# Callan

March 31, 2016

City of Milwaukee Employes' Retirement System

Investment Measurement Service Quarterly Review

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## Table of Contents March 31, 2016

Capital Markets Review	1
Total Fund	
Investment Manager Asset Allocation	8
Actual vs. Target Asset Allocation	9
Total Fund vs. Total Public Fund Database	11
Quarterly Total Fund Attribution	14
Cumulative Total Fund Attribution	15
Investment Manager Returns - Gross of Fee	16
Investment Manager Returns - Net of Fee	20
Asset Class Rankings	22
Asset Class Rankings	23
Callan Research/Education	24
Disclosures	27

# Callan



First Quarter 2016

This "Preview" contains excerpts from the upcoming *Capital Market Review* (CMR) newsletter, which will be published at the end of the month.

## Tale of Two Halves

## U.S. EQUITY | Lauren Mathias, CFA

The first quarter of 2016 was a tale of two halves: the **S&P 500 Index** declined in the first half only to reverse course and post a positive quarterly return (+1.34%). Large cap companies held their lead over small cap, but in the trend of reversals value overtook growth in all capitalizations. (**Russell 1000 Index**: +1.18% and **Russell 2000 Index**: -1.52%; **Russell 1000 Value Index**: +1.64% and **Russell 1000 Growth Index**: +0.74%).

Continued on pg. 2

# Mr. Draghi's Wild Ride

## NON-U.S. EQUITY | Kevin Nagy

Non-U.S. equity markets endured a rocky January and February but rallied in March to finish at a modest loss (MSCI ACWI ex USA Index: -0.26%). Emerging markets (MSCI Emerging Markets Index: +5.75%) did better than their developed counterparts (MSCI World ex USA: -1.95%).

Continued on pg. 3

## **Broad Market Quarterly Returns**



# More T-Bills, Please

### U.S. FIXED INCOME | Irina Sushch

Yields plummeted during a volatile first quarter. A dovish Fed fostered uncertainty over global economic growth. **The Barclays Aggregate Index** gained 3.03% and the **Barclays Corporate High Yield Index** was up 3.35%.

Continued on pg. 4

## A Dole of Doves

### NON-U.S. FIXED INCOME | Kyle Fekete

Sovereign debt rallied in the first quarter, driven by risk-on sentiment and the impact of the U.S. dollar's relative weakness. The **Citi Non-U.S. World Government Bond Index** jumped 9.10% (+4.16% on a hedged basis). The hard currency **JPM EMBI Global Diversified Index** rose 5.04% while the local currency **JPM GBI-EM Global Diversified** soared 11.02%.

Continued on pg. 5

## U.S. Equity: Tale of Two Halves

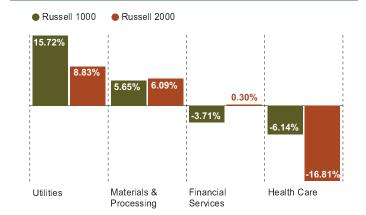
## Continued from pg. 1

Though the S&P 500 Index ended in positive territory, during the quarter performance dipped 10%. This is the first time since the Great Depression that the S&P fell to this depth only to rebound and end in the black. January was a disappointing month as economic concerns lingered from 2015. But in February and March, U.S. manufacturing activity grew, U.S. fourth-guarter 2015 GDP was revised to 1.4% from 1.0%, the labor force participation rate expanded to 63% (from 62.4%), and the U.S. economy added 215,000 jobs in March alone. Global concerns around the price of oil abated as the crude oil spot price ended the quarter at \$38/barrel after bottoming at \$26/barrel in mid-February. Investor sentiment rose in tandem to these positive developments. Despite some improvement, the U.S. Federal Reserve stated global economic and financial developments continued to pose risks, and thus maintained the target range for the federal funds rate at 0.25%-0.50%.

Growth lost its lead over Value. The difference was most significant within small cap (Russell 2000 Growth Index: -4.68% and Russell 2000 Value Index: +1.70). Micro and small cap companies declined while mid and large cap advanced (Russell Microcap Index: -5.43%, Russell 2000 Index: -1.52%, and Russell Midcap Index: +2.24%, Russell 1000 Index: +1.18%).

Sector performance over the quarter also revealed reversals. Cyclical areas like Energy, Industrials, and Materials added value, and the interest rate-sensitive Utilities sector expanded, but typically defensive Health Care trailed. Not only did sectors turnabout, so did factors—valuation metrics such as price/book and yield outpaced growth metrics such as projected-EPS growth and price momentum. Volatility of stocks, as measured by the daily VIX, increased during February's pullback, ending the quarter near average levels. Correlations remained well above long-term averages and spreads between stock returns were below average (both based on the S&P 500 universe)—a difficult environment for stock-picking strategies.

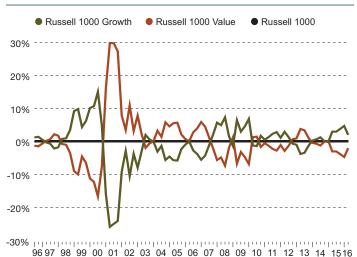
### **Quarterly Performance of Select Sectors**



Source: Russell Investment Group

### **Rolling One-Year Relative Returns**

(vs. Russell 1000)



Source: Russell Investment Group

The U.S. equity market had a tumultuous start to the year, but found itself in positive territory by quarter end. This tale of two halves made it challenging for active management, with just 19% of large cap funds outperforming the S&P 500 Index during the quarter.

## Non-U.S. Equity: Mr. Draghi's Wild Ride

Continued from pg. 1

Non-U.S. equity markets fought through a horrible January to post a modest loss for the quarter (MSCI ACWI ex USA Index: -0.26%). Falling oil prices, concerns about global economic growth, and declining corporate profits prompted the January sell-off as many investors switched to a "risk-off" footing. Announcements of further European Central Bank (ECB) monetary stimulus and a modest rebound in commodities prices helped kick start a comeback in February and March, but were not enough to drive the broader non-U.S. indices into the black.

Emerging markets outperformed developed markets with the MSCI Emerging Markets Index (+5.75%) handily surpassing the MSCI World ex USA Index (-1.95%). Small cap stocks rode the rally further than large cap and posted a slight positive return, due to strong performance in the Utilities sector (MSCI ACWI ex USA Small Cap Index: +0.68%). Sector results were mixed: Energy (+9.97%) and Materials (+7.26%) were strongest while Health Care and Financials retreated (-7.17% and -4.85%, respectively).

European stocks were unable to complete their rebound despite further rate cuts and bond purchases by the ECB (MSCI Europe Index: -2.51%). The banking sector was hurt by slashed interest rates. Health Care also struggled, dropping 7.45% amid renewed political tension over rising drug prices. The Netherlands (+3.35%) was the top performer in Europe due to strong domestic performance from Energy (+15.73%) and Consumer Discretionary (+12.32%). Italy (-11.66%) was the

## Regional Quarterly Performance

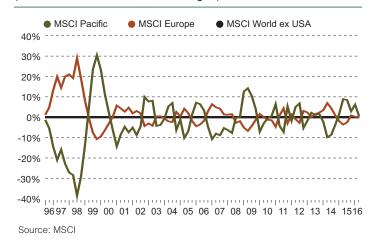
Source: MSCI



(U.S. Dollar)

**Rolling One-Year Relative Returns** 

(vs. MSCI World ex USA, USD hedged)



worst performer; its Financial sector lost 25.84% due to Italian banks carrying massive amounts of non-performing loans on their balance sheets.

Southeast Asia and the Pacific (MSCI Pacific Index: -3.79%) underperformed Europe and other broad benchmarks. Japan (-6.52%) battled with tepid economic growth and large losses in the banking sector. The Financial sector was hit especially hard, losing 13.58%. Exporters also struggled due to the strengthening yen. Things were less gloomy in the rest of the region with New Zealand (+11.60%), Singapore (+5.05%), and Australia (+2.10%) benefitting from a commodities rally.

China (-4.80%) continued to struggle due to concerns over slowing growth and ineffective monetary policy. In an effort to sustain the economy's growth, Chinese authorities implemented selective capital controls to slow asset withdrawals and cut the required reserve ratio. Consumer Discretionary (-10.75%), Financials (-9.68%), and Health Care (-6.65%) were three significant detractors. In keeping with the rest of the world, surging commodity prices buoyed Energy (6.75%) and Materials (7.26%). Latin America was the big winner of the first quarter as Brazil, Colombia, Chile, and Peru (+28.58%, +22.49%, +13.25%, and +27.02%) made the MSCI Latin America Index the top-performing regional index at +19.23%. The recovery in commodity prices and the prospect of political change boosted the Brazilian real to appreciate 12% against the dollar.

## U.S. Fixed Income: More T-Bills, Please

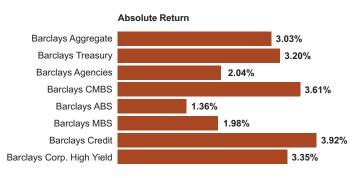
## Continued from pg. 1

Yields fell nearly 50 bps from year end during a volatile first quarter. The yield curve flattened further in markets abundant with uncertainty over global economic growth. Investment grade credit, mortgage-backed (MBS), commercial mortgage-backed (CMBS), and high yield spreads all tightened, while assetbacked spreads widened. The **Barclays Aggregate Index** gained 3.03%.

Following December's federal funds rate hike, the Federal Reserve took on a neutral outlook. The Fed stated that financial and economic conditions are less favorable than they had been in December. The U.S. economy experienced modest growth despite improving employment and housing numbers. Fed chair Janet Yellen stated that the U.S. economy would have to get much worse before the Fed would consider the use of negative interest rates (six other central banks have implemented negative interest rates). The 10-year U.S. Treasury yield tumbled to 1.77%. The breakeven inflation rate (the difference between nominal and real yields) on 10-year Treasuries ticked up 1.63% as TIPS fell 55 bps, in line with their nominal counterparts.

Sectors in the Barclays Aggregate posted positive returns across the board. CMBS outperformed like-duration Treasuries by 0.58% and rose 3.61% for the quarter. Credit was the highest returning sector (+3.92%), but only beat like-duration Treasuries by 0.18%. MBS was the only sector to trail like-duration Treasuries (down by 0.38%), yet still rose 1.98%. Investment grade Financials, burt by worries over persistent low or negative

**Fixed Income Index Quarterly Returns** 



Source: Barclays

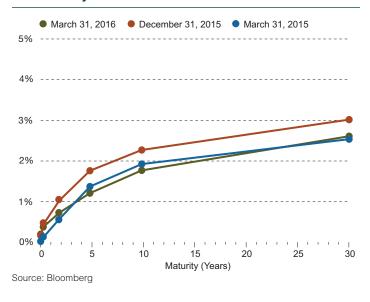
interest rates, underperformed like-duration Treasuries by nearly 100 bps; Industrials, buoyed by a rebound in commodity prices, outperformed by 70 bps.

High yield corporate bonds rebounded from severe underperformance in January and early February (down 5% through February 11) to finish in the black. The **Barclays Corporate High Yield Index** was up 3.35%, outpacing Treasuries by 77 bps. Including an upsurge in issuance in the last few weeks of the quarter, new high yield issuance was \$35.9 billion—60% lower than one year ago.

#### **Historical 10-Year Yields**



### **U.S. Treasury Yield Curves**



## Non-U.S. Fixed Income: A Dole of Doves

### Continued from pg. 1

The U.S. dollar weakened versus most currencies during the quarter, providing a tailwind to unhedged foreign bond returns. The yen gained 7% versus the dollar as investors sought its safe-haven status amid market turbulence in China and concerns over the health of the European banking sector. The euro was also stronger versus the dollar (+5%). In March, the ECB continued its accomodative stance, slashing interest rates and increasing asset purchases. For the first time, the ECB included non-bank investment grade corporate bonds in its asset purchase program. Interest rates fell across developed markets, further bolstering returns. The Citi Non-U.S. World Government Bond Index was up 9.10% (+4.16% hedged) while the Barclays Global Aggregate rose 5.90% (+3.28% hedged).

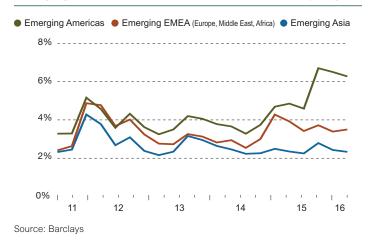
On an unhedged basis, returns approached 10% for many countries, including Japan which was up almost 12% on the back of falling rates combined with yen strength. Yield on the Japanese 10-year bond reached negative territory after a surprise move by the Bank of Japan (BoJ) in January to adopt a negative interest rate policy, indicating bond investors would have to pay-to-own before adjusting for inflation. The BoJ owns approximately a third of outstanding Japanese bonds as a result of its quantitative easing program. Regulations require the nation's banks, insurers, and pension funds to carry Japanese bonds on their balance sheets.

The unhedged U.K. gilt advanced 2.66%, hampered by the pound's 3% fall. Worries over a potential Brexit put pressure on the currency. Yield on the 10-year U.K. gilt declined more than 50 bps, hitting an all-time low early in the quarter. The Bank of England elected to maintain its relaxed monetary policy for the seventh straight year, citing weak growth and global market turmoil.

Emerging market bonds rebounded. In late February and March, commodity prices stabilized, risk appetite returned, and confidence in the Chinese renminbi stabilized. The hard currency **JPM EMBI Global Diversified Index** rose 5.04% while

### **Emerging Spreads Over Developed**

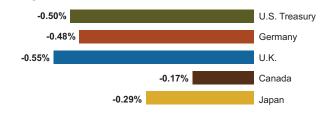
(By Region)



### 10-Year Global Government Bond Yields



Change in 10-Year Yields from 4Q15 to 1Q16



Source: Bloomberg

the local currency **JPM GBI-EM Global Diversified** soared 11.02%, bolstered by the dollar's relative weakness. Brazil led both indices as investors cheered the prospect of an impeachment of President Dilma Rousseff, hoping a new government could bring better days for the beleaguered country.

## **Investment Manager Asset Allocation**

The table below contrasts the distribution of assets across the Fund's investment managers as of March 31, 2016, with the distribution as of December 31, 2015.

## **Asset Distribution Across Investment Managers**

	March 31, 2	016	December 31	2015
	Market Value	Weight	Market Value	Weight
Total Domestic Equity	\$1,249,130,022	26.14%	\$1,352,532,040	28.71%
Northern Trust Global	481,290,985	10.07%	479,688,976	10.18%
BlackRock R1000 Alpha Tilts	-	=	122,361,433	2.60%
Cornerstone Investment Partners	177,626,336	3.72%	175,333,053	3.72%
Polen Capital Management	194,636,410	4.07%	204,312,466	4.34%
Earnest Partners LLC	121.123.747	2.54%	119.976.557	2.55%
	, -,		-,,-	
Dimensional Fund Advisors Inc.	188,572,275	3.95%	159,991,956	3.40%
CastleArk Management	85,880,268	1.80%	90,867,600	1.93%
otal Global Equity	\$518,808,103	10.86%	\$331,029,212	7.03%
BlackRock ACWI Value	82,969	0.00%	91,663,022	1.95%
BlackRock Global Alpha Tilts	278.157.193	5.82%	- , , , , , , , , , , , , , , , , , , ,	
MFS Investment Management	240,567,941	5.04%	239,366,190	5.08%
Total International Equity	\$920,157,631	19.26%	\$1,008,195,083	21.40%
BlackRock ACWI	<del>-</del>	-	230,201,965	4.89%
BlackRock Emerging Markets	58,671,146	1.23%	-	•
Brandes Investment Partners	402,802,388	8.43%	398,380,002	8.45%
William Blair & Company	280,751,742	5.88%	238,989,518	5.07%
Dimensional Fund Advisors Inc.	177,932,355	3.72%	140,623,597	2.98%
otal Fixed Income	\$1,112,678,837	23.29%	\$1,137,635,159	24.14%
BlackRock Intermediate Agg	243,062,372	5.09%	262,202,157	5.56%
Reams Asset Management	257,004,948	5.38%	266,260,558	5.65%
Loomis, Sayles & Company, L.P.				
	412,029,572	8.62%	411,594,313	8.74%
Wellington Management Company	200,581,945	4.20%	197,578,131	4.19%
otal Private Equity	\$187,810,617	3.93%	\$181,049,472	3.84%
Abbott Capital Management 2010	23,243,184	0.49%	22,893,184	0.49%
Abbott Capital Management 2011	32,935,837	0.69%	31,560,837	0.67%
Abbott Capital Management 2012	16,847,469	0.35%	15,647,469	0.33%
Abbott Capital Management 2013	11,477,716	0.24%	10,427,716	0.22%
Abbott Capital Management 2014	8,924,964	0.19%	7,699,964	0.16%
Abbott Capital Management 2015	2.337.865	0.05%		0.10%
	, ,		2,165,365	0.05%
Abbott Capital Management 2016	15,000	0.00%	-	
Mesirow V	63,054,869	1.32%	62,056,394	1.32%
Mesirow VI	13,357,447	0.28%	11,674,586	0.25%
NB Secondary Opp Fund III	11,983,888	0.25%	11,983,888	0.25%
Private Advisors	3,632,378	0.08%	4,940,069	0.10%
bsolute Return	\$265,741,832	5.56%	\$266,969,992	5.67%
Allianz SA 1000	74,366,071	1.56%	72,619,327	1.54%
Newton	63,555,224	1.33%	64,238,428	1.36%
UBS A & Q				
UDS A & Q	127,820,538	2.68%	130,112,238	2.76%
Real Assets	\$87,274,208	1.83%	-	,
Principal DRA	87,274,208	1.83%	-	
Total Real Estate	\$406,368,011	8.51%	\$394,800,944	8.38%
Real Estate	406,368,011	8.51%	394,800,944	8.38%
otal Cash	\$29,741,697	0.62%	\$39,584,979	0.84%
Cash	29,741,697	0.62%	39,584,979	0.84%

\$4,777,710,957

100.0%



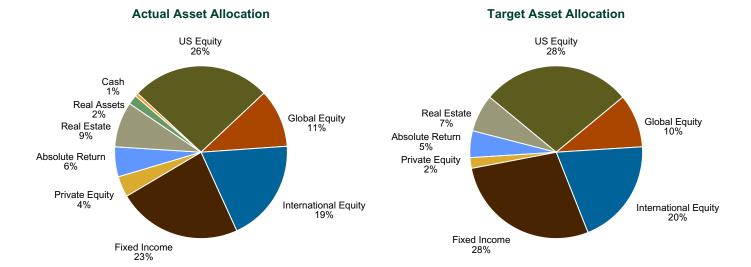
**Total Fund** 

\$4,711,796,882

100.0%

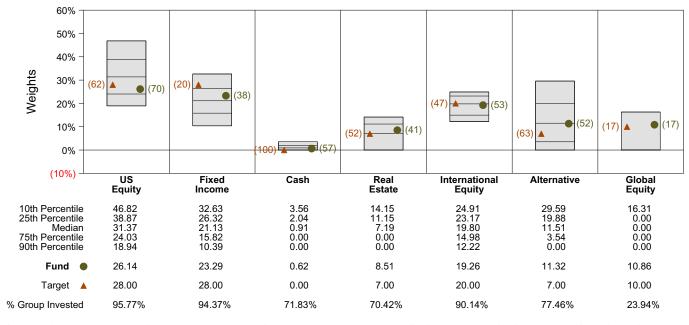
# Actual vs Target Asset Allocation As of March 31, 2016

The top left chart shows the Fund's asset allocation as of March 31, 2016. The top right chart shows the Fund's target asset allocation as outlined in the investment policy statement. The bottom chart ranks the fund's asset allocation and the target allocation versus the Public Fund - Large (>1B).



Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
US Equity	1,249,130	26.1%	28.0%	(1.9%)	(88,629)
Global Equity	518,808	10.9%	10.0%	`0.9%′	41,037
International Equity	920,158	19.3%	20.0%	(0.7%)	(35,385)
Fixed Income	1,112,679	23.3%	28.0%	(4.7%)	(225,080)
Private Equity	187,811	3.9%	2.0%	`1.9%´	92,256
Absolute Return	265,742	5.6%	5.0%	0.6%	26,856
Real Estate	406,368	8.5%	7.0%	1.5%	71,928
Real Assets	87,274	1.8%	0.0%	1.8%	87,274
Cash	29,742	0.6%	0.0%	0.6%	29,742
Total	4,777,711	100.0%	100.0%		

## Asset Class Weights vs Public Fund - Large (>1B)



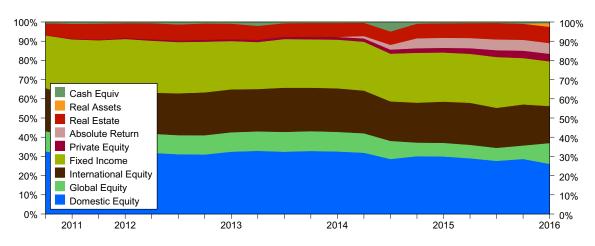
<sup>\*</sup> Current Quarter Target = 28.0% Russell 3000 Index, 28.0% Barclays Aggregate Index, 20.0% MSCI EAFE, 10.0% MSCI ACWI, 7.0% NFI-ODCE (1 Qtr in Arrears), 5.0% 3-month Treasury Bill+3.0% and 2.0% Russell 3000 (1 Qtr in Arrears)+3.0%.



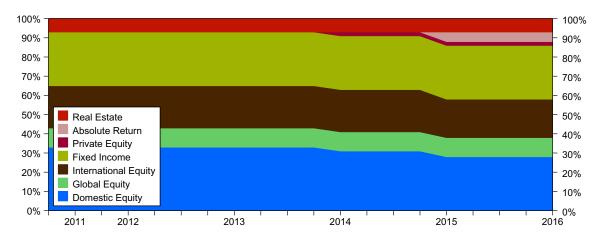
## **Actual vs Target Historical Asset Allocation**

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 Public Fund Sponsor Database.

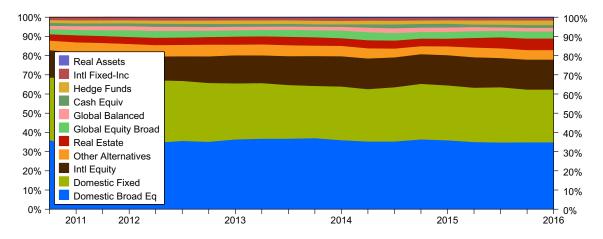
### **Actual Historical Asset Allocation**



### **Target Historical Asset Allocation**



## Average Public Fund Sponsor Database Historical Asset Allocation



<sup>\*</sup> Current Quarter Target = 28.0% Russell 3000 Index, 28.0% Barclays Aggregate Index, 20.0% MSCI EAFE, 10.0% MSCI ACWI, 7.0% NFI-ODCE (1 Qtr in Arrears), 5.0% 3-month Treasury Bill+3.0% and 2.0% Russell 3000 (1 Qtr in Arrears)+3.0%.



## Total Fund Period Ended March 31, 2016

### **Investment Philosophy**

The Public Fund Sponsor Database consists of public employee pension total funds including both Callan Associates client and surveyed non-client funds. The Total Fund Reference Index consists of 33% Russell 3000, 28% Barclays Capital Aggregate, 22% MSCI EAFE (net), 10% MSCI World (net) and 7% NCREIF Property (One Quarter in Arrears).

### **Quarterly Summary and Highlights**

- Total Fund's portfolio posted a 1.95% return for the quarter placing it in the 9 percentile of the Public Fund Sponsor Database group for the quarter and in the 10 percentile for the last year.
- Total Fund's portfolio outperformed the Total Fund Reference Index by 1.01% for the quarter and outperformed the Total Fund Reference Index for the year by 0.94%.

### **Quarterly Asset Growth**

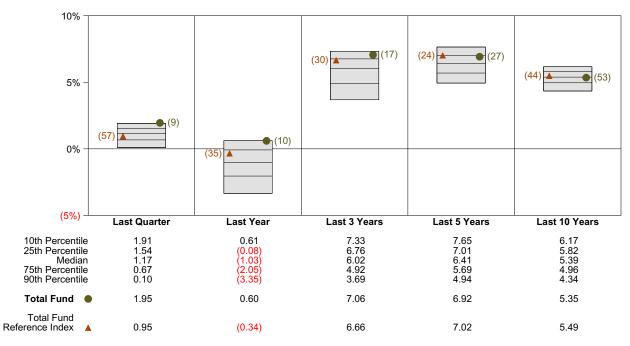
 Beginning Market Value
 \$4,711,796,882

 Net New Investment
 \$-23,725,087

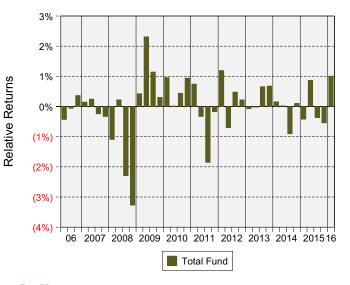
 Investment Gains/(Losses)
 \$89,639,162

Ending Market Value \$4,777,710,957

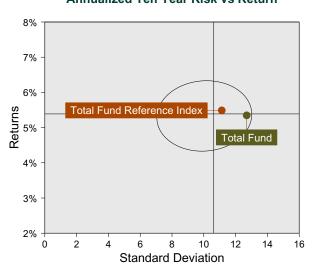
### Performance vs Public Fund Sponsor Database (Gross)



## **Relative Return vs Total Fund Reference Index**



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



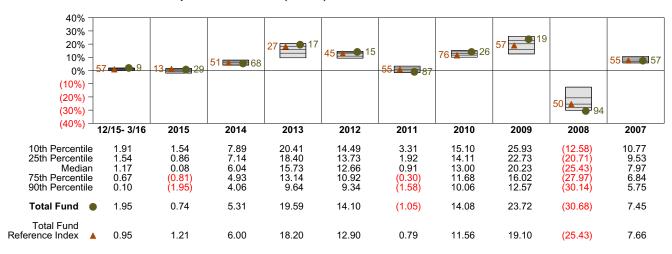


## Total Fund Return Analysis Summary

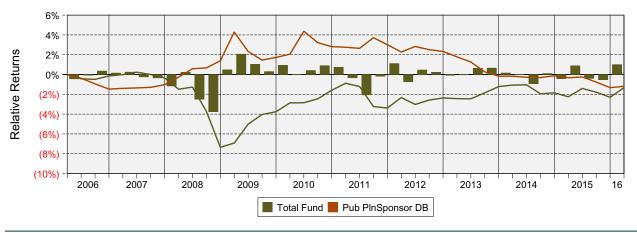
### **Return Analysis**

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 two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures.

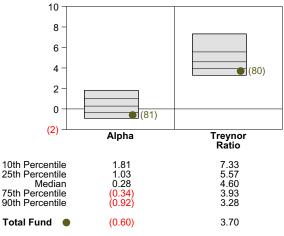
### Performance vs Public Fund Sponsor Database (Gross)

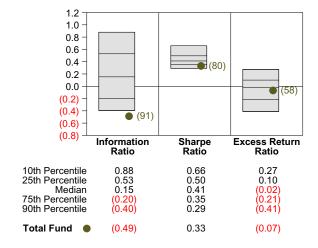


### Cumulative and Quarterly Relative Return vs Total Fund Reference Index



Risk Adjusted Return Measures vs Total Fund Reference Index Rankings Against Public Fund Sponsor Database (Gross) Ten Years Ended March 31, 2016





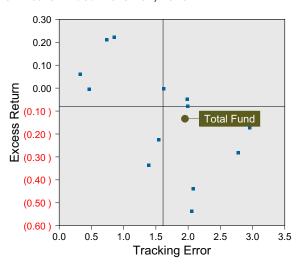


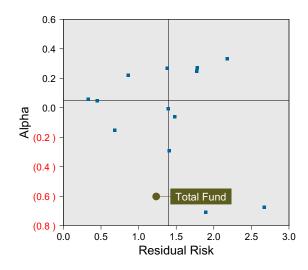
## Total Fund Total Fund vs Target Risk Analysis

#### **Risk Analysis**

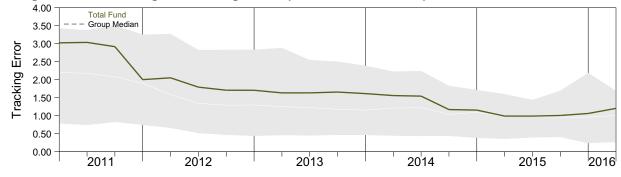
The graphs below analyze the performance and risk of the fund relative to the appropriate target mix. This relative performance is compared to a peer group of funds wherein each member fund is measured against its own target mix. The first scatter chart illustrates the relationship, called Excess Return 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 Public Fund Sponsor Database Ten Years Ended March 31, 2016

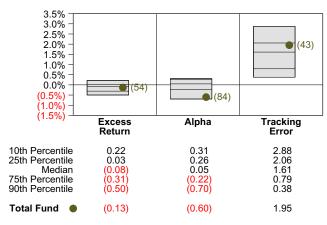


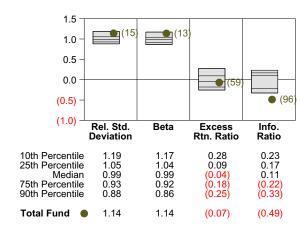


Rolling 12 Quarter Tracking Error vs Targets Compared to Public Fund Sponsor Database



Risk Statistics Rankings vs Targets Rankings Against Public Fund Sponsor Database Ten Years Ended March 31, 2016



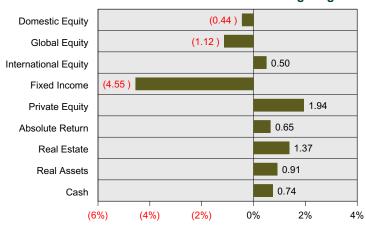




## Quarterly Total Fund Relative Attribution - March 31, 2016

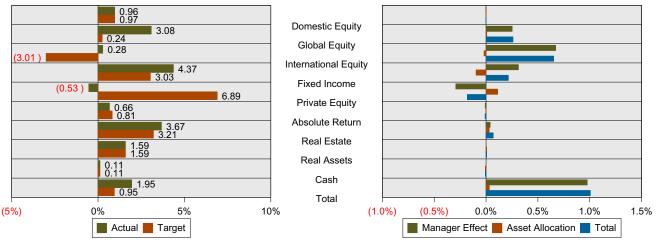
The following analysis approaches Total Fund Attribution from the perspective of relative return. Relative return attribution separates and quantifies the sources of total fund excess return relative to its target. This excess return is separated into two relative attribution effects: Asset Allocation 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.





## **Actual vs Target Returns**

## **Relative Attribution by Asset Class**



### Relative Attribution Effects for Quarter ended March 31, 2016

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	28%	28%	0.96%	0.97%	(0.00%)	(0.00%)	(0.00%)
Global Equity	9%	10%	3.08%	0.24%	0.25%	0.01%	0.26%
International Equity	20%	20%	0.28%	(3.01%)	0.67%	(0.02%)	0.65%
Fixed Income '	23%	28%	4.37%	`3.03%´	0.31%	(0.10%)	0.22%
Private Equity	4%	2%	(0.53%)	6.89%	(0.29%)	`0.11%´	(0.18%)
Absolute Return	6%	5%	`0.66%´	0.81%	(0.01%)	(0.00%)	(0.01%)
Real Estate	8%	7%	3.67%	3.21%	`0.04%′	`0.03%´	`0.07%´
Real Assets	1%	0%	1.59%	1.59%	0.00%	0.01%	0.01%
Cash	1%	0%	0.11%	0.11%	0.00%	(0.01%)	_(0.01%)
Total			1.95% =	0.95%	+ 0.97% +	0.03%	1.01%

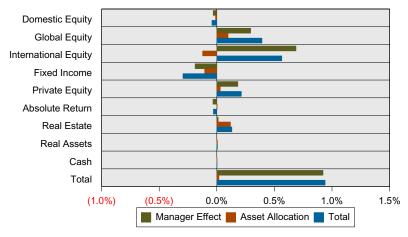
<sup>\*</sup> Current Quarter Target = 28.0% Russell 3000 Index, 28.0% Barclays Aggregate Index, 20.0% MSCI EAFE, 10.0% MSCI ACWI, 7.0% NFI-ODCE (1 Qtr in Arrears), 5.0% 3-month Treasury Bill+3.0% and 2.0% Russell 3000 (1 Qtr in Arrears)+3.0%.



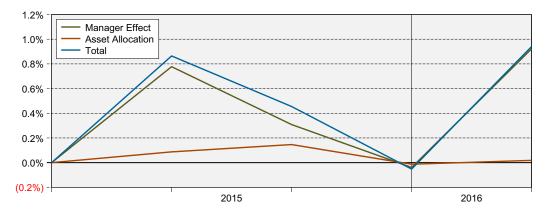
## **Cumulative Total Fund Relative Attribution - March 31, 2016**

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

### **One Year Relative Attribution Effects**



### **Cumulative Relative Attribution Effects**



### One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	28%	28%	(0.46%)	(0.34%)	(0.03%)	(0.01%)	(0.04%)
Global Equity	7%	10%	(0.97%)	(4.34%)	`0.29%´	`0.10%′	`0.39%´
International Equity	21%	20%	(5.11%)	(8.27%)	0.69%	(0.12%)	0.56%
Fixed Income ' '	25%	28%	`1.36%′	`1.96%′	(0.19%)	(0.11%)	(0.29%)
Private Equity	3%	2%	11.20%	3.54%	`0.18%´	`0.03%′	`0.21%´
Absolute Return	5%	5%	2.49%	3.12%	(0.03%)	0.00%	(0.03%)
Real Estate	8%	7%	14.42%	14.18%	`0.01%′	0.12%	0.13%
Real Assets	0%	0%	-	-	0.00%	0.01%	0.01%
Cash	1%	0%	0.98%	0.98%	0.00%	0.00%	0.00%
Total			0.60% =	(0.34%) +	0.92% +	0.02%	0.94%

<sup>\*</sup> Current Quarter Target = 28.0% Russell 3000 Index, 28.0% Barclays Aggregate Index, 20.0% MSCI EAFE, 10.0% MSCI ACWI, 7.0% NFI-ODCE (1 Qtr in Arrears), 5.0% 3-month Treasury Bill+3.0% and 2.0% Russell 3000 (1 Qtr in Arrears)+3.0%.



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, 2016. 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, 2016

	Last		Last		Last 3		Last 5		Since
	Quarter		Year		Years		Years		Inception
Total Domestic Equity	0.96%		(0.46%)		10.93%		9.69%		<b>6.20%</b> (7/98)
Russell 3000 Index	0.97%		(0.34%)		11.15%		11.01%		5.71% (7/98)
Nouthous Trust Clabal	4 200/	0.4	4.000/	40	44.040/	07	11 000/	4-	10.050/
Northern Trust Global	1.38%	21	1.92%	18	11.91%	37	11.66%	47	10.05% (8/88)
S&P 500 Index	1.35%	21	1.78%	19	11.82%	39	11.58%	49	10.00% (8/88)
CAI Large Cap Core Style	(0.12%)		(0.84%)		11.55%		11.43%		-
Cornerstone Investment Partners	1.31%	25	(7.42%)	95	5.13%	99	_		9.97% (6/12)
S&P 500 Index	1.35%	24	1.78%	6	11.82%	6	11.58%	11	14.95% (6/12)
CAI Large Cap Value Style	0.52%		(2.37%)	Ü	9.67%	Ü	10.25%		-
o, ii <b>2</b> a. go cap ta.ao cij.o	0.0270		(=:0: 70)		0.0.70				
Polen Capital Management	0.17%	22	11.58%	1	16.51%	3	-		16.14% (7/12)
S&P 500 Index	1.35%	9	1.78%	32	11.82%	73	11.58%	49	14.07% (7/12)
CAI Lrg Cap Growth Style	(1.87%)		0.44%		13.05%		11.51%		-
5	, ,								
Earnest Partners LLC	0.96%	43	(1.58%)	13	10.07%	45	9.61%	51	9.32% (5/05)
Russell MidCap Index	2.24%	24	(4.04%)	36	10.45%	38	10.30%	33	9.05% (5/05)
CAI Mid Cap Style	0.39%		(5.53%)		9.81%		9.65%		-
			,						
Dimensional Fund Advisors Inc.	2.54%	46	(6.10%)	67	8.28%	63	8.69%	57	12.00% (11/96)
Russell 2000 Value Index	1.70%	66	(7.72%)	84	5.73%	89	6.67%	88	9.03% (11/96)
CAI Small Cap Value Style	2.41%		(4.93%)		8.92%		9.09%		-
CastleArk Management	(5.49%)	53	(13.27%)	51	-		-		5.24% (9/13)
Russell 2000 Growth Index	(4.68%)	43	(11.84%)	44	7.91%	46	7.70%	50	5.51% (9/13)
CAI Sm Cap Growth Style	(5.18%)		(13.12%)		7.24%		7.69%		-
T / 10/1 15 %	0.000/		(0.070()		0.000/		<b>=</b> 400/		0.440/
Total Global Equity	3.08%		(0.97%)		6.68%		5.12%		<b>6.41%</b> (4/10)
MSCI World Index	(0.35%)		(3.45%)		6.82%		6.51%		7.64% (4/10)
MFS Investment Management	3.86%	5	1.05%	13	8.02%	36	_		9.98% (12/12)
MSCI ACWI Idx	0.38%	31	(3.81%)	53	6.10%	70	5.80%	67	8.26% (12/12)
CAI Global Eq Broad Style	(0.83%)	01	(3.45%)	55	7.27%	70	7.11%	01	- (12/12)
OAI Olobai Eq bibad Style	(0.00 /0)		(3.4370)		1.21/0		1.11/0		-



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, 2016. 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, 2016

	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Since Inceptior	1
Total International Equity MSCI EAFE Index	<b>0.28%</b> (3.01%)		<b>(5.11%)</b> (8.27%)		<b>4.80%</b> 2.23%		<b>4.43%</b> 2.29%		<b>6.85%</b> 3.98%	(5/96) (5/96)
Brandes Investment Partners MSCI EAFE Index CAI Non-U.S. Eq. Style	1.11% (3.01%) (2.46%)	6 67	(5.98%) (8.27%) (6.23%)	45 71	5.56% 2.23% 3.54%	14 75	3.62% 2.29% 3.45%	47 73	8.08% 4.01% -	(2/98) (2/98)
William Blair & Company MSCI ACWI ex-US Index CAI Non-U.S. Eq. Style	(2.21%) (0.26%) (2.46%)	46 19	(6.63%) (8.78%) (6.23%)	54 77	3.64% 0.76% 3.54%	46 92	4.98% 0.76% 3.45%	18 92	7.26% 6.31% -	(12/03) (12/03)
Dimensional Fund Advisors Inc. Blended Benchmark CAI Int'l Small Cap Style	(0.81%) (0.60%) (0.89%)	46 41	(1. <mark>46%)</mark> 3.20% 2.36%	87 41	6.33% 7.29% 7.94%	71 61	4.63% 5.58% 7.23%	81 71	3.98% 2.00% -	(5/06) (5/06)
Total Fixed Income Barclays Capital Aggregate	<b>4.37%</b> 3.03%		<b>1.36%</b> 1.96%		<b>1.58%</b> 2.50%		<b>3.86%</b> 3.78%		<b>7.86%</b> 6.68%	(12/87) (12/87)
BlackRock Intermediate Agg Barclays Capital Int Aggregate CAI Intermediate F-I Styl	2.33% 2.31% 2.34%	54 57	2.28% 2.20% 2.11%	29 40	2.24% 2.14% 2.00%	19 31	3.24% 3.11% 3.30%	56 72	5.14% 5.02% -	(7/99) (7/99)
Reams Asset Management Barclays Capital Aggregate CAI FI Core Plus Style	4.25% 3.03% 2.90%	3 38	3.21% 1.96% 1.35%	3 14	2.43% 2.50% 2.65%	77 70	4.41% 3.78% 4.47%	54 100	6.05% 5.09% -	(1/01) (1/01)
Loomis, Sayles & Company, L.P. Barclays Capital Aggregate CAI FI Core Plus Style	4.20% 3.03% 2.90%	3 38	( <mark>2.63%)</mark> 1.96% 1.35%	99 14	1.15% 2.50% 2.65%	100 70	4.96% 3.78% 4.47%	16 100	9.18% 6.68% -	(12/87) (12/87)
Wellington Management Company CG WGBI Index CAI Glbl Fixed Inc Style	7.33% 7.09% 5.73%	14 19	6.30% 5.92% 3.39%	4 14	0.52% 0.49% 0.90%	68 69	1.58% 1.16% 2.15%	83 90	1.81% 1.24% -	(1/11) (1/11)
Total Private Equity Abbott Capital Management 2010 Abbott Capital Management 2011 Abbott Capital Management 2012 Abbott Capital Management 2013 Abbott Capital Management 2014 Abbott Capital Management 2015 Mesirow V Mesirow VI NB Secondary Opp Fund III Private Advisors Russell 3000 (1 Qtr in Arrears) + 3%	(0.53%) 0.00% 0.00% 0.00% 0.00% 0.00% (1.39%) (0.93%) 0.00% 0.00%		11.20% 12.32% 10.12% 2.45% 2.23% 0.39% 11.25% 17.75% (4.88%) 22.38% (16.74%) 3.53%		11.90% 10.65% 6.75% 1.59% - - 17.65% - - 18.10%		7.32% (1.60%) - - - - 12.78% - - 15.49%		5,71% (15.88%) (1.07%) (1.88%) (7.01%) 11.25% 11.34% (1.05%) 6.13% (16.74%) 15.74%	(6/11) (7/12) (5/13) (4/14) (4/15) (6/10) (7/13) (12/13)
Absolute Return	0.66%		2.49%		-		-		4.91%	(6/14)
Allianz SA 1000 T-Bills + 10% Absolute Rtn FoFs	2.41% 2.48% (1.93%)	1	7.92% 10.12% (3.92%)	1	10.07% 2.42%	1	10.08% 1.93%	1	9.95% 10.08% -	(6/14) (6/14)
Newton 1-month LIBOR + 4% Absolute Rtn FoFs	3.61% 1.09% (1.93%)	1 2	2.02% 4.26% (3.92%)	6 3	- 4.20% 2.42%	21	- 4.21% 1.93%	10	3.84% 4.22% -	(8/14) (8/14)
UBS A & Q 1-month LIBOR + 4% Absolute Rtn FoFs	(1.76%) 1.09% (1.93%)	40 2	(0.20%) 4.26% (3.92%)	12 3	4.20% 2.42%	21	- 4.21% 1.93%	10	-	(12/14) (12/14)
Total Real Estate	3.67%		14.42%		13.93%		13.14%		6.46%	(7/86)
Real Estate Blended Benchmark (1) Total Real Estate DB	3.67% 3.21% 2.42%	13 23	14.42% 14.18% 13.40%	41 42	13.93% 12.26% 13.11%	36 61	13.14% 12.31% 12.66%	36 60	6.46% - -	(7/86)
Total Fund Total Fund Reference Index*	<b>1.95%</b> 0.95%		0.60% (0.34%)		<b>7.06%</b> 6.66%		<b>6.92%</b> 7.02%		9.52% -	(1/79)

<sup>(1)</sup> 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.



<sup>\*</sup> Current Quarter Target = 28.0% Russell 3000 Index, 28.0% Barclays Aggregate Index, 20.0% MSCI EAFE, 10.0% MSCI ACWI, 7.0% NFI-ODCE (1 Qtr in Arrears), 5.0% 3-month Treasury Bill+3.0% and 2.0% Russell 3000 (1 Qtr in Arrears)+3.0%.

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.

	12/2015-									
	3/2016		2015		2014		2013		2012	
Total Domestic Equity	0.96%		(0.07%)		11.63%		33.86%		16.12%	
Russell 3000 Index	0.97%		0.48%		12.56%		33.55%		16.42%	
Northern Trust Global	1.38%	21	1.49%	45	13.77%	47	32.46%	77	16.07%	48
S&P 500 Index	1.35%	21	1.38%	50	13.69%	48	32.39%	77	16.00%	48
CAI Large Cap Core Style	(0.12%)		1.38%		13.63%		34.45%		15.89%	
Cornerstone Investment Partners	1.31%	25	(13.54%)	98	8.32%	95	34.87%	46	-	
S&P 500 Index	1.35%	24	1.38%	3	13.69%	27	32.39%	75	16.00%	59
CAI Large Cap Value Style	0.52%		(2.57%)		12.54%		34.59%		16.78%	
Polen Capital Management	0.17%	22	15.51%	3	17.60%	6	23.45%	99	-	
S&P 500 Index	1.35%	9	1.38%	93	13.69%	25	32.39%	79	16.00%	55
CAI Lrg Cap Growth Style	(1.87%)		6.43%		11.83%		35.60%		16.14%	
Earnest Partners LLC	0.96%	43	1.25%	27	10.38%	46	31.29%	90	16.53%	47
Russell MidCap Index	2.24%	24	(2.44%)	67	13.22%	23	34.76%	63	17.28%	41
CAI Mid Cap Style	0.39%		(0.69%)		9.88%		35.84%		16.26%	
Dimensional Fund Advisors Inc.	2.54%	46	(6.06%)	76	5.04%	67	42.70%	23	22.43%	20
Russell 2000 Value Index	1.70%	66	(7.47%)	83	4.22%	82	34.52%	81	18.05%	50
CAI Small Cap Value Style	2.41%		(3.73%)		5.93%		38.72%		18.12%	
CastleArk Management	(5.49%)	53	(4.90%)	78	6.15%	31	-		-	
Russell 2000 Growth Index	(4.68%)	43	(1.38%)	50	5.60%	32	43.30%	74	14.59%	50
CAI Sm Cap Growth Style	(5.18%)		(1.29%)		3.41%		46.83%		14.56%	
Total Global Equity	3.08%		(2.08%)		2.32%		24.81%		15.39%	
MSCI The World Index	(0.35%)		(0.87%)		4.94%		26.68%		15.83%	
MFS Investment Management	3.86%	5	(0.49%)	58	5.59%	27	23.08%	85	-	
MSCI ACWI Idx	0.38%	31	(1.84%)	72	4.71%	46	23.44%	84	16.80%	61
CAI Global Eq Broad Style	(0.83%)		0.08%		4.53%		28.49%		17.85%	



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.

	12/2015-									
Total International Equity	3/2016 0.28%		2015 (0.41%)		(3.63%)		2013 26.26%		2012 18.88%	
MSCI EAFE Index	(3.01%)		(0.81%)		(4.90%)		22.78%		17.32%	
Brandes Investment Partners MSCI EAFE Index CAI Non-U.S. Eq. Style	1.11% (3.01%) (2.46%)	6 67	(1.25%) (0.81%) 0.72%	68 64	(4.45%) (4.90%) (4.12%)	53 60	29.45% 22.78% 23.32%	8 52	11.97% 17.32% 18.99%	96 69
William Blair & Company MSCI ACWI ex-US Index CAI Non-U.S. Eq. Style	(2.21%) (0.26%) (2.46%)	46 19	0.18% ( <mark>5.25%)</mark> 0.72%	55 92	(1.77%) (3.44%) (4.12%)	19 42	21.92% 15.78% 23.32%	58 87	23.79% 17.39% 18.99%	9 69
Dimensional Fund Advisors Inc. Blended Benchmark CAI Int'l Small Cap Style	(0.81%) (0.60%) (0.89%)	46 41	3.99% 9.59% 9.90%	85 51	(4.99%) (4.95%) (3.94%)	58 58	32.60% 29.30% 31.08%	27 64	22.79% 20.00% 23.64%	65 79
Total Fixed Income Barclays Capital Aggregate	<b>4.37%</b> 3.03%		<b>(2.49%)</b> 0.55%		<b>4.00%</b> 5.97%		<b>(0.53%)</b> (2.02%)		<b>8.82%</b> 4.21%	
BlackRock Intermediate Agg Barclays Capital Int Aggregate CAI Intermediate F-I Styl	2.33% 2.31% 2.34%	54 57	1.31% 1.21% 1.28%	44 66	4.37% 4.12% 3.42%	9 13	(0.93%) (1.02%) (0.49%)	67 74	3.68% 3.56% 4.89%	86 87
Reams Asset Management Barclays Capital Aggregate CAI FI Core Plus Style	4.25% 3.03% 2.90%	3 38	0.38% 0.55% 0.30%	48 37	4.09% 5.97% 6.16%	97 60	(1.08%) (2.02%) (0.71%)	75 96	7.94% 4.21% 8.29%	61 100
Loomis, Sayles & Company, L.P. Barclays Capital Aggregate CAI FI Core Plus Style	4.20% 3.03% 2.90%	3 38	( <mark>6.10%)</mark> 0.55% 0.30%	100 37	5.94% 5.97% 6.16%	61 60	2.41% (2.02%) (0.71%)	4 96	15.47% 4.21% 8.29%	1 100
Wellington Management Company CG WGBI Index CAI Glbl Fixed Inc Style	7.33% 7.09% 5.73%	14 19	(3.20%) (3.57%) (3.31%)	44 57	(0.55%) (0.48%) 1.30%	92 86	(5.38%) (4.00%) (3.44%)	95 65	3.21% 1.65% 5.31%	77 95
Total Private Equity Abbott Capital Management 2010 Abbott Capital Management 2011 Abbott Capital Management 2012 Abbott Capital Management 2013 Abbott Capital Management 2014 Abbott Capital Management 2015	(0.53%) 0.00% 0.00% 0.00% 0.00% 0.00% 0.00%		12.34% 12.32% 10.12% 2.45% 2.23% 0.39%		15.40% 12.36% 9.17% 4.97% (2.17%)		8.66% 7.33% 1.20% (2.50%)		3.44% (1.66%) (5.63%) - -	
Mesirow V Mesirow VI NB Secondary Opp Fund III Private Advisors	(1.39%) (0.93%) 0.00% 0.00%		19.41% (3.99%) 33.37%		21.07% 2.22% 19.77%		14.22%		6.65%	
Russell 3000 (1 Qtr in Arrears) + 3% <b>Absolute Return</b>	7.02% <b>0.66%</b>		2.53% <b>4.92%</b>		21.19% -		25.11% -		33.90% -	
Allianz SA 1000 T-Bills + 10% Absolute Rtn FoFs	2.41% 2.48% (1.93%)	1	9.76% 10.05% (0.33%)	1 1	- 10.03% 3.78%	1	- 10.07% 8.92%	34	- 10.11% 6.42%	9
Newton 1-month LIBOR + 4% Absolute Rtn FoFs	3.61% 1.09% (1.93%)	1 2	1.50% 4.19% (0.33%)	29 8	- 4.16% 3.78%	39	- 4.19% 8.92%	89	- 4.24% 6.42%	79
UBS A & Q 1-month LIBOR + 4% Absolute Rtn FoFs	(1.76%) 1.09% (1.93%)	40 2	4.09% 4.19% (0.33%)	9 8	- 4.16% 3.78%	39	- 4.19% 8.92%	89	- 4.24% 6.42%	79
Total Real Estate	3.67%		13.44%		13.87%		13.58%		9.22%	
Real Estate Blended Benchmark (1) Total Real Estate DB	3.67% 3.21% 2.42%	13 23	13.44% 13.82% 13.60%	50 50	13.87% 11.26% 12.59%	44 62	13.58% 10.99% 12.08%	41 60	9.22% 11.00% 10.51%	59 47
Total Fund Total Fund Reference Index*	<b>1.95%</b> 0.95%		<b>0.74%</b> 1.21%		<b>5.31%</b> 6.00%		<b>19.59%</b> 18.20%		<b>14.10%</b> 12.90%	

<sup>(1)</sup> 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.



<sup>\*</sup> Current Quarter Target = 28.0% Russell 3000 Index, 28.0% Barclays Aggregate Index, 20.0% MSCI EAFE, 10.0% MSCI ACWI, 7.0% NFI-ODCE (1 Qtr in Arrears), 5.0% 3-month Treasury Bill+3.0% and 2.0% Russell 3000 (1 Qtr in Arrears)+3.0%.

## **Investment Manager Returns**

The table below details the rates of return for the Fund's investment managers over various time periods ended March 31, 2016. 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, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5	Since Inception
Net of Fee Returns	Quarter	r ear	rears	Years	inception
Total Domestic Equity Russell 3000 Index Northern Trust Global S&P 500 Index Cornerstone Investment Partners S&P 500 Index Polen Capital Management S&P 500 Index Earnest Partners LLC Russell MidCap Index Dimensional Fund Advisors Inc. Russell 2000 Value Index CastleArk Management Russell 2000 Growth Index	0.88% 0.97% 1.37% 1.35% 1.21% 1.35% 0.04% 1.35% 0.82% 2.24% 2.40% 1.70% (5.65%) (4.68%)	(0.78%) (0.34%) 1.89% 1.78% (7.80%) 1.78% 11.03% 1.78% (2.11%) (4.04%) (6.61%) (7.72%) (13.85%) (11.84%)	10.58% 11.15% 11.89% 11.82% 4.71% 11.82% 15.94% 11.82% 9.48% 10.45% 7.70% 5.73%	9.35% 11.01% 11.64% 11.58% - 11.58% 9.02% 10.30% 8.09% 6.67% - 7.70%	5.87% (7/98) 5.71% (7/98) 9.08% (9/94) 9.11% (9/94) 9.54% (6/12) 14.95% (6/12) 14.95% (7/12) 14.07% (7/12) 8.46% (5/05) 9.05% (5/05) 11.33% (11/96) 9.03% (11/96) 4.54% (9/13)
Total Global Equity MSCI World Index MFS Investment Management MSCI ACWI Idx	2.99% ( <mark>0.35%)</mark> 3.76% 0.38%	(1.33%) (3.45%) 0.64% (3.81%)	6.30% 6.82% 7.59% 6.10%	4.72% 6.51% - 5.80%	5.95% (4/10) 7.64% (4/10) 9.54% (12/12) 8.26% (12/12)
Total International Equity MSCI EAFE Index Brandes Investment Partners MSCI EAFE Index William Blair & Company MSCI ACWI ex-US Index Dimensional Fund Advisors Inc. Blended Benchmark	0.16% (3.01%) 1.01% (3.01%) (2.31%) (0.26%) (0.81%) (0.60%)	(5.57%) (8.27%) (6.36%) (8.27%) (7.00%) (8.78%) (1.46%) 3.20%	4.30% 2.23% 5.13% 2.23% 3.23% 0.76% 6.33% 7.29%	3.89% 2.29% 3.19% 2.29% 4.56% 0.76% 4.40% 5.58%	6.04% (5/96) 3.98% (5/96) 7.29% (2/98) 4.01% (2/98) 6.82% (12/03) 6.31% (12/03) 3.50% (5/06) 2.00% (5/06)
Total Fixed Income Barclays Capital Aggregate BlackRock Intermediate Agg Barclays Capital Int Aggregate Reams Asset Management Loomis, Sayles & Company, L.P. Barclays Capital Aggregate Wellington Management Company CG WGBI Index	4.32% 3.03% 2.32% 2.31% 4.22% 4.16% 3.03% 7.27% 7.09%	1.21% 1.96% 2.25% 2.20% 3.05% (2.74%) 1.96% 6.05% 5.92%	1.43% 2.50% 2.21% 2.14% 2.28% 1.04% 2.50% 0.27% 0.49%	3.71% 3.78% 3.21% 3.11% 4.25% 4.84% 3.78% 1.32% 1.16%	6.94% (9/94) 5.85% (9/94) 5.09% (7/99) 5.02% (7/99) 5.79% (1/01) 8.32% (9/94) 5.85% (9/94) 1.55% (1/11) 1.24% (1/11)
Total Private Equity Abbott Capital Management 2010 Abbott Capital Management 2011 Abbott Capital Management 2012 Abbott Capital Management 2013 Abbott Capital Management 2014 Abbott Capital Management 2015 Mesirow V Mesirow IV NB Secondary Opp Fund III Private Advisors Russell 3000 (1 Qtr in Arrears) + 3%	(0.53%) 0.00% 0.00% 0.00% 0.00% 0.00% (1.39%) (0.93%) 0.00% 7.02%	11.20% 12.32% 10.12% 2.45% 2.23% 0.39% 11.25% 17.75% (4.88%) 22.38% (16.74%) 3.53%	11.90% 10.65% 6.75% 1.59% - - - 17.65% - - - 18.10%	7.32% (1.60%) 	5.71% (6/10) (15.88%) (6/10) (13.52%) (6/11) (1.07%) (7/12) (1.88%) (5/13) (7.01%) (4/14) 11.25% (4/15) 11.34% (6/10) (1.05%) (7/13) 6.13% (12/13) (16.74%) (4/15) 15.74% (9/10)
Absolute Return Allianz SA 1000 T-Bills + 10% Newton 1-month LIBOR + 4% UBS A & Q 1-month LIBOR + 4%	0.66% 2.41% 2.48% 3.61% 1.09% (1.76%) 1.09%	2.49% 7.92% 10.12% 2.02% 4.26% (0.20%) 4.26%	- 10.07% - 4.20% - 4.20%	10.08% 4.21% 4.21%	4.91% (6/14) 9.95% (6/14) 10.08% (6/14) 3.84% (8/14) 4.22% (8/14) 1.69% (12/14) 4.24% (12/14)
Total Real Estate Real Estate Blended Benchmark (1)	3.61% 3.61% 3.21%	14.13% 14.13% 14.18%	13.59% 13.59% 12.26%	12.78% 12.78% 12.31%	5.25% (7/86) 5.25% (7/86)
Total Fund Total Fund Reference Index*	1.88% 0.95%	0.32% (0.34%)	6.76% 6.66%	6.62% 7.02%	9.14% (1/79)

<sup>(1)</sup> 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.



<sup>\*</sup> Current Quarter Target = 28.0% Russell 3000 Index, 28.0% Barclays Aggregate Index, 20.0% MSCI EAFE, 10.0% MSCI ACWI, 7.0% NFI-ODCE (1 Qtr in Arrears), 5.0% 3-month Treasury Bill+3.0% and 2.0% Russell 3000 (1 Qtr in Arrears)+3.0%.

## **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.

	12/2015-				
	3/2016	2015	2014	2013	2012
t of Fee Returns					
Total Domestic Equity	0.88%	(0.39%)	11.28%	33.44%	15.82%
Russell 3000 Index	0.97%	0.48%	12.56%	33.55%	16.42%
Northern Trust Global	1.37%	1.47%	13.75%	32.43%	16.04%
S&P 500 Index	1.35%	1.38%	13.69%	32.39%	16.00%
BlackRock R1000 Alpha Tilts Russell 1000 Index	- 1.17%	0.81% 0.92%	13.83% 13.24%	32.90% 33.11%	19.74% 16.42%
Cornerstone Investment Partners	1.17%	(13.89%)	7.89%	34.35%	10.42%
S&P 500 Index	1.35%	1.38%	13.69%	32.39%	16.00%
Polen Capital Management	0.04%	14.94%	17.02%	22.84%	10.00 /6
S&P 500 Index	1.35%	1.38%	13.69%	32.39%	16.00%
Earnest Partners LLC	0.82%	0.71%	9.79%	30.60%	15.87%
Russell MidCap Index	2.24%	(2.44%)	13.22%	34.76%	17.28%
Dimensional Fund Advisors Inc.	2.40%	(6.57%)	4.47%	41.95%	21.77%
Russell 2000 Value Index	1.70%	(7.47%)	4.22%	34.52%	18.05%
CastleArk Management	(5.65%)	(5.54%)	5.45%	=	-
Russell 2000 Growth Index	(4.68%)	(1.38%)	5.60%	43.30%	14.59%
Total Global Equity	2.99%	(2.44%)	1.95%	24.37%	14.88%
MSCI The World Index	(0.35%)	(0.87%)	4.94%	26.68%	15.83%
MFS Investment Management	3.76%	(0.89%)	5.17%	22.47%	-
MSCI ACWI	0.38%	(1.84%)	4.71%	23.44%	16.80%
Total International Equity	0.16%	(0.89%)	(4.09%)	25.66%	18.32%
MSCI EAFE Index	(3.01%)	(0.81%)	(4.90%)	22.78%	17.32%
Brandes Investment Partners	1.01%	(1.66%)	(4.84%)	28.93%	11.51%
MSCI EAFE Index	(3.01%)	(0.81%)	(4.90%)	22.78%	17.32%
William Blair & Company	(2.31%)	(0.22%)	(2.17%)	21.36%	23.38%
MSCI ACWI ex-US Index	(0.26%)	(5.25%)	(3.44%)	15.78%	17.39%
Dimensional Fund Advisors Inc.	(0.81%)	3.99%	(4.99%)	32.39%	22.26%
Blended Benchmark	(0.60%)	9.59%	(4.95%)	29.30%	20.00%
Total Fixed Income	4.32%	(2.63%)	3.85%	(0.69%)	8.65%
Barclays Capital Aggregate	3.03%	0.55%	5.97%	(2.02%)	4.21%
BlackRock Intermediate Agg	2.32%	1.28%	4.34%	(0.96%)	3.65%
Barclays Capital Int Aggregate Reams Asset Management	2.31% 4.22%	1.21% 0.23%	4.12% 3.94%	(1.02%) (1.23%)	3.56% 7.78%
Loomis, Sayles & Company, L.P.	4.16%	(6.20%)	5.82%	2.29%	15.33%
Barclays Capital Aggregate	3.03%	0.55%	5.97%	(2.02%)	4.21%
Wellington Management Company	7.27%	(3.43%)	(0.78%)	(5.61%)	2.93%
CG WGBI Index	7.09%	(3.57%)	(0.48%)	(4.00%)	1.65%
Total Private Equity	(0.53%)	12.34%	15.40%	8.66%	3.44%
Abbott Capital Management 2010	0.00%	12.32%	12.36%	7.33%	(1.66%)
Abbott Capital Management 2011	0.00%	10.12%	9.17%	1.20%	(5.63%)
Abbott Capital Management 2012	0.00%	2.45%	4.97%	(2.50%)	-
Abbott Capital Management 2013	0.00%	2.23%	(2.17%)	-	-
Abbott Capital Management 2014	0.00%	0.39%	` - '	=	-
Abbott Capital Management 2015	0.00%	-	-	-	-
Mesirow V	(1.39%)	19.41%	21.07%	14.22%	6.65%
Mesirow VI	(0.93%)	(3.99%)	2.22%	=	-
NB Secondary Opp Fund III	0.00%	33.37%	19.77%	-	-
Private Advisors Russell 3000 (1 Qtr in Arrears) + 3%	0.00% 7.02%	2.53%	- 21.19%	- 25.11%	- 33.90%
,					
Absolute Return Allianz SA 1000	0.66% 2.41%	4.92%	-	<del>-</del> -	-
	2.41%	9.76%	10.020/		10.11%
T-Bills + 10% Newton	3.61%	10.05% 1.50%	10.03%	10.07%	10.1170
1-month LIBOR + 4%	1.09%	4.19%	4.16%	- 4.19%	4.24%
UBS A & Q	(1.76%)	4.09%	-	-	-
1-month LIBOR + 4%	1.09%	4.19%	4.16%	4.19%	4.24%
Total Real Estate	3.61%	13.15%	13.54%	13.15%	8.83%
Real Estate	3.61%	13.15%	13.54%	13.15%	8.83%
Blended Benchmark (1)	3.21%	13.82%	11.26%	10.99%	11.00%
Total Fund	1.88%	0.46%	5.02%	19.26%	13.78%

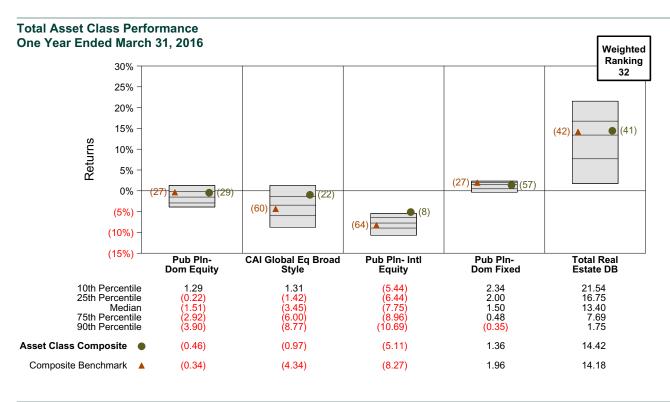
<sup>(1)</sup> Blended Benchmark consists of NCREIF (NPI) through 6/30/06, NCREIF (NPI 1 Qtr Arrears) through 12/31/13 and NFI-ODCE (1 Qtr Arrears) thereafter.

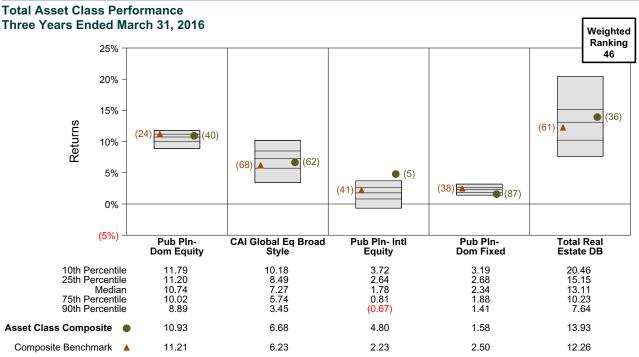


<sup>\*</sup> Current Quarter Target = 28.0% Russell 3000 Index, 28.0% Barclays Aggregate Index, 20.0% MSCI EAFE, 10.0% MSCI ACWI, 7.0% NFI-ODCE (1 Qtr in Arrears), 5.0% 3-month Treasury Bill+3.0% and 2.0% Russell 3000 (1 Qtr in Arrears)+3.0%.

## **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.



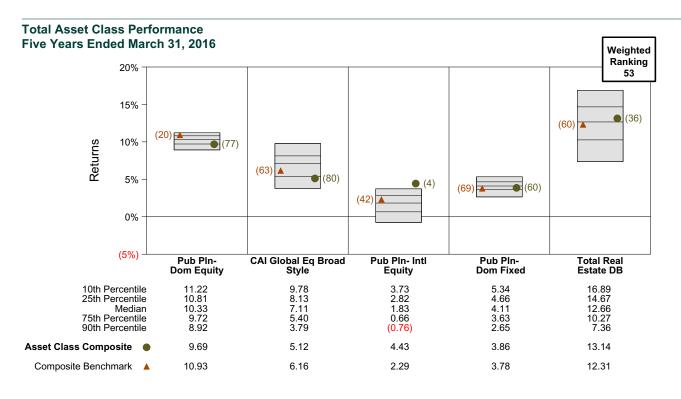


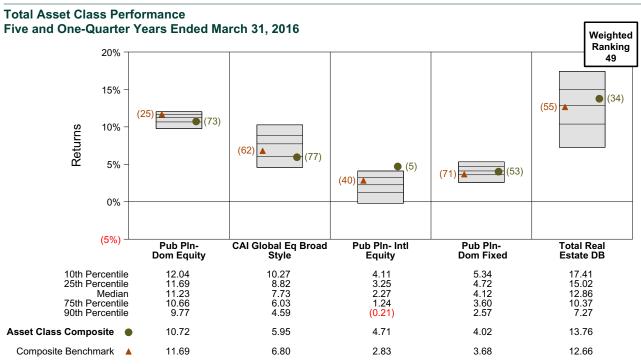
<sup>\*</sup> Current Quarter Target = 28.0% Russell 3000 Index, 28.0% Barclays Aggregate Index, 20.0% MSCI EAFE, 10.0% MSCI ACWI, 7.0% NFI-ODCE (1 Qtr in Arrears), 5.0% 3-month Treasury Bill+3.0% and 2.0% Russell 3000 (1 Qtr in Arrears)+3.0%.



## **Asset Class Rankings**

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# **Research and Educational Programs**

The Callan Investments Institute provides research that updates clients on the latest industry trends while helping them learn through carefully structured educational programs. Visit www.callan.com/research to see all of our publications, or for more information contact Anna West at 415.974.5060 / institute@callan.com.

### Recent Research



**2016 DC Survey & Key Findings** Callan's 2016 DC Trends Survey highlights plan sponsors' key themes from 2015 and expectations for 2016; the Key Findings summarize the Survey.

**Periodic Table & Periodic Table Collection** Depicts annual investment returns for 10 major asset classes, ranked from best to worst. The Collection includes 10 additional variations.

**Spotlight: Six Key Themes** Callan reflects on some of the ongoing trends within institutional investing and considers how they may develop in the coming year.

**Inside Callan's Database, 4th Quarter 2015** This report graphs performance and risk data from Callan's proprietary database alongside relevant market indices.

Capital Market Review, 4th Quarter 2015 Insights on the economy and recent performance in equities, fixed income, alternatives, real estate, and more.

Market Pulse Flipbook, 4th Quarter 2015 A quarterly reference guide covering investment and fund sponsor trends in the U.S. economy, the capital markets, and defined contribution.

**October Regional Workshop Summary** We reviewed real assets and the implementation implications of building out a robust real assets allocation in portfolios.

**Capital Market Projections** This charticle summarizes key figures from Callan's 2016 capital market projections.

**Global Equity Benchmark Review** This annual report examines FTSE, MSCI, Russell, and S&P indices alongside Callan Active Manager Style Groups.

**Hedge Fund Monitor, 4th Quarter 2015** Our cover story, "David versus Goliath: Sizing Up the Odds," compares the respective advantages and challenges of smaller and larger hedge funds.

The Renaissance of Stable Value In this paper, we seek to answer questions about stable value funds, and how they have evolved since the financial crisis.



Real Assets Reporter, Winter/Spring 2016 In this issue, we look at implementing diversified real asset portfolios, focusing on a process that helps evaluate financial and operational risks.

**U.S. Equity Benchmark Review** This annual report compares CRSP, Russell, and S&P index metrics alongside Callan Active Manager Style Groups.

**DC Observer, 4th Quarter 2015** Cover story: In-Plan Annuities: The Stuff That Dreams Are Made Of?

The Costs of Closing: Nuclear Decommissioning Trusts In this video, Julia Moriarty discusses hedging costs, the impact of license extension, and more.

**Private Markets Trends, Winter 2016** Gary Robertson summarizes the market environment, recent events, performance, and other issues involving private equity.

#### **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/

Our next **Regional Workshop**, June 28 in Atlanta and June 29 in San Francisco, will consist of two separate one-hour presentations given by our specialists. This year, we look at the impact the Pension Protection Act has had on defined benefit and defined contribution retirement plans a decade after its enactment, and look ahead to the next 10 years.

Save the date for our fall **Regional Workshop**, October 25 in New York and October 26 in Chicago, and our **National Conference**, January 23–25, 2017, at the Palace Hotel in San Francisco.

For more information about events, please contact Barb Gerraty: 415.974.5060 / institute@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 session is:

### Introduction to Investments

San Francisco, CA, July 19–20, 2016 Chicago, IL, October 18–19, 2016

This session 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

## **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

3,300

Total attendees of the "Callan College" since 1994

1980

Year the Callan Investments 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
13D Management
1607 Capital Partners, LLC
Aberdeen Asset Management PLC
Acadian Asset Management LLC
AEGON USA Investment Management
Affiliated Managers Group, Inc.
AllianceBernstein
Allianz Global Investors
Allianz Life Insurance Company of North America
AlphaOne Investment Services
American Century Investment Management
Amundi Smith Breeden LLC
Analytic Investors
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
Babson Capital Management
Baillie Gifford Overseas Limited
Baird Advisors
Bank of America
Baring Asset Management
Baron Capital Management, Inc.
Barrow, Hanley, Mewhinney & Strauss, LLC
BlackRock
BMO Asset Management, Corp.
BNP Paribas Investment Partners
BNY Mellon Asset Management
Boston Partners
Brandes Investment Partners, L.P.
Brandywine Global Investment Management, LLC

Manager Name
Brown Brothers Harriman & Company
Cambiar Investors, LLC
Capital Group
CastleArk Management, LLC
Causeway Capital Management
Charles Schwab Investment Management
Chartwell Investment Partners
ClearBridge Investments, LLC
Cohen & Steers Capital Management, Inc.
Columbia Management Investment Advisers, LLC
Columbus Circle Investors
Corbin Capital Partners, L.P.
Cornerstone Capital Management
Cramer Rosenthal McGlynn, LLC
Crawford Investment Counsel, Inc.
Credit Suisse Asset Management
Crestline Investors, Inc.
DE Shaw Investment Management, LLC
Delaware Investments
DePrince, Race & Zollo, Inc.
Deutsche Asset Management
Diamond Hill Investments
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
Fiera Capital Global Asset Management
First Eagle Investment Management, LLC
First Hawaiian Bank
Fisher Investments
Fort Washington Investment Advisors, Inc.
Franklin Templeton Institutional
Fred Alger Management, Inc.

Manager Name

Manager Name Manager Name Fuller & Thaler Asset Management, Inc. Opus Capital Management Inc. Pacific Investment Management Company GAM (USA) Inc. Parametric Portfolio Associates **GE Asset Management** GMO Peregrine Capital Management, Inc. Goldman Sachs Asset Management **PGIM Grand-Jean Capital Management** PineBridge Investments Pinnacle Asset Management L.P. Guggenheim Investments Guggenheim Real Estate LLC **Pioneer Investments** PNC Capital Advisors, LLC **GW&K Investment Management** Harbor Capital Group Trust Polen Capital Management Hartford Funds Principal Global Investors Hartford Investment Management Co. Private Advisors, LLC Henderson Global Investors Putnam Investments, LLC Hotchkis & Wiley Capital Management, LLC QMA (Quantitative Management Associates) **HSBC Global Asset Management RBC Global Asset Management** Income Research + Management, Inc. Regions Financial Corporation Insight Investment Management Limited RidgeWorth Capital Management, Inc. Institutional Capital LLC Rockefeller & Co., Inc. INTECH Investment Management, LLC Rothschild Asset Management, Inc. Invesco Russell Investments Investec Asset Management Santander Global Facilities Janus Capital Management, LLC Schroder Investment Management North America Inc. Jensen Investment Management Scout Investments J.P. Morgan Asset Management **SEI Investments** KeyCorp Seminole Advisory Services, LLC Lazard Asset Management Smith, Graham & Co. Investment Advisors, L.P. Legal & General Investment Management America Smith Group Asset Management **Lincoln National Corporation** Standard Life Investments Limited LMCG Investments, LLC Standish **Longview Partners** State Street Global Advisors Loomis, Sayles & Company, L.P. Stone Harbor Investment Partners, L.P. Lord Abbett & Company Systematic Financial Management Los Angeles Capital Management T. Rowe Price Associates. Inc. LSV Asset Management Taplin, Canida & Habacht MacKay Shields LLC The Boston Company Asset Management, LLC Man Investments Inc. The Hartford Manulife Asset Management The London Company Martin Currie Inc. The TCW Group, Inc. Mellon Capital Management Tri-Star Trust Bank MFS Investment Management **UBS Asset Management** MidFirst Bank Van Eck Global Mondrian Investment Partners Limited Versus Capital Group Montag & Caldwell, LLC Victory Capital Management Inc. Morgan Stanley Investment Management Vontobel Asset Management, Inc. Mountain Lake Investment Management LLC Voya Investment Management (fka ING) MUFG Union Bank, N.A. Waddell & Reed Asset Management Group Neuberger Berman WCM Investment Management **Newton Capital Management** WEDGE Capital Management Nicholas Investment Partners Wellington Management Company, LLP Nikko Asset Management Co., Ltd. Wells Capital Management Northern Trust Asset Management Western Asset Management Company Nuveen Investments, Inc. William Blair & Company

**OFI Global Asset Management** Old Mutual Asset Management