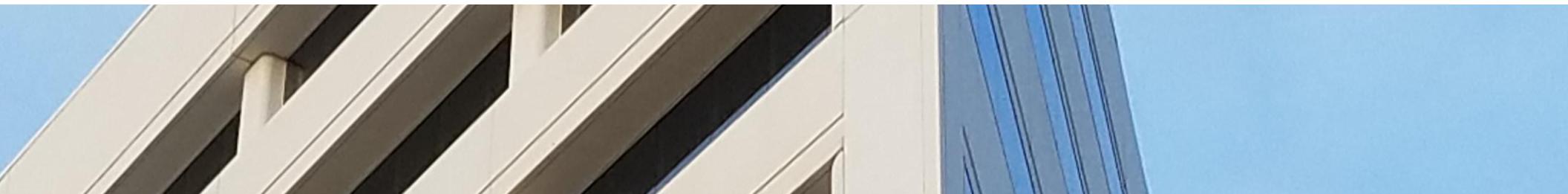




WILSHIRE ASSOCIATES

Wilshire Consulting



Monthly Performance Review

As of June 30, 2020



Capital Market Review

Economic Review

Market Commentary

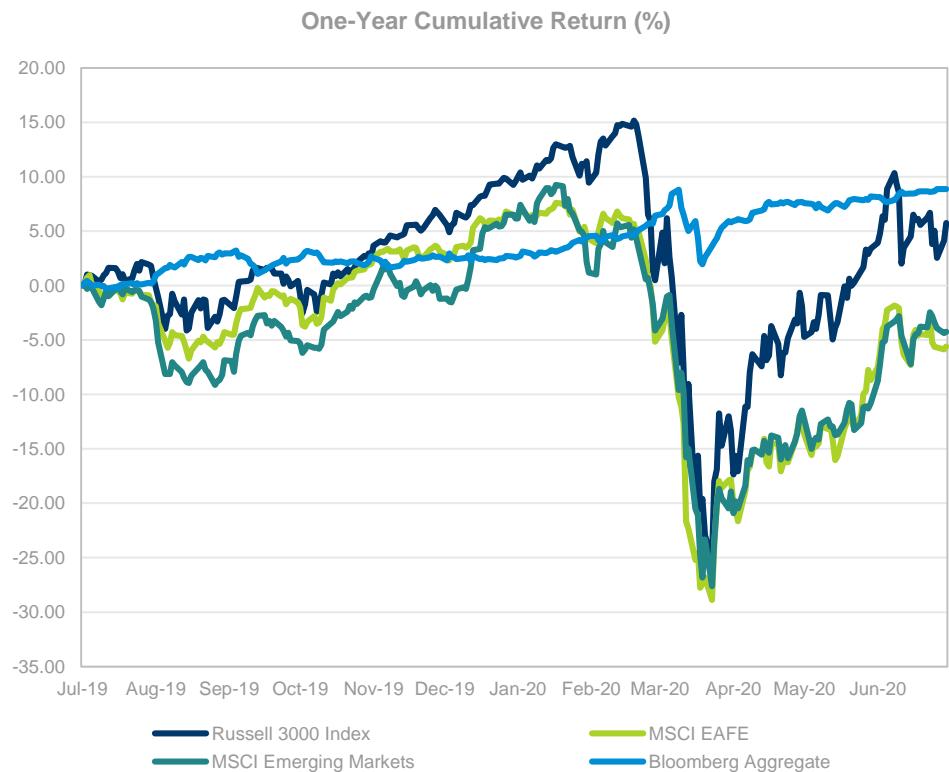
Massive amounts of fiscal and monetary stimulus continued to aid the rise of global markets during the month of June. As the world saw the gradual reopening of many economies throughout the month as COVID-19 restrictions were cautiously lifted or eased, the United States saw a rapid increase in the daily new infection rate across many states, and emerging market economies like India and Latin America were not able fully contain additional outbreaks. By the end of June, nearly one dozen U.S. states paused or reversed reopening plans. Despite these risks, U.S. equities were up over 20% during the quarter and emerging markets equites were up 18%.

With the continued reopening of the economy, the United States added 4.8 million jobs during the month of June. Unemployment, which peaked at 14.7% in April, had now dropped to 11.1% by the end of June. With the latest surge in COVID-19 cases across the United States beginning at the end of month, continued near-term improvement in the unemployment rate remains unknown.

Manufacturing in the United States, marked by the ISM Manufacturing Index, grew to 52.6 during June, up 9.5% from May.

Consumer spending rose during June as economic conditions and unemployment improved across the United States. Retail sales, a measure of purchases at stores, at restaurants and online, increased by 7.8% during the month.

Consumer sentiment increased during June. The University of Michigan Consumer Sentiment Index rose to 78.9, up from 72.3 during May, and 71.8 during April.



U.S. Equity Market

U.S. Equity Indices (%)	MTD	QTD	YTD	1 Year	3 Years	5 Years	10 Years
Russell 3000 Index	2.29	22.03	(3.48)	6.53	10.03	10.02	13.71
Standard & Poor's 500 Index	1.99	20.54	(3.08)	7.51	10.72	10.72	13.98
Russell 1000 Index	2.21	21.82	(2.81)	7.48	10.63	10.46	13.96
Russell 2500 Index	2.89	26.56	(11.05)	(4.70)	4.07	5.41	11.45
Russell 2000 Index	3.53	25.42	(12.98)	(6.63)	2.01	4.28	10.49
Russell Micro Cap Index	6.25	30.54	(11.21)	(4.77)	0.85	2.85	9.92
Russell 1000 Index	2.21	21.82	(2.81)	7.48	10.63	10.46	13.96
Russell 1000 Growth Index	4.35	27.84	9.81	23.28	18.98	15.87	17.22
Russell 1000 Value Index	(0.66)	14.29	(16.26)	(8.84)	1.82	4.64	10.40
Russell 2000 Index	3.53	25.42	(12.98)	(6.63)	2.01	4.28	10.49
Russell 2000 Growth Index	3.84	30.58	(3.06)	3.48	7.85	6.85	12.91
Russell 2000 Value Index	2.90	18.91	(23.50)	(17.48)	(4.34)	1.26	7.81
Russell 3000 Index	2.29	22.03	(3.48)	6.53	10.03	10.02	13.71
GICS - Communication Services	(3.29)	17.43	(0.82)	(0.78)	16.34	12.20	10.72
GICS - Consumer Discretionary	4.01	30.89	4.02	10.17	13.95	11.86	17.03
GICS - Consumer Staples	0.18	9.34	(7.15)	2.80	2.05	5.18	11.15
GICS - Energy	(0.73)	33.20	(35.54)	(37.06)	(13.56)	(10.77)	(1.00)
GICS - Financials	0.94	16.05	(17.12)	(8.46)	4.17	7.30	11.11
GICS - Health Care	(1.59)	16.88	1.82	12.79	11.44	8.48	16.29
GICS - Industrials	1.00	20.03	(11.31)	(2.55)	1.93	4.22	12.87
GICS - Information Technology	6.32	31.21	15.29	36.24	25.13	22.00	19.40
GICS - Materials	2.73	27.02	(8.92)	(2.87)	2.41	5.55	10.22
GICS - Real Estate	5.71	29.89	(22.41)	(11.39)	(3.25)	(2.22)	5.05
GICS - Utilities	(3.94)	3.79	(11.83)	(2.84)	5.41	8.06	10.60

Sector Returns (%)



Market Commentary

The U.S. stock market, represented by the Russell 3000 Index, continued to rise during the month, up +2.3% during June, and up +22.0% for the quarter ending June 30, 2020. Over the trailing one-year, the Russell 3000 Index is now positive, up +6.5%.

Although many states across the United States began to ease social-distancing restrictions and allowing some non-essential businesses to reopen during May and June, a surge in new COVID-19 cases across the country forced nearly one dozen states to pause or reverse reopening plans in place.

According to a recent report by the Federal Reserve Bank of Philadelphia, expectations for real GDP growth this year is approximately -5%, with unemployment remaining above 10%.

Small capitalization stocks outperformed large caps for the third month in a row, as the Russell 2000 Index returned +3.5% versus +2.2% for the Russell 1000 Index. The Russell Micro Cap Index was up 6.3% for the month.

Growth stocks again led value stocks during June as technology names in the index continue to lead the way.

Of the eleven major sectors in the index, seven were positive during June. Year-to-date, three sectors (Consumer Discretionary, Health Care, and Information Technology) are positive.

Non-U.S. Equity Market

Market Commentary

Equity markets outside of the U.S. outperformed the U.S. equity market during June, up +4.5% for the month. During the quarter, Non-U.S. equity markets rebounded, as well, returning +16.1%. Over the trailing one-year; however, Non-U.S. equity markets remain negative down -4.8%.

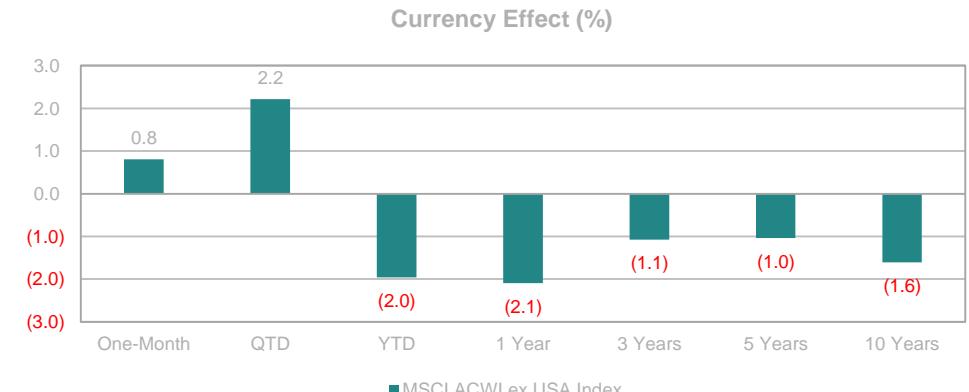
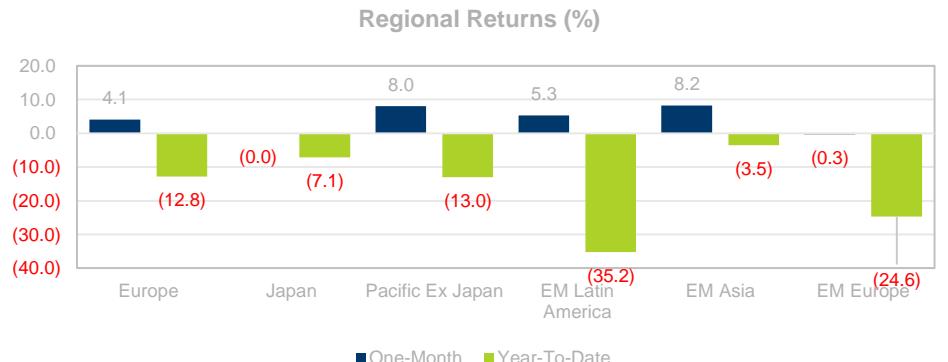
Continued support from central banks aided in the strong returns out of Non-U.S. equity during the month. In Mid-June, The Bank of England increased its quantitative easing program by £100 billion, helping to keep UK 10-year Gilt yields low at around 0.2%.

Several risks continue to exist following the strong recovery. Central banks including the U.S. Federal Reserve, reiterated their commitment to lend; however, businesses facing solvency issues will struggle to survive. Additionally, emerging market economies have not been able to contain the virus and remain the most vulnerable of additional infection surges.

Developed Markets underperformed Emerging Markets +3.4 versus +7.4% during the month. EM Asia and EM Latin America were both up during the month, with EM Asia up +8.2%, and EM Latin America up +5.3%.

The U.S. Dollar weakened during the month, providing a tailwind for U.S. based investors. Year-to-date; however, the strengthening of the U.S. Dollar during the first quarter has cost U.S. based investors 2.0% 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	4.52	16.12	(11.00)	(4.80)	1.13	2.26	4.97
MSCI EAFE Index	3.41	14.88	(11.34)	(5.13)	0.81	2.05	5.72
MSCI Emerging Markets Index	7.35	18.08	(9.78)	(3.39)	1.90	2.86	3.27
MSCI AC World ex U.S. Small Index	3.26	22.83	(12.80)	(4.34)	(0.17)	2.50	6.04
MSCI Europe Index	4.07	15.26	(12.78)	(6.78)	(0.00)	1.46	5.65
MSCI Japan Index	(0.01)	11.61	(7.12)	3.10	2.96	3.44	6.09
MSCI Pacific ex Japan Index	8.01	20.19	(12.98)	(12.74)	0.82	2.68	5.64
MSCI EM Latin America Index	5.26	19.10	(35.23)	(32.46)	(7.21)	(3.22)	(3.80)
MSCI EM Asia Index	8.24	17.82	(3.50)	4.88	4.10	4.83	5.80
MSCI EM Europe Index	(0.29)	18.63	(24.64)	(17.05)	0.67	1.29	(0.65)
Local Currency (%)	MTD	QTD	YTD	1 Year	3 Years	5 Years	10 Years
MSCI AC World ex U.S. Index	3.71	13.90	(9.04)	(2.71)	2.21	3.30	6.57
MSCI EAFE Index	2.64	12.60	(10.53)	(4.24)	1.26	2.63	6.85
MSCI Emerging Markets Index	6.63	16.74	(5.50)	1.37	4.47	5.08	6.01



Fixed Income Market

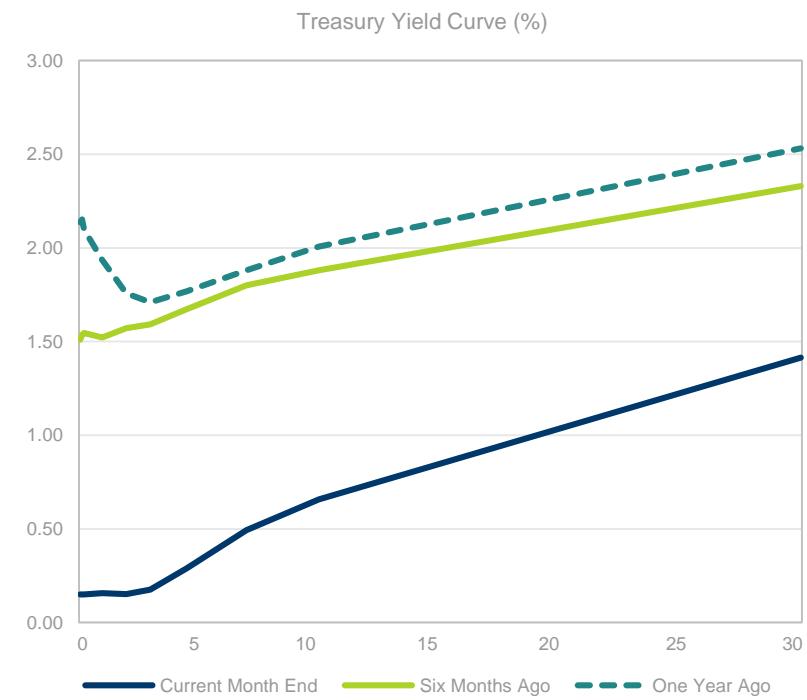
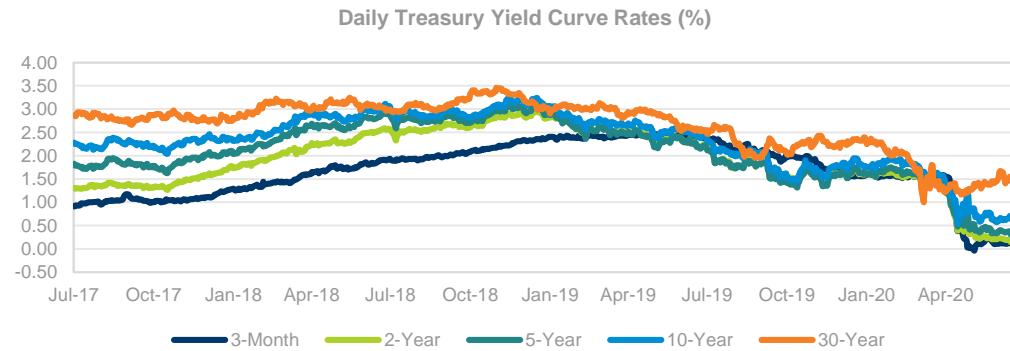
Market Commentary

The U.S. Treasury yield curve remained depressed during the month across the maturity spectrum. The 10-year Treasury yield ended the month at 0.66%, up 1 bps from May 30, 2020 and up 4 bps from March 31, 2020. Although the entire yield curve is below 1.50%, the yield curve is now steeper than it has been in the past two years.

The Federal Open Market Committee met twice during the quarter, as scheduled, with no change to the overnight rate, which is expected to continue until at least 2022.

Credit spreads continued to tighten during June in both investment grade and non-investment grade fixed income.

U.S. Fixed Income	MTD	QTD	YTD	1 Year	3 Years	5 Years	10 Years
Bloomberg Barclays U.S. Aggregate	0.63	2.90	6.14	8.74	5.32	4.30	3.82
Bloomberg Barclays Long Govt/Credit	1.55	6.23	12.82	18.91	10.31	8.97	7.83
Bloomberg Barclays LT Treasury	0.13	0.25	21.20	25.41	12.03	9.25	7.73
Bloomberg Barclays U.S. TIPS	1.12	4.24	6.01	8.28	5.04	3.74	3.52
Bloomberg Barclays U.S. Credit	1.83	8.22	4.82	9.07	6.13	5.54	5.23
Bloomberg Barclays U.S. High Yield	0.98	10.18	(3.80)	0.03	3.33	4.78	6.68
ICE BofA U.S. High Yield Cash Pay	0.95	9.58	(4.73)	(1.06)	2.95	4.58	6.46
S&P LSTA Levered Loan Index	1.14	9.70	(4.61)	(1.99)	2.07	2.89	4.17
ICE BofA US 3-Month Treasury Bill	0.01	0.02	0.60	1.63	1.77	1.19	0.64
Global Fixed Income	MTD	QTD	YTD	1 Year	3 Years	5 Years	10 Years
Bloomberg Barclays Global Aggregate	0.89	3.32	2.98	4.22	3.79	3.55	2.81
Bloomberg Barclays Global Aggregate (Hdg.)	0.50	2.42	3.90	6.07	5.14	4.44	4.07
JPM GBI-EM Index	0.07	7.63	(7.00)	(3.16)	(0.03)	1.80	1.83
JPM EMBI Global Index	2.91	11.21	(1.86)	1.54	3.32	5.13	5.82
JPM Corporate EMBI Index	2.66	11.47	0.30	4.35	4.75	5.40	6.13



Real Assets Market

Real Assets	MTD	QTD	YTD	1 Year	3 Years	5 Years	10 Years
Wilshire US RESI	2.28	10.57	(17.89)	(12.39)	0.22	4.19	9.33
Wilshire Global RESI	2.24	9.49	(20.30)	(15.15)	(0.67)	2.59	8.25
Bloomberg Commodity Index	2.28	5.08	(19.40)	(17.38)	(6.13)	(7.68)	(5.81)
S&P GSCI Index	5.09	10.47	(36.31)	(33.90)	(8.70)	(12.53)	(8.52)
Alerian MLP Index	(7.87)	50.18	(35.71)	(41.43)	(16.77)	(12.84)	(1.41)
DJ Brookfield Global Infrastructure	(1.21)	11.84	(11.43)	(5.21)	3.65	4.76	9.46
FTSE Global 50/50 Infrastructure	(1.97)	10.51	(12.97)	(7.33)	3.78	6.31	9.65

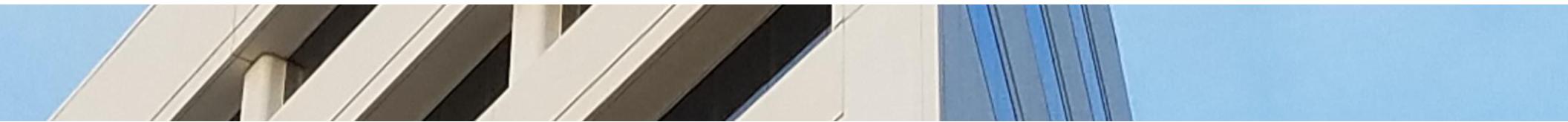
Market Commentary

U.S. real estate securities were up during June, +2.3%. Similarly, global real estate securities were up +2.2%. Over the trailing one year, real estate both in the United States and globally remain negative, -12.4% and -15.2%, respectively.

Commodities continued their strong recovery during June, returning +2.3% for the month.

Crude oil was up +14.5% for the month, ending at \$40.65 per barrel. Year-to-date; however, crude oil remains negative, down -33.4%, ending 2019 at \$61.06 per barrel.





IMRF Performance

IMRF Commentary

IMRF Commentary

The Illinois Municipal Retirement Fund (“IMRF”) ended June 2020 with a market value of \$43.1 billion, up for the month by approximately \$854 million. The Fund returned +2.20% for the month, outperforming the Total Fund Benchmark, which returned +1.89%.

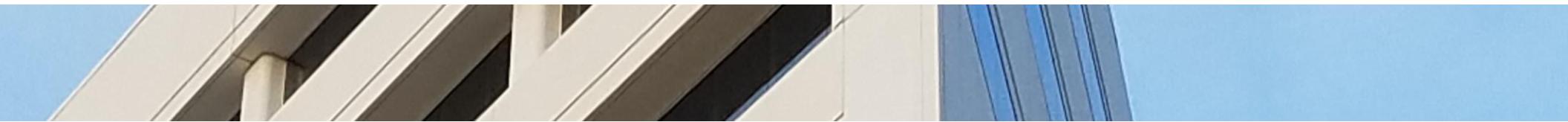
The U.S. Equity Portfolio outperformed the benchmark for the month returning +2.94% versus +2.29%. Investment manager outperformance in Large Cap added relative value versus the benchmark, returning +3.18% during the month. Additionally, the Portfolio’s overweight position to Small Cap contributed to relative performance, also returning +3.18%.

The Public Real Assets Portfolio matched the return of its benchmark for the month returning -1.95%.

The International Equity Portfolio modestly trailed the return of the benchmark during June, up +4.31% versus +4.52%. In aggregate, investment managers within Large Cap Growth added value by outperforming its respective benchmark, while Large Cap Core, Large Cap Value, and Emerging Markets in aggregate trailed their benchmarks during the month. The Portfolio’s allocation to Small Cap detracted from relative outperformance, returning +2.67% during the month.

The Fixed Income Portfolio benefited from credit spread compression during the month in both investment grade and non-investment grade fixed income. The Portfolio outperformed its benchmark during June +1.04% versus +0.63%. Positions in Corporate Credit, High Yield and Emerging Markets added value.

Entering the month, the allocation to U.S. Equity, on average, was overweight by 2.78% versus the Total Fund Benchmark. Given the strong performance within the U.S. Equity market (the U.S. Equity market returned +2.29% during the month), an overweight position added relative value. Conversely, the allocation to Fixed Income, on average, was overweight by 0.92%. Within Fixed Income, returns for the month were modest compared to equities (the Core Fixed Income market returned +0.63%), an overweight position detracted relative value.



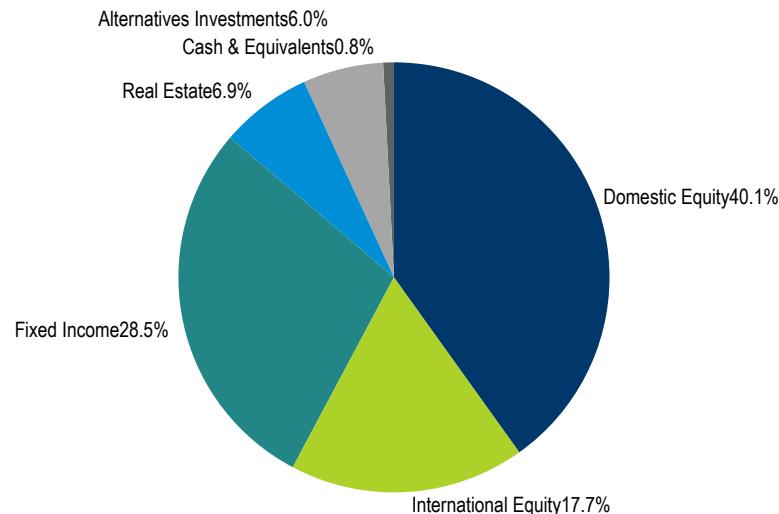
Total Fund

Asset Allocation

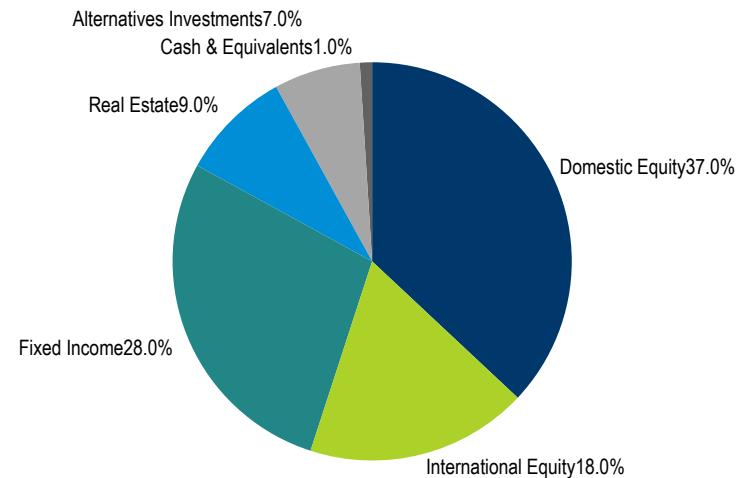
Total Fund

Periods Ended As of June 30, 2020

Actual Allocation



Target Allocation

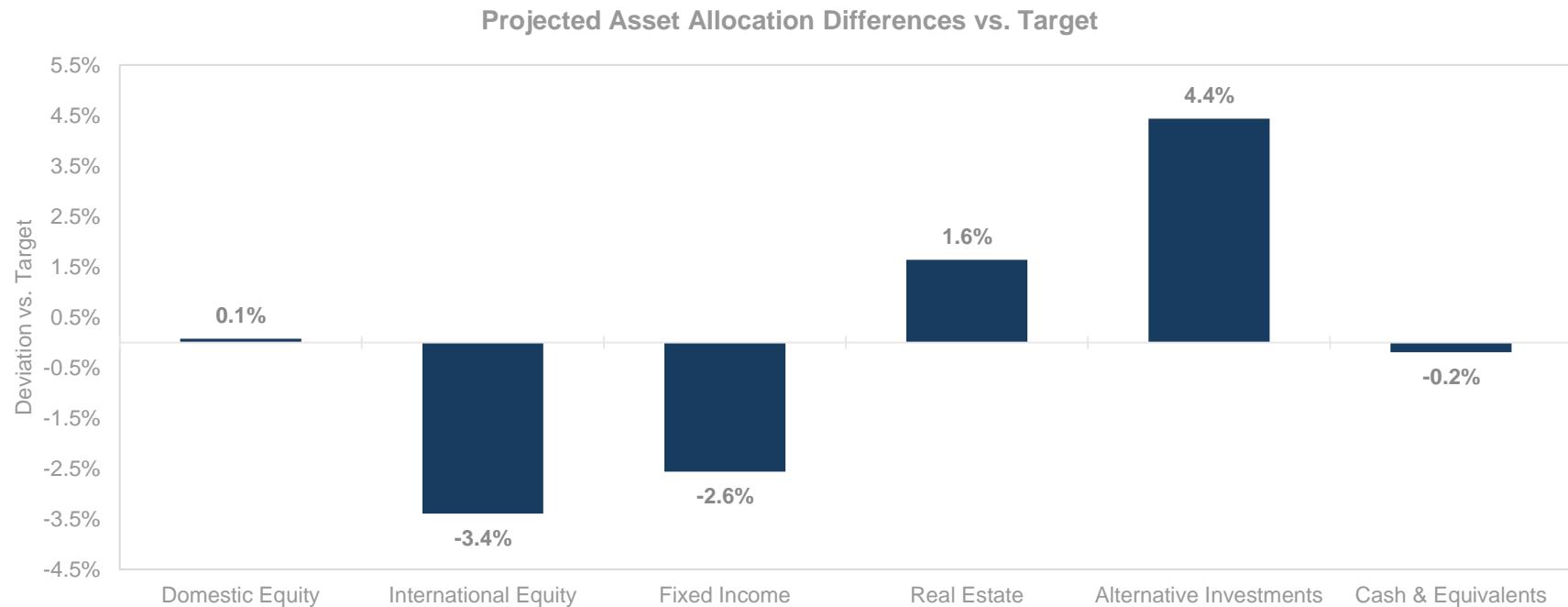


■ Domestic Equity ■ International Equity ■ Fixed Income ■ Real Estate ■ Alternatives Investments ■ Cash & Equivalents

	Actual Allocation \$Millions	Actual Allocation %	Target Allocation %	Differences %	Differences \$Millions
Total Fund	43,107	100.0	100.0	0.0	
■ Domestic Equity	17,296	40.1	37.0	3.1	1,346
■ International Equity	7,610	17.7	18.0	-0.3	-150
■ Fixed Income	12,279	28.5	28.0	0.5	209
■ Real Estate	2,973	6.9	9.0	-2.1	-906
■ Alternatives Investments	2,603	6.0	7.0	-1.0	-415
■ Cash & Equivalents	347	0.8	1.0	-0.2	-84

Projected Deviation From Benchmark

Period Ending June 30, 2020

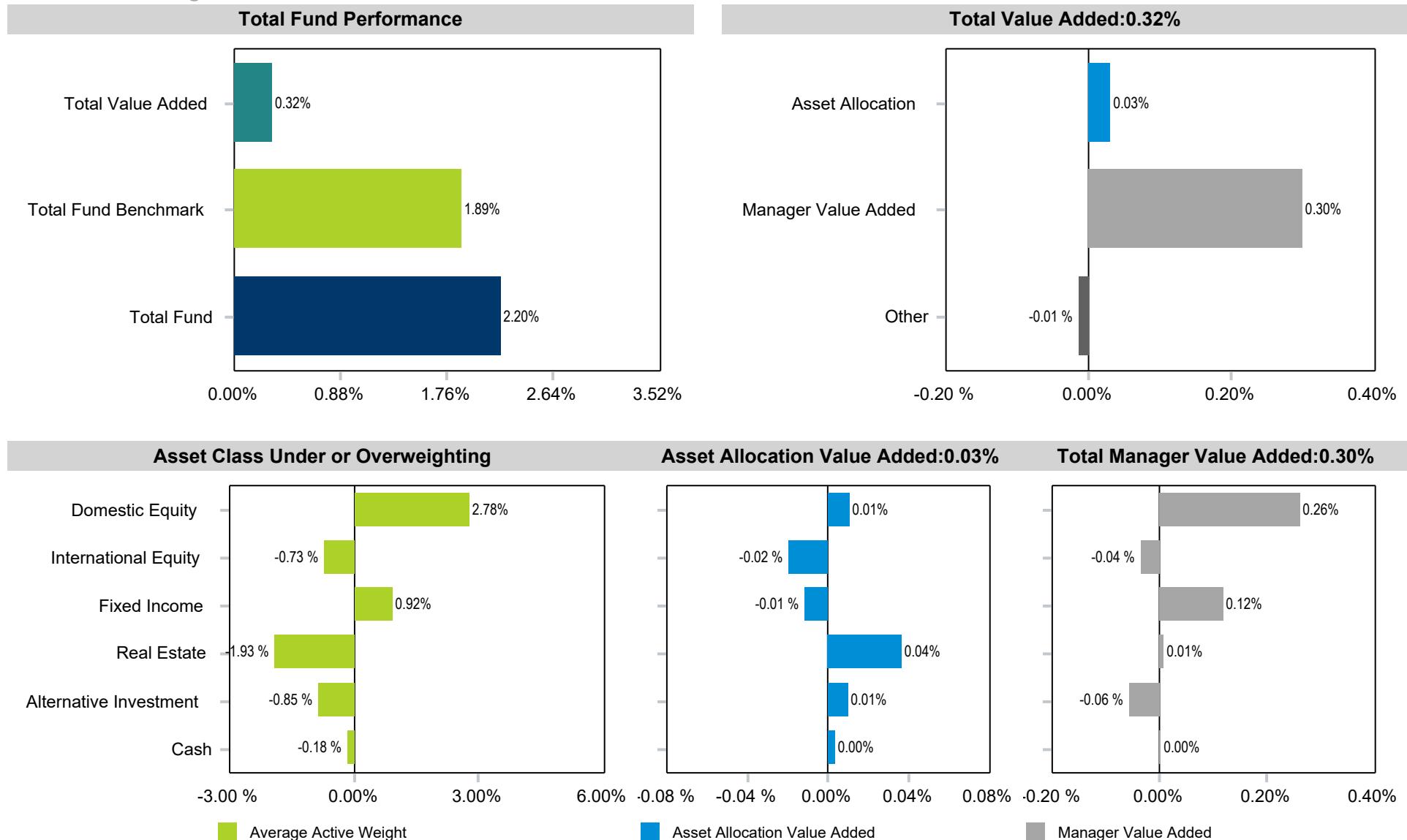


- Includes committed, but unfunded amounts for real estate (\$1,612.9 million) and alternatives (\$2,326.6 million). Assumes real estate and alternatives allocations are fully funded as of quarter end.
- Assumes that outstanding commitments are funded equally from the public markets asset classes (one-third from U.S. Equity, one-third from International Equity, and one-third from Fixed Income).

Total Fund Attribution

Total Fund

1 Month Ending June 30, 2020



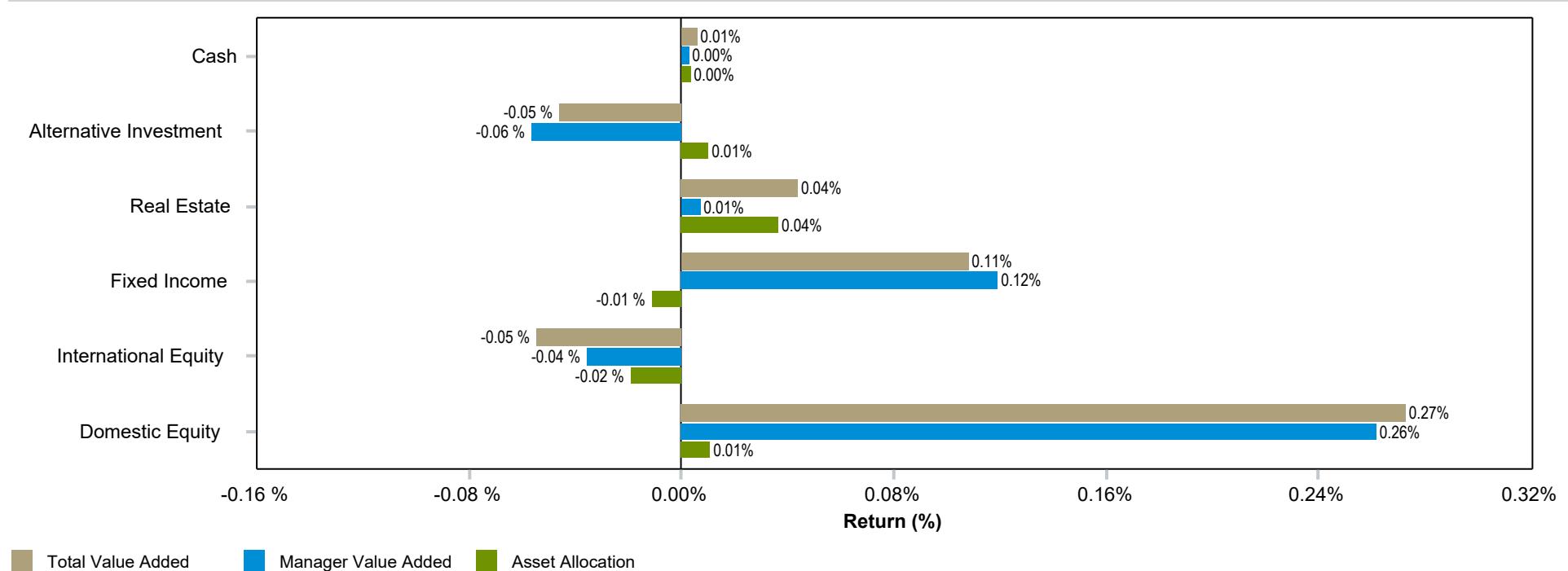
Total Fund Benchmark = 37.0% Russell 3000 Index, 28.0% Blmbg Aggregate, 18.0% MSCI ACWI ex US, 9.0% NCREIF NFI-ODCE Val Wt Nt, 7.0% 9% Annually and 1.0% 3-month Treasury Bill.

Total Fund Attribution

Total Fund

1 Month Ending June 30, 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	39.8	37.0	2.94	2.29	0.26	0.01	0.27
International Equity	17.3	18.0	4.31	4.52	-0.04	-0.02	-0.05
Fixed Income	28.9	28.0	1.04	0.63	0.12	-0.01	0.11
Real Estate	7.1	9.0	0.10	0.00	0.01	0.04	0.04
Alternative Investment	6.1	7.0	-0.20	0.72	-0.06	0.01	-0.05
Cash	0.8	1.0	0.33	0.01	0.00	0.00	0.01
Total Fund	100.0	100.0	2.20	1.89	0.30	0.03	0.32

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 June 30, 2020

	Performance (%)										
	1 Month	QTD	YTD	1 Year	3 Years	5 Years	10 Years	20 Years	30 Years	Since Inception	Inception Date
Total Fund	2.21	12.66	-2.42	3.98	6.47	6.48	9.06	6.26	8.28	9.69	1/1/1982
Total Fund - Net	2.20	12.61	-2.51	3.80	6.28	6.27	8.83				
Total Fund Benchmark	1.89	11.82	-0.79	5.49	6.88	6.87	8.81				
Domestic Equity	2.95	24.05	-4.22	4.65	8.83	8.73	13.31	6.42	10.17	11.38	1/1/1982
Domestic Equity - Net	2.94	24.00	-4.31	4.46	8.63	8.50	13.05				
Blended Benchmark (U.S. Equity)	2.29	22.03	-3.48	6.53	10.04	10.03	13.71	6.24	9.80		
U.S. Equity IMRF Custom Benchmark	2.18	21.41	-5.74	3.46	7.86	8.49					
International Equity	4.33	17.20	-10.69	-3.55	1.88	3.19	6.51	4.86	6.35	7.39	9/1/1986
International Equity - Net	4.31	17.09	-10.86	-3.88	1.54	2.84	6.17				
MSCI AC World ex USA (Net)	4.52	16.12	-11.00	-4.80	1.13	2.26	4.97	3.40			
International Equity IMRF Custom Benchmark	4.54	16.46	-11.02	-4.63	1.06	2.30					
Fixed Income	1.04	4.74	4.51	7.31	5.13	4.59	4.65	5.64	6.66	8.21	1/1/1982
Fixed Income - Net	1.04	4.72	4.46	7.19	4.99	4.45	4.50				
Bloomberg Barc. U.S. Aggregate	0.63	2.90	6.14	8.74	5.32	4.30	3.82	5.14	6.02	7.73	
Fixed Income IMRF Custom Benchmark	0.70	3.70	4.84	7.55	5.06	4.30					
Real Estate	0.10	-1.38	0.65	5.24	8.20	9.15	10.82	7.81	4.95	5.50	5/1/1985
Real Estate - Net	0.10	-1.38	0.65	5.20	8.18	9.12	10.81				
Blended Benchmark (Real Estate)	0.00	0.00	0.75	3.14	5.34	6.72	10.08	7.22	7.42	7.60	
Alternatives Investments	-0.19	-3.43	-1.70	3.80	9.88	9.01	8.96	6.00	11.44	10.64	2/1/1986
Alternatives Investments - Net	-0.20	-3.43	-1.71	3.77	9.77	8.81	8.71				
Alternatives Custom Benchmark	0.72	2.18	4.40	9.00	9.00	9.00	9.00	10.90	12.25	12.60	
Private Equity	-0.19	-2.53	-1.04	5.76	12.76	11.67	11.60	7.36	14.03	12.85	2/1/1986
Alternatives Custom Benchmark	0.72	2.18	4.40	9.00	9.00	9.00	9.00	10.90	12.25	12.60	
Agriculture	-0.33	-0.49	4.19	0.51	-1.89	2.44	8.97	7.33		7.00	10/1/1997
NCREIF Farmland Index	0.00	0.00	-0.10	3.22	5.14	6.31	10.80	12.14		11.53	
Timberland	-0.21	0.57	4.13	4.73	1.66	1.00	2.96	3.25		7.36	10/1/1992
NCREIF Timberland Index	0.00	0.00	0.11	0.25	2.25	2.69	4.38	5.75		8.46	

Benchmark definitions on next page.

Asset Class Returns

Periods Ended June 30, 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	-0.09 0.72	-1.09 2.18	-1.43 4.40	4.73 9.00						7.18 9.00	4/1/2018
Cash 90 Day US Treasury Bill	0.33 0.01	0.85 0.02	1.64 0.60	3.59 1.63	2.83 1.77	2.02 1.17	1.10 0.62	1.91 1.62	3.25 2.76	3.81 3.26	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 June 30, 2020

	May-2020		Jun-2020	
	\$	%	\$	%
Domestic Equity	16,808,723,749	39.78	17,295,813,978	40.12
Large Cap Growth	6,575,826,970	15.56	6,948,567,457	16.12
NTGI S&P 500 Growth	2,508,774,830	5.94	2,611,124,948	6.06
Sands Capital	2,602,061,578	6.16	2,808,741,818	6.52
Xponance Russell 1000 G	1,464,990,563	3.47	1,528,700,691	3.55
Large Cap Value	4,546,975,084	10.76	4,541,830,303	10.54
Dodge & Cox	1,209,031,058	2.86	1,226,748,297	2.85
BMO	739,034,826	1.75	735,567,463	1.71
LSV Asset	1,250,602,119	2.96	1,243,365,023	2.88
NTGI S&P 500 Value	1,348,307,081	3.19	1,336,149,521	3.10
Large Cap Pass. Core	2,535,633,146	6.00	2,593,851,075	6.02
NTGI MarketCap Idx.	2,535,633,146	6.00	2,593,851,075	6.02
Quantitative Factor Strategies	239,285,966	0.57	240,593,860	0.56
Quantitative US Equity - SciBeta	239,285,966	0.57	240,593,860	0.56
Small Cap Growth	728,245,237	1.72	757,859,352	1.76
Frontier Capital	571,533,096	1.35	596,999,920	1.38
FIAM Small Cap	156,712,141	0.37	160,859,433	0.37
Small Cap Value	1,191,513,533	2.82	1,222,700,615	2.84
Channing	197,187,175	0.47	202,452,804	0.47
DFA Small Cap Val.	437,510,266	1.04	450,036,277	1.04
Inv. Couns. Maryland	556,816,092	1.32	570,211,534	1.32
Micro Cap	356,244,219	0.84	367,815,935	0.85
DFA Micro Cap (9-10)	356,244,219	0.84	367,815,935	0.85

Investment Manager Asset Allocation

Periods Ended June 30, 2020

	May-2020		Jun-2020	
	\$	%	\$	%
Public Real Assets	634,999,592	1.50	622,595,379	1.44
Brookfield Public Global Infrastru	150,081,119	0.36	147,206,133	0.34
Cohen & St Public Global Infrastru	484,918,473	1.15	475,389,246	1.10
 International Equity	 7,295,747,849	 17.27	 7,609,681,490	 17.65
Intl Large Cap Growth	1,190,672,238	2.82	1,253,702,405	2.91
EARNEST Part. Intl	395,932,424	0.94	407,303,824	0.94
William Blair	794,739,813	1.88	846,398,582	1.96
 Intl Large Cap Value	 1,053,225,387	 2.49	 1,097,036,344	 2.54
Brandes Investment	487,538,557	1.15	507,521,852	1.18
Mondrian	461,853,458	1.09	481,825,341	1.12
Lazard	103,833,372	0.25	107,689,151	0.25
 Intl Large Cap Core	 3,427,858,740	 8.11	 3,546,187,057	 8.23
Arrowstreet Capital	674,181,007	1.60	705,733,947	1.64
Brown Capital	379,701,913	0.90	386,180,068	0.90
GlobeFlex Capital	479,337,594	1.13	496,889,120	1.15
NTGI MSCI EAFE	1,891,918,497	4.48	1,955,291,758	4.54
Progress Intl Equity	2,146,580	0.01	1,699,147	0.00
Transition Account	573,148	0.00	393,017	0.00
 Intl All Cap Developed	 125,208,258	 0.30	 129,082,958	 0.30
Ativo International	125,208,258	0.30	129,082,958	0.30
 Internationall Small Cap	 470,223,949	 1.11	 482,798,494	 1.12
Franklin Templeton	171,760,370	0.41	176,156,559	0.41

Investment Manager Asset Allocation

Periods Ended June 30, 2020

	May-2020		Jun-2020	
	\$	%	\$	%
William Blair IntSC	298,463,579	0.71	306,641,935	0.71
Emerging Mkt Equity	1,028,559,278	2.43	1,100,874,231	2.55
Genesis Asset Mngrs.	1,028,559,278	2.43	1,100,874,231	2.55

Investment Manager Asset Allocation

Periods Ended June 30, 2020

	May-2020		Jun-2020	
	\$	%	\$	%
Fixed Income	12,217,790,079	28.92	12,278,611,553	28.48
Domestic Fixed Core	3,732,448,024	8.83	3,765,383,854	8.73
Brandes FI Core	384,214,965	0.91	384,176,382	0.89
EARNEST Partners	1,034,996,538	2.45	1,042,449,118	2.42
Xponance Yield Advantage Agg.	1,097,887,975	2.60	1,108,936,180	2.57
Garcia Hamilton	1,104,384,530	2.61	1,116,618,903	2.59
Ramirez Asset Management	110,964,016	0.26	113,203,271	0.26
Domestic Fixed Passive Core	3,740,145,531	8.85	3,763,446,071	8.73
NTGI Blmbg Agg.	1,909,770,433	4.52	1,921,193,764	4.46
BlackRock US Debt I	1,830,375,098	4.33	1,842,252,307	4.27
Domestic Fixed Core Plus	3,260,781,597	7.72	3,248,578,176	7.54
LM Capital Group FI	948,046,819	2.24	960,889,804	2.23
Progress Inv. FI	27,157	0.00	46,812	0.00
BMO - TCH	976,938,486	2.31	986,366,335	2.29
Western Asset	1,159,255,641	2.74	1,122,831,517	2.60
Longfellow Core Plus	176,513,493	0.42	178,443,709	0.41
Bank Loans	515,886,158	1.22	525,326,297	1.22
Barings Global Loan Fund	515,886,158	1.22	525,326,297	1.22
Emerging Markets Debt	210,283,787	0.50	213,407,036	0.50
Standish-Mellon EMD	210,283,787	0.50	213,407,036	0.50
High Yield	758,244,983	1.79	762,470,118	1.77
MacKay Shields	757,925,169	1.79	762,150,466	1.77
FIAM High Yield	319,814	0.00	319,652	0.00

Investment Manager Asset Allocation

Periods Ended June 30, 2020

	May-2020		Jun-2020	
	\$	%	\$	%
Real Estate	2,987,124,348	7.07	2,973,376,487	6.90
Real Estate Core Cmp	1,596,982,668	3.78	1,598,039,573	3.71
TA Assoc. Buckhead	623,041,645	1.47	617,951,573	1.43
Barings Core Property		0.00		0.00
Barings Euro Core Property	129,311,241	0.31	130,566,748	0.30
Blackstone Property Euro	134,591,039	0.32	135,897,797	0.32
INVESCO Core Real Estate	214,079,432	0.51	214,079,432	0.50
INVESCO European real estate	56,798,358	0.13	57,349,823	0.13
AEW Core Property Tr	234,536,661	0.56	234,536,661	0.54
CBRE Core Partners	204,624,292	0.48	207,657,540	0.48
RE Non-Core Cmp	1,390,141,681	3.29	1,375,336,913	3.19
Artemis MWBE Spruce	260,463,718	0.62	218,177,200	0.51
Franklin T. EMREFF	7,946,633	0.02	7,860,669	0.02
Security Capital	49,155,100	0.12	49,800,323	0.12
Dune II	20,456,881	0.05	20,456,881	0.05
Non-Core Real Estate Funds	919,463,355	2.18	933,925,379	2.17
Non-Core Intl Real Estate	132,363,033	0.31	144,972,599	0.34
Rockwood Fund VIII	149,098	0.00	1	0.00
Almanac ARS V	143,862	0.00	143,862	0.00
TA Assoc. - Fund IX		0.00		0.00
Alternatives Investments	2,597,369,700	6.15	2,602,977,223	6.04
Absolute Return	336,524	0.00	327,113	0.00
Aurora Investment	336,524	0.00	327,113	0.00

Investment Manager Asset Allocation

Periods Ended June 30, 2020

	May-2020		Jun-2020	
	\$	%	\$	%
Private Equity	2,125,878,274	5.03	2,131,821,562	4.95
Abbott S/A Comp.	353,654,638	0.84	352,787,433	0.82
Muller Monroe MPEFF	4,808,888	0.01	4,969,587	0.01
Pantheon S/A Comp.	269,573,799	0.64	269,573,636	0.63
Private Equity Fund - Domestic	1,161,514,489	2.75	1,165,530,329	2.70
Private Equity Fund - International	322,850,169	0.76	323,952,227	0.75
Oakbrook Opportunities Fund	13,476,291	0.03	15,008,349	0.03
Private Credit	130,898,261	0.31	130,898,261	0.30
Private Credit Fund - Domestic	130,898,261	0.31	130,898,261	0.30
Agriculture	217,525,457	0.51	216,305,455	0.50
Premiere Partners IV	217,525,457	0.51	216,305,455	0.50
Timberland	77,119,926	0.18	76,355,317	0.18
Forest Investment	77,119,926	0.18	76,355,317	0.18
Unlisted Infrastructure	45,611,258	0.11	47,269,515	0.11
Unlisted Infrastructure Funds	45,611,258	0.11	47,269,515	0.11
Cash & Equivalents	346,431,860	0.82	346,847,746	0.80
Total Fund	42,253,187,585	100.00	43,107,308,477	100.00

Wilshire Consulting Performance



Periods Ended June 30, 2020

	Market Value \$	Performance (%)									
		1 Month	QTD	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	
Total Fund	43,107,308,477	2.21	12.66	-2.42	3.98	6.47	6.48	9.06	9.69	1/1/1982	
Total Fund - Net		2.20	12.61	-2.51	3.80	6.28	6.27	8.83			
Total Fund Benchmark		1.89	11.82	-0.79	5.49	6.88	6.87	8.81			
Domestic Equity	17,295,813,978	2.95	24.05	-4.22	4.65	8.83	8.73	13.31	11.38	1/1/1982	
Domestic Equity - Net		2.94	24.00	-4.31	4.46	8.63	8.50	13.05			
Blended Benchmark		2.29	22.03	-3.48	6.53	10.04	10.03	13.71			
Russell 3000 Index		2.29	22.03	-3.48	6.53	10.04	10.03	13.72	11.33		
Large Cap Equity	14,084,248,836	3.18	24.36	-1.12	8.37	10.79	10.33	14.07	11.16	1/1/1982	
Large Cap Equity - Net		3.18	24.34	-1.17	8.29	10.68	10.21	13.93			
Russell 1000 Index		2.21	21.82	-2.81	7.48	10.64	10.47	13.97	11.49		
Large Cap Growth	6,948,567,457	5.67	31.34	14.87	24.20	20.47	16.12	17.19	12.29	1/1/1982	
Large Cap Growth - Net		5.67	31.32	14.82	24.10	20.35	15.99	17.02			
LCG Blended Benchmark		4.35	27.84	9.81	23.28	18.99	15.89	17.23			
Russell 1000 Growth Index		4.35	27.84	9.81	23.28	18.99	15.89	17.23	11.44		
NTGI S&P 500 Growth	2,611,124,948	4.08	26.17	7.83	17.67	16.70	14.59	16.62	8.46	8/1/2001	
NTGI S&P 500 Growth - Net		4.08	26.17	7.82	17.66	16.69	14.59	16.61			
S&P 500 Growth		4.10	26.23	7.93	17.75	16.75	14.63	16.62	8.44		
Xponance Russell 1000 G	1,528,700,691	4.35	27.82	9.81	23.25				14.09	10/1/2018	
Xponance Russell 1000 G - Net		4.35	27.82	9.80	23.23				14.07		
Russell 1000 Growth Index		4.35	27.84	9.81	23.28				14.11		
Sands Capital	2,808,741,818	7.94	38.21	25.39	31.48	25.75	18.41	20.35	13.59	11/1/2003	
Sands Capital - Net		7.94	38.15	25.26	31.20	25.48	18.14	20.08			
LCG Blended Benchmark		4.35	27.84	9.81	23.28	18.99	15.89	17.23	10.67		
Russell 1000 Growth Index		4.35	27.84	9.81	23.28	18.99	15.89	17.23	10.72		
Large Cap Value	4,541,830,303	0.06	16.21	-16.63	-7.74	2.23	4.90	11.22	9.75	10/1/1982	
Large Cap Value - Net		0.06	16.17	-16.69	-7.87	2.07	4.73	11.04			
LCV Blended Benchmark		-0.66	14.29	-16.26	-8.84	1.82	4.64	10.41			
Russell 1000 Value Index		-0.66	14.29	-16.26	-8.84	1.82	4.64	10.41	11.24		

Benchmark definitions in glossary.

Wilshire Consulting Performance



Periods Ended June 30, 2020

	Market Value \$	Performance (%)								
		1 Month	QTD	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Dodge & Cox	1,226,748,297	1.63	18.80	-14.67	-5.95	3.10	6.15	11.97	8.45	9/1/2003
Dodge & Cox - Net		1.63	18.73	-14.76	-6.15	2.88	5.92	11.73		
LCV Blended Benchmark		-0.66	14.29	-16.26	-8.84	1.82	4.64	10.41	7.24	
Russell 1000 Value Index		-0.66	14.29	-16.26	-8.84	1.82	4.64	10.41	7.39	
BMO	735,567,463	-0.24	17.11	-15.38	-9.78	1.34	3.67	10.99	6.99	2/1/2001
BMO - Net		-0.24	17.09	-15.40	-9.91	1.14	3.46	10.76		
LCV Blended Benchmark		-0.66	14.29	-16.26	-8.84	1.82	4.64	10.41	4.94	
Russell 1000 Value Index		-0.66	14.29	-16.26	-8.84	1.82	4.64	10.41	5.89	
LSV Asset	1,243,365,023	-0.25	16.42	-20.59	-11.32	0.51	3.84	11.01	9.39	2/1/2003
LSV Asset - Net		-0.25	16.34	-20.69	-11.53	0.28	3.60	10.74		
LCV Blended Benchmark		-0.66	14.29	-16.26	-8.84	1.82	4.64	10.41	8.14	
Russell 1000 Value Index		-0.66	14.29	-16.26	-8.84	1.82	4.64	10.41	8.15	
NTGI S&P 500 Value	1,336,149,521	-0.90	13.29	-15.31	-4.29	3.85	6.10	10.98	5.34	8/1/1999
NTGI S&P 500 Value - Net		-0.90	13.28	-15.32	-4.29	3.85	6.09	10.98		
S&P 500 Value		-0.95	13.15	-15.52	-4.50	3.74	5.98	10.88	5.30	
Large Cap Pass. Core	2,593,851,075	2.30	22.05	-3.51	6.44	10.02	10.05	13.74	11.01	1/1/1985
Large Cap Pass. Core - Net		2.30	22.05	-3.51	6.43	10.01	10.04	13.73		
Dow Jones US Total Stock Market Index		2.30	22.09	-3.50	6.41	9.97	9.97	13.68		
NTGI MarketCap Idx.	2,593,851,075	2.30	22.05	-3.51	6.44	10.02	10.05	13.75	10.79	2/1/1985
NTGI MarketCap Idx. - Net		2.30	22.05	-3.51	6.43	10.01	10.04	13.74		
Dow Jones US Total Stock Market Index		2.30	22.09	-3.50	6.41	9.97	9.97	13.68		
Quantitative Factor Strategies	240,593,860	0.55	19.28	-8.75					-3.60	9/17/2019
Quantitative US Equity - SciBeta	240,593,860	0.55	19.28	-8.75					-3.60	9/17/2019
Quantitative US Equity - SciBeta - Net		0.50	19.12	-8.99					-3.86	
SciBeta US Hi-Fctr-Intst Div Multi-Beta Multi-Strat Index		-0.20	18.06	-9.54					-4.77	
Small Cap	2,348,375,902	3.18	26.76	-17.19	-10.26	0.81	2.75	10.43	11.27	7/1/1988
Small Cap Composite - Net		3.18	26.62	-17.48	-10.82	0.28	2.19	9.83		
Russell 2000 Index		3.53	25.42	-12.98	-6.63	2.01	4.29	10.50	8.86	

Benchmark definitions in glossary.

Wilshire Consulting Performance



Periods Ended June 30, 2020

	Market Value \$	Performance (%)								
		1 Month	QTD	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Small Cap Growth	757,859,352	4.07	37.48	-5.80	3.96	8.79	6.71	13.10	12.63	7/1/1988
Small Cap Growth - Net		4.07	37.33	-6.40	3.04	8.16	6.07	12.46		
Russell 2000 Growth Index		3.84	30.58	-3.06	3.48	7.86	6.86	12.92	8.02	
Frontier Capital	596,999,920	4.46	41.33	-3.35	7.06	13.51	8.76	13.51	13.01	8/1/1988
Frontier Capital - Net		4.46	41.14	-4.16	5.92	12.62	8.00	12.80		
Russell 2000 Growth Index		3.84	30.58	-3.06	3.48	7.86	6.86	12.92	8.10	
FIAM Small Cap	160,859,433	2.65	24.84	-13.88	-6.14	3.99	4.59	12.60	12.81	8/1/1988
FIAM Small Cap - Net		2.65	24.81	-13.90	-6.37	3.69	4.14	12.07		
Russell 2000 Index		3.53	25.42	-12.98	-6.63	2.01	4.29	10.50	8.91	
Russell 2000 Growth Index		3.84	30.58	-3.06	3.48	7.86	6.86	12.92	8.10	
Small Cap Value	1,222,700,615	2.62	22.03	-22.26	-16.36	-3.21	1.66	9.16	10.62	9/1/1989
Small Cap Value - Net		2.62	21.89	-22.44	-16.79	-3.72	1.13	8.62		
Russell 2000 Value Index		2.90	18.91	-23.50	-17.48	-4.35	1.26	7.82	8.92	
Channing	202,452,804	2.67	25.90	-16.43	-11.43	-1.62	2.22		7.58	7/1/2011
Channing - Net		2.67	25.73	-16.65	-11.89	-2.12	1.70		7.00	
Russell 2000 Value Index		2.90	18.91	-23.50	-17.48	-4.35	1.26		5.48	
DFA Small Cap Val.	450,036,277	2.86	23.17	-25.35	-19.49	-6.03	-0.72	8.54	10.23	2/1/1996
DFA Small Cap Val. - Net		2.86	23.04	-25.53	-19.89	-6.51	-1.23	8.02		
Russell 2000 Value Index		2.90	18.91	-23.50	-17.48	-4.35	1.26	7.82	8.15	
Inv. Couns. Maryland	570,211,534	2.41	19.84	-21.63	-15.43	-1.32	4.13	10.03	10.00	5/1/1999
Inv. Couns. Maryland - Net		2.41	19.71	-21.80	-15.88	-1.84	3.59	9.51		
Russell 2000 Value Index		2.90	18.91	-23.50	-17.48	-4.35	1.26	7.82	7.50	
Micro Cap	367,815,935	3.25	22.86	-19.79	-13.70	-2.45	-0.50	8.73	10.62	7/1/1984
Micro Cap - Net		3.25	22.73	-19.99	-14.13	-2.96	-1.08	8.05		
Russell Microcap Index		6.25	30.54	-11.21	-4.77	0.85	2.86	9.93		
DFA Micro Cap (9-10)	367,815,935	3.25	22.86	-19.79	-13.70	-1.49	3.08	10.41	10.20	8/1/1987
DFA Micro Cap (9-10) - Net		3.25	22.73	-19.99	-14.13	-1.98	2.57	9.87		
Russell 2000 Index		3.53	25.42	-12.98	-6.63	2.01	4.29	10.50	8.29	

Benchmark definitions in glossary.

Wilshire Consulting Performance



Periods Ended June 30, 2020

	Market Value \$	Performance (%)								
		1 Month	QTD	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Public Real Assets	622,595,379	-1.95	10.25	-12.32	-6.73				3.30	8/1/2017
Public Real Assets - Net		-1.95	10.15	-12.50	-7.13				2.87	
Public Real Assets Benchmark		-1.95	11.29	-13.64	-8.62				1.24	
Brookfield	147,206,133	-1.92	12.44	-16.49	-12.07				-0.54	8/1/2017
Brookfield - Net		-1.92	12.27	-16.72	-12.54				-1.03	
Dow Jones Brookfield Global Infrastructure Composite Index		-1.74	13.32	-14.39	-9.89				-0.43	
Cohen & Steers	475,389,246	-1.96	9.40	-10.37	-4.21				5.14	8/1/2017
Cohen & Steers - Net		-1.96	9.31	-10.54	-4.59				4.73	
FTSE Global Core Infrastructure 50/50 Index (Net)		-2.06	10.27	-13.30	-8.02				2.05	

Benchmark definitions in glossary.

Wilshire Consulting Performance



Periods Ended June 30, 2020

	Market Value \$	Performance (%)									
		1 Month	QTD	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	
International Equity	7,609,681,490	4.33	17.20	-10.69	-3.55	1.88	3.19	6.51	7.39	9/1/1986	
International Equity - Net		4.31	17.09	-10.86	-3.88	1.54	2.84	6.17			
MSCI AC World ex USA (Net)		4.52	16.12	-11.00	-4.80	1.13	2.26	4.97			
Intl LargeCap Equity	5,896,925,807	3.98	16.19	-10.84	-4.10	1.53	2.90	6.49	7.37	9/1/1986	
Intl LargeCap Equity - Net		3.98	16.11	-10.97	-4.36	1.26	2.62	6.21			
MSCI AC World ex USA (Net)		4.52	16.12	-11.00	-4.80	1.13	2.26	4.97			
Intl Large Cap Grwth	1,253,702,405	5.29	21.51	-6.73	1.26	3.74	4.26	7.00	7.93	9/1/2002	
Intl Large Cap Grwth - Net		5.29	21.41	-6.88	0.98	3.48	3.98	6.66			
MSCI AC World ex USA (Net)		4.52	16.12	-11.00	-4.80	1.13	2.26	4.97	6.59		
MSCI AC World ex USA Growth (Net)		5.08	19.11	-2.62	5.80	6.07	5.61	7.04	7.43		
EARNEST Part. Intl	407,303,824	2.87	14.92	-19.14	-13.44	-2.63	0.88	4.63	7.38	10/1/2004	
EARNEST Part. Intl - Net		2.87	14.85	-19.24	-13.58	-2.80	0.70	4.35			
MSCI AC World ex USA (Net)		4.52	16.12	-11.00	-4.80	1.13	2.26	4.97	5.17		
MSCI AC World ex USA Growth (Net)		5.08	19.11	-2.62	5.80	6.07	5.61	7.04	6.51		
William Blair	846,398,582	6.50	24.96	1.06	10.94	8.04	6.35	8.86	9.69	10/1/2002	
William Blair - Net		6.50	24.85	0.88	10.55	7.66	5.97	8.46			
MSCI AC World ex USA (Net)		4.52	16.12	-11.00	-4.80	1.13	2.26	4.97	7.29		
MSCI AC World ex USA Growth (Net)		5.08	19.11	-2.62	5.80	6.07	5.61	7.04	8.02		
Intl Large Cap Val.	1,097,036,344	4.16	11.97	-18.92	-12.70	-2.27	0.02	4.32	7.67	10/1/1995	
Intl Large Cap Val. - Net		4.16	11.88	-19.05	-12.97	-2.59	-0.33	3.97			
MSCI AC World ex USA (Net)		4.52	16.12	-11.00	-4.80	1.13	2.26	4.97			
MSCI AC World ex USA Value		4.03	12.99	-19.15	-14.78	-3.38	-0.67	3.37			
Brandes Investment	507,521,852	4.10	12.29	-21.55	-15.04	-3.84	-1.09	4.14	7.64	1/1/1996	
Brandes Investment - Net		4.10	12.22	-21.64	-15.23	-4.05	-1.31	3.90			
MSCI AC World ex USA (Net)		4.52	16.12	-11.00	-4.80	1.13	2.26	4.97			
MSCI AC World ex USA Value		4.03	12.99	-19.15	-14.78	-3.38	-0.67	3.37			
Mondrian	481,825,341	4.32	10.99	-17.26	-11.11	-1.18	0.91		3.35	4/1/2012	
Mondrian - Net		4.32	10.86	-17.44	-11.48	-1.65	0.42		2.86		
MSCI AC World ex USA (Net)		4.52	16.12	-11.00	-4.80	1.13	2.26		3.75		
MSCI AC World ex USA Value		4.03	12.99	-19.15	-14.78	-3.38	-0.67		1.89		

Benchmark definitions in glossary.

Wilshire Consulting Performance



Periods Ended June 30, 2020

	Market Value \$	Performance (%)								
		1 Month	QTD	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Lazard	107,689,151	3.71	15.03	-12.95	-8.13	1.04	1.80		4.67	4/1/2012
Lazard - Net		3.71	14.95	-13.06	-8.37	0.78	1.46		4.17	
MSCI AC World ex USA (Net)		4.52	16.12	-11.00	-4.80	1.13	2.26		3.75	
MSCI AC World ex USA Value		4.03	12.99	-19.15	-14.78	-3.38	-0.67		1.89	
Intl Large Cap Active Core	1,590,895,299	3.63	16.44	-8.41	-1.67	2.79	4.39	8.01	4.30	2/1/2008
Intl Large Cap Active Core - Net		3.62	16.30	-8.66	-2.16	2.31	3.86	7.47		
MSCI AC World ex USA (Net)		4.52	16.12	-11.00	-4.80	1.13	2.26	4.97	1.70	
Arrowstreet Capital	705,733,947	4.68	19.32	-6.97	0.50	3.94	4.97	8.47	4.69	3/1/2008
Arrowstreet Capital - Net		4.68	19.18	-7.20	0.03	3.45	4.48	7.96	4.20	
MSCI AC World ex USA (Net)		4.52	16.12	-11.00	-4.80	1.13	2.26	4.97	1.48	
Brown Capital	386,180,068	1.71	18.96	2.16	8.14	6.66	6.24	9.07	7.99	10/1/2004
Brown Capital - Net		1.71	18.88	2.03	7.84	6.18	5.44	8.29		
MSCI AC World ex USA (Net)		4.52	16.12	-11.00	-4.80	1.13	2.26	4.97	5.17	
GlobeFlex Capital	496,889,120	3.66	15.88	-14.33	-9.35	-1.36	2.42	6.98	3.77	3/1/2006
GlobeFlex Capital - Net		3.66	15.74	-14.52	-9.75	-1.76	2.01	6.54	3.33	
MSCI AC World ex USA (Net)		4.52	16.12	-11.00	-4.80	1.13	2.26	4.97	3.07	
Progress Intl Equity	1,699,147									
Intl Large Cap Passive Core	1,955,291,758	3.35	14.96	-10.89	-4.63	1.21	2.46	6.14	3.03	1/1/2000
Intl Large Cap Passive Core - Net		3.35	14.96	-10.89	-4.64	1.21	2.45	6.13		
MSCI EAFE Index (Net)		3.41	14.88	-11.34	-5.13	0.81	2.05	5.73	2.63	
NTGI MSCI EAFE	1,955,291,758	3.35	14.96	-10.89	-4.63	1.21	2.46	6.14	3.36	2/1/2000
NTGI MSCI EAFE - Net		3.35	14.96	-10.89	-4.64	1.21	2.45	6.13		
MSCI EAFE Index (Net)		3.41	14.88	-11.34	-5.13	0.81	2.05	5.73	2.97	
Intl All Cap Developed	129,082,958	3.10	16.47	-13.16	-7.48				0.03	2/1/2019
Intl All Cap Developed - Net		3.10	16.31	-13.39	-7.95				-0.39	
MSCI EAFE + Canada (Net)		3.42	15.34	-11.49	-5.42				0.84	

Benchmark definitions in glossary.

Wilshire Consulting Performance



Periods Ended June 30, 2020

	Market Value \$	Performance (%)								
		1 Month	QTD	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Ativo International	129,082,958	3.10	16.47	-13.16	-7.48				0.03	2/1/2019
Ativo International - Net		3.10	16.31	-13.39	-7.95				-0.39	
MSCI EAFE + Canada (Net)		3.42	15.34	-11.49	-5.42				0.84	
Intl Small Cap Eqty	482,798,494	2.67	26.54	-7.35	2.93	2.85	4.73	8.60	4.53	12/1/2005
Intl Small Cap Eqty - Net		2.67	26.29	-7.72	2.14	2.07	3.94	7.80		
MSCI AC World ex USA Small Cap (Net)		3.26	22.83	-12.80	-4.34	-0.17	2.50	6.05	5.11	
Custom Benchmark (Intl Small Cap)		3.26	22.83	-12.80	-4.34	-0.17	2.50	6.25	4.42	
Franklin Templeton	176,156,559	2.56	22.77	-14.83	-8.12	-0.64	2.23		4.49	8/1/2011
Franklin Templeton - Net		2.56	22.53	-15.17	-8.81	-1.38	1.48		3.74	
MSCI AC World ex USA Small Cap (Net)		3.26	22.83	-12.80	-4.34	-0.17	2.50		3.34	
William Blair IntSC	306,641,935	2.74	28.81	-2.42	10.56	5.11	6.42		9.04	9/1/2010
William Blair IntSC - Net		2.74	28.56	-2.82	9.70	4.31	5.60		8.21	
MSCI AC World ex USA Small Cap (Net)		3.26	22.83	-12.80	-4.34	-0.17	2.50		5.51	
Custom Benchmark (Intl Small Cap)		3.26	22.83	-12.80	-4.34	-0.17	2.50		5.80	
Emerging Mkt Equity	1,100,874,231	7.14	19.46	-11.02	-2.50	4.31	4.71	5.42	8.64	2/1/1992
Emerging Mkt Equity - Net		7.03	19.24	-11.34	-3.10	3.70	4.09	4.80		
MSCI Emerging Markets Index		7.40	18.18	-9.67	-3.05	2.27	3.24	3.63	6.68	
Genesis Asset Mngrs.	1,100,874,231	7.14	19.46	-11.02	-2.50	4.31	4.71	5.42	10.30	5/1/2004
Genesis Asset Mngrs. - Net		7.03	19.24	-11.34	-3.10	3.70	4.09	4.80		
MSCI Emerging Markets Index		7.40	18.18	-9.67	-3.05	2.27	3.24	3.63	8.07	

Benchmark definitions in glossary.

Wilshire Consulting Performance



Periods Ended June 30, 2020

	Market Value \$	Performance (%)									
		1 Month	QTD	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	
Fixed Income	12,278,611,553	1.04	4.74	4.51	7.31	5.13	4.59	4.65	8.21	1/1/1982	
Fixed Income - Net		1.04	4.72	4.46	7.19	4.99	4.45	4.50			
Blmbg. Barc. U.S. Aggregate		0.63	2.90	6.14	8.74	5.32	4.30	3.82	7.73		
Active Fixed Core	3,765,383,854	1.05	3.84	6.08	8.33	5.32	4.46	4.36	4.78	4/1/2001	
ActiveCore Fixed Inc - Net		1.05	3.82	6.02	8.22	5.22	4.34	4.20			
Blmbg. Barc. U.S. Aggregate		0.63	2.90	6.14	8.74	5.32	4.30	3.82	4.79		
Brandes FI Core	384,176,382	0.06	1.94	6.37	8.25	4.91			3.95	3/1/2016	
Brandes FI Core - Net		0.06	1.94	6.37	8.25	4.91			3.95		
Blmbg. Barc. U.S. Aggregate		0.63	2.90	6.14	8.74	5.32			4.32		
EARNEST Partners	1,042,449,118	0.99	3.30	5.53	7.72	5.30	4.42	4.34	4.82	5/1/2005	
EARNEST Partners - Net		0.99	3.27	5.46	7.58	5.16	4.25	4.15	4.62		
Blmbg. Barc. U.S. Aggregate		0.63	2.90	6.14	8.74	5.32	4.30	3.82	4.46		
Xponance Yield Advantage Agg.	1,108,936,180	1.26	4.57	5.63	7.85	5.01	4.31	4.25	4.60	6/1/2005	
Xponance Yield Advantage Agg. - Net		1.26	4.54	5.56	7.71	4.87	4.16	4.08	4.41		
Blmbg. Barc. U.S. Aggregate		0.63	2.90	6.14	8.74	5.32	4.30	3.82	4.41		
Garcia Hamilton	1,116,618,903	1.15	4.09	6.73	9.27	5.63	4.80		4.44	6/1/2015	
Garcia Hamilton - Net		1.15	4.07	6.69	9.18	5.54	4.71		4.35		
Blmbg. Barc. U.S. Aggregate		0.63	2.90	6.14	8.74	5.32	4.30		4.01		
Ramirez Asset Management	113,203,271	2.02							3.14	5/1/2020	
Ramirez Asset Management - Net		2.02							3.14		
Blmbg. Barc. U.S. Aggregate		0.63							1.10		
Pass. Core Fixed Inc	3,763,446,071	0.62	2.89	6.21	8.82	5.39	4.37	3.86	6.04	1/1/1990	
Pass. Core Fixed Inc - Net		0.62	2.89	6.20	8.81	5.38	4.36	3.86			
Blmbg. Barc. U.S. Aggregate		0.63	2.90	6.14	8.74	5.32	4.30	3.82	6.02		
BlackRock US Debt I	1,842,252,307	0.65	2.98	6.22	8.84	5.42	4.41		4.15	10/1/2013	
BlackRock US Debt I - Net		0.65	2.98	6.22	8.84	5.42	4.40		4.15		
Blmbg. Barc. U.S. Aggregate		0.63	2.90	6.14	8.74	5.32	4.30		4.02		

Benchmark definitions in glossary.

Wilshire Consulting Performance



Periods Ended June 30, 2020

	Market Value \$	Performance (%)									
		1 Month	QTD	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	
NTGI Blmbg Agg.	1,921,193,764	0.60	2.80	6.19	8.79	5.36	4.33	3.85	6.09	2/1/1990	
NTGI Blmbg Agg. - Net	0.60	2.80	6.19	8.79	5.36	4.32	3.84				
Blmbg. Barc. U.S. Aggregate	0.63	2.90	6.14	8.74	5.32	4.30	3.82		6.08		
Core Plus Fixed Income	3,248,578,176	1.37	5.45	5.56	8.64	5.51	4.89	4.84	8.10	1/1/1982	
Core Plus Fixed Inc. - Net	1.36	5.39	5.45	8.43	5.32	4.70	4.66				
Blmbg. Barc. U.S. Aggregate	0.63	2.90	6.14	8.74	5.32	4.30	3.82		7.73		
LM Capital Group FI	960,889,804	1.54	4.26	6.23	8.94	5.28	4.66	4.58	5.14	5/1/2005	
LM Capital Group FI - Net	1.54	4.22	6.14	8.77	5.11	4.49	4.42		4.97		
Blmbg. Barc. U.S. Aggregate	0.63	2.90	6.14	8.74	5.32	4.30	3.82		4.46		
Progress Inv. FI	46,812										
BMO - TCH	986,366,335	1.13	4.16	5.68	8.31	5.53	5.12	5.09	5.25	5/1/2005	
BMO - TCH - Net	1.13	4.12	5.61	8.17	5.39	4.99	4.95		5.12		
Blmbg. Barc. U.S. Aggregate	0.63	2.90	6.14	8.74	5.32	4.30	3.82		4.46		
Western Asset	1,122,831,517	1.46	7.52	4.67	8.64	5.73	5.37	5.33	5.67	11/1/2001	
Western Asset - Net	1.46	7.49	4.60	8.53	5.61	5.23	5.19				
Blmbg. Barc. U.S. Aggregate	0.63	2.90	6.14	8.74	5.32	4.30	3.82		4.55		
Longfellow Core Plus	178,443,709	1.09							2.01	5/1/2020	
Longfellow Core Plus - Net	1.09								2.01		
Blmbg. Barc. U.S. Aggregate	0.63								1.10		
Bank Loans	525,326,297	1.83	9.69	-6.36	-3.37	1.73	3.05		3.14	8/1/2014	
Bank Loans - Net	1.83	9.69	-6.36	-3.40	1.39	2.61			2.68		
Custom Benchmark	1.41	10.25	-4.36	-1.68	2.45	3.21			3.12		
Barings Global Loan Fund	525,326,297	1.83	9.69	-6.36	-3.37	1.73	3.05		3.14	8/1/2014	
Barings Global Loan Fund - Net	1.83	9.69	-6.36	-3.40	1.39	2.61			2.68		
Custom Benchmark	1.41	10.25	-4.36	-1.68	2.45	3.21			3.12		
Emerging Markets Debt	213,407,036	1.49	11.74	-5.41	-1.57	2.05	3.61		2.26	8/1/2014	
Emerging Markets Debt - Net	1.49	11.74	-5.49	-1.83	1.73	3.26			1.94		
Custom Benchmark	1.65	10.70	-3.77	0.17	2.73	3.91			1.95		

Benchmark definitions in glossary.

Wilshire Consulting Performance



Periods Ended June 30, 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	213,407,036	1.49	11.74	-5.41	-1.57	2.05	3.61		2.26	8/1/2014
		1.49	11.74	-5.49	-1.83	1.73	3.26		1.94	
		1.65	10.70	-3.77	0.17	2.73	3.91		1.95	
High Yield High Yield - Net ICE BofAML US High Yield, Cash Pay Index	762,470,118	1.04	10.39	-1.96	2.04	4.84	5.86	7.23	9.35	4/1/1986
		1.04	10.39	-2.04	1.79	4.51	5.52	6.86		
		0.95	9.58	-4.73	-1.07	2.95	4.58	6.46	8.04	
MacKay Shields MacKay Shields - Net ICE BofAML US High Yield, Cash Pay Index	762,150,466	1.04	10.40	-1.96	2.05	4.81	6.07	7.34	8.54	11/1/2000
		1.04	10.40	-2.04	1.80	4.49	5.72	6.97		
		0.95	9.58	-4.73	-1.07	2.95	4.58	6.46	7.14	

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