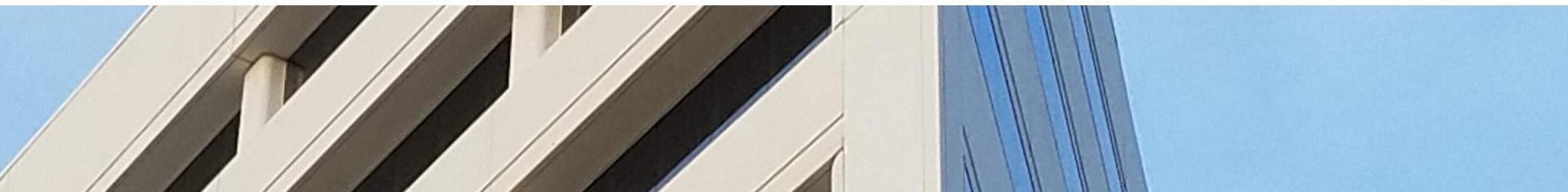




WILSHIRE ASSOCIATES

Wilshire Consulting



Monthly Performance Review

As of August 31, 2020



Capital Market Review

Economic Review

Market Commentary

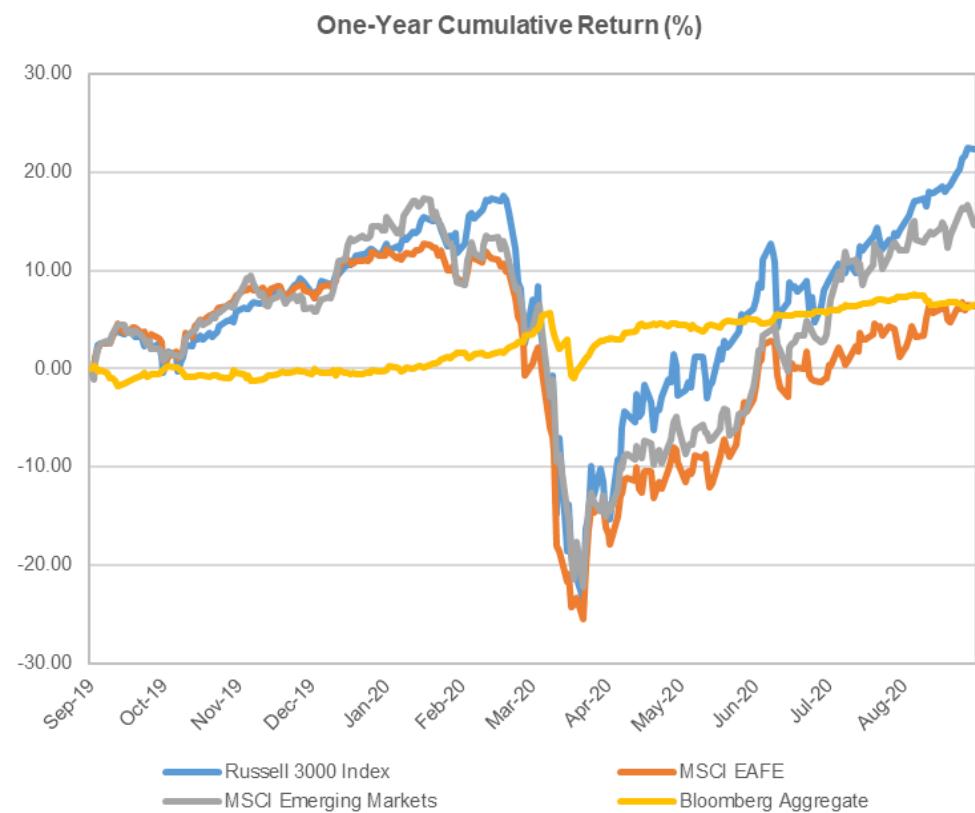
Global markets, particularly risk-oriented assets, continued its strong rally during the month of August. Although the COVID-19 virus continued to spread globally, now reaching 25 million cases, up from 10 million at the start of July, investors were encouraged by better-than-expected second quarter earnings results and the continued optimism for a near-term virus vaccine.

U.S. Equities continued their strong recovery following the March 2020 sell-off, posting its fifth straight month of positive returns in August. Year-to-date, the U.S. Equity market is up 9.4% after posting a +60% return since the market trough on March 23rd.

Unemployment in the United States ticked lower during August having added 1.4 million jobs in the month. The unemployment rate fell nearly to 8.4% by the end of August.

Manufacturing in the United States, marked by the ISM Manufacturing Index, rose to 56.0 during the month, outpacing market expectations of 54.5. Noteworthy, is the reading marked the biggest expansion in manufacturing since November of 2018 as August was the first full month of operations as employees began to return to work.

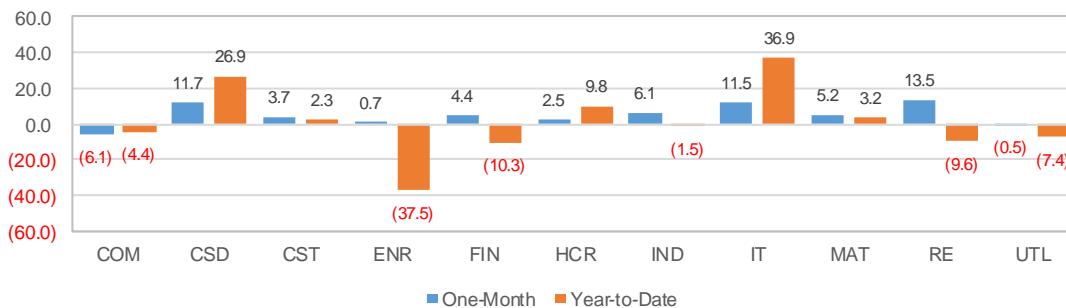
Consumer spending also rose higher during August. The University of Michigan Consumer Sentiment Index rose to 74.1, up from 72.5 during July. Early estimates of the September Sentiment Index suggest a continued improvement to the figure.



U.S. Equity Market

U.S. Equity Indices (%)	MTD	QTD	YTD	1 Year	3 Years	5 Years	10 Years
Russell 3000 Index	7.24	13.33	9.39	21.44	13.93	13.84	14.92
Standard & Poor's 500 Index	7.19	13.23	9.74	21.94	14.50	14.44	15.15
Russell 1000 Index	7.34	13.63	10.43	22.50	14.57	14.29	15.17
Russell 2500 Index	4.53	8.69	(3.32)	6.79	6.93	8.53	12.30
Russell 2000 Index	5.63	8.56	(5.53)	6.02	5.02	7.64	11.52
Russell Micro Cap Index	5.95	7.08	(4.93)	10.32	3.66	6.12	11.08
Russell 1000 Index	7.34	13.63	10.43	22.50	14.57	14.29	15.17
Russell 1000 Growth Index	10.32	18.81	30.47	44.34	24.15	20.63	19.00
Russell 1000 Value Index	4.14	8.25	(9.35)	0.84	4.50	7.52	11.04
Russell 2000 Index	5.63	8.56	(5.53)	6.02	5.02	7.64	11.52
Russell 2000 Growth Index	5.87	9.50	6.15	17.28	10.89	10.44	14.07
Russell 2000 Value Index	5.39	7.56	(17.71)	(6.14)	(1.39)	4.36	8.70
Russell 3000 Index	7.24	13.33	9.39	21.44	13.93	13.84	14.92
GICS - Communication Services	(6.07)	(3.60)	(4.39)	1.74	14.63	12.92	10.02
GICS - Consumer Discretionary	11.68	21.96	26.87	35.33	21.76	17.02	19.00
GICS - Consumer Staples	3.72	10.14	2.27	9.06	5.68	7.34	11.73
GICS - Energy	0.68	(2.97)	(37.45)	(31.46)	(13.47)	(8.97)	(1.60)
GICS - Financials	4.38	8.26	(10.28)	(0.95)	6.58	9.76	12.10
GICS - Health Care	2.53	7.86	9.82	24.87	13.33	11.36	17.27
GICS - Industrials	6.09	11.06	(1.49)	7.71	6.64	8.27	13.67
GICS - Information Technology	11.51	18.78	36.94	59.42	29.34	27.35	21.49
GICS - Materials	5.17	13.30	3.19	14.75	6.32	10.25	10.77
GICS - Real Estate	13.52	16.48	(9.62)	8.65	3.13	2.91	5.89
GICS - Utilities	(0.53)	4.99	(7.43)	(1.92)	5.49	9.18	10.12

Sector Returns (%)



Market Commentary

The U.S. stock market, represented by the Russell 3000 Index, continued its strong recovery during August, up +7.2%, and up +9.4% year-to-date. The U.S. stock market has now returned +60% since its trough on March 23, 2020. Over the trailing one-year, the Russell 3000 Index is up 21.4%.

U.S. equities reached a new high in August despite rising tensions between U.S. and China. The growing trade and political tensions between the two nations was overshadowed by economic data that suggests continued recovery – better-than-expected corporate earnings, lower unemployment and improving consumer sentiment.

Large capitalization stocks outperformed small capitalization stocks during the month, as the Russell 1000 Index returned +7.3% versus +5.6% for the Russell 2000 Index. The Russell Micro Cap Index was up 6.0% for the month.

Growth stocks again led value stocks during August while technology names continued to be strong contributors to market performance.

In addition to Technology, sectors exposed to improving economic conditions, including Industrials and Consumer Discretionary, increased during the month. Utilities and Communication Services were negative for the month.

Of the eleven major sectors in the index, five are positive year-to-date - Consumer Discretionary, Consumer Staples, Health Care, Information Technology and Materials.

Non-U.S. Equity Market

Market Commentary

Equity markets outside of the U.S. again underperformed the U.S. stock market during August, up +4.3% for the month. Year-to-date, Non-U.S. stocks remain negative, down -3.1%; however, over the trailing one-year, Non-U.S. stocks are positive, up +8.3%.

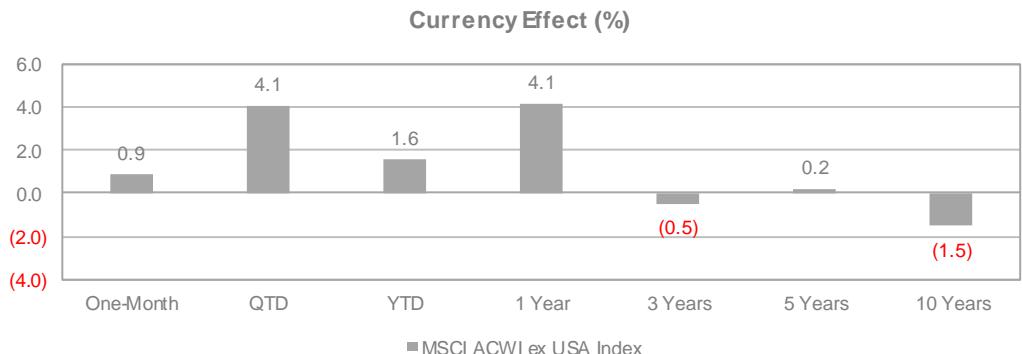
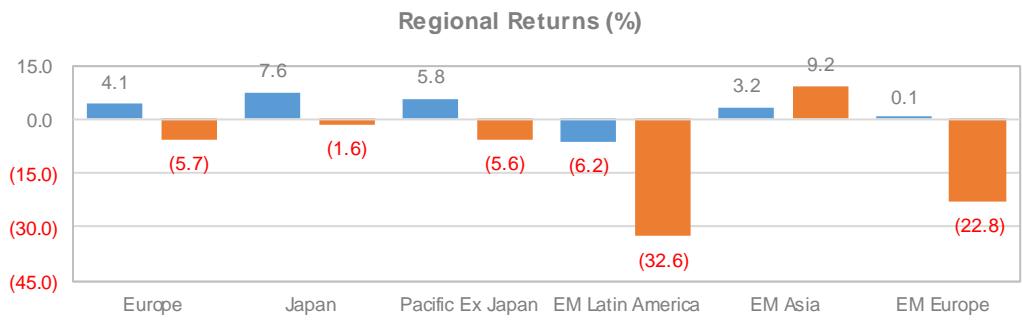
Developed Markets outperformed Emerging Markets during August, a reversal from the prior two months, up +5.1% versus +2.2%. Year-to-date, Emerging Markets have outperformed Developed Markets by over 5.0%.

Significant spikes in COVID-19 cases dominated the news across Europe during August. Countries including France and Spain saw daily new case increases to levels experienced at the height of the pandemic during March and April. Rather than new lockdown restrictions, governments imposed travel restrictions, social distancing measures and the requirement of face masks to help combat the spread of the new cases.

In Asia, COVID-19 cases were mixed during the month, as several countries saw a rise in daily new infections rates, while others saw a continued decline. Reported economic data in China suggests a continued recovery; however, trade relations with the U.S. remain uncertain.

The U.S. Dollar continued to weaken during the month of August, providing a strong tailwind for U.S.-based investors of approximately 0.9%. Over the trailing one-year, the weakening of the U.S. Dollar has gained U.S.-based investors 4.1% of return.

Non-U.S. Equity (USD %)	MTD	QTD	YTD	1 Year	3 Years	5 Years	10 Years
MSCI AC World ex U.S. Index	4.28	8.93	(3.05)	8.32	2.63	5.75	5.25
MSCI EAFE Index	5.14	7.59	(4.61)	6.13	2.34	4.72	5.87
MSCI Emerging Markets Index	2.21	11.34	0.45	14.49	2.83	8.65	3.76
MSCI AC World ex U.S. Small Index	6.58	11.91	(2.41)	10.96	2.08	6.45	6.60
MSCI Europe Index	4.11	8.12	(5.71)	5.43	1.61	3.94	5.70
MSCI Japan Index	7.61	5.90	(1.64)	10.16	4.27	5.80	6.57
MSCI Pacific ex Japan Index	5.77	8.48	(5.60)	1.18	2.06	7.25	5.68
MSCI EM Latin America Index	(6.21)	4.06	(32.60)	(23.59)	(9.80)	1.50	(4.29)
MSCI EM Asia Index	3.21	13.19	9.23	25.35	6.05	11.20	6.70
MSCI EM Europe Index	0.13	2.45	(22.79)	(9.83)	(2.25)	4.30	(1.31)
Local Currency (%)	MTD	QTD	YTD	1 Year	3 Years	5 Years	10 Years
MSCI AC World ex U.S. Index	3.42	4.87	(4.61)	4.20	3.10	5.52	6.79
MSCI EAFE Index	4.10	2.23	(8.53)	(0.38)	1.79	4.01	6.89
MSCI Emerging Markets Index	2.17	10.47	4.39	16.03	5.56	9.61	6.58



Fixed Income Market

Market Commentary

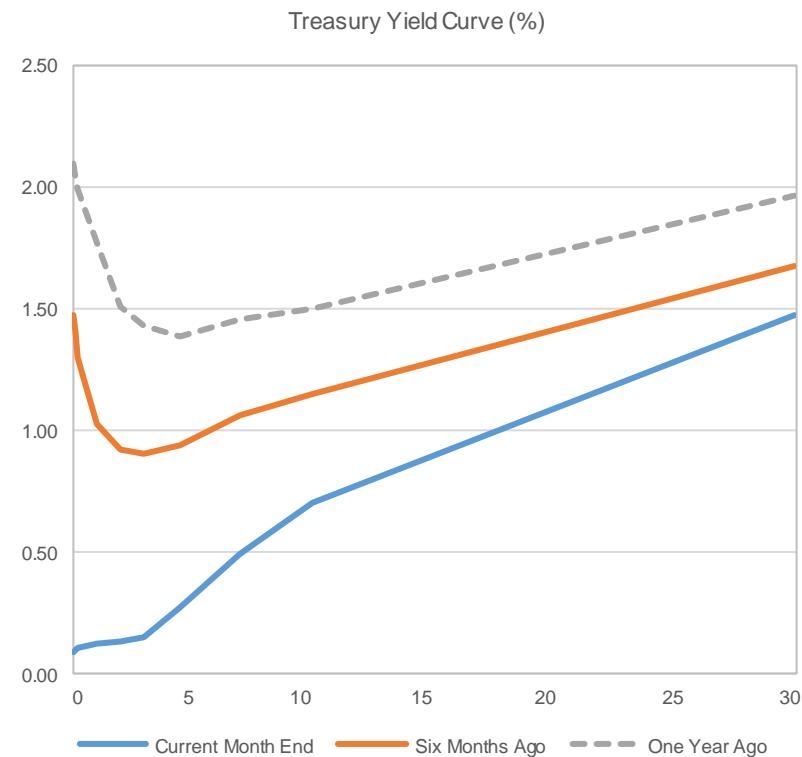
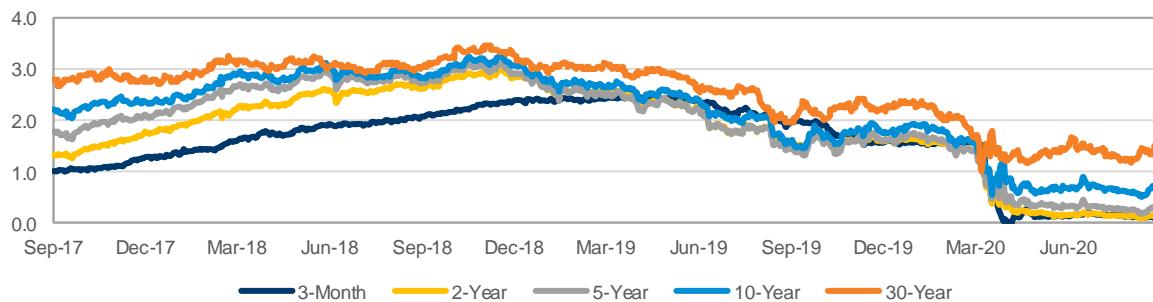
The U.S. Treasury yield curve rose modestly during the month; however, continues to remained depressed across the maturity spectrum. The 10-year Treasury yield ended the month at 0.72%, up 17 bps from July 31, 2020. Also notable, is the continued steepness of the yield curve.

The Federal Reserve's annual Jackson Hole conference proved to be significant for investors. The Fed announced that it would tolerate higher inflation now targeting a 2% average level rather than a 2% target. This announcement suggested to investors that highly accommodative monetary policy will remain in place until further economic recovery is achieved.

Bonds in riskier segments of the market continued to outperform Treasuries during the month as credit spreads modestly contracted.

U.S. Fixed Income	MTD	QTD	YTD	1 Year	3 Years	5 Years	10 Years
Bloomberg Barclays U.S. Aggregate	(0.81)	0.67	6.85	6.47	5.09	4.32	3.65
Bloomberg Barclays Long Gov't/Credit	(3.75)	1.36	14.36	10.92	9.90	8.97	7.29
Bloomberg Barclays LT Treasury	(4.31)	(0.27)	20.88	13.00	10.91	8.44	6.99
Bloomberg Barclays U.S. TIPS	1.09	3.42	9.63	8.99	5.69	4.56	3.67
Bloomberg Barclays U.S. Credit	(1.27)	1.78	6.68	7.10	6.20	5.90	5.01
Bloomberg Barclays U.S. High Yield	0.95	5.68	1.67	4.71	4.88	6.44	6.89
ICE BofA U.S. High Yield Cash Pay	0.99	5.82	0.81	3.74	4.51	6.27	6.67
S&P LSTA Levered Loan Index	1.49	3.48	(1.29)	0.89	3.02	3.74	4.33
ICE BofA US 3-Month Treasury Bill	0.01	0.03	0.62	1.26	1.71	1.20	0.63
Global Fixed Income	MTD	QTD	YTD	1 Year	3 Years	5 Years	10 Years
Bloomberg Barclays Global Aggregate	(0.15)	3.03	6.11	5.54	3.90	4.10	2.63
Bloomberg Barclays Global Aggregate (Hdg.)	(0.72)	0.36	4.27	3.28	4.83	4.36	3.85
JPM GBI-EM Index	(0.48)	3.21	(4.02)	2.50	(0.27)	3.88	1.51
JPM EMBI Global Index	0.30	4.01	2.08	3.84	3.86	6.10	5.57
JPM Corporate EMBI Index	0.91	3.18	3.49	6.25	5.23	6.42	5.95

Daily Treasury Yield Curve Rates (%)



Real Assets Market

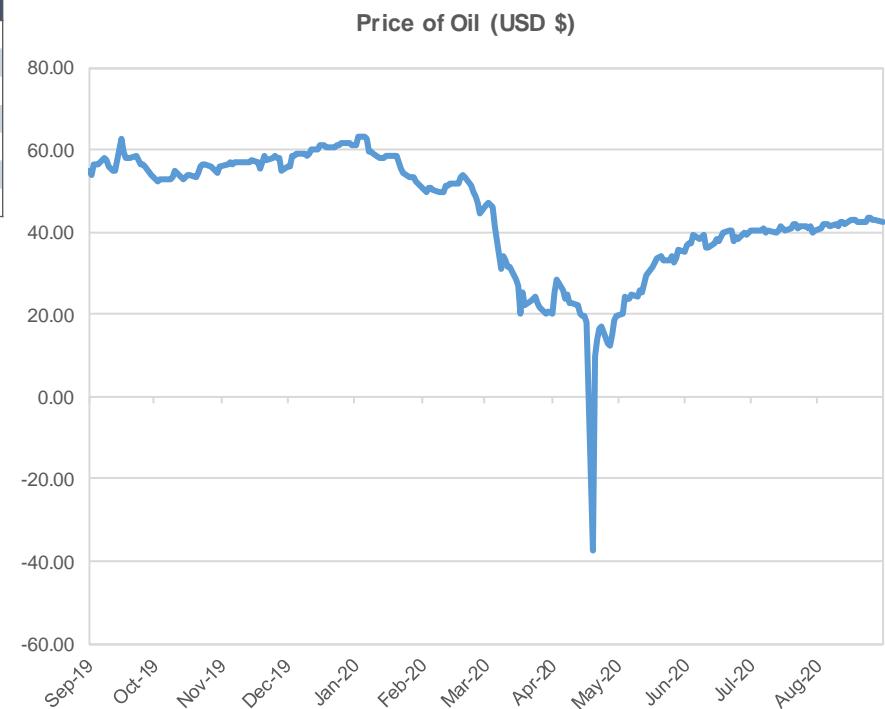
Real Assets	MTD	QTD	YTD	1 Year	3 Years	5 Years	10 Years
Wilshire US RESI	0.41	4.76	(13.97)	(12.53)	1.54	5.23	8.98
Wilshire Global RESI	1.51	4.76	(16.50)	(13.28)	0.38	4.06	7.71
Bloomberg Commodity Index	6.76	12.86	(9.04)	(3.90)	(3.13)	(3.10)	(5.05)
S&P GSCI Index	4.59	8.56	(30.86)	(23.81)	(7.32)	(8.40)	(7.75)
Alerian MLP Index	0.52	(3.05)	(37.67)	(39.79)	(16.58)	(11.91)	(2.17)
DJ Brookfield Global Infrastructure	(0.32)	1.69	(9.92)	(5.03)	2.61	6.18	8.74
FTSE Global 50/50 Infrastructure	0.39	3.34	(10.06)	(4.78)	3.25	7.65	9.19

Market Commentary

U.S. real estate securities were up modestly during August, +0.4%. Similarly, global real estate securities were up, as well, up +1.5%.

The S&P GSCI Index (Commodities Index) was also up for the month, with Agriculture leading the way in the index. Energy was also positive in the index, driven by increased demand as economic activity continued to pick up globally.

Crude oil was up nearly +6.0% for the month, ending at \$42.61 per barrel. Year-to-date; crude oil remains negative, down -30.2%, ending 2019 at \$61.06 per barrel.





IMRF Performance

IMRF Commentary

IMRF Commentary

The Illinois Municipal Retirement Fund (“IMRF”) ended August 2020 with a market value of \$46.1 billion, up for the month by approximately \$1.7 billion. The Fund returned +3.70% for the month, outperforming the Total Fund Benchmark, which returned +3.28%.

Entering the month, the allocation to U.S. Equity, on average, was overweight by 4.00% versus the Total Fund Benchmark. Given the continued strong performance within the U.S. Equity market (the U.S. Equity market returned +7.24% during the month), an overweight position added relative value versus the Total Fund Benchmark.

The U.S. Equity Portfolio underperformed the benchmark for the month returning +6.84% versus +7.24%. The Portfolio’s overweight position to Small Cap was one of the primary drivers of relative underperformance, as Small Cap stocks returned +5.63% during the month. Investment manager performance was mixed within U.S. Equity during August, as managers within the Large Cap Portfolio, in aggregate, added relative value versus their benchmarks, and managers within the Small Cap and Micro Cap Portfolios, trailed their benchmark during the month.

The Public Real Assets Portfolio underperformed its benchmark for the month returning -0.23% versus +0.11%.

The International Equity Portfolio outpaced the return of the benchmark during August, +4.35% versus +4.28%. In aggregate, investment managers within Large Cap Growth, and Emerging Markets added value by outperforming their respective benchmarks, while Large Cap Value, Large Cap Core and Small Cap, in aggregate trailed their benchmarks during the month. The Portfolio’s allocation to Small Cap contributed to relative outperformance, returning +5.72% during the month.

Although Fixed Income markets were negative for the month as the yield curve modestly rose (bond prices and yields move inversely of each other), the IMRF Fixed Income Portfolio continued to benefit from its credit exposure as risk-oriented fixed income investments outperformed government bonds during the month. The Portfolio outperformed its benchmark during August, returning -0.33% versus -0.81%. Positions in Corporate Credit, High Yield and Emerging Markets added value as credit spreads compressed during the month in both investment grade and below-investment grade fixed income.

Current policy states that when actual allocations of the asset classes differ by more than four percentage points from their policy target, a recommendation for rebalancing will be made to the Board of Trustees. As of August month end, Domestic Equity was 5.4% over its target. The Chief Investment Officer and Consultant do not recommend any rebalancing at this time.

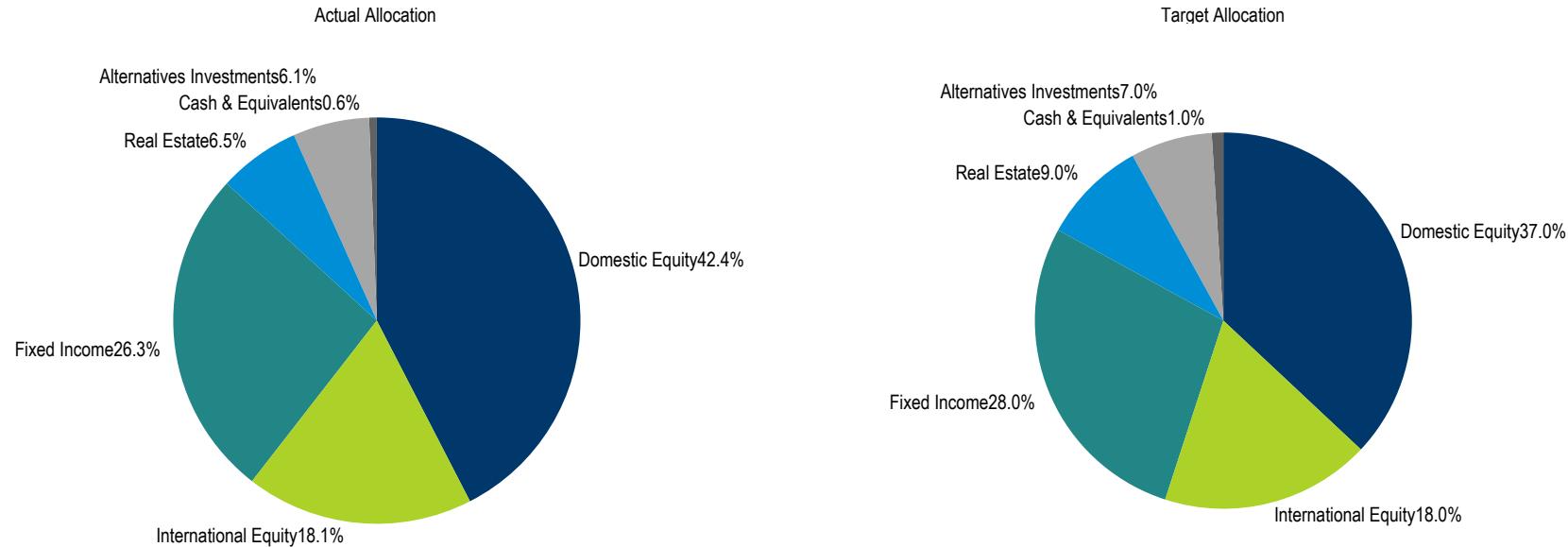


Total Fund

Asset Allocation

Total Fund

Periods Ended As of August 31, 2020

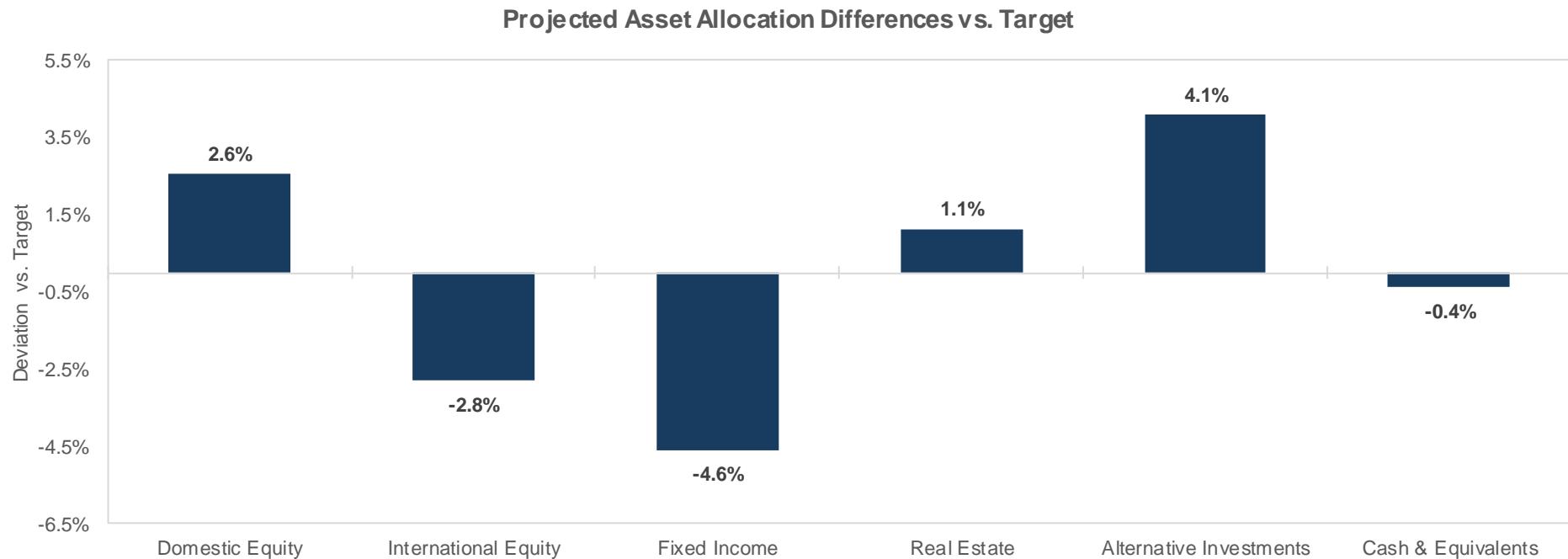


■ Domestic Equity ■ International Equity ■ Fixed Income ■ Real Estate ■ Alternatives Investments ■ Cash & Equivalents

	Actual Allocation \$Millions	Actual Allocation %	Target Allocation %	Differences %	Differences \$Millions
Total Fund	46,075	100.0	100.0	0.0	
■ Domestic Equity	19,551	42.4	37.0	5.4	2,503
■ International Equity	8,326	18.1	18.0	0.1	32
■ Fixed Income	12,114	26.3	28.0	-1.7	-787
■ Real Estate	3,005	6.5	9.0	-2.5	-1,142
■ Alternatives Investments	2,798	6.1	7.0	-0.9	-427
■ Cash & Equivalents	281	0.6	1.0	-0.4	-179

Projected Deviation From Benchmark

Period Ending August 31, 2020

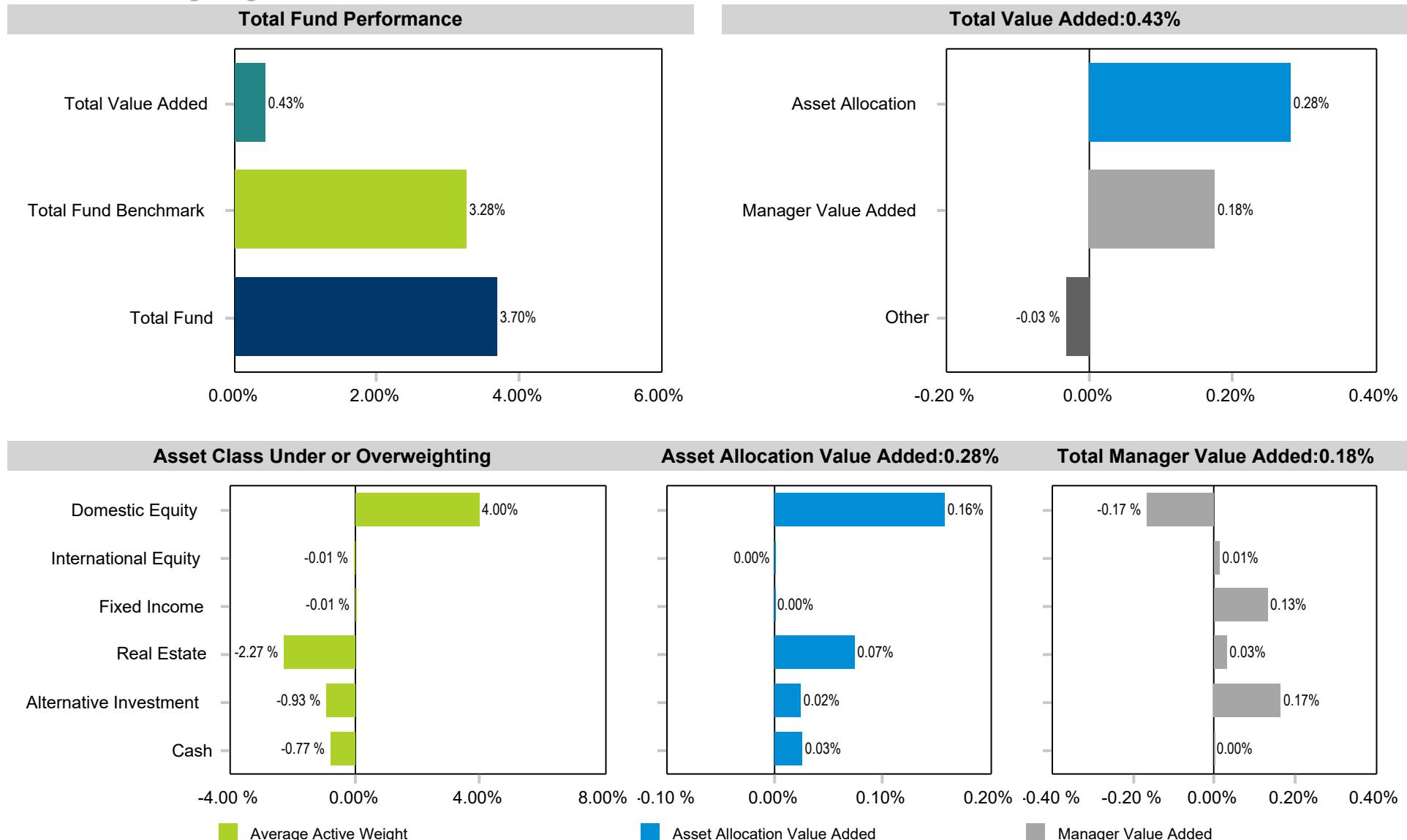


- Includes committed, but unfunded amounts for real estate (\$1,668.1 million) and alternatives (\$2,308.4 million). Assumes real estate and alternatives allocations are fully funded as of quarter end.
- Assumes that outstanding commitments are funded equally from the public markets asset classes (one-third from U.S. Equity, one-third from International Equity, and one-third from Fixed Income).

Total Fund Attribution

Total Fund

1 Month Ending August 31, 2020



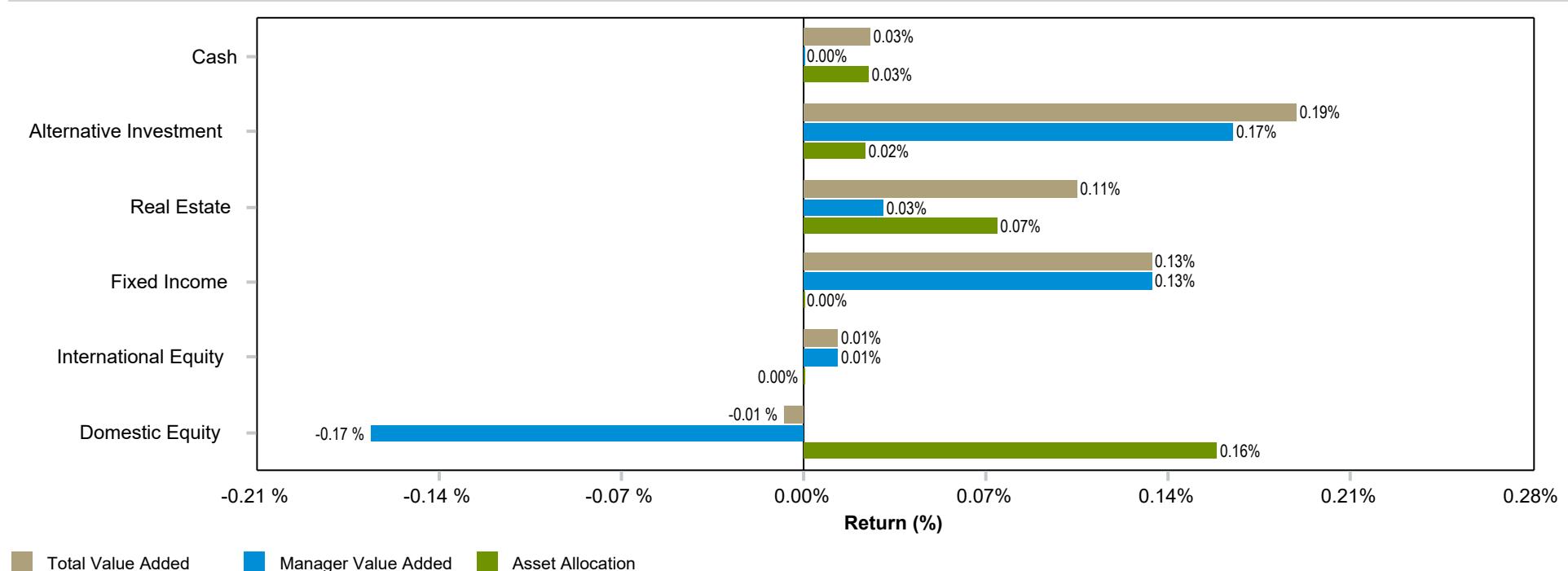
Total Fund Benchmark = 37.0% Russell 3000 Index, 28.0% Blmbg Aggregate, 18.0% MSCI ACWI ex US, 9.0% NCREIF NFI-ODCE Val Wt Nt, 7.0% 9% Annually and 1.0% 3-month Treasury Bill.

Total Fund Attribution

Total Fund

1 Month Ending August 31, 2020

Relative Attribution by Asset Class



	Relative Attribution Effects						
	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	41.0	37.0	6.84	7.24	-0.17	0.16	-0.01
International Equity	18.0	18.0	4.35	4.28	0.01	0.00	0.01
Fixed Income	28.0	28.0	-0.33	-0.81	0.13	0.00	0.13
Real Estate	6.7	9.0	0.46	0.00	0.03	0.07	0.11
Alternative Investment	6.1	7.0	3.44	0.72	0.17	0.02	0.19
Cash	0.2	1.0	0.12	0.01	0.00	0.03	0.03
Total Fund	100.0	100.0	3.70	3.28	0.18	0.28	0.43

Total Fund Benchmark = 37.0% Russell 3000 Index, 28.0% Blmbg Aggregate, 18.0% MSCI ACWI ex US, 9.0% NCREIF NFI-ODCE Val Wt Nt, 7.0% 9% Annually and 1.0% 3-month Treasury Bill.

Asset Class Returns

Periods Ended August 31, 2020

	Performance (%)										
	1 Month	QTD	YTD	1 Year	3 Years	5 Years	10 Years	20 Years	30 Years	Since Inception	Inception Date
Total Fund	3.73	7.48	4.88	12.19	8.30	8.77	9.56	6.41	8.71	9.85	1/1/1982
Total Fund - Net	3.70	7.44	4.75	12.00	8.11	8.56	9.33				
Total Fund Benchmark	3.28	6.76	5.75	12.47	8.43	8.81	9.19				
Domestic Equity	6.87	12.52	7.78	19.83	12.54	12.50	14.50	6.63	11.04	11.67	1/1/1982
Domestic Equity - Net	6.84	12.47	7.63	19.61	12.32	12.27	14.25				
Blended Benchmark (U.S. Equity)	7.24	13.33	9.39	21.44	13.95	13.86	14.93	6.65	10.66		
U.S. Equity IMRF Custom Benchmark	6.97	12.71	6.24	17.89	11.74	12.32					
International Equity	4.40	9.43	-2.45	9.46	3.46	6.53	6.85	5.34	6.89	7.63	9/1/1986
International Equity - Net	4.35	9.36	-2.70	9.08	3.13	6.17	6.51				
MSCI AC World ex USA (Net)	4.28	8.93	-3.05	8.31	2.63	5.75	5.26	4.00			
International Equity IMRF Custom Benchmark	4.35	9.13	-2.89	8.76	2.61	5.80					
Fixed Income	-0.31	1.58	6.16	6.36	5.19	4.89	4.54	5.64	6.71	8.22	1/1/1982
Fixed Income - Net	-0.33	1.56	6.08	6.24	5.06	4.74	4.39				
Bloomberg Barc. U.S. Aggregate	-0.81	0.67	6.85	6.47	5.09	4.33	3.65	5.05	6.05	7.72	
Fixed Income IMRF Custom Benchmark	-0.58	1.14	6.03	6.07	4.99	4.49					
Real Estate	0.48	1.03	1.68	4.40	7.76	8.58	10.72	7.72	4.93	5.50	5/1/1985
Real Estate - Net	0.46	1.01	1.66	4.36	7.73	8.55	10.71				
Blended Benchmark (Real Estate)	0.00	0.00	-1.01	0.61	4.34	5.87	9.59	7.08	7.28	7.51	
Alternatives Investments	3.45	4.80	3.02	5.50	11.50	9.77	9.36	5.96	11.56	10.74	2/1/1986
Alternatives Investments - Net	3.44	4.79	3.00	5.47	11.40	9.60	9.12				
Alternatives Custom Benchmark	0.72	1.45	5.91	9.00	9.00	9.00	9.00	10.85	12.22	12.58	
Private Equity	3.36	4.89	3.80	7.12	14.43	12.11	11.94	7.21	14.15	12.94	2/1/1986
Alternatives Custom Benchmark	0.72	1.45	5.91	9.00	9.00	9.00	9.00	10.85	12.22	12.58	
Agriculture	0.01	0.25	4.45	0.75	-1.80	2.54	9.01	7.32		6.96	10/1/1997
NCREIF Farmland Index	0.00	0.00	0.50	3.85	5.35	6.44	10.86	12.17		11.47	
Timberland	0.00	1.03	5.21	5.78	2.09	0.60	3.09	3.55		7.35	10/1/1992
NCREIF Timberland Index	0.00	0.00	0.19	0.34	2.28	2.71	4.39	5.75		8.41	

Benchmark definitions on next page.

Asset Class Returns

Periods Ended August 31, 2020

	Performance (%)										
	1 Month	QTD	YTD	1 Year	3 Years	5 Years	10 Years	20 Years	30 Years	Since Inception	Inception Date
Unlisted Infrastructure Alternatives Custom Benchmark	8.85 0.72	8.54 1.45	6.98 5.91	9.83 9.00						10.34 9.00	4/1/2018
Cash 90 Day US Treasury Bill	0.12 0.01	0.54 0.03	2.18 0.63	3.73 1.27	2.96 1.72	2.13 1.18	1.15 0.62	1.85 1.58	3.24 2.71	3.81 3.24	7/1/1986

Benchmark definitions on next page.

Benchmark Definitions

Account Name	From Date	To Date	Benchmark
Domestic Equity Blended Benchmark	1/1/2015 1/1/1982	Present 12/31/2014	100% Russell 3000 Index 100% Dow Jones US Total Stock Market Index
Real Estate Blended Benchmark	1/1/2013 1/1/2007 1/1/2005	Present 12/31/2012 12/31/2016	100% NCREIF Fund Index-ODCE (VW) (Net)** 100% 100% NPI + 1% 100% Consumer Price Index + 5%
Alternatives Custom Benchmark	7/1/2010 1/1/2004 1/1/2003 2/1/1986	Present 6/30/2010 12/31/2003 12/31/2002	100% Annualized rate of 9.0% 100% Annualized rate of 12.0% 100% Annualized rate of 13.0% 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 previous month end.
International Equity IMRF Custom Benchmark			Blend of the International Equity Style benchmarks returns, dollar weighted by the actual allocation at previous month end.
Fixed Income IMRF Custom Benchmark			Blend of 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			<p>The total fund benchmark is a blend of the asset class benchmark returns weighted by the target allocation for each asset class, currently:</p> <p>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.</p>

Investment Manager Asset Allocation

Periods Ended August 31, 2020

	Jul-2020		Aug-2020	
	\$	%	\$	%
Domestic Equity	18,178,578,333	41.00	19,550,845,501	42.43
Large Cap Growth	7,481,171,476	16.87	8,202,847,510	17.80
NTGI S&P 500 Growth	2,793,366,006	6.30	3,059,988,072	6.64
Sands Capital	3,041,487,198	6.86	3,326,743,371	7.22
Xponance Russell 1000 G	1,646,318,271	3.71	1,816,116,067	3.94
Large Cap Value	4,667,146,581	10.53	4,759,363,397	10.33
Dodge & Cox	1,255,309,213	2.83	1,265,475,427	2.75
BMO	754,487,783	1.70	787,424,759	1.71
LSV Asset	1,272,051,398	2.87	1,321,194,073	2.87
NTGI S&P 500 Value	1,385,298,187	3.12	1,385,269,139	3.01
Large Cap Pass. Core	2,740,155,009	6.18	2,936,822,998	6.37
NTGI MarketCap Idx.	2,740,155,009	6.18	2,936,822,998	6.37
Factor Diversity Strategies	0.00	0.00	257,726,879	0.56
U.S. Large Cap FDP-GSAM	0.00	0.00	257,726,879	0.56
Quantitative Factor Strategies	253,252,354	0.57	261,808,790	0.57
Quantitative US Equity - SciBeta	253,252,354	0.57	261,808,790	0.57
Small Cap Growth	784,322,681	1.77	825,012,823	1.79
Frontier Capital	617,495,298	1.39	649,103,318	1.41
FIAM Small Cap	166,827,382	0.38	175,909,506	0.38
Small Cap Value	1,255,697,042	2.83	1,320,007,367	2.86
Channing	211,898,395	0.48	217,496,064	0.47
DFA Small Cap Val.	463,711,481	1.05	489,567,310	1.06
Inv. Couns. Maryland	580,087,165	1.31	612,943,994	1.33

Investment Manager Asset Allocation

Periods Ended August 31, 2020

	Jul-2020		Aug-2020	
	\$	%	\$	%
Micro Cap	353,980,763	0.80	345,260,966	0.75
DFA Micro Cap (9-10)	353,980,763	0.80	345,260,966	0.75
Public Real Assets	642,852,428	1.45	641,994,771	1.39
Brookfield	150,029,055	0.34	150,546,047	0.33
Cohen & Steers	492,823,374	1.11	491,448,724	1.07
International Equity	7,975,410,540	17.99	8,325,911,545	18.07
Intl Large Cap Growth	1,340,813,068	3.02	1,410,009,709	3.06
EARNEST Part. Intl	424,131,315	0.96	441,556,142	0.96
William Blair	916,681,753	2.07	968,453,568	2.10
Intl Large Cap Value	1,127,862,883	2.54	1,175,609,553	2.55
Brandes Investment	516,650,488	1.17	543,025,160	1.18
Mondrian	498,294,045	1.12	514,801,918	1.12
Lazard	112,918,350	0.25	117,782,475	0.26
Intl Large Cap Core	3,662,521,508	8.26	3,824,162,844	8.30
Arrowstreet Capital	740,488,569	1.67	764,535,500	1.66
Brown Capital	409,075,565	0.92	421,996,859	0.92
GlobeFlex Capital	516,940,086	1.17	535,750,849	1.16
NTGI MSCI EAFE	1,994,261,304	4.50	2,100,150,073	4.56
Progress Intl Equity	1,631,694	0.00	1,602,459	0.00
Transition Account	124,291	0.00	127,105	0.00
Intl All Cap Developed	136,263,630	0.31	141,888,506	0.31
Ativo International	136,263,630	0.31	141,888,506	0.31

Investment Manager Asset Allocation

Periods Ended August 31, 2020

	Jul-2020		Aug-2020	
	\$	%	\$	%
International Small Cap	515,098,866	1.16	545,166,441	1.18
Franklin Templeton	184,157,488	0.42	197,181,920	0.43
William Blair IntSC	330,941,378	0.75	347,984,522	0.76
Emerging Mkt Equity	1,192,850,585	2.69	1,229,074,491	2.67
Genesis Asset Mngrs.	1,192,850,585	2.69	1,229,074,491	2.67

Investment Manager Asset Allocation

Periods Ended August 31, 2020

	Jul-2020		Aug-2020	
	\$	%	\$	%
Fixed Income	12,411,957,325	27.99	12,113,871,907	26.29
Domestic Fixed Core	3,817,646,472	8.61	3,806,421,014	8.26
Brandes FI Core	388,948,000	0.88	385,116,534	0.84
EARNEST Partners	1,057,875,416	2.39	1,047,121,624	2.27
Xponance Yield Advantage Agg.	1,127,048,863	2.54	1,121,110,953	2.43
Garcia Hamilton	1,128,274,773	2.54	1,121,786,884	2.43
Ramirez Asset Management	115,499,421	0.26	131,285,019	0.28
Domestic Fixed Passive Core	3,819,831,141	8.61	3,788,662,738	8.22
NTGI Blmbg Agg.	1,949,891,400	4.40	1,933,638,694	4.20
BlackRock US Debt I	1,869,939,741	4.22	1,855,024,044	4.03
Domestic Fixed Core Plus	3,237,510,217	7.30	2,965,316,735	6.44
LM Capital Group FI	978,342,150	2.21	973,424,206	2.11
Progress Inv. FI	27,257	0.00	3,768	0.00
BMO - TCH	927,233,870	2.09	667,306,569	1.45
Western Asset	1,149,891,295	2.59	1,141,827,283	2.48
Longfellow Core Plus	182,015,646	0.41	182,754,909	0.40
Bank Loans	525,326,571	1.18	537,097,609	1.17
Barings Global Loan Fund	525,326,571	1.18	537,097,609	1.17
Emerging Markets Debt	220,647,930	0.50	222,148,121	0.48
Standish-Mellon EMD	220,647,930	0.50	222,148,121	0.48
High Yield	790,994,994	1.78	794,225,690	1.72
MacKay Shields	790,675,640	1.78	794,203,439	1.72
FIAM High Yield	319,354	0.00	22,251	0.00

Investment Manager Asset Allocation

Periods Ended August 31, 2020

	Jul-2020		Aug-2020	
	\$	%	\$	%
Real Estate	2,981,966,046	6.73	3,004,728,653	6.52
Real Estate Core Cmp	1,599,649,524	3.61	1,615,252,570	3.51
TA Assoc. Buckhead	617,951,573	1.39	633,748,333	1.38
Barings Core Property		0.00		0.00
Barings Euro Core Property	137,466,221	0.31	136,880,059	0.30
Blackstone Property Euro	143,078,976	0.32	144,415,658	0.31
INVESTCO Core Real Estate	203,018,548	0.46	203,018,548	0.44
INVESTCO European real estate	58,824,791	0.13	59,486,422	0.13
AEW Core Property Tr	234,198,533	0.53	232,592,669	0.50
CBRE Core Partners	205,110,882	0.46	205,110,882	0.45
RE Non-Core Cmp	1,382,316,522	3.12	1,389,476,082	3.02
Artemis MWBE Spruce	211,881,282	0.48	216,501,113	0.47
Franklin T. EMREFF	7,860,669	0.02	5,378,057	0.01
Security Capital	50,822,633	0.11	53,660,947	0.12
Dune II	20,456,881	0.05	19,935,889	0.04
Non-Core Real Estate Funds	939,062,938	2.12	940,199,252	2.04
Non-Core Intl Real Estate	152,088,256	0.34	153,606,965	0.33
Rockwood Fund VIII	1	0.00	61,273	0.00
Almanac ARS V	143,862	0.00	132,586	0.00
Alternatives Investments	2,690,326,730	6.07	2,797,914,614	6.07
Absolute Return	293,345	0.00	274,390	0.00
Aurora Investment	293,345	0.00	274,390	0.00

Investment Manager Asset Allocation

Periods Ended August 31, 2020

	Jul-2020		Aug-2020	
	\$	%	\$	%
Private Equity	2,217,352,293	5.00	2,306,507,745	5.01
Abbott S/A Comp.	344,945,338	0.78	354,412,360	0.77
Muller Monroe MPEFF	4,793,706	0.01	4,793,706	0.01
Pantheon S/A Comp.	269,337,345	0.61	247,641,534	0.54
Private Equity Fund - Domestic	1,239,156,946	2.79	1,324,196,498	2.87
Private Equity Fund - International	344,110,609	0.78	357,734,382	0.78
Oakbrook Opportunities Fund	15,008,349	0.03	17,729,264	0.04
Private Credit	129,513,243	0.29	143,598,103	0.31
Private Credit Fund - Domestic	129,513,243	0.29	143,598,103	0.31
Agriculture	216,824,705	0.49	216,836,347	0.47
Premiere Partners IV	216,824,705	0.49	216,836,347	0.47
Timberland	77,144,129	0.17	77,144,129	0.17
Forest Investment	77,144,129	0.17	77,144,129	0.17
Unlisted Infrastructure	49,199,015	0.11	53,553,900	0.12
Unlisted Infrastructure Funds	49,199,015	0.11	53,553,900	0.12
Cash & Equivalents	101,098,541	0.23	281,259,485	0.61
Total Fund	44,339,337,515	100.00	46,074,531,705	100.00

Wilshire Consulting Performance



Periods Ended August 31, 2020

	Market Value \$	Performance (%)									
		1 Month	QTD	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	
Total Fund	46,074,531,705	3.73	7.48	4.88	12.19	8.30	8.77	9.56	9.85	1/1/1982	
Total Fund - Net		3.70	7.44	4.75	12.00	8.11	8.56	9.33			
Total Fund Benchmark		3.28	6.76	5.75	12.47	8.43	8.81	9.19			
Domestic Equity	19,550,845,501	6.87	12.52	7.78	19.83	12.54	12.50	14.50	11.67	1/1/1982	
Domestic Equity - Net		6.84	12.47	7.63	19.61	12.32	12.27	14.25			
Blended Benchmark		7.24	13.33	9.39	21.44	13.95	13.86	14.93			
Russell 3000 Index		7.24	13.33	9.39	21.44	13.95	13.86	14.94	11.64		
Large Cap Equity	16,156,760,783	7.52	13.71	12.43	24.89	14.73	14.22	15.33	11.48	1/1/1982	
Large Cap Equity - Net		7.51	13.69	12.36	24.80	14.62	14.10	15.19			
Russell 1000 Index		7.34	13.63	10.43	22.50	14.58	14.31	15.19	11.81		
Large Cap Growth	8,202,847,510	9.65	18.05	35.60	47.04	25.36	20.83	18.89	12.71	1/1/1982	
Large Cap Growth - Net		9.63	18.03	35.52	46.92	25.24	20.70	18.72			
LCG Blended Benchmark		10.32	18.81	30.47	44.34	24.18	20.66	19.02			
Russell 1000 Growth Index		10.32	18.81	30.47	44.34	24.18	20.66	19.02	11.89		
NTGI S&P 500 Growth	3,059,988,072	9.54	17.19	26.36	37.30	21.39	18.94	18.21	9.29	8/1/2001	
NTGI S&P 500 Growth - Net		9.54	17.19	26.36	37.29	21.39	18.93	18.20			
S&P 500 Growth		9.57	17.24	26.53	37.45	21.45	18.98	18.22	9.27		
Xponance Russell 1000 G	1,816,116,067	10.31	18.80	30.45	44.31				23.40	10/1/2018	
Xponance Russell 1000 G - Net		10.31	18.80	30.43	44.28				23.37		
Russell 1000 Growth Index		10.32	18.81	30.47	44.34				23.42		
Sands Capital	3,326,743,371	9.38	18.44	48.51	58.92	29.94	23.67	21.91	14.60	11/1/2003	
Sands Capital - Net		9.33	18.39	48.30	58.61	29.67	23.40	21.64			
LCG Blended Benchmark		10.32	18.81	30.47	44.34	24.18	20.66	19.02	11.70		
Russell 1000 Growth Index		10.32	18.81	30.47	44.34	24.18	20.66	19.02	11.74		
Large Cap Value	4,759,363,397	4.28	7.32	-10.53	1.73	4.35	7.57	11.83	9.91	10/1/1982	
Large Cap Value - Net		4.28	7.28	-10.62	1.59	4.19	7.40	11.64			
LCV Blended Benchmark		4.14	8.25	-9.35	0.84	4.50	7.53	11.05			
Russell 1000 Value Index		4.14	8.25	-9.35	0.84	4.50	7.53	11.05	11.42		

Benchmark definitions in glossary.

Wilshire Consulting Performance



Periods Ended August 31, 2020

	Market Value \$	Performance (%)								
		1 Month	QTD	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Dodge & Cox	1,265,475,427	5.09	7.78	-8.02	4.22	5.42	9.01	12.72	8.84	9/1/2003
Dodge & Cox - Net		5.09	7.73	-8.17	4.00	5.20	8.78	12.49		
LCV Blended Benchmark		4.14	8.25	-9.35	0.84	4.50	7.53	11.05	7.67	
Russell 1000 Value Index		4.14	8.25	-9.35	0.84	4.50	7.53	11.05	7.82	
BMO	787,424,759	4.53	7.42	-9.10	0.65	3.18	6.26	11.67	7.32	2/1/2001
BMO - Net		4.53	7.42	-9.12	0.57	2.98	6.06	11.44		
LCV Blended Benchmark		4.14	8.25	-9.35	0.84	4.50	7.53	11.05	5.32	
Russell 1000 Value Index		4.14	8.25	-9.35	0.84	4.50	7.53	11.05	6.26	
LSV Asset	1,321,194,073	4.08	6.70	-15.26	-1.68	2.39	6.32	11.54	9.70	2/1/2003
LSV Asset - Net		4.08	6.64	-15.42	-1.92	2.15	6.07	11.27		
LCV Blended Benchmark		4.14	8.25	-9.35	0.84	4.50	7.53	11.05	8.55	
Russell 1000 Value Index		4.14	8.25	-9.35	0.84	4.50	7.53	11.05	8.56	
NTGI S&P 500 Value	1,385,269,139	3.62	7.43	-9.02	3.72	6.28	8.88	11.55	5.66	8/1/1999
NTGI S&P 500 Value - Net		3.62	7.43	-9.02	3.71	6.28	8.87	11.54		
S&P 500 Value		3.58	7.37	-9.30	3.44	6.16	8.75	11.45	5.62	
Large Cap Pass. Core	2,936,822,998	7.18	13.22	9.25	21.20	13.88	13.85	14.96	11.34	1/1/1985
Large Cap Pass. Core - Net		7.18	13.22	9.24	21.19	13.88	13.84	14.95		
Dow Jones US Total Stock Market Index		7.19	13.24	9.28	21.20	13.85	13.77	14.88		
NTGI MarketCap Idx.	2,936,822,998	7.18	13.22	9.25	21.20	13.88	13.85	14.96	11.12	2/1/1985
NTGI MarketCap Idx. - Net		7.18	13.22	9.24	21.19	13.88	13.84	14.95		
Dow Jones US Total Stock Market Index		7.19	13.24	9.28	21.20	13.85	13.77	14.88		
Factor Diversity Strategies	257,726,879	2.78							2.78	8/18/2020
U.S. Large Cap FDP-GSAM	257,726,879	2.78							2.78	8/18/2020
U.S. Large Cap FDP-GSAM - Net		2.78							2.78	
Solactive GBS U.S. 1000 Index		3.44							3.44	
GSAM Active Beta US. Large Cap FDC Index		2.81							2.81	
Quantitative Factor Strategies	261,808,790	3.38	8.82	-0.70					4.89	9/17/2019

Benchmark definitions in glossary.

Wilshire Consulting Performance



Periods Ended August 31, 2020

	Market Value \$	Performance (%)								
		1 Month	QTD	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Quantitative US Equity - SciBeta	261,808,790	3.38	8.82	-0.70					4.89	9/17/2019
Quantitative US Equity - SciBeta - Net		3.35	8.72	-1.06					4.52	
SciBeta US Hi-Fctr-Intst Div Multi-Beta Multi-Strat Index		3.15	8.63	-1.74					3.45	
Small Cap	2,490,281,156	5.07	8.23	-10.37	1.84	3.76	5.89	11.41	11.48	7/1/1988
Small Cap Composite - Net		4.94	8.07	-10.82	1.22	3.21	5.31	10.81		
Russell 2000 Index		5.63	8.56	-5.53	6.02	5.03	7.65	11.53	9.09	
Small Cap Growth	825,012,823	5.19	8.86	2.55	15.56	11.82	9.86	14.10	12.86	7/1/1988
Small Cap Growth - Net		5.17	8.74	1.78	14.58	11.15	9.21	13.46		
Russell 2000 Growth Index		5.87	9.50	6.15	17.28	10.90	10.45	14.08	8.28	
Frontier Capital	649,103,318	5.12	8.73	5.08	18.23	16.19	12.83	14.79	13.23	8/1/1988
Frontier Capital - Net		5.12	8.60	4.09	16.97	15.28	12.04	14.07		
Russell 2000 Growth Index		5.87	9.50	6.15	17.28	10.90	10.45	14.08	8.36	
FIAM Small Cap	175,909,506	5.44	9.36	-5.83	6.68	7.20	7.04	13.44	13.05	8/1/1988
FIAM Small Cap - Net		5.34	9.25	-5.94	6.55	6.86	6.58	12.91		
Russell 2000 Index		5.63	8.56	-5.53	6.02	5.03	7.65	11.53	9.15	
Russell 2000 Growth Index		5.87	9.50	6.15	17.28	10.90	10.45	14.08	8.36	
Small Cap Value	1,320,007,367	5.12	7.96	-16.07	-4.23	-0.22	4.74	10.15	10.84	9/1/1989
Small Cap Value - Net		4.93	7.76	-16.42	-4.73	-0.73	4.18	9.62		
Russell 2000 Value Index		5.39	7.56	-17.71	-6.14	-1.39	4.37	8.71	9.13	
Channing	217,496,064	2.64	7.43	-10.22	0.25	0.81	5.33		8.28	7/1/2011
Channing - Net		2.52	7.31	-10.56	-0.25	0.30	4.81		7.69	
Russell 2000 Value Index		5.39	7.56	-17.71	-6.14	-1.39	4.37		6.22	
DFA Small Cap Val.	489,567,310	5.58	8.78	-18.79	-5.89	-2.87	2.44	9.49	10.53	2/1/1996
DFA Small Cap Val. - Net		5.46	8.66	-19.09	-6.35	-3.35	1.92	8.96		
Russell 2000 Value Index		5.39	7.56	-17.71	-6.14	-1.39	4.37	8.71	8.41	
Inv. Couns. Maryland	612,943,994	5.66	7.49	-15.76	-4.41	1.72	7.13	11.05	10.29	5/1/1999
Inv. Couns. Maryland - Net		5.39	7.21	-16.16	-4.94	1.18	6.54	10.53		
Russell 2000 Value Index		5.39	7.56	-17.71	-6.14	-1.39	4.37	8.71	7.81	

Benchmark definitions in glossary.

Wilshire Consulting Performance



Periods Ended August 31, 2020

	Market Value \$	Performance (%)								
		1 Month	QTD	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Micro Cap	345,260,966	4.63	7.69	-13.62	-1.84	0.58	2.81	9.71	10.79	7/1/1984
Micro Cap - Net		4.50	7.55	-13.95	-2.33	0.06	2.22	9.03		
Russell Microcap Index		5.95	7.08	-4.92	10.32	3.66	6.13	11.09		
DFA Micro Cap (9-10)	345,260,966	4.63	7.69	-13.62	-1.84	1.45	6.06	11.40	10.40	8/1/1987
DFA Micro Cap (9-10) - Net		4.50	7.55	-13.95	-2.33	0.95	5.53	10.85		
Russell 2000 Index		5.63	8.56	-5.53	6.02	5.03	7.65	11.53	8.51	
Public Real Assets	641,994,771	-0.13	3.12	-9.58	-5.93	3.69			4.15	8/1/2017
Public Real Assets - Net		-0.23	3.01	-9.86	-6.33	3.23			3.71	
Public Real Assets Benchmark		0.11	2.58	-11.42	-6.76	1.58			2.01	
Brookfield	150,546,047	0.34	2.27	-14.59	-11.33	0.10			0.22	8/1/2017
Brookfield - Net		0.21	2.14	-14.94	-11.81	-0.43			-0.30	
Dow Jones Brookfield Global Infrastructure Composite Index		-0.29	1.27	-13.30	-9.34	-0.14			0.00	
Cohen & Steers	491,448,724	-0.28	3.38	-7.35	-3.51	5.34			5.99	8/1/2017
Cohen & Steers - Net		-0.37	3.28	-7.61	-3.88	4.92			5.57	
FTSE Global Core Infrastructure 50/50 Index (Net)		0.31	3.23	-10.50	-5.49	2.43			3.00	

Benchmark definitions in glossary.

Wilshire Consulting Performance



Periods Ended August 31, 2020

	Market Value \$	Performance (%)									
		1 Month	QTD	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	
International Equity	8,325,911,545	4.40	9.43	-2.45	9.46	3.46	6.53	6.85	7.63	9/1/1986	
International Equity - Net		4.35	9.36	-2.70	9.08	3.13	6.17	6.51			
MSCI AC World ex USA (Net)		4.28	8.93	-3.05	8.31	2.63	5.75	5.26			
Intl LargeCap Equity	6,409,782,107	4.55	8.70	-3.31	8.44	2.97	5.95	6.77	7.58	9/1/1986	
Intl LargeCap Equity - Net		4.50	8.64	-3.50	8.15	2.70	5.67	6.50			
MSCI AC World ex USA (Net)		4.28	8.93	-3.05	8.31	2.63	5.75	5.26			
Intl Large Cap Grwth	1,410,009,709	5.16	12.47	4.90	17.61	5.94	8.42	7.67	8.56	9/1/2002	
Intl Large Cap Grwth - Net		5.11	12.39	4.67	17.27	5.67	8.14	7.32			
MSCI AC World ex USA (Net)		4.28	8.93	-3.05	8.31	2.63	5.75	5.26	7.03		
MSCI AC World ex USA Growth (Net)		4.08	11.13	8.22	20.00	8.27	9.51	7.55	7.99		
EARNEST Part. Intl	441,556,142	4.11	8.41	-12.34	-1.67	-1.61	4.48	4.67	7.85	10/1/2004	
EARNEST Part. Intl - Net		4.11	8.36	-12.48	-1.87	-1.78	4.29	4.39			
MSCI AC World ex USA (Net)		4.28	8.93	-3.05	8.31	2.63	5.75	5.26	5.68		
MSCI AC World ex USA Growth (Net)		4.08	11.13	8.22	20.00	8.27	9.51	7.55	7.15		
William Blair	968,453,568	5.65	14.42	15.64	29.53	10.78	10.69	9.80	10.42	10/1/2002	
William Blair - Net		5.57	14.33	15.34	29.09	10.40	10.30	9.40			
MSCI AC World ex USA (Net)		4.28	8.93	-3.05	8.31	2.63	5.75	5.26	7.74		
MSCI AC World ex USA Growth (Net)		4.08	11.13	8.22	20.00	8.27	9.51	7.55	8.58		
Intl Large Cap Val.	1,175,609,553	4.24	7.17	-13.11	-1.14	-0.84	2.79	4.59	7.92	10/1/1995	
Intl Large Cap Val. - Net		4.19	7.09	-13.31	-1.45	-1.16	2.43	4.23			
MSCI AC World ex USA (Net)		4.28	8.93	-3.05	8.31	2.63	5.75	5.26			
MSCI AC World ex USA Value		4.52	6.80	-13.66	-2.59	-2.53	2.45	3.43			
Brandes Investment	543,025,160	5.11	7.00	-16.06	-4.11	-2.37	1.66	4.38	7.89	1/1/1996	
Brandes Investment - Net		5.11	6.95	-16.20	-4.32	-2.58	1.44	4.14			
MSCI AC World ex USA (Net)		4.28	8.93	-3.05	8.31	2.63	5.75	5.26			
MSCI AC World ex USA Value		4.52	6.80	-13.66	-2.59	-2.53	2.45	3.43			
Mondrian	514,801,918	3.32	6.85	-11.60	0.92	0.14	3.56		4.10	4/1/2012	
Mondrian - Net		3.22	6.74	-11.88	0.50	-0.32	3.07		3.60		
MSCI AC World ex USA (Net)		4.28	8.93	-3.05	8.31	2.63	5.75		4.73		
MSCI AC World ex USA Value		4.52	6.80	-13.66	-2.59	-2.53	2.45		2.65		

Benchmark definitions in glossary.

Wilshire Consulting Performance



Periods Ended August 31, 2020

	Market Value \$	Performance (%)								
		1 Month	QTD	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Lazard	117,782,475	4.31	9.38	-4.78	4.42	2.74	5.00		5.70	4/1/2012
Lazard - Net		4.25	9.31	-4.97	4.16	2.48	4.65		5.19	
MSCI AC World ex USA (Net)		4.28	8.93	-3.05	8.31	2.63	5.75		4.73	
MSCI AC World ex USA Value		4.52	6.80	-13.66	-2.59	-2.53	2.45		2.65	
Intl Large Cap Active Core	1,724,012,771	3.35	8.38	-1.35	10.54	3.66	7.38	8.30	4.86	2/1/2008
Intl Large Cap Active Core - Net		3.25	8.28	-1.72	9.99	3.18	6.83	7.76		
MSCI AC World ex USA (Net)		4.28	8.93	-3.05	8.31	2.63	5.75	5.26	2.37	
Arrowstreet Capital	764,535,500	3.25	8.34	0.78	14.27	5.20	8.42	8.82	5.30	3/1/2008
Arrowstreet Capital - Net		3.14	8.22	0.43	13.74	4.72	7.92	8.31	4.81	
MSCI AC World ex USA (Net)		4.28	8.93	-3.05	8.31	2.63	5.75	5.26	2.16	
Brown Capital	421,996,859	3.18	9.29	11.65	20.78	9.22	8.82	9.77	8.50	10/1/2004
Brown Capital - Net		3.12	9.23	11.45	20.45	8.74	8.01	8.99		
MSCI AC World ex USA (Net)		4.28	8.93	-3.05	8.31	2.63	5.75	5.26	5.68	
GlobeFlex Capital	535,750,849	3.64	7.82	-7.62	3.14	-1.23	5.28	7.01	4.27	3/1/2006
GlobeFlex Capital - Net		3.53	7.71	-7.94	2.68	-1.63	4.86	6.57	3.82	
MSCI AC World ex USA (Net)		4.28	8.93	-3.05	8.31	2.63	5.75	5.26	3.64	
Progress Intl Equity	1,602,459									
Intl Large Cap Passive Core	2,100,150,073	5.31	7.41	-4.28	6.50	2.68	5.10	6.28	3.36	1/1/2000
Intl Large Cap Passive Core - Net		5.31	7.41	-4.29	6.49	2.67	5.09	6.27		
MSCI EAFE Index (Net)		5.14	7.59	-4.61	6.13	2.34	4.72	5.88	2.97	
NTGI MSCI EAFE	2,100,150,073	5.31	7.41	-4.28	6.50	2.68	5.10	6.28	3.69	2/1/2000
NTGI MSCI EAFE - Net		5.31	7.41	-4.29	6.49	2.67	5.09	6.27		
MSCI EAFE Index (Net)		5.14	7.59	-4.61	6.13	2.34	4.72	5.88	3.31	
Intl All Cap Developed	141,888,506	4.13	9.92	-4.55	4.31				6.19	2/1/2019
Intl All Cap Developed - Net		4.13	9.80	-4.90	3.79				5.71	
MSCI EAFE + Canada (Net)		5.16	7.96	-4.44	5.96				5.75	

Benchmark definitions in glossary.

Wilshire Consulting Performance



Periods Ended August 31, 2020

	Market Value \$	Performance (%)								
		1 Month	QTD	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Ativo International	141,888,506	4.13	9.92	-4.55	4.31				6.19	2/1/2019
Ativo International - Net		4.13	9.80	-4.90	3.79				5.71	
MSCI EAFE + Canada (Net)		5.16	7.96	-4.44	5.96				5.75	
Intl Small Cap Eqty	545,166,441	5.84	12.92	4.62	20.22	5.41	8.16	9.32	5.34	12/1/2005
Intl Small Cap Eqty - Net		5.72	12.73	4.02	19.32	4.62	7.35	8.52		
MSCI AC World ex USA Small Cap (Net)		6.58	11.91	-2.41	10.97	2.08	6.45	6.61	5.86	
Custom Benchmark (Intl Small Cap)		6.58	11.91	-2.41	10.97	2.08	6.45	6.90	5.17	
Franklin Templeton	197,181,920	7.07	11.94	-4.66	7.12	1.88	5.84		5.71	8/1/2011
Franklin Templeton - Net		7.07	11.75	-5.20	6.33	1.12	5.07		4.94	
MSCI AC World ex USA Small Cap (Net)		6.58	11.91	-2.41	10.97	2.08	6.45		4.56	
William Blair IntSC	347,984,522	5.15	13.48	10.74	29.18	7.61	9.63	10.27	10.27	9/1/2010
William Blair IntSC - Net		4.97	13.29	10.10	28.20	6.79	8.79	9.42	9.42	
MSCI AC World ex USA Small Cap (Net)		6.58	11.91	-2.41	10.97	2.08	6.45	6.61	6.61	
Custom Benchmark (Intl Small Cap)		6.58	11.91	-2.41	10.97	2.08	6.45	6.90	6.90	
Emerging Mkt Equity	1,229,074,491	3.08	11.75	-0.57	11.01	5.91	10.41	5.77	9.01	2/1/1992
Emerging Mkt Equity - Net		3.04	11.65	-1.01	10.35	5.29	9.75	5.15		
MSCI Emerging Markets Index		2.24	11.46	0.68	14.88	3.21	9.05	4.12	7.05	
Genesis Asset Mngrs.	1,229,074,491	3.08	11.75	-0.57	11.01	5.91	10.41	5.77	10.95	5/1/2004
Genesis Asset Mngrs. - Net		3.04	11.65	-1.01	10.35	5.29	9.75	5.15		
MSCI Emerging Markets Index		2.24	11.46	0.68	14.88	3.21	9.05	4.12	8.71	

Benchmark definitions in glossary.

Wilshire Consulting Performance



Periods Ended August 31, 2020

	Market Value \$	Performance (%)								
		1 Month	QTD	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Fixed Income	12,113,871,907	-0.31	1.58	6.16	6.36	5.19	4.89	4.54	8.22	1/1/1982
Fixed Income - Net		-0.33	1.56	6.08	6.24	5.06	4.74	4.39		
Blmbg. Barc. U.S. Aggregate		-0.81	0.67	6.85	6.47	5.09	4.33	3.65	7.72	
Active Fixed Core	3,806,421,014	-0.45	1.13	7.27	6.42	5.26	4.60	4.23	4.79	4/1/2001
ActiveCore Fixed Inc - Net		-0.47	1.10	7.19	6.32	5.16	4.48	4.07		
Blmbg. Barc. U.S. Aggregate		-0.81	0.67	6.85	6.47	5.09	4.33	3.65	4.79	
Brandes FI Core	385,116,534	-0.29	1.06	7.49	6.76	4.77			4.04	3/1/2016
Brandes FI Core - Net		-0.29	1.06	7.49	6.76	4.77			4.04	
Blmbg. Barc. U.S. Aggregate		-0.81	0.67	6.85	6.47	5.09			4.32	
EARNEST Partners	1,047,121,624	-0.79	0.89	6.47	5.47	5.08	4.43	4.20	4.82	5/1/2005
EARNEST Partners - Net		-0.79	0.86	6.37	5.33	4.95	4.27	4.01	4.63	
Blmbg. Barc. U.S. Aggregate		-0.81	0.67	6.85	6.47	5.09	4.33	3.65	4.45	
Xponance Yield Advantage Agg.	1,121,110,953	-0.23	1.58	7.29	6.46	5.05	4.64	4.18	4.65	6/1/2005
Xponance Yield Advantage Agg. - Net		-0.26	1.54	7.19	6.33	4.91	4.49	4.02	4.47	
Blmbg. Barc. U.S. Aggregate		-0.81	0.67	6.85	6.47	5.09	4.33	3.65	4.40	
Garcia Hamilton	1,121,786,884	-0.41	0.86	7.65	6.88	5.59	4.70		4.47	6/1/2015
Garcia Hamilton - Net		-0.43	0.85	7.59	6.80	5.50	4.60		4.37	
Blmbg. Barc. U.S. Aggregate		-0.81	0.67	6.85	6.47	5.09	4.33		4.01	
Ramirez Asset Management	131,285,019	-0.32	1.70						4.89	5/1/2020
Ramirez Asset Management - Net		-0.35	1.67						4.86	
Blmbg. Barc. U.S. Aggregate		-0.81	0.67						1.78	
Pass. Core Fixed Inc	3,788,662,738	-0.82	0.67	6.92	6.53	5.15	4.39	3.70	6.03	1/1/1990
Pass. Core Fixed Inc - Net		-0.82	0.67	6.91	6.52	5.14	4.38	3.69		
Blmbg. Barc. U.S. Aggregate		-0.81	0.67	6.85	6.47	5.09	4.33	3.65	6.01	
BlackRock US Debt I	1,855,024,044	-0.80	0.69	6.96	6.58	5.19	4.44		4.15	10/1/2013
BlackRock US Debt I - Net		-0.80	0.69	6.95	6.58	5.18	4.43		4.15	
Blmbg. Barc. U.S. Aggregate		-0.81	0.67	6.85	6.47	5.09	4.33		4.03	

Benchmark definitions in glossary.

Wilshire Consulting Performance



Periods Ended August 31, 2020

	Market Value \$	Performance (%)								
		1 Month	QTD	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
NTGI Blmbg Agg.	1,933,638,694	-0.83	0.65	6.88	6.47	5.12	4.35	3.68	6.08	2/1/1990
NTGI Blmbg Agg. - Net		-0.83	0.65	6.87	6.46	5.11	4.34	3.67		
Blmbg. Barc. U.S. Aggregate		-0.81	0.67	6.85	6.47	5.09	4.33	3.65	6.07	
Core Plus Fixed Income	2,965,316,735	-0.38	1.84	7.50	7.82	5.68	5.21	4.73	8.11	1/1/1982
Core Plus Fixed Inc. - Net		-0.41	1.80	7.35	7.62	5.48	5.02	4.55		
Blmbg. Barc. U.S. Aggregate		-0.81	0.67	6.85	6.47	5.09	4.33	3.65	7.72	
LM Capital Group FI	973,424,206	-0.17	1.86	8.21	8.20	5.51	4.95	4.47	5.21	5/1/2005
LM Capital Group FI - Net		-0.21	1.82	8.08	8.03	5.34	4.79	4.30	5.04	
Blmbg. Barc. U.S. Aggregate		-0.81	0.67	6.85	6.47	5.09	4.33	3.65	4.45	
Progress Inv. FI	3,768									
BMO - TCH	667,306,569	-0.59	1.30	7.06	7.12	5.53	5.49	4.96	5.28	5/1/2005
BMO - TCH - Net		-0.63	1.27	6.95	6.98	5.39	5.35	4.82	5.15	
Blmbg. Barc. U.S. Aggregate		-0.81	0.67	6.85	6.47	5.09	4.33	3.65	4.45	
Western Asset	1,141,827,283	-0.38	2.30	7.08	8.25	5.96	5.76	5.25	5.74	11/1/2001
Western Asset - Net		-0.42	2.26	6.97	8.11	5.84	5.63	5.11		
Blmbg. Barc. U.S. Aggregate		-0.81	0.67	6.85	6.47	5.09	4.33	3.65	4.54	
Longfellow Core Plus	182,754,909	-0.37	1.63						3.67	5/1/2020
Longfellow Core Plus - Net		-0.37	1.63						3.67	
Blmbg. Barc. U.S. Aggregate		-0.81	0.67						1.78	
Bank Loans	537,097,609	2.24	3.30	-3.26	-0.81	2.55	3.87		3.61	8/1/2014
Bank Loans - Net		2.24	3.30	-3.26	-0.81	2.24	3.44		3.16	
Custom Benchmark		1.45	3.14	-1.35	0.76	3.27	3.93		3.56	
Barings Global Loan Fund	537,097,609	2.24	3.30	-3.26	-0.81	2.55	3.87		3.61	8/1/2014
Barings Global Loan Fund - Net		2.24	3.30	-3.26	-0.81	2.24	3.44		3.16	
Custom Benchmark		1.45	3.14	-1.35	0.76	3.27	3.93		3.56	
Emerging Markets Debt	222,148,121	0.68	4.10	-1.53	3.23	2.14	5.58		2.88	8/1/2014
Emerging Markets Debt - Net		0.60	3.92	-1.78	2.88	1.79	5.21		2.53	
Custom Benchmark		0.09	3.12	-0.76	3.36	2.76	5.53		2.42	

Benchmark definitions in glossary.

Wilshire Consulting Performance



Periods Ended August 31, 2020

	Market Value \$	Performance (%)								
		1 Month	QTD	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Standish-Mellon EMD Standish EM MRK - Net Custom Benchmark	222,148,121	0.68	4.10	-1.53	3.23	2.14	5.58		2.88	8/1/2014
		0.60	3.92	-1.78	2.88	1.79	5.21		2.53	
		0.09	3.12	-0.76	3.36	2.76	5.53		2.42	
High Yield High Yield - Net ICE BofAML US High Yield, Cash Pay Index	794,225,690	1.10	5.31	3.24	6.87	6.13	7.24	7.48	9.47	4/1/1986
		1.10	5.22	3.07	6.52	5.81	6.87	7.10		
		0.99	5.82	0.81	3.74	4.52	6.28	6.68	8.18	
MacKay Shields MacKay Shields - Net ICE BofAML US High Yield, Cash Pay Index	794,203,439	1.11	5.32	3.26	6.88	6.14	7.44	7.56	8.75	11/1/2000
		1.11	5.24	3.09	6.54	5.81	7.08	7.19		
		0.99	5.82	0.81	3.74	4.52	6.28	6.68	7.39	

Benchmark definitions in glossary.

Benchmark History

Account Name	From Date	To Date	Benchmark
Total Fund			<p>The total fund benchmark is a blend of the asset class benchmark returns weighted by the target allocation for each asset class, currently:</p> <p>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.</p>
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	12/31/2005	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)
Progress Intl Equity	12/1/2017	Present	100% MSCI AC World ex USA (Net)
	7/1/2014	11/30/2017	Custom blended weighted average of the underlying managers' individual MSCI benchmarks

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 Emerging Markets	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