

**Wilshire**



# Illinois Municipal Retirement Fund

Monthly Investment Summary

April-2023

## IMRF Performance Summary

- The Illinois Municipal Retirement Fund (“IMRF”) ended April 2023 with a market value of \$49.9 billion, up for the month by approximately \$400 million. IMRF returned 0.67% during the month, underperforming the Total Fund Benchmark, which returned 1.57%. Growth and defensive assets were generally positive to begin the new quarter despite softening economic data refueling recession concerns.
- The broad U.S. Equity market was up for the month, while small cap stocks trailed large cap. The U.S. Equity Portfolio underperformed the benchmark during April, returning 0.58% versus 1.14%. Investment manager performance in Large Cap Growth was the largest contributor to relative underperformance.
- International Equity markets were positive in April. The International Equity Portfolio underperformed the benchmark during the month, returning 1.66% versus 1.74%. The portfolios allocation to Emerging Markets and Small Cap was the largest contributor to relative underperformance.
- Fixed Income markets were generally positive as rates declined on the short and intermediate end of the curve. The Fixed Income Portfolio slightly underperformed the benchmark during the month, returning 0.68% versus 0.70%. Investment manager performance in Core Plus was the largest contributor to relative underperformance.
- As of April month-end, all underlying asset class allocations in the Portfolio are within the stated four percentage point rebalancing range as outlined by the current Statement of Investment Policy.

Performance referenced above is Net of Fees.

## Market Dashboard

Returns though Friday April 28, 2023

Portfolio Allocations	MTD	MAR	FEB	QTD	Q1 2023	YTD	1 Year	3 Year	5 Year
Global 60/40	1.11	2.87	(2.75)	1.11	5.56	6.73	(0.00)	6.30	4.95
Wilshire Risk Parity (12%)	1.52	6.51	(3.33)	1.52	8.66	10.30	(4.61)	6.76	4.99

Strategic Allocation Themes *	MTD	MAR	FEB	QTD	Q1 2023	YTD	1 Year	3 Year	5 Year
Growth <sup>1</sup>	1.44	3.08	(2.87)	1.44	7.31	8.85	0.21	12.64	6.96
Defensive Growth <sup>2</sup>	1.13	1.96	(2.78)	1.13	2.46	3.62	(3.19)	8.40	7.15
Diversified Credit <sup>3</sup>	0.79	0.85	(1.39)	0.79	2.78	3.59	0.19	3.25	1.89
Real Assets <sup>4</sup>	0.42	1.50	(4.69)	0.42	0.90	1.33	(13.79)	11.38	5.56
Defensive <sup>5</sup>	0.61	2.54	(2.59)	0.61	2.96	3.59	(0.93)	(3.14)	1.20

Major Asset Classes	MTD	MAR	FEB	QTD	Q1 2023	YTD	1 Year	3 Year	5 Year
FT Wilshire 5000	1.04	2.77	(2.34)	1.04	7.29	8.40	(2.13)	15.01	10.67
MSCI ACWI-ex-USA (Net)	1.74	2.45	(3.51)	1.74	6.87	8.72	4.26	10.26	2.55
Bloomberg U.S. Aggregate	0.61	2.54	(2.59)	0.61	2.96	3.59	(0.93)	(3.14)	1.20
Bloomberg U.S. Corporate High Yield	1.00	1.07	(1.29)	1.00	3.57	4.60	0.73	4.98	3.28
Wilshire Global Real Estate Securities	1.41	(2.83)	(4.50)	1.41	2.35	3.79	(18.93)	7.37	3.11
Bloomberg Commodity	(0.75)	(0.21)	(4.70)	(0.75)	(5.36)	(6.07)	(16.40)	21.99	4.72

Source: Bloomberg, All returns are in USD

\* Strategic Allocations are comprised of the following asset mixes (rebalanced monthly)

<sup>1</sup> Growth : 100% Global Equity

<sup>2</sup> Defensive Growth : 60% Low Vol Global Equity, 40% US Convertibles

<sup>3</sup> Diversified Credit : 42.5% U.S. High Yield, 42.5% EMD, 15% Banks Loans

<sup>4</sup> Real Assets : 43% Global REITS/GLI, 33% Commodities, 48% TIPS, 9% Gold, -31% Cash

<sup>5</sup> Defensive : 100% US Core Bonds

## Market Returns

Returns though Friday April 28, 2023

<b>US Equity</b>	<b>MTD</b>	<b>MAR</b>	<b>FEB</b>	<b>QTD</b>	<b>Q1 2023</b>	<b>YTD</b>	<b>1 Year</b>	<b>3 Year</b>	<b>5 Year</b>
FT Wilshire 5000	1.04	2.77	(2.34)	1.04	7.29	8.40	(2.13)	15.01	10.67
Standard & Poor's 500	1.56	3.67	(2.44)	1.56	7.50	9.17	(1.05)	15.17	11.27
Wilshire 4500 Completion	(2.00)	(2.59)	(1.61)	(2.00)	5.77	3.66	(8.01)	13.74	6.75
Wilshire US Large Cap	1.29	3.48	(2.39)	1.29	7.64	9.03	(1.71)	15.13	11.25
Wilshire US Large-Cap Growth	1.38	6.83	(1.19)	1.38	15.68	17.27	(1.82)	15.90	13.00
Wilshire US Large-Cap Value	1.19	0.05	(3.60)	1.19	0.06	1.25	(1.58)	14.05	9.38
Wilshire US Small Cap	(1.83)	(4.48)	(1.72)	(1.83)	3.55	1.65	(6.35)	14.28	5.17
Wilshire US Small-Cap Growth	(1.77)	(3.41)	(0.85)	(1.77)	6.35	4.46	(2.58)	12.04	5.54
Wilshire US Small-Cap Value	(1.89)	(5.48)	(2.52)	(1.89)	1.03	(0.88)	(9.66)	16.53	4.80
<b>Non-US Equity</b>	<b>MTD</b>	<b>MAR</b>	<b>FEB</b>	<b>QTD</b>	<b>Q1 2023</b>	<b>YTD</b>	<b>1 Year</b>	<b>3 Year</b>	<b>5 Year</b>
MSCI ACWI-ex-USA (Net)	1.74	2.45	(3.51)	1.74	6.87	8.72	4.26	10.26	2.55
MSCI EAFE (Net)	2.82	2.48	(2.09)	2.82	8.47	11.53	9.58	12.08	3.65
MSCI EM (Net)	(1.13)	3.03	(6.48)	(1.13)	3.96	2.78	(4.52)	5.18	(0.90)
MSCI ACWI-ex-US Small cap (Net)	1.47	0.23	(2.55)	1.47	4.70	6.24	(1.99)	12.14	1.76
<b>Global Equity</b>	<b>MTD</b>	<b>MAR</b>	<b>FEB</b>	<b>QTD</b>	<b>Q1 2023</b>	<b>YTD</b>	<b>1 Year</b>	<b>3 Year</b>	<b>5 Year</b>
MSCI ACWI (Net)	1.44	3.08	(2.87)	1.44	7.31	8.85	0.21	12.64	6.96
MSCI ACWI Minimum Volatility (Net)	2.82	3.71	(3.77)	2.82	1.53	4.39	(0.81)	6.52	5.56
<b>Fixed Income</b>	<b>MTD</b>	<b>MAR</b>	<b>FEB</b>	<b>QTD</b>	<b>Q1 2023</b>	<b>YTD</b>	<b>1 Year</b>	<b>3 Year</b>	<b>5 Year</b>
Bloomberg U.S. Aggregate	0.61	2.54	(2.59)	0.61	2.96	3.59	(0.93)	(3.14)	1.20
Bloomberg Long Term Treasury	0.52	4.74	(4.74)	0.52	6.17	6.72	(8.42)	(12.05)	0.25
Bloomberg U.S. TIPS	0.11	2.89	(1.37)	0.11	3.34	3.45	(4.73)	0.63	3.03
Bloomberg US Treasury Bills	0.36	0.44	0.33	0.36	1.11	1.48	2.81	0.97	1.46
Bloomberg U.S. Corporate High Yield	1.00	1.07	(1.29)	1.00	3.57	4.60	0.73	4.98	3.28
Credit Suisse Leveraged Loan	0.95	(0.10)	0.63	0.95	3.11	4.09	2.81	7.30	3.65
Bloomberg US Convertibles Index	(1.32)	(0.23)	(1.42)	(1.32)	4.47	3.09	(5.78)	11.37	9.06
JPM EMBI Global Diversified	0.53	0.96	(2.21)	0.53	1.86	2.40	(1.50)	0.01	(0.22)
<b>Real Assets</b>	<b>MTD</b>	<b>MAR</b>	<b>FEB</b>	<b>QTD</b>	<b>Q1 2023</b>	<b>YTD</b>	<b>1 Year</b>	<b>3 Year</b>	<b>5 Year</b>
Wilshire Global Real Estate Securities	1.41	(2.83)	(4.50)	1.41	2.35	3.79	(18.93)	7.37	3.11
FTSE Global Core Infrastructure 50/50	2.17	3.03	(4.72)	2.17	0.74	2.93	(3.38)	8.86	6.66
Alerian Midstream Energy	2.44	(0.11)	(3.79)	2.44	0.77	3.23	0.49	26.38	9.07
Bloomberg Commodity	(0.75)	(0.21)	(4.70)	(0.75)	(5.36)	(6.07)	(16.40)	21.99	4.72
Gold	1.05	7.79	(5.26)	1.05	7.96	9.10	5.04	5.23	8.49
Bitcoin	3.38	22.67	0.86	3.38	71.27	77.06	(26.41)	55.97	26.74

Source: Bloomberg. All returns are in USD

## Factor/Relative Returns

Returns though Friday April 28, 2023

<b>Asset Class Differentials</b>	<b>MTD</b>	<b>MAR</b>	<b>FEB</b>	<b>QTD</b>	<b>Q1 2023</b>	<b>YTD</b>	<b>1 Year</b>	<b>3 Year</b>	<b>5 Year</b>
Stocks (ACWI) > Bonds (BB US Aggregate)	0.83	0.54	(0.28)	0.83	4.34	5.26	1.15	15.77	5.77
Stocks (ACWI) > Mkt Alts (Equity Hedged))	0.34	2.10	(1.44)	0.34	4.86	5.28	0.94	5.48	3.95
Mkt Alts (Relative Value) > Bonds (BB US Aggregate)	(0.18)	(1.74)	1.25	(0.18)	(1.43)	(1.62)	(1.05)	4.40	(0.85)
<b>Equity &amp; Real Assets Differentials</b>	<b>MTD</b>	<b>MAR</b>	<b>FEB</b>	<b>QTD</b>	<b>Q1 2023</b>	<b>YTD</b>	<b>1 Year</b>	<b>3 Year</b>	<b>5 Year</b>
US Small > Large	(3.12)	(7.97)	0.67	(3.12)	(4.09)	(7.38)	(4.64)	(0.85)	(6.08)
US Value > Growth	(0.19)	(6.78)	(2.41)	(0.19)	(15.61)	(16.01)	0.23	(1.86)	(3.63)
ACWI-ex-US > US	0.70	(0.32)	(1.17)	0.70	(0.42)	0.32	6.39	(4.75)	(8.12)
EM > EAFE	(3.96)	0.55	(4.40)	(3.96)	(4.51)	(8.75)	(14.10)	(6.90)	(4.55)
ACWI-ex-US Currency Impact	0.21	1.58	(2.39)	0.21	0.69	0.93	(0.22)	(1.08)	(2.19)
EAFE Currency Impact	0.55	1.98	(2.70)	0.55	0.97	1.59	1.34	(1.49)	(2.20)
EM Currency Impact	(0.44)	0.87	(1.83)	(0.44)	0.18	(0.28)	(2.27)	(0.95)	(2.58)
Global Low Volatility > ACWI	1.38	0.63	(0.90)	1.38	(5.78)	(4.46)	(1.02)	(6.11)	(1.40)
Global RE > ACWI	(0.03)	(5.91)	(1.63)	(0.03)	(4.96)	(5.06)	(19.14)	(5.26)	(3.85)
Commodities > Global RE	(2.16)	2.62	(0.20)	(2.16)	(7.71)	(9.86)	2.53	14.62	1.61
Commodities > TIPS	(0.86)	(3.10)	(3.33)	(0.86)	(8.70)	(9.52)	(11.67)	21.36	1.69
Gold > Commodities	1.80	8.00	(0.56)	1.80	13.32	15.17	21.44	(16.76)	3.77
<b>Fixed Income Differentials</b>	<b>MTD</b>	<b>MAR</b>	<b>FEB</b>	<b>QTD</b>	<b>Q1 2023</b>	<b>YTD</b>	<b>1 Year</b>	<b>3 Year</b>	<b>5 Year</b>
Duration (US Core > US Core 1-3 Years)	0.26	1.09	(1.84)	0.26	1.45	1.73	(1.92)	(2.59)	(0.10)
IG Credit > Treasury	0.23	(0.11)	(0.84)	0.23	0.50	0.74	1.40	2.33	0.95
High Yield > IG Credit	0.23	(1.72)	1.90	0.23	0.07	0.31	0.71	6.94	1.30
High Yield > Loans	(0.00)	1.10	(1.86)	(0.00)	0.32	0.32	(2.53)	(2.40)	(0.48)
TIPS > Treasury	(0.75)	(0.79)	1.85	(0.75)	(0.19)	(0.97)	(3.54)	5.76	1.63
EMD > Dev Hdg	(0.03)	(0.76)	(1.39)	(0.03)	(0.71)	(0.74)	0.75	1.72	(0.42)
EMD > High Yield	(0.60)	0.17	(0.95)	(0.60)	(1.42)	(2.05)	(1.17)	(5.26)	(2.69)
Non-US > US Core	(0.32)	1.19	(1.41)	(0.32)	0.10	(0.23)	(2.60)	(1.18)	(3.90)
Non-US Hdg > US Core	(0.19)	(0.53)	1.74	(0.19)	(0.10)	(0.30)	(0.26)	1.13	(0.18)
FI Currency Impact	(0.13)	1.73	(3.15)	(0.13)	0.20	0.06	(2.34)	(2.31)	(3.72)

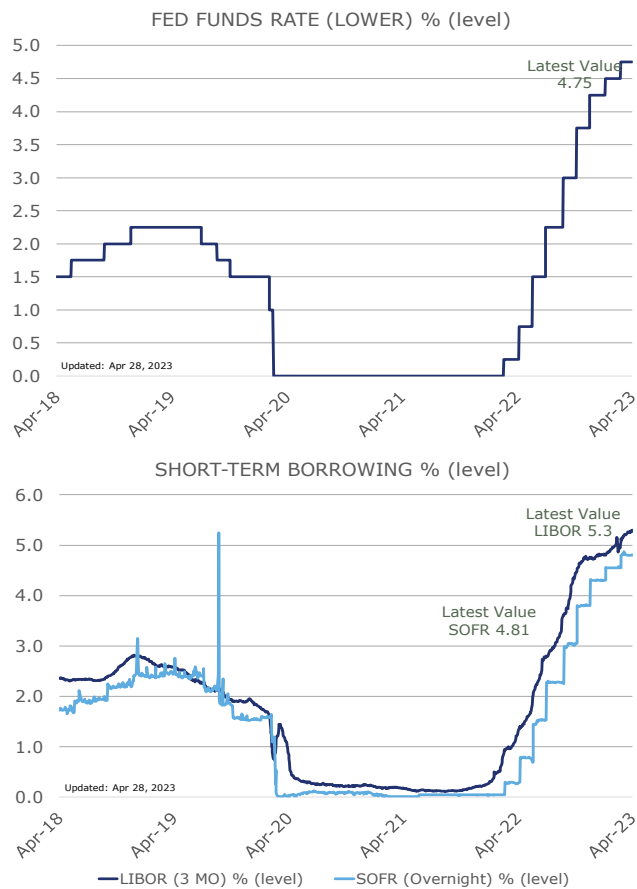
Source: Bloomberg, All returns are in USD

## Market Yields & Breakeven Inflation

Market Yields	Previous 3 Month-ends				Previous 2 Quarter-ends		EOY Prior	1 Yr Ago	3 Yrs Ago	5 Yrs Ago
	04/28/23	03/31/23	02/28/23	01/31/23	03/31/23	12/30/22	12/30/22	04/28/22	04/28/20	04/27/18
<b>Govt/Treasury Yields</b>										
Fed Funds Target Rate (Upper)	5.00	5.00	4.75	4.50	5.00	4.50	4.50	0.50	0.25	1.75
2-Year Treasury	4.01	4.03	4.82	4.20	4.03	4.43	4.43	2.62	0.21	2.49
5-Year Treasury	3.49	3.58	4.18	3.62	3.58	4.01	4.01	2.84	0.38	2.80
10-Year Treasury	3.43	3.47	3.92	3.51	3.47	3.88	3.88	2.83	0.61	2.96
30-Year Treasury	3.68	3.65	3.92	3.63	3.65	3.97	3.97	2.90	1.21	3.13
10-Year Real Treasury	1.22	1.15	1.55	1.26	1.15	1.58	1.58	(0.15)	(0.53)	0.79
<b>Term Spreads</b>										
5 - 2 Year Treasury Spread	(0.53)	(0.46)	(0.64)	(0.59)	(0.46)	(0.43)	(0.43)	0.22	0.16	0.31
10 - 5 Year Treasury Spread	(0.06)	(0.11)	(0.26)	(0.11)	(0.11)	(0.13)	(0.13)	(0.02)	0.24	0.15
10 - 2 Year Treasury Spread	(0.59)	(0.56)	(0.90)	(0.70)	(0.56)	(0.56)	(0.56)	0.20	0.40	0.47
30 - 10Year Treasury Spread	0.25	0.18	(0.01)	0.12	0.18	0.08	0.08	0.06	0.59	0.17
30 - 2Year Treasury Spread	(0.34)	(0.38)	(0.91)	(0.57)	(0.38)	(0.47)	(0.47)	0.27	0.99	0.64
<b>Market Yields</b>										
Bloomberg U.S. Treasury YTW	3.79	3.83	4.38	3.86	3.83	4.18	4.18	2.80	0.52	2.75
Bloomberg U.S. Aggregate YTW	4.35	4.40	4.81	4.30	4.40	4.68	4.68	3.40	1.38	3.29
Bloomberg U.S. Long Treasury YTW	3.75	3.77	4.04	3.72	3.77	4.08	4.08	3.03	1.16	3.10
Bloomberg U.S. Long Govt/Credit YTW	4.55	4.58	4.87	4.48	4.58	4.91	4.91	3.97	2.44	3.97
<b>Credit Spreads</b>										
Bloomberg Investment Grade OAS	1.36	1.38	1.24	1.17	1.38	1.30	1.30	1.35	2.07	1.08
Bloomberg High Yield OAS	4.52	4.55	4.12	4.20	4.55	4.69	4.69	3.76	7.73	3.33
<b>Breakeven Inflation Rates</b>										
1-Year Breakeven Inflation	2.11	3.14	3.45	2.13	3.14	2.14	2.14	5.25	(1.45)	1.70
2-Year Breakeven Inflation	2.16	2.68	3.18	2.33	2.68	2.31	2.31	4.43	(0.29)	1.96
5-Year Breakeven Inflation	2.25	2.48	2.59	2.33	2.48	2.38	2.38	3.40	0.78	2.10
10-Year Breakeven Inflation	2.21	2.32	2.38	2.25	2.32	2.30	2.30	2.97	1.14	2.17
5-Year 5-Year Forward Breakeven Inflation	2.15	2.21	2.20	2.20	2.21	2.20	2.20	2.55	1.54	2.27

Source: Bloomberg

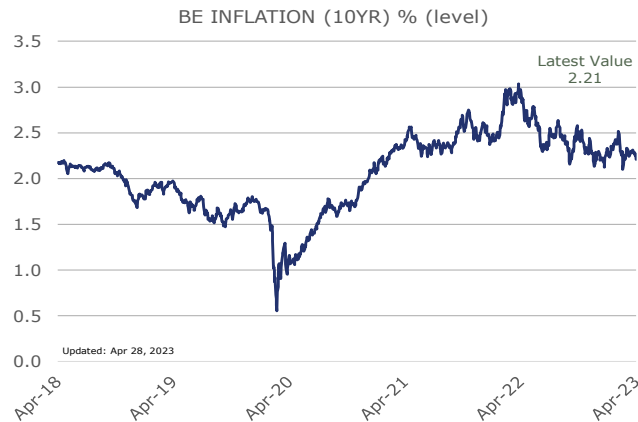
# Short Rates



Data Source: Bloomberg

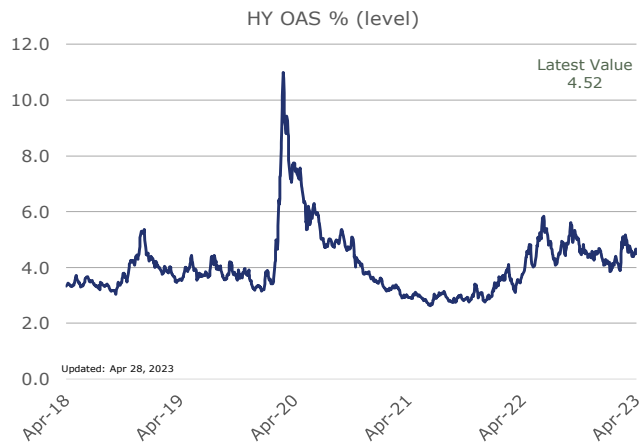
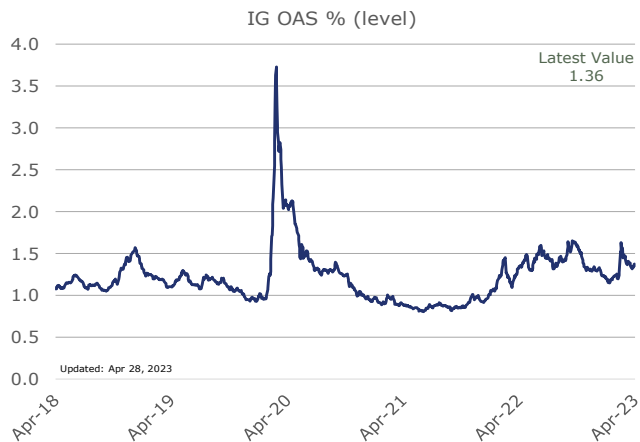
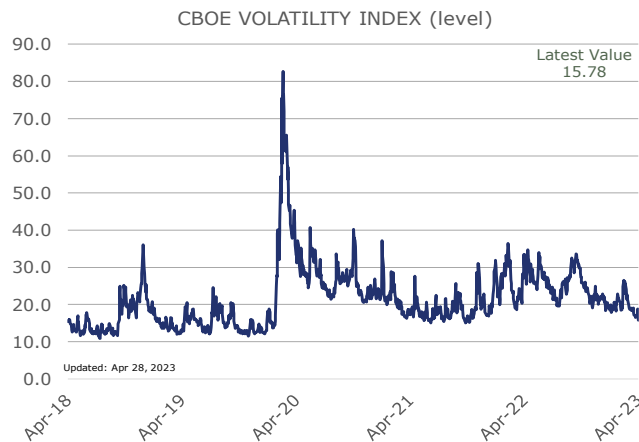
LIBOR: London Inter-bank Offered Rate  
 SOFR: Federal Reserve Bank NY Secured Overnight Financing Rate

# Treasury Rates

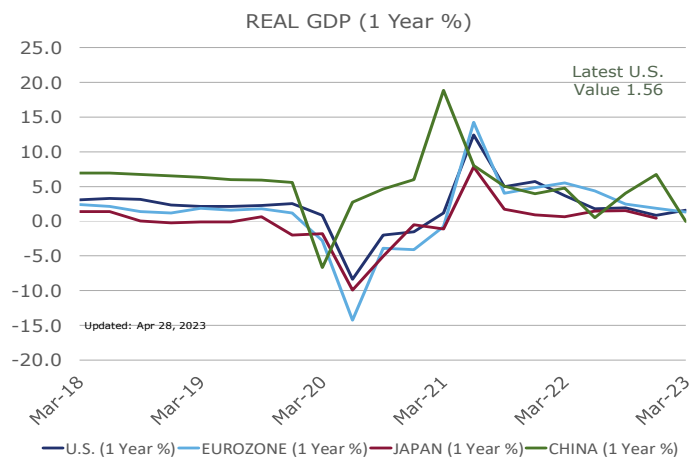
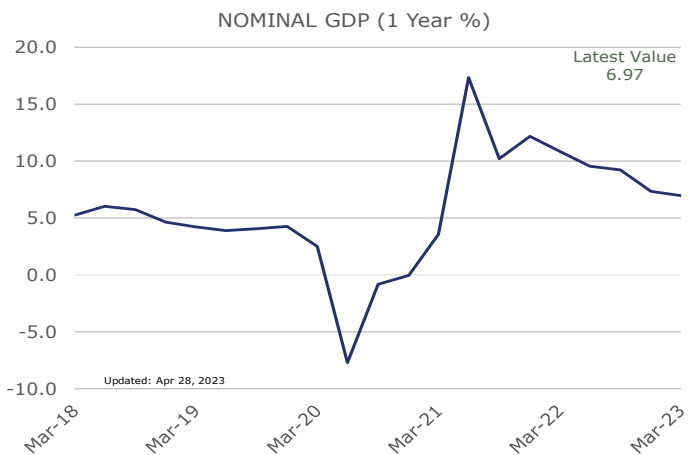
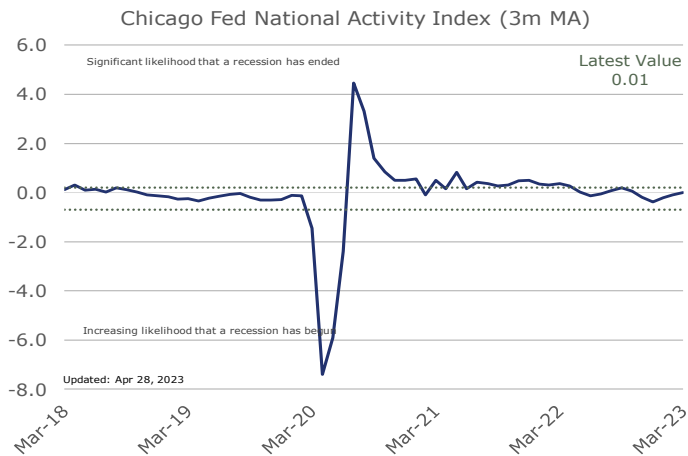




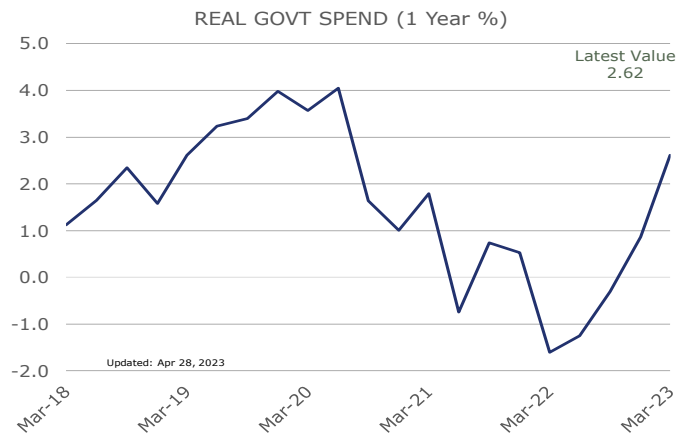
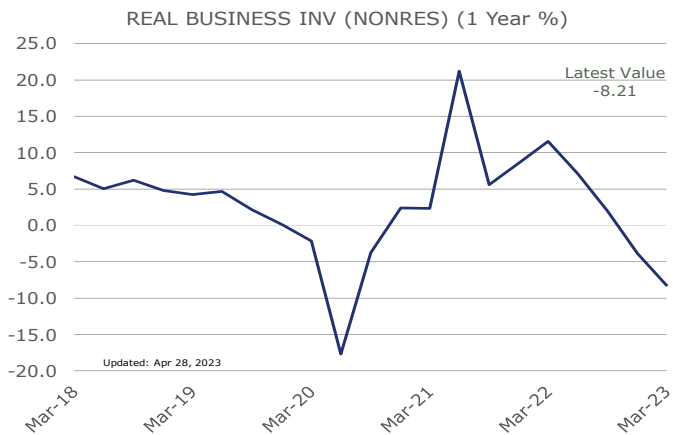
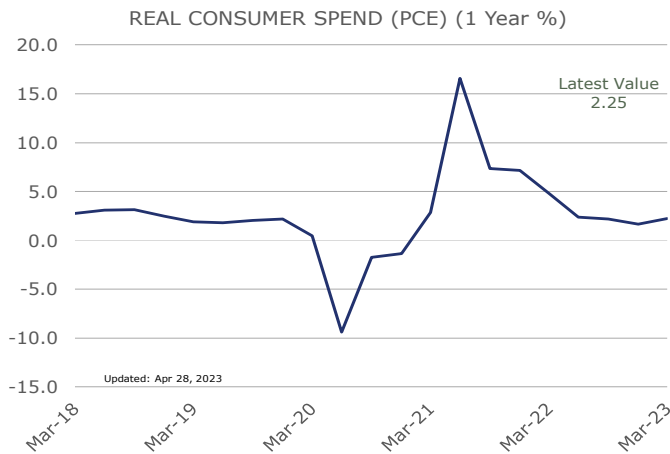
# Volatility & Credit Risk



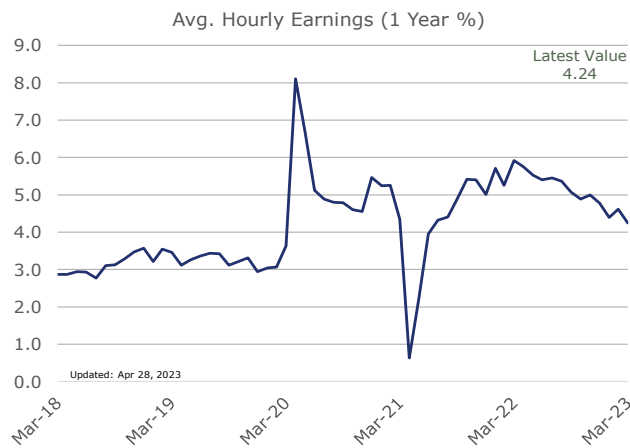
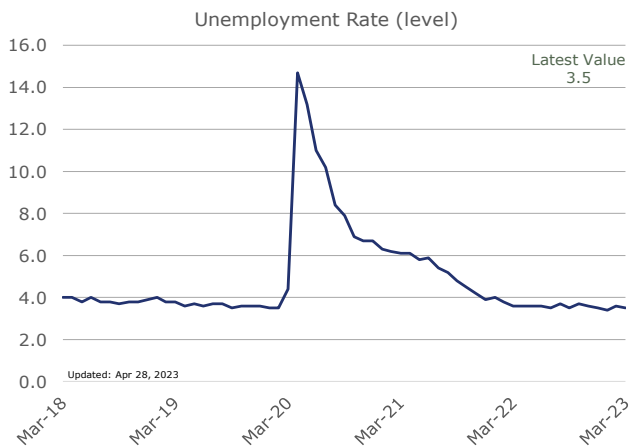
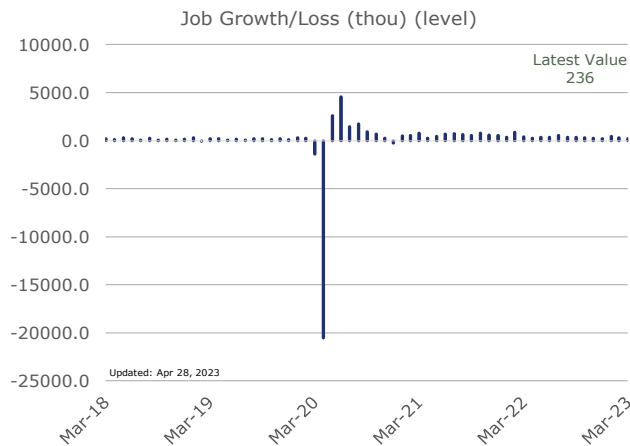
Economic Growth



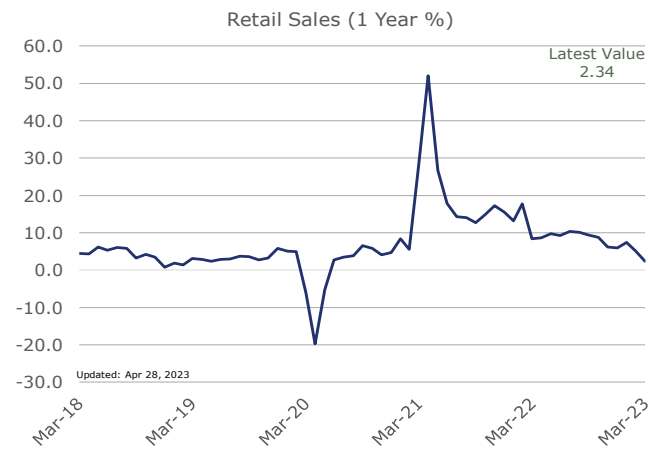
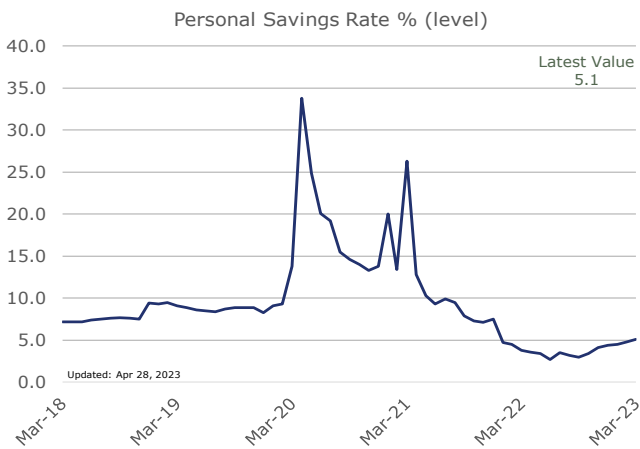
# Economic Growth



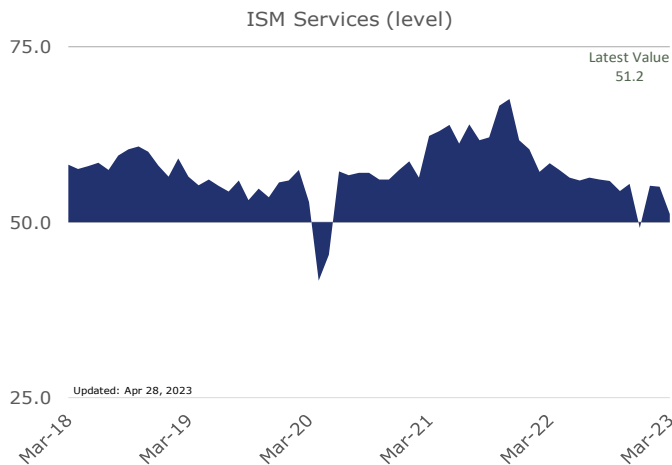
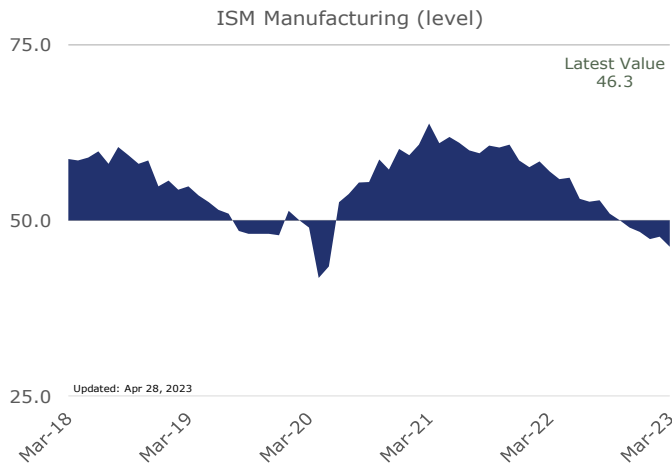
# Consumers & Employment



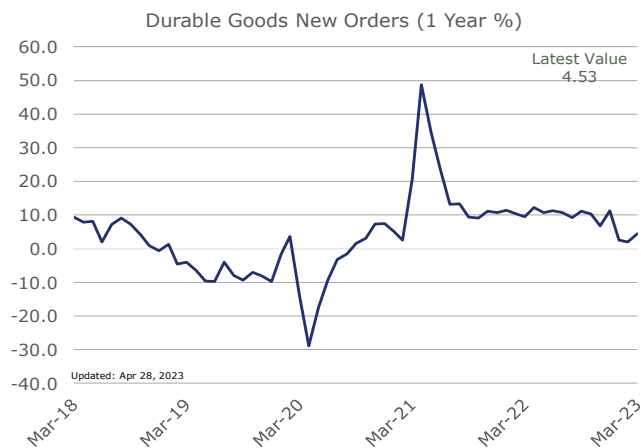
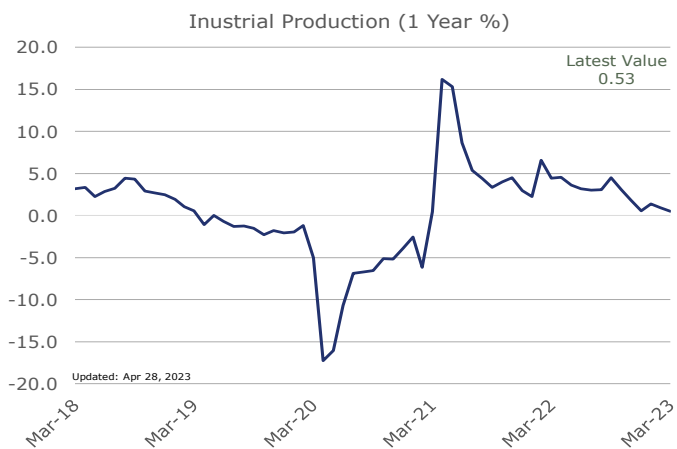
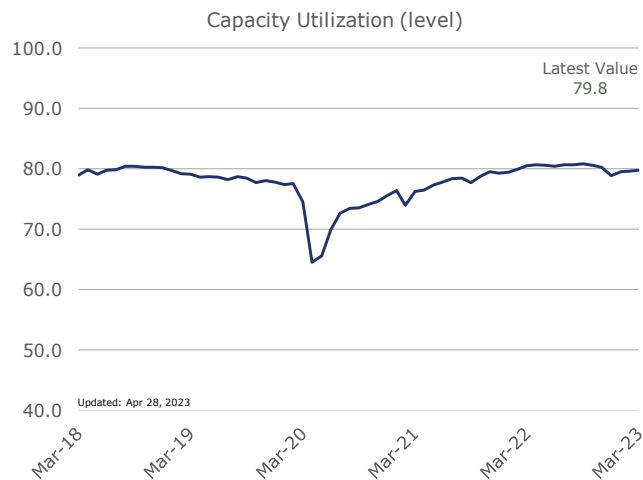
# Income & Spending



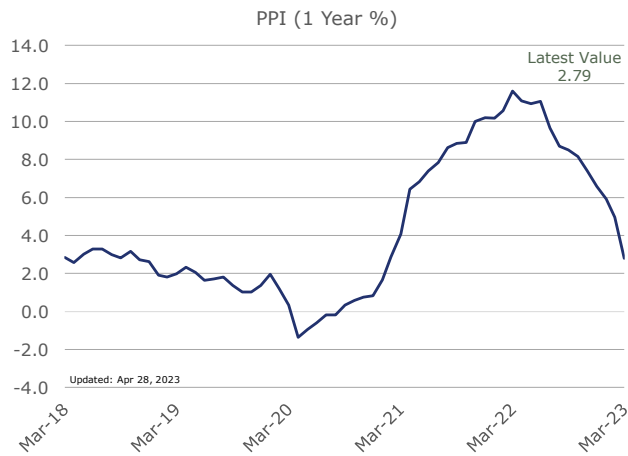
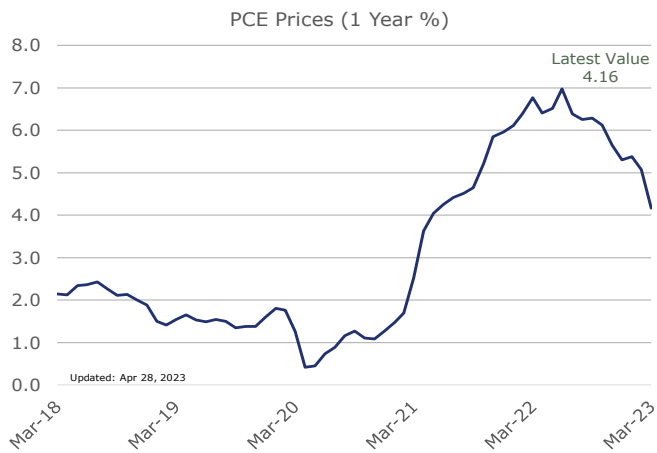
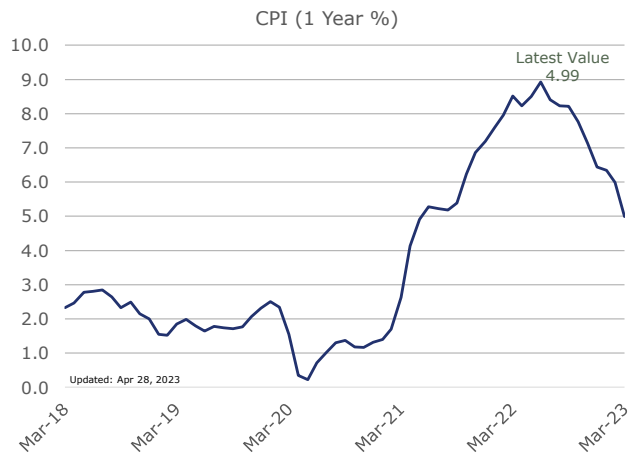
# ISM Surveys



# Manufacturing Activity

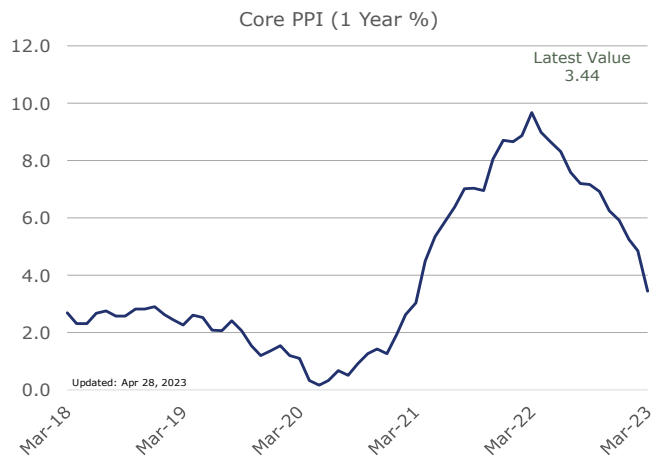
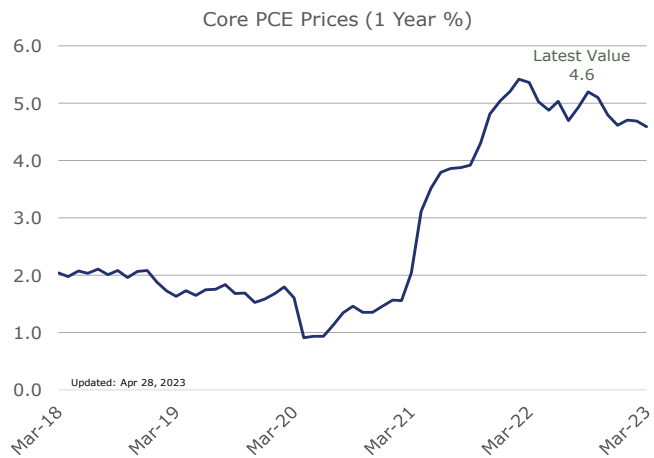
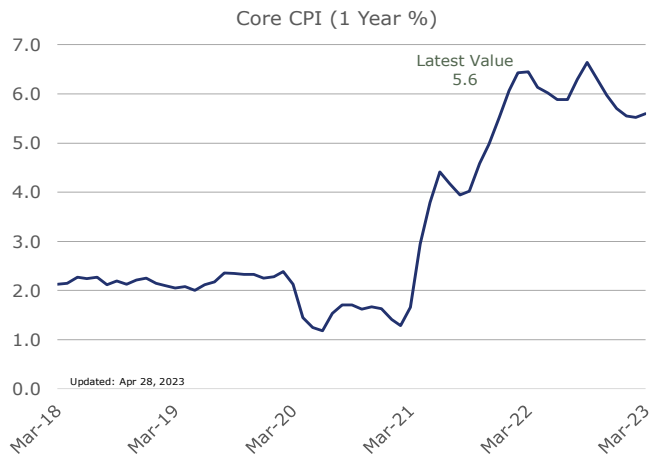


Price Indexes





Core Price Indexes



U.S. Dollar

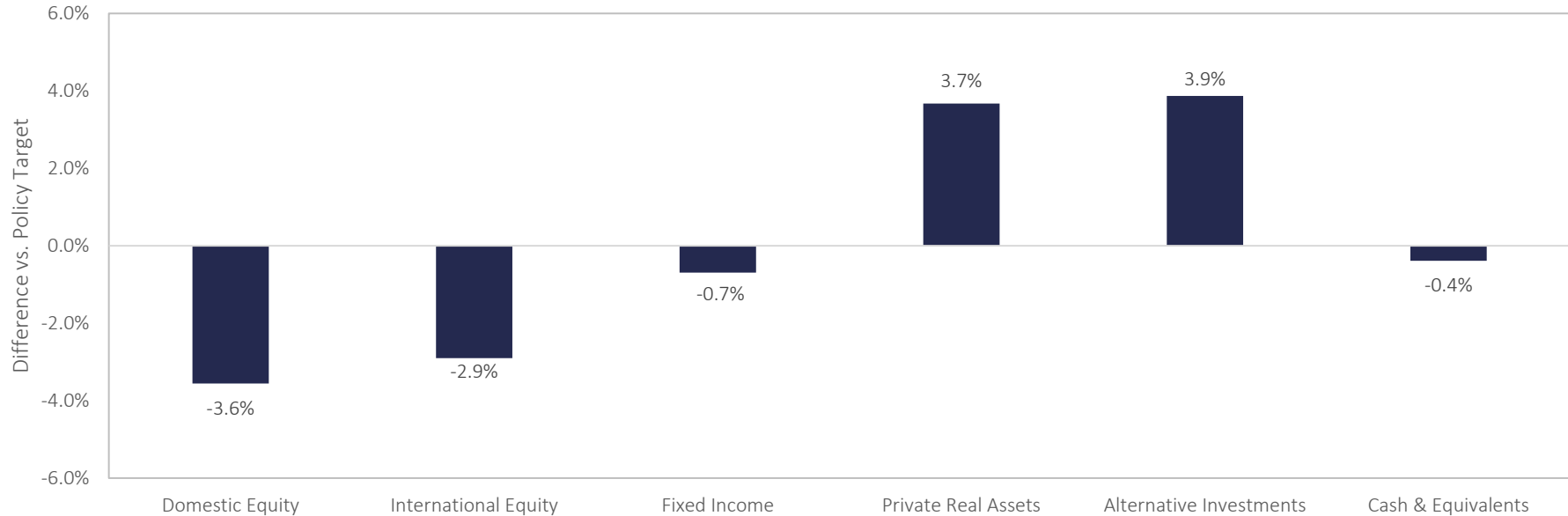


# IMRF Performance

# Projected Deviations from the Benchmark

As of April 30, 2023

Projected Asset Allocation Difference vs. Target



- Includes committed, but unfunded amounts for Real Assets (\$2.29 billion) and Alternatives (\$2.43 billion). Assumes Real Assets and Alternatives allocations are fully funded as of month-end.
- Assumes that outstanding commitments are funded from a basket of public markets asset classes (Domestic Equity, International Equity and/or Fixed Income) that best reflects the expectations of risk, yield and regional allocations of the asset class.

Alternatives Proxy: 60% Domestic Equity, 40% International Equity

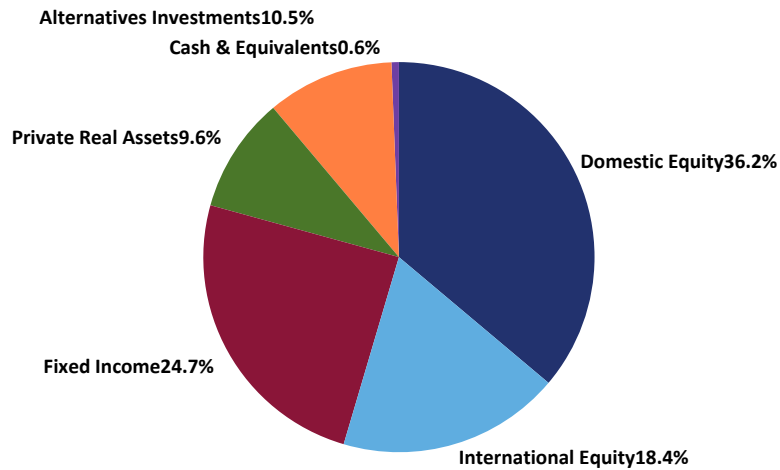
Real Assets Proxy: 50% Domestic Equity, 30% International Equity, 20% Fixed Income

# Asset Allocation

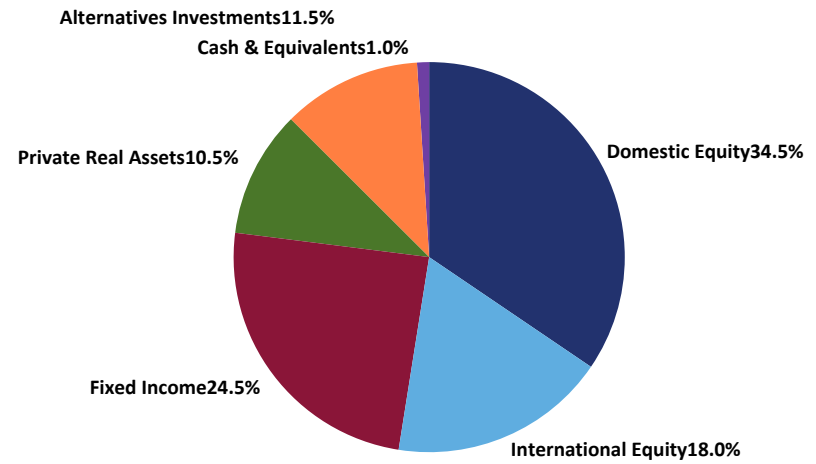
Total Fund

Periods Ended As of April 30, 2023

Actual Allocation



Target Allocation



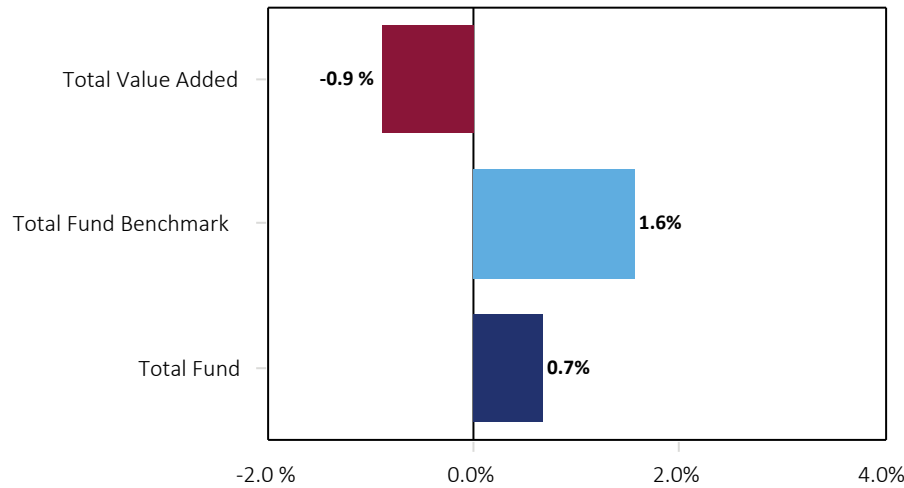
	Actual Allocation \$Millions	Actual Allocation %	Target Allocation %	Differences %	Differences \$Millions
Total Fund	49,888	100.0	100.0	0.0	
Domestic Equity	18,035	36.2	34.5	1.7	823
International Equity	9,189	18.4	18.0	0.4	209
Fixed Income	12,334	24.7	24.5	0.2	111
Private Real Assets	4,784	9.6	10.5	-0.9	-455
Alternatives Investments	5,242	10.5	11.5	-1.0	-495
Cash & Equivalents	305	0.6	1.0	-0.4	-193

# Total Fund Attribution

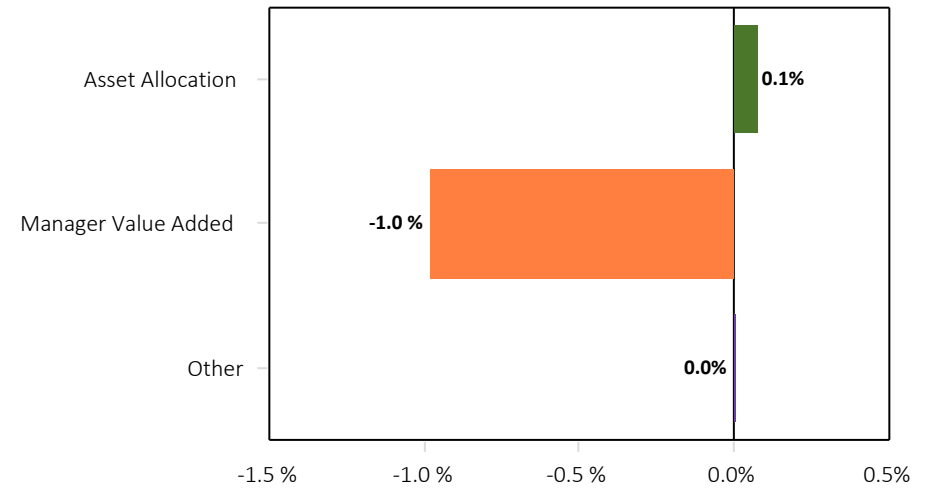
Total Fund

1 Month Ending April 30, 2023

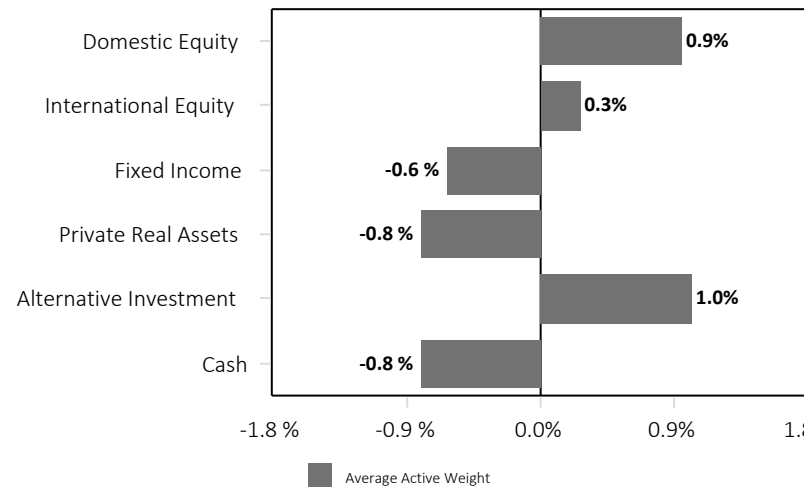
## Total Fund Performance



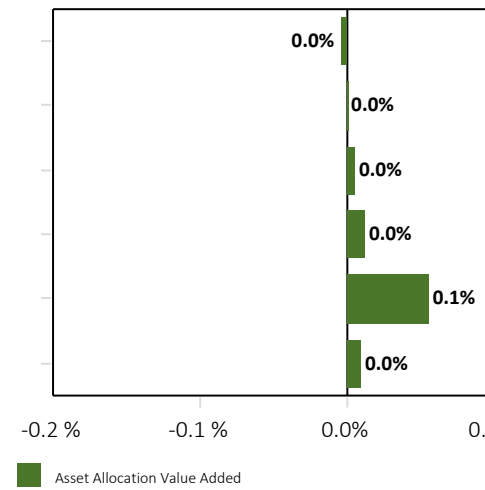
## Total Value Added:-0.9 %



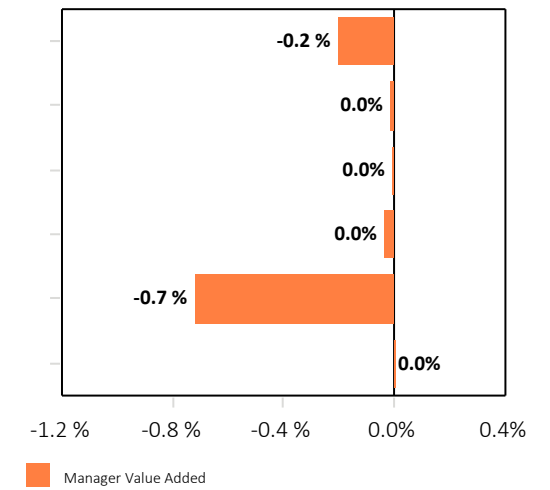
## Asset Class Under or Overweighting



## Asset Allocation Value Added:0.1%



## Total Manager Value Added:-1.0 %



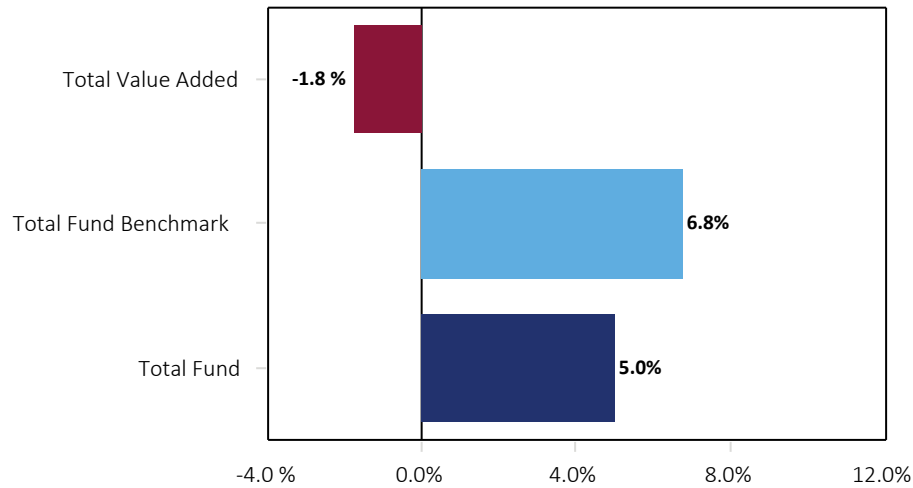
Total Fund Benchmark = 35.5% Domestic Equity Custom Benchmark, 25.5% Fixed Income Custom Benchmark, 18.0% MSCI AC World ex USA (Net), 10.5% Private Real Assets Custom Benchmark, 9.5% Alternatives Custom Benchmark, 1% 90 Day US Treasury Bill.

# Total Fund Attribution

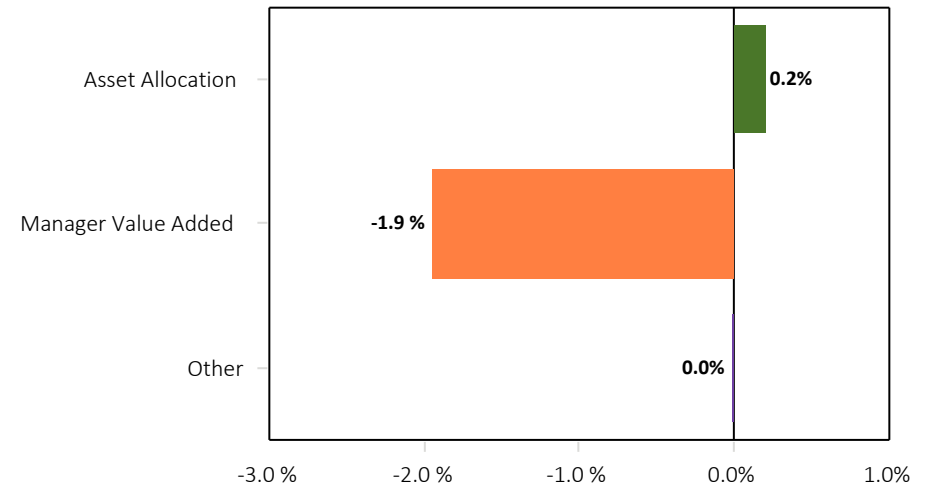
Total Fund

Year To Date Ending April 30, 2023

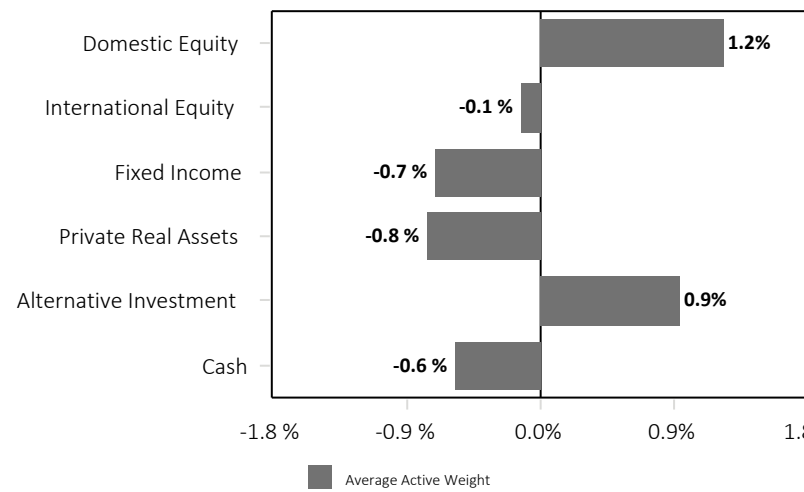
## Total Fund Performance



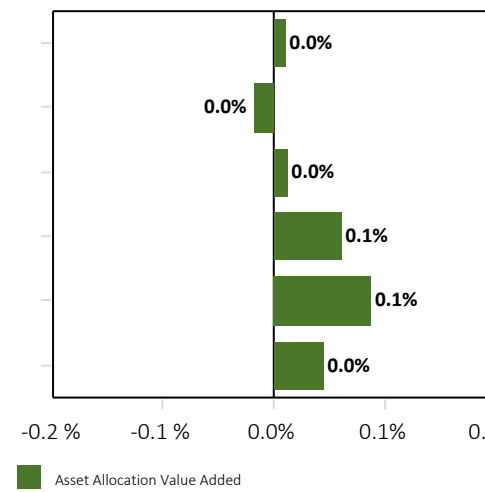
## Total Value Added:-1.8 %



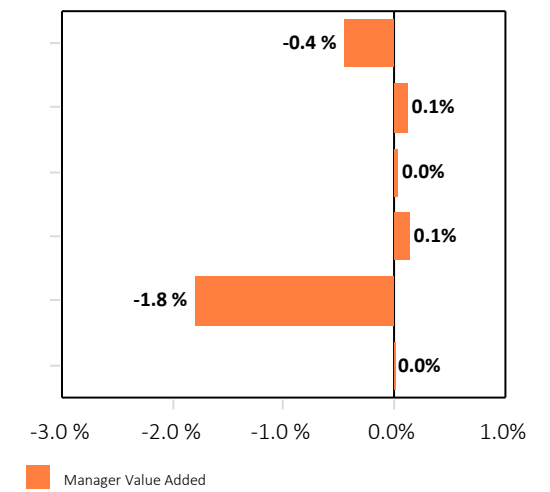
## Asset Class Under or Overweighting



## Asset Allocation Value Added:0.2%



## Total Manager Value Added:-1.9 %



Total Fund Benchmark = 35.5% Domestic Equity Custom Benchmark, 25.5% Fixed Income Custom Benchmark, 18.0% MSCI AC World ex USA (Net), 10.5% Private Real Assets Custom Benchmark, 9.5% Alternatives Custom Benchmark, 1% 90 Day US Treasury Bill.

# Asset Class Returns

*Periods Ended April 30, 2023*

	Performance (%)									
	1 Month	YTD	1 Year	3 Years	5 Years	10 Years	20 Years	30 Years	Since Inception	Inception Date
<b>Total Fund</b>	<b>0.67</b>	<b>5.05</b>	<b>1.44</b>	<b>9.96</b>	<b>7.03</b>	<b>7.73</b>	<b>8.28</b>	<b>8.19</b>	<b>9.61</b>	<b>1/1/1982</b>
Total Fund - Net	0.67	5.00	1.29	9.78	6.85	7.53				
Total Fund Benchmark	1.57	6.77	0.98	7.86	6.49	7.11	7.64			
<b>Domestic Equity</b>	<b>0.58</b>	<b>6.76</b>	<b>1.21</b>	<b>14.47</b>	<b>9.60</b>	<b>11.25</b>	<b>10.25</b>	<b>10.08</b>	<b>11.42</b>	<b>1/1/1982</b>
Domestic Equity - Net	0.58	6.70	1.05	14.28	9.41	11.03				
Custom Benchmark (U.S. Equity)	1.14	7.93	1.27	14.24	10.70	11.70	10.22	9.85		
U.S. Equity IMRF Custom Benchmark	0.93	6.48	0.80	13.76	9.45					
<b>International Equity</b>	<b>1.67</b>	<b>9.57</b>	<b>4.47</b>	<b>11.04</b>	<b>3.28</b>	<b>5.17</b>	<b>8.18</b>	<b>7.13</b>	<b>7.46</b>	<b>9/1/1986</b>
International Equity - Net	1.66	9.47	4.12	10.65	2.93	4.82				
MSCI AC World ex USA (Net)	1.74	8.72	3.05	9.74	2.50	3.97	7.10			
International Equity IMRF Custom Benchmark	1.42	7.87	1.60	9.23	2.09					
<b>Fixed Income</b>	<b>0.68</b>	<b>3.96</b>	<b>0.43</b>	<b>-1.23</b>	<b>1.79</b>	<b>2.08</b>	<b>4.09</b>	<b>5.10</b>	<b>7.47</b>	<b>1/1/1982</b>
Fixed Income - Net	0.68	3.95	0.36	-1.31	1.68	1.95				
Custom Benchmark (Fixed Income)	0.70	3.80	0.27	-2.55	1.55	1.51	3.26	4.57	6.95	
Fixed Income IMRF Custom Benchmark	0.70	3.79	0.32	-1.97	1.53					
<b>Private Real Assets</b>	<b>-0.31</b>	<b>-1.56</b>	<b>1.41</b>						<b>4.51</b>	<b>3/1/2022</b>
Private Real Assets - Net	-0.33	-1.59	1.33						4.44	
Custom Benchmark (Private Real Assets)	0.04	-2.99	-3.24						2.95	
<b>Real Estate</b>	<b>-0.33</b>	<b>-1.93</b>	<b>0.83</b>	<b>11.26</b>	<b>10.18</b>	<b>10.46</b>	<b>8.14</b>	<b>7.10</b>	<b>5.98</b>	<b>5/1/1985</b>
Real Estate - Net	-0.34	-1.96	0.75	11.19	10.13	10.42				
Blended Benchmark (Real Estate)	0.00	-3.33	-3.87	7.47	6.44	8.35	7.33	7.36	7.63	
<b>Agriculture</b>	<b>-0.48</b>	<b>1.19</b>	<b>3.88</b>	<b>2.65</b>	<b>1.76</b>	<b>5.13</b>	<b>7.69</b>		<b>6.54</b>	<b>10/1/1997</b>
NCREIF Farmland Index	0.00	2.08	9.05	7.59	6.56	8.48	12.57		11.14	
<b>Timberland</b>	<b>0.28</b>	<b>-0.77</b>	<b>14.91</b>	<b>2.67</b>	<b>2.08</b>	<b>3.46</b>	<b>3.39</b>	<b>6.41</b>	<b>6.94</b>	<b>10/1/1992</b>
NCREIF Timberland Index	0.00	1.75	11.31	8.09	5.54	5.82	7.04	7.85	8.47	

Benchmark definitions on next page.

Private Equity and Blended Benchmark (Private Equity) returns are 1 quarter lagged.



# Asset Class Returns

*Periods Ended April 30, 2023*

	Performance (%)									
	1 Month	YTD	1 Year	3 Years	5 Years	10 Years	20 Years	30 Years	Since Inception	Inception Date
<b>Unlisted Infrastructure</b>	<b>0.28</b>	<b>6.21</b>	<b>11.70</b>	<b>15.88</b>	<b>12.74</b>				<b>12.52</b>	<b>4/1/2018</b>
Blended Benchmark (Unlisted Infrastructure)	0.83	3.56	9.13	9.44	9.27				9.26	
<b>Alternatives Investments</b>	<b>0.19</b>	<b>0.73</b>	<b>-0.15</b>	<b>19.09</b>	<b>16.73</b>	<b>12.95</b>	<b>10.68</b>	<b>12.78</b>	<b>11.47</b>	<b>2/1/1986</b>
Alternatives Investments - Net	0.19	0.73	-0.15	19.07	16.69	12.75				
Custom Benchmark (Alternative Investments)	7.04	17.99	-4.06	3.72	5.80	7.39	9.28	11.13	11.88	
<b>Private Equity</b>	<b>0.20</b>	<b>0.72</b>	<b>0.28</b>	<b>22.34</b>	<b>19.71</b>	<b>15.96</b>	<b>13.50</b>	<b>15.48</b>	<b>13.74</b>	<b>2/1/1986</b>
Blended Benchmark (Private Equity)	7.34	18.70	-4.68	3.48	5.65	7.31	9.24			
<b>Cash</b>	<b>0.39</b>	<b>1.59</b>	<b>3.58</b>	<b>2.90</b>	<b>3.01</b>	<b>1.85</b>	<b>1.31</b>	<b>3.02</b>	<b>3.74</b>	<b>7/1/1986</b>
90 Day U.S. Treasury Bill	0.32	1.39	2.81	0.99	1.44	0.89	1.28	2.35	3.09	

Benchmark definitions on next page.

Private Equity and Blended Benchmark (Private Equity) returns are 1 quarter lagged.

## Benchmark Definitions

Account Name	From Date	To Date	Benchmark
Domestic Equity Custom	3/1/2022	Present	93% Russell 3000 Index, 7% FTSE Global Core Infrastructure 50/50 Index (Net)
Benchmark	1/1/2015	2/28/2022	100% Russell 3000 Index
	1/1/1982	12/31/2014	100% Dow Jones US Total Stock Market Index
Real Estate Blended	1/1/2013	Present	100% NCREIF Fund Index-ODCE (VW) (Net)**
Benchmark	1/1/2007	12/31/2012	100% NPI + 1%
	1/1/2005	12/31/2016	100% Consumer Price Index + 5%
Alternatives Custom	3/1/2022	Present	95% MSCI World World Index (Net) 1 Qtr Lagged +3%, 5% S&P LSTA Leveraged Loan 100 Index +2%
Benchmark	7/1/2010	2/28/2022	100% Annualized rate of 9.0%
	1/1/2004	6/30/2010	100% Annualized rate of 12.0%
	1/1/2003	12/31/2003	100% Annualized rate of 13.0%
	2/1/1986	12/31/2002	100% Annualized rate of 15.0%
U.S. Equity IMRF Custom Benchmark			Blend of the U.S. Equity Style benchmarks returns, dollar weighted by the actual allocation at pervious month end.
International Equity IMRF Custom Benchmark			Blend of the the International Equity Style benchmarks returns, dollar weighted by the actual allocation at previous month end.
Fixed Income IMRF Custom Benchmark			Blend of the the Fixed Income Style benchmarks returns, dollar weighted by the actual allocation at previous month end.

\*\*ODCE returns are updated quarterly.

# Benchmark Definitions

Account Name	From Date	To Date	Benchmark
Fixed Income Custom Benchmark	3/1/2022	Present	78% Bloomberg U.S. Aggregate, 14% Custom Barings Global Loan Benchmark, 8% ICE BofAML U.S. High Yield Cash Pay Index
	1/1/1976	2/28/2022	100% Bloomberg U.S. Aggregate
Private Real Assets Custom Benchmark	3/1/2022	Present	95% NCREIF Fund Index-ODCE (VW) (Net)**, 5% Consumer Price Index +4%
Unlisted Infrastructure Blended Benchmark	3/1/2022	Present	100% Consumer Price Index +4%
	4/1/2018	2/28/2022	100% Alternatives Custom Benchmark
Private Equity Blended Benchmark	3/1/2022	Present	100% MSCI World World Index (Net) 1 Qtr Lagged +3%
	2/1/1996	2/28/2022	100% Alternatives Custom Benchmark

\*\*ODCE returns are updated quarterly.

# Benchmark Definitions

Account Name	From Date	To Date	Benchmark
Total Fund Benchmark			The total fund benchmark is a blend of the asset class benchmark returns weighted by the target allocation for each asset class:
	3/1/2022	Present	35.5% Domestic Equity Custom Benchmark, 25.5% Fixed Income Custom Benchmark, 18% MSCI AC World ex USA (Net), 10.5% Private Real Assets Custom Benchmark, 9.5% Alternatives Custom Benchmark, 1% 90 Day US Treasury Bill.
	1/1/2021	2/28/2022	39% Russell 3000 Index, 25% Blmbg. Barc. U.S. Aggregate, 15% MSCI AC World ex USA (Net), 10% NCREIF Fund Index-ODCE (VW) (Net), 10% Alternatives Custom Benchmark, 1% 90 Day US Treasury Bill.
	3/1/2018	12/31/2020	37% Russell 3000 Index, 28% Blmbg. Barc. U.S. Aggregate, 18% MSCI AC World ex USA (Net), 9% NCREIF Fund Index-ODCE (VW) (Net), 7% Alternatives Custom Benchmark, 1% 90 Day US Treasury Bill.

# Investment Manager Asset Allocation

*Periods Ended April 30, 2023*

	Mar-2023		Apr-2023	
	\$	%	\$	%
<b>Domestic Equity</b>	<b>18,037,864,656</b>	<b>36.45</b>	<b>18,034,857,871</b>	<b>36.15</b>
<b>Large Cap Growth</b>	<b>3,411,535,102</b>	<b>6.89</b>	<b>3,400,748,225</b>	<b>6.82</b>
Sands Capital	1,417,919,641	2.87	1,387,406,653	2.78
Xponance Russell 1000 G	1,993,615,462	4.03	2,013,341,572	4.04
<b>Large Cap Value</b>	<b>4,371,812,163</b>	<b>8.83</b>	<b>4,308,856,331</b>	<b>8.64</b>
Dodge & Cox	1,747,504,129	3.53	1,664,658,987	3.34
LSV Asset	1,257,641,452	2.54	1,256,496,950	2.52
NTGI S&P 500 Value	1,366,666,582	2.76	1,387,700,395	2.78
<b>Large Cap Pass. Core</b>	<b>1,986,032,436</b>	<b>4.01</b>	<b>2,006,015,391</b>	<b>4.02</b>
NTGI MarketCap Idx.	1,986,032,436	4.01	2,006,015,391	4.02
<b>Factor Diversity Strategies</b>	<b>2,484,085,458</b>	<b>5.02</b>	<b>2,512,397,151</b>	<b>5.04</b>
U.S. Large Cap FDP-GSAM	2,484,085,458	5.02	2,512,397,151	5.04
<b>Quantitative Factor Strategies</b>	<b>2,224,054,962</b>	<b>4.49</b>	<b>2,252,883,666</b>	<b>4.52</b>
Quantitative US Equity - SciBeta	2,224,054,962	4.49	2,252,883,666	4.52
<b>Small Cap Growth</b>	<b>734,171,475</b>	<b>1.48</b>	<b>725,920,161</b>	<b>1.46</b>
Frontier Capital	734,171,475	1.48	725,920,161	1.46
<b>Small Cap Value</b>	<b>1,427,016,424</b>	<b>2.88</b>	<b>1,394,585,438</b>	<b>2.80</b>
Channing	296,972,560	0.60	292,667,623	0.59
DFA Small Cap Val.	536,804,731	1.08	527,247,047	1.06
William Blair Small Cap Value	593,239,133	1.20	574,670,767	1.15
<b>Public Real Assets</b>	<b>1,399,156,635</b>	<b>2.83</b>	<b>1,433,451,508</b>	<b>2.87</b>
Brookfield	398,861,484	0.81	410,528,524	0.82
Cohen & Steers	1,000,295,151	2.02	1,022,922,984	2.05

# Investment Manager Asset Allocation

*Periods Ended April 30, 2023*

	Mar-2023		Apr-2023	
	\$	%	\$	%
<b>International Equity</b>	<b>9,038,362,962</b>	<b>18.26</b>	<b>9,188,708,608</b>	<b>18.42</b>
<b>Intl Large Cap Growth</b>	<b>1,508,036,352</b>	<b>3.05</b>	<b>1,524,879,293</b>	<b>3.06</b>
EARNEST Part. Intl	609,641,109	1.23	616,185,484	1.24
William Blair	898,395,243	1.82	908,693,810	1.82
<b>Intl Large Cap Value</b>	<b>1,395,967,617</b>	<b>2.82</b>	<b>1,431,582,621</b>	<b>2.87</b>
Brandes Investment	635,988,594	1.29	654,775,893	1.31
Mondrian	623,129,087	1.26	639,201,094	1.28
Lazard	136,849,936	0.28	137,605,634	0.28
<b>Intl Large Cap Core</b>	<b>4,346,698,640</b>	<b>8.78</b>	<b>4,442,505,976</b>	<b>8.90</b>
Arrowstreet Capital	1,072,670,685	2.17	1,099,280,379	2.20
Brown Capital	513,762,612	1.04	531,567,430	1.07
GlobeFlex Capital	841,043,484	1.70	857,682,714	1.72
Xponance Intl EQ	97,014,762	0.20	99,301,535	0.20
Progress Intl Equity	599,172	0.00	602,649	0.00
Transition Account	69,599	0.00	69,884	0.00
NTGI ACWI ex US Index Fund	1,821,538,327	3.68	1,854,001,386	3.72
<b>Intl All Cap Developed</b>	<b>155,475,320</b>	<b>0.31</b>	<b>158,335,216</b>	<b>0.32</b>
Ativo International	155,475,320	0.31	158,335,216	0.32
<b>International Small Cap</b>	<b>542,865,440</b>	<b>1.10</b>	<b>551,832,585</b>	<b>1.11</b>
Franklin Templeton	215,855,333	0.44	217,833,906	0.44
William Blair IntSC	327,010,107	0.66	333,998,678	0.67

# Investment Manager Asset Allocation

*Periods Ended April 30, 2023*

	Mar-2023		Apr-2023	
	\$	%	\$	%
<b>Emerging Mkt Equity</b>	<b>1,089,319,592</b>	<b>2.20</b>	<b>1,079,572,916</b>	<b>2.16</b>
Genesis Investment Management, LLP.	683,979,442	1.38	673,661,089	1.35
Arrowstreet EME	405,340,151	0.82	405,911,828	0.81

# Investment Manager Asset Allocation

*Periods Ended April 30, 2023*

	Mar-2023		Apr-2023	
	\$	%	\$	%
<b>Fixed Income</b>	<b>12,309,642,246</b>	<b>24.87</b>	<b>12,333,831,728</b>	<b>24.72</b>
<b>Domestic Fixed Core</b>	<b>3,822,644,684</b>	<b>7.72</b>	<b>3,839,037,918</b>	<b>7.70</b>
Attucks Fixed Income	89,026,673	0.18	89,700,727	0.18
Brandes FI Core	339,521,154	0.69	341,851,887	0.69
EARNEST Partners	906,895,810	1.83	910,117,480	1.82
Garcia Hamilton	980,726,152	1.98	983,518,983	1.97
Ramirez Asset Management	529,455,223	1.07	531,753,756	1.07
Xponance Yield Advantage Agg.	977,019,672	1.97	982,095,085	1.97
<b>Domestic Fixed Passive Core</b>	<b>2,782,322,635</b>	<b>5.62</b>	<b>2,799,327,667</b>	<b>5.61</b>
NTGI Blmbg Agg.	1,132,899,530	2.29	1,139,822,896	2.28
BlackRock US Debt I	1,649,423,105	3.33	1,659,504,771	3.33
<b>Domestic Fixed Core Plus</b>	<b>2,971,071,147</b>	<b>6.00</b>	<b>2,974,173,896</b>	<b>5.96</b>
LM Capital Group FI	852,931,652	1.72	849,076,656	1.70
Progress Inv. FI	1,121	0.00	1,164	0.00
Loop Capital Management	580,170,820	1.17	581,664,241	1.17
Western Asset	962,326,994	1.94	965,385,369	1.94
Longfellow Core Plus	575,640,560	1.16	578,046,466	1.16
<b>Bank Loans</b>	<b>1,643,191,238</b>	<b>3.32</b>	<b>1,627,490,806</b>	<b>3.26</b>
Barings Global Loan Fund	1,643,191,238	3.32	1,627,490,806	3.26
<b>Emerging Markets Debt</b>	<b>362,578</b>	<b>0.00</b>	<b>357,059</b>	<b>0.00</b>
Standish-Mellon EMD	362,578	0.00	357,059	0.00
<b>High Yield</b>	<b>1,090,049,964</b>	<b>2.20</b>	<b>1,093,444,380</b>	<b>2.19</b>
MacKay Shields	1,090,049,964	2.20	1,093,444,380	2.19



# Investment Manager Asset Allocation

Periods Ended April 30, 2023

	Mar-2023		Apr-2023	
	\$	%	\$	%
<b>Private Real Assets</b>	<b>4,799,850,715</b>	<b>9.70</b>	<b>4,783,768,995</b>	<b>9.59</b>
<b>Real Estate</b>	<b>4,372,373,550</b>	<b>8.84</b>	<b>4,356,999,462</b>	<b>8.73</b>
<b>Real Estate Core Cmp</b>	<b>2,289,223,276</b>	<b>4.63</b>	<b>2,268,670,841</b>	<b>4.55</b>
TA Assoc. Buckhead	886,346,978	1.79	886,346,978	1.78
Barings Euro Core Property	137,906,644	0.28	140,134,322	0.28
Blackstone Property Euro	183,870,646	0.37	186,840,802	0.37
INVESCO Core Real Estate	248,625,899	0.50	236,783,349	0.47
INVESCO European real estate	57,897,583	0.12	58,257,399	0.12
AEW Core Property Tr	286,024,825	0.58	275,246,917	0.55
CBRE Core Partners	303,329,032	0.61	299,839,946	0.60
JPM Strategic Property Fund	185,221,668	0.37	185,221,128	0.37
<b>RE Non-Core Cmp</b>	<b>2,083,150,275</b>	<b>4.21</b>	<b>2,088,328,620</b>	<b>4.19</b>
Artemis MWBE Spruce	317,844,239	0.64	311,243,558	0.62
Franklin T. EMREFF	2,771,341	0.01	2,771,341	0.01
Security Capital	90,360,245	0.18	92,686,992	0.19
Dune II	7,650,902	0.02	7,650,902	0.02
Non-Core Real Estate Funds	1,407,253,987	2.84	1,410,923,265	2.83
Non-Core Intl Real Estate	257,192,826	0.52	262,975,827	0.53
Almanac ARS V	76,735	0.00	76,735	0.00
<b>Agriculture</b>	<b>251,723,757</b>	<b>0.51</b>	<b>250,526,556</b>	<b>0.50</b>
Premiere Partners IV	251,723,757	0.51	250,526,556	0.50
<b>Timberland</b>	<b>62,682,276</b>	<b>0.13</b>	<b>62,860,298</b>	<b>0.13</b>
Forest Investment	62,682,276	0.13	62,860,298	0.13
<b>Unlisted Infrastructure</b>	<b>113,071,132</b>	<b>0.23</b>	<b>113,382,679</b>	<b>0.23</b>
Unlisted Infrastructure Funds	113,071,132	0.23	113,382,679	0.23

# Investment Manager Asset Allocation

*Periods Ended April 30, 2023*

	Mar-2023		Apr-2023	
	\$	%	\$	%
<b>Alternatives Investments</b>	<b>5,203,863,529</b>	<b>10.52</b>	<b>5,241,828,614</b>	<b>10.51</b>
<b>Absolute Return</b>	<b>77,994</b>	<b>0.00</b>	<b>77,496</b>	<b>0.00</b>
Aurora Investment	77,994	0.00	77,496	0.00
<b>Private Equity</b>	<b>5,023,846,983</b>	<b>10.15</b>	<b>5,066,799,368</b>	<b>10.16</b>
<b>Abbott S/A Comp.</b>	<b>497,863,913</b>	<b>1.01</b>	<b>498,275,341</b>	<b>1.00</b>
Muller Monroe MPEFF	1	0.00	1	0.00
<b>Pantheon S/A Comp.</b>	<b>408,891,982</b>	<b>0.83</b>	<b>412,601,690</b>	<b>0.83</b>
Private Equity Fund - Domestic	3,309,737,538	6.69	3,344,425,811	6.70
Private Equity Fund - International	585,413,600	1.18	589,556,577	1.18
Oakbrook Opportunities Fund	221,939,948	0.45	221,939,948	0.44
<b>Private Credit</b>	<b>179,938,552</b>	<b>0.36</b>	<b>174,951,750</b>	<b>0.35</b>
Private Credit Fund - Domestic	179,938,552	0.36	174,951,750	0.35
<b>Cash &amp; Equivalents</b>	<b>97,300,539</b>	<b>0.20</b>	<b>305,483,861</b>	<b>0.61</b>
<b>Total Fund</b>	<b>49,486,884,647</b>	<b>100.00</b>	<b>49,888,479,675</b>	<b>100.00</b>

# Performance

*Periods Ended April 30, 2023*

	Market Value \$	Performance (%)							
		1 Month	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
<b>Total Fund</b>	<b>49,888,479,675</b>	<b>0.67</b>	<b>5.05</b>	<b>1.44</b>	<b>9.96</b>	<b>7.03</b>	<b>7.73</b>	<b>9.61</b>	<b>1/1/1982</b>
Total Fund - Net		0.67	5.00	1.29	9.78	6.85	7.53		
Total Fund Benchmark		1.57	6.77	0.98	7.86	6.49	7.11		
<b>Domestic Equity</b>	<b>18,034,857,871</b>	<b>0.58</b>	<b>6.76</b>	<b>1.21</b>	<b>14.47</b>	<b>9.60</b>	<b>11.25</b>	<b>11.42</b>	<b>1/1/1982</b>
Domestic Equity - Net		0.58	6.70	1.05	14.28	9.41	11.03		
Custom Benchmark (U.S. Equity)		1.14	7.93	1.27	14.24	10.70	11.70		
Russell 3000 Index		1.07	8.32	1.50	14.07	10.60	11.67	11.37	
U.S. Equity IMRF Custom Benchmark		0.93	6.48	0.80	13.76	9.45			
<b>Large Cap Equity</b>	<b>12,228,017,098</b>	<b>0.67</b>	<b>8.31</b>	<b>1.74</b>	<b>13.55</b>	<b>10.04</b>	<b>11.70</b>	<b>11.14</b>	<b>1/1/1982</b>
Large Cap Equity - Net		0.67	8.29	1.65	13.45	9.95	11.58		
Russell 1000 Index		1.24	8.79	1.82	14.22	11.07	11.95	11.54	
<b>Large Cap Growth</b>	<b>3,400,748,225</b>	<b>-0.32</b>	<b>15.50</b>	<b>0.54</b>	<b>10.90</b>	<b>11.99</b>	<b>13.42</b>	<b>11.88</b>	<b>1/1/1982</b>
Large Cap Growth - Net		-0.32	15.47	0.43	10.80	11.89	13.28		
LCG Blended Benchmark		0.99	15.49	2.34	13.62	13.80	14.46		
Russell 1000 Growth Index		0.99	15.49	2.34	13.62	13.80	14.46	11.36	
<b>Xponance Russell 1000 G</b>	<b>2,013,341,572</b>	<b>0.99</b>	<b>15.49</b>	<b>2.34</b>	<b>13.61</b>			<b>11.67</b>	<b>10/1/2018</b>
Xponance Russell 1000 G - Net		0.99	15.49	2.32	13.59			11.65	
Russell 1000 Growth Index		0.99	15.49	2.34	13.62			11.68	
<b>Sands Capital</b>	<b>1,387,406,653</b>	<b>-2.15</b>	<b>15.52</b>	<b>-5.87</b>	<b>0.57</b>	<b>6.25</b>	<b>11.06</b>	<b>10.56</b>	<b>11/1/2003</b>
Sands Capital - Net		-2.15	15.46	-6.09	0.34	6.01	10.82		
LCG Blended Benchmark		0.99	15.49	2.34	13.62	13.80	14.46	10.60	
Russell 1000 Growth Index		0.99	15.49	2.34	13.62	13.80	14.46	10.64	

# Performance

*Periods Ended April 30, 2023*

	Market Value \$	Performance (%)							Inception Date
		1 Month	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	
<b>Large Cap Value</b>	<b>4,308,856,331</b>	<b>1.02</b>	<b>3.75</b>	<b>3.67</b>	<b>17.00</b>	<b>8.46</b>	<b>10.47</b>	<b>10.22</b>	<b>10/1/1982</b>
Large Cap Value - Net		1.02	3.72	3.52	16.84	8.30	10.30		
LCV Blended Benchmark		1.51	2.53	1.21	14.38	7.75	9.13		
Russell 1000 Value Index		1.51	2.53	1.21	14.38	7.75	9.13	11.44	
<b>Dodge &amp; Cox</b>	<b>1,664,658,987</b>	<b>1.14</b>	<b>2.71</b>	<b>2.33</b>	<b>18.52</b>	<b>9.58</b>	<b>11.44</b>	<b>9.73</b>	<b>9/1/2003</b>
Dodge & Cox - Net		1.14	2.66	2.12	18.27	9.36	11.21		
LCV Blended Benchmark		1.51	2.53	1.21	14.38	7.75	9.13	8.21	
Russell 1000 Value Index		1.51	2.53	1.21	14.38	7.75	9.13	8.35	
<b>LSV Asset</b>	<b>1,256,496,950</b>	<b>0.11</b>	<b>1.60</b>	<b>2.11</b>	<b>16.63</b>	<b>6.72</b>	<b>10.09</b>	<b>10.33</b>	<b>2/1/2003</b>
LSV Asset - Net		0.11	1.54	1.87	16.37	6.47	9.83		
LCV Blended Benchmark		1.51	2.53	1.21	14.38	7.75	9.13	8.97	
Russell 1000 Value Index		1.51	2.53	1.21	14.38	7.75	9.13	8.98	
<b>NTGI S&amp;P 500 Value</b>	<b>1,387,700,395</b>	<b>1.71</b>	<b>7.01</b>	<b>6.70</b>	<b>15.78</b>	<b>9.76</b>	<b>10.23</b>	<b>6.55</b>	<b>8/1/1999</b>
NTGI S&P 500 Value - Net		1.71	7.01	6.69	15.78	9.76	10.23		
S&P 500 Value		1.71	6.97	6.74	15.80	9.73	10.16	6.52	
<b>Large Cap Pass. Core</b>	<b>2,006,015,391</b>	<b>1.01</b>	<b>8.31</b>	<b>1.29</b>	<b>13.92</b>	<b>10.49</b>	<b>11.63</b>	<b>11.07</b>	<b>1/1/1985</b>
Large Cap Pass. Core - Net		1.01	8.31	1.29	13.91	10.48	11.63		
Dow Jones U.S. Total Stock Market Index		1.00	8.32	1.28	13.91	10.46	11.57		
<b>NTGI MarketCap Idx.</b>	<b>2,006,015,391</b>	<b>1.01</b>	<b>8.31</b>	<b>1.29</b>	<b>13.92</b>	<b>10.49</b>	<b>11.63</b>	<b>10.86</b>	<b>2/1/1985</b>
NTGI MarketCap Idx. - Net		1.01	8.31	1.29	13.91	10.48	11.63		
Dow Jones U.S. Total Stock Market Index		1.00	8.32	1.28	13.91	10.46	11.57		
<b>Factor Diversity Strategies</b>	<b>2,512,397,151</b>	<b>1.14</b>	<b>8.38</b>	<b>2.39</b>				<b>8.89</b>	<b>8/18/2020</b>

# Performance

Periods Ended April 30, 2023

	Market Value \$	Performance (%)							Inception Date
		1 Month	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	
<b>U.S. Large Cap FDP-GSAM</b>	2,512,397,151	1.14	8.38	2.39				8.89	8/18/2020
U.S. Large Cap FDP-GSAM - Net		1.14	8.37	2.36				8.84	
Solactive GBS U.S. 1000 Index		1.19	8.88	1.78				8.59	
GSAM Active Beta US. Large Cap FDC Index		1.14	8.43	2.45				8.88	
<b>Quantitative Factor Strategies</b>	2,252,883,666	1.30	4.53	3.03	14.00			8.48	9/17/2019
<b>Quantitative US Equity - SciBeta</b>	2,252,883,666	1.30	4.53	3.03	14.00			8.48	9/17/2019
Quantitative US Equity - SciBeta - Net		1.29	4.52	2.97	13.84			8.31	
SciBeta US Hi-Fctr-Intst Div Multi-Beta Multi-Strat Index		1.26	4.16	2.00	13.00			7.53	
<b>Small Cap</b>	2,120,505,599	-1.88	1.98	-0.21	19.52	7.60	9.76	11.73	7/1/1988
Small Cap Composite - Net		-1.88	1.69	-0.84	18.75	6.95	9.14		
Russell 2000 Index		-1.80	0.89	-3.65	11.90	4.15	7.88	8.85	
<b>Small Cap Growth</b>	725,920,161	-1.12	6.88	2.96	17.82	10.11	11.41	12.68	7/1/1988
Small Cap Growth - Net		-1.12	6.13	1.85	16.62	9.12	10.63		
Russell 2000 Growth Index		-1.16	4.84	0.72	7.82	4.00	8.44	7.64	
<b>Frontier Capital</b>	725,920,161	-1.12	6.88	2.96	18.48	11.82	12.42	13.03	8/1/1988
Frontier Capital - Net		-1.12	6.13	1.85	17.29	10.72	11.56		
Russell 2000 Growth Index		-1.16	4.84	0.72	7.82	4.00	8.44	7.72	
<b>Small Cap Value</b>	1,394,585,438	-2.27	-0.38	-1.78	20.53	6.36	9.18	11.32	9/1/1989
Small Cap Value - Net		-2.27	-0.47	-2.18	19.99	5.86	8.66		
Russell 2000 Value Index		-2.49	-3.13	-7.99	15.44	3.66	6.96	9.35	
<b>Channing</b>	292,667,623	-1.45	2.37	-6.01	16.74	4.86	8.39	9.06	7/1/2011
Channing - Net		-1.45	2.25	-6.48	16.18	4.37	7.88	8.49	
Russell 2000 Value Index		-2.49	-3.13	-7.99	15.44	3.66	6.96	7.48	

# Performance

*Periods Ended April 30, 2023*

	Market Value \$	Performance (%)							Inception Date
		1 Month	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	
<b>DFA Small Cap Val.</b>	<b>527,247,047</b>	<b>-1.78</b>	<b>-0.97</b>	<b>2.05</b>	<b>26.19</b>	<b>7.69</b>	<b>9.62</b>	<b>11.71</b>	<b>2/1/1996</b>
DFA Small Cap Val. - Net		-1.78	-1.03	1.77	25.71	7.23	9.11		
Russell 2000 Value Index		-2.49	-3.13	-7.99	15.44	3.66	6.96	8.75	
<b>William Blair Small Cap Value</b>	<b>574,670,767</b>	<b>-3.13</b>	<b>-1.20</b>	<b>-2.90</b>	<b>17.72</b>	<b>6.02</b>	<b>9.69</b>	<b>10.74</b>	<b>5/1/1999</b>
Inv. Couns. Maryland - Net		-3.13	-1.29	-3.37	17.16	5.49	9.18		
Russell 2000 Value Index		-2.49	-3.13	-7.99	15.44	3.66	6.96	8.26	
<b>Public Real Assets</b>	<b>1,433,451,508</b>	<b>2.45</b>	<b>4.25</b>	<b>0.72</b>	<b>10.31</b>	<b>7.50</b>		<b>6.52</b>	<b>8/1/2017</b>
Public Real Assets - Net		2.45	4.17	0.42	9.92	7.08		6.11	
Public Real Assets Benchmark		2.31	3.75	-1.76	8.67	5.82		4.68	
<b>Brookfield</b>	<b>410,528,524</b>	<b>2.93</b>	<b>6.75</b>	<b>2.22</b>	<b>13.09</b>	<b>7.28</b>		<b>5.79</b>	<b>8/1/2017</b>
Brookfield - Net		2.93	6.64	1.83	12.56	6.75		5.29	
Dow Jones Brookfield Global Infrastructure Composite Index		2.65	5.83	-0.90	9.52	5.67		4.14	
<b>Cohen &amp; Steers</b>	<b>1,022,922,984</b>	<b>2.26</b>	<b>3.28</b>	<b>0.12</b>	<b>9.49</b>	<b>7.84</b>		<b>7.07</b>	<b>8/1/2017</b>
Cohen & Steers - Net		2.26	3.21	-0.15	9.15	7.45		6.71	
FTSE Global Core Infrastructure 50/50 Index (Net)		2.14	2.70	-2.22	8.22	5.85		4.92	

# Performance

*Periods Ended April 30, 2023*

	Market Value \$	Performance (%)							Inception Date
		1 Month	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	
<b>International Equity</b>	<b>9,188,708,608</b>	<b>1.67</b>	<b>9.57</b>	<b>4.47</b>	<b>11.04</b>	<b>3.28</b>	<b>5.17</b>	<b>7.46</b>	<b>9/1/1986</b>
International Equity - Net		1.66	9.47	4.12	10.65	2.93	4.82		
MSCI AC World ex USA (Net)		1.74	8.72	3.05	9.74	2.50	3.97		
International Equity IMRF Custom Benchmark		1.42	7.87	1.60	9.23	2.09			
<b>Intl LargeCap Equity</b>	<b>7,398,967,891</b>	<b>2.05</b>	<b>10.29</b>	<b>5.88</b>	<b>12.75</b>	<b>4.15</b>	<b>5.63</b>	<b>7.58</b>	<b>9/1/1986</b>
Intl LargeCap Equity - Net		2.05	10.23	5.61	12.43	3.87	5.34		
MSCI AC World ex USA (Net)		1.74	8.72	3.05	9.74	2.50	3.97		
<b>Intl Large Cap Grwth</b>	<b>1,524,879,293</b>	<b>1.12</b>	<b>9.55</b>	<b>3.44</b>	<b>12.58</b>	<b>4.69</b>	<b>5.70</b>	<b>8.08</b>	<b>9/1/2002</b>
Intl Large Cap Grwth - Net		1.12	9.47	3.13	12.23	4.42	5.40		
MSCI AC World ex USA (Net)		1.74	8.72	3.05	9.74	2.50	3.97	6.70	
MSCI AC World ex USA Growth (Net)		1.01	9.69	2.20	6.87	3.41	4.87	6.93	
<b>EARNEST Part. Intl</b>	<b>616,185,484</b>	<b>1.07</b>	<b>8.47</b>	<b>4.37</b>	<b>16.91</b>	<b>4.57</b>	<b>5.19</b>	<b>8.62</b>	<b>10/1/2004</b>
EARNEST Part. Intl - Net		1.07	8.42	4.16	16.68	4.38	4.99		
MSCI AC World ex USA (Net)		1.74	8.72	3.05	9.74	2.50	3.97	5.51	
MSCI AC World ex USA Growth (Net)		1.01	9.69	2.20	6.87	3.41	4.87	6.10	
<b>William Blair</b>	<b>908,693,810</b>	<b>1.15</b>	<b>10.29</b>	<b>2.81</b>	<b>9.95</b>	<b>4.89</b>	<b>6.21</b>	<b>9.08</b>	<b>10/1/2002</b>
William Blair - Net		1.15	10.20	2.44	9.54	4.52	5.82		
MSCI AC World ex USA (Net)		1.74	8.72	3.05	9.74	2.50	3.97	7.31	
MSCI AC World ex USA Growth (Net)		1.01	9.69	2.20	6.87	3.41	4.87	7.44	
<b>Intl Large Cap Val.</b>	<b>1,431,582,621</b>	<b>2.55</b>	<b>12.96</b>	<b>10.07</b>	<b>14.48</b>	<b>3.17</b>	<b>4.94</b>	<b>8.20</b>	<b>10/1/1995</b>
Intl Large Cap Val. - Net		2.55	12.89	9.73	14.16	2.85	4.57		
MSCI AC World ex USA (Net)		1.74	8.72	3.05	9.74	2.50	3.97	5.05	
MSCI AC World ex USA Value		2.57	8.04	4.51	13.14	1.91	3.48		

# Performance

*Periods Ended April 30, 2023*

	Market Value \$	Performance (%)							Inception Date
		1 Month	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	
<b>Brandes Investment</b>	<b>654,775,893</b>	<b>2.95</b>	<b>14.63</b>	<b>14.62</b>	<b>18.02</b>	<b>3.70</b>	<b>5.65</b>	<b>8.52</b>	<b>1/1/1996</b>
Brandes Investment - Net		2.95	14.58	14.39	17.79	3.50	5.41		
MSCI AC World ex USA (Net)		1.74	8.72	3.05	9.74	2.50	3.97	4.97	
MSCI AC World ex USA Value		2.57	8.04	4.51	13.14	1.91	3.48		
<b>Mondrian</b>	<b>639,201,094</b>	<b>2.58</b>	<b>11.71</b>	<b>6.48</b>	<b>11.85</b>	<b>2.82</b>	<b>4.37</b>	<b>5.14</b>	<b>4/1/2012</b>
Mondrian - Net		2.58	11.61	6.05	11.47	2.40	3.90	4.67	
MSCI AC World ex USA (Net)		1.74	8.72	3.05	9.74	2.50	3.97	4.67	
MSCI AC World ex USA Value		2.57	8.04	4.51	13.14	1.91	3.48	4.28	
<b>Lazard</b>	<b>137,605,634</b>	<b>0.55</b>	<b>11.04</b>	<b>6.57</b>	<b>11.32</b>	<b>3.34</b>	<b>4.65</b>	<b>5.78</b>	<b>4/1/2012</b>
Lazard - Net		0.55	10.98	6.31	11.07	3.09	4.19	5.34	
MSCI AC World ex USA (Net)		1.74	8.72	3.05	9.74	2.50	3.97	4.67	
MSCI AC World ex USA Value		2.57	8.04	4.51	13.14	1.91	3.48	4.28	
<b>Intl Large Cap Active Core</b>	<b>2,588,504,590</b>	<b>2.51</b>	<b>10.31</b>	<b>5.99</b>	<b>13.65</b>	<b>5.22</b>	<b>7.06</b>	<b>5.55</b>	<b>2/1/2008</b>
Intl Large Cap Active Core - Net		2.51	10.22	5.58	13.10	4.72	6.52		
MSCI AC World ex USA (Net)		1.74	8.72	3.05	9.74	2.50	3.97	2.74	
<b>Arrowstreet Capital</b>	<b>1,099,280,379</b>	<b>2.48</b>	<b>9.65</b>	<b>8.59</b>	<b>19.06</b>	<b>8.79</b>	<b>9.07</b>	<b>6.84</b>	<b>3/1/2008</b>
Arrowstreet Capital - Net		2.48	9.54	8.09	18.52	8.29	8.56	6.35	
MSCI AC World ex USA (Net)		1.74	8.72	3.05	9.74	2.50	3.97	2.56	
<b>Brown Capital</b>	<b>531,567,430</b>	<b>3.47</b>	<b>14.54</b>	<b>4.98</b>	<b>5.13</b>	<b>3.33</b>	<b>6.02</b>	<b>7.06</b>	<b>10/1/2004</b>
Brown Capital - Net		3.47	14.48	4.71	4.43	2.81	5.19		
MSCI AC World ex USA (Net)		1.74	8.72	3.05	9.74	2.50	3.97	5.51	
<b>GlobeFlex Capital</b>	<b>857,682,714</b>	<b>1.98</b>	<b>8.49</b>	<b>3.18</b>	<b>14.14</b>	<b>3.20</b>	<b>6.01</b>	<b>5.20</b>	<b>3/1/2006</b>
GlobeFlex Capital - Net		1.98	8.41	2.83	13.74	2.81	5.60	4.77	
MSCI AC World ex USA (Net)		1.74	8.72	3.05	9.74	2.50	3.97	3.77	



# Performance

Periods Ended April 30, 2023

	Market Value \$	Performance (%)							Inception Date
		1 Month	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	
<b>Xponance Intl EQ</b>	<b>99,301,535</b>	<b>2.36</b>	<b>12.01</b>	<b>8.54</b>				<b>1.53</b>	<b>2/1/2021</b>
Xponance Intl EQ - Net		2.36	11.85	7.84				0.97	
MSCI EAFE (Net)		2.82	11.53	8.42				3.18	
<b>Progress Intl Equity</b>	<b>602,649</b>								
<b>Intl Large Cap Passive Core</b>	<b>1,854,001,386</b>	<b>1.78</b>	<b>8.89</b>	<b>4.68</b>	<b>10.57</b>	<b>3.16</b>	<b>4.68</b>	<b>3.93</b>	<b>2/1/2000</b>
Intl Large Cap Passive Core - Net		1.78	8.89	4.67	10.56	3.15	4.67		
International Large Cap Passive Core Benchmark		1.74	8.72	3.05	9.75	2.55	4.21	3.50	
<b>NTGI ACWI ex US Index</b>	<b>1,854,001,386</b>	<b>1.78</b>	<b>8.89</b>	<b>4.68</b>				<b>-3.75</b>	<b>10/1/2021</b>
NTGI ACWI ex US Index - Net		1.78	8.89	4.67				-3.75	
MSCI AC World ex USA (Net)		1.74	8.72	3.05				-4.49	
<b>Intl All Cap Developed</b>	<b>158,335,216</b>	<b>1.84</b>	<b>9.60</b>	<b>1.90</b>	<b>9.78</b>			<b>4.94</b>	<b>2/1/2019</b>
Intl All Cap Developed - Net		1.84	9.47	1.38	9.29			4.46	
MSCI EAFE + Canada (Net)		2.84	11.09	7.05	12.01			6.73	
<b>Ativo International</b>	<b>158,335,216</b>	<b>1.84</b>	<b>9.60</b>	<b>1.90</b>	<b>9.78</b>			<b>4.94</b>	<b>2/1/2019</b>
Ativo International - Net		1.84	9.47	1.38	9.29			4.46	
MSCI EAFE + Canada (Net)		2.84	11.09	7.05	12.01			6.73	
<b>Intl Small Cap Eqty</b>	<b>551,832,585</b>	<b>1.65</b>	<b>9.79</b>	<b>1.50</b>	<b>8.84</b>	<b>1.69</b>	<b>5.34</b>	<b>4.58</b>	<b>12/1/2005</b>
Intl Small Cap Eqty - Net		1.65	9.60	0.72	8.04	0.95	4.55		
MSCI AC World ex USA Small Cap (Net)		1.47	6.24	-2.78	11.27	1.73	4.93	5.65	
Custom Benchmark (Intl Small Cap)		1.47	6.24	-2.78	11.27	1.73	4.93	5.06	
<b>Franklin Templeton</b>	<b>217,833,906</b>	<b>0.92</b>	<b>9.15</b>	<b>3.09</b>	<b>10.83</b>	<b>1.06</b>	<b>5.07</b>	<b>5.27</b>	<b>8/1/2011</b>
Franklin Templeton - Net		0.92	8.97	2.35	10.04	0.33	4.30	4.53	
MSCI AC World ex USA Small Cap (Net)		1.47	6.24	-2.78	11.27	1.73	4.93	4.54	

# Performance

Periods Ended April 30, 2023

	Market Value \$	Performance (%)							Inception Date
		1 Month	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	
<b>William Blair IntSC</b>	<b>333,998,678</b>	<b>2.14</b>	<b>10.21</b>	<b>0.48</b>	<b>7.62</b>	<b>2.14</b>	<b>5.53</b>	<b>7.68</b>	<b>9/1/2010</b>
William Blair IntSC - Net		2.14	10.02	-0.31	6.81	1.40	4.72	6.87	
MSCI AC World ex USA Small Cap (Net)		1.47	6.24	-2.78	11.27	1.73	4.93	6.15	
Custom Benchmark (Intl Small Cap)		1.47	6.24	-2.78	11.27	1.73	4.93	6.39	
<b>Emerging Mkt Equity</b>	<b>1,079,572,916</b>	<b>-0.87</b>	<b>4.35</b>	<b>-2.94</b>	<b>2.47</b>	<b>-0.77</b>	<b>2.25</b>	<b>7.79</b>	<b>2/1/1992</b>
Emerging Mkt Equity - Net		-0.89	4.02	-3.60	1.84	-1.36	1.66		
MSCI Emerging Markets Index		-1.11	2.86	-6.09	4.71	-0.67	2.18	6.26	
<b>Genesis Investment Management, LLP.</b>	<b>673,661,089</b>	<b>-1.47</b>	<b>3.54</b>	<b>-3.71</b>	<b>2.20</b>	<b>-0.93</b>	<b>2.17</b>	<b>8.61</b>	<b>5/1/2004</b>
Genesis Investment Management, LLP. - Net		-1.51	3.15	-4.40	1.56	-1.52	1.57		
MSCI Emerging Markets Index		-1.11	2.86	-6.09	4.71	-0.67	2.18	7.16	
<b>Arrowstreet EME</b>	<b>405,911,828</b>	<b>0.14</b>						<b>2.06</b>	<b>3/1/2023</b>
Arrowstreet EME - Net		0.14						2.06	
MSCI Emerging Markets IMI (Net)		-0.90						1.83	

# Performance

*Periods Ended April 30, 2023*

	Market Value \$	Performance (%)							
		1 Month	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
<b>Fixed Income</b>	<b>12,333,831,728</b>	<b>0.68</b>	<b>3.96</b>	<b>0.43</b>	<b>-1.23</b>	<b>1.79</b>	<b>2.08</b>	<b>7.47</b>	<b>1/1/1982</b>
Fixed Income - Net		0.68	3.95	0.36	-1.31	1.68	1.95		
Custom Benchmark (Fixed Income)		0.70	3.80	0.27	-2.55	1.55	1.51	6.95	
Fixed Income IMRF Custom Benchmark		0.70	3.79	0.32	-1.97	1.53			
<b>Active Fixed Core</b>	<b>3,839,037,918</b>	<b>0.70</b>	<b>3.89</b>	<b>-0.17</b>	<b>-2.10</b>	<b>1.51</b>	<b>1.74</b>	<b>3.77</b>	<b>4/1/2001</b>
ActiveCore Fixed Inc - Net		0.70	3.86	-0.29	-2.19	1.42	1.61		
Blmbg. U.S. Aggregate Index		0.61	3.59	-0.43	-3.15	1.18	1.32	3.66	
<b>Attucks Fixed Income</b>	<b>89,700,727</b>	<b>0.76</b>	<b>4.11</b>	<b>-0.53</b>				<b>-4.69</b>	<b>2/1/2021</b>
Attucks Fixed Income - Net		0.68	4.03	-0.86				-4.97	
Blmbg. U.S. Aggregate Index		0.61	3.59	-0.43				-4.88	
<b>Brandes FI Core</b>	<b>341,851,887</b>	<b>0.79</b>	<b>4.08</b>	<b>1.25</b>	<b>-2.23</b>	<b>1.62</b>		<b>1.33</b>	<b>3/1/2016</b>
Brandes FI Core - Net		0.79	4.07	1.21	-2.24	1.61		1.32	
Blmbg. U.S. Aggregate Index		0.61	3.59	-0.43	-3.15	1.18		1.07	
<b>EARNEST Partners</b>	<b>910,117,480</b>	<b>0.68</b>	<b>3.73</b>	<b>-0.32</b>	<b>-2.27</b>	<b>1.54</b>	<b>1.73</b>	<b>3.57</b>	<b>5/1/2005</b>
EARNEST Partners - Net		0.68	3.69	-0.46	-2.39	1.41	1.57	3.39	
Blmbg. U.S. Aggregate Index		0.61	3.59	-0.43	-3.15	1.18	1.32	3.13	
<b>Garcia Hamilton</b>	<b>983,518,983</b>	<b>0.54</b>	<b>4.24</b>	<b>0.31</b>	<b>-2.22</b>	<b>1.45</b>		<b>1.69</b>	<b>6/1/2015</b>
Garcia Hamilton - Net		0.54	4.22	0.23	-2.29	1.37		1.61	
Blmbg. U.S. Aggregate Index		0.61	3.59	-0.43	-3.15	1.18		1.18	
<b>Ramirez Asset Management</b>	<b>531,753,756</b>	<b>0.75</b>	<b>4.06</b>	<b>0.14</b>	<b>-1.28</b>			<b>-1.28</b>	<b>5/1/2020</b>
Ramirez Asset Management - Net		0.75	4.03	0.00	-1.41			-1.41	
Blmbg. U.S. Aggregate Index		0.61	3.59	-0.43	-3.15			-3.15	
<b>Xponance Yield Advantage Agg.</b>	<b>982,095,085</b>	<b>0.81</b>	<b>3.51</b>	<b>-1.11</b>	<b>-1.74</b>	<b>1.48</b>	<b>1.71</b>	<b>3.41</b>	<b>6/1/2005</b>
Xponance Yield Advantage Agg. - Net		0.81	3.47	-1.25	-1.86	1.36	1.57	3.24	
Blmbg. U.S. Aggregate Index		0.61	3.59	-0.43	-3.15	1.18	1.32	3.08	

Benchmark definitions in glossary.

# Performance

*Periods Ended April 30, 2023*

	Market Value \$	Performance (%)							
		1 Month	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
<b>Pass. Core Fixed Inc</b>	<b>2,799,327,667</b>	<b>0.61</b>	<b>3.70</b>	<b>-0.34</b>	<b>-3.10</b>	<b>1.24</b>	<b>1.38</b>	<b>5.18</b>	<b>1/1/1990</b>
Pass. Core Fixed Inc - Net		0.61	3.70	-0.35	-3.10	1.24	1.37		
Blmbg. U.S. Aggregate Index		0.61	3.59	-0.43	-3.15	1.18	1.32	5.15	
<b>BlackRock US Debt I</b>	<b>1,659,504,771</b>	<b>0.61</b>	<b>3.80</b>	<b>-0.36</b>	<b>-3.06</b>	<b>1.27</b>		<b>1.79</b>	<b>10/1/2013</b>
BlackRock US Debt I - Net		0.61	3.80	-0.36	-3.06	1.26		1.79	
Blmbg. U.S. Aggregate Index		0.61	3.59	-0.43	-3.15	1.18		1.68	
<b>NTGI Blmbg Agg.</b>	<b>1,139,822,896</b>	<b>0.61</b>	<b>3.56</b>	<b>-0.34</b>	<b>-3.14</b>	<b>1.21</b>	<b>1.35</b>	<b>5.22</b>	<b>2/1/1990</b>
NTGI Blmbg Agg. - Net		0.61	3.56	-0.34	-3.14	1.21	1.35		
Blmbg. U.S. Aggregate Index		0.61	3.59	-0.43	-3.15	1.18	1.32	5.21	
<b>Core Plus Fixed Income</b>	<b>2,974,173,896</b>	<b>0.42</b>	<b>3.63</b>	<b>-0.44</b>	<b>-1.85</b>	<b>1.62</b>	<b>1.99</b>	<b>7.31</b>	<b>1/1/1982</b>
Core Plus Fixed Inc. - Net		0.42	3.59	-0.59	-2.00	1.46	1.82		
Blmbg. U.S. Aggregate Index		0.61	3.59	-0.43	-3.15	1.18	1.32	6.91	
<b>LM Capital Group FI</b>	<b>849,076,656</b>	<b>-0.11</b>	<b>2.92</b>	<b>-0.83</b>	<b>-1.43</b>	<b>1.82</b>	<b>1.95</b>	<b>3.90</b>	<b>5/1/2005</b>
LM Capital Group FI - Net		-0.11	2.88	-0.99	-1.57	1.67	1.79	3.74	
Blmbg. U.S. Aggregate Index		0.61	3.59	-0.43	-3.15	1.18	1.32	3.13	
<b>Progress Inv. FI</b>	<b>1,164</b>								
<b>Loop Capital Management</b>	<b>581,664,241</b>	<b>0.63</b>	<b>3.90</b>	<b>0.28</b>	<b>-2.11</b>	<b>1.51</b>	<b>2.11</b>	<b>3.93</b>	<b>5/1/2005</b>
Loop Capital Management - Net		0.63	3.86	0.14	-2.24	1.37	1.98	3.79	
Blmbg. U.S. Aggregate Index		0.61	3.59	-0.43	-3.15	1.18	1.32	3.13	
<b>Western Asset</b>	<b>965,385,369</b>	<b>0.61</b>	<b>3.94</b>	<b>-0.47</b>	<b>-2.15</b>	<b>1.41</b>	<b>2.13</b>	<b>4.41</b>	<b>11/1/2001</b>
Western Asset - Net		0.61	3.90	-0.61	-2.28	1.29	1.99		
Blmbg. U.S. Aggregate Index		0.61	3.59	-0.43	-3.15	1.18	1.32	3.42	
<b>Longfellow Core Plus</b>	<b>578,046,466</b>	<b>0.67</b>	<b>3.87</b>	<b>-0.53</b>	<b>-1.48</b>			<b>-1.48</b>	<b>5/1/2020</b>
Longfellow Core Plus - Net		0.67	3.83	-0.68	-1.62			-1.62	
Blmbg. U.S. Aggregate Index		0.61	3.59	-0.43	-3.15			-3.15	

Benchmark definitions in glossary.

# Performance

*Periods Ended April 30, 2023*

	Market Value \$	Performance (%)							
		1 Month	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
<b>Bank Loans</b>	<b>1,627,490,806</b>	<b>1.02</b>	<b>4.58</b>	<b>0.93</b>	<b>7.12</b>	<b>3.23</b>		<b>3.93</b>	<b>8/1/2014</b>
Bank Loans - Net		1.06	4.63	1.09	7.18	3.16		3.64	
Custom Benchmark		1.05	4.43	3.30	7.25	3.85		3.98	
<b>Barings Global Loan Fund</b>	<b>1,627,490,806</b>	<b>1.02</b>	<b>4.58</b>	<b>0.93</b>	<b>7.12</b>	<b>3.23</b>		<b>3.93</b>	<b>8/1/2014</b>
Barings Global Loan Fund - Net		1.06	4.63	1.09	7.18	3.16		3.64	
Custom Benchmark		1.05	4.43	3.30	7.25	3.85		3.98	
<b>Emerging Markets Debt</b>	<b>357,059</b>								
Standish-Mellon EMD	357,059								
<b>High Yield</b>	<b>1,093,444,380</b>	<b>0.95</b>	<b>4.86</b>	<b>3.51</b>	<b>5.94</b>	<b>4.72</b>	<b>5.02</b>	<b>8.96</b>	<b>4/1/1986</b>
High Yield - Net		0.95	4.86	3.29	5.63	4.40	4.68		
ICE BofA US High Yield, Cash Pay Index		0.96	4.67	1.15	4.86	3.13	3.93	7.66	
<b>MacKay Shields</b>	<b>1,093,444,380</b>	<b>0.95</b>	<b>4.86</b>	<b>3.50</b>	<b>5.94</b>	<b>4.72</b>	<b>5.16</b>	<b>8.00</b>	<b>11/1/2000</b>
MacKay Shields - Net		0.95	4.86	3.29	5.64	4.40	4.81		
ICE BofA US High Yield, Cash Pay Index		0.96	4.67	1.15	4.86	3.13	3.93	6.63	

## Benchmark History

Account Name	From Date	To Date	Benchmark
Total Fund			The total fund benchmark is a blend of the asset class benchmark returns weighted by the target allocation for each asset classes:
	3/1/2022	Present	35.5% Domestic Equity Custom Benchmark, 25.5% Fixed Income Custom Benchmark, 18% MSCI AC World ex USA (Net), 10.5% Private Real Assets Custom Benchmark, 9.5% Alternatives Custom Benchmark, 1% 90 Day US Treasury Bill.
	1/1/2021	2/28/2022	39% Russell 3000 Index, 25% Blmbg. Barc. U.S. Aggregate, 15% MSCI AC World ex USA (Net), 10% NCREIF Fund Index-ODCE (VW) (Net), 10% Alternatives Custom Benchmark, 1% 90 Day US Treasury Bill
	3/1/2018	12/31/2020	37% Russell 3000 Index, 28% Blmbg. Barc. U.S. Aggregate, 18% MSCI AC World ex USA (Net), 9% NCREIF Fund Index-ODCE (VW) (Net), 7% Alternatives Custom Benchmark, 1% 90 Day US Treasury Bill
Domestic Equity	3/1/2022	Present	93% Russell 3000 Index, 7% FTSE Global Core Infrastructure 50/50 Index (Net)
	1/1/2015	2/28/2022	100% Russell 3000 Index
	1/1/1982	12/31/2014	100% Dow Jones US Total Stock Market Index
Large Cap Growth	1/1/2006	Present	100% Russell 1000 Growth Index
	11/1/2003	12/13/2005	100% S&P 500 Growth
Large Cap Value	1/1/2006	Present	100% Russell 1000 Value Index
	2/1/2001	12/31/2005	100% S&P 500 Value
Public Real Assets	8/1/2017	Present	33.3% Dow Jones Brookfield Global Infrastructure Composite, 66.7% FTSE GLOBAL CORE INFRASTRUCTURE 50/50 INDEX (Net)

## Benchmark History

Account Name	From Date	To Date	Benchmark
Intl Small Cap Eqty	6/1/2011	Present	100% MSCI AC World ex USA Small Cap (Net)
	12/1/2005	5/31/2011	100% S&P Developed Ex-U.S. SmallCap (Net)
Barings Global Loan Fund	8/1/2014	Present	Comprised of the Credit Suisse US Leveraged Loan Index and the Credit Suisse Western European Leveraged Loan Index, weighted by the portfolio's market value to each sector.