

Wilshire



# Wilshire Advisors

## Monthly Performance Summary

As of December 31, 2021

# IMRF Performance Summary

- The Illinois Municipal Retirement Fund (“IMRF”) ended December 2021 with a market value of \$56.8 billion, up for the month by approximately \$1.1 billion. IMRF returned +2.42% during the month, outperforming the Total Fund Benchmark which returned +2.16%. Total Fund outperformance was primarily driven by overweights to U.S. and Non-U.S. Equity and underweights to Fixed Income and Real Estate.
  - Through the end of 2021, IMRF returned +16.63% versus its benchmark of +12.63% for the calendar year.
- The U.S. Equity Portfolio underperformed the Russell 3000 Index during the month, returning +3.47% versus +3.94%. In aggregate, investment manager performance in Large Cap Growth was the largest detractor to relative performance; however, strong absolute and excess returns from Small Cap Value helped offset a portion of Large Cap Growth underperformance.
  - Year-to-date, the U.S. Equity Portfolio has underperformed the benchmark, returning +24.69% versus +25.66%.
- The Internally Managed Scientific Beta Portfolio underperformed the benchmark during December, returning +5.37% versus +5.64%. Since inception, the strategy has outperformed the benchmark, returning +16.99% versus +16.33%.
- The Internally Managed GSAM-Factor Diversity Portfolio outperformed the benchmark during the month, returning +4.28% versus +3.87%.
- The Public Real Assets Portfolio underperformed its benchmark during the month, but provided a strong diversification benefit, returning +6.80% versus +7.23% for the benchmark.
- The International Equity Portfolio underperformed the benchmark during December, returning +3.89% versus +4.13%. In aggregate, investment managers in both Large Cap Growth and Small Cap underperformed their respective benchmarks during the month.
  - During the one-year ending December 31, 2021, IMRF’s International Equity Portfolio generated strong excess returns above the index, returning +9.37% versus +7.82% for the benchmark.
- The Fixed Income Portfolio outperformed the benchmark during December, returning +0.05% versus -0.26%. The Portfolio’s allocation to Core Plus, as well as its dedicated allocation to Emerging Markets, Bank Loans and High Yield were among the largest contributors to relative outperformance as sub-investment grade credit markets outperformed the broad Aggregate Index during the month.
  - IMRF’s Fixed Income Portfolio returned -0.53% versus -1.55% for the benchmark during 2021.
- As of December 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.

IMRF returns referenced above are Net of Fees

# Market Dashboard

Returns though Friday December 31, 2021

Portfolio Allocations	MTD	NOV	OCT	QTD	Q3 2021	YTD	1 Year	3 Year	5 Year
Global 60/40	2.30	(1.33)	3.05	4.02	(0.59)	10.20	10.20	14.31	10.24
Wilshire Risk Parity (12%)	2.73	0.49	1.97	5.26	1.12	15.12	15.12	15.18	10.96
Strategic Allocation Themes *	MTD	NOV	OCT	QTD	Q3 2021	YTD	1 Year	3 Year	5 Year
Growth <sup>1</sup>	4.00	(2.41)	5.10	6.68	(1.05)	18.54	18.54	20.38	14.40
Defensive Growth <sup>2</sup>	3.45	(2.58)	2.95	3.76	(0.14)	11.05	11.05	17.10	13.10
Diversified Credit <sup>3</sup>	1.49	(1.22)	(0.03)	0.22	0.25	2.26	2.26	7.11	5.33
Real Assets <sup>4</sup>	4.65	(2.80)	4.09	5.88	2.96	23.61	23.61	14.83	8.77
Defensive <sup>5</sup>	(0.26)	0.30	(0.03)	0.01	0.05	(1.54)	(1.54)	4.79	3.57
Major Asset Classes	MTD	NOV	OCT	QTD	Q3 2021	YTD	1 Year	3 Year	5 Year
FT Wilshire 5000	3.89	(1.17)	6.73	9.58	0.14	26.70	26.70	26.11	18.11
MSCI ACWI-ex-USA (Net)	4.13	(4.50)	2.39	1.82	(2.99)	7.82	7.82	13.18	9.61
Bloomberg U.S. Aggregate	(0.26)	0.30	(0.03)	0.01	0.05	(1.54)	(1.54)	4.79	3.57
Bloomberg U.S. Corporate High Yield	1.87	(0.97)	(0.17)	0.71	0.89	5.28	5.28	8.83	6.30
Wilshire Global Real Estate Securities	7.38	(1.04)	6.45	13.12	0.37	34.05	34.05	15.08	9.68
Bloomberg Commodity	3.53	(7.31)	2.58	(1.56)	6.59	27.11	27.11	9.86	3.66

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 through Friday December 31, 2021

US Equity	MTD	NOV	OCT	QTD	Q3 2021	YTD	1 Year	3 Year	5 Year
FT Wilshire 5000	3.89	(1.17)	6.73	9.58	0.14	26.70	26.70	26.11	18.11
Standard & Poor's 500	4.48	(0.69)	7.01	11.03	0.58	28.71	28.71	26.07	18.47
Wilshire 4500 Completion	1.24	(4.31)	5.02	1.73	(1.77)	16.02	16.02	25.17	15.89
Wilshire US Large Cap	3.85	(0.91)	6.54	9.64	0.10	25.44	25.44	24.39	16.60
Wilshire US Large-Cap Growth	2.19	0.26	8.74	11.41	1.15	28.18	28.18	32.33	22.82
Wilshire US Large-Cap Value	6.14	(2.82)	4.60	7.90	(1.23)	21.55	21.55	16.17	10.07
Wilshire US Small Cap	3.03	(3.55)	3.50	2.85	(3.41)	17.39	17.39	19.25	10.52
Wilshire US Small-Cap Growth	1.61	(4.18)	4.35	1.61	(3.91)	9.50	9.50	21.78	13.95
Wilshire US Small-Cap Value	4.52	(3.66)	3.40	4.12	(2.36)	26.49	26.49	16.04	6.90
Non-US Equity	MTD	NOV	OCT	QTD	Q3 2021	YTD	1 Year	3 Year	5 Year
MSCI ACWI-ex-USA (Net)	4.13	(4.50)	2.39	1.82	(2.99)	7.82	7.82	13.18	9.61
MSCI EAFE (Net)	5.12	(4.65)	2.46	2.69	(0.45)	11.26	11.26	13.54	9.55
MSCI EM (Net)	1.88	(4.08)	0.99	(1.31)	(8.09)	(2.54)	(2.54)	10.94	9.87
MSCI ACWI-ex-US Small cap (Net)	4.23	(4.95)	1.56	0.62	(0.00)	12.93	12.93	16.46	11.21
Global Equity	MTD	NOV	OCT	QTD	Q3 2021	YTD	1 Year	3 Year	5 Year
MSCI ACWI (Net)	4.00	(2.41)	5.10	6.68	(1.05)	18.54	18.54	20.38	14.40
MSCI ACWI Minimum Volatility (Net)	5.71	(1.93)	2.53	6.29	0.08	13.94	13.94	12.31	10.46
Fixed Income	MTD	NOV	OCT	QTD	Q3 2021	YTD	1 Year	3 Year	5 Year
Bloomberg U.S. Aggregate	(0.26)	0.30	(0.03)	0.01	0.05	(1.54)	(1.54)	4.79	3.57
Bloomberg Long Term Treasury	(1.42)	2.65	1.86	3.08	0.47	(4.65)	(4.65)	8.82	6.54
Bloomberg U.S. TIPS	0.32	0.89	1.13	2.36	1.75	5.96	5.96	8.44	5.34
Bloomberg U.S. Corporate High Yield	1.87	(0.97)	(0.17)	0.71	0.89	5.28	5.28	8.83	6.30
Credit Suisse Leveraged Loan	0.63	(0.15)	0.24	0.71	1.13	5.40	5.40	5.43	4.32
ICE BofA US Convertible Index	0.07	(3.55)	3.58	(0.03)	(0.49)	6.34	6.34	24.18	16.87
JPM EMBI Global Diversified	1.40	(1.84)	0.02	(0.44)	(0.70)	(1.80)	(1.80)	5.94	4.65
Real Assets	MTD	NOV	OCT	QTD	Q3 2021	YTD	1 Year	3 Year	5 Year
Wilshire Global Real Estate Securities	7.38	(1.04)	6.45	13.12	0.37	34.05	34.05	15.08	9.68
FTSE Global Core Infrastructure 50/50	7.36	(3.26)	3.72	7.72	(0.07)	15.71	15.71	12.15	10.26
Alerian Midstream Energy	1.13	(7.14)	6.11	(0.35)	(1.26)	38.42	38.42	9.58	2.17
Bloomberg Commodity	3.53	(7.31)	2.58	(1.56)	6.59	27.11	27.11	9.86	3.66
Gold	3.08	(0.50)	1.50	4.11	(0.74)	(3.64)	(3.64)	12.56	9.77
Bitcoin	(18.91)	(8.43)	43.65	6.67	25.59	59.79	59.79	132.76	117.50

Source: Bloomberg, All returns are in USD

# Factor/Relative Returns

Returns though Friday December 31, 2021

Asset Class Differentials	MTD	NOV	OCT	QTD	Q3 2021	YTD	1 Year	3 Year	5 Year
Stocks (ACWI) > Bonds (BB US Aggregate)	4.25	(2.70)	5.13	6.66	(1.10)	20.08	20.08	15.59	10.83
Stocks (ACWI) > Mkt Alts (Equity Hedged)	2.11	(1.19)	2.52	3.42	(0.89)	5.79	5.79	12.22	9.68
Mkt Alts (Relative Value) > Bonds (BB US Aggregate)	0.41	(0.81)	(0.27)	(0.67)	(0.22)	1.97	1.97	(1.44)	(1.25)
Equity & Real Assets Differentials	MTD	NOV	OCT	QTD	Q3 2021	YTD	1 Year	3 Year	5 Year
US Small > Large	(0.74)	(2.85)	(3.06)	(6.96)	(3.42)	(8.28)	(8.28)	(5.76)	(6.43)
US Value > Growth	4.12	(2.92)	(3.97)	(3.00)	(1.89)	(4.32)	(4.32)	(13.77)	(10.56)
ACWI-ex-US > US	0.25	(3.33)	(4.34)	(7.76)	(3.13)	(18.87)	(18.87)	(12.93)	(8.50)
EM > EAFE	(3.24)	0.58	(1.47)	(4.00)	(7.65)	(13.81)	(13.81)	(2.60)	0.33
ACWI-ex-US Currency Impact	0.75	(1.86)	0.37	(0.87)	(1.69)	(5.22)	(5.22)	0.07	0.75
EAFE Currency Impact	0.81	(2.14)	0.28	(1.22)	(1.76)	(7.44)	(7.44)	0.19	1.19
EM Currency Impact	0.39	(0.85)	0.09	(0.40)	(1.40)	(2.35)	(2.35)	(1.02)	(0.63)
Global Low Volatility > ACWI	1.71	0.48	(2.58)	(0.39)	1.14	(4.59)	(4.59)	(8.08)	(3.94)
Global RE > ACWI	3.38	1.37	1.35	6.45	1.42	15.52	15.52	(5.30)	(4.72)
Commodities > Global RE	(3.85)	(6.27)	(3.87)	(14.69)	6.22	(6.95)	(6.95)	(5.22)	(6.02)
Commodities > TIPS	3.21	(8.20)	1.45	(3.93)	4.84	21.15	21.15	1.43	(1.68)
Gold > Commodities	(0.44)	6.81	(1.08)	5.68	(7.33)	(30.75)	(30.75)	2.70	6.11
Fixed Income Differentials	MTD	NOV	OCT	QTD	Q3 2021	YTD	1 Year	3 Year	5 Year
Duration (US Core > US Core 1-3 Years)	(0.10)	0.38	0.30	0.57	(0.04)	(1.05)	(1.05)	2.60	1.76
IG Credit > Treasury	0.43	(0.71)	0.32	0.05	(0.09)	1.28	1.28	3.52	2.19
High Yield > IG Credit	1.96	(1.03)	(0.42)	0.49	0.89	6.32	6.32	1.24	1.04
High Yield > Loans	1.24	(0.83)	(0.42)	(0.04)	(0.22)	0.07	0.07	3.20	2.02
TIPS > Treasury	0.62	(0.20)	1.58	2.03	1.77	9.03	9.03	3.47	1.68
EMD > Dev Hdg	1.52	(2.12)	0.01	(0.59)	(0.63)	(0.25)	(0.25)	2.51	1.45
EMD > High Yield	(0.90)	(0.10)	(0.25)	(1.23)	(1.43)	(6.93)	(6.93)	(3.01)	(1.73)
Non-US > US Core	0.18	(1.01)	(0.36)	(1.19)	(1.64)	(5.51)	(5.51)	(2.34)	(0.50)
Non-US Hdg > US Core	(0.29)	0.75	(0.40)	0.06	0.04	0.14	0.14	(1.49)	(0.46)
FI Currency Impact	0.47	(1.76)	0.03	(1.25)	(1.68)	(5.65)	(5.65)	(0.85)	(0.04)

Source: Bloomberg, All returns are in USD

# Market Yields & Breakeven Inflation

## Market Yields

Govt/Treasury Yields	Previous 3 Month-ends				Previous 2 Quarter-ends		EOY Prior	1 Yr Ago	3 Yrs Ago	5 Yrs Ago
	12/31/21	11/30/21	10/29/21	09/30/21	09/30/21	06/30/21	12/31/20	12/31/20	12/31/18	12/30/16
Fed Funds Target Rate (Upper)	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	2.50	0.75
2-Year Treasury	0.73	0.57	0.50	0.28	0.28	0.25	0.12	0.12	2.49	1.19
5-Year Treasury	1.26	1.16	1.19	0.97	0.97	0.89	0.36	0.36	2.51	1.93
10-Year Treasury	1.51	1.45	1.56	1.49	1.49	1.47	0.92	0.92	2.69	2.45
30-Year Treasury	1.90	1.79	1.93	2.05	2.05	2.09	1.65	1.65	3.02	3.07
10-Year Real Treasury	(1.10)	(1.08)	(1.03)	(0.89)	(0.89)	(0.88)	(1.09)	(1.09)	0.97	0.48
<b>Term Spreads</b>	<b>12/31/21</b>	<b>11/30/21</b>	<b>10/29/21</b>	<b>09/30/21</b>	<b>09/30/21</b>	<b>06/30/21</b>	<b>12/31/20</b>	<b>12/31/20</b>	<b>12/31/18</b>	<b>12/30/16</b>
5 - 2 Year Treasury Spread	0.53	0.59	0.68	0.69	0.69	0.64	0.24	0.24	0.02	0.74
10 - 5 Year Treasury Spread	0.25	0.28	0.37	0.52	0.52	0.58	0.55	0.55	0.17	0.52
10 - 2 Year Treasury Spread	0.77	0.87	1.05	1.21	1.21	1.22	0.79	0.79	0.19	1.25
30 - 10Year Treasury Spread	0.39	0.34	0.38	0.56	0.56	0.62	0.73	0.73	0.33	0.62
30 - 2Year Treasury Spread	1.17	1.22	1.43	1.77	1.77	1.84	1.52	1.52	0.52	1.87

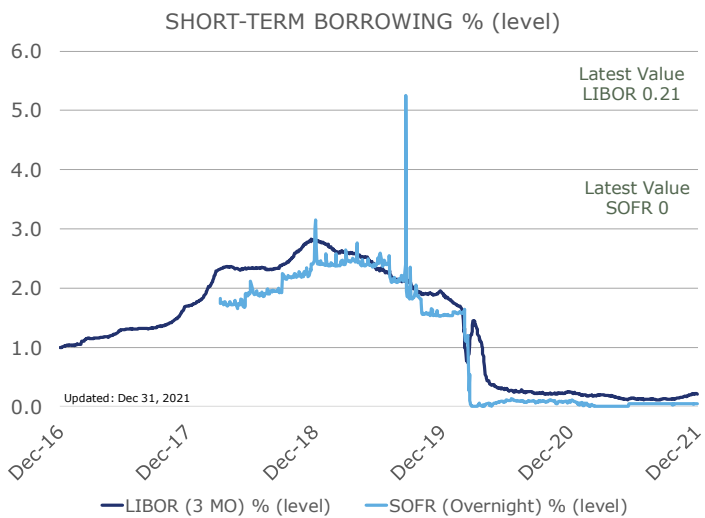
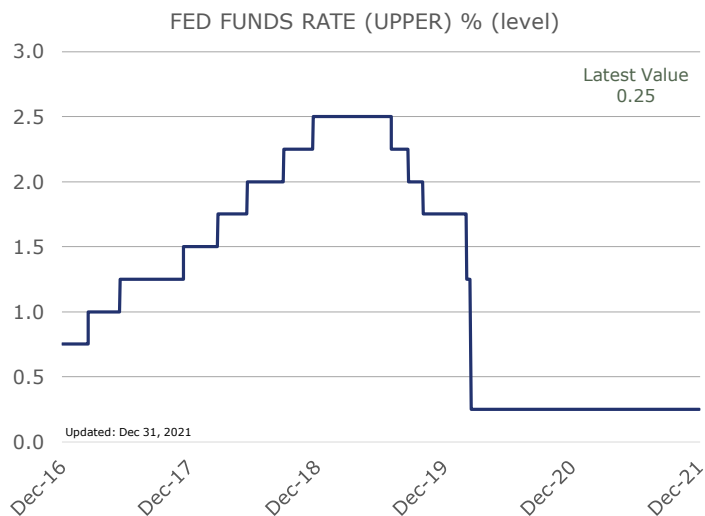
Market Yields	12/31/21	11/30/21	10/29/21	09/30/21	09/30/21	06/30/21	12/31/20	12/31/20	12/31/18	12/30/16
Bloomberg U.S. Treasury YTW	1.23	1.12	1.14	1.01	1.01	0.95	0.57	0.57	2.61	1.89
Bloomberg U.S. Aggregate YTW	1.75	1.69	1.66	1.56	1.56	1.50	1.12	1.12	3.28	2.61
Bloomberg U.S. Long Treasury YTW	1.89	1.81	1.94	2.03	2.03	2.03	1.51	1.51	2.99	2.98
Bloomberg U.S. Long Govt/Credit YTW	2.58	2.53	2.60	2.68	2.68	2.66	2.28	2.28	4.06	3.95

Credit Spreads	12/31/21	11/30/21	10/29/21	09/30/21	09/30/21	06/30/21	12/31/20	12/31/20	12/31/18	12/30/16
Bloomberg Investment Grade OAS	0.92	0.99	0.87	0.84	0.84	0.80	0.96	0.96	1.53	1.23
Bloomberg High Yield OAS	2.83	3.37	2.87	2.89	2.89	2.68	3.60	3.60	5.26	4.09

Breakeven Inflation Rates	12/31/21	11/30/21	10/29/21	09/30/21	09/30/21	06/30/21	12/31/20	12/31/20	12/31/18	12/30/16
1-Year Breakeven Inflation	3.43	3.75	3.23	2.54	2.54	3.17	2.02	2.02	(2.84)	1.27
2-Year Breakeven Inflation	3.22	3.24	3.07	2.53	2.53	2.72	2.01	2.01	0.66	1.60
5-Year Breakeven Inflation	2.91	2.81	2.93	2.53	2.53	2.50	1.97	1.97	1.49	1.86
10-Year Breakeven Inflation	2.59	2.51	2.59	2.38	2.38	2.34	1.99	1.99	1.71	1.97
5-Year 5-Year Forward Breakeven Inflation	2.27	2.22	2.19	2.24	2.24	2.18	1.97	1.97	1.84	2.04

Source: Bloomberg

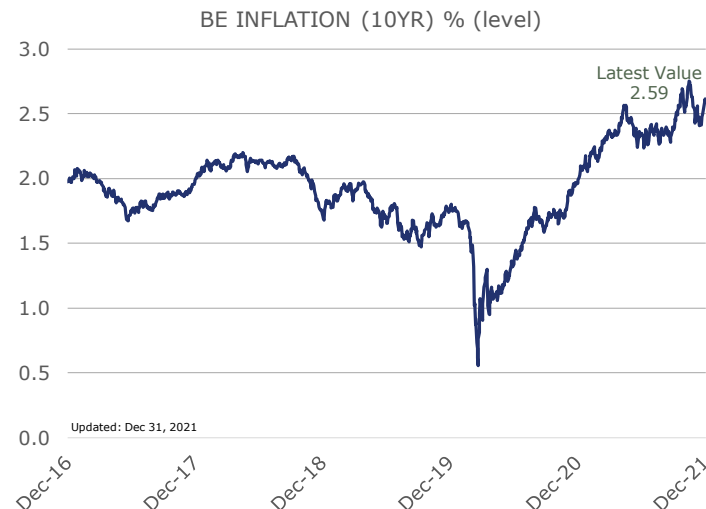
# Short Rates



Data Source: Bloomberg

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

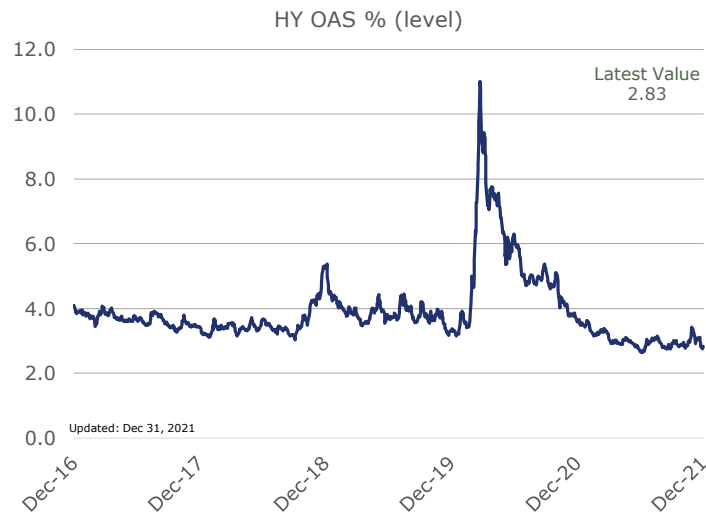
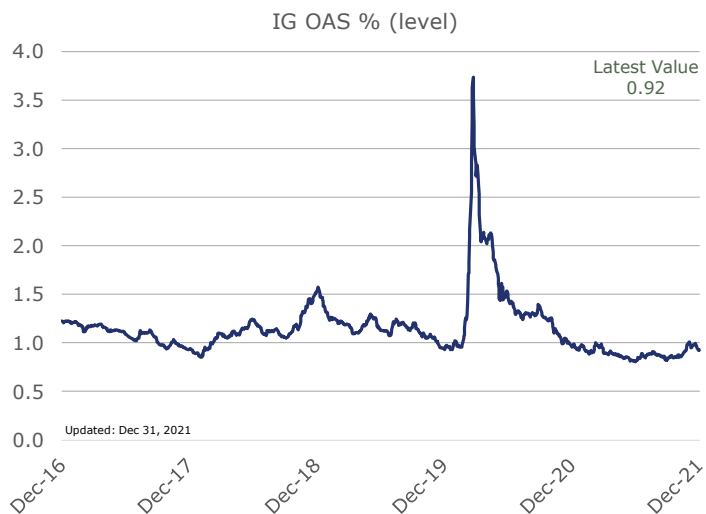
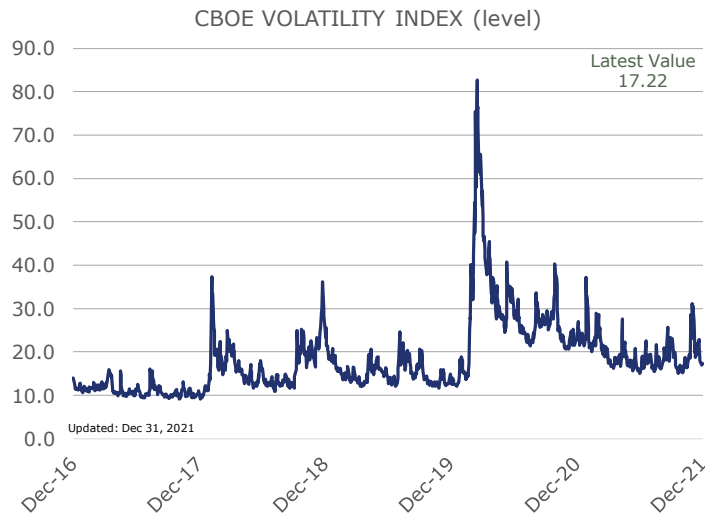
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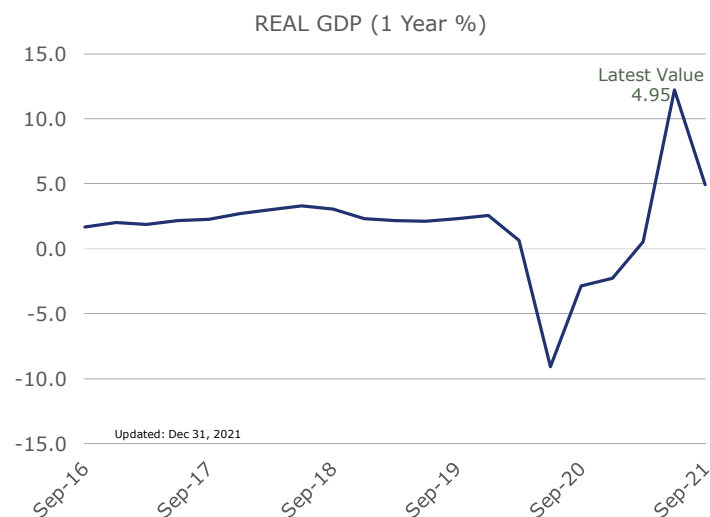
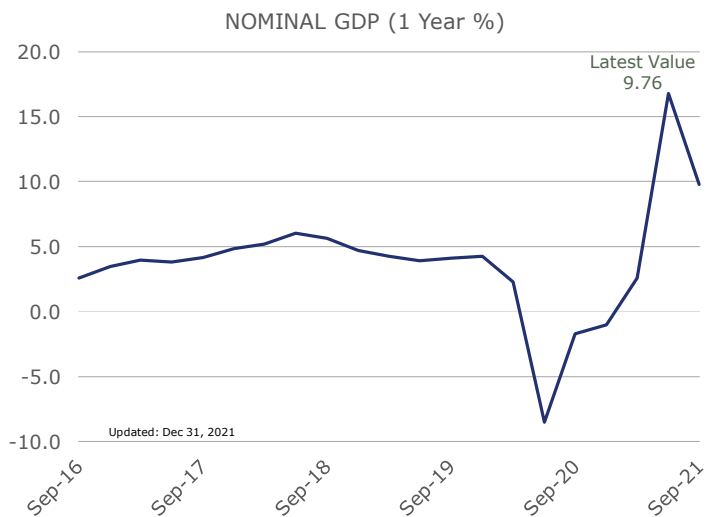
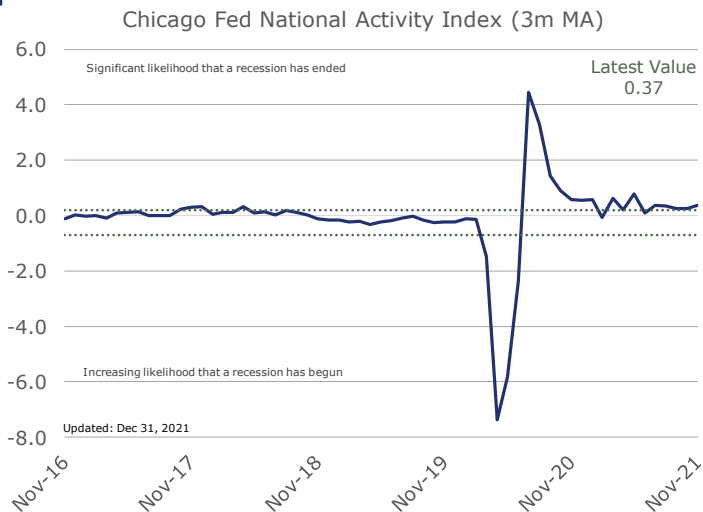
Data Sources: Bloomberg



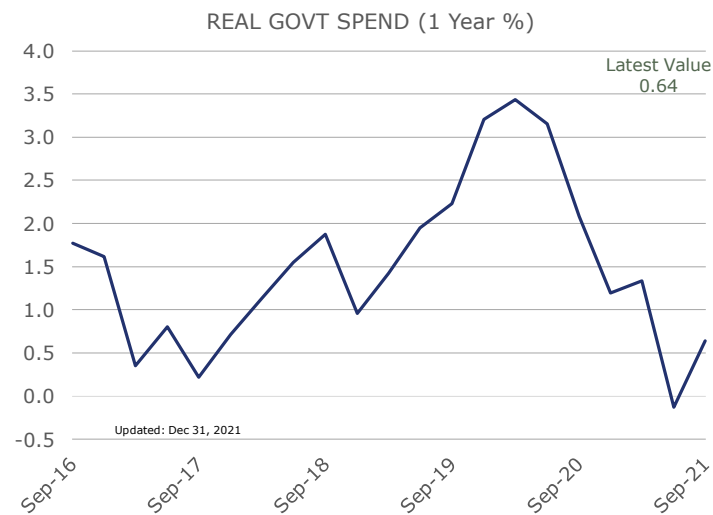
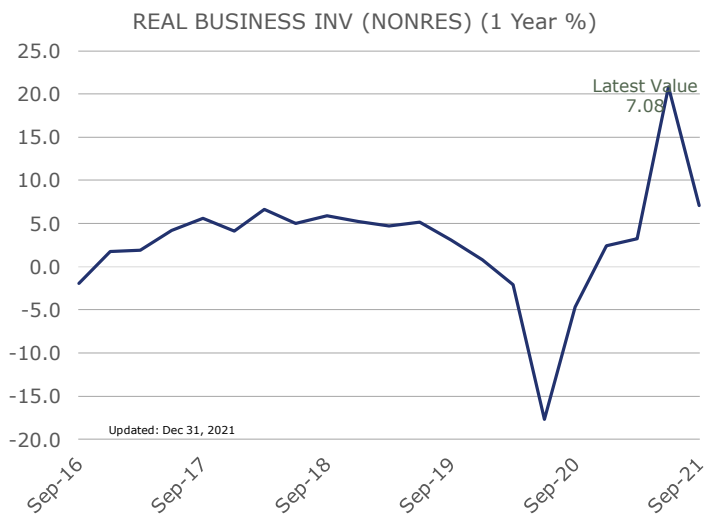
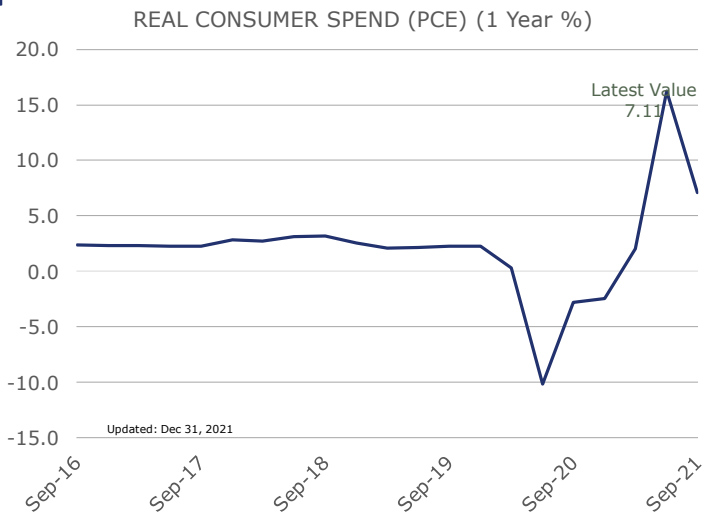
# Volatility & Credit Risk



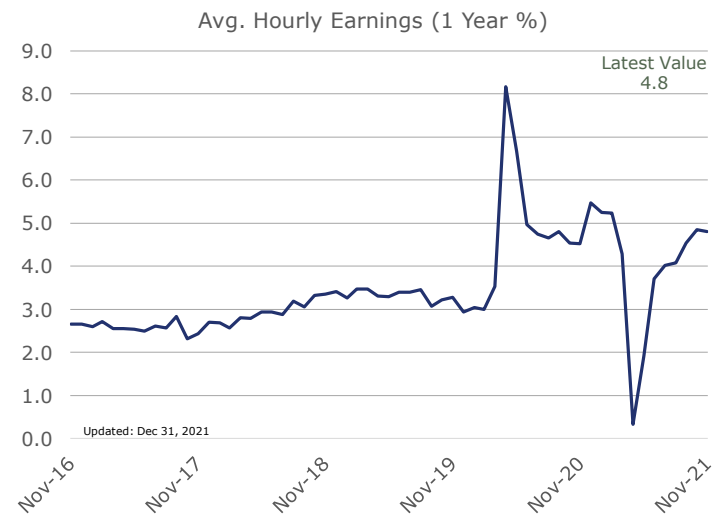
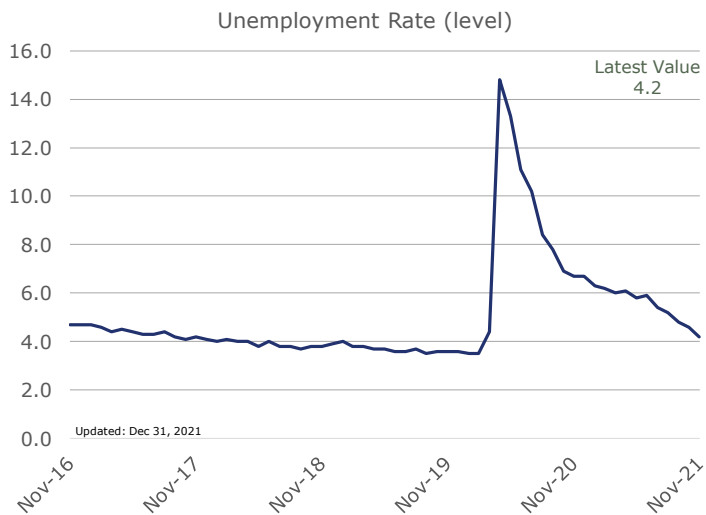
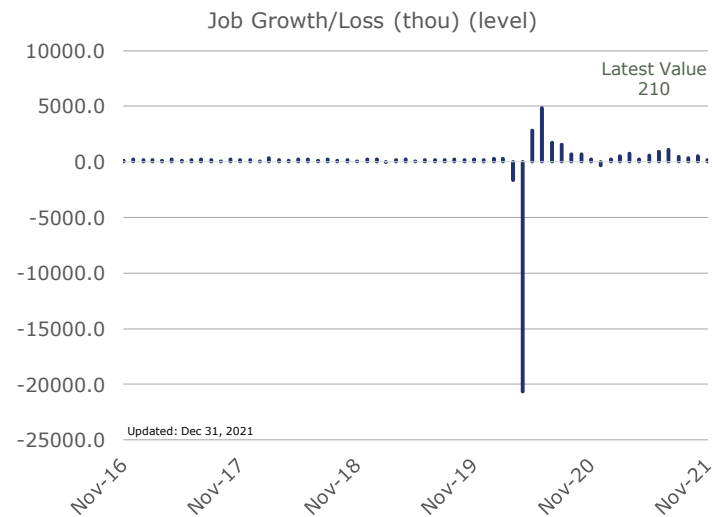
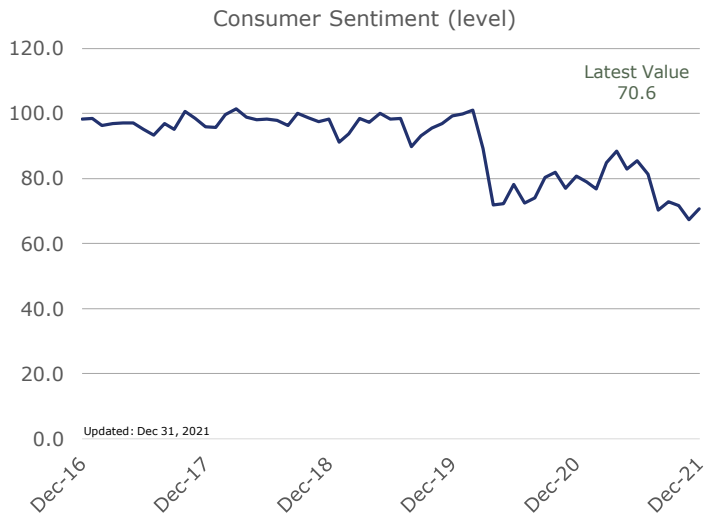
# Economic Growth



# Economic Growth

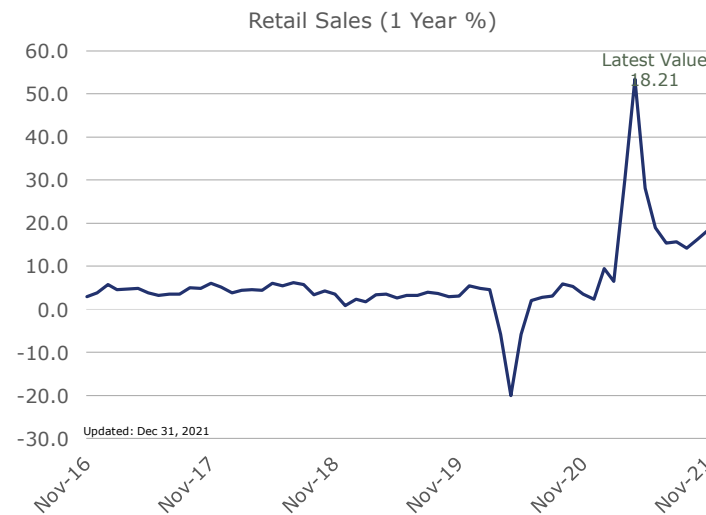
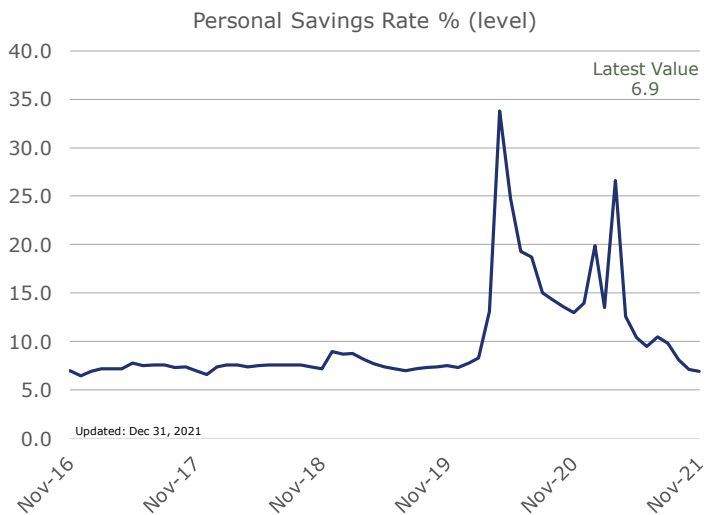


# Consumers & Employment



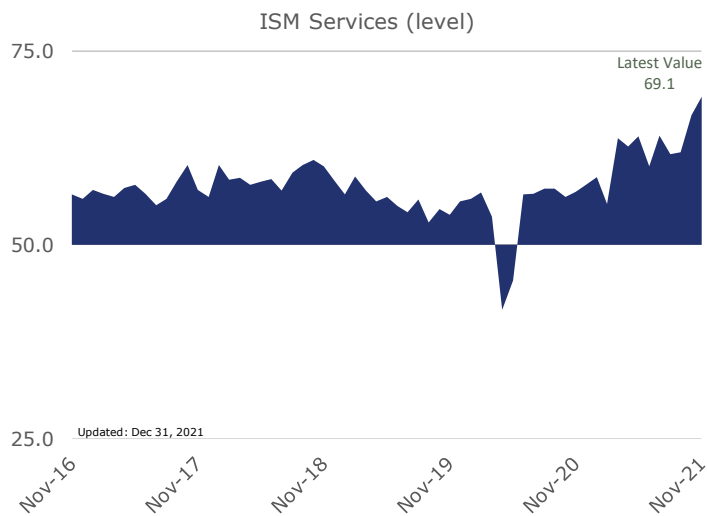
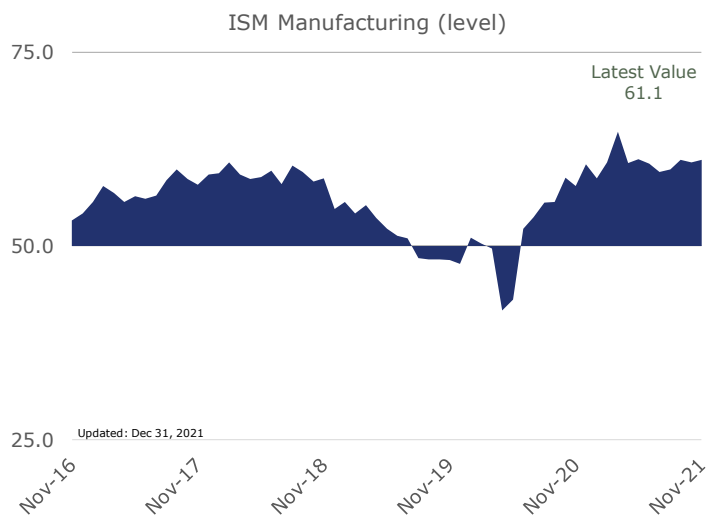
Data Sources: BLS, BEA

# Income & Spending

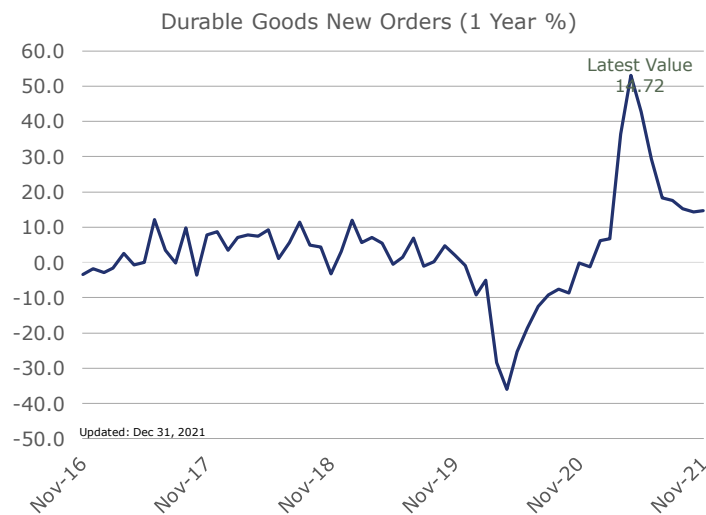
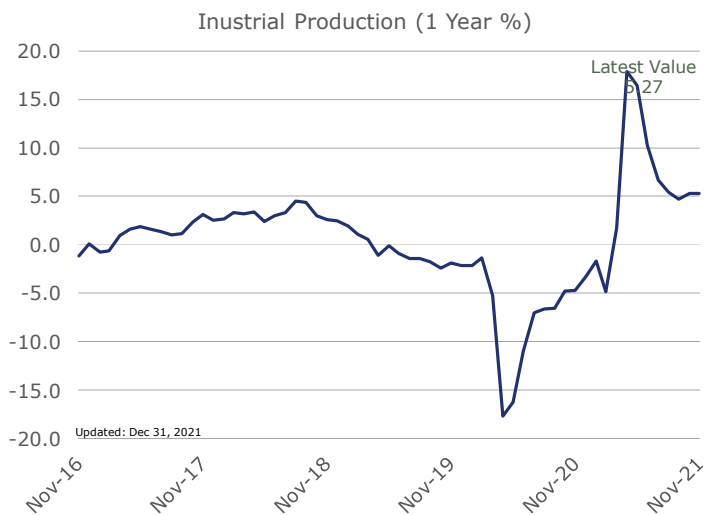
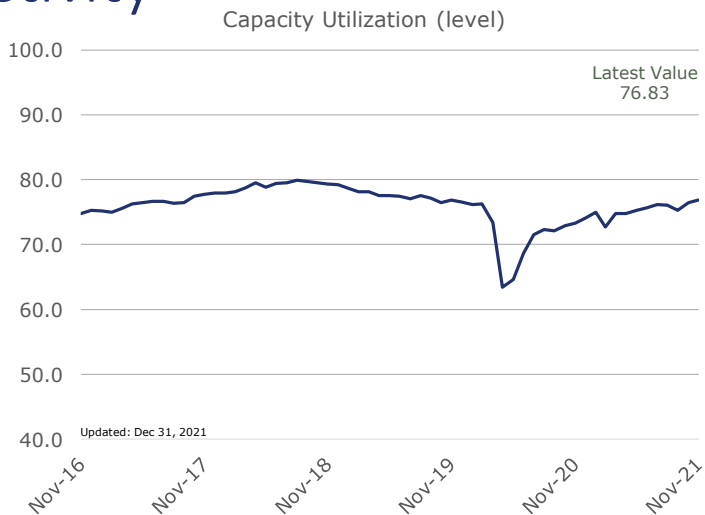


Data Sources: Bloomberg

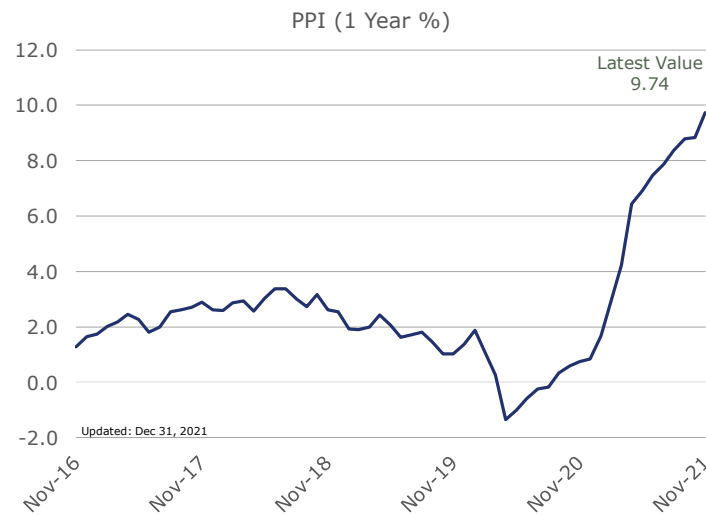
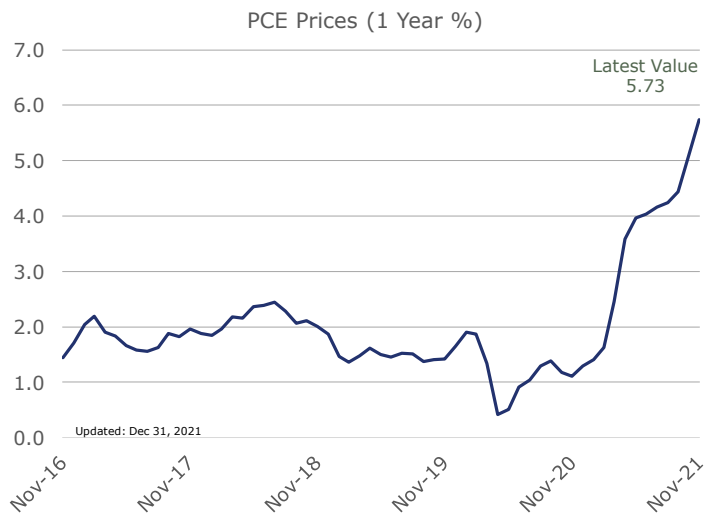
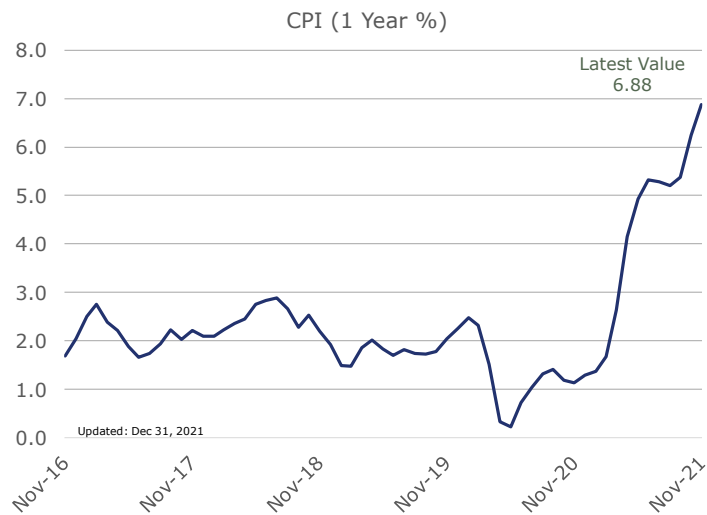
# ISM Surveys



# Manufacturing Activity



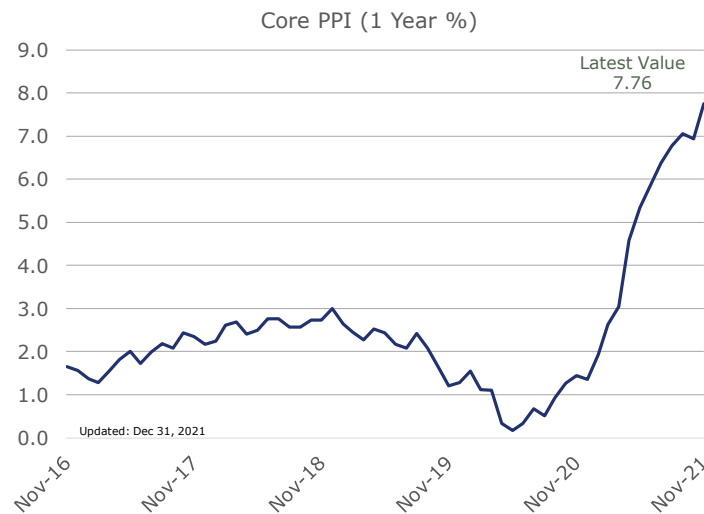
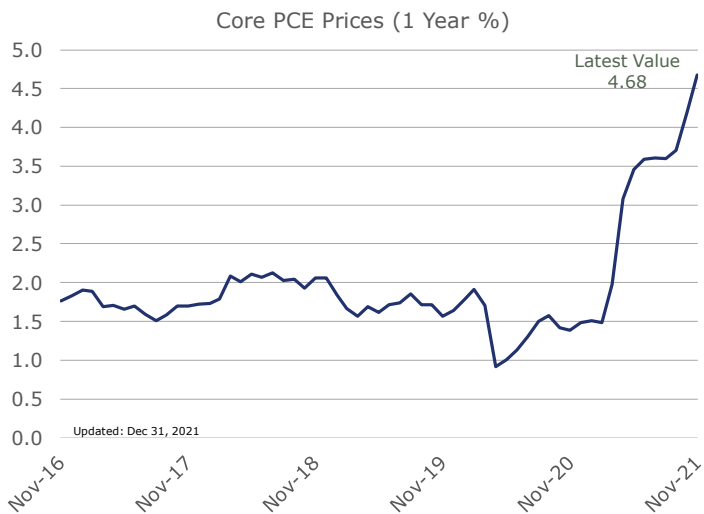
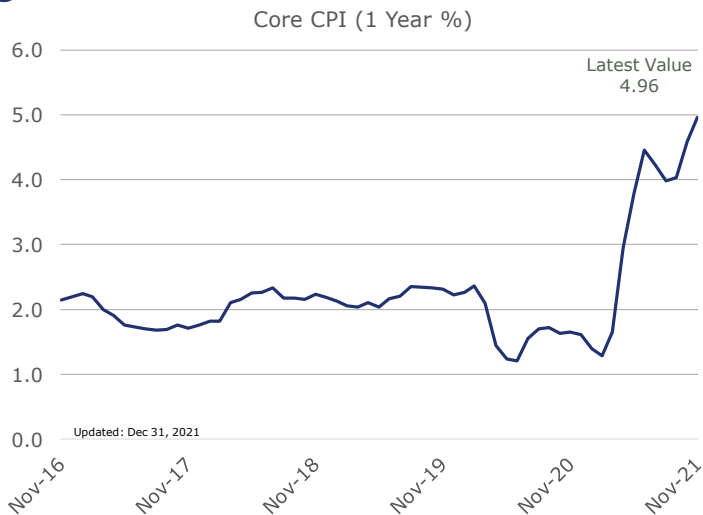
# Price Indexes



Data Sources: Bloomberg

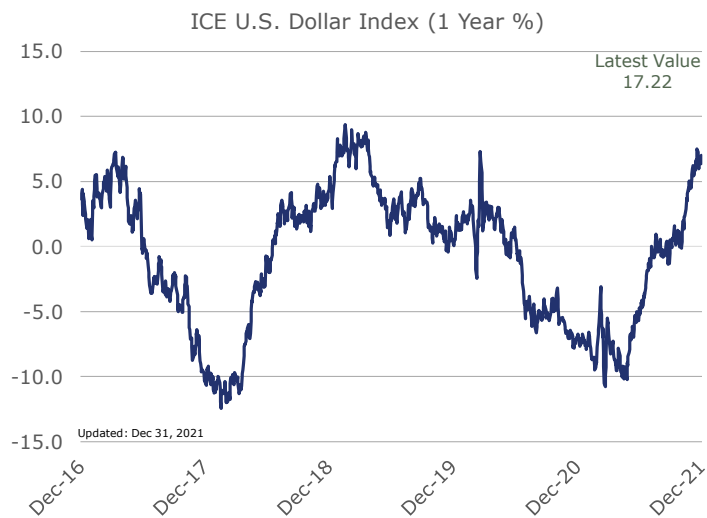


# Core Price Indexes



Data Sources: Bloomberg

# U.S. Dollar

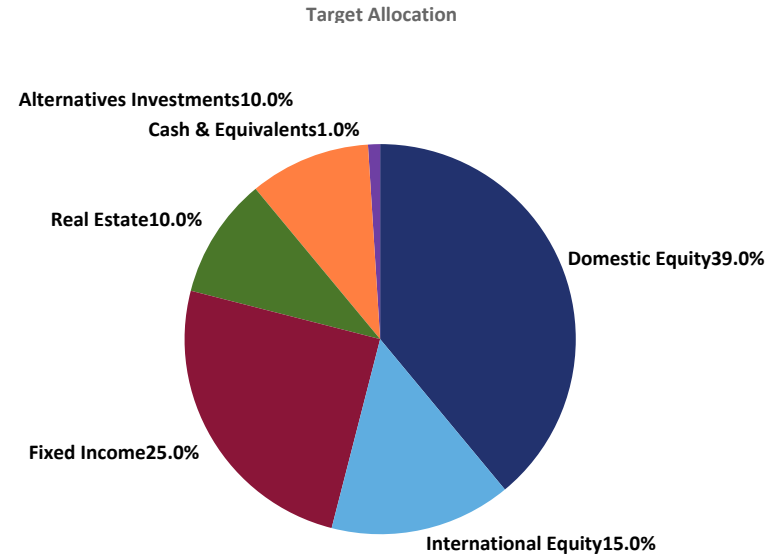
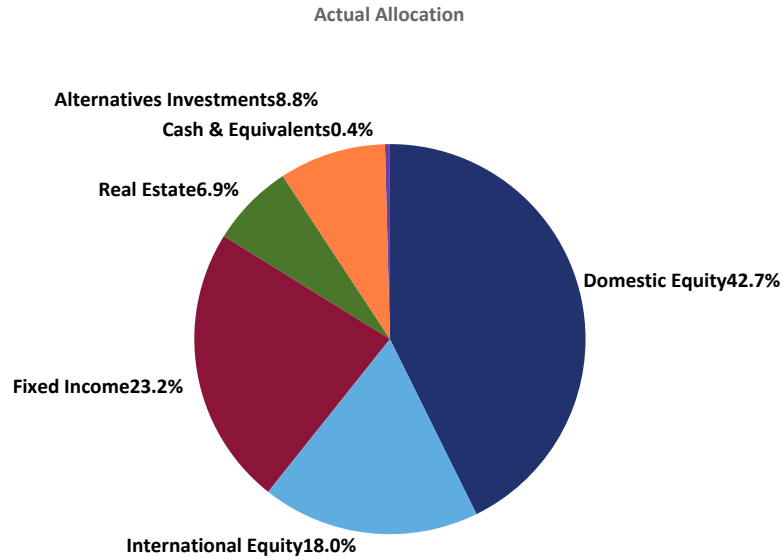


# IMRF Performance

# Asset Allocation

Total Fund

Periods Ended As of December 31, 2021

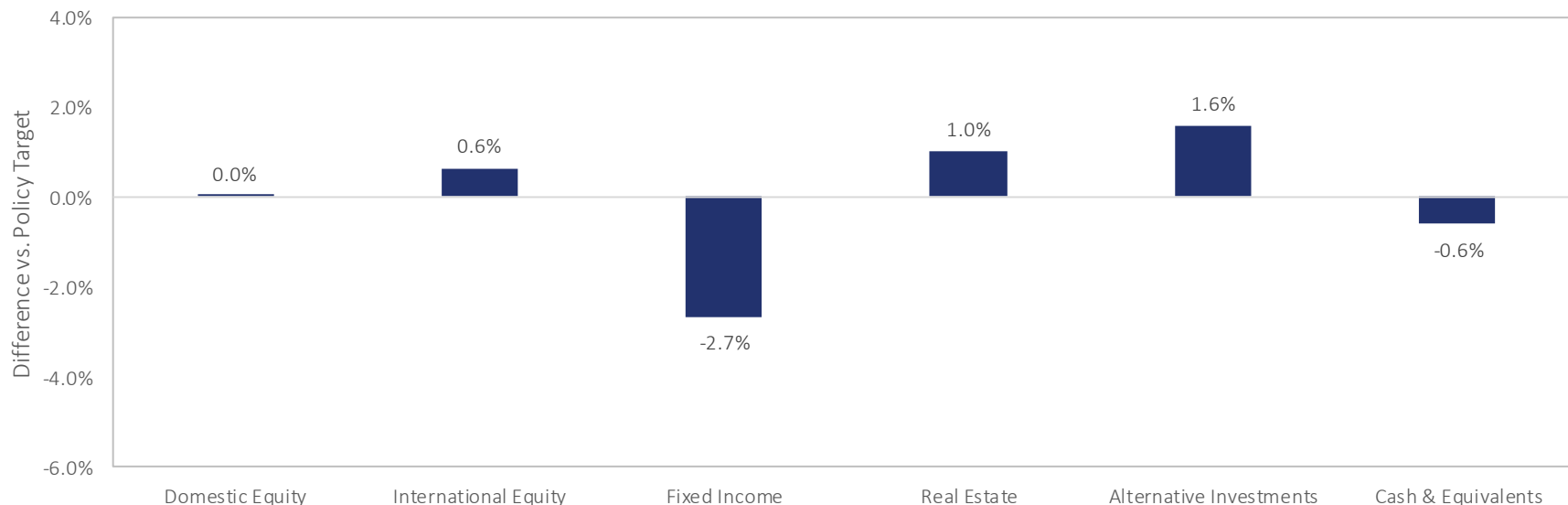


	Actual Allocation \$Millions	Actual Allocation %	Target Allocation %	Differences %	Differences \$Millions
Total Fund	56,806	100.0	100.0	0.0	
Domestic Equity	24,264	42.7	39.0	3.7	2,109
International Equity	10,213	18.0	15.0	3.0	1,693
Fixed Income	13,160	23.2	25.0	-1.8	-1,042
Real Estate	3,918	6.9	10.0	-3.1	-1,763
Alternatives Investments	5,015	8.8	10.0	-1.2	-666
Cash & Equivalents	236	0.4	1.0	-0.6	-332

# Projected Deviations from the Benchmark

As of December 31, 2021

Projected Asset Allocation Difference vs. Target



- Includes committed, but unfunded amounts for real estate (\$1.55 billion) and alternatives (\$2.37 billion). Assumes real estate 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

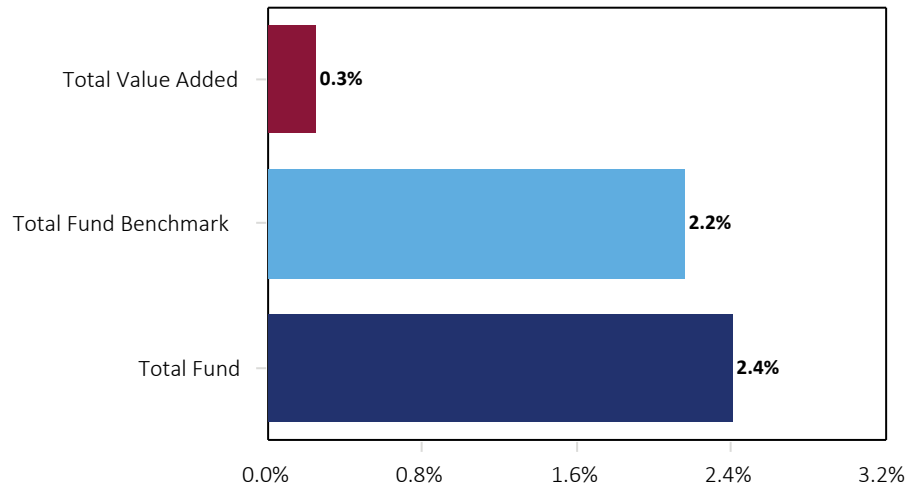
Private Equity Proxy: 60% Domestic Equity, 40% International Equity  
 Real Estate Proxy: 50% Domestic Equity, 30% International Equity, 20% Fixed Income

# Total Fund Attribution

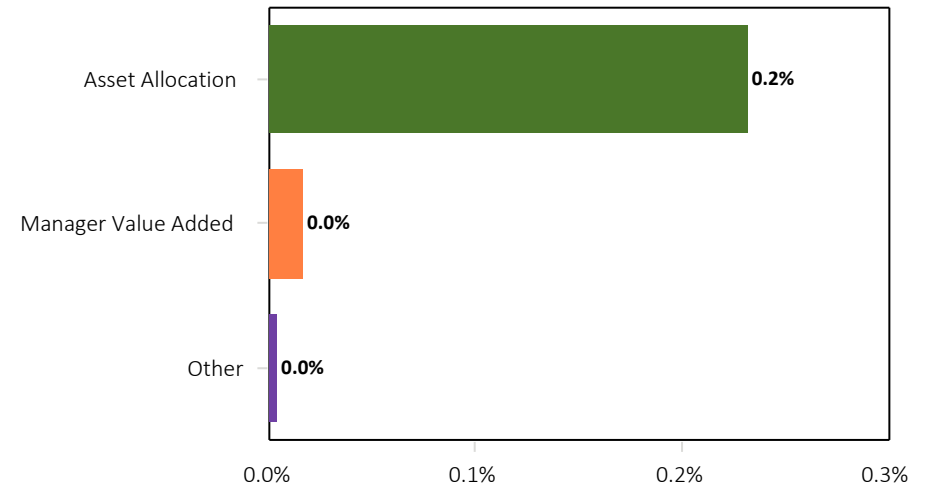
Total Fund

1 Month Ending December 31, 2021

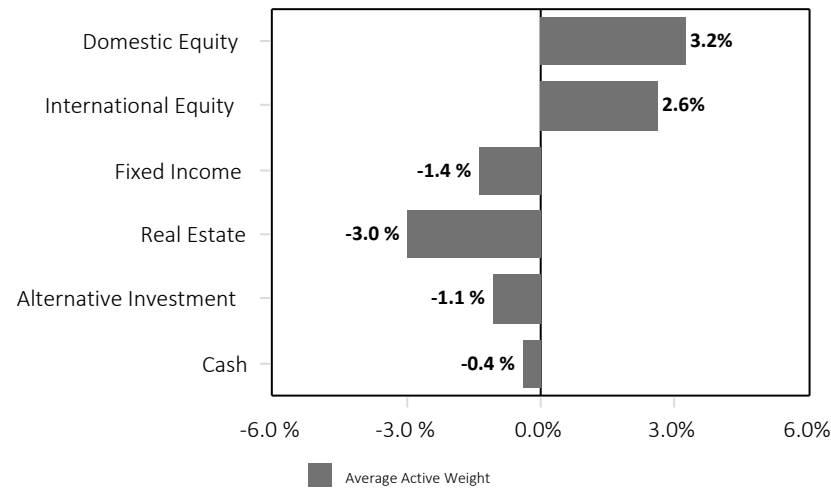
## Total Fund Performance



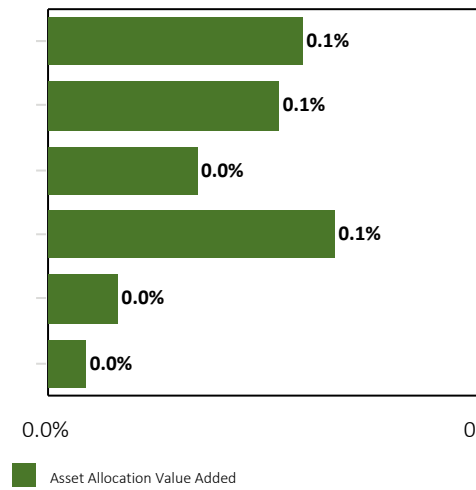
## Total Value Added:0.3%



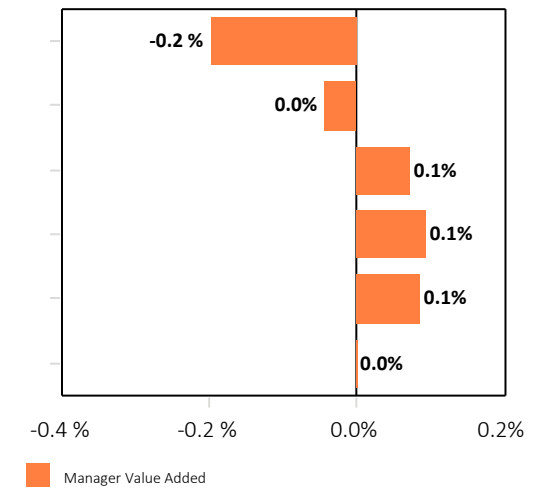
## Asset Class Under or Overweighting



## Asset Allocation Value Added:0.2%



## Total Manager Value Added:0.0%



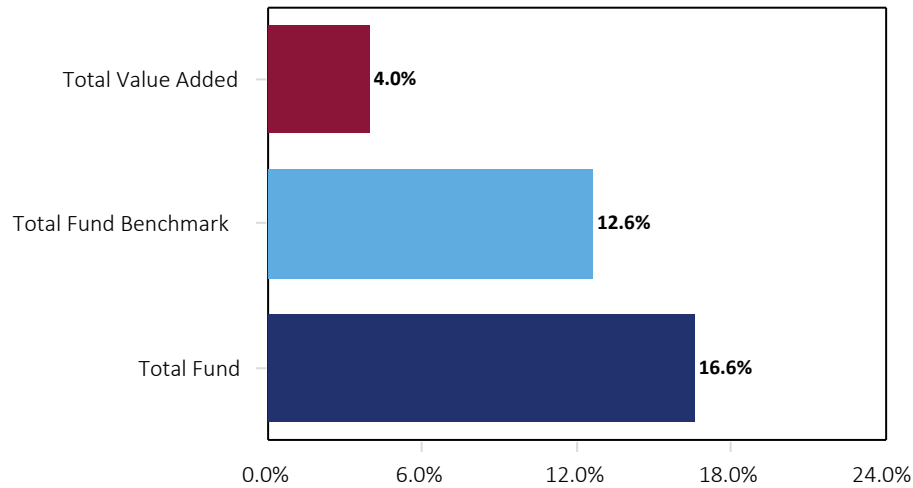
Total Fund Benchmark = 39.0% Russell 3000 Index, 25.0% Blmbg Aggregate, 15.0% MSCI ACWI ex US, 10.0% NCREIF NFI-ODCE Val Wt Nt, 10.0% 9% Annually and 1.0% 3-month Treasury Bill.

# Total Fund Attribution

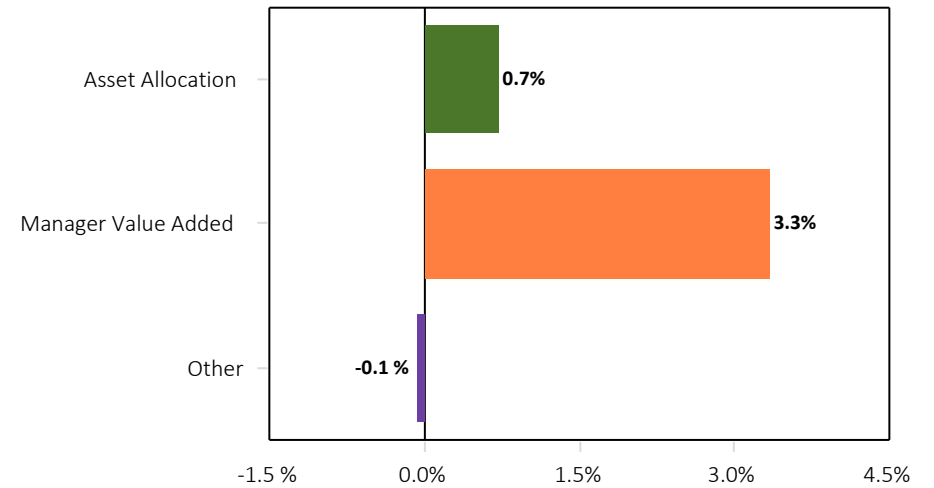
Total Fund

Year To Date Ending December 31, 2021

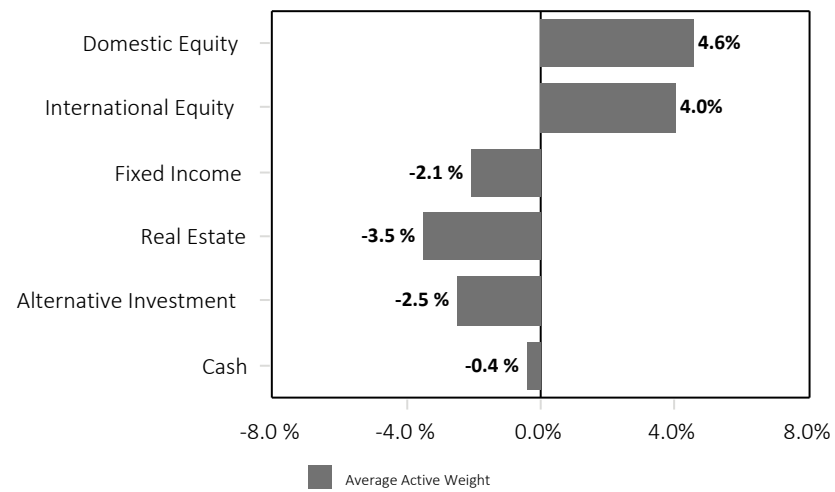
## Total Fund Performance



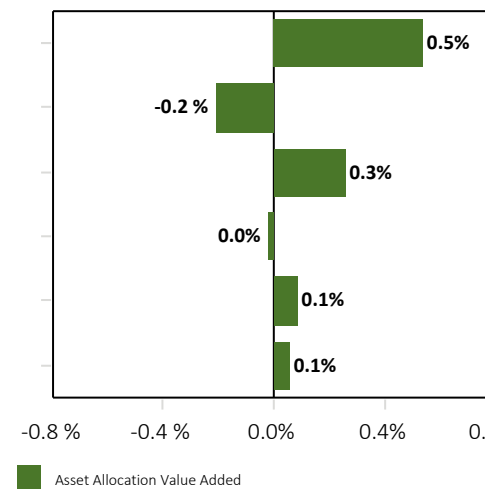
## Total Value Added: 4.0%



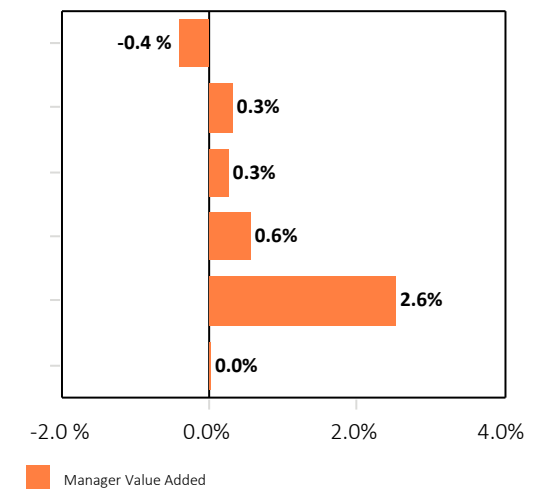
## Asset Class Under or Overweighting



## Asset Allocation Value Added: 0.7%



## Total Manager Value Added: 3.3%



Total Fund Benchmark = 39.0% Russell 3000 Index, 25.0% Blmbg Aggregate, 15.0% MSCI ACWI ex US, 10.0% NCREIF NFI-ODCE Val Wt Nt, 10.0% 9% Annually and 1.0% 3-month Treasury Bill.

# Asset Class Returns

*Periods Ended December 31, 2021*

	Performance (%)									
	1 Month	QTD	1 Year	3 Years	5 Years	10 Years	20 Years	30 Years	Since Inception	Inception Date
<b>Total Fund</b>	<b>2.42</b>	<b>4.41</b>	<b>16.82</b>	<b>17.18</b>	<b>12.32</b>	<b>10.92</b>	<b>8.44</b>	<b>8.86</b>	<b>10.19</b>	<b>1/1/1982</b>
Total Fund - Net	2.42	4.36	16.63	16.98	12.12	10.70				
Total Fund Benchmark	2.16	4.11	12.63	14.79	10.88	9.84				
<b>Domestic Equity</b>	<b>3.48</b>	<b>7.29</b>	<b>24.89</b>	<b>25.36</b>	<b>17.27</b>	<b>16.06</b>	<b>9.99</b>	<b>11.01</b>	<b>12.23</b>	<b>1/1/1982</b>
Domestic Equity - Net	3.47	7.25	24.69	25.15	17.05	15.81				
Blended Benchmark (U.S. Equity)	3.94	9.28	25.66	25.79	17.97	16.28	9.90	10.69		
U.S. Equity IMRF Custom Benchmark	3.96	9.42	25.68	24.35	16.18					
<b>International Equity</b>	<b>3.89</b>	<b>0.59</b>	<b>9.78</b>	<b>15.54</b>	<b>11.12</b>	<b>9.13</b>	<b>7.83</b>	<b>7.76</b>	<b>8.08</b>	<b>9/1/1986</b>
International Equity - Net	3.89	0.45	9.37	15.13	10.74	8.77				
MSCI AC World ex USA (Net)	4.13	1.82	7.82	13.18	9.61	7.28	6.80			
International Equity IMRF Custom Benchmark	3.86	1.34	7.30	13.17	9.67					
<b>Fixed Income</b>	<b>0.06</b>	<b>0.00</b>	<b>-0.44</b>	<b>5.55</b>	<b>4.22</b>	<b>3.88</b>	<b>5.19</b>	<b>5.94</b>	<b>7.96</b>	<b>1/1/1982</b>
Fixed Income - Net	0.05	-0.03	-0.53	5.44	4.09	3.73				
Blmbg. U.S. Aggregate	-0.26	0.01	-1.55	4.79	3.57	2.90	4.33	5.29	7.42	
Fixed Income IMRF Custom Benchmark	-0.05	0.07	-0.85	5.10	3.82					
<b>Real Estate</b>	<b>1.36</b>	<b>6.90</b>	<b>21.95</b>	<b>11.74</b>	<b>10.72</b>	<b>11.17</b>	<b>8.02</b>	<b>6.31</b>	<b>5.94</b>	<b>5/1/1985</b>
Real Estate - Net	1.36	6.88	21.88	11.69	10.68	11.15				
Blended Benchmark (Real Estate)	0.00	0.00	12.41	5.60	6.16	8.80	7.33	7.36	7.61	
<b>Alternatives Investments</b>	<b>1.70</b>	<b>8.69</b>	<b>46.46</b>	<b>21.67</b>	<b>18.82</b>	<b>13.49</b>	<b>9.91</b>	<b>13.09</b>	<b>11.77</b>	<b>2/1/1986</b>
Alternatives Investments - Net	1.70	8.69	46.44	21.62	18.72	13.26				
Alternatives Custom Benchmark	0.72	2.18	9.00	9.00	9.00	9.00	10.46	11.95	12.45	
<b>Private Equity</b>	<b>1.81</b>	<b>9.35</b>	<b>54.15</b>	<b>25.42</b>	<b>22.61</b>	<b>16.16</b>	<b>11.97</b>	<b>15.85</b>	<b>14.10</b>	<b>2/1/1986</b>
Alternatives Custom Benchmark	0.72	2.18	9.00	9.00	9.00	9.00	10.46	11.95	12.45	
<b>Agriculture</b>	<b>1.58</b>	<b>4.68</b>	<b>2.69</b>	<b>0.42</b>	<b>-0.63</b>	<b>7.51</b>	<b>7.19</b>		<b>6.69</b>	<b>10/1/1997</b>
NCREIF Farmland Index	0.00	0.00	3.89	3.93	4.93	9.28	12.17		11.10	

Benchmark definitions on next page.



# Asset Class Returns

*Periods Ended December 31, 2021*

	Performance (%)									
	1 Month	QTD	1 Year	3 Years	5 Years	10 Years	20 Years	30 Years	Since Inception	Inception Date
<b>Timberland</b>	<b>1.43</b>	<b>3.31</b>	<b>-2.72</b>	<b>0.89</b>	<b>0.71</b>	<b>2.11</b>	<b>3.33</b>		<b>6.88</b>	<b>10/1/1992</b>
NCREIF Timberland Index	0.00	0.00	4.41	2.16	2.66	4.84	6.19		8.20	
<b>Unlisted Infrastructure</b>	<b>0.03</b>	<b>1.80</b>	<b>11.68</b>	<b>12.38</b>					<b>12.10</b>	<b>4/1/2018</b>
Alternatives Custom Benchmark	0.72	2.18	9.00	9.00					9.00	
<b>Cash</b>	<b>0.24</b>	<b>0.64</b>	<b>2.44</b>	<b>2.86</b>	<b>2.52</b>	<b>1.40</b>	<b>1.43</b>	<b>3.03</b>	<b>3.75</b>	<b>7/1/1986</b>
90 Day US Treasury Bill	0.01	0.01	0.05	0.99	1.14	0.61	1.25	2.41	3.12	

# Benchmark Definitions

Account Name	From Date	To Date	Benchmark
Domestic Equity Blended	1/1/2015	Present	100% Russell 3000 Index
Benchmark	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)** 100%
Benchmark	1/1/2007	12/31/2012	100% NPI + 1%
	1/1/2005	12/31/2016	100% Consumer Price Index + 5%
Alternatives Custom	7/1/2010	Present	100% Annualized rate of 9.0%
Benchmark	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
Total Fund Benchmark	1/1/2021	Present	The total fund benchmark is a blend of the asset class benchmark returns weighted by the target allocation for each asset class: 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 December 31, 2021*

	Nov-2021		Dec-2021	
	\$	%	\$	%
<b>Domestic Equity</b>	<b>23,535,476,553</b>	<b>42.24</b>	<b>24,263,588,229</b>	<b>42.71</b>
Domestic Equity Transition	6,813	0.00	6,813	0.00
<b>Large Cap Growth</b>	<b>8,912,281,731</b>	<b>15.99</b>	<b>8,966,966,722</b>	<b>15.79</b>
NTGI S&P 500 Growth	4,054,331,624	7.28	4,155,109,642	7.31
Sands Capital	2,449,179,070	4.40	2,352,249,613	4.14
Xponance Russell 1000 G	2,408,771,037	4.32	2,459,607,467	4.33
<b>Large Cap Value</b>	<b>4,756,702,854</b>	<b>8.54</b>	<b>5,044,517,266</b>	<b>8.88</b>
Dodge & Cox	1,797,675,530	3.23	1,895,588,088	3.34
LSV Asset	1,455,157,453	2.61	1,543,467,846	2.72
NTGI S&P 500 Value	1,503,869,871	2.70	1,605,461,332	2.83
<b>Large Cap Pass. Core</b>	<b>3,212,672,453</b>	<b>5.77</b>	<b>3,255,297,472</b>	<b>5.73</b>
NTGI MarketCap Idx.	3,212,672,453	5.77	3,255,297,472	5.73
<b>Factor Diversity Strategies</b>	<b>1,615,866,369</b>	<b>2.90</b>	<b>1,685,001,206</b>	<b>2.97</b>
U.S. Large Cap FDP-GSAM	1,615,866,369	2.90	1,685,001,206	2.97
<b>Quantitative Factor Strategies</b>	<b>1,798,517,172</b>	<b>3.23</b>	<b>1,895,279,823</b>	<b>3.34</b>
Quantitative US Equity - SciBeta	1,798,517,172	3.23	1,895,279,823	3.34
<b>Small Cap Growth</b>	<b>833,782,652</b>	<b>1.50</b>	<b>860,226,828</b>	<b>1.51</b>
Frontier Capital	833,782,652	1.50	860,226,828	1.51
FIAM Small Cap		0.00		0.00
<b>Small Cap Value</b>	<b>1,446,571,496</b>	<b>2.60</b>	<b>1,532,024,888</b>	<b>2.70</b>
Channing	323,624,432	0.58	342,867,129	0.60

# Investment Manager Asset Allocation

Periods Ended December 31, 2021

	Nov-2021		Dec-2021	
	\$	%	\$	%
DFA Small Cap Val.	511,762,308	0.92	541,157,352	0.95
William Blair Small Cap Value	611,184,757	1.10	648,000,407	1.14
<b>Micro Cap</b>	<b>281</b>	<b>0.00</b>	<b>281</b>	<b>0.00</b>
DFA Micro Cap (9-10)	281	0.00	281	0.00
<b>Public Real Assets</b>	<b>959,074,733</b>	<b>1.72</b>	<b>1,024,266,931</b>	<b>1.80</b>
Brookfield	182,026,543	0.33	193,837,513	0.34
Cohen & Steers	777,048,189	1.39	830,429,418	1.46
<b>International Equity</b>	<b>9,831,193,705</b>	<b>17.64</b>	<b>10,213,451,507</b>	<b>17.98</b>
<b>Intl Large Cap Growth</b>	<b>1,723,317,297</b>	<b>3.09</b>	<b>1,775,800,868</b>	<b>3.13</b>
EARNEST Part. Intl	604,657,516	1.09	633,247,732	1.11
William Blair	1,118,659,781	2.01	1,142,553,136	2.01
<b>Intl Large Cap Value</b>	<b>1,322,737,789</b>	<b>2.37</b>	<b>1,391,290,279</b>	<b>2.45</b>
Brandes Investment	573,231,023	1.03	606,793,349	1.07
Mondrian	612,976,612	1.10	642,066,919	1.13
Lazard	136,530,153	0.25	142,430,011	0.25
<b>Intl Large Cap Core</b>	<b>4,569,095,883</b>	<b>8.20</b>	<b>4,788,394,708</b>	<b>8.43</b>
Arrowstreet Capital	1,042,203,687	1.87	1,108,573,867	1.95
Brown Capital	644,615,047	1.16	667,668,782	1.18
GlobeFlex Capital	840,742,782	1.51	888,587,956	1.56
Xponance Intl EQ	103,654,051	0.19	108,889,659	0.19
Progress Intl Equity	702,988	0.00	705,844	0.00
Transition Account	119,870	0.00	119,870	0.00

# Investment Manager Asset Allocation

*Periods Ended December 31, 2021*

	<b>Nov-2021</b>		<b>Dec-2021</b>	
	<b>\$</b>	<b>%</b>	<b>\$</b>	<b>%</b>
NTGI ACWI ex US Index Fund	1,937,057,459	3.48	2,013,848,731	3.55
<b>Intl All Cap Developed</b>	<b>168,466,158</b>	<b>0.30</b>	<b>178,770,019</b>	<b>0.31</b>
Ativo International	168,466,158	0.30	178,770,019	0.31
<b>International Small Cap</b>	<b>701,010,896</b>	<b>1.26</b>	<b>721,707,021</b>	<b>1.27</b>
Franklin Templeton	245,819,002	0.44	257,093,975	0.45
William Blair IntSC	455,191,894	0.82	464,613,046	0.82
<b>Emerging Mkt Equity</b>	<b>1,346,565,683</b>	<b>2.42</b>	<b>1,357,488,612</b>	<b>2.39</b>
Genesis Asset Mngrs.	1,346,565,683	2.42	1,357,488,612	2.39

# Investment Manager Asset Allocation

*Periods Ended December 31, 2021*

	Nov-2021		Dec-2021	
	\$	%	\$	%
<b>Fixed Income</b>	<b>13,151,550,678</b>	<b>23.60</b>	<b>13,159,667,791</b>	<b>23.17</b>
Global Bonds Transition	214,369	0.00	210,202	0.00
<b>Domestic Fixed Core</b>	<b>4,310,081,112</b>	<b>7.74</b>	<b>4,300,008,101</b>	<b>7.57</b>
Attucks Fixed Income	100,150,487	0.18	99,778,376	0.18
Brandes FI Core	374,608,546	0.67	374,372,550	0.66
EARNEST Partners	1,027,301,193	1.84	1,024,001,258	1.80
Garcia Hamilton	1,091,324,917	1.96	1,088,146,596	1.92
Ramirez Asset Management	602,832,801	1.08	600,486,115	1.06
Xponance Yield Advantage Agg.	1,113,863,169	2.00	1,113,223,206	1.96
<b>Domestic Fixed Passive Core</b>	<b>3,666,006,181</b>	<b>6.58</b>	<b>3,654,995,037</b>	<b>6.43</b>
NTGI Blmbg Agg.	1,822,088,284	3.27	1,817,007,757	3.20
BlackRock US Debt I	1,843,917,897	3.31	1,837,987,280	3.24
<b>Domestic Fixed Core Plus</b>	<b>3,401,787,711</b>	<b>6.11</b>	<b>3,407,077,560</b>	<b>6.00</b>
LM Capital Group FI	957,469,209	1.72	959,042,988	1.69
Progress Inv. FI	1,620	0.00	1,650	0.00
BMO - TCH	661,844,973	1.19	661,962,167	1.17
Western Asset	1,126,944,218	2.02	1,130,766,162	1.99
Longfellow Core Plus	655,527,691	1.18	655,304,594	1.15
<b>Bank Loans</b>	<b>728,574,470</b>	<b>1.31</b>	<b>734,087,200</b>	<b>1.29</b>
Barings Global Loan Fund	728,574,470	1.31	734,087,200	1.29
<b>Emerging Markets Debt</b>	<b>219,934,409</b>	<b>0.39</b>	<b>223,383,314</b>	<b>0.39</b>
Standish-Mellon EMD	219,934,409	0.39	223,383,314	0.39

# Investment Manager Asset Allocation

*Periods Ended December 31, 2021*

	Nov-2021		Dec-2021	
	\$	%	\$	%
<b>High Yield</b>	<b>824,952,426</b>	<b>1.48</b>	<b>839,906,376</b>	<b>1.48</b>
MacKay Shields	824,936,466	1.48	839,715,134	1.48
FIAM High Yield	15,960	0.00	191,242	0.00



# Investment Manager Asset Allocation

*Periods Ended December 31, 2021*

	Nov-2021		Dec-2021	
	\$	%	\$	%
<b>Real Estate</b>	<b>3,896,993,357</b>	<b>6.99</b>	<b>3,917,928,441</b>	<b>6.90</b>
<b>Real Estate Core Cmp</b>	<b>2,087,565,188</b>	<b>3.75</b>	<b>2,126,788,357</b>	<b>3.74</b>
TA Assoc. Buckhead	819,665,905	1.47	817,726,253	1.44
Barings Euro Core Property	143,968,764	0.26	145,452,455	0.26
Blackstone Property Euro	162,606,677	0.29	162,085,823	0.29
INVESCO Core Real Estate	226,419,016	0.41	239,614,476	0.42
INVESCO European real estate	57,527,366	0.10	58,120,223	0.10
AEW Core Property Tr	252,746,615	0.45	252,746,615	0.44
CBRE Core Partners	256,116,454	0.46	282,528,121	0.50
JPM Strategic Property Fund	168,514,391	0.30	168,514,391	0.30
<b>RE Non-Core Cmp</b>	<b>1,809,428,169</b>	<b>3.25</b>	<b>1,791,140,084</b>	<b>3.15</b>
Artemis MWBE Spruce	301,721,111	0.54	311,927,332	0.55
Franklin T. EMREFF	4,776,924	0.01	4,776,924	0.01
Security Capital	71,132,555	0.13	69,456,897	0.12
Dune II	10,805,178	0.02	9,280,716	0.02
Non-Core Real Estate Funds	1,188,665,020	2.13	1,165,632,735	2.05
Non-Core Intl Real Estate	232,240,838	0.42	229,978,936	0.40
Almanac ARS V	86,544	0.00	86,544	0.00
<b>Alternatives Investments</b>	<b>4,967,830,000</b>	<b>8.92</b>	<b>5,014,866,919</b>	<b>8.83</b>
<b>Absolute Return</b>	<b>116,811</b>	<b>0.00</b>	<b>115,896</b>	<b>0.00</b>
Aurora Investment	116,811	0.00	115,896	0.00
<b>Private Equity</b>	<b>4,370,662,970</b>	<b>7.84</b>	<b>4,415,124,940</b>	<b>7.77</b>

# Investment Manager Asset Allocation

*Periods Ended December 31, 2021*

	Nov-2021		Dec-2021	
	\$	%	\$	%
<b>Abbott S/A Comp.</b>	<b>516,426,765</b>	<b>0.93</b>	<b>536,294,967</b>	<b>0.94</b>
Muller Monroe MPEFF	520,309	0.00	520,309	0.00
<b>Pantheon S/A Comp.</b>	<b>400,414,265</b>	<b>0.72</b>	<b>430,276,910</b>	<b>0.76</b>
Private Equity Fund - Domestic	2,773,318,547	4.98	2,749,033,772	4.84
Private Equity Fund - International	564,545,522	1.01	556,840,434	0.98
Oakbrook Opportunities Fund	115,437,563	0.21	142,158,549	0.25
<b>Private Credit</b>	<b>197,238,655</b>	<b>0.35</b>	<b>197,053,744</b>	<b>0.35</b>
Private Credit Fund - Domestic	197,238,655	0.35	197,053,744	0.35
<b>Agriculture</b>	<b>224,683,859</b>	<b>0.40</b>	<b>228,223,321</b>	<b>0.40</b>
Premiere Partners IV	224,683,859	0.40	228,223,321	0.40
<b>Timberland</b>	<b>67,771,284</b>	<b>0.12</b>	<b>65,271,284</b>	<b>0.11</b>
Forest Investment	67,771,284	0.12	65,271,284	0.11
<b>Unlisted Infrastructure</b>	<b>107,356,421</b>	<b>0.19</b>	<b>109,077,734</b>	<b>0.19</b>
Unlisted Infrastructure Funds	107,356,421	0.19	109,077,734	0.19
<b>Cash &amp; Equivalents</b>	<b>337,934,031</b>	<b>0.61</b>	<b>236,077,684</b>	<b>0.42</b>
<b>Total Fund</b>	<b>55,720,978,324</b>	<b>100.00</b>	<b>56,805,580,572</b>	<b>100.00</b>

# Performance

Periods Ended December 31, 2021

	Market Value \$	Performance (%)							
		1 Month	QTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
<b>Total Fund</b>	<b>56,805,580,572</b>	<b>2.42</b>	<b>4.41</b>	<b>16.82</b>	<b>17.18</b>	<b>12.32</b>	<b>10.92</b>	<b>10.19</b>	<b>1/1/1982</b>
Total Fund - Net		2.42	4.36	16.63	16.98	12.12	10.70		
Total Fund Benchmark		2.16	4.11	12.63	14.79	10.88	9.84		
<b>Domestic Equity</b>	<b>24,263,588,229</b>	<b>3.48</b>	<b>7.29</b>	<b>24.89</b>	<b>25.36</b>	<b>17.27</b>	<b>16.06</b>	<b>12.23</b>	<b>1/1/1982</b>
Domestic Equity - Net		3.47	7.25	24.69	25.15	17.05	15.81		
Blended Benchmark		3.94	9.28	25.66	25.79	17.97	16.28		
Russell 3000 Index		3.94	9.28	25.66	25.79	17.97	16.30	12.15	
U.S. Equity IMRF Custom Benchmark		3.96	9.42	25.68	24.35	16.18			
<b>Large Cap Equity</b>	<b>18,951,782,665</b>	<b>2.94</b>	<b>7.46</b>	<b>24.63</b>	<b>26.49</b>	<b>18.67</b>	<b>16.74</b>	<b>11.99</b>	<b>1/1/1982</b>
Large Cap Equity - Net		2.94	7.43	24.52	26.38	18.56	16.60		
Russell 1000 Index		4.05	9.78	26.45	26.21	18.43	16.54	12.30	
<b>Large Cap Growth</b>	<b>8,966,966,722</b>	<b>0.61</b>	<b>6.66</b>	<b>22.11</b>	<b>34.17</b>	<b>26.35</b>	<b>19.60</b>	<b>13.09</b>	<b>1/1/1982</b>
Large Cap Growth - Net		0.59	6.63	22.00	34.06	26.22	19.44		
LCG Blended Benchmark		2.11	11.64	27.60	34.08	25.32	19.79		
Russell 1000 Growth Index		2.11	11.64	27.60	34.08	25.32	19.79	12.32	
<b>NTGI S&amp;P 500 Growth</b>	<b>4,155,109,642</b>	<b>2.49</b>	<b>13.36</b>	<b>31.99</b>	<b>32.15</b>	<b>24.05</b>	<b>19.22</b>	<b>10.43</b>	<b>8/1/2001</b>
NTGI S&P 500 Growth - Net		2.49	13.36	31.98	32.14	24.04	19.21		
S&P 500 Growth		2.48	13.37	32.01	32.20	24.11	19.23	10.42	
<b>Xponance Russell 1000 G</b>	<b>2,459,607,467</b>	<b>2.11</b>	<b>11.63</b>	<b>27.58</b>	<b>34.05</b>			<b>24.27</b>	<b>10/1/2018</b>
Xponance Russell 1000 G - Net		2.11	11.63	27.56	34.02			24.25	
Russell 1000 Growth Index		2.11	11.64	27.60	34.08			24.29	
<b>Sands Capital</b>	<b>2,352,249,613</b>	<b>-3.96</b>	<b>-7.02</b>	<b>5.20</b>	<b>34.03</b>	<b>28.40</b>	<b>20.71</b>	<b>14.66</b>	<b>11/1/2003</b>
Sands Capital - Net		-4.03	-7.09	4.96	33.75	28.13	20.45		
LCG Blended Benchmark		2.11	11.64	27.60	34.08	25.32	19.79	12.66	
Russell 1000 Growth Index		2.11	11.64	27.60	34.08	25.32	19.79	12.70	

Benchmark definitions in glossary.

# Performance

*Periods Ended December 31, 2021*

	Market Value \$	Performance (%)							
		1 Month	QTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
<b>Large Cap Value</b>	<b>5,044,517,266</b>	<b>6.28</b>	<b>6.96</b>	<b>28.93</b>	<b>18.66</b>	<b>12.35</b>	<b>14.21</b>	<b>10.66</b>	<b>10/1/1982</b>
Large Cap Value - Net		6.28	6.92	28.74	18.49	12.18	14.02		
LCV Blended Benchmark		6.31	7.77	25.16	17.64	11.16	12.97		
Russell 1000 Value Index		6.31	7.77	25.16	17.64	11.16	12.97	12.01	
<b>Dodge &amp; Cox</b>	<b>1,895,588,088</b>	<b>5.61</b>	<b>6.08</b>	<b>32.20</b>	<b>20.73</b>	<b>14.27</b>	<b>15.74</b>	<b>10.75</b>	<b>9/1/2003</b>
Dodge & Cox - Net		5.61	6.03	31.94	20.48	14.03	15.50		
LCV Blended Benchmark		6.31	7.77	25.16	17.64	11.16	12.97	9.15	
Russell 1000 Value Index		6.31	7.77	25.16	17.64	11.16	12.97	9.30	
<b>LSV Asset</b>	<b>1,543,467,846</b>	<b>6.34</b>	<b>6.64</b>	<b>28.96</b>	<b>17.21</b>	<b>11.15</b>	<b>14.09</b>	<b>11.33</b>	<b>2/1/2003</b>
LSV Asset - Net		6.34	6.57	28.67	16.93	10.89	13.82		
LCV Blended Benchmark		6.31	7.77	25.16	17.64	11.16	12.97	9.94	
Russell 1000 Value Index		6.31	7.77	25.16	17.64	11.16	12.97	9.95	
<b>NTGI S&amp;P 500 Value</b>	<b>1,605,461,332</b>	<b>7.00</b>	<b>8.34</b>	<b>24.90</b>	<b>18.75</b>	<b>11.99</b>	<b>13.38</b>	<b>6.89</b>	<b>8/1/1999</b>
NTGI S&P 500 Value - Net		7.00	8.34	24.90	18.74	11.98	13.37		
S&P 500 Value		7.04	8.31	24.90	18.65	11.90	13.29	6.85	
<b>Large Cap Pass. Core</b>	<b>3,255,297,472</b>	<b>3.82</b>	<b>9.18</b>	<b>25.71</b>	<b>25.75</b>	<b>17.96</b>	<b>16.32</b>	<b>11.90</b>	<b>1/1/1985</b>
Large Cap Pass. Core - Net		3.82	9.18	25.70	25.74	17.95	16.31		
Dow Jones US Total Stock Market Index		3.80	9.14	25.66	25.72	17.92	16.24		
<b>NTGI MarketCap Idx.</b>	<b>3,255,297,472</b>	<b>3.82</b>	<b>9.18</b>	<b>25.71</b>	<b>25.75</b>	<b>17.96</b>	<b>16.32</b>	<b>11.69</b>	<b>2/1/1985</b>
NTGI MarketCap Idx. - Net		3.82	9.18	25.70	25.74	17.95	16.31		
Dow Jones US Total Stock Market Index		3.80	9.14	25.66	25.72	17.92	16.24		
<b>Factor Diversity Strategies</b>	<b>1,685,001,206</b>	<b>4.28</b>	<b>9.97</b>	<b>25.70</b>				<b>28.73</b>	<b>8/18/2020</b>

# Performance

Periods Ended December 31, 2021

	Market Value \$	Performance (%)							Inception Date
		1 Month	QTD	1 Year	3 Years	5 Years	10 Years	Since Inception	
<b>U.S. Large Cap FDP-GSAM</b>	1,685,001,206	4.28	9.97	25.70				28.73	8/18/2020
U.S. Large Cap FDP-GSAM - Net		4.28	9.96	25.63				28.65	
Solactive GBS U.S. 1000 Index		3.87	9.51	26.19				28.88	
GSAM Active Beta US. Large Cap FDC Index		4.28	9.97	25.77				28.67	
<b>Quantitative Factor Strategies</b>	1,895,279,823	5.38	9.47	26.05				17.24	9/17/2019
<b>Quantitative US Equity - SciBeta</b>	1,895,279,823	5.38	9.47	26.05				17.24	9/17/2019
Quantitative US Equity - SciBeta - Net		5.37	9.45	25.97				16.99	
SciBeta US Hi-Fctr-Intst Div Multi-Beta Multi-Strat Index		5.64	9.66	24.80				16.33	
<b>Small Cap</b>	2,392,251,997	4.91	4.95	26.72	22.81	13.14	14.17	12.62	7/1/1988
Small Cap Composite - Net		4.91	4.78	25.96	22.10	12.54	13.56		
Russell 2000 Index		2.23	2.14	14.82	20.02	12.02	13.23	9.94	
<b>Small Cap Growth</b>	860,226,828	3.17	2.68	17.15	28.76	18.16	16.30	13.79	7/1/1988
Small Cap Growth - Net		3.17	2.47	16.07	27.76	17.43	15.63		
Russell 2000 Growth Index		0.44	0.01	2.83	21.17	14.53	14.14	8.79	
<b>Frontier Capital</b>	860,226,828	3.17	2.58	16.16	29.76	22.28	17.14	14.16	8/1/1988
Frontier Capital - Net		3.17	2.45	15.13	28.58	21.38	16.39		
Russell 2000 Growth Index		0.44	0.01	2.83	21.17	14.53	14.14	8.88	
<b>Small Cap Value</b>	1,532,024,888	5.91	6.33	32.25	20.24	10.39	13.35	12.13	9/1/1989
Small Cap Value - Net		5.91	6.18	31.68	19.66	9.84	12.80		
Russell 2000 Value Index		4.08	4.36	28.27	17.99	9.07	12.03	10.39	
<b>Channing</b>	342,867,129	5.95	5.15	20.53	21.24	9.90	13.64	11.94	7/1/2011
Channing - Net		5.95	5.02	19.97	20.65	9.36	13.04	11.35	
Russell 2000 Value Index		4.08	4.36	28.27	17.99	9.07	12.03	10.44	

Benchmark definitions in glossary.

# Performance

*Periods Ended December 31, 2021*

	Market Value \$	Performance (%)							
		1 Month	QTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
<b>DFA Small Cap Val.</b>	<b>541,157,352</b>	<b>5.74</b>	<b>6.68</b>	<b>40.60</b>	<b>20.15</b>	<b>9.72</b>	<b>13.47</b>	<b>12.46</b>	<b>2/1/1996</b>
DFA Small Cap Val. - Net		5.74	6.53	39.98	19.59	9.18	12.93		
Russell 2000 Value Index		4.08	4.36	28.27	17.99	9.07	12.03	10.02	
<b>William Blair Small Cap Value</b>	<b>648,000,407</b>	<b>6.02</b>	<b>6.75</b>	<b>30.17</b>	<b>20.09</b>	<b>11.35</b>	<b>13.86</b>	<b>12.00</b>	<b>5/1/1999</b>
Inv. Couns. Maryland - Net		6.02	6.60	29.64	19.50	10.79	13.33		
Russell 2000 Value Index		4.08	4.36	28.27	17.99	9.07	12.03	9.67	
<b>Micro Cap</b>	<b>281</b>								<b>7/1/1984</b>
Micro Cap - Net									
Russell Microcap Index									
<b>DFA Micro Cap (9-10)</b>	<b>281</b>								<b>8/1/1987</b>
DFA Micro Cap (9-10) - Net									
Russell 2000 Index									
<b>Public Real Assets</b>	<b>1,024,266,931</b>	<b>6.80</b>	<b>7.91</b>	<b>18.27</b>	<b>13.19</b>			<b>8.39</b>	<b>8/1/2017</b>
Public Real Assets - Net		6.80	7.83	17.84	12.72			7.96	
Public Real Assets Benchmark		7.23	7.26	16.65	11.31			6.45	
<b>Brookfield</b>	<b>193,837,513</b>	<b>6.49</b>	<b>6.88</b>	<b>21.06</b>	<b>11.86</b>			<b>6.05</b>	<b>8/1/2017</b>
Brookfield - Net		6.49	6.74	20.45	11.28			5.52	
Dow Jones Brookfield Global Infrastructure Composite Index		7.15	6.70	20.23	11.24			5.27	
<b>Cohen &amp; Steers</b>	<b>830,429,418</b>	<b>6.87</b>	<b>8.16</b>	<b>17.32</b>	<b>13.83</b>			<b>9.53</b>	<b>8/1/2017</b>
Cohen & Steers - Net		6.87	8.08	16.94	13.40			9.13	
FTSE Global Core Infrastructure 50/50 Index (Net)		7.27	7.54	14.88	11.31			7.01	

Benchmark definitions in glossary.

# Performance

*Periods Ended December 31, 2021*

	Market Value \$	Performance (%)							
		1 Month	QTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
<b>International Equity</b>	<b>10,213,451,507</b>	<b>3.89</b>	<b>0.59</b>	<b>9.78</b>	<b>15.54</b>	<b>11.12</b>	<b>9.13</b>	<b>8.08</b>	<b>9/1/1986</b>
International Equity - Net		3.89	0.45	9.37	15.13	10.74	8.77		
MSCI AC World ex USA (Net)		4.13	1.82	7.82	13.18	9.61	7.28		
International Equity IMRF Custom Benchmark		3.86	1.34	7.30	13.17	9.67			
<b>Intl LargeCap Equity</b>	<b>7,955,485,855</b>	<b>4.47</b>	<b>1.46</b>	<b>12.60</b>	<b>15.67</b>	<b>11.14</b>	<b>9.26</b>	<b>8.10</b>	<b>9/1/1986</b>
Intl LargeCap Equity - Net		4.47	1.32	12.25	15.34	10.83	8.96		
MSCI AC World ex USA (Net)		4.13	1.82	7.82	13.18	9.61	7.28		
<b>Intl Large Cap Grwth</b>	<b>1,775,800,868</b>	<b>2.98</b>	<b>1.09</b>	<b>11.63</b>	<b>20.89</b>	<b>13.93</b>	<b>10.24</b>	<b>9.52</b>	<b>9/1/2002</b>
Intl Large Cap Grwth - Net		2.98	0.96	11.25	20.53	13.62	9.89		
MSCI AC World ex USA (Net)		4.13	1.82	7.82	13.18	9.61	7.28	7.68	
MSCI AC World ex USA Growth (Net)		3.01	2.37	5.09	17.82	13.06	9.13	8.37	
<b>EARNEST Part. Intl</b>	<b>633,247,732</b>	<b>4.73</b>	<b>1.08</b>	<b>14.55</b>	<b>15.32</b>	<b>10.79</b>	<b>7.87</b>	<b>9.49</b>	<b>10/1/2004</b>
EARNEST Part. Intl - Net		4.73	1.03	14.33	15.11	10.58	7.58		
MSCI AC World ex USA (Net)		4.13	1.82	7.82	13.18	9.61	7.28	6.51	
MSCI AC World ex USA Growth (Net)		3.01	2.37	5.09	17.82	13.06	9.13	7.64	
<b>William Blair</b>	<b>1,142,553,136</b>	<b>2.04</b>	<b>1.10</b>	<b>10.16</b>	<b>24.72</b>	<b>16.08</b>	<b>12.06</b>	<b>11.05</b>	<b>10/1/2002</b>
William Blair - Net		2.04	0.91	9.70	24.27	15.66	11.63		
MSCI AC World ex USA (Net)		4.13	1.82	7.82	13.18	9.61	7.28	8.34	
MSCI AC World ex USA Growth (Net)		3.01	2.37	5.09	17.82	13.06	9.13	8.93	
<b>Intl Large Cap Val.</b>	<b>1,391,290,279</b>	<b>5.18</b>	<b>0.57</b>	<b>10.63</b>	<b>9.52</b>	<b>7.18</b>	<b>6.94</b>	<b>8.52</b>	<b>10/1/1995</b>
Intl Large Cap Val. - Net		5.18	0.49	10.30	9.19	6.83	6.56		
MSCI AC World ex USA (Net)		4.13	1.82	7.82	13.18	9.61	7.28	5.68	
MSCI AC World ex USA Value		5.36	1.34	11.13	8.90	6.64	5.90		

# Performance

Periods Ended December 31, 2021

	Market Value \$	Performance (%)							
		1 Month	QTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
<b>Brandes Investment</b>	<b>606,793,349</b>	<b>5.86</b>	<b>0.05</b>	<b>14.33</b>	<b>8.94</b>	<b>6.62</b>	<b>7.17</b>	<b>8.66</b>	<b>1/1/1996</b>
Brandes Investment - Net		5.86	0.00	14.08	8.71	6.37	6.92		
MSCI AC World ex USA (Net)		4.13	1.82	7.82	13.18	9.61	7.28	5.60	
MSCI AC World ex USA Value		5.36	1.34	11.13	8.90	6.64	5.90		
<b>Mondrian</b>	<b>642,066,919</b>	<b>4.75</b>	<b>1.17</b>	<b>8.65</b>	<b>9.87</b>	<b>7.57</b>		<b>5.90</b>	<b>4/1/2012</b>
Mondrian - Net		4.75	1.07	8.22	9.41	7.09		5.41	
MSCI AC World ex USA (Net)		4.13	1.82	7.82	13.18	9.61		6.31	
MSCI AC World ex USA Value		5.36	1.34	11.13	8.90	6.64		4.94	
<b>Lazard</b>	<b>142,430,011</b>	<b>4.32</b>	<b>0.11</b>	<b>4.85</b>	<b>12.12</b>	<b>9.12</b>		<b>6.97</b>	<b>4/1/2012</b>
Lazard - Net		4.32	0.05	4.59	11.84	8.85		6.49	
MSCI AC World ex USA (Net)		4.13	1.82	7.82	13.18	9.61		6.31	
MSCI AC World ex USA Value		5.36	1.34	11.13	8.90	6.64		4.94	
<b>Intl Large Cap Active Core</b>	<b>2,774,545,977</b>	<b>5.45</b>	<b>1.56</b>	<b>15.50</b>	<b>17.70</b>	<b>12.93</b>	<b>11.05</b>	<b>6.65</b>	<b>2/1/2008</b>
Intl Large Cap Active Core - Net		5.45	1.29	14.90	17.07	12.37	10.48		
MSCI AC World ex USA (Net)		4.13	1.82	7.82	13.18	9.61	7.28	3.68	
<b>Arrowstreet Capital</b>	<b>1,108,573,867</b>	<b>6.37</b>	<b>1.43</b>	<b>18.23</b>	<b>21.67</b>	<b>15.33</b>	<b>12.35</b>	<b>7.63</b>	<b>3/1/2008</b>
Arrowstreet Capital - Net		6.37	1.31	17.71	21.12	14.81	11.84	7.13	
MSCI AC World ex USA (Net)		4.13	1.82	7.82	13.18	9.61	7.28	3.49	
<b>Brown Capital</b>	<b>667,668,782</b>	<b>3.58</b>	<b>1.19</b>	<b>8.90</b>	<b>18.85</b>	<b>13.28</b>	<b>12.09</b>	<b>9.06</b>	<b>10/1/2004</b>
Brown Capital - Net		3.58	0.43	7.89	18.03	12.58	11.19		
MSCI AC World ex USA (Net)		4.13	1.82	7.82	13.18	9.61	7.28	6.51	
<b>GlobeFlex Capital</b>	<b>888,587,956</b>	<b>5.79</b>	<b>1.95</b>	<b>18.39</b>	<b>14.09</b>	<b>10.46</b>	<b>9.49</b>	<b>5.88</b>	<b>3/1/2006</b>
GlobeFlex Capital - Net		5.79	1.86	18.00	13.64	10.04	9.05	5.44	
MSCI AC World ex USA (Net)		4.13	1.82	7.82	13.18	9.61	7.28	4.70	

Benchmark definitions in glossary.



# Performance

Periods Ended December 31, 2021

	Market Value \$	Performance (%)							
		1 Month	QTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
<b>Xponance Intl EQ</b>	<b>108,889,659</b>	<b>5.05</b>	<b>2.15</b>					<b>13.52</b>	<b>2/1/2021</b>
Xponance Intl EQ - Net		5.05	1.99					13.02	
MSCI EAFE Index (Net)		5.12	2.69					12.46	
<b>Progress Intl Equity</b>	<b>705,844</b>								
<b>Intl Large Cap Passive Core</b>	<b>2,013,848,731</b>	<b>3.98</b>	<b>2.26</b>	<b>11.19</b>	<b>13.80</b>	<b>9.88</b>	<b>8.40</b>	<b>4.57</b>	<b>2/1/2000</b>
Intl Large Cap Passive Core - Net		3.98	2.26	11.18	13.79	9.87	8.40		
International Large Cap Passive Core Benchmark		4.13	1.82	10.32	13.22	9.36	7.94	4.15	
<b>NTGI ACWI ex US Index</b>	<b>2,013,848,731</b>	<b>3.96</b>	<b>2.25</b>					<b>2.25</b>	<b>10/1/2021</b>
NTGI ACWI ex US Index - Net		3.96	2.25					2.25	
MSCI AC World ex USA (Net)		4.13	1.82					1.82	
<b>Intl All Cap Developed</b>	<b>178,770,019</b>	<b>6.12</b>	<b>5.45</b>	<b>16.33</b>				<b>11.83</b>	<b>2/1/2019</b>
Intl All Cap Developed - Net		6.12	5.32	15.77				11.33	
MSCI EAFE + Canada (Net)		5.08	3.14	12.62				11.82	
<b>Ativo International</b>	<b>178,770,019</b>	<b>6.12</b>	<b>5.45</b>	<b>16.33</b>				<b>11.83</b>	<b>2/1/2019</b>
Ativo International - Net		6.12	5.32	15.77				11.33	
MSCI EAFE + Canada (Net)		5.08	3.14	12.62				11.82	
<b>Intl Small Cap Eqty</b>	<b>721,707,021</b>	<b>2.95</b>	<b>-0.01</b>	<b>12.99</b>	<b>21.91</b>	<b>14.04</b>	<b>11.72</b>	<b>6.74</b>	<b>12/1/2005</b>
Intl Small Cap Eqty - Net		2.95	-0.20	12.20	21.03	13.20	10.89		
MSCI AC World ex USA Small Cap (Net)		4.23	0.62	12.93	16.46	11.21	9.46	7.20	
Custom Benchmark (Intl Small Cap)		4.23	0.62	12.93	16.46	11.21	9.46	6.57	
<b>Franklin Templeton</b>	<b>257,093,975</b>	<b>4.59</b>	<b>0.61</b>	<b>12.74</b>	<b>15.57</b>	<b>11.48</b>	<b>10.42</b>	<b>7.67</b>	<b>8/1/2011</b>
Franklin Templeton - Net		4.59	0.43	11.98	14.75	10.68	9.62	6.90	
MSCI AC World ex USA Small Cap (Net)		4.23	0.62	12.93	16.46	11.21	9.46	6.79	

Benchmark definitions in glossary.

# Performance

*Periods Ended December 31, 2021*

	Market Value \$	Performance (%)							
		1 Month	QTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
<b>William Blair IntSC</b>	<b>464,613,046</b>	<b>2.07</b>	<b>-0.36</b>	<b>13.13</b>	<b>26.17</b>	<b>15.58</b>	<b>12.50</b>	<b>11.82</b>	<b>9/1/2010</b>
William Blair IntSC - Net		2.07	-0.55	12.32	25.24	14.71	11.64	10.98	
MSCI AC World ex USA Small Cap (Net)		4.23	0.62	12.93	16.46	11.21	9.46	8.45	
Custom Benchmark (Intl Small Cap)		4.23	0.62	12.93	16.46	11.21	9.46	8.71	
<b>Emerging Mkt Equity</b>	<b>1,357,488,612</b>	<b>0.86</b>	<b>-4.44</b>	<b>-6.35</b>	<b>12.88</b>	<b>10.49</b>	<b>6.89</b>	<b>8.98</b>	<b>2/1/1992</b>
Emerging Mkt Equity - Net		0.81	-4.57	-6.87	12.25	9.85	6.28		
MSCI Emerging Markets Index		1.92	-1.24	-2.22	11.33	10.26	5.87	7.23	
<b>Genesis Asset Mngrs.</b>	<b>1,357,488,612</b>	<b>0.86</b>	<b>-4.44</b>	<b>-6.35</b>	<b>12.88</b>	<b>10.49</b>	<b>6.89</b>	<b>10.75</b>	<b>5/1/2004</b>
Genesis Asset Mngrs. - Net		0.81	-4.57	-6.87	12.25	9.85	6.28		
MSCI Emerging Markets Index		1.92	-1.24	-2.22	11.33	10.26	5.87	8.90	

# Performance

Periods Ended December 31, 2021

	Market Value \$	Performance (%)							
		1 Month	QTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
<b>Fixed Income</b>	<b>13,159,667,791</b>	<b>0.06</b>	<b>0.00</b>	<b>-0.44</b>	<b>5.55</b>	<b>4.22</b>	<b>3.88</b>	<b>7.96</b>	<b>1/1/1982</b>
Fixed Income - Net		0.05	-0.03	-0.53	5.44	4.09	3.73		
Blmbg. U.S. Aggregate		-0.26	0.01	-1.55	4.79	3.57	2.90	7.42	
Fixed Income IMRF Custom Benchmark		-0.05	0.07	-0.85	5.10	3.82			
<b>Active Fixed Core</b>	<b>4,300,008,101</b>	<b>-0.23</b>	<b>0.05</b>	<b>-0.91</b>	<b>5.06</b>	<b>3.90</b>	<b>3.45</b>	<b>4.48</b>	<b>4/1/2001</b>
ActiveCore Fixed Inc - Net		-0.23	0.03	-1.01	4.95	3.79	3.31		
Blmbg. U.S. Aggregate		-0.26	0.01	-1.55	4.79	3.57	2.90	4.43	
<b>Attucks Fixed Income</b>	<b>99,778,376</b>	<b>-0.37</b>	<b>0.03</b>					<b>-0.16</b>	<b>2/1/2021</b>
Attucks Fixed Income - Net		-0.37	-0.05					-0.40	
Blmbg. U.S. Aggregate		-0.26	0.01					-0.83	
<b>Brandes FI Core</b>	<b>374,372,550</b>	<b>-0.06</b>	<b>-0.08</b>	<b>-1.28</b>	<b>4.56</b>	<b>3.41</b>		<b>2.90</b>	<b>3/1/2016</b>
Brandes FI Core - Net		-0.06	-0.10	-1.29	4.55	3.41		2.89	
Blmbg. U.S. Aggregate		-0.26	0.01	-1.55	4.79	3.57		3.15	
<b>EARNEST Partners</b>	<b>1,024,001,258</b>	<b>-0.32</b>	<b>-0.01</b>	<b>-0.51</b>	<b>5.02</b>	<b>3.95</b>	<b>3.46</b>	<b>4.46</b>	<b>5/1/2005</b>
EARNEST Partners - Net		-0.32	-0.04	-0.64	4.89	3.81	3.28	4.27	
Blmbg. U.S. Aggregate		-0.26	0.01	-1.55	4.79	3.57	2.90	4.03	
<b>Garcia Hamilton</b>	<b>1,088,146,596</b>	<b>-0.29</b>	<b>0.13</b>	<b>-2.01</b>	<b>4.57</b>	<b>3.70</b>		<b>3.32</b>	<b>6/1/2015</b>
Garcia Hamilton - Net		-0.29	0.11	-2.09	4.49	3.61		3.23	
Blmbg. U.S. Aggregate		-0.26	0.01	-1.55	4.79	3.57		3.04	
<b>Ramirez Asset Management</b>	<b>600,486,115</b>	<b>-0.39</b>	<b>-0.26</b>	<b>-0.16</b>				<b>3.59</b>	<b>5/1/2020</b>
Ramirez Asset Management - Net		-0.39	-0.26	-0.30				3.46	
Blmbg. U.S. Aggregate		-0.26	0.01	-1.55				0.49	
<b>Xponance Yield Advantage Agg.</b>	<b>1,113,223,206</b>	<b>-0.06</b>	<b>0.19</b>	<b>-0.13</b>	<b>5.63</b>	<b>4.08</b>	<b>3.56</b>	<b>4.35</b>	<b>6/1/2005</b>
Xponance Yield Advantage Agg. - Net		-0.06	0.16	-0.26	5.50	3.94	3.40	4.17	
Blmbg. U.S. Aggregate		-0.26	0.01	-1.55	4.79	3.57	2.90	3.98	

Benchmark definitions in glossary.

# Performance

Periods Ended December 31, 2021

	Market Value \$	Performance (%)							
		1 Month	QTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
<b>Pass. Core Fixed Inc</b>	<b>3,654,995,037</b>	<b>-0.30</b>	<b>-0.04</b>	<b>-1.58</b>	<b>4.84</b>	<b>3.62</b>	<b>2.95</b>	<b>5.74</b>	<b>1/1/1990</b>
Pass. Core Fixed Inc - Net		-0.30	-0.04	-1.58	4.83	3.62	2.94		
Blmbg. U.S. Aggregate		-0.26	0.01	-1.55	4.79	3.57	2.90	5.72	
<b>BlackRock US Debt I</b>	<b>1,837,987,280</b>	<b>-0.32</b>	<b>-0.05</b>	<b>-1.57</b>	<b>4.86</b>	<b>3.65</b>		<b>3.35</b>	<b>10/1/2013</b>
BlackRock US Debt I - Net		-0.32	-0.05	-1.58	4.85	3.65		3.35	
Blmbg. U.S. Aggregate		-0.26	0.01	-1.55	4.79	3.57		3.25	
<b>NTGI Blmbg Agg.</b>	<b>1,817,007,757</b>	<b>-0.28</b>	<b>-0.03</b>	<b>-1.58</b>	<b>4.82</b>	<b>3.60</b>	<b>2.93</b>	<b>5.78</b>	<b>2/1/1990</b>
NTGI Blmbg Agg. - Net		-0.28	-0.03	-1.59	4.81	3.59	2.92		
Blmbg. U.S. Aggregate		-0.26	0.01	-1.55	4.79	3.57	2.90	5.77	
<b>Core Plus Fixed Income</b>	<b>3,407,077,560</b>	<b>0.16</b>	<b>-0.04</b>	<b>-1.02</b>	<b>6.19</b>	<b>4.52</b>	<b>4.05</b>	<b>7.86</b>	<b>1/1/1982</b>
Core Plus Fixed Inc. - Net		0.15	-0.07	-1.17	6.02	4.35	3.87		
Blmbg. U.S. Aggregate		-0.26	0.01	-1.55	4.79	3.57	2.90	7.42	
<b>LM Capital Group FI</b>	<b>959,042,988</b>	<b>0.16</b>	<b>-0.12</b>	<b>-1.50</b>	<b>6.17</b>	<b>4.25</b>	<b>3.78</b>	<b>4.83</b>	<b>5/1/2005</b>
LM Capital Group FI - Net		0.16	-0.16	-1.65	6.01	4.09	3.62	4.66	
Blmbg. U.S. Aggregate		-0.26	0.01	-1.55	4.79	3.57	2.90	4.03	
<b>Progress Inv. FI</b>	<b>1,650</b>								
<b>BMO - TCH</b>	<b>661,962,167</b>	<b>0.02</b>	<b>-0.07</b>	<b>-0.41</b>	<b>5.75</b>	<b>4.41</b>	<b>4.30</b>	<b>4.91</b>	<b>5/1/2005</b>
BMO - TCH - Net		0.02	-0.10	-0.55	5.61	4.27	4.16	4.78	
Blmbg. U.S. Aggregate		-0.26	0.01	-1.55	4.79	3.57	2.90	4.03	
<b>Western Asset</b>	<b>1,130,766,162</b>	<b>0.34</b>	<b>-0.05</b>	<b>-1.25</b>	<b>6.61</b>	<b>4.99</b>	<b>4.52</b>	<b>5.41</b>	<b>11/1/2001</b>
Western Asset - Net		0.31	-0.09	-1.39	6.49	4.86	4.38		
Blmbg. U.S. Aggregate		-0.26	0.01	-1.55	4.79	3.57	2.90	4.19	
<b>Longfellow Core Plus</b>	<b>655,304,594</b>	<b>-0.03</b>	<b>0.32</b>	<b>0.47</b>				<b>3.62</b>	<b>5/1/2020</b>
Longfellow Core Plus - Net		-0.03	0.31	0.30				3.47	
Blmbg. U.S. Aggregate		-0.26	0.01	-1.55				0.49	

Benchmark definitions in glossary.

# Performance

*Periods Ended December 31, 2021*

	Market Value \$	Performance (%)							
		1 Month	QTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
<b>Bank Loans</b>	<b>734,087,200</b>	<b>0.76</b>	<b>0.79</b>	<b>6.63</b>	<b>5.58</b>	<b>4.56</b>		<b>4.57</b>	<b>8/1/2014</b>
Bank Loans - Net		0.76	0.77	6.61	5.49	4.29		4.20	
Custom Benchmark		0.62	0.78	5.43	5.53	4.51		4.25	
<b>Barings Global Loan Fund</b>	<b>734,087,200</b>	<b>0.76</b>	<b>0.79</b>	<b>6.63</b>	<b>5.58</b>	<b>4.56</b>		<b>4.57</b>	<b>8/1/2014</b>
Barings Global Loan Fund - Net		0.76	0.77	6.61	5.49	4.29		4.20	
Custom Benchmark		0.62	0.78	5.43	5.53	4.51		4.25	
<b>Emerging Markets Debt</b>	<b>223,383,314</b>	<b>1.57</b>	<b>-2.23</b>	<b>-5.97</b>	<b>4.42</b>	<b>3.95</b>		<b>2.44</b>	<b>8/1/2014</b>
Emerging Markets Debt - Net		1.57	-2.23	-6.22	4.09	3.60		2.11	
Custom Benchmark		1.28	-1.80	-5.66	4.05	3.79		1.95	
<b>Standish-Mellon EMD</b>	<b>223,383,314</b>	<b>1.57</b>	<b>-2.23</b>	<b>-5.97</b>	<b>4.42</b>	<b>3.95</b>		<b>2.44</b>	<b>8/1/2014</b>
Standish EM MRK - Net		1.57	-2.23	-6.22	4.09	3.60		2.11	
Custom Benchmark		1.28	-1.80	-5.66	4.05	3.79		1.95	
<b>High Yield</b>	<b>839,906,376</b>	<b>1.81</b>	<b>0.47</b>	<b>6.53</b>	<b>9.40</b>	<b>6.91</b>	<b>7.28</b>	<b>9.40</b>	<b>4/1/1986</b>
High Yield - Net		1.73	0.39	6.19	9.05	6.56	6.90		
ICE BofAML US High Yield, Cash Pay Index		1.92	0.69	5.28	8.55	6.09	6.69	8.17	
<b>MacKay Shields</b>	<b>839,715,134</b>	<b>1.79</b>	<b>0.45</b>	<b>6.51</b>	<b>9.40</b>	<b>6.90</b>	<b>7.32</b>	<b>8.67</b>	<b>11/1/2000</b>
MacKay Shields - Net		1.71	0.37	6.16	9.05	6.54	6.94		
ICE BofAML US High Yield, Cash Pay Index		1.92	0.69	5.28	8.55	6.09	6.69	7.43	

# 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:
	1/1/2021	Present	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	1/1/2015	Present	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 Composi, 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