

October 31, 2017



**Illinois Municipal
Retirement Fund
Monthly Performance Report**

**Investment Measurement Service
Monthly Review**

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Market Environment
As of October 31, 2017

Index	Last Month	Year to Date	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Russell:3000 Index	2.18	16.40	23.98	10.53	15.12	7.61
S&P:500	2.33	16.91	23.63	10.77	15.18	7.51
Russell:2000 Index	0.85	11.89	27.85	10.12	14.49	7.63
MSCI:ACWI ex US	1.88	23.41	23.64	5.71	7.29	0.92
MSCI:EM	3.51	32.26	26.45	5.70	4.83	0.60
Blmbg:Aggregate	0.06	3.20	0.90	2.40	2.04	4.19
NCREIF:Total Index	0.56	5.66	6.88	9.67	10.29	6.18
Blmbg:Commodity Price Idx	2.05	(1.52)	1.52	(9.87)	(9.60)	(7.28)

In October, positive economic indicators in the U.S. and abroad kept the equity rally alive. The euro zone saw record annualized growth in the third quarter. The Bank of Japan (BOJ) voted at the end of the month to hold its monetary policy steady while the country rides a six quarter economic winning streak. At the end of the month, the Federal Open Market Committee (FOMC) upgraded its view on the U.S. economy, solidifying expectations for a December rate hike. The dollar strengthened versus the euro for the second month in a row. Despite the rising dollar, the MSCI Emerging Markets Index increased 3.5%. Rates rose across the Treasury curve, though the U.S. Aggregate still eked out a 0.1% gain. The Russell 3000 Index rose 2.2% during the month and the MSCI ACWI ex U.S. Index advanced 1.9%.

Nonfarm payroll growth met consensus expectations this month. There were 261,000 jobs added during October. Jobs affected by last month's hurricane, such as restaurants and construction, saw large payroll increases. Manufacturing also saw a sizable jump. The biggest contributor, however, was professional business services which added 50,000 jobs. In October, the unemployment rate fell 0.1% to 4.1%, a 17-year low. The labor-force participation rate rang in at 62.7%, down a sharp 0.4% from September's reading. This concurrent drop in both unemployment and participation suggests that the pool of discouraged workers whose skill sets are compatible with available jobs is drying up due to hiring and that remaining discouraged workers who lack marketable skills are dropping out of the work force.

Headline CPI, which includes food and energy, managed a 0.1% increase month-over-month and fell two tenths to 2.0% year-over-year. Core CPI, which excludes food and energy, increased 0.2% over the past month and rose 0.1% to a slightly better-than-expected 1.8% over the trailing 12 months. Wireless services, up 0.4%, housing, up 0.3%, and medical, up 0.3%, all improved during the month. New vehicles and drugs, both down 0.2%, were areas of weakness in the October. The initial estimate of third quarter GDP clocked in at 3.0% annualized. Personal consumption revved during the quarter and was a large driver of growth, particularly in the durable goods arena. Inventories, a significant contributor to the figure, rose as a result of the late August storms. However, this may be absorbed due to the strong consumer demand.

*Due to a lag in the reporting of NCREIF Property Index returns, the monthly return shown is deduced from the most recent quarterly return. This monthly return, when compounded over three months, equates to the quarterly return.

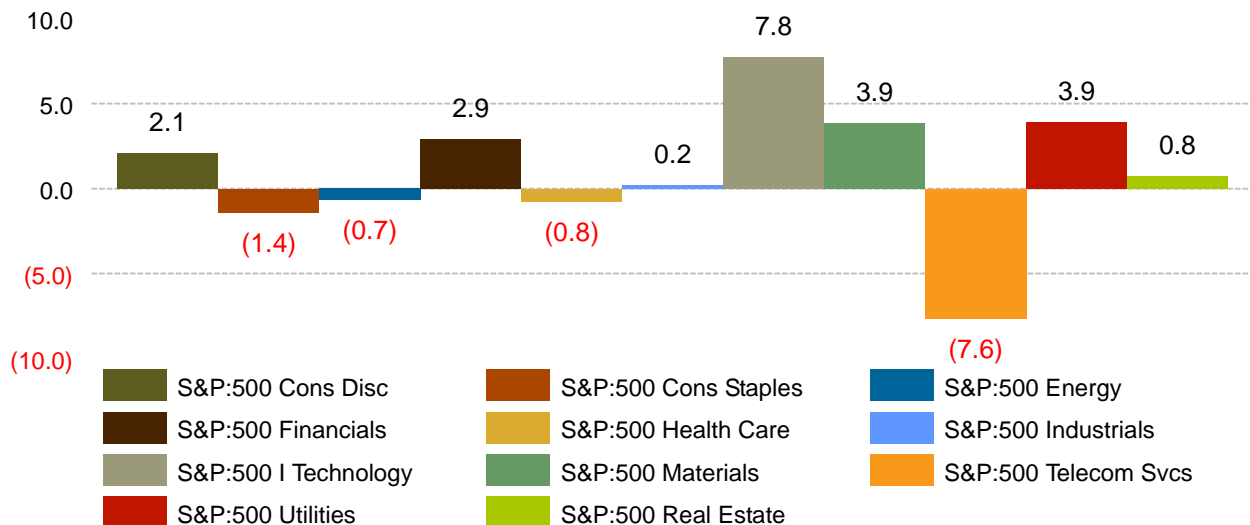
U.S. Equity Overview As of October 31, 2017

Index	Last Month	Year to Date	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Russell:3000 Index	2.18	16.40	23.98	10.53	15.12	7.61
Russell:1000 Index	2.29	16.78	23.67	10.58	15.18	7.61
Russell:1000 Growth	3.87	25.40	29.71	13.15	16.83	9.13
Russell:1000 Value	0.73	8.70	17.78	7.99	13.48	5.99
Russell:Midcap Index	1.67	13.60	21.09	9.04	14.87	8.09
Russell:2000 Index	0.85	11.89	27.85	10.12	14.49	7.63
Russell:2000 Growth	1.55	18.62	31.00	10.51	15.36	8.16
Russell:2000 Value	0.13	5.81	24.81	9.67	13.58	7.04

U.S. equities extended the year's gains during October. Indices were propelled by continued economic expansion, both domestically and abroad, and tech stocks. The market was also encouraged by the FOMC, which met on October 31 and announced an upgrade of the country's economic growth from "rising moderately" to "rising at a solid rate." This month, the market followed its year-to-date trend and continued its trek upward. Also on track with the year-to-date trend, large caps outperformed small caps during October (Russell 1000 Index: +2.3%; Russell 2000 Index: +0.9%). Similarly, growth has outperformed value year-to-date and that rang true again last month (Russell 1000 Growth: +3.9%; Russell 1000 Value: +0.7%). The Russell Midcap Index sat between the two extremes and returned 1.7% for the month.

The Energy sector had the hurricane-force wind let out of its balloon and revisited its losing streak as stockpiles grew. Energy fell 0.7% to end the month. In a similar fashion, Telecommunications returned to its frequent position as a top detractor, plunging 7.6%. Information Technology was the top contributor for the month, gaining 7.8%. Materials and Utilities were runners up, each gaining 3.9% and contributing positively to the index's overall return. Financials continued to gain on the back of rising rates, increasing 2.9%. Consumer Discretionary and Real Estate also bolstered index performance, returning 2.1% and 0.8%, respectively.

S&P 500 Index Sector Returns



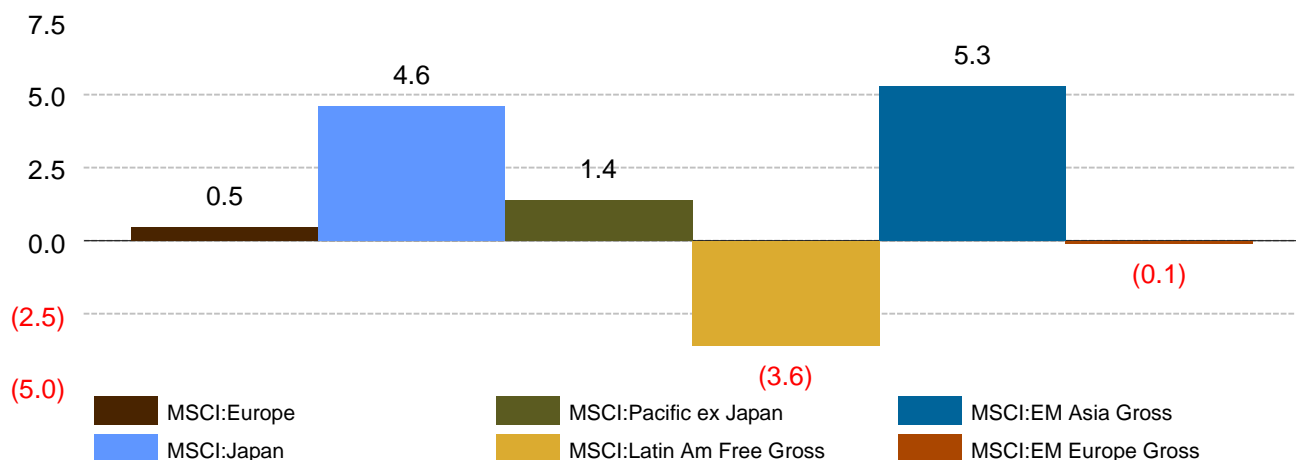
Non-U.S. Equity Overview As of October 31, 2017

Index	Last Month	Year to Date	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
MSCI:ACWI ex US	1.88	23.41	23.64	5.71	7.29	0.92
MSCI:EAFE	1.52	21.78	23.44	6.08	8.53	1.10
MSCI:EAFE Hedged Net	3.05	15.74	22.58	9.55	12.89	3.05
MSCI:EM	3.51	32.26	26.45	5.70	4.83	0.60
MSCI:ACWI ex US Small Cap	1.87	25.85	24.70	9.68	10.08	3.18

A concurrent economic recovery around the globe continued to lift broad non-U.S. equity markets to an eleventh straight positive month (MSCI ACWI ex US: +1.9%). Euro zone GDP grew at a 2.5% annualized rate during the third quarter. This is the fastest growth rate since the first quarter of 2011. On October 26, the European Central Bank (ECB) announced it would cut its bond buying program in half, down to 30 billion euros each month. President Draghi said the ECB would be open to increasing the quantity again if economic conditions call for it. At its October meeting, the BOJ kept its target for the 10-year government bond at zero, but reduced its core inflation projection by 0.3% for the 2018 fiscal year. The U.S. Dollar Index is still at a net loss for the year but has gained slightly the past two months. In October, the MSCI EAFE Hedged Index (+3.1%) outperformed the MSCI EAFE Index (+1.5%) by 153 basis points. Emerging markets had a strong showing despite the strengthening dollar and the MSCI EM Index rose 3.5%. It is up an impressive 32.3% year to date. Non-U.S. equities trailed their U.S. counterparts (Russell 3000 Index: +2.2% vs. MSCI ACWI ex U.S. Index: +1.9%).

Asian emerging markets was the top performing region during the month. The MSCI EM Asia Index gained 5.3%, propelled upwards by the index's largest constituents, Tencent Holdings, Samsung Electronics, Alibaba Group, and Taiwan Semiconductor. All of which are Information Technology companies. The MSCI Japan Index came in second, climbing 4.6% during the period. The third largest constituent in the index, SoftBank, climbed 9.5% during the month on the back of its multiple tech investments. Latin American emerging markets brought up the rear, dropping 3.6% (MSCI Latin America Index). Continued political upheaval and runaway inflation in the region has hampered equity markets.

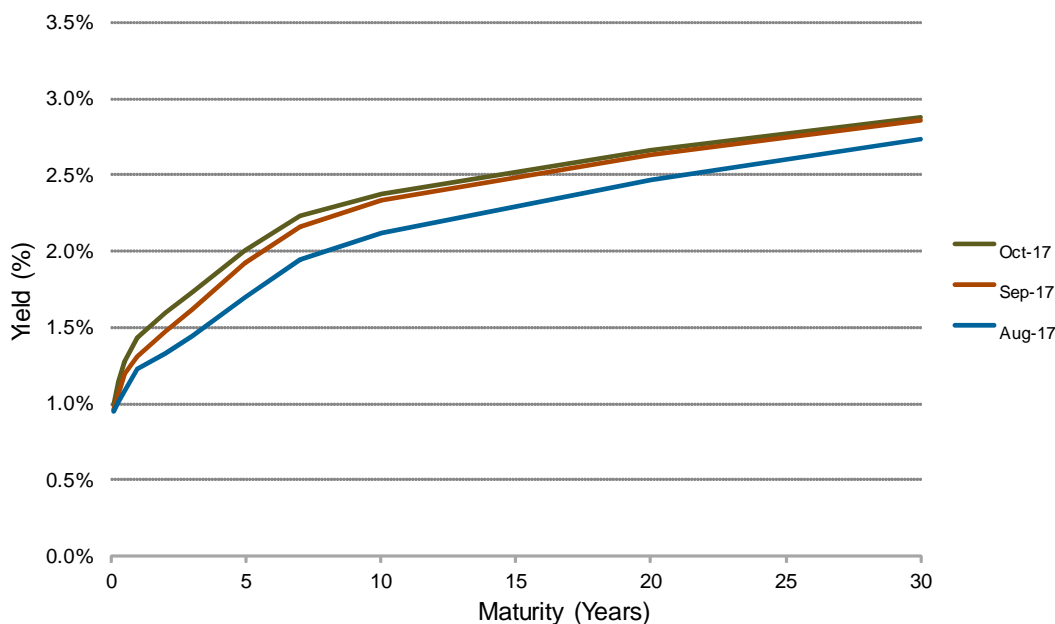
MSCI Regional Returns



Fixed Income Overview
As of October 31, 2017

Index	Last Month	Year to Date	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Blmbg:Aggregate	0.06	3.20	0.90	2.40	2.04	4.19
Blmbg:Long Gov/Credit	0.40	8.09	2.52	4.83	3.78	7.24
Blmbg:US Government	(0.11)	2.13	(0.62)	1.65	1.26	3.52
Blmbg:Credit	0.34	5.43	3.18	3.62	3.07	5.45
Blmbg:Mortgage Backed Sec	(0.03)	2.29	0.53	2.10	1.99	4.03
Blmbg:US TIPS	0.21	1.94	(0.11)	1.40	(0.11)	3.81
ML:US High Yield Cash Pay	0.38	7.47	9.14	5.60	6.26	7.63
3 Month T-Bill	0.09	0.66	0.72	0.35	0.24	0.45
CS:Leveraged Loan	0.66	3.72	5.25	4.09	4.45	4.36

Treasury Yield Curve



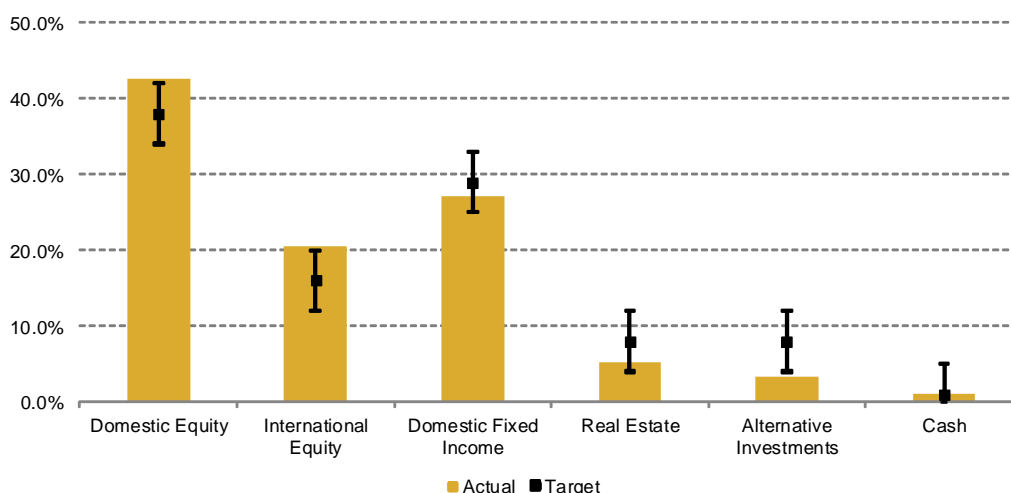
Treasury yields rose across the curve on positive economic data and expectations of a December rate hike. Intermediate yields moved the most, with increases dwindling to near nothing on the long end of the curve. The 1-month Treasury increased three basis points to 0.99%, the 5-year rose 9 basis points to 2.01% and the 30-year rose 2 basis points to 2.88%. The biggest increase was seen at the 2-year maturity, which popped 13 basis points to 1.60%, its highest rate since October 28, 2008. At the October Fed meeting, the committee reiterated its intention for a December rate increase.

Fixed income sector returns were mostly positive for the month despite the increase in rates. The Bloomberg Aggregate Index gained 0.1%. Leveraged loans did well in the environment and the Credit Suisse Leveraged Loan Index returned 0.7%. Long duration also put up a good showing and gained 0.4% (Bloomberg Long Government/Credit Index). High yield rose 0.4% (ML: U.S. High Yield Cash Pay) and credit followed close behind, up 0.3% (Bloomberg Credit Index). TIPS saw a boost on the back of rising inflation expectations (Bloomberg US TIPS Index: +0.2%). Governments dipped and mortgage-backed securities were flat, dropping 0.1% and three basis points, respectively (Bloomberg U.S. Government Index and Bloomberg Mortgage Backed Security Index). All sectors remain positive year to date.

Total Fund

The market value of the Total Fund was \$40.38 billion at the end of October, an increase of \$578.3 million from the prior month. The Fund added 1.24% during the month, and trailed the 1.25% return of its benchmark. After outperforming in September, both Domestic and International Equity trailed their respective benchmarks in October. Domestic Equity increased 1.86% relative to the 2.18% return of its benchmark, and International Equity gained 1.68%, trailing its benchmark by 20 basis points. Real Estate grew 1.05% during October and outperformed the 0.54% return of its benchmark. Alternatives gained 0.59%, trailing the benchmark by 13 basis points. The Fixed Income composite returned 0.10%, beating the Bloomberg Aggregate Index return of 0.06%. For the trailing year, the Fund is 2.46% ahead of its benchmark, returning 16.56%.

Current policy states that when actual allocations of the asset classes differ by more than four percentage points from their policy targets, a recommendation for rebalancing will be made to the Board of Trustees. As of October month end, Alternatives was below the target allocation by 4.6%, International Equity was above target by 4.6%, and Domestic Equity was above target by 4.5%. The Chief Investment Officer and Consultant do not recommend any rebalancing at this time.



U.S. Equity

The U.S. Equity composite gained 1.86% during October, trailing the 2.18% return of the Russell 3000 Index. For the month, large caps outperformed small caps, and growth beat value.

Large Cap: IMRF's Large Cap managers added 2.12% during October relative to the 2.29% return of the Russell 1000 Index. In aggregate, growth managers added 3.25% versus the 3.87% return of the Russell 1000 Growth Index. Sands returned 3.23%, trailing the benchmark by 64 basis points. Value Managers returned 1.44% collectively, outperforming the 0.73% return of the Russell 1000 Value Index.

Small Cap: The Small Cap composite (+1.07%) beat the Russell 2000 Index by 22 basis points in October. The growth managers collectively returned 0.62% relative to the 1.55% return of the Russell 2000 Growth Index. Frontier (+2.39%) beat the benchmark, while FIAM (-0.07%) trailed. The value managers returned 1.53% and outperformed the 0.13% return of the Russell 2000 Value Index. Channing (+1.21%), DFA (+1.13%) and Investment Counselors of Maryland (+2.01%) all outperformed the index. The Micro Cap composite increased 1.12% in October.

International Equity

The International Equity composite slightly trailed the 1.88% return of the MSCI ACWI ex-U.S. (Net) Index, returning 1.68%.

International Large Cap: International Large Cap managers collectively gained 1.60% and trailed the MSCI ACWI ex-U.S. Index by 28 basis points. International Large Cap Growth managers trailed the MSCI ACWI ex-U.S. Growth Index by 57 basis points, gaining 1.84% in aggregate. William Blair and EARNEST both underperformed the benchmark, returning 1.97% and 1.70%, respectively. International Large Cap Value managers returned 0.52%, trailing the MSCI ACWI ex-U.S. Value Index by 85 basis points. Mondrian and Lazard both produced positive results, returning 1.65% and 1.44%, respectively.

International Small Cap and Emerging Markets: The International Small Cap managers surpassed the 1.87% return of the MSCI ACWI Small Cap ex-U.S. Index, returning 2.11%. Franklin Templeton (+2.96%) outperformed the benchmark by 109 basis points. The Emerging Markets Portfolio, managed by Genesis, returned 2.17% and trailed the MSCI Emerging Markets Index by 134 basis points.

Fixed Income

The Fixed Income composite was up 0.10% in October relative to the 0.06% return of the Bloomberg Aggregate Index.

Active Core: In aggregate, the Active Core Fixed Income managers were up 0.11%, 5 basis points ahead of the Bloomberg Aggregate Index. EARNEST (+0.12%), Piedmont (+0.07%) and Garcia Hamilton (+0.14%) outperformed.

Core Plus: Core Plus managers ended the month up 0.09%. Brandes and Western trailed the benchmark by five and 17 basis points, respectively. LM Capital (+0.11%), Progress (+0.17%) and TCH (+0.24%) outperformed.

Bank Loans: The Bank Loans portfolio, managed by Barings, returned 0.63% in October, in line with the return of its custom benchmark.

Emerging Markets: The Emerging Markets Debt component, managed by Standish, lost 1.29% during October, trailing the return of its custom benchmark (-1.25%).

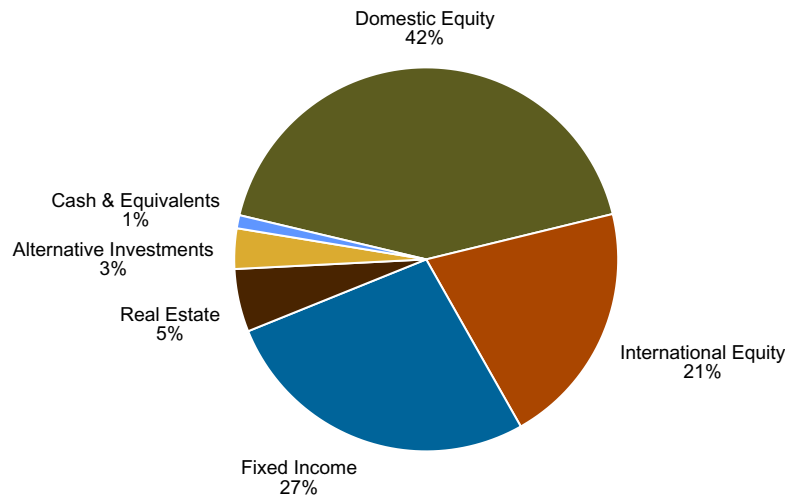
Opportunistic: The Opportunistic Fixed Income allocation, managed by Crescent, gained 0.45% during the month relative to the 0.49% return of its custom benchmark.

High Yield: The High Yield portfolio, managed by Mackay Shields, returned 0.19% and trailed the 0.38% return of its benchmark.

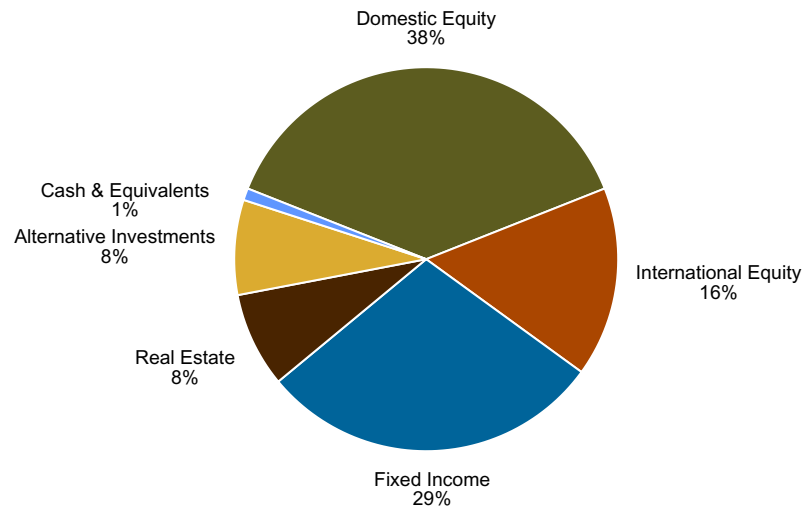
Actual vs Target Asset Allocation

The first chart below shows the Fund's asset allocation as of October 31, 2017. The second chart shows the Fund's target asset allocation as outlined in the investment policy statement.

Actual Asset Allocation



Target Asset Allocation



Asset Class	\$Millions Actual	Percent Actual	Percent Target	Percent Difference	\$Millions Difference
Domestic Equity	17,147	42.5%	38.0%	4.5%	1,803
International Equity	8,313	20.6%	16.0%	4.6%	1,852
Fixed Income	10,942	27.1%	29.0%	(1.9%)	(769)
Real Estate	2,160	5.3%	8.0%	(2.7%)	(1,071)
Alternative Investments	1,391	3.4%	8.0%	(4.6%)	(1,839)
Cash & Equivalents	428	1.1%	1.0%	0.1%	24
Total	40,381	100.0%	100.0%		

* Current Month Target = 38.0% Russell 3000 Index, 29.0% Blmbg Aggregate, 16.0% MSCI ACWI ex US, 8.0% NCREIF NFI-ODCE Val Wt Nt, 8.0% 9% Annually and 1.0% 3-month Treasury Bill.

Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of October 31, 2017, with the distribution as of September 30, 2017.

Asset Distribution Across Investment Managers

	October 31, 2017		September 30, 2017	
	Market Value	Percent	Market Value	Percent
Domestic Equity*	\$17,147,409,436	42.46%	\$16,842,318,252	42.31%
Large Cap Growth				
Holland	2	0.00%	5,498	0.00%
NTGI S&P 500 Growth Idx	1,876,273,617	4.65%	1,817,041,210	4.57%
Sands	1,761,322,206	4.36%	1,706,193,855	4.29%
Large Cap Value				
Dodge & Cox	1,436,073,715	3.56%	1,427,121,484	3.59%
BMO	1,476,304,911	3.66%	1,452,403,872	3.65%
LSV	1,491,555,201	3.69%	1,465,414,797	3.68%
NTGI S&P 500 Value Idx	1,682,803,630	4.17%	1,663,255,106	4.18%
Large Cap Core				
NTGI MarketCap Index	3,430,465,219	8.50%	3,357,453,045	8.44%
Small Cap Growth				
Frontier	440,641,742	1.09%	430,359,952	1.08%
FIAM	1,093,840,999	2.71%	1,094,648,594	2.75%
Small Cap Value				
Channing	227,632,881	0.56%	224,917,450	0.57%
Dimensional Small Cap Value	582,786,030	1.44%	576,296,959	1.45%
Inv. Counselors of Maryland	645,099,434	1.60%	632,370,297	1.59%
Micro Cap				
Ativo	135,310,869	0.34%	133,388,001	0.34%
Dimensional Micro Cap	415,118,466	1.03%	410,948,076	1.03%
Public Real Assets				
Brookfield	147,116,848	0.36%	148,967,575	0.37%
Cohen & Steers	305,063,666	0.76%	301,532,480	0.76%
International Equity	\$8,312,950,871	20.59%	\$8,175,021,645	20.54%
International Large Cap Growth				
EARNEST Partners	654,357,454	1.62%	643,130,005	1.62%
William Blair	742,488,214	1.84%	728,120,060	1.83%
International Large Cap Value				
Brandes	594,880,501	1.47%	598,958,046	1.50%
Lombardia	1	0.00%	1	0.00%
Mondrian	583,579,503	1.45%	574,093,467	1.44%
Lazard	112,219,700	0.28%	110,627,803	0.28%
International Large Cap Core				
Arrowstreet	684,687,067	1.70%	666,103,283	1.67%
Brown	334,190,218	0.83%	329,364,257	0.83%
GlobeFlex	676,666,341	1.68%	662,091,333	1.66%
NTGI MSCI EAFE Index	2,316,821,035	5.74%	2,282,322,652	5.73%
Progress Intl Equity	298,718,985	0.74%	293,123,121	0.74%
International Small Cap				
Franklin Templeton	246,115,953	0.61%	239,049,521	0.60%
William Blair	290,817,487	0.72%	286,780,896	0.72%
Emerging Markets				
Genesis	777,408,411	1.93%	761,257,201	1.91%

* includes asset in equity transition account.

Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of October 31, 2017, with the distribution as of September 30, 2017.

Asset Distribution Across Investment Managers

	October 31, 2017		September 30, 2017	
	Market Value	Percent	Market Value	Percent
Total Fixed Income	\$10,941,683,334	27.10%	\$10,957,137,226	27.53%
Domestic Fixed Core				
EARNEST Partners	752,024,574	1.86%	753,634,169	1.89%
Piedmont Investment	752,888,072	1.86%	754,513,681	1.90%
Garcia Hamilton	726,746,373	1.80%	726,772,304	1.83%
Domestic Fixed Passive Core				
NTGI Blmbg Agg. Index	1,657,435,556	4.10%	1,656,413,953	4.16%
BlackRock US Debt	1,587,422,416	3.93%	1,586,429,411	3.99%
Domestic Fixed Core Plus				
BlackRock Core Plus	74,901	0.00%	76,623	0.00%
Transition Account	97	0.00%	151,276	0.00%
Brandes Core Plus	246,360,739	0.61%	246,588,258	0.62%
LM Capital	864,779,206	2.14%	867,033,654	2.18%
Progress Fixed Income	887,772,918	2.20%	886,276,064	2.23%
Taplin, Canida, & Habacht	882,862,793	2.19%	883,487,138	2.22%
Western	1,044,284,865	2.59%	1,048,236,376	2.63%
Bank Loans				
Barings Global Loan Fund	582,491,588	1.44%	585,230,394	1.47%
Emerging Markets Debt				
Standish	205,537,585	0.51%	208,213,275	0.52%
Opportunistic Fixed Income				
Crescent	118,011,743	0.29%	118,880,955	0.30%
High Yield				
MackKay Shields	632,668,099	1.57%	634,874,857	1.60%
FIAM High Yield	321,808	0.00%	324,840	0.00%

* Non-Core Real Estate Funds funded since September 2011.

** Non-Core International Real Estate Funds funded since August 2014.

Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of October 31, 2017, with the distribution as of September 30, 2017.

Asset Distribution Across Investment Managers

	October 31, 2017		September 30, 2017	
	Market Value	Percent	Market Value	Percent
Real Estate	\$2,159,612,879	5.35%	\$2,128,482,395	5.35%
Real Estate Core				
TA Buckhead Ind. Prop.	400,477,134	0.99%	400,477,134	1.01%
Barings Core Property Fund	148,446,007	0.37%	144,847,067	0.36%
Barings European Core Property	29,808,931	0.07%	29,288,280	0.07%
INVESCO Core RE	194,170,415	0.48%	192,926,452	0.48%
AEW Core Property Trust	228,935,137	0.57%	225,364,887	0.57%
CBRE US Core Property Trust	169,908,585	0.42%	165,845,686	0.42%
Real Estate Non-Core				
Artemis MWBE Spruce	108,153,350	0.27%	92,679,140	0.23%
Franklin Templeton EMREFF	31,306,163	0.08%	32,581,970	0.08%
Security Capital	52,453,602	0.13%	51,404,700	0.13%
Dune II	30,187,072	0.07%	30,187,072	0.08%
Non-Core Real Estate Funds*	685,676,737	1.70%	684,172,437	1.72%
Non-Core Intl Real Estate Funds**	68,006,936	0.17%	66,324,733	0.17%
Rockwood Fund VIII	2,972,621	0.01%	2,972,621	0.01%
Almanac ARS V	3,282,145	0.01%	3,582,173	0.01%
TA Fund IX	5,828,044	0.01%	5,828,044	0.01%
Alternative Investments	\$1,391,411,654	3.45%	\$1,394,386,974	3.50%
Absolute Return				
Aurora	20,608,102	0.05%	20,490,409	0.05%
Private Equity				
Abbott	324,624,162	0.80%	337,574,512	0.85%
Muller & Monroe ILPEFF	495,905	0.00%	495,905	0.00%
Muller & Monroe MPEFF	9,243,050	0.02%	9,243,050	0.02%
Pantheon	224,133,669	0.56%	222,025,941	0.56%
Private Equity Fund - Domestic	517,197,826	1.28%	507,399,716	1.27%
Private Equity Fund - International	43,374,091	0.11%	43,722,591	0.11%
Agriculture				
Premiere Partners IV	178,046,928	0.44%	178,046,928	0.45%
Timberland				
Forest Investment Assoc.	73,687,921	0.18%	75,387,921	0.19%
Cash & Equivalents	\$427,942,732	1.06%	\$305,372,538	0.77%
Total Fund	\$40,381,010,905	100.0%	\$39,802,719,030	100.0%

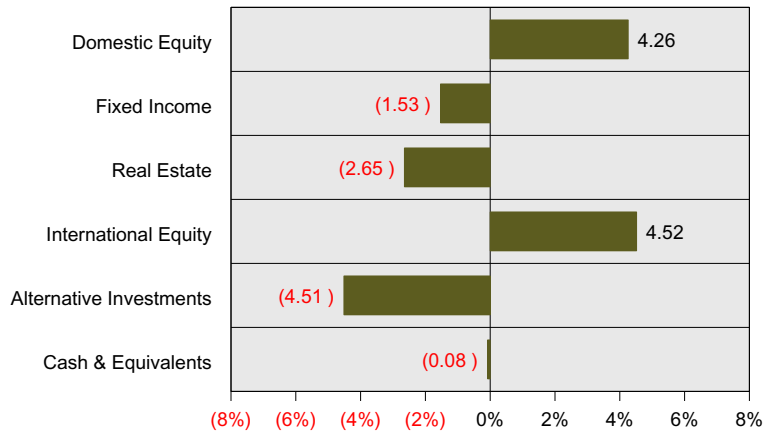
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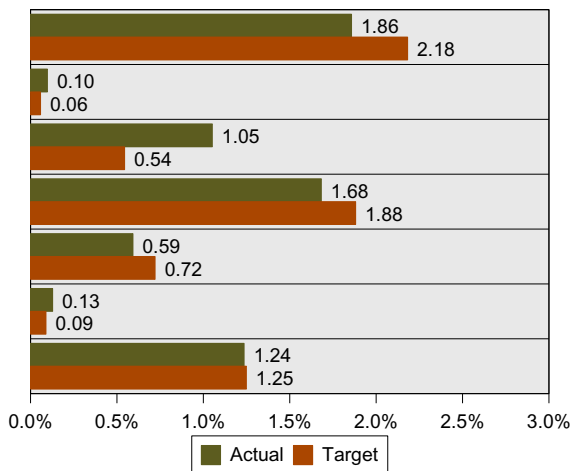
Monthly Total Fund Relative Attribution - October 31, 2017

The following analysis approaches Total Fund Attribution from the perspective of relative return. Relative return attribution separates and quantifies the sources of total fund excess return relative to its target. This excess return is separated into two relative attribution effects: Asset Allocation Effect and Manager Selection Effect. The Asset Allocation Effect represents the excess return due to the actual total fund asset allocation differing from the target asset allocation. Manager Selection Effect represents the total fund impact of the individual managers excess returns relative to their benchmarks.

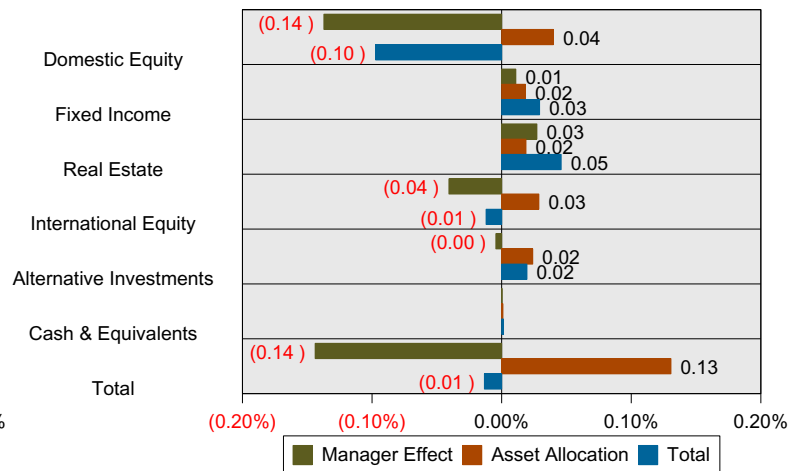
Asset Class Under or Overweighting



Actual vs Target Returns



Relative Attribution by Asset Class



Relative Attribution Effects for Month ended October 31, 2017

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	42%	38%	1.86%	2.18%	(0.14%)	0.04%	(0.10%)
Fixed Income	27%	29%	0.10%	0.06%	0.01%	0.02%	0.03%
Real Estate	5%	8%	1.05%	0.54%	0.03%	0.02%	0.05%
International Equity	21%	16%	1.68%	1.88%	(0.04%)	0.03%	(0.01%)
Alternative Investments	3%	8%	0.59%	0.72%	(0.00%)	0.02%	0.02%
Cash & Equivalents	1%	1%	0.13%	0.09%	0.00%	0.00%	0.00%
Total			1.24%	1.25%	(0.14%)	0.13%	(0.01%)

* Current Month Target = 38.0% Russell 3000 Index, 29.0% Blmbg Aggregate, 16.0% MSCI ACWI ex US, 8.0% NCREIF NFI-ODCE Val Wt Nt, 8.0% 9% Annually and 1.0% 3-month Treasury Bill.

Asset Class Returns

The table below details the rates of return for the fund's asset class composites over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns for Periods Ended October 31, 2017

	Last Month	Last 3 Months	Year to Date	Last 12 Months
Domestic Equity	1.86%	4.91%	15.63%	24.94%
Blended Benchmark**	2.18%	4.88%	16.40%	23.98%
Domestic Equity - Net	1.84%	4.85%	15.45%	24.68%
International Equity	1.68%	4.30%	24.17%	24.05%
MSCI ACWI x US (Net)	1.88%	4.32%	23.41%	23.64%
International Equity - Net	1.66%	4.21%	23.88%	23.64%
Fixed Income	0.10%	0.72%	4.28%	2.56%
Blmbg Aggregate Index	0.06%	0.47%	3.20%	0.90%
Fixed Income - Net	0.08%	0.68%	4.16%	2.42%
Real Estate	1.05%	2.26%	7.38%	9.48%
Blended Benchmark***	0.54%	1.64%	5.30%	6.62%
Real Estate - Net	1.05%	2.26%	7.38%	9.48%
Alternative Investments	0.59%	2.36%	8.70%	11.60%
Alternatives Custom Benchmark****	0.72%	2.18%	7.45%	9.00%
Alternative Investments - Net	0.58%	2.32%	8.55%	11.39%
Absolute Return	1.00%	1.53%	36.14%	43.55%
HFR Fund-of-Funds Index	1.12%	2.39%	6.74%	7.97%
Private Equity	0.72%	3.54%	11.52%	14.72%
Alternatives Custom Benchmark****	0.72%	2.18%	7.45%	9.00%
Agriculture	0.00%	(3.83%)	(4.38%)	(3.86%)
Blended Benchmark***	0.54%	1.64%	5.30%	6.62%
Timberland	0.00%	1.01%	1.77%	4.33%
Blended Benchmark***	0.54%	1.64%	5.30%	6.62%
Total Fund	1.24%	3.33%	13.13%	16.56%
Total Fund - Net	1.22%	3.26%	12.94%	16.32%
Total Fund Benchmark	1.25%	2.98%	11.73%	14.10%

* Current Month Target = 38.0% Russell 3000 Index, 29.0% Blmbg Aggregate, 16.0% MSCI ACWI ex US, 8.0% NCREIF NFI-ODCE Val Wt Nt, 8.0% 9% Annually and 1.0% 3-month Treasury Bill.

** The Blended Benchmark is currently Russell 3000 Index. Returns prior to January 1, 2015, reflect those of the Dow Jones U.S. Total Stock Market Index.

*** The Blended Benchmark is currently ODCE Value Weighted Index. Returns between January 1, 2007 and December 31, 2012 reflect NPI+1%. Returns prior to January 1, 2007, reflect those of the Consumer Price Index +5%.

Given that ODCE returns are updated quarterly, an approximation of the Index is used in the monthly reports.

**** The Alternatives Custom Benchmark is based on an annualized rate of return of 9.0%. Prior to July 1, 2010 the Benchmark was based on an annual return of 12.0%. Prior to 2004, the Benchmark was based on an annual return of 13.0%. Prior to 2003, it was based on an annual return of 15.0%.

Asset Class Returns

The table below details the rates of return for the fund's asset class composites over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns for Periods Ended October 31, 2017

	Last 36 Months	Last 60 Months	Last 120 Months	Since Inception
Domestic Equity	10.12%	15.24%	7.66%	11.70% ^(1/82)
Blended Benchmark**	10.53%	15.08%	7.68%	11.46% ^(1/82)
Domestic Equity - Net	9.86%	14.97%	7.40%	8.46% ^(1/05)
International Equity	7.29%	9.23%	2.06%	8.12% ^(9/86)
MSCI ACWI x US (Net)	5.71%	7.29%	0.92%	-
International Equity - Net	6.92%	8.88%	1.74%	6.20% ^(1/05)
Fixed Income	3.20%	3.02%	5.21%	8.43% ^(1/82)
Blmbg Aggregate Index	2.40%	2.04%	4.19%	7.89% ^(1/82)
Fixed Income - Net	3.05%	2.87%	5.06%	4.90% ^(1/05)
Real Estate - Net	10.64%	10.91%	4.78%	7.19% ^(1/05)
Blended Benchmark***	9.68%	10.63%	6.87%	7.69% ^(1/05)
Alternative Investments	8.15%	9.26%	5.54%	10.66% ^(2/86)
Alternatives Custom Benchmark****	9.00%	9.00%	9.79%	12.91% ^(2/86)
Alternative Investments - Net	7.81%	8.93%	5.26%	7.94% ^(1/05)
Absolute Return	13.15%	10.50%	4.89%	6.39% ^(1/02)
HFR Fund-of-Funds Index	2.82%	4.13%	0.88%	3.56% ^(1/02)
Private Equity	10.32%	11.44%	7.28%	12.81% ^(2/86)
Alternatives Custom Benchmark****	9.00%	9.00%	9.79%	12.91% ^(2/86)
Agriculture	10.30%	14.61%	9.12%	8.06% ^(10/97)
Blended Benchmark***	9.68%	10.63%	6.87%	7.53% ^(10/97)
Timberland	1.53%	4.31%	4.96%	7.99% ^(10/92)
Blended Benchmark***	9.68%	10.63%	6.87%	7.55% ^(10/92)
Total Fund	7.43%	9.99%	6.30%	10.03% ^(1/82)
Total Fund - Net	7.19%	9.74%	6.07%	7.31% ^(1/05)
Total Fund Benchmark	7.26%	9.17%	6.09%	7.08% ^(1/05)

* Current Month Target = 38.0% Russell 3000 Index, 29.0% Blmbg Aggregate, 16.0% MSCI ACWI ex US, 8.0% NCREIF NFI-ODCE Val Wt Nt, 8.0% 9% Annually and 1.0% 3-month Treasury Bill.

** The Blended Benchmark is currently Russell 3000 Index. Returns prior to January 1, 2015, reflect those of the Dow Jones U.S. Total Stock Market Index.

*** The Blended Benchmark is currently ODCE Value Weighted Index. Returns between January 1, 2007 and December 31, 2012 reflect NPI+1%. Returns prior to January 1, 2007, reflect those of the Consumer Price Index +5%.

Given that ODCE returns are updated quarterly, an approximation of the Index is used in the monthly reports.

**** The Alternatives Custom Benchmark is based on an annualized rate of return of 9.0%. Prior to July 1, 2010 the Benchmark was based on an annual return of 12.0%. Prior to 2004, the Benchmark was based on an annual return of 13.0%. Prior to 2003, it was based on an annual return of 15.0%.

Large Cap Equity Returns

The table below details the rates of return for the fund's large cap growth and large cap value managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns for Periods Ended October 31, 2017

	Last Month	Last 3 Months	Year to Date	Last 12 Months
Large Cap Equity	2.12%	4.81%	17.66%	24.86%
Russell 1000 Index	2.29%	4.80%	16.78%	23.67%
Large Cap Growth	3.25%	4.89%	26.50%	26.81%
NTGI S&P 500 Growth Idx	3.26%	5.96%	23.14%	26.48%
S&P/Citi 500 Growth Index	3.28%	5.97%	23.24%	26.51%
NTGI S&P 500 Growth Idx - Net	3.26%	5.96%	23.14%	26.47%
Sands	3.23%	4.92%	34.75%	29.08%
LCG Blended Benchmark*	3.87%	7.15%	25.40%	29.71%
Russell 1000 Growth Index	3.87%	7.15%	25.40%	29.71%
Sands - Net	3.23%	4.87%	34.54%	28.79%
Large Cap Value	1.44%	4.59%	12.46%	23.75%
Dodge & Cox	0.81%	3.70%	13.18%	25.14%
LCV Blended Benchmark**	0.73%	2.50%	8.70%	17.78%
Russell 1000 Value Index	0.73%	2.50%	8.70%	17.78%
Dodge & Cox - Net	0.81%	3.64%	13.00%	24.89%
BMO	1.81%	5.70%	14.48%	25.55%
LCV Blended Benchmark**	0.73%	2.50%	8.70%	17.78%
Russell 1000 Value Index	0.73%	2.50%	8.70%	17.78%
BMO - Net	1.81%	5.65%	14.30%	25.28%
LSV	1.98%	5.89%	12.78%	25.33%
LCV Blended Benchmark**	0.73%	2.50%	8.70%	17.78%
Russell 1000 Value Index	0.73%	2.50%	8.70%	17.78%
LSV - Net	1.98%	5.89%	12.58%	25.11%
NTGI S&P 500 Value Idx	1.18%	3.28%	9.89%	19.72%
S&P/Citi 500 Value Index	1.15%	3.25%	9.74%	19.62%
NTGI S&P 500 Value Idx - Net	1.18%	3.28%	9.89%	19.71%
Large Cap Passive Core	2.17%	4.87%	16.50%	24.09%
NTGI MarketCap Idx	2.17%	4.87%	16.50%	24.09%
DJ U.S. Total Stock Market Index	2.17%	4.85%	16.42%	23.96%
NTGI MarketCap Idx - Net	2.17%	4.87%	16.49%	24.08%

* The LCG Blended Benchmark is currently the Russell 1000 Growth Index. Returns prior to January 1, 2006, reflect those of the S&P 500/Citigroup Growth Index.

** The LCV Blended Benchmark is currently the Russell 1000 Value Index. Returns prior to January 1, 2006, reflect those of the S&P 500/Citigroup Value Index.

Large Cap Equity Returns

The table below details the rates of return for the fund's large cap growth and large cap value managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns for Periods Ended October 31, 2017

	Last 36 Months	Last 60 Months	Last 120 Months	Since Inception
Large Cap Equity	10.40%	15.52%	7.69%	11.30% ^(1/82)
Russell 1000 Index	10.58%	15.18%	7.61%	11.65% ^(1/82)
Large Cap Growth	10.82%	15.73%	8.81%	11.76% ^(1/82)
NTGI S&P 500 Growth Idx	12.36%	16.42%	9.27%	7.38% ^(8/01)
S&P/Citi 500 Growth Index	12.37%	16.40%	9.25%	7.34% ^(8/01)
NTGI S&P 500 Growth Idx - Net	12.35%	16.41%	9.26%	9.38% ^(1/05)
Sands	9.43%	16.51%	10.79%	11.58% ^(11/03)
LCG Blended Benchmark*	13.15%	16.83%	9.13%	9.44% ^(11/03)
Russell 1000 Growth Index	13.15%	16.83%	9.13%	9.50% ^(11/03)
Sands - Net	9.17%	16.27%	10.53%	10.40% ^(1/05)
Large Cap Value	9.67%	15.50%	6.75%	10.52% ^(10/82)
Dodge & Cox	10.58%	16.13%	7.17%	9.83% ^(9/03)
LCV Blended Benchmark**	7.99%	13.48%	5.99%	8.53% ^(9/03)
Russell 1000 Value Index	7.99%	13.48%	5.99%	8.72% ^(9/03)
Dodge & Cox - Net	10.37%	15.90%	6.94%	8.04% ^(1/05)
BMO	9.45%	15.46%	7.08%	8.39% ^(2/01)
LCV Blended Benchmark**	7.99%	13.48%	5.99%	5.64% ^(2/01)
Russell 1000 Value Index	7.99%	13.48%	5.99%	6.75% ^(2/01)
BMO - Net	9.22%	15.21%	6.83%	8.61% ^(1/05)
LSV	10.12%	16.62%	7.70%	11.63% ^(2/03)
LCV Blended Benchmark**	7.99%	13.48%	5.99%	9.56% ^(2/03)
Russell 1000 Value Index	7.99%	13.48%	5.99%	9.57% ^(2/03)
LSV - Net	9.88%	16.35%	7.42%	8.78% ^(1/05)
NTGI S&P 500 Value Idx	8.77%	13.74%	5.63%	5.76% ^(8/99)
S&P/Citi 500 Value Index	8.67%	13.62%	5.58%	5.73% ^(8/99)
NTGI S&P 500 Value Idx - Net	8.77%	13.73%	5.63%	7.11% ^(1/05)
Large Cap Passive Core	10.60%	15.17%	7.61%	11.21% ^(1/85)
NTGI MarketCap Idx	10.60%	15.17%	7.62%	10.97% ^(2/85)
DJ U.S. Total Stock Market Index	10.49%	15.05%	7.67%	10.91% ^(2/85)
NTGI MarketCap Idx - Net	10.59%	15.16%	7.61%	8.50% ^(1/05)

* The LCG Blended Benchmark is currently the Russell 1000 Growth Index. Returns prior to January 1, 2006, reflect those of the S&P 500/Citigroup Growth Index.

** The LCV Blended Benchmark is currently the Russell 1000 Value Index. Returns prior to January 1, 2006, reflect those of the S&P 500/Citigroup Value Index.

Small Cap Equity Returns

The table below details the rates of return for the fund's small cap growth, small cap value, and micro cap managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns for Periods Ended October 31, 2017

	Last Month	Last 3 Months	Year to Date	Last 12 Months
Small Cap Equity	1.07%	5.78%	9.69%	25.60%
Russell 2000 Index	0.85%	5.78%	11.89%	27.85%
Small Cap Growth	0.62%	3.95%	11.91%	23.21%
Frontier	2.39%	5.84%	19.78%	30.25%
Russell 2000 Growth Index	1.55%	6.95%	18.62%	31.00%
Frontier - Net	2.27%	5.71%	19.20%	29.62%
FIAM	(0.07%)	3.20%	9.02%	20.59%
Russell 2000 Growth Index	1.55%	6.95%	18.62%	31.00%
FIAM - Net	(0.07%)	3.20%	8.76%	20.03%
Small Cap Value	1.53%	7.34%	8.13%	28.24%
Channing	1.21%	5.82%	6.43%	25.46%
Russell 2000 Value Index	0.13%	4.59%	5.81%	24.81%
Channing - Net	1.09%	5.70%	5.91%	24.85%
DFA Small Cap Value	1.13%	6.63%	5.68%	25.75%
Russell 2000 Value Index	0.13%	4.59%	5.81%	24.81%
DFA Small Cap Value - Net	1.13%	6.42%	5.21%	25.04%
Inv. Counselors of Maryland	2.01%	8.54%	11.59%	32.07%
Russell 2000 Value Index	0.13%	4.59%	5.81%	24.81%
Inv. Couns. of Maryland - Net	2.01%	8.26%	11.09%	31.35%
Micro Cap	1.12%	6.92%	10.51%	25.49%
Ativo	1.44%	5.83%	12.33%	29.18%
Russell Microcap Index	(0.16%)	7.08%	10.99%	29.52%
Russell 2000 Growth Index	1.55%	6.95%	18.62%	31.00%
Russell 2000 Index	0.85%	5.78%	11.89%	27.85%
Ativo - Net	1.29%	5.67%	11.64%	28.39%
DFA Micro Cap	1.01%	7.28%	10.11%	30.07%
Russell 2000 Value Index	0.13%	4.59%	5.81%	24.81%
Russell 2000 Index	0.85%	5.78%	11.89%	27.85%
DFA Micro Cap - Net	1.01%	7.15%	9.69%	29.42%
Public Real Assets	0.37%	0.69%	-	-
Public Real Assets Benchmark (1)	0.82%	0.78%	-	-
Brookfield Public Global Inf	(1.24%)	(1.63%)	-	-
Dow Jones Global Infra Comp Idx	(0.83%)	(1.44%)	11.49%	10.53%
Brookfield Public Global Inf - Net	(1.24%)	(1.63%)	-	-
Cohen & Steers Public Global Inf	1.17%	1.85%	-	-
FTSE GI Core Infr 50/50 N	1.37%	1.52%	17.98%	15.86%
Cohen & St Public Global Inf - Net	1.17%	1.85%	-	-

(1) 1/3 Dow Jones Brookfield Global Infrastructure Composite Index + 2/3 FTSE Global Core Infrastructure 50/50 Net Tax Index

Small Cap Equity Returns

The table below details the rates of return for the fund's small cap growth, small cap value, and micro cap managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns for Periods Ended October 31, 2017

	Last 36 Months	Last 60 Months	Last 120 Months	Since Inception
Small Cap Equity	9.42%	14.70%	8.31%	12.51% (7/88)
Russell 2000 Index	10.12%	14.49%	7.63%	9.72% (7/88)
Small Cap Growth	9.28%	14.78%	8.04%	13.08% (7/88)
Frontier	8.15%	14.31%	8.49%	13.10% (8/88)
Russell 2000 Growth Index	10.51%	15.36%	8.16%	8.31% (8/88)
Frontier - Net	7.53%	13.70%	6.42%	7.57% (1/05)
FIAM	11.14%	15.92%	9.20%	13.76% (8/88)
Russell 2000 Growth Index	10.51%	15.36%	8.16%	8.31% (8/88)
FIAM - Net	10.52%	15.35%	8.60%	11.04% (1/05)
Small Cap Value	10.85%	15.38%	8.60%	12.38% (9/89)
Channing	10.02%	15.70%	-	13.01% (7/11)
Russell 2000 Value Index	9.67%	13.58%	7.04%	11.07% (7/11)
Channing - Net	9.48%	15.12%	-	12.37% (7/11)
DFA Small Cap Value	9.63%	15.22%	8.79%	12.88% (2/96)
Russell 2000 Value Index	9.67%	13.58%	7.04%	10.12% (2/96)
DFA Small Cap Value - Net	9.11%	14.67%	8.26%	8.70% (1/05)
Inv. Counselors of Maryland	13.53%	16.47%	8.96%	12.27% (5/99)
Russell 2000 Value Index	9.67%	13.58%	7.04%	9.72% (5/99)
Inv. Couns. of Maryland - Net	12.94%	15.93%	8.43%	9.41% (1/05)
Micro Cap	7.02%	13.29%	6.34%	12.00% (7/84)
Ativo	10.33%	18.27%	-	15.11% (10/10)
Russell Microcap Index	9.86%	14.57%	6.48%	13.69% (10/10)
Russell 2000 Growth Index	10.51%	15.36%	8.16%	14.24% (10/10)
Russell 2000 Index	10.12%	14.49%	7.63%	13.48% (10/10)
Ativo - Net	9.59%	17.43%	-	14.28% (10/10)
DFA Micro Cap	11.79%	16.43%	8.95%	11.60% (8/87)
Russell 2000 Value Index	9.67%	13.58%	7.04%	10.28% (8/87)
Russell 2000 Index	10.12%	14.49%	7.63%	9.07% (8/87)
DFA Micro Cap - Net	11.24%	15.86%	8.43%	8.65% (1/05)
Public Real Assets	-	-	-	0.69% (8/17)
Public Real Assets Benchmark (1)	-	-	-	0.78% (8/17)
Brookfield Public Global Inf	-	-	-	(1.63%) (8/17)
Dow Jones Global Infra Comp Idx	1.89%	8.03%	6.66%	(1.44%) (8/17)
Brookfield Public Global Inf - Net	-	-	-	(1.63%) (8/17)
Cohen & Steers Public Global Inf	-	-	-	1.85% (8/17)
FTSE GI Core Infr 50/50 N	6.01%	9.74%	-	1.52% (8/17)
Cohen & St Public Global Inf - Net	-	-	-	1.85% (8/17)

(1) 1/3 Dow Jones Brookfield Global Infrastructure Composite Index + 2/3 FTSE Global Core Infrastructure 50/50 Net Tax Index

International Equity Returns

The table below details the rates of return for the fund's international large cap growth and international large cap value managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns for Periods Ended October 31, 2017

	Last Month	Last 3 Months	Year to Date	Last 12 Months
Intl Large Cap Equity	1.60%	4.15%	23.29%	23.87%
MSCI ACWI ex-US Index	1.88%	4.32%	23.41%	23.64%
Intl Large Cap Growth	1.84%	4.62%	26.87%	26.37%
EARNEST Partners	1.70%	3.17%	26.67%	27.59%
MSCI ACWI ex-US Index	1.88%	4.32%	23.41%	23.64%
MSCI ACWI ex-US Growth	2.41%	5.30%	28.22%	25.19%
EARNEST Partners - Net	1.70%	3.12%	26.61%	27.53%
William Blair	1.97%	5.94%	27.04%	25.32%
MSCI ACWI ex-US Index	1.88%	4.32%	23.41%	23.64%
MSCI ACWI ex-US Growth	2.41%	5.30%	28.22%	25.19%
William Blair - Net	1.89%	5.76%	26.60%	24.88%
Intl Large Cap Value	0.52%	2.60%	16.69%	17.85%
Brandes	(0.73%)	1.41%	13.06%	15.04%
MSCI ACWI ex-US Index	1.88%	4.32%	23.41%	23.64%
MSCI ACWI ex-US Value	1.37%	3.48%	19.87%	23.20%
Brandes - Net	(0.73%)	1.41%	12.89%	14.87%
Mondrian	1.65%	3.70%	19.64%	20.18%
MSCI ACWI ex-US Index	1.88%	4.32%	23.41%	23.64%
MSCI ACWI ex-US Value	1.37%	3.48%	19.87%	23.20%
Mondrian - Net	1.65%	3.57%	19.20%	19.58%
Lazard	1.44%	3.28%	21.88%	21.27%
MSCI ACWI ex-US Index	1.88%	4.32%	23.41%	23.64%
MSCI ACWI ex-US Value	1.37%	3.48%	19.87%	23.20%
Lazard - Net	1.38%	3.16%	21.58%	20.90%

International Equity Returns

The table below details the rates of return for the fund's international large cap growth and international large cap value managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns for Periods Ended October 31, 2017

	Last 36 Months	Last 60 Months	Last 120 Months	Since Inception
Intl Large Cap Equity	7.23%	9.44%	1.82%	8.12% ^(9/86)
MSCI ACWI ex-US Index	5.71%	7.29%	0.92%	-
Intl Large Cap Growth	7.24%	8.80%	1.74%	9.26% ^(9/02)
EARNEST Partners	6.67%	7.81%	3.61%	10.34% ^(10/04)
MSCI ACWI ex-US Index	5.71%	7.29%	0.92%	6.62% ^(10/04)
MSCI ACWI ex-US Growth	7.79%	8.74%	1.92%	7.49% ^(10/04)
EARNEST Partners - Net	6.50%	7.56%	3.28%	8.94% ^(1/05)
William Blair	7.76%	9.71%	2.42%	10.54% ^(10/02)
MSCI ACWI ex-US Index	5.71%	7.29%	0.92%	8.96% ^(10/02)
MSCI ACWI ex-US Growth	7.79%	8.74%	1.92%	9.21% ^(10/02)
William Blair - Net	7.33%	9.31%	2.03%	6.99% ^(1/05)
Intl Large Cap Value	5.64%	8.44%	1.24%	9.25% ^(10/95)
Brandes	5.55%	9.17%	1.40%	9.40% ^(1/96)
MSCI ACWI ex-US Index	5.71%	7.29%	0.92%	5.52% ^(1/96)
MSCI ACWI ex-US Value	4.54%	6.75%	0.79%	-
Brandes - Net	5.33%	8.94%	1.16%	4.65% ^(1/05)
Mondrian	5.84%	7.80%	-	6.92% ^(4/12)
MSCI ACWI ex-US Index	5.71%	7.29%	0.92%	6.43% ^(4/12)
MSCI ACWI ex-US Value	4.54%	6.75%	0.79%	6.09% ^(4/12)
Mondrian - Net	5.31%	7.29%	-	6.41% ^(4/12)
Lazard	5.26%	8.10%	-	7.77% ^(4/12)
MSCI ACWI ex-US Index	5.71%	7.29%	0.92%	6.43% ^(4/12)
MSCI ACWI ex-US Value	4.54%	6.75%	0.79%	6.09% ^(4/12)
Lazard - Net	4.71%	7.40%	-	7.13% ^(4/12)

International Equity Returns

The table below details the rates of return for the fund's international large cap core, international small cap, and emerging markets managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns for Periods Ended October 31, 2017

	Last Month	Last 3 Months	Year to Date	Last 12 Months
Intl Large Cap Active Core	2.23%	4.91%	26.65%	26.12%
Arrowstreet	2.79%	5.43%	26.00%	26.86%
MSCI ACWI ex-US Index	1.88%	4.32%	23.41%	23.64%
Arrowstreet - Net	2.79%	5.31%	25.58%	26.29%
Brown	1.47%	3.71%	21.27%	21.03%
MSCI ACWI ex-US Index	1.88%	4.32%	23.41%	23.64%
Brown - Net	1.47%	3.71%	21.05%	19.52%
GlobeFlex	2.20%	5.05%	30.09%	29.02%
MSCI ACWI ex-US Index	1.88%	4.32%	23.41%	23.64%
GlobeFlex - Net	2.20%	4.96%	29.74%	28.55%
Progress Intl Equity	1.91%	4.83%	26.90%	24.03%
Custom Benchmark	1.52%	4.22%	25.62%	24.62%
MSCI ACWI ex-US Index	1.88%	4.32%	23.41%	23.64%
Progress Intl Equity - Net	1.91%	4.70%	26.44%	23.42%
Intl Large Cap Pass. Core	1.51%	4.05%	22.24%	23.92%
NTGI MSCI EAFE Idx	1.51%	4.05%	22.24%	23.92%
MSCI EAFE Index	1.52%	4.01%	21.78%	23.44%
NTGI EAFE Idx - Net	1.51%	4.05%	22.23%	23.92%
International Small Cap	2.11%	5.65%	30.20%	27.13%
Franklin Templeton	2.96%	5.56%	31.54%	29.88%
ACWI Small Cap ex US	1.87%	5.18%	25.85%	24.70%
Franklin Templeton - Net	2.96%	5.38%	30.87%	29.22%
William Blair	1.41%	5.73%	29.08%	24.90%
ACWI Small Cap ex US	1.87%	5.18%	25.85%	24.70%
Intl SC Blended Benchmark	1.87%	5.18%	25.85%	24.70%
William Blair - Net	1.22%	5.34%	28.12%	23.97%
Emerging Markets	2.17%	4.79%	28.36%	23.53%
Genesis	2.17%	4.79%	28.36%	23.53%
MSCI Emerging Markets Index	3.51%	5.46%	32.64%	26.91%
Genesis - Net	2.12%	4.64%	27.72%	22.79%

Brown and GlobeFlex moved to International Large Cap Active Core April 1, 2011.

Progress Custom Benchmark is a comprised of each manager's weighted benchmark.

Intl SC Blended Benchmark consists of the S&P Developed Ex-U.S. Small Cap Index through May 31, 2011 and the MSCI ACWI Ex-U.S. Small Cap Index thereafter.

International Equity Returns

The table below details the rates of return for the fund's international large cap core, international small cap, and emerging markets managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns for Periods Ended October 31, 2017

	Last 36 Months	Last 60 Months	Last 120 Months	Since Inception
Intl Large Cap Active Core	9.26%	11.36%	-	5.52% ^(2/08)
Arrowstreet	9.56%	11.97%	-	5.69% ^(3/08)
MSCI ACWI ex-US Index	5.71%	7.29%	0.92%	2.36% ^(3/08)
Arrowstreet - Net	9.05%	11.45%	-	5.20% ^(3/08)
Brown	7.94%	11.88%	4.00%	8.48% ^(10/04)
MSCI ACWI ex-US Index	5.71%	7.29%	0.92%	6.62% ^(10/04)
Brown - Net	6.70%	10.85%	3.32%	6.86% ^(1/05)
GlobeFlex	10.36%	10.92%	2.43%	5.92% ^(3/06)
MSCI ACWI ex-US Index	5.71%	7.29%	0.92%	4.18% ^(3/06)
GlobeFlex - Net	9.93%	10.49%	1.98%	5.47% ^(3/06)
Progress Intl Equity	7.72%	-	-	5.31% ^(7/14)
Custom Benchmark	7.09%	-	-	4.45% ^(7/14)
MSCI ACWI ex-US Index	5.71%	7.29%	0.92%	3.12% ^(7/14)
Progress Intl Equity - Net	7.23%	-	-	4.87% ^(7/14)
Intl Large Cap Pass. Core	6.49%	8.94%	1.52%	3.67% ^(1/00)
NTGI MSCI EAFE Idx	6.49%	8.94%	1.51%	4.07% ^(2/00)
MSCI EAFE Index	6.08%	8.53%	1.10%	3.68% ^(2/00)
NTGI EAFE Idx - Net	6.49%	8.93%	1.50%	5.44% ^(1/05)
International Small Cap	10.87%	11.54%	2.09%	5.65% ^(12/05)
Franklin Templeton	10.58%	11.44%	-	8.33% ^(8/11)
ACWI Small Cap ex US	9.68%	10.08%	3.18%	6.32% ^(8/11)
Franklin Templeton - Net	9.78%	10.68%	-	7.58% ^(8/11)
William Blair	11.12%	11.63%	-	11.78% ^(9/10)
ACWI Small Cap ex US	9.68%	10.08%	3.18%	9.00% ^(9/10)
Intl SC Blended Benchmark	9.68%	10.08%	2.57%	9.47% ^(9/10)
William Blair - Net	10.20%	10.77%	-	10.91% ^(9/10)
Emerging Markets	5.46%	5.42%	4.33%	9.44% ^(2/92)
Genesis	5.46%	5.42%	4.33%	12.20% ^(5/04)
MSCI Emerging Markets Index	6.08%	5.21%	0.93%	10.10% ^(5/04)
Genesis - Net	4.83%	4.82%	3.71%	10.07% ^(1/05)

Brown and GlobeFlex moved to International Large Cap Active Core April 1, 2011.

Progress Custom Benchmark is a comprised of each manager's weighted benchmark.

Intl SC Blended Benchmark consists of the S&P Developed Ex-U.S. Small Cap Index through May 31, 2011 and the MSCI ACWI Ex-U.S. Small Cap Index thereafter.

Fixed Income Returns

The table below details the rates of return for the fund's domestic fixed core managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns for Periods Ended October 31, 2017

	Last Month	Last 3 Months	Year to Date	Last 12 Months
Dom. Fixed Active Core	0.11%	0.63%	3.45%	1.48%
EARNEST Partners	0.12%	0.52%	3.54%	1.25%
Blmbg Aggregate Index	0.06%	0.47%	3.20%	0.90%
EARNEST Partners - Net	0.09%	0.48%	3.38%	1.09%
Piedmont	0.07%	0.65%	3.69%	1.87%
Blmbg Aggregate Index	0.06%	0.47%	3.20%	0.90%
Piedmont - Net	0.07%	0.62%	3.58%	1.75%
Garcia Hamilton	0.14%	0.72%	3.10%	1.33%
Blmbg Aggregate Index	0.06%	0.47%	3.20%	0.90%
Garcia Hamilton	0.14%	0.72%	3.02%	1.22%
Dom. Fixed Passive Core	0.06%	0.48%	3.29%	0.95%
BlackRock US Debt	0.06%	0.50%	3.33%	1.03%
Blmbg Aggregate Index	0.06%	0.47%	3.20%	0.90%
BlackRock US Debt - Net	0.06%	0.50%	3.33%	1.02%
NTGI Blmbg Agg. Index	0.06%	0.47%	3.25%	0.88%
Blmbg Aggregate Index	0.06%	0.47%	3.20%	0.90%
NTGI Blmbg Agg. Index - Net	0.06%	0.47%	3.24%	0.88%

Fixed Income Returns

The table below details the rates of return for the fund's domestic fixed core managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns for Periods Ended October 31, 2017

	Last 36 Months	Last 60 Months	Last 120 Months	Since Inception
Dom. Fixed Active Core	2.81%	2.52%	4.65%	4.64% ^(4/01)
EARNEST Partners	2.85%	2.56%	4.76%	4.65% ^(5/05)
Blmbg Aggregate Index	2.40%	2.04%	4.19%	4.20% ^(5/05)
EARNEST Partners - Net	2.66%	2.36%	4.55%	4.44% ^(5/05)
Piedmont	2.85%	2.53%	4.57%	4.46% ^(6/05)
Blmbg Aggregate Index	2.40%	2.04%	4.19%	4.14% ^(6/05)
Piedmont - Net	2.72%	2.37%	4.40%	4.27% ^(6/05)
Garcia Hamilton	-	-	-	2.67% ^(6/15)
Blmbg Aggregate Index	2.40%	2.04%	4.19%	2.23% ^(6/15)
Garcia Hamilton	-	-	-	2.58% ^(6/15)
Dom. Fixed Passive Core	2.48%	2.07%	4.16%	6.07% ^(1/90)
BlackRock US Debt	2.53%	-	-	3.12% ^(10/13)
Blmbg Aggregate Index	2.40%	2.04%	4.19%	2.98% ^(10/13)
BlackRock US Debt - Net	2.53%	-	-	3.12% ^(10/13)
NTGI Blmbg Agg. Index	2.43%	2.05%	4.15%	6.13% ^(2/90)
Blmbg Aggregate Index	2.40%	2.04%	4.19%	6.12% ^(2/90)
NTGI Blmbg Agg. Index - Net	2.43%	2.05%	4.14%	4.13% ^(1/05)

Fixed Income Returns

The table below details the rates of return for the fund's domestic fixed core plus and high yield managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns for Periods Ended October 31, 2017

	Last Month	Last 3 Months	Year to Date	Last 12 Months
Domestic Fixed Core Plus	0.09%	0.72%	4.43%	2.54%
Brandes Core Plus	0.01%	0.35%	3.39%	1.05%
Blmbg Aggregate Index	0.06%	0.47%	3.20%	0.90%
Brandes Core Plus - Net	0.01%	0.35%	3.39%	1.05%
LM Capital	0.11%	0.67%	4.00%	2.09%
Blmbg Aggregate Index	0.06%	0.47%	3.20%	0.90%
LM Capital - Net	0.07%	0.63%	3.83%	1.93%
Progress Fixed Income	0.17%	0.74%	4.16%	2.42%
Blmbg Aggregate Index	0.06%	0.47%	3.20%	0.90%
Progress Fixed Inc. - Net	0.17%	0.66%	3.91%	2.08%
Taplin, Canida, Habacht	0.24%	1.00%	4.82%	3.42%
Blmbg Aggregate Index	0.06%	0.47%	3.20%	0.90%
Taplin, Canida, Hab. - Net	0.24%	1.00%	4.72%	3.32%
Western	(0.11%)	0.59%	5.55%	3.44%
Blmbg Aggregate Index	0.06%	0.47%	3.20%	0.90%
Western - Net	(0.11%)	0.55%	5.47%	3.33%
Bank Loans	0.63%	1.11%	4.37%	6.36%
Barings Global Loan Fund	0.63%	1.11%	4.37%	6.36%
Custom Benchmark	0.63%	0.98%	3.90%	5.38%
Barings Global Loan Fund - Net	0.59%	1.06%	4.02%	5.90%
Emerging Markets	(1.29%)	0.62%	11.54%	8.28%
Standish	(1.29%)	0.62%	11.54%	8.28%
Custom Benchmark	(1.25%)	0.22%	9.72%	5.73%
Standish - Net	(1.29%)	0.53%	11.25%	7.90%
Opportunistic Fixed Income	0.45%	1.11%	6.07%	7.91%
Crescent	0.45%	1.11%	6.07%	7.91%
Custom Benchmark	0.49%	1.11%	5.51%	7.09%
Crescent - Net	0.45%	1.05%	5.59%	7.29%
High Yield	0.19%	1.49%	7.29%	8.53%
MacKay Shields	0.19%	1.42%	7.24%	8.63%
ML High Yield Cash Pay Index	0.38%	1.26%	7.47%	9.14%
MacKay Shields - Net	0.19%	1.33%	6.96%	8.26%

Taplin, Canida, & Habacht moved to Core Plus October 1, 2010.

Barings Custom Benchmark is 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 Custom Benchmark is 50% JPM GBI-EM Index, 25% JPM EMBI Global Index and 25% JPM Corporate EMBI Diversified Index.

Crescent Custom Benchmark is 50% ML U.S. High Yield Master II Index and 50% S&P/LSTA Leveraged Loan Index.

Fixed Income Returns

The table below details the rates of return for the fund's domestic fixed core plus and high yield managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns for Periods Ended October 31, 2017

	Last 36 Months	Last 60 Months	Last 120 Months	Since Inception	
Domestic Fixed Core Plus	3.30%	3.02%	5.02%	8.28%	(1/82)
Brandes Core Plus	-	-	-	1.94%	(3/16)
Blmbg Aggregate Index	2.40%	2.04%	4.19%	2.24%	(3/16)
Brandes Core Plus - Net	-	-	-	1.94%	(3/16)
LM Capital	3.18%	2.75%	5.05%	5.06%	(5/05)
Blmbg Aggregate Index	2.40%	2.04%	4.19%	4.20%	(5/05)
LM Capital - Net	3.01%	2.59%	4.88%	4.89%	(5/05)
Progress Fixed Income	3.07%	2.88%	4.92%	5.06%	(1/06)
Blmbg Aggregate Index	2.40%	2.04%	4.19%	4.31%	(1/06)
Progress Fixed Inc. - Net	2.73%	2.55%	4.56%	4.72%	(1/06)
Taplin, Canida, Habacht	3.56%	3.31%	5.36%	5.17%	(5/05)
Blmbg Aggregate Index	2.40%	2.04%	4.19%	4.20%	(5/05)
Taplin, Canida, Hab. - Net	3.42%	3.19%	5.23%	5.04%	(5/05)
Western	3.97%	3.58%	5.30%	5.61%	(11/01)
Blmbg Aggregate Index	2.40%	2.04%	4.19%	4.36%	(11/01)
Western - Net	3.84%	3.46%	5.16%	5.05%	(1/05)
Bank Loans	5.14%	-	-	4.77%	(8/14)
Barings Global Loan Fund	5.14%	-	-	4.77%	(8/14)
Custom Benchmark	4.31%	-	-	3.98%	(8/14)
Barings Global Loan Fund - Net	4.58%	-	-	4.22%	(8/14)
Emerging Markets	1.96%	-	-	2.95%	(8/14)
Standish	1.96%	-	-	2.95%	(8/14)
Custom Benchmark	2.16%	1.43%	4.98%	1.57%	(8/14)
Standish - Net	1.62%	-	-	2.63%	(8/14)
Opportunistic Fixed Income	4.42%	-	-	3.99%	(8/14)
Crescent	4.42%	-	-	3.83%	(9/14)
Custom Benchmark	4.81%	5.23%	6.20%	4.33%	(9/14)
Crescent - Net	3.98%	-	-	3.41%	(9/14)
High Yield	6.47%	6.69%	7.97%	9.78%	(4/86)
MacKay Shields	6.77%	6.79%	7.66%	9.20%	(11/00)
ML High Yield Cash Pay Index	5.60%	6.26%	7.63%	7.91%	(11/00)
MacKay Shields - Net	6.40%	6.42%	7.28%	7.18%	(1/05)

Taplin, Canida, & Habacht moved to Core Plus October 1, 2010.

Barings Custom Benchmark is 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 Custom Benchmark is 50% JPM GBI-EM Index, 25% JPM EMBI Global Index and 25% JPM Corporate EMBI Diversified Index.

Crescent Custom Benchmark is 50% ML U.S. High Yield Master II Index and 50% S&P/LSTA Leveraged Loan Index.

Five Best Performing Portfolio's vs. Benchmarks

Manager	Year-to-Date Outperformance	Since Inception Outperformance	
	(in % points)	(in % points)	
Sands	9.36	2.14	10/31/2003
BMO	5.78	2.75	01/31/2001
Inv Counselors of MD	5.77	2.55	04/30/1999
Franklin	5.70	2.01	07/31/2011
Dodge & Cox	4.48	1.30	08/31/2003

Five Worst Performing Portfolio's vs. Benchmarks

Manager	Year-to-Date Underperformance	Since Inception Underperformance	
	(in % points)	(in % points)	
Brandes	-10.35	3.89	12/31/1995
Pyramis SCG	-9.60	5.45	07/31/1988
Ativo	-6.29	0.87	09/30/2010
Genesis	-4.28	2.10	04/30/2004
Mondrian	-3.77	0.49	03/31/2012

Five Highest Returning Portfolios

Manager	Year-to-Date Return	Since Inception Return	
	(in % points)	(in % points)	
Sands	34.75	11.58	10/31/2003
Franklin	31.54	8.33	07/31/2011
GlobeFlex	30.09	5.88	02/28/2006
William Blair Int'l SC	29.08	11.78	08/31/2010
Genesis	28.36	12.20	04/30/2004

Five Lowest Returning Portfolios

Manager	Year-to-Date Return	Since Inception Return	
	(in % points)	(in % points)	
NTGI BC Agg	3.25	6.13	01/31/1990
Blackrock US Debt	3.33	3.08	09/01/2013
Earnest FI	3.54	4.65	04/30/2005
Piedmont	3.69	4.43	05/31/2005
LM Capital	4.00	5.06	04/30/2005

Returns are shown gross of investment management fees.

Excludes Real Estate and Alternative Investments portfolios.