

June 30, 2019



**Illinois Municipal
Retirement Fund
Monthly Performance Report**

**Investment Measurement Service
Monthly Review**

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Market Environment As of June 30, 2019

| Index | Last Month | Last Quarter | Last Year | Last 3 Years | Last 5 Years | Last 10 Years |
|---------------------------|------------|--------------|-----------|--------------|--------------|---------------|
| Russell:3000 Index | 7.02 | 4.10 | 8.98 | 14.02 | 10.19 | 14.67 |
| S&P:500 | 7.05 | 4.30 | 10.42 | 14.19 | 10.71 | 14.70 |
| Russell:2000 Index | 7.07 | 2.10 | (3.31) | 12.30 | 7.06 | 13.45 |
| MSCI:ACWI ex US | 6.02 | 2.98 | 1.29 | 9.39 | 2.16 | 6.54 |
| MSCI:EM | 6.24 | 0.61 | 1.22 | 10.66 | 2.49 | 5.81 |
| Blmbg:Aggregate | 1.26 | 3.08 | 7.87 | 2.31 | 2.95 | 3.90 |
| NCREIF:Total Index | 0.60 | 1.80 | 6.82 | 6.99 | 8.89 | 9.28 |
| Blmbg:Commodity Price Idx | 2.51 | (1.77) | (8.87) | (3.57) | (9.96) | (4.22) |

Risk assets climbed in June as accommodative policy suggestions by central banks outweighed lackluster economic data both domestically and internationally. The Fed did not change rates in June but adjustments to their stance on policy normalization hinted at future rate cuts. Fed Chair Powell noted that the Fed would "closely monitor" developments rather than remaining patient. Treasury yields continued their year-to-date descent with the 10-year yield ending the month at 2.00%. In Europe, ECB President Mario Draghi suggested further accommodative policy would be required in the event inflation does not pick up. Threats to implement tariffs on Mexican goods never materialized after Mexico agreed to strengthen their stance on border control. Regarding China, tension remains high but Treasury Secretary Steve Mnuchin was able to calm investors noting the two sides were close to an agreement. Britain continues to work through their dealings around Brexit as potential successors to Theresa May look to avoid a no-deal exit from the European Union.

The Consumer Price Index (CPI) climbed 0.1% in June and 1.6% over the trailing 12 months. Core CPI rose 0.3% in June remaining at 2.1% over the trailing year. A surge in apparel prices, up 1.1% for the month, was a key contributor to the rise in the core rate. Regarding the headline CPI, energy prices fell 2.3% on the month, with the gasoline component down 3.6%.

The third estimate of first quarter GDP came in at 3.1%, unchanged from the second estimate. Consumer spending did not meet expectations rising only 0.9%. This will likely negatively impact second quarter growth. Nonresidential fixed investment offset lackluster consumer spending, coming in at 4.4% vs. 2.3% in the second estimate.

Non-farm payrolls jumped 224,000 higher in June, considerably higher than the consensus estimate of 165,000 and May's 72,000 revised figure. The unemployment and participation rates increased to 3.7% and 62.9%, respectively. Wages grew 0.2% month-over-month. Year-over-year wage growth missed expectations coming in at 3.1%.

*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.

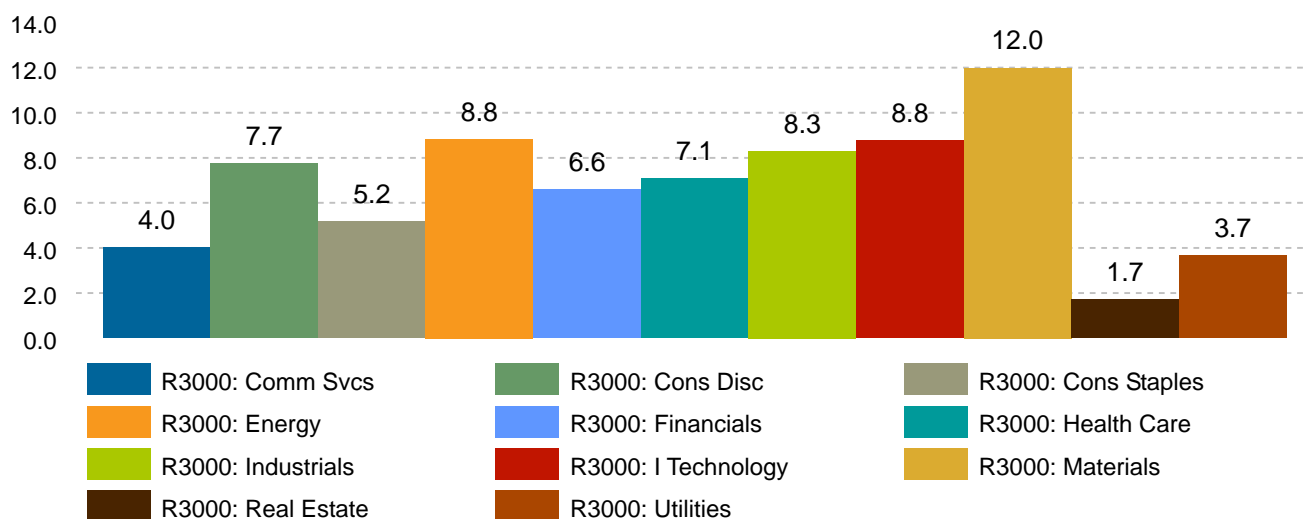
U.S. Equity Overview As of June 30, 2019

| Index | Last Month | Last Quarter | Last Year | Last 3 Years | Last 5 Years | Last 10 Years |
|----------------------|------------|--------------|-----------|--------------|--------------|---------------|
| Russell:3000 Index | 7.02 | 4.10 | 8.98 | 14.02 | 10.19 | 14.67 |
| S&P:500 | 7.05 | 4.30 | 10.42 | 14.19 | 10.71 | 14.70 |
| Russell:1000 Index | 7.02 | 4.25 | 10.02 | 14.15 | 10.45 | 14.77 |
| Russell:1000 Growth | 6.87 | 4.64 | 11.56 | 18.07 | 13.39 | 16.28 |
| Russell:1000 Value | 7.18 | 3.84 | 8.46 | 10.19 | 7.46 | 13.19 |
| Russell:Midcap Index | 6.87 | 4.13 | 7.83 | 12.16 | 8.63 | 15.16 |
| Russell:2000 Index | 7.07 | 2.10 | (3.31) | 12.30 | 7.06 | 13.45 |
| Russell:2000 Growth | 7.70 | 2.75 | (0.49) | 14.69 | 8.63 | 14.41 |
| Russell:2000 Value | 6.37 | 1.38 | (6.24) | 9.81 | 5.39 | 12.40 |

The equity markets responded favorably to the Fed's dovish tone despite continuing trade tension internationally and lackluster economic data. An agreement with Mexico and calmed relations with China allowed for strong equity market performance. The S&P 500 Index reached a record high before ending the month up 7.1%, a rebound off of poor May performance. Small caps narrowly outperformed large caps (Russell 2000 Index: +7.1% vs. Russell 1000 Index: +7.0%) and value edged out growth (Russell 1000 Value Index: +7.2% vs. Russell 1000 Growth Index: +6.9%), both reversals from the previous month and recent trends. Mid caps trailed both large and small caps in June (Russell Midcap Index: +6.9%).

All 11 Russell 3000 sectors rose in June, led by a 12.0% return from the Materials sector. More cyclical areas of the market outperformed defensive sectors. Information Technology (+8.8%) and Industrials (+8.3%) were both up over 8% for the month. Oil prices climbed significantly in June in response to troubles in the Straits of Hormuz. The Energy sector was up 8.8% for the month. Defensive sectors underperformed in June but Utilities (+3.7%) and Real Estate (+1.7%) still managed modest gains.

Russell 3000 Index Sector Returns



Non-U.S. Equity Overview

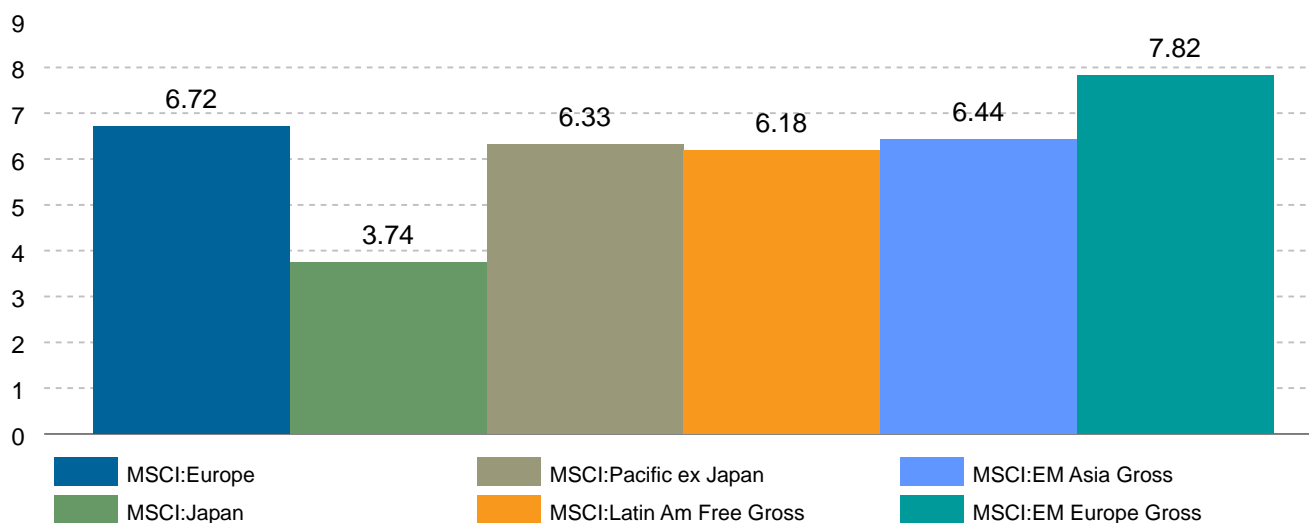
As of June 30, 2019

| Index | Last Month | Last Quarter | Last Year | Last 3 Years | Last 5 Years | Last 10 Years |
|---------------------------|------------|--------------|-----------|--------------|--------------|---------------|
| MSCI:ACWI ex US | 6.02 | 2.98 | 1.29 | 9.39 | 2.16 | 6.54 |
| MSCI:EAFE | 5.93 | 3.68 | 1.08 | 9.11 | 2.25 | 6.90 |
| MSCI:EAFE Hedged Net | 4.54 | 3.50 | 4.81 | 11.79 | 6.96 | 8.97 |
| MSCI:EM | 6.24 | 0.61 | 1.22 | 10.66 | 2.49 | 5.81 |
| MSCI:ACWI ex US Small Cap | 4.41 | 1.21 | (5.94) | 7.76 | 2.77 | 8.48 |

Market sentiment improved significantly in June on the back of easing trade tensions between the U.S. and various countries and the prospects of continued easy monetary policy. Broad non-U.S. equities trailed their U.S. counterparts, but still experienced rather significant gains during the month (MSCI ACWI ex-U.S.: +6.0% vs. Russell 1000 Index: +7.0%). Emerging markets (MSCI Emerging Markets Index: +6.2%) narrowly outperformed developed international equity (MSCI EAFE Index: +5.9%) while also trailing U.S. stocks. The dollar fell against developed market currencies in a reversal from the previous four months (MSCI EAFE Index: +5.9% vs. MSCI EAFE Hedged Net Index: +4.5%). Non-U.S. small cap trailed non-U.S. large cap stocks (MSCI ACWI ex-U.S. Small Cap: +4.4% vs. MSCI ACWI ex-U.S.: 6.0%).

The prospect of easy economic policy drove performance in both developed and emerging Europe in June. The MSCI Europe Index returned 6.7% for the month, trailing only Emerging Europe which was again the best performing region (MSCI EM Europe Index: +7.8%). Japan (MSCI Japan Index: +3.7%) was the worst performing region on the back of poor economic data, while Pacific ex-Japan (MSCI Pacific ex-Japan Index: +6.3%) performed well for the month. Chinese markets responded favorably to progressing trade talks (MSCI China Free Gross Index: +8.1%), leading to a 6.4% return in EM Asia (MSCI EM Asia Gross Index).

MSCI Regional Returns

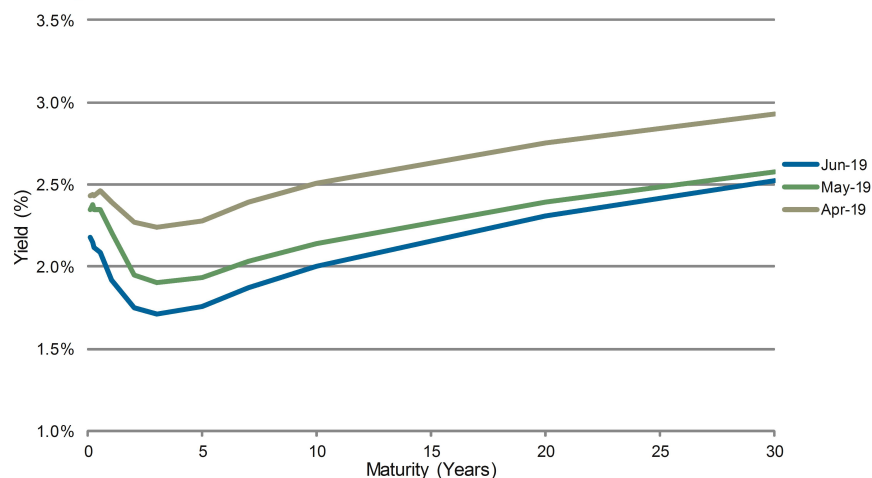


Fixed Income Overview

As of June 30, 2019

| Index | Last Month | Last Quarter | Last Year | Last 3 Years | Last 5 Years | Last 10 Years |
|---------------------------|------------|--------------|-----------|--------------|--------------|---------------|
| Blmbg:Aggregate | 1.26 | 3.08 | 7.87 | 2.31 | 2.95 | 3.90 |
| Blmbg:Long Gov/Credit | 2.78 | 6.59 | 13.82 | 3.76 | 5.68 | 7.62 |
| Blmbg:US Government | 0.92 | 2.99 | 7.21 | 1.39 | 2.48 | 2.97 |
| Blmbg:Credit | 2.26 | 4.27 | 10.34 | 3.74 | 3.92 | 5.77 |
| Blmbg:Mortgage Backed Sec | 0.72 | 1.96 | 6.22 | 2.06 | 2.56 | 3.23 |
| Blmbg:US TIPS | 0.86 | 2.86 | 4.84 | 2.08 | 1.76 | 3.64 |
| ML:US High Yield Cash Pay | 2.46 | 2.57 | 7.61 | 7.54 | 4.70 | 9.16 |
| CS:Leveraged Loan | 0.22 | 1.58 | 4.15 | 5.43 | 3.85 | 6.22 |
| 3 Month T-Bill | 0.22 | 0.64 | 2.31 | 1.38 | 0.87 | 0.49 |
| Blmbg:Treasury | 0.92 | 3.01 | 7.24 | 1.34 | 2.49 | 3.05 |

Treasury Yield Curve



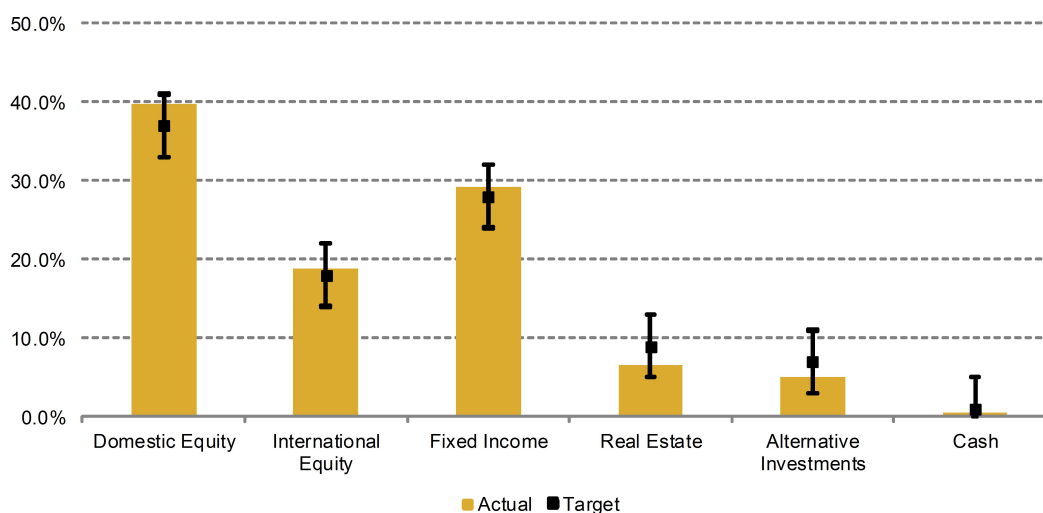
At their June meeting, the Fed signaled a policy shift indicating that they may be open to rates cuts moving forward. Markets responded with risk assets rallying during the month and rates falling across the curve. On the long end, the 30-year fell six basis points to 2.52%. The 10-year fell 14 bps to 2.00% and the 2-year fell 20 bps to 1.75%. At month end, the closely watched spread between the 2- and 10-year Treasuries sat at 25 bps, up from 19 at the end of May. Portions of the yield curve remain inverted, specifically the yield on maturities of 6 months or less remain above maturities between one and 10 years. Positive market tone in response to Fed comments tightened investment corporate spreads by 13 bps, ending the month at 115 bps. High yield corporate spreads tightened by 56 bps to close at 377 bps, recovering a significant portion of the widening experienced in the previous month. Fed Fund futures now project a 100% probability of a July rate cut, with the probability of three 25 bp rate cuts by year-end above 50%.

The Bloomberg Aggregate Index increased 1.3% in June amid the falling rate environment. Longer dated issues (Bloomberg Long Gov/Credit Index: +2.8%) outperformed all other sectors. The Bloomberg Credit Index (+2.3%) outperformed the broad index on the back of spread tightening. In high yield (ML U.S. High Yield Index), spreads tightened more significantly and the sector trailed only long bonds with a 2.5% return. TIPS (Bloomberg U.S. TIPS Index: +0.9%) narrowly underperformed nominal bonds (Bloomberg Treasury Index: +0.9%) by six basis points. All fixed income sectors are positive year-to-date, with the Bloomberg Long Gov/Credit Index up over 13%.

Total Fund

The market value of the Total Fund was \$42.76 billion at the end of June, an increase of \$1.80 billion from the prior month. The Fund returned 4.18% during the month, leading the 4.12% return of its benchmark. Domestic Equity (+6.74%) underperformed its benchmark (+7.02%). International Equity (+6.05%) modestly outperformed its benchmark for the month. The Fixed Income composite returned 1.36%, leading its benchmark return of 1.26%. Real Estate returned 0.29% in June, trailing its benchmark by 11 basis points. Over the last three months, Alternatives (+1.61%) trailed the benchmark return of 2.18%.

As of June 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 6.74% during June, trailing the Russell 3000 Index by 28 basis points. For the month, small caps outperformed large caps.

Large Cap: IMRF's Large Cap managers returned 6.73% in June, trailing the 7.02% return of the Russell 1000 Index. In aggregate, growth managers returned 6.30%, while the Russell 1000 Growth Index returned 6.87%. Value managers returned 7.01% collectively, underperforming the 7.18% return of the Russell 1000 Value Index.

Small Cap: The Small Cap composite (+7.24%) led the Russell 2000 Index by 17 basis points in June. The growth managers collectively returned 6.91%, relative to the 7.70% return of the Russell 2000 Growth Index. The value managers returned 7.40% during the month, leading the Russell 2000 Value Index by 103 basis points. The Micro Cap composite returned 7.29% in June.

Public Real Assets: The Public Real Assets portfolio managed by Brookfield and Cohen & Steers returned 4.40% in June, outperforming the custom benchmark by 33 basis points.

International Equity

The International Equity composite returned 6.05% in June, modestly outperforming its MSCI ACWI ex-U.S. benchmark.

International Large Cap: International Large Cap managers collectively returned 5.95% in June, trailing the MSCI ACWI ex-U.S. Index by seven basis points. International Large Cap Growth managers (+6.47%) trailed the MSCI ACWI ex-U.S. Growth Index by 21 basis points. International Large Cap Value managers returned 5.40% for the month, trailing the MSCI ACWI ex-U.S. Value Index (+5.44%).

International Small Cap and Emerging Markets: The International Small Cap managers returned 6.03% in June, 162 basis points ahead of the MSCI ACWI Small Cap ex-U.S. Index return of 4.41%. The Emerging Markets portfolio, managed by Genesis, returned 6.74% during the month, leading the MSCI Emerging Markets Index by 42 basis points.

Fixed Income

The Fixed Income composite returned 1.36% in June relative to the 1.26% return of the Bloomberg Aggregate Index.

Active Core: In aggregate, the Domestic Active Core managers returned 1.00% in June, 26 basis points behind the Bloomberg Aggregate Index.

Core Plus: Domestic Fixed Core Plus managers ended the month with a return of 1.55%, leading the Bloomberg Aggregate Index by 29 basis points.

Bank Loans: The Bank Loans portfolio, managed by Barings, returned 0.14% for the month, trailing the custom benchmark by 12 basis points.

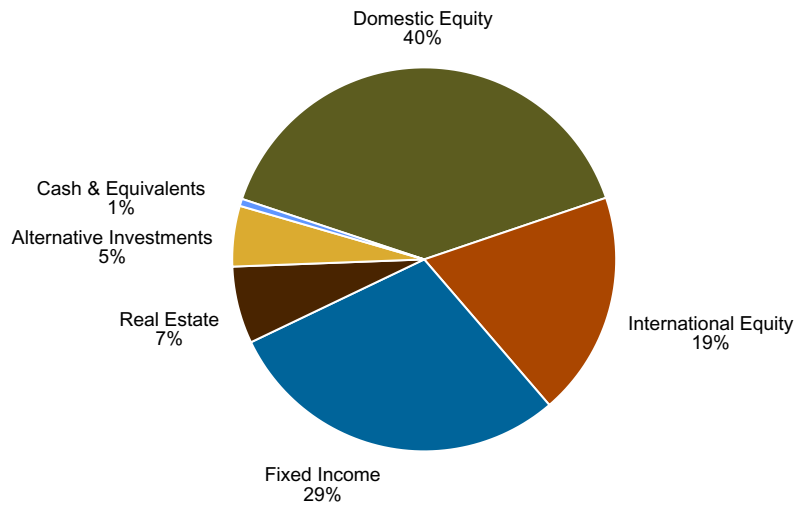
Emerging Markets: The Emerging Markets Debt component, managed by Standish, returned 4.77% in June, 74 basis points ahead of the custom benchmark.

High Yield: The High Yield allocation, managed by MacKay Shields, returned 2.39% in June, trailing the benchmark return of 2.46%.

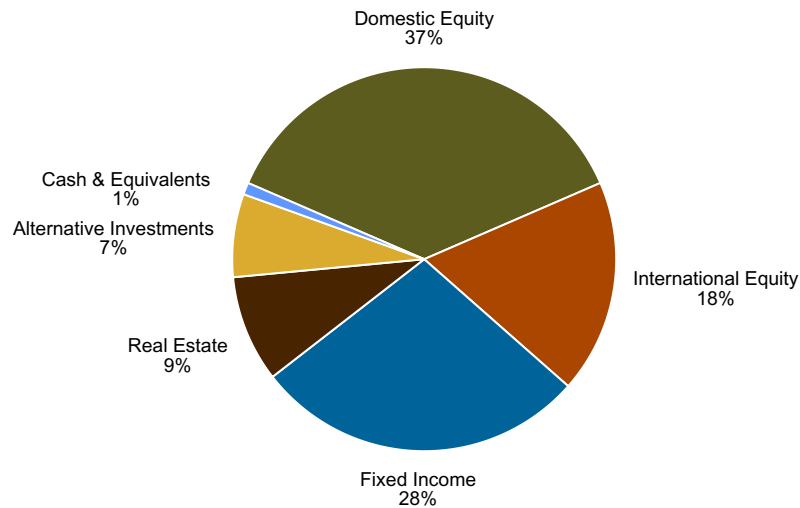
Actual vs Target Asset Allocation

The first chart below shows the Fund's asset allocation as of June 30, 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 | 16,976 | 39.7% | 37.0% | 2.7% | 1,154 |
| International Equity | 8,091 | 18.9% | 18.0% | 0.9% | 393 |
| Fixed Income | 12,468 | 29.2% | 28.0% | 1.2% | 495 |
| Real Estate | 2,780 | 6.5% | 9.0% | (2.5%) | (1,069) |
| Alternative Investments | 2,179 | 5.1% | 7.0% | (1.9%) | (814) |
| Cash & Equivalents | 268 | 0.6% | 1.0% | (0.4%) | (159) |
| Total | 42,762 | 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 June 30, 2019, with the distribution as of May 31, 2019.

Asset Distribution Across Investment Managers

| | June 30, 2019 | | May 31, 2019 | |
|--|-------------------------|---------------|-------------------------|---------------|
| | Market Value | Percent | Market Value | Percent |
| Domestic Equity* | \$16,976,333,996 | 39.70% | \$16,063,759,825 | 39.21% |
| Large Cap Growth | | | | |
| NTGI S&P 500 Growth Idx | 2,330,696,749 | 5.45% | 2,195,156,468 | 5.36% |
| Sands | 2,005,800,971 | 4.69% | 1,889,477,150 | 4.61% |
| Piedmont Russell 1000 G | 1,028,061,199 | 2.40% | 962,125,822 | 2.35% |
| Large Cap Value | | | | |
| Dodge & Cox | 1,327,054,195 | 3.10% | 1,261,538,924 | 3.08% |
| BMO | 1,345,037,630 | 3.15% | 1,272,642,177 | 3.11% |
| LSV | 1,510,140,459 | 3.53% | 1,402,047,832 | 3.42% |
| NTGI S&P 500 Value Idx | 1,660,746,186 | 3.88% | 1,536,751,450 | 3.75% |
| Large Cap Core | | | | |
| NTGI MarketCap Index | 2,622,467,401 | 6.13% | 2,450,610,486 | 5.98% |
| Small Cap Growth | | | | |
| Frontier | 557,623,629 | 1.30% | 520,183,269 | 1.27% |
| FIAM | 171,392,694 | 0.40% | 307,919,036 | 0.75% |
| Small Cap Value | | | | |
| Channing | 228,606,022 | 0.53% | 211,664,768 | 0.52% |
| Dimensional Small Cap Value | 558,987,867 | 1.31% | 520,848,844 | 1.27% |
| Inv. Counselors of Maryland | 674,245,004 | 1.58% | 628,575,329 | 1.53% |
| Micro Cap | | | | |
| Dimensional Micro Cap | 426,190,223 | 1.00% | 397,250,010 | 0.97% |
| Public Real Assets | | | | |
| Brookfield | 167,410,283 | 0.39% | 159,757,664 | 0.39% |
| Cohen & Steers | 361,873,485 | 0.85% | 347,210,597 | 0.85% |
| International Equity | \$8,090,580,091 | 18.92% | \$7,628,842,756 | 18.62% |
| International Large Cap Growth | | | | |
| EARNEST Partners | 640,121,224 | 1.50% | 604,272,393 | 1.48% |
| William Blair | 762,937,322 | 1.78% | 713,526,106 | 1.74% |
| International Large Cap Value | | | | |
| Brandes | 597,378,675 | 1.40% | 569,551,335 | 1.39% |
| Mondrian | 542,043,903 | 1.27% | 512,084,523 | 1.25% |
| Lazard | 117,228,083 | 0.27% | 110,611,098 | 0.27% |
| International Large Cap Core | | | | |
| Arrowstreet | 702,247,819 | 1.64% | 659,969,453 | 1.61% |
| Brown | 357,105,905 | 0.84% | 339,830,723 | 0.83% |
| GlobeFlex | 600,104,681 | 1.40% | 562,831,672 | 1.37% |
| NTGI MSCI EAFE Index | 1,878,865,714 | 4.39% | 1,775,598,854 | 4.33% |
| Progress Intl Equity | 315,595,479 | 0.74% | 299,328,825 | 0.73% |
| International All Cap Developed | | | | |
| Ativo International | 139,522,079 | 0.33% | 131,631,151 | 0.32% |
| International Small Cap | | | | |
| Franklin Templeton | 191,736,341 | 0.45% | 179,996,715 | 0.44% |
| William Blair | 277,350,378 | 0.65% | 262,418,488 | 0.64% |
| Emerging Markets | | | | |
| Genesis | 968,342,488 | 2.26% | 907,191,421 | 2.21% |

* 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 June 30, 2019, with the distribution as of May 31, 2019.

Asset Distribution Across Investment Managers

| | June 30, 2019 | | May 31, 2019 | |
|------------------------------------|-------------------------|---------------|-------------------------|---------------|
| | Market Value | Percent | Market Value | Percent |
| Total Fixed Income | \$12,468,064,014 | 29.16% | \$12,319,243,654 | 30.07% |
| Domestic Fixed Core | | | | |
| Brandes Core | 364,541,064 | 0.85% | 361,033,950 | 0.88% |
| EARNEST Partners | 1,069,753,723 | 2.50% | 1,062,042,660 | 2.59% |
| Piedmont Investment | 1,056,369,053 | 2.47% | 1,047,498,186 | 2.56% |
| Garcia Hamilton | 1,041,269,155 | 2.44% | 1,034,152,825 | 2.52% |
| Domestic Fixed Passive Core | | | | |
| NTGI Blmbg Agg. Index | 1,765,910,760 | 4.13% | 1,743,714,207 | 4.26% |
| BlackRock US Debt | 1,692,553,053 | 3.96% | 1,671,363,453 | 4.08% |
| Domestic Fixed Core Plus | | | | |
| LM Capital | 905,916,137 | 2.12% | 894,798,864 | 2.18% |
| Progress Fixed Income | 950,720,600 | 2.22% | 938,093,629 | 2.29% |
| Taplin, Canida, & Habacht | 934,039,330 | 2.18% | 922,712,727 | 2.25% |
| Western | 1,110,311,305 | 2.60% | 1,091,982,720 | 2.67% |
| Bank Loans | | | | |
| Barings Global Loan Fund | 573,517,630 | 1.34% | 572,701,815 | 1.40% |
| Emerging Markets Debt | | | | |
| Standish | 216,870,344 | 0.51% | 207,000,635 | 0.51% |
| High Yield | | | | |
| Mackay Shields | 785,958,312 | 1.84% | 771,814,862 | 1.88% |
| FIAM High Yield | 333,544 | 0.00% | 333,118 | 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 June 30, 2019, with the distribution as of May 31, 2019.

Asset Distribution Across Investment Managers

| | June 30, 2019 | | May 31, 2019 | |
|-------------------------------------|-------------------------|---------------|-------------------------|---------------|
| | Market Value | Percent | Market Value | Percent |
| Real Estate | \$2,779,894,601 | 6.50% | \$2,708,029,598 | 6.61% |
| Real Estate Core | | | | |
| TA Buckhead Ind. Prop. | 569,464,015 | 1.33% | 519,636,080 | 1.27% |
| Barings Core Property Fund | 1,070 | 0.00% | 1,070 | 0.00% |
| Barings European Core Property | 122,526,772 | 0.29% | 119,896,127 | 0.29% |
| Blackstone Property Partners Europe | 127,197,561 | 0.30% | 124,466,635 | 0.30% |
| INVESCO Core RE | 208,860,635 | 0.49% | 208,860,635 | 0.51% |
| INVESCO Euro real estate | 57,163,841 | 0.13% | 55,936,535 | 0.14% |
| AEW Core Property Trust | 236,476,046 | 0.55% | 236,476,046 | 0.58% |
| CBRE US Core Property Trust | 193,547,093 | 0.45% | 193,547,093 | 0.47% |
| Real Estate Non-Core | | | | |
| Artemis MWBE Spruce | 177,092,578 | 0.41% | 178,788,193 | 0.44% |
| Franklin Templeton EMREFF | 17,460,476 | 0.04% | 17,460,476 | 0.04% |
| Security Capital | 57,053,998 | 0.13% | 57,053,998 | 0.14% |
| Dune II | 26,059,989 | 0.06% | 26,059,989 | 0.06% |
| Non-Core Real Estate Funds* | 860,141,009 | 2.01% | 844,948,316 | 2.06% |
| Non-Core Intl Real Estate Funds** | 124,807,123 | 0.29% | 122,856,008 | 0.30% |
| Rockwood Fund VIII | 229,684 | 0.00% | 229,684 | 0.00% |
| Almanac ARS V | 1,812,710 | 0.00% | 1,812,710 | 0.00% |
| TA Fund IX | 1 | 0.00% | 1 | 0.00% |
| Alternative Investments | \$2,178,937,249 | 5.10% | \$2,159,358,112 | 5.27% |
| Absolute Return | | | | |
| Aurora | 629,033 | 0.00% | 630,564 | 0.00% |
| Private Equity | | | | |
| Abbott | 332,728,550 | 0.78% | 334,021,759 | 0.82% |
| Muller & Monroe MPEFF | 5,068,585 | 0.01% | 5,550,901 | 0.01% |
| Pantheon | 254,581,162 | 0.60% | 255,584,440 | 0.62% |
| Private Equity Fund - Domestic | 981,716,833 | 2.30% | 965,223,146 | 2.36% |
| Private Equity Fund - International | 294,961,630 | 0.69% | 292,108,454 | 0.71% |
| Agriculture | | | | |
| Premiere Partners IV | 197,125,377 | 0.46% | 197,389,572 | 0.48% |
| Timberland | | | | |
| Forest Investment Assoc. | 73,616,238 | 0.17% | 73,093,535 | 0.18% |
| Unlisted Infrastructure | | | | |
| Unlisted Infrastructure Funds | 38,509,841 | 0.09% | 35,755,741 | 0.09% |
| Cash & Equivalents | \$268,496,960 | 0.63% | \$85,072,336 | 0.21% |
| Total Fund | \$42,762,306,910 | 100.0% | \$40,964,306,281 | 100.0% |

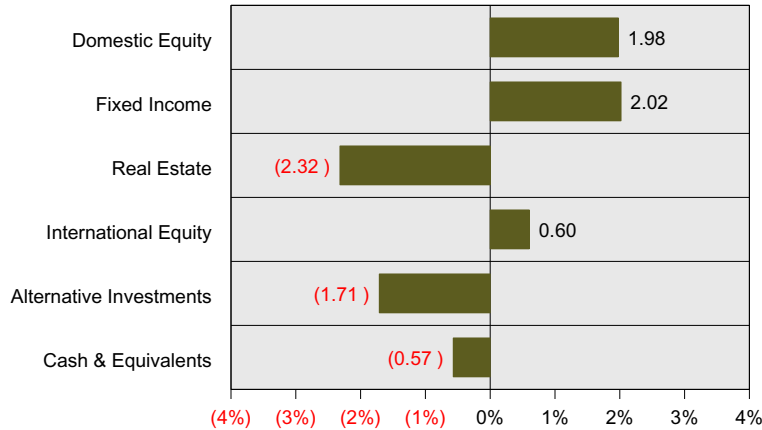
* Non-Core Real Estate Funds funded since September 2011.

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

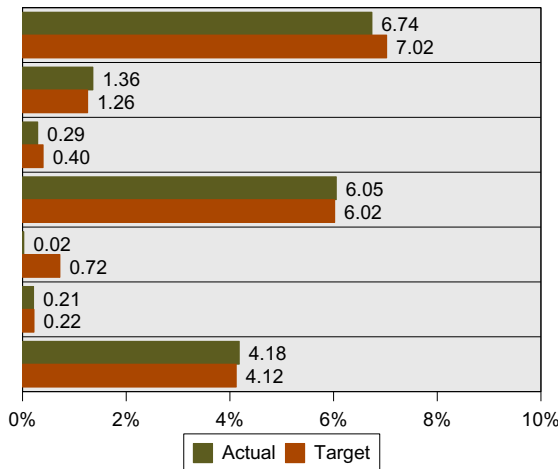
Monthly Total Fund Relative Attribution - June 30, 2019

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.

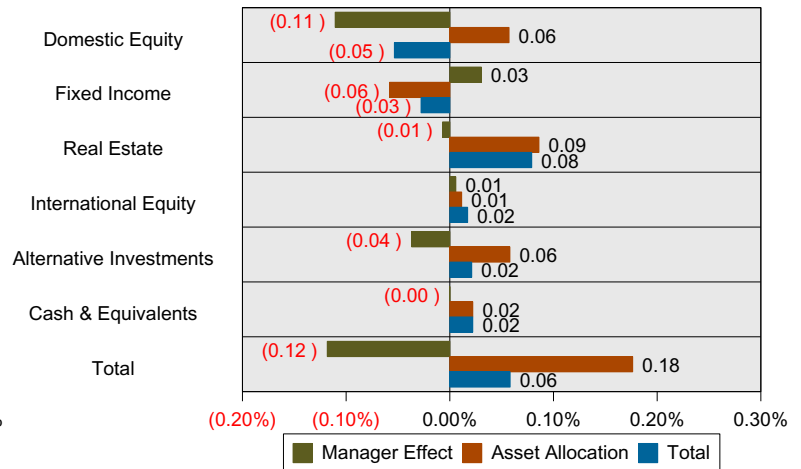
Asset Class Under or Overweighting



Actual vs Target Returns



Relative Attribution by Asset Class



Relative Attribution Effects for Month ended June 30, 2019

| Asset Class | Effective Actual Weight | Effective Target Weight | Actual Return | Target Return | Manager Effect | Asset Allocation | Total Relative Return |
|-------------------------|-------------------------|-------------------------|---------------|---------------|----------------|------------------|-----------------------|
| Domestic Equity | 39% | 37% | 6.74% | 7.02% | (0.11%) | 0.06% | (0.05%) |
| Fixed Income | 30% | 28% | 1.36% | 1.26% | 0.03% | (0.06%) | (0.03%) |
| Real Estate | 7% | 9% | 0.29% | 0.40% | (0.01%) | 0.09% | 0.08% |
| International Equity | 19% | 18% | 6.05% | 6.02% | 0.01% | 0.01% | 0.02% |
| Alternative Investments | 5% | 7% | 0.02% | 0.72% | (0.04%) | 0.06% | 0.02% |
| Cash & Equivalents | 0% | 1% | 0.21% | 0.22% | (0.00%) | 0.02% | 0.02% |
| Total | | | 4.18% | 4.12% | (0.12%) | 0.18% | 0.06% |

* 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 June 30, 2019

| | Last Month | Last 3 Months | Year to Date | Last 12 Months |
|-----------------------------------|---------------|---------------------|--------------------|----------------------|
| Domestic Equity | 6.74% | 3.22% | 18.28% | 5.90% |
| Blended Benchmark** | 7.02% | 4.10% | 18.71% | 8.98% |
| Domestic Equity - Net | 6.74% | 3.18% | 18.17% | 5.70% |
| International Equity | 6.05% | 3.07% | 14.57% | 0.89% |
| MSCI ACWI x US (Net) | 6.02% | 2.98% | 13.60% | 1.29% |
| International Equity - Net | 6.05% | 3.01% | 14.43% | 0.62% |
| Fixed Income | 1.36% | 3.04% | 6.65% | 7.83% |
| Blmbg Aggregate Index | 1.26% | 3.08% | 6.11% | 7.87% |
| Fixed Income - Net | 1.35% | 3.01% | 6.59% | 7.71% |
| Real Estate | 0.29% | 3.84% | 5.02% | 10.71% |
| Blended Benchmark*** | 0.40% | 1.20% | 2.41% | 5.91% |
| Real Estate - Net | 0.29% | 3.83% | 5.00% | 10.69% |
| Alternative Investments | 0.02% | 1.61% | 3.69% | 14.94% |
| Alternatives Custom Benchmark**** | 0.72% | 2.18% | 4.40% | 9.00% |
| Alternative Investments - Net | 0.02% | 1.61% | 3.64% | 14.82% |
| Private Equity | 0.02% | 1.83% | 4.60% | 18.03% |
| Alternatives Custom Benchmark**** | 0.72% | 2.18% | 4.40% | 9.00% |
| Agriculture | (0.13%) | (0.20%) | (2.36%) | 0.71% |
| Blended Benchmark*** | 0.40% | 1.20% | 2.41% | 5.91% |
| Timberland | 0.72% | 0.47% | 0.43% | (2.17%) |
| Blended Benchmark*** | 0.40% | 1.20% | 2.41% | 5.91% |
| Unlisted Infrastructure | 0.00% | 3.20% | 3.20% | 10.10% |
| Alternatives Custom Benchmark**** | 0.72% | 2.18% | 4.40% | 9.00% |
| Total Fund | 4.18% | 3.09% | 12.40% | 5.95% |
| Total Fund - Net | 4.18% | 3.05% | 12.31% | 5.79% |
| Total Fund Benchmark | 4.12% | 3.31% | 11.67% | 7.37% |

* 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 June 30, 2019

| | Last 36 Months | Last 60 Months | Last 84 Months | Last 120 Months | Since Inception |
|-----------------------------------|----------------------|----------------------|----------------------|-----------------------|--------------------------------|
| Domestic Equity | 14.25% | 9.41% | 13.58% | 14.55% | 11.57% ^(1/82) |
| Blended Benchmark** | 14.02% | 10.17% | 13.76% | 14.70% | 11.39% ^(1/82) |
| Domestic Equity - Net | 14.02% | 9.17% | 13.33% | 14.28% | 8.48% ^(1/05) |
| International Equity | 9.69% | 3.21% | 7.94% | 8.06% | 7.74% ^(9/86) |
| MSCI ACWI x US (Net) | 9.39% | 2.16% | 6.36% | 6.54% | - |
| International Equity - Net | 9.34% | 2.88% | 7.60% | 7.73% | 5.52% ^(1/05) |
| Fixed Income | 3.40% | 3.47% | 3.57% | 5.31% | 8.23% ^(1/82) |
| Blmbg Aggregate Index | 2.31% | 2.95% | 2.62% | 3.90% | 7.70% ^(1/82) |
| Fixed Income - Net | 3.25% | 3.32% | 3.42% | 5.16% | 4.79% ^(1/05) |
| Real Estate - Net | 9.54% | 10.13% | 10.74% | 8.92% | 7.47% ^(1/05) |
| Blended Benchmark*** | 6.76% | 8.86% | 9.69% | 9.73% | 7.57% ^(1/05) |
| Alternative Investments | 12.70% | 9.88% | 10.19% | 9.62% | 10.85% ^(2/86) |
| Alternatives Custom Benchmark**** | 9.00% | 9.00% | 9.00% | 9.30% | 12.71% ^(2/86) |
| Alternative Investments - Net | 12.50% | 9.60% | 9.90% | 9.32% | 8.66% ^(1/05) |
| Private Equity | 16.07% | 12.36% | 12.39% | 12.60% | 13.06% ^(2/86) |
| Alternatives Custom Benchmark**** | 9.00% | 9.00% | 9.00% | 9.30% | 12.71% ^(2/86) |
| Agriculture | (2.51%) | 5.75% | 9.95% | 8.40% | 7.30% ^(10/97) |
| Blended Benchmark*** | 6.76% | 8.86% | 9.69% | 9.73% | 7.47% ^(10/97) |
| Timberland | 1.11% | 1.48% | 2.63% | 2.23% | 7.46% ^(10/92) |
| Blended Benchmark*** | 6.76% | 8.86% | 9.69% | 9.73% | 7.49% ^(10/92) |
| Unlisted Infrastructure | - | - | - | - | 9.18% ^(4/18) |
| Alternatives Custom Benchmark**** | 9.00% | 9.00% | 9.00% | 9.30% | 9.00% ^(4/18) |
| Total Fund | 9.81% | 6.45% | 9.24% | 10.02% | 9.85% ^(1/82) |
| Total Fund - Net | 9.60% | 6.23% | 9.01% | 9.79% | 7.15% ^(1/05) |
| Total Fund Benchmark | 8.86% | 6.62% | 8.65% | 9.48% | 6.99% ^(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 June 30, 2019

| | Last Month | Last 3 Months | Year to Date | Last 12 Months |
|----------------------------------|---------------|---------------------|--------------------|----------------------|
| Large Cap Equity | 6.73% | 3.58% | 18.38% | 7.95% |
| Russell 1000 Index | 7.02% | 4.25% | 18.84% | 10.02% |
| Large Cap Growth | 6.30% | 4.45% | 23.11% | 11.43% |
| NTGI S&P 500 Growth Idx | 6.17% | 4.55% | 20.19% | 12.04% |
| S&P/Citi 500 Growth Index | 6.17% | 4.56% | 20.19% | 12.02% |
| NTGI S&P 500 Growth Idx - Net | 6.17% | 4.55% | 20.19% | 12.03% |
| Piedmont Russell 1000 G | 6.85% | 4.63% | 21.46% | - |
| Russell 1000 Growth Index | 6.87% | 4.64% | 21.49% | 11.56% |
| Piedmont Russell 1000 G - Net | 6.85% | 4.63% | 21.45% | - |
| Sands | 6.16% | 4.24% | 27.60% | 12.25% |
| LCG Blended Benchmark* | 6.87% | 4.64% | 21.49% | 11.56% |
| Russell 1000 Growth Index | 6.87% | 4.64% | 21.49% | 11.56% |
| Sands - Net | 6.16% | 4.19% | 27.47% | 11.99% |
| Large Cap Value | 7.01% | 2.58% | 14.24% | 4.68% |
| Dodge & Cox | 5.52% | 2.56% | 12.77% | 3.98% |
| LCV Blended Benchmark** | 7.18% | 3.84% | 16.24% | 8.46% |
| Russell 1000 Value Index | 7.18% | 3.84% | 16.24% | 8.46% |
| Dodge & Cox - Net | 5.52% | 2.51% | 12.66% | 3.77% |
| BMO | 6.01% | 1.30% | 13.33% | 3.11% |
| LCV Blended Benchmark** | 7.18% | 3.84% | 16.24% | 8.46% |
| Russell 1000 Value Index | 7.18% | 3.84% | 16.24% | 8.46% |
| BMO - Net | 6.01% | 1.24% | 13.21% | 2.89% |
| LSV | 8.10% | 2.18% | 13.74% | 2.44% |
| LCV Blended Benchmark** | 7.18% | 3.84% | 16.24% | 8.46% |
| Russell 1000 Value Index | 7.18% | 3.84% | 16.24% | 8.46% |
| LSV - Net | 8.10% | 2.13% | 13.61% | 2.20% |
| NTGI S&P 500 Value Idx | 8.07% | 4.02% | 16.73% | 8.69% |
| S&P/Citi 500 Value Index | 8.08% | 4.02% | 16.70% | 8.67% |
| NTGI S&P 500 Value Idx - Net | 8.07% | 4.02% | 16.72% | 8.68% |
| Large Cap Passive Core | 7.01% | 4.10% | 18.74% | 8.95% |
| NTGI MarketCap Idx | 7.01% | 4.10% | 18.74% | 8.95% |
| DJ U.S. Total Stock Market Index | 7.00% | 4.09% | 18.70% | 8.88% |
| NTGI MarketCap Idx - Net | 7.01% | 4.10% | 18.74% | 8.94% |

* 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 June 30, 2019

| | Last 36 Months | Last 60 Months | Last 120 Months | Since Inception |
|----------------------------------|----------------------|----------------------|-----------------------|----------------------------------|
| Large Cap Equity | 14.79% | 10.23% | 14.79% | 11.23% ^(1/82) |
| Russell 1000 Index | 14.15% | 10.45% | 14.77% | 11.60% ^(1/82) |
| Large Cap Growth | 19.57% | 13.16% | 16.29% | 11.98% ^(1/82) |
| NTGI S&P 500 Growth Idx | 17.22% | 13.07% | 16.11% | 7.97% ^(8/01) |
| S&P/Citi 500 Growth Index | 17.26% | 13.09% | 16.10% | 7.94% ^(8/01) |
| NTGI S&P 500 Growth Idx - Net | 17.22% | 13.07% | 16.11% | 9.89% ^(1/05) |
| Piedmont Russell 1000 G | - | - | - | 2.18% ^(10/18) |
| Russell 1000 Growth Index | 18.07% | 13.39% | 16.28% | 2.19% ^(10/18) |
| Piedmont Russell 1000 G - Net | - | - | - | 2.17% ^(10/18) |
| Sands | 24.07% | 13.92% | 19.87% | 12.54% ^(11/03) |
| LCG Blended Benchmark* | 18.07% | 13.39% | 16.28% | 9.91% ^(11/03) |
| Russell 1000 Growth Index | 18.07% | 13.39% | 16.28% | 9.96% ^(11/03) |
| Sands - Net | 23.80% | 13.66% | 19.60% | 11.53% ^(1/05) |
| Large Cap Value | 11.87% | 7.97% | 13.70% | 10.27% ^(10/82) |
| Dodge & Cox | 14.30% | 8.49% | 14.33% | 9.43% ^(9/03) |
| LCV Blended Benchmark** | 10.19% | 7.46% | 13.19% | 8.34% ^(9/03) |
| Russell 1000 Value Index | 10.19% | 7.46% | 13.19% | 8.51% ^(9/03) |
| Dodge & Cox - Net | 14.07% | 8.26% | 14.08% | 7.78% ^(1/05) |
| BMO | 11.11% | 7.78% | 13.22% | 7.99% ^(2/01) |
| LCV Blended Benchmark** | 10.19% | 7.46% | 13.19% | 5.74% ^(2/01) |
| Russell 1000 Value Index | 10.19% | 7.46% | 13.19% | 6.75% ^(2/01) |
| BMO - Net | 10.88% | 7.55% | 12.96% | 8.05% ^(1/05) |
| LSV | 11.53% | 7.71% | 14.14% | 10.80% ^(2/03) |
| LCV Blended Benchmark** | 10.19% | 7.46% | 13.19% | 9.27% ^(2/03) |
| Russell 1000 Value Index | 10.19% | 7.46% | 13.19% | 9.28% ^(2/03) |
| LSV - Net | 11.27% | 7.45% | 13.86% | 8.15% ^(1/05) |
| NTGI S&P 500 Value Idx | 10.76% | 8.00% | 13.17% | 5.85% ^(8/99) |
| S&P/Citi 500 Value Index | 10.64% | 7.92% | 13.10% | 5.82% ^(8/99) |
| NTGI S&P 500 Value Idx - Net | 10.75% | 8.00% | 13.16% | 7.08% ^(1/05) |
| Large Cap Passive Core | 14.08% | 10.22% | 14.76% | 11.15% ^(1/85) |
| NTGI MarketCap Idx | 14.08% | 10.22% | 14.77% | 10.92% ^(2/85) |
| DJ U.S. Total Stock Market Index | 13.99% | 10.13% | 14.68% | 10.86% ^(2/85) |
| NTGI MarketCap Idx - Net | 14.07% | 10.22% | 14.77% | 8.66% ^(1/05) |

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

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

Small Cap Equity Returns

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

Returns for Periods Ended June 30, 2019

| | Last Month | Last 3 Months | Year to Date | Last 12 Months |
|------------------------------------|---------------|---------------------|--------------------|----------------------|
| Small Cap Equity | 7.24% | 1.26% | 17.24% | (3.40%) |
| Russell 2000 Index | 7.07% | 2.10% | 16.98% | (3.31%) |
| Small Cap Growth | 6.91% | 0.89% | 22.02% | 2.92% |
| Frontier | 7.20% | (0.85%) | 21.14% | 4.32% |
| Russell 2000 Growth Index | 7.70% | 2.75% | 20.36% | (0.49%) |
| Frontier - Net | 7.20% | (0.97%) | 20.49% | 3.49% |
| FIAM | 6.33% | 3.14% | 23.67% | 3.13% |
| Russell 2000 Growth Index | 7.70% | 2.75% | 20.36% | (0.49%) |
| FIAM - Net | 6.16% | 2.97% | 23.48% | 2.85% |
| Small Cap Value | 7.40% | 1.64% | 15.15% | (7.06%) |
| Channing | 8.00% | 3.06% | 18.81% | (4.02%) |
| Russell 2000 Value Index | 6.37% | 1.38% | 13.47% | (6.24%) |
| Channing - Net | 8.00% | 2.94% | 18.52% | (4.51%) |
| DFA Small Cap Value | 7.32% | (0.52%) | 10.55% | (10.85%) |
| Russell 2000 Value Index | 6.37% | 1.38% | 13.47% | (6.24%) |
| DFA Small Cap Value - Net | 7.32% | (0.64%) | 10.29% | (11.29%) |
| Inv. Counselors of Maryland | 7.27% | 3.00% | 17.99% | (4.72%) |
| Russell 2000 Value Index | 6.37% | 1.38% | 13.47% | (6.24%) |
| Inv. Couns. of Maryland - Net | 7.27% | 2.91% | 17.76% | (5.19%) |
| Micro Cap | 7.29% | 1.10% | 13.04% | (7.23%) |
| DFA Micro Cap | 7.29% | 1.10% | 13.04% | (6.91%) |
| Russell 2000 Value Index | 6.37% | 1.38% | 13.47% | (6.24%) |
| Russell 2000 Index | 7.07% | 2.10% | 16.98% | (3.31%) |
| DFA Micro Cap - Net | 7.29% | 0.98% | 12.78% | (7.37%) |
| Public Real Assets | 4.40% | 4.33% | 19.72% | 15.72% |
| Public Real Assets Benchmark (1) | 4.07% | 4.15% | 18.51% | 14.48% |
| Brookfield Public Global Inf | 4.79% | 3.81% | 20.90% | 12.78% |
| Dow Jones Global Infra Comp Idx | 3.78% | 3.73% | 20.21% | 11.41% |
| Brookfield Public Global Inf - Net | 4.79% | 3.68% | 20.59% | 12.19% |
| Cohen & Steers Public Global Inf | 4.22% | 4.58% | 19.18% | 17.14% |
| FTSE GI Core Infr 50/50 N | 4.17% | 4.29% | 17.94% | 15.47% |
| Cohen & St Public Global Inf - Net | 4.22% | 4.47% | 18.93% | 16.63% |

(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 June 30, 2019

| | Last 36 Months | Last 60 Months | Last 120 Months | Since Inception |
|------------------------------------|----------------------|----------------------|-----------------------|---------------------------------|
| Small Cap Equity | 11.78% | 6.67% | 14.02% | 12.04% ^(7/88) |
| Russell 2000 Index | 12.30% | 7.06% | 13.45% | 9.40% ^(7/88) |
| Small Cap Growth | 14.27% | 8.96% | 14.70% | 12.92% ^(7/88) |
| Frontier | 19.84% | 9.83% | 14.82% | 13.21% ^(8/88) |
| Russell 2000 Growth Index | 14.69% | 8.63% | 14.41% | 8.25% ^(8/88) |
| Frontier - Net | 19.11% | 9.17% | 14.09% | 9.86% ^(1/05) |
| FIAM | 12.16% | 9.64% | 15.54% | 13.48% ^(8/88) |
| Russell 2000 Growth Index | 14.69% | 8.63% | 14.41% | 8.25% ^(8/88) |
| FIAM - Net | 11.72% | 9.11% | 14.95% | 10.73% ^(1/05) |
| Small Cap Value | 10.31% | 6.01% | 13.78% | 11.66% ^(9/89) |
| Channing | 9.54% | 5.83% | - | 10.22% ^(7/11) |
| Russell 2000 Value Index | 9.81% | 5.39% | 12.40% | 8.77% ^(7/11) |
| Channing - Net | 8.99% | 5.33% | - | 9.63% ^(7/11) |
| DFA Small Cap Value | 8.15% | 4.39% | 14.08% | 11.71% ^(2/96) |
| Russell 2000 Value Index | 9.81% | 5.39% | 12.40% | 9.40% ^(2/96) |
| DFA Small Cap Value - Net | 7.59% | 3.88% | 13.53% | 7.29% ^(1/05) |
| Inv. Counselors of Maryland | 12.60% | 8.33% | 14.33% | 11.44% ^(5/99) |
| Russell 2000 Value Index | 9.81% | 5.39% | 12.40% | 8.92% ^(5/99) |
| Inv. Couns. of Maryland - Net | 11.99% | 7.80% | 13.79% | 8.56% ^(1/05) |
| Micro Cap | 9.75% | 3.59% | 12.68% | 11.41% ^(7/84) |
| DFA Micro Cap | 11.67% | 7.37% | 14.43% | 11.05% ^(8/87) |
| Russell 2000 Value Index | 9.81% | 5.39% | 12.40% | 9.74% ^(8/87) |
| Russell 2000 Index | 12.30% | 7.06% | 13.45% | 8.80% ^(8/87) |
| DFA Micro Cap - Net | 11.12% | 6.83% | 13.87% | 7.75% ^(1/05) |
| Public Real Assets | - | - | - | 8.95% ^(8/17) |
| Public Real Assets Benchmark (1) | - | - | - | 7.04% ^(8/17) |
| Brookfield Public Global Inf | - | - | - | 6.06% ^(8/17) |
| Dow Jones Global Infra Comp Idx | 6.48% | 3.30% | 12.01% | 4.89% ^(8/17) |
| Brookfield Public Global Inf - Net | - | - | - | 5.56% ^(8/17) |
| Cohen & Steers Public Global Inf | - | - | - | 10.37% ^(8/17) |
| FTSE GI Core Infr 50/50 N | 9.24% | 6.54% | - | 7.74% ^(8/17) |
| Cohen & St Public Global Inf - Net | - | - | - | 9.95% ^(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 June 30, 2019

| | Last Month | Last 3 Months | Year to Date | Last 12 Months |
|------------------------------|---------------|---------------------|--------------------|----------------------|
| Intl Large Cap Equity | 5.95% | 3.04% | 13.88% | 0.70% |
| MSCI ACWI ex-US Index | 6.02% | 2.98% | 13.60% | 1.29% |
| Intl Large Cap Growth | 6.47% | 4.08% | 17.23% | 0.16% |
| EARNEST Partners | 5.93% | 2.59% | 13.94% | (0.59%) |
| MSCI ACWI ex-US Index | 6.02% | 2.98% | 13.60% | 1.29% |
| MSCI ACWI ex-US Growth | 6.68% | 4.55% | 17.53% | 3.03% |
| EARNEST Partners - Net | 5.93% | 2.59% | 13.88% | (0.75%) |
| William Blair | 6.92% | 5.37% | 20.15% | 0.95% |
| MSCI ACWI ex-US Index | 6.02% | 2.98% | 13.60% | 1.29% |
| MSCI ACWI ex-US Growth | 6.68% | 4.55% | 17.53% | 3.03% |
| William Blair - Net | 6.92% | 5.28% | 19.94% | 0.58% |
| Intl Large Cap Value | 5.40% | 1.17% | 9.63% | (0.19%) |
| Brandes | 4.89% | (0.05%) | 6.71% | (4.11%) |
| MSCI ACWI ex-US Index | 6.02% | 2.98% | 13.60% | 1.29% |
| MSCI ACWI ex-US Value | 5.44% | 1.86% | 10.48% | 0.56% |
| Brandes - Net | 4.89% | (0.10%) | 6.60% | (4.26%) |
| Mondrian | 5.85% | 1.67% | 11.69% | 3.52% |
| MSCI ACWI ex-US Index | 6.02% | 2.98% | 13.60% | 1.29% |
| MSCI ACWI ex-US Value | 5.44% | 1.86% | 10.48% | 0.56% |
| Mondrian - Net | 5.85% | 1.67% | 11.69% | 3.52% |
| Lazard | 5.98% | 5.30% | 15.97% | 4.25% |
| MSCI ACWI ex-US Index | 6.02% | 2.98% | 13.60% | 1.29% |
| MSCI ACWI ex-US Value | 5.44% | 1.86% | 10.48% | 0.56% |
| Lazard - Net | 5.98% | 5.23% | 15.83% | 3.98% |

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 June 30, 2019

| | Last 36 Months | Last 60 Months | Last 120 Months | Since Inception |
|------------------------------|----------------------|----------------------|-----------------------|---------------------------------|
| Intl Large Cap Equity | 9.55% | 3.11% | 7.91% | 7.73% ^(9/86) |
| MSCI ACWI ex-US Index | 9.39% | 2.16% | 6.54% | - |
| Intl Large Cap Growth | 10.41% | 3.38% | 8.32% | 8.34% ^(9/02) |
| EARNEST Partners | 10.82% | 2.33% | 8.10% | 8.97% ^(10/04) |
| MSCI ACWI ex-US Index | 9.39% | 2.16% | 6.54% | 5.89% ^(10/04) |
| MSCI ACWI ex-US Growth | 10.21% | 4.38% | 7.98% | 6.92% ^(10/04) |
| EARNEST Partners - Net | 10.62% | 2.13% | 7.74% | 7.68% ^(1/05) |
| William Blair | 10.14% | 4.34% | 9.58% | 9.62% ^(10/02) |
| MSCI ACWI ex-US Index | 9.39% | 2.16% | 6.54% | 8.06% ^(10/02) |
| MSCI ACWI ex-US Growth | 10.21% | 4.38% | 7.98% | 8.53% ^(10/02) |
| William Blair - Net | 9.74% | 3.96% | 9.18% | 6.32% ^(1/05) |
| Intl Large Cap Value | 7.65% | 1.89% | 6.22% | 8.62% ^(10/95) |
| Brandes | 7.74% | 1.54% | 6.33% | 8.73% ^(1/96) |
| MSCI ACWI ex-US Index | 9.39% | 2.16% | 6.54% | 5.14% ^(1/96) |
| MSCI ACWI ex-US Value | 9.58% | 0.87% | 6.02% | - |
| Brandes - Net | 7.50% | 1.32% | 6.09% | 4.11% ^(1/05) |
| Mondrian | 7.50% | 2.19% | - | 5.45% ^(4/12) |
| MSCI ACWI ex-US Index | 9.39% | 2.16% | 6.54% | 4.98% ^(4/12) |
| MSCI ACWI ex-US Value | 9.58% | 0.87% | 6.02% | 4.43% ^(4/12) |
| Mondrian - Net | 7.15% | 1.78% | - | 5.01% ^(4/12) |
| Lazard | 8.44% | 2.82% | - | 6.57% ^(4/12) |
| MSCI ACWI ex-US Index | 9.39% | 2.16% | 6.54% | 4.98% ^(4/12) |
| MSCI ACWI ex-US Value | 9.58% | 0.87% | 6.02% | 4.43% ^(4/12) |
| Lazard - Net | 8.17% | 2.41% | - | 6.03% ^(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 June 30, 2019

| | Last Month | Last 3 Months | Year to Date | Last 12 Months |
|-----------------------------------|---------------|---------------------|--------------------|----------------------|
| Intl Large Cap Active Core | 6.07% | 2.74% | 14.26% | 1.12% |
| Arrowstreet | 6.41% | 2.89% | 14.08% | 2.75% |
| MSCI ACWI ex-US Index | 6.02% | 2.98% | 13.60% | 1.29% |
| Arrowstreet - Net | 6.41% | 2.77% | 13.82% | 2.26% |
| Brown | 5.08% | 4.76% | 16.60% | 3.20% |
| MSCI ACWI ex-US Index | 6.02% | 2.98% | 13.60% | 1.29% |
| Brown - Net | 5.08% | 4.70% | 16.46% | 2.94% |
| GlobeFlex | 6.62% | 0.99% | 12.64% | (2.71%) |
| MSCI ACWI ex-US Index | 6.02% | 2.98% | 13.60% | 1.29% |
| GlobeFlex - Net | 6.62% | 0.88% | 12.40% | (3.11%) |
| Progress Intl Equity | 5.43% | 3.53% | 15.19% | 2.66% |
| Custom Benchmark | 6.02% | 2.98% | 13.60% | 1.29% |
| MSCI ACWI ex-US Index | 6.02% | 2.98% | 13.60% | 1.29% |
| Progress Intl Equity - Net | 5.43% | 3.41% | 14.91% | 2.15% |
| Intl Large Cap Pass. Core | 5.82% | 3.86% | 14.22% | 1.31% |
| NTGI MSCI EAFE Idx | 5.82% | 3.86% | 14.22% | 1.31% |
| MSCI EAFE Index | 5.93% | 3.68% | 14.03% | 1.08% |
| NTGI EAFE Idx - Net | 5.82% | 3.86% | 14.22% | 1.30% |
| Intl All Cap Developed | 5.99% | 4.89% | 7.89% | - |
| Ativo International | 5.99% | 4.89% | - | - |
| MSCI EAFE + Canada | 5.94% | 3.79% | 14.64% | 1.29% |
| Ativo International - Net | 5.99% | 4.89% | - | - |
| International Small Cap | 6.03% | 4.24% | 17.76% | (4.65%) |
| Franklin Templeton | 6.52% | 1.94% | 15.10% | (4.21%) |
| ACWI Small Cap ex US | 4.41% | 1.21% | 11.60% | (5.94%) |
| Franklin Templeton - Net | 6.52% | 1.75% | 14.68% | (4.95%) |
| William Blair | 5.69% | 5.79% | 19.89% | (4.89%) |
| ACWI Small Cap ex US | 4.41% | 1.21% | 11.60% | (5.94%) |
| Intl SC Blended Benchmark | 4.41% | 1.21% | 11.60% | (5.94%) |
| William Blair - Net | 5.69% | 5.60% | 19.44% | (5.63%) |
| Emerging Markets | 6.74% | 2.46% | 18.58% | 5.94% |
| Genesis | 6.74% | 2.46% | 18.58% | 5.94% |
| MSCI Emerging Markets Index | 6.32% | 0.74% | 10.78% | 1.62% |
| Genesis - Net | 6.74% | 2.41% | 18.36% | 5.42% |

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 June 30, 2019

| | Last 36 Months | Last 60 Months | Last 120 Months | Since Inception | |
|-----------------------------------|----------------------|----------------------|-----------------------|--------------------|---------|
| Intl Large Cap Active Core | 10.34% | 4.49% | 9.64% | 4.84% | (2/08) |
| Arrowstreet | 11.00% | 4.99% | 9.87% | 5.07% | (3/08) |
| MSCI ACWI ex-US Index | 9.39% | 2.16% | 6.54% | 2.05% | (3/08) |
| Arrowstreet - Net | 10.49% | 4.50% | 9.35% | 4.58% | (3/08) |
| Brown | 8.97% | 4.59% | 9.72% | 7.98% | (10/04) |
| MSCI ACWI ex-US Index | 9.39% | 2.16% | 6.54% | 5.89% | (10/04) |
| Brown - Net | 8.14% | 3.64% | 8.94% | 6.46% | (1/05) |
| GlobeFlex | 9.77% | 3.74% | 8.88% | 4.83% | (3/06) |
| MSCI ACWI ex-US Index | 9.39% | 2.16% | 6.54% | 3.69% | (3/06) |
| GlobeFlex - Net | 9.35% | 3.34% | 8.45% | 4.38% | (3/06) |
| Progress Intl Equity | 11.43% | 4.68% | - | 4.68% | (7/14) |
| Custom Benchmark | 10.32% | 3.25% | - | 3.25% | (7/14) |
| MSCI ACWI ex-US Index | 9.39% | 2.16% | 6.54% | 2.16% | (7/14) |
| Progress Intl Equity - Net | 10.89% | 4.21% | - | 4.21% | (7/14) |
| Intl Large Cap Pass. Core | 9.50% | 2.62% | 7.33% | 3.43% | (1/00) |
| NTGI MSCI EAFE Idx | 9.50% | 2.62% | 7.31% | 3.79% | (2/00) |
| MSCI EAFE Index | 9.11% | 2.25% | 6.90% | 3.41% | (2/00) |
| NTGI EAFE Idx - Net | 9.49% | 2.61% | 7.31% | 4.91% | (1/05) |
| Intl All Cap Developed | - | - | - | 8.04% | (2/19) |
| Ativo International | - | - | - | 8.04% | (2/19) |
| MSCI EAFE + Canada | 9.01% | 2.04% | 6.75% | 7.00% | (2/19) |
| Ativo International - Net | - | - | - | 8.04% | (2/19) |
| International Small Cap | 8.69% | 3.91% | 9.23% | 4.65% | (12/05) |
| Franklin Templeton | 10.29% | 3.94% | - | 6.20% | (8/11) |
| ACWI Small Cap ex US | 7.76% | 2.77% | 8.48% | 4.35% | (8/11) |
| Franklin Templeton - Net | 9.48% | 3.17% | - | 5.44% | (8/11) |
| William Blair | 7.47% | 3.95% | - | 8.87% | (9/10) |
| ACWI Small Cap ex US | 7.76% | 2.77% | 8.48% | 6.69% | (9/10) |
| Intl SC Blended Benchmark | 7.76% | 2.77% | 8.13% | 7.06% | (9/10) |
| William Blair - Net | 6.65% | 3.15% | - | 8.04% | (9/10) |
| Emerging Markets | 11.38% | 3.56% | 8.98% | 9.06% | (2/92) |
| Genesis | 11.38% | 3.56% | 8.98% | 11.20% | (5/04) |
| MSCI Emerging Markets Index | 11.07% | 2.87% | 6.17% | 8.85% | (5/04) |
| Genesis - Net | 10.75% | 2.95% | 8.35% | 9.21% | (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 June 30, 2019

| | Last Month | Last 3 Months | Year to Date | Last 12 Months |
|--------------------------------|-----------------------|------------------------------|-----------------------------|-------------------------------|
| Dom. Fixed Active Core | 1.00% | 2.94% | 5.85% | 7.24% |
| Brandes Core* | 1.09% | 2.63% | 5.71% | 6.81% |
| Blmbg Aggregate Index | 1.26% | 3.08% | 6.11% | 7.87% |
| Brandes Core - Net | 1.09% | 2.63% | 5.71% | 6.81% |
| EARNEST Partners | 1.02% | 3.13% | 6.06% | 8.13% |
| Blmbg Aggregate Index | 1.26% | 3.08% | 6.11% | 7.87% |
| EARNEST Partners - Net | 1.02% | 3.10% | 5.99% | 7.99% |
| Piedmont | 1.19% | 3.26% | 6.26% | 7.20% |
| Blmbg Aggregate Index | 1.26% | 3.08% | 6.11% | 7.87% |
| Piedmont - Net | 1.19% | 3.23% | 6.19% | 7.06% |
| Garcia Hamilton | 0.77% | 2.52% | 5.25% | 6.45% |
| Blmbg Aggregate Index | 1.26% | 3.08% | 6.11% | 7.87% |
| Garcia Hamilton | 0.77% | 2.49% | 5.21% | 6.35% |
| Dom. Fixed Passive Core | 1.27% | 3.10% | 6.17% | 7.96% |
| BlackRock US Debt | 1.27% | 3.09% | 6.18% | 7.97% |
| Blmbg Aggregate Index | 1.26% | 3.08% | 6.11% | 7.87% |
| BlackRock US Debt - Net | 1.27% | 3.09% | 6.17% | 7.97% |
| NTGI Blmbg Agg. Index | 1.27% | 3.10% | 6.17% | 7.94% |
| Blmbg Aggregate Index | 1.26% | 3.08% | 6.11% | 7.87% |
| NTGI Blmbg Agg. Index - Net | 1.27% | 3.10% | 6.17% | 7.93% |

* 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 June 30, 2019

| | Last 36 Months | Last 60 Months | Last 120 Months | Since Inception |
|--------------------------------|----------------------|----------------------|-----------------------|--------------------------------|
| Dom. Fixed Active Core | 2.69% | 3.31% | 4.73% | 4.58% ^(4/01) |
| Brandes Core * | 2.12% | - | - | 2.69% ^(3/16) |
| Blmbg Aggregate Index | 2.31% | 2.95% | 3.90% | 3.03% ^(3/16) |
| Brandes Core - Net | 2.12% | - | - | 2.69% ^(3/16) |
| EARNEST Partners | 2.69% | 3.48% | 4.69% | 4.62% ^(5/05) |
| Blmbg Aggregate Index | 2.31% | 2.95% | 3.90% | 4.16% ^(5/05) |
| EARNEST Partners - Net | 2.54% | 3.30% | 4.50% | 4.42% ^(5/05) |
| Piedmont | 2.76% | 3.15% | 4.66% | 4.37% ^(6/05) |
| Blmbg Aggregate Index | 2.31% | 2.95% | 3.90% | 4.11% ^(6/05) |
| Piedmont - Net | 2.61% | 3.00% | 4.50% | 4.18% ^(6/05) |
| Garcia Hamilton | 2.63% | - | - | 3.29% ^(6/15) |
| Blmbg Aggregate Index | 2.31% | 2.95% | 3.90% | 2.88% ^(6/15) |
| Garcia Hamilton | 2.53% | - | - | 3.19% ^(6/15) |
| Dom. Fixed Passive Core | 2.36% | 3.02% | 3.98% | 5.94% ^(1/90) |
| BlackRock US Debt | 2.41% | 3.06% | - | 3.35% ^(10/13) |
| Blmbg Aggregate Index | 2.31% | 2.95% | 3.90% | 3.22% ^(10/13) |
| BlackRock US Debt - Net | 2.41% | 3.06% | - | 3.35% ^(10/13) |
| NTGI Blmbg Agg. Index | 2.32% | 2.99% | 3.97% | 6.00% ^(2/90) |
| Blmbg Aggregate Index | 2.31% | 2.95% | 3.90% | 5.99% ^(2/90) |
| NTGI Blmbg Agg. Index - Net | 2.31% | 2.98% | 3.96% | 4.10% ^(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 June 30, 2019

| | Last Month | Last 3 Months | Year to Date | Last 12 Months |
|---------------------------------|---------------|---------------------|--------------------|----------------------|
| Domestic Fixed Core Plus | 1.55% | 3.26% | 7.09% | 8.37% |
| LM Capital | 1.43% | 3.15% | 7.06% | 7.87% |
| Blmbg Aggregate Index | 1.26% | 3.08% | 6.11% | 7.87% |
| LM Capital - Net | 1.43% | 3.11% | 6.97% | 7.70% |
| Progress Fixed Income | 1.35% | 3.25% | 6.76% | 8.09% |
| Blmbg Aggregate Index | 1.26% | 3.08% | 6.11% | 7.87% |
| Progress Fixed Inc. - Net | 1.35% | 3.16% | 6.59% | 7.74% |
| BMO-TCH | 1.41% | 2.95% | 6.71% | 7.86% |
| Blmbg Aggregate Index | 1.26% | 3.08% | 6.11% | 7.87% |
| BMO-TCH. - Net | 1.41% | 2.92% | 6.64% | 7.72% |
| Western | 1.93% | 3.61% | 7.73% | 9.46% |
| Blmbg Aggregate Index | 1.26% | 3.08% | 6.11% | 7.87% |
| Western - Net | 1.93% | 3.58% | 7.70% | 9.35% |
| Bank Loans | 0.14% | 1.20% | 4.79% | 3.50% |
| Barings Global Loan Fund | 0.14% | 1.20% | 4.79% | 3.50% |
| Custom Benchmark | 0.26% | 1.64% | 5.27% | 4.51% |
| Barings Global Loan Fund - Net | 0.14% | 1.20% | 4.79% | 3.45% |
| Emerging Markets | 4.77% | 5.25% | 10.42% | 10.77% |
| Standish | 4.77% | 5.25% | 10.42% | 10.77% |
| Custom Benchmark | 4.03% | 4.64% | 9.24% | 10.04% |
| Standish - Net | 4.77% | 5.16% | 10.23% | 10.39% |
| High Yield | 2.39% | 2.98% | 10.61% | 9.28% |
| MacKay Shields | 2.39% | 2.98% | 10.62% | 9.27% |
| ML High Yield Cash Pay Index | 2.46% | 2.57% | 10.16% | 7.61% |
| MacKay Shields - Net | 2.31% | 2.90% | 10.45% | 8.92% |

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 June 30, 2019

| | Last 36 Months | Last 60 Months | Last 120 Months | Since Inception |
|---------------------------------|----------------------|----------------------|-----------------------|--------------------------------|
| Domestic Fixed Core Plus | 3.35% | 3.57% | 5.43% | 8.09% ^(1/82) |
| LM Capital | 2.77% | 3.26% | 4.82% | 4.88% ^(5/05) |
| Blmbg Aggregate Index | 2.31% | 2.95% | 3.90% | 4.16% ^(5/05) |
| LM Capital - Net | 2.61% | 3.10% | 4.65% | 4.71% ^(5/05) |
| Progress Fixed Income | 3.29% | 3.45% | 4.82% | 4.96% ^(1/06) |
| Blmbg Aggregate Index | 2.31% | 2.95% | 3.90% | 4.25% ^(1/06) |
| Progress Fixed Inc. - Net | 2.96% | 3.12% | 4.46% | 4.61% ^(1/06) |
| BMO-TCH | 4.09% | 3.74% | 5.49% | 5.04% ^(5/05) |
| Blmbg Aggregate Index | 2.31% | 2.95% | 3.90% | 4.16% ^(5/05) |
| BMO-TCH - Net | 3.95% | 3.60% | 5.35% | 4.91% ^(5/05) |
| Western | 3.95% | 4.14% | 6.36% | 5.50% ^(11/01) |
| Blmbg Aggregate Index | 2.31% | 2.95% | 3.90% | 4.31% ^(11/01) |
| Western - Net | 3.82% | 4.00% | 6.22% | 4.96% ^(1/05) |
| Bank Loans | 5.77% | 4.36% | - | 4.45% ^(8/14) |
| Barings Global Loan Fund | 5.77% | 4.36% | - | 4.45% ^(8/14) |
| Custom Benchmark | 5.57% | - | - | 4.13% ^(8/14) |
| Barings Global Loan Fund - Net | 5.35% | 3.87% | - | 3.96% ^(8/14) |
| Emerging Markets | 5.58% | 1.04% | - | 3.06% ^(8/14) |
| Standish | 5.58% | - | - | 3.06% ^(8/14) |
| Custom Benchmark | 4.81% | 2.17% | 5.40% | 2.33% ^(8/14) |
| Standish - Net | 5.21% | - | - | 2.72% ^(8/14) |
| High Yield | 8.17% | 5.66% | 9.74% | 9.58% ^(4/86) |
| MacKay Shields | 8.27% | 5.85% | 9.33% | 8.90% ^(11/00) |
| ML High Yield Cash Pay Index | 7.54% | 4.70% | 9.16% | 7.60% ^(11/00) |
| MacKay Shields - Net | 7.91% | 5.49% | 8.95% | 6.98% ^(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 | 8.28 | 2.18 | 08/31/2010 |
| Genesis | 7.81 | 2.35 | 04/30/2004 |
| William Blair | 6.55 | 1.55 | 09/30/2002 |
| Sands | 6.11 | 2.63 | 10/31/2003 |
| Channing | 5.34 | 1.45 | 06/30/2011 |

Five Worst Performing Portfolio's vs. Benchmarks

| Manager | Year-to-Date Underperformance | Since Inception Underperformance | |
|-------------|-------------------------------|----------------------------------|------------|
| | (in % points) | (in % points) | |
| Brandes | -6.89 | 3.60 | 12/31/1995 |
| Dodge & Cox | -3.47 | 1.09 | 08/31/2003 |
| DFA SCV | -2.92 | 2.31 | 01/31/1996 |
| BMO | -2.91 | 2.25 | 01/31/2001 |
| LSV | -2.49 | 1.52 | 01/31/2003 |

Five Highest Returning Portfolios

| Manager | Year-to-Date Return | Since Inception Return | |
|----------------|---------------------|------------------------|------------|
| | (in % points) | (in % points) | |
| Sands | 27.60 | 12.54 | 10/31/2003 |
| Pyramis SCG | 23.67 | 13.48 | 07/31/1988 |
| Frontier | 21.14 | 13.21 | 07/31/1988 |
| NTGI S&P500 Gr | 20.19 | 7.97 | 07/31/2001 |
| William Blair | 20.15 | 9.62 | 09/30/2002 |

Five Lowest Returning Portfolios

| Manager | Year-to-Date Return | Since Inception Return | |
|-------------------------|---------------------|------------------------|------------|
| | (in % points) | (in % points) | |
| Earnest FI | 6.06 | 4.62 | 04/30/2005 |
| NTGI BC Agg | 6.17 | 6.00 | 01/31/1990 |
| Blackrock US Debt | 6.18 | 3.32 | 09/01/2013 |
| Piedmont | 6.26 | 4.34 | 05/31/2005 |
| Taplin, Canida, Habacht | 6.71 | 5.01 | 04/30/2005 |

Returns are shown gross of investment management fees.

Excludes Real Estate and Alternative Investments portfolios.