

March 31, 2017



## City of Milwaukee Employees' Retirement System

### Investment Measurement Service Quarterly Review

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This “Preview” contains excerpts from the upcoming *Capital Market Review* (CMR) newsletter, which will be published in several weeks.

## Steady as She Goes

**U.S. EQUITY** | [Lauren Mathias, CFA](#)

Despite concerns over the Trump administration’s ability to follow through on promises of lower taxes and decreased regulation, the market accelerated higher in the first quarter. The **S&P 500 Index** hit a peak (2,396) in March and notched a 6.07% gain over the full three-month period. But the quarter was marked by reversals from the previous one—small cap fell behind large cap (**Russell 2000 Index**: +2.47% vs. **Russell 1000 Index**: +6.03%) and growth overtook value (**Russell 1000 Growth Index**: +8.91% vs. **Russell 1000 Value Index**: +3.27%).

[Continued on pg. 2](#)

## Profits Trump Populism

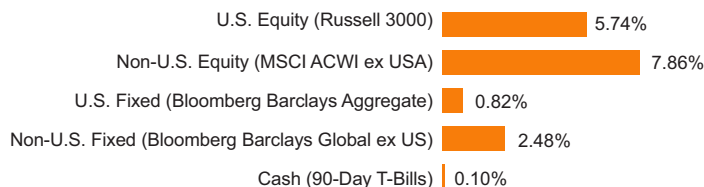
**NON-U.S. EQUITY** | [Irina Sushch](#)

A flurry of political skirmishes and uneven growth in Asia failed to deter non-U.S. equity investors, and the “risk-on” theme of last year continued into 2017. The weak U.S. dollar also bolstered overseas returns for U.S. investors.

The **MSCI ACWI ex USA Index** jumped 7.86% during the quarter. All of its sectors were in the black, with the exception of Energy (-0.91%), which was hurt by falling oil prices. Economically sensitive sectors led the pack: Information Technology contributed 14.59% and Industrials added 9.48%. Defensive and cyclical sectors such as Telecommunications (+5.98%) and Real Estate (+6.72%) lagged.

[Continued on pg. 3](#)

## Broad Market Quarterly Returns



Sources: Bloomberg Barclays, Merrill Lynch, MSCI, Russell Investment Group

## Up, Up, and Away

**U.S. FIXED INCOME** | [Rufash Lama](#)

During the first quarter, the U.S. bond market generated positive returns across the board due in part to strong economic data and upbeat investors. U.S. fourth quarter GDP grew at an annualized rate of 2.1%, consumer spending rose 3.5%, and the unemployment rate fell to 4.7%. High yield bonds performed best; the **Bloomberg Barclays High Yield Index** climbed 2.70% for the quarter.

[Continued on pg. 4](#)

## Separation Anxiety

**NON-U.S. FIXED INCOME** | [Kyle Fekete](#)

Sovereign debt performed well in the first quarter amid political uncertainty about the future of the European Union (EU). Emerging market debt outperformed developed market debt for the third straight quarter as the **JPM GBI-EM Global Diversified Index** advanced 6.50% versus the **Bloomberg Barclays Global Aggregate ex-US Index**’s 2.48% gain. Returns were bolstered by the U.S. dollar’s drop against most currencies.

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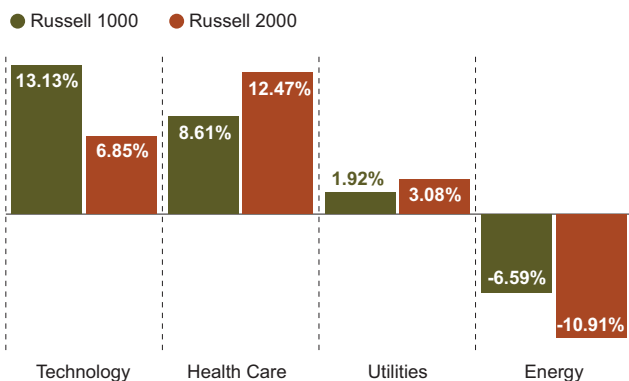
## U.S. Equity: Steady as She Goes

Continued from pg. 1

The broader U.S. economy reflected the market's optimism, and to no one's surprise the Fed raised rates a quarter-point in mid-March. Wages continued to rise, consumer confidence was up, inflation moved closer to the 2% target, and unemployment fell to 4.7%. Yet some headwinds persisted in the U.S., with slowing GDP growth (the fourth quarter trailed the third, 2.1% vs. 3.5%), and significant issues abroad: elections and Brexit in Europe, the Syrian war in the Middle East, and South Korea's presidential impeachment in Asia. Valuations in the U.S. remain high by various measures, but investors appear unfazed—for now.

Technology shares were especially strong; the FANG stocks—Facebook, Amazon, Netflix, and Google—hit record highs during the quarter. (Technically it should be the FANA stocks because Google is officially Alphabet—but FANG sounds better!) Micro and small cap companies ran out of steam after a strong 2016, while mid and large cap stocks charged ahead (**Russell Microcap Index**: +0.38%, **Russell 2000 Index**: +2.47%, **Russell Midcap Index**: +5.15%, and **Russell 1000 Index**: +6.03%). Value lost its lead over growth in all capitalizations (**Russell 2000 Value Index**: -0.13% vs. **Russell 2000 Growth Index**: +5.35%). The dispersion in style returns was broad across market capitalizations.

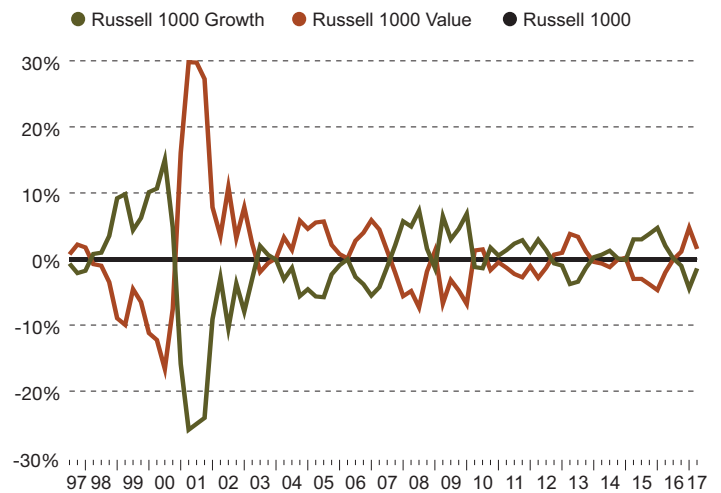
### Quarterly Performance of Select Sectors



Source: Russell Investment Group

### Rolling One-Year Relative Returns

(vs. Russell 1000)



Source: Russell Investment Group

Reflecting the reversal in investor preference, the best-performing sectors in the S&P 500 Index during the quarter were growth-oriented; Technology (+12.57%) was No. 1, followed by Consumer Discretionary (+8.45%), and Health Care (+8.37%). After leading in the fourth quarter, Financials (+2.53%) and Energy (-6.68%) trailed the broad market in the first. Both Health Care and Financials traded on President Donald Trump's failure to amend the Affordable Care Act—Health Care stocks gained on the certainty of the status quo and Financials dropped on fear the administration may fall short on deregulation and tax reform as well. Energy was the worst-performing sector during the quarter as last year's agreement by the Organization of the Petroleum Exporting Countries (OPEC) has not reduced fears of oversupply or meaningfully increased the price of oil.

As the U.S. equity market powered on, valuations across indices traded at historically high levels—the S&P 500 Index NTM (next 12 months) P/E was 17.5x versus the 25-year average of 14x as of March 31, 2017. Correlation (measured by S&P 500 stocks) ended the quarter below average and at levels not seen in 10 years, a positive for active management. Volatility (as measured by the **CBOE Market Volatility Index**, or VIX) also tracked below its average, seemingly unfazed by geopolitical uncertainty.

## Non-U.S. Equity: Profits Trump Populism

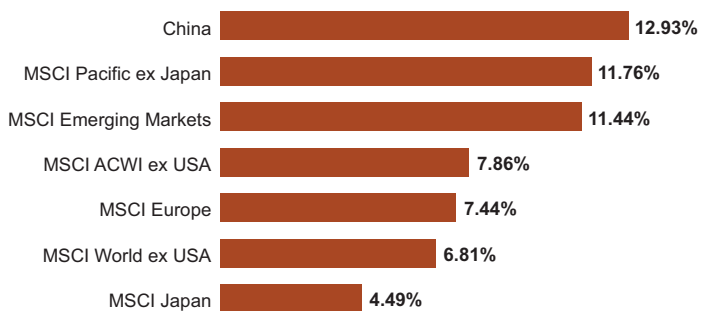
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Helped by a weaker dollar, emerging markets (**MSCI Emerging Markets Index: +11.44%**) outperformed their developed peers (**MSCI World ex USA Index: +6.81%** and **MSCI EAFE Index: +7.25%**). The **MSCI ACWI ex USA Growth Index (+9.13%)** resumed dominance over the **MSCI ACWI ex USA Value Index (+6.68%)**. Small cap stocks also performed well (**MSCI ACWI ex USA Small Cap Index: +8.78%**).

Politics continued to roil Europe. Most notably, British Prime Minister Theresa May triggered Article 50 of the Lisbon Treaty on March 29, giving the U.K. two years to negotiate an exit from the European Union. The negotiations are likely to be arduous, particularly concerning trade and immigration. France's presidential elections will be held in April and May. Marine Le Pen, the far right contender, has consistently led in the polls, in step with the global rise of nationalist populist movements. On the other hand, the economic outlook brightened in the euro zone. Inflation hit a four-year high (2%) in February. Fourth quarter GDP was 1.7% (year-over-year) and positive in each country except Greece (-1.2%). The **MSCI Europe Index** jumped 7.44% in the first quarter; all of the countries posted positive returns. Spain (+14.76%) and the Netherlands (+11.33%) contributed most, while Ireland (+3.75%) and Norway (+1.43%) lagged. Information Technology (+12.89%) and Industrials (+10.39%) rallied, while Energy stocks (-3.10%) brought up the rear.

### Regional Quarterly Performance

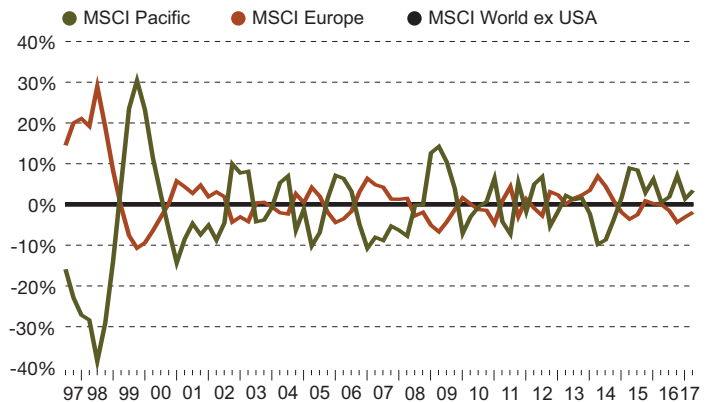
(U.S. Dollar)



Source: MSCI

### Rolling One-Year Relative Returns

(vs. MSCI World ex USA, USD hedged)



Source: MSCI

In Southeast Asia and the Pacific, Japan's economy grew at a meager (yet notably positive) annualized 1.2% in the fourth quarter. Industrial output and inflation rose and unemployment fell. But the stronger yen (+5%) dampened exporters' returns, and Japan ended the quarter up just 4.49%; only New Zealand posted worse returns (+1.95%) in the region, owing to a faltering Materials sector (-19.33%). Singapore (+13.46%) and Hong Kong (+13.41%) fared best, thanks to thriving real estate markets. Australia advanced 10.98%, propped up by currency strength. The **MSCI Pacific Index** was up 6.92% and excluding Japan jumped even more (**MSCI Pacific ex Japan Index: +11.76%**).

Emerging market returns were boosted by a weaker dollar, economic growth in China, and rising industrial metal prices. India (+17.12%) and South Korea (+16.85%) were the top performers. The party of India's prime minister, Narendra Modi, won a key regional election despite an abrupt currency recall last year, and the central bank predicted strong economic growth for the next 12 months. Copious gains in IT stocks bolstered Korean returns. China, which makes up more than a quarter of the MSCI Emerging Markets Index, also experienced growth in its IT sector, as well as in Manufacturing and Real Estate. Fourth quarter GDP came in at 6.8%, and China ended the quarter up 12.93%. Mexico was among the top performers (+16.03%) as the peso rebounded 9%. Russia (-4.61%) and Greece (-3.49%) were the region's poorest performers. Russia was hurt by falling oil prices, and Greece by negative GDP growth.

## U.S. Fixed Income: Up, Up, and Away

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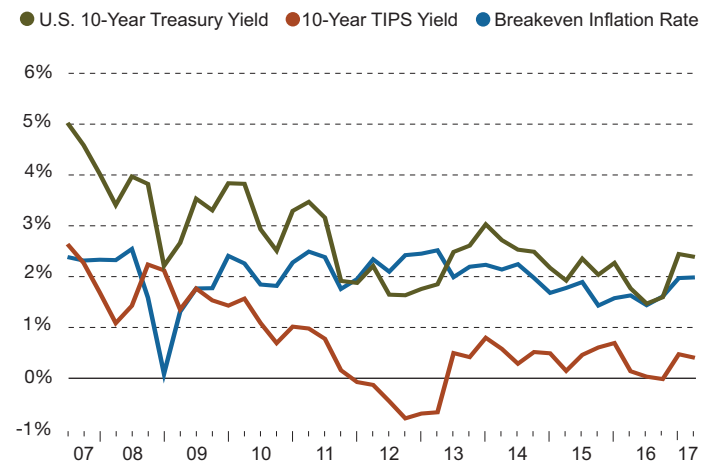
The Fed increased rates by 25 basis points in March, to a range of 0.75% – 1.00%, as U.S. economic indicators continued to signal growth; two additional hikes are expected over the rest of the year. The Treasury yield curve flattened during the quarter as short-term Treasuries rose while longer-term issues fell. Despite hitting an intra-quarter high of 2.62%, the benchmark 10-year Treasury note ended the quarter at 2.39%, 5 bps lower than the yield at the end of 2016. For the quarter, U.S. Treasuries increased 0.67%; long Treasuries (+1.40%) outperformed intermediate ones (+0.54%). TIPS were up 1.26% as expectations for future inflation rose. At the end of the quarter, the 10-year breakeven inflation rate, a market-based gauge of investors' expectations for future inflation, stood at 1.97%.

All fixed income sectors reported returns in the black as both the corporate credit market and the structured-debt market benefited from strong investor demand; the **Bloomberg Barclays U.S. Aggregate Bond Index** rose 0.82%. Issuance in the investment-grade primary market totaled \$390 billion, easily surpassing the prior record of \$357 billion in the second quarter of 2015. Overall, spreads tightened and investor appetite for bonds remained strong despite the headwind of higher rates. High yield spreads over comparable Treasuries tightened by 26 bps and delivered the strongest return. Lower-rated bonds outperformed higher-rated issues; BBB-rated securities generated

an excess return of 85 bps and outperformed AAA securities by 70 bps. Investment-grade and ABS spreads tightened by 5 bps and rose 1.22% and 0.54%, respectively. Mortgage-backed securities (MBS) (+0.47%) underperformed duration-matched Treasuries by 17 bps. Commercial mortgage-backed securities (CMBS) rose 0.86% for the quarter and benefited from strong demand.

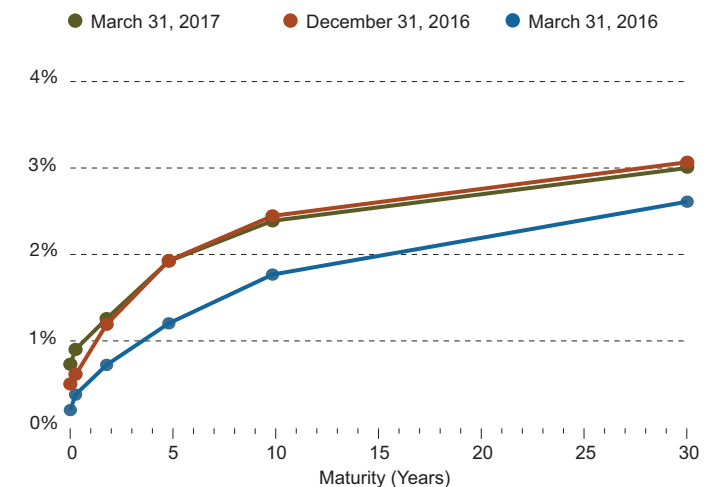
Municipal bonds also delivered a strong quarter as expectations for U.S. tax reform fell and new issuance remained light. The **Bloomberg Barclays Municipal Bond Index** jumped 1.58%.

### Historical 10-Year Yields



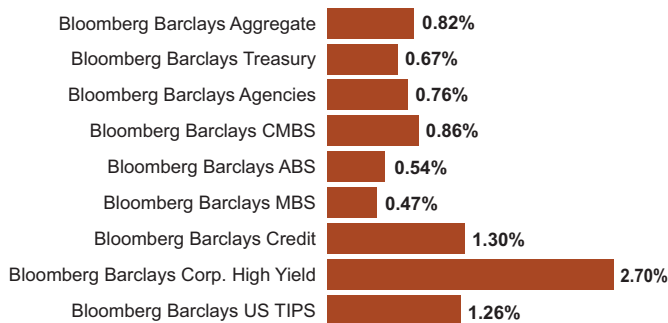
Source: Bloomberg

### U.S. Treasury Yield Curves



Source: Bloomberg

### Fixed Income Index Quarterly Returns



Source: Bloomberg Barclays

## Non-U.S. Fixed Income: Separation Anxiety

Continued from pg. 1

European sovereign bond yields rose in the midst of critical elections and debate over the future of the EU. The safe-haven German 10-year bond climbed 12 basis points to 0.33%, steepening the yield curve to its highest since 2014. France's 10-year bonds sold off in the middle of the quarter as the markets priced in the risk of a potential victory by presidential candidate Marine Le Pen, who wants the French to vote on whether to leave the EU. The Italian 10-year yield jumped 50 bps to 2.32% as an air of political risk also loomed over Europe's third-largest economy.

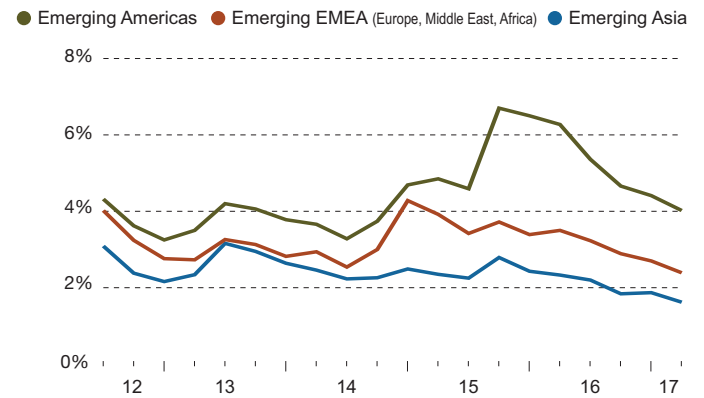
The European Central Bank continued its stimulus efforts, extending its bond-buying program until December 2017 and maintaining interest rates near record lows. Yet there was renewed confidence in the region's economic health as a result of solid manufacturing data, strength in the region's labor market, and encouraging inflation news. The euro strengthened against the U.S. dollar, providing some headwind to the hedged Bloomberg Barclays Global Aggregate ex-US Index, which increased only slightly (+0.06%).

In the Asia-Pacific region, Japan's 10-year yield edged up 2 bps to 0.07%, in line with the Bank of Japan's goal of maintaining its yield at approximately zero. The Reserve Bank of Australia left rates unchanged despite rapid growth in household debt. The Australian 10-year yield declined 6 bps to 2.70%. Both countries' currencies advanced roughly 5% against the U.S. dollar.

Emerging markets performed quite well. The U.S. dollar-denominated **JPM EMBI Global Diversified Index** rose 3.87%, and only three countries out of 65 posted negative returns for the quarter. Mexico, the most heavily weighted in the Index, was the strongest performer (+5.46%). Venezuela was the worst, falling 1.29%. Emerging market currencies also generally appreciated versus the U.S. dollar, accounting for the JPM GBI-EM Global Diversified Index's 6.50% rise. Argentina reentered the Index in February, and its debt

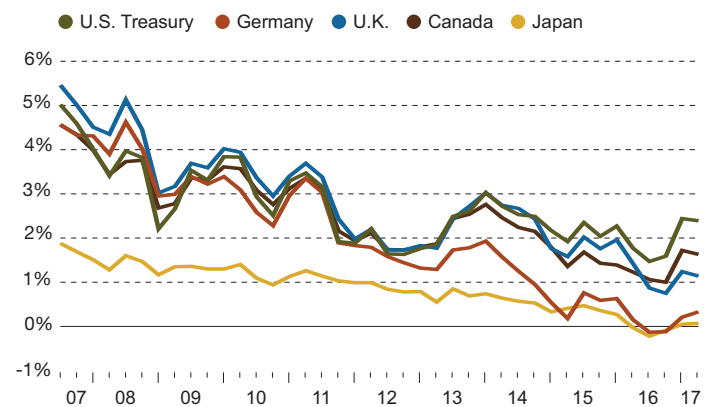
## Emerging Spreads Over Developed

(By Region)

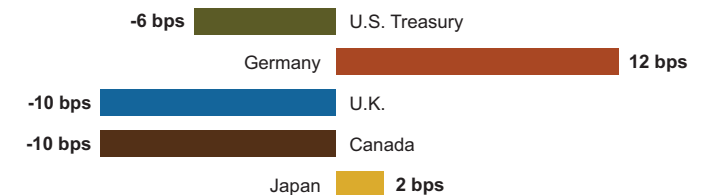


Source: Bloomberg

## 10-Year Global Government Bond Yields



## Change in 10-Year Yields from 4Q16 to 1Q17



Source: Bloomberg

posted the strongest return (+15.60%). Mexico (+13.60%) and Brazil (+9.69%) were also top performers, while Turkey (-0.68%) was the only country to deliver a negative return in the Index.





## Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of March 31, 2017, with the distribution as of December 31, 2016. 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.

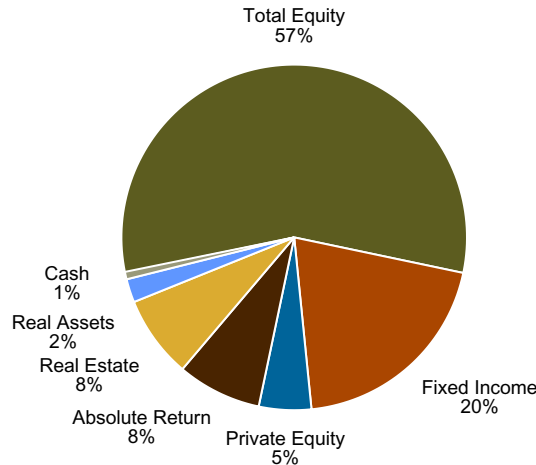
### Asset Distribution Across Investment Managers

	March 31, 2017			Inv. Return	December 31, 2016	
	Market Value	Weight	Net New Inv.		Market Value	Weight
<b>Total Domestic Equity</b>	<b>\$1,294,383,371</b>	<b>25.62%</b>	<b>\$(37,949,787)</b>	<b>\$69,520,870</b>	<b>\$1,262,812,288</b>	<b>25.90%</b>
BlackRock Russell 1000 Value	160,956,070	3.19%	159,740,426	1,215,644	-	-
Northern Trust Global	510,057,585	10.10%	(17,000,000)	30,143,626	496,913,959	10.19%
Cornerstone Investment Partners	13,765	0.00%	(180,690,213)	11,478,770	169,225,209	3.47%
Polen Capital Management	177,497,477	3.51%	0	15,036,447	162,461,031	3.33%
Earnest Partners LLC	134,592,138	2.66%	0	9,457,706	125,134,431	2.57%
Dimensional Fund Advisors Inc.	209,561,909	4.15%	0	(3,185,178)	212,747,086	4.36%
CastleArk Management	101,704,427	2.01%	0	5,373,855	96,330,572	1.98%
<b>Total Global Equity</b>	<b>\$525,561,200</b>	<b>10.40%</b>	<b>\$0</b>	<b>\$42,474,595</b>	<b>\$483,086,605</b>	<b>9.91%</b>
BlackRock Global Alpha Tilts	318,416,025	6.30%	0	23,211,769	295,204,256	6.06%
MFS Investment Management	207,145,175	4.10%	0	19,262,826	187,882,349	3.85%
<b>Total International Equity</b>	<b>\$1,038,968,221</b>	<b>20.57%</b>	<b>\$0</b>	<b>\$68,371,006</b>	<b>\$970,597,215</b>	<b>19.91%</b>
AQR Emerging Markets	114,687,725	2.27%	0	12,852,727	101,834,998	2.09%
Brandes Investment Partners	416,298,277	8.24%	0	20,292,608	396,005,669	8.12%
William Blair & Company	299,264,262	5.92%	0	20,251,769	279,012,493	5.72%
Dimensional Fund Advisors Inc.	208,717,957	4.13%	0	14,973,902	193,744,054	3.97%
<b>Total Fixed Income</b>	<b>\$1,015,195,947</b>	<b>20.10%</b>	<b>\$0</b>	<b>\$15,933,744</b>	<b>\$999,262,202</b>	<b>20.50%</b>
BlackRock US Debt Idx Fd	360,832,362	7.14%	0	3,032,082	357,800,280	7.34%
Reams Asset Management	309,189,971	6.12%	0	2,607,181	306,582,790	6.29%
Loomis, Sayles & Company, L.P.	345,173,614	6.83%	0	10,294,481	334,879,133	6.87%
<b>Total Private Equity</b>	<b>\$246,234,395</b>	<b>4.87%</b>	<b>\$4,931,610</b>	<b>\$(464,413)</b>	<b>\$241,767,198</b>	<b>4.96%</b>
Abbott Capital Management 2010	26,800,701	0.53%	(175,016)	15	26,975,702	0.55%
Abbott Capital Management 2011	41,582,248	0.82%	1,100,000	11	40,482,237	0.83%
Abbott Capital Management 2012	23,712,368	0.47%	199,957	31	23,512,380	0.48%
Abbott Capital Management 2013	18,237,076	0.36%	525,000	33	17,712,043	0.36%
Abbott Capital Management 2014	15,218,957	0.30%	1,575,000	0	13,643,957	0.28%
Abbott Capital Management 2015	5,031,052	0.10%	543,750	0	4,487,302	0.09%
Abbott Capital Management 2016	1,141,175	0.02%	192,500	(12,500)	961,175	0.02%
Mesirow V	62,587,352	1.24%	(4,500,368)	(111,313)	67,199,032	1.38%
Mesirow VI	24,839,158	0.49%	2,400,000	(100,140)	22,539,298	0.46%
NB Secondary Opp Fund III	15,927,835	0.32%	310,787	(187,500)	15,804,548	0.32%
Private Advisors VI	8,396,474	0.17%	0	(53,049)	8,449,523	0.17%
Private Advisors VII	2,760,000	0.05%	2,760,000	0	-	-
<b>Absolute Return</b>	<b>\$397,373,308</b>	<b>7.87%</b>	<b>\$0</b>	<b>\$4,811,358</b>	<b>\$392,561,950</b>	<b>8.05%</b>
Allianz SA 1000	109,547,619	2.17%	0	561,643	108,985,976	2.24%
Newton	90,951,285	1.80%	0	2,180,580	88,770,705	1.82%
UBS A & Q	196,874,404	3.90%	0	2,069,135	194,805,269	4.00%
<b>Real Assets</b>	<b>\$111,096,084</b>	<b>2.20%</b>	<b>\$0</b>	<b>\$3,601,347</b>	<b>\$107,494,737</b>	<b>2.20%</b>
Principal DRA	111,096,084	2.20%	0	3,601,347	107,494,737	2.20%
<b>Total Real Estate</b>	<b>\$388,053,474</b>	<b>7.68%</b>	<b>\$(7,563,646)</b>	<b>\$8,228,405</b>	<b>\$387,388,715</b>	<b>7.95%</b>
Real Estate	388,053,474	7.68%	(7,563,646)	8,228,405	387,388,715	7.95%
<b>Total Cash</b>	<b>\$34,553,438</b>	<b>0.68%</b>	<b>\$4,251,236</b>	<b>\$99,181</b>	<b>\$30,203,021</b>	<b>0.62%</b>
Cash	34,553,438	0.68%	4,251,236	99,181	30,203,021	0.62%
<b>Total Fund</b>	<b>\$5,051,419,438</b>	<b>100.0%</b>	<b>\$(36,330,587)</b>	<b>\$212,576,093</b>	<b>\$4,875,173,932</b>	<b>100.0%</b>

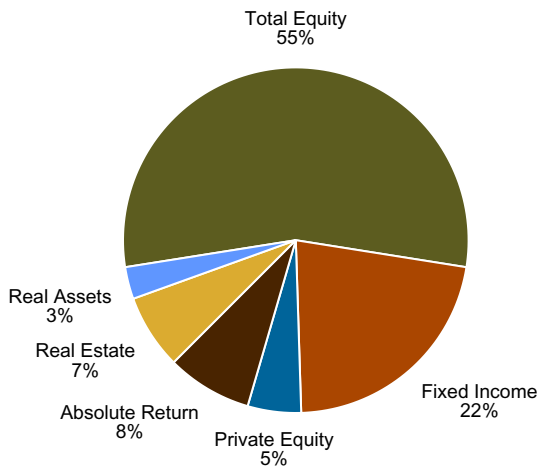
## Actual vs Target Asset Allocation As of March 31, 2017

The first chart below shows the Fund's asset allocation as of March 31, 2017. 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 CAI Public Fund Sponsor - Large (>1B).

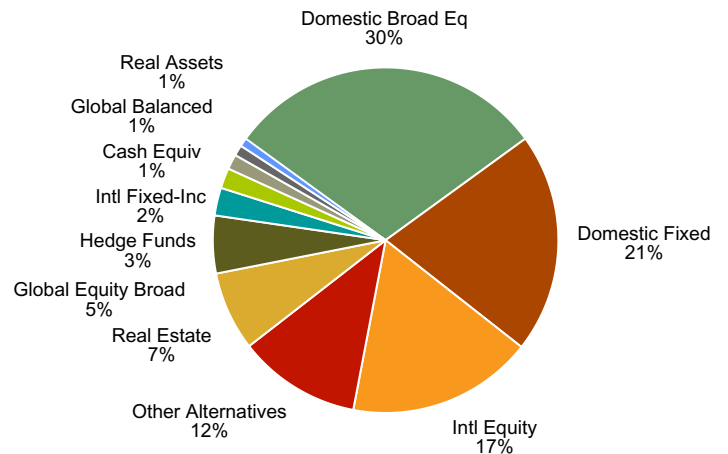
**Actual Asset Allocation**



**Target Asset Allocation**



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



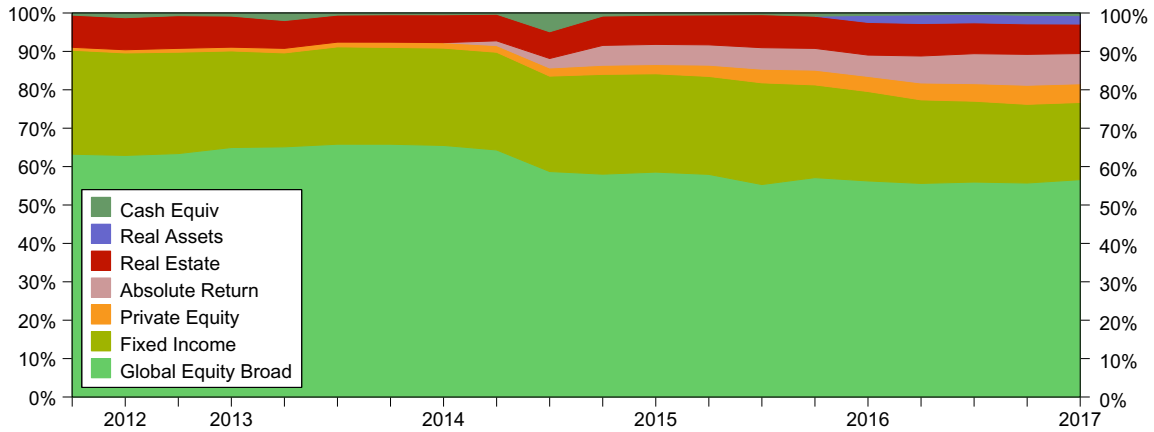
Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Total Equity	2,858,913	56.6%	55.0%	1.6%	80,632
Fixed Income	1,015,196	20.1%	22.0%	(1.9%)	(96,116)
Private Equity	246,234	4.9%	5.0%	(0.1%)	(6,337)
Absolute Return	397,373	7.9%	8.0%	(0.1%)	(6,740)
Real Estate	388,053	7.7%	7.0%	0.7%	34,454
Real Assets	111,096	2.2%	3.0%	(0.8%)	(40,446)
Cash	34,553	0.7%	0.0%	0.7%	34,553
Total	5,051,419	100.0%	100.0%		

\* Current Quarter Target = 55.0% MSCI ACWI IMI, 22.0% Blmbg Aggregate, 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.

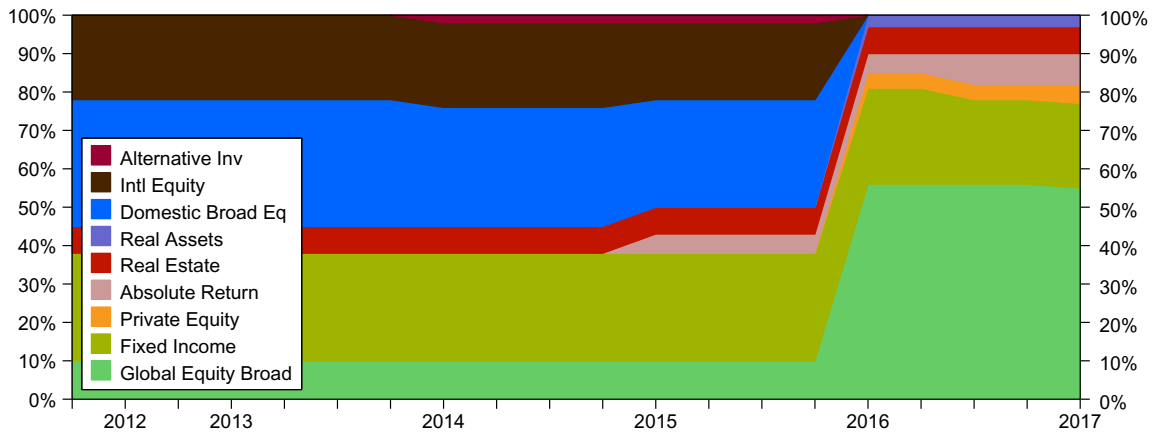
## Actual vs Target Historical Asset Allocation

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 CAI Public Fund Sponsor Database.

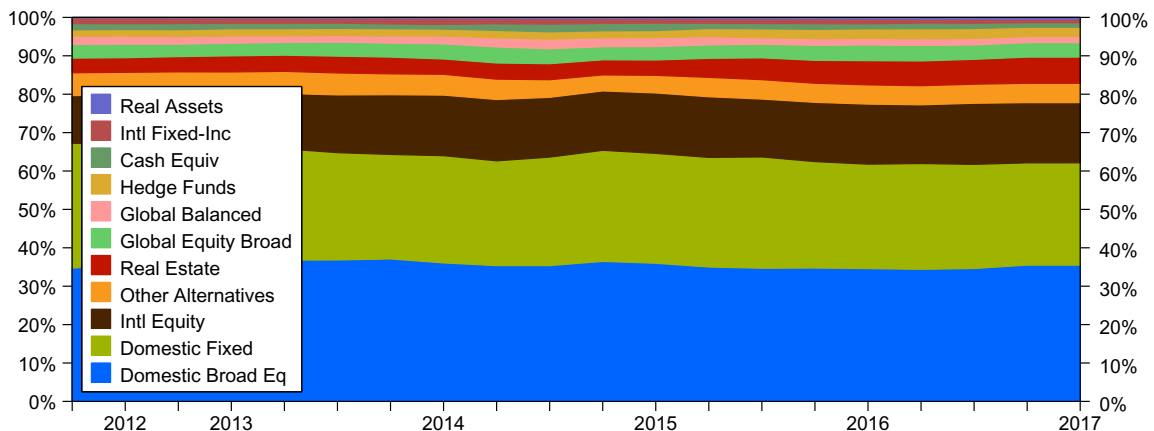
### Actual Historical Asset Allocation



### Target Historical Asset Allocation



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



\* Current Quarter Target = 55.0% MSCI ACWI IMI, 22.0% Blmbg Aggregate, 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.

# Total Fund Period Ended March 31, 2017

## 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.

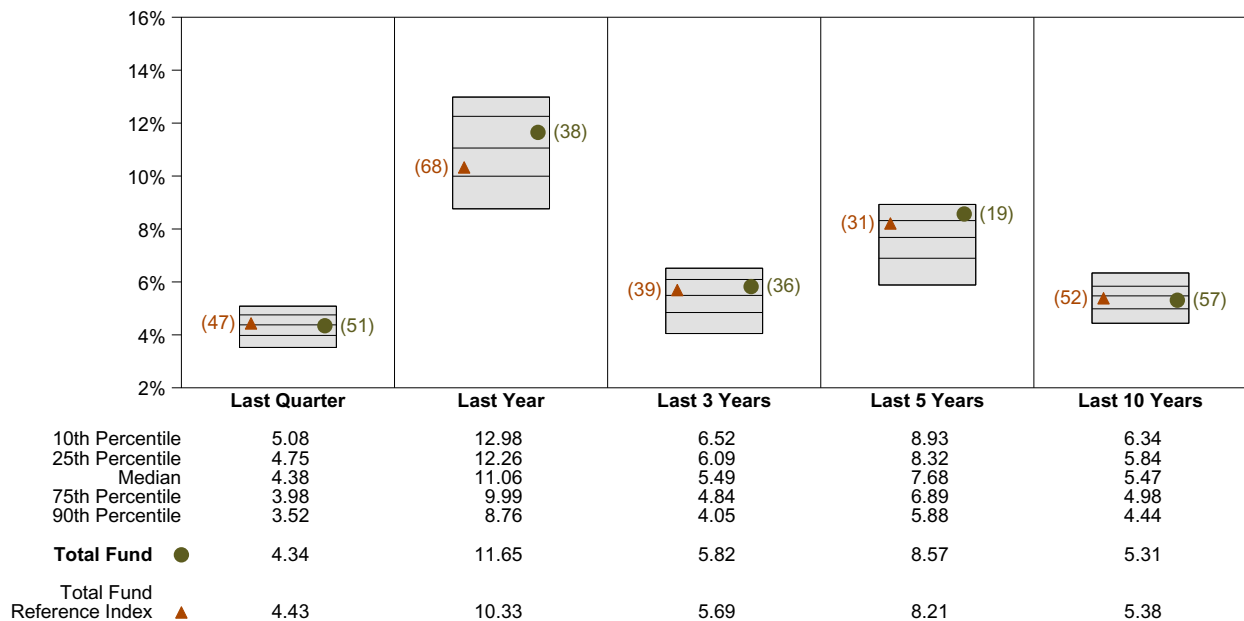
## Quarterly Summary and Highlights

- Total Fund's portfolio posted a 4.34% return for the quarter placing it in the 51 percentile of the CAI Public Fund Sponsor Database group for the quarter and in the 38 percentile for the last year.
- Total Fund's portfolio underperformed the Total Fund Reference Index by 0.09% for the quarter and outperformed the Total Fund Reference Index for the year by 1.32%.

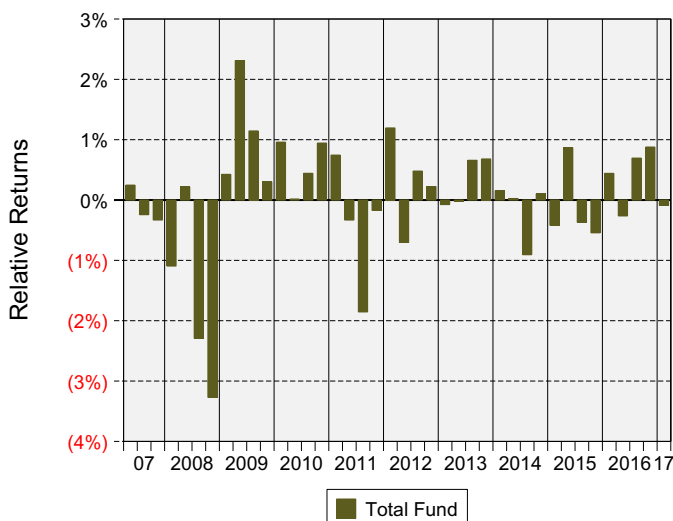
## Quarterly Asset Growth

Beginning Market Value	\$4,875,173,932
Net New Investment	\$-36,330,587
Investment Gains/(Losses)	\$212,576,093
Ending Market Value	\$5,051,419,438

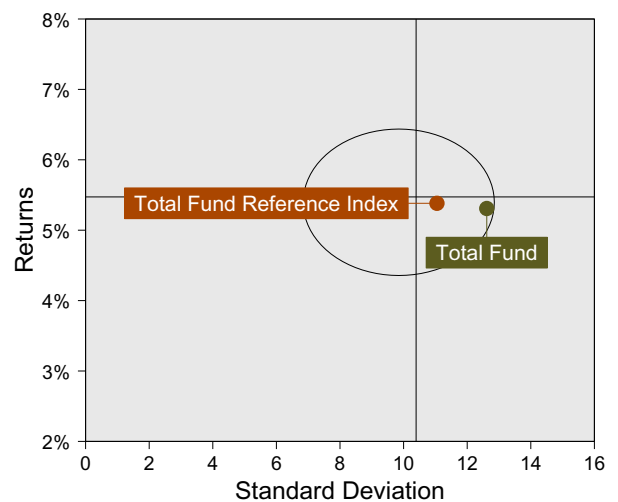
## Performance vs CAI Public Fund Sponsor Database (Gross)



## Relative Return vs Total Fund Reference Index



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

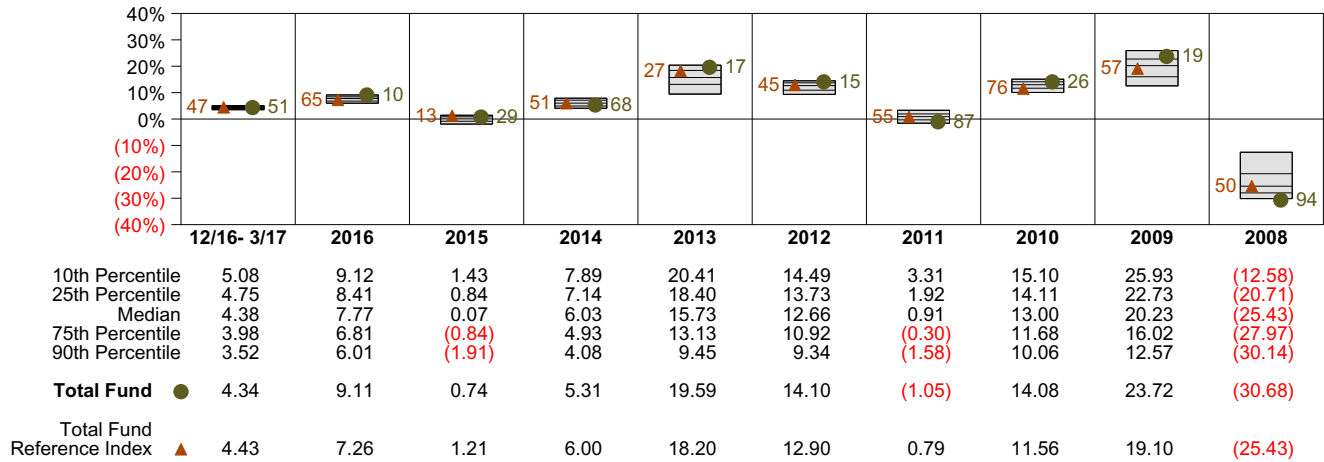


# Total Fund Return Analysis Summary

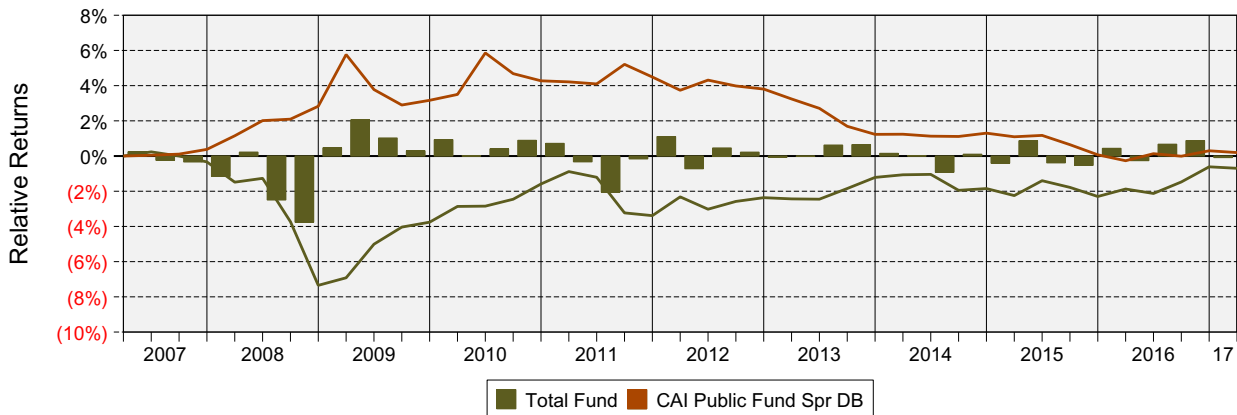
## Return Analysis

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.

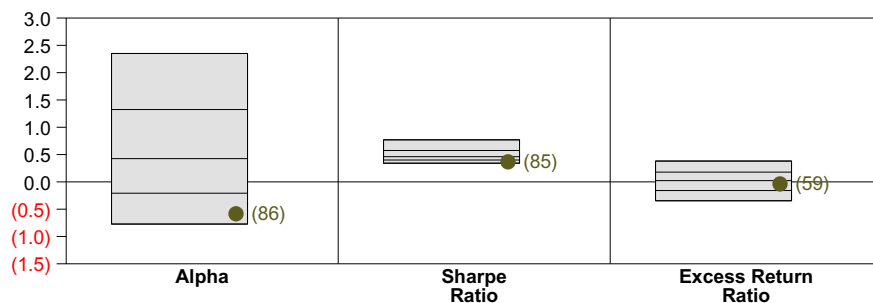
### Performance vs CAI Public Fund Sponsor Database (Gross)



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



### Risk Adjusted Return Measures vs Total Fund Reference Index Rankings Against CAI Public Fund Sponsor Database (Gross) Ten Years Ended March 31, 2017



10th Percentile	2.35	0.77	0.38
25th Percentile	1.32	0.57	0.18
Median	0.43	0.46	0.02
75th Percentile	(0.21)	0.40	(0.16)
90th Percentile	(0.77)	0.34	(0.35)
<b>Total Fund</b>	● (0.58)	0.37	(0.04)

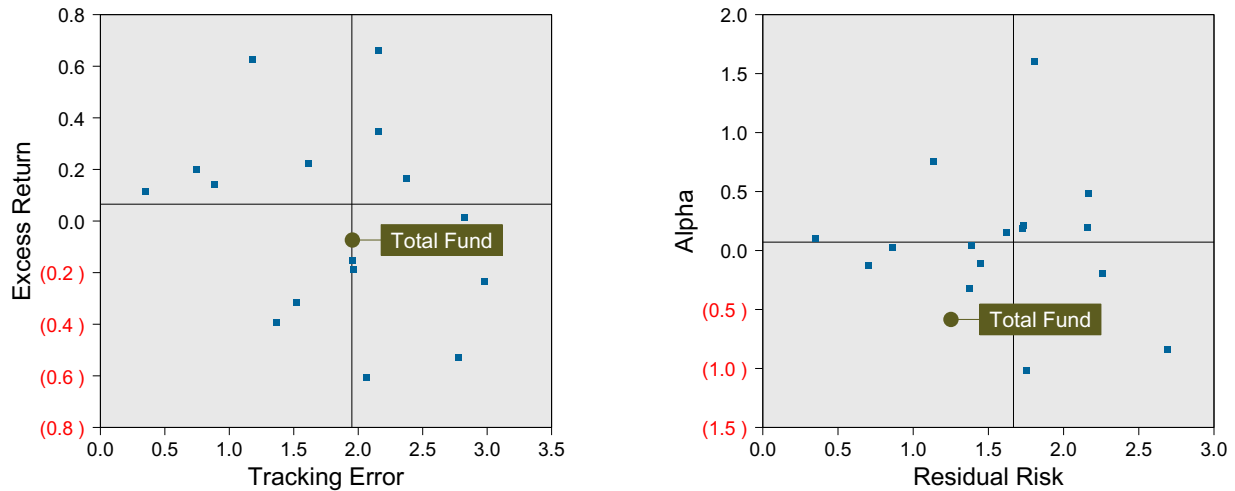
# Total Fund

## Total Fund vs Target Risk Analysis

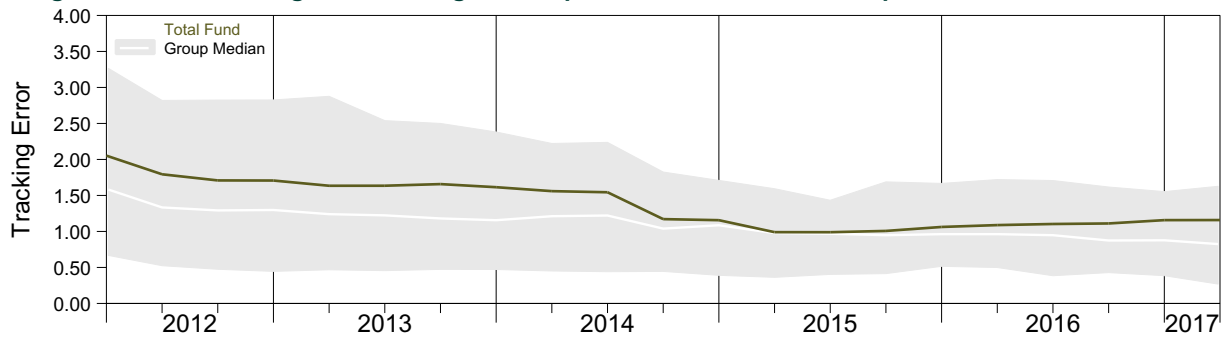
### Risk Analysis

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.

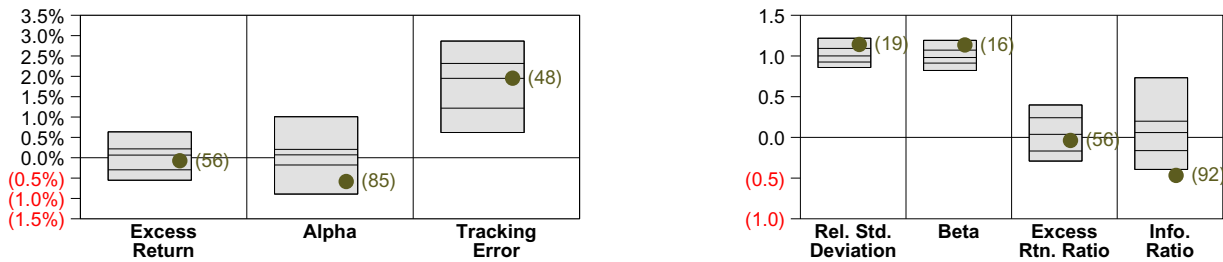
### Risk Analysis vs CAI Public Fund Sponsor Database Ten Years Ended March 31, 2017



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



### Risk Statistics Rankings vs Targets Rankings Against CAI Public Fund Sponsor Database Ten Years Ended March 31, 2017

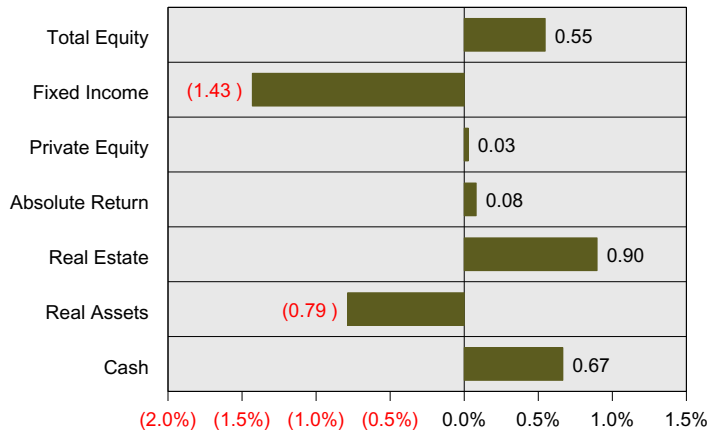


10th Percentile	0.64	1.01	2.87	10th Percentile	1.22	1.19	0.40	0.73
25th Percentile	0.22	0.21	2.32	25th Percentile	1.09	1.07	0.24	0.20
Median	0.07	0.07	1.95	Median	1.00	0.98	0.04	0.06
75th Percentile	(0.30)	(0.18)	1.22	75th Percentile	0.93	0.91	(0.17)	(0.16)
90th Percentile	(0.55)	(0.89)	0.62	90th Percentile	0.86	0.82	(0.29)	(0.39)
<b>Total Fund</b>	<b>(0.07)</b>	<b>(0.58)</b>	<b>1.95</b>	<b>Total Fund</b>	<b>1.14</b>	<b>1.14</b>	<b>(0.04)</b>	<b>(0.47)</b>

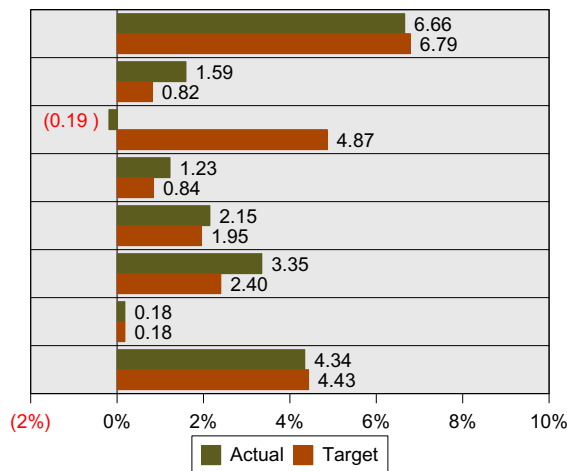
## Quarterly Total Fund Relative Attribution - March 31, 2017

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.

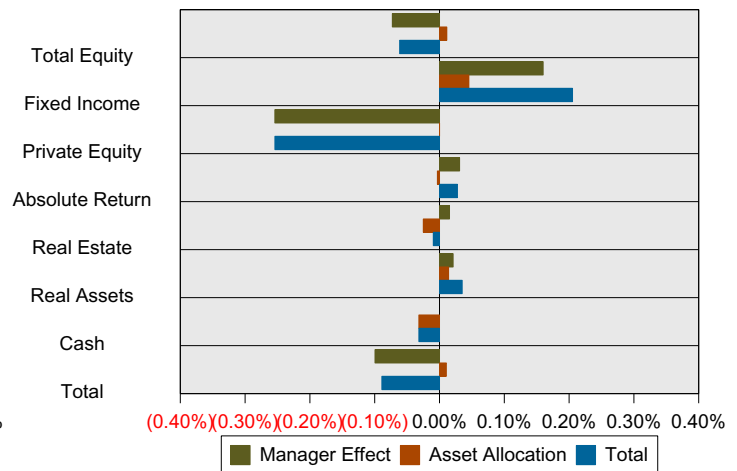
### Asset Class Under or Overweighting



### Actual vs Target Returns



### Relative Attribution by Asset Class



### Relative Attribution Effects for Quarter ended March 31, 2017

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Total Equity	56%	55%	6.66%	6.79%	(0.07%)	0.01%	(0.06%)
Fixed Income	21%	22%	1.59%	0.82%	0.16%	0.05%	0.21%
Private Equity	5%	5%	(0.19%)	4.87%	(0.25%)	0.00%	(0.25%)
Absolute Return	8%	8%	1.23%	0.84%	0.03%	(0.00%)	0.03%
Real Estate	8%	7%	2.15%	1.95%	0.02%	(0.03%)	(0.01%)
Real Assets	2%	3%	3.35%	2.40%	0.02%	0.01%	0.04%
Cash	1%	0%	0.18%	0.18%	0.00%	(0.03%)	(0.03%)
<b>Total</b>			<b>4.34%</b>	<b>4.43%</b>	<b>(0.10%)</b>	<b>0.01%</b>	<b>(0.09%)</b>

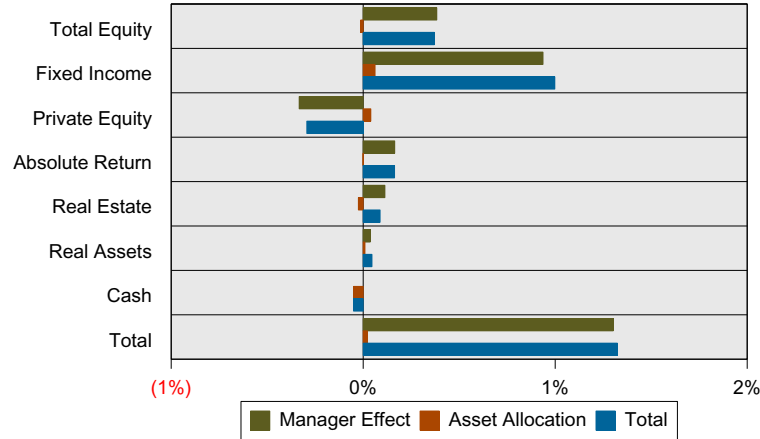
\* Current Quarter Target = 55.0% MSCI ACWI IMI, 22.0% Blmbg Aggregate, 8.0% 3-month Treasury Bill+3.0%, 7.0% NFI-ODCE (1 Qtr in Arrears), 5.0% Russell 3000 (1 Qtr in Arrears)+3.0% and 3.0% Principal Blended Benchmark.



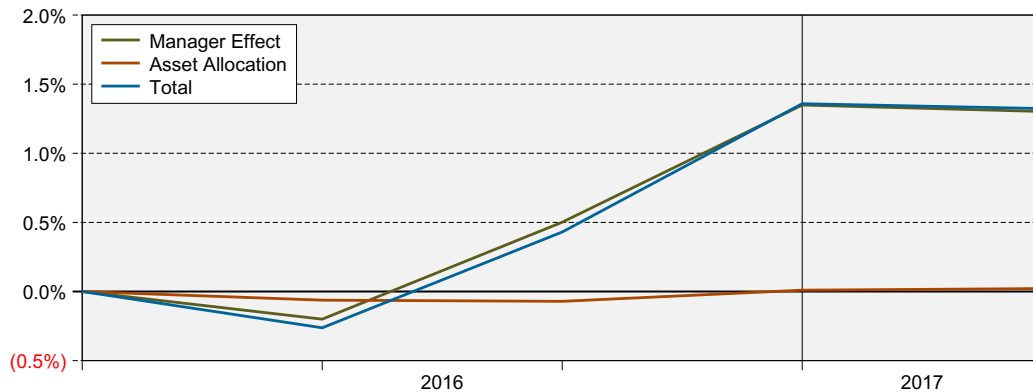
## Cumulative Total Fund Relative Attribution - March 31, 2017

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	56%	56%	16.09%	15.37%	0.38%	(0.01%)	0.37%
Fixed Income	21%	23%	4.54%	0.44%	0.94%	0.06%	1.00%
Private Equity	5%	4%	9.02%	15.74%	(0.33%)	0.04%	(0.29%)
Absolute Return	7%	7%	5.74%	3.36%	0.16%	(0.00%)	0.16%
Real Estate	8%	7%	9.74%	8.36%	0.11%	(0.02%)	0.09%
Real Assets	2%	3%	8.85%	7.15%	0.04%	0.01%	0.05%
Cash	1%	0%	2.00%	2.00%	0.00%	(0.05%)	(0.05%)
<b>Total</b>			<b>11.65%</b>	<b>10.33%</b>	<b>+ 1.30%</b>	<b>+ 0.02%</b>	<b>1.32%</b>

\* Current Quarter Target = 55.0% MSCI ACWI IMI, 22.0% Blmbg Aggregate, 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.

## 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 March 31, 2017. 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 March 31, 2017

	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Since Inception
<b>Total Domestic Equity</b>	<b>5.51%</b>		<b>19.03%</b>		<b>9.63%</b>		<b>12.89%</b>		<b>6.85%</b> (7/98)
Russell 3000 Index	5.74%		18.07%		9.76%		13.18%		6.33% (7/98)
Northern Trust Global	6.07%	56	17.19%	53	10.45%	29	13.37%	42	10.29% (8/88)
S&P 500 Index	6.07%	56	17.17%	53	10.37%	34	13.30%	45	10.24% (8/88)
CAI Large Cap Core	6.14%		17.66%		9.85%		13.11%		-
Polen Capital Management	9.26%	44	10.93%	87	14.47%	4	-		15.02% (7/12)
S&P 500 Index	6.07%	99	17.17%	21	10.37%	46	13.30%	29	14.72% (7/12)
CAI Large Cap Growth	9.18%		14.80%		10.31%		12.66%		-
Earnest Partners LLC	7.56%	30	24.14%	8	10.43%	13	13.62%	30	10.49% (5/05)
Russell MidCap Index	5.15%	59	17.03%	52	8.48%	43	13.09%	40	9.70% (5/05)
CAI Mid Capitalization	5.88%		17.35%		7.81%		12.30%		-
Dimensional Fund Advisors Inc.	(1.50%)	83	24.27%	60	7.58%	79	14.12%	47	12.58% (11/96)
Russell 2000 Value Index	(0.13%)	61	29.37%	14	7.62%	78	12.54%	81	9.95% (11/96)
CAI Small Cap Value	0.37%		24.62%		9.02%		13.91%		-
CastleArk Management	5.58%	71	18.43%	79	3.23%	74	-		8.76% (9/13)
Russell 2000 Growth Index	5.35%	72	23.03%	53	6.72%	35	12.10%	50	10.13% (9/13)
CAI Small Cap Growth	6.75%		23.25%		5.66%		12.12%		-
<b>Total Global Equity</b>	<b>8.79%</b>		<b>14.66%</b>		<b>5.53%</b>		<b>8.36%</b>		<b>7.56%</b> (4/10)
MSCI World Index	6.38%		14.77%		5.52%		9.37%		8.63% (4/10)
BlackRock Global Alpha Tilts	7.86%	37	16.03%	31	-		-		22.56% (3/16)
MSCI World Index	6.38%	64	14.77%	47	5.52%	55	9.37%	57	20.65% (3/16)
CAI Global Equity	6.99%		14.50%		5.74%		9.65%		-
MFS Investment Management	10.25%	8	12.59%	73	6.90%	23	-		10.58% (12/12)
MSCI ACWI Idx	7.05%	50	15.69%	34	5.65%	52	8.97%	67	9.93% (12/12)
CAI Global Equity	6.99%		14.50%		5.74%		9.65%		-

## 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 March 31, 2017. 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 March 31, 2017

	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Since Inception	
<b>Total International Equity</b>	<b>7.04%</b>		<b>12.92%</b>		<b>2.11%</b>		<b>7.57%</b>		<b>7.13%</b> (5/96)	
MSCI EAFE Index	7.25%		11.67%		0.50%		5.83%		4.34% (5/96)	
AQR Emerging Markets	12.62%	35	-	-	-	-	-	-	14.69%	(8/16)
MSCI EM Gross	11.49%	61	17.65%	56	1.55%	65	1.17%	79	11.07%	(8/16)
Emerging Mkts Equity DB	11.84%		18.58%		2.57%		2.95%		-	
Brandes Investment Partners	5.12%	98	12.80%	38	1.41%	58	7.14%	35	8.32%	(2/98)
MSCI EAFE Index	7.25%	70	11.67%	54	0.50%	73	5.83%	70	4.40%	(2/98)
CAI NonUS Eq	7.90%		11.91%		1.80%		6.54%		-	
William Blair & Company	7.26%	70	8.09%	83	1.45%	57	6.49%	52	7.32%	(12/03)
MSCI ACWI ex-US Index	7.98%	49	13.70%	27	1.03%	67	4.84%	91	6.85%	(12/03)
CAI NonUS Eq	7.90%		11.91%		1.80%		6.54%		-	
Dimensional Fund Advisors Inc.	7.73%	79	17.30%	8	2.71%	77	9.87%	61	5.13%	(5/06)
Blended Benchmark	7.97%	78	10.99%	45	3.60%	59	9.20%	75	2.79%	(5/06)
CAI Intl Small Cap	9.11%		10.36%		3.89%		10.44%		-	
<b>Total Fixed Income</b>	<b>1.59%</b>		<b>4.54%</b>		<b>2.63%</b>		<b>3.16%</b>		<b>7.75%</b> (12/87)	
Bimbg Capital Aggregate	0.82%		0.44%		2.68%		2.34%		6.46% (12/87)	
BlackRock US Debt Idx Fd	0.85%	70	-	-	-	-	-	-	(1.14%)	(6/16)
Bimbg Aggregate Idx	0.82%	82	0.44%	87	2.68%	89	2.34%	100	0.03%	(6/16)
CAI Core Bond FI	0.95%		1.14%		3.03%		2.84%		-	
Reams Asset Management	0.85%	27	0.97%	37	2.70%	8	2.75%	10	5.73%	(1/01)
Bimbg Capital Aggregate	0.82%	39	0.44%	74	2.68%	8	2.34%	37	4.80%	(1/01)
CAI Intermediate FI	0.81%		0.73%		2.19%		2.22%		-	
Loomis, Sayles & Company, L.P.	3.07%	1	12.75%	1	4.18%	6	5.62%	1	9.30%	(12/87)
Bimbg Capital Aggregate	0.82%	99	0.44%	100	2.68%	91	2.34%	100	6.46%	(12/87)
CAI Core Plus FI	1.27%		3.15%		3.25%		3.52%		-	
<b>Total Private Equity</b>	<b>(0.19%)</b>		<b>9.02%</b>		<b>12.32%</b>		<b>9.67%</b>		<b>6.25%</b> (6/10)	
Abbott Capital Management 2010	0.00%		11.03%		11.90%		8.14%		(12.39%)	(6/10)
Abbott Capital Management 2011	0.00%		10.43%		9.90%		4.86%		(9.82%)	(6/11)
Abbott Capital Management 2012	0.00%		9.42%		5.57%		-		1.05%	(7/12)
Abbott Capital Management 2013	0.00%		5.25%		1.72%		-		(0.11%)	(5/13)
Abbott Capital Management 2014	0.00%		2.86%		(3.83%)		-		(3.83%)	(4/14)
Abbott Capital Management 2015	0.00%		(5.11%)		-		-		2.74%	(4/15)
Abbott Capital Management 2016	(1.19%)		(1.38%)		-		-		(1.27%)	(3/16)
Mesirov V	(0.18%)		12.06%		17.37%		14.52%		11.64%	(6/10)
Mesirov VI	(0.44%)		3.83%		0.32%		-		0.23%	(7/13)
NB Secondary Opp Fund III	(1.18%)		11.49%		29.92%		-		7.71%	(12/13)
Private Advisors VI	(0.63%)		(1.96%)		-		-		(9.65%)	(4/15)
Russell 3000 (1 Qtr in Arrears) + 3%	4.87%		15.74%		11.46%		17.71%		9.47%	(4/15)
<b>Absolute Return</b>	<b>1.23%</b>		<b>5.74%</b>		<b>-</b>		<b>-</b>		<b>5.20%</b> (6/14)	
Allianz SA 1000	0.52%	88	9.10%	15	-	-	-	-	9.65%	(6/14)
T-Bills + 10%	2.51%	13	10.36%	1	10.17%	1	10.14%	1	10.18%	(6/14)
CAI Abs Return Hedge FoF	1.66%		7.21%		2.52%		4.45%		-	
Newton	2.46%	15	2.16%	97	-	-	-	-	3.21%	(8/14)
1-month LIBOR + 4%	1.18%	74	4.59%	82	4.33%	5	4.28%	55	4.36%	(8/14)
CAI Abs Return Hedge FoF	1.66%		7.21%		2.52%		4.45%		-	
UBS A & Q	1.06%	76	5.36%	73	-	-	-	-	3.25%	(12/14)
1-month LIBOR + 4%	1.18%	74	4.59%	82	4.33%	5	4.28%	55	4.39%	(12/14)
CAI Abs Return Hedge FoF	1.66%		7.21%		2.52%		4.45%		-	
<b>Real Assets</b>	<b>3.35%</b>		<b>8.85%</b>		<b>-</b>		<b>-</b>		<b>8.38%</b> (1/16)	
Principal DRA	3.35%	18	8.85%	52	-	-	-	-	8.38%	(1/16)
Principal Blended Benchmark (1)	2.40%	25	7.15%	60	-	-	-	-	7.40%	(1/16)
CAI Alternative Invest DB	0.82%		9.07%		(1.06%)		0.89%		-	
<b>Total Real Estate</b>	<b>2.15%</b>		<b>9.74%</b>		<b>12.37%</b>		<b>12.56%</b>		<b>6.57%</b> (7/86)	
Real Estate	2.15%	41	9.74%	32	12.37%	38	12.56%	33	6.57%	(7/86)
Blended Benchmark (2)	1.95%	46	8.36%	46	11.37%	50	11.13%	56	-	
CAI Total Real Estate DB	1.88%		7.90%		11.40%		11.51%		-	
<b>Total Fund</b>	<b>4.34%</b>		<b>11.65%</b>		<b>5.82%</b>		<b>8.57%</b>		<b>9.58%</b> (1/79)	
Total Fund Reference Index*	4.43%		10.33%		5.69%		8.21%		-	

\* Current Quarter Target = 55.0% MSCI ACWI IMI, 22.0% Bimbg Aggregate, 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.

(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.

	12/2016- 3/2017		2016		2015		2014		2013	
<b>Total Domestic Equity</b>	<b>5.51%</b>		<b>13.91%</b>		<b>(0.07%)</b>		<b>11.63%</b>		<b>33.86%</b>	
Russell 3000 Index	5.74%		12.74%		0.48%		12.56%		33.55%	
Northern Trust Global	6.07%	56	12.01%	19	1.49%	46	13.77%	47	32.46%	77
S&P 500 Index	6.07%	56	11.96%	20	1.38%	51	13.69%	48	32.39%	77
CAI Large Cap Core	6.14%		10.40%		1.41%		13.63%		34.49%	
Polen Capital Management	9.26%	44	1.70%	72	15.51%	3	17.60%	6	23.45%	99
S&P 500 Index	6.07%	99	11.96%	2	1.38%	93	13.69%	25	32.39%	79
CAI Large Cap Growth	9.18%		3.39%		6.43%		11.83%		35.60%	
Earnest Partners LLC	7.56%	30	16.52%	29	1.25%	27	10.38%	46	31.29%	90
Russell MidCap Index	5.15%	59	13.80%	42	(2.44%)	67	13.22%	23	34.76%	63
CAI Mid Capitalization	5.88%		12.23%		(0.69%)		9.88%		35.84%	
Dimensional Fund Advisors Inc.	(1.50%)	83	29.36%	32	(6.06%)	76	5.04%	67	42.70%	23
Russell 2000 Value Index	(0.13%)	61	31.74%	14	(7.47%)	83	4.22%	82	34.52%	81
CAI Small Cap Value	0.37%		27.86%		(3.73%)		5.93%		38.72%	
CastleArk Management	5.58%	71	6.01%	68	(4.90%)	78	6.15%	31	-	-
Russell 2000 Growth Index	5.35%	72	11.32%	36	(1.38%)	50	5.60%	32	43.30%	74
CAI Small Cap Growth	6.75%		8.63%		(1.29%)		3.41%		46.83%	
<b>Total Global Equity</b>	<b>8.79%</b>		<b>8.65%</b>		<b>(2.08%)</b>		<b>2.32%</b>		<b>24.81%</b>	
MSCI The World Index	6.38%		7.51%		(0.87%)		4.94%		26.68%	
MFS Investment Management	10.25%	8	6.06%	52	(0.49%)	60	5.59%	34	23.08%	79
MSCI ACWI Idx	7.05%	50	8.48%	27	(1.84%)	71	4.71%	47	23.44%	78
CAI Global Equity	6.99%		6.21%		0.17%		4.57%		27.96%	

## 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.

	12/2016- 3/2017		2016		2015		2014		2013	
<b>Total International Equity</b>	<b>7.04%</b>		<b>5.78%</b>		<b>(0.41%)</b>		<b>(3.63%)</b>		<b>26.26%</b>	
MSCI EAFE Index	7.25%		1.00%		(0.81%)		(4.90%)		22.78%	
AQR Emerging Markets	12.62%	1	-		-		-		-	
MSCI EM Gross	11.49%	4	11.60%	1	(14.60%)	99	(1.82%)	23	(2.27%)	100
CAI NonUS Eq	7.90%		1.49%		0.48%		(3.88%)		22.49%	
Brandes Investment Partners	5.12%	98	8.50%	3	(1.25%)	67	(4.45%)	56	29.45%	8
MSCI EAFE Index	7.25%	70	1.00%	56	(0.81%)	62	(4.90%)	61	22.78%	47
CAI NonUS Eq	7.90%		1.49%		0.48%		(3.88%)		22.49%	
William Blair & Company	7.26%	70	(1.45%)	82	0.18%	53	(1.77%)	23	21.92%	54
MSCI ACWI ex-US Index	7.98%	49	5.01%	15	(5.25%)	92	(3.44%)	47	15.78%	89
CAI NonUS Eq	7.90%		1.49%		0.48%		(3.88%)		22.49%	
Dimensional Fund Advisors Inc.	7.73%	79	8.00%	8	3.99%	86	(4.99%)	67	32.60%	35
Blended Benchmark	7.97%	78	2.18%	34	4.95%	56	(4.95%)	67	29.30%	67
CAI Intl Small Cap	9.11%		0.23%		10.09%		(3.42%)		31.13%	
<b>Total Fixed Income</b>	<b>1.59%</b>		<b>7.40%</b>		<b>(2.49%)</b>		<b>4.00%</b>		<b>(0.53%)</b>	
Blmbg Capital Aggregate	0.82%		2.65%		0.55%		5.97%		(2.02%)	
BlackRock Intermediate Agg	-		-		1.31%	43	4.37%	9	(0.93%)	67
Blmbg Capital Int Aggregate	0.68%	83	1.97%	72	1.21%	64	4.12%	13	(1.02%)	74
CAI Intermediate FI	0.81%		2.30%		1.28%		3.47%		(0.49%)	
Reams Asset Management	0.85%	99	4.38%	63	0.38%	49	4.09%	97	(1.08%)	75
Blmbg Capital Aggregate	0.82%	99	2.65%	100	0.55%	38	5.97%	61	(2.02%)	96
CAI Core Plus FI	1.27%		4.66%		0.34%		6.20%		(0.68%)	
Loomis, Sayles & Company, L.P.	3.07%	1	13.97%	1	(6.10%)	100	5.94%	61	2.41%	4
Blmbg Capital Aggregate	0.82%	99	2.65%	100	0.55%	38	5.97%	61	(2.02%)	96
CAI Core Plus FI	1.27%		4.66%		0.34%		6.20%		(0.68%)	
CAI Global FI (Unhedged)	2.33%		2.41%		(3.38%)		1.29%		(2.66%)	
<b>Total Private Equity</b>	<b>(0.19%)</b>		<b>9.09%</b>		<b>12.34%</b>		<b>15.40%</b>		<b>8.66%</b>	
Abbott Capital Management 2010	0.00%		11.03%		12.32%		12.36%		7.33%	
Abbott Capital Management 2011	0.00%		10.43%		10.12%		9.17%		1.20%	
Abbott Capital Management 2012	0.00%		9.42%		2.45%		4.97%		(2.50%)	
Abbott Capital Management 2013	0.00%		5.25%		2.23%		(2.17%)		-	
Abbott Capital Management 2014	0.00%		2.86%		0.39%		-		-	
Abbott Capital Management 2015	0.00%		(5.11%)		-		-		-	
Abbott Capital Management 2016	(1.19%)		-		-		-		-	
Mesirov V	(0.18%)		12.03%		19.41%		21.07%		14.22%	
Mesirov VI	(0.44%)		3.32%		(3.99%)		2.22%		-	
NB Secondary Opp Fund III	(1.18%)		12.83%		33.37%		19.77%		-	
Private Advisors VI	(0.63%)		(1.34%)		-		-		-	
Russell 3000 (1 Qtr in Arrears) + 3%	4.87%		17.97%		2.56%		20.79%		24.63%	
<b>Absolute Return</b>	<b>1.23%</b>		<b>5.16%</b>		<b>4.92%</b>		-		-	
Allianz SA 1000	0.52%	88	11.15%	1	9.76%	1	-		-	
T-Bills + 10%	2.51%	13	10.33%	1	10.05%	1	10.03%	1	10.07%	34
CAI Abs Return Hedge FoF	1.66%		3.35%		(0.33%)		3.78%		8.92%	
Newton	2.46%	15	3.31%	52	1.50%	29	-		-	
1-month LIBOR + 4%	1.18%	74	4.49%	23	4.19%	8	4.16%	39	4.19%	89
CAI Abs Return Hedge FoF	1.66%		3.35%		(0.33%)		3.78%		8.92%	
UBS A & Q	1.06%	76	2.42%	71	4.09%	9	-		-	
1-month LIBOR + 4%	1.18%	74	4.49%	23	4.19%	8	4.16%	39	4.19%	89
CAI Abs Return Hedge FoF	1.66%		3.35%		(0.33%)		3.78%		8.92%	
<b>Total Real Estate</b>	<b>2.15%</b>		<b>11.38%</b>		<b>13.44%</b>		<b>13.87%</b>		<b>13.58%</b>	
Real Estate	2.15%	41	11.38%	23	13.44%	56	13.87%	46	13.58%	42
Blended Benchmark (1)	1.95%	46	9.69%	38	13.82%	54	11.26%	62	10.99%	59
CAI Total Real Estate DB	1.88%		8.39%		14.50%		13.27%		11.96%	
<b>Total Fund</b>	<b>4.34%</b>		<b>9.11%</b>		<b>0.74%</b>		<b>5.31%</b>		<b>19.59%</b>	
Total Fund Reference Index*	4.43%		7.26%		1.21%		6.00%		18.20%	

\* Current Quarter Target = 55.0% MSCI ACWI IMI, 22.0% Blmbg Aggregate, 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.  
(1) 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 March 31, 2017. 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 March 31, 2017

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Since Inception	
<b>Net of Fee Returns</b>						
Total Domestic Equity	5.42%	18.66%	9.28%	12.54%	6.51%	(7/98)
Russell 3000 Index	5.74%	18.07%	9.76%	13.18%	6.33%	(7/98)
Northern Trust Global	6.06%	17.17%	10.42%	13.35%	9.42%	(9/94)
S&P 500 Index	6.07%	17.17%	10.37%	13.30%	9.45%	(9/94)
Polen Capital Management	9.12%	10.38%	13.90%	-	14.45%	(7/12)
S&P 500 Index	6.07%	17.17%	10.37%	13.30%	14.72%	(7/12)
Earnest Partners LLC	7.42%	23.48%	9.84%	13.01%	9.65%	(5/05)
Russell MidCap Index	5.15%	17.03%	8.48%	13.09%	9.70%	(5/05)
Dimensional Fund Advisors Inc.	(1.63%)	23.61%	7.01%	13.52%	11.90%	(11/96)
Russell 2000 Value Index	(0.13%)	29.37%	7.62%	12.54%	9.95%	(11/96)
CastleArk Management	5.41%	17.65%	2.54%	-	8.04%	(9/13)
Russell 2000 Growth Index	5.35%	23.03%	6.72%	12.10%	10.13%	(9/13)
Total Global Equity	8.70%	14.26%	5.16%	7.96%	7.10%	(4/10)
MSCI World	6.38%	14.77%	5.52%	9.37%	8.63%	(4/10)
BlackRock Global Alpha Tilts	7.85%	15.98%	-	-	22.50%	(3/16)
MSCI World	6.38%	14.77%	5.52%	9.37%	20.65%	(3/16)
MFS Investment Management	10.14%	12.12%	6.47%	-	10.13%	(12/12)
MSCI ACWI Gross	7.05%	15.69%	5.65%	8.97%	9.93%	(12/12)
Total International Equity	6.92%	12.38%	1.62%	7.04%	6.34%	(5/96)
MSCI EAFE Index	7.25%	11.67%	0.50%	5.83%	4.34%	(5/96)
AQR Emerging Markets	12.42%	-	-	-	14.13%	(8/16)
MSCI EM Gross	11.49%	17.65%	1.55%	1.17%	11.07%	(8/16)
Brandes Investment Partners	5.02%	12.34%	0.99%	6.70%	7.55%	(2/98)
MSCI EAFE Index	7.25%	11.67%	0.50%	5.83%	4.40%	(2/98)
William Blair & Company	7.15%	7.66%	1.04%	6.07%	6.88%	(12/03)
MSCI ACWI ex-US Index	7.98%	13.70%	1.03%	4.84%	6.85%	(12/03)
Dimensional Fund Advisors Inc.	7.73%	17.30%	2.71%	9.78%	4.69%	(5/06)
Blended Benchmark	7.97%	10.99%	3.60%	9.20%	2.79%	(5/06)
Total Fixed Income	1.55%	4.36%	2.47%	3.00%	6.82%	(9/94)
Blmbg Capital Aggregate	0.82%	0.44%	2.68%	2.34%	5.61%	(9/94)
BlackRock US Debt Idx Fd	0.83%	-	-	-	(1.19%)	(6/16)
Blmbg Aggregate Idx	0.82%	0.44%	2.68%	2.34%	0.03%	(6/16)
Reams Asset Management	0.81%	0.82%	2.55%	2.59%	5.48%	(1/01)
Loomis, Sayles & Company, L.P.	3.04%	12.60%	4.06%	5.50%	8.51%	(9/94)
Blmbg Capital Aggregate	0.82%	0.44%	2.68%	2.34%	5.61%	(9/94)
Total Private Equity	(0.19%)	9.02%	12.32%	9.67%	6.25%	(6/10)
Abbott Capital Management 2010	0.00%	11.03%	11.90%	8.14%	(12.39%)	(6/10)
Abbott Capital Management 2011	0.00%	10.43%	9.90%	4.86%	(9.82%)	(6/11)
Abbott Capital Management 2012	0.00%	9.42%	5.57%	-	1.05%	(7/12)
Abbott Capital Management 2013	0.00%	5.25%	1.72%	-	(0.11%)	(5/13)
Abbott Capital Management 2014	0.00%	2.86%	(3.83%)	-	(3.83%)	(4/14)
Abbott Capital Management 2015	0.00%	(5.11%)	-	-	2.74%	(4/15)
Abbott Capital Management 2016	(1.19%)	(1.38%)	-	-	(1.27%)	(3/16)
Mesirow V	(0.18%)	12.06%	17.37%	14.52%	11.64%	(6/10)
Mesirow IV	(0.44%)	3.83%	0.32%	-	0.23%	(7/13)
NB Secondary Opp Fund III	(1.18%)	11.49%	29.92%	-	7.71%	(12/13)
Private Advisors VI	(0.63%)	(1.96%)	-	-	(9.65%)	(4/15)
Russell 3000 (1 Qtr in Arrears) + 3%	4.87%	15.74%	11.46%	17.71%	9.47%	(4/15)
Absolute Return	1.23%	5.74%	-	-	5.20%	(6/14)
Allianz SA 1000	0.52%	9.10%	-	-	9.65%	(6/14)
T-Bills + 10%	2.51%	10.36%	10.17%	10.14%	10.18%	(6/14)
Newton	2.46%	2.16%	-	-	3.21%	(8/14)
1-month LIBOR + 4%	1.18%	4.59%	4.33%	4.28%	4.36%	(8/14)
UBS A & Q	1.06%	5.36%	-	-	3.25%	(12/14)
1-month LIBOR + 4%	1.18%	4.59%	4.33%	4.28%	4.39%	(12/14)
Real Assets	3.35%	8.85%	-	-	8.38%	(1/16)
Principal DRA	3.35%	8.85%	-	-	8.38%	(1/16)
Principal Blended Benchmark (1)	2.40%	7.15%	-	-	7.40%	(1/16)
Total Real Estate	2.09%	9.46%	12.07%	12.22%	5.38%	(7/86)
Real Estate	2.09%	9.46%	12.07%	12.22%	5.38%	(7/86)
Blended Benchmark (2)	1.95%	8.36%	11.37%	11.13%	-	
Total Fund	4.27%	11.34%	5.53%	8.26%	9.20%	(1/79)
Total Fund Reference Index*	4.43%	10.33%	5.69%	8.21%	-	

\* Current Quarter Target = 55.0% MSCI ACWI IMI, 22.0% Blmbg Aggregate, 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.

(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 consists of 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.

	12/2016- 3/2017	2016	2015	2014	2013
<b>Net of Fee Returns</b>					
Total Domestic Equity	5.42%	13.55%	(0.39%)	11.28%	33.44%
Russell 3000 Index	5.74%	12.74%	0.48%	12.56%	33.55%
Northern Trust Global	6.06%	11.99%	1.47%	13.75%	32.43%
S&P 500 Index	6.07%	11.96%	1.38%	13.69%	32.39%
Polen Capital Management	9.12%	1.19%	14.94%	17.02%	22.84%
S&P 500 Index	6.07%	11.96%	1.38%	13.69%	32.39%
Earnest Partners LLC	7.42%	15.90%	0.71%	9.79%	30.60%
Russell MidCap Index	5.15%	13.80%	(2.44%)	13.22%	34.76%
Dimensional Fund Advisors Inc.	(1.63%)	28.68%	(6.57%)	4.47%	41.95%
Russell 2000 Value Index	(0.13%)	31.74%	(7.47%)	4.22%	34.52%
CastleArk Management	5.41%	5.30%	(5.54%)	5.45%	-
Russell 2000 Growth Index	5.35%	11.32%	(1.38%)	5.60%	43.30%
Total Global Equity	8.70%	8.26%	(2.44%)	1.95%	24.37%
MSCI World	6.38%	7.51%	(0.87%)	4.94%	26.68%
BlackRock Global Alpha Tilts	7.85%	-	-	-	-
MSCI World	6.38%	7.51%	(0.87%)	4.94%	26.68%
MFS Investment Management	10.14%	5.62%	(0.89%)	5.17%	22.47%
MSCI ACWI Gross	7.05%	8.48%	(1.84%)	4.71%	23.44%
Total International Equity	6.92%	5.27%	(0.89%)	(4.09%)	25.66%
MSCI EAFE Index	7.25%	1.00%	(0.81%)	(4.90%)	22.78%
AQR Emerging Markets	12.42%	-	-	-	-
MSCI EM Gross	11.49%	11.60%	(14.60%)	(1.82%)	(2.27%)
Brandes Investment Partners	5.02%	8.05%	(1.66%)	(4.84%)	28.93%
MSCI EAFE Index	7.25%	1.00%	(0.81%)	(4.90%)	22.78%
William Blair & Company	7.15%	(1.84%)	(0.22%)	(2.17%)	21.36%
MSCI ACWI ex-US Index	7.98%	5.01%	(5.25%)	(3.44%)	15.78%
Dimensional Fund Advisors Inc.	7.73%	8.00%	3.99%	(4.99%)	32.39%
Blended Benchmark	7.97%	2.18%	9.59%	(4.95%)	29.30%
Total Fixed Income	1.55%	7.21%	(2.63%)	3.85%	(0.69%)
Blmbg Capital Aggregate	0.82%	2.65%	0.55%	5.97%	(2.02%)
Reams Asset Management	0.81%	4.22%	0.23%	3.94%	(1.23%)
Loomis, Sayles & Company, L.P.	3.04%	13.82%	(6.20%)	5.82%	2.29%
Blmbg Capital Aggregate	0.82%	2.65%	0.55%	5.97%	(2.02%)
Total Private Equity	(0.19%)	9.09%	12.34%	15.40%	8.66%
Abbott Capital Management 2010	0.00%	11.03%	12.32%	12.36%	7.33%
Abbott Capital Management 2011	0.00%	10.43%	10.12%	9.17%	1.20%
Abbott Capital Management 2012	0.00%	9.42%	2.45%	4.97%	(2.50%)
Abbott Capital Management 2013	0.00%	5.25%	2.23%	(2.17%)	-
Abbott Capital Management 2014	0.00%	2.86%	0.39%	-	-
Abbott Capital Management 2015	0.00%	(5.11%)	-	-	-
Abbott Capital Management 2016	(1.19%)	-	-	-	-
Mesirov V	(0.18%)	12.03%	19.41%	21.07%	14.22%
Mesirov VI	(0.44%)	3.32%	(3.99%)	2.22%	-
NB Secondary Opp Fund III	(1.18%)	12.83%	33.37%	19.77%	-
Private Advisors VI	(0.63%)	(1.34%)	-	-	-
Russell 3000 (1 Qtr in Arrears) + 3%	4.87%	17.97%	2.56%	20.79%	24.63%
Absolute Return	1.23%	5.16%	4.92%	-	-
Allianz SA 1000	0.52%	11.15%	9.76%	-	-
T-Bills + 10%	2.51%	10.33%	10.05%	10.03%	10.07%
Newton	2.46%	3.31%	1.50%	-	-
1-month LIBOR + 4%	1.18%	4.49%	4.19%	4.16%	4.19%
UBS A & Q	1.06%	2.42%	4.09%	-	-
1-month LIBOR + 4%	1.18%	4.49%	4.19%	4.16%	4.19%
Total Real Estate	2.09%	11.09%	13.15%	13.54%	13.15%
Real Estate	2.09%	11.09%	13.15%	13.54%	13.15%
Blended Benchmark (1)	1.95%	9.69%	13.82%	11.26%	10.99%
Total Fund	4.27%	8.80%	0.46%	5.02%	19.26%
Total Fund Reference Index*	4.43%	7.26%	1.21%	6.00%	18.20%

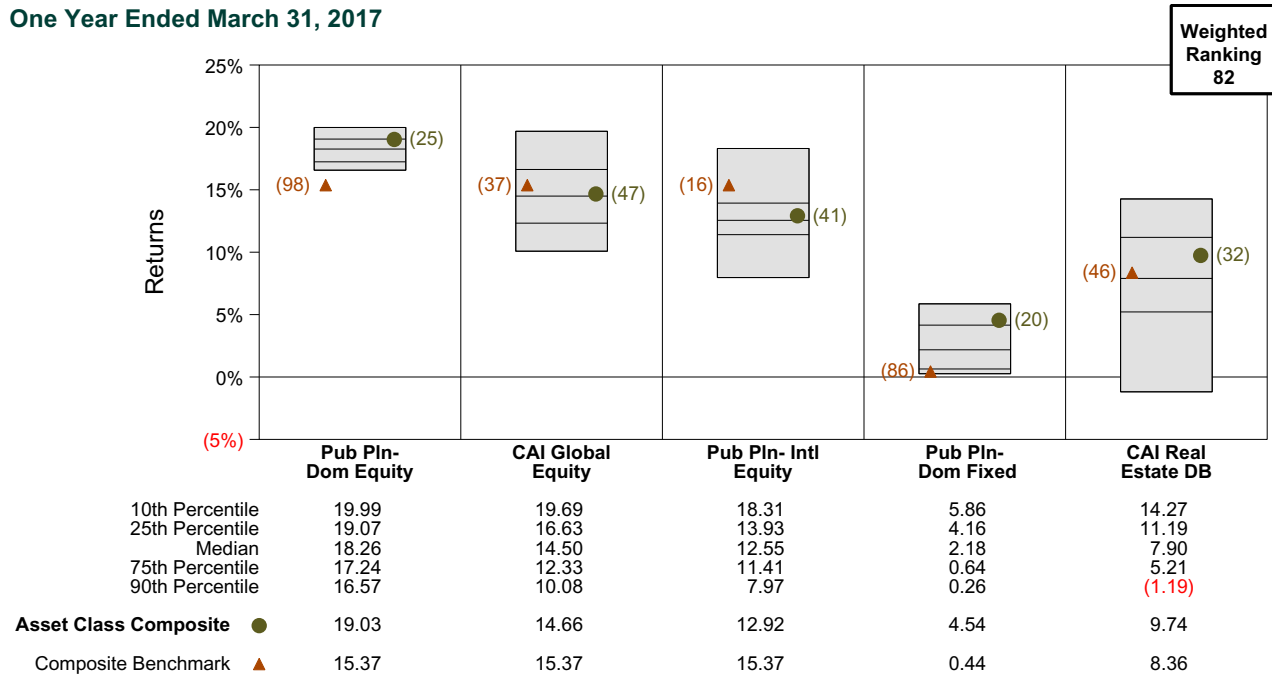
\* Current Quarter Target = 55.0% MSCI ACWI IMI, 22.0% Blmbg Aggregate, 8.0% 3-month Treasury Bill+3.0%, 7.0% NFI-ODCE (1 Qtr in Arrears), 5.0% Russell 3000 (1 Qtr in Arrears)+3.0% and 3.0% Principal Blended Benchmark.

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

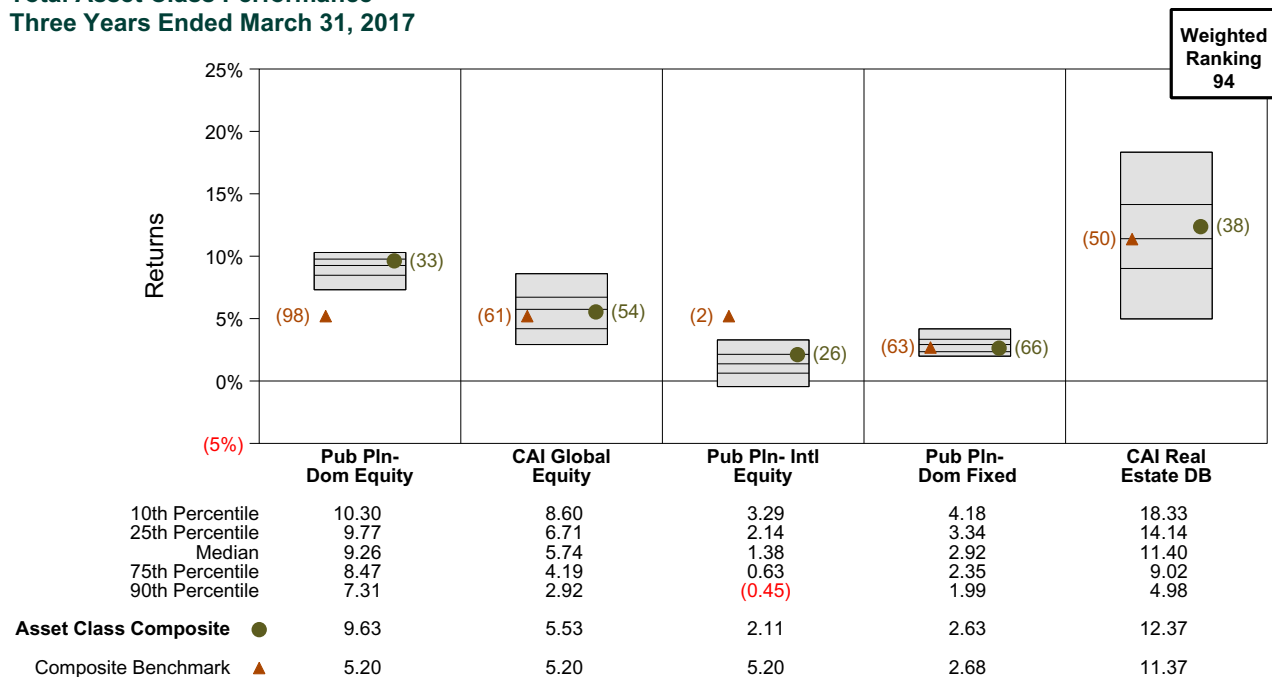
## Asset Class Rankings

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 March 31, 2017



### Total Asset Class Performance Three Years Ended March 31, 2017



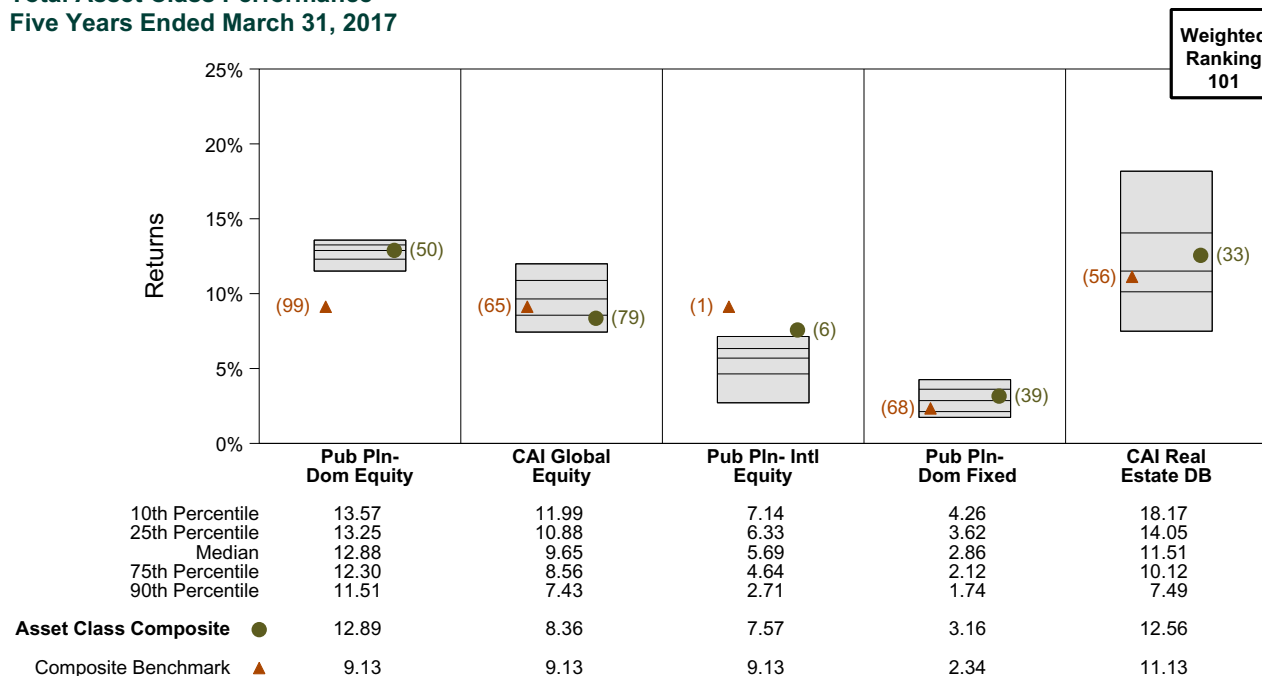
\* Current Quarter Target = 55.0% MSCI ACWI IMI, 22.0% Blmbg Aggregate, 8.0% 3-month Treasury Bill+3.0%, 7.0% NFI-ODCE (1 Qtr in Arrears), 5.0% Russell 3000 (1 Qtr in Arrears)+3.0% and 3.0% Principal Blended Benchmark.



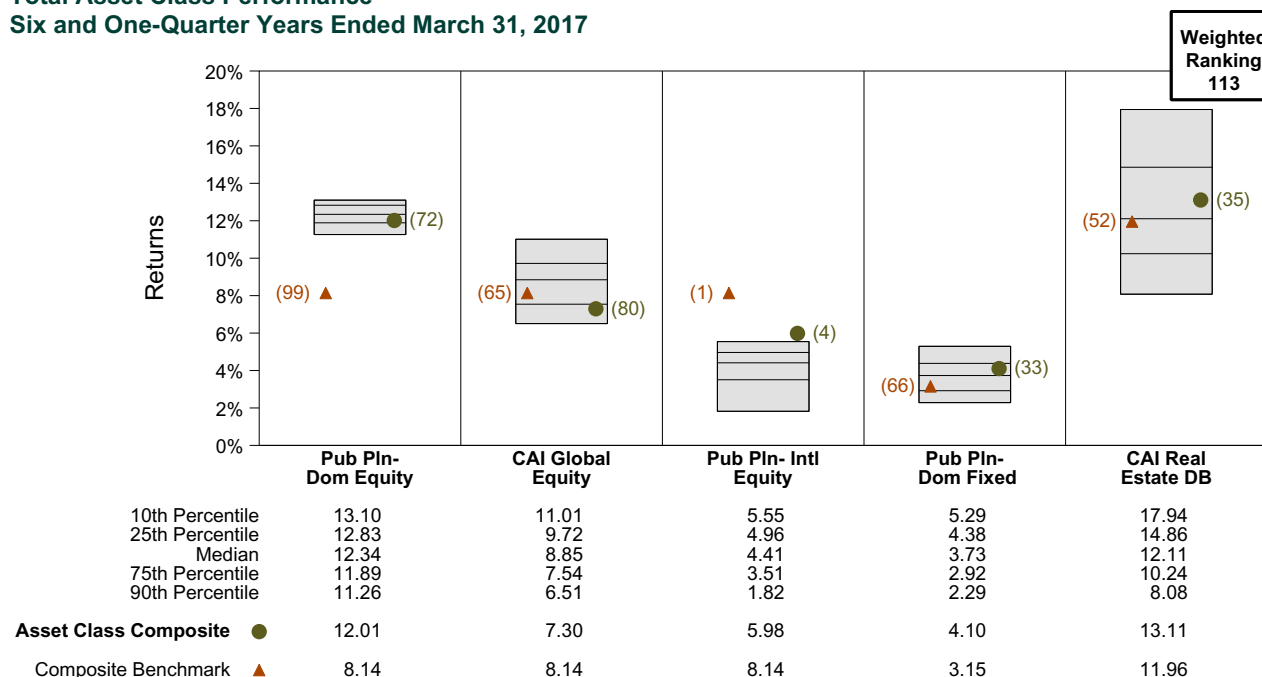
## Asset Class Rankings

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 March 31, 2017



### Total Asset Class Performance Six and One-Quarter Years Ended March 31, 2017



\* Current Quarter Target = 55.0% MSCI ACWI IMI, 22.0% Blmbg Aggregate, 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.



## Research and Educational Programs

The Callan Institute provides both 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 Anna West at 415.974.5060 / [institute@callan.com](mailto:institute@callan.com).

## New Research from Callan’s Experts

**Smart Beta Is the Gateway Drug to Factor Investing** | In this paper, a reprint from the *Journal of Portfolio Management’s* special issue on Factor Investing, author Eugene Podkaminer, CFA, of Callan’s Capital Markets Research group describes the connection between alternative indices and more sophisticated risk premia strategies.

**2017 National Conference: ‘It’s Private’** | A summary of “It’s Private: Real Estate Debt and Middle Market Direct Lending,” a presentation from Callan experts Kristin Bradbury, Alex Browning, and Jay Nayak.

**Capital Market Projections for 2017-2026** | Callan prepares capital market projections annually to help guide clients with their long-term strategic planning. We publish three pieces authored by the team that creates them: Jay Kloepfer, John Pirone, CFA, CAIA, and Jim Van Heuit. A **white paper** delves into the process and thinking behind the 2017 figures; a **Manifesto** outlines the reasons that Callan produces its annual capital market projections and the rigorous process behind it; and a “**charticle**” (chart+article) summarizes key figures from Callan’s 2017 capital market projections.

**It’s a (Fiduciary) Trap! But You Don’t Have to Fall In** | Defined contribution (DC) plan sponsors often worry about landing in hot water for doing the wrong thing. However, many fiduciary issues crop up because plan sponsors have failed to take action. Author Lori Lucas, CFA, Callan’s Defined Contribution Practice Leader, lists eight potential fiduciary traps and ways for plan sponsors to avoid falling into them in 2017.

**The Callan Periodic Table of Investment Returns (Key Indices: 1997-2016) and Collection** | The Periodic Table of Investment Returns depicts annual returns for 10 asset classes, ranked from

best to worst performance for each calendar year. The Collection includes 10 additional versions, such as the indices relative to inflation, real estate, and hedge fund sub-strategies.

### Periodicals

**Real Assets Reporter, Winter/Spring 2017** | Avery Robinson, CAIA, explores how we developed our Real Estate Indicators. We also cover the latest on the real estate market, and share charts and tables on the long-term performance of various real assets.

**Private Markets Trends, Winter 2017** | Gary Robertson provides an overview of the environment for private equity in 2016 and a look ahead at 2017. He sees continued liquidity in the private equity market, and writes that distributions will continue to benefit investors.

**Hedge Fund Monitor, 4th Quarter 2016** | Jim McKee provides a view of the hedge fund industry and detailed quarterly performance. This quarter’s cover story: “Alternative Facts and the Evolving Role of Hedge Funds.”

**DC Observer, 1st Quarter 2017** | Lori Lucas discusses the best approach to crafting, implementing, and maintaining an investment policy statement for defined contribution plans.

**Market Pulse Flipbook, Fourth Quarter 2016** | 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, 4th Quarter 2016** | A quarterly macroeconomic newsletter providing thoughtful insights on the economy and recent performance in equity, fixed income, alternatives, international, real estate, and other capital markets.

## Events

Miss out on a Callan conference or workshop? Event summaries and speakers' presentations are available on our website: <https://www.callan.com/education/CII/>

### 'Why Diversify'

Our **June Regional Workshops**, June 27 in Atlanta and June 29 in San Francisco, will focus on diversification, which has turned out to be very expensive for U.S.-based investors, especially since the Global Financial Crisis. In this workshop, Callan experts Mark Andersen, Jay Kloepfer, and Brian Smith analyze diversification from multiple angles, answering the questions of whether investors erred in adopting diversified portfolios over the last 30 years, and what investors should do now.

Also mark your calendars for our **October Regional Workshops**, October 24 in New York and October 26 in Chicago.

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

*San Francisco, July 25-26, 2017*

*Chicago, October 24-25, 2017*

This program familiarizes fund sponsor trustees, staff, and asset management advisors 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 <https://www.callan.com/education/college/> or contact Kathleen Cunnie: 415.274.3029 / [cunnie@callan.com](mailto:cunnie@callan.com)

## Education: By the Numbers

500

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

50+

Unique pieces of research the Institute generates each year

3,500

Total attendees of the "Callan College" since 1994

1980

Year the Callan Institute was founded



"We think the best way to learn something is to teach it. Entrusting client education to our consultants and specialists ensures that they have a total command of their subject matter. This is one reason why education and research have been cornerstones of our firm for more than 40 years."

Ron Peyton, Chairman and CEO



## 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 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
1607 Capital Partners, LLC
Aberdeen Asset Management PLC
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
Amundi Smith Breeden LLC
Angelo, Gordon & Co.
Apollo Global Management
AQR Capital Management
Ares Management LLC
Ariel Investments, LLC
Aristotle Capital Management, LLC
Artisan Holdings
Atlanta Capital Management Co., LLC
Aviva Investors Americas
AXA Investment Managers
Baillie Gifford Overseas Limited
Baird Advisors
Bank of America
Barings LLC
Baron Capital Management, Inc.
Barrow, Hanley, Mewhinney & Strauss, LLC
BlackRock
BMO Global Asset Management
BNP Paribas Investment Partners
BNY Mellon Asset Management
Boston Partners
Brandes Investment Partners, L.P.
Brandywine Global Investment Management, LLC
Brown Brothers Harriman & Company
BTG Pactual
Cambiar Investors, LLC

Manager Name
Campbell Global, LLC
Capital Group
CastleArk Management, LLC
Causeway Capital Management
Cavanal Hill Investment Management, Inc.
Chartwell Investment Partners
ClearBridge Investments, LLC
Cohen & Steers Capital Management, Inc.
Columbia Management Investment Advisers, LLC
Columbus Circle Investors
Cornerstone Capital Management
Cove Street Capital, LLC
Cramer Rosenthal McGlynn, LLC
Credit Suisse Asset Management
Crestline Investors, Inc.
DDJ Capital Management, LLC
D.E. Shaw Investment Management, L.L.C.
DePrince, Race & Zollo, Inc.
Deutsche Asset Management
Diamond Hill Capital Management, Inc.
Dimensional Fund Advisors LP
Doubleline
Duff & Phelps Investment Mgmt. Co.
Eagle Asset Management, Inc.
EARNEST Partners, LLC
Eaton Vance Management
Epoch Investment Partners, Inc.
Fayez Sarofim & Company
Federated Investors
Fidelity Institutional Asset Management
Fidelity Management & Research
Fiera Capital Corporation
First Eagle Investment Management, LLC
First Hawaiian Bank Wealth Management Division
Fisher Investments
Franklin Templeton
Franklin Templeton Institutional

Manager Name
Fred Alger Management, Inc.
Frost Investment Advisors, LLC
Fuller & Thaler Asset Management, Inc.
GAM (USA) Inc.
GlobeFlex Capital, L.P.
GMO
Goldman Sachs Asset Management
Great Lakes Advisors, LLC
Guggenheim Investments
GW&K Investment Management
Harbor Capital Group Trust
Hartford Funds
Hartford Investment Management Co.
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
Janus Capital Management, LLC
Jensen Investment Management
Jobs Peak Advisors
J.P. Morgan Asset Management
Kayne Anderson Capital Advisors LP
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
MackKay Shields LLC
Man Investments Inc.
Manulife Asset Management
Macquarie Investment Management (formerly Delaware Investments)
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.
Neuberger Berman
Newton Investment Management (fka Newton Capital Management)
Nikko Asset Management Co., Ltd.
Northern Trust Asset Management

Manager Name
Nuveen Investments, Inc.
OFI Global Asset Management
Old Mutual Asset Management
Opus Capital Management Inc.
O'Shaughnessy Asset Management, LLC
Pacific Investment Management Company
Peregrine Capital Management, Inc.
PGIM
PGIM Fixed Income
PineBridge Investments
Pioneer Investments
PNC Capital Advisors, LLC
Principal Global Investors
Private Advisors, LLC
Putnam Investments, LLC
QMA (Quantitative Management Associates)
RBC Global Asset Management
Regions Financial Corporation
Reinhart Partners, Inc.
RidgeWorth Capital Management, Inc.
Rockefeller & Co., Inc.
Rothschild Asset Management, Inc.
Russell Investments
Santa Barbara Asset Management
Santander Global Facilities
Schroder Investment Management North America Inc.
Smith, Graham & Co. Investment Advisors, L.P.
Smith Group Asset Management
Standard Life Investments Limited
Standish
State Street Global Advisors
Stone Harbor Investment Partners, L.P.
T. Rowe Price Associates, Inc.
Taplin, Canida & Habacht
The Boston Company Asset Management, LLC
The Hartford
The London Company
The TCW Group, Inc.
Thompson, Siegel & Walmsley LLC
Thornburg Investment Management, Inc.
Tri-Star Trust Bank
UBS Asset Management
Van Eck Global
Versus Capital Group
Victory Capital Management Inc.
Vontobel Asset Management, Inc.
Voya Financial
Voya Investment Management (fka ING)
Waterton Associates L.L.C.
WCM Investment Management
WEDGE Capital Management
Wellington Management Company, LLP
Wells Capital Management
Western Asset Management Company
William Blair & Company