

December 31, 2019



**Illinois Municipal
Retirement Fund
Monthly Performance Report**

**Investment Measurement Service
Monthly Review**

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Market Environment

As of December 31, 2019

Index	Last Month	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Russell:3000 Index	2.89	31.02	14.57	11.24	13.42
S&P:500	3.02	31.49	15.27	11.70	13.56
Russell:2000 Index	2.88	25.52	8.59	8.23	11.83
MSCI:ACWI ex US	4.33	21.51	9.87	5.51	4.97
MSCI:EM	7.46	18.44	11.58	5.61	3.68
Blmbg:Aggregate	(0.07)	8.72	4.03	3.05	3.75
NCREIF:Total Index	0.47	6.28	6.65	8.22	10.16
Blmbg:Commodity Price Idx	4.90	5.44	(2.59)	(4.96)	(5.28)

The year concluded with many of the same prevalent market themes that dominated the narrative of 2019. In particular, investors responded to accommodative central banking policy, Brexit developments, and progress on a U.S.-China phase one trade deal. Positive developments across all three fueled risk-on sentiment and caused global equities to rally in December. After reducing rates in October, the U.S. Federal Reserve decided to keep the target federal funds rate unchanged at 1.50% to 1.75% in December. Treasuries fell during the month, while corporate credit and high yield debt produced gains. In the U.K., the Conservative Party won a deciding victory in the December parliamentary elections. The Party achieved a strong majority which increases the likelihood of a withdrawal deal by the end of 2020. In response to the election, both Sterling and U.K. equities rallied during the month. The strongest performing asset class in December was emerging market equities, with the MSCI EM Index climbing over 7%. Rising oil prices, easing geopolitical tensions, and a weaker U.S. dollar all contributed to growth in the region.

Following a surprisingly strong November jobs report that added a revised 256,000 non-farm payrolls, December fell slightly short of analysts' expectations with the addition of 145,000 jobs. The retail and hospitality sectors contributed the most to employment in December, while mining, transportation and warehousing, and manufacturing all shed jobs. Unemployment remained at the 50-year low rate of 3.5%. Year-over-year wage growth fell to 2.9%, down from 3.1% in November.

The headline Consumer Price Index (CPI) rose 0.2% in December for a year-over-year growth figure of 2.3%. Gasoline, housing, and medical expenses were the primary contributors to rising prices during the month. The core CPI, which excludes food and energy, only rose 0.1% in December, and is up 2.3% over the trailing year.

Third quarter annualized GDP growth remained unchanged at 2.1% in the third estimate. Personal consumption expenditures and nonresidential fixed investments were revised higher, but were offset by downward revisions to private inventory investment.

*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.

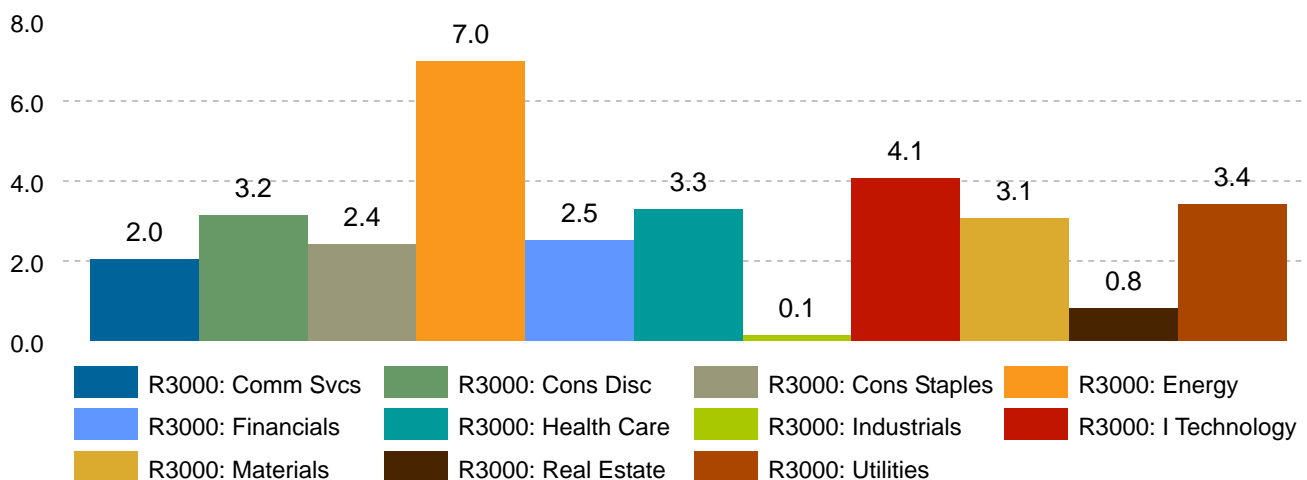
U.S. Equity Overview As of December 31, 2019

Index	Last Month	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Russell:3000 Index	2.89	31.02	14.57	11.24	13.42
S&P:500	3.02	31.49	15.27	11.70	13.56
Russell:1000 Index	2.89	31.43	15.05	11.48	13.54
Russell:1000 Growth	3.02	36.39	20.49	14.63	15.22
Russell:1000 Value	2.75	26.54	9.68	8.29	11.80
Russell:Midcap Index	2.29	30.54	12.06	9.33	13.19
Russell:2000 Index	2.88	25.52	8.59	8.23	11.83
Russell:2000 Growth	2.29	28.48	12.49	9.34	13.01
Russell:2000 Value	3.50	22.39	4.77	6.99	10.56

U.S. equities (S&P 500 Index) finished a strong year on a high note, adding 3.0% in the month and bringing the one-year return to 31.5%. That marks the biggest one-year return since 2013 and represents a top-20 calendar year for the index going back to 1926. However, it bears mentioning that this was on the heels of a down year for equities in 2018, and the S&P lost over 13% in the fourth quarter of 2018 in particular. Following those declines, the Fed reversed course from tightening and signaled a willingness to resume stimulus to keep the economy growing, fueling a first quarter rebound that remained intact throughout the year. Large caps outperformed small caps in 2019 (Russell 1000 Index: +31.4% vs. Russell 2000 Index: +25.5%), while mid cap returns were between large and small caps (Russell Midcap Index: +30.5%).

All 11 Russell 3000 Index sectors posted positive performance for the year and only the Energy sector (+9.7%) failed to post a double-digit gain. Information Technology (+49.2%) was the standout top performer, outgaining the next best sector (Communication Services: +31.6%) by almost 18%. Overall, four sectors gained over 30% and six sectors gained over 20%, underscoring a very strong year for equities.

One Month Russell 3000 Index Sector Returns



Non-U.S. Equity Overview

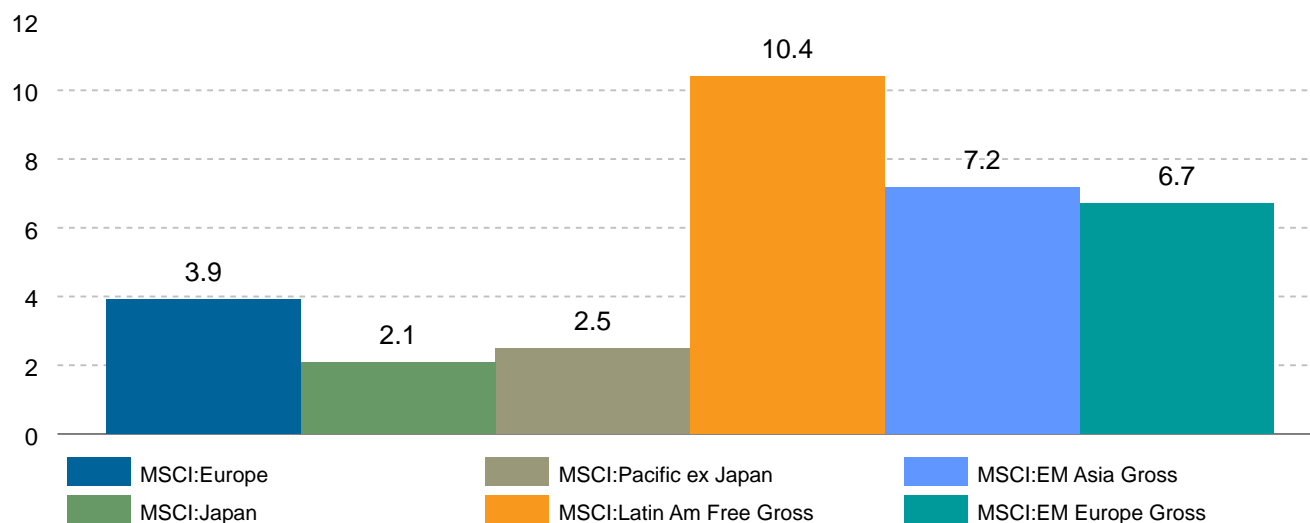
As of December 31, 2019

Index	Last Month	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
MSCI:ACWI ex US	4.33	21.51	9.87	5.51	4.97
MSCI:EAFE	3.25	22.01	9.56	5.67	5.50
MSCI:EAFE Hedged Net	1.56	24.64	9.86	8.13	8.00
MSCI:EM	7.46	18.44	11.58	5.61	3.68
MSCI:ACWI ex US Small Cap	4.93	22.42	9.65	7.04	6.92

Broad non-U.S. equities (MSCI ACWI ex U.S.) climbed 4.3% in December and gained a meaningful 21.5% in the year. While exceptionally strong in absolute terms, this one-year performance lagged U.S. equities by a whopping 10% (S&P 500 Index: +31.5% vs. MSCI ACWI ex U.S.: +21.5%). After a significant decline in the fourth quarter of 2018, non-U.S. equities rebounded strongly in the first quarter of 2019. Dovish central bank rhetoric, a generally improving tone in U.S.-China trade talks, clarity around Brexit negotiations, and stabilizing economic fundamentals helped equity markets find their footing during the year. Emerging markets outperformed developed international equities in December (MSCI Emerging Markets Index: +7.5% vs. MSCI EAFE Index: +3.3%) but lagged for the one-year period (MSCI Emerging Markets Index: +18.4% vs. MSCI EAFE Index: +22.0%). With the dollar fluctuating over the year, hedged returns outperformed unhedged in 2019 (MSCI EAFE Index: +22.0% vs. MSCI EAFE Hedged Net Index: +24.6%). Non-U.S. small cap stocks narrowly led non-U.S. large cap stocks over the year (MSCI ACWI ex U.S. Small Cap: +22.4% vs. MSCI ACWI ex U.S.: +21.5%).

Regional returns were strong across the board, with all six regions shown in the chart producing gains of more than 17% for the year. Emerging Europe (MSCI EM Europe Gross Index: +33.8%) was the best performing region, led by Russia's 53.2% annual return. Developed Europe (MSCI Europe Index: +23.8%) was the next best performing region. Latin America (MSCI Latin Am Free Gross Index: +17.9%) was the worst performing index despite generating substantial gains over the year.

One Month MSCI Regional Returns

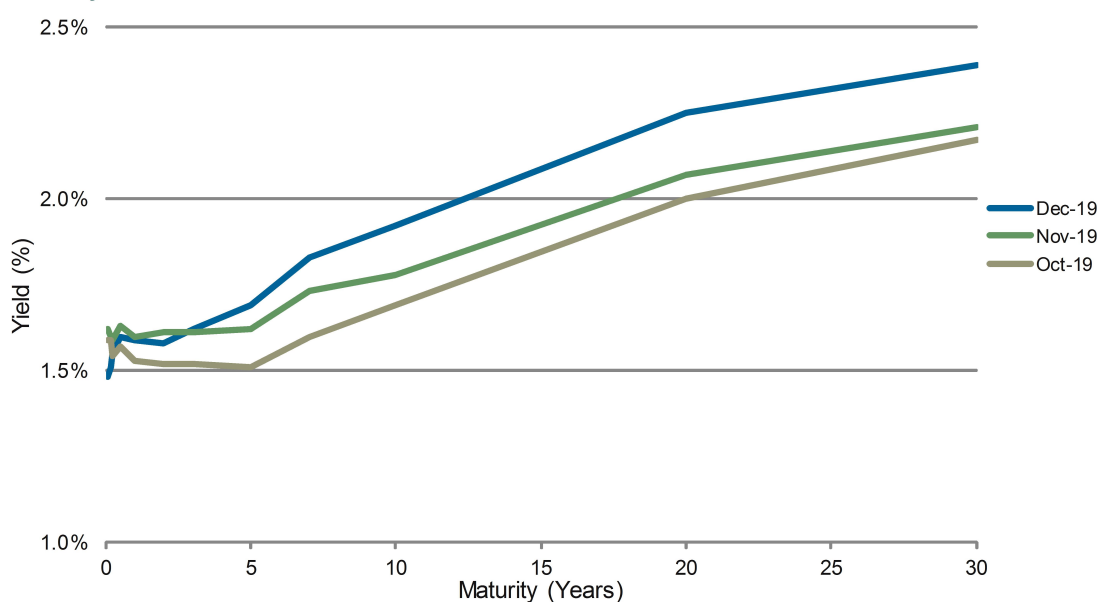


Fixed Income Overview

As of December 31, 2019

Index	Last Month	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Blmbg:Aggregate	(0.07)	8.72	4.03	3.05	3.75
Blmbg:Long Gov/Credit	(1.14)	19.59	8.07	5.42	7.59
Blmbg:Government	(0.55)	6.83	3.31	2.36	3.03
Blmbg:Treasury	(0.56)	6.86	3.31	2.36	3.13
Blmbg:Credit	0.29	13.80	5.75	4.39	5.32
Blmbg:MBS	0.28	6.35	3.25	2.58	3.15
Blmbg:TIPS	0.38	8.43	3.32	2.62	3.36
ML:HY Corp Cash Pay	2.08	14.40	6.32	6.12	7.49
CS:Leveraged Loan	1.61	8.17	4.48	4.54	5.11
3 Month T-Bill	0.14	2.28	1.67	1.07	0.58

Treasury Yield Curve



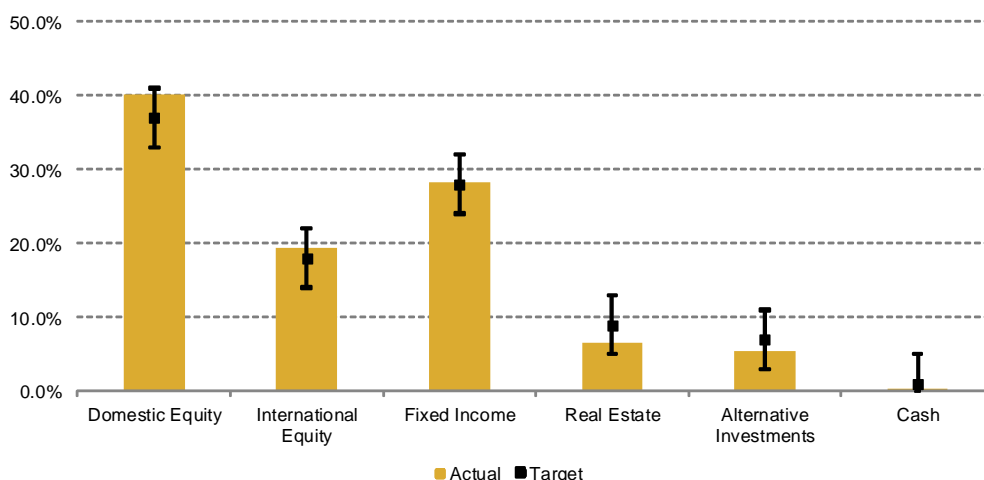
Investor sentiment remained positive in December on the back of encouraging economic data and progress in the U.S.-China trade spat. Fixed income markets were again mixed as the rally in risk assets favored credit sectors over more defensive sectors. The Fed left rates unchanged at 1.50% to 1.75% at their December meetings, and the Treasury curve steepened month-over-month, creating a headwind for longer duration securities. 3-month T-Bill yields fell four basis points (bps) to 1.55%, 2-year yields fell three bps to 1.58%, 10-year yields rose 14 bps to 1.92%, and 30-year yields climbed 18 bps to 2.39%.

The Bloomberg Aggregate Index lost 0.1% in December, a month that saw rates rise across the longer end of the curve. Amid the risk on environment, high yield credit spreads tightened 34 bps and investment grade credit spreads tightened 12 bps. Credit sectors performed well in the month, with lower quality leading higher quality. The ML High Yield CP Index returned 2.1%, and the investment grade Bloomberg Credit Index returned 0.3%. Leverage Loans (CS Leveraged Loan Index) also performed well returning 1.6% in December. Rising rates drove both the Bloomberg Government Index and Bloomberg Treasury Index down by 0.6%. TIPS (Bloomberg U.S. TIPS Index: +0.4%) outperformed nominal bonds as long-term inflation expectations rose, driving the 10-year breakeven inflation rate up to 1.77% from 1.61%.

Total Fund

The market value of the Total Fund was \$44.67 billion at the end of December, an increase of \$825.6 million from the prior month. The Fund returned 2.05% during the month, leading the 1.91% return of its benchmark. Domestic Equity (+2.91%) modestly outperformed its benchmark (+2.89%). International Equity (+4.08%) trailed its benchmark for the month. The Fixed Income composite returned 0.24%, leading its benchmark return. Real Estate returned 0.30% in December, underperforming its benchmark return of 0.36%. Over the last three months, Alternatives (+2.57%) led the benchmark return of 2.18%.

As of December month end, all asset classes are within their target ranges. Current policy states that when actual allocations of the asset classes differ by more than four percentage points from their policy target, a recommendation for rebalancing will be made to the Board of Trustees.



U.S. Equity

The U.S. Equity composite returned 2.91% during December, modestly leading the Russell 3000 Index by two basis point. For the month, large caps outperformed small caps.

Large Cap: IMRF's Large Cap managers returned 2.91% in December, leading the 2.89% return of the Russell 1000 Index. In aggregate, growth managers returned 2.96%, while the Russell 1000 Growth Index returned 3.02%. Value managers returned 2.88% collectively, outperforming the 2.75% return of the Russell 1000 Value Index.

Small Cap: The Small Cap composite (+2.64%) trailed the Russell 2000 Index by 24 basis points in December. The growth managers collectively returned 1.72%, relative to the 2.29% return of the Russell 2000 Growth Index. The value managers returned 2.80% during the month, underperforming the Russell 2000 Value Index by 70 basis points. The Micro Cap composite returned 3.73% in December.

Public Real Assets: The Public Real Assets portfolio managed by Brookfield and Cohen & Steers returned 4.58% in December, modestly outperforming the custom benchmark by 3 basis points.

International Equity

The International Equity composite returned 4.08% in December, underperforming its MSCI ACWI ex-U.S. benchmark (+4.33%).

International Large Cap: International Large Cap managers collectively returned 3.78% in December, trailing the MSCI ACWI ex-U.S. Index by 55 basis points. International Large Cap Growth managers (+4.39%) led the MSCI ACWI ex-U.S. Growth Index by 22 basis points. International Large Cap Value managers returned 4.24% for the month, trailing the MSCI ACWI ex-U.S. Value Index (+4.56%).

International Small Cap and Emerging Markets: The International Small Cap managers returned 4.78% in December, underperforming the MSCI ACWI Small Cap ex-U.S. Index (+4.93%). The Emerging Markets portfolio, managed by Genesis, returned 5.91% during the month, trailing the MSCI Emerging Markets Index by 162 basis points.

Fixed Income

The Fixed Income composite returned 0.24% in December, outperforming the Bloomberg Aggregate Index.

Active Core: In aggregate, the Domestic Active Core managers returned -0.29% in December, 22 basis points behind the Bloomberg Aggregate Index.

Core Plus: Domestic Fixed Core Plus managers ended the month with a return of +0.30%, outperforming the Bloomberg Aggregate Index.

Bank Loans: The Bank Loans portfolio, managed by Barings, returned 1.87% for the month, leading the custom benchmark by 39 basis points.

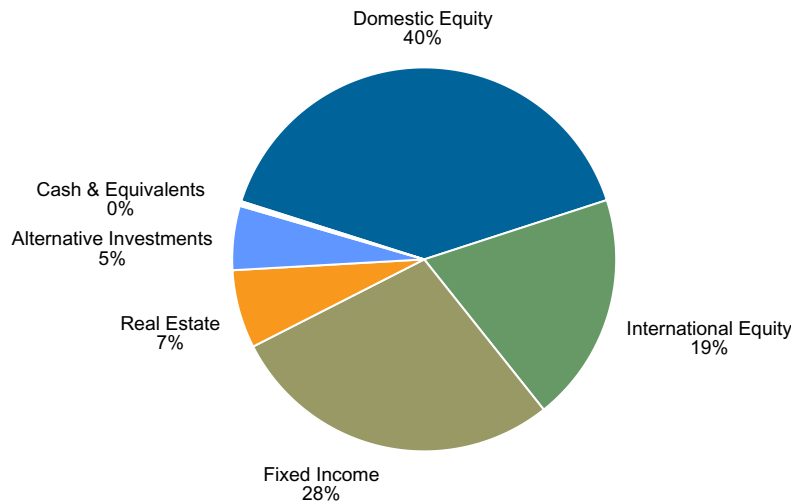
Emerging Markets: The Emerging Markets Debt component, managed by Standish, returned +3.52% in December, 78 basis points ahead of the custom benchmark.

High Yield: The High Yield allocation, managed by MacKay Shields, returned 1.69% in December, trailing the benchmark return of 2.08%.

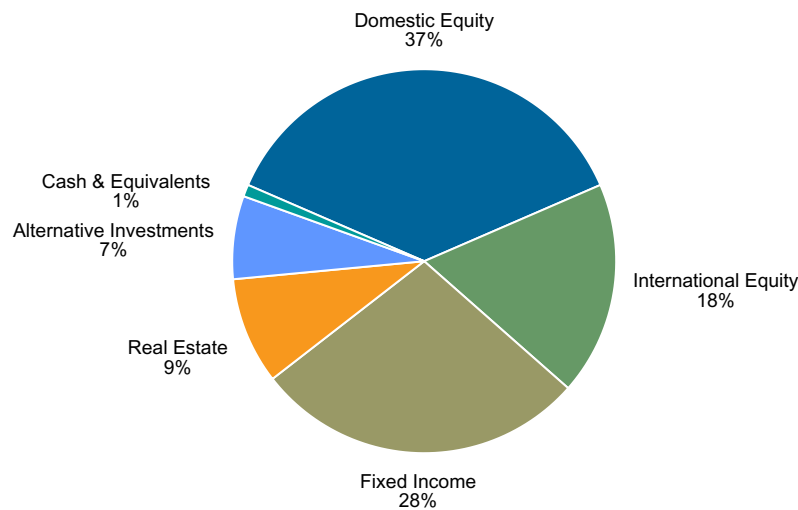
Actual vs Target Asset Allocation

The first chart below shows the Fund's asset allocation as of December 31, 2019. 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	17,935	40.1%	37.0%	3.1%	1,407
International Equity	8,600	19.3%	18.0%	1.3%	559
Fixed Income	12,576	28.2%	28.0%	0.2%	68
Real Estate	2,964	6.6%	9.0%	(2.4%)	(1,056)
Alternative Investments	2,427	5.4%	7.0%	(1.6%)	(700)
Cash & Equivalents	169	0.4%	1.0%	(0.6%)	(278)
Total	44,672	100.0%	100.0%		

* Current Month Target = 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.

Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of December 31, 2019, with the distribution as of November 30, 2019.

Asset Distribution Across Investment Managers

	December 31, 2019		November 30, 2019	
	Market Value	Percent	Market Value	Percent
Domestic Equity*	\$17,935,495,260	40.15%	\$17,511,265,845	39.94%
Large Cap Growth				
NTGI S&P 500 Growth Idx	2,543,433,185	5.69%	2,471,022,535	5.64%
Sands	2,103,278,144	4.71%	2,042,649,265	4.66%
Piedmont Russell 1000 G	1,153,960,741	2.58%	1,120,232,998	2.55%
Large Cap Value				
Dodge & Cox	1,447,797,316	3.24%	1,403,701,712	3.20%
BMO	1,028,690,139	2.30%	1,080,035,941	2.46%
LSV	1,661,390,635	3.72%	1,626,031,422	3.71%
NTGI S&P 500 Value Idx	1,712,138,876	3.83%	1,660,440,131	3.79%
Large Cap Core				
NTGI MarketCap Index	2,622,330,010	5.87%	2,548,907,618	5.81%
Quantitative Factor Strategies				
Quantitative U.S. Equity - SB	263,662,873	0.59%	256,962,682	0.59%
Small Cap Growth				
Frontier	617,718,712	1.38%	610,355,154	1.39%
FIAM	186,791,117	0.42%	180,545,816	0.41%
Small Cap Value				
Channing	242,270,534	0.54%	235,202,201	0.54%
Dimensional Small Cap Value	602,828,900	1.35%	579,585,451	1.32%
Inv. Counselors of Maryland	727,632,122	1.63%	715,134,301	1.63%
Micro Cap				
Dimensional Micro Cap	458,554,044	1.03%	442,085,772	1.01%
Public Real Assets				
Brookfield	176,273,741	0.39%	166,846,777	0.38%
Cohen & Steers	386,744,170	0.87%	371,526,070	0.85%
International Equity	\$8,600,379,064	19.25%	\$8,263,494,157	18.85%
International Large Cap Growth				
EARNEST Partners	605,966,756	1.36%	577,960,897	1.32%
William Blair	837,528,831	1.87%	804,870,866	1.84%
International Large Cap Value				
Brandes	646,970,266	1.45%	621,901,230	1.42%
Mondrian	582,363,658	1.30%	557,473,673	1.27%
Lazard	123,707,510	0.28%	118,618,730	0.27%
International Large Cap Core				
Arrowstreet	758,679,892	1.70%	725,892,812	1.66%
Brown	378,026,609	0.85%	371,237,122	0.85%
GlobeFlex	579,991,613	1.30%	559,504,924	1.28%
NTGI MSCI EAFE Index	2,010,705,163	4.50%	1,950,518,450	4.45%
Progress Intl Equity	348,413,722	0.78%	334,205,076	0.76%
International All Cap Developed				
Ativo International	148,654,168	0.33%	144,792,885	0.33%
International Small Cap				
Franklin Templeton	206,833,333	0.46%	197,918,151	0.45%
William Blair	314,253,082	0.70%	299,391,428	0.68%
Emerging Markets				
Genesis	1,058,284,461	2.37%	999,207,914	2.28%

* 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 December 31, 2019, with the distribution as of November 30, 2019.

Asset Distribution Across Investment Managers

	December 31, 2019		November 30, 2019	
	Market Value	Percent	Market Value	Percent
Total Fixed Income	\$12,576,451,533	28.15%	\$12,567,299,727	28.66%
Domestic Fixed Core				
Brandes Core	365,347,188	0.82%	366,065,364	0.83%
EARNEST Partners	998,040,790	2.23%	1,004,860,591	2.29%
Piedmont Investment	1,060,171,256	2.37%	1,066,620,961	2.43%
Garcia Hamilton	1,051,372,456	2.35%	1,055,755,882	2.41%
Domestic Fixed Passive Core				
NTGI Blmbg Agg. Index	1,809,158,439	4.05%	1,810,613,443	4.13%
BlackRock US Debt	1,734,360,670	3.88%	1,735,507,783	3.96%
Domestic Fixed Core Plus				
LM Capital	912,793,939	2.04%	911,559,450	2.08%
Progress Fixed Income	975,964,038	2.18%	975,603,933	2.23%
Taplin, Canida, & Habacht	941,707,150	2.11%	942,213,631	2.15%
Western	1,133,500,624	2.54%	1,130,548,623	2.58%
Bank Loans				
Barings Global Loan Fund	575,673,744	1.29%	565,126,427	1.29%
Emerging Markets Debt				
Standish	225,668,765	0.51%	218,004,818	0.50%
High Yield				
Mackay Shields	792,364,020	1.77%	784,495,287	1.79%
FIAM High Yield	328,452	0.00%	323,533	0.00%

Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of December 31, 2019, with the distribution as of November 30, 2019.

Asset Distribution Across Investment Managers

	December 31, 2019		November 30, 2019	
	Market Value	Percent	Market Value	Percent
Real Estate	\$2,964,215,005	6.64%	\$2,945,336,478	6.72%
Real Estate Core				
TA Buckhead Ind. Prop.	605,428,300	1.36%	608,522,263	1.39%
Barings Core Property Fund	1,070	0.00%	1,070	0.00%
Barings European Core Property	126,969,573	0.28%	124,718,609	0.28%
Blackstone Property Partners Europe	130,685,873	0.29%	128,369,027	0.29%
INVESCO Core RE	211,508,105	0.47%	211,508,105	0.48%
INVESCO Euro real estate	56,923,207	0.13%	55,914,051	0.13%
AEW Core Property Trust	239,085,694	0.54%	239,085,694	0.55%
CBRE US Core Property Trust	200,730,602	0.45%	200,730,602	0.46%
Real Estate Non-Core				
Artemis MWBE Spruce	240,731,549	0.54%	244,070,765	0.56%
Franklin Templeton EMREFF	14,756,093	0.03%	14,756,093	0.03%
Security Capital	59,648,554	0.13%	59,290,671	0.14%
Dune II	21,982,160	0.05%	21,982,160	0.05%
Non-Core Real Estate Funds*	893,638,295	2.00%	884,638,303	2.02%
Non-Core Intl Real Estate Funds**	161,583,067	0.36%	151,206,202	0.34%
Rockwood Fund VIII	168,181	0.00%	168,181	0.00%
Almanac ARS V	374,681	0.00%	374,681	0.00%
TA Fund IX	1	0.00%	1	0.00%
Alternative Investments	\$2,426,795,465	5.43%	\$2,389,750,965	5.45%
Absolute Return				
Aurora	550,758	0.00%	542,874	0.00%
Private Equity				
Abbott	359,027,403	0.80%	342,317,977	0.78%
Muller & Monroe MPEFF	5,104,385	0.01%	5,139,236	0.01%
Pantheon	256,760,283	0.57%	264,008,911	0.60%
Private Equity Fund - Domestic	1,010,187,362	2.26%	997,138,792	2.27%
Private Equity Fund - International	332,244,607	0.74%	321,000,060	0.73%
Oakbrook Opportunities Fund	5,362,066	0.01%	5,645,964	0.01%
Private Credit				
Private Credit Fund-Domestic	128,930,696	0.29%	124,262,501	0.28%
Agriculture				
Premiere Partners IV	208,323,624	0.47%	209,323,223	0.48%
Timberland				
Forest Investment Assoc.	73,900,301	0.17%	74,100,301	0.17%
Unlisted Infrastructure				
Unlisted Infrastructure Funds	46,403,981	0.10%	46,271,126	0.11%
Cash & Equivalents	\$168,699,071	0.38%	\$169,274,225	0.39%
Total Fund	\$44,672,035,398	100.0%	\$43,846,421,398	100.0%

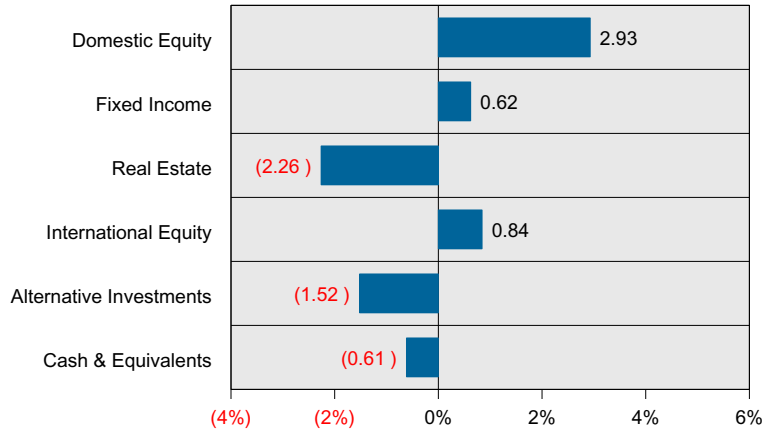
* Non-Core Real Estate Funds funded since September 2011.

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

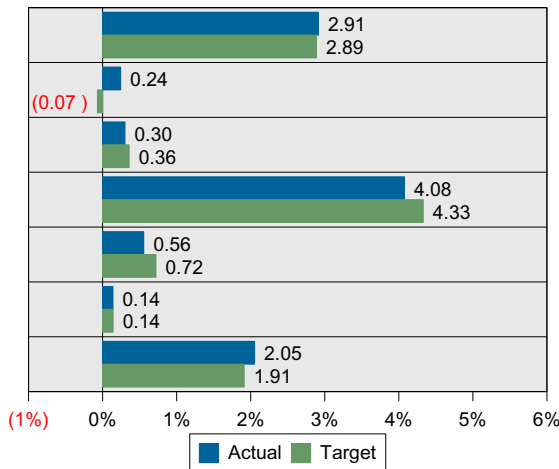
Monthly Total Fund Relative Attribution - December 31, 2019

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.

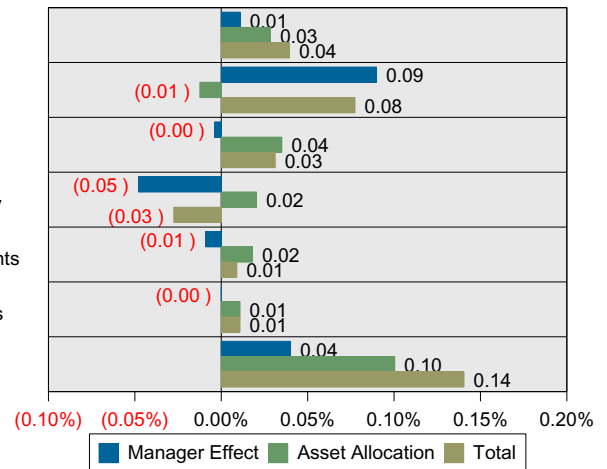
Asset Class Under or Overweighting



Actual vs Target Returns



Relative Attribution by Asset Class



Relative Attribution Effects for Month ended December 31, 2019

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	40%	37%	2.91%	2.89%	0.01%	0.03%	0.04%
Fixed Income	29%	28%	0.24%	(0.07%)	0.09%	(0.01%)	0.08%
Real Estate	7%	9%	0.30%	0.36%	(0.00%)	0.04%	0.03%
International Equity	19%	18%	4.08%	4.33%	(0.05%)	0.02%	(0.03%)
Alternative Investments	5%	7%	0.56%	0.72%	(0.01%)	0.02%	0.01%
Cash & Equivalents	0%	1%	0.14%	0.14%	(0.00%)	0.01%	0.01%
Total			2.05%	1.91%	+ 0.04%	+ 0.10%	0.14%

* Current Month Target = 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

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 December 31, 2019

	Last Month	Last 3 Months	Last 12 Months
Domestic Equity	2.91%	9.08%	29.23%
Blended Benchmark**	2.89%	9.10%	31.02%
Domestic Equity - Net	2.91%	9.04%	29.00%
International Equity	4.08%	9.42%	23.76%
MSCI ACWI x US (Net)	4.33%	8.92%	21.51%
International Equity - Net	4.07%	9.34%	23.39%
Fixed Income	0.24%	0.56%	9.50%
Blmbg Aggregate Index	(0.07%)	0.18%	8.72%
Fixed Income - Net	0.24%	0.52%	9.37%
Real Estate	0.30%	2.86%	9.81%
Blended Benchmark***	0.36%	1.08%	4.19%
Real Estate - Net	0.30%	2.86%	9.78%
Alternative Investments	0.56%	2.57%	9.48%
Alternatives Custom Benchmark****	0.72%	2.18%	9.00%
Alternative Investments - Net	0.55%	2.57%	9.43%
Private Equity	0.69%	3.39%	11.78%
Alternatives Custom Benchmark****	0.72%	2.18%	9.00%
Agriculture	0.00%	(3.54%)	(5.82%)
Blended Benchmark***	0.36%	1.08%	4.19%
Timberland	0.00%	0.55%	1.00%
Blended Benchmark***	0.36%	1.08%	4.19%
Unlisted Infrastructure	0.00%	2.66%	9.65%
Alternatives Custom Benchmark****	0.72%	2.18%	9.00%
Total Fund	2.05%	5.81%	19.77%
Total Fund - Net	2.05%	5.77%	19.57%
Total Fund Benchmark	1.91%	5.23%	18.66%

* Current Month Target = 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.

** 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 December 31, 2019

	Last 36 Months	Last 60 Months	Last 84 Months	Last 120 Months	Since Inception
Domestic Equity	13.30%	10.38%	13.83%	13.12%	11.67% ^(1/82)
Blended Benchmark**	14.57%	11.24%	14.35%	13.46%	11.52% ^(1/82)
Domestic Equity - Net	13.09%	10.15%	13.58%	12.86%	8.82% ^(1/05)
International Equity	10.78%	6.68%	7.08%	6.66%	7.87% ^(9/86)
MSCI ACWI x US (Net)	9.87%	5.51%	5.44%	4.97%	-
International Equity - Net	10.43%	6.33%	6.74%	6.33%	5.87% ^(1/05)
Fixed Income	4.62%	3.78%	3.45%	4.76%	8.20% ^(1/82)
Blmbg Aggregate Index	4.03%	3.05%	2.72%	3.75%	7.67% ^(1/82)
Fixed Income - Net	4.47%	3.63%	3.30%	4.60%	4.81% ^(1/05)
Real Estate - Net	9.39%	9.91%	10.48%	10.49%	7.53% ^(1/05)
Blended Benchmark***	6.06%	7.94%	9.14%	10.47%	7.44% ^(1/05)
Alternative Investments	12.92%	10.14%	10.63%	9.53%	10.86% ^(2/86)
Alternatives Custom Benchmark****	9.00%	9.00%	9.00%	9.15%	12.66% ^(2/86)
Alternative Investments - Net	12.78%	9.91%	10.36%	9.27%	8.75% ^(1/05)
Private Equity	16.22%	13.07%	13.31%	12.61%	13.08% ^(2/86)
Alternatives Custom Benchmark****	9.00%	9.00%	9.00%	9.15%	12.66% ^(2/86)
Agriculture	(3.41%)	1.51%	7.78%	8.01%	6.96% ^(10/97)
Blended Benchmark***	6.06%	7.94%	9.14%	10.47%	7.38% ^(10/97)
Timberland	0.63%	0.41%	3.32%	2.59%	7.34% ^(10/92)
Blended Benchmark***	6.06%	7.94%	9.14%	10.47%	7.42% ^(10/92)
Unlisted Infrastructure	-	-	-	-	10.23% ^(4/18)
Alternatives Custom Benchmark****	9.00%	9.00%	9.00%	9.15%	9.00% ^(4/18)
Total Fund	9.99%	7.64%	9.13%	9.05%	9.90% ^(1/82)
Total Fund - Net	9.79%	7.42%	8.90%	8.82%	7.35% ^(1/05)
Total Fund Benchmark	9.54%	7.54%	8.66%	8.67%	7.18% ^(1/05)

* Current Month Target = 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.

** 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 December 31, 2019

	Last Month	Last 3 Months	Last 12 Months
Large Cap Equity	2.91%	9.36%	29.75%
Russell 1000 Index	2.89%	9.04%	31.43%
Large Cap Growth	2.96%	9.63%	33.12%
NTGI S&P 500 Growth Idx	2.93%	8.33%	31.16%
S&P/Citi 500 Growth Index	2.93%	8.32%	31.13%
NTGI S&P 500 Growth Idx - Net	2.93%	8.33%	31.15%
Piedmont Russell 1000 G	3.01%	10.61%	36.34%
Russell 1000 Growth Index	3.02%	10.62%	36.39%
Piedmont Russell 1000 G - Net	3.01%	10.60%	36.31%
Sands	2.97%	10.71%	33.80%
LCG Blended Benchmark*	3.02%	10.62%	36.39%
Russell 1000 Growth Index	3.02%	10.62%	36.39%
Sands - Net	2.97%	10.65%	33.51%
Large Cap Value	2.88%	9.23%	26.42%
Dodge & Cox	3.34%	9.80%	24.27%
LCV Blended Benchmark**	2.75%	7.41%	26.54%
Russell 1000 Value Index	2.75%	7.41%	26.54%
Dodge & Cox - Net	3.34%	9.74%	24.01%
BMO	2.47%	7.01%	20.83%
LCV Blended Benchmark**	2.75%	7.41%	26.54%
Russell 1000 Value Index	2.75%	7.41%	26.54%
BMO - Net	2.41%	6.94%	20.56%
LSV	2.52%	9.71%	27.01%
LCV Blended Benchmark**	2.75%	7.41%	26.54%
Russell 1000 Value Index	2.75%	7.41%	26.54%
LSV - Net	2.52%	9.65%	26.71%
NTGI S&P 500 Value Idx	3.11%	9.92%	31.93%
S&P/Citi 500 Value Index	3.12%	9.93%	31.93%
NTGI S&P 500 Value Idx - Net	3.11%	9.92%	31.92%
Large Cap Passive Core	2.88%	9.04%	30.98%
NTGI MarketCap Idx	2.88%	9.04%	30.98%
DJ U.S. Total Stock Market Index	2.88%	9.03%	30.90%
NTGI MarketCap Idx - Net	2.88%	9.04%	30.97%
Quantitative Factor Strategies	2.61%	5.21%	-
Quantitative US Equity - SciBeta	2.61%	5.21%	-
SciBeta US HFI M-Beta/Strat 6F EW	2.58%	5.25%	-
Quantitative US Equity - SciBeta - Net	2.61%	5.21%	-

* 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 December 31, 2019

	Last 36 Months	Last 60 Months	Last 120 Months	Since Inception	
Large Cap Equity	14.70%	11.03%	13.42%	11.35%	(1/82)
Russell 1000 Index	15.05%	11.48%	13.54%	11.73%	(1/82)
Large Cap Growth	21.07%	13.58%	14.59%	12.05%	(1/82)
NTGI S&P 500 Growth Idx	18.63%	13.51%	14.79%	8.26%	(8/01)
S&P/Citi 500 Growth Index	18.66%	13.52%	14.78%	8.23%	(8/01)
NTGI S&P 500 Growth Idx - Net	18.62%	13.50%	14.78%	10.18%	(1/05)
Piedmont Russell 1000 G	-	-	-	11.59%	(10/18)
Russell 1000 Growth Index	20.49%	14.63%	15.22%	11.61%	(10/18)
Piedmont Russell 1000 G - Net	-	-	-	11.57%	(10/18)
Sands	24.71%	13.37%	16.93%	12.46%	(11/03)
LCG Blended Benchmark*	20.49%	14.63%	15.22%	10.38%	(11/03)
Russell 1000 Growth Index	20.49%	14.63%	15.22%	10.43%	(11/03)
Sands - Net	24.44%	13.11%	16.66%	11.47%	(1/05)
Large Cap Value	10.63%	9.11%	12.58%	10.43%	(10/82)
Dodge & Cox	11.23%	9.89%	12.87%	9.78%	(9/03)
LCV Blended Benchmark**	9.68%	8.29%	11.80%	8.64%	(9/03)
Russell 1000 Value Index	9.68%	8.29%	11.80%	8.80%	(9/03)
Dodge & Cox - Net	10.99%	9.66%	12.63%	8.20%	(1/05)
BMO	9.26%	7.68%	12.14%	8.14%	(2/01)
LCV Blended Benchmark**	9.68%	8.29%	11.80%	6.06%	(2/01)
Russell 1000 Value Index	9.68%	8.29%	11.80%	7.05%	(2/01)
BMO - Net	9.02%	7.45%	11.89%	8.22%	(1/05)
LSV	10.19%	9.14%	12.91%	11.18%	(2/03)
LCV Blended Benchmark**	9.68%	8.29%	11.80%	9.54%	(2/03)
Russell 1000 Value Index	9.68%	8.29%	11.80%	9.55%	(2/03)
LSV - Net	9.94%	8.88%	12.63%	8.66%	(1/05)
NTGI S&P 500 Value Idx	11.55%	9.59%	12.23%	6.34%	(8/99)
S&P/Citi 500 Value Index	11.49%	9.52%	12.16%	6.31%	(8/99)
NTGI S&P 500 Value Idx - Net	11.54%	9.59%	12.22%	7.71%	(1/05)
Large Cap Passive Core	14.59%	11.27%	13.49%	11.29%	(1/85)
NTGI MarketCap Idx	14.59%	11.27%	13.50%	11.06%	(2/85)
DJ U.S. Total Stock Market Index	14.52%	11.18%	13.43%	11.01%	(2/85)
NTGI MarketCap Idx - Net	14.58%	11.26%	13.49%	9.07%	(1/05)
Quantitative Factor Strategies	-	-	-	5.63%	(9/19)
Quantitative US Equity - SciBeta	-	-	-	5.63%	(9/19)
SciBeta US HFI M-Beta/Strat 6F EW	-	-	-	5.28%	(9/19)
Quantitative US Equity - SciBeta - Net	-	-	-	5.63%	(9/19)

* 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 December 31, 2019

	Last Month	Last 3 Months	Last 12 Months
Small Cap Equity	2.64%	9.30%	27.07%
Russell 2000 Index	2.88%	9.94%	25.52%
Small Cap Growth	1.72%	12.21%	34.69%
Frontier	1.21%	12.36%	34.20%
Russell 2000 Growth Index	2.29%	11.39%	28.48%
Frontier - Net	1.21%	12.22%	33.15%
FIAM	3.46%	11.73%	34.79%
Russell 2000 Growth Index	2.29%	11.39%	28.48%
FIAM - Net	3.46%	11.73%	34.27%
Small Cap Value	2.80%	7.87%	23.88%
Channing	3.01%	7.96%	25.91%
Russell 2000 Value Index	3.50%	8.49%	22.39%
Channing - Net	3.01%	7.82%	25.29%
DFA Small Cap Value	4.01%	9.04%	19.22%
Russell 2000 Value Index	3.50%	8.49%	22.39%
DFA Small Cap Value - Net	4.01%	8.91%	18.64%
Inv. Counselors of Maryland	1.75%	6.88%	27.33%
Russell 2000 Value Index	3.50%	8.49%	22.39%
Inv. Couns. of Maryland - Net	1.75%	6.79%	26.67%
Micro Cap	3.73%	9.30%	21.62%
DFA Micro Cap	3.73%	9.30%	21.63%
Russell 2000 Value Index	3.50%	8.49%	22.39%
Russell 2000 Index	2.88%	9.94%	25.52%
DFA Micro Cap - Net	3.73%	9.16%	21.04%
Public Real Assets	4.58%	3.07%	27.35%
Public Real Assets Benchmark (1)	4.55%	3.64%	25.48%
Brookfield Public Global Inf	5.65%	3.00%	27.30%
Dow Jones Global Infra Comp Idx	5.47%	3.52%	26.53%
Brookfield Public Global Inf - Net	5.65%	2.86%	26.64%
Cohen & Steers Public Global Inf	4.10%	3.10%	27.37%
FTSE GI Core Infr 50/50 N	4.25%	3.68%	25.13%
Cohen & St Public Global Inf - Net	4.10%	2.99%	26.84%

(1) 1/3 Dow Jones 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 December 31, 2019

	Last 36 Months	Last 60 Months	Last 120 Months	Since Inception
Small Cap Equity	8.35%	8.04%	12.34%	12.13% ^(7/88)
Russell 2000 Index	8.59%	8.23%	11.83%	9.49% ^(7/88)
Small Cap Growth	13.27%	10.13%	13.41%	13.06% ^(7/88)
Frontier	18.86%	11.15%	13.75%	13.35% ^(8/88)
Russell 2000 Growth Index	12.49%	9.34%	13.01%	8.34% ^(8/88)
Frontier - Net	18.17%	10.48%	13.02%	10.24% ^(1/05)
FIAM	10.96%	10.43%	13.74%	13.56% ^(8/88)
Russell 2000 Growth Index	12.49%	9.34%	13.01%	8.34% ^(8/88)
FIAM - Net	10.56%	9.91%	13.15%	10.97% ^(1/05)
Small Cap Value	5.32%	7.55%	11.71%	11.73% ^(9/89)
Channing	4.24%	6.99%	-	10.34% ^(7/11)
Russell 2000 Value Index	4.77%	6.99%	10.56%	9.20% ^(7/11)
Channing - Net	3.73%	6.48%	-	9.75% ^(7/11)
DFA Small Cap Value	3.01%	5.80%	11.80%	11.81% ^(2/96)
Russell 2000 Value Index	4.77%	6.99%	10.56%	9.54% ^(2/96)
DFA Small Cap Value - Net	2.48%	5.26%	11.26%	7.56% ^(1/05)
Inv. Counselors of Maryland	7.97%	10.09%	12.39%	11.56% ^(5/99)
Russell 2000 Value Index	4.77%	6.99%	10.56%	9.09% ^(5/99)
Inv. Couns. of Maryland - Net	7.41%	9.52%	11.87%	8.79% ^(1/05)
Micro Cap	6.00%	5.19%	11.60%	11.47% ^(7/84)
DFA Micro Cap	6.74%	8.51%	13.08%	11.12% ^(8/87)
Russell 2000 Value Index	4.77%	6.99%	10.56%	9.84% ^(8/87)
Russell 2000 Index	8.59%	8.23%	11.83%	8.89% ^(8/87)
DFA Micro Cap - Net	6.22%	7.97%	12.53%	7.99% ^(1/05)
Public Real Assets	-	-	-	9.81% ^(8/17)
Public Real Assets Benchmark (1)	-	-	-	8.07% ^(8/17)
Brookfield Public Global Inf	-	-	-	7.04% ^(8/17)
Dow Jones Global Infra Comp Idx	9.27%	4.48%	9.93%	6.08% ^(8/17)
Brookfield Public Global Inf - Net	-	-	-	6.52% ^(8/17)
Cohen & Steers Public Global Inf	-	-	-	11.16% ^(8/17)
FTSE GI Core Infr 50/50 N	12.46%	7.54%	9.82%	8.72% ^(8/17)
Cohen & St Public Global Inf - Net	-	-	-	10.73% ^(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 December 31, 2019

	Last Month	Last 3 Months	Last 12 Months
Intl Large Cap Equity	3.78%	9.02%	22.52%
MSCI ACWI ex-US Index	4.33%	8.92%	21.51%
Intl Large Cap Growth	4.39%	10.27%	27.27%
EARNEST Partners	4.85%	9.26%	21.97%
MSCI ACWI ex-US Index	4.33%	8.92%	21.51%
MSCI ACWI ex-US Growth	4.17%	9.63%	27.84%
EARNEST Partners - Net	4.85%	9.20%	21.85%
William Blair	4.06%	11.06%	31.90%
MSCI ACWI ex-US Index	4.33%	8.92%	21.51%
MSCI ACWI ex-US Growth	4.17%	9.63%	27.84%
William Blair - Net	4.06%	10.97%	31.45%
Intl Large Cap Value	4.24%	8.83%	18.17%
Brandes	4.03%	8.34%	15.57%
MSCI ACWI ex-US Index	4.33%	8.92%	21.51%
MSCI ACWI ex-US Value	4.56%	8.29%	16.45%
Brandes - Net	4.03%	8.29%	15.33%
Mondrian	4.46%	9.71%	20.29%
MSCI ACWI ex-US Index	4.33%	8.92%	21.51%
MSCI ACWI ex-US Value	4.56%	8.29%	16.45%
Mondrian - Net	4.46%	9.61%	19.75%
Lazard	4.29%	7.26%	22.38%
MSCI ACWI ex-US Index	4.33%	8.92%	21.51%
MSCI ACWI ex-US Value	4.56%	8.29%	16.45%
Lazard - Net	4.29%	7.19%	22.08%

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 December 31, 2019

	Last 36 Months	Last 60 Months	Last 120 Months	Since Inception
Intl Large Cap Equity	10.32%	6.48%	6.57%	7.85% ^(9/86)
MSCI ACWI ex-US Index	9.87%	5.51%	4.97%	-
Intl Large Cap Growth	11.41%	6.47%	6.98%	8.60% ^(9/02)
EARNEST Partners	9.91%	5.47%	6.10%	9.15% ^(10/04)
MSCI ACWI ex-US Index	9.87%	5.51%	4.97%	6.16% ^(10/04)
MSCI ACWI ex-US Growth	13.31%	7.69%	6.61%	7.28% ^(10/04)
EARNEST Partners - Net	9.73%	5.28%	5.82%	7.90% ^(1/05)
William Blair	12.74%	7.36%	8.37%	9.92% ^(10/02)
MSCI ACWI ex-US Index	9.87%	5.51%	4.97%	8.24% ^(10/02)
MSCI ACWI ex-US Growth	13.31%	7.69%	6.61%	8.80% ^(10/02)
William Blair - Net	12.35%	6.98%	7.98%	6.75% ^(1/05)
Intl Large Cap Value	8.36%	5.61%	5.29%	8.78% ^(10/95)
Brandes	7.19%	5.62%	5.45%	8.91% ^(1/96)
MSCI ACWI ex-US Index	9.87%	5.51%	4.97%	5.32% ^(1/96)
MSCI ACWI ex-US Value	7.53%	4.26%	4.23%	-
Brandes - Net	6.93%	5.38%	5.21%	4.52% ^(1/05)
Mondrian	9.32%	5.66%	-	6.13% ^(4/12)
MSCI ACWI ex-US Index	9.87%	5.51%	4.97%	5.57% ^(4/12)
MSCI ACWI ex-US Value	7.53%	4.26%	4.23%	4.85% ^(4/12)
Mondrian - Net	8.80%	5.14%	-	5.62% ^(4/12)
Lazard	10.34%	5.62%	-	6.88% ^(4/12)
MSCI ACWI ex-US Index	9.87%	5.51%	4.97%	5.57% ^(4/12)
MSCI ACWI ex-US Value	7.53%	4.26%	4.23%	4.85% ^(4/12)
Lazard - Net	10.07%	5.20%	-	6.35% ^(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 December 31, 2019

	Last Month	Last 3 Months	Last 12 Months
Intl Large Cap Active Core	3.73%	9.22%	22.65%
Arrowstreet	4.52%	9.82%	23.25%
MSCI ACWI ex-US Index	4.33%	8.92%	21.51%
Arrowstreet - Net	4.52%	9.70%	22.69%
Brown	1.83%	7.41%	23.43%
MSCI ACWI ex-US Index	4.33%	8.92%	21.51%
Brown - Net	1.83%	7.30%	23.09%
GlobeFlex	3.66%	8.74%	19.18%
MSCI ACWI ex-US Index	4.33%	8.92%	21.51%
GlobeFlex - Net	3.66%	8.62%	18.68%
Progress Intl Equity Custom Benchmark	4.25%	10.76%	27.31%
MSCI ACWI ex-US Index	4.33%	8.92%	21.51%
Progress Intl Equity - Net	4.25%	10.50%	26.55%
Intl Large Cap Pass. Core	3.09%	8.06%	22.24%
NTGI MSCI EAFE Idx	3.09%	8.06%	22.24%
MSCI EAFE Index	3.25%	8.17%	22.01%
NTGI EAFE Idx - Net	3.09%	8.06%	22.23%
Intl All Cap Developed	2.67%	7.72%	15.06%
Ativo International	2.67%	7.72%	-
MSCI EAFE + Canada	3.19%	7.86%	22.49%
Ativo International - Net	2.67%	7.59%	-
International Small Cap	4.78%	12.71%	30.81%
Franklin Templeton	4.50%	9.82%	24.16%
ACWI Small Cap ex US	4.93%	11.01%	22.42%
Franklin Templeton - Net	4.33%	9.63%	23.28%
William Blair	4.96%	14.70%	35.84%
ACWI Small Cap ex US	4.93%	11.01%	22.42%
Intl SC Blended Benchmark	4.93%	11.01%	22.42%
William Blair - Net	4.96%	14.49%	34.83%
Emerging Markets	5.91%	10.76%	30.00%
Genesis	5.91%	10.76%	30.00%
MSCI Emerging Markets Index	7.53%	11.93%	18.90%
Genesis - Net	5.91%	10.64%	29.35%

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 until 201712.

after 201712 the benchmark is MSCI ACWI ex US - Net.

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 December 31, 2019

	Last 36 Months	Last 60 Months	Last 120 Months	Since Inception	
Intl Large Cap Active Core	11.37%	7.66%	7.92%	5.26%	(2/08)
Arrowstreet	11.77%	8.04%	8.20%	5.54%	(3/08)
MSCI ACWI ex-US Index	9.87%	5.51%	4.97%	2.55%	(3/08)
Arrowstreet - Net	11.26%	7.54%	7.70%	5.05%	(3/08)
Brown	11.11%	7.50%	7.89%	8.11%	(10/04)
MSCI ACWI ex-US Index	9.87%	5.51%	4.97%	6.16%	(10/04)
Brown - Net	10.62%	6.70%	7.12%	6.63%	(1/05)
GlobeFlex	9.68%	6.85%	7.52%	5.08%	(3/06)
MSCI ACWI ex-US Index	9.87%	5.51%	4.97%	4.06%	(3/06)
GlobeFlex - Net	9.27%	6.43%	7.08%	4.63%	(3/06)
Progress Intl Equity	14.05%	8.45%	-	6.16%	(7/14)
Custom Benchmark	10.89%	6.58%	-	4.22%	(7/14)
MSCI ACWI ex-US Index	9.87%	5.51%	4.97%	3.22%	(7/14)
Progress Intl Equity - Net	13.45%	7.89%	-	5.66%	(7/14)
Intl Large Cap Pass. Core	9.93%	6.05%	5.89%	3.70%	(1/00)
NTGI MSCI EAFE Idx	9.93%	6.05%	5.89%	4.05%	(2/00)
MSCI EAFE Index	9.56%	5.67%	5.50%	3.67%	(2/00)
NTGI EAFE Idx - Net	9.92%	6.04%	5.88%	5.21%	(1/05)
Intl All Cap Developed	-	-	-	15.21%	(2/19)
Ativo International	-	-	-	15.21%	(2/19)
MSCI EAFE + Canada	9.34%	5.42%	5.32%	14.33%	(2/19)
Ativo International - Net	-	-	-	14.83%	(2/19)
International Small Cap	11.66%	7.92%	8.43%	5.26%	(12/05)
Franklin Templeton	11.47%	7.30%	-	6.78%	(8/11)
ACWI Small Cap ex US	9.65%	7.04%	6.92%	5.24%	(8/11)
Franklin Templeton - Net	10.67%	6.52%	-	6.02%	(8/11)
William Blair	11.73%	8.40%	-	9.83%	(9/10)
ACWI Small Cap ex US	9.65%	7.04%	6.92%	7.38%	(9/10)
Intl SC Blended Benchmark	9.65%	7.04%	6.92%	7.73%	(9/10)
William Blair - Net	10.88%	7.57%	-	9.00%	(9/10)
Emerging Markets	14.17%	7.42%	6.52%	9.25%	(2/92)
Genesis	14.17%	7.42%	6.52%	11.48%	(5/04)
MSCI Emerging Markets Index	11.99%	6.01%	4.04%	9.05%	(5/04)
Genesis - Net	13.52%	6.79%	5.91%	9.54%	(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 until 201712. after 201712 the benchmark is MSCI ACWI ex US - Net.

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 December 31, 2019

	Last Month	Last 3 Months	Last 12 Months
Dom. Fixed Active Core	(0.29%)	(0.17%)	8.10%
Brandes Core*	(0.06%)	(0.09%)	7.58%
Blmbg Aggregate Index	(0.07%)	0.18%	8.72%
Brandes Core - Net	(0.06%)	(0.09%)	7.58%
EARNEST Partners	(0.33%)	(0.16%)	8.26%
Blmbg Aggregate Index	(0.07%)	0.18%	8.72%
EARNEST Partners - Net	(0.33%)	(0.20%)	8.12%
Piedmont	(0.29%)	(0.20%)	8.49%
Blmbg Aggregate Index	(0.07%)	0.18%	8.72%
Piedmont - Net	(0.29%)	(0.23%)	8.36%
Garcia Hamilton	(0.33%)	(0.19%)	7.76%
Blmbg Aggregate Index	(0.07%)	0.18%	8.72%
Garcia Hamilton	(0.33%)	(0.21%)	7.68%
Dom. Fixed Passive Core	(0.07%)	0.17%	8.79%
BlackRock US Debt	(0.07%)	0.19%	8.80%
Blmbg Aggregate Index	(0.07%)	0.18%	8.72%
BlackRock US Debt - Net	(0.07%)	0.18%	8.79%
NTGI Blmbg Agg. Index	(0.08%)	0.16%	8.77%
Blmbg Aggregate Index	(0.07%)	0.18%	8.72%
NTGI Blmbg Agg. Index - Net	(0.08%)	0.16%	8.77%

* Brandes changed to a Core mandate from Core Plus on 01/01/2018. Performance shown is Brandes full SI history.

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 December 31, 2019

	Last 36 Months	Last 60 Months	Last 120 Months	Since Inception
Dom. Fixed Active Core	4.12%	3.34%	4.32%	4.58% ^(4/01)
Brandes Core *	3.64%	-	-	2.80% ^(3/16)
Blmbg Aggregate Index	4.03%	3.05%	3.75%	3.28% ^(3/16)
Brandes Core - Net	3.64%	-	-	2.80% ^(3/16)
EARNEST Partners	4.29%	3.34%	4.39%	4.60% ^(5/05)
Blmbg Aggregate Index	4.03%	3.05%	3.75%	4.19% ^(5/05)
EARNEST Partners - Net	4.14%	3.17%	4.20%	4.40% ^(5/05)
Piedmont	3.99%	3.34%	4.32%	4.37% ^(6/05)
Blmbg Aggregate Index	4.03%	3.05%	3.75%	4.13% ^(6/05)
Piedmont - Net	3.84%	3.20%	4.16%	4.18% ^(6/05)
Garcia Hamilton	4.17%	-	-	3.45% ^(6/15)
Blmbg Aggregate Index	4.03%	3.05%	3.75%	3.11% ^(6/15)
Garcia Hamilton	4.07%	-	-	3.36% ^(6/15)
Dom. Fixed Passive Core	4.09%	3.11%	3.79%	5.93% ^(1/90)
BlackRock US Debt	4.13%	3.14%	-	3.49% ^(10/13)
Blmbg Aggregate Index	4.03%	3.05%	3.75%	3.36% ^(10/13)
BlackRock US Debt - Net	4.12%	3.14%	-	3.48% ^(10/13)
NTGI Blmbg Agg. Index	4.06%	3.07%	3.78%	5.98% ^(2/90)
Blmbg Aggregate Index	4.03%	3.05%	3.75%	5.97% ^(2/90)
NTGI Blmbg Agg. Index - Net	4.06%	3.07%	3.77%	4.13% ^(1/05)

* Brandes changed to a Core mandate from Core Plus on 01/01/2018. Performance shown is Brandes full SI history.

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 December 31, 2019

	Last Month	Last 3 Months	Last 12 Months
Domestic Fixed Core Plus	0.30%	0.70%	10.19%
LM Capital	0.29%	0.53%	9.79%
Blmbg Aggregate Index	(0.07%)	0.18%	8.72%
LM Capital - Net	0.29%	0.49%	9.62%
Progress Fixed Income	0.04%	0.36%	9.51%
Blmbg Aggregate Index	(0.07%)	0.18%	8.72%
Progress Fixed Inc. - Net	0.04%	0.28%	9.16%
BMO-TCH	0.18%	0.68%	9.36%
Blmbg Aggregate Index	(0.07%)	0.18%	8.72%
BMO-TCH. - Net	0.18%	0.64%	9.22%
Western	0.64%	1.15%	11.82%
Blmbg Aggregate Index	(0.07%)	0.18%	8.72%
Western - Net	0.64%	1.12%	11.75%
Bank Loans	1.87%	1.92%	8.33%
Barings Global Loan Fund	1.87%	1.92%	8.33%
Custom Benchmark	1.48%	1.63%	8.22%
Barings Global Loan Fund - Net	1.87%	1.92%	8.10%
Emerging Markets	3.52%	4.30%	14.90%
Standish	3.52%	4.30%	14.90%
Custom Benchmark	2.74%	3.62%	13.68%
Standish - Net	3.52%	4.21%	14.51%
High Yield	1.69%	2.81%	15.13%
MacKay Shields	1.69%	2.81%	15.14%
ML High Yield Cash Pay Index	2.08%	2.59%	14.40%
MacKay Shields - Net	1.61%	2.64%	14.78%

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.

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 December 31, 2019

	Last 36 Months	Last 60 Months	Last 120 Months	Since Inception
Domestic Fixed Core Plus	4.71%	3.81%	4.89%	8.06% ^(1/82)
LM Capital	4.15%	3.48%	4.45%	4.89% ^(5/05)
Blmbg Aggregate Index	4.03%	3.05%	3.75%	4.19% ^(5/05)
LM Capital - Net	3.98%	3.32%	4.28%	4.72% ^(5/05)
Progress Fixed Income	4.62%	3.68%	4.54%	4.97% ^(1/06)
Blmbg Aggregate Index	4.03%	3.05%	3.75%	4.28% ^(1/06)
Progress Fixed Inc. - Net	4.28%	3.34%	4.19%	4.62% ^(1/06)
BMO-TCH	4.70%	3.93%	5.04%	5.04% ^(5/05)
Blmbg Aggregate Index	4.03%	3.05%	3.75%	4.19% ^(5/05)
BMO-TCH - Net	4.56%	3.79%	4.90%	4.91% ^(5/05)
Western	5.60%	4.52%	5.56%	5.56% ^(11/01)
Blmbg Aggregate Index	4.03%	3.05%	3.75%	4.33% ^(11/01)
Western - Net	5.48%	4.39%	5.42%	5.05% ^(1/05)
Bank Loans	4.78%	5.14%	-	4.70% ^(8/14)
Barings Global Loan Fund	4.78%	5.14%	-	4.70% ^(8/14)
Custom Benchmark	4.71%	4.75%	-	4.27% ^(8/14)
Barings Global Loan Fund - Net	4.34%	4.64%	-	4.19% ^(8/14)
Emerging Markets	6.99%	4.55%	-	3.53% ^(8/14)
Standish	6.99%	4.55%	-	3.53% ^(8/14)
Custom Benchmark	6.73%	4.50%	4.63%	2.87% ^(8/14)
Standish - Net	6.62%	4.19%	-	3.19% ^(8/14)
High Yield	7.09%	7.13%	7.87%	9.56% ^(4/86)
MacKay Shields	7.07%	7.29%	8.02%	8.88% ^(11/00)
ML High Yield Cash Pay Index	6.32%	6.12%	7.49%	7.61% ^(11/00)
MacKay Shields - Net	6.71%	6.92%	7.64%	7.02% ^(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.

Five Best Performing Portfolio's vs. Benchmarks

Manager	Year-to-Date Outperformance	Since Inception Outperformance	
	(in % points)	(in % points)	
William Blair Int'l SC	13.42	2.46	08/31/2010
Genesis	11.10	2.43	04/30/2004
William Blair	10.38	1.67	09/30/2002
Pyramis SCG	6.31	5.22	07/31/1988
Frontier	5.71	5.01	07/31/1988

Five Worst Performing Portfolio's vs. Benchmarks

Manager	Year-to-Date Underperformance	Since Inception Underperformance	
	(in % points)	(in % points)	
Brandes	-5.94	3.59	12/31/1995
BMO	-5.71	2.08	01/31/2001
DFA SCV	-3.60	2.25	01/31/1996
Sands	-2.59	2.08	10/31/2003
Dodge & Cox	-2.27	1.14	08/31/2003

Five Highest Returning Portfolios

Manager	Year-to-Date Return	Since Inception Return	
	(in % points)	(in % points)	
William Blair Int'l SC	35.84	9.83	08/31/2010
Pyramis SCG	34.79	13.56	07/31/1988
Frontier	34.20	13.35	07/31/1988
Sands	33.80	12.46	10/31/2003
William Blair	31.90	9.92	09/30/2002

Five Lowest Returning Portfolios

Manager	Year-to-Date Return	Since Inception Return	
	(in % points)	(in % points)	
Earnest FI	8.26	4.60	04/30/2005
Piedmont	8.49	4.34	05/31/2005
NTGI BC Agg	8.77	5.98	01/31/1990
Blackrock US Debt	8.80	3.45	09/01/2013
Taplin, Canida, Habacht	9.36	5.01	04/30/2005

Returns are shown gross of investment management fees.

Excludes Real Estate and Alternative Investments portfolios.