

## Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of December 31, 2018, with the distribution as of September 30, 2018. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

### Asset Distribution Across Investment Managers

	December 31, 2018			September 30, 2018		
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
<b>Domestic Equity</b>	<b>\$699,856,410</b>	<b>29.68%</b>	<b>\$3,251,763</b>	<b>\$(135,581,765)</b>	<b>\$832,186,411</b>	<b>32.46%</b>
SSGA S&P 500 Index Fund	513,439,585	21.77%	0	(80,185,773)	593,625,358	23.15%
DFA Small Cap Core	210,566,486	8.93%	248,409,751	(37,843,265)	-	-
DFA Value	0	0.00%	(113,843,857)	(7,349,009)	121,192,866	4.73%
Columbus Circle Growth	0	0.00%	(134,580,576)	(13,408,241)	147,988,817	5.77%
Parametric Domestic Equity Futures	-24,149,662	(1.02%)	3,266,445	3,204,522	-30,620,629	(1.19%)
<b>International Equity</b>	<b>\$473,204,154</b>	<b>20.07%</b>	<b>\$139,021</b>	<b>\$(62,826,453)</b>	<b>\$535,891,586</b>	<b>20.90%</b>
Morgan Stanley Value	145,456,183	6.17%	0	(20,472,838)	165,929,022	6.47%
Artisan Partners Growth	151,126,159	6.41%	0	(19,395,114)	170,521,273	6.65%
FIAM International Small Cap	92,722,662	3.93%	0	(18,623,856)	111,346,518	4.34%
Parametric Emerging Markets	95,964,884	4.07%	0	(5,703,537)	101,668,421	3.97%
Parametric International Equity Futures	-12,065,734	(0.51%)	139,021	1,368,892	-13,573,647	(0.53%)
<b>Fixed Income</b>	<b>\$518,861,283</b>	<b>22.00%</b>	<b>\$(7,896,028)</b>	<b>\$5,282,982</b>	<b>\$521,474,329</b>	<b>20.34%</b>
Wellington Core Plus	217,290,297	9.21%	(1,775,628)	1,584,462	217,481,463	8.48%
Western Intermediate Credit	119,765,549	5.08%	(1,177,782)	567,738	120,375,593	4.69%
Colchester Global	120,269,770	5.10%	(129,357)	1,556,954	118,842,173	4.63%
Parametric Fixed Income Futures	61,535,667	2.61%	(4,813,261)	1,573,827	64,775,101	2.53%
<b>Real Estate</b>	<b>\$240,156,121</b>	<b>10.18%</b>	<b>\$(479,526)</b>	<b>\$4,581,647</b>	<b>\$236,054,000</b>	<b>9.21%</b>
Woodmont	15,077,004	0.64%	0	576,999	14,500,006	0.57%
UBS Trumbull Property Fund	125,169,903	5.31%	(243,677)	2,129,768	123,283,812	4.81%
AEW Core Property Trust	99,897,474	4.24%	(235,849)	1,875,699	98,257,623	3.83%
AEW Partners V, LP **	11,740	0.00%	0	(819)	12,559	0.00%
<b>Public Real Assets</b>	<b>\$158,529,304</b>	<b>6.72%</b>	<b>\$(68,119)</b>	<b>\$(10,920,874)</b>	<b>\$169,518,297</b>	<b>6.61%</b>
INVESCO Commodities Fund	36,618,735	1.55%	(68,119)	(3,005,026)	39,691,880	1.55%
BlackRock TIPS Index Fund	42,679,070	1.81%	0	(174,914)	42,853,985	1.67%
KBI Global Resources Fund	37,714,464	1.60%	0	(4,825,181)	42,539,645	1.66%
Blackrock REIT Index Fund	41,517,034	1.76%	0	(2,915,753)	44,432,787	1.73%
<b>Private Equity*</b>	<b>\$267,601,717</b>	<b>11.35%</b>	<b>\$(1,365,002)</b>	<b>\$0</b>	<b>\$268,966,719</b>	<b>10.49%</b>
Abbott ACE VI*	70,697,577	3.00%	(5,639,422)	0	76,336,999	2.98%
Abbott ACE VII*	32,478,232	1.38%	615,000	0	31,863,232	1.24%
Abbott 2016*	17,912,829	0.76%	3,500,000	0	14,412,829	0.56%
Abbott 2017*	2,361,527	0.10%	836,250	0	1,525,277	0.06%
Pathway PPEF 2008*	77,160,131	3.27%	(4,592,891)	0	81,753,022	3.19%
Pathway PE I-7*	32,620,773	1.38%	(602,231)	(0)	33,223,004	1.30%
Pathway PE I-8*	31,994,050	1.36%	3,781,673	(0)	28,212,377	1.10%
Pathway PE I-9*	2,376,597	0.10%	736,618	0	1,639,979	0.06%
<b>Total Fund</b>	<b>\$2,358,208,988</b>	<b>100.0%</b>	<b>\$(6,417,775)</b>	<b>\$(199,464,579)</b>	<b>\$2,564,091,342</b>	<b>100.0%</b>

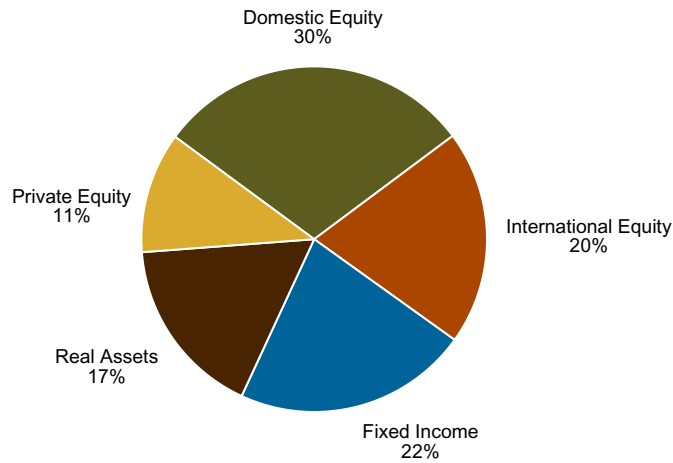
\*Current market values are those of the prior quarter, adjusted for capital calls and distributions of current quarter.

\*\*Estimate

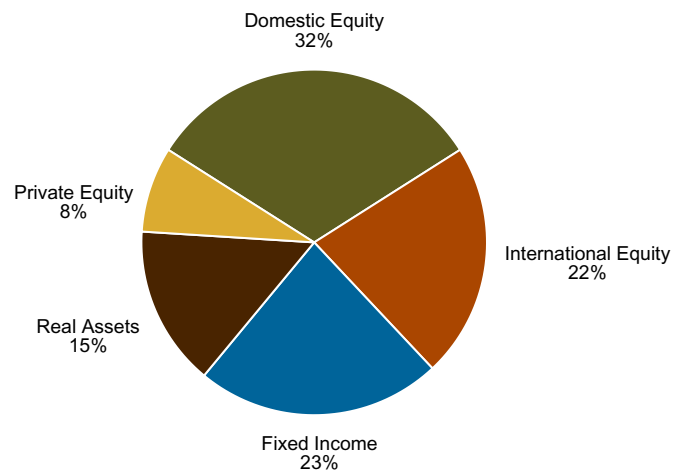
## Actual vs Target Asset Allocation As of December 31, 2018

The first chart below shows the Fund's asset allocation as of December 31, 2018. The second chart shows the Fund's target asset allocation as outlined in the investment policy statement.

### Actual Asset Allocation



### Target Asset Allocation



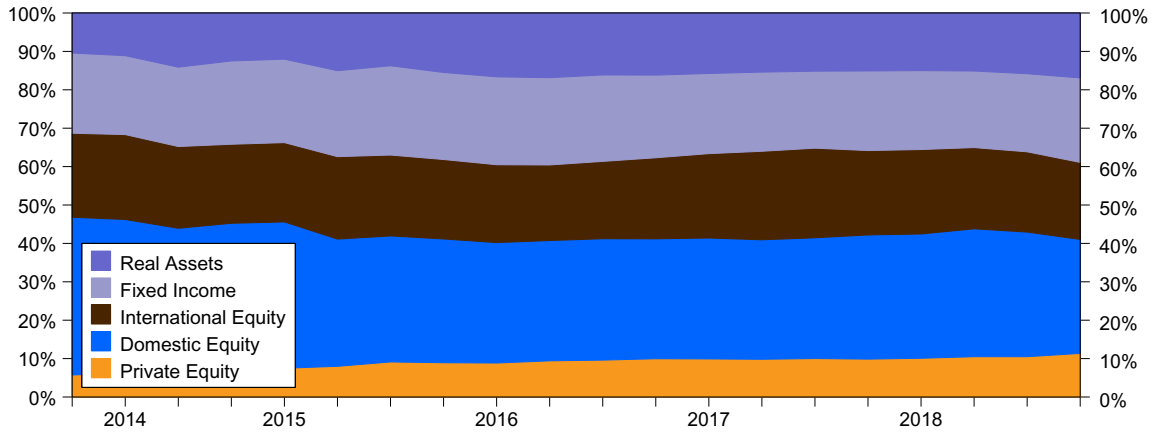
Asset Class	\$Millions Actual	Weight Actual	Min Target	Target	Max Target	Percent Difference	\$Millions Difference
Domestic Equity	700	29.7%	28.0%	32.0%	36.0%	(2.3%)	(55)
International Equity	473	20.1%	19.0%	22.0%	25.0%	(1.9%)	(46)
Fixed Income	519	22.0%	20.0%	23.0%	26.0%	(1.0%)	(24)
Real Assets	399	16.9%	12.0%	15.0%	18.0%	1.9%	45
Private Equity	268	11.3%	0.0%	8.0%	12.0%	3.3%	79
Total	2,358	100.0%		100.0%			

\* Current Quarter Target = 32.0% Russell 3000 Index, 22.0% MSCI ACWI ex US IMI, 11.5% Blmbg Aggregate, 8.0% NCREIF NFI-ODCE Eq Wt Net, 6.4% Russell 3000 Index (Lagged), 5.8% Blmbg Intmtd Credit, 5.8% FTSE WGBI, 1.8% S&P Global Nat Res (Net), 1.8% Blmbg Commodity TR Idx, 1.8% S&P DJ US Select REIT, 1.8% Blmbg US TIPS and 1.6% MSCI ACWI ex US IMI (Lagged).

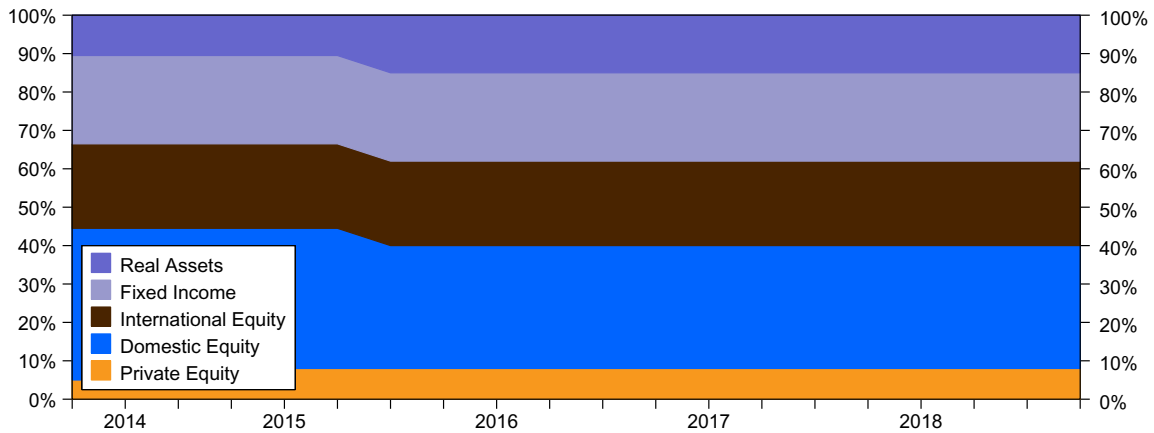
## Actual vs Target Historical Asset Allocation

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, the fund's historical target asset allocation, and the historical asset allocation of the average fund in the Callan Public Fund Sponsor - Large (>1B).

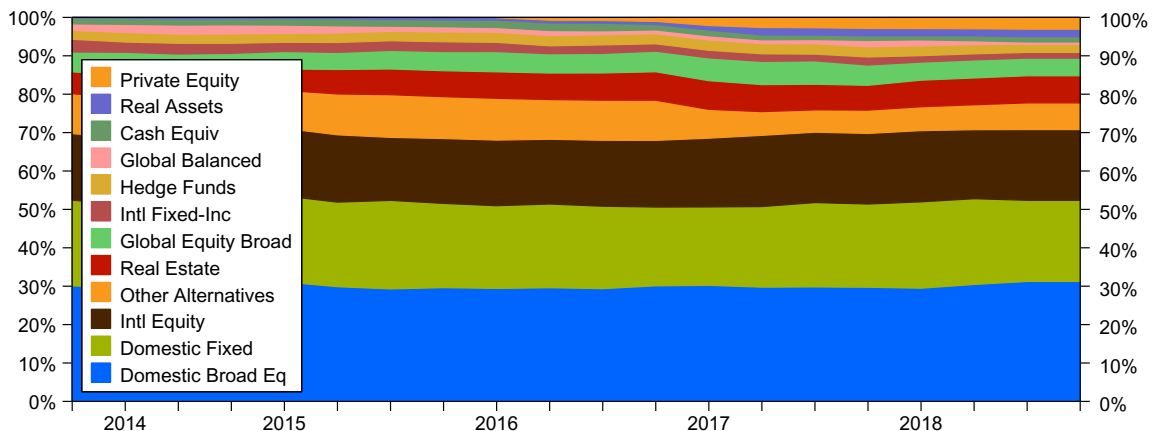
### Actual Historical Asset Allocation



### Target Historical Asset Allocation



### Average Callan Public Fund Sponsor - Large (>1B) Historical Asset Allocation



\* Current Quarter Target = 32.0% Russell 3000 Index, 22.0% MSCI ACWI ex US IMI, 11.5% Blmbg Aggregate, 8.0% NCREIF NFI-ODCE Eq Wt Net, 6.4% Russell 3000 Index (Lagged), 5.8% Blmbg Intmtd Credit, 5.8% FTSE WGBl, 1.8% S&P Global Nat Res (Net), 1.8% Blmbg Commodity TR Idx, 1.8% S&P DJ US Select REIT, 1.8% Blmbg US TIPS and 1.6% MSCI ACWI ex US IMI (Lagged).

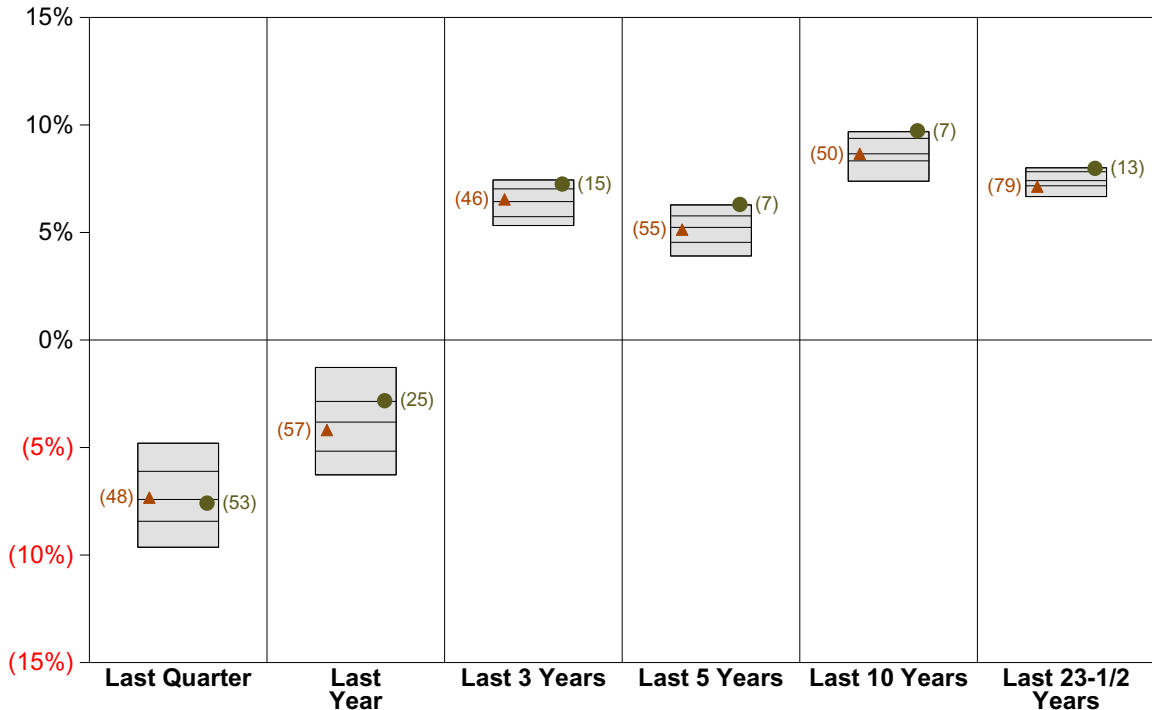
# Total Fund

## Period Ended December 31, 2018

### Quarterly Summary and Highlights

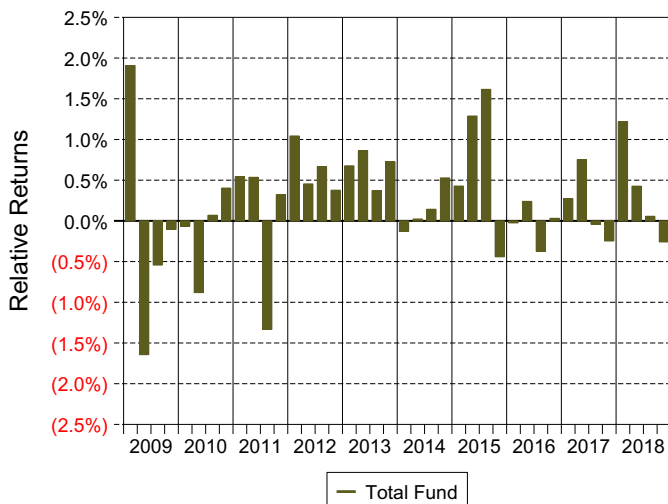
- Total Fund's portfolio posted a (7.59)% return for the quarter placing it in the 53 percentile of the Callan Public Fund Sponsor - Large (>1B) group for the quarter and in the 25 percentile for the last year.
- Total Fund's portfolio underperformed the Total Fund Target by 0.26% for the quarter and outperformed the Total Fund Target for the year by 1.36%.

### Performance vs Callan Public Fund Sponsor - Large (>1B) (Gross)

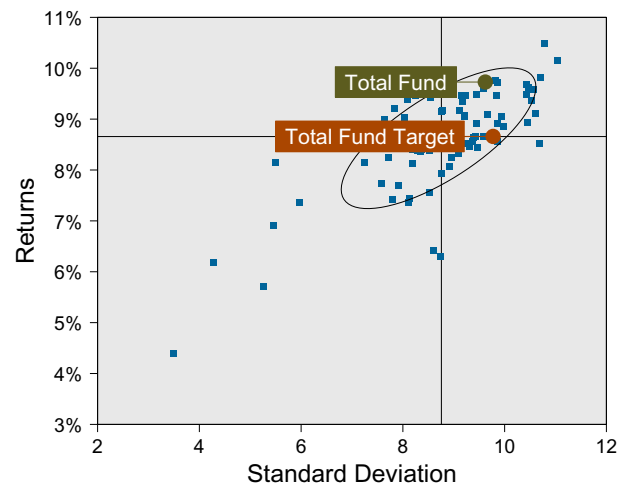


10th Percentile	(4.80)	(1.28)	7.44	6.28	9.69	8.01
25th Percentile	(6.11)	(2.86)	7.03	5.77	9.38	7.83
Median	(7.42)	(3.82)	6.44	5.24	8.66	7.41
75th Percentile	(8.43)	(5.17)	5.74	4.54	8.33	7.17
90th Percentile	(9.64)	(6.27)	5.32	3.91	7.38	6.67
<b>Total Fund</b> ●	(7.59)	(2.82)	7.25	6.30	9.73	7.98
<b>Total Fund Target</b> ▲	(7.33)	(4.19)	6.54	5.14	8.66	7.13

### Relative Return vs Total Fund Target



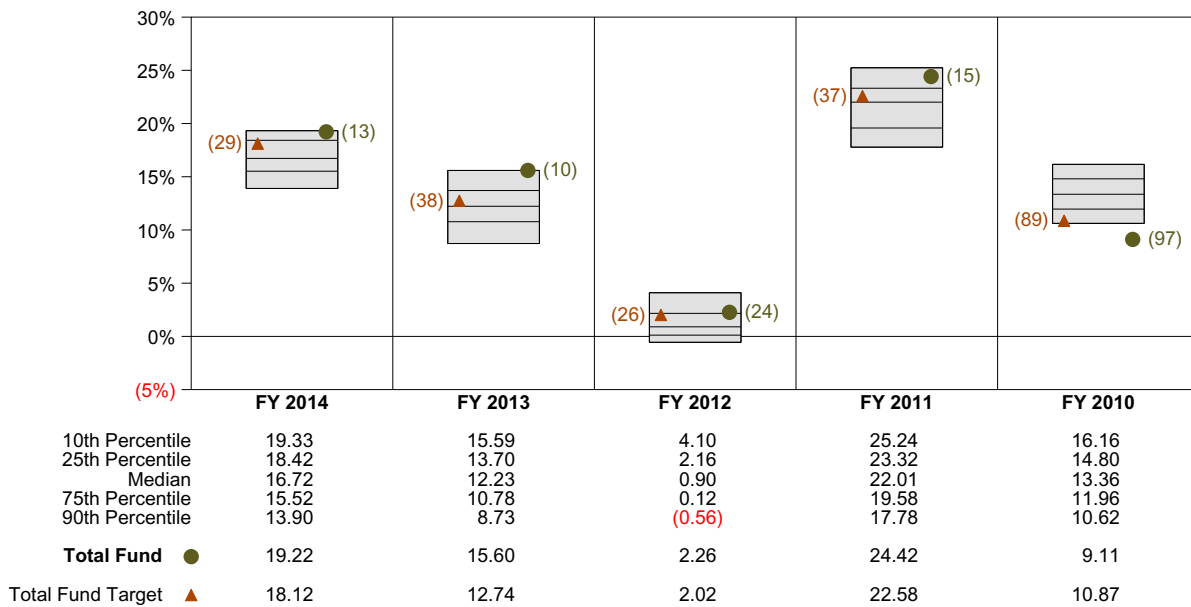
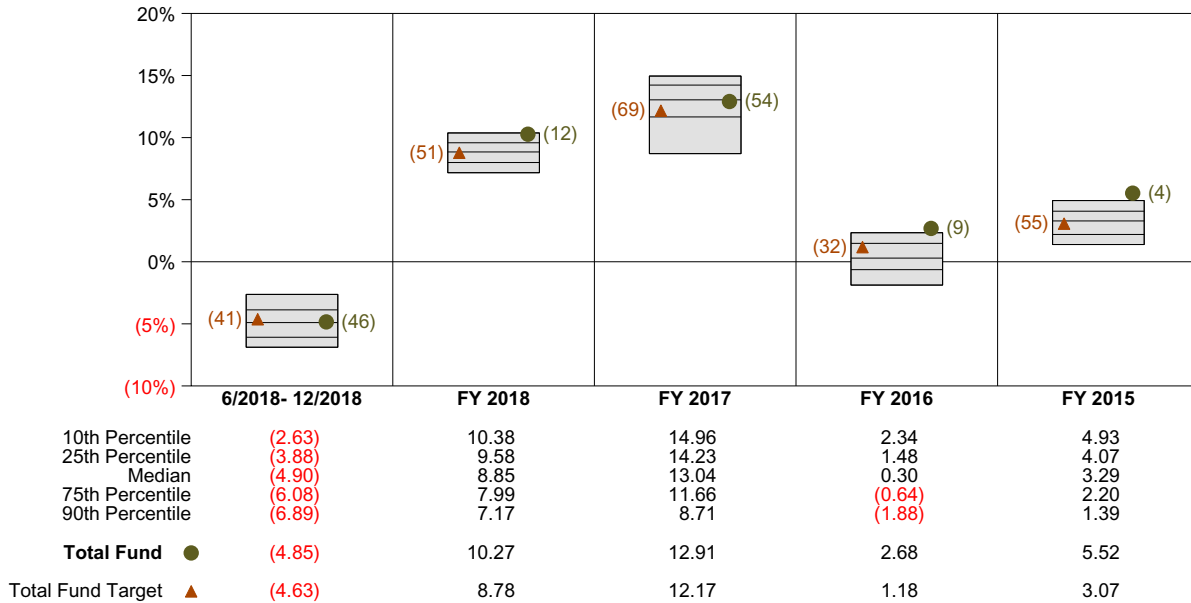
### Callan Public Fund Sponsor - Large (>1B) (Gross) Annualized Ten Year Risk vs Return



# Marin County Employees' Retirement Association Performance vs Callan Public Fund Sponsor - Large (>1B)

## Return Ranking

The chart below illustrates fund rankings over various periods versus the Callan Public Fund Sponsor - Large (>1B). The bars represent the range of returns from the 10th percentile to the 90th percentile for each period for all funds in the Callan Public Fund Sponsor - Large (>1B). The numbers to the right of the bar represent the percentile rankings of the fund being analyzed. The table below the chart details the rates of return plotted in the graph above.

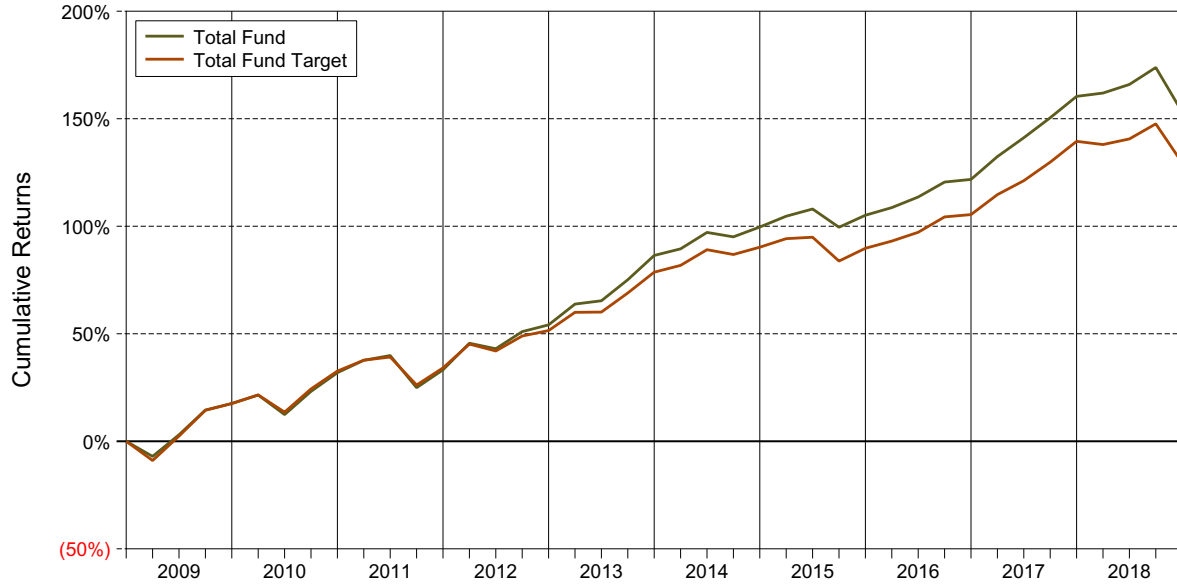


\* Current Quarter Target = 32.0% Russell 3000 Index, 22.0% MSCI ACWI ex US IMI, 11.5% Blmbg Aggregate, 8.0% NCREIF NFI-ODCE Eq Wt Net, 6.4% Russell 3000 Index (Lagged), 5.8% Blmbg Intmdt Credit, 5.8% FTSE WGBI, 1.8% S&P Global Nat Res (Net), 1.8% Blmbg Commodity TR Idx, 1.8% S&P DJ US Select REIT, 1.8% Blmbg US TIPS and 1.6% MSCI ACWI ex US IMI (Lagged).

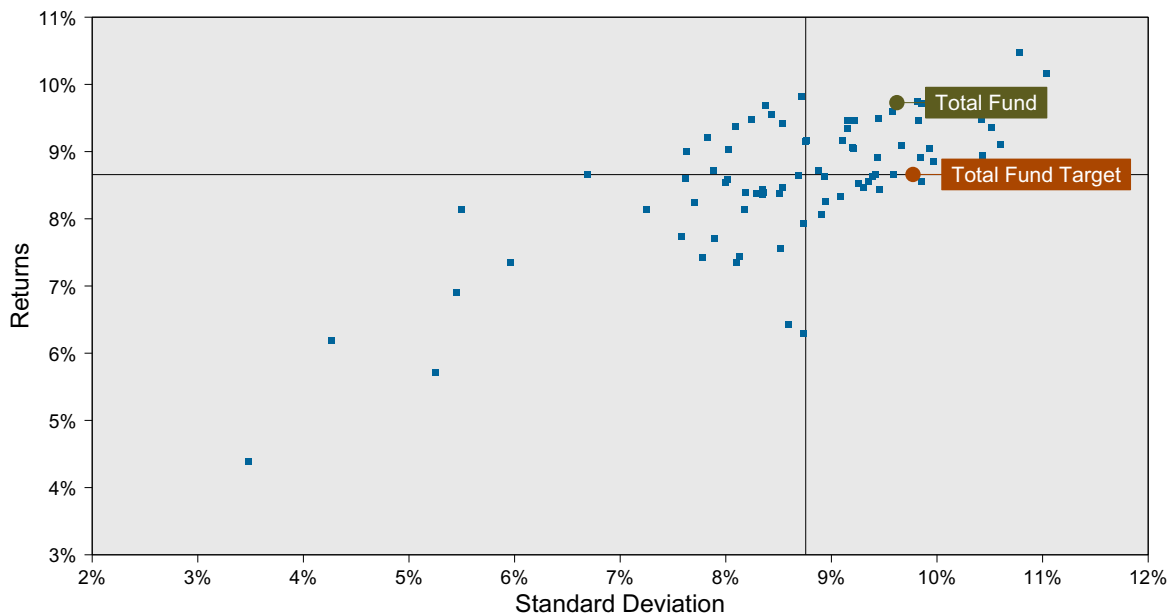
## Cumulative Performance Relative to Target

The first chart below illustrates the cumulative performance of the Total Fund relative to the cumulative performance of the Fund's Target Asset Mix. The Target Mix is assumed to be rebalanced each quarter with no transaction costs. The second chart below shows the return and the risk of the Total Fund and the Target Mix, contrasted with the returns and risks of the funds in the Callan Public Fund Sponsor - Large (>1B).

### Cumulative Returns Actual vs Target



### Ten Year Annualized Risk vs Return



Squares represent membership of the Callan Public Fund Sponsor - Large (>1B)

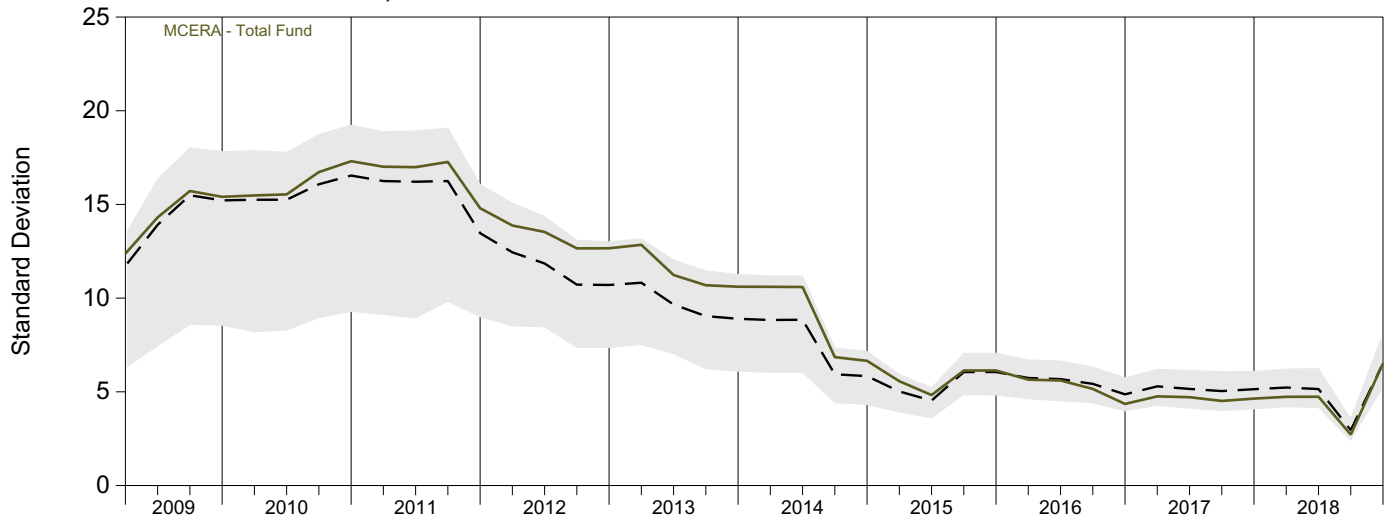
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# MCERA - Total Fund Historical Consistency Analysis

## Consistency of Standard Deviation and Sharpe Ratio

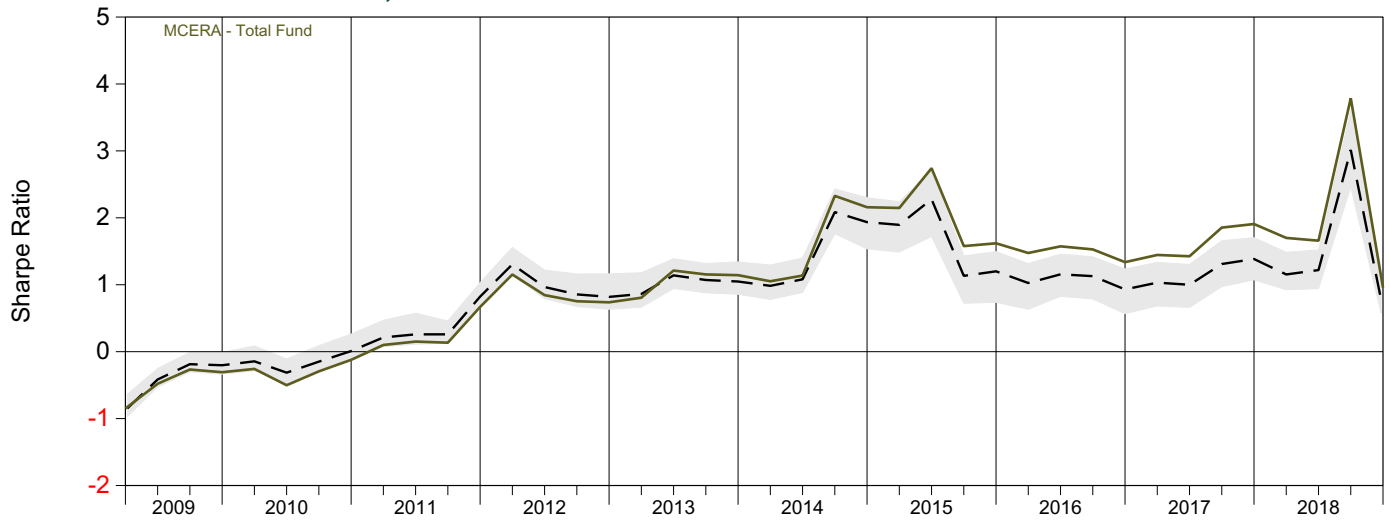
The first chart below illustrates the consistency of standard deviation over rolling three year periods . The gray area represents the range of standard deviation for the 10th through 90th percentile for the Callan Public Fund Spr DB. The second chart below illustrates the consistency of sharpe ratio over rolling three year periods. The tables provide summary statistics for the median manager of the group and the portfolio.

### Rolling Three Year Standard Deviation Ten Years Ended December 31, 2018



<u>Rolling Three Year Period Analysis</u>	<u>Median</u>	<u>Portfolio</u>
Average Annual Standard Deviation	9.47%	10.06%
% Positive Periods	100%	100%
Average Ranking	50	41

### Rolling Three Year Sharpe Ratio Relative to Composite Benchmark Ten Years Ended December 31, 2018

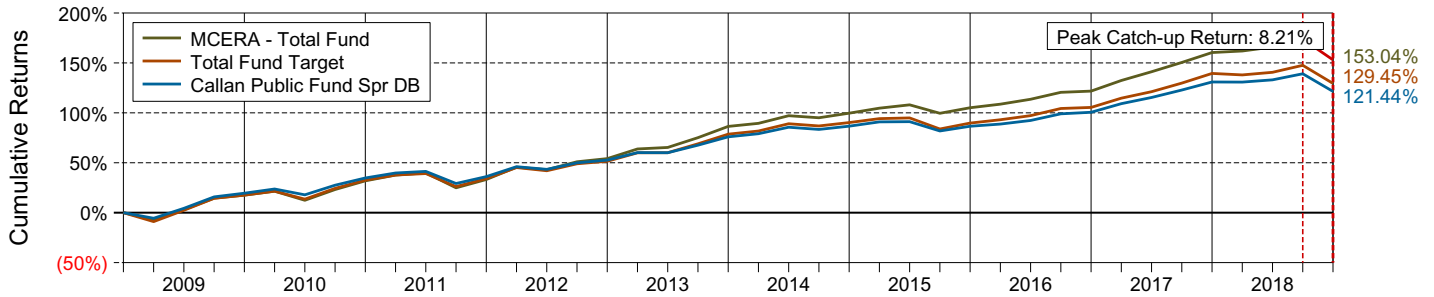


<u>Rolling Three Year Period Analysis</u>	<u>Median</u>	<u>Portfolio</u>
Average Annual Sharpe Ratio	0.88%	1.03%
% Positive Periods	83%	80%
Average Ranking	50	42

# MCERA - Total Fund Drawdown Analysis for Ten Years Ended December 31, 2018

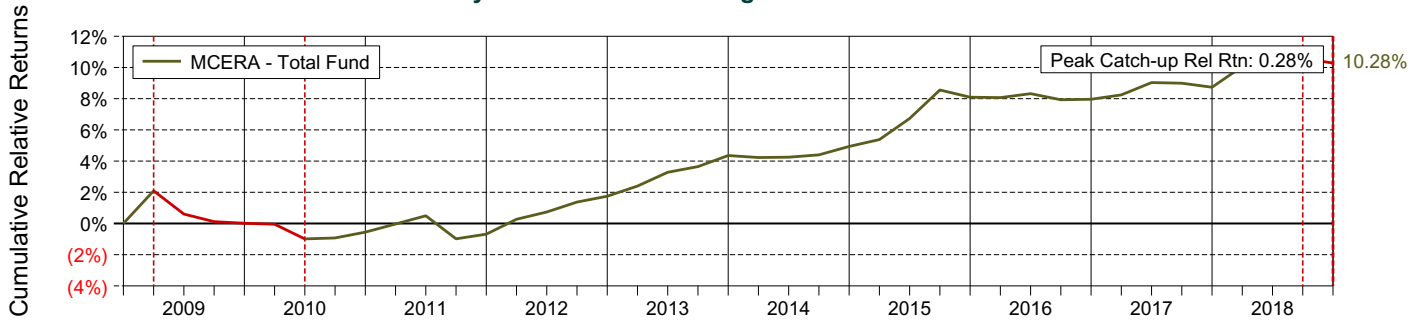
The following analysis focuses on downside risk by looking at cumulative drawdowns experienced from peak-to-trough for the portfolio, index, and peer group. Drawdown is measured from the "high-water mark" of cumulative return to the subsequent "trough". The first chart illustrates the Worst Absolute Drawdown as well as the Current Drawdown (cumulative return from high-water mark to now). The second chart focuses on Relative Drawdown (negative excess return vs. index). The bottom charts highlight the portfolio's peer rankings during drawdown periods.

## Absolute Cumulative Drawdown Analysis



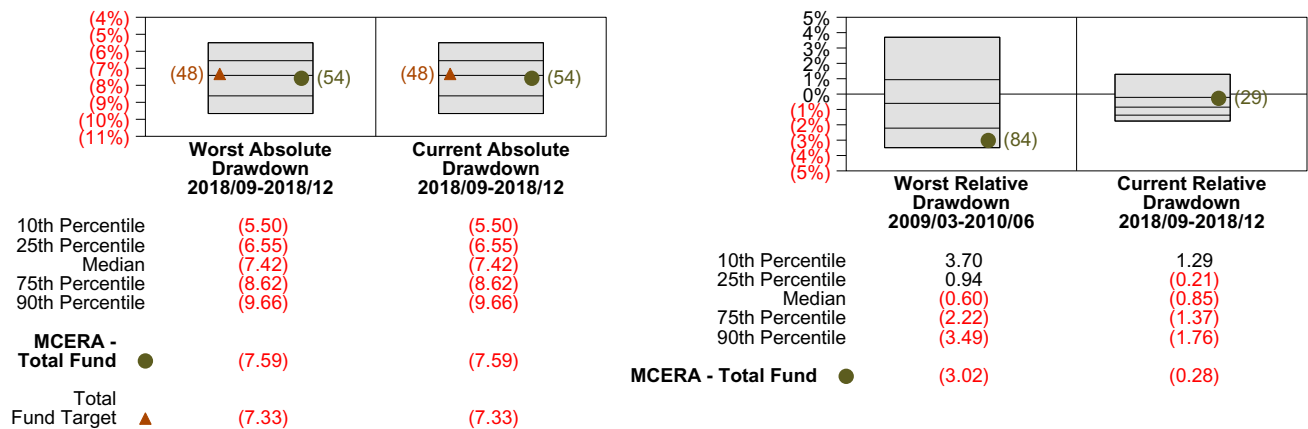
	Worst Absolute Drawdown					Current Absolute Drawdown				
	Return	Years	Period	Index	Peers	Return	Years	Period	Index	Peers
MCERA - Total Fund	(7.59)%	0.25	2018/09-2018/12	(7.33)%	(7.39)%	(7.59)%	0.25	2018/09-2018/12	(7.33)%	(7.39)%
Recovery from Trough	-	-	-	-	-	-	-	-	-	-
Total Fund Target	(8.95)%	0.25	2008/12-2009/03	-	-	(7.33)%	0.25	2018/09-2018/12	-	-
Callan Public Fund Spr DB	(7.39)%	0.25	2018/09-2018/12	-	-	(7.39)%	0.25	2018/09-2018/12	-	-

## Relative Cumulative Drawdown Analysis vs. Total Fund Target



	Worst Relative Drawdown			Current Relative Drawdown		
	Rel Rtn	Years	Period	Rel Rtn	Years	Period
MCERA - Total Fund	(3.02)%	1.25	2009/03-2010/06	(0.28)%	0.25	2018/09-2018/12
Recovery from Trough	3.42%	2.75	2010/06-2013/03	-	-	-

## Drawdown Rankings vs. Total Fund Target Rankings against Callan Public Fund Sponsor Database Ten Years Ended December 31, 2018

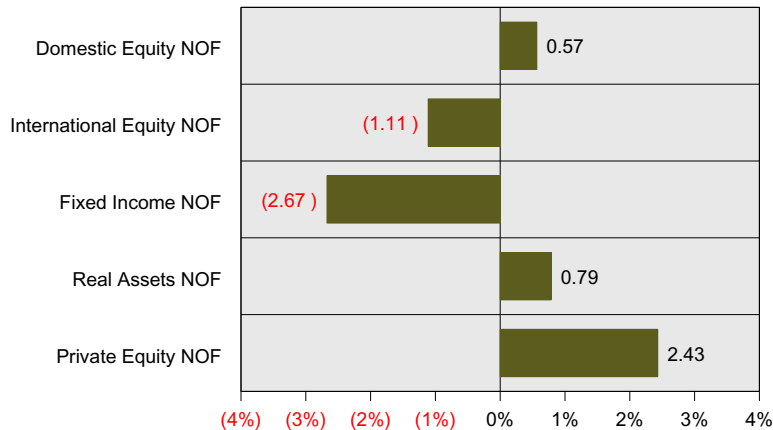




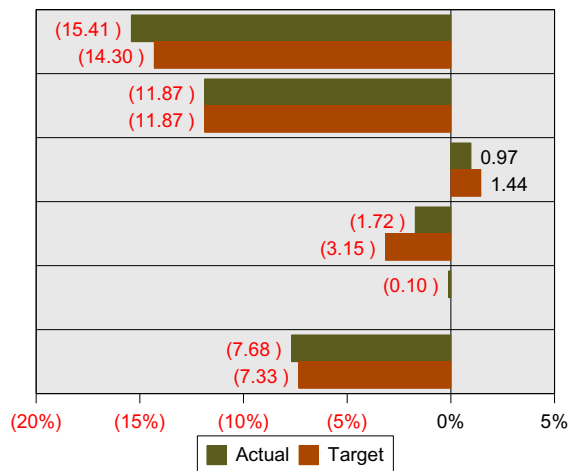
## Quarterly Total Fund Relative Attribution - December 31, 2018

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.

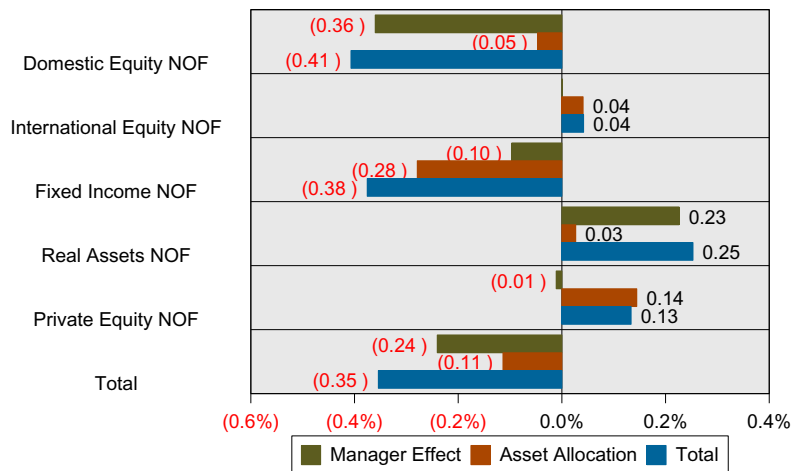
### Asset Class Under or Overweighting



### Actual vs Target Returns



### Relative Attribution by Asset Class



### Relative Attribution Effects for Quarter ended December 31, 2018

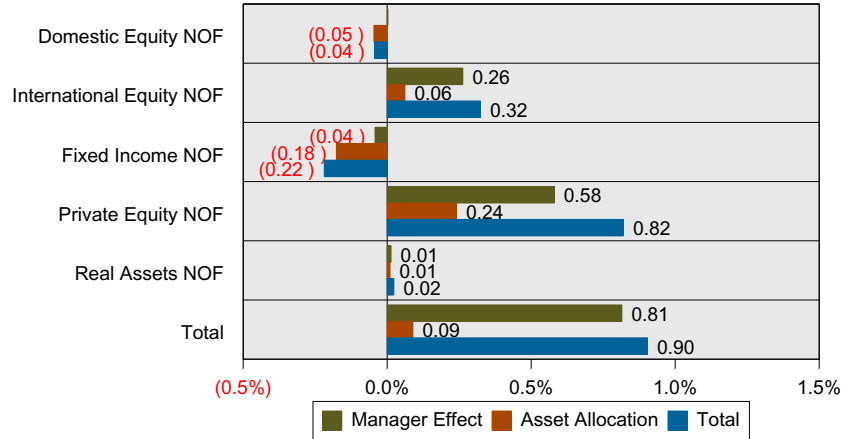
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity NOF	33%	32%	(15.41%)	(14.30%)	(0.36%)	(0.05%)	(0.41%)
International Equity NOF	21%	22%	(11.87%)	(11.87%)	0.00%	0.04%	0.04%
Fixed Income NOF	20%	23%	0.97%	1.44%	(0.10%)	(0.28%)	(0.38%)
Real Assets NOF	16%	15%	(1.72%)	(3.15%)	0.23%	0.03%	0.25%
Private Equity NOF	10%	8%	(0.10%)	0.00%	(0.01%)	0.14%	0.13%
<b>Total</b>			<b>(7.68%)</b>	<b>(7.33%)</b>	<b>(0.24%)</b>	<b>(0.11%)</b>	<b>(0.35%)</b>

\* Current Quarter Target = 32.0% Russell 3000 Index, 22.0% MSCI ACWI ex US IMI, 11.5% Blmbg Aggregate, 8.0% NCREIF NFI-ODCE Eq Wt Net, 6.4% Russell 3000 Index (Lagged), 5.8% Blmbg Intmdt Credit, 5.8% FTSE WGBI, 1.8% S&P Global Nat Res (Net), 1.8% Blmbg Commodity TR Idx, 1.8% S&P DJ US Select REIT, 1.8% Blmbg US TIPS and 1.6% MSCI ACWI ex US IMI (Lagged).  
Net-of-fee attribution

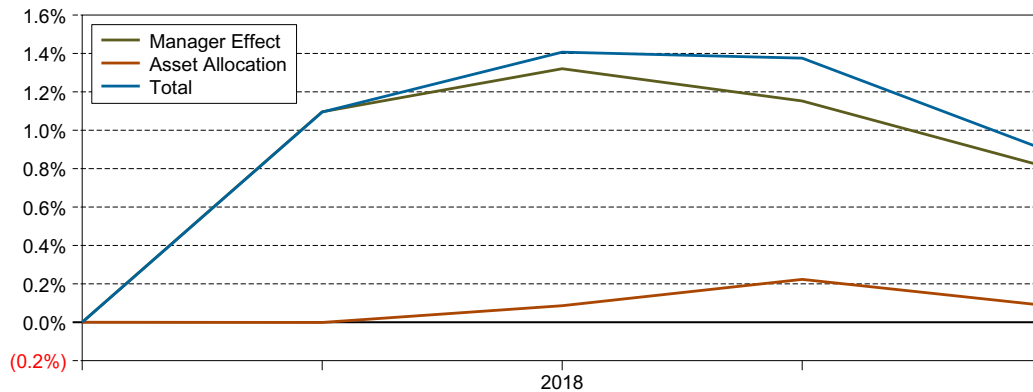
## Cumulative Total Fund Relative Attribution - December 31, 2018

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

### One Year Relative Attribution Effects



### Cumulative Relative Attribution Effects



### One Year Relative Attribution Effects

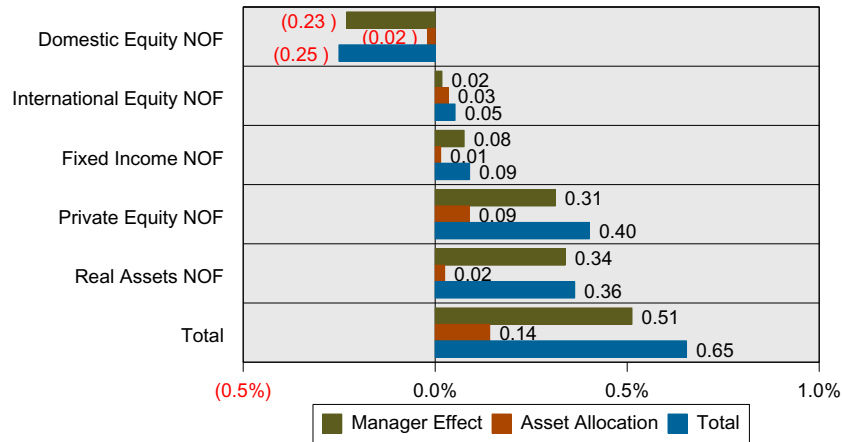
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity NOF	32%	32%	(5.34%)	(5.24%)	0.00%	(0.05%)	(0.04%)
International Equity NOF	22%	22%	(13.69%)	(14.76%)	0.26%	0.06%	0.32%
Fixed Income NOF	21%	23%	(0.35%)	(0.17%)	(0.04%)	(0.18%)	(0.22%)
Private Equity NOF	10%	8%	14.39%	7.73%	0.58%	0.24%	0.82%
Real Assets NOF	15%	15%	0.37%	0.40%	0.01%	0.01%	0.02%
<b>Total</b>			<b>(3.28%)</b>	<b>(4.19%)</b>	<b>+ 0.81%</b>	<b>+ 0.09%</b>	<b>0.90%</b>

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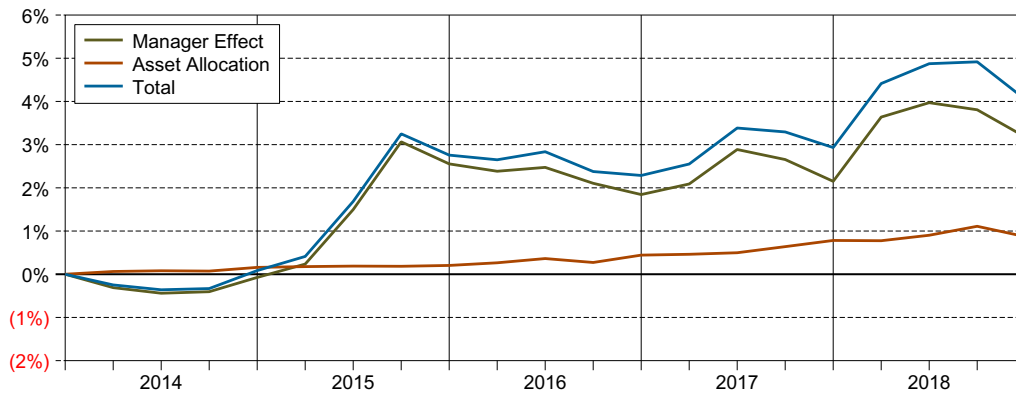
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### Five Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects



### Five Year Annualized Relative Attribution Effects

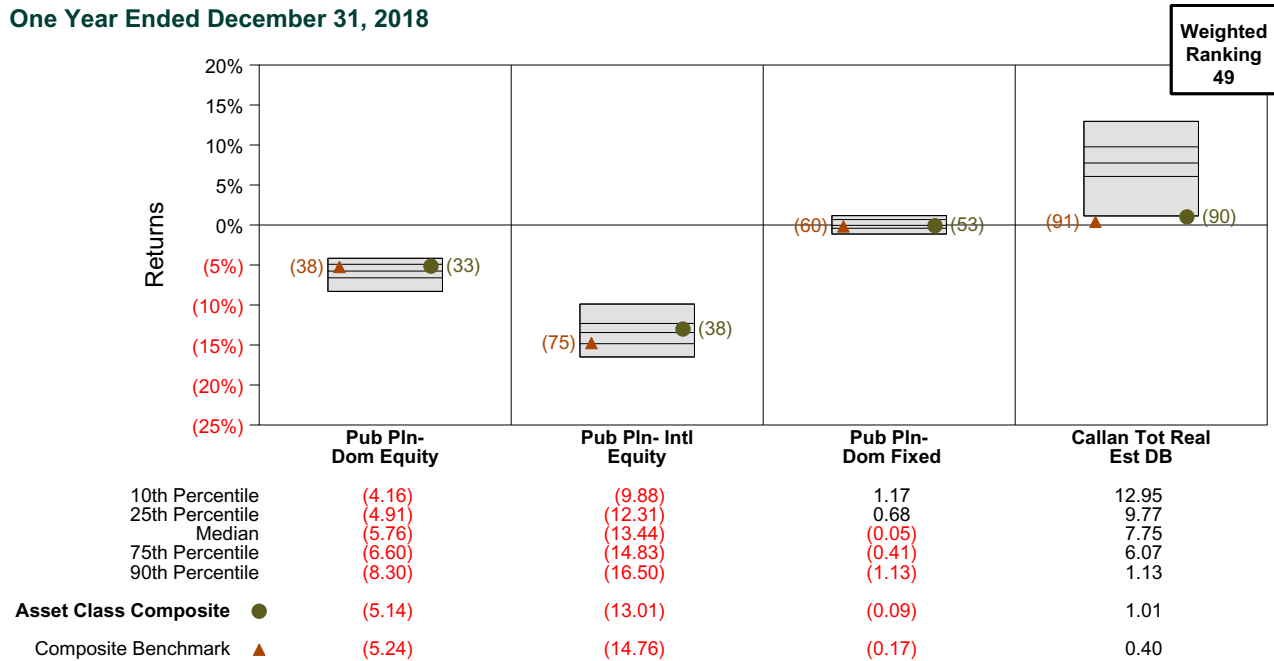
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity NOF	34%	34%	7.22%	7.91%	(0.23%)	(0.02%)	(0.25%)
International Equity NOF	21%	22%	0.88%	0.85%	0.02%	0.03%	0.05%
Fixed Income NOF	21%	23%	2.44%	2.06%	0.08%	0.01%	0.09%
Private Equity NOF	9%	8%	13.80%	9.73%	0.31%	0.09%	0.40%
Real Assets NOF	14%	14%	9.60%	7.16%	0.34%	0.02%	0.36%
<b>Total</b>			<b>5.79%</b>	<b>5.13%</b>	<b>+ 0.51%</b>	<b>+ 0.14%</b>	<b>0.65%</b>

\* Current Quarter Target = 32.0% Russell 3000 Index, 22.0% MSCI ACWI ex US IMI, 11.5% Blmbg Aggregate, 8.0% NCREIF NFI-ODCE Eq Wt Net, 6.4% Russell 3000 Index (Lagged), 5.8% Blmbg Intmtd Credit, 5.8% FTSE WGBI, 1.8% S&P Global Nat Res (Net), 1.8% Blmbg Commodity TR Idx, 1.8% S&P DJ US Select REIT, 1.8% Blmbg US TIPS and 1.6% MSCI ACWI ex US IMI (Lagged).  
Net-of-fee attribution

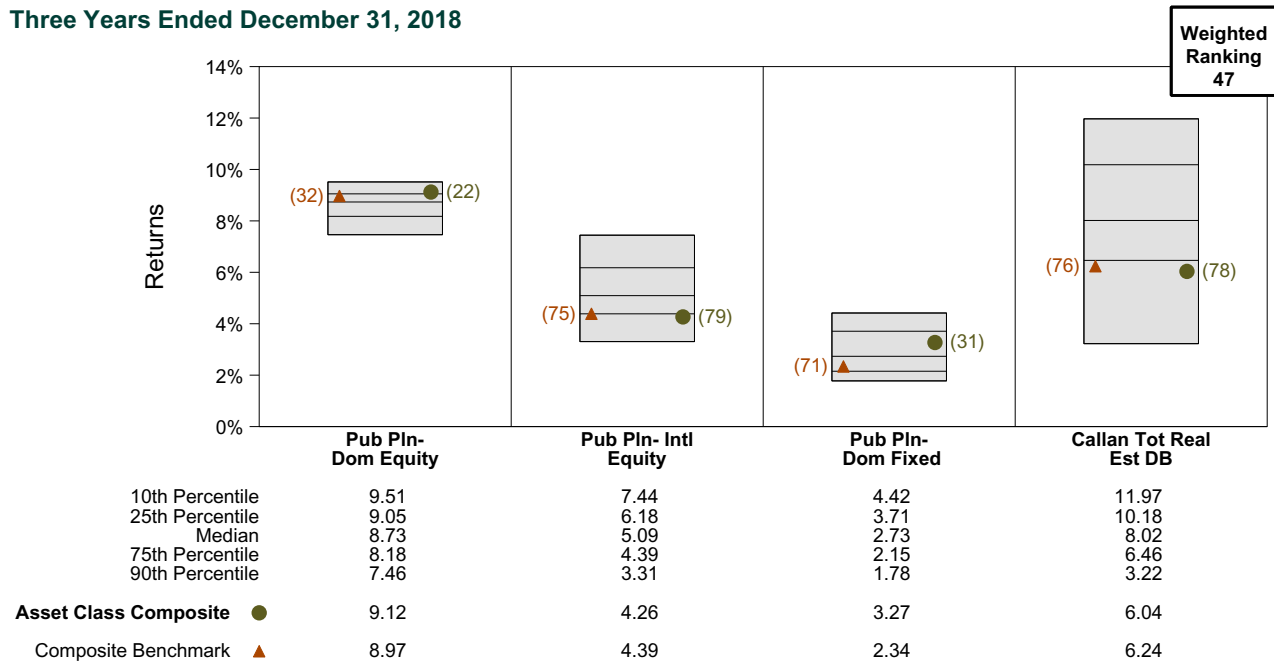
## Asset Class Rankings

The charts below show the rankings of each asset class component of the Total Fund relative to appropriate comparative databases. In the upper right corner of each graph is the weighted average of the rankings across the different asset classes. The weights of the fund's actual asset allocation are used to make this calculation. The weighted average ranking can be viewed as a measure of the fund's overall success in picking managers and structuring asset classes.

### Total Asset Class Performance One Year Ended December 31, 2018



### Total Asset Class Performance Three Years Ended December 31, 2018

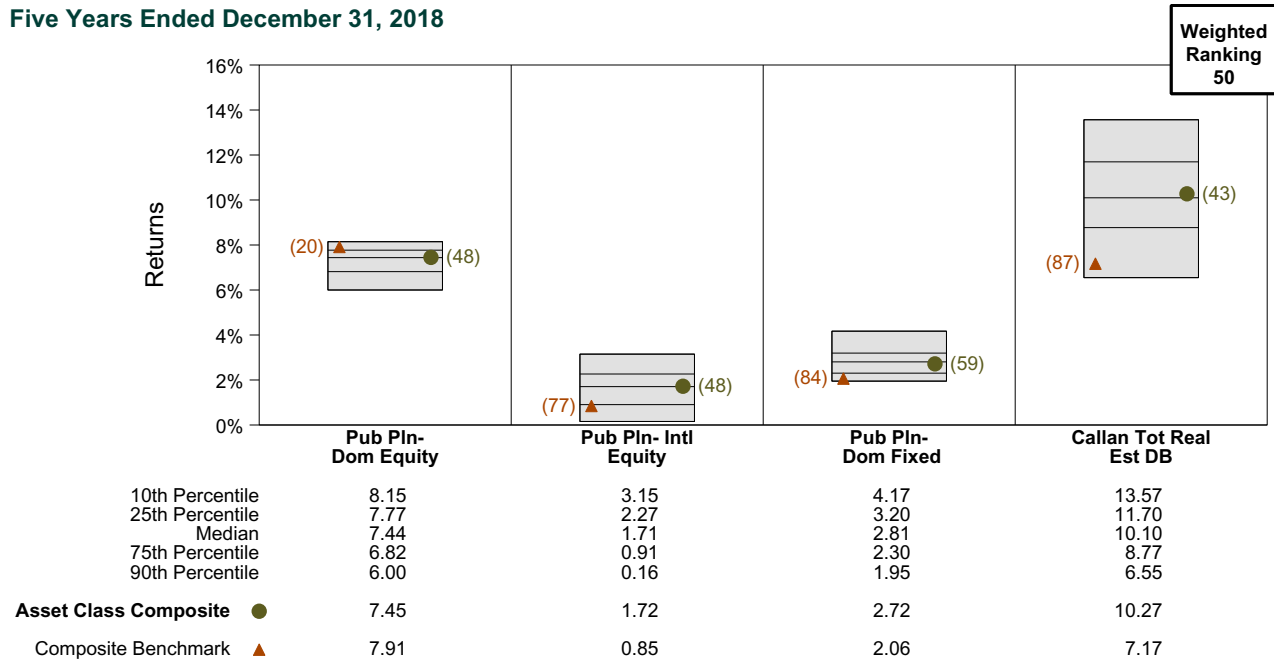


\* Current Quarter Target = 32.0% Russell 3000 Index, 22.0% MSCI ACWI ex US IMI, 11.5% Blmbg Aggregate, 8.0% NCREIF NFI-ODCE Eq Wt Net, 6.4% Russell 3000 Index (Lagged), 5.8% Blmbg Intmtd Credit, 5.8% FTSE WGBI, 1.8% S&P Global Nat Res (Net), 1.8% Blmbg Commodity TR Idx, 1.8% S&P DJ US Select REIT, 1.8% Blmbg US TIPS and 1.6% MSCI ACWI ex US IMI (Lagged).

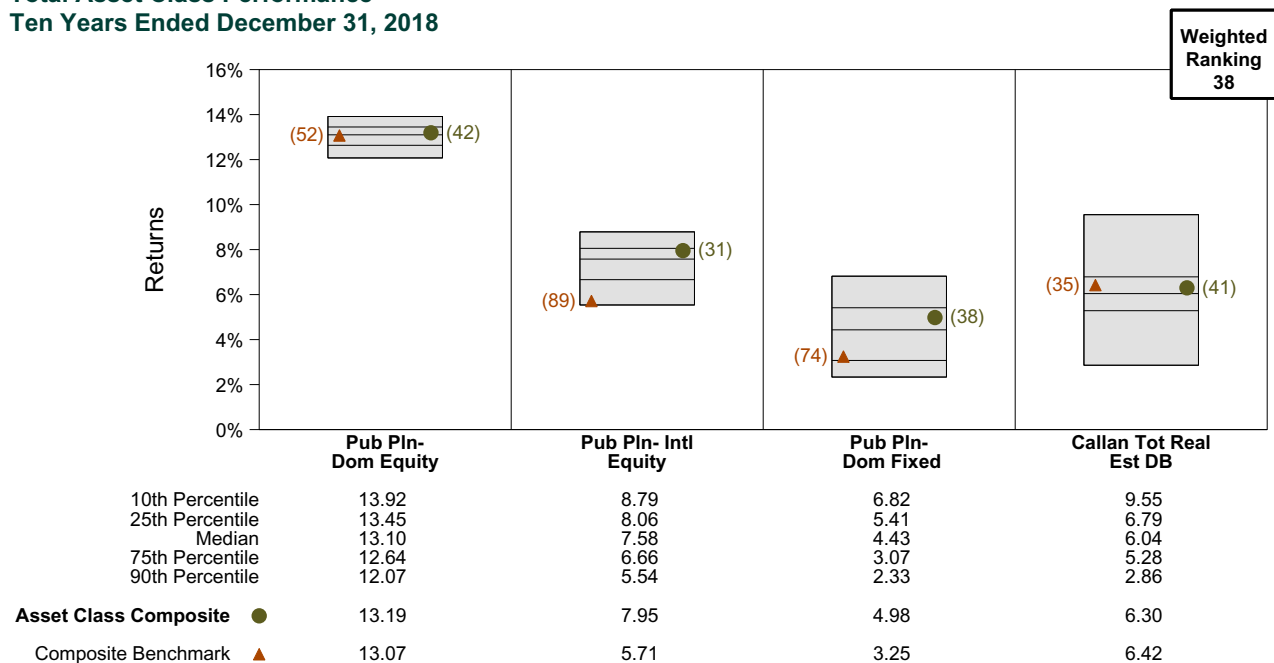
## Asset Class Rankings

The charts below show the rankings of each asset class component of the Total Fund relative to appropriate comparative databases. In the upper right corner of each graph is the weighted average of the rankings across the different asset classes. The weights of the fund's actual asset allocation are used to make this calculation. The weighted average ranking can be viewed as a measure of the fund's overall success in picking managers and structuring asset classes.

### Total Asset Class Performance Five Years Ended December 31, 2018



### Total Asset Class Performance Ten Years Ended December 31, 2018



\* Current Quarter Target = 32.0% Russell 3000 Index, 22.0% MSCI ACWI ex US IMI, 11.5% Blmbg Aggregate, 8.0% NCREIF NFI-ODCE Eq Wt Net, 6.4% Russell 3000 Index (Lagged), 5.8% Blmbg Intmtd Credit, 5.8% FTSE WGBI, 1.8% S&P Global Nat Res (Net), 1.8% Blmbg Commodity TR Idx, 1.8% S&P DJ US Select REIT, 1.8% Blmbg US TIPS and 1.6% MSCI ACWI ex US IMI (Lagged).

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended December 31, 2018. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

### Returns for Periods Ended December 31, 2018

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Domestic Equity</b>	<b>(15.37%)</b>	<b>(5.14%)</b>	<b>9.12%</b>	<b>7.45%</b>	<b>13.19%</b>
Equity Benchmark	(14.30%)	(5.24%)	8.97%	7.91%	13.07%
<b>Large Cap Equity</b>	<b>(13.58%)</b>	<b>(4.56%)</b>	<b>9.24%</b>	<b>8.50%</b>	<b>13.02%</b>
SSGA S&P 500 Index Fund	(13.51%)	(4.36%)	9.30%	8.53%	-
S&P 500 Index	(13.52%)	(4.38%)	9.26%	8.49%	13.12%
<b>Small Cap Equity</b>	<b>(21.19%)</b>	<b>(8.19%)</b>	<b>8.19%</b>	<b>4.44%</b>	<b>14.30%</b>
Russell 2000 Index	(20.20%)	(11.01%)	7.36%	4.41%	11.97%
<b>International Equity</b>	<b>(11.69%)</b>	<b>(13.01%)</b>	<b>4.26%</b>	<b>1.72%</b>	<b>7.95%</b>
International Benchmark	(11.87%)	(14.76%)	4.39%	0.85%	5.71%
Morgan Stanley Value	(12.34%)	(12.86%)	2.96%	0.94%	6.46%
Artisan Partners Growth	(11.37%)	(10.42%)	2.78%	1.17%	9.26%
MSCI EAFE Index	(12.54%)	(13.79%)	2.87%	0.53%	6.32%
FIAM International Small Cap	(16.73%)	(17.56%)	3.49%	3.29%	10.93%
S&P EPAC Small Cap Index	(16.42%)	(18.58%)	3.27%	2.92%	9.73%
Parametric Emerging	(5.42%)	(12.89%)	8.45%	0.98%	-
MSCI Emerging Markets Index	(7.46%)	(14.57%)	9.25%	1.65%	8.02%
<b>Fixed Income</b>	<b>1.03%</b>	<b>(0.09%)</b>	<b>3.27%</b>	<b>2.72%</b>	<b>4.98%</b>
Fixed Income Benchmark	1.44%	(0.17%)	2.34%	2.06%	3.25%
Wellington Core Plus	0.74%	(0.17%)	3.26%	3.28%	5.30%
Bloomberg Aggregate Index	1.64%	0.01%	2.06%	2.52%	3.48%
Western Asset Intermediate Credit	0.48%	(0.07%)	3.16%	3.05%	6.46%
Blended Benchmark****	0.75%	0.01%	2.44%	2.47%	3.45%
Colchester Global	1.31%	(0.47%)	4.11%	-	-
Citi World Govt Bond Index	1.75%	(0.84%)	2.69%	0.77%	1.52%
<b>Real Assets</b>	<b>(1.56%)</b>	<b>1.01%</b>	<b>6.04%</b>	<b>10.27%</b>	<b>6.30%</b>
Real Asset Benchmark	(3.15%)	0.40%	6.24%	7.17%	6.42%
<b>Private Real Estate</b>	<b>1.94%</b>	<b>7.30%</b>	<b>7.32%</b>	<b>13.00%</b>	<b>7.61%</b>
NFI-ODCE Equal Weight Net	1.39%	7.30%	7.53%	9.60%	5.92%
UBS Trumbull Property Fund	1.73%	6.97%	6.83%	8.96%	-
AEW Core Property Trust	1.89%	7.73%	8.06%	9.83%	-
<b>Public Real Assets</b>	<b>(6.44%)</b>	<b>(7.59%)</b>	<b>4.16%</b>	<b>-</b>	<b>-</b>
Public Real Assets Benchmark	(8.33%)	(7.27%)	4.61%	-	-
BlackRock TIPS Index Fund	(0.41%)	(1.12%)	2.29%	-	-
Bloomberg US TIPS Index	(0.42%)	(1.26%)	2.11%	1.69%	3.64%
BlackRock REIT Index Fund (1)	(6.56%)	(4.16%)	3.37%	-	-
DJ US Select REIT Index	(6.61%)	(4.22%)	1.97%	7.89%	12.05%
MSCI REIT Index	(6.71%)	(4.57%)	2.88%	7.80%	12.17%
Invesco Commodity Fund (2)	(7.58%)	(10.99%)	1.54%	-	-
Bloomberg Commodity Index	(9.41%)	(11.25%)	0.30%	(8.80%)	(3.78%)
KBI Global Resources Fund (3)	(11.34%)	(13.86%)	9.46%	-	-
S&P Global Natural Resources Index	(16.90%)	(13.08%)	11.70%	(1.12%)	2.59%
KBI Custom Benchmark (4)	(9.95%)	(13.77%)	4.20%	1.66%	5.35%
<b>Private Equity**</b>	<b>0.00%</b>	<b>15.38%</b>	<b>17.00%</b>	<b>15.21%</b>	<b>9.17%</b>
<b>Total Fund</b>	<b>(7.59%)</b>	<b>(2.82%)</b>	<b>7.25%</b>	<b>6.30%</b>	<b>9.73%</b>
Total Fund - NOF	(7.68%)	(3.28%)	6.73%	5.79%	9.16%
Total Fund - IRR	(7.79%)	(3.01%)	7.26%	6.29%	9.21%
Total Fund Target	(7.33%)	(4.19%)	6.54%	5.14%	8.66%
Public Fund Sponsor Database	(7.42%)	(4.11%)	5.97%	4.76%	8.49%

(1) MCERA changed managers in 3Q17. Prior returns linked to Vanguard REIT Index Fund.

(2) MCERA changed managers in 2Q16. Prior returns linked to BlackRock Commodity Index Fund.

(3) MCERA changed managers in 3Q16. Prior returns linked to SSGA Natural Resources Index Fund.

(4) KBI Custom Benchmark consists of 1/3 each: S-Network Global Water Index, Wilderhill New Energy Global Innovation Index, and Dax Global Agribusiness Index.

\*\*Current market values are those of the prior quarter, adjusted for capital calls and distributions of current quarter.

\*\*\*Estimate

\*\*\*\*Blended Index = Bloomberg Aggregate through 2/10/14 and Bloomberg U.S. Intermediate Credit thereafter.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended June 30. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

	6/2018- 12/2018	FY 2018	FY 2017	FY 2016	FY 2015
<b>Domestic Equity</b>	<b>(9.44%)</b>	<b>16.87%</b>	<b>19.56%</b>	<b>(0.59%)</b>	<b>7.52%</b>
Equity Benchmark	(8.20%)	14.78%	18.51%	2.14%	7.29%
<b>Large Cap Equity</b>	<b>(7.00%)</b>	<b>14.36%</b>	<b>18.07%</b>	<b>4.00%</b>	<b>7.47%</b>
SSGA S&P 500 Index Fund	(6.82%)	14.40%	17.97%	4.08%	7.42%
S&P 500 Index	(6.85%)	14.37%	17.90%	3.99%	7.42%
<b>Small Cap Equity</b>	<b>(16.70%)</b>	<b>23.31%</b>	<b>23.47%</b>	<b>(11.13%)</b>	<b>7.05%</b>
Russell 2000 Index	(17.35%)	17.57%	24.60%	(6.73%)	6.49%
<b>International Equity</b>	<b>(11.11%)</b>	<b>7.95%</b>	<b>18.41%</b>	<b>(6.92%)</b>	<b>(1.97%)</b>
International Benchmark	(11.53%)	7.75%	20.43%	(9.61%)	(4.97%)
Morgan Stanley Value	(11.94%)	6.61%	17.87%	(7.41%)	(2.55%)
Artisan Partners Growth	(8.84%)	8.45%	14.74%	(10.76%)	0.60%
MSCI EAFE Index	(11.35%)	6.84%	20.27%	(10.16%)	(4.22%)
FIAM International Small Cap	(17.53%)	12.26%	23.14%	(2.74%)	1.65%
S&P EPAC Small Cap Index	(16.80%)	11.27%	22.97%	(4.77%)	0.33%
Parametric Emerging	(6.20%)	4.27%	18.89%	(7.65%)	(9.22%)
MSCI Emerging Markets Index	(8.48%)	8.20%	23.75%	(12.05%)	(5.12%)
<b>Fixed Income</b>	<b>1.24%</b>	<b>0.31%</b>	<b>1.28%</b>	<b>6.68%</b>	<b>(0.57%)</b>
Fixed Income Benchmark	1.23%	0.21%	(0.83%)	7.05%	(1.02%)
Wellington Core Plus	1.22%	0.34%	2.40%	6.05%	1.79%
Bloomberg Aggregate Index	1.65%	(0.40%)	(0.31%)	6.00%	1.86%
Western Asset Intermediate Credit	1.45%	(0.02%)	3.11%	5.09%	1.44%
Blended Benchmark****	1.48%	(0.36%)	1.36%	4.97%	1.51%
Colchester Global	0.35%	1.47%	(0.81%)	8.29%	(7.61%)
Citi World Govt Bond Index	0.10%	1.90%	(4.14%)	11.26%	(9.02%)
<b>Real Assets</b>	<b>(0.95%)</b>	<b>7.29%</b>	<b>4.10%</b>	<b>13.68%</b>	<b>22.79%</b>
Real Assets Benchmark	(2.29%)	8.58%	4.30%	6.79%	13.15%
<b>Private Real Estate</b>	<b>3.39%</b>	<b>7.60%</b>	<b>6.55%</b>	<b>19.84%</b>	<b>22.84%</b>
NFI-ODCE Equal Weight Net	3.29%	7.68%	7.23%	11.24%	13.64%
UBS Trumbull Property Fund	3.17%	7.70%	5.60%	10.71%	12.57%
AEW Core Property Trust	3.58%	8.16%	7.77%	11.61%	13.22%
<b>Public Real Assets</b>	<b>(6.87%)</b>	<b>6.80%</b>	<b>0.39%</b>	<b>1.14%</b>	<b>-</b>
Public Real Asset Benchmark	(8.55%)	9.51%	1.01%	1.32%	-
BlackRock TIPS Index Fund	(1.19%)	2.30%	(0.38%)	4.35%	-
Bloomberg US TIPS Index	(1.24%)	2.11%	(0.63%)	4.35%	(1.73%)
BlackRock REIT Index Fund (1)	(5.89%)	5.26%	(1.79%)	24.06%	-
DJ US Select REIT Index	(5.93%)	4.23%	(2.43%)	22.85%	5.21%
MSCI REIT Index	(5.70%)	3.57%	(1.82%)	24.10%	3.93%
Invesco Commodity Fund (2)	(10.47%)	12.37%	(8.47%)	(12.99%)	-
Bloomberg Commodity Index	(11.24%)	7.35%	(6.50%)	(13.32%)	(23.71%)
KBI Global Resources Fund (3)	(10.14%)	7.54%	13.43%	(9.16%)	-
S&P Global Natural Resources Index	(15.93%)	24.07%	14.70%	(9.47%)	(18.09%)
KBI Custom Benchmark (4)	(8.00%)	5.46%	12.80%	(5.43%)	(4.53%)
<b>Private Equity**</b>	<b>4.44%</b>	<b>20.81%</b>	<b>20.72%</b>	<b>8.85%</b>	<b>10.45%</b>
<b>Total Fund</b>	<b>(4.85%)</b>	<b>10.27%</b>	<b>12.91%</b>	<b>2.68%</b>	<b>5.52%</b>
Total Fund - NOF	(5.06%)	9.72%	12.34%	2.19%	5.02%
Total Fund -IRR	(5.02%)	10.29%	12.82%	2.61%	5.55%
Total Fund Target	(4.63%)	8.78%	12.17%	1.18%	3.07%
Public Fund Sponsor Database	(4.90%)	8.35%	12.45%	0.86%	3.23%
7.00% Actuarial Assumption	3.44%	7.00%	7.00%	7.00%	7.00%

(1) MCERA changed managers in 3Q17. Prior returns linked to Vanguard REIT Index Fund.

(2) MCERA changed managers in 2Q16. Prior returns linked to BlackRock Commodity Index Fund.

(3) MCERA changed managers in 3Q16. Prior returns linked to SSGA Natural Resources Index Fund.

(4) KBI Custom Benchmark consists of 1/3 each: S-Network Global Water Index, Wilderhill New Energy Global Innovation Index, and Dax Global Agribusiness Index.

\*\*Current market values are those of the prior quarter, adjusted for capital calls and distributions of current quarter.

\*\*\*Estimate

\*\*\*\*Blended Index = Bloomberg Aggregate through 2/10/14 and Bloomberg U.S. Intermediate Credit thereafter.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended June 30. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

	FY 2014	FY 2013	FY 2012	FY 2011	FY 2010
<b>Domestic Equity</b>	<b>24.38%</b>	<b>22.55%</b>	<b>1.07%</b>	<b>35.41%</b>	<b>15.95%</b>
Equity Benchmark	25.22%	21.46%	3.84%	32.37%	15.85%
<b>Large Cap Equity</b>	<b>24.60%</b>	<b>21.36%</b>	<b>2.46%</b>	<b>31.98%</b>	<b>12.94%</b>
Dodge & Cox Value	-	-	0.40%	30.50%	16.03%
RCM Growth	-	-	(0.65%)	31.40%	9.18%
S&P 500 Index	24.61%	20.60%	5.45%	30.69%	14.43%
<b>Small Cap Equity</b>	<b>23.57%</b>	<b>25.33%</b>	<b>(3.63%)</b>	<b>48.85%</b>	<b>30.45%</b>
Russell 2000 Index	23.64%	24.21%	(2.08%)	37.41%	21.48%
DFA Value	25.92%	33.04%	(3.56%)	40.67%	32.40%
Russell 2000 Value Index	22.54%	24.76%	(1.44%)	31.35%	25.07%
Russell 2000 Growth Index	24.73%	23.67%	(2.71%)	43.50%	17.96%
<b>International Equity</b>	<b>22.56%</b>	<b>19.76%</b>	<b>(7.18%)</b>	<b>32.48%</b>	<b>6.94%</b>
International Benchmark	22.28%	13.91%	(14.79%)	30.26%	5.92%
Morgan Stanley Value	20.84%	19.69%	(7.10%)	29.25%	4.44%
Artisan Partners Growth	23.64%	21.84%	(2.57%)	33.42%	9.08%
MSCI EAFE Index	23.57%	18.62%	(13.83%)	30.36%	5.92%
FIAM International Small Cap	27.34%	26.27%	(12.50%)	40.91%	10.79%
S&P EPAC Small Cap Index	29.15%	20.11%	(15.62%)	36.79%	11.15%
<b>Fixed Income</b>	<b>6.02%</b>	<b>1.89%</b>	<b>8.77%</b>	<b>5.79%</b>	<b>13.91%</b>
Fixed Income Benchmark	4.36%	(0.69%)	7.47%	3.90%	9.50%
Wellington	6.31%	1.74%	8.39%	5.14%	13.40%
Bloomberg Aggregate Index	4.37%	(0.69%)	7.47%	3.90%	9.50%
Western Asset	5.22%	2.93%	8.80%	7.33%	20.89%
Bloomberg Aggregate Index	4.37%	(0.69%)	7.47%	3.90%	9.50%
<b>Real Assets</b>	<b>13.73%</b>	<b>13.23%</b>	<b>13.02%</b>	<b>13.00%</b>	<b>(17.40%)</b>
Real Assets Benchmark	11.21%	10.72%	12.04%	16.73%	(1.48%)
<b>Real Estate</b>	<b>13.73%</b>	<b>13.23%</b>	<b>13.02%</b>	<b>13.00%</b>	<b>(17.40%)</b>
NCREIF Total Index	11.21%	10.72%	12.04%	16.73%	(1.48%)
NFI-ODCE Equal Weight Net	11.37%	10.80%	11.46%	19.33%	(8.47%)
Woodmont	14.06%	13.03%	12.26%	9.02%	(17.85%)
AEW Partners V Fund	27.76%	20.69%	23.82%	14.98%	(15.23%)
RREEF America III	27.46%	19.17%	20.69%	65.53%	(29.05%)
ING Clarion	-	-	10.01%	26.72%	(12.29%)
<b>Private Equity</b>	<b>25.66%</b>	<b>12.34%</b>	<b>5.16%</b>	<b>16.55%</b>	<b>(1.04%)</b>
<b>Total Fund</b>	<b>19.22%</b>	<b>15.60%</b>	<b>2.26%</b>	<b>24.42%</b>	<b>9.11%</b>
Total Fund - NOF	18.65%	15.01%	1.67%	23.71%	8.49%
Total Fund Target	18.12%	12.74%	2.02%	22.58%	10.87%
Public Fund Sponsor Database	16.31%	11.98%	1.20%	20.86%	12.90%
7.00% Actuarial Assumption	7.00%	7.00%	7.00%	7.00%	7.00%



## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

	2018	2017	2016	2015	2014
<b>Domestic Equity</b>	<b>(5.14%)</b>	<b>20.85%</b>	<b>13.35%</b>	<b>(0.72%)</b>	<b>11.02%</b>
Equity Benchmark	(5.24%)	21.13%	12.74%	0.48%	12.56%
<b>Large Cap Equity</b>	<b>(4.56%)</b>	<b>21.89%</b>	<b>12.04%</b>	<b>1.46%</b>	<b>13.70%</b>
SSGA S&P 500 Index Fund	(4.36%)	21.86%	12.03%	1.44%	13.69%
S&P 500 Index	(4.38%)	21.83%	11.96%	1.38%	13.69%
<b>Small Cap Equity</b>	<b>(8.19%)</b>	<b>18.21%</b>	<b>16.70%</b>	<b>(6.22%)</b>	<b>4.65%</b>
Russell 2000 Index	(11.01%)	14.65%	21.31%	(4.41%)	4.89%
<b>International Equity</b>	<b>(13.01%)</b>	<b>29.99%</b>	<b>0.23%</b>	<b>(0.66%)</b>	<b>(3.27%)</b>
International Benchmark	(14.76%)	27.81%	4.41%	(4.60%)	(3.89%)
Morgan Stanley Value	(12.86%)	26.28%	(0.82%)	1.17%	(5.10%)
Artisan Partners Growth	(10.42%)	32.52%	(8.53%)	(2.61%)	0.24%
MSCI EAFE Index	(13.79%)	25.03%	1.00%	(0.81%)	(4.90%)
FIAM International Small Cap	(17.56%)	32.96%	1.13%	12.54%	(5.75%)
S&P EPAC Small Cap Index	(18.58%)	33.47%	1.34%	8.58%	(3.43%)
Parametric Emerging	(12.89%)	28.61%	13.85%	(15.12%)	(3.00%)
MSCI Emerging Markets Index	(14.57%)	37.28%	11.19%	(14.92%)	(2.19%)
<b>Fixed Income</b>	<b>(0.09%)</b>	<b>5.43%</b>	<b>4.55%</b>	<b>(0.61%)</b>	<b>4.46%</b>
Fixed Income Benchmark	(0.17%)	4.55%	2.70%	(0.39%)	3.74%
Wellington Core Plus	(0.17%)	5.11%	4.93%	0.30%	6.40%
Bloomberg Aggregate Index	0.01%	3.54%	2.65%	0.55%	5.97%
Western Asset Intermediate Credit	(0.07%)	4.43%	5.21%	1.25%	4.56%
Blended Benchmark****	0.01%	3.67%	3.68%	0.90%	4.16%
Colchester Global	(0.47%)	8.68%	4.33%	(5.52%)	-
Citi World Govt Bond Index	(0.84%)	7.49%	1.60%	(3.57%)	(0.48%)
<b>Real Assets</b>	<b>1.01%</b>	<b>7.91%</b>	<b>9.37%</b>	<b>18.37%</b>	<b>15.55%</b>
Real Asset Benchmark	0.40%	7.42%	11.18%	5.44%	11.82%
<b>Private Real Estate</b>	<b>7.30%</b>	<b>6.57%</b>	<b>8.11%</b>	<b>29.00%</b>	<b>15.55%</b>
NFI-ODCE Equal Weight Net	7.30%	6.92%	8.36%	14.18%	11.42%
UBS Trumbull Property Fund	6.97%	6.29%	7.21%	12.93%	11.56%
AEW Core Property Trust	7.73%	7.96%	8.49%	13.76%	11.31%
<b>Public Real Assets</b>	<b>(7.59%)</b>	<b>10.03%</b>	<b>11.14%</b>	<b>-</b>	<b>-</b>
Public Real Assets Benchmark	(7.27%)	7.95%	14.37%	-	-
BlackRock TIPS Index Fund	(1.12%)	3.24%	4.84%	-	-
Bloomberg US TIPS Index	(1.26%)	3.01%	4.68%	(1.44%)	3.64%
BlackRock REIT Index Fund (1)	(4.16%)	6.10%	8.62%	-	-
DJ US Select REIT Index	(4.22%)	3.76%	6.68%	4.48%	32.00%
MSCI REIT Index	(4.57%)	5.07%	8.60%	2.52%	30.38%
Invesco Commodity Fund (2)	(10.99%)	5.91%	11.05%	-	-
Bloomberg Commodity Index	(11.25%)	1.70%	11.77%	(24.66%)	(17.01%)
KBI Global Resources Fund (3)	(13.86%)	25.66%	21.17%	-	-
S&P Global Natural Resources Index	(13.08%)	21.98%	31.45%	(24.50%)	(10.18%)
KBI Custom Benchmark (4)	(13.77%)	21.95%	7.57%	(4.54%)	0.57%
<b>Private Equity**</b>	<b>15.38%</b>	<b>22.16%</b>	<b>13.64%</b>	<b>10.95%</b>	<b>14.19%</b>
<b>Total Fund</b>	<b>(2.82%)</b>	<b>17.41%</b>	<b>8.13%</b>	<b>2.73%</b>	<b>7.10%</b>
Total Fund - NOF	(3.28%)	16.81%	7.61%	2.24%	6.59%
Total Fund -IRR	(3.01%)	17.39%	8.14%	2.74%	7.02%
Total Fund Target	(4.19%)	16.58%	8.26%	(0.26%)	6.50%
Public Fund Sponsor Database	(4.11%)	15.48%	7.75%	0.06%	6.03%

(1) MCERA changed managers in 3Q17. Prior returns linked to Vanguard REIT Index Fund.

(2) MCERA changed managers in 2Q16. Prior returns linked to BlackRock Commodity Index Fund.

(3) MCERA changed managers in 3Q16. Prior returns linked to SSGA Natural Resources Index Fund.

(4) KBI Custom Benchmark consists of 1/3 each: S-Network Global Water Index, Wilderhill New Energy Global Innovation Index, and Dax Global Agribusiness Index.

\*\*Current market values are those of the prior quarter, adjusted for capital calls and distributions of current quarter.

\*\*\*\*Estimate

\*\*\*\*Blended Index = Bloomberg Aggregate through 2/10/14 and Bloomberg U.S. Intermediate Credit thereafter.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

	2013	2012	2011	2010	2009
<b>Domestic Equity</b>	<b>34.25%</b>	<b>17.20%</b>	<b>(1.09%)</b>	<b>18.78%</b>	<b>30.42%</b>
Equity Benchmark	33.55%	16.42%	1.03%	17.35%	26.66%
<b>Large Cap Equity</b>	<b>32.40%</b>	<b>16.68%</b>	<b>(0.79%)</b>	<b>14.79%</b>	<b>28.59%</b>
SSGA S&P 500 Index Fund	32.39%	16.07%	2.14%	-	-
Blackrock Alpha Advantage 500 Fund	-	-	-	-	24.41%
Equitized Market Neutral	-	-	-	15.89%	22.23%
Dodge & Cox Value	-	20.59%	(3.02%)	13.53%	31.64%
RCM Growth	-	10.26%	(3.73%)	13.31%	37.00%
S&P 500 Index	32.39%	16.00%	2.11%	15.06%	26.47%
<b>Small Cap Equity</b>	<b>38.37%</b>	<b>18.28%</b>	<b>(2.29%)</b>	<b>36.86%</b>	<b>39.89%</b>
Russell 2000 Index	38.82%	16.35%	(4.18%)	26.85%	27.17%
DFA Value	42.66%	22.41%	(6.75%)	34.42%	36.75%
Russell 2000 Value Index	34.52%	18.05%	(5.50%)	24.50%	20.58%
Mazama Capital Growth	-	-	-	-	35.08%
Columbus Circle Growth	32.88%	14.09%	2.49%	39.97%	-
Russell 2000 Growth Index	43.30%	14.59%	(2.91%)	29.09%	34.47%
<b>International Equity</b>	<b>22.57%</b>	<b>23.53%</b>	<b>(8.87%)</b>	<b>9.08%</b>	<b>31.12%</b>
International Benchmark	15.82%	17.04%	(14.31%)	9.19%	31.78%
Morgan Stanley Value	21.79%	20.70%	(7.40%)	6.94%	22.61%
Artisan Partners Growth	26.68%	26.87%	(6.12%)	7.24%	41.37%
MSCI EAFE Index	22.78%	17.32%	(12.14%)	7.75%	31.78%
AXA Rosenberg Intl Small Cap	-	-	-	-	31.86%
FIAM International Small Cap	31.84%	26.26%	(13.39%)	21.86%	36.61%
S&P EPAC Small Cap Index	27.93%	19.92%	(14.74%)	18.91%	40.86%
Parametric Emerging	3.38%	21.17%	(17.23%)	-	-
MSCI Emerging Markets Index	(2.60%)	18.23%	(18.42%)	18.88%	78.51%
<b>Fixed Income</b>	<b>(0.90%)</b>	<b>8.28%</b>	<b>7.93%</b>	<b>8.79%</b>	<b>12.86%</b>
Fixed Income Benchmark	(2.02%)	4.21%	7.84%	6.54%	5.93%
Wellington Core Plus	(0.79%)	8.03%	7.82%	7.72%	14.61%
Bloomberg Aggregate Index	(2.02%)	4.21%	7.84%	6.54%	5.93%
Western Asset	(0.66%)	9.79%	7.39%	11.39%	23.35%
Blended Benchmark****	(2.02%)	4.21%	7.84%	6.54%	5.93%
Citi World Govt Bond Index	(4.00%)	1.65%	6.35%	5.16%	2.56%
<b>Real Assets</b>	<b>13.01%</b>	<b>14.69%</b>	<b>13.57%</b>	<b>(1.66%)</b>	<b>(21.96%)</b>
Real Assets Benchmark	10.98%	10.54%	14.26%	13.11%	(16.86%)
<b>Private Real Estate</b>	<b>13.01%</b>	<b>14.69%</b>	<b>13.57%</b>	<b>(1.66%)</b>	<b>(21.96%)</b>
NCREIF Total Index	10.98%	10.54%	14.26%	13.11%	(16.86%)
NFI-ODCE Equal Weight Net	12.36%	9.93%	14.99%	15.12%	(31.30%)
Woodmont	13.48%	15.29%	11.86%	(4.46%)	(14.65%)
AEW Partners V (estimated)	26.24%	19.92%	17.13%	10.70%	(41.91%)
RREEF America III	16.97%	23.73%	55.41%	9.05%	(64.10%)
ING Clarion	-	-	18.70%	19.16%	(38.65%)
<b>Private Equity**</b>	<b>20.25%</b>	<b>12.28%</b>	<b>6.63%</b>	<b>3.26%</b>	<b>(20.29%)</b>
<b>Total Fund</b>	<b>20.94%</b>	<b>15.70%</b>	<b>1.00%</b>	<b>12.19%</b>	<b>17.57%</b>
Total Fund - NOF	20.37%	15.03%	0.42%	11.55%	16.90%
Total Fund Target	17.92%	12.93%	1.13%	12.83%	17.55%
Public Fund Sponsor Database	15.73%	12.66%	0.91%	12.99%	20.29%

\* Current Quarter Target = 39.5% Russell 3000 Index, 23.0% Blmbg Aggregate, 22.0% MSCI ACWI ex US IMI, 10.5% NCREIF Total Index, 4.0% Russell 3000 Index and 1.0% MSCI ACWI ex US IMI.

\*\*Current market values are those of the prior quarter, adjusted for capital calls and distributions of current quarter.

\*\*\*\*Blended Index = Bloomberg Aggregate through 2/10/14 and Bloomberg U.S. Intermediate Credit thereafter.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended December 31, 2018. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

### Returns for Periods Ended December 31, 2018

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Net-of-Fees</b>					
<b>Domestic Equity</b>	<b>(15.41%)</b>	<b>(5.34%)</b>	<b>8.89%</b>	<b>7.22%</b>	<b>12.91%</b>
Equity Benchmark	(14.30%)	(5.24%)	8.97%	7.91%	13.07%
Large Cap Equity	(13.59%)	(4.59%)	9.20%	8.47%	12.89%
SSGA S&P 500 Index Fund	(13.52%)	(4.38%)	9.27%	8.50%	-
S&P 500 Index	(13.52%)	(4.38%)	9.26%	8.49%	13.12%
Small Cap Equity	(21.34%)	(8.79%)	7.52%	3.79%	13.60%
Russell 2000 Index	(20.20%)	(11.01%)	7.36%	4.41%	11.97%
<b>International Equity</b>	<b>(11.87%)</b>	<b>(13.69%)</b>	<b>3.41%</b>	<b>0.88%</b>	<b>7.13%</b>
International Benchmark	(11.87%)	(14.76%)	4.39%	0.85%	5.71%
Morgan Stanley Value	(12.50%)	(13.46%)	2.27%	0.28%	5.76%
Artisan Partners Growth	(11.56%)	(11.16%)	1.84%	0.21%	8.21%
MSCI EAFE Index	(12.54%)	(13.79%)	2.87%	0.53%	6.32%
FIAM International Small Cap	(16.93%)	(18.26%)	2.67%	2.47%	10.07%
S&P EPAC Small Cap Index	(16.42%)	(18.58%)	3.27%	2.92%	9.73%
Parametric Emerging	(5.61%)	(13.57%)	7.60%	0.12%	-
MSCI Emerging Markets Index	(7.46%)	(14.57%)	9.25%	1.65%	8.02%
<b>Fixed Income</b>	<b>0.97%</b>	<b>(0.35%)</b>	<b>2.99%</b>	<b>2.44%</b>	<b>4.72%</b>
Fixed Income Benchmark	1.44%	(0.17%)	2.34%	2.06%	3.25%
Wellington Core Plus	0.69%	(0.38%)	3.05%	3.06%	5.08%
Bloomberg Aggregate Index	1.64%	0.01%	2.06%	2.52%	3.48%
Western Asset Intermediate Credit	0.40%	(0.37%)	2.85%	2.75%	6.17%
Blended Benchmark****	0.75%	0.01%	2.44%	2.47%	3.45%
Colchester Global	1.20%	(0.90%)	3.66%	-	-
Citi World Govt Bond Index	1.75%	(0.84%)	2.69%	0.77%	1.52%
<b>Real Assets</b>	<b>(1.72%)</b>	<b>0.37%</b>	<b>5.35%</b>	<b>9.60%</b>	<b>5.85%</b>
Real Assets Benchmark	(3.15%)	0.40%	6.24%	7.17%	6.42%
<b>Private Real Estate</b>	<b>1.74%</b>	<b>6.46%</b>	<b>6.42%</b>	<b>12.16%</b>	<b>7.08%</b>
NFI-ODCE Equal Weight Net	1.39%	7.30%	7.53%	9.60%	5.92%
UBS Trumbull Property Fund	1.53%	6.12%	5.87%	7.96%	-
AEW Core Property Trust	1.67%	6.77%	7.09%	8.83%	-
<b>Public Real Assets</b>	<b>(6.54%)</b>	<b>(7.97%)</b>	<b>3.80%</b>	<b>-</b>	<b>-</b>
Public Real Assets Benchmark	(8.33%)	(7.27%)	4.61%	-	-
BlackRock TIPS Index Fund	(0.42%)	(1.15%)	2.26%	-	-
Bloomberg US TIPS Index	(0.42%)	(1.26%)	2.11%	1.69%	3.64%
BlackRock REIT Index Fund (1)	(6.58%)	(4.22%)	3.28%	-	-
DJ US Select REIT Index	(6.61%)	(4.22%)	1.97%	7.89%	12.05%
MSCI REIT Index	(6.71%)	(4.57%)	2.88%	7.80%	12.17%
Invesco Commodity Fund (2)	(7.74%)	(11.61%)	0.95%	-	-
Bloomberg Commodity Index	(9.41%)	(11.25%)	0.30%	(8.80%)	(3.78%)
KBI Global Resources Fund (3)	(11.54%)	(14.59%)	8.72%	-	-
S&P Global Natural Resources Index	(16.90%)	(13.08%)	11.70%	(1.12%)	2.59%
KBI Custom Benchmark (4)	(9.95%)	(13.77%)	4.20%	1.66%	5.35%
<b>Private Equity**</b>	<b>(0.10%)</b>	<b>14.39%</b>	<b>15.79%</b>	<b>13.80%</b>	<b>1.32%</b>
<b>Total Fund</b>	<b>(7.68%)</b>	<b>(3.28%)</b>	<b>6.73%</b>	<b>5.79%</b>	<b>9.16%</b>
Total Fund Target	(7.33%)	(4.19%)	6.54%	5.14%	8.66%
Public Fund Sponsor Database	(7.42%)	(4.11%)	5.97%	4.76%	8.49%

\* Current Quarter Target = 32.0% Russell 3000 Index, 22.0% MSCI ACWI ex US IMI, 11.5% Blmbg Aggregate, 8.0% NCREIF NFI-ODCE Eq Wt Net, 6.4% Russell 3000 Index (Lagged), 5.8% Blmbg Intmdt Credit, 5.8% FTSE WGBI, 1.8% S&P Global Nat Res (Net), 1.8% Blmbg Commodity TR Idx, 1.8% S&P DJ US Select REIT, 1.8% Blmbg US TIPS and 1.6% MSCI ACWI ex US IMI (Lagged).

(1) MCERA changed managers in 3Q17. Prior returns linked to Vanguard REIT Index Fund.

(2) MCERA changed managers in 2Q16. Prior returns linked to BlackRock Commodity Index Fund.

(3) MCERA changed managers in 3Q16. Prior returns linked to SSGA Natural Resources Index Fund.

(4) KBI Custom Benchmark consists of 1/3 each: S-Network Global Water Index, Wilderhill New Energy

Global Innovation Index, and Dax Global Agribusiness Index.

\*\*Current market values are those of the prior quarter, adjusted for capital calls and distributions

of current quarter.

\*\*\*\*Blended Index = Bloomberg Aggregate through 2/10/14 and Bloomberg U.S. Intermediate Credit thereafter.