	17.2%	4.9%
Real Estate	-6.2%	-6.3%	-0.4%	2.9%
Utilities	-5.1%	-9.3%	0.0%	2.6%

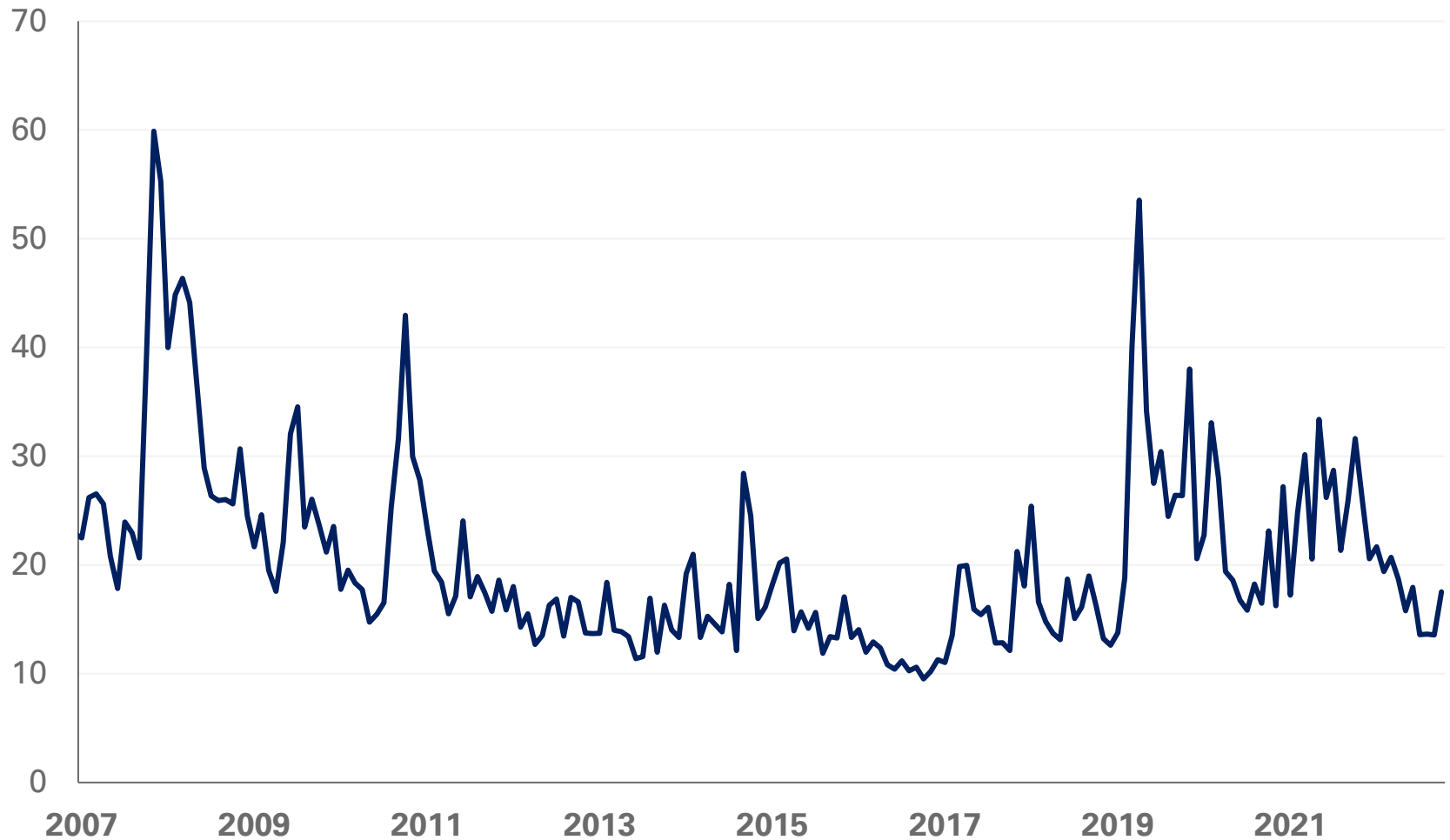
	Monthly Return	YTD	Trailing 12M Return	Index Weight
<b>S&amp;P 500</b>	<b>-4.8%</b>	<b>13.1%</b>	<b>21.6%</b>	<b>100.0%</b>
Communication Services	-3.3%	40.4%	38.5%	8.9%
Consumer Discretionary	-6.0%	26.7%	13.8%	10.7%
Consumer Staples	-4.5%	-4.8%	7.3%	6.6%
Energy	2.6%	6.0%	30.2%	4.7%
Financials	-3.1%	-1.6%	11.7%	12.8%
Health Care	-3.0%	-4.1%	8.2%	13.4%
Industrials	-6.0%	4.5%	24.6%	8.3%
Information Technology	-6.9%	34.7%	41.1%	27.5%
Materials	-4.8%	2.6%	18.0%	2.4%
Real Estate	-7.2%	-5.4%	-1.8%	2.4%
Utilities	-5.6%	-14.4%	-7.0%	2.4%

Source (Top): MSCI, FactSet  
Source (Bottom): S&P, FactSet

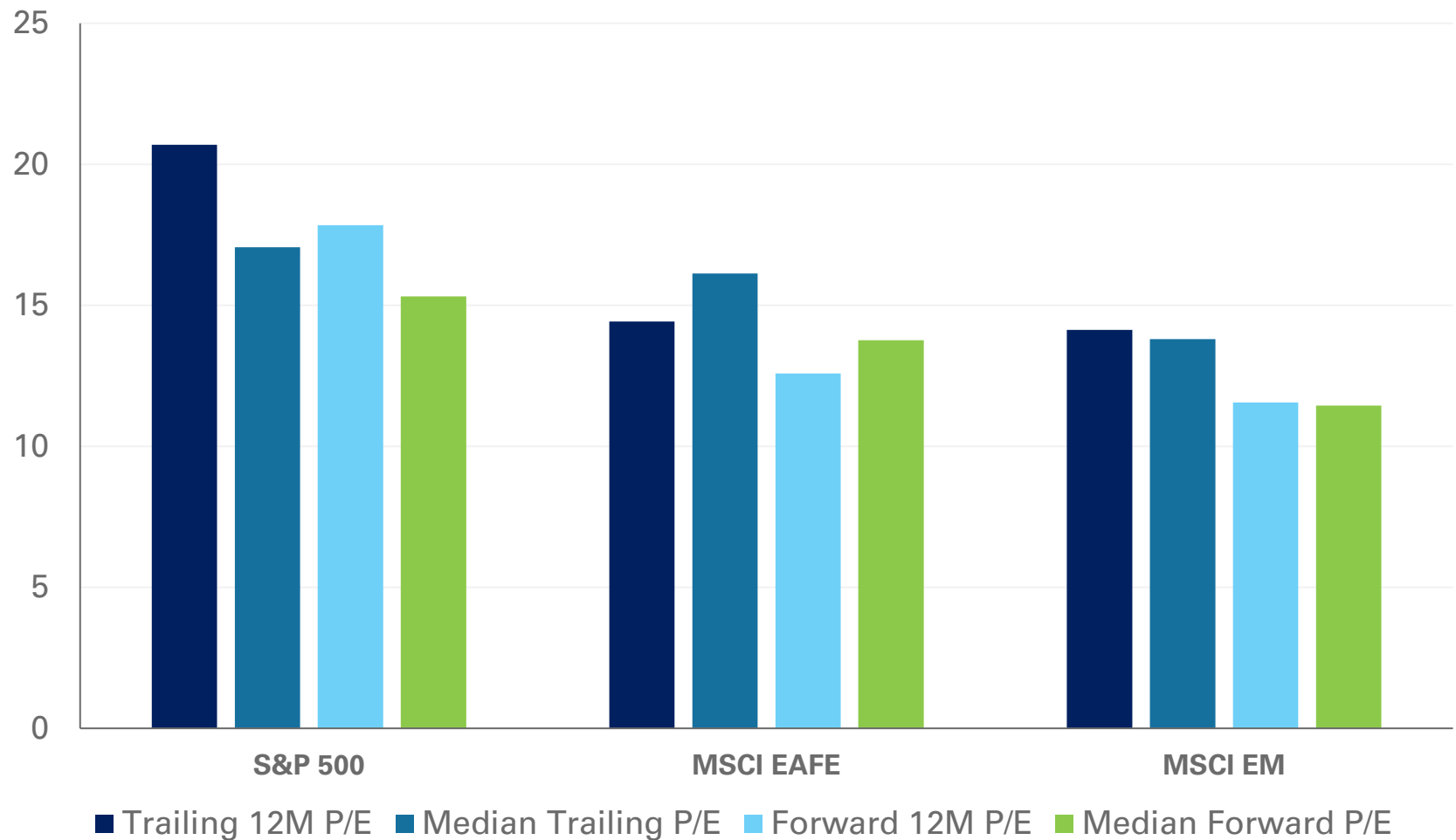




# EQUITY VOLATILITY INDEX (VIX)



# GLOBAL EQUITY VALUATIONS

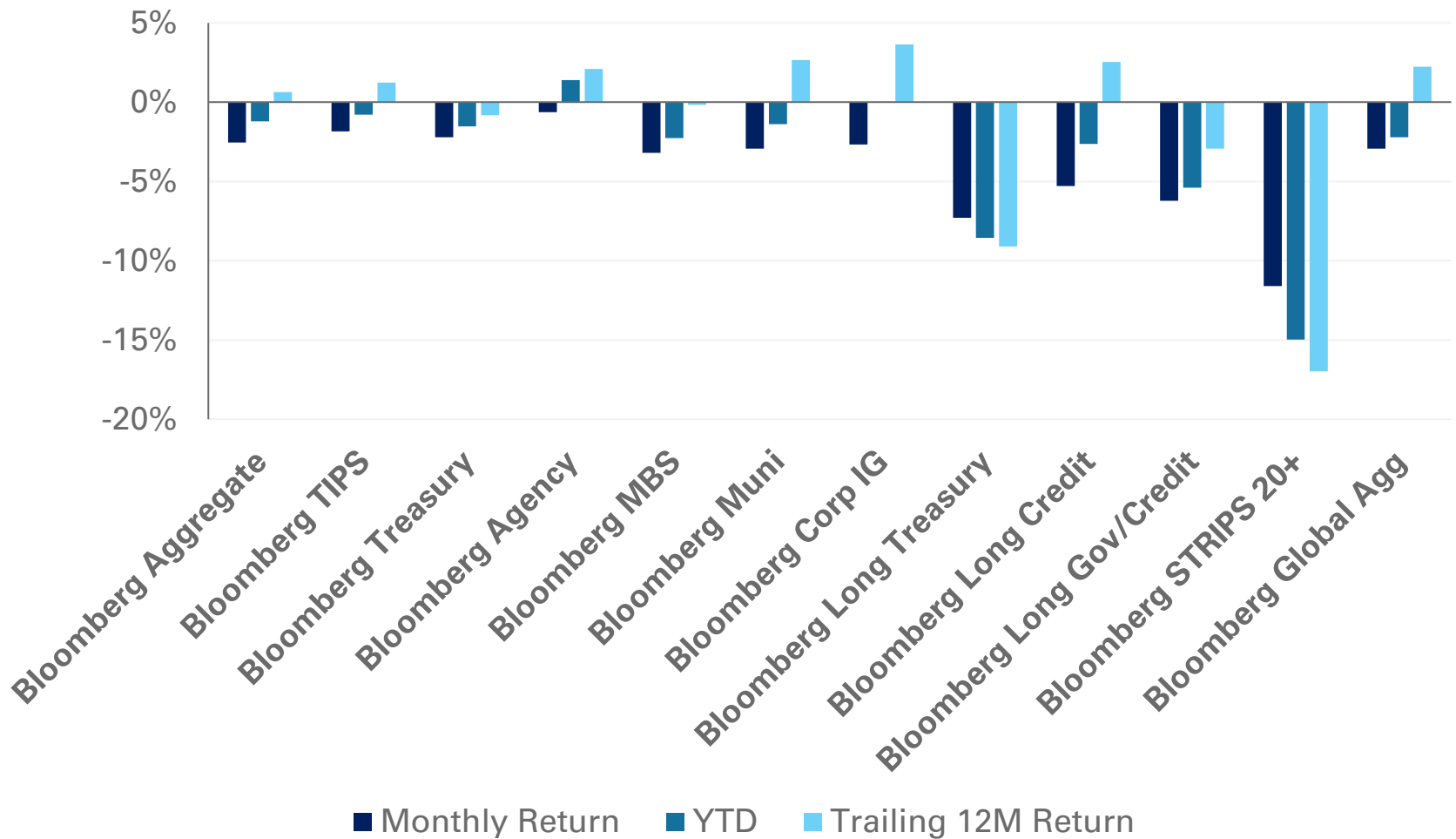


Median calculated based on 20-year monthly data  
Source: S&P, MSCI, FactSet

# SAFE-HAVEN FIXED INCOME



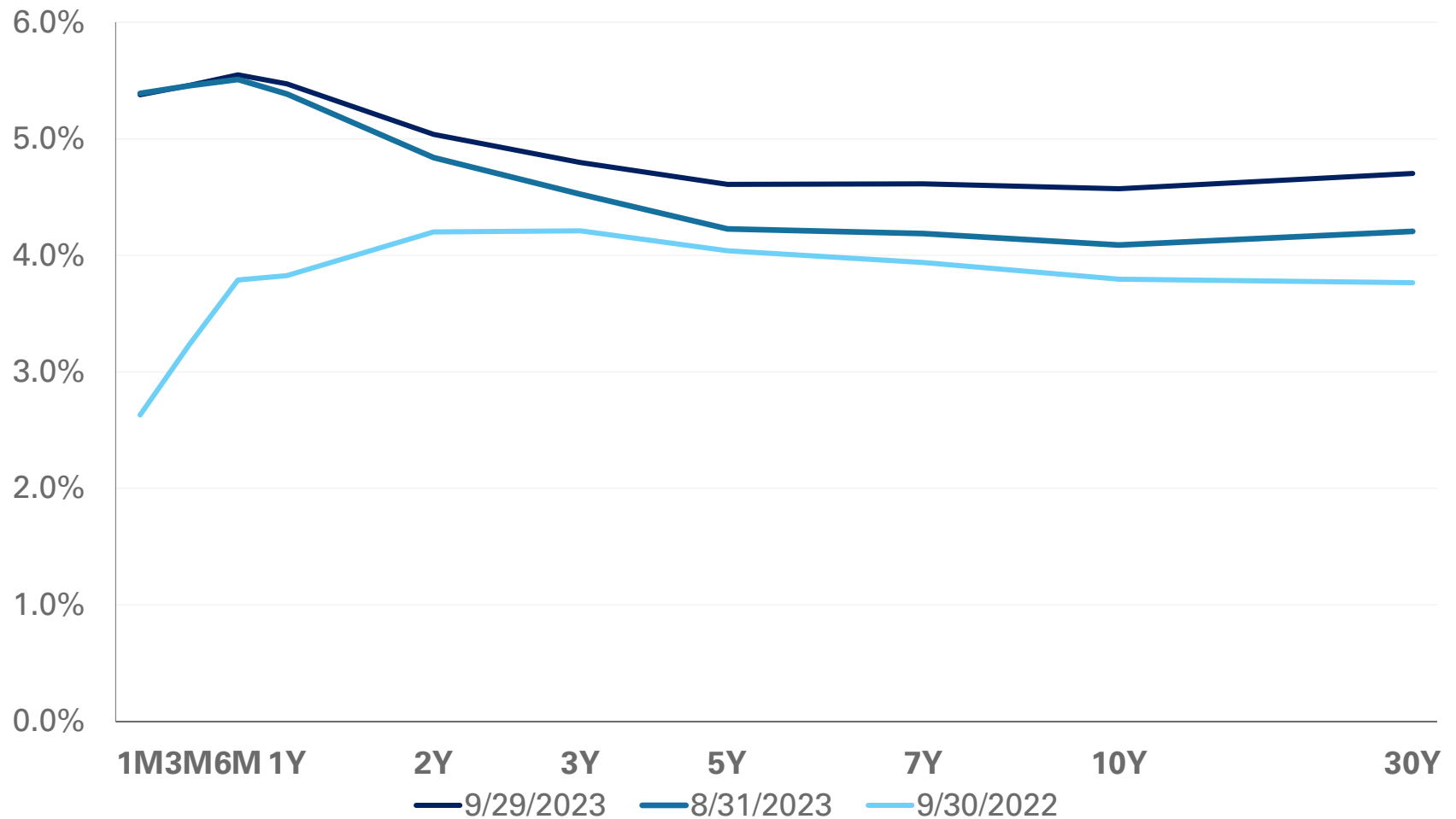
# SAFE-HAVEN FIXED INCOME PERFORMANCE



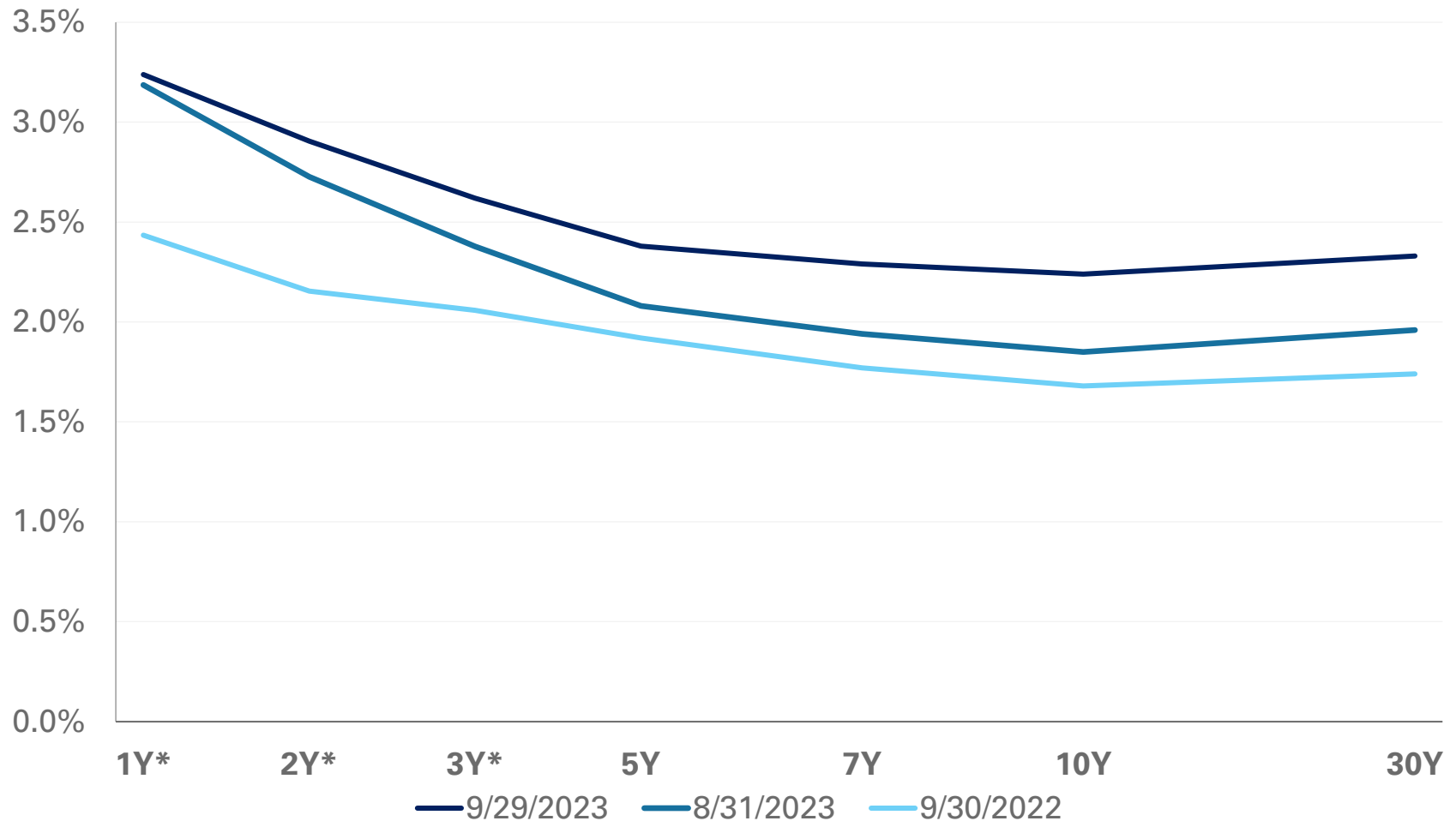
# FIXED INCOME CHARACTERISTICS

	Yield to Worst	Spread (bps)	Duration (Years)
<b>Bloomberg Aggregate</b>	5.39%	52	6.2
<b>Bloomberg TIPS</b>	5.02%	-	5.0
<b>Bloomberg Treasury</b>	4.85%	-	5.9
<b>Bloomberg Agency</b>	5.20%	16	3.1
<b>Bloomberg MBS</b>	5.57%	66	6.4
<b>Bloomberg Muni</b>	4.32%	-	6.4
<b>Bloomberg Corp IG</b>	6.04%	121	6.8
<b>Bloomberg Long Treasury</b>	4.85%	-	15.3
<b>Bloomberg Long Credit</b>	6.13%	133	12.4
<b>Bloomberg Long Gov/Credit</b>	5.54%	71	13.7
<b>Bloomberg STRIPS 20+</b>	4.81%	-	24.8
<b>Bloomberg Global Agg</b>	4.22%	50	6.6

# US TREASURY YIELD CURVE



# US TREASURY REAL YIELD CURVE



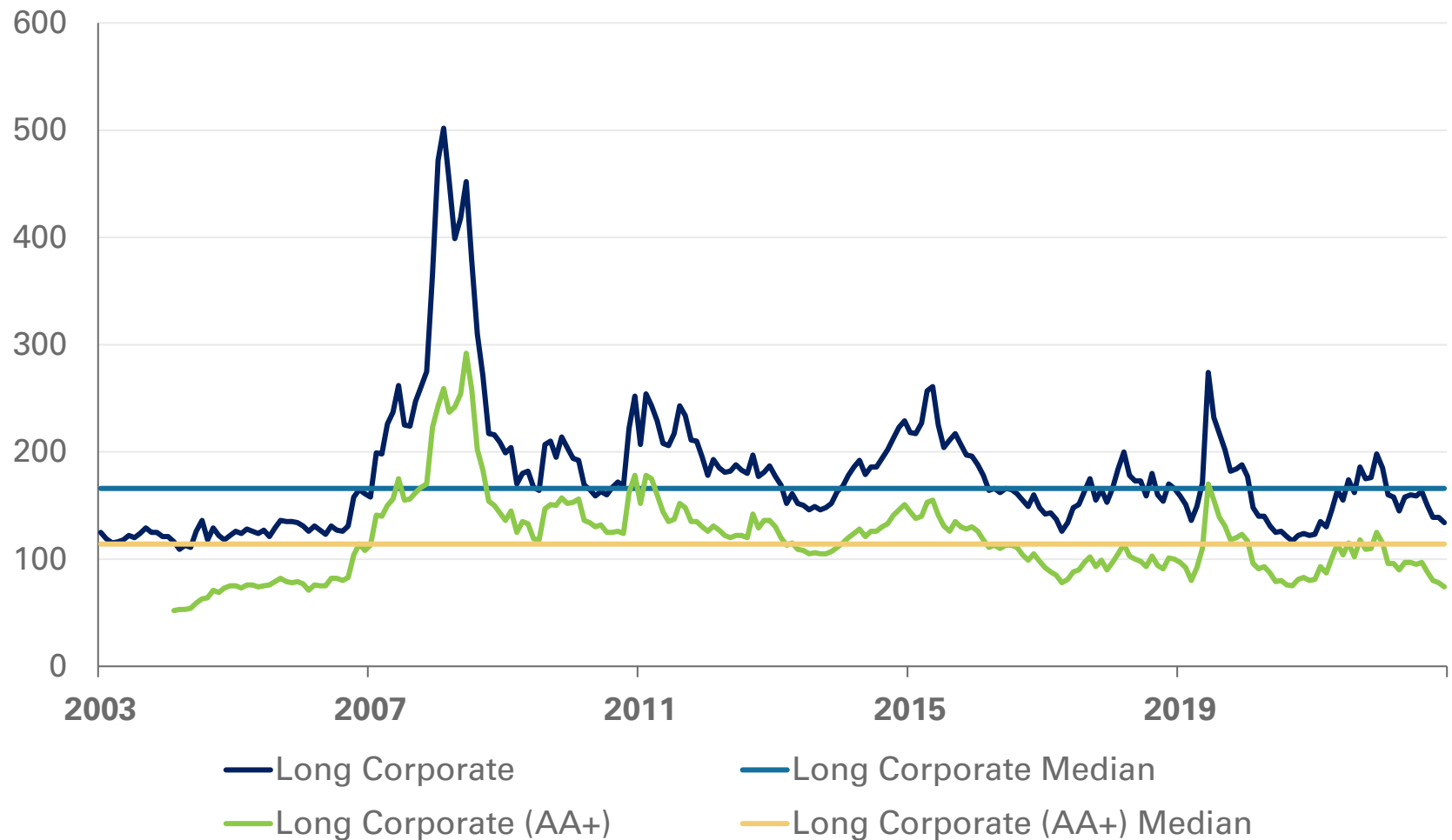
Notes: \*Real yields are calculated based on a weighted average of select off-the-run TIPS yields  
Source: NEPC, Bloomberg, FactSet

# LONG DURATION YIELDS





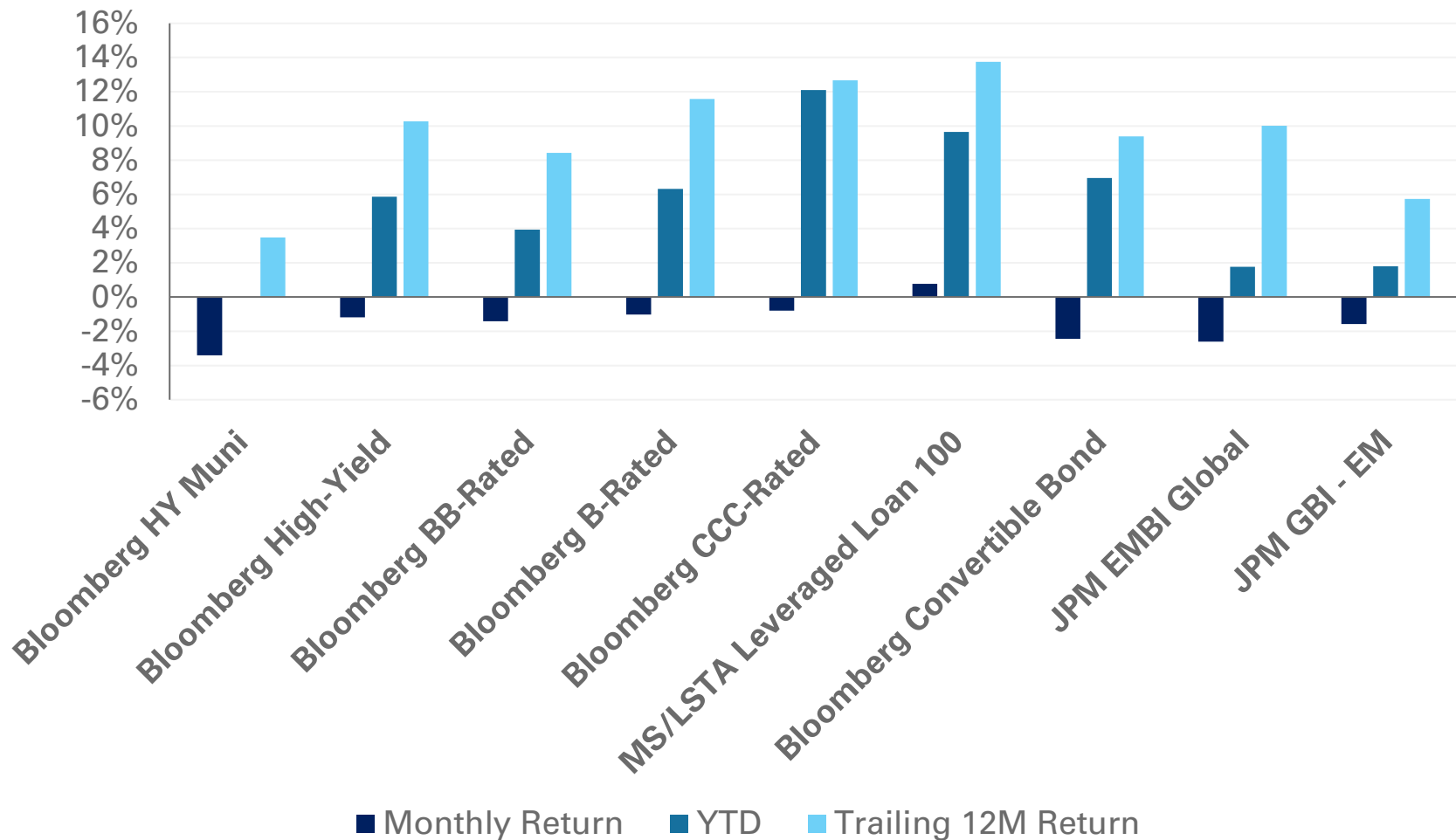
# LONG DURATION CORPORATE SPREADS



Median calculated based on 20-year of monthly data  
Source: Bloomberg, FactSet

# RETURN-SEEKING CREDIT

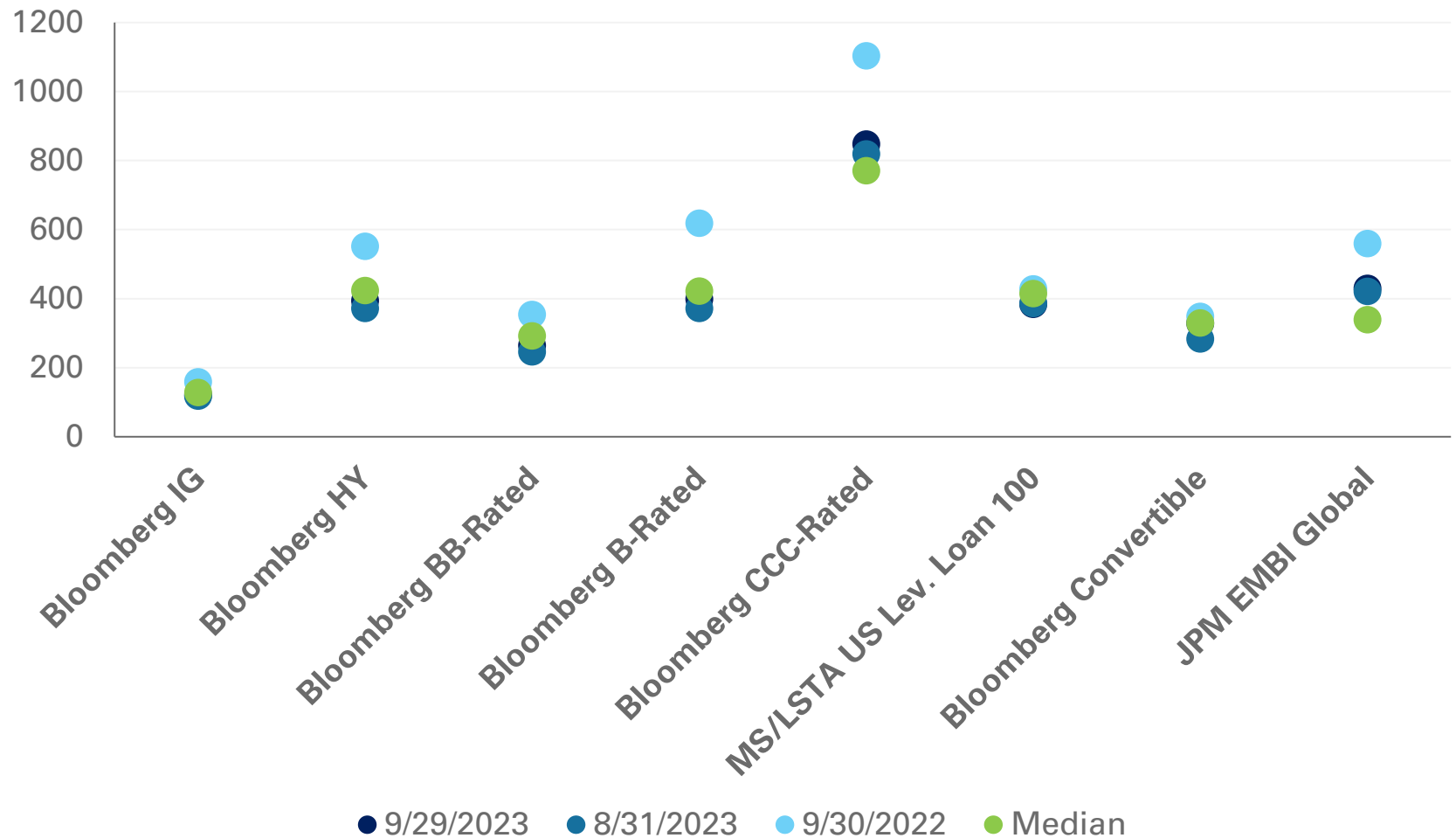
# RETURN-SEEKING CREDIT INDEX PERFORMANCE



# RETURN-SEEKING CREDIT CHARACTERISTICS

	Yield to Worst	Spread (bps)	Duration (Years)
<b>Bloomberg HY Muni</b>	6.25%	-	7.9
<b>Bloomberg High-Yield</b>	8.88%	394	3.5
<b>Bloomberg BB-Rated</b>	7.61%	264	3.8
<b>Bloomberg B-Rated</b>	9.00%	399	3.3
<b>Bloomberg CCC-Rated</b>	13.28%	848	3.0
<b>MS/LSTA Leveraged Loan 100</b>	9.49%	384	-
<b>Bloomberg Convertible Bond</b>	0.71%	329	2.1
<b>JPM EMBI Global</b>	9.04%	430	6.3
<b>JPM GBI - EM</b>	4.96%	-	5.4

# CREDIT SPREADS

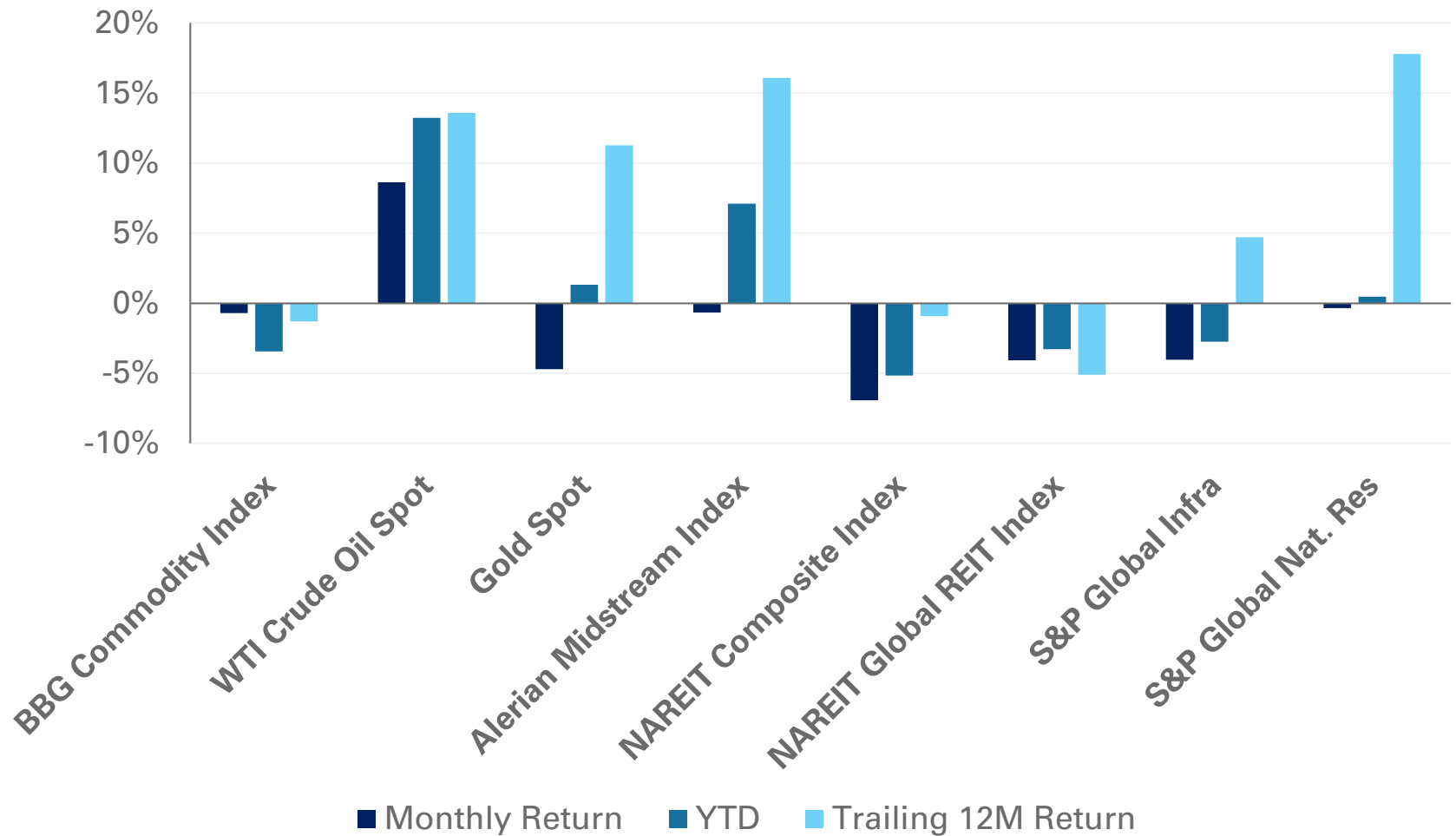


Median calculated based on 20-year of monthly data  
Source: Bloomberg, S&P, JPM, FactSet

# REAL ASSETS



# REAL ASSETS INDEX PERFORMANCE



# REAL ASSETS INDEX PERFORMANCE

Index	1 Month	3 Month	YTD	1 Year	3 Year	5 Year
<b>Bloomberg Commodity Index</b>	<b>-0.7%</b>	<b>4.7%</b>	<b>-3.4%</b>	<b>-1.3%</b>	<b>16.2%</b>	<b>6.1%</b>
<b>Bloomberg Sub Agriculture Index</b>	<b>-4.2%</b>	<b>-3.2%</b>	<b>-4.2%</b>	<b>-1.8%</b>	<b>19.4%</b>	<b>10.7%</b>
Coffee	-5.0%	-6.6%	-6.1%	-27.1%	10.6%	3.4%
Corn	0.1%	-3.7%	-15.2%	-14.9%	20.6%	9.0%
Cotton	-0.3%	9.9%	11.3%	12.1%	19.5%	7.1%
Soybean	-6.4%	-3.8%	1.7%	13.5%	21.8%	14.0%
Soybean Oil	-10.3%	-4.0%	-6.2%	2.4%	32.8%	19.2%
Sugar	5.1%	16.6%	51.6%	73.6%	33.7%	20.4%
Wheat	-9.7%	-18.9%	-34.8%	-44.8%	-7.5%	-3.2%
<b>Bloomberg Sub Energy</b>	<b>4.4%</b>	<b>19.6%</b>	<b>-4.3%</b>	<b>-13.0%</b>	<b>26.5%</b>	<b>-1.2%</b>
Brent Crude	6.2%	24.6%	13.9%	22.1%	47.1%	10.1%
Heating Oil	9.2%	41.0%	17.4%	34.6%	65.5%	14.9%
Natural Gas	-6.5%	-9.2%	-54.0%	-70.6%	-17.0%	-23.8%
Unleaded Gas	-2.8%	12.8%	19.7%	35.0%	53.8%	13.5%
WTI Crude Oil	9.9%	31.7%	18.8%	24.6%	41.4%	-0.1%
<b>Bloomberg Sub Industrial Metals</b>	<b>1.6%</b>	<b>3.5%</b>	<b>-9.3%</b>	<b>5.6%</b>	<b>9.6%</b>	<b>5.6%</b>
Aluminum	7.0%	9.3%	-1.8%	7.9%	9.1%	0.6%
Copper	-1.8%	-0.1%	0.4%	13.5%	8.5%	6.4%
Nickel	-7.9%	-8.9%	-37.4%	-10.7%	9.4%	8.5%
Zinc	9.4%	12.3%	-7.0%	-5.4%	6.6%	3.7%
<b>Bloomberg Sub Precious Metals</b>	<b>-5.7%</b>	<b>-3.6%</b>	<b>-0.7%</b>	<b>12.5%</b>	<b>-1.5%</b>	<b>7.9%</b>
Gold	-4.7%	-3.9%	1.3%	10.9%	-1.4%	8.0%
Silver	-9.1%	-2.6%	-6.9%	17.9%	-2.2%	7.4%
<b>Bloomberg Sub Livestock</b>	<b>0.3%</b>	<b>2.7%</b>	<b>7.8%</b>	<b>17.0%</b>	<b>8.8%</b>	<b>-1.8%</b>
Lean Hogs	-3.6%	0.7%	-14.7%	-4.6%	9.4%	-8.2%
Live Cattle	1.9%	3.3%	21.7%	30.3%	8.2%	1.5%



# OIL MARKETS

## WTI VERSUS BRENT CRUDE SPOT PRICES



# GOLD SPOT PRICE



# DISCLAIMERS & DISCLOSURES

# DISCLAIMERS & DISCLOSURES

Past performance is no guarantee of future results.

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A “since inception” return, if reported, begins with the first full month after funding, although actual inception dates (e.g. the middle of a month) and the timing of cash flows are taken into account in Composite return calculations.

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Source of private fund performance benchmark data: Cambridge Associates, via Refinitiv