

June 30, 2018



## City of Milwaukee Employees' Retirement System

Investment Measurement Service  
Quarterly Review

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**U.S. EQUITY**

U.S. equities (S&P 500: +3.4%) rose on a strong earnings season and positive economic data. Energy was the best-performing sector (+13.5%) as oil prices trended higher after the U.S. withdrew from the Iran nuclear accord.

Small cap (+7.8%) outperformed large cap (+3.6%) on trade war fears. Large cap companies derive a big portion of revenues from foreign markets (S&P 500 aggregate is approximately 40%) and are more negatively impacted compared to domestically focused small cap firms.

Growth (+5.8%) continued to outperform value (+1.2%) due to strong results in Consumer Discretionary (+8.2%) and Tech (+7.1%).

The concentration of returns within broad indices remains a concern. Excluding the performance of the FAANG stocks (Facebook, Amazon, Apple, Netflix, Google), S&P 500 performance was negative.

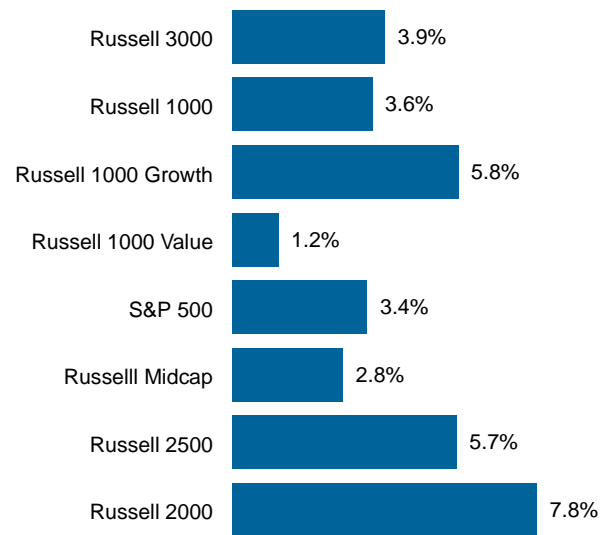
**Large Cap Trails Small Cap Amid Trade War Concerns**

- Retaliatory tariffs hit the U.S. agriculture, auto, and industrial metals sectors, among others. The ongoing decline of U.S. export market share is exacerbating the impact on large caps, which may continue to face macro headwinds in the coming quarters.
- Large cap (+2.9% YTD) is significantly trailing small cap (+7.7% YTD) as investors view small companies as more insulated against potential trade wars/looming tariffs. S&P 500 companies generate 38% of revenue overseas versus 20% for the S&P SmallCap 600.
- The rising dollar and concerns over the divergence between the strong U.S. economy and slower global growth are also driving investors to the relative safety of smaller companies.

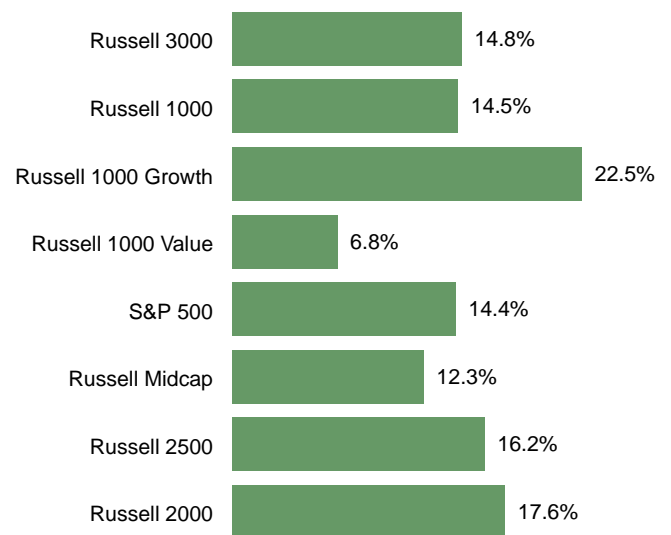
**Large Growth Continues to Dominate**

- Large value trailed large growth by nearly 900 bps in the first half of 2018 (-1.7% vs. +7.3%), driven by ongoing outperformance of the Tech sector and Tech-exposed Consumer Discretionary companies.

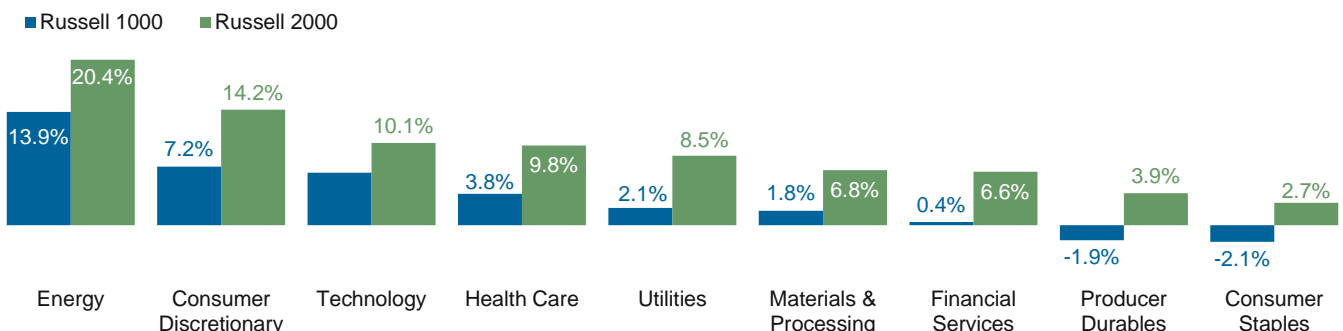
**U.S. Equity: Quarterly Returns**



**U.S. Equity: One-Year Returns**



**Russell Sector Returns, Quarter ended June 30, 2018**



Sources: FTSE Russell, Standard & Poor's

**Concentration Risk**

- FAANG stocks continue to drive an outsized proportion of returns within equity indices.
- Biotech represents half of the Health Care weight of the Russell 2000 Growth (12% vs. 25%), and many small growth managers have struggled in selecting biotech names given the binary outcomes of research and depth of resources needed to do it well.

**Amazon Effect Continues**

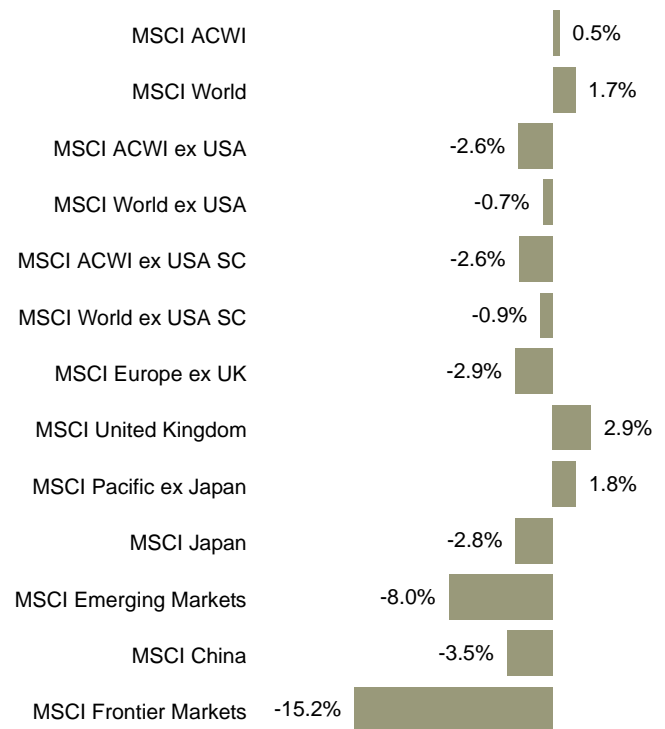
- Amazon (+17%) increased in size by over 69% since last year’s Russell reconstitution with continued market share expansion in the retailing space (including food) and now into Health Care.
- Active large cap managers with underweight positions to Amazon will likely continue to lag their benchmarks given Amazon’s looming presence in large cap indices.

**NON-U.S./GLOBAL EQUITY**

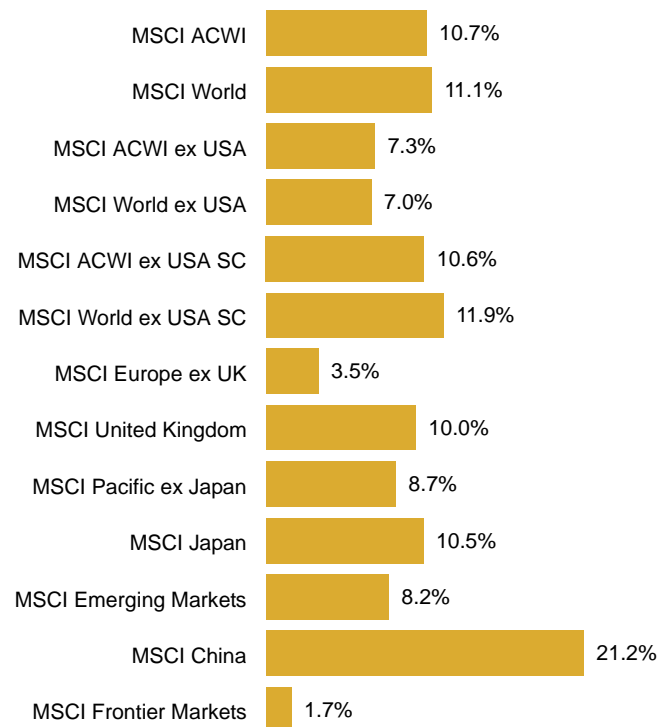
Non-U.S. markets ended in the red as trade war talk moved into action. Although initial tariffs levied by the U.S. were targeted, retaliatory actions and supply chain disruptions broadened their effects.

- Growth outpaced value—although no factor category showed significant strength.
- Cyclical sectors were hurt later in the quarter as the prospect of slower growth led to reduced expectations.
- The U.S. dollar was up, hurting non-U.S. returns. The euro and British pound were hit especially hard with the rise of populism and Brexit turmoil.
- Emerging markets sold off significantly, led by China and Latin America.
- Fears of increasing debt burdens and trade war effects impacted China.
- Brazil was affected by slower global growth, and falling sentiment hit energy and financials hard.
- Frontier markets were singed by Argentina (-42%) on continuing political unrest, severe drought, and a devaluing currency.
- Emerging markets were among the hardest hit with Latin America taking the brunt of the sell-off. In May, Brazil’s central bank unexpectedly left rates unchanged, while a trucking strike and growing concern about October elections weighed on markets. The Brazilian real fell 14% in the quarter versus the U.S. dollar.
- China reversed a five-quarter rally on concerns surrounding growing debt burdens, slower growth, and trade uncertainty.

**Global Equity: Quarterly Returns**



**Global Equity: One-Year Returns**



Source: MSCI

**U.S. FIXED INCOME**

Fixed income markets grappled with multiple issues, resulting in continued volatility. Trade conflicts due to the imposition of tariffs, emerging market elections, and the rising U.S. dollar contributed to the unstable environment.

U.S. rates rose in the second quarter and the yield curve continued its flattening trend.

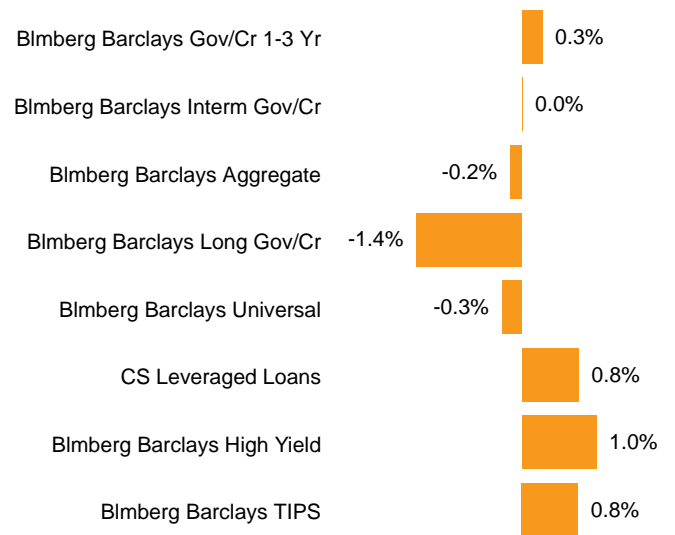
**Treasury Spreads Tighten**

- The spread between the 2-year and 10-year ended at its lowest level (33 bps) in more than 10 years.
- The Bloomberg Barclays U.S. Aggregate Bond Index fell 0.2%.
- Investment-grade (IG) corporates faced increased headwinds during the quarter, dragging returns lower. Concerns over potential trade wars and rising rates increasingly weighed on IG credit despite rising earnings and revenues.
- High yield corporates (Bloomberg Barclays High Yield Index: +1.0%) rebounded in the second quarter, pushing year-to-date returns into positive territory.
- CCC-rated credits continued to outperform higher-rated credits within high yield.
- Earnings growth remains strong and defaults remain benign amid the positive economic outlook.

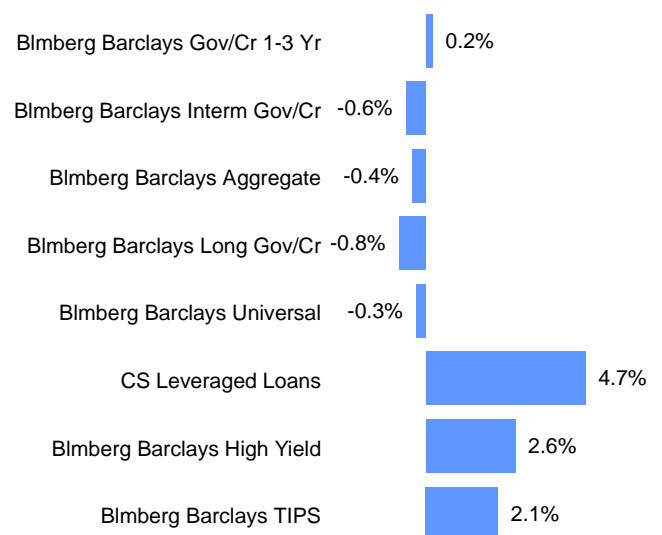
**Yield Curve Nears Inversion**

- The Fed's preferred measure of inflation, personal consumption expenditures (PCE), is on the precipice of its 2% target.
- The impact of increased tariffs and fiscal policy may lead to even higher levels.
- Only the recent strength of the U.S. dollar and a drop in energy prices have curtailed the dramatic rise over the past year.
- With two more hikes forecasted for this year and three more next year, the curve is inching closer to inversion.
- While not an immediate cause of recession, an inverted curve has been a reliable signal of recession in the past.

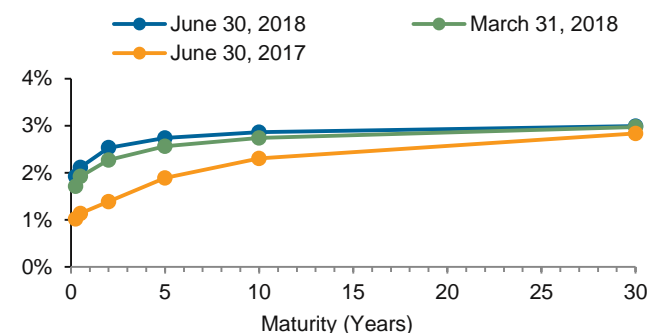
**U.S. Fixed Income: Quarterly Returns**



**U.S. Fixed Income: One-Year Returns**



**U.S. Treasury Yield Curves**



Sources: Bloomberg, Bloomberg Barclays, Credit Suisse

**NON-U.S. FIXED INCOME**

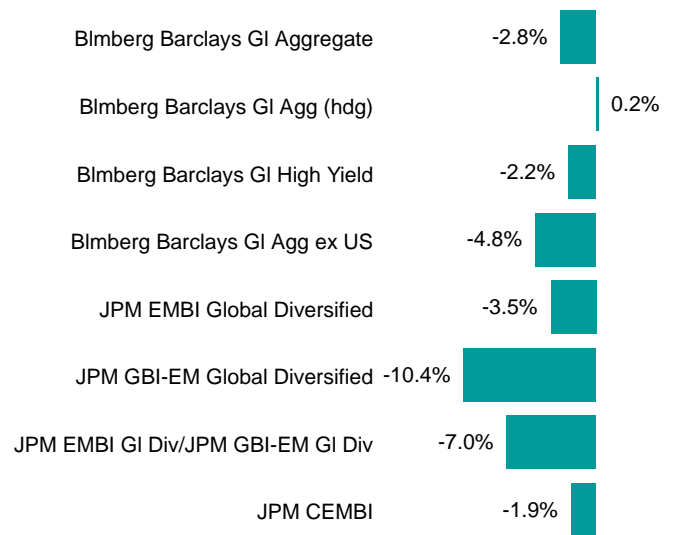
**Most Indices Fell in Second Quarter**

- The Bloomberg Barclays Global Aggregate Bond Index dropped 2.8%.
- The ex-US version of the Index fell even more, declining 4.8%.
- Emerging market indices were especially hard hit (JPM GBI-EM Global Diversified Index: -10.4%).
- For the last year, broad indices were narrowly positive but EM indices were lower.

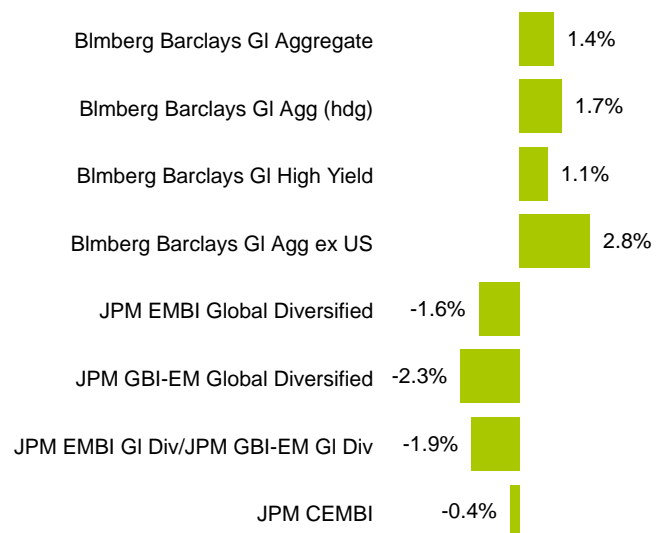
**Uncertainty of Trade War May Have Biggest Impact**

- Announced tariffs aren't expected to have a meaningful impact on growth; however, the extent of the costs ultimately depends on the degree to which other countries counter.
- An OECD study that looks at the far larger shock of a 10% across-the-board increase in tariffs by the U.S., euro zone, and China finds that global GDP would fall by 1.4%.
- The more impactful result may be an increase in uncertainty, which tends to precede weaker economic activity.
- These effects will take time to ultimately play out and are even more difficult to cap and quantify.

**Global Fixed Income: Quarterly Returns**

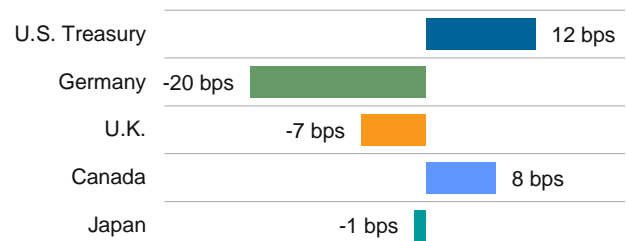


**Global Fixed Income: One-Year Returns**



**Change in 10-Year Global Government Bond Yields**

**1Q18 to 2Q18**



Sources: Bloomberg, Bloomberg Barclays, JP Morgan





## Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of June 30, 2018, with the distribution as of March 31, 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.

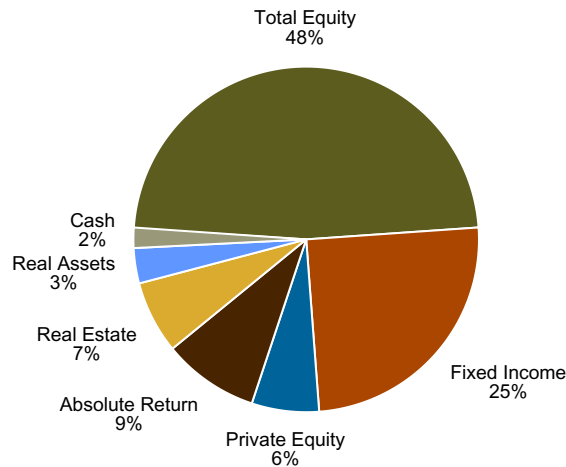
### Asset Distribution Across Investment Managers

	June 30, 2018			Inv. Return	March 31, 2018	
	Market Value	Weight	Net New Inv.		Market Value	Weight
<b>Total Domestic Equity</b>	<b>\$1,173,639,738</b>	<b>21.88%</b>	<b>\$(97,000,000)</b>	<b>\$55,802,548</b>	<b>\$1,214,837,190</b>	<b>22.66%</b>
BlackRock Russell 1000 Value	157,494,991	2.94%	0	1,881,065	155,613,926	2.90%
DFA Large Cap Value	152,322,001	2.84%	(9,000,000)	1,440,397	159,881,604	2.98%
Northern Trust Global	295,032,109	5.50%	(21,000,000)	10,346,406	305,685,703	5.70%
Polen Capital Management	163,403,264	3.05%	(16,000,000)	14,765,270	164,637,994	3.07%
Earnest Partners LLC	116,351,554	2.17%	(16,000,000)	2,837,336	129,514,218	2.42%
DFA Small Cap Value	187,374,870	3.49%	(20,000,000)	15,159,071	192,215,799	3.59%
CastleArk Management	101,660,950	1.90%	(15,000,000)	9,373,002	107,287,947	2.00%
<b>Total Global Equity</b>	<b>\$467,373,644</b>	<b>8.71%</b>	<b>\$(45,000,000)</b>	<b>\$3,447,005</b>	<b>\$508,926,639</b>	<b>9.49%</b>
BlackRock Global Alpha Tilts	278,914,956	5.20%	(24,000,000)	(1,312,373)	304,227,329	5.68%
MFS Investment Management	188,458,688	3.51%	(21,000,000)	4,759,378	204,699,310	3.82%
<b>Total International Equity</b>	<b>\$930,840,276</b>	<b>17.35%</b>	<b>\$(23,000,000)</b>	<b>\$(22,452,229)</b>	<b>\$976,292,505</b>	<b>18.21%</b>
AQR Emerging Markets	99,660,703	1.86%	0	(10,614,181)	110,274,884	2.06%
Brandes Investment Partners	377,562,372	7.04%	(12,000,000)	(2,470,733)	392,033,105	7.31%
William Blair & Company	272,777,233	5.08%	(6,000,000)	(2,983,994)	281,761,227	5.26%
DFA International Small Cap	180,839,968	3.37%	(5,000,000)	(6,383,321)	192,223,289	3.59%
<b>Total Fixed Income</b>	<b>\$1,333,860,820</b>	<b>24.86%</b>	<b>\$0</b>	<b>\$3,906,996</b>	<b>\$1,329,953,824</b>	<b>24.81%</b>
Allianz US Fixed Income 250	485,388,204	9.05%	0	3,914,049	481,474,155	8.98%
BlackRock US Debt Idx Fd	214,285,611	3.99%	0	(277,365)	214,562,976	4.00%
Reams Asset Management	275,067,210	5.13%	0	954,456	274,112,754	5.11%
Loomis, Sayles & Company, L.P.	359,119,796	6.69%	0	(684,143)	359,803,939	6.71%
<b>Total Private Equity</b>	<b>\$335,843,871</b>	<b>6.26%</b>	<b>\$(3,579,818)</b>	<b>\$33,357,493</b>	<b>\$306,066,196</b>	<b>5.71%</b>
Abbott Capital Management 2010	28,728,550	0.54%	(2,275,000)	3,289,490	27,714,060	0.52%
Abbott Capital Management 2011	48,570,556	0.91%	(3,025,000)	5,459,465	46,136,091	0.86%
Abbott Capital Management 2012	34,346,268	0.64%	0	3,525,611	30,820,657	0.57%
Abbott Capital Management 2013	29,633,752	0.55%	0	3,419,203	26,214,549	0.49%
Abbott Capital Management 2014	27,622,082	0.51%	1,400,000	2,811,478	23,410,604	0.44%
Abbott Capital Management 2015	10,923,679	0.20%	1,787,500	569,618	8,566,561	0.16%
Abbott Capital Management 2016	4,339,770	0.08%	1,126,250	99,308	3,114,212	0.06%
Abbott Capital Management 2018	75,000	0.00%	75,000	0	-	-
Mesirow V	63,722,635	1.19%	(3,000,000)	5,337,404	61,385,231	1.15%
Mesirow VI	43,045,877	0.80%	1,800,560	4,763,269	36,482,048	0.68%
Mesirow VII	4,679,887	0.09%	0	(71,116)	4,751,003	0.09%
NB Secondary Opp Fund III	17,905,679	0.33%	(1,069,330)	1,762,531	17,212,478	0.32%
NB Secondary Opp Fund IV	2,552,438	0.05%	146,147	471,998	1,934,293	0.04%
Private Advisors VI	15,917,459	0.30%	(366,991)	1,374,188	14,910,262	0.28%
Private Advisors VII	3,780,239	0.07%	(178,954)	545,046	3,414,147	0.06%
<b>Absolute Return</b>	<b>\$481,594,373</b>	<b>8.98%</b>	<b>\$0</b>	<b>\$12,455,986</b>	<b>\$469,138,386</b>	<b>8.75%</b>
Allianz SA 1000	122,226,255	2.28%	0	7,538,751	114,687,504	2.14%
Newton	118,151,916	2.20%	0	2,459,668	115,692,247	2.16%
UBS A & Q	241,216,202	4.50%	0	2,457,567	238,758,635	4.45%
<b>Real Assets</b>	<b>\$176,868,652</b>	<b>3.30%</b>	<b>\$0</b>	<b>\$4,188,147</b>	<b>\$172,680,506</b>	<b>3.22%</b>
Principal DRA	176,868,652	3.30%	0	4,188,147	172,680,506	3.22%
<b>Total Real Estate</b>	<b>\$365,061,957</b>	<b>6.81%</b>	<b>\$(4,854,003)</b>	<b>\$4,414,812</b>	<b>\$365,501,147</b>	<b>6.82%</b>
Real Estate	365,061,957	6.81%	(4,854,003)	4,414,812	365,501,147	6.82%
<b>Total Cash</b>	<b>\$99,443,073</b>	<b>1.85%</b>	<b>\$81,878,153</b>	<b>\$197,472</b>	<b>\$17,367,448</b>	<b>0.32%</b>
Cash	99,443,073	1.85%	81,878,153	197,472	17,367,448	0.32%
<b>Total Fund</b>	<b>\$5,364,526,404</b>	<b>100.0%</b>	<b>\$(91,555,668)</b>	<b>\$95,318,231</b>	<b>\$5,360,763,842</b>	<b>100.0%</b>

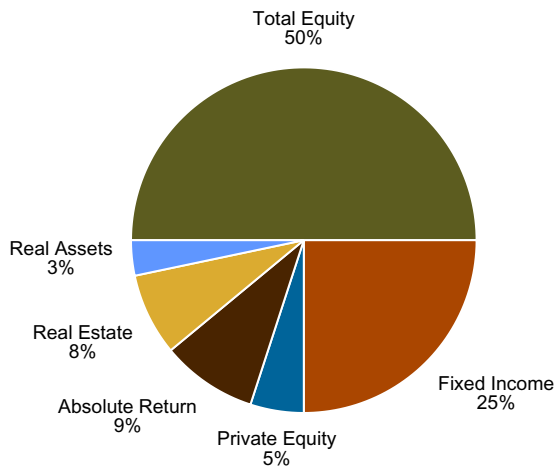
## Actual vs Target Asset Allocation As of June 30, 2018

The first chart below shows the Fund's asset allocation as of June 30, 2018. The second chart shows the Fund's target asset allocation as outlined in the investment policy statement. The last chart shows the average asset allocation for the Callan Public Fund Sponsor - Large (>1B).

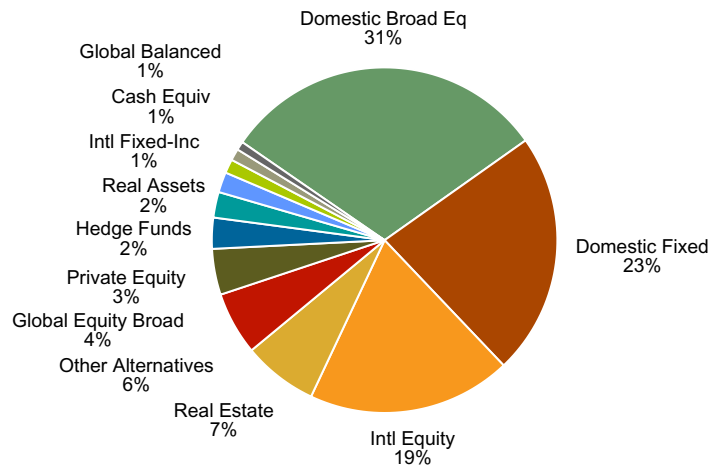
**Actual Asset Allocation**



**Target Asset Allocation**



**Callan Public Fund Sponsor - Large (>1B)**



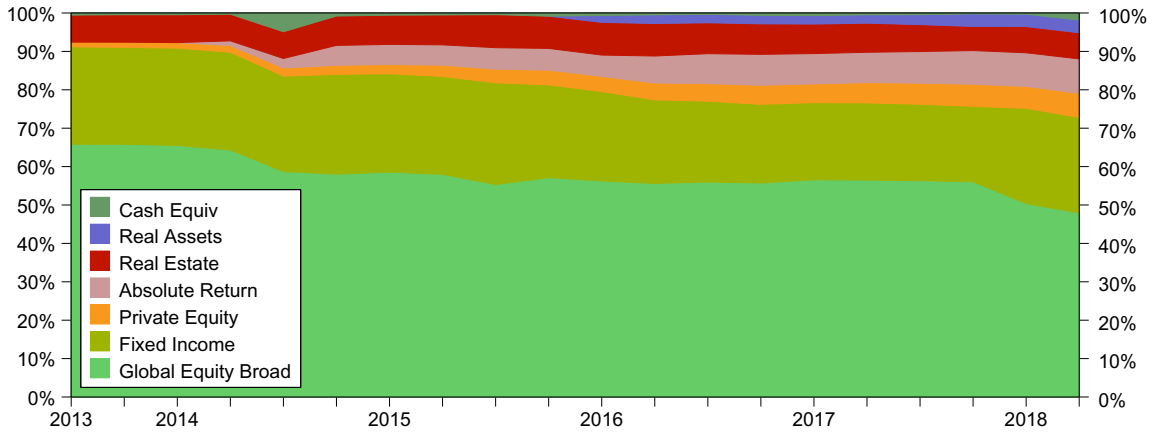
Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Total Equity	2,571,854	47.9%	50.0%	(2.1%)	(110,410)
Fixed Income	1,333,861	24.9%	25.0%	(0.1%)	(7,271)
Private Equity	335,844	6.3%	5.0%	1.3%	67,618
Absolute Return	481,594	9.0%	9.0%	(0.0%)	(1,213)
Real Estate	365,062	6.8%	7.7%	(0.9%)	(48,007)
Real Assets	176,869	3.3%	3.3%	(0.0%)	(161)
Cash	99,443	1.9%	0.0%	1.9%	99,443
<b>Total</b>	<b>5,364,526</b>	<b>100.0%</b>	<b>100.0%</b>		

\* Current Quarter Target = 50.0% MSCI ACWI IMI, 25.0% Blmbg Aggregate, 9.0% 3-month Treasury Bill+3.0%, 7.7% NFI-ODCE (1 Qtr in Arrears), 5.0% Russell 3000 (1 Qtr in Arrears)+3.0% and 3.3% Principal Blended Benchmark.

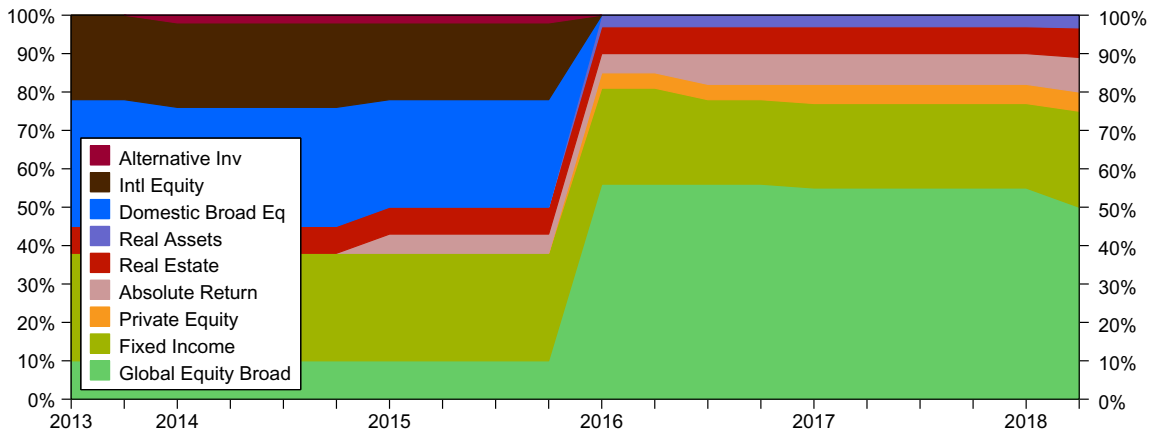
## Actual vs Target Historical Asset Allocation

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 Database.

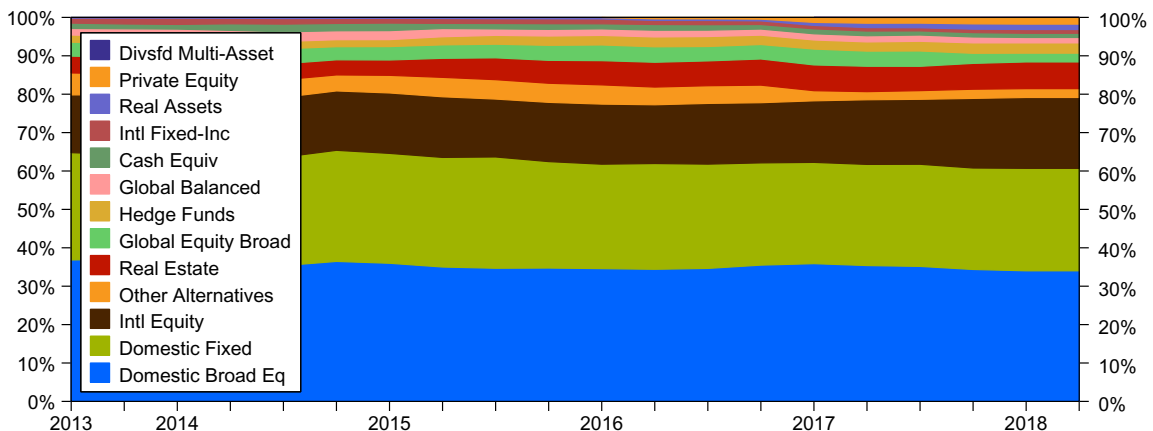
### Actual Historical Asset Allocation



### Target Historical Asset Allocation



### Average Callan Public Fund Sponsor Database Historical Asset Allocation



\* Current Quarter Target = 50.0% MSCI ACWI IMI, 25.0% Blmbg Aggregate, 9.0% 3-month Treasury Bill+3.0%, 7.7% NFI-ODCE (1 Qtr in Arrears), 5.0% Russell 3000 (1 Qtr in Arrears)+3.0% and 3.3% Principal Blended Benchmark.

# Total Fund Period Ended June 30, 2018

## Investment Philosophy

The Public Fund Sponsor Database consists of public employee pension total funds including both Callan Associates client and surveyed non-client funds. Current Quarter Target = 55.0% MSCI ACWI IMI, 22.0% BB Barclays Aggregate Idx, 8.0% 3-month Treasury Bill+3.0%, 7.0% NFI-ODCE (1 Qtr in Arrears), 5.0% Russell 3000 (1 Qtr in Arrears)+3.0% and 3.0% Principal Blended Benchmark.

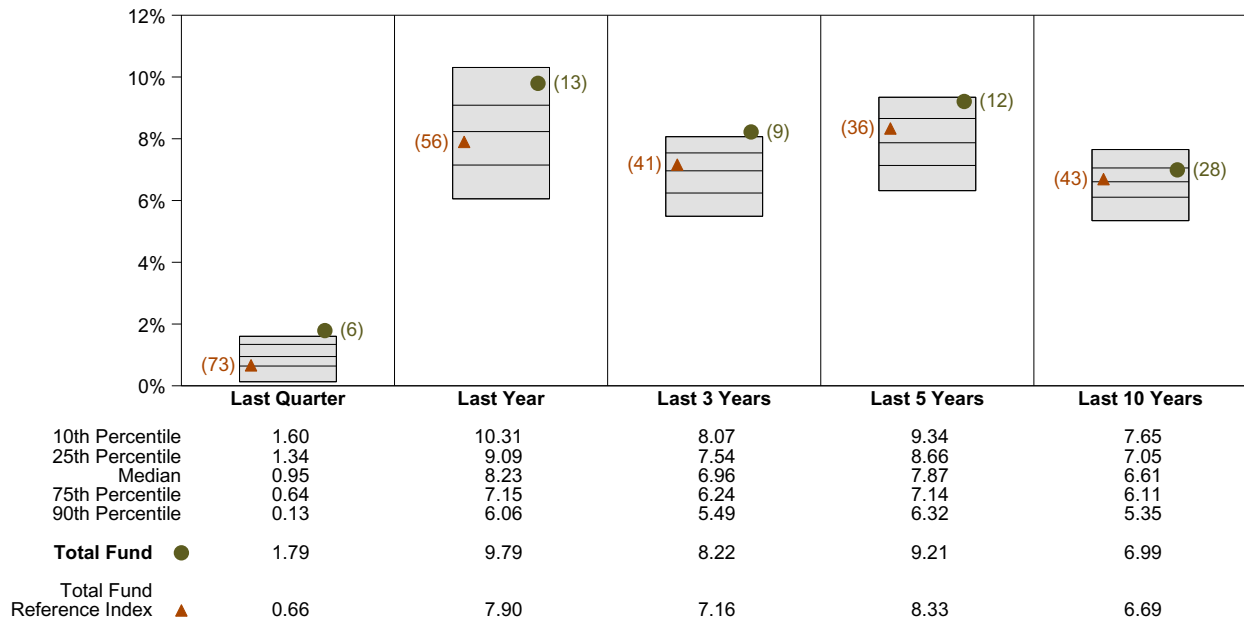
## Quarterly Summary and Highlights

- Total Fund's portfolio posted a 1.79% return for the quarter placing it in the 6 percentile of the Callan Public Fund Sponsor Database group for the quarter and in the 13 percentile for the last year.
- Total Fund's portfolio outperformed the Total Fund Reference Index by 1.12% for the quarter and outperformed the Total Fund Reference Index for the year by 1.90%.

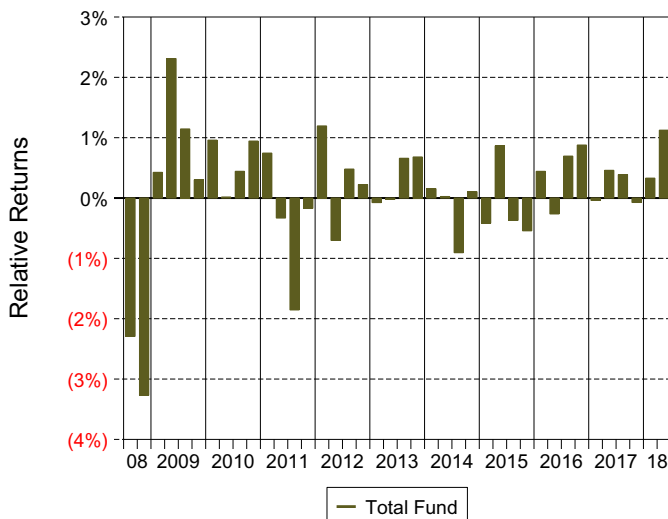
## Quarterly Asset Growth

Beginning Market Value	\$5,360,763,842
Net New Investment	\$-91,555,668
Investment Gains/(Losses)	\$95,318,231
Ending Market Value	\$5,364,526,404

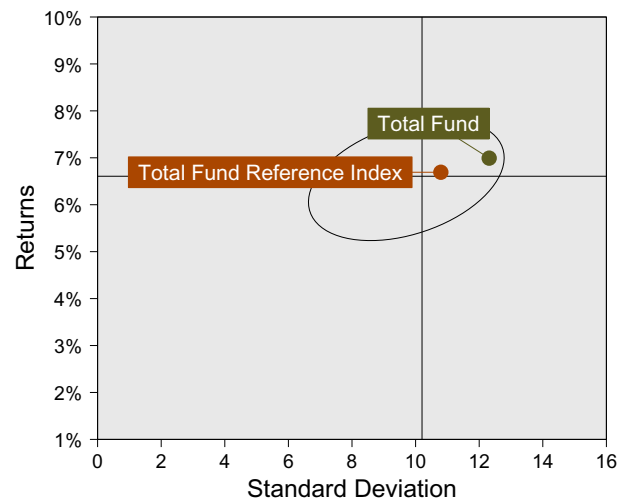
## Performance vs Callan Public Fund Sponsor Database (Gross)



## Relative Return vs Total Fund Reference Index



## Callan Public Fund Sponsor Database (Gross) Annualized Ten Year Risk vs Return

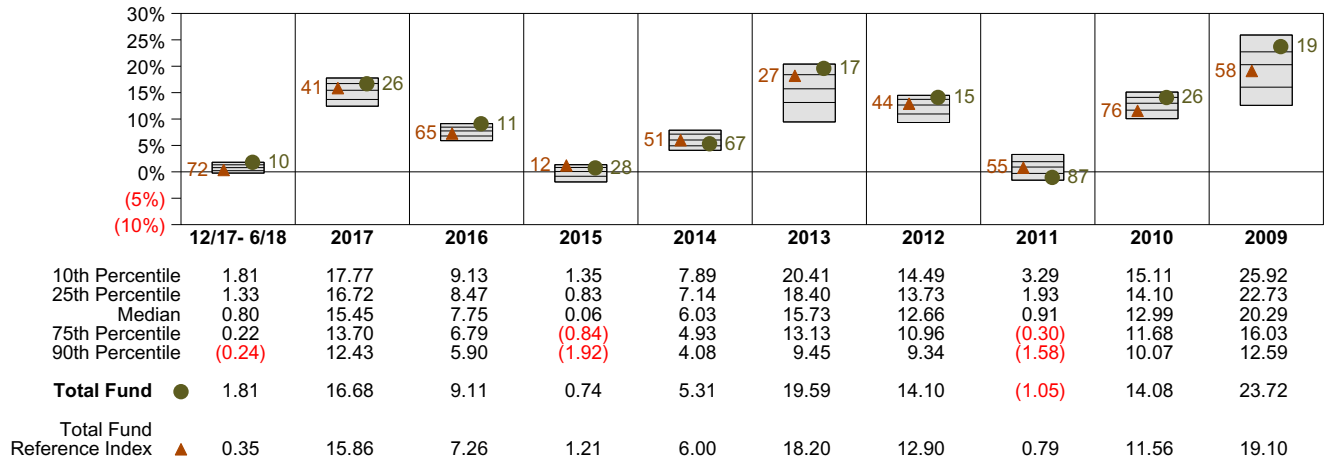


# Total Fund Return Analysis Summary

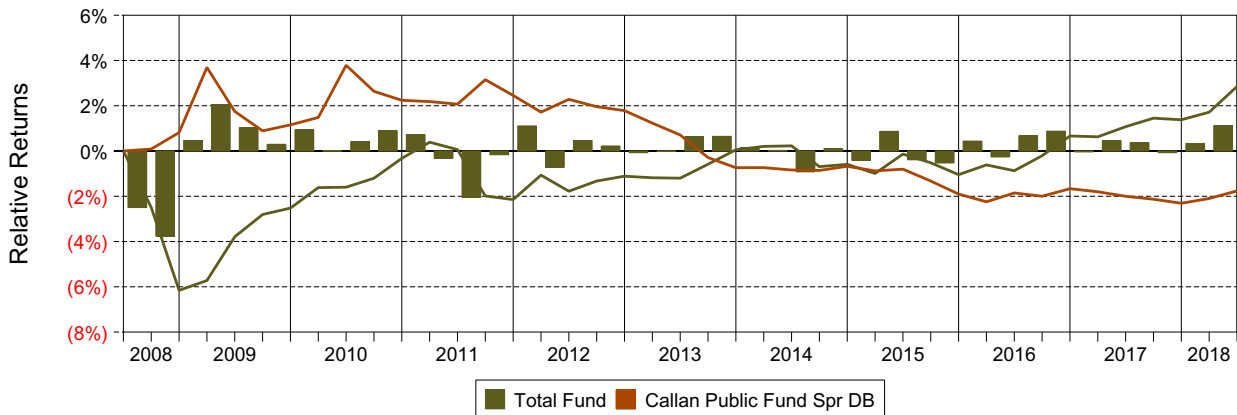
## Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

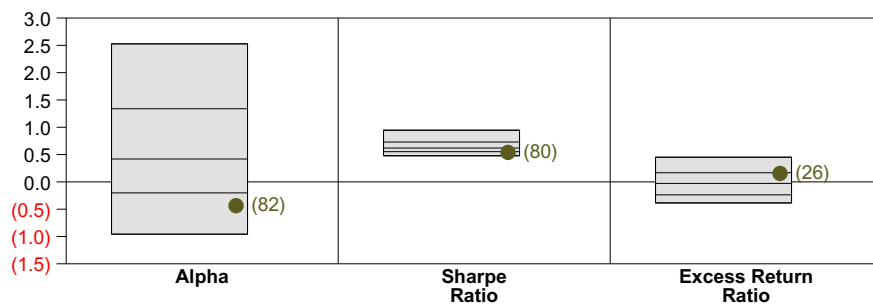
### Performance vs Callan Public Fund Sponsor Database (Gross)



### Cumulative and Quarterly Relative Return vs Total Fund Reference Index



### Risk Adjusted Return Measures vs Total Fund Reference Index Rankings Against Callan Public Fund Sponsor Database (Gross) Ten Years Ended June 30, 2018



10th Percentile	2.53	0.95	0.45
25th Percentile	1.34	0.73	0.17
Median	0.42	0.62	(0.03)
75th Percentile	(0.20)	0.55	(0.24)
90th Percentile	(0.96)	0.48	(0.39)
<b>Total Fund</b>	● (0.44)	0.54	0.15

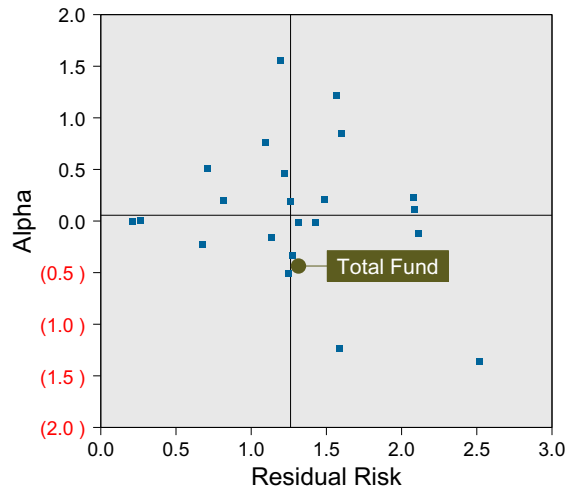
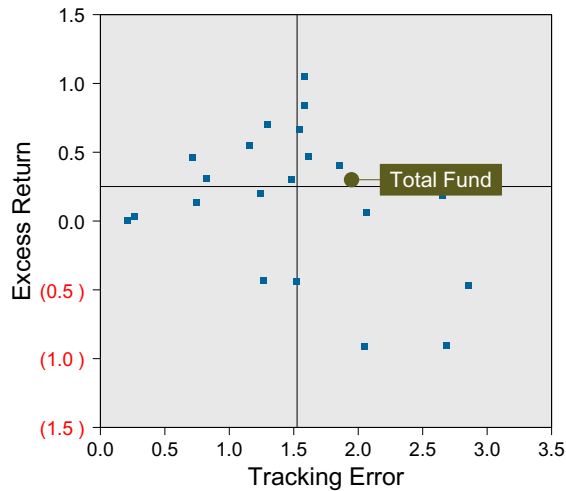
# Total Fund

## Total Fund vs Target Risk Analysis

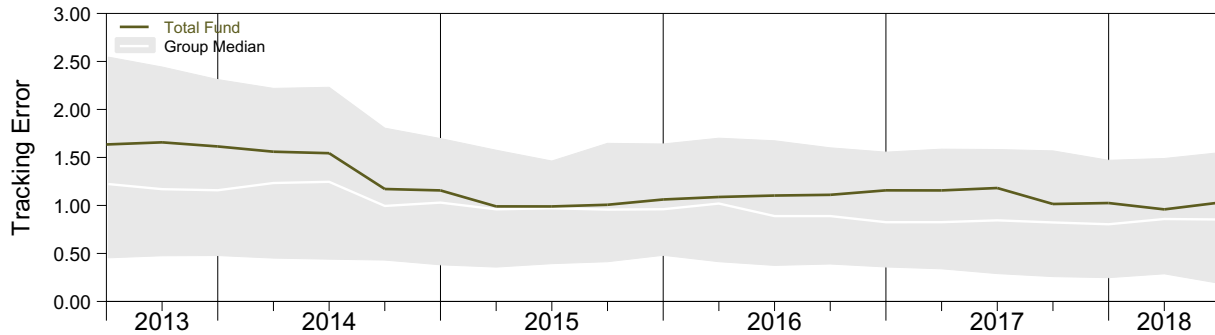
### Risk Analysis

The graphs below analyze the performance and risk of the fund relative to the appropriate target mix. This relative performance is compared to a peer group of funds wherein each member fund is measured against its own target mix. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the target. The second scatter chart displays the relationship, sometimes called Information Ratio, between alpha (market-risk or "beta" adjusted return) and residual risk (non-market or "unsystematic" risk). The third chart shows tracking error patterns over time compared to the range of tracking error patterns for the peer group. The last two charts show the ranking of the fund's risk statistics versus the peer group.

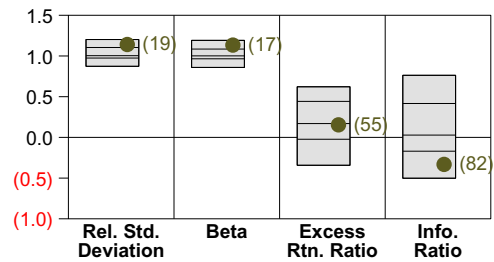
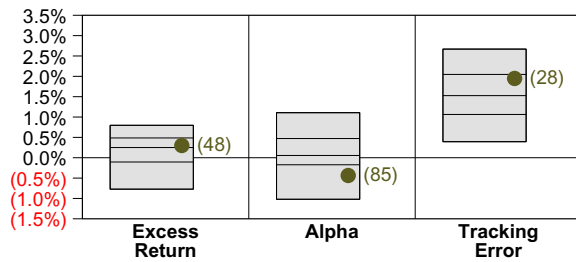
### Risk Analysis vs Callan Public Fund Sponsor Database Ten Years Ended June 30, 2018



### Rolling 12 Quarter Tracking Error vs Targets Compared to Callan Public Fund Sponsor Database



### Risk Statistics Rankings vs Targets Rankings Against Callan Public Fund Sponsor Database Ten Years Ended June 30, 2018



10th Percentile	0.80
25th Percentile	0.49
Median	0.25
75th Percentile	(0.10)
90th Percentile	(0.77)

10th Percentile	1.11
25th Percentile	0.47
Median	0.06
75th Percentile	(0.17)
90th Percentile	(1.02)

10th Percentile	2.67
25th Percentile	2.05
Median	1.53
75th Percentile	1.06
90th Percentile	0.39

**Total Fund** ● 0.30

**Total Fund** ● (0.44)

**Total Fund** ● 1.95

10th Percentile	1.20
25th Percentile	1.10
Median	1.00
75th Percentile	0.97
90th Percentile	0.87

10th Percentile	1.19
25th Percentile	1.09
Median	1.00
75th Percentile	0.97
90th Percentile	0.86

10th Percentile	0.62
25th Percentile	0.44
Median	0.17
75th Percentile	(0.02)
90th Percentile	(0.34)

10th Percentile	0.76
25th Percentile	0.42
Median	0.03
75th Percentile	(0.17)
90th Percentile	(0.50)

**Total Fund** ● 1.14

**Total Fund** ● 1.13

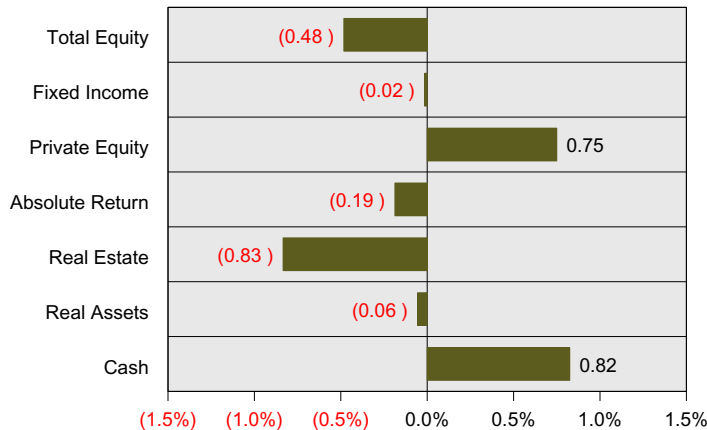
**Total Fund** ● 0.15

**Total Fund** ● (0.33)

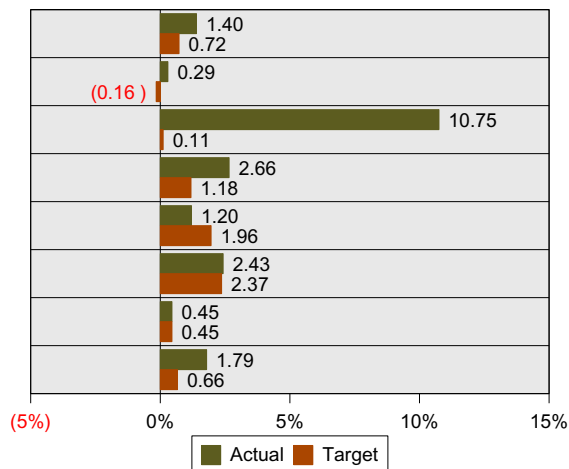
## Quarterly Total Fund Relative Attribution - June 30, 2018

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.

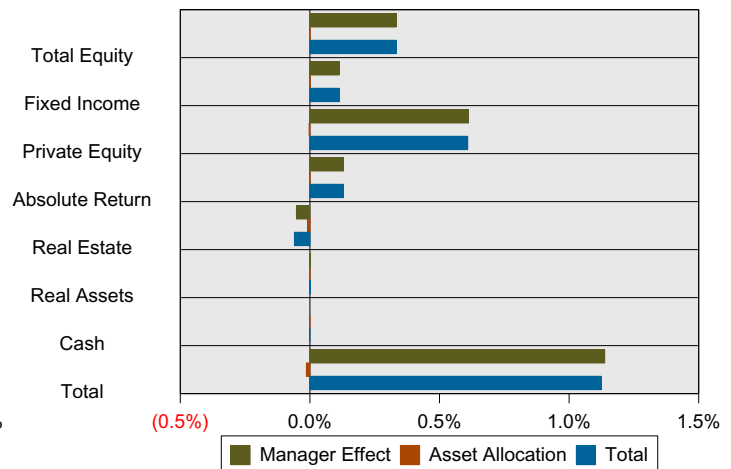
### Asset Class Under or Overweighting



### Actual vs Target Returns



### Relative Attribution by Asset Class



### Relative Attribution Effects for Quarter ended June 30, 2018

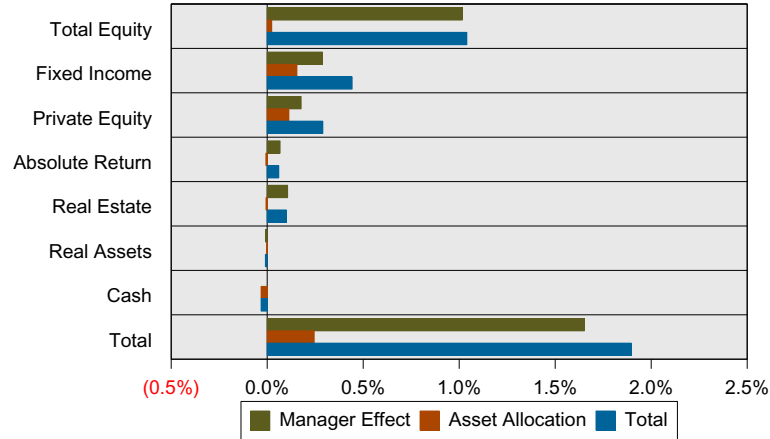
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Total Equity	50%	50%	1.40%	0.72%	0.33%	(0.00%)	0.33%
Fixed Income	25%	25%	0.29%	(0.16%)	0.11%	0.00%	0.11%
Private Equity	6%	5%	10.75%	0.11%	0.61%	(0.00%)	0.61%
Absolute Return	9%	9%	2.66%	1.18%	0.13%	(0.00%)	0.13%
Real Estate	7%	8%	1.20%	1.96%	(0.05%)	(0.01%)	(0.06%)
Real Assets	3%	3%	2.43%	2.37%	0.00%	(0.00%)	0.00%
Cash	1%	0%	0.45%	0.45%	0.00%	(0.00%)	(0.00%)
<b>Total</b>			<b>1.79%</b>		<b>1.14%</b>	<b>(0.01%)</b>	<b>1.12%</b>

\* Current Quarter Target = 50.0% MSCI ACWI IMI, 25.0% Blmbg Aggregate, 9.0% 3-month Treasury Bill+3.0%, 7.7% NFI-ODCE (1 Qtr in Arrears), 5.0% Russell 3000 (1 Qtr in Arrears)+3.0% and 3.3% Principal Blended Benchmark.

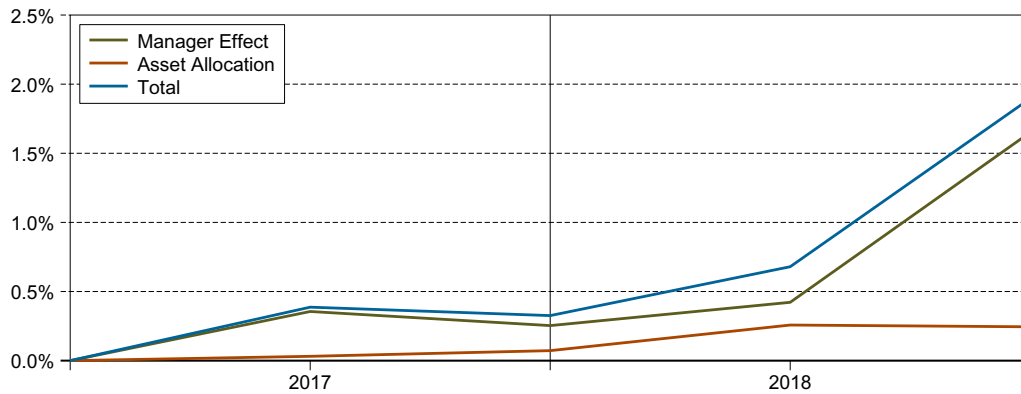
## Cumulative Total Fund Relative Attribution - June 30, 2018

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
Total Equity	54%	54%	13.10%	11.14%	1.02%	0.02%	1.04%
Fixed Income	21%	23%	0.84%	(0.40%)	0.29%	0.15%	0.44%
Private Equity	6%	5%	20.01%	16.83%	0.18%	0.11%	0.29%
Absolute Return	9%	8%	5.10%	4.36%	0.07%	(0.01%)	0.06%
Real Estate	7%	7%	8.98%	7.28%	0.11%	(0.01%)	0.10%
Real Assets	3%	3%	6.91%	7.25%	(0.01%)	(0.00%)	(0.01%)
Cash	1%	0%	1.72%	1.72%	0.00%	(0.03%)	(0.03%)
<b>Total</b>			<b>9.79%</b>	<b>7.90%</b>	<b>+ 1.65%</b>	<b>+ 0.24%</b>	<b>1.90%</b>

\* Current Quarter Target = 50.0% MSCI ACWI IMI, 25.0% BlmBg Aggregate, 9.0% 3-month Treasury Bill+3.0%, 7.7% NFI-ODCE (1 Qtr in Arrears), 5.0% Russell 3000 (1 Qtr in Arrears)+3.0% and 3.3% Principal Blended Benchmark.



## Investment Manager Returns and Peer Group Rankings

The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods ended June 30, 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 and Rankings for Periods Ended June 30, 2018

	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Since Inception	
<b>Total Domestic Equity</b>	<b>4.68%</b>		<b>15.72%</b>		<b>12.06%</b>		<b>13.67%</b>		<b>7.36%</b> (7/98)	
Russell 3000 Index	3.89%		14.78%		11.58%		13.29%		6.82% (7/98)	
BlackRock Russell 1000 Value	1.21%	57	6.88%	83	-	-	-	-	6.81%	(3/17)
Russell 1000 Value Index	1.18%	60	6.77%	84	8.26%	72	10.34%	80	5.28%	(3/17)
Callan Large Cap Value	1.51%		9.63%		9.24%		11.17%		-	
DFA Large Cap Value	0.92%	67	-		-		-		5.23%	(11/17)
Russell 1000 Value Index	1.18%	60	6.77%	84	8.26%	72	10.34%	80	2.80%	(11/17)
Callan Large Cap Value	1.51%		9.63%		9.24%		11.17%		-	
Northern Trust Global	3.43%	38	14.38%	45	11.96%	27	13.48%	44	10.45%	(8/88)
S&P 500 Index	3.43%	38	14.37%	45	11.93%	27	13.42%	49	10.40%	(8/88)
Callan Large Cap Core	3.11%		14.09%		11.14%		13.42%		-	
Polen Capital Management	9.17%	4	23.41%	41	16.80%	9	18.79%	11	16.98%	(7/12)
S&P 500 Index	3.43%	88	14.37%	97	11.93%	85	13.42%	96	14.59%	(7/12)
Callan Large Cap Growth	5.76%		22.56%		13.98%		16.33%		-	
Earnest Partners LLC	2.29%	67	15.19%	41	13.50%	8	14.86%	13	10.98%	(5/05)
Russell MidCap Index	2.82%	50	12.33%	65	9.58%	49	12.22%	57	9.92%	(5/05)
Callan Mid Capitalization	2.81%		13.92%		9.43%		12.45%		-	
DFA Small Cap Value	7.97%	15	15.64%	20	10.42%	54	11.91%	64	12.55%	(11/96)
Russell 2000 Value Index	8.30%	12	13.10%	41	11.22%	44	11.18%	79	10.01%	(11/96)
Callan Small Cap Value	6.00%		12.52%		10.53%		12.31%		-	
CastleArk Management	9.24%	50	26.04%	61	9.70%	79	-		12.92%	(9/13)
Russell 2000 Growth Index	7.23%	81	21.86%	82	10.60%	68	13.65%	69	12.90%	(9/13)
Callan Small Cap Growth	9.27%		27.96%		12.29%		14.58%		-	
<b>Total Global Equity</b>	<b>0.75%</b>		<b>14.67%</b>		<b>11.26%</b>		<b>11.09%</b>		<b>8.99%</b> (4/10)	
MSCI World	1.73%		11.09%		8.48%		9.94%		9.17% (4/10)	
BlackRock Global Alpha Tilts	(0.44%)	75	13.31%	34	-	-	-	-	18.84%	(3/16)
MSCI ACWI Gross	0.72%	54	11.31%	52	8.78%	50	10.00%	63	17.11%	(3/16)
Callan Global Equity	0.88%		11.43%		8.77%		10.63%		-	
MFS Investment Management	2.40%	20	16.48%	19	12.17%	15	12.36%	22	12.55%	(12/12)
MSCI ACWI Gross	0.72%	54	11.31%	52	8.78%	50	10.00%	63	10.57%	(12/12)
Callan Global Equity	0.88%		11.43%		8.77%		10.63%		-	
<b>Total International Equity</b>	<b>(2.38%)</b>		<b>8.91%</b>		<b>6.35%</b>		<b>8.33%</b>		<b>7.38%</b> (5/96)	
MSCI EAFE	(1.24%)		6.84%		4.90%		6.44%		4.68% (5/96)	
AQR Emerging Markets	(9.63%)	79	4.71%	79	-	-	-	-	13.76%	(8/16)
MSCI EM Gross	(7.86%)	42	8.59%	48	5.98%	75	5.39%	67	13.89%	(8/16)
Callan Emerging Broad	(8.19%)		8.41%		7.08%		6.37%		-	
Brandes Investment Partners	(0.71%)	26	9.11%	35	5.07%	65	7.80%	45	8.41%	(2/98)
MSCI EAFE	(1.24%)	37	6.84%	60	4.90%	69	6.44%	81	4.76%	(2/98)
Callan NonUS Eq	(1.79%)		7.81%		6.02%		7.66%		-	
William Blair & Company	(1.09%)	34	12.82%	13	6.68%	35	8.16%	37	8.08%	(12/03)
MSCI ACWIxUS Gross	(2.39%)	64	7.79%	50	5.56%	54	6.48%	80	7.22%	(12/03)
Callan NonUS Eq	(1.79%)		7.81%		6.02%		7.66%		-	
DFA International Small Cap	(3.47%)	80	5.40%	94	7.19%	90	10.09%	75	5.58%	(5/06)
Blended Benchmark	(1.57%)	37	12.45%	49	10.09%	49	11.32%	60	4.16%	(5/06)
Callan Intl Small Cap	(1.94%)		12.34%		10.02%		12.07%		-	

## Investment Manager Returns and Peer Group Rankings

The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods ended June 30, 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 and Rankings for Periods Ended June 30, 2018

	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Since Inception	
<b>Total Fixed Income</b>	<b>0.29%</b>		<b>0.84%</b>		<b>3.21%</b>		<b>2.91%</b>		<b>7.51%</b>	(12/87)
Bimbg Aggregate	(0.16%)		(0.40%)		1.72%		2.27%		6.23%	(12/87)
Allianz US Fixed Income 250	0.81%	1	-		-		-		1.30%	(2/18)
Bimbg Aggregate +2.5%	0.46%	1	2.10%	1	4.22%	1	4.78%	1	0.57%	(2/18)
Callan Core Bond FI	(0.12%)		(0.04%)		2.11%		2.67%		-	
BlackRock US Debt Idx Fd	(0.13%)	54	(0.33%)	77	-		-		0.01%	(6/16)
Bimbg Aggregate	(0.16%)	65	(0.40%)	86	1.72%	91	2.27%	93	0.51%	(6/16)
Callan Core Bond FI	(0.12%)		(0.04%)		2.11%		2.67%		-	
Reams Asset Management	0.35%	5	0.78%	22	2.44%	58	2.49%	97	5.43%	(1/01)
Bimbg Aggregate	(0.16%)	47	(0.40%)	87	1.72%	98	2.27%	99	4.51%	(1/01)
Callan Core Plus FI	(0.18%)		0.30%		2.56%		3.15%		-	
Loomis, Sayles & Company, L.P.	(0.19%)	51	1.58%	2	4.94%	2	4.59%	3	9.05%	(12/87)
Bimbg Aggregate	(0.16%)	47	(0.40%)	87	1.72%	98	2.27%	99	6.23%	(12/87)
Callan Core Plus FI	(0.18%)		0.30%		2.56%		3.15%		-	
<b>Total Private Equity</b>	<b>10.75%</b>		<b>20.01%</b>		<b>14.14%</b>		<b>14.00%</b>		<b>8.73%</b>	(6/10)
Abbott Capital Management 2010	11.99%		25.48%		16.42%		14.55%		(7.25%)	(6/10)
Abbott Capital Management 2011	11.89%		24.17%		15.83%		12.52%		(4.35%)	(6/11)
Abbott Capital Management 2012	11.44%		22.11%		13.65%		9.45%		5.53%	(7/12)
Abbott Capital Management 2013	13.04%		24.39%		12.86%		5.97%		5.77%	(5/13)
Abbott Capital Management 2014	11.37%		18.91%		10.31%		-		2.79%	(4/14)
Abbott Capital Management 2015	5.82%		8.10%		6.08%		-		5.60%	(4/15)
Abbott Capital Management 2016	2.68%		3.19%		-		-		0.31%	(3/16)
Mesirow V	8.78%		16.84%		16.74%		18.15%		13.55%	(6/10)
Mesirow VI	12.07%		18.46%		8.73%		5.02%		5.02%	(7/13)
Mesirow VII	(1.50%)		(33.24%)		-		-		-	
NB Secondary Opp Fund III	10.30%		22.04%		16.44%		-		12.48%	(12/13)
NB Secondary Opp Fund IV	24.48%		18.08%		-		-		14.22%	(4/17)
Private Advisors VI	9.41%		17.61%		1.44%		-		0.31%	(4/15)
Private Advisors VII	16.85%		21.09%		-		-		7.10%	(1/17)
Russell 3000 (1 Qtr in Arrears) + 3%	0.11%		16.83%		13.26%		16.06%		19.31%	(1/17)
<b>Absolute Return</b>	<b>2.66%</b>		<b>5.10%</b>		<b>5.07%</b>		<b>-</b>		<b>5.40%</b>	(6/14)
Allianz SA 1000	6.57%	1	6.89%	17	8.85%	2	-		9.50%	(6/14)
T-Bills + 10%	2.83%	8	11.36%	2	10.68%	2	10.42%	1	10.50%	(6/14)
Callan Abs Rtn Hedge FoF	1.36%		4.99%		2.71%		4.07%		-	
Newton	2.13%	16	2.24%	97	3.47%	23	-		3.22%	(8/14)
1-month LIBOR + 4%	1.47%	40	5.55%	26	4.87%	9	4.59%	26	4.70%	(8/14)
Callan Abs Rtn Hedge FoF	1.36%		4.99%		2.71%		4.07%		-	
UBS A & Q	1.03%	56	5.55%	26	3.67%	14	-		3.96%	(12/14)
1-month LIBOR + 4%	1.47%	40	5.55%	26	4.87%	9	4.59%	26	4.75%	(12/14)
Callan Abs Rtn Hedge FoF	1.36%		4.99%		2.71%		4.07%		-	
<b>Real Assets</b>	<b>2.43%</b>		<b>6.91%</b>		<b>-</b>		<b>-</b>		<b>7.30%</b>	(1/16)
Principal DRA	2.43%	27	6.91%	35	-		-		7.30%	(1/16)
Principal Blended Benchmark (1)	2.37%	29	7.25%	32	-		-		6.82%	(1/16)
Callan Alternative Inv DB	0.65%		3.16%		(0.45%)		0.49%		-	
<b>Total Real Estate</b>	<b>1.20%</b>		<b>8.98%</b>		<b>10.24%</b>		<b>11.80%</b>		<b>6.65%</b>	(7/86)
Real Estate	1.20%	83	8.98%	34	10.24%	31	11.80%	24	6.65%	(7/86)
Blended Benchmark (2)	1.96%	55	7.28%	56	9.34%	44	10.26%	47	-	
Callan Total Real Est DB	2.04%		7.59%		9.08%		10.05%		-	
<b>Total Fund</b>	<b>1.79%</b>		<b>9.79%</b>		<b>8.22%</b>		<b>9.21%</b>		<b>9.62%</b>	(1/79)
Total Fund Reference Index*	0.66%		7.90%		7.16%		8.33%		-	

(1) Current Principal Blended Benchmark = 35% Barclays US Treasury US TIPS Idx, 15% Bloomberg Commodity Idx, 20% S&P Global Infrastructure Idx, 20% S&P Global Natural Resources Idx and 10% FTSE EPRA/NAREIT Developed Market Idx.  
(2) Blended Benchmark = NCREIF (NPI) through 6/30/06, NCREIF (NPI 1 Qtr Arrears) through 12/31/13 and NFI-ODCE (1 Qtr Arrears) thereafter.

## Investment Manager Returns and Peer Group Rankings

The table below details the rates of return and peer group rankings 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.

	12/2017- 6/2018		2017		2016		2015		2014	
<b>Total Domestic Equity</b>	<b>4.18%</b>		<b>20.91%</b>		<b>13.91%</b>		<b>(0.07%)</b>		<b>11.63%</b>	
Russell 3000 Index	3.22%		21.13%		12.74%		0.48%		12.56%	
BlackRock Russell 1000 Value	(1.64%)	62	-		-		-		-	
Russell 1000 Value Index	(1.69%)	63	13.66%	90	17.34%	26	(3.83%)	70	13.45%	31
Callan Large Cap Value	(0.95%)		17.09%		15.25%		(2.56%)		12.54%	
DFA Large Cap Value	(1.67%)	63	-		-		-		-	
Russell 1000 Value Index	(1.69%)	63	13.66%	90	17.34%	26	(3.83%)	70	13.45%	31
Callan Large Cap Value	(0.95%)		17.09%		15.25%		(2.56%)		12.54%	
Northern Trust Global	2.64%	50	21.87%	47	12.01%	21	1.49%	46	13.77%	47
S&P 500 Index	2.65%	50	21.83%	48	11.96%	21	1.38%	51	13.69%	48
Callan Large Cap Core	2.65%		21.65%		10.42%		1.40%		13.63%	
Polen Capital Management	12.82%	15	27.67%	65	1.70%	73	15.51%	3	17.60%	6
S&P 500 Index	2.65%	100	21.83%	98	11.96%	2	1.38%	93	13.69%	25
Callan Large Cap Growth	8.83%		28.84%		3.39%		6.43%		11.82%	
Earnest Partners LLC	2.30%	53	26.16%	23	16.52%	29	1.25%	27	10.38%	46
Russell MidCap Index	2.35%	52	18.52%	55	13.80%	42	(2.44%)	67	13.22%	23
Callan Mid Capitalization	2.46%		19.58%		12.23%		(0.80%)		9.88%	
DFA Small Cap Value	5.61%	19	7.68%	66	29.36%	32	(6.06%)	76	5.04%	67
Russell 2000 Value Index	5.44%	23	7.84%	65	31.74%	14	(7.47%)	83	4.22%	82
Callan Small Cap Value	3.71%		9.19%		27.86%		(3.73%)		5.81%	
CastleArk Management	13.41%	56	23.93%	59	6.01%	68	(4.90%)	78	6.15%	31
Russell 2000 Growth Index	9.70%	82	22.17%	70	11.32%	36	(1.38%)	50	5.60%	32
Callan Small Cap Growth	14.16%		25.76%		8.62%		(1.29%)		3.40%	
<b>Total Global Equity</b>	<b>1.19%</b>		<b>31.31%</b>		<b>8.65%</b>		<b>(2.08%)</b>		<b>2.32%</b>	
MSCI World	0.43%		22.40%		7.51%		(0.87%)		4.94%	
BlackRock Global Alpha Tilts	(0.54%)	61	30.12%	22	-		-		-	
MSCI ACWI Gross	(0.13%)	54	24.62%	57	8.48%	27	(1.84%)	71	4.71%	47
Callan Global Equity	0.10%		25.37%		6.20%		0.17%		4.57%	
MFS Investment Management	3.61%	21	33.16%	12	6.06%	52	(0.49%)	60	5.59%	34
MSCI ACWI Gross	(0.13%)	54	24.62%	57	8.48%	27	(1.84%)	71	4.71%	47
Callan Global Equity	0.10%		25.37%		6.20%		0.17%		4.57%	
<b>Total International Equity</b>	<b>(1.76%)</b>		<b>25.03%</b>		<b>5.78%</b>		<b>(0.41%)</b>		<b>(3.63%)</b>	
MSCI EAFE	(2.75%)		25.03%		1.00%		(0.81%)		(4.90%)	
AQR Emerging Markets	(7.23%)	62	35.53%	72	-		-		-	
MSCI EM Gross	(6.51%)	39	37.75%	57	11.60%	49	(14.60%)	63	(1.82%)	62
Callan Emerging Broad	(6.94%)		39.25%		11.55%		(13.71%)		(1.09%)	
Brandes Investment Partners	1.52%	8	16.53%	99	8.50%	4	(1.25%)	67	(4.45%)	56
MSCI EAFE	(2.75%)	52	25.03%	75	1.00%	57	(0.81%)	62	(4.90%)	61
Callan NonUS Eq	(2.69%)		28.18%		1.50%		0.47%		(3.88%)	
William Blair & Company	(1.21%)	29	31.45%	22	(1.45%)	82	0.18%	53	(1.77%)	23
MSCI ACWIxUS Gross	(3.44%)	62	27.77%	56	5.01%	16	(5.25%)	92	(3.44%)	47
Callan NonUS Eq	(2.69%)		28.18%		1.50%		0.47%		(3.88%)	
DFA International Small Cap	(5.66%)	90	27.98%	92	8.00%	8	3.99%	86	(4.99%)	67
Blended Benchmark	(1.33%)	41	33.01%	74	2.18%	32	9.59%	56	(4.95%)	67
Callan Intl Small Cap	(1.72%)		35.25%		(0.03%)		10.09%		(3.42%)	

## Investment Manager Returns and Peer Group Rankings

The table below details the rates of return and peer group rankings 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.

	12/2017- 6/2018		2017		2016		2015		2014	
<b>Total Fixed Income</b>	<b>(0.96%)</b>		<b>5.28%</b>		<b>7.40%</b>		<b>(2.49%)</b>		<b>4.00%</b>	
Bimbg Aggregate	<b>(1.62%)</b>		3.54%		2.65%		0.55%		5.97%	
BlackRock US Debt Idx Fd	<b>(1.60%)</b>	71	3.68%	74	-	-	-	-	-	-
Bimbg Aggregate	<b>(1.62%)</b>	73	3.54%	85	2.65%	86	0.55%	72	5.97%	69
Callan Core Bond FI	<b>(1.46%)</b>		3.96%		3.14%		0.84%		6.19%	
Reams Asset Management	<b>(0.57%)</b>	6	3.62%	95	4.38%	63	0.38%	49	4.09%	97
Bimbg Aggregate	<b>(1.62%)</b>	65	3.54%	95	2.65%	100	0.55%	38	5.97%	61
Callan Core Plus FI	<b>(1.45%)</b>		4.97%		4.67%		0.34%		6.18%	
Loomis, Sayles & Company, L.P.	<b>(1.16%)</b>	33	8.50%	1	13.97%	1	<b>(6.10%)</b>	100	5.94%	62
Bimbg Aggregate	<b>(1.62%)</b>	65	3.54%	95	2.65%	100	0.55%	38	5.97%	61
Callan Core Plus FI	<b>(1.45%)</b>		4.97%		4.67%		0.34%		6.18%	
<b>Total Private Equity</b>	<b>10.61%</b>		<b>17.27%</b>		<b>9.09%</b>		<b>12.34%</b>		<b>15.40%</b>	
Abbott Capital Management 2010	11.99%		19.98%		11.03%		12.32%		12.36%	
Abbott Capital Management 2011	11.89%		19.24%		10.43%		10.12%		9.17%	
Abbott Capital Management 2012	11.44%		17.97%		9.42%		2.45%		4.97%	
Abbott Capital Management 2013	13.04%		18.71%		5.25%		2.23%		<b>(2.17%)</b>	
Abbott Capital Management 2014	11.37%		13.50%		2.86%		0.39%		-	
Abbott Capital Management 2015	5.82%		6.87%		<b>(5.11%)</b>		-		-	
Abbott Capital Management 2016	2.07%		<b>(1.13%)</b>		-		-		-	
Mesirow V	8.61%		21.00%		12.03%		19.41%		21.07%	
Mesirow VI	12.07%		12.50%		3.32%		<b>(3.99%)</b>		2.22%	
Mesirow VII	<b>(2.17%)</b>		-		-		-		-	
NB Secondary Opp Fund III	9.62%		20.63%		12.83%		33.37%		19.77%	
Private Advisors VI	8.68%		13.15%		<b>(1.34%)</b>		-		-	
Private Advisors VII	14.65%		<b>(3.33%)</b>		-		-		-	
Russell 3000 (1 Qtr in Arrears) + 3%	7.07%		21.71%		17.97%		2.56%		20.79%	
<b>Absolute Return</b>	<b>2.55%</b>		<b>5.96%</b>		<b>5.16%</b>		<b>4.92%</b>		<b>-</b>	
Allianz SA 1000	2.26%		59		9.67%		10		11.15%	
T-Bills + 10%	5.65%		11		10.86%		5		10.33%	
Callan Abs Rtn Hedge FoF	2.78%				4.97%				3.35%	
Newton	0.98%		93		5.59%		39		3.31%	
1-month LIBOR + 4%	2.86%		45		5.11%		47		4.49%	
Callan Abs Rtn Hedge FoF	2.78%				4.97%				3.35%	
UBS A & Q	3.49%		19		4.16%		67		2.42%	
1-month LIBOR + 4%	2.86%		45		5.11%		47		4.49%	
Callan Abs Rtn Hedge FoF	2.78%				4.97%				3.35%	
<b>Real Assets</b>	<b>1.20%</b>		<b>10.15%</b>		<b>7.00%</b>		<b>-</b>		<b>-</b>	
Principal DRA	1.20%		31		10.15%		13		7.00%	
Principal Blended Benchmark (1)	0.07%		50		10.38%		12		6.77%	
Callan Alternative Inv DB	0.11%				4.85%				10.65%	
<b>Total Real Estate</b>	<b>3.71%</b>		<b>9.20%</b>		<b>11.38%</b>		<b>13.44%</b>		<b>13.87%</b>	
Real Estate	3.71%		52		9.20%		39		11.38%	
Blended Benchmark (2)	3.94%		43		6.93%		57		9.69%	
Callan Total Real Est DB	3.74%				7.59%				8.91%	
<b>Total Fund</b>	<b>1.81%</b>		<b>16.68%</b>		<b>9.11%</b>		<b>0.74%</b>		<b>5.31%</b>	
Total Fund Reference Index*	0.35%		15.86%		7.26%		1.21%		6.00%	

\* Current Quarter Target = 50.0% MSCI ACWI IMI, 25.0% Bimbg Aggregate, 9.0% 3-month Treasury Bill+3.0%, 7.7% NFI-ODCE (1 Qtr in Arrears), 5.0% Russell 3000 (1 Qtr in Arrears)+3.0% and 3.3% Principal Blended Benchmark.  
(1) Current Principal Blended Benchmark = 35% Barclays US Treasury US TIPS Idx, 15% Bloomberg Commodity Idx, 20% S&P Global Infrastructure Idx, 20% S&P Global Natural Resources Idx and 10% FTSE EPRA/NAREIT Developed Market Idx.  
(2) Blended Benchmark = NCREIF (NPI) through 6/30/06, NCREIF (NPI 1 Qtr Arrears) through 12/31/13 and NFI-ODCE (1 Qtr Arrears) 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, 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 June 30, 2018

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Since Inception	
<b>Net of Fee Returns</b>						
Total Domestic Equity	4.60%	15.36%	11.70%	13.31%	7.02%	(7/98)
Russell 3000 Index	3.89%	14.78%	11.58%	13.29%	6.82%	(7/98)
BlackRock Russell 1000 Value	1.21%	6.86%	-	-	6.79%	(3/17)
Russell 1000 Value Index	1.18%	6.77%	8.26%	10.34%	5.28%	(3/17)
DFA Large Cap Value	0.86%	-	-	-	5.07%	(11/17)
Russell 1000 Value Index	1.18%	6.77%	8.26%	10.34%	2.80%	(11/17)
Northern Trust Global	3.43%	14.36%	11.94%	13.46%	9.66%	(9/94)
S&P 500 Index	3.43%	14.37%	11.93%	13.42%	9.69%	(9/94)
Polen Capital Management	9.04%	22.81%	16.22%	18.20%	16.40%	(7/12)
S&P 500 Index	3.43%	14.37%	11.93%	13.42%	14.59%	(7/12)
Earnest Partners LLC	2.15%	14.57%	12.89%	14.24%	10.15%	(5/05)
Russell MidCap Index	2.82%	12.33%	9.58%	12.22%	9.92%	(5/05)
DFA Small Cap Value	7.82%	15.03%	9.83%	11.31%	11.88%	(11/96)
Russell 2000 Value Index	8.30%	13.10%	11.22%	11.18%	10.01%	(11/96)
CastleArk Management	9.06%	25.22%	8.97%	-	12.17%	(9/13)
Russell 2000 Growth Index	7.23%	21.86%	10.60%	13.65%	12.90%	(9/13)
Total Global Equity	0.66%	14.27%	10.86%	10.70%	8.54%	(4/10)
MSCI World	1.73%	11.09%	8.48%	9.94%	9.17%	(4/10)
BlackRock Global Alpha Tilts	(0.45%)	13.25%	-	-	18.78%	(3/16)
MSCI ACWI Gross	0.72%	11.31%	8.78%	10.00%	17.11%	(3/16)
MFS Investment Management	2.29%	16.00%	11.71%	11.91%	12.09%	(12/12)
MSCI ACWI Gross	0.72%	11.31%	8.78%	10.00%	10.57%	(12/12)
Total International Equity	(2.50%)	8.39%	5.85%	7.82%	6.60%	(5/96)
MSCI EAFE Index	(1.24%)	6.84%	4.90%	6.44%	4.68%	(5/96)
AQR Emerging Markets	(9.80%)	3.93%	-	-	12.92%	(8/16)
MSCI EM Gross	(7.86%)	8.59%	5.98%	5.39%	13.89%	(8/16)
Brandes Investment Partners	(0.82%)	8.66%	4.64%	7.37%	7.67%	(2/98)
MSCI EAFE Index	(1.24%)	6.84%	4.90%	6.44%	4.76%	(2/98)
William Blair & Company	(1.19%)	12.38%	6.26%	7.73%	7.64%	(12/03)
MSCI ACWI ex-US Index	(2.39%)	7.79%	5.56%	6.48%	7.22%	(12/03)
DFA International Small Cap	(3.47%)	5.40%	7.19%	10.09%	5.18%	(5/06)
Blended Benchmark	(1.57%)	12.45%	10.09%	11.32%	4.16%	(5/06)
Total Fixed Income	0.26%	0.69%	3.04%	2.75%	6.56%	(9/94)
Bimbg Aggregate	(0.16%)	(0.40%)	1.72%	2.27%	5.35%	(9/94)
Allianz US Fixed Income 250	0.75%	-	-	-	1.20%	(2/18)
Bimbg Aggregate +2.5%	0.46%	2.10%	4.22%	4.78%	0.57%	(2/18)
BlackRock US Debt Idx Fd	(0.15%)	(0.38%)	-	-	(0.05%)	(6/16)
Reams Asset Management	0.31%	0.63%	2.29%	2.33%	5.19%	(1/01)
Loomis, Sayles & Company, L.P.	(0.22%)	1.45%	4.80%	4.47%	8.21%	(9/94)
Bimbg Aggregate	(0.16%)	(0.40%)	1.72%	2.27%	5.35%	(9/94)
Total Private Equity	10.75%	20.01%	14.14%	14.00%	8.73%	(6/10)
Abbott Capital Management 2010	11.99%	25.48%	16.42%	14.55%	(7.25%)	(6/10)
Abbott Capital Management 2011	11.89%	24.17%	15.83%	12.52%	(4.35%)	(6/11)
Abbott Capital Management 2012	11.44%	22.11%	13.65%	9.45%	5.53%	(7/12)
Abbott Capital Management 2013	13.04%	24.39%	12.86%	5.97%	5.77%	(5/13)
Abbott Capital Management 2014	11.37%	18.91%	10.31%	-	2.79%	(4/14)
Abbott Capital Management 2015	5.82%	8.10%	6.08%	-	5.60%	(4/15)
Abbott Capital Management 2016	2.68%	3.19%	-	-	0.31%	(3/16)
Mesirow V	8.78%	16.84%	16.74%	18.15%	13.55%	(6/10)
Mesirow IV	12.07%	18.46%	8.73%	5.02%	5.02%	(7/13)
Mesirow VII	(1.50%)	(33.24%)	-	-	-	-
NB Secondary Opp Fund III	10.30%	22.04%	16.44%	-	12.48%	(12/13)
NB Secondary Opp Fund IV	24.48%	18.08%	-	-	14.22%	(4/17)
Private Advisors VI	9.41%	17.61%	1.44%	-	0.31%	(4/15)
Private Advisors VII	16.85%	21.09%	-	-	7.10%	(1/17)
Russell 3000 (1 Qtr in Arrears) + 3%	0.11%	16.83%	13.26%	16.06%	19.31%	(1/17)
Absolute Return	2.66%	5.10%	5.07%	-	5.40%	(6/14)
Allianz SA 1000	6.57%	6.89%	8.85%	-	9.50%	(6/14)
T-Bills + 10%	2.83%	11.36%	10.68%	10.42%	10.50%	(6/14)
Newton	2.13%	2.24%	3.47%	-	3.22%	(8/14)
UBS A & Q	1.03%	5.55%	3.67%	-	3.96%	(12/14)
1-month LIBOR + 4%	1.47%	5.55%	4.87%	4.59%	4.75%	(12/14)
Real Assets	2.43%	6.91%	-	-	7.30%	(1/16)
Principal DRA	2.43%	6.91%	-	-	7.30%	(1/16)
Principal Blended Benchmark (1)	2.37%	7.25%	-	-	6.82%	(1/16)
Total Real Estate	1.14%	8.69%	9.95%	11.49%	5.49%	(7/86)
Real Estate	1.14%	8.69%	9.95%	11.49%	5.49%	(7/86)
Blended Benchmark (2)	1.96%	7.28%	9.34%	10.26%	-	-
Total Fund	1.72%	9.49%	7.92%	8.90%	9.25%	(1/79)
Total Fund Reference Index*	0.66%	7.90%	7.16%	8.33%	-	-

(1) Current Principal Blended Benchmark = 35% Barclays US Treasury US TIPS Idx, 15% Bloomberg Commodity Idx, 20% S&P Global Infrastructure Idx, 20% S&P Global Natural Resources Idx and 10% FTSE EPRA/NAREIT Developed Market Idx.

(2) Blended Benchmark = NCREIF (NPI) through 6/30/06, NCREIF (NPI 1 Qtr Arrears) through 12/31/13 and NFI-ODCE (1 Qtr Arrears) 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.

	12/2017- 6/2018	2017	2016	2015	2014
<b>Net of Fee Returns</b>					
Total Domestic Equity	4.01%	20.53%	13.55%	(0.39%)	11.28%
Russell 3000 Index	3.22%	21.13%	12.74%	0.48%	12.56%
BlackRock Russell 1000 Value	(1.65%)	-	-	-	-
Russell 1000 Value Index	(1.69%)	13.66%	17.34%	(3.83%)	13.45%
DFA Large Cap Value	(1.78%)	-	-	-	-
Russell 1000 Value Index	(1.69%)	13.66%	17.34%	(3.83%)	13.45%
Northern Trust Global	2.63%	21.84%	11.99%	1.47%	13.75%
S&P 500 Index	2.65%	21.83%	11.96%	1.38%	13.69%
Polen Capital Management	12.54%	27.05%	1.19%	14.94%	17.02%
S&P 500 Index	2.65%	21.83%	11.96%	1.38%	13.69%
Earnest Partners LLC	2.03%	25.50%	15.90%	0.71%	9.79%
Russell MidCap Index	2.35%	18.52%	13.80%	(2.44%)	13.22%
DFA Small Cap Value	5.33%	7.10%	28.68%	(6.57%)	4.47%
Russell 2000 Value Index	5.44%	7.84%	31.74%	(7.47%)	4.22%
CastleArk Management	13.04%	23.12%	5.30%	(5.54%)	5.45%
Russell 2000 Growth Index	9.70%	22.17%	11.32%	(1.38%)	5.60%
Total Global Equity	1.01%	30.85%	8.26%	(2.44%)	1.95%
MSCI World	0.43%	22.40%	7.51%	(0.87%)	4.94%
BlackRock Global Alpha Tilts	(0.56%)	30.06%	-	-	-
MSCI ACWI Gross	(0.13%)	24.62%	8.48%	(1.84%)	4.71%
MFS Investment Management	3.39%	32.62%	5.62%	(0.89%)	5.17%
MSCI ACWI Gross	(0.13%)	24.62%	8.48%	(1.84%)	4.71%
Total International Equity	(1.99%)	24.44%	5.27%	(0.89%)	(4.09%)
MSCI EAFE Index	(2.75%)	25.03%	1.00%	(0.81%)	(4.90%)
AQR Emerging Markets	(7.58%)	34.55%	-	-	-
MSCI EM Gross	(6.51%)	37.75%	11.60%	(14.60%)	(1.82%)
Brandes Investment Partners	1.31%	16.06%	8.05%	(1.66%)	(4.84%)
MSCI EAFE Index	(2.75%)	25.03%	1.00%	(0.81%)	(4.90%)
William Blair & Company	(1.40%)	30.94%	(1.84%)	(0.22%)	(2.17%)
MSCI ACWI ex-US Index	(3.44%)	27.77%	5.01%	(5.25%)	(3.44%)
DFA International Small Cap	(5.66%)	27.98%	8.00%	3.99%	(4.99%)
Blended Benchmark	(1.33%)	33.01%	2.18%	9.59%	(4.95%)
Total Fixed Income	(1.03%)	5.10%	7.21%	(2.63%)	3.85%
Bimbg Aggregate	(1.62%)	3.54%	2.65%	0.55%	5.97%
BlackRock US Debt Idx Fd	(1.63%)	3.63%	-	-	-
Reams Asset Management	(0.64%)	3.46%	4.22%	0.23%	3.94%
Loomis, Sayles & Company, L.P.	(1.23%)	8.36%	13.82%	(6.20%)	5.82%
Bimbg Aggregate	(1.62%)	3.54%	2.65%	0.55%	5.97%
Total Private Equity	10.61%	17.27%	9.09%	12.34%	15.40%
Abbott Capital Management 2010	11.99%	19.98%	11.03%	12.32%	12.36%
Abbott Capital Management 2011	11.89%	19.24%	10.43%	10.12%	9.17%
Abbott Capital Management 2012	11.44%	17.97%	9.42%	2.45%	4.97%
Abbott Capital Management 2013	13.04%	18.71%	5.25%	2.23%	(2.17%)
Abbott Capital Management 2014	11.37%	13.50%	2.86%	0.39%	-
Abbott Capital Management 2015	5.82%	6.87%	(5.11%)	-	-
Abbott Capital Management 2016	2.07%	(1.13%)	-	-	-
Mesirow V	8.61%	21.00%	12.03%	19.41%	21.07%
Mesirow VI	12.07%	12.50%	3.32%	(3.99%)	2.22%
Mesirow VII	(2.17%)	-	-	-	-
NB Secondary Opp Fund III	9.62%	20.63%	12.83%	33.37%	19.77%
Private Advisors VI	8.68%	13.15%	(1.34%)	-	-
Private Advisors VII	14.65%	(3.33%)	-	-	-
Russell 3000 (1 Qtr in Arrears) + 3%	7.07%	21.71%	17.97%	2.56%	20.79%
Absolute Return	2.55%	5.96%	5.16%	4.92%	-
Allianz SA 1000	2.26%	9.67%	11.15%	9.76%	-
T-Bills + 10%	5.65%	10.86%	10.33%	10.05%	10.03%
Newton	0.98%	5.59%	3.31%	1.50%	-
UBS A & Q	3.49%	4.16%	2.42%	4.09%	-
1-month LIBOR + 4%	2.86%	5.11%	4.49%	4.19%	4.16%
Real Assets	1.20%	10.15%	7.00%	-	-
Principal DRA	1.20%	10.15%	7.00%	-	-
Principal Blended Benchmark (1)	0.07%	10.38%	6.77%	-	-
Total Real Estate	3.59%	8.89%	11.09%	13.15%	13.54%
Real Estate	3.59%	8.89%	11.09%	13.15%	13.54%
Blended Benchmark (2)	3.94%	9.93%	9.69%	13.82%	11.26%
Total Fund	1.66%	16.36%	8.80%	0.46%	5.02%
Total Fund Reference Index*	0.35%	15.86%	7.26%	1.21%	6.00%

\* Current Quarter Target = 50.0% MSCI ACWI IMI, 25.0% Bimbg Aggregate, 9.0% 3-month Treasury Bill+3.0%, 7.7%

NFI-ODCE (1 Qtr in Arrears), 5.0% Russell 3000 (1 Qtr in Arrears)+3.0% and 3.3% Principal Blended Benchmark.

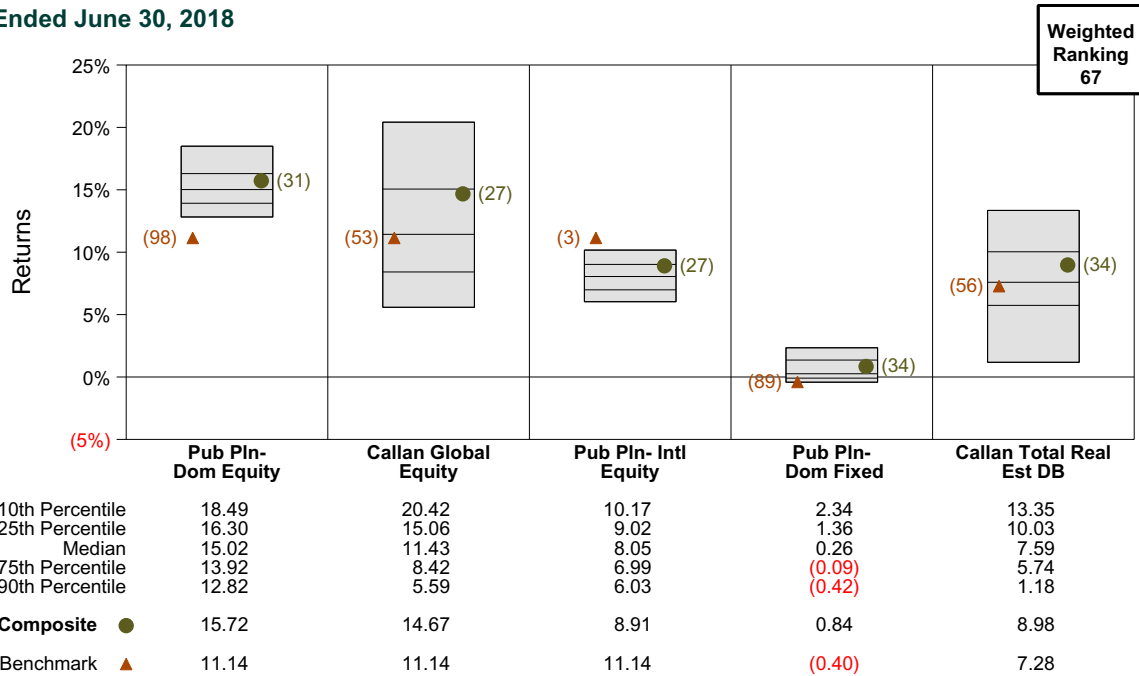
(1) Current Principal Blended Benchmark = 35% Barclays US Treasury US TIPS Idx, 15% Bloomberg Commodity Idx, 20% S&P Global Infrastructure Idx, 20% S&P Global Natural Resources Idx and 10% FTSE EPRA/NAREIT Developed Market Idx.

(2) Blended Benchmark = NCREIF (NPI) through 6/30/06, NCREIF (NPI 1 Qtr Arrears) through 12/31/13 and NFI-ODCE (1 Qtr Arrears) thereafter.

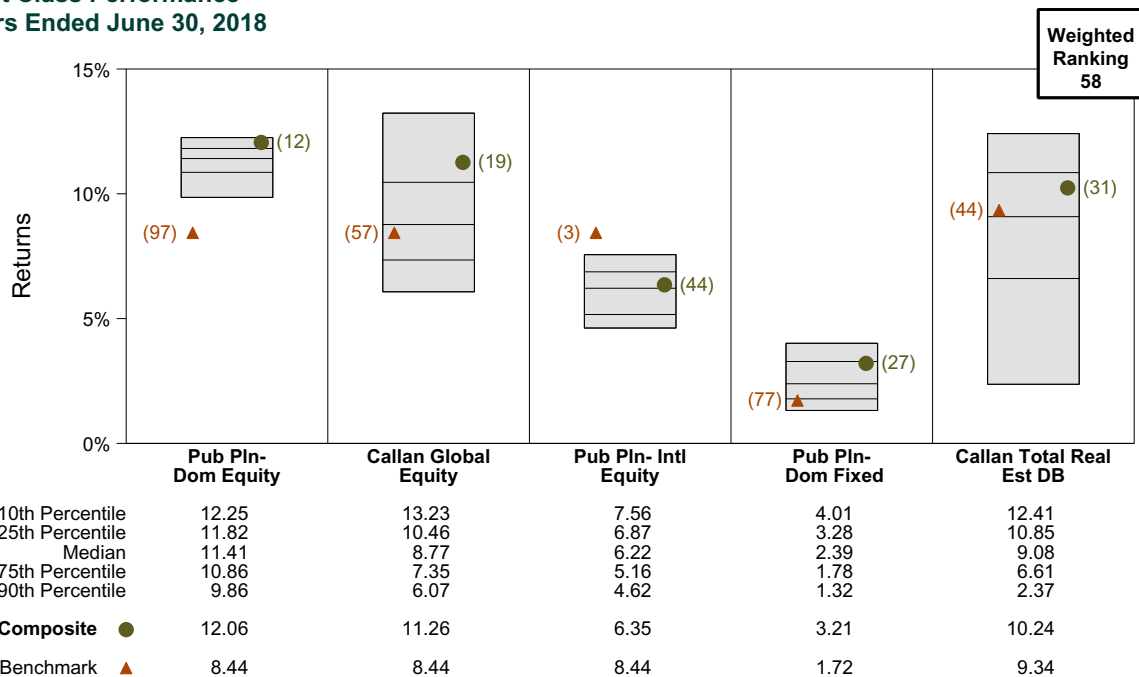
## Asset Class Rankings

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 June 30, 2018



### Total Asset Class Performance Three Years Ended June 30, 2018

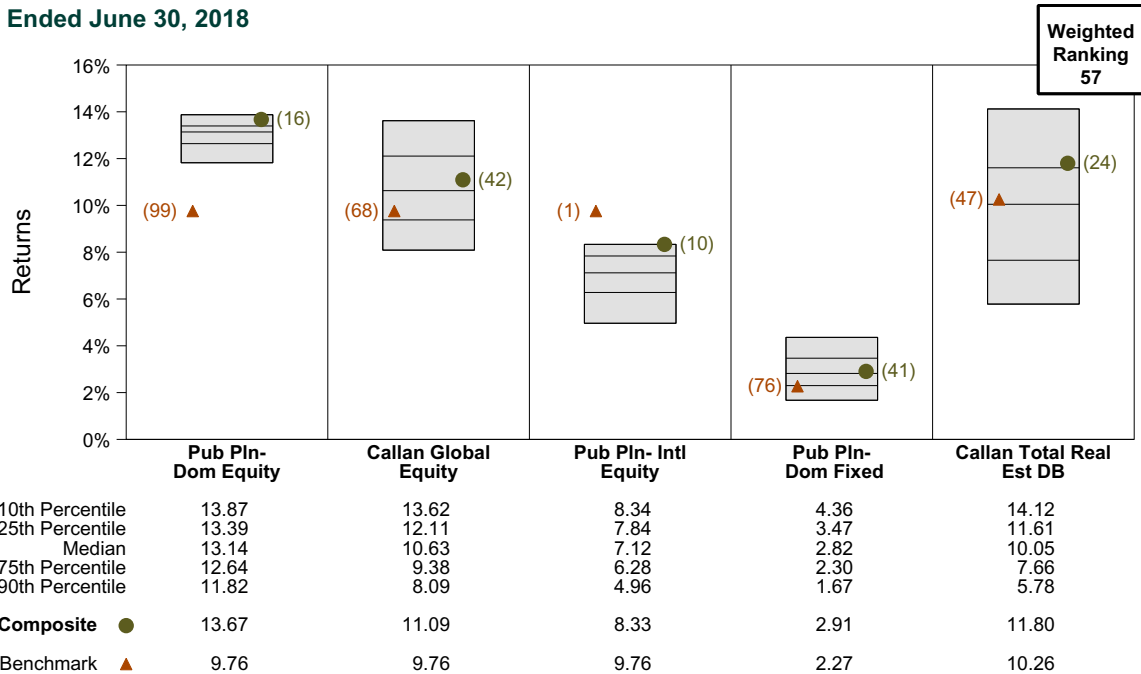


\* Current Quarter Target = 50.0% MSCI ACWI IMI, 25.0% Blmbg Aggregate, 9.0% 3-month Treasury Bill+3.0%, 7.7% NFI-ODCE (1 Qtr in Arrears), 5.0% Russell 3000 (1 Qtr in Arrears)+3.0% and 3.3% Principal Blended Benchmark.

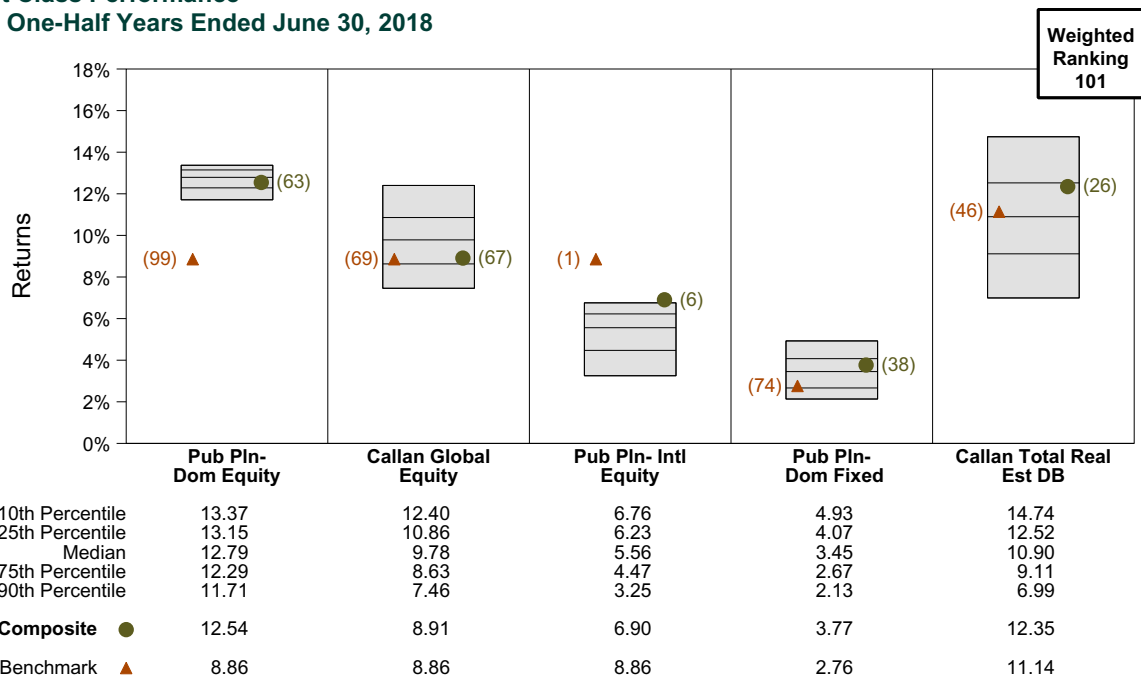
## Asset Class Rankings

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 June 30, 2018



### Total Asset Class Performance Seven and One-Half Years Ended June 30, 2018



\* Current Quarter Target = 50.0% MSCI ACWI IMI, 25.0% Blmbg Aggregate, 9.0% 3-month Treasury Bill+3.0%, 7.7% NFI-ODCE (1 Qtr in Arrears), 5.0% Russell 3000 (1 Qtr in Arrears)+3.0% and 3.3% Principal Blended Benchmark.





## Research and Educational Programs

The Callan Institute provides research to update clients on the latest industry trends and carefully structured educational programs to enhance the knowledge of industry professionals. Visit [www.callan.com/library](http://www.callan.com/library) to see all of our publications, and [www.callan.com/blog](http://www.callan.com/blog) to view our blog “Perspectives.” For more information contact Corry Walsh at 312.346.3536 / [institute@callan.com](mailto:institute@callan.com).

## New Research from Callan’s Experts



**Handle With Extreme Care: Callan’s Take on Cryptocurrencies** | In this paper, author Mark Wood provides a brief overview of cryptocurrencies and addresses primary considerations for potential investors.

He describes why Callan does not currently recommend our clients allocate to cryptocurrency investment strategies, and where we see the greatest future potential in this space.

**Risk Parity: Silver Bullet or a Bridge Too Far?** | In this chapter from the CFA Institute’s book “Multi-Asset Strategies: The Future of Investment Management,” Callan’s Greg Allen describes risk parity strategies, a category of investment strategies in which capital is allocated across asset classes so that each contributes an equal amount of volatility to the portfolio’s total volatility.

**China A-Shares: Key Issues for Investors to Consider** | China is opening up its securities markets to more non-Chinese institutional investors. In particular, expanded access to China A-shares creates new opportunities for investors. But investing in China presents a set of risks that range from the country’s slowing GDP growth to stock trading suspensions. Although China A-shares present an attractive opportunity, implementation is challenged by a shallow manager universe and high fees.

**June 2018 Regional Workshop Summary: Governance Alpha** | Investment committees face complex challenges overseeing institutional investment funds. They must navigate myriad laws and regulations, select the right managers and strategies, monitor their portfolios, and ensure their funds can deliver the returns needed for their beneficiaries. Governance describes the policies and practices established to guide these decisions. What if implementing the

astute governance required to meet these challenges also resulted in better portfolio performance? At this workshop, Callan experts described the most effective institutional fund governance practices and explored new research that connects strong plan governance with performance (i.e., governance alpha), and reviewed how investment managers fit into this framework.

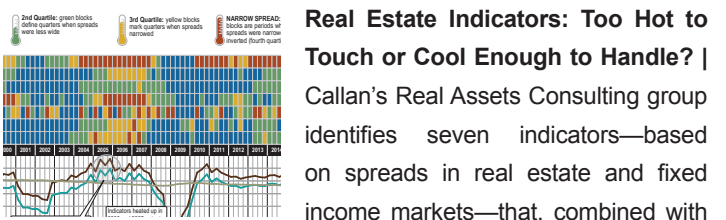
## Quarterly Periodicals

**Private Markets Trends** | This newsletter offers the latest data on activity in private equity fundraising, buyouts, venture capital, and returns for this asset class.

**Market Pulse Flipbook** | A quarterly market reference guide covering investment and fund sponsor trends in the U.S. economy, U.S. and non-U.S. equities and fixed income, alternatives, and defined contribution.

**Capital Market Review** | This quarterly publication provides analysis and a broad overview of the economy and public and private market activity each quarter across a wide range of asset classes.

**Active vs. Passive Report** | This series of charts maps active managers alongside relevant benchmarks over the last two decades.



an understanding of prevailing market dynamics, have helped signal when the institutional real estate market is overheated or cooled.

## Events

Miss out on a Callan conference or workshop? Event summaries and speakers' presentations are available on our website: [www.callan.com/library/](http://www.callan.com/library/)

Callan's **October Regional Workshops** will be held on October 16 in New York and October 18 in Atlanta. Please visit the Events page on our website ([www.callan.com/events/](http://www.callan.com/events/)) for additional information.

Callan's **2019 National Conference** will be held January 28-30, 2019. Mark your calendars for this upcoming event!

**For more information about events, please contact Barb Gerraty: 415.274.3093 / [gerraty@callan.com](mailto:gerraty@callan.com)**

## The Center for Investment Training Educational Sessions

The Center for Investment Training, better known as the "Callan College," provides a foundation of knowledge for industry professionals who are involved in the investment decision-making process. It was founded in 1994 to provide clients and non-clients alike with basic- to intermediate-level instruction. Our next sessions are:

### Introduction to Investments

*Chicago, October 2-3, 2018*

*Atlanta, October 23-24, 2018*

This program familiarizes fund sponsor trustees, staff, and asset management advisers with basic investment theory, terminology, and practices. It lasts one-and-a-half days and is designed for individuals who have less than two years of experience with asset-management oversight and/or support responsibilities. Tuition for the Introductory "Callan College" session is \$2,350 per person. Tuition includes instruction, all materials, breakfast and lunch on each day, and dinner on the first evening with the instructors.

### Customized Sessions

The "Callan College" is equipped to customize a curriculum to meet the training and educational needs of a specific organization. These tailored sessions range from basic to advanced and can take place anywhere—even at your office.

**Learn more at [www.callan.com/events/callan-college-intro](http://www.callan.com/events/callan-college-intro) or contact Kathleen Cunnie: 415.274.3029 / [cunnie@callan.com](mailto:cunnie@callan.com)**

## Education: By the Numbers

**525** Attendees (on average) of the Institute's annual National Conference

**50+** Unique pieces of research the Institute generates each year

**3,700** Total attendees of the "Callan College" since 1994

**1980** Year the Callan Institute was founded



**"Research is the foundation of all we do at Callan, and sharing our best thinking with the investment community is our way of helping to foster dialog to raise the bar across the industry."**

Greg Allen, CEO and CRO



## List of Callan's Investment Manager Clients

Confidential – For Callan Client Use Only

Callan takes its fiduciary and disclosure responsibilities to clients very seriously. We recognize that there are numerous potential conflicts of interest encountered in the investment consulting industry and that it is our responsibility to manage those conflicts effectively and in the best interest of our clients. At Callan, we employ a robust process to identify, manage, monitor and disclose potential conflicts on an on-going basis.

The list below is an important component of our conflicts management and disclosure process. It identifies those investment managers that pay Callan fees for educational, consulting, software, database or reporting products and services. We update the list quarterly because we believe that our fund sponsor clients should know the investment managers that do business with Callan, particularly those investment manager clients that the fund sponsor clients may be using or considering using. Please note that if an investment manager receives a product or service on a complimentary basis (e.g. attending and educational event), they are not included in the list below. Callan is committed to ensuring that we do not consider an investment manager's business relationship with Callan, or lack thereof, in performing evaluations for or making suggestions or recommendations to its other clients. Please refer to Callan's ADV Part 2A for a more detailed description of the services and products that Callan makes available to investment manager clients through our Institutional Consulting Group, Independent Adviser Group and Fund Sponsor Consulting Group. Due to the complex corporate and organizational ownership structures of many investment management firms, parent and affiliate firm relationships are not indicated on our list.

Fund sponsor clients may request a copy of the most currently available list at any time. Fund sponsor clients may also request specific information regarding the fees paid to Callan by particular fund manager clients. Per company policy, information requests regarding fees are handled exclusively by Callan's Compliance Department.

Manager Name
Acadian Asset Management LLC
AEGON USA Investment Management
Affiliated Managers Group, Inc.
Alcentra
AllianceBernstein
Allianz Global Investors
Allianz Life Insurance Company of North America
American Century Investments
Apollo Global Management
AQR Capital Management
Ares Management LLC
Ariel Investments, LLC
Atlanta Capital Management Co., LLC
Aviva Investors Americas
AXA Investment Managers
Baillie Gifford International, LLC
Baird Advisors
Baron Capital Management, Inc.
Barrow, Hanley, Mewhinney & Strauss, LLC
BlackRock
BMO Global Asset Management
BNP Paribas Asset Management
BNY Mellon Asset Management
Boston Partners
Brandes Investment Partners, L.P.
Brandywine Global Investment Management, LLC
BrightSphere Investment Group (FKA Old Mutual Asset)
Brown Brothers Harriman & Company
Cambiar Investors, LLC
Capital Group
Carillon Tower Advisers
CastleArk Management, LLC
Causeway Capital Management
Chartwell Investment Partners

Manager Name
ClearBridge Investments, LLC
Cohen & Steers Capital Management, Inc.
Columbia Threadneedle Investments
Columbus Circle Investors
Credit Suisse Asset Management
DePrince, Race & Zollo, Inc.
Deutsche Asset Management
Diamond Hill Capital Management, Inc.
Dimensional Fund Advisors LP
Doubleline
Duff & Phelps Investment Management Co.
EARNEST Partners, LLC
Eaton Vance Management
Epoch Investment Partners, Inc.
Fayez Sarofim & Company
Federated Investors
Fidelity Institutional Asset Management
Fiera Capital Corporation
First Eagle Investment Management, LLC
First Hawaiian Bank Wealth Management Division
Fisher Investments
Franklin Templeton
Fred Alger Management, Inc.
GAM (USA) Inc.
Global Evolution USA
GlobeFlex Capital, L.P.
GMO
Goldman Sachs Asset Management
Green Square Capital LLC
Guggenheim Investments
GW&K Investment Management
Harbor Capital Group Trust
Hartford Funds
Hartford Investment Management Co.

Manager Name
Heitman LLC
Henderson Global Investors
Hotchkis & Wiley Capital Management, LLC
HSBC Global Asset Management
Income Research + Management, Inc.
Insight Investment Management Limited
Intech Investment Management, LLC
Invesco
Investec Asset Management
Ivy Investments
J.P. Morgan
Janus Henderson Investors
Jennison Associates LLC
Jensen Investment Management
Jobs Peak Advisors
KeyCorp
Lazard Asset Management
Legal & General Investment Management America
Lincoln National Corporation
LMCG Investments, LLC
Longview Partners
Loomis, Sayles & Company, L.P.
Lord Abbett & Company
Los Angeles Capital Management
LSV Asset Management
MacKay Shields LLC
Macquarie Investment Management (MIM)
Manulife Asset Management
McKinley Capital Management, LLC
MFS Investment Management
MidFirst Bank
Mondrian Investment Partners Limited
Montag & Caldwell, LLC
Morgan Stanley Investment Management
Mountain Lake Investment Management LLC
MUFG Union Bank, N.A.
Natixis Investment Managers
Neuberger Berman
Newton Investment Management
Nikko Asset Management Co., Ltd.
Northern Trust Asset Management
Nuveen Investments, Inc.
OFI Global Asset Management
O'Shaughnessy Asset Management, LLC
P/E Investments
Pacific Investment Management Company
Pathway Capital Management
Peregrine Capital Management, Inc.
Perkins Investment Management

Manager Name
PGIM
PGIM Fixed Income
PineBridge Investments
Pioneer Investments
PNC Capital Advisors, LLC
Principal Global Investors
Private Advisors, LLC
Putnam Investments, LLC
QMA
RBC Global Asset Management
Regions Financial Corporation
Robeco Institutional Asset Management, US Inc.
Rockefeller & Co., Inc.
Rothschild Asset Management, Inc.
Russell Investments
Santander Global Facilities
Schroder Investment Management North America Inc.
Smith Graham & Co. Investment Advisors, L.P.
Smith Group Asset Management
South Texas Money Management, Ltd.
Standard Life Investments Limited
State Street Global Advisors
Stone Harbor Investment Partners, L.P.
Sun Life Investment Management
T. Rowe Price Associates, Inc.
The Boston Company Asset Management, LLC
The London Company
The TCW Group, Inc.
Thompson, Siegel & Walmsley LLC
Thornburg Investment Management, Inc.
Tri-Star Trust Bank
UBS Asset Management
VanEck
Velanne Asset Management Ltd.
Versus Capital Group
Victory Capital Management Inc.
Virtus Investment Partners, Inc.
Vontobel Asset Management, Inc.
Voya
WCM Investment Management
WEDGE Capital Management
Wellington Management Company, LLP
Wells Capital Management
Western Asset Management Company
Westfield Capital Management Company, LP
Westwood Holdings Group
William Blair & Company