

January 31, 2019



**Illinois Municipal  
Retirement Fund  
Monthly Performance Report**

**Investment Measurement Service  
Monthly Review**

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## Market Environment

### As of January 31, 2019

Index	Last Month	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Russell:3000 Index	8.58	(2.26)	14.19	10.41	15.12
S&P:500	8.01	(2.31)	14.02	10.96	15.00
Russell:2000 Index	11.25	(3.52)	14.71	7.26	14.52
MSCI:ACWI ex US	7.56	(12.58)	9.59	3.11	8.35
MSCI:EM	8.76	(14.24)	14.89	4.77	9.66
Blmbg:Aggregate	1.06	2.25	1.95	2.44	3.68
NCREIF:Total Index	0.46	6.60	7.12	9.23	7.81
Blmbg:Commodity Price Idx	5.23	(10.11)	1.49	(8.54)	(3.13)

Domestic and international equities rebounded after a painful December. Both equity and fixed income markets were up for the month on the back of strong corporate earnings and a renewed appetite for risk. Returns were helped by signals from the Federal Reserve (Fed) that it would be more patient with rate increases moving forward. In addition, improving trade conversations between the U.S. and China came in the form of a truce to last until March, helping investors worried about the continued rhetoric between the two superpowers. The U.S. government entered the year in a partial shutdown that lasted until January 25 (35 days in all). The shutdown dragged on GDP, but expectations are that lost production will be recovered by year end. A slowdown in China's economy is still a concern, proven by the People's Bank of China (PBoC) taking action to stimulate the economy. The PBoC lowered its reserve requirement ratio, and is expected to continue with stimulus measures through the year. While the U.K. labor market remains healthy, a no deal Brexit stands at the forefront of uncertainty. Prime Minister Theresa May negotiated a deal that was quickly shot down through a parliamentary vote in January. The Prime Minister has currently set a date of February 13 to bring forth a revised vote.

January's employment report exceeded expectations, adding 304,000 nonfarm payrolls, nearly double the consensus estimate of 158,000. Revisions to the two prior months amounted to a net decrease of 70,000 jobs. Wages inched higher by 0.1% in January, but the year-over-year figure remained steady at 3.2%. The unemployment rate rose 0.1% to 4.0%, but the labor participation rate also rose by 0.1% to 63.2%.

Inflation came in at consensus in December. The headline Consumer Price Index (CPI) declined 0.1% month-over-month, pulled down by lower oil prices. The headline index ended the year 1.9% higher. Core CPI rose 0.2% month-over-month and finished the year up 2.2%. While energy prices fell during the month, food, housing, and medical costs ticked higher.

The government shutdown delayed the release of initial fourth quarter GDP estimates. The fourth quarter GDP projections among Federal Reserve Officials was 2.7% (annualized) as of February 6, following a strong third quarter growth rate of 3.4%.

\*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

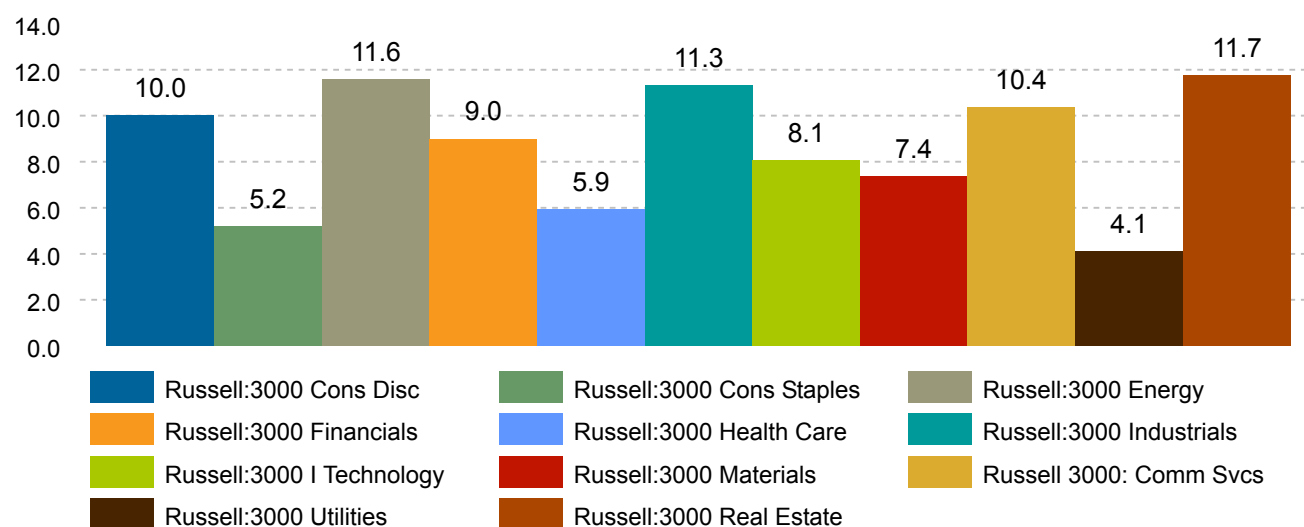
### As of January 31, 2019

Index	Last Month	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Russell:3000 Index	8.58	(2.26)	14.19	10.41	15.12
Russell:1000 Index	8.38	(2.17)	14.14	10.68	15.17
Russell:1000 Growth	8.99	0.24	16.60	12.97	16.86
Russell:1000 Value	7.78	(4.81)	11.62	8.33	13.39
Russell:Midcap Index	10.79	(2.90)	13.29	8.89	16.09
Russell:2000 Index	11.25	(3.52)	14.71	7.26	14.52
Russell:2000 Growth	11.55	(2.63)	15.55	7.83	15.68
Russell:2000 Value	10.94	(4.51)	13.76	6.62	13.28

The S&P 500 Index followed its worst December since 1931 with its best January since 1987, gaining 8.0% in the month. A number of factors contributed to the rebound: corporate earnings are expected to begin moderating but remain strong for the time being; the Fed signaled a willingness to pause on rate increases depending on economic data; the U.S. and China made progress on trade talks; and the longest government shutdown in U.S. history came to an end on January 25, boosting market sentiment. Large caps trailed small caps in the period (Russell 1000 Index: +8.4% vs. Russell 2000 Index: +11.3%) while growth continued to outperform value (Russell 1000 Growth Index: +9.0% vs. Russell 1000 Value Index: +7.8%). Mid cap returns were between large and small caps (Russell Midcap Index: +10.8%).

All 11 Russell 3000 sectors rebounded to produce positive results in January after falling in tandem last month. The Real Estate sector (+11.7%) was the best performer in the month on expectations that interest rate increases may take a pause. After a sharp fall in December, oil rebounded to gain 19% (West Texas Intermediate), driving the Energy sector to a return of 11.6%. As a more defensive sector, Utilities (+4.1%) struggled to keep up amid the rebound. Health Care (+5.9%) and Consumer Staples (+5.2%) also lagged in the period.

### Russell 3000 Index Sector Returns



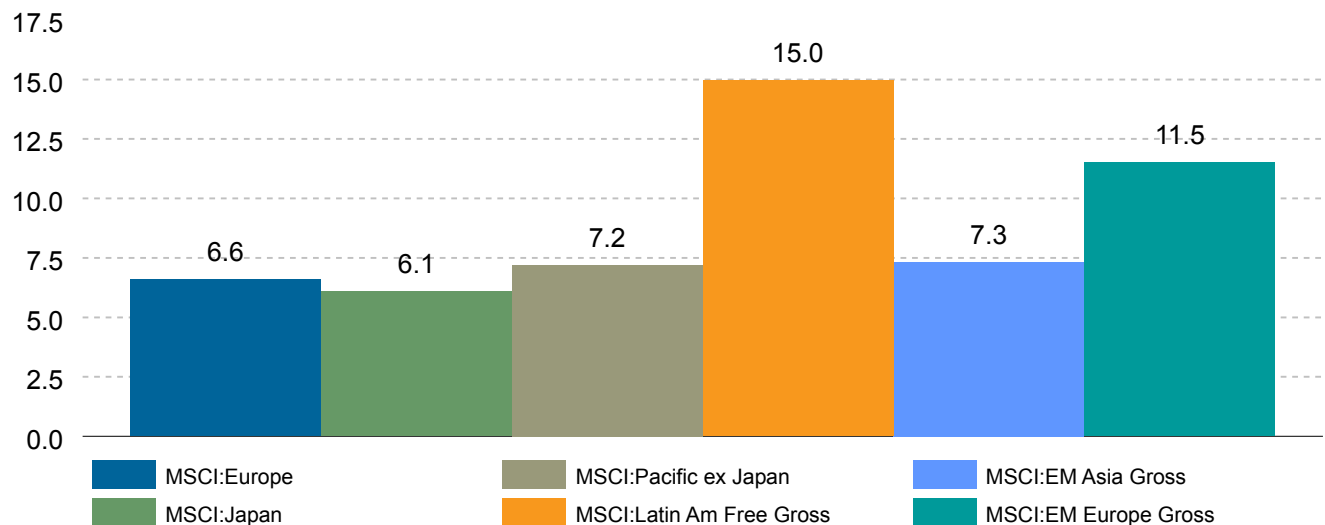
## Non-U.S. Equity Overview As of January 31, 2019

Index	Last Month	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
MSCI:ACWI ex US	7.56	(12.58)	9.59	3.11	8.35
MSCI:EAFE	6.57	(12.51)	7.74	2.66	8.11
MSCI:EAFE Hedged Net	5.72	(5.05)	8.17	6.51	9.37
MSCI:EM	8.76	(14.24)	14.89	4.77	9.66
MSCI:ACWI ex US Small Cap	7.83	(15.93)	9.33	3.91	11.53

Non-U.S. equity markets posted strong gains for largely the same reasons as U.S. equities, namely the improvement in trade talks between the U.S. and China and more dovish central bank tone. After economic data came in weaker than expected, the European Central Bank stated their willingness to resume their quantitative easing program that only just ended in December. A lack of inflation led the Bank of Japan to continue their bond-buying program, leaving short-term rates negative. In response to these developments non-U.S. equities gained 7.6% (MSCI ACWI ex U.S.), only slightly behind their U.S. counterparts (Russell 1000 Index: +8.4%). Emerging markets topped developed markets over the month (MSCI Emerging Markets Index: +8.8% vs. MSCI EAFE Index: +6.6%). The dollar has now depreciated against developed market currencies for two months in a row (MSCI EAFE Index: +6.6% vs. MSCI EAFE Hedged Net Index: +5.7%). Non-U.S. small cap stocks outperformed developed large caps but trailed emerging markets (MSCI ACWI ex U.S. Small Cap: +7.8%).

Latin America was the best performing region for the second consecutive month (MSCI Latin America Free Gross Index: +15.0%). Brazil led the region higher as optimism abounds on the new president's pro-business policies. Emerging Europe (MSCI EM Europe Gross Index: +11.5%) delivered strong gains as both Russia and Turkey posted double-digit returns. Despite a substantial 6.1% return in absolute terms, Japan (MSCI Japan Index) was the worst performing region on a relative basis as the country's economic data pointed to a looming slowdown.

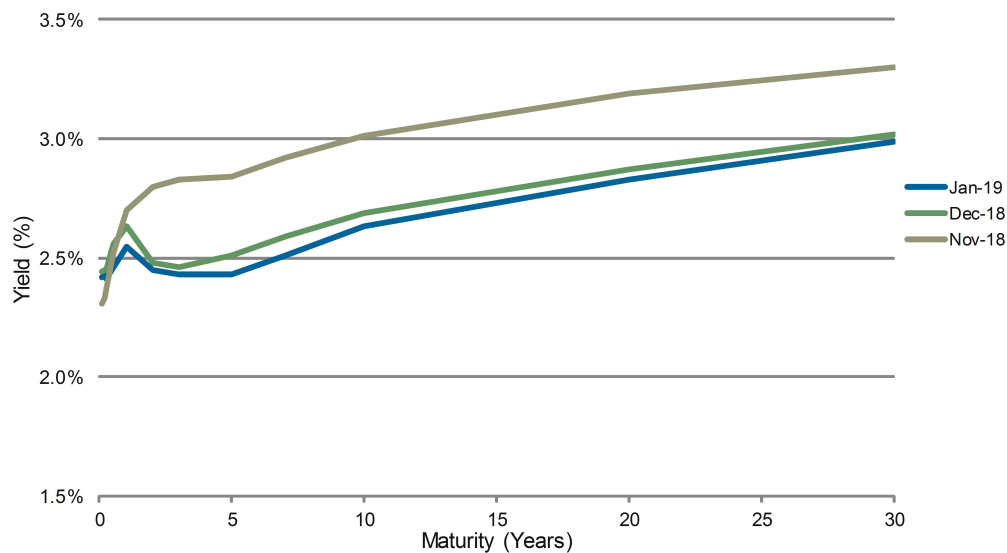
### MSCI Regional Returns



**Fixed Income Overview**  
**As of January 31, 2019**

Index	Last Month	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Blmbg:Aggregate	1.06	2.25	1.95	2.44	3.68
Blmbg:Long Gov/Credit	2.24	(0.50)	4.07	5.00	6.79
Blmbg:US Government	0.47	2.72	0.87	1.82	2.43
Blmbg:Credit	2.16	0.94	3.72	3.31	5.75
Blmbg:Mortgage Backed Sec	0.79	3.00	1.54	2.37	3.17
Blmbg:US TIPS	1.35	0.93	2.07	1.57	3.61
ML:US High Yield Cash Pay	4.59	1.58	9.42	4.59	10.81
CS:Leveraged Loan	2.30	2.37	6.08	3.65	7.87
3 Month T-Bill	0.20	1.95	1.08	0.67	0.40

**Treasury Yield Curve**



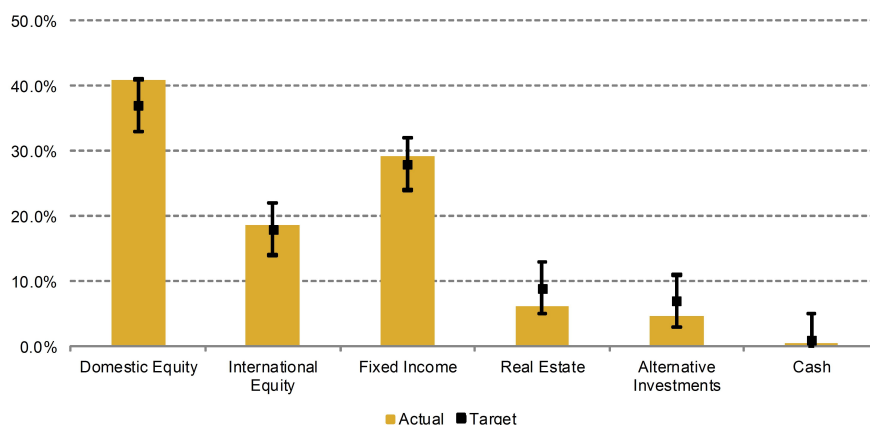
Bonds rallied in January as Fed Officials signaled that tighter monetary policy would be on hold for now, and the Bloomberg Aggregate Index returned 1.1% for the month. The Fed held rates steady at its January meeting, and suggested a slower approach toward normalization which investors interpreted as dovish. As of January 31, Fed Fund Futures projected zero rate hikes in 2019. Treasury yields were relatively stable during the month, but still fell across the curve. On the long end, the 30-year closed at 2.99%, below 3.00% for the first time since August. The 10-year fell six basis points while the 2-year fell three basis points, closing at 2.63% and 2.45%, respectively. The spread between the 2- and 10-year Treasuries ended the month at 18 bps. However, the yield curve remained inverted for maturities from 1- to 7-years, with the 1-year closing at 2.55% and the 7-year closing at 2.51%.

High yield bonds performed well as risk assets came back into favor and high yield spreads fell 103 bps in January. For the month the ML U.S. High Yield CP Index returned 4.6%. The Bloomberg Credit index performed favorably as well returning 2.2% over the month, while spreads narrowed by 25 bps. High quality segments of the fixed income market underperformed the index, including the Bloomberg U.S. Government Index (+0.5%), Bloomberg Mortgage Backed Securities Index (+0.8%) and 3-month T-Bills (+0.2%).

**Total Fund**

The market value of the Total Fund was \$40.70 billion at the end of January, an increase of \$2.25 billion from the prior month. The Fund returned 5.70% during the month, leading the 4.93% return of its benchmark. Domestic Equity (+9.91%) outperformed its benchmark (+8.58%). International Equity (+7.43%) underperformed its benchmark by 13 basis points. The Fixed Income composite returned 1.42% leading its benchmark return of 1.06%. Real Estate returned -0.05% in January, trailing its benchmark by 55 basis points. Over the last three months, Alternatives (+5.53%) outperformed the benchmark return of 2.18%. For the trailing year, the Fund is 103 basis points behind its benchmark, returning -2.02%.

Current policy states that when actual allocations of the asset classes differ by more than four percentage points from their policy target, a recommendation for rebalancing will be made to the Board of Trustees. As of January month end, all asset classes are within their target ranges. The Board approved rebalancing actions totaling \$1.7 billion across Domestic Equity and Fixed Income at the October meeting.



**U.S. Equity**

The U.S. Equity composite returned 9.91% during January, leading the Russell 3000 Index by 133 basis points. For the month, small caps outperformed large caps.

**Large Cap:** IMRF's Large Cap managers returned 9.25% in January, outperforming the 8.38% return of the Russell 1000 Index. In aggregate, growth managers returned 10.46%, while the Russell 1000 Growth Index returned 8.99%. Value managers returned 8.55% collectively, outperforming the 7.78% return of the Russell 1000 Value Index.

**Small Cap:** The Small Cap composite (+13.07%) led the Russell 2000 Index by 182 basis points in January. The growth managers collectively returned 15.90%, relative to the 11.55% return of the Russell 2000 Growth Index. The value managers returned 11.78% during the month, leading the Russell 2000 Value Index by 84 basis points. The Micro Cap composite returned 10.28% in January.

**Public Real Assets:** The Public Real Assets portfolio managed by Brookfield and Cohen & Steers returned 9.36% in January, 101 basis points ahead of the custom benchmark.

**International Equity**

The International Equity composite returned 7.43% in January, 13 basis points behind its MSCI ACWI ex-U.S. benchmark (+7.56%).

International Large Cap: International Large Cap managers collectively returned 7.05% in January, trailing the MSCI ACWI ex-U.S. Index by 51 basis points. International Large Cap Growth managers (+7.68%) led the MSCI ACWI ex-U.S. Growth Index by 5 basis points. International Large Cap Value managers returned 7.52% for the month, finishing in line with the MSCI ACWI ex-U.S. Value Index.

International Small Cap and Emerging Markets: The International Small Cap managers returned 8.41% in January, 58 basis points ahead of the MSCI ACWI Small Cap ex-U.S. Index return of 7.83%. The Emerging Markets portfolio, managed by Genesis, returned 10.29% during the month, leading the MSCI Emerging Markets Index by 153 basis points.

**Fixed Income**

The Fixed Income composite returned 1.42% in January relative to the 1.06% return of the Bloomberg Aggregate Index.

Active Core: In aggregate, the Domestic Active Core managers were up 0.92% in January, 14 basis points behind the Bloomberg Aggregate Index.

Core Plus: Domestic Fixed Core Plus managers ended the month with a return of 1.36%, leading the Bloomberg Aggregate Index by 30 basis points.

Bank Loans: The Bank Loans portfolio, managed by Barings, returned 2.04% for the month, trailing the custom benchmark by seven basis points.

Emerging Markets: The Emerging Markets Debt component, managed by Standish, returned 5.05% in January, 58 basis points ahead of the custom benchmark.

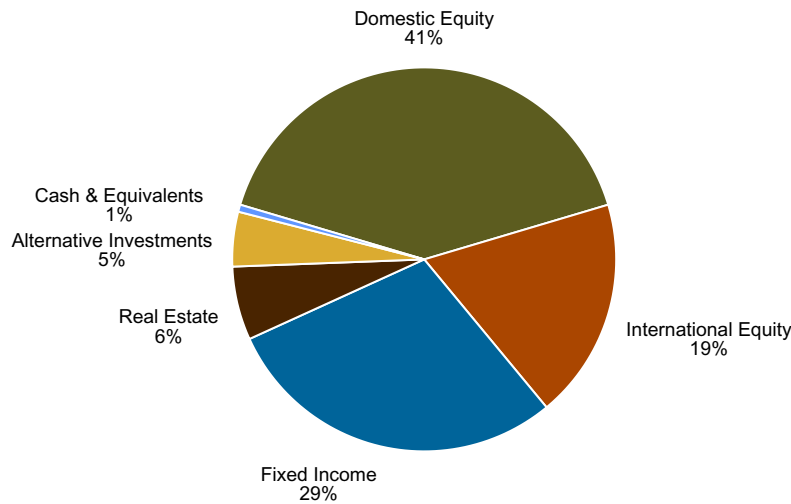
High Yield: The High Yield allocation, managed by MacKay Shields, returned 4.14% in January, underperforming the benchmark return of 4.59%.



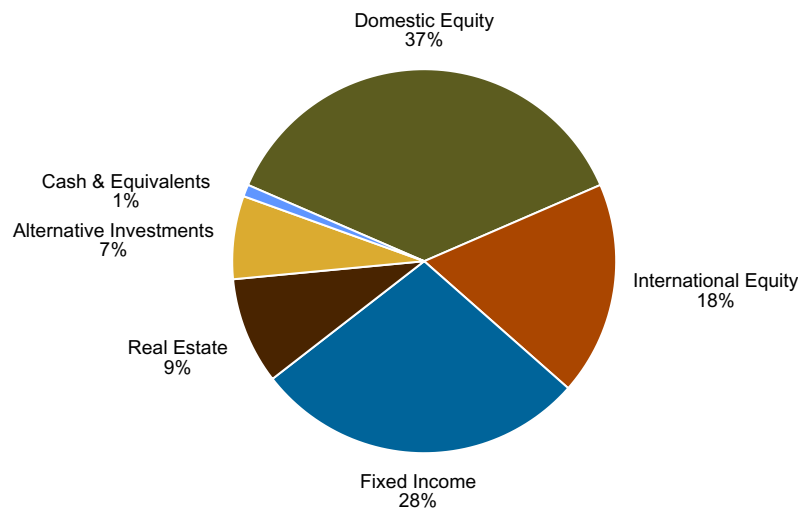
## Actual vs Target Asset Allocation

The first chart below shows the Fund's asset allocation as of January 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	16,594	40.8%	37.0%	3.8%	1,536
International Equity	7,588	18.6%	18.0%	0.6%	263
Fixed Income	11,897	29.2%	28.0%	1.2%	502
Real Estate	2,533	6.2%	9.0%	(2.8%)	(1,130)
Alternative Investments	1,853	4.6%	7.0%	(2.4%)	(995)
Cash & Equivalents	231	0.6%	1.0%	(0.4%)	(176)
Total	40,696	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 January 31, 2019, with the distribution as of December 31, 2018.

### Asset Distribution Across Investment Managers

	January 31, 2019		December 31, 2018	
	Market Value	Percent	Market Value	Percent
<b>Domestic Equity*</b>	<b>\$16,593,967,320</b>	<b>40.78%</b>	<b>\$15,351,663,236</b>	<b>39.93%</b>
<b>Large Cap Growth</b>				
NTGI S&P 500 Growth Idx	2,084,828,428	5.12%	1,939,178,208	5.04%
Sands	1,806,286,979	4.44%	1,571,958,078	4.09%
Piedmont Russell 1000 G	922,413,776	2.27%	846,386,617	2.20%
<b>Large Cap Value</b>				
Dodge & Cox	1,288,029,740	3.16%	1,193,139,294	3.10%
BMO	1,299,092,912	3.19%	1,202,113,731	3.13%
LSV	1,469,364,009	3.61%	1,348,605,351	3.51%
NTGI S&P 500 Value Idx	1,544,567,651	3.80%	1,519,141,144	3.95%
<b>Large Cap Core</b>				
NTGI MarketCap Index	2,732,652,486	6.71%	2,515,871,313	6.54%
<b>Small Cap Growth</b>				
Frontier	539,514,999	1.33%	460,326,283	1.20%
FIAM	588,795,939	1.45%	664,094,875	1.73%
<b>Small Cap Value</b>				
Channing	214,804,742	0.53%	192,418,255	0.50%
Dimensional Small Cap Value	565,079,225	1.39%	505,660,219	1.32%
Inv. Counselors of Maryland	639,069,254	1.57%	571,455,677	1.49%
<b>Micro Cap</b>				
Ativo	189,575	0.00%	2,190,666	0.01%
Dimensional Micro Cap	415,791,175	1.02%	377,012,845	0.98%
<b>Public Real Assets</b>				
Brookfield	152,995,309	0.38%	138,475,315	0.36%
Cohen & Steers	330,491,121	0.81%	303,635,365	0.79%
<b>International Equity</b>	<b>\$7,588,189,068</b>	<b>18.65%</b>	<b>\$7,128,878,587</b>	<b>18.54%</b>
<b>International Large Cap Growth</b>				
EARNEST Partners	606,284,642	1.49%	561,556,621	1.46%
William Blair	682,489,889	1.68%	634,976,094	1.65%
<b>International Large Cap Value</b>				
Brandes	606,388,404	1.49%	559,795,851	1.46%
Lombardia	1	0.00%	1	0.00%
Mondrian	517,461,831	1.27%	484,146,031	1.26%
Lazard	107,958,034	0.27%	101,084,244	0.26%
<b>International Large Cap Core</b>				
Arrowstreet	666,244,444	1.64%	615,555,533	1.60%
Brown	328,672,619	0.81%	306,266,447	0.80%
GlobeFlex	580,505,422	1.43%	532,785,032	1.39%
NTGI MSCI EAFE Index	1,897,924,949	4.66%	1,972,067,710	5.13%
Progress Intl Equity	274,313,309	0.67%	274,313,309	0.71%
<b>International All Cap Developed</b>				
Ativo International	129,025,896	0.32%	-	-
<b>International Small Cap</b>				
Franklin Templeton	179,867,250	0.44%	166,583,965	0.43%
William Blair	251,836,376	0.62%	231,344,937	0.60%
<b>Emerging Markets</b>				
Genesis	759,216,003	1.87%	688,402,812	1.79%

\* 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 January 31, 2019, with the distribution as of December 31, 2018.

### Asset Distribution Across Investment Managers

	January 31, 2019		December 31, 2018	
	Market Value	Percent	Market Value	Percent
<b>Total Fixed Income</b>	<b>\$11,897,339,187</b>	<b>29.23%</b>	<b>\$11,563,685,358</b>	<b>30.08%</b>
<b>Domestic Fixed Core</b>				
Brandes Core	349,733,496	0.86%	345,395,292	0.90%
EARNEST Partners	1,019,105,767	2.50%	1,012,164,652	2.63%
Piedmont Investment	1,007,323,823	2.48%	823,121,826	2.14%
Garcia Hamilton	1,000,512,880	2.46%	990,483,905	2.58%
<b>Domestic Fixed Passive Core</b>				
NTGI Blmbg Agg. Index	1,680,901,365	4.13%	1,663,255,569	4.33%
BlackRock US Debt	1,611,381,402	3.96%	1,594,104,143	4.15%
<b>Domestic Fixed Core Plus</b>				
LM Capital	863,378,700	2.12%	848,518,013	2.21%
Progress Fixed Income	891,210,020	2.19%	891,210,020	2.32%
Taplin, Canida, & Habacht	891,528,645	2.19%	877,539,132	2.28%
Western	1,053,896,310	2.59%	1,033,088,613	2.69%
<b>Bank Loans</b>				
Barings Global Loan Fund	566,583,205	1.39%	562,562,404	1.46%
<b>Emerging Markets Debt</b>				
Standish	206,331,442	0.51%	196,410,149	0.51%
<b>Opportunistic Fixed Income</b>				
Crescent	11,115,635	0.03%	11,115,633	0.03%
<b>High Yield</b>				
MacKay Shields	744,002,384	1.83%	714,382,662	1.86%
FIAM High Yield	334,114	0.00%	333,345	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 January 31, 2019, with the distribution as of December 31, 2018.

### Asset Distribution Across Investment Managers

	January 31, 2019		December 31, 2018	
	Market Value	Percent	Market Value	Percent
<b>Real Estate</b>	<b>\$2,532,639,545</b>	<b>6.22%</b>	<b>\$2,456,707,565</b>	<b>6.39%</b>
<b>Real Estate Core</b>				
TA Buckhead Ind. Prop.	479,284,513	1.18%	479,284,513	1.25%
Barings Core Property Fund	1,070	0.00%	1,070	0.00%
Barings European Core Property	87,359,998	0.21%	29,875,116	0.08%
Blackstone Property Partners Europe	122,042,023	0.30%	121,584,673	0.32%
INVESCO Core RE	208,383,270	0.51%	210,160,344	0.55%
INVESCO Euro real estate	57,292,496	0.14%	57,157,154	0.15%
AEW Core Property Trust	234,651,564	0.58%	237,342,034	0.62%
CBRE US Core Property Trust	189,500,154	0.47%	189,500,154	0.49%
<b>Real Estate Non-Core</b>				
Artemis MWBE Spruce	175,253,531	0.43%	173,114,545	0.45%
Franklin Templeton EMREFF	18,094,696	0.04%	20,071,732	0.05%
Security Capital	52,451,755	0.13%	52,451,755	0.14%
Dune II	28,405,977	0.07%	28,405,977	0.07%
Non-Core Real Estate Funds*	778,492,524	1.91%	756,683,477	1.97%
Non-Core Intl Real Estate Funds**	99,770,353	0.25%	98,601,669	0.26%
Rockwood Fund VIII	262,601	0.00%	262,601	0.00%
Almanac ARS V	1,364,882	0.00%	2,182,612	0.01%
TA Fund IX	28,138	0.00%	28,138	0.00%
<b>Alternative Investments</b>	<b>\$1,853,257,354</b>	<b>4.55%</b>	<b>\$1,812,803,906</b>	<b>4.72%</b>
<b>Absolute Return</b>				
Aurora	661,104	0.00%	737,480	0.00%
<b>Private Equity</b>				
Abbott	344,688,263	0.85%	348,695,356	0.91%
Muller & Monroe MPEFF	5,800,581	0.01%	5,800,581	0.02%
Pantheon	259,295,772	0.64%	257,988,274	0.67%
Private Equity Fund - Domestic	837,701,887	2.06%	799,791,897	2.08%
Private Equity Fund - International	95,946,375	0.24%	97,786,947	0.25%
<b>Agriculture</b>				
Premiere Partners IV	201,895,562	0.50%	194,735,562	0.51%
<b>Timberland</b>				
Forest Investment Assoc.	73,121,141	0.18%	73,121,141	0.19%
<b>Unlisted Infrastructure</b>				
Unlisted Infrastructure Funds	34,146,667	0.08%	34,146,667	0.09%
<b>Cash &amp; Equivalents</b>	<b>\$230,784,771</b>	<b>0.57%</b>	<b>\$130,517,820</b>	<b>0.34%</b>
<b>Total Fund</b>	<b>\$40,696,177,244</b>	<b>100.0%</b>	<b>\$38,444,256,472</b>	<b>100.0%</b>

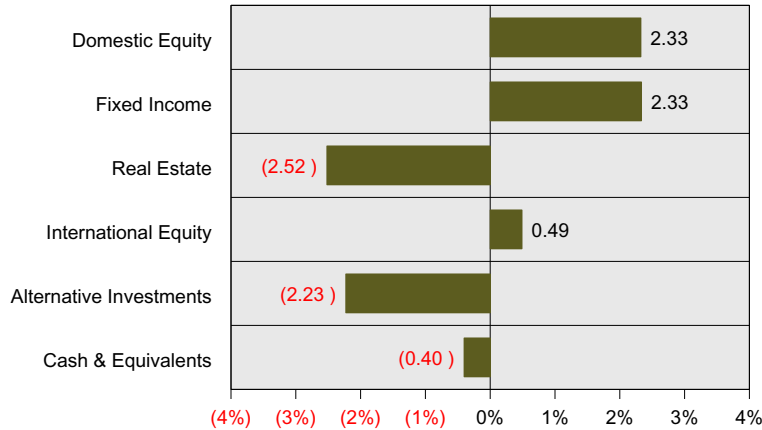
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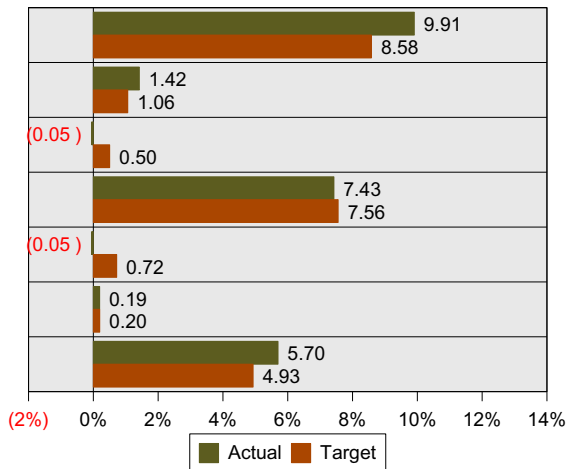
## Monthly Total Fund Relative Attribution - January 31, 2019

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.

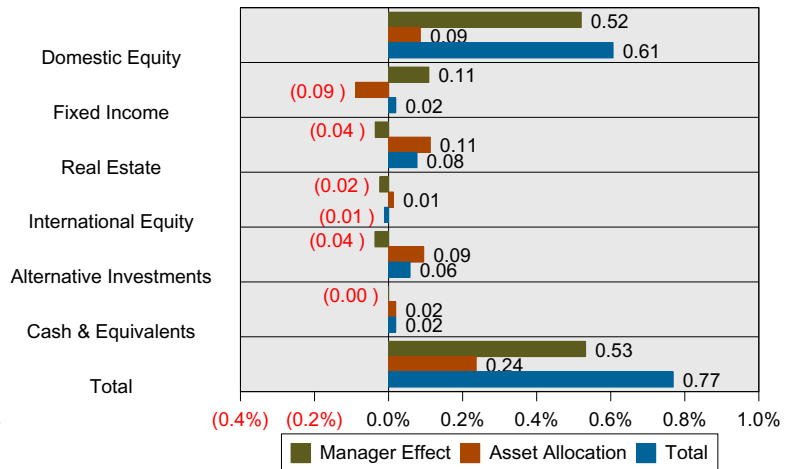
### Asset Class Under or Overweighting



### Actual vs Target Returns



### Relative Attribution by Asset Class



### Relative Attribution Effects for Month ended January 31, 2019

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	39%	37%	9.91%	8.58%	0.52%	0.09%	0.61%
Fixed Income	30%	28%	1.42%	1.06%	0.11%	(0.09)%	0.02%
Real Estate	6%	9%	(0.05)%	0.50%	(0.04)%	0.11%	0.08%
International Equity	18%	18%	7.43%	7.56%	(0.02)%	0.01%	(0.01)%
Alternative Investments	5%	7%	(0.05)%	0.72%	(0.04)%	0.09%	0.06%
Cash & Equivalents	1%	1%	0.19%	0.20%	(0.00)%	0.02%	0.02%
<b>Total</b>			<b>5.70%</b>	<b>4.93%</b>	<b>+ 0.53%</b>	<b>+ 0.24%</b>	<b>0.77%</b>

\* 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 January 31, 2019

	Last Month	Last 3 Months	Last 12 Months
Domestic Equity	9.91%	1.50%	(1.93%)
Blended Benchmark**	8.58%	0.45%	(2.26%)
Domestic Equity - Net	9.88%	1.44%	(2.13%)
International Equity	7.43%	2.63%	(12.80%)
MSCI ACWI x US (Net)	7.56%	3.66%	(12.58%)
International Equity - Net	7.39%	2.53%	(13.07%)
Fixed Income	1.42%	3.00%	1.82%
Blmbg Aggregate Index	1.06%	3.53%	2.25%
Fixed Income - Net	1.40%	2.96%	1.68%
Real Estate	(0.05%)	1.71%	7.90%
Blended Benchmark***	0.50%	1.52%	7.20%
Real Estate - Net	(0.05%)	1.71%	7.90%
Alternative Investments	(0.05%)	5.53%	17.38%
Alternatives Custom Benchmark****	0.72%	2.18%	9.00%
Alternative Investments - Net	(0.06%)	5.51%	17.19%
Private Equity	(0.06%)	6.22%	21.43%
Alternatives Custom Benchmark****	0.72%	2.18%	9.00%
Agriculture	0.00%	3.63%	0.76%
Blended Benchmark***	0.50%	1.52%	7.20%
Timberland	0.00%	(0.61%)	(3.38%)
Blended Benchmark***	0.50%	1.52%	7.20%
Unlisted Infrastructure	0.00%	1.11%	-
Alternatives Custom Benchmark****	0.72%	2.18%	9.00%
<b>Total Fund</b>	<b>5.70%</b>	<b>2.28%</b>	<b>(2.02%)</b>
Total Fund - Net	5.68%	2.22%	(2.19%)
Total Fund Benchmark	4.93%	2.29%	(0.99%)

\* 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 January 31, 2019

	Last 36 Months	Last 60 Months	Last 84 Months	Last 120 Months	Since Inception
Domestic Equity	14.46%	9.54%	12.89%	15.33%	11.48% <sup>(1/82)</sup>
Blended Benchmark**	14.19%	10.39%	12.97%	15.16%	11.26% <sup>(1/82)</sup>
Domestic Equity - Net	14.22%	9.30%	12.63%	15.06%	8.18% <sup>(1/05)</sup>
International Equity	9.40%	3.93%	6.69%	9.67%	7.63% <sup>(9/86)</sup>
MSCI ACWI x US (Net)	9.59%	3.11%	4.96%	8.35%	-
International Equity - Net	9.03%	3.59%	6.34%	9.32%	5.22% <sup>(1/05)</sup>
Fixed Income	3.29%	3.09%	3.17%	5.45%	8.18% <sup>(1/82)</sup>
Blmbg Aggregate Index	1.95%	2.44%	2.12%	3.68%	7.65% <sup>(1/82)</sup>
Fixed Income - Net	3.14%	2.94%	3.01%	5.30%	4.56% <sup>(1/05)</sup>
Real Estate - Net	9.06%	10.38%	10.66%	6.77%	7.32% <sup>(1/05)</sup>
Blended Benchmark***	7.22%	9.35%	10.14%	8.45%	7.66% <sup>(1/05)</sup>
Alternative Investments	11.69%	10.34%	9.98%	8.42%	10.87% <sup>(2/86)</sup>
Alternatives Custom Benchmark****	9.00%	9.00%	9.00%	9.42%	12.76% <sup>(2/86)</sup>
Alternative Investments - Net	11.46%	10.02%	9.68%	8.12%	8.65% <sup>(1/05)</sup>
Private Equity	15.17%	13.37%	12.35%	10.02%	13.08% <sup>(2/86)</sup>
Alternatives Custom Benchmark****	9.00%	9.00%	9.00%	9.42%	12.76% <sup>(2/86)</sup>
Agriculture	(1.67%)	6.18%	10.37%	8.66%	7.57% <sup>(10/97)</sup>
Blended Benchmark***	7.22%	9.35%	10.14%	8.45%	7.52% <sup>(10/97)</sup>
Timberland	(1.26%)	2.66%	2.67%	2.12%	7.56% <sup>(10/92)</sup>
Blended Benchmark***	7.22%	9.35%	10.14%	8.45%	7.54% <sup>(10/92)</sup>
Unlisted Infrastructure	-	-	-	-	8.14% <sup>(4/18)</sup>
Alternatives Custom Benchmark****	9.00%	9.00%	9.00%	9.42%	7.45% <sup>(4/18)</sup>
<b>Total Fund</b>	<b>9.75%</b>	<b>6.60%</b>	<b>8.58%</b>	<b>10.52%</b>	<b>9.78%</b> <sup>(1/82)</sup>
Total Fund - Net	9.52%	6.38%	8.35%	10.28%	6.90% <sup>(1/05)</sup>
Total Fund Benchmark	8.87%	6.75%	7.98%	9.86%	6.73% <sup>(1/05)</sup>

\* 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 January 31, 2019

	Last Month	Last 3 Months	Last 12 Months
<b>Large Cap Equity</b>	<b>9.25%</b>	<b>1.39%</b>	<b>(2.26%)</b>
Russell 1000 Index	8.38%	0.51%	(2.17%)
<b>Large Cap Growth</b>	<b>10.46%</b>	<b>3.43%</b>	<b>4.33%</b>
NTGI S&P 500 Growth Idx	7.51%	(0.23%)	0.22%
S&P/Citi 500 Growth Index	7.51%	(0.25%)	0.25%
NTGI S&P 500 Growth Idx - Net	7.51%	(0.24%)	0.21%
Piedmont Russell 1000 G	8.98%	0.68%	-
Russell 1000 Growth Index	8.99%	0.68%	0.24%
Piedmont Russell 1000 G - Net	8.98%	0.68%	-
Sands	14.91%	9.52%	10.11%
LCG Blended Benchmark*	8.99%	0.68%	0.24%
Russell 1000 Growth Index	8.99%	0.68%	0.24%
Sands - Net	14.91%	9.44%	9.86%
<b>Large Cap Value</b>	<b>8.55%</b>	<b>0.13%</b>	<b>(6.30%)</b>
Dodge & Cox	8.15%	(0.66%)	(4.73%)
LCV Blended Benchmark**	7.78%	0.34%	(4.81%)
Russell 1000 Value Index	7.78%	0.34%	(4.81%)
Dodge & Cox - Net	8.15%	(0.71%)	(4.93%)
BMO	8.24%	0.07%	(7.42%)
LCV Blended Benchmark**	7.78%	0.34%	(4.81%)
Russell 1000 Value Index	7.78%	0.34%	(4.81%)
BMO - Net	8.24%	0.01%	(7.62%)
LSV	9.10%	0.01%	(7.90%)
LCV Blended Benchmark**	7.78%	0.34%	(4.81%)
Russell 1000 Value Index	7.78%	0.34%	(4.81%)
LSV - Net	9.10%	0.01%	(8.06%)
NTGI S&P 500 Value Idx	8.56%	0.87%	(5.07%)
S&P/Citi 500 Value Index	8.57%	0.87%	(5.08%)
NTGI S&P 500 Value Idx - Net	8.56%	0.87%	(5.08%)
<b>Large Cap Passive Core</b>	<b>8.62%</b>	<b>0.50%</b>	<b>(2.28%)</b>
NTGI MarketCap Idx	8.62%	0.50%	(2.28%)
DJ U.S. Total Stock Market Index	8.61%	0.46%	(2.32%)
NTGI MarketCap Idx - Net	8.61%	0.50%	(2.29%)

\* 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 January 31, 2019

	Last 36 Months	Last 60 Months	Last 120 Months	Since Inception
<b>Large Cap Equity</b>	<b>14.64%</b>	<b>10.40%</b>	<b>15.35%</b>	<b>11.13%</b> <sup>(1/82)</sup>
Russell 1000 Index	14.14%	10.68%	15.17%	11.46% <sup>(1/82)</sup>
<b>Large Cap Growth</b>	<b>17.32%</b>	<b>12.01%</b>	<b>16.84%</b>	<b>11.80%</b> <sup>(1/82)</sup>
NTGI S&P 500 Growth Idx	15.51%	12.82%	16.25%	7.48% <sup>(8/01)</sup>
S&P/Citi 500 Growth Index	15.53%	12.84%	16.23%	7.45% <sup>(8/01)</sup>
NTGI S&P 500 Growth Idx - Net	15.51%	12.81%	16.24%	9.33% <sup>(1/05)</sup>
Piedmont Russell 1000 G	-	-	-	<b>(8.32%)</b> <sup>(10/18)</sup>
Russell 1000 Growth Index	16.60%	12.97%	16.86%	<b>(8.33%)</b> <sup>(10/18)</sup>
Piedmont Russell 1000 G - Net	-	-	-	<b>(8.33%)</b> <sup>(10/18)</sup>
Sands	20.75%	12.11%	21.79%	12.13% <sup>(11/03)</sup>
LCG Blended Benchmark*	16.60%	12.97%	16.86%	9.41% <sup>(11/03)</sup>
Russell 1000 Growth Index	16.60%	12.97%	16.86%	9.46% <sup>(11/03)</sup>
Sands - Net	20.48%	11.85%	21.51%	11.07% <sup>(1/05)</sup>
<b>Large Cap Value</b>	<b>13.16%</b>	<b>9.22%</b>	<b>14.39%</b>	<b>10.24%</b> <sup>(10/82)</sup>
Dodge & Cox	15.68%	9.80%	15.51%	9.40% <sup>(9/03)</sup>
LCV Blended Benchmark**	11.62%	8.33%	13.39%	8.05% <sup>(9/03)</sup>
Russell 1000 Value Index	11.62%	8.33%	13.39%	8.22% <sup>(9/03)</sup>
Dodge & Cox - Net	15.43%	9.58%	15.27%	7.71% <sup>(1/05)</sup>
BMO	12.08%	9.00%	13.61%	7.91% <sup>(2/01)</sup>
LCV Blended Benchmark**	11.62%	8.33%	13.39%	5.44% <sup>(2/01)</sup>
Russell 1000 Value Index	11.62%	8.33%	13.39%	6.46% <sup>(2/01)</sup>
BMO - Net	11.83%	8.76%	13.35%	7.95% <sup>(1/05)</sup>
LSV	13.21%	9.43%	15.09%	10.80% <sup>(2/03)</sup>
LCV Blended Benchmark**	11.62%	8.33%	13.39%	9.01% <sup>(2/03)</sup>
Russell 1000 Value Index	11.62%	8.33%	13.39%	9.02% <sup>(2/03)</sup>
LSV - Net	12.97%	9.18%	14.80%	8.09% <sup>(1/05)</sup>
NTGI S&P 500 Value Idx	12.15%	8.77%	13.66%	5.59% <sup>(8/99)</sup>
S&P/Citi 500 Value Index	12.07%	8.70%	13.59%	5.56% <sup>(8/99)</sup>
NTGI S&P 500 Value Idx - Net	12.15%	8.77%	13.65%	6.75% <sup>(1/05)</sup>
<b>Large Cap Passive Core</b>	<b>14.26%</b>	<b>10.45%</b>	<b>15.27%</b>	<b>11.00%</b> <sup>(1/85)</sup>
NTGI MarketCap Idx	14.26%	10.45%	15.28%	10.77% <sup>(2/85)</sup>
DJ U.S. Total Stock Market Index	14.17%	10.36%	15.14%	10.71% <sup>(2/85)</sup>
NTGI MarketCap Idx - Net	14.25%	10.44%	15.27%	8.24% <sup>(1/05)</sup>

\* 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 January 31, 2019

	Last Month	Last 3 Months	Last 12 Months
<b>Small Cap Equity</b>	<b>13.07%</b>	<b>1.51%</b>	<b>(1.47%)</b>
Russell 2000 Index	11.25%	(0.41%)	(3.52%)
<b>Small Cap Growth</b>	<b>15.90%</b>	<b>5.57%</b>	<b>4.52%</b>
Frontier	17.20%	6.71%	14.65%
Russell 2000 Growth Index	11.55%	0.06%	(2.63%)
Frontier - Net	16.71%	6.26%	13.75%
FIAM	15.00%	4.63%	(0.06%)
Russell 2000 Growth Index	11.55%	0.06%	(2.63%)
FIAM - Net	15.00%	4.63%	(0.39%)
<b>Small Cap Value</b>	<b>11.78%</b>	<b>(0.19%)</b>	<b>(5.52%)</b>
Channing	11.64%	(0.14%)	(8.18%)
Russell 2000 Value Index	10.94%	(0.90%)	(4.51%)
Channing - Net	11.49%	(0.27%)	(8.66%)
DFA Small Cap Value	11.75%	(1.64%)	(6.12%)
Russell 2000 Value Index	10.94%	(0.90%)	(4.51%)
DFA Small Cap Value - Net	11.75%	(1.77%)	(6.60%)
Inv. Counselors of Maryland	11.84%	1.11%	(4.04%)
Russell 2000 Value Index	10.94%	(0.90%)	(4.51%)
Inv. Couns. of Maryland - Net	11.74%	0.90%	(4.62%)
<b>Micro Cap</b>	<b>10.28%</b>	<b>(2.75%)</b>	<b>(4.87%)</b>
DFA Micro Cap	10.29%	(1.93%)	(3.63%)
Russell 2000 Value Index	10.94%	(0.90%)	(4.51%)
Russell 2000 Index	11.25%	(0.41%)	(3.52%)
DFA Micro Cap - Net	10.29%	(2.07%)	(4.12%)
<b>Public Real Assets</b>	<b>9.36%</b>	<b>6.11%</b>	<b>4.19%</b>
Public Real Assets Benchmark (1)	8.35%	6.65%	2.48%
Brookfield Public Global Inf	10.49%	5.48%	1.35%
Dow Jones Global Infra Comp Idx	9.90%	5.45%	(0.29%)
Brookfield Public Global Inf - Net	10.49%	5.33%	0.81%
Cohen & Steers Public Global Inf	8.84%	6.41%	5.56%
FTSE GI Core Infr 50/50 N	7.83%	7.01%	3.37%
Cohen & St Public Global Inf - Net	8.73%	6.18%	4.99%

(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 January 31, 2019

	Last 36 Months	Last 60 Months	Last 120 Months	Since Inception
<b>Small Cap Equity</b>	<b>13.68%</b>	<b>7.11%</b>	<b>15.81%</b>	<b>12.08%</b> <sup>(7/88)</sup>
Russell 2000 Index	14.71%	7.26%	14.52%	9.36% <sup>(7/88)</sup>
<b>Small Cap Growth</b>	<b>14.48%</b>	<b>8.74%</b>	<b>16.34%</b>	<b>12.92%</b> <sup>(7/88)</sup>
Frontier	21.00%	9.89%	17.05%	13.28% <sup>(8/88)</sup>
Russell 2000 Growth Index	15.55%	7.83%	15.68%	8.10% <sup>(8/88)</sup>
Frontier - Net	20.27%	9.23%	16.31%	9.91% <sup>(1/05)</sup>
FIAM	11.45%	9.11%	16.94%	13.41% <sup>(8/88)</sup>
Russell 2000 Growth Index	15.55%	7.83%	15.68%	8.10% <sup>(8/88)</sup>
FIAM - Net	10.98%	8.59%	16.34%	10.50% <sup>(1/05)</sup>
<b>Small Cap Value</b>	<b>13.51%</b>	<b>7.34%</b>	<b>15.62%</b>	<b>11.73%</b> <sup>(9/89)</sup>
Channing	12.17%	6.42%	-	9.91% <sup>(7/11)</sup>
Russell 2000 Value Index	13.76%	6.62%	13.28%	8.95% <sup>(7/11)</sup>
Channing - Net	11.56%	5.91%	-	9.30% <sup>(7/11)</sup>
DFA Small Cap Value	12.34%	6.60%	16.42%	11.99% <sup>(2/96)</sup>
Russell 2000 Value Index	13.76%	6.62%	13.28%	9.47% <sup>(2/96)</sup>
DFA Small Cap Value - Net	11.75%	6.08%	15.85%	7.61% <sup>(1/05)</sup>
Inv. Counselors of Maryland	15.62%	9.15%	15.90%	11.40% <sup>(5/99)</sup>
Russell 2000 Value Index	13.76%	6.62%	13.28%	8.99% <sup>(5/99)</sup>
Inv. Couns. of Maryland - Net	14.95%	8.60%	15.34%	8.42% <sup>(1/05)</sup>
<b>Micro Cap</b>	<b>12.00%</b>	<b>3.37%</b>	<b>14.81%</b>	<b>11.47%</b> <sup>(7/84)</sup>
DFA Micro Cap	14.57%	8.07%	16.25%	11.12% <sup>(8/87)</sup>
Russell 2000 Value Index	13.76%	6.62%	13.28%	9.80% <sup>(8/87)</sup>
Russell 2000 Index	14.71%	7.26%	14.52%	8.75% <sup>(8/87)</sup>
DFA Micro Cap - Net	14.00%	7.53%	15.69%	7.82% <sup>(1/05)</sup>
<b>Public Real Assets</b>	-	-	-	<b>5.05%</b> <sup>(8/17)</sup>
Public Real Assets Benchmark (1)	-	-	-	2.76% <sup>(8/17)</sup>
Brookfield Public Global Inf	-	-	-	1.53% <sup>(8/17)</sup>
Dow Jones Global Infra Comp Idx	9.18%	4.66%	12.27%	0.12% <sup>(8/17)</sup>
Brookfield Public Global Inf - Net	-	-	-	1.09% <sup>(8/17)</sup>
Cohen & Steers Public Global Inf	-	-	-	6.78% <sup>(8/17)</sup>
FTSE GI Core Infr 50/50 N	10.92%	7.60%	-	3.62% <sup>(8/17)</sup>
Cohen & St Public Global Inf - Net	-	-	-	6.34% <sup>(8/17)</sup>

(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 January 31, 2019

	<b>Last Month</b>	<b>Last 3 Months</b>	<b>Last 12 Months</b>
<b>Intl Large Cap Equity</b>	<b>7.05%</b>	<b>1.73%</b>	<b>(12.35%)</b>
MSCI ACWI ex-US Index	7.56%	3.66%	(12.58%)
<b>Intl Large Cap Growth</b>	<b>7.68%</b>	<b>1.52%</b>	<b>(14.90%)</b>
EARNEST Partners	7.91%	1.51%	(13.82%)
MSCI ACWI ex-US Index	7.56%	3.66%	(12.58%)
MSCI ACWI ex-US Growth	7.63%	4.29%	(12.14%)
EARNEST Partners - Net	7.91%	1.45%	(13.95%)
William Blair	7.48%	1.52%	(15.71%)
MSCI ACWI ex-US Index	7.56%	3.66%	(12.58%)
MSCI ACWI ex-US Growth	7.63%	4.29%	(12.14%)
William Blair - Net	7.39%	1.33%	(16.02%)
<b>Intl Large Cap Value</b>	<b>7.52%</b>	<b>2.77%</b>	<b>(9.54%)</b>
Brandes	8.32%	1.93%	(7.25%)
MSCI ACWI ex-US Index	7.56%	3.66%	(12.58%)
MSCI ACWI ex-US Value	7.52%	3.17%	(12.15%)
Brandes - Net	8.27%	1.88%	(7.39%)
Mondrian	6.75%	3.75%	(11.24%)
MSCI ACWI ex-US Index	7.56%	3.66%	(12.58%)
MSCI ACWI ex-US Value	7.52%	3.17%	(12.15%)
Mondrian - Net	6.75%	3.75%	(11.45%)
Lazard	6.80%	2.86%	(12.76%)
MSCI ACWI ex-US Index	7.56%	3.66%	(12.58%)
MSCI ACWI ex-US Value	7.52%	3.17%	(12.15%)
Lazard - Net	6.74%	2.73%	(13.03%)

## 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 January 31, 2019

	Last 36 Months	Last 60 Months	Last 120 Months	Since Inception
<b>Intl Large Cap Equity</b>	<b>9.03%</b>	<b>3.87%</b>	<b>9.44%</b>	<b>7.63%</b> <sup>(9/86)</sup>
MSCI ACWI ex-US Index	9.59%	3.11%	8.35%	-
<b>Intl Large Cap Growth</b>	<b>9.32%</b>	<b>3.44%</b>	<b>9.70%</b>	<b>8.00%</b> <sup>(9/02)</sup>
EARNEST Partners	11.32%	3.25%	10.60%	8.82% <sup>(10/04)</sup>
MSCI ACWI ex-US Index	9.59%	3.11%	8.35%	5.66% <sup>(10/04)</sup>
MSCI ACWI ex-US Growth	9.46%	4.58%	9.17%	6.48% <sup>(10/04)</sup>
EARNEST Partners - Net	11.12%	3.04%	10.23%	7.51% <sup>(1/05)</sup>
William Blair	7.72%	3.64%	10.92%	9.13% <sup>(10/02)</sup>
MSCI ACWI ex-US Index	9.59%	3.11%	8.35%	7.92% <sup>(10/02)</sup>
MSCI ACWI ex-US Growth	9.46%	4.58%	9.17%	8.17% <sup>(10/02)</sup>
William Blair - Net	7.30%	3.25%	10.50%	5.68% <sup>(1/05)</sup>
<b>Intl Large Cap Value</b>	<b>8.97%</b>	<b>3.87%</b>	<b>7.70%</b>	<b>8.69%</b> <sup>(10/95)</sup>
Brandes	9.85%	3.93%	8.19%	8.97% <sup>(1/96)</sup>
MSCI ACWI ex-US Index	9.59%	3.11%	8.35%	4.98% <sup>(1/96)</sup>
MSCI ACWI ex-US Value	10.77%	2.54%	8.48%	-
Brandes - Net	9.60%	3.69%	7.92%	4.35% <sup>(1/05)</sup>
Mondrian	8.15%	4.03%	-	5.09% <sup>(4/12)</sup>
MSCI ACWI ex-US Index	9.59%	3.11%	8.35%	4.46% <sup>(4/12)</sup>
MSCI ACWI ex-US Value	10.77%	2.54%	8.48%	4.29% <sup>(4/12)</sup>
Mondrian - Net	7.70%	3.56%	-	4.63% <sup>(4/12)</sup>
Lazard	7.80%	3.40%	-	5.71% <sup>(4/12)</sup>
MSCI ACWI ex-US Index	9.59%	3.11%	8.35%	4.46% <sup>(4/12)</sup>
MSCI ACWI ex-US Value	10.77%	2.54%	8.48%	4.29% <sup>(4/12)</sup>
Lazard - Net	7.36%	2.91%	-	5.14% <sup>(4/12)</sup>

## 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 January 31, 2019

	Last Month	Last 3 Months	Last 12 Months
<b>Intl Large Cap Active Core</b>	<b>6.99%</b>	<b>1.73%</b>	<b>(12.71%)</b>
Arrowstreet	8.23%	2.97%	(10.44%)
MSCI ACWI ex-US Index	7.56%	3.66%	(12.58%)
Arrowstreet - Net	8.11%	2.73%	(10.96%)
Brown	7.32%	1.16%	(8.18%)
MSCI ACWI ex-US Index	7.56%	3.66%	(12.58%)
Brown - Net	7.25%	1.03%	(8.46%)
GlobeFlex	8.96%	3.31%	(15.53%)
MSCI ACWI ex-US Index	7.56%	3.66%	(12.58%)
GlobeFlex - Net	8.96%	3.21%	(15.85%)
Progress Intl Equity	0.00%	(3.57%)	(16.67%)
Custom Benchmark	7.56%	3.66%	(12.58%)
MSCI ACWI ex-US Index	7.56%	3.66%	(12.58%)
Progress Intl Equity - Net	(0.13%)	(3.83%)	(17.20%)
<b>Intl Large Cap Pass. Core</b>	<b>6.42%</b>	<b>1.24%</b>	<b>(12.07%)</b>
NTGI MSCI EAFE Idx	6.42%	1.24%	(12.07%)
MSCI EAFE Index	6.57%	1.27%	(12.51%)
NTGI EAFE Idx - Net	6.42%	1.24%	(12.08%)
<b>International Small Cap</b>	<b>8.41%</b>	<b>1.48%</b>	<b>(18.81%)</b>
Franklin Templeton	7.78%	2.10%	(16.12%)
ACWI Small Cap ex US	7.83%	2.22%	(15.93%)
Franklin Templeton - Net	7.78%	2.10%	(16.60%)
William Blair	8.86%	1.04%	(20.69%)
ACWI Small Cap ex US	7.83%	2.22%	(15.93%)
Intl SC Blended Benchmark	7.83%	2.22%	(15.93%)
William Blair - Net	8.65%	0.63%	(21.32%)
<b>Emerging Markets</b>	<b>10.29%</b>	<b>11.89%</b>	<b>(12.92%)</b>
Genesis	10.29%	11.89%	(12.92%)
MSCI Emerging Markets Index	8.76%	10.32%	(13.90%)
Genesis - Net	10.29%	11.78%	(13.41%)

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 January 31, 2019

	Last 36 Months	Last 60 Months	Last 120 Months	Since Inception
<b>Intl Large Cap Active Core</b>	<b>9.99%</b>	<b>5.32%</b>	<b>11.86%</b>	<b>4.41%</b> <sup>(2/08)</sup>
Arrowstreet	11.81%	5.92%	12.24%	4.76% <sup>(3/08)</sup>
MSCI ACWI ex-US Index	9.59%	3.11%	8.35%	1.62% <sup>(3/08)</sup>
Arrowstreet - Net	11.25%	5.43%	11.70%	4.27% <sup>(3/08)</sup>
Brown	6.67%	4.99%	11.98%	7.59% <sup>(10/04)</sup>
MSCI ACWI ex-US Index	9.59%	3.11%	8.35%	5.66% <sup>(10/04)</sup>
Brown - Net	5.83%	4.04%	11.18%	6.03% <sup>(1/05)</sup>
GlobeFlex	10.48%	5.58%	10.47%	4.72% <sup>(3/06)</sup>
MSCI ACWI ex-US Index	9.59%	3.11%	8.35%	3.37% <sup>(3/06)</sup>
GlobeFlex - Net	10.07%	5.17%	10.03%	4.28% <sup>(3/06)</sup>
Progress Intl Equity	8.73%	-	-	1.92% <sup>(7/14)</sup>
Custom Benchmark	10.90%	-	-	2.32% <sup>(7/14)</sup>
MSCI ACWI ex-US Index	9.59%	3.11%	8.35%	1.15% <sup>(7/14)</sup>
Progress Intl Equity - Net	8.15%	-	-	1.45% <sup>(7/14)</sup>
<b>Intl Large Cap Pass. Core</b>	<b>8.13%</b>	<b>3.03%</b>	<b>8.54%</b>	<b>3.13%</b> <sup>(1/00)</sup>
NTGI MSCI EAFE Idx	8.13%	3.03%	8.53%	3.49% <sup>(2/00)</sup>
MSCI EAFE Index	7.74%	2.66%	8.11%	3.11% <sup>(2/00)</sup>
NTGI EAFE Idx - Net	8.12%	3.03%	8.52%	4.53% <sup>(1/05)</sup>
<b>International Small Cap</b>	<b>6.99%</b>	<b>3.34%</b>	<b>10.13%</b>	<b>4.13%</b> <sup>(12/05)</sup>
Franklin Templeton	9.13%	4.20%	-	5.60% <sup>(8/11)</sup>
ACWI Small Cap ex US	9.33%	3.91%	11.53%	4.12% <sup>(8/11)</sup>
Franklin Templeton - Net	8.40%	3.52%	-	4.88% <sup>(8/11)</sup>
William Blair	5.38%	2.71%	-	8.08% <sup>(9/10)</sup>
ACWI Small Cap ex US	9.33%	3.91%	11.53%	6.59% <sup>(9/10)</sup>
Intl SC Blended Benchmark	9.33%	3.91%	10.46%	6.98% <sup>(9/10)</sup>
William Blair - Net	4.51%	1.88%	-	7.24% <sup>(9/10)</sup>
<b>Emerging Markets</b>	<b>14.61%</b>	<b>5.03%</b>	<b>12.84%</b>	<b>8.92%</b> <sup>(2/92)</sup>
Genesis	14.61%	5.03%	12.84%	10.99% <sup>(5/04)</sup>
MSCI Emerging Markets Index	15.32%	5.15%	10.03%	8.97% <sup>(5/04)</sup>
Genesis - Net	13.94%	4.41%	12.18%	8.95% <sup>(1/05)</sup>

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 January 31, 2019

	Last Month	Last 3 Months	Last 12 Months
<b>Dom. Fixed Active Core</b>	<b>0.92%</b>	<b>3.09%</b>	<b>2.26%</b>
Brandes Core*	1.26%	3.02%	2.51%
Blmbg Aggregate Index	1.06%	3.53%	2.25%
Brandes Core - Net	1.26%	3.02%	2.51%
EARNEST Partners	0.69%	3.35%	2.46%
Blmbg Aggregate Index	1.06%	3.53%	2.25%
EARNEST Partners - Net	0.66%	3.30%	2.32%
Piedmont	0.94%	2.90%	1.50%
Blmbg Aggregate Index	1.06%	3.53%	2.25%
Piedmont - Net	0.91%	2.87%	1.36%
Garcia Hamilton	1.01%	2.97%	2.62%
Blmbg Aggregate Index	1.06%	3.53%	2.25%
Garcia Hamilton	0.99%	2.95%	2.53%
<b>Dom. Fixed Passive Core</b>	<b>1.07%</b>	<b>3.54%</b>	<b>2.31%</b>
BlackRock US Debt	1.08%	3.56%	2.35%
Blmbg Aggregate Index	1.06%	3.53%	2.25%
BlackRock US Debt - Net	1.08%	3.56%	2.34%
NTGI Blmbg Agg. Index	1.06%	3.51%	2.28%
Blmbg Aggregate Index	1.06%	3.53%	2.25%
NTGI Blmbg Agg. Index - Net	1.06%	3.51%	2.28%

\* 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 January 31, 2019

	Last 36 Months	Last 60 Months	Last 120 Months	Since Inception
<b>Dom. Fixed Active Core</b>	<b>2.43%</b>	<b>2.89%</b>	<b>4.69%</b>	<b>4.42%</b> <sup>(4/01)</sup>
Brandes Core *	-	-	-	1.57% <sup>(3/16)</sup>
Blmbg Aggregate Index	1.95%	2.44%	3.68%	1.76% <sup>(3/16)</sup>
Brandes Core - Net	-	-	-	1.57% <sup>(3/16)</sup>
EARNEST Partners	2.06%	2.96%	4.53%	4.36% <sup>(5/05)</sup>
Blmbg Aggregate Index	1.95%	2.44%	3.68%	3.92% <sup>(5/05)</sup>
EARNEST Partners - Net	1.90%	2.77%	4.33%	4.16% <sup>(5/05)</sup>
Piedmont	2.69%	2.67%	4.57%	4.11% <sup>(6/05)</sup>
Blmbg Aggregate Index	1.95%	2.44%	3.68%	3.86% <sup>(6/05)</sup>
Piedmont - Net	2.54%	2.52%	4.40%	3.93% <sup>(6/05)</sup>
Garcia Hamilton	2.40%	-	-	2.51% <sup>(6/15)</sup>
Blmbg Aggregate Index	1.95%	2.44%	3.68%	1.85% <sup>(6/15)</sup>
Garcia Hamilton	2.30%	-	-	2.41% <sup>(6/15)</sup>
<b>Dom. Fixed Passive Core</b>	<b>1.99%</b>	<b>2.51%</b>	<b>3.76%</b>	<b>5.85%</b> <sup>(1/90)</sup>
BlackRock US Debt	2.04%	2.56%	-	2.67% <sup>(10/13)</sup>
Blmbg Aggregate Index	1.95%	2.44%	3.68%	2.54% <sup>(10/13)</sup>
BlackRock US Debt - Net	2.03%	2.56%	-	2.67% <sup>(10/13)</sup>
NTGI Blmbg Agg. Index	1.95%	2.46%	3.74%	5.91% <sup>(2/90)</sup>
Blmbg Aggregate Index	1.95%	2.44%	3.68%	5.90% <sup>(2/90)</sup>
NTGI Blmbg Agg. Index - Net	1.94%	2.46%	3.74%	3.86% <sup>(1/05)</sup>

\* 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 January 31, 2019

	Last Month	Last 3 Months	Last 12 Months
<b>Domestic Fixed Core Plus</b>	<b>1.36%</b>	<b>3.28%</b>	<b>1.36%</b>
LM Capital	1.75%	3.16%	1.15%
Blmbg Aggregate Index	1.06%	3.53%	2.25%
LM Capital - Net	1.71%	3.12%	0.98%
Progress Fixed Income	0.00%	1.75%	0.79%
Blmbg Aggregate Index	1.06%	3.53%	2.25%
Progress Fixed Inc. - Net	(0.08%)	1.59%	0.38%
BMO-TCH	1.59%	3.11%	1.74%
Blmbg Aggregate Index	1.06%	3.53%	2.25%
BMO-TCH. - Net	1.56%	3.05%	1.60%
Western	2.01%	4.84%	1.70%
Blmbg Aggregate Index	1.06%	3.53%	2.25%
Western - Net	2.01%	4.80%	1.56%
<b>Bank Loans</b>	<b>2.04%</b>	<b>(1.04%)</b>	<b>2.05%</b>
Barings Global Loan Fund	2.04%	(1.04%)	2.05%
Custom Benchmark	2.11%	(0.68%)	2.68%
Barings Global Loan Fund - Net	2.04%	(1.04%)	1.76%
<b>Emerging Markets</b>	<b>5.05%</b>	<b>7.38%</b>	<b>(4.61%)</b>
Standish	5.05%	7.38%	(4.61%)
Custom Benchmark	4.47%	7.17%	(2.30%)
Standish - Net	5.05%	7.28%	(4.95%)
<b>High Yield</b>	<b>4.14%</b>	<b>1.09%</b>	<b>1.86%</b>
MacKay Shields	4.15%	1.09%	1.85%
ML High Yield Cash Pay Index	4.59%	1.40%	1.58%
MacKay Shields - Net	4.15%	1.00%	1.49%

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 January 31, 2019

	Last 36 Months	Last 60 Months	Last 120 Months	Since Inception
<b>Domestic Fixed Core Plus</b>	<b>3.06%</b>	<b>3.14%</b>	<b>5.49%</b>	<b>8.02%</b> <sup>(1/82)</sup>
LM Capital	2.46%	2.86%	4.91%	4.64% <sup>(5/05)</sup>
Blmbg Aggregate Index	1.95%	2.44%	3.68%	3.92% <sup>(5/05)</sup>
LM Capital - Net	2.30%	2.69%	4.74%	4.47% <sup>(5/05)</sup>
Progress Fixed Income	2.49%	2.72%	4.53%	4.59% <sup>(1/06)</sup>
Blmbg Aggregate Index	1.95%	2.44%	3.68%	4.00% <sup>(1/06)</sup>
Progress Fixed Inc. - Net	2.13%	2.37%	4.17%	4.25% <sup>(1/06)</sup>
BMO-TCH	4.44%	3.68%	5.46%	4.82% <sup>(5/05)</sup>
Blmbg Aggregate Index	1.95%	2.44%	3.68%	3.92% <sup>(5/05)</sup>
BMO-TCH - Net	4.29%	3.53%	5.33%	4.69% <sup>(5/05)</sup>
Western	3.86%	3.74%	6.51%	5.30% <sup>(11/01)</sup>
Blmbg Aggregate Index	1.95%	2.44%	3.68%	4.12% <sup>(11/01)</sup>
Western - Net	3.72%	3.60%	6.36%	4.70% <sup>(1/05)</sup>
<b>Bank Loans</b>	<b>6.60%</b>	-	-	<b>4.26%</b> <sup>(8/14)</sup>
Barings Global Loan Fund	6.60%	-	-	4.26% <sup>(8/14)</sup>
Custom Benchmark	6.12%	-	-	3.82% <sup>(8/14)</sup>
Barings Global Loan Fund - Net	6.09%	-	-	3.72% <sup>(8/14)</sup>
<b>Emerging Markets</b>	<b>7.87%</b>	-	-	<b>2.21%</b> <sup>(8/14)</sup>
Standish	7.87%	-	-	2.21% <sup>(8/14)</sup>
Custom Benchmark	7.18%	3.13%	6.50%	1.54% <sup>(8/14)</sup>
Standish - Net	7.49%	-	-	1.88% <sup>(8/14)</sup>
<b>High Yield</b>	<b>9.20%</b>	<b>5.35%</b>	<b>11.34%</b>	<b>9.49%</b> <sup>(4/86)</sup>
MacKay Shields	9.46%	5.41%	10.55%	8.72% <sup>(11/00)</sup>
ML High Yield Cash Pay Index	9.42%	4.59%	10.81%	7.48% <sup>(11/00)</sup>
MacKay Shields - Net	9.08%	5.04%	10.16%	6.72% <sup>(1/05)</sup>

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)	
Sands	5.92	2.72	10/31/2003
Frontier	5.65	5.17	07/31/1988
Pyramis SCG	3.45	5.30	07/31/1988
Genesis	1.52	2.01	04/30/2004
LSV	1.32	1.79	01/31/2003

**Five Worst Performing Portfolio's vs. Benchmarks**

Manager	Year-to-Date Underperformance	Since Inception Underperformance	
	(in % points)	(in % points)	
Mondrian	-0.81	0.64	03/31/2012
Lazard	-0.76	1.25	03/31/2012
DFA Micro Cap	-0.65	1.32	07/31/1987
MacKay Shields	-0.45	1.25	10/31/2000
Earnest FI	-0.38	0.44	04/30/2005

**Five Highest Returning Portfolios**

Manager	Year-to-Date Return	Since Inception Return	
	(in % points)	(in % points)	
Frontier	17.20	13.28	07/31/1988
Pyramis SCG	15.00	13.41	07/31/1988
Sands	14.91	12.13	10/31/2003
Inv Counselors of MD	11.84	11.40	04/30/1999
DFA SCV	11.75	11.99	01/31/1996

**Five Lowest Returning Portfolios**

Manager	Year-to-Date Return	Since Inception Return	
	(in % points)	(in % points)	
Earnest FI	0.69	4.36	04/30/2005
Piedmont	0.94	4.09	05/31/2005
NTGI BC Agg	1.06	5.91	01/31/1990
Blackrock US Debt	1.08	2.65	09/01/2013
Taplin, Canida, Habacht	1.59	4.79	04/30/2005

Returns are shown gross of investment management fees.

Excludes Real Estate and Alternative Investments portfolios.