

Wilshire



Wilshire Advisors

Monthly Performance Summary

As of March 31, 2022

IMRF Performance Summary

- The Illinois Municipal Retirement Fund (“IMRF”) ended March 2022 with a market value of \$54.1 billion, up for the month by approximately \$262.9 million. IMRF returned 0.75% during the month, underperforming the Total Fund Benchmark, which returned 1.14%.
- The U.S. Equity Portfolio underperformed the benchmark during the month, returning 2.56% versus 3.54%. Investment manager performance in Large Cap Growth was among the largest contributor to relative underperformance. While GLI served as a meaningful source of diversification premia to help stave off further underperformance.
- The Internally Managed Scientific Beta Portfolio underperformed the benchmark during March, returning 2.50% versus 2.65% for the benchmark. Since Inception, the strategy has outperformed the benchmark, returning 13.32% versus 12.72%.
- The Internally Managed GSAM-Factor Diversity Portfolio underperformed the benchmark during the month, returning 2.62% versus 3.30% for the benchmark.
- The International Equity Portfolio underperformed the benchmark during March, returning -0.27% versus 0.16%. In aggregate, investment manager performance in Emerging Markets and Small Cap underperformed their respective benchmarks during the month.
- The Fixed Income Portfolio underperformed the benchmark during the month, returning -2.45% versus -2.23%. Investment manager performance in EMD, and a relative underweight to strategic credit contributed to relative underperformance during March.
- As of March month-end, Domestic Equity was 5.9% over its target. The current Statement of Investment Policy states that when actual allocations of the asset class differ by more than four percentage points from the policy target, a recommendation for rebalancing will be made to the Board of Trustees. At this time, IMRF is implementing the rebalancing recommendations approved by the Board at the March 2022 meeting.

Performance referenced above is Net of Fees.

Market Dashboard

Returns though Thursday March 31, 2022

Strategic Allocation Themes *	MTD	FEB	JAN	QTD	Q4 2021	YTD	1 Year	3 Year	5 Year
Growth ¹	2.17	(2.58)	(4.91)	(5.36)	6.68	(5.36)	7.28	13.70	11.64
Defensive Growth ²	2.65	(0.93)	(5.57)	(3.97)	3.76	(3.97)	4.24	11.84	10.97
Diversified Credit ³	(0.86)	(3.29)	(2.32)	(6.35)	0.22	(6.35)	(2.98)	2.58	3.35
Real Assets ⁴	4.58	2.28	(0.62)	6.30	5.88	6.30	27.46	13.64	9.69
Defensive ⁵	(2.78)	(1.12)	(2.15)	(5.93)	0.01	(5.93)	(4.15)	1.68	2.14
Major Asset Classes	MTD	FEB	JAN	QTD	Q4 2021	YTD	1 Year	3 Year	5 Year
FT Wilshire 5000	3.35	(2.44)	(5.73)	(4.95)	9.58	(4.95)	13.09	18.59	15.65
MSCI ACWI-ex-USA (Net)	0.16	(1.98)	(3.69)	(5.44)	1.82	(5.44)	(1.48)	7.49	6.76
Bloomberg U.S. Aggregate	(2.78)	(1.12)	(2.15)	(5.93)	0.01	(5.93)	(4.15)	1.68	2.14
Bloomberg U.S. Corporate High Yield	(1.15)	(1.03)	(2.73)	(4.84)	0.71	(4.84)	(0.66)	4.56	4.69
Wilshire Global Real Estate Securities	5.51	(2.22)	(5.97)	(2.98)	13.12	(2.98)	21.98	8.71	8.55
Bloomberg Commodity	8.65	6.23	8.78	25.55	(1.56)	25.55	49.25	16.06	9.00

Source: Bloomberg, All returns are in USD

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

¹ Growth : 100% Global Equity

² Defensive Growth : 60% Low Vol Global Equity, 40% US Convertibles

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

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

⁵ Defensive : 100% US Core Bonds

Market Returns

Returns though Thursday March 31, 2022

US Equity	MTD	FEB	JAN	QTD	Q4 2021	YTD	1 Year	3 Year	5 Year
FT Wilshire 5000	3.35	(2.44)	(5.73)	(4.95)	9.58	(4.95)	13.09	18.59	15.65
Standard & Poor's 500	3.71	(2.99)	(5.17)	(4.60)	11.03	(4.60)	15.65	18.86	15.99
Wilshire 4500 Completion	1.26	0.60	(9.19)	(7.49)	1.73	(7.49)	(1.25)	15.96	13.18
Wilshire US Large Cap	3.40	(3.04)	(5.56)	(5.32)	9.64	(5.32)	12.67	17.19	14.11
Wilshire US Large-Cap Growth	4.13	(3.78)	(8.25)	(8.07)	11.41	(8.07)	15.73	22.57	18.97
Wilshire US Large-Cap Value	2.56	(1.79)	(2.01)	(1.31)	7.90	(1.31)	9.90	11.50	9.10
Wilshire US Small Cap	1.13	0.67	(8.43)	(6.78)	2.85	(6.78)	(3.32)	10.89	8.59
Wilshire US Small-Cap Growth	(0.02)	1.01	(11.35)	(10.47)	1.61	(10.47)	(9.91)	11.62	10.79
Wilshire US Small-Cap Value	2.32	1.07	(5.48)	(2.25)	4.12	(2.25)	5.09	10.25	6.41
Non-US Equity	MTD	FEB	JAN	QTD	Q4 2021	YTD	1 Year	3 Year	5 Year
MSCI ACWI-ex-USA (Net)	0.16	(1.98)	(3.69)	(5.44)	1.82	(5.44)	(1.48)	7.49	6.76
MSCI EAFE (Net)	0.64	(1.77)	(4.83)	(5.91)	2.69	(5.91)	1.16	7.76	6.72
MSCI EM (Net)	(2.26)	(2.99)	(1.89)	(6.97)	(1.31)	(6.97)	(11.37)	4.92	5.98
MSCI ACWI-ex-US Small cap (Net)	1.02	(1.30)	(6.24)	(6.52)	0.62	(6.52)	0.03	10.18	7.89
Global Equity	MTD	FEB	JAN	QTD	Q4 2021	YTD	1 Year	3 Year	5 Year
MSCI ACWI (Net)	2.17	(2.58)	(4.91)	(5.36)	6.68	(5.36)	7.28	13.70	11.64
MSCI ACWI Minimum Volatility (Net)	3.61	(1.56)	(4.92)	(3.02)	6.29	(3.02)	8.63	7.67	8.55
Fixed Income	MTD	FEB	JAN	QTD	Q4 2021	YTD	1 Year	3 Year	5 Year
Bloomberg U.S. Aggregate	(2.78)	(1.12)	(2.15)	(5.93)	0.01	(5.93)	(4.15)	1.68	2.14
Bloomberg Long Term Treasury	(5.34)	(1.46)	(4.14)	(10.58)	3.08	(10.58)	(1.42)	3.25	3.90
Bloomberg U.S. TIPS	(1.86)	0.85	(2.02)	(3.02)	2.36	(3.02)	4.29	6.19	4.43
Bloomberg U.S. Corporate High Yield	(1.15)	(1.03)	(2.73)	(4.84)	0.71	(4.84)	(0.66)	4.56	4.69
Credit Suisse Leveraged Loan	0.04	(0.50)	0.36	(0.10)	0.71	(0.10)	3.22	4.08	4.05
ICE BofA US Convertible Index	1.20	0.03	(6.55)	(5.41)	(0.03)	(5.41)	(2.21)	17.93	14.39
JPM EMBI Global Diversified	(0.90)	(6.55)	(2.84)	(10.02)	(0.44)	(10.02)	(7.44)	0.01	1.69
Real Assets	MTD	FEB	JAN	QTD	Q4 2021	YTD	1 Year	3 Year	5 Year
Wilshire Global Real Estate Securities	5.51	(2.22)	(5.97)	(2.98)	13.12	(2.98)	21.98	8.71	8.55
FTSE Global Core Infrastructure 50/50	7.51	(0.36)	(3.01)	3.90	7.72	3.90	15.30	8.93	9.36
Alerian Midstream Energy	7.02	5.52	9.76	23.95	(0.35)	23.95	41.93	10.08	6.07
Bloomberg Commodity	8.65	6.23	8.78	25.55	(1.56)	25.55	49.25	16.06	9.00
Gold	1.49	6.22	(1.75)	5.92	4.11	5.92	13.45	14.40	9.17
Bitcoin	9.87	8.37	(17.04)	(1.22)	6.67	(1.22)	(22.38)	123.40	111.77

Source: Bloomberg. All returns are in USD

Factor/Relative Returns

Returns through Thursday March 31, 2022

Asset Class Differentials	MTD	FEB	JAN	QTD	Q4 2021	YTD	1 Year	3 Year	5 Year
Stocks (ACWI) > Bonds (BB US Aggregate)	4.95	(1.47)	(2.76)	0.57	6.66	0.57	11.43	12.02	9.50
Stocks (ACWI) > Mkt Alts (Equity Hedged)	1.32	(1.02)	(3.25)	(2.98)	3.31	(2.98)	2.65	8.00	7.81
Mkt Alts (Relative Value) > Bonds (BB US Aggregate)	1.69	(0.01)	1.23	2.82	(0.66)	2.82	1.25	(0.27)	(0.67)
Equity & Real Assets Differentials	MTD	FEB	JAN	QTD	Q4 2021	YTD	1 Year	3 Year	5 Year
US Small > Large	(2.21)	3.90	(2.91)	(1.28)	(6.96)	(1.28)	(16.09)	(6.42)	(5.80)
US Value > Growth	(1.39)	2.16	6.39	7.27	(3.00)	7.27	(3.69)	(8.80)	(7.66)
ACWI-ex-US > US	(3.19)	0.46	2.04	(0.49)	(7.76)	(0.49)	(14.58)	(11.10)	(8.89)
EM > EAFE	(2.90)	(1.22)	2.94	(1.06)	(4.00)	(1.06)	(12.53)	(2.84)	(0.74)
ACWI-ex-US Currency Impact	(0.86)	0.11	(0.84)	(1.54)	(0.87)	(1.54)	(3.50)	(0.44)	(0.14)
EAFE Currency Impact	(1.49)	0.41	(1.19)	(2.18)	(1.22)	(2.18)	(5.05)	(0.45)	0.17
EM Currency Impact	(0.20)	(0.61)	(0.10)	(0.87)	(0.40)	(0.87)	(1.51)	(1.32)	(1.52)
Global Low Volatility > ACWI	1.45	1.02	(0.01)	2.34	(0.39)	2.34	1.35	(6.03)	(3.09)
Global RE > ACWI	3.35	0.37	(1.06)	2.38	6.45	2.38	14.71	(4.99)	(3.10)
Commodities > Global RE	3.13	8.45	14.75	28.53	(14.69)	28.53	27.27	7.36	0.45
Commodities > TIPS	10.51	5.38	10.80	28.57	(3.93)	28.57	44.97	9.87	4.57
Gold > Commodities	(7.16)	(0.01)	(10.53)	(19.63)	5.68	(19.63)	(35.80)	(1.67)	0.17
Fixed Income Differentials	MTD	FEB	JAN	QTD	Q4 2021	YTD	1 Year	3 Year	5 Year
Duration (US Core > US Core 1-3 Years)	(1.42)	(0.67)	(1.44)	(3.43)	0.57	(3.43)	(1.24)	0.76	0.94
IG Credit > Treasury	0.59	(1.34)	(1.47)	(2.11)	0.05	(2.11)	(0.52)	1.62	1.58
High Yield > IG Credit	1.37	0.98	0.63	2.85	0.49	2.85	3.54	1.55	1.35
High Yield > Loans	(1.19)	(0.51)	(3.10)	(4.73)	(0.04)	(4.73)	(3.91)	0.34	0.68
TIPS > Treasury	2.19	1.18	0.33	3.59	2.03	3.59	8.26	4.56	2.37
EMD > Dev Hdg	(0.70)	(3.18)	(1.52)	(5.18)	(0.59)	(5.18)	(3.95)	(0.24)	(0.35)
EMD > High Yield	(1.19)	(3.51)	0.10	(4.39)	(1.23)	(4.39)	(6.85)	(3.90)	(2.79)
Non-US > US Core	(0.43)	0.01	0.20	(0.21)	(1.19)	(0.21)	(3.74)	(1.87)	(0.87)
Non-US Hdg > US Core	1.14	(0.24)	1.04	1.88	0.06	1.88	0.59	(0.78)	0.11
FI Currency Impact	(1.57)	0.25	(0.84)	(2.10)	(1.25)	(2.10)	(4.33)	(1.09)	(0.98)

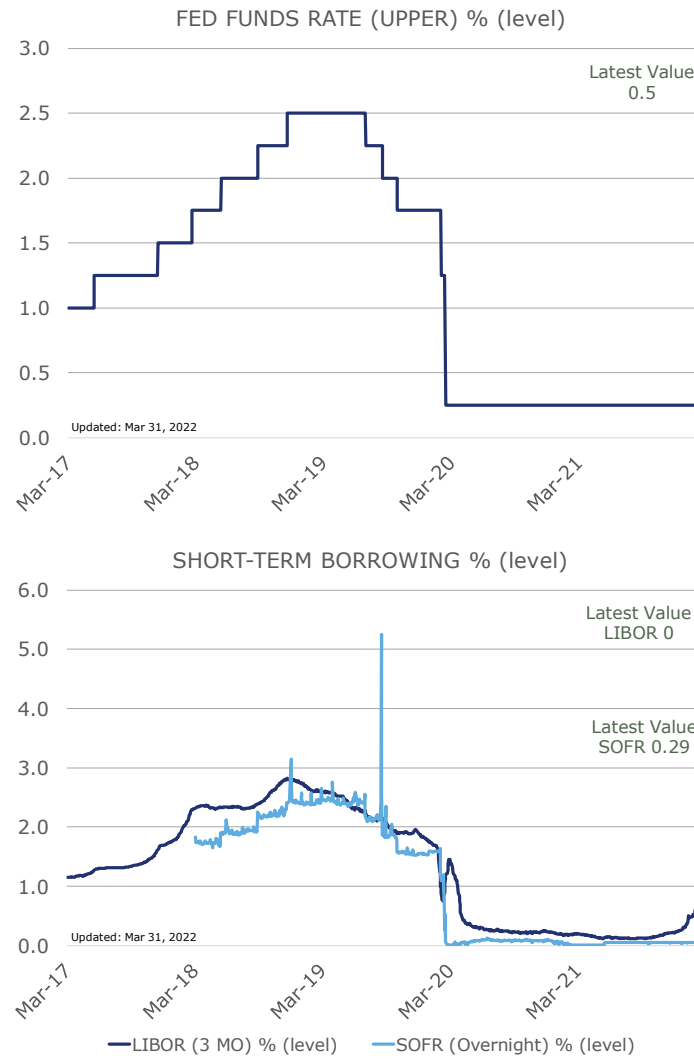
Source: Bloomberg. All returns are in USD

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
	03/31/22	02/28/22	01/31/22	12/31/21	12/31/21	09/30/21	12/31/21	03/31/21	03/29/19	03/31/17
Govt/Treasury Yields										
Fed Funds Target Rate (Upper)	0.50	0.25	0.25	0.25	0.25	0.25	0.25	0.25	2.50	1.00
2-Year Treasury	2.34	1.43	1.18	0.73	0.73	0.28	0.73	0.16	2.26	1.26
5-Year Treasury	2.46	1.72	1.61	1.26	1.26	0.97	1.26	0.94	2.23	1.92
10-Year Treasury	2.34	1.83	1.78	1.51	1.51	1.49	1.51	1.74	2.41	2.39
30-Year Treasury	2.45	2.16	2.11	1.90	1.90	2.05	1.90	2.41	2.82	3.01
10-Year Real Treasury	(0.49)	(0.80)	(0.71)	(1.10)	(1.10)	(0.89)	(1.10)	(0.63)	0.53	0.40
Term Spreads										
5 - 2 Year Treasury Spread	0.12	0.28	0.43	0.53	0.53	0.69	0.53	0.78	(0.03)	0.66
10 - 5 Year Treasury Spread	(0.13)	0.11	0.17	0.25	0.25	0.52	0.25	0.80	0.17	0.46
10 - 2 Year Treasury Spread	(0.00)	0.39	0.60	0.77	0.77	1.21	0.77	1.58	0.14	1.13
30 - 10Year Treasury Spread	0.10	0.33	0.33	0.39	0.39	0.56	0.39	0.67	0.41	0.62
30 - 2Year Treasury Spread	0.11	0.72	0.93	1.17	1.17	1.77	1.17	2.25	0.55	1.75
Market Yields										
Bloomberg U.S. Treasury YTW	2.42	1.76	1.58	1.23	1.23	1.01	1.23	1.00	2.38	1.91
Bloomberg U.S. Aggregate YTW	2.92	2.33	2.11	1.75	1.75	1.56	1.75	1.61	2.93	2.61
Bloomberg U.S. Long Treasury YTW	2.55	2.23	2.14	1.89	1.89	2.03	1.89	2.34	2.77	2.95
Bloomberg U.S. Long Govt/Credit YTW	3.39	3.09	2.92	2.58	2.58	2.68	2.58	3.02	3.70	3.88
Credit Spreads										
Bloomberg Investment Grade OAS	1.16	1.22	1.06	0.92	0.92	0.84	0.92	0.91	1.19	1.18
Bloomberg High Yield OAS	3.25	3.59	3.42	2.83	2.83	2.89	2.83	3.10	3.91	3.83
Breakeven Inflation Rates										
1-Year Breakeven Inflation	5.63	5.16	3.51	3.43	3.43	2.54	3.43	2.69	4.29	2.06
2-Year Breakeven Inflation	4.41	4.04	3.26	3.22	3.22	2.53	3.22	2.66	1.83	1.82
5-Year Breakeven Inflation	3.43	3.15	2.89	2.91	2.91	2.53	2.91	2.60	1.79	1.95
10-Year Breakeven Inflation	2.83	2.62	2.49	2.59	2.59	2.38	2.59	2.37	1.87	1.98
5-Year 5-Year Forward Breakeven Inflation	2.38	2.22	2.18	2.27	2.27	2.24	2.27	2.27	1.96	2.12

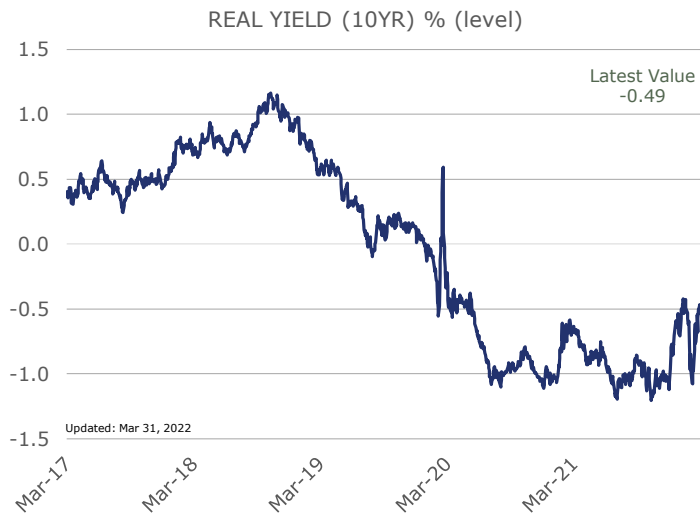
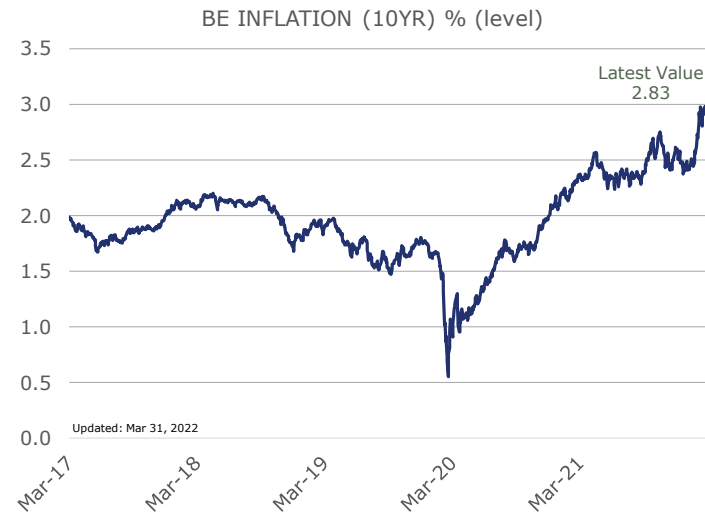
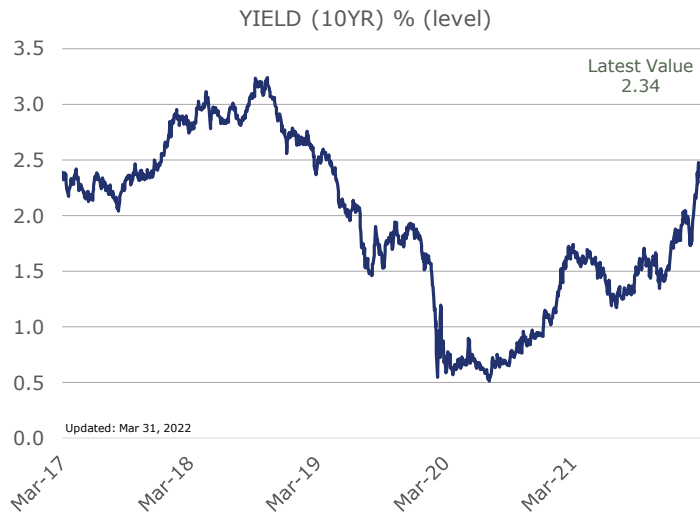
Source: Bloomberg

Short Rates



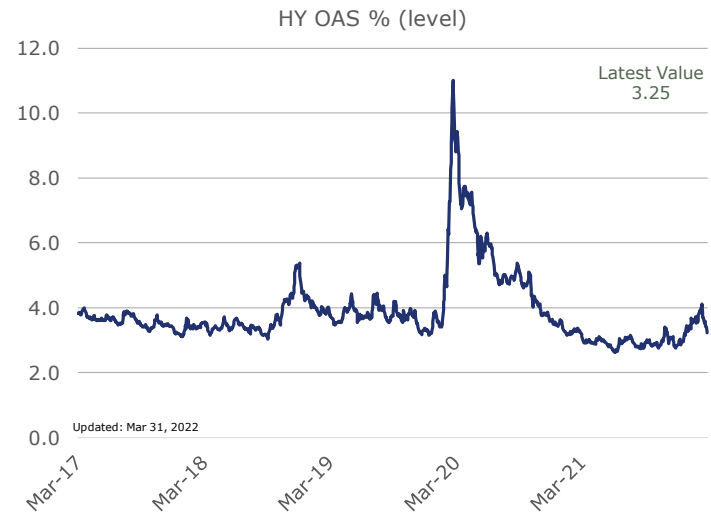
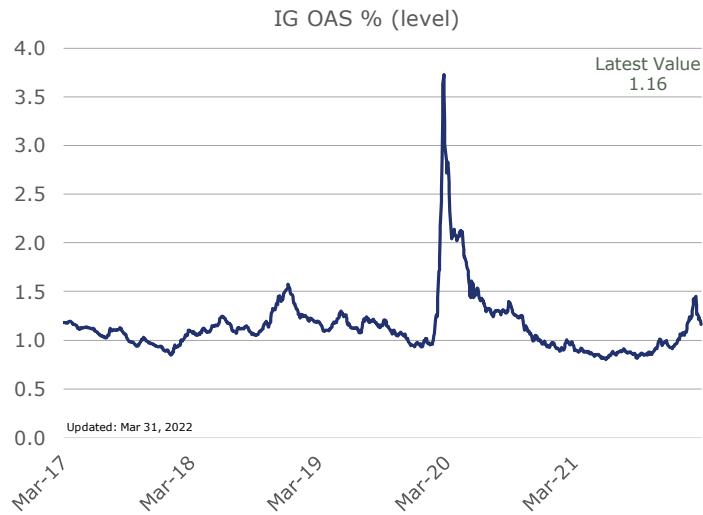
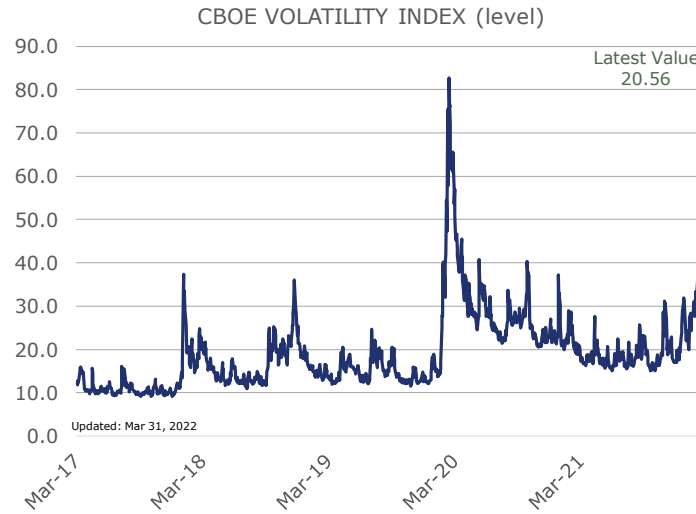
Source: Bloomberg

Treasury Rates



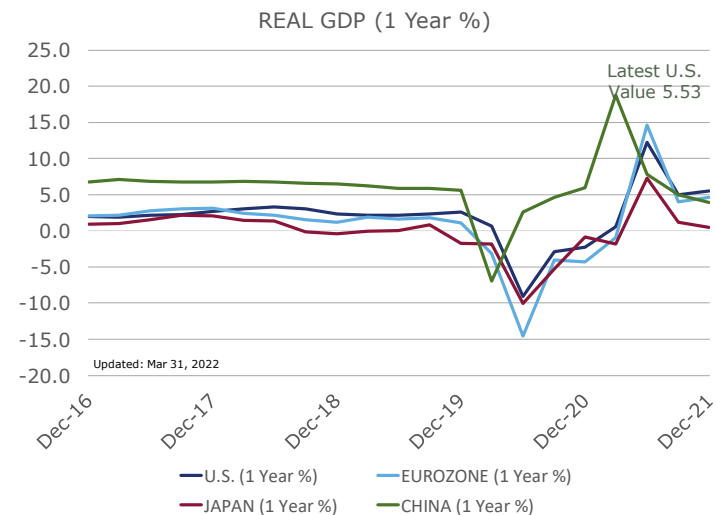
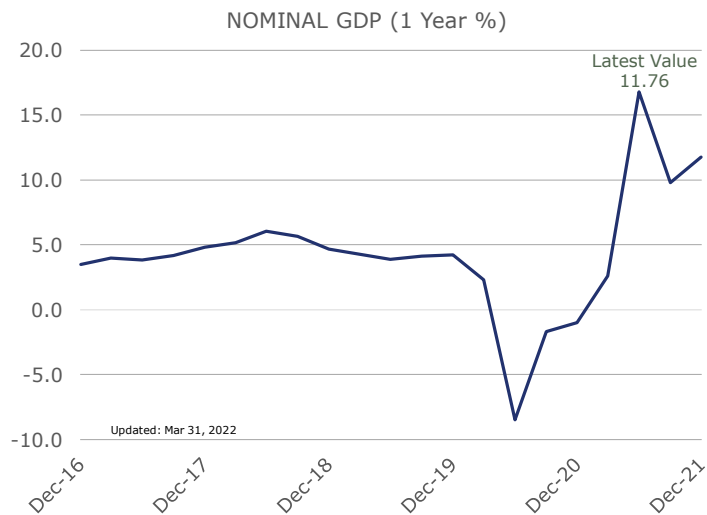
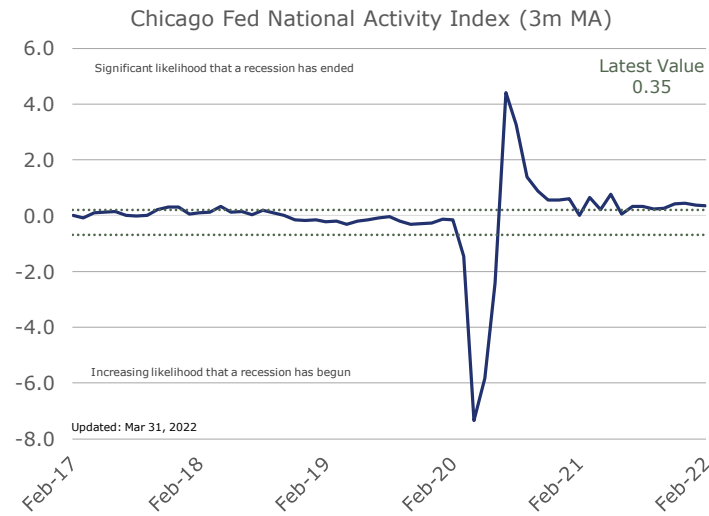
Source: Bloomberg

Volatility & Credit Risk



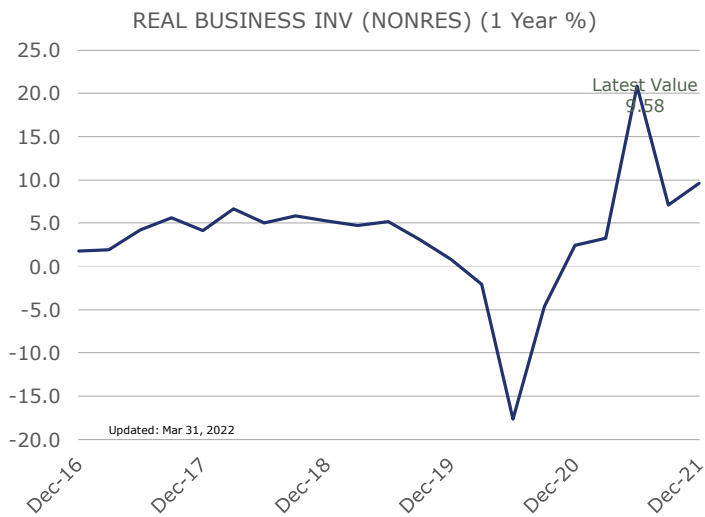
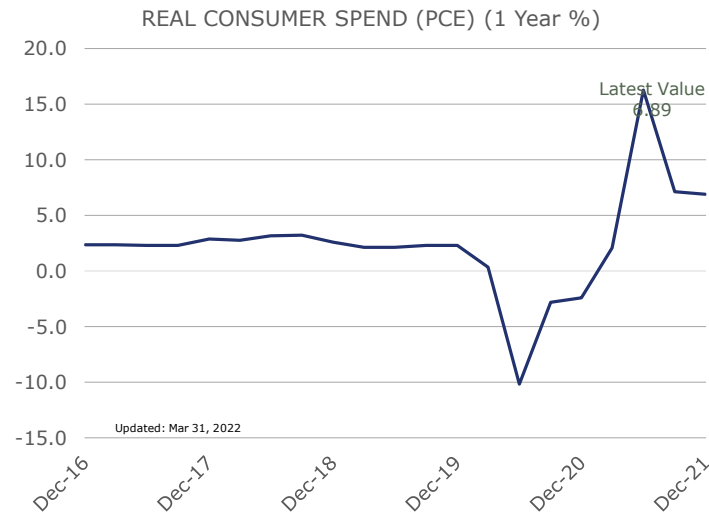
Source: Bloomberg

Economic Growth



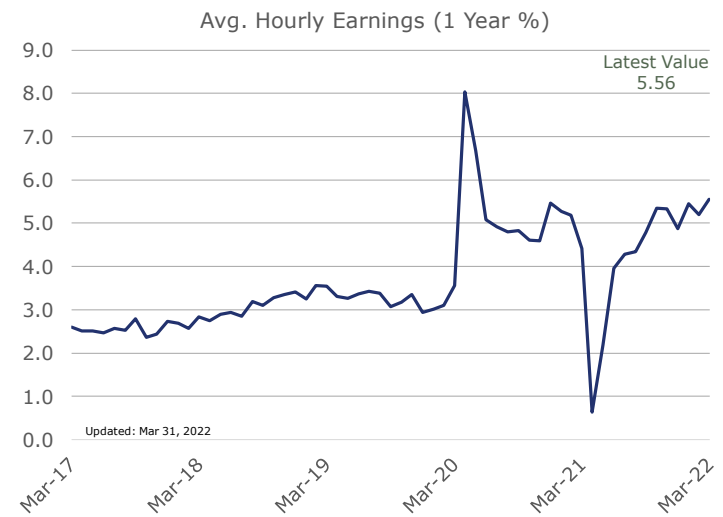
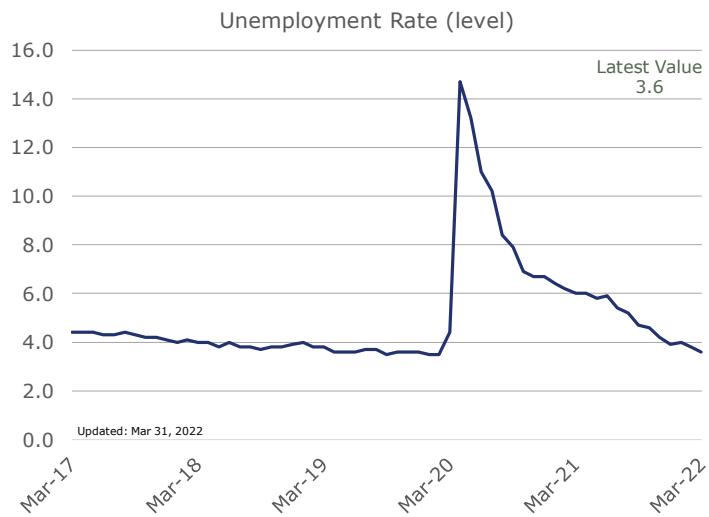
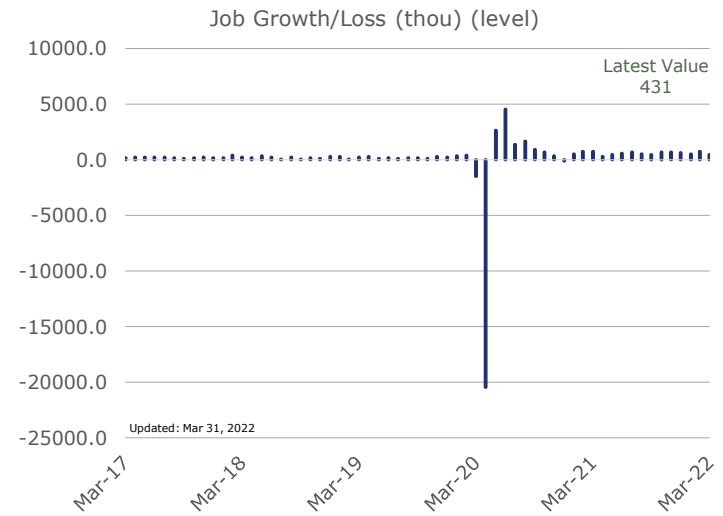
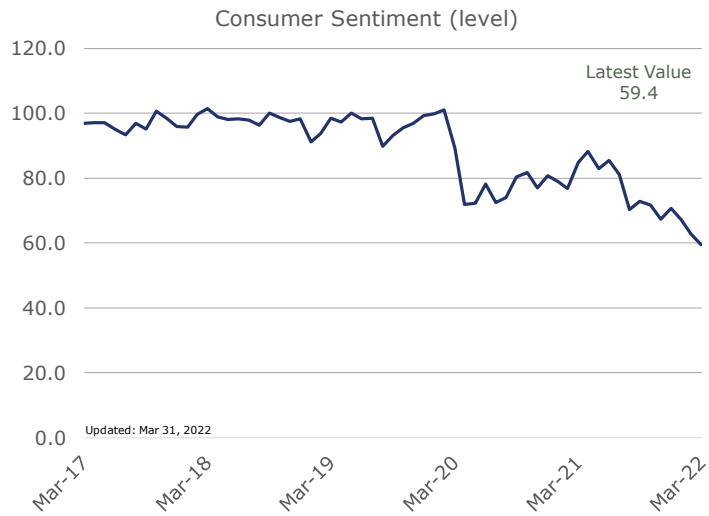
Source: Bloomberg

Economic Growth



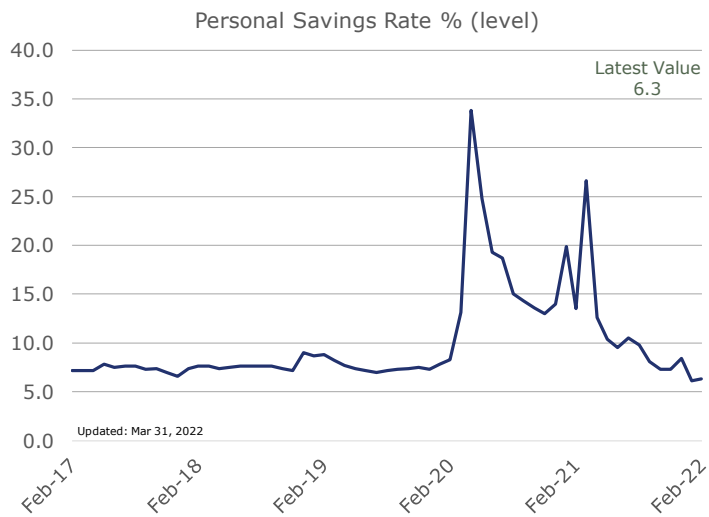
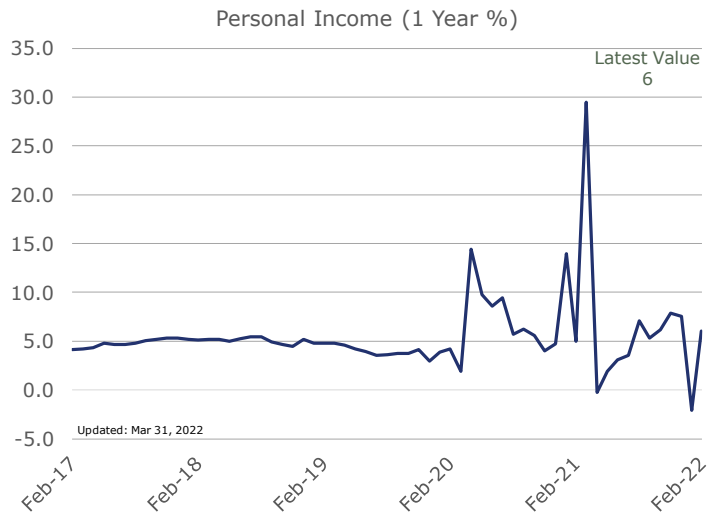
Source: Bloomberg

Consumers & Employment



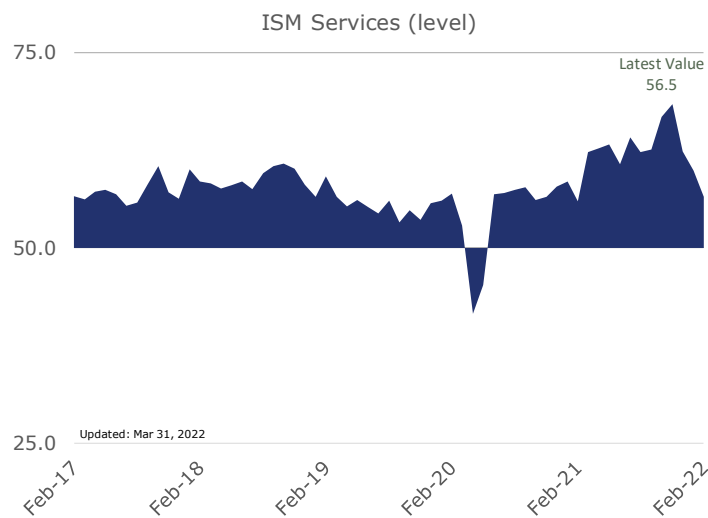
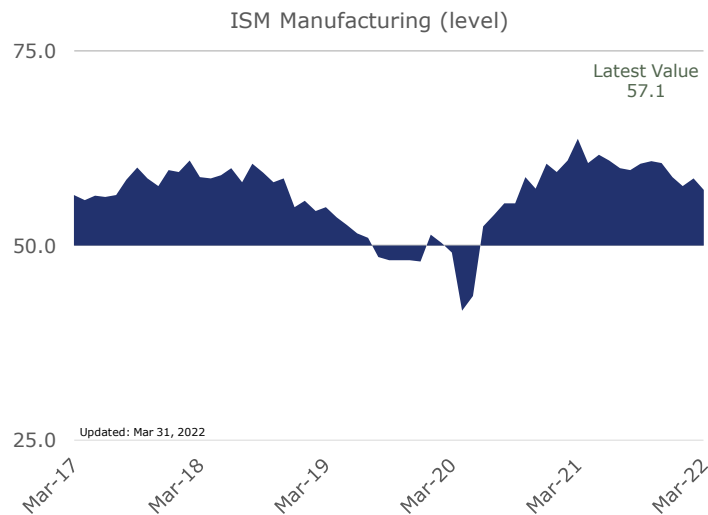
Source: Bloomberg

Income & Spending



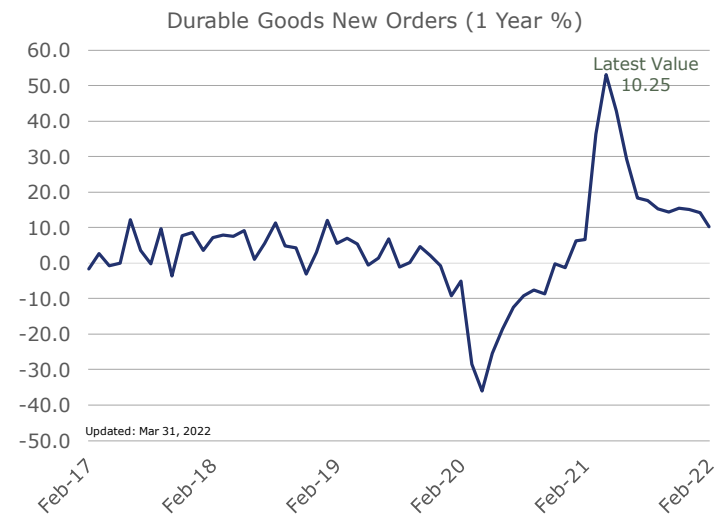
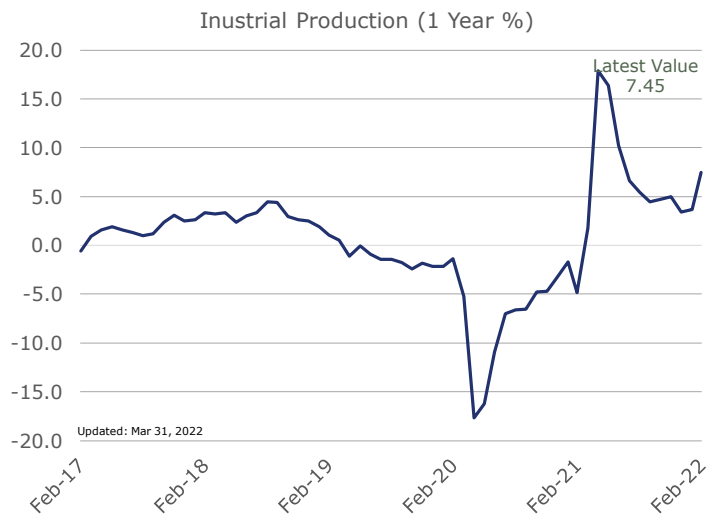
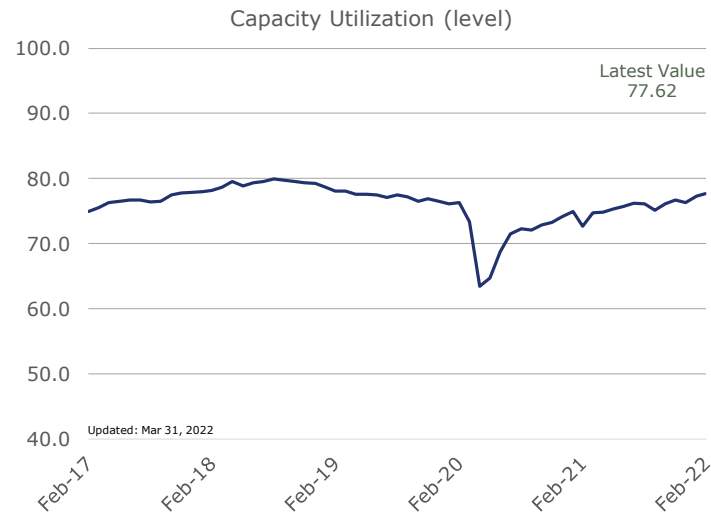
Source: Bloomberg

ISM Surveys



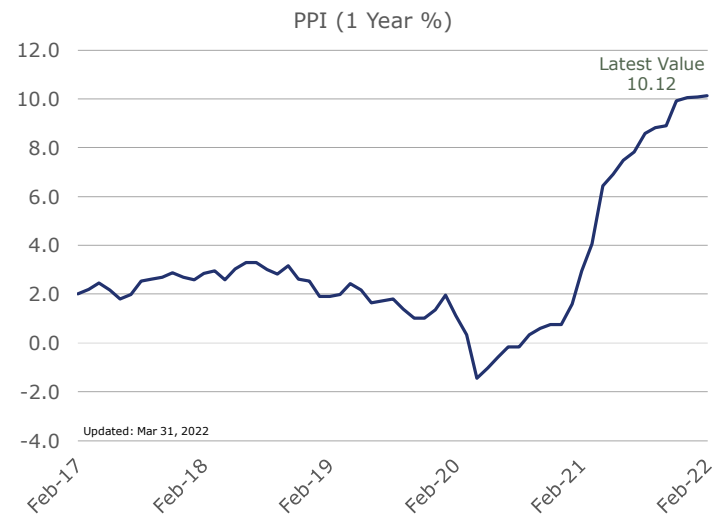
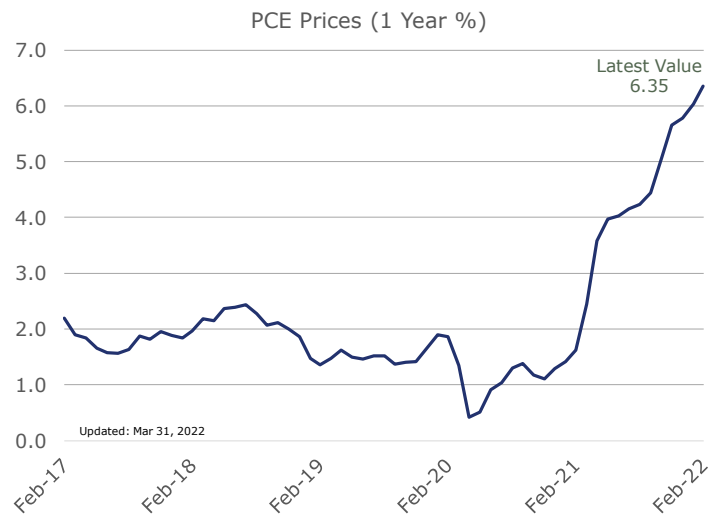
Source: Bloomberg

Manufacturing Activity



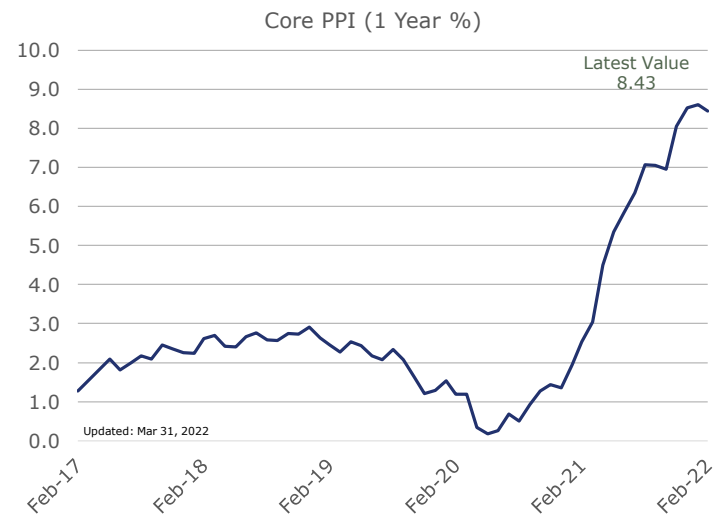
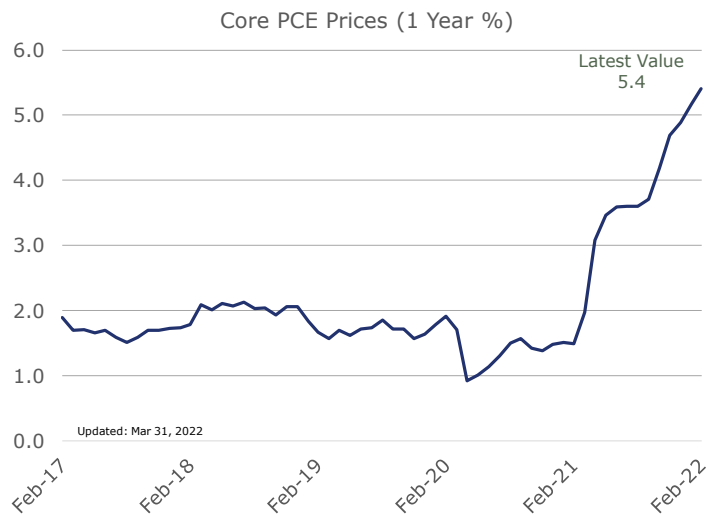
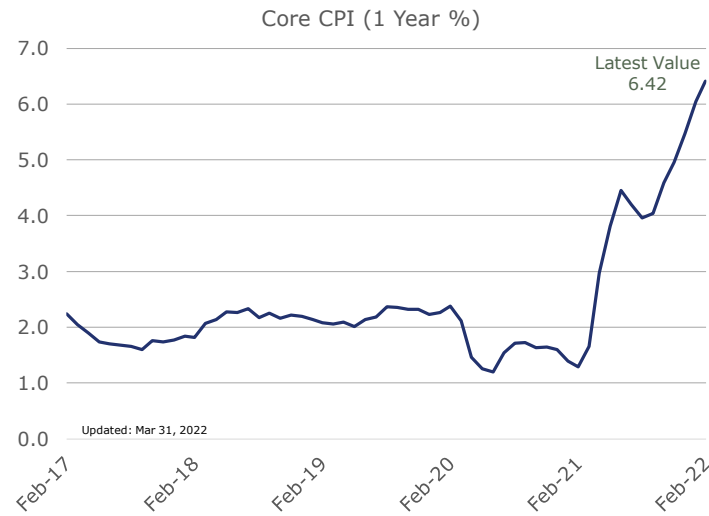
Source: Bloomberg

Price Indexes



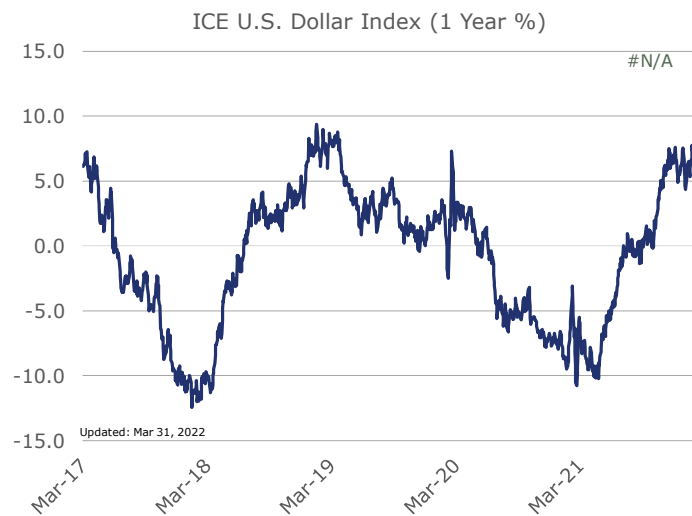
Source: Bloomberg

Core Price Indexes



Source: Bloomberg

U.S. Dollar



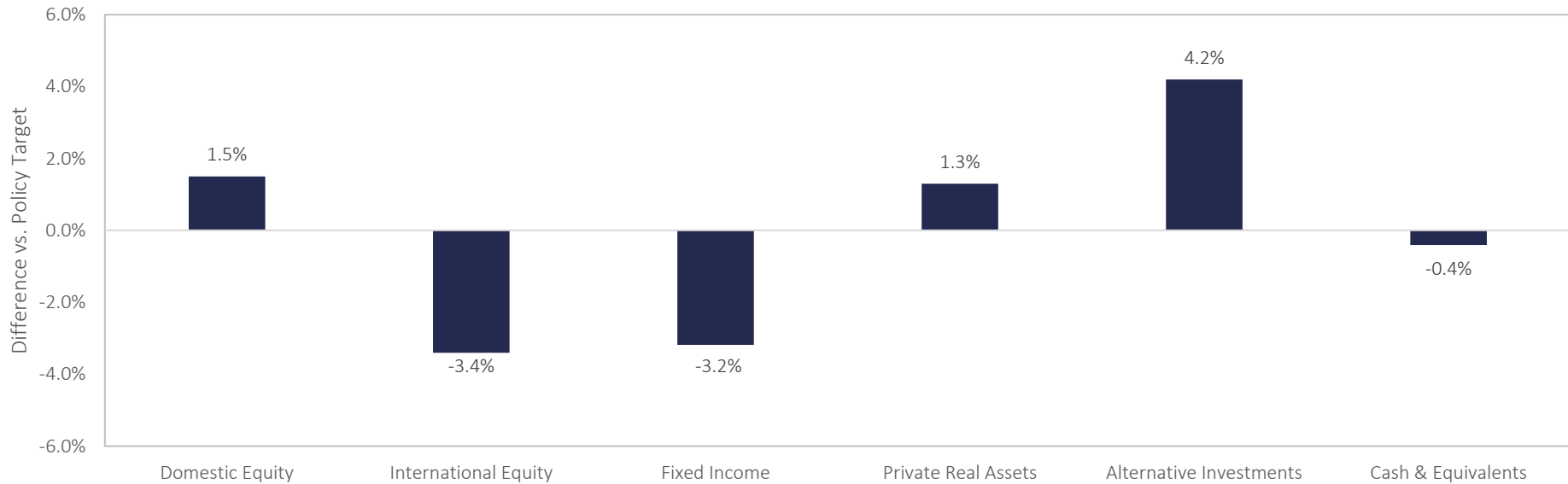
Source: Bloomberg

IMRF Performance

Projected Deviations from the Benchmark

As of March 31, 2022

Projected Asset Allocation Difference vs. Target



- Includes committed, but unfunded amounts for Real Assets (\$1.78 billion) and Alternatives (\$2.49 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

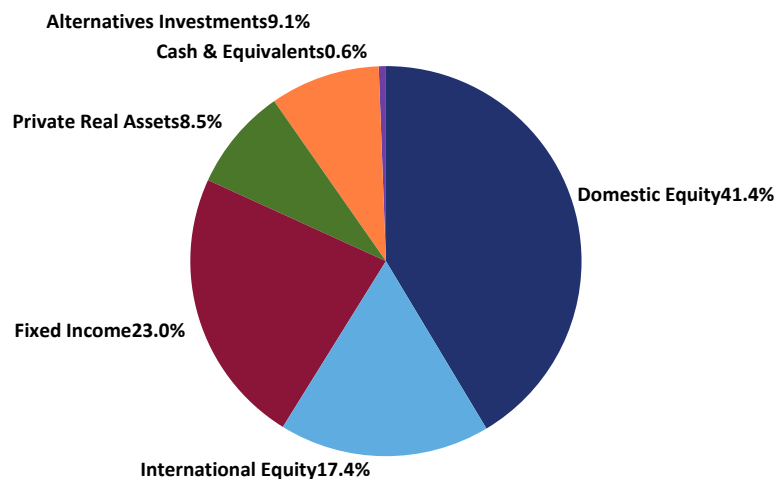
Real Assets Proxy: 50% Domestic Equity, 30% International Equity, 20% Fixed Income

Asset Allocation

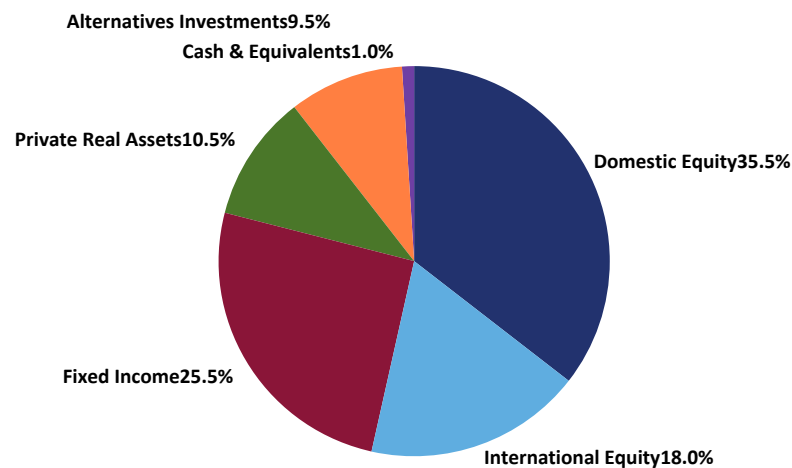
Total Fund

Periods Ended As of March 31, 2022

Actual Allocation



Target Allocation



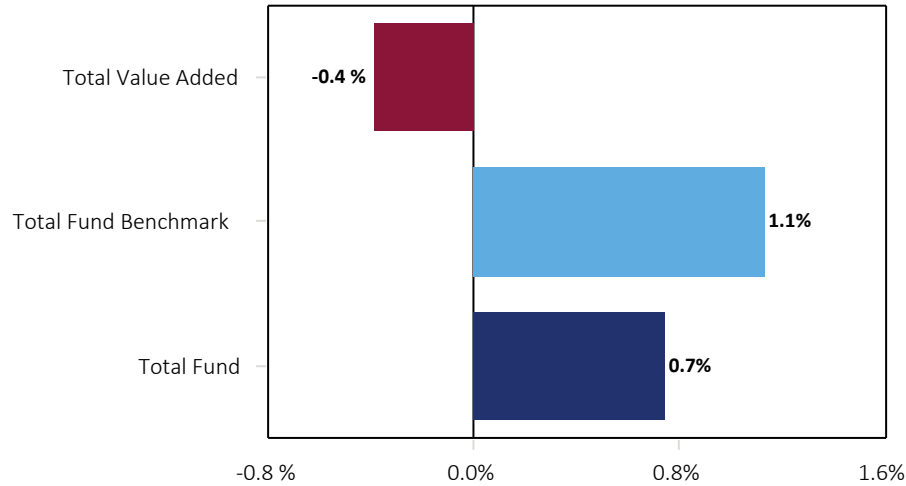
	Actual Allocation \$Millions	Actual Allocation %	Target Allocation %	Differences %	Differences \$Millions
Total Fund	54,085	100.0	100.0	0.0	
Domestic Equity	22,398	41.4	35.5	5.9	3,198
International Equity	9,426	17.4	18.0	-0.6	-309
Fixed Income	12,427	23.0	25.5	-2.5	-1,365
Private Real Assets	4,598	8.5	10.5	-2.0	-1,081
Alternatives Investments	4,915	9.1	9.5	-0.4	-223
Cash & Equivalents	321	0.6	1.0	-0.4	-220

Total Fund Attribution

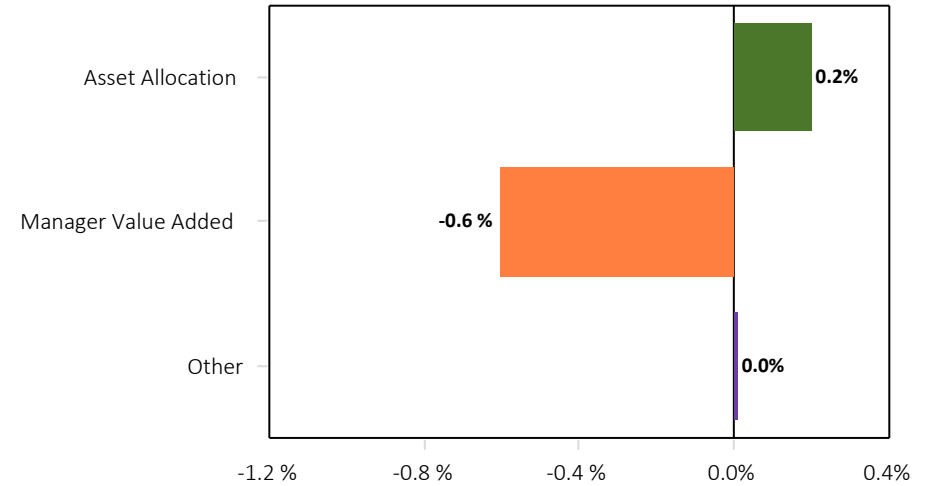
Total Fund

1 Month Ending March 31, 2022

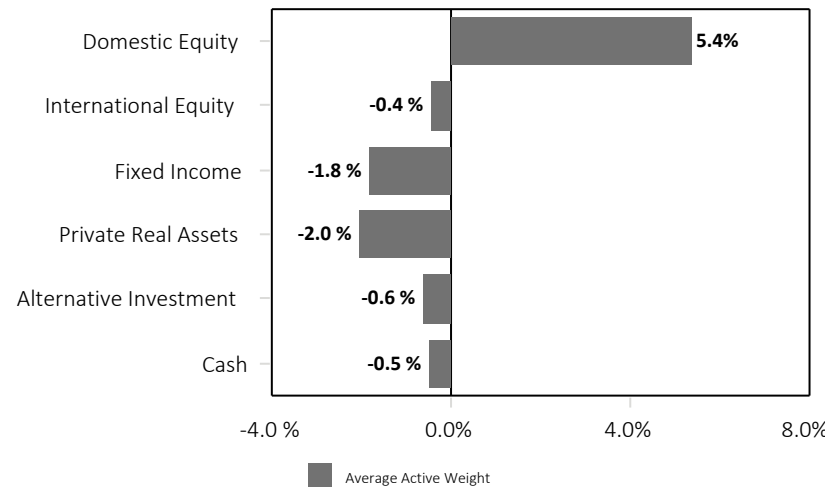
Total Fund Performance



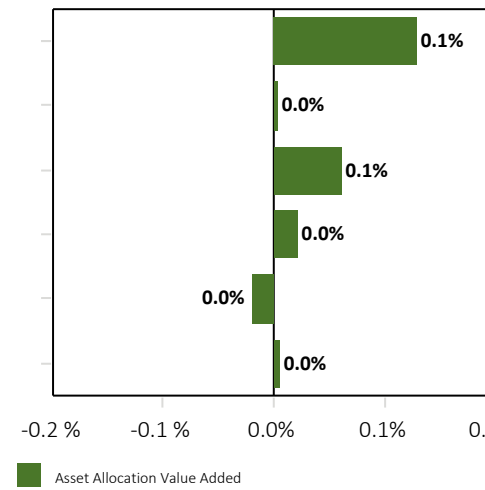
Total Value Added:-0.4 %



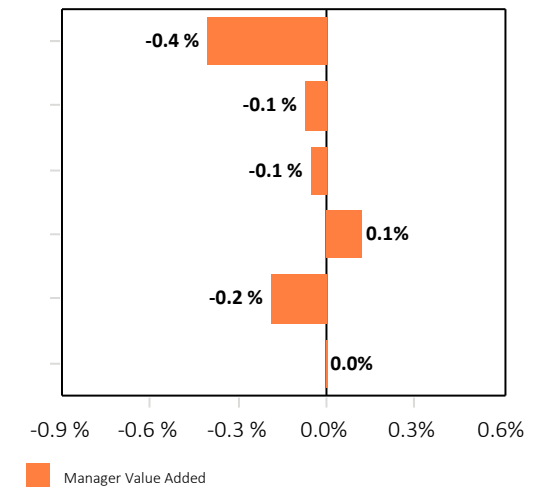
Asset Class Under or Overweighting



Asset Allocation Value Added:0.2%



Total Manager Value Added:-0.6 %



Total Fund Benchmark = 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.

Asset Class Returns

Periods Ended March 31, 2022

	Performance (%)									
	1 Month	QTD	1 Year	3 Years	5 Years	10 Years	20 Years	30 Years	Since Inception	Inception Date
Total Fund	0.75	-4.39	7.65	12.16	10.40	9.49	8.12	8.72	10.00	1/1/1982
Total Fund - Net	0.75	-4.44	7.47	11.97	10.21	9.27				
Total Fund Benchmark	1.14	-3.67	6.62	10.75	9.36	8.73	7.60			
Domestic Equity	2.56	-6.17	9.46	17.29	14.64	13.81	9.56	10.79	11.97	1/1/1982
Domestic Equity - Net	2.56	-6.22	9.27	17.08	14.43	13.56				
Custom Benchmark (U.S. Equity)	3.54	-5.01	12.24	18.35	15.46	14.29	9.56	10.55		
U.S. Equity IMRF Custom Benchmark	3.42	-5.24	11.90	16.99	13.92					
International Equity	-0.26	-7.68	-2.14	8.60	7.69	7.06	7.28	7.61	7.78	9/1/1986
International Equity - Net	-0.27	-7.76	-2.51	8.21	7.32	6.70				
MSCI AC World ex USA (Net)	0.16	-5.44	-1.48	7.51	6.76	5.55	6.41			
International Equity IMRF Custom Benchmark	-0.08	-5.71	-2.22	7.44	6.72					
Fixed Income	-2.44	-5.51	-3.30	2.39	2.78	3.13	4.86	5.75	7.76	1/1/1982
Fixed Income - Net	-2.45	-5.54	-3.40	2.29	2.66	2.99				
Custom Benchmark (Fixed Income)	-2.23	-5.40	-3.61	1.88	2.26	2.30	4.03	5.14	7.23	
Fixed Income IMRF Custom Benchmark	-2.48	-5.56	-3.58	2.01	2.43					
Private Real Assets	1.55								1.55	3/1/2022
Private Real Assets - Net	1.55								1.55	
Custom Benchmark (Private Real Assets)	0.08								0.08	
Real Estate	1.70	6.10	26.84	13.54	11.81	11.49	8.16	6.54	6.07	5/1/1985
Real Estate - Net	1.70	6.08	26.76	13.48	11.78	11.46				
Blended Benchmark (Real Estate)	0.00	0.00	18.78	7.80	7.41	9.30	7.60	7.55	7.77	
Agriculture	-0.03	1.43	4.04	1.63	-0.25	7.45	7.26		6.68	10/1/1997
NCREIF Farmland Index	0.00	0.00	6.92	4.98	5.62	9.28	12.35		11.15	
Timberland	-1.91	-3.34	2.67	-0.23	0.03	1.79	3.14		6.70	10/1/1992
NCREIF Timberland Index	0.00	0.00	8.35	3.65	3.42	5.27	6.40		8.29	

Benchmark definitions on next page.

Asset Class Returns

Periods Ended March 31, 2022

	Performance (%)									
	1 Month	QTD	1 Year	3 Years	5 Years	10 Years	20 Years	30 Years	Since Inception	Inception Date
Unlisted Infrastructure	1.30	6.26	13.10	14.68					13.01	4/1/2018
Blended Benchmark (Unlisted Infrastructure)	1.67	3.14	10.02	9.34					9.25	
Alternatives Investments	2.16	5.55	41.50	23.04	19.60	13.75	10.24	13.17	11.85	2/1/1986
Alternatives Investments - Net	2.16	5.55	41.48	23.02	19.51	13.52				
Custom Benchmark (Alternative Investments)	4.32	5.83	12.90	10.28	9.77	9.38	10.58	12.03	12.53	
Private Equity	2.40	6.09	47.63	26.78	23.26	16.50	12.41	15.93	14.18	2/1/1986
Blended Benchmark (Private Equity)	4.53	6.04	13.12	10.36	9.81	9.41	10.59			
Cash	0.43	0.94	3.06	2.93	2.67	1.49	1.41	3.03	3.75	7/1/1986
90 Day US Treasury Bill	0.03	0.04	0.06	0.81	1.13	0.62	1.23	2.38	3.10	

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	3/1/2022	Present	The total fund benchmark is a blend of the asset class benchmark returns weighted by the target allocation for each asset class: 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 March 31, 2022

	Feb-2022		Mar-2022	
	\$	%	\$	%
Domestic Equity	22,020,329,530	40.91	22,397,947,137	41.41
Large Cap Growth	7,485,369,229	13.91	7,534,804,251	13.93
NTGI S&P 500 Growth	3,469,370,100	6.45	3,453,552,109	6.39
Sands Capital	1,862,877,770	3.46	1,843,848,163	3.41
Xponance Russell 1000 G	2,153,121,359	4.00	2,237,403,980	4.14
Large Cap Value	4,940,905,012	9.18	5,019,576,663	9.28
Dodge & Cox	1,881,879,531	3.50	1,906,842,354	3.53
LSV Asset	1,507,909,711	2.80	1,519,183,210	2.81
NTGI S&P 500 Value	1,551,115,769	2.88	1,593,551,100	2.95
Large Cap Pass. Core	2,983,098,541	5.54	3,079,794,923	5.69
NTGI MarketCap Idx.	2,983,098,541	5.54	3,079,794,923	5.69
Factor Diversity Strategies	1,542,871,036	2.87	1,583,425,819	2.93
U.S. Large Cap FDP-GSAM	1,542,871,036	2.87	1,583,425,819	2.93
Quantitative Factor Strategies	1,771,128,330	3.29	1,815,612,829	3.36
Quantitative US Equity - SciBeta	1,771,128,330	3.29	1,815,612,829	3.36
Small Cap Growth	792,265,491	1.47	789,461,182	1.46
Frontier Capital	792,265,491	1.47	789,461,182	1.46
Small Cap Value	1,510,759,924	2.81	1,508,746,381	2.79
Channing	344,731,837	0.64	338,698,999	0.63
DFA Small Cap Val.	538,888,048	1.00	546,646,562	1.01
William Blair Small Cap Value	627,140,040	1.17	623,400,820	1.15

Investment Manager Asset Allocation

Periods Ended March 31, 2022

	Feb-2022		Mar-2022	
	\$	%	\$	%
Public Real Assets	993,931,967	1.85	1,066,525,086	1.97
Brookfield	195,610,191	0.36	208,310,698	0.39
Cohen & Steers	798,321,776	1.48	858,214,388	1.59
International Equity	9,451,965,122	17.56	9,426,493,695	17.43
Intl Large Cap Growth	1,593,892,448	2.96	1,613,458,917	2.98
EARNEST Part. Intl	626,831,733	1.16	634,339,683	1.17
William Blair	967,060,714	1.80	979,119,234	1.81
Intl Large Cap Value	1,377,894,454	2.56	1,366,997,412	2.53
Brandes Investment	607,659,590	1.13	596,775,229	1.10
Mondrian	634,493,618	1.18	631,847,525	1.17
Lazard	135,741,246	0.25	138,374,658	0.26
Intl Large Cap Core	4,467,113,593	8.30	4,493,473,193	8.31
Arrowstreet Capital	1,048,230,504	1.95	1,064,663,946	1.97
Brown Capital	557,657,172	1.04	560,794,246	1.04
GlobeFlex Capital	859,288,743	1.60	876,851,825	1.62
Xponance Intl EQ	98,918,527	0.18	98,508,960	0.18
Progress Intl Equity	677,561	0.00	659,544	0.00
Transition Account	119,717	0.00	119,717	0.00
NTGI ACWI ex US Index Fund	1,902,221,369	3.53	1,891,874,955	3.50
Intl All Cap Developed	163,806,942	0.30	165,796,869	0.31
Ativo International	163,806,942	0.30	165,796,869	0.31

Investment Manager Asset Allocation

Periods Ended March 31, 2022

	Feb-2022		Mar-2022	
	\$	%	\$	%
International Small Cap	604,523,404	1.12	600,108,570	1.11
Franklin Templeton	234,470,590	0.44	226,459,614	0.42
William Blair IntSC	370,052,814	0.69	373,648,956	0.69
Emerging Mkt Equity	1,244,734,281	2.31	1,186,658,735	2.19
Genesis Asset Mngrs.	1,244,734,281	2.31	1,186,658,735	2.19

Investment Manager Asset Allocation

Periods Ended March 31, 2022

	Feb-2022		Mar-2022	
	\$	%	\$	%
Fixed Income	12,738,458,620	23.67	12,427,070,915	22.98
Global Bonds Transition	210,227	0.00	210,263	0.00
Domestic Fixed Core	4,176,812,080	7.76	4,064,715,748	7.52
Attucks Fixed Income	96,514,074	0.18	93,716,240	0.17
Brandes FI Core	364,644,370	0.68	354,946,090	0.66
EARNEST Partners	993,946,316	1.85	965,774,469	1.79
Garcia Hamilton	1,061,122,923	1.97	1,035,544,810	1.91
Ramirez Asset Management	582,270,708	1.08	563,847,708	1.04
Xponance Yield Advantage Agg.	1,078,313,689	2.00	1,050,886,430	1.94
Domestic Fixed Passive Core	3,537,763,952	6.57	3,439,948,286	6.36
NTGI Blmbg Agg.	1,757,891,572	3.27	1,709,083,276	3.16
BlackRock US Debt I	1,779,872,380	3.31	1,730,865,010	3.20
Domestic Fixed Core Plus	3,274,199,703	6.08	3,184,087,542	5.89
LM Capital Group FI	929,959,953	1.73	908,230,733	1.68
Progress Inv. FI	1,155	0.00	1,159	0.00
Loop Capital Management	636,338,669	1.18	619,953,817	1.15
Western Asset	1,075,376,544	2.00	1,039,857,546	1.92
Longfellow Core Plus	632,523,382	1.18	616,044,287	1.14
Bank Loans	725,892,512	1.35	726,116,001	1.34
Barings Global Loan Fund	725,892,512	1.35	726,116,001	1.34
Emerging Markets Debt	205,956,077	0.38	199,893,049	0.37
Standish-Mellon EMD	205,956,077	0.38	199,893,049	0.37

Investment Manager Asset Allocation

Periods Ended March 31, 2022

	Feb-2022		Mar-2022	
	\$	%	\$	%
High Yield	817,624,069	1.52	812,100,026	1.50
MacKay Shields	817,624,066	1.52	812,100,023	1.50
FIAM High Yield	3	0.00	3	0.00

Investment Manager Asset Allocation

Periods Ended March 31, 2022

	Feb-2022		Mar-2022	
	\$	%	\$	%
Private Real Assets		0.00	4,597,883,654	8.50
Real Estate	4,134,578,384	7.68	4,182,789,262	7.73
Real Estate Core Cmp	2,240,468,045	4.16	2,241,122,737	4.14
TA Assoc. Buckhead	899,683,122	1.67	894,660,982	1.65
Barings Euro Core Property	147,055,501	0.27	145,674,226	0.27
Blackstone Property Euro	162,259,975	0.30	160,735,892	0.30
INVESCO Core Real Estate	237,766,430	0.44	237,766,430	0.44
INVESCO European real estate	58,567,077	0.11	58,016,963	0.11
AEW Core Property Tr	270,756,245	0.50	272,951,247	0.50
CBRE Core Partners	282,528,121	0.52	282,528,121	0.52
JPM Strategic Property Fund	181,851,574	0.34	188,788,876	0.35
RE Non-Core Cmp	1,894,110,339	3.52	1,941,666,525	3.59
Artemis MWBE Spruce	320,726,908	0.60	355,210,635	0.66
Franklin T. EMREFF	4,639,964	0.01	4,639,964	0.01
Security Capital	61,777,751	0.11	61,777,751	0.11
Dune II	9,412,963	0.02	9,412,963	0.02
Non-Core Real Estate Funds	1,260,662,499	2.34	1,265,156,738	2.34
Non-Core Intl Real Estate	236,803,710	0.44	245,382,878	0.45
Almanac ARS V	86,544	0.00	85,596	0.00
Agriculture	231,556,552	0.43	231,475,704	0.43
Premiere Partners IV	231,556,552	0.43	231,475,704	0.43
Timberland	64,316,624	0.12	63,091,285	0.12
Forest Investment	64,316,624	0.12	63,091,285	0.12
Unlisted Infrastructure	119,017,678	0.22	120,527,403	0.22
Unlisted Infrastructure Funds	119,017,678	0.22	120,527,403	0.22

Investment Manager Asset Allocation

Periods Ended March 31, 2022

	Feb-2022		Mar-2022	
	\$	%	\$	%
Alternatives Investments	5,199,599,763*	9.66	4,914,673,500	9.09
Absolute Return	82,627	0.00	78,878	0.00
Aurora Investment	82,627	0.00	78,878	0.00
Private Equity	4,602,980,019	8.55	4,731,189,165	8.75
Abbott S/A Comp.	536,100,107	1.00	536,150,189	0.99
Muller Monroe MPEFF	517,859	0.00	517,859	0.00
Pantheon S/A Comp.	420,261,055	0.78	419,526,411	0.78
Private Equity Fund - Domestic	2,911,771,355	5.41	3,068,429,292	5.67
Private Equity Fund - International	579,117,324	1.08	551,353,095	1.02
Oakbrook Opportunities Fund	155,212,320	0.29	155,212,320	0.29
Private Credit	181,646,263	0.34	183,405,457	0.34
Private Credit Fund - Domestic	181,646,263	0.34	183,405,457	0.34
Cash & Equivalents	277,200,690	0.52	320,935,546	0.59
Total Fund	53,822,132,109	100.00	54,085,004,446	100.00

*As of 2/28/22, the total Alternative Investments composite contained Agriculture, Timberland, and Unlisted Infrastructure. Effective 3/1/22, these asset classes are now included in the Private Real Assets composite, listed on the previous page.

Performance

Periods Ended March 31, 2022

	Market Value \$	Performance (%)							
		1 Month	QTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Total Fund	54,085,004,446	0.75	-4.39	7.65	12.16	10.40	9.49	10.00	1/1/1982
Total Fund - Net		0.75	-4.44	7.47	11.97	10.21	9.27		
Total Fund Benchmark		1.14	-3.67	6.62	10.75	9.36	8.73		
Domestic Equity	22,397,947,137	2.56	-6.17	9.46	17.29	14.64	13.81	11.97	1/1/1982
Domestic Equity - Net		2.56	-6.22	9.27	17.08	14.43	13.56		
Custom Benchmark (U.S. Equity)		3.54	-5.01	12.24	18.35	15.46	14.29		
Russell 3000 Index		3.24	-5.28	11.92	18.24	15.40	14.28	11.92	
U.S. Equity IMRF Custom Benchmark		3.42	-5.24	11.90	16.99	13.92			
Large Cap Equity	17,217,601,657	2.64	-7.21	9.98	18.00	15.49	14.35	11.70	1/1/1982
Large Cap Equity - Net		2.64	-7.23	9.89	17.90	15.38	14.21		
Russell 1000 Index		3.37	-5.13	13.27	18.71	15.82	14.53	12.07	
Large Cap Growth	7,534,804,251	2.93	-12.15	7.17	21.65	20.72	16.26	12.64	1/1/1982
Large Cap Growth - Net		2.93	-12.16	7.08	21.55	20.60	16.11		
LCG Blended Benchmark		3.91	-9.04	14.98	23.60	20.88	17.04		
Russell 1000 Growth Index		3.91	-9.04	14.98	23.60	20.88	17.04	11.97	
NTGI S&P 500 Growth	3,453,552,109	4.45	-8.57	18.14	22.44	19.88	16.80	9.82	8/1/2001
NTGI S&P 500 Growth - Net		4.45	-8.57	18.13	22.43	19.87	16.79		
S&P 500 Growth		4.45	-8.59	18.16	22.48	19.92	16.80	9.80	
Xponance Russell 1000 G	2,237,403,980	3.91	-9.03	14.97	23.58			19.09	10/1/2018
Xponance Russell 1000 G - Net		3.91	-9.04	14.95	23.56			19.07	
Russell 1000 Growth Index		3.91	-9.04	14.98	23.60			19.10	
Sands Capital	1,843,848,163	-1.02	-21.61	-15.57	15.53	19.14	15.28	12.95	11/1/2003
Sands Capital - Net		-1.02	-21.67	-15.77	15.28	18.88	15.03		
LCG Blended Benchmark		3.91	-9.04	14.98	23.60	20.88	17.04	11.90	
Russell 1000 Growth Index		3.91	-9.04	14.98	23.60	20.88	17.04	11.94	

Benchmark definitions in glossary.

Performance

Periods Ended March 31, 2022

	Market Value \$	Performance (%)							
		1 Month	QTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Large Cap Value	5,019,576,663	1.83	0.02	12.34	14.49	11.48	12.88	10.59	10/1/1982
Large Cap Value - Net		1.83	-0.01	12.17	14.32	11.31	12.70		
LCV Blended Benchmark		2.82	-0.74	11.67	13.02	10.29	11.70		
Russell 1000 Value Index		2.82	-0.74	11.67	13.02	10.29	11.70	11.90	
Dodge & Cox	1,906,842,354	1.52	1.02	15.35	17.36	13.37	14.48	10.66	9/1/2003
Dodge & Cox - Net		1.52	0.97	15.12	17.12	13.14	14.24		
LCV Blended Benchmark		2.82	-0.74	11.67	13.02	10.29	11.70	8.98	
Russell 1000 Value Index		2.82	-0.74	11.67	13.02	10.29	11.70	9.13	
LSV Asset	1,519,183,210	1.03	-0.95	8.68	12.74	10.24	12.65	11.12	2/1/2003
LSV Asset - Net		1.03	-1.01	8.43	12.47	9.98	12.38		
LCV Blended Benchmark		2.82	-0.74	11.67	13.02	10.29	11.70	9.76	
Russell 1000 Value Index		2.82	-0.74	11.67	13.02	10.29	11.70	9.77	
NTGI S&P 500 Value	1,593,551,100	2.97	-0.21	12.45	14.19	11.21	11.98	6.80	8/1/1999
NTGI S&P 500 Value - Net		2.97	-0.21	12.44	14.18	11.20	11.97		
S&P 500 Value		2.96	-0.16	12.58	14.12	11.14	11.89	6.77	
Large Cap Pass. Core	3,079,794,923	3.24	-5.39	11.71	18.15	15.35	14.28	11.65	1/1/1985
Large Cap Pass. Core - Net		3.24	-5.39	11.70	18.14	15.34	14.27		
Dow Jones US Total Stock Market Index		3.24	-5.40	11.67	18.12	15.31	14.21		
NTGI MarketCap Idx.	3,079,794,923	3.24	-5.39	11.71	18.15	15.35	14.28	11.44	2/1/1985
NTGI MarketCap Idx. - Net		3.24	-5.39	11.70	18.14	15.34	14.27		
Dow Jones US Total Stock Market Index		3.24	-5.40	11.67	18.12	15.31	14.21		
Factor Diversity Strategies	1,583,425,819	2.63	-6.03	11.61				19.41	8/18/2020

Performance

Periods Ended March 31, 2022

	Market Value \$	Performance (%)							
		1 Month	QTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
U.S. Large Cap FDP-GSAM	1,583,425,819	2.63	-6.03	11.61				19.41	8/18/2020
U.S. Large Cap FDP-GSAM - Net		2.62	-6.04	11.56				19.33	
Solactive GBS U.S. 1000 Index		3.30	-5.41	12.93				20.00	
GSAM Active Beta US. Large Cap FDC Index		2.65	-6.03	11.68				19.36	
Quantitative Factor Strategies	1,815,612,829	2.51	-4.20	12.12				13.55	9/17/2019
Quantitative US Equity - SciBeta	1,815,612,829	2.51	-4.20	12.12				13.55	9/17/2019
Quantitative US Equity - SciBeta - Net		2.50	-4.22	12.05				13.32	
SciBeta US Hi-Fctr-Intst Div Multi-Beta Multi-Strat Index		2.65	-4.28	11.22				12.72	
Small Cap	2,298,207,564	-0.21	-3.93	3.04	15.40	11.96	12.21	12.39	7/1/1988
Small Cap Composite - Net		-0.21	-4.27	2.27	14.65	11.30	11.58		
Russell 2000 Index		1.24	-7.53	-5.79	11.74	9.74	11.04	9.61	
Small Cap Growth	789,461,182	-0.35	-8.23	-2.95	17.44	15.30	13.77	13.39	7/1/1988
Small Cap Growth - Net		-0.35	-8.99	-4.21	16.28	14.40	13.04		
Russell 2000 Growth Index		0.46	-12.63	-14.33	9.88	10.33	11.21	8.29	
Frontier Capital	789,461,182	-0.35	-8.23	-3.92	17.95	19.00	14.60	13.76	8/1/1988
Frontier Capital - Net		-0.35	-8.99	-5.09	16.72	17.95	13.78		
Russell 2000 Growth Index		0.46	-12.63	-14.33	9.88	10.33	11.21	8.37	
Small Cap Value	1,508,746,381	-0.13	-1.52	6.46	14.75	10.14	11.81	11.98	9/1/1989
Small Cap Value - Net		-0.13	-1.62	6.00	14.20	9.59	11.27		
Russell 2000 Value Index		1.96	-2.40	3.32	12.73	8.57	10.54	10.23	
Channing	338,698,999	-1.75	-1.22	3.42	15.16	9.57	12.38	11.52	7/1/2011
Channing - Net		-1.75	-1.34	2.93	14.60	9.04	11.80	10.93	
Russell 2000 Value Index		1.96	-2.40	3.32	12.73	8.57	10.54	9.93	

Performance

Periods Ended March 31, 2022

	Market Value \$	Performance (%)							
		1 Month	QTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
DFA Small Cap Val.	546,646,562	1.44	1.01	12.00	16.39	10.28	12.16	12.38	2/1/1996
DFA Small Cap Val. - Net		1.44	0.92	11.52	15.85	9.74	11.62		
Russell 2000 Value Index		1.96	-2.40	3.32	12.73	8.57	10.54	9.82	
William Blair Small Cap Value	623,400,820	-0.60	-3.80	3.19	13.31	10.33	11.99	11.67	5/1/1999
Inv. Couns. Maryland - Net		-0.60	-3.89	2.76	12.75	9.77	11.47		
Russell 2000 Value Index		1.96	-2.40	3.32	12.73	8.57	10.54	9.45	
Public Real Assets	1,066,525,086	7.30	4.13	18.57	9.58			8.87	8/1/2017
Public Real Assets - Net		7.30	4.04	18.16	9.14			8.43	
Public Real Assets Benchmark		7.08	3.93	15.72	7.93			6.98	
Brookfield	208,310,698	6.49	7.47	24.14	8.91			7.36	8/1/2017
Brookfield - Net		6.49	7.33	23.53	8.34			6.82	
Dow Jones Brookfield Global Infrastructure Composite Index		6.39	4.36	18.21	7.42			5.95	
Cohen & Steers	858,214,388	7.50	3.35	17.07	10.17			9.77	8/1/2017
Cohen & Steers - Net		7.50	3.27	16.70	9.78			9.37	
FTSE Global Core Infrastructure 50/50 Index (Net)		7.43	3.72	14.47	8.15			7.46	

Performance

Periods Ended March 31, 2022

	Market Value \$	Performance (%)							
		1 Month	QTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
International Equity	9,426,493,695	-0.26	-7.68	-2.14	8.60	7.69	7.06	7.78	9/1/1986
International Equity - Net		-0.27	-7.76	-2.51	8.21	7.32	6.70		
MSCI AC World ex USA (Net)		0.16	-5.44	-1.48	7.51	6.76	5.55		
International Equity IMRF Custom Benchmark		-0.08	-5.71	-2.22	7.44	6.72			
Intl LargeCap Equity	7,473,929,522	0.47	-6.05	1.42	9.57	8.13	7.40	7.85	9/1/1986
Intl LargeCap Equity - Net		0.47	-6.11	1.10	9.25	7.83	7.11		
MSCI AC World ex USA (Net)		0.16	-5.44	-1.48	7.51	6.76	5.55		
Intl Large Cap Grwth	1,613,458,917	1.23	-9.14	0.30	12.53	10.12	7.88	8.86	9/1/2002
Intl Large Cap Grwth - Net		1.23	-9.21	-0.05	12.20	9.81	7.56		
MSCI AC World ex USA (Net)		0.16	-5.44	-1.48	7.51	6.76	5.55	7.27	
MSCI AC World ex USA Growth (Net)		-0.16	-10.78	-6.16	9.12	8.60	6.70	7.63	
EARNEST Part. Intl	634,339,683	1.20	0.18	8.51	11.42	9.07	6.82	9.36	10/1/2004
EARNEST Part. Intl - Net		1.20	0.13	8.30	11.22	8.87	6.58		
MSCI AC World ex USA (Net)		0.16	-5.44	-1.48	7.51	6.76	5.55	6.07	
MSCI AC World ex USA Growth (Net)		-0.16	-10.78	-6.16	9.12	8.60	6.70	6.83	
William Blair	979,119,234	1.25	-14.30	-4.49	13.39	11.01	8.84	10.02	10/1/2002
William Blair - Net		1.25	-14.39	-4.91	12.98	10.61	8.43		
MSCI AC World ex USA (Net)		0.16	-5.44	-1.48	7.51	6.76	5.55	7.92	
MSCI AC World ex USA Growth (Net)		-0.16	-10.78	-6.16	9.12	8.60	6.70	8.18	
Intl Large Cap Val.	1,366,997,412	-0.79	-1.73	1.59	5.99	5.49	5.80	8.36	10/1/1995
Intl Large Cap Val. - Net		-0.79	-1.81	1.29	5.67	5.16	5.43		
MSCI AC World ex USA (Net)		0.16	-5.44	-1.48	7.51	6.76	5.55	5.41	
MSCI AC World ex USA Value		0.57	0.28	3.95	6.09	5.30	4.84		

Performance

Periods Ended March 31, 2022

	Market Value \$	Performance (%)							Inception Date
		1 Month	QTD	1 Year	3 Years	5 Years	10 Years	Since Inception	
Brandes Investment	596,775,229	-1.79	-1.65	3.06	6.00	5.20	5.97	8.51	1/1/1996
Brandes Investment - Net		-1.79	-1.70	2.85	5.77	4.97	5.73		
MSCI AC World ex USA (Net)		0.16	-5.44	-1.48	7.51	6.76	5.55	5.32	
MSCI AC World ex USA Value		0.57	0.28	3.95	6.09	5.30	4.84		
Mondrian	631,847,525	-0.42	-1.57	0.64	5.88	5.65	5.58	5.58	4/1/2012
Mondrian - Net		-0.42	-1.57	0.34	5.48	5.21	5.10	5.10	
MSCI AC World ex USA (Net)		0.16	-5.44	-1.48	7.51	6.76	5.55	5.55	
MSCI AC World ex USA Value		0.57	0.28	3.95	6.09	5.30	4.84	4.84	
Lazard	138,374,658	1.94	-2.84	-0.21	7.53	7.14	6.48	6.48	4/1/2012
Lazard - Net		1.94	-2.84	-0.40	7.28	6.89	6.02	6.02	
MSCI AC World ex USA (Net)		0.16	-5.44	-1.48	7.51	6.76	5.55	5.55	
MSCI AC World ex USA Value		0.57	0.28	3.95	6.09	5.30	4.84	4.84	
Intl Large Cap Active Core	2,601,598,237	1.43	-6.22	2.30	11.20	9.53	9.02	6.04	2/1/2008
Intl Large Cap Active Core - Net		1.43	-6.31	1.75	10.61	8.99	8.46		
MSCI AC World ex USA (Net)		0.16	-5.44	-1.48	7.51	6.76	5.55	3.20	
Arrowstreet Capital	1,064,663,946	1.57	-3.96	3.99	15.99	12.48	10.63	7.18	3/1/2008
Arrowstreet Capital - Net		1.57	-4.07	3.51	15.46	11.96	10.12	6.69	
MSCI AC World ex USA (Net)		0.16	-5.44	-1.48	7.51	6.76	5.55	3.01	
Brown Capital	560,794,246	0.56	-16.01	-6.24	8.21	7.84	8.67	7.85	10/1/2004
Brown Capital - Net		0.56	-16.07	-7.13	7.46	7.17	7.80		
MSCI AC World ex USA (Net)		0.16	-5.44	-1.48	7.51	6.76	5.55	6.07	
GlobeFlex Capital	876,851,825	2.04	-1.29	7.07	9.54	7.99	8.05	5.71	3/1/2006
GlobeFlex Capital - Net		2.04	-1.36	6.73	9.12	7.58	7.62	5.26	
MSCI AC World ex USA (Net)		0.16	-5.44	-1.48	7.51	6.76	5.55	4.26	

Performance

Periods Ended March 31, 2022

	Market Value \$	Performance (%)							
		1 Month	QTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Xponance Intl EQ	98,508,960	-0.41	-9.53	-2.80				2.31	2/1/2021
Xponance Intl EQ - Net		-0.41	-9.68	-3.39				1.78	
MSCI EAFE Index (Net)		0.64	-5.91	1.16				4.96	
Progress Intl Equity	659,544								
Intl Large Cap Passive Core	1,891,874,955	-0.54	-6.06	1.07	7.97	6.98	6.61	4.22	2/1/2000
Intl Large Cap Passive Core - Net		-0.54	-6.06	1.06	7.97	6.97	6.61		
International Large Cap Passive Core Benchmark		0.16	-5.44	0.81	7.66	6.64	6.23	3.84	
NTGI ACWI ex US Index	1,891,874,955	-0.54	-6.06					-3.95	10/1/2021
NTGI ACWI ex US Index - Net		-0.54	-6.06					-3.95	
MSCI AC World ex USA (Net)		0.16	-5.44					-3.72	
Intl All Cap Developed	165,796,869	1.21	-7.26	3.31	7.65			8.24	2/1/2019
Intl All Cap Developed - Net		1.21	-7.37	2.81	7.14			7.75	
MSCI EAFE + Canada (Net)		1.16	-4.81	3.04	8.55			9.13	
Ativo International	165,796,869	1.21	-7.26	3.31	7.65			8.24	2/1/2019
Ativo International - Net		1.21	-7.37	2.81	7.14			7.75	
MSCI EAFE + Canada (Net)		1.16	-4.81	3.04	8.55			9.13	
Intl Small Cap Eqty	600,108,570	-0.73	-16.85	-7.33	10.07	8.04	8.22	5.43	12/1/2005
Intl Small Cap Eqty - Net		-0.73	-17.02	-8.02	9.26	7.24	7.42		
MSCI AC World ex USA Small Cap (Net)		1.02	-6.52	0.03	10.22	7.89	7.28	6.65	
Custom Benchmark (Intl Small Cap)		1.02	-6.52	0.03	10.22	7.89	7.28	6.02	
Franklin Templeton	226,459,614	-3.42	-11.91	-6.74	6.39	6.62	7.45	6.21	8/1/2011
Franklin Templeton - Net		-3.42	-12.08	-7.39	5.63	5.86	6.66	5.45	
MSCI AC World ex USA Small Cap (Net)		1.02	-6.52	0.03	10.22	7.89	7.28	5.95	

Performance

Periods Ended March 31, 2022

	Market Value \$	Performance (%)							
		1 Month	QTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
William Blair IntSC	373,648,956	0.97	-19.58	-7.68	12.54	8.96	8.73	9.47	9/1/2010
William Blair IntSC - Net		0.97	-19.76	-8.39	11.69	8.13	7.90	8.64	
MSCI AC World ex USA Small Cap (Net)		1.02	-6.52	0.03	10.22	7.89	7.28	7.63	
Custom Benchmark (Intl Small Cap)		1.02	-6.52	0.03	10.22	7.89	7.28	7.88	
Emerging Mkt Equity	1,186,658,735	-4.62	-12.46	-18.57	2.84	5.58	4.12	8.42	2/1/1992
Emerging Mkt Equity - Net		-4.67	-12.58	-19.03	2.27	4.97	3.52		
MSCI Emerging Markets Index		-2.22	-6.92	-11.08	5.31	6.35	3.73	6.91	
Genesis Asset Mngrs.	1,186,658,735	-4.62	-12.46	-18.57	2.84	5.58	4.12	9.77	5/1/2004
Genesis Asset Mngrs. - Net		-4.67	-12.58	-19.03	2.27	4.97	3.52		
MSCI Emerging Markets Index		-2.22	-6.92	-11.08	5.31	6.35	3.73	8.33	

Performance

Periods Ended March 31, 2022

	Market Value \$	Performance (%)							
		1 Month	QTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Fixed Income	12,427,070,915	-2.44	-5.51	-3.30	2.39	2.78	3.13	7.76	1/1/1982
Fixed Income - Net		-2.45	-5.54	-3.40	2.29	2.66	2.99		
Custom Benchmark (Fixed Income)		-2.23	-5.40	-3.61	1.88	2.26	2.30	7.23	
Fixed Income IMRF Custom Benchmark		-2.48	-5.56	-3.58	2.01	2.43			
Active Fixed Core	4,064,715,748	-2.68	-5.47	-3.47	2.15	2.54	2.76	4.15	4/1/2001
ActiveCore Fixed Inc - Net		-2.68	-5.50	-3.58	2.05	2.43	2.62		
Blmbg. U.S. Aggregate		-2.78	-5.93	-4.15	1.69	2.14	2.24	4.07	
Attucks Fixed Income	93,716,240	-2.90	-6.07	-3.56				-5.36	2/1/2021
Attucks Fixed Income - Net		-2.90	-6.15	-3.87				-5.62	
Blmbg. U.S. Aggregate		-2.78	-5.93	-4.15				-5.78	
Brandes FI Core	354,946,090	-2.66	-5.19	-3.17	1.71	2.09		1.88	3/1/2016
Brandes FI Core - Net		-2.66	-5.20	-3.19	1.70	2.08		1.88	
Blmbg. U.S. Aggregate		-2.78	-5.93	-4.15	1.69	2.14		1.98	
EARNEST Partners	965,774,469	-2.83	-5.69	-3.89	2.04	2.57	2.74	4.03	5/1/2005
EARNEST Partners - Net		-2.83	-5.72	-4.01	1.91	2.43	2.57	3.85	
Blmbg. U.S. Aggregate		-2.78	-5.93	-4.15	1.69	2.14	2.24	3.59	
Garcia Hamilton	1,035,544,810	-2.41	-4.83	-3.38	1.95	2.48		2.45	6/1/2015
Garcia Hamilton - Net		-2.41	-4.85	-3.46	1.87	2.40		2.36	
Blmbg. U.S. Aggregate		-2.78	-5.93	-4.15	1.69	2.14		2.01	
Ramirez Asset Management	563,847,708	-3.16	-6.10	-3.72				-0.22	5/1/2020
Ramirez Asset Management - Net		-3.16	-6.13	-3.84				-0.35	
Blmbg. U.S. Aggregate		-2.78	-5.93	-4.15				-2.73	
Xponance Yield Advantage Agg.	1,050,886,430	-2.54	-5.60	-2.90	2.64	2.65	2.85	3.93	6/1/2005
Xponance Yield Advantage Agg. - Net		-2.54	-5.63	-3.03	2.51	2.51	2.69	3.75	
Blmbg. U.S. Aggregate		-2.78	-5.93	-4.15	1.69	2.14	2.24	3.55	

Benchmark definitions in glossary.

Performance

Periods Ended March 31, 2022

	Market Value \$	Performance (%)							
		1 Month	QTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Pass. Core Fixed Inc	3,439,948,286	-2.76	-5.88	-4.06	1.74	2.20	2.29	5.49	1/1/1990
Pass. Core Fixed Inc - Net		-2.77	-5.89	-4.07	1.73	2.19	2.28		
Blmbg. U.S. Aggregate		-2.78	-5.93	-4.15	1.69	2.14	2.24	5.47	
BlackRock US Debt I	1,730,865,010	-2.75	-5.83	-4.06	1.78	2.24		2.53	10/1/2013
BlackRock US Debt I - Net		-2.75	-5.83	-4.06	1.77	2.24		2.52	
Blmbg. U.S. Aggregate		-2.78	-5.93	-4.15	1.69	2.14		2.41	
NTGI Blmbg Agg.	1,709,083,276	-2.78	-5.94	-4.07	1.70	2.16	2.26	5.54	2/1/1990
NTGI Blmbg Agg. - Net		-2.78	-5.94	-4.08	1.69	2.15	2.26		
Blmbg. U.S. Aggregate		-2.78	-5.93	-4.15	1.69	2.14	2.24	5.53	
Core Plus Fixed Income	3,184,087,542	-2.75	-6.52	-4.14	2.58	2.85	3.20	7.63	1/1/1982
Core Plus Fixed Inc. - Net		-2.76	-6.56	-4.28	2.41	2.67	3.03		
Blmbg. U.S. Aggregate		-2.78	-5.93	-4.15	1.69	2.14	2.24	7.21	
LM Capital Group FI	908,230,733	-2.34	-5.30	-4.00	2.98	2.87	3.08	4.42	5/1/2005
LM Capital Group FI - Net		-2.34	-5.34	-4.15	2.82	2.71	2.92	4.25	
Blmbg. U.S. Aggregate		-2.78	-5.93	-4.15	1.69	2.14	2.24	3.59	
Progress Inv. FI	1,159								
Loop Capital Management	619,953,817	-2.57	-6.35	-3.80	2.23	2.77	3.40	4.43	5/1/2005
Loop Capital Management - Net		-2.57	-6.38	-3.92	2.10	2.63	3.27	4.30	
Blmbg. U.S. Aggregate		-2.78	-5.93	-4.15	1.69	2.14	2.24	3.59	
Western Asset	1,039,857,546	-3.30	-7.98	-4.90	2.36	2.88	3.47	4.92	11/1/2001
Western Asset - Net		-3.33	-8.01	-5.03	2.23	2.75	3.33		
Blmbg. U.S. Aggregate		-2.78	-5.93	-4.15	1.69	2.14	2.24	3.82	
Longfellow Core Plus	616,044,287	-2.61	-5.99	-3.09				-0.13	5/1/2020
Longfellow Core Plus - Net		-2.61	-6.02	-3.23				-0.27	
Blmbg. U.S. Aggregate		-2.78	-5.93	-4.15				-2.73	

Benchmark definitions in glossary.

Performance

Periods Ended March 31, 2022

	Market Value \$	Performance (%)							
		1 Month	QTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Bank Loans	726,116,001	0.03	-0.17	3.63	4.26	4.23		4.39	8/1/2014
Bank Loans - Net		0.03	-0.14	3.68	4.23	4.01		4.04	
Custom Benchmark		0.08	-0.14	3.23	4.26	4.22		4.09	
Barings Global Loan Fund	726,116,001	0.03	-0.17	3.63	4.26	4.23		4.39	8/1/2014
Barings Global Loan Fund - Net		0.03	-0.14	3.68	4.23	4.01		4.04	
Custom Benchmark		0.08	-0.14	3.23	4.26	4.22		4.09	
Emerging Markets Debt	199,893,049	-2.94	-10.52	-10.52	-0.97	0.53		0.89	8/1/2014
Emerging Markets Debt - Net		-2.94	-10.60	-10.76	-1.29	0.20		0.56	
Custom Benchmark		-1.95	-8.27	-8.74	-0.35	1.02		0.75	
Standish-Mellon EMD	199,893,049	-2.94	-10.52	-10.52	-0.97	0.53		0.89	8/1/2014
Standish EM MRK - Net		-2.94	-10.60	-10.76	-1.29	0.20		0.56	
Custom Benchmark		-1.95	-8.27	-8.74	-0.35	1.02		0.75	
High Yield	812,100,026	-0.68	-3.31	1.00	5.63	5.74	6.39	9.23	4/1/1986
High Yield - Net		-0.76	-3.39	0.59	5.29	5.39	6.02		
ICE BofAML US High Yield, Cash Pay Index		-0.92	-4.53	-0.30	4.37	4.55	5.68	7.98	
MacKay Shields	812,100,023	-0.68	-3.29	1.01	5.64	5.73	6.48	8.40	11/1/2000
MacKay Shields - Net		-0.76	-3.37	0.60	5.30	5.38	6.11		
ICE BofAML US High Yield, Cash Pay Index		-0.92	-4.53	-0.30	4.37	4.55	5.68	7.11	

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.
Standish-Mellon EMD	4/1/2020	Present	50% JPM GBI-EM Global Diversified ex-CNY, 25% JPM EMBI Global (USD), 25% JPM CEMBI Broad Index
	8/1/2014	3/31/2020	50% JPM GBI-EM Global Diversified, 25% JPM EMBI Global (USD), 25% JPM CEMBI Broad Index