

September 30, 2017



## **Mendocino County Employees' Retirement Association**

**Investment Measurement Service  
Quarterly Review**

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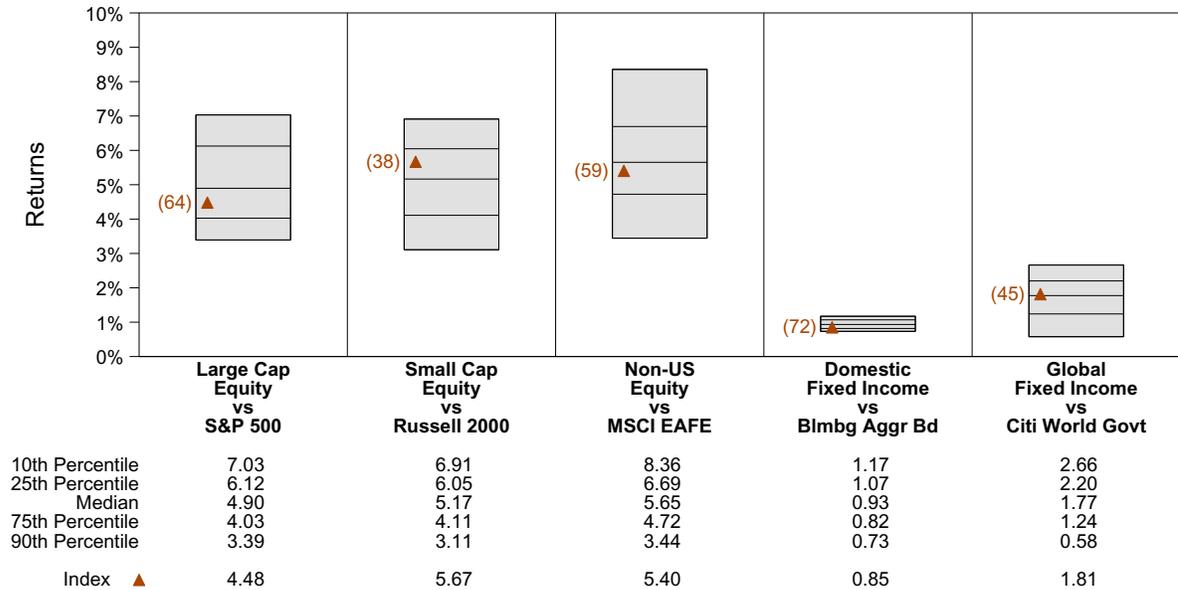
# Market Overview

## Active Management vs Index Returns

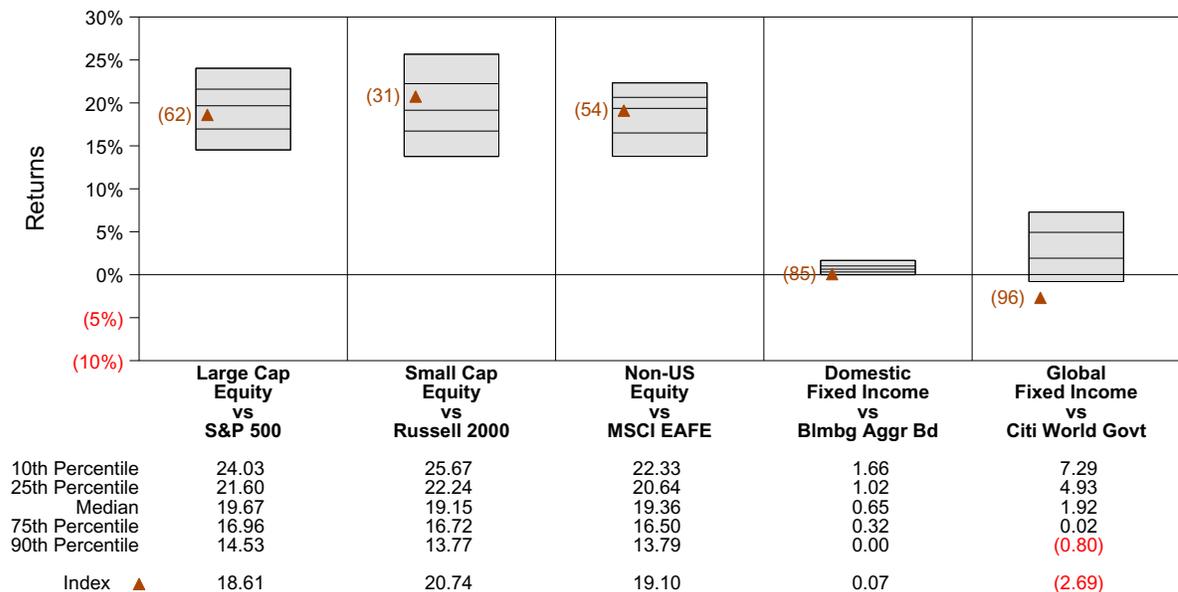
### Market Overview

The charts below illustrate the range of returns across managers in Callan's Mutual Fund database over the most recent one quarter and one year time periods. The database is broken down by asset class to illustrate the difference in returns across those asset classes. An appropriate index is also shown for each asset class for comparison purposes. As an example, the first bar in the upper chart illustrates the range of returns for domestic equity managers over the last quarter. The triangle represents the S&P 500 return. The number next to the triangle represents the ranking of the S&P 500 in the Large Cap Equity manager database.

### Range of Mutual Fund Returns by Asset Class One Quarter Ended September 30, 2017



### Range of Mutual Fund Returns by Asset Class One Year Ended September 30, 2017

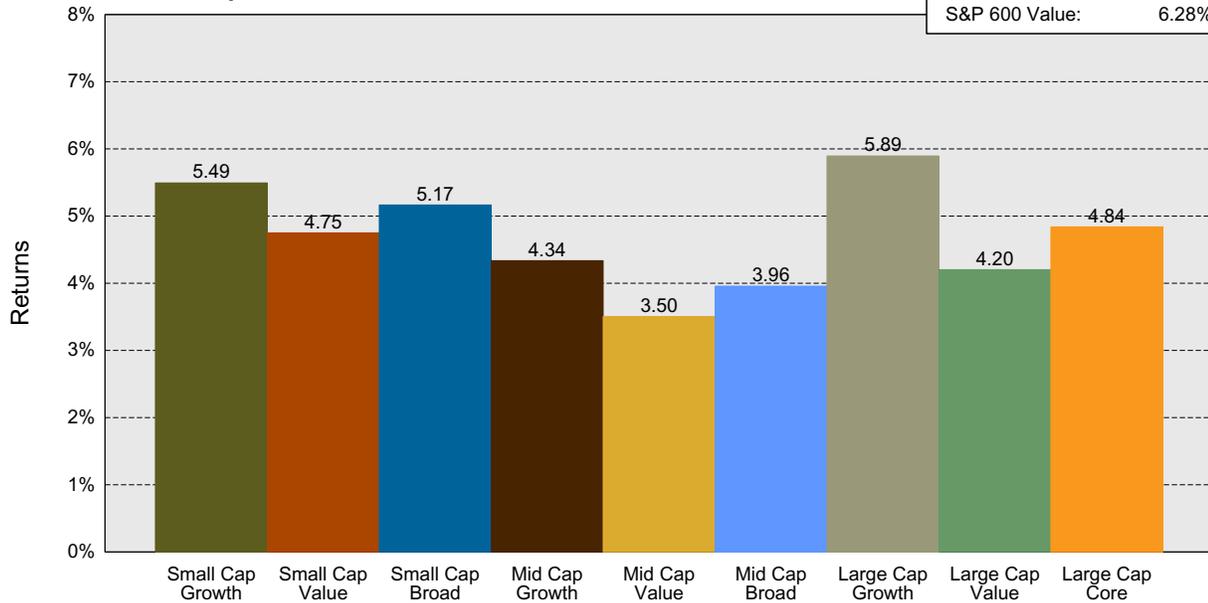


## Domestic Equity Active Management Overview

Several U.S. stock market indices hit record highs going into quarter-end as investors shrugged off bad news and pinned their hopes on meaningful tax reform. Small caps outperformed large caps across styles for the quarter, but trail on a year-to-date basis. Growth outperformed value for the quarter and year-to-date, growth has outperformed value by more than 10 percentage points across the cap spectrum. Technology continued to fuel the growth indices' returns, especially in the large cap space. The "FAAMG" stocks have an average return of 31% year-to-date and have contributed 7.3% of the 20.7% year-to-date return for the Russell 1000 Growth Index. Along with Technology (+8.6%), Energy (+6.8%) and Telecommunications (+6.8%) were strong sectors. Consumer Staples (-1.3%) was the sole sector to deliver a negative result for the third quarter.

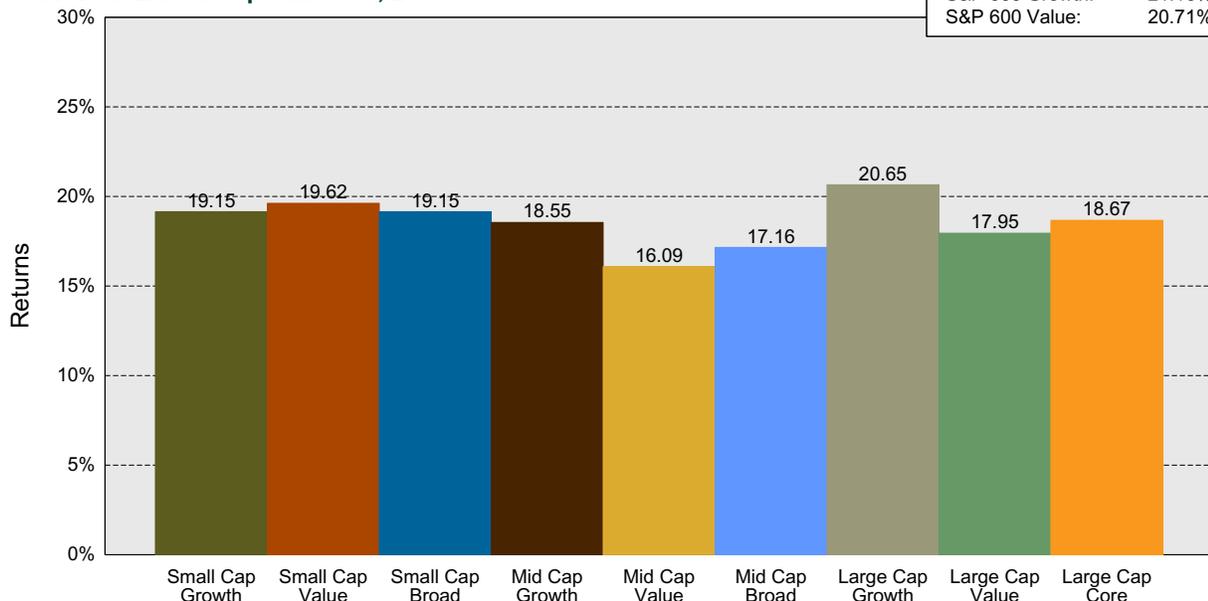
S&P 500:	4.48%
S&P 500 Growth:	5.29%
S&P 500 Value:	3.48%
S&P Mid Cap:	3.22%
S&P 600:	5.96%
S&P 600 Growth:	5.65%
S&P 600 Value:	6.28%

### Mutual Fund Style Group Median Returns for Quarter Ended September 30, 2017



S&P 500:	18.61%
S&P 500 Growth:	19.90%
S&P 500 Value:	16.47%
S&P Mid Cap:	17.52%
S&P 600:	21.05%
S&P 600 Growth:	21.16%
S&P 600 Value:	20.71%

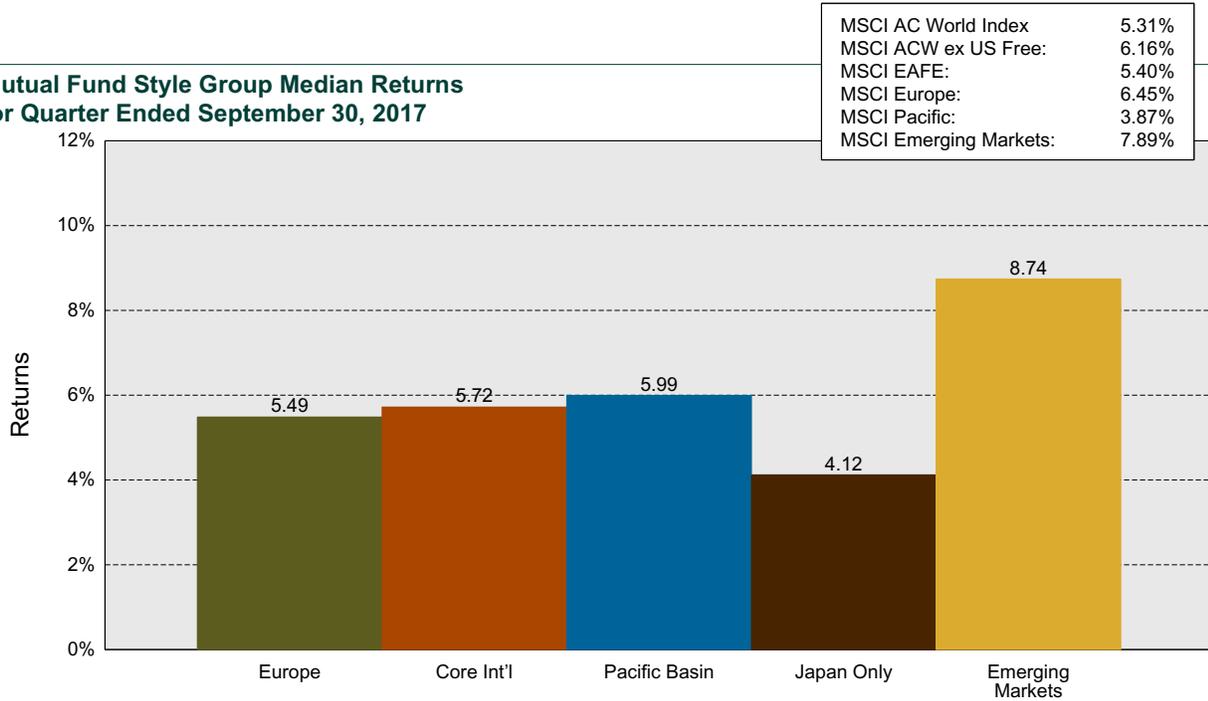
### Mutual Fund Style Group Median Returns for One Year Ended September 30, 2017



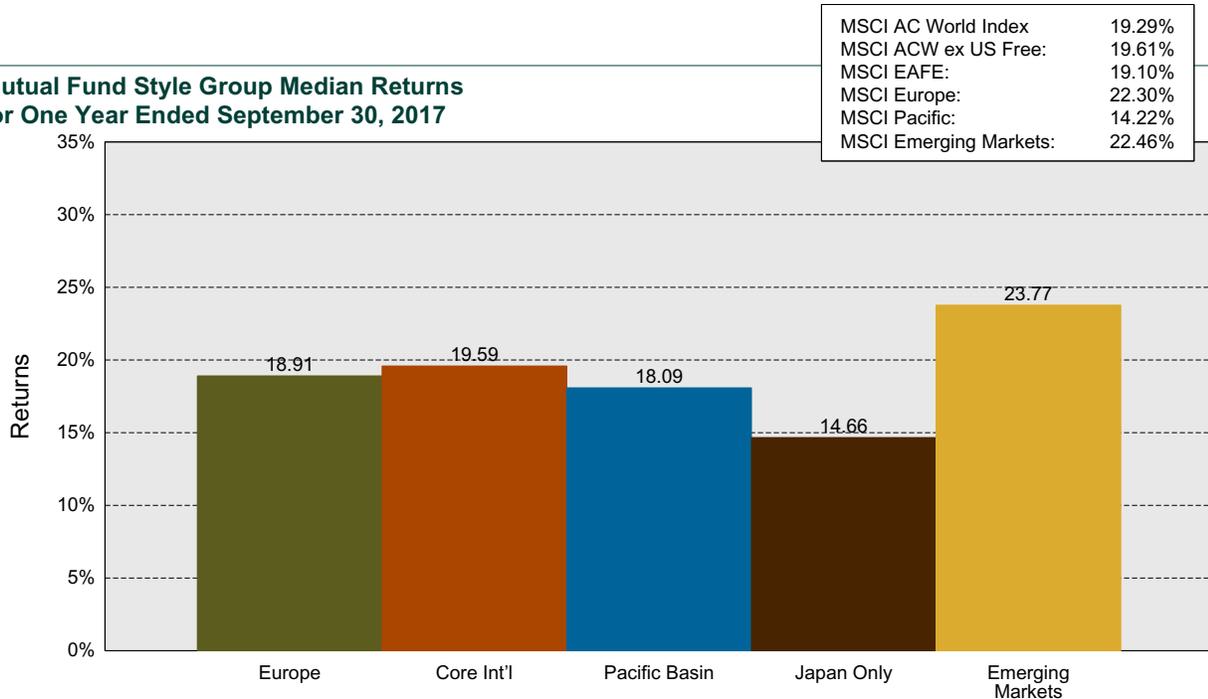
## International Equity Active Management Overview

The MSCI EAFE Index outperformed the U.S. market in the third quarter. Gains were broad-based with several countries (Austria, Portugal, Italy, and Norway) posting double-digit returns. The U.S. dollar continued to weaken, down 3-4% versus the euro, Canadian dollar, and the U.K. pound. Within the MSCI EAFE, Europe ex-U.K. was up 6.9%, the U.K. gained 5.2%, and Japan returned +4.0%. From a sector perspective, Energy and Materials posted double-digit gains while Health Care and Consumer Staples were laggards with results of less than 1%. Emerging markets modestly outperformed developed and the MSCI EM Index is up an impressive 28% year-to-date. Emerging Asia continued to be the key driver (as was the case in the first and second quarters) with China (+14.7%) taking the lead. The only emerging markets country to deliver a negative return was Greece (-12.1%). Elsewhere, Russia and Brazil (+17.6% and +22.9%) both posted sharp gains as their economies improved, reversing second quarter declines. India, where second quarter growth did not meet expectations, posted a more muted return at +3.0%.

**Mutual Fund Style Group Median Returns  
for Quarter Ended September 30, 2017**



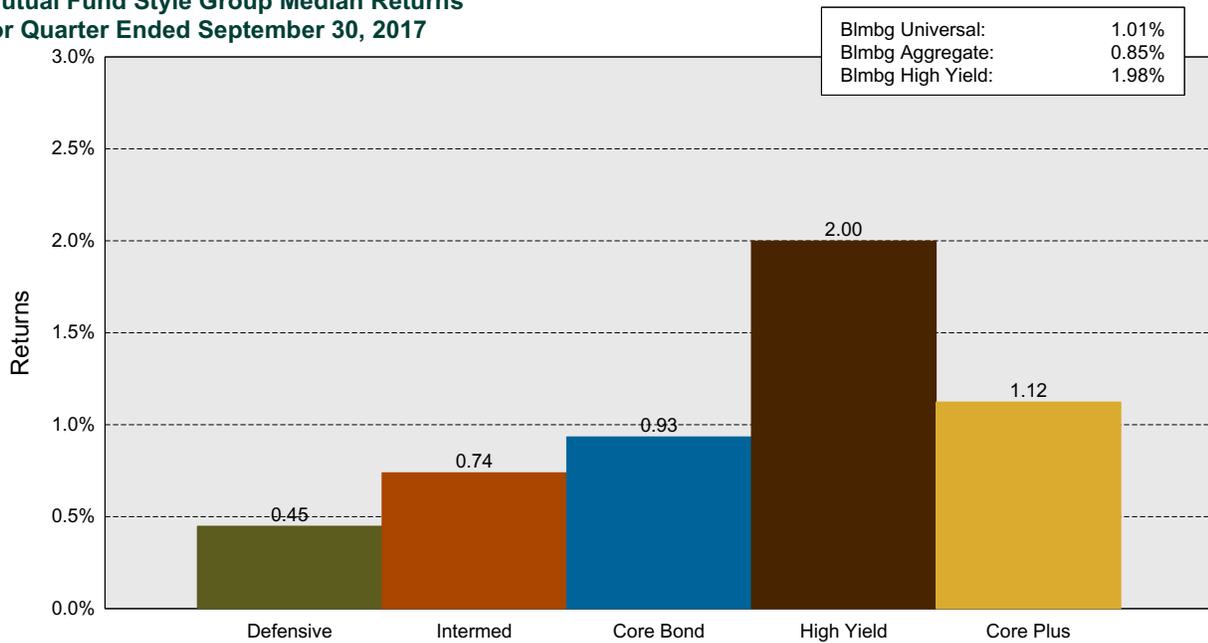
**Mutual Fund Style Group Median Returns  
for One Year Ended September 30, 2017**



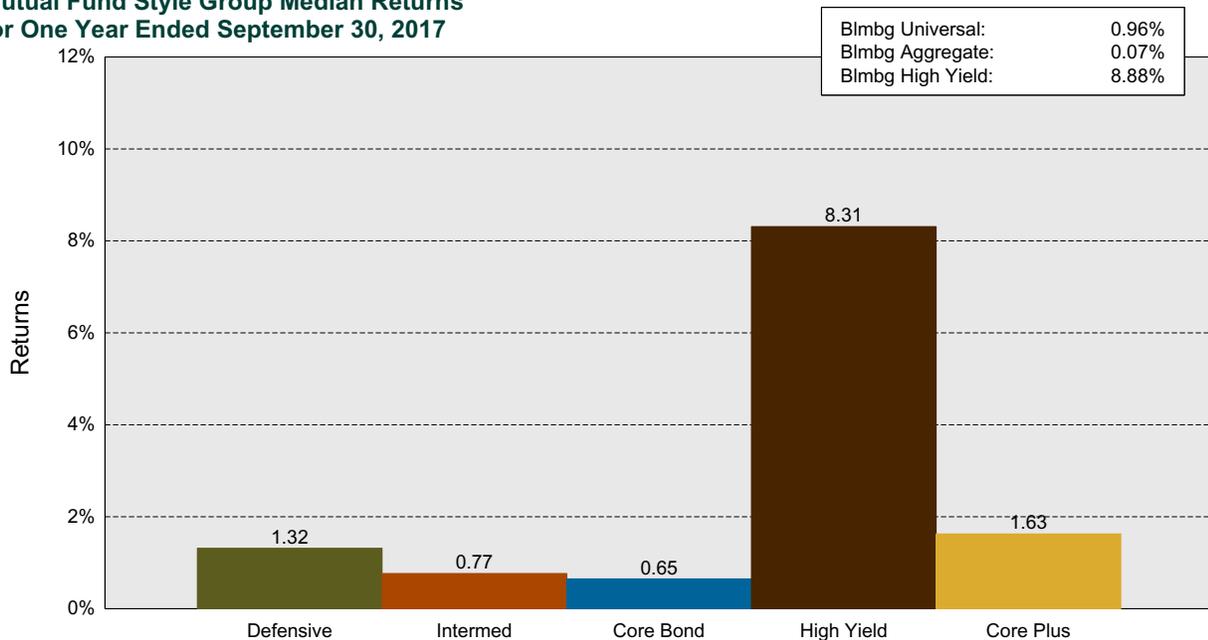
## Domestic Fixed Income Active Management Overview

Interest rates were range-bound during the third quarter. The yield on the 10-year U.S. Treasury closed the quarter at 2.33%, two basis points higher than at the end of the second quarter. The yield curve continued its flattening trend and the 2-year Treasury yield ended the quarter at 1.47%, its highest level since August 2008. The Bloomberg Barclays Aggregate U.S. Bond Index posted a +0.8% result with corporate bonds outperforming other investment grade sectors. TIPS regained some of their underperformance from the previous quarter. The Bloomberg Barclays U.S. TIPS Index rose 0.9% and the 10-year breakeven spread (the difference between nominal and real yields) rose to 1.84% as of quarter-end from 1.73% at the end of the second quarter.

**Mutual Fund Style Group Median Returns  
for Quarter Ended September 30, 2017**



**Mutual Fund Style Group Median Returns  
for One Year Ended September 30, 2017**





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## ASSET ALLOCATION AND PERFORMANCE

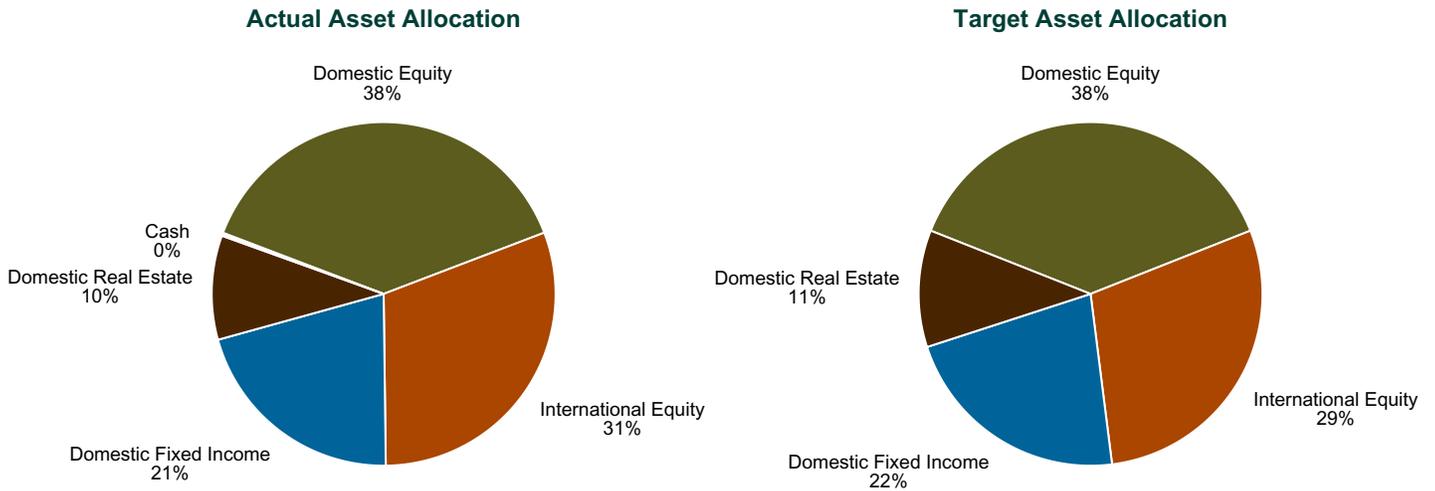
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### **Asset Allocation and Performance**

This section begins with an overview of the fund's asset allocation at the broad asset class level. This is followed by a top down performance attribution analysis which analyzes the fund's performance relative to the performance of the fund's policy target asset allocation. The fund's historical performance is then examined relative to funds with similar objectives. Performance of each asset class is then shown relative to the asset class performance of other funds. Finally, a summary is presented of the holdings of the fund's investment managers, and the returns of those managers over various recent periods.

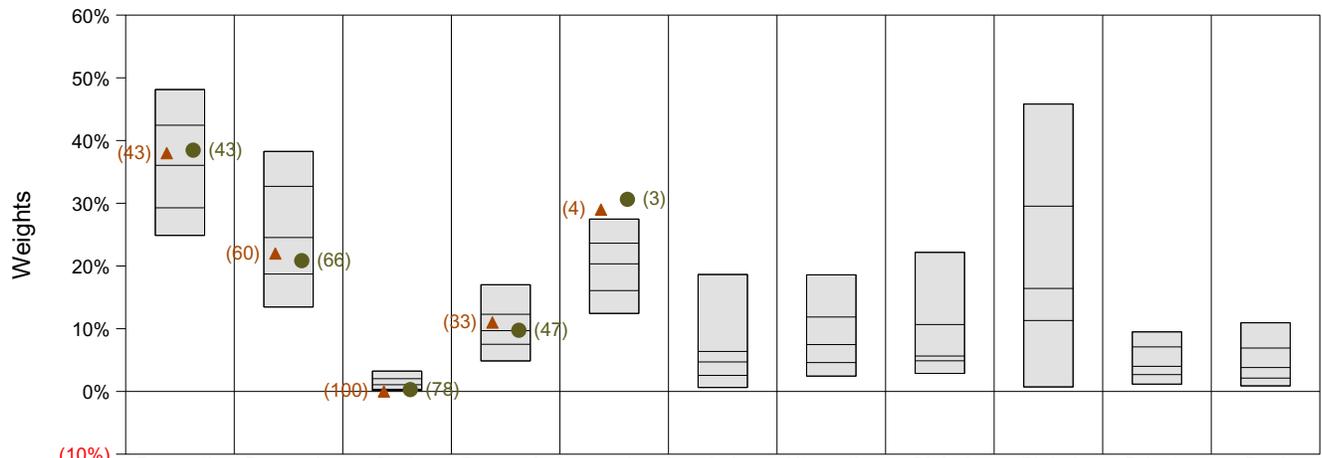
## Actual vs Target Asset Allocation As of September 30, 2017

The top left chart shows the Fund's asset allocation as of September 30, 2017. 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 Callan Public Fund Sponsor Database.



Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equity	193,680	38.5%	38.0%	0.5%	2,329
International Equity	154,244	30.6%	29.0%	1.6%	8,213
Domestic Fixed Income	105,008	20.9%	22.0%	(1.1%)	(5,774)
Domestic Real Estate	49,132	9.8%	11.0%	(1.2%)	(6,259)
Cash	1,492	0.3%	0.0%	0.3%	1,492
<b>Total</b>	<b>503,555</b>	<b>100.0%</b>	<b>100.0%</b>		

### Asset Class Weights vs Callan Public Fund Sponsor Database



	Domestic Equity	Domestic Fixed Income	Cash	Domestic Real Estate	International Equity	Intl Fixed-Inc	Alternative	Global Balanced	Global Equity Broad	Private Equity	Real Assets
10th Percentile	48.13	38.27	3.25	17.01	27.48	18.64	18.59	22.18	45.82	9.50	10.95
25th Percentile	42.44	32.70	2.03	12.30	23.63	6.38	11.87	10.67	29.54	7.10	6.92
Median	36.05	24.54	1.07	9.69	20.34	4.71	7.47	5.65	16.42	4.01	3.81
75th Percentile	29.28	18.72	0.35	7.52	16.08	2.56	4.60	4.89	11.31	2.69	2.13
90th Percentile	24.88	13.46	0.15	4.87	12.44	0.63	2.44	2.88	0.72	1.16	0.89
<b>Fund</b> ●	38.46	20.85	0.30	9.76	30.63	-	-	-	-	-	-
<b>Target</b> ▲	38.00	22.00	0.00	11.00	29.00	-	-	-	-	-	-
% Group Invested	98.64%	97.28%	73.47%	71.43%	97.28%	14.97%	47.37%	17.01%	12.24%	36.73%	23.81%

\* Current Quarter Target = 38.0% Russell 3000 Index, 29.0% MSCI ACWIxUS Gross, 22.0% Blmbg Aggregate and 11.0% NCREIF NFI-ODCE Eq Wt Net.

## Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2017, with the distribution as of June 30, 2017. 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

	September 30, 2017		Net New Inv.	Inv. Return	June 30, 2017	
	Market Value	Weight			Market Value	Weight
<b>Domestic Equities</b>	<b>\$193,680,104</b>	<b>38.46%</b>	<b>\$(2,000,000)</b>	<b>\$10,022,448</b>	<b>\$185,657,656</b>	<b>38.37%</b>
<b>Large Cap Equities</b>	<b>\$136,135,623</b>	<b>27.03%</b>	<b>\$(2,000,000)</b>	<b>\$6,940,131</b>	<b>\$131,195,492</b>	<b>27.12%</b>
Vanguard S&P 500 Index	33,527,895	6.66%	8,000,000	1,135,462	24,392,433	5.04%
Dodge & Cox Stock	17,093,978	3.39%	(5,000,000)	876,403	21,217,575	4.39%
Boston Partners	33,431,333	6.64%	0	1,497,651	31,933,682	6.60%
Harbor Cap Appreciation	35,464,805	7.04%	0	2,820,281	32,644,524	6.75%
Janus Research	16,617,612	3.30%	(5,000,000)	610,334	21,007,278	4.34%
<b>Mid Cap Equities</b>	<b>\$28,890,432</b>	<b>5.74%</b>	<b>\$0</b>	<b>\$1,405,544</b>	<b>\$27,484,888</b>	<b>5.68%</b>
Fidelity Low Priced Stock	14,385,976	2.86%	0	688,994	13,696,982	2.83%
Janus Enterprise	14,504,456	2.88%	0	716,550	13,787,906	2.85%
<b>Small Cap Equities</b>	<b>\$28,654,049</b>	<b>5.69%</b>	<b>\$0</b>	<b>\$1,676,773</b>	<b>\$26,977,276</b>	<b>5.58%</b>
Prudential Small Cap Value	13,471,851	2.68%	0	588,370	12,883,482	2.66%
AB US Small Growth	15,182,198	3.02%	0	1,088,403	14,093,794	2.91%
<b>International Equities</b>	<b>\$154,244,075</b>	<b>30.63%</b>	<b>\$(1,162,112)</b>	<b>\$9,311,767</b>	<b>\$146,094,419</b>	<b>30.20%</b>
EuroPacific	26,844,333	5.33%	0	1,722,192	25,122,142	5.19%
Harbor International	30,756,402	6.11%	(1,600,000)	1,134,644	31,221,758	6.45%
Columbia Acorn Intl	0	0.00%	(17,962,112)	943,772	17,018,340	3.52%
T. Rowe Price Intl Small Cap	21,472,624	4.26%	21,400,000	72,624	-	-
Oakmark International	34,293,293	6.81%	(3,000,000)	3,187,697	34,105,596	7.05%
Mondrian International	26,126,532	5.19%	(7,000,000)	1,488,114	31,638,418	6.54%
Investec	14,750,890	2.93%	7,000,000	762,725	6,988,165	1.44%
<b>Domestic Fixed Income</b>	<b>\$105,007,846</b>	<b>20.85%</b>	<b>\$0</b>	<b>\$1,360,315</b>	<b>\$103,647,530</b>	<b>21.42%</b>
Dodge & Cox Income	52,491,436	10.42%	0	584,614	51,906,821	10.73%
PIMCO	52,516,410	10.43%	0	775,701	51,740,709	10.69%
<b>Real Estate</b>	<b>\$49,131,587</b>	<b>9.76%</b>	<b>\$1,478,558</b>	<b>\$900,277</b>	<b>\$46,752,751</b>	<b>9.66%</b>
RREEF Private Fund	22,836,501	4.54%	1,500,000	338,888	20,997,614	4.34%
Barings Core Property Fund	25,145,085	4.99%	0	539,948	24,605,138	5.09%
625 Kings Court	1,150,000	0.23%	(21,442)	21,442	1,150,000	0.24%
<b>Cash</b>	<b>\$1,491,663</b>	<b>0.30%</b>	<b>\$(190,179)</b>	<b>\$(0)</b>	<b>\$1,681,842</b>	<b>0.35%</b>
<b>Total Fund</b>	<b>\$503,555,274</b>	<b>100.0%</b>	<b>\$(1,873,733)</b>	<b>\$21,594,808</b>	<b>\$483,834,199</b>	<b>100.0%</b>

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 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 September 30, 2017

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years
<b>Domestic Equities</b>	<b>5.43%</b>	<b>21.41%</b>	<b>10.59%</b>	<b>14.56%</b>	<b>13.98%</b>
Russell 3000 Index	4.57%	18.71%	10.74%	14.23%	14.28%
<b>Large Cap Equities</b>					
Vanguard S&P 500 Index	4.48%	18.57%	10.79%	-	-
S&P 500 Index	4.48%	18.61%	10.81%	14.22%	14.38%
Dodge & Cox Stock	4.76%	23.88%	9.83%	15.65%	14.73%
Boston Partners	4.69%	20.57%	8.30%	13.07%	-
S&P 500 Index	4.48%	18.61%	10.81%	14.22%	14.38%
Russell 1000 Value Index	3.11%	15.12%	8.53%	13.20%	13.24%
Harbor Cap Appreciation (1)	8.64%	25.01%	13.07%	15.91%	15.54%
Janus Research (2)	3.03%	17.10%	10.48%	14.81%	13.79%
S&P 500 Index	4.48%	18.61%	10.81%	14.22%	14.38%
Russell 1000 Growth Index	5.90%	21.94%	12.69%	15.26%	15.41%
<b>Mid Cap Equities</b>					
Fidelity Low Priced Stock	5.03%	16.91%	8.44%	12.81%	12.81%
Russell MidCap Value Idx	2.14%	13.37%	9.19%	14.33%	13.76%
Janus Enterprise (2)	5.20%	20.45%	14.47%	16.53%	15.10%
Russell MidCap Growth Idx	5.28%	17.82%	9.96%	14.18%	13.84%
<b>Small Cap Equities</b>					
Prudential Small Cap Value (3)	4.57%	21.12%	11.16%	13.84%	-
US Small Cap Value Idx	4.43%	18.88%	11.22%	13.83%	13.30%
Russell 2000 Value Index	5.11%	20.55%	12.12%	13.27%	12.80%
AB US Small Growth (4)	7.72%	28.84%	11.13%	13.73%	15.83%
Russell 2000 Growth Index	6.22%	20.98%	12.17%	14.28%	14.17%

(1) Switched share class in June 2016.

(2) Switched share class in July 2016.

(3) Switched share class in September 2015.

(4) Switched to a mutual fund in September 2015.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 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 September 30, 2017

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years
<b>International Equities</b>	<b>6.27%</b>	<b>21.19%</b>	<b>5.12%</b>	<b>7.85%</b>	<b>5.61%</b>
MSCI ACWI ex-US Index	6.25%	20.15%	5.19%	7.45%	5.72%
EuroPacific	6.86%	20.64%	7.57%	9.51%	7.28%
Harbor International (1)	3.63%	15.17%	3.64%	6.37%	5.68%
Oakmark International (2)	9.49%	35.74%	9.65%	13.02%	9.91%
Mondrian International	4.99%	16.43%	3.29%	6.48%	-
MSCI EAFE Index	5.40%	19.10%	5.04%	8.38%	6.38%
MSCI ACWI ex-US Index	6.25%	20.15%	5.19%	7.45%	5.72%
Investec	8.62%	-	-	-	-
MSCI Emerging Markets Index	7.89%	22.46%	4.90%	3.99%	2.54%
<b>Domestic Fixed Income</b>	<b>1.31%</b>	<b>2.50%</b>	<b>3.22%</b>	<b>2.80%</b>	<b>3.67%</b>
Blmbg Aggregate Index	0.85%	0.07%	2.71%	2.06%	2.95%
Dodge & Cox Income	1.13%	2.57%	3.23%	3.17%	3.92%
PIMCO	1.50%	2.42%	3.21%	2.42%	3.46%
Blmbg Aggregate Index	0.85%	0.07%	2.71%	2.06%	2.95%
<b>Real Estate</b>	<b>1.87%</b>	<b>6.23%</b>	<b>9.83%</b>	<b>10.34%</b>	<b>11.02%</b>
Real Estate Custom Benchmark (3)	1.51%	5.72%	10.03%	10.42%	11.44%
RREEF Private	1.51%	6.71%	10.16%	11.43%	11.77%
Barings Core Property Fund	2.19%	7.18%	9.43%	9.36%	-
NFI-ODCE Equal Weight Net	1.51%	6.75%	10.05%	10.61%	11.51%
625 Kings Court	1.87%	44.67%	20.48%	21.10%	13.02%
<b>Total Fund</b>	<b>4.46%</b>	<b>15.53%</b>	<b>7.51%</b>	<b>9.49%</b>	<b>8.88%</b>
Total Fund Benchmark*	3.90%	13.41%	7.44%	9.03%	8.99%

\* Current Quarter Target = 38.0% Russell 3000 Index, 29.0% MSCI ACWIxUS Gross, 22.0% Blmbg Aggregate and 11.0% NCREIF NFI-ODCE Eq Wt Net.

(1) Switched share class in June 2016.

(2) Switched to CIT in November 2015.

(3) Real Estate Custom Benchmark is 50% NAREIT Composite Index and 50% NFI-ODCE Equal Wt Net through 12/31/2011; 20% NAREIT Composite Index and 80% NFI-ODCE Equal Wt Net through 12/31/2016 and NFI-ODCE Equal Wt Net 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- 9/2017	2016	2015	2014	2013
<b>Domestic Equities</b>	<b>16.07%</b>	<b>10.90%</b>	<b>(0.15%)</b>	<b>9.59%</b>	<b>38.02%</b>
Russell 3000 Index	13.91%	12.74%	0.48%	12.56%	33.55%
<b>Large Cap Equities</b>					
Vanguard S&P 500 Index	14.21%	11.93%	1.37%	13.65%	-
S&P 500 Index	14.24%	11.96%	1.38%	13.69%	32.39%
Dodge & Cox Stock	11.89%	21.28%	(4.49%)	10.40%	40.55%
Boston Partners	11.54%	13.76%	(4.99%)	10.87%	36.43%
S&P 500 Index	14.24%	11.96%	1.38%	13.69%	32.39%
Russell 1000 Value Index	7.92%	17.34%	(3.83%)	13.45%	32.53%
Harbor Cap Appreciation (1)	27.46%	(1.04%)	10.99%	9.93%	37.66%
Janus Research (2)	18.20%	1.60%	5.55%	14.10%	35.36%
S&P 500 Index	14.24%	11.96%	1.38%	13.69%	32.39%
Russell 1000 Growth Index	20.72%	7.08%	5.67%	13.05%	33.48%
<b>Mid Cap Equities</b>					
Fidelity Low Priced Stock	13.16%	8.79%	(0.56%)	7.65%	34.31%
Russell MidCap Value Idx	7.43%	20.00%	(4.78%)	14.75%	33.46%
Janus Enterprise (2)	20.02%	12.13%	3.49%	12.01%	30.86%
Russell MidCap Growth Idx	17.29%	7.33%	(0.20%)	11.90%	35.74%
<b>Small Cap Equities</b>					
Prudential Small Cap Value (3)	2.78%	33.99%	(7.00%)	5.89%	35.87%
US Small Cap Value Idx	6.04%	27.64%	(5.14%)	7.44%	33.71%
Russell 2000 Value Index	5.68%	31.74%	(7.47%)	4.22%	34.52%
AB US Small Growth (2)	25.49%	6.91%	(0.66%)	(1.24%)	46.72%
Russell 2000 Growth Index	16.81%	11.32%	(1.38%)	5.60%	43.30%

(1) Switched share class in June 2016.

(2) Switched share class in July 2016.

(3) Switched share class in September 2015.

(4) Switched to a mutual fund in September 2015.

## 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- 9/2017	2016	2015	2014	2013
<b>International Equities</b>	<b>23.25%</b>	<b>2.84%</b>	<b>(4.62%)</b>	<b>(5.73%)</b>	<b>19.25%</b>
MSCI ACWI ex-US Index	21.61%	5.01%	(5.25%)	(3.44%)	15.78%
EuroPacific	25.86%	1.01%	(0.48%)	(2.29%)	20.58%
Harbor International (1)	20.33%	0.27%	(3.82%)	(6.81%)	16.84%
Oakmark International (2)	27.50%	8.19%	(3.99%)	(5.41%)	29.34%
Mondrian International	17.77%	4.50%	(6.33%)	(2.06%)	16.69%
MSCI EAFE Index	19.96%	1.00%	(0.81%)	(4.90%)	22.78%
MSCI ACWI ex-US Index	21.61%	5.01%	(5.25%)	(3.44%)	15.78%
<b>Domestic Fixed Income</b>	<b>4.43%</b>	<b>4.10%</b>	<b>0.07%</b>	<b>5.09%</b>	<b>(0.65%)</b>
Blmbg Aggregate Index	3.14%	2.65%	0.55%	5.97%	(2.02%)
Dodge & Cox Income	3.86%	5.61%	(0.59%)	5.49%	0.64%
PIMCO	5.00%	2.59%	0.73%	4.69%	(1.92%)
Blmbg Aggregate Index	3.14%	2.65%	0.55%	5.97%	(2.02%)
<b>Real Estate</b>	<b>5.40%</b>	<b>7.02%</b>	<b>12.14%</b>	<b>14.50%</b>	<b>10.21%</b>
Real Estate Custom Benchmark (3)	4.70%	8.62%	11.81%	14.57%	10.40%
RREEF Private	4.34%	7.95%	15.63%	11.95%	14.50%
Barings Core Property Fund	5.06%	8.62%	12.99%	8.64%	9.82%
NFI-ODCE Equal Weight Net	4.70%	8.36%	14.18%	11.42%	12.36%
625 Kings Court	41.24%	10.01%	9.85%	12.15%	33.50%
<b>Total Fund</b>	<b>14.48%</b>	<b>6.67%</b>	<b>0.01%</b>	<b>4.72%</b>	<b>19.72%</b>
Total Fund Benchmark*	12.62%	7.78%	0.21%	6.80%	16.47%

\* Current Quarter Target = 38.0% Russell 3000 Index, 29.0% MSCI ACWixUS Gross, 22.0% Blmbg Aggregate and 11.0% NCREIF NFI-ODCE Eq Wt Net.

(1) Switched share class in June 2016.

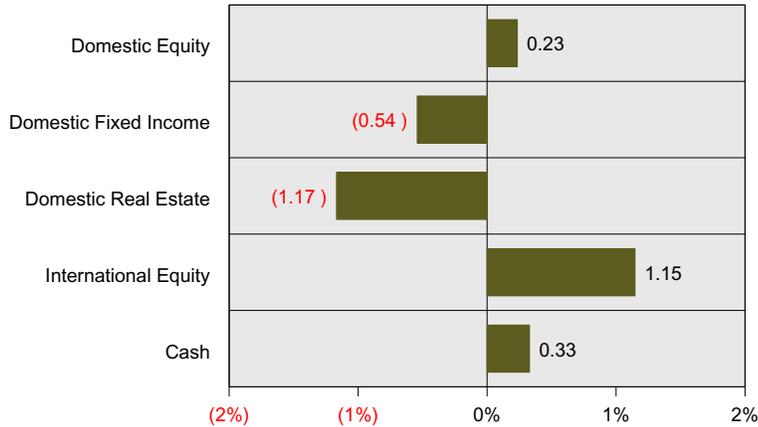
(2) Switched to CIT in November 2015.

(3) Real Estate Custom Benchmark is 50% NAREIT Composite Index and 50% NFI-ODCE Equal Wt Net through 12/31/2011; 20% NAREIT Composite Index and 80% NFI-ODCE Equal Wt Net through 12/31/2016 and NFI-ODCE Equal Wt Net thereafter.

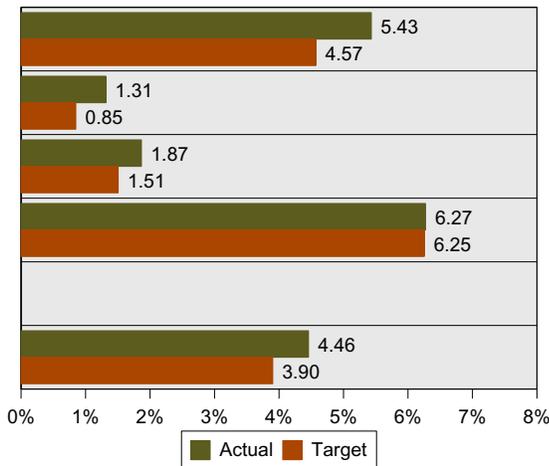
## Quarterly Total Fund Relative Attribution - September 30, 2017

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.

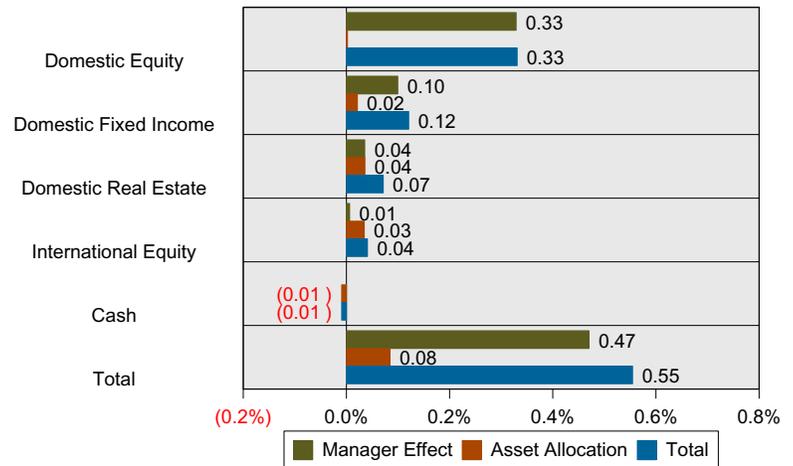
### Asset Class Under or Overweighting



### Actual vs Target Returns



### Relative Attribution by Asset Class



### Relative Attribution Effects for Quarter ended September 30, 2017

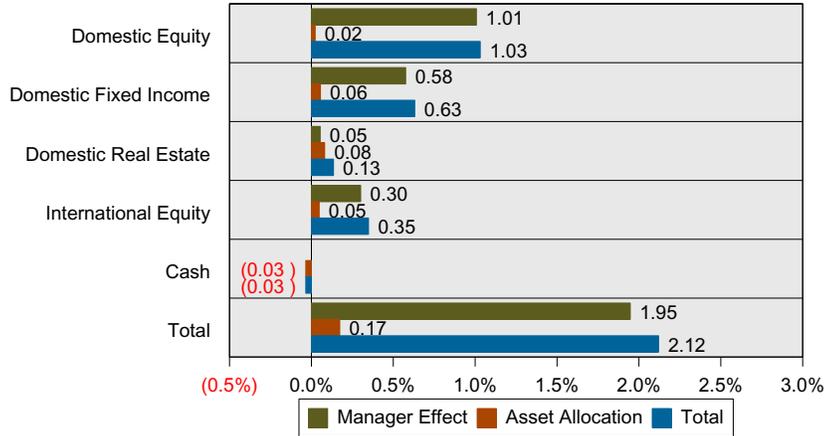
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	38%	38%	5.43%	4.57%	0.33%	0.00%	0.33%
Domestic Fixed Income	21%	22%	1.31%	0.85%	0.10%	0.02%	0.12%
Domestic Real Estate	10%	11%	1.87%	1.51%	0.04%	0.04%	0.07%
International Equity	30%	29%	6.27%	6.25%	0.01%	0.03%	0.04%
Cash	0%	0%	0.00%	0.00%	0.00%	(0.01%)	(0.01%)
<b>Total</b>			<b>4.46%</b>	<b>3.90%</b>	<b>+ 0.47%</b>	<b>+ 0.08%</b>	<b>0.55%</b>

\* Current Quarter Target = 38.0% Russell 3000 Index, 29.0% MSCI ACWIxUS Gross, 22.0% Blmbg Aggregate and 11.0% NCREIF NFI-ODCE Eq Wt Net.

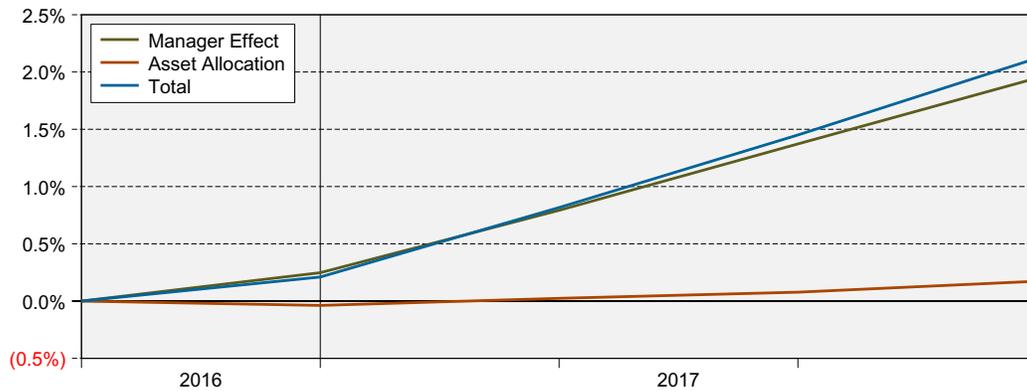
## Cumulative Total Fund Relative Attribution - September 30, 2017

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

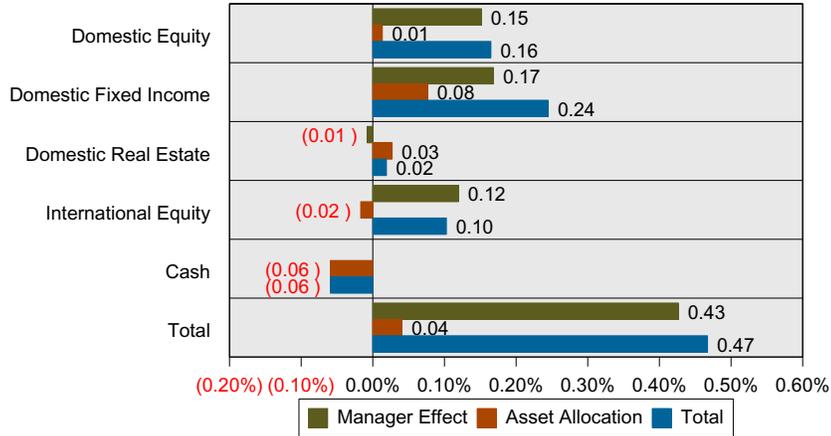
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	39%	38%	21.41%	18.71%	1.01%	0.02%	1.03%
Domestic Fixed Income	22%	22%	2.50%	0.07%	0.58%	0.06%	0.63%
Domestic Real Estate	10%	11%	6.23%	5.72%	0.05%	0.08%	0.13%
International Equity	29%	29%	21.19%	20.15%	0.30%	0.05%	0.35%
Cash	0%	0%	0.00%	0.00%	0.00%	(0.03%)	(0.03%)
<b>Total</b>			<b>15.53%</b>	<b>13.41%</b>	<b>+ 1.95%</b>	<b>+ 0.17%</b>	<b>2.12%</b>

\* Current Quarter Target = 38.0% Russell 3000 Index, 29.0% MSCI ACWIxUS Gross, 22.0% Blmbg Aggregate and 11.0% NCREIF NFI-ODCE Eq Wt Net.

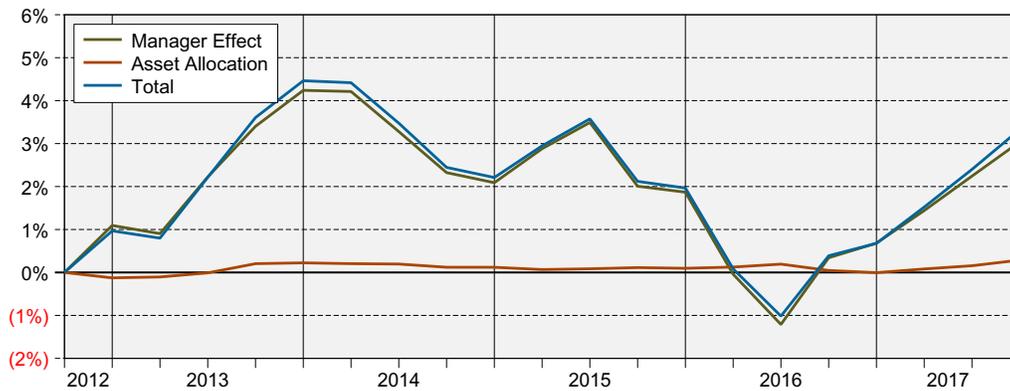
## Cumulative Total Fund Relative Attribution - September 30, 2017

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.

### Five Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects



### Five Year Annualized Relative Attribution Effects

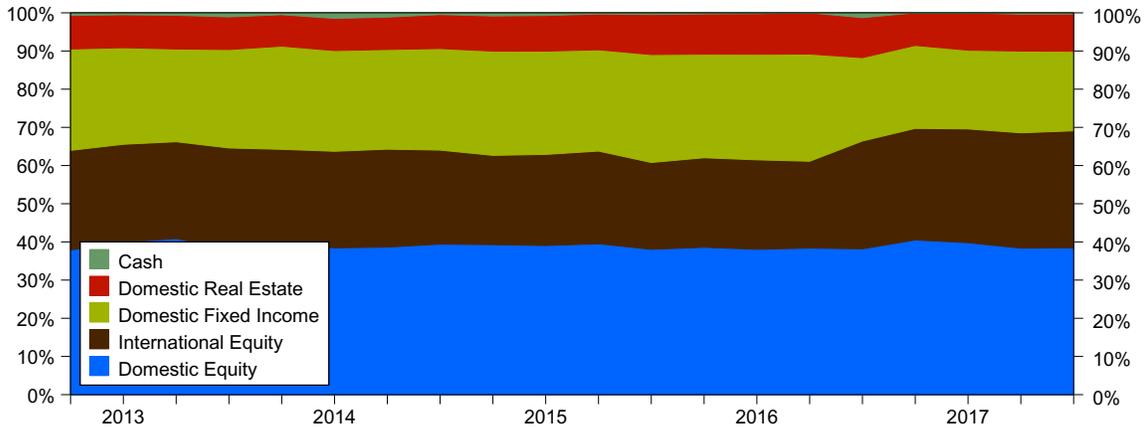
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	39%	38%	14.56%	14.23%	0.15%	0.01%	0.16%
Domestic Fixed Income	26%	27%	2.80%	2.06%	0.17%	0.08%	0.24%
Domestic Real Estate	9%	9%	10.34%	10.42%	(0.01%)	0.03%	0.02%
International Equity	25%	26%	7.85%	7.45%	0.12%	(0.02%)	0.10%
Cash	1%	0%	0.00%	0.00%	0.00%	(0.06%)	(0.06%)
<b>Total</b>			<b>9.49%</b>	<b>9.03%</b>	<b>+ 0.43%</b>	<b>+ 0.04%</b>	<b>0.47%</b>

\* Current Quarter Target = 38.0% Russell 3000 Index, 29.0% MSCI ACWIxUS Gross, 22.0% Blmbg Aggregate and 11.0% NCREIF NFI-ODCE Eq Wt Net.

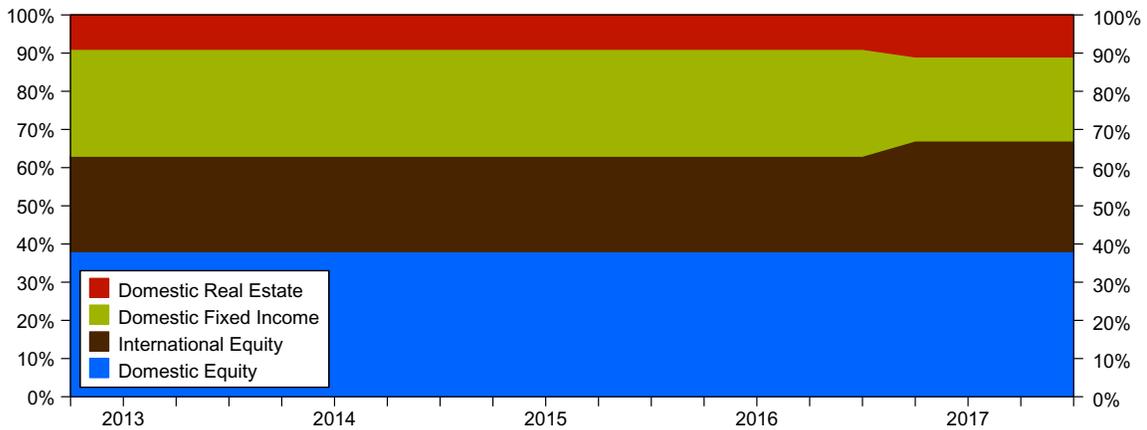
## Actual vs Target Historical Asset Allocation

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

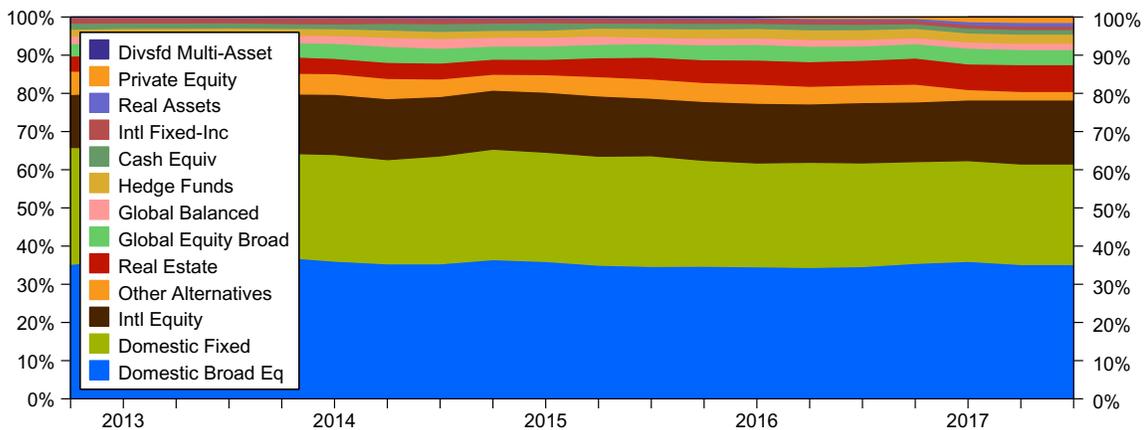
### Actual Historical Asset Allocation



### Target Historical Asset Allocation



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

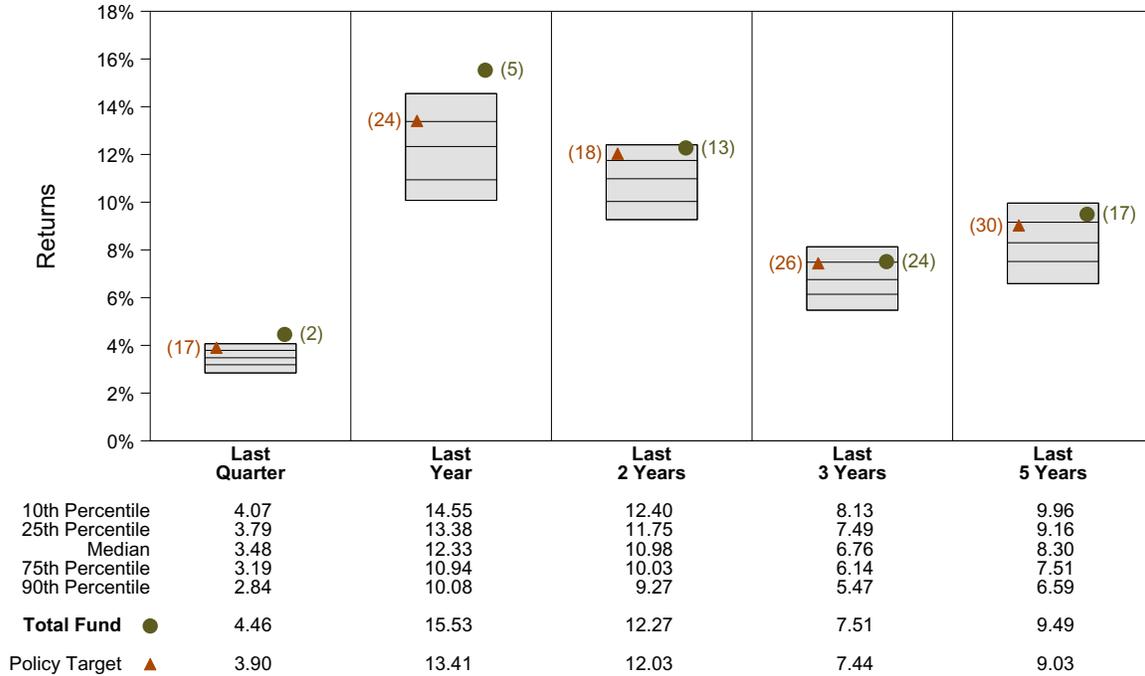


\* Current Quarter Target = 38.0% Russell 3000 Index, 29.0% MSCI ACWIxUS Gross, 22.0% Blmbg Aggregate and 11.0% NCREIF NFI-ODCE Eq Wt Net.

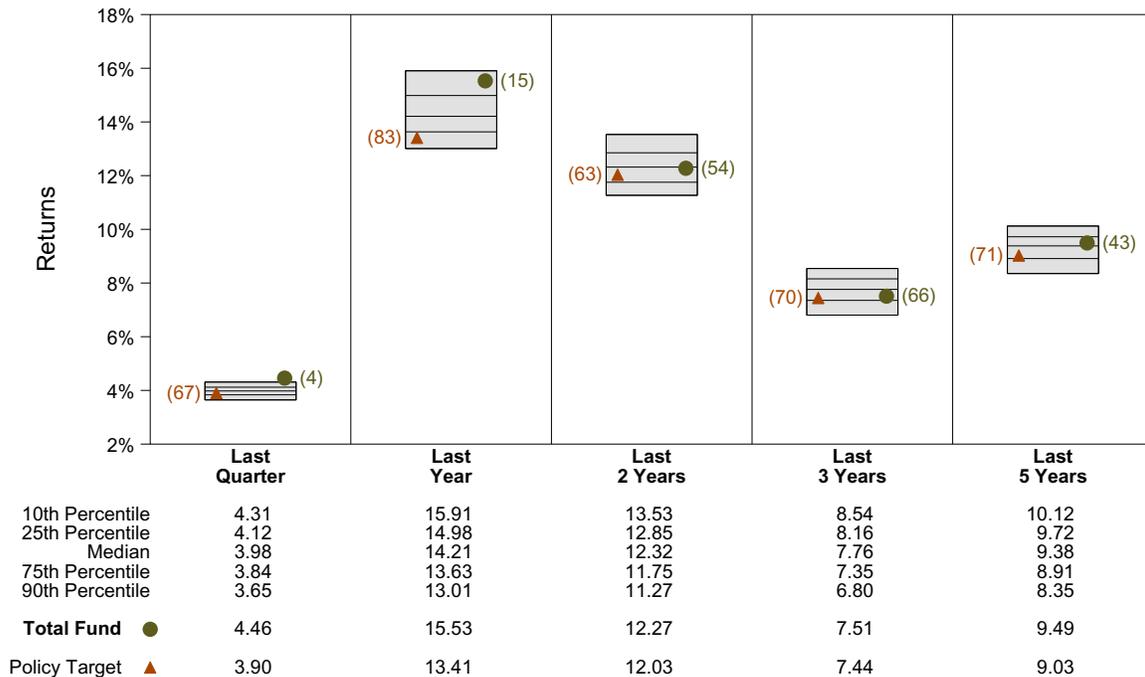
## Total Fund Ranking

The first two charts show the ranking of the Total Fund's performance relative to that of the Callan Public Fund Sponsor Database for periods ended September 30, 2017. The first chart is a standard unadjusted ranking. In the second chart each fund in the database is adjusted to have the same historical asset allocation as that of the Total Fund.

### Callan Public Fund Sponsor Database



### Asset Allocation Adjusted Ranking



\* Current Quarter Target = 38.0% Russell 3000 Index, 29.0% MSCI ACWIxUS Gross, 22.0% Blmbg Aggregate and 11.0% NCREIF NFI-ODCE Eq Wt Net.

# Total Fund

## Period Ended September 30, 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.

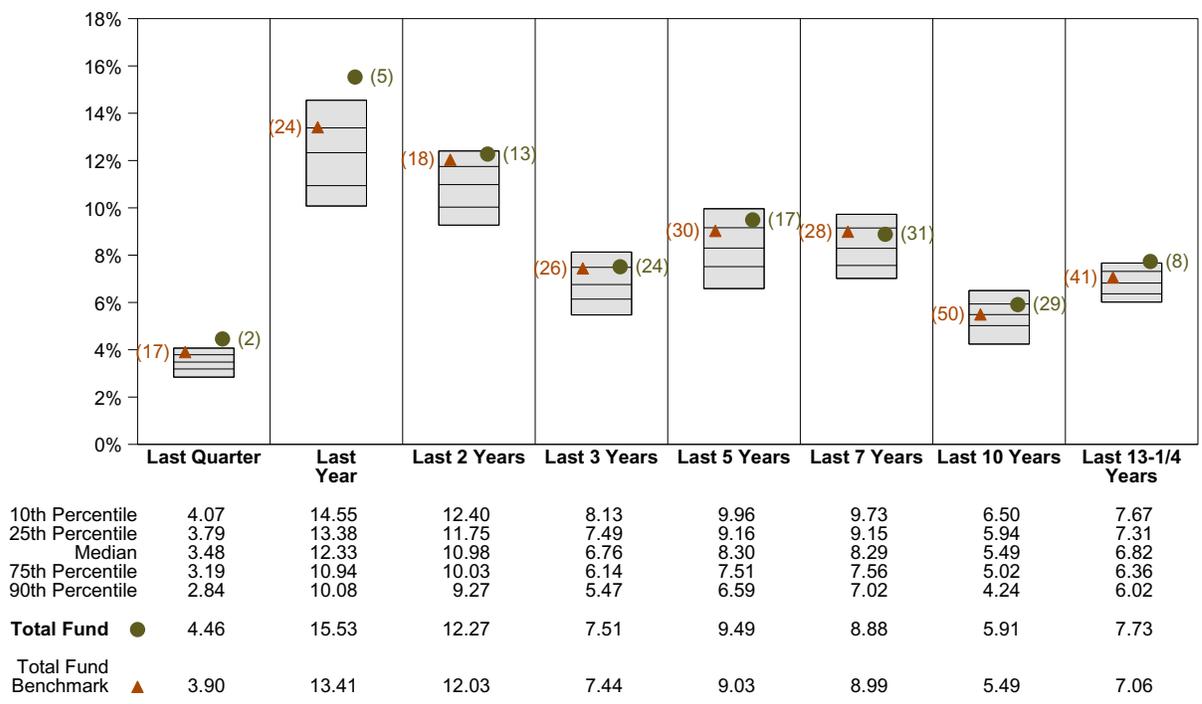
### Quarterly Summary and Highlights

- Total Fund's portfolio posted a 4.46% return for the quarter placing it in the 2 percentile of the Callan Public Fund Sponsor Database group for the quarter and in the 5 percentile for the last year.
- Total Fund's portfolio outperformed the Total Fund Benchmark by 0.55% for the quarter and outperformed the Total Fund Benchmark for the year by 2.12%.

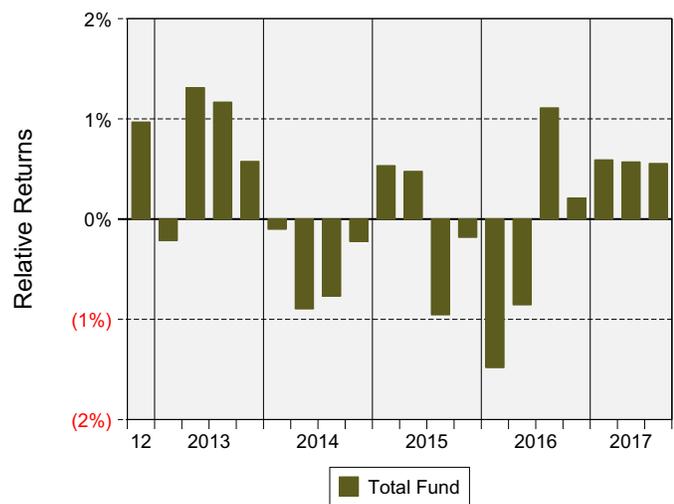
### Quarterly Asset Growth

Beginning Market Value	\$483,834,199
Net New Investment	\$-1,873,733
Investment Gains/(Losses)	\$21,594,808
Ending Market Value	\$503,555,274

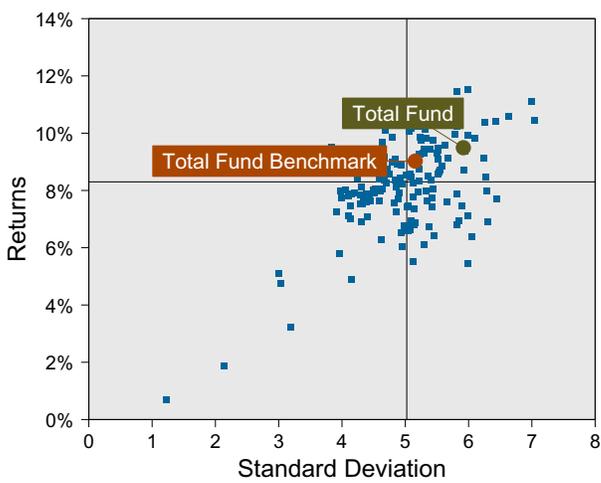
### Performance vs Callan Public Fund Sponsor Database (Gross)



### Relative Return vs Total Fund Benchmark



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

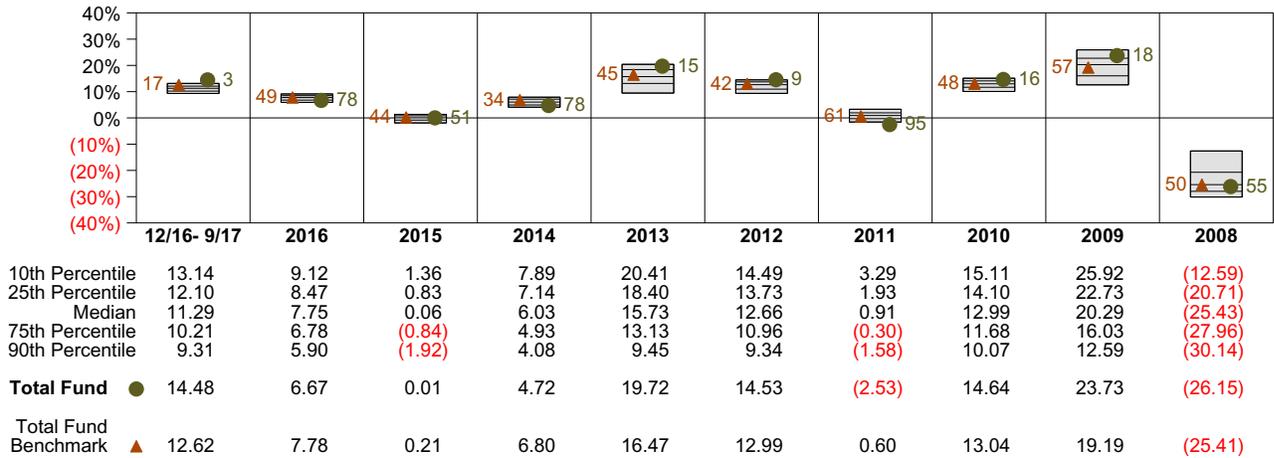


# Total Fund Return Analysis Summary

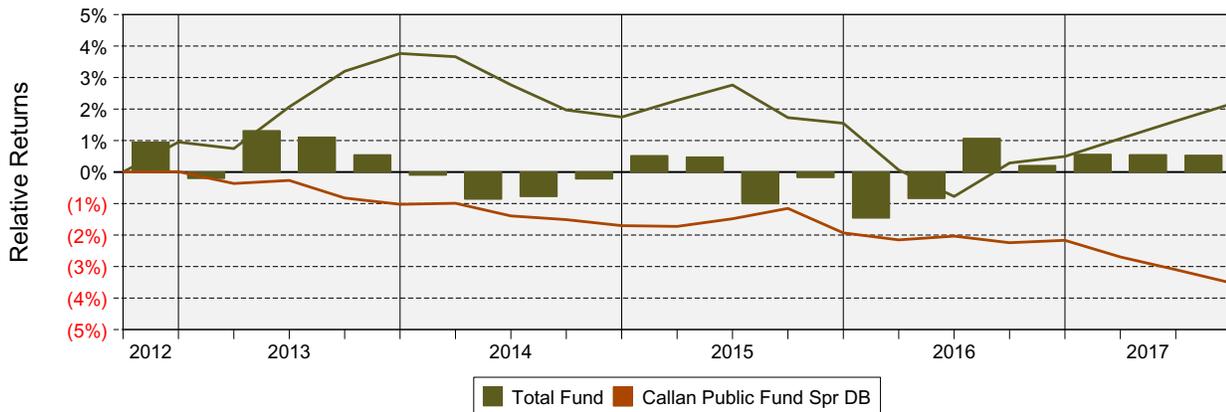
## Return Analysis

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

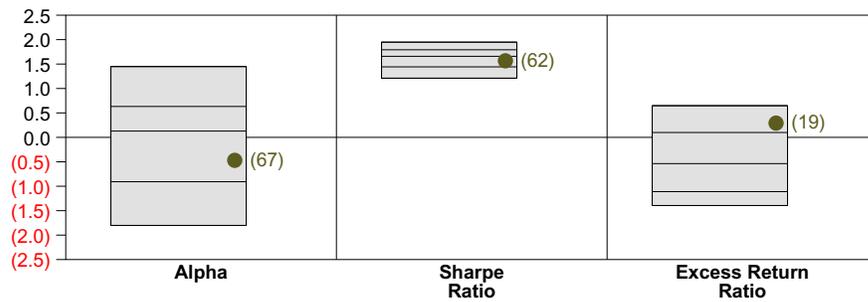
### Performance vs Callan Public Fund Sponsor Database (Gross)



### Cumulative and Quarterly Relative Return vs Total Fund Benchmark



### Risk Adjusted Return Measures vs Total Fund Benchmark Rankings Against Callan Public Fund Sponsor Database (Gross) Five Years Ended September 30, 2017

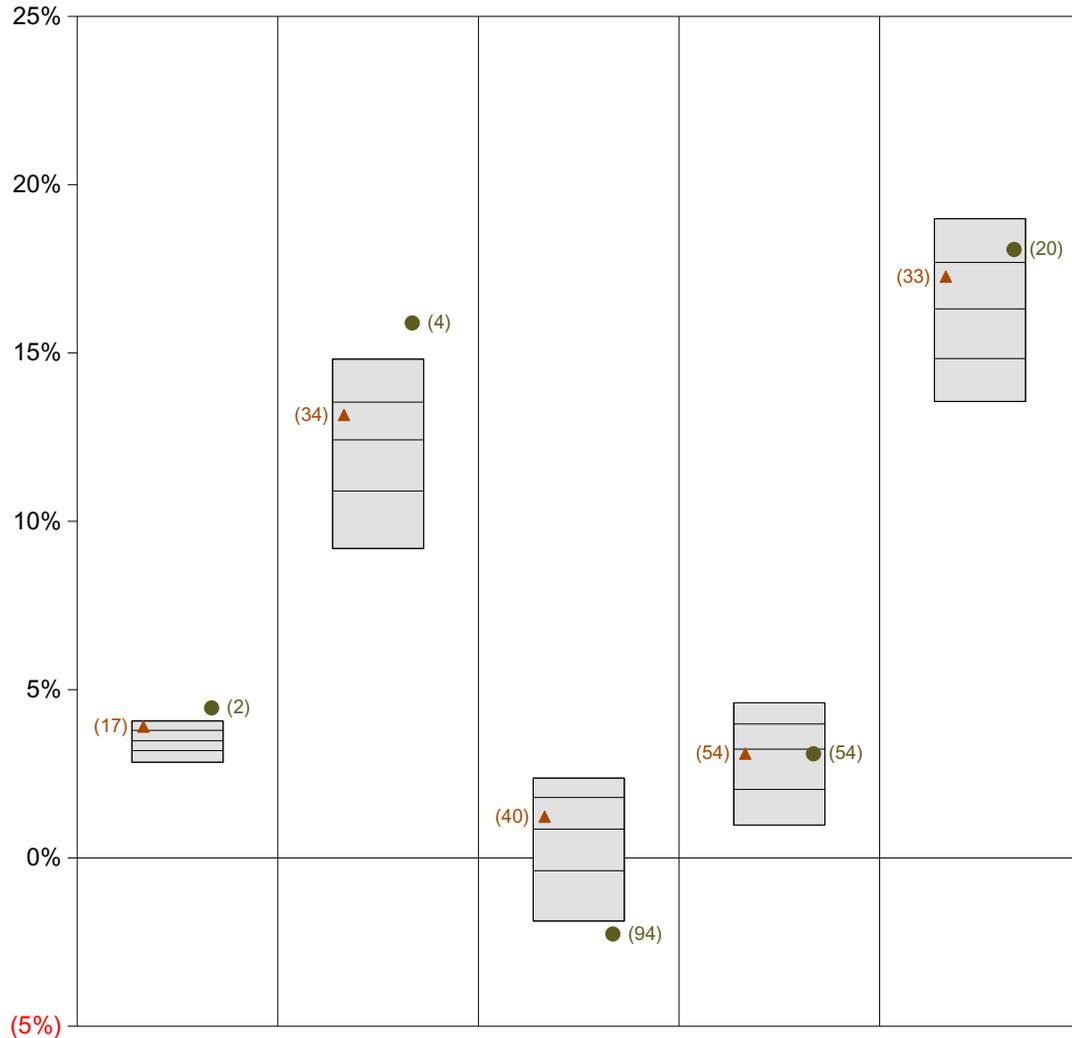


10th Percentile	1.45	1.95	0.65
25th Percentile	0.63	1.79	0.10
Median	0.13	1.66	(0.54)
75th Percentile	(0.91)	1.44	(1.11)
90th Percentile	(1.80)	1.21	(1.39)
<b>Total Fund</b>	● (0.47)	1.57	0.29

# Mendocino County Employees' Retirement Association Performance vs Callan Public Fund Sponsor Database Periods Ended September 30, 2017

## Return Ranking

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



	Fiscal YTD	Calendar YTD	2016	2015	2014
10th Percentile	4.07	14.82	2.37	4.61	18.99
25th Percentile	3.79	13.54	1.80	3.98	17.69
Median	3.48	12.42	0.86	3.23	16.31
75th Percentile	3.19	10.90	(0.38)	2.04	14.83
90th Percentile	2.84	9.19	(1.87)	0.98	13.56
<b>Total Fund</b> ●	4.46	15.89	(2.26)	3.09	18.08
Total Fund Benchmark ▲	3.90	13.16	1.23	3.10	17.27

\* Current Quarter Target = 38.0% Russell 3000 Index, 29.0% MSCI ACWixUS Gross, 22.0% Blmbg Aggregate and 11.0% NCREIF NFI-ODCE Eq Wt Net.



# Domestic Equity Composite Period Ended September 30, 2017

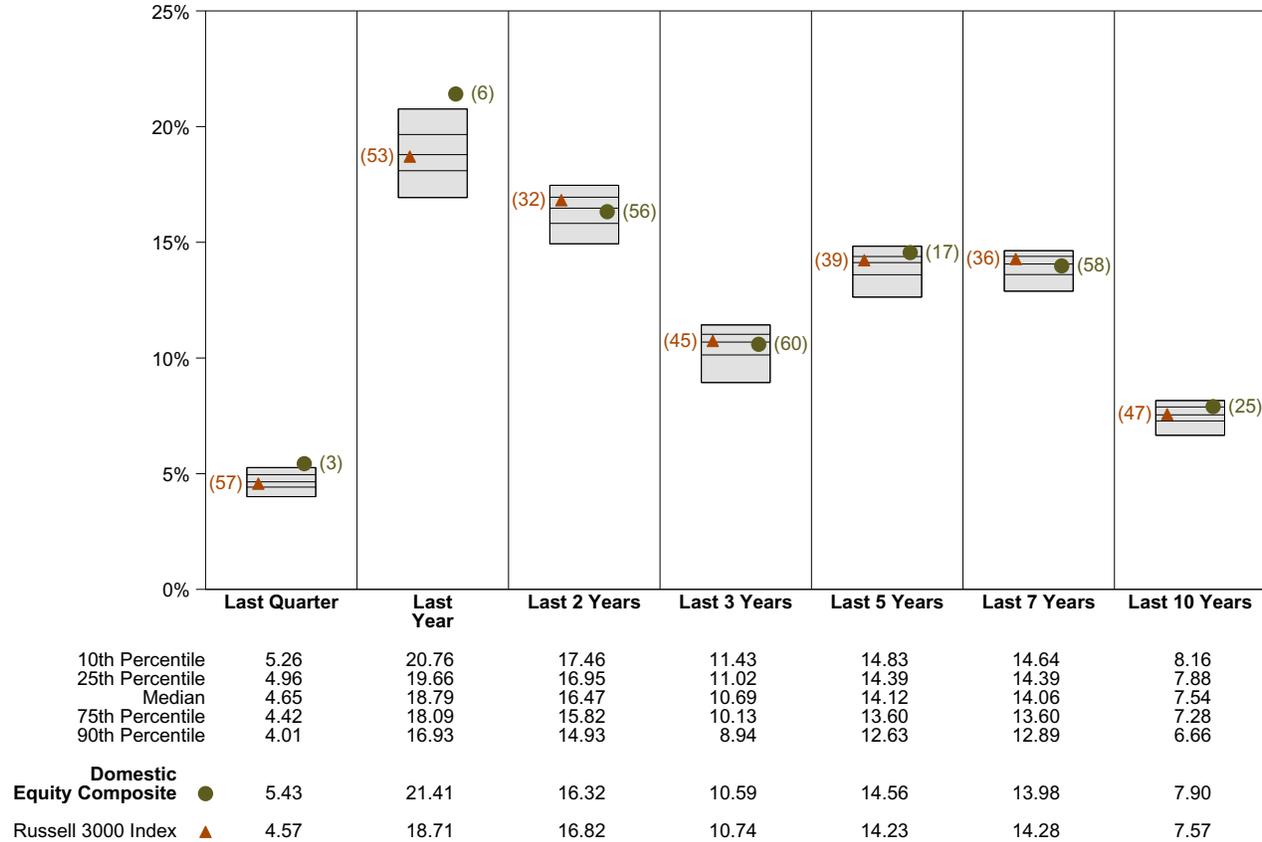
## Quarterly Summary and Highlights

- Domestic Equity Composite's portfolio posted a 5.43% return for the quarter placing it in the 3 percentile of the Pub Pln- Domestic Equity group for the quarter and in the 6 percentile for the last year.
- Domestic Equity Composite's portfolio outperformed the Russell 3000 Index by 0.86% for the quarter and outperformed the Russell 3000 Index for the year by 2.70%.

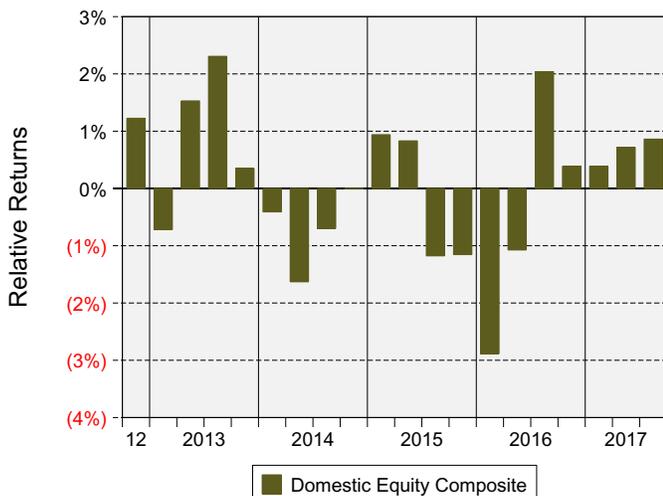
## Quarterly Asset Growth

Beginning Market Value	\$185,657,656
Net New Investment	\$-2,000,000
Investment Gains/(Losses)	\$10,022,448
Ending Market Value	\$193,680,104

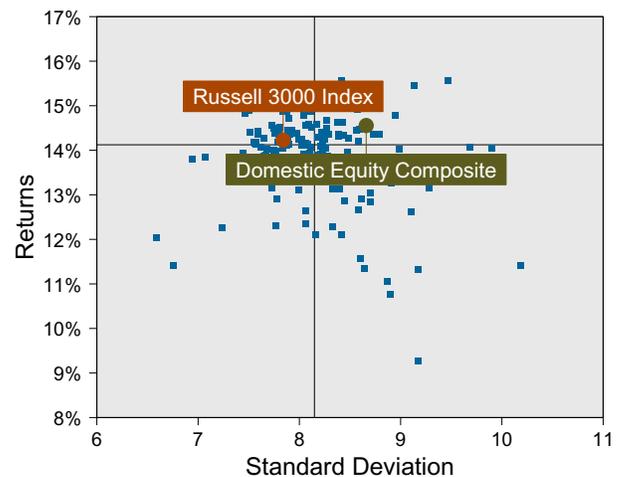
## Performance vs Pub Pln- Domestic Equity (Gross)



## Relative Return vs Russell 3000 Index



## Pub Pln- Domestic Equity (Gross) Annualized Five Year Risk vs Return

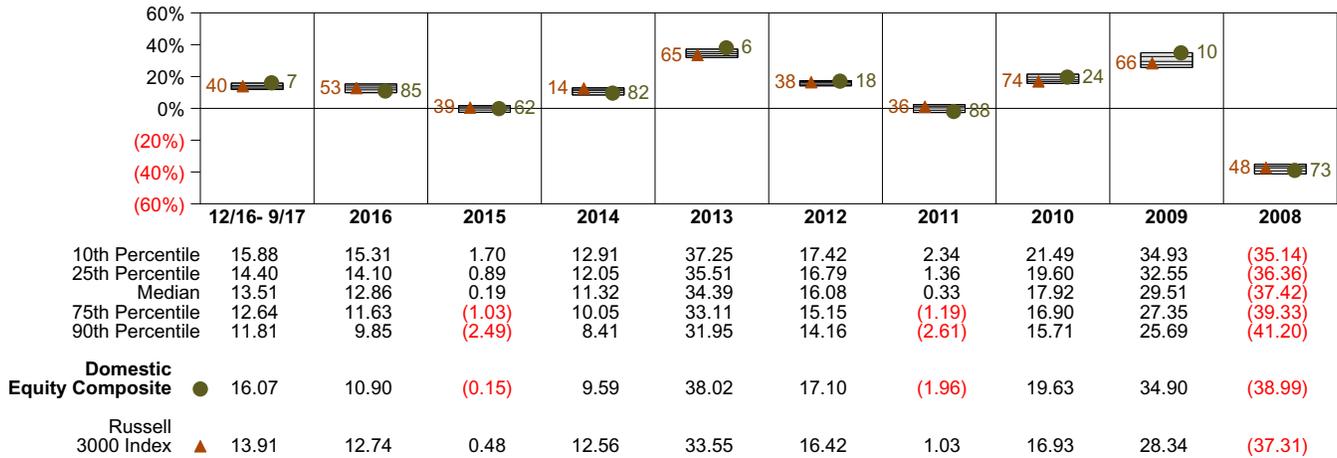


# Domestic Equity Composite Return Analysis Summary

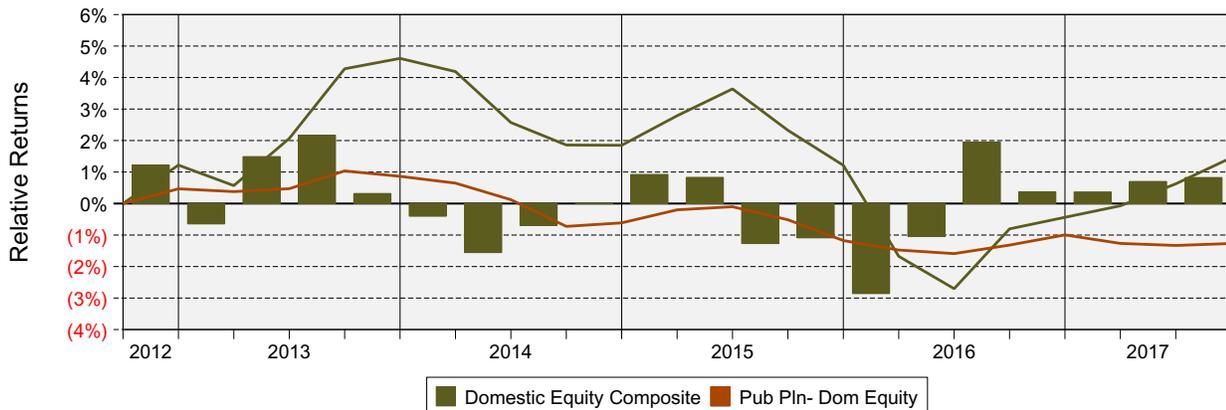
## Return Analysis

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.

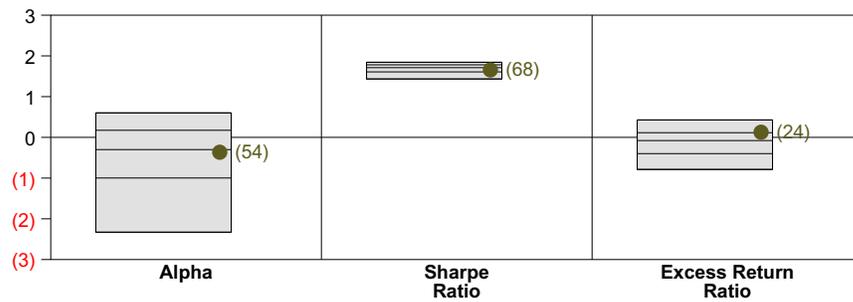
### Performance vs Pub Pln- Domestic Equity (Gross)



### Cumulative and Quarterly Relative Return vs Russell 3000 Index



### Risk Adjusted Return Measures vs Russell 3000 Index Rankings Against Pub Pln- Domestic Equity (Gross) Five Years Ended September 30, 2017

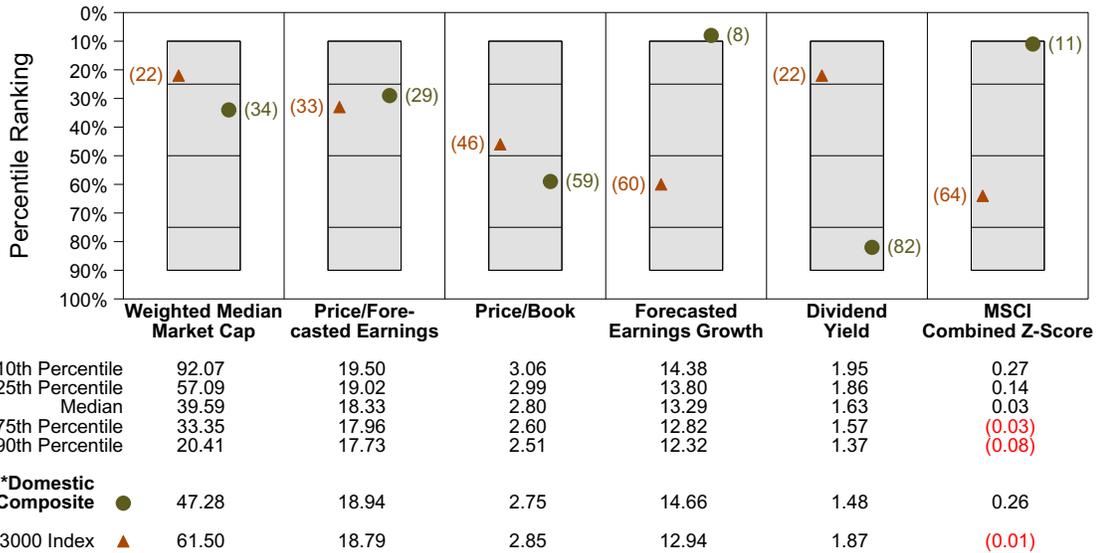


# Domestic Equity Composite Equity Characteristics Analysis Summary

## Portfolio Characteristics

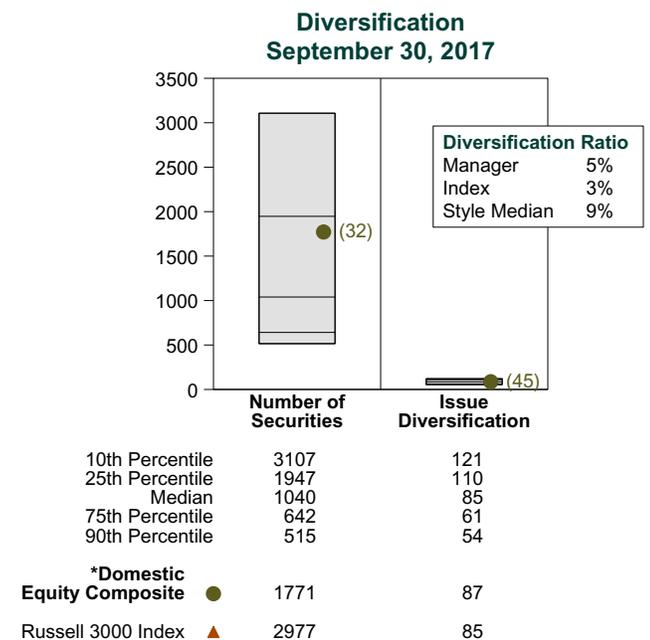
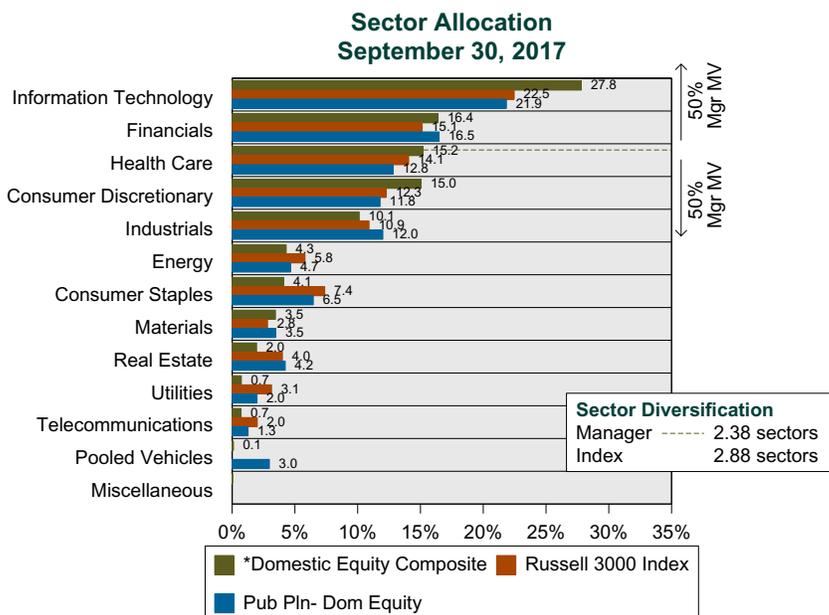
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against Pub Pln- Domestic Equity as of September 30, 2017



## Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.

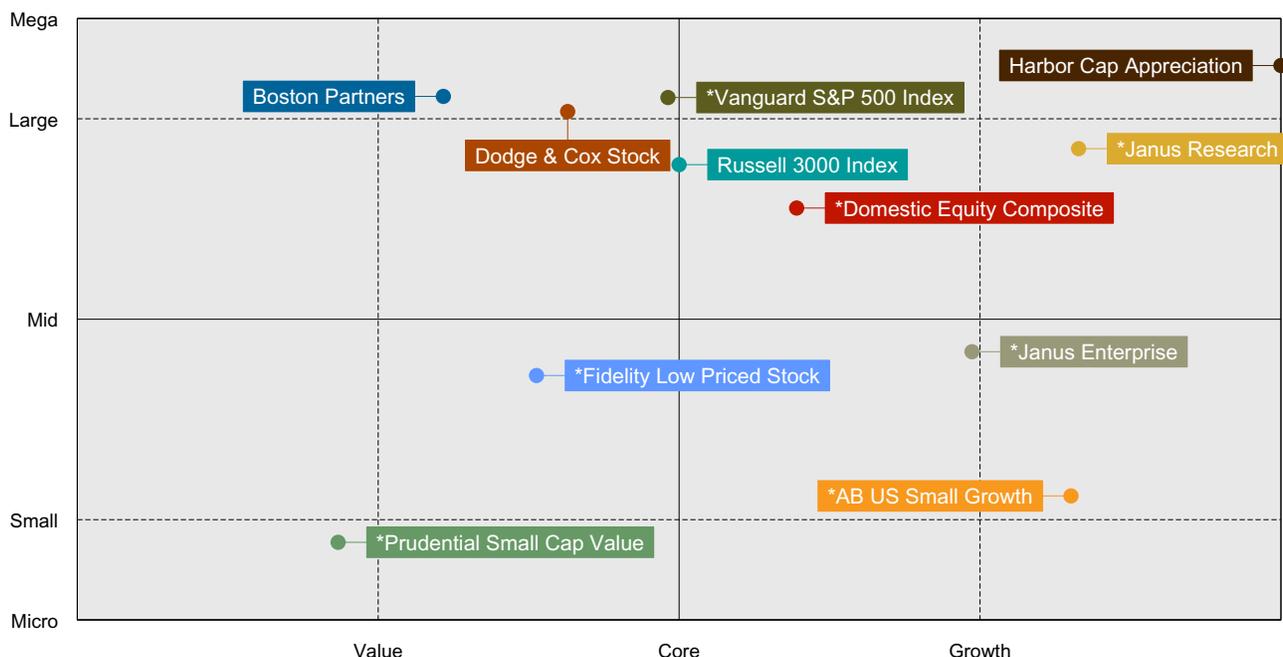


\*9/30/17 portfolio characteristics generated using most recently available holdings (6/30/17) modified based on a "buy-and-hold" assumption (repriced and adjusted for corporate actions). Analysis is then done using current market and company financial data.

## Holdings Based Style Analysis For One Quarter Ended September 30, 2017

This page analyzes and compares the investment styles of multiple portfolios using a detailed holdings-based style analysis methodology. The size component of style is measured by the weighted median market capitalization of the holdings. The value/core/growth style dimension is captured by the "Combined Z-Score" of the portfolio. This score is based on eight fundamental factors used in the MSCI stock style scoring system. The table below gives a more detailed breakdown of several relevant style metrics on the portfolios.

### Style Map Holdings for One Quarter Ended September 30, 2017



	Weight %	Wtd Median Mkt Cap	Combined Z-Score	Growth Z-Score	Value Z-Score	Number of Securities	Security Diversification
*Vanguard S&P 500 Index	17.31%	91.89	(0.03)	(0.00)	0.03	506	54.42
Dodge & Cox Stock	8.83%	81.76	(0.26)	(0.11)	0.15	70	18.11
Boston Partners	17.26%	92.72	(0.54)	(0.11)	0.43	82	20.07
Harbor Cap Appreciation	18.31%	115.02	1.45	0.67	(0.78)	54	14.50
*Janus Research	8.58%	66.75	0.89	0.36	(0.53)	85	21.44
*Fidelity Low Priced Stock	7.43%	8.35	(0.33)	(0.08)	0.25	883	27.64
*Janus Enterprise	7.49%	9.39	0.65	0.19	(0.46)	82	27.06
*Prudential Small Cap Value	6.96%	1.67	(0.78)	(0.09)	0.68	320	67.56
*AB US Small Growth	7.84%	3.05	0.87	0.25	(0.63)	100	37.72
*Domestic Equity Composite	100.00%	47.28	0.26	0.15	(0.11)	1771	86.73
Russell 3000 Index	-	61.50	(0.01)	0.00	0.01	2977	84.82

\* 9/30/17 portfolio characteristics generated using most recently available holdings (6/30/17) modified based on a "buy-and-hold" assumption (repriced and adjusted for corporate actions). Analysis is then done using current market and company financial data.

# Vanguard S&P 500 Index Period Ended September 30, 2017

## Investment Philosophy

Vanguard's Institutional Index Fund is passively administered using a "full replication" approach. Under this method, the fund holds all of the 500 underlying securities in proportion to their weighting in the index. The fund remains fully invested in equities at all times and does not make judgement calls on the direction of the S&P 500 Index.

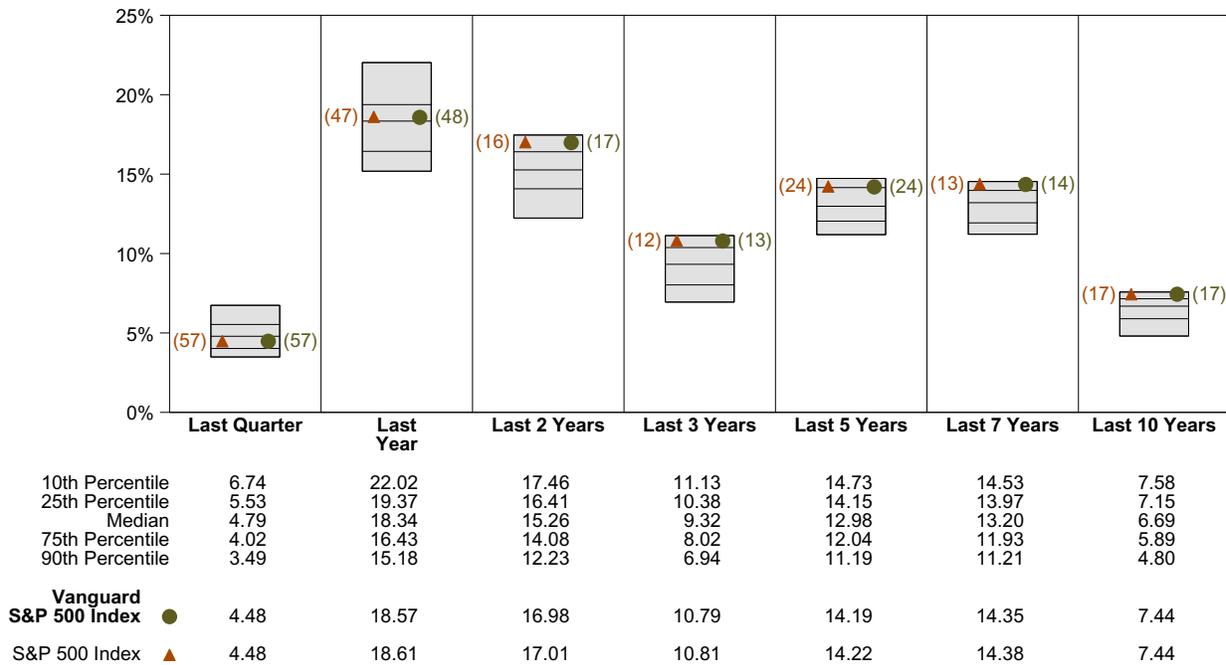
## Quarterly Summary and Highlights

- Vanguard S&P 500 Index's portfolio posted a 4.48% return for the quarter placing it in the 57 percentile of the Callan Large Cap Core Mutual Funds group for the quarter and in the 48 percentile for the last year.
- Vanguard S&P 500 Index's portfolio underperformed the S&P 500 Index by 0.00% for the quarter and underperformed the S&P 500 Index for the year by 0.04%.

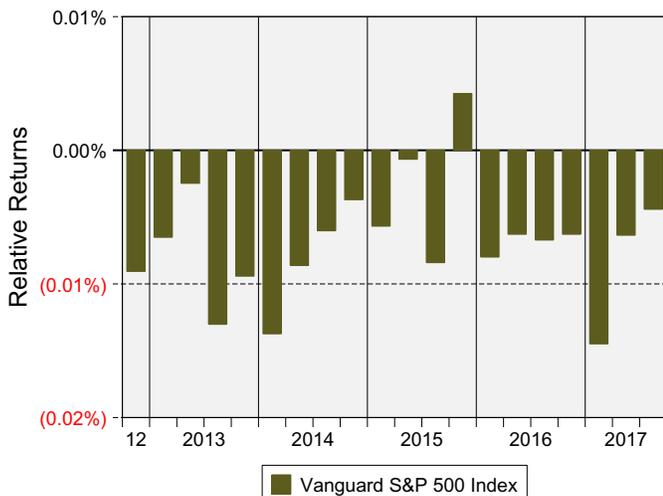
## Quarterly Asset Growth

Beginning Market Value	\$24,392,433
Net New Investment	\$8,000,000
Investment Gains/(Losses)	\$1,135,462
Ending Market Value	\$33,527,895

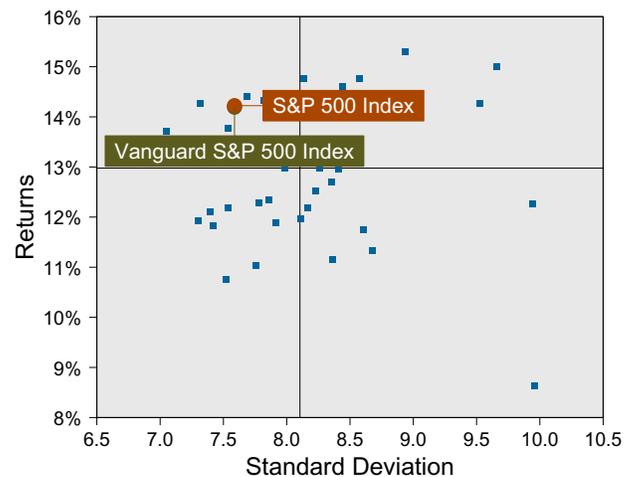
## Performance vs Callan Large Cap Core Mutual Funds (Net)



## Relative Return vs S&P 500 Index



## Callan Large Cap Core Mutual Funds (Net) Annualized Five Year Risk vs Return

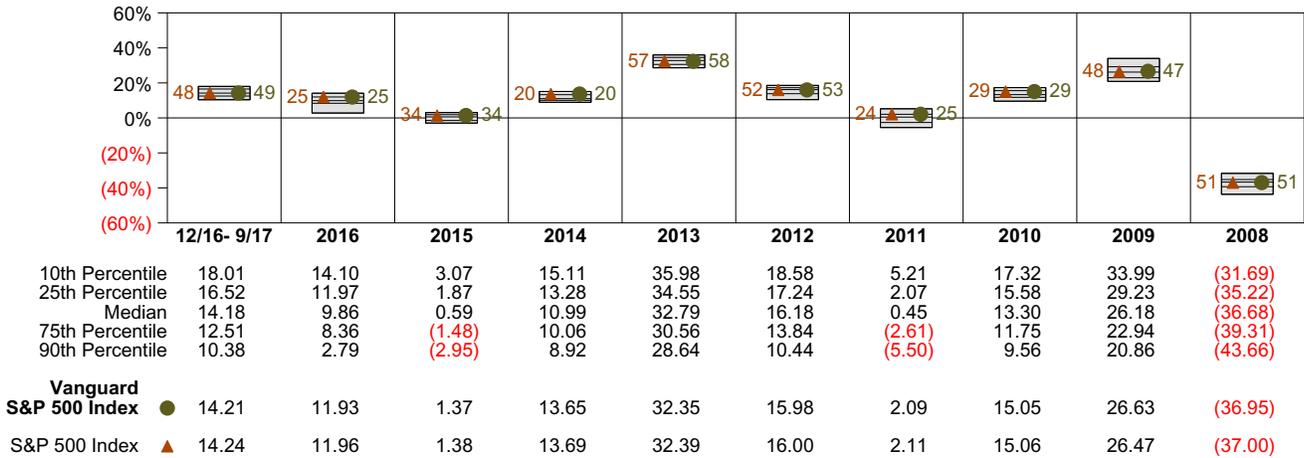


# Vanguard S&P 500 Index Return Analysis Summary

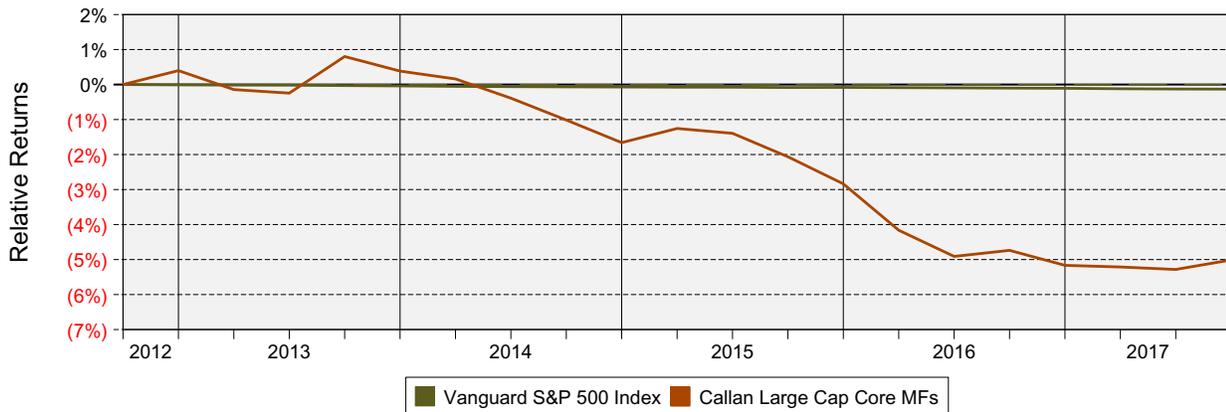
## Return Analysis

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

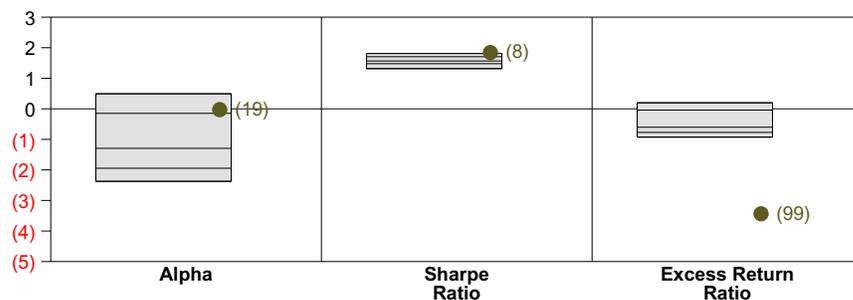
### Performance vs Callan Large Cap Core Mutual Funds (Net)



### Cumulative and Quarterly Relative Return vs S&P 500 Index



### Risk Adjusted Return Measures vs S&P 500 Index Rankings Against Callan Large Cap Core Mutual Funds (Net) Five Years Ended September 30, 2017



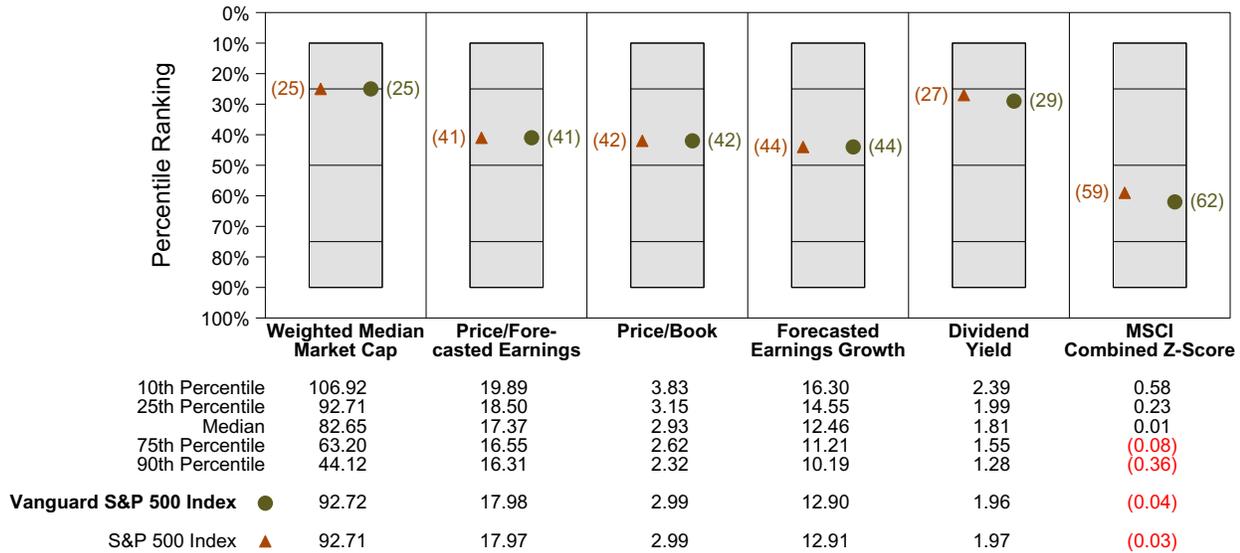
10th Percentile	0.49	1.81	0.20
25th Percentile	(0.15)	1.70	(0.04)
Median	(1.29)	1.57	(0.60)
75th Percentile	(1.95)	1.48	(0.77)
90th Percentile	(2.37)	1.32	(0.93)
<b>Vanguard S&amp;P 500 Index</b>	● (0.03)	1.84	(3.44)

# Vanguard S&P 500 Index Equity Characteristics Analysis Summary

## Portfolio Characteristics

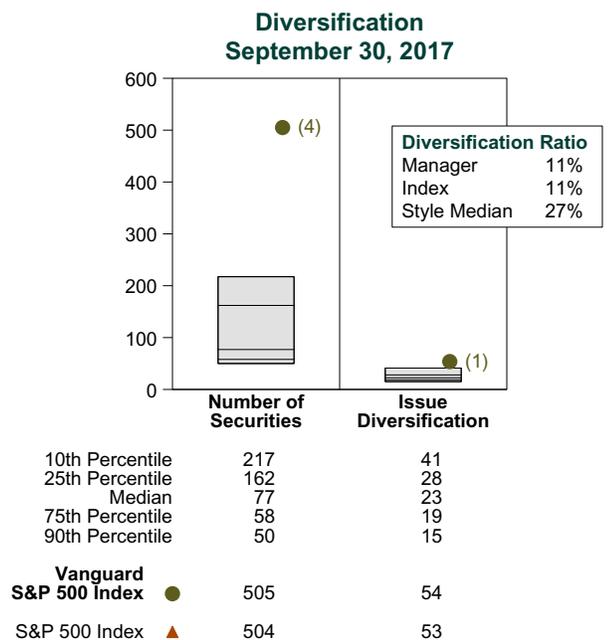
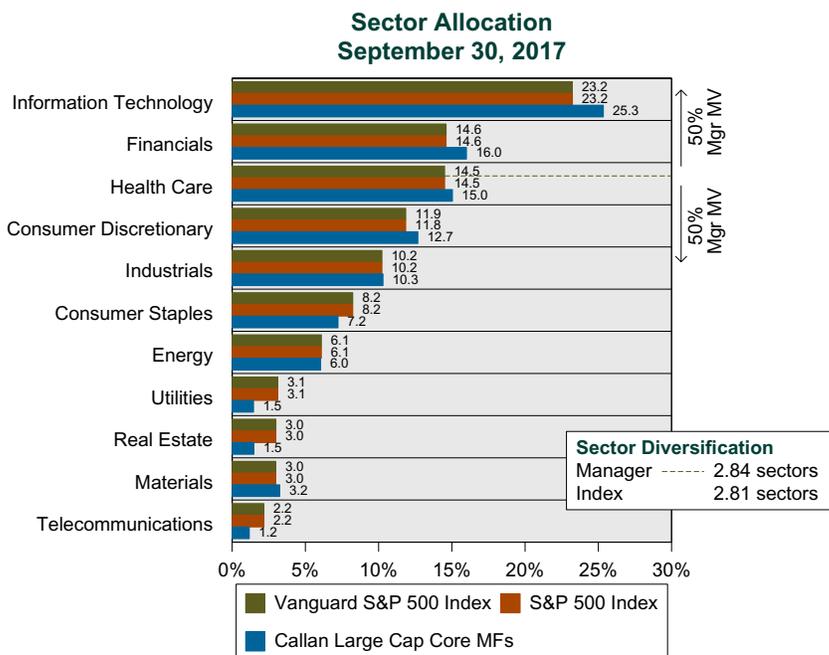
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against Callan Large Cap Core Mutual Funds as of September 30, 2017



## Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.



# Dodge & Cox Stock Period Ended September 30, 2017

## Investment Philosophy

Dodge & Cox seeks to build a portfolio of individual companies where the current market valuation does not adequately reflect the company's long-term profit opportunities. The firm maintains a long-term focus, conducts their own research, and employs a rigorous price discipline.

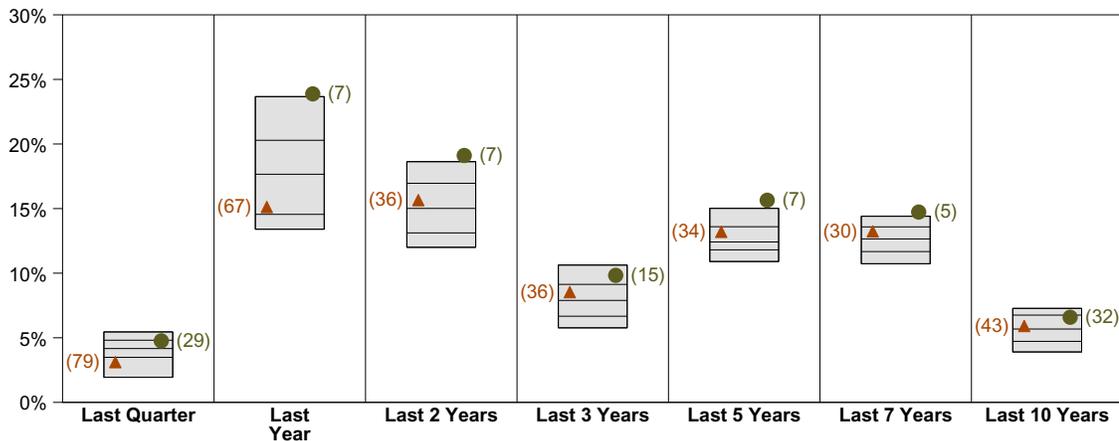
## Quarterly Summary and Highlights

- Dodge & Cox Stock's portfolio posted a 4.76% return for the quarter placing it in the 29 percentile of the Callan Large Cap Value Mutual Funds group for the quarter and in the 7 percentile for the last year.
- Dodge & Cox Stock's portfolio outperformed the Russell 1000 Value Index by 1.65% for the quarter and outperformed the Russell 1000 Value Index for the year by 8.76%.

## Quarterly Asset Growth

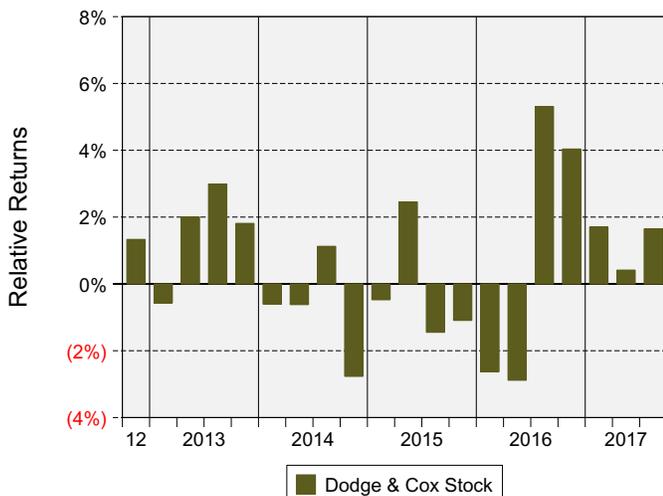
Beginning Market Value	\$21,217,575
Net New Investment	\$-5,000,000
Investment Gains/(Losses)	\$876,403
Ending Market Value	\$17,093,978

## Performance vs Callan Large Cap Value Mutual Funds (Net)

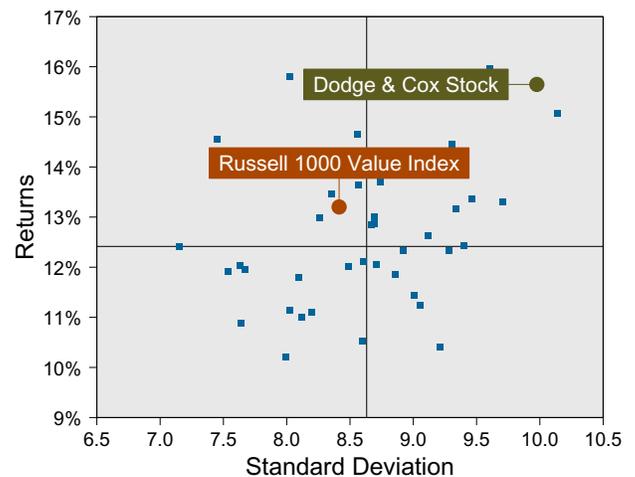


10th Percentile	5.45	23.67	18.63	10.63	15.02	14.41	7.28
25th Percentile	4.81	20.29	16.96	9.13	13.60	13.58	6.75
Median	4.17	17.66	15.01	7.89	12.41	12.65	5.68
75th Percentile	3.49	14.55	13.12	6.67	11.81	11.67	4.72
90th Percentile	1.95	13.40	12.00	5.77	10.90	10.73	3.90
<b>Dodge &amp; Cox Stock</b> ●	4.76	23.88	19.11	9.83	15.65	14.73	6.59
Russell 1000 Value Index ▲	3.11	15.12	15.66	8.53	13.20	13.24	5.92

## Relative Return vs Russell 1000 Value Index



## Callan Large Cap Value Mutual Funds (Net) Annualized Five Year Risk vs Return

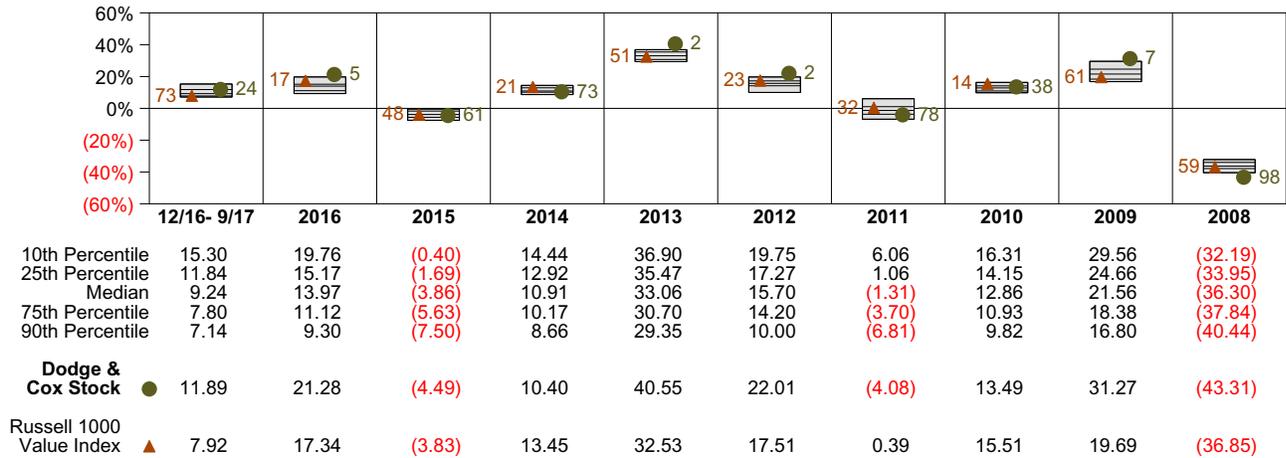


# Dodge & Cox Stock Return Analysis Summary

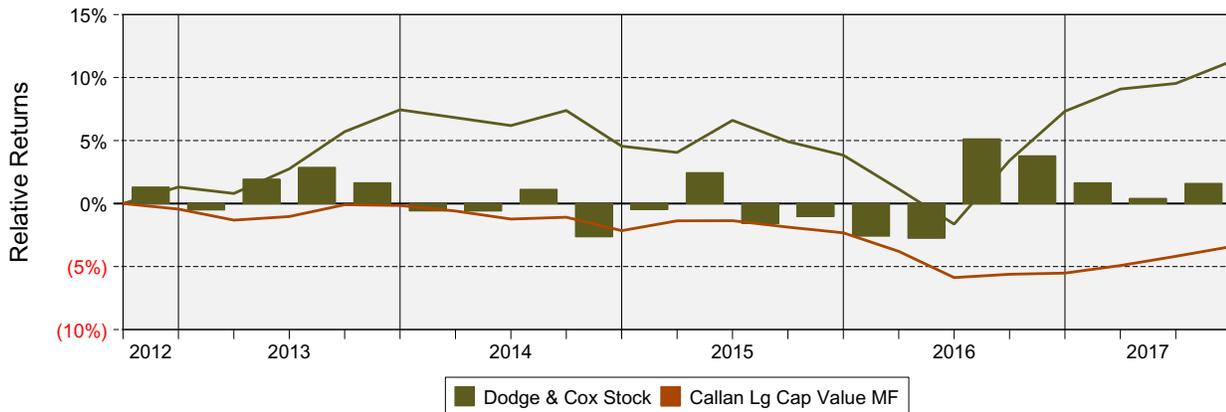
## Return Analysis

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

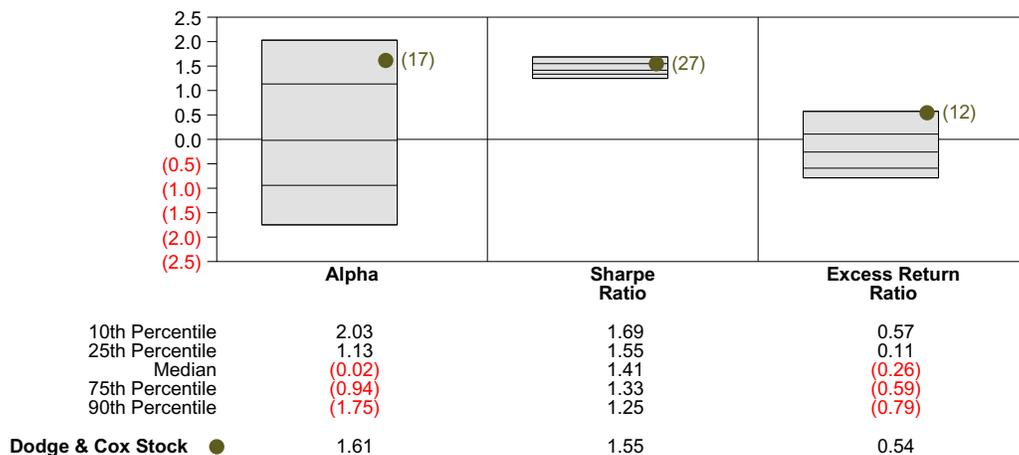
### Performance vs Callan Large Cap Value Mutual Funds (Net)



### Cumulative and Quarterly Relative Return vs Russell 1000 Value Index



### Risk Adjusted Return Measures vs Russell 1000 Value Index Rankings Against Callan Large Cap Value Mutual Funds (Net) Five Years Ended September 30, 2017

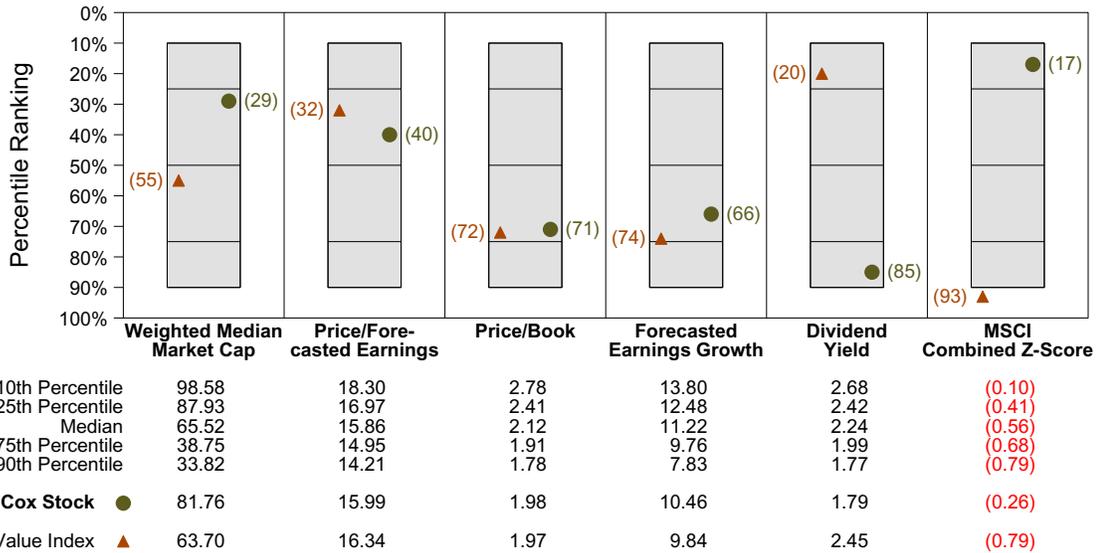


# Dodge & Cox Stock Equity Characteristics Analysis Summary

## Portfolio Characteristics

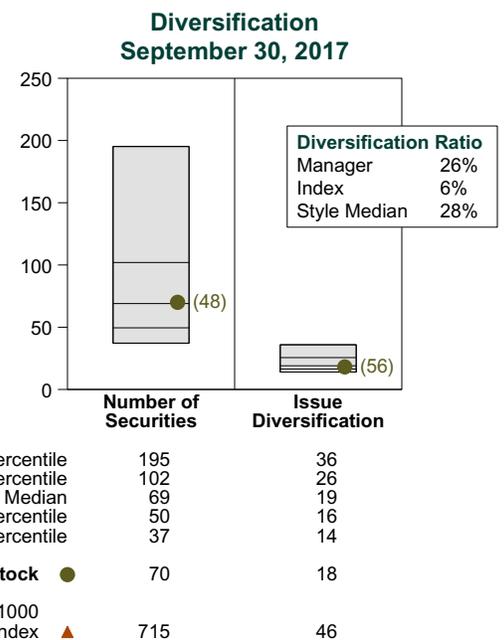
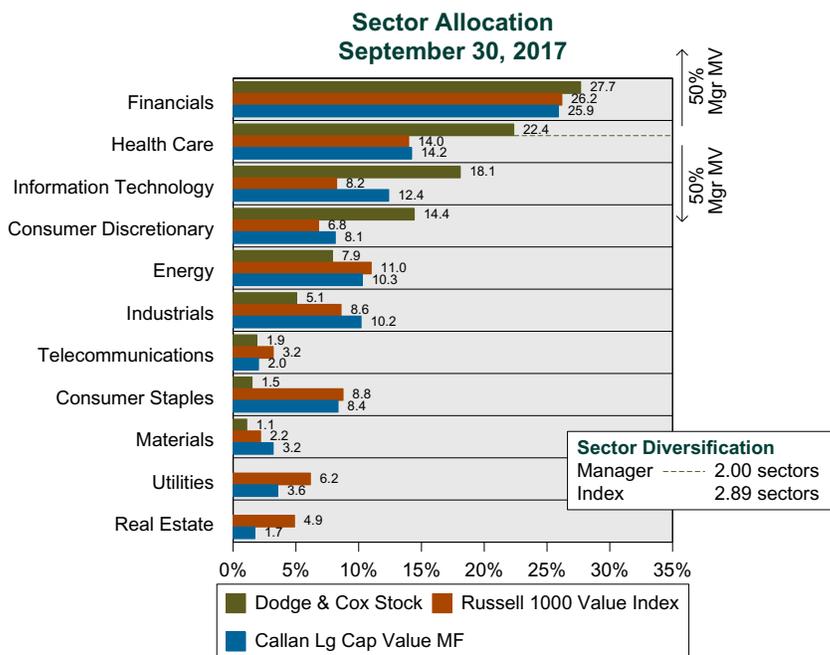
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against Callan Large Cap Value Mutual Funds as of September 30, 2017



## Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.



# Boston Partners

## Period Ended September 30, 2017

### Investment Philosophy

Boston Partners' investment philosophy is grounded in certain "fundamental truths" to investing, namely that low valuation stocks outperform high valuation stocks, companies with strong fundamentals, e.g. high and sustainable returns on invested capital, outperform companies with weak fundamentals, and stocks with positive business momentum, e.g. rising earnings estimates, outperform stocks with negative business momentum. The firm seeks to construct well-diversified portfolios that consistently possess these three characteristics, attempting to limit downside risk, preserve capital, and maximize the power of compounding. Boston Partner's management fee is 50 bps on all assets.

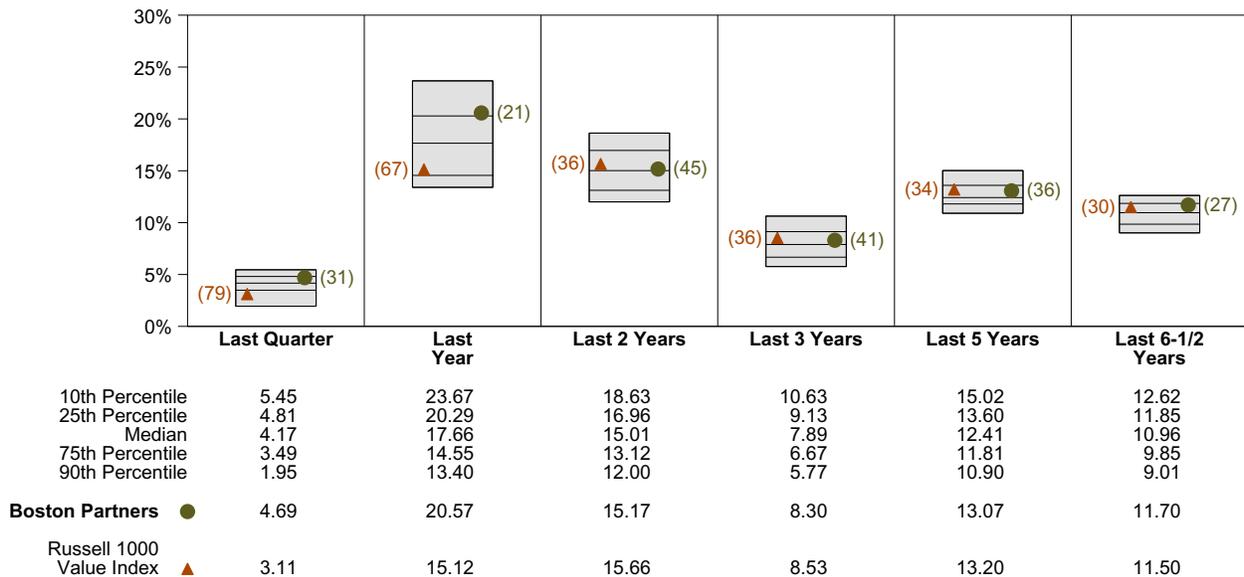
### Quarterly Summary and Highlights

- Boston Partners's portfolio posted a 4.69% return for the quarter placing it in the 31 percentile of the Callan Large Cap Value Mutual Funds group for the quarter and in the 21 percentile for the last year.
- Boston Partners's portfolio outperformed the Russell 1000 Value Index by 1.57% for the quarter and outperformed the Russell 1000 Value Index for the year by 5.45%.

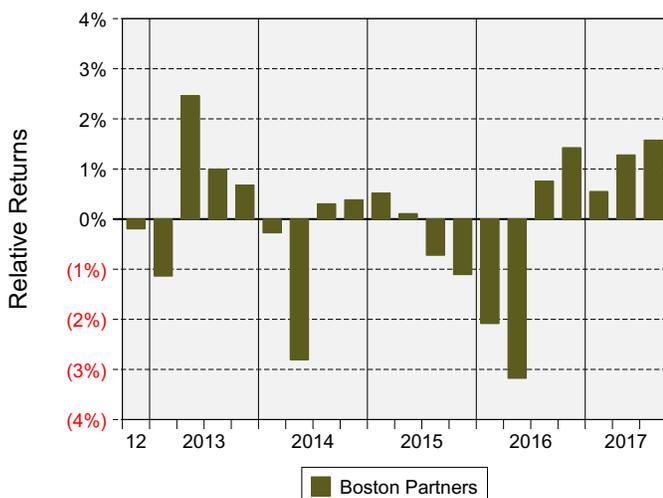
### Quarterly Asset Growth

Beginning Market Value	\$31,933,682
Net New Investment	\$0
Investment Gains/(Losses)	\$1,497,651
Ending Market Value	\$33,431,333

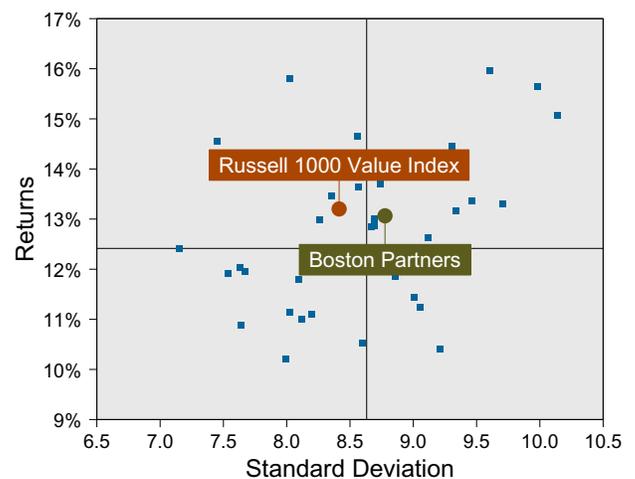
### Performance vs Callan Large Cap Value Mutual Funds (Net)



### Relative Return vs Russell 1000 Value Index



### Callan Large Cap Value Mutual Funds (Net) Annualized Five Year Risk vs Return

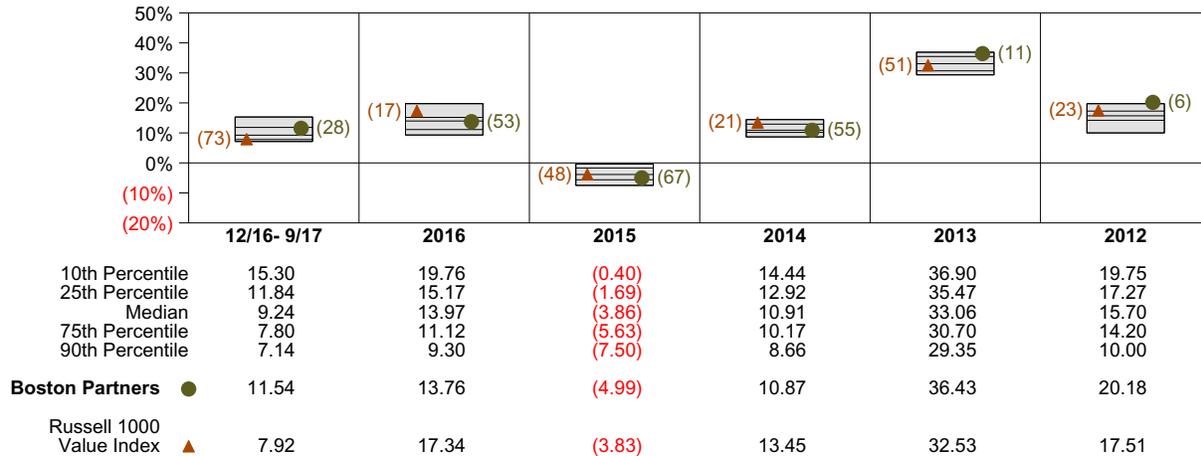


# Boston Partners Return Analysis Summary

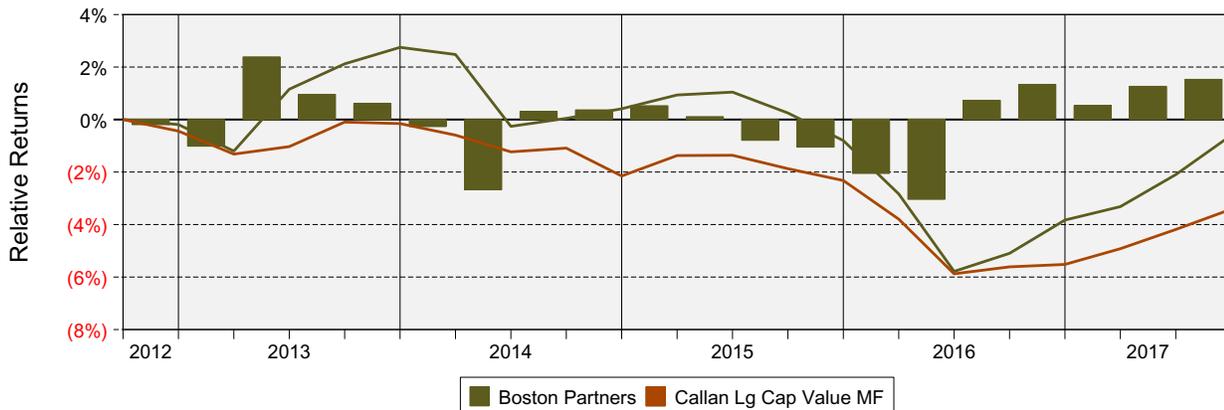
## Return Analysis

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

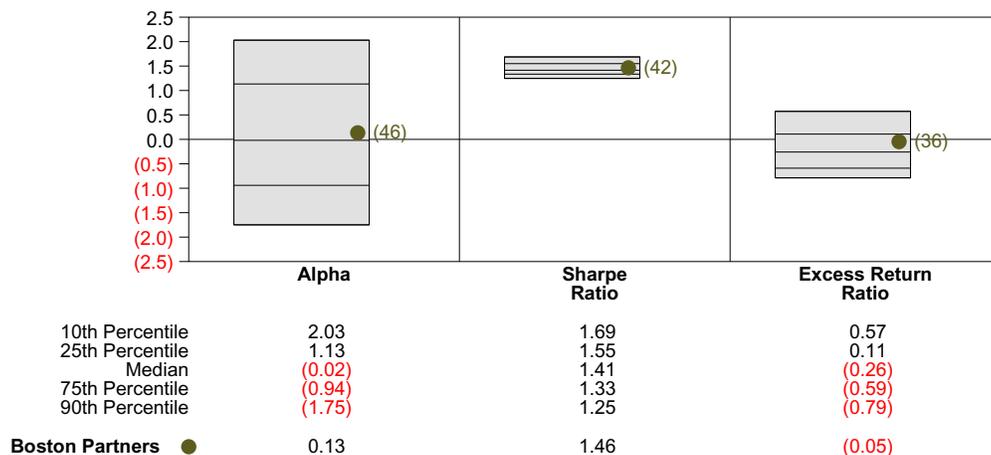
### Performance vs Callan Large Cap Value Mutual Funds (Net)



### Cumulative and Quarterly Relative Return vs Russell 1000 Value Index



### Risk Adjusted Return Measures vs Russell 1000 Value Index Rankings Against Callan Large Cap Value Mutual Funds (Net) Five Years Ended September 30, 2017

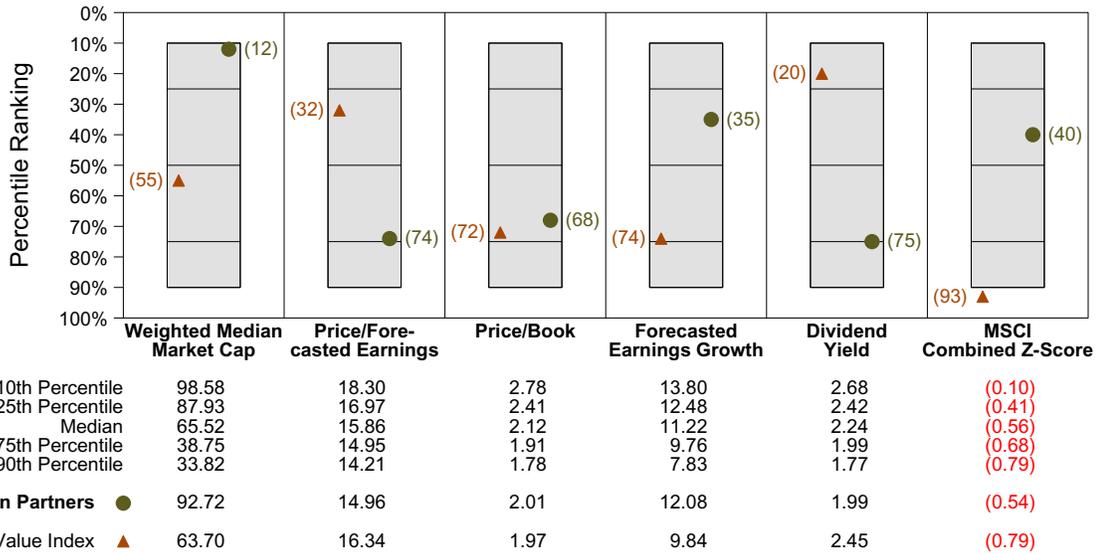


# Boston Partners Equity Characteristics Analysis Summary

## Portfolio Characteristics

This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

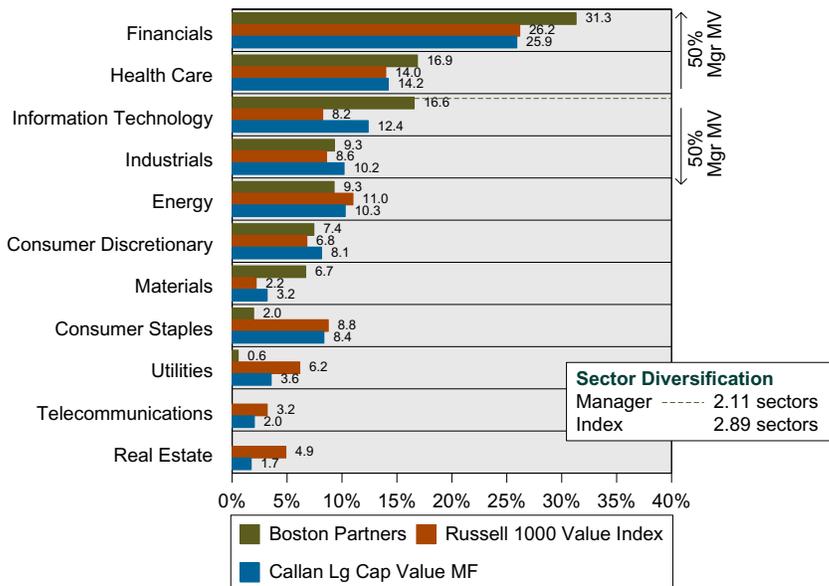
## Portfolio Characteristics Percentile Rankings Rankings Against Callan Large Cap Value Mutual Funds as of September 30, 2017



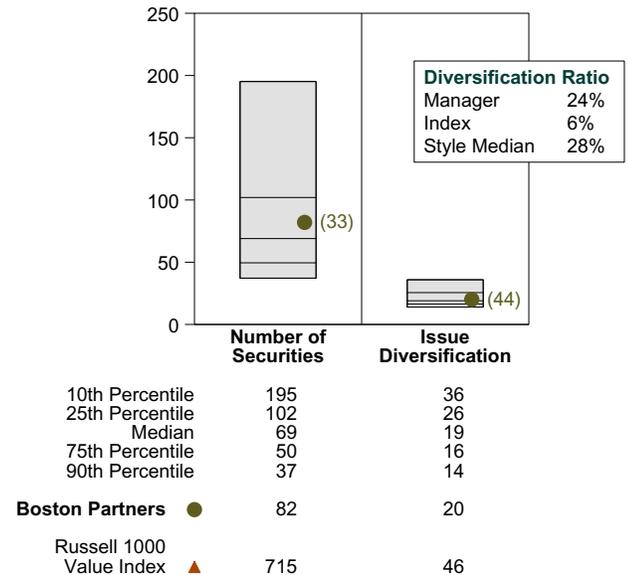
## Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.

### Sector Allocation September 30, 2017



### Diversification September 30, 2017



# Harbor Cap Appreciation Period Ended September 30, 2017

## Investment Philosophy

Key elements of Jennison's investment philosophy include a bottom-up stock selection approach and internal fundamental research. These elements are critical to successful stock selection. Jennison believes that carefully selected, reasonably priced growth stocks should generate investment results superior to the stock market over an intermediate to long-term period.

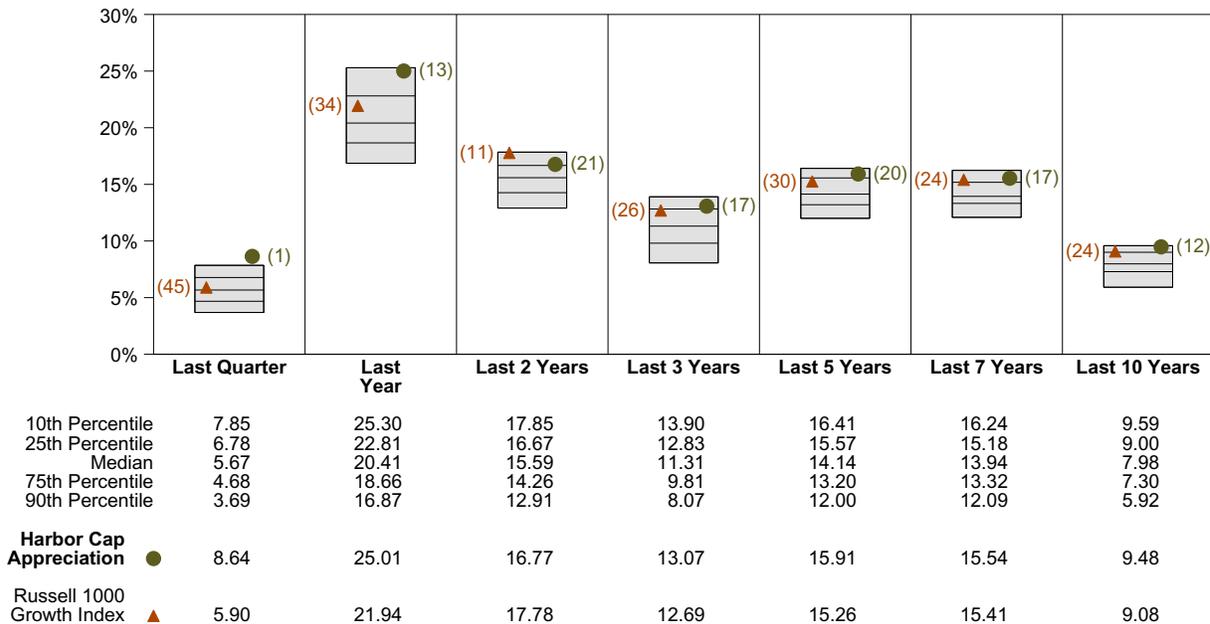
## Quarterly Summary and Highlights

- Harbor Cap Appreciation's portfolio posted a 8.64% return for the quarter placing it in the 1 percentile of the Callan Large Cap Growth Mutual Funds group for the quarter and in the 13 percentile for the last year.
- Harbor Cap Appreciation's portfolio outperformed the Russell 1000 Growth Index by 2.74% for the quarter and outperformed the Russell 1000 Growth Index for the year by 3.07%.

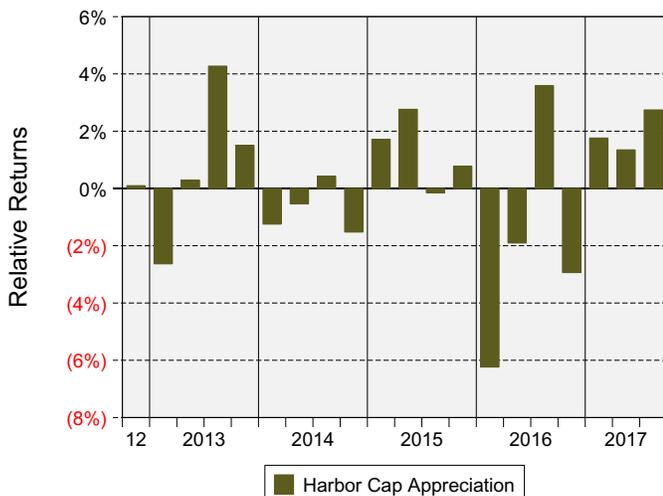
## Quarterly Asset Growth

Beginning Market Value	\$32,644,524
Net New Investment	\$0
Investment Gains/(Losses)	\$2,820,281
Ending Market Value	\$35,464,805

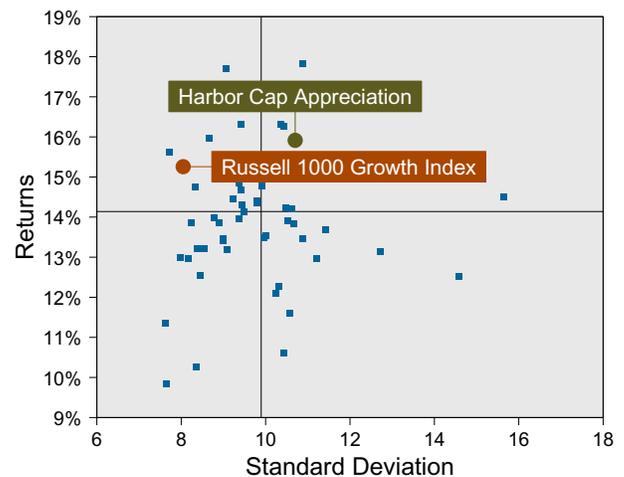
## Performance vs Callan Large Cap Growth Mutual Funds (Net)



## Relative Return vs Russell 1000 Growth Index



## Callan Large Cap Growth Mutual Funds (Net) Annualized Five Year Risk vs Return

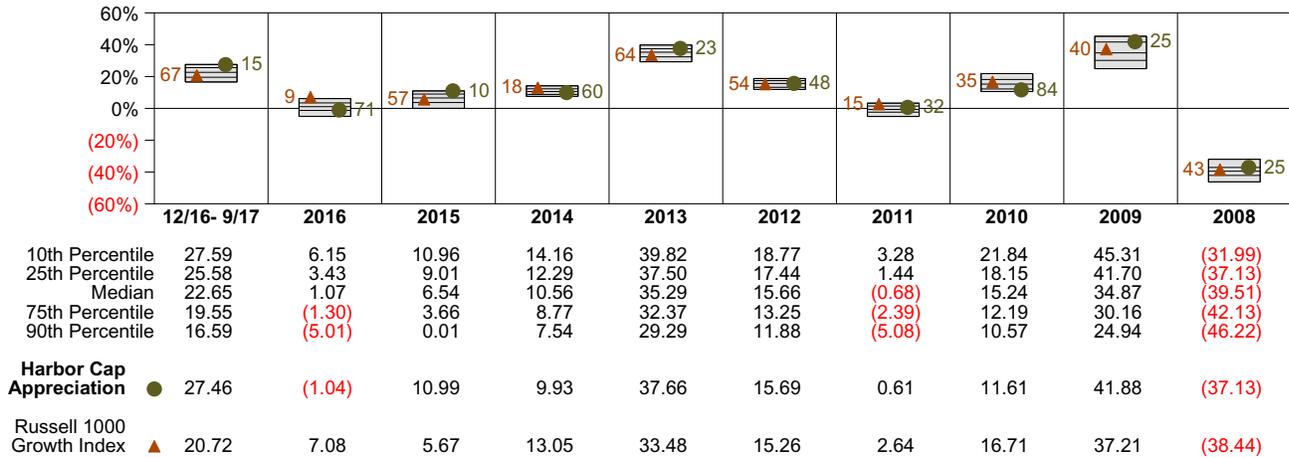


# Harbor Cap Appreciation Return Analysis Summary

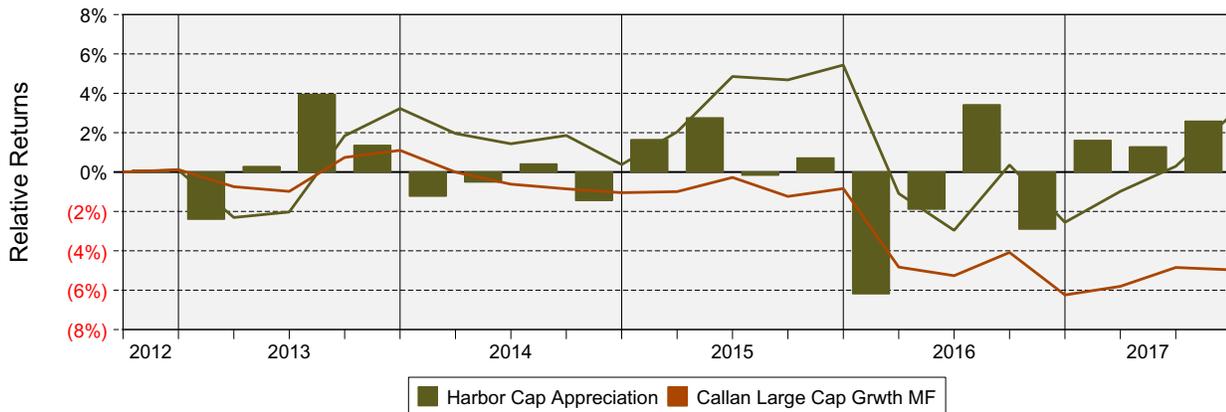
## Return Analysis

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

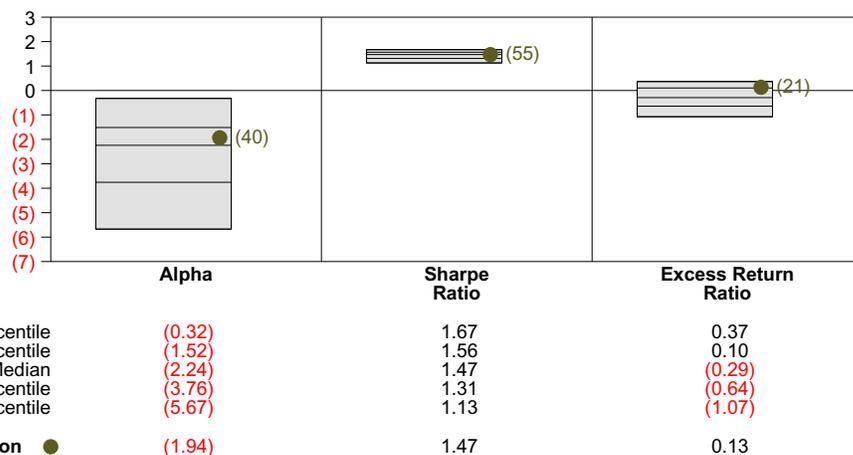
### Performance vs Callan Large Cap Growth Mutual Funds (Net)



### Cumulative and Quarterly Relative Return vs Russell 1000 Growth Index



### Risk Adjusted Return Measures vs Russell 1000 Growth Index Rankings Against Callan Large Cap Growth Mutual Funds (Net) Five Years Ended September 30, 2017

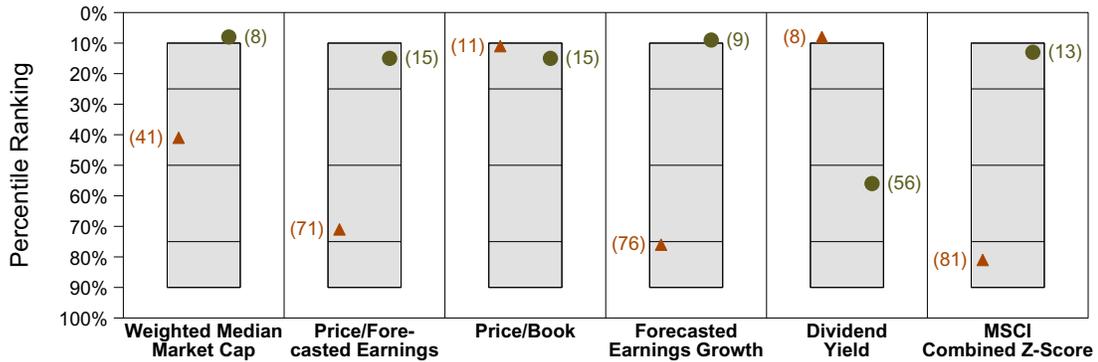


# Harbor Cap Appreciation Equity Characteristics Analysis Summary

## Portfolio Characteristics

This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

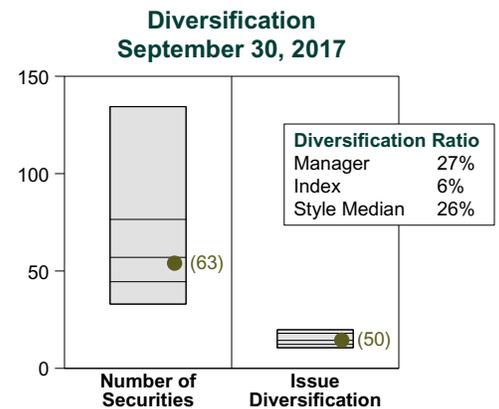
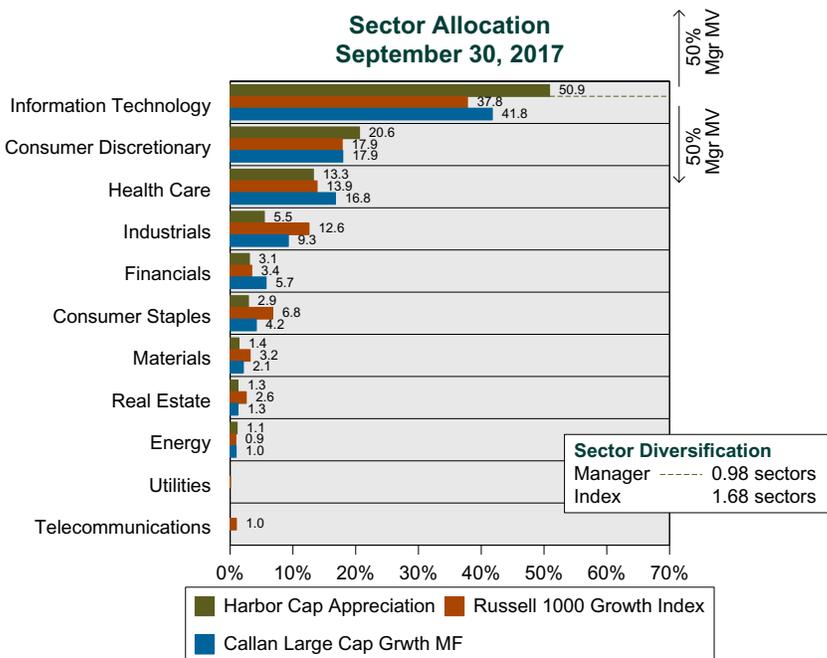
## Portfolio Characteristics Percentile Rankings Rankings Against Callan Large Cap Growth Mutual Funds as of September 30, 2017



10th Percentile	113.30	26.29	6.22	23.87	1.30	1.45
25th Percentile	94.93	24.24	5.82	21.01	1.13	1.28
Median	81.60	23.02	5.14	19.14	0.85	1.14
75th Percentile	67.98	20.59	4.75	16.33	0.77	0.85
90th Percentile	62.41	19.89	4.32	14.51	0.71	0.68
<b>Harbor Cap Appreciation</b>	<b>115.02</b>	<b>26.08</b>	<b>5.97</b>	<b>24.12</b>	<b>0.81</b>	<b>1.45</b>
Russell 1000 Growth Index	89.00	20.87	6.10	15.98	1.38	0.79

## Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.



10th Percentile	134	20
25th Percentile	77	18
Median	57	14
75th Percentile	45	12
90th Percentile	33	11
<b>Harbor Cap Appreciation</b>	<b>54</b>	<b>14</b>
Russell 1000 Growth Index	549	34

# Janus Research Period Ended September 30, 2017

## Investment Philosophy

Growth Equity Style mutual funds invest mainly in large companies that are expected to have above average prospects for long-term growth in earnings and profitability. Future growth prospects take precedence over valuation levels in stock selection. Switched from Class T Shares to Class I Shares in December 2009 and to Class N Shares in July 2016.

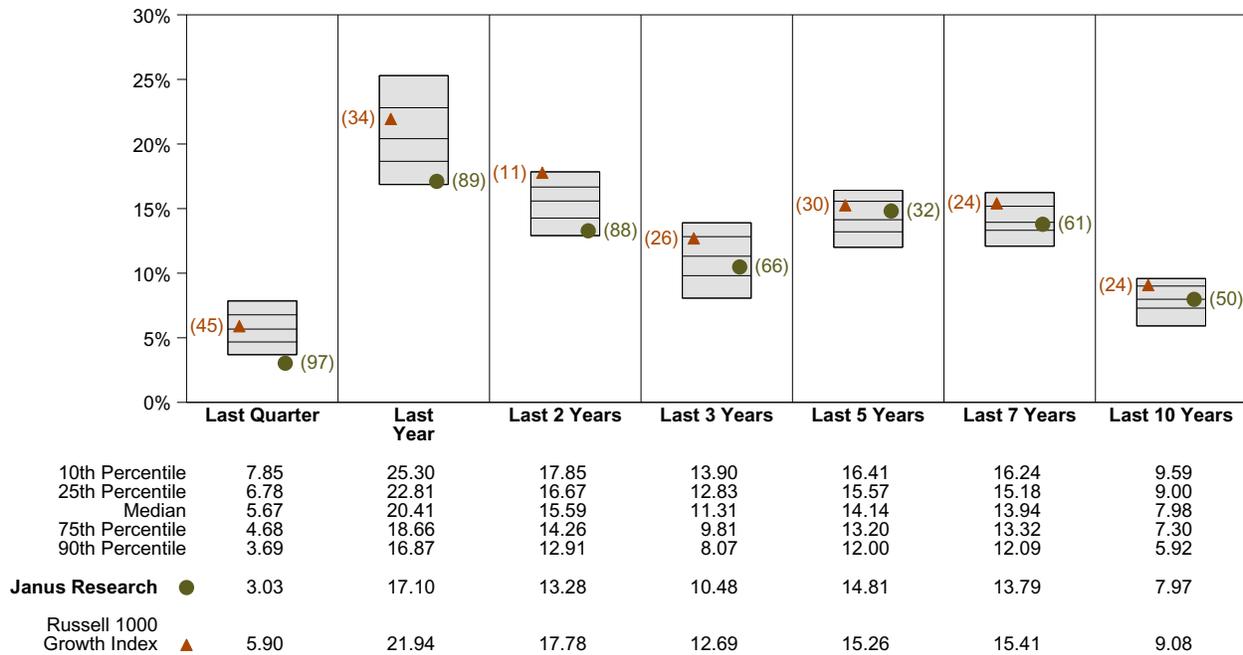
## Quarterly Summary and Highlights

- Janus Research's portfolio posted a 3.03% return for the quarter placing it in the 97 percentile of the Callan Large Cap Growth Mutual Funds group for the quarter and in the 89 percentile for the last year.
- Janus Research's portfolio underperformed the Russell 1000 Growth Index by 2.87% for the quarter and underperformed the Russell 1000 Growth Index for the year by 4.84%.

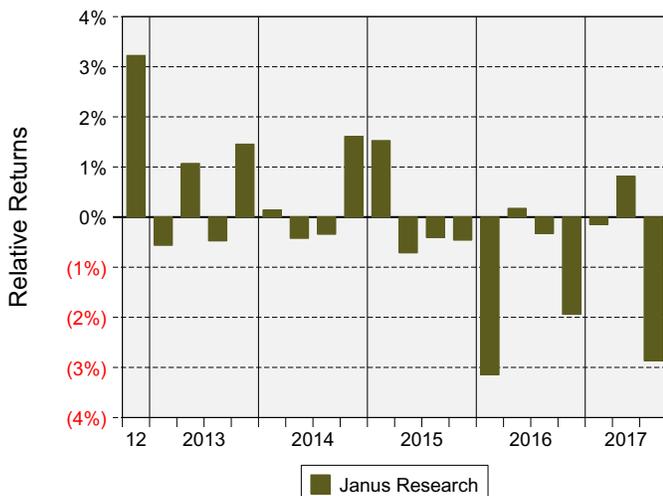
## Quarterly Asset Growth

Beginning Market Value	\$21,007,278
Net New Investment	\$-5,000,000
Investment Gains/(Losses)	\$610,334
Ending Market Value	\$16,617,612

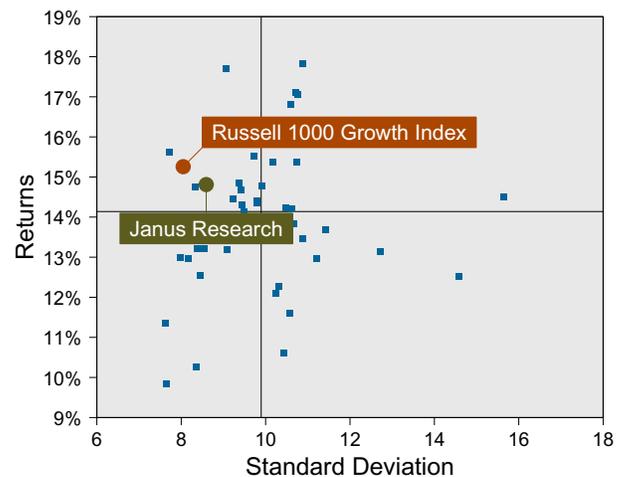
## Performance vs Callan Large Cap Growth Mutual Funds (Net)



## Relative Return vs Russell 1000 Growth Index



## Callan Large Cap Growth Mutual Funds (Net) Annualized Five Year Risk vs Return

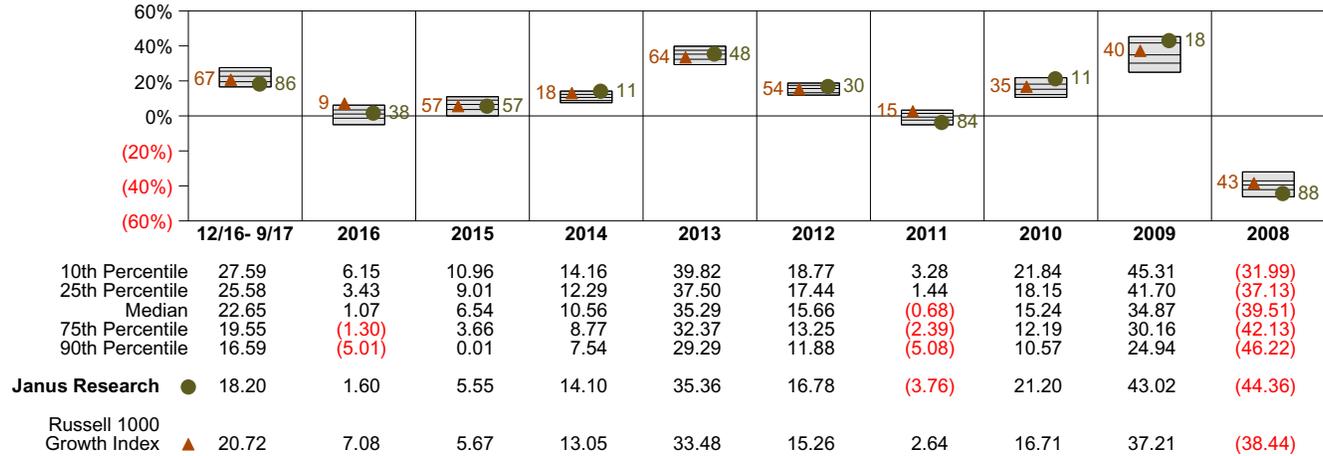


# Janus Research Return Analysis Summary

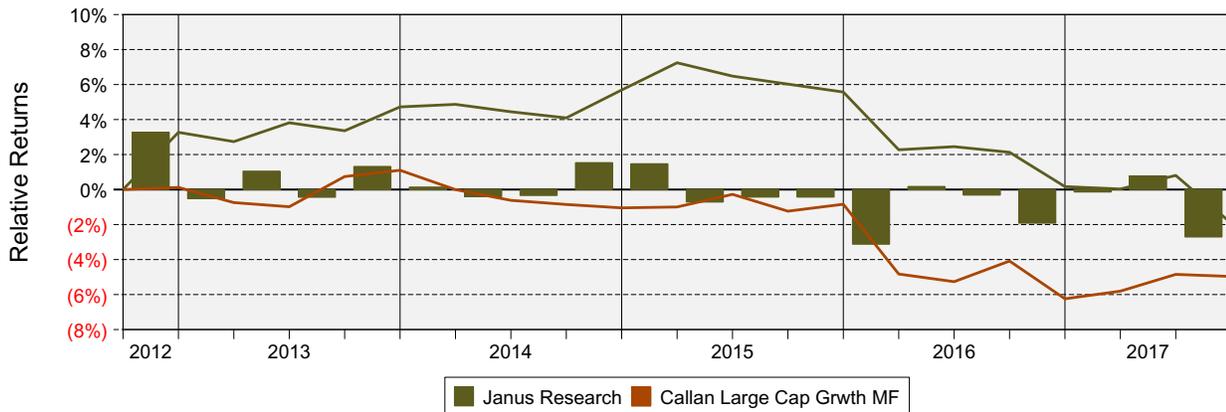
## Return Analysis

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

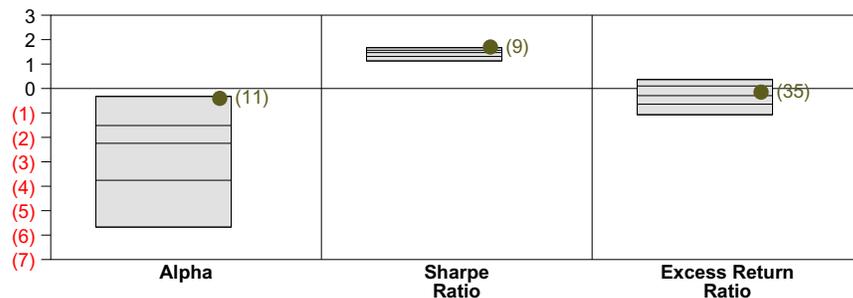
### Performance vs Callan Large Cap Growth Mutual Funds (Net)



### Cumulative and Quarterly Relative Return vs Russell 1000 Growth Index



### Risk Adjusted Return Measures vs Russell 1000 Growth Index Rankings Against Callan Large Cap Growth Mutual Funds (Net) Five Years Ended September 30, 2017

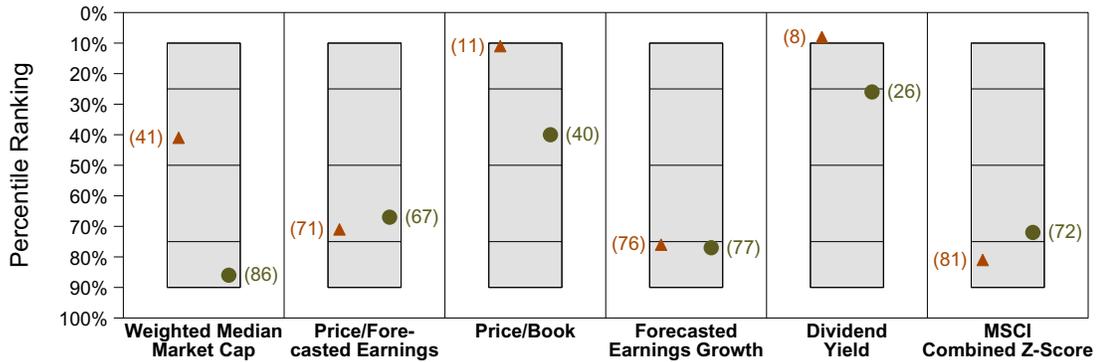


# Janus Research Equity Characteristics Analysis Summary

## Portfolio Characteristics

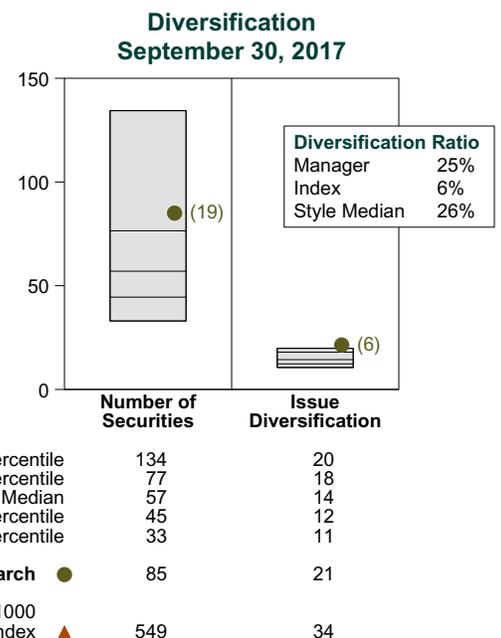
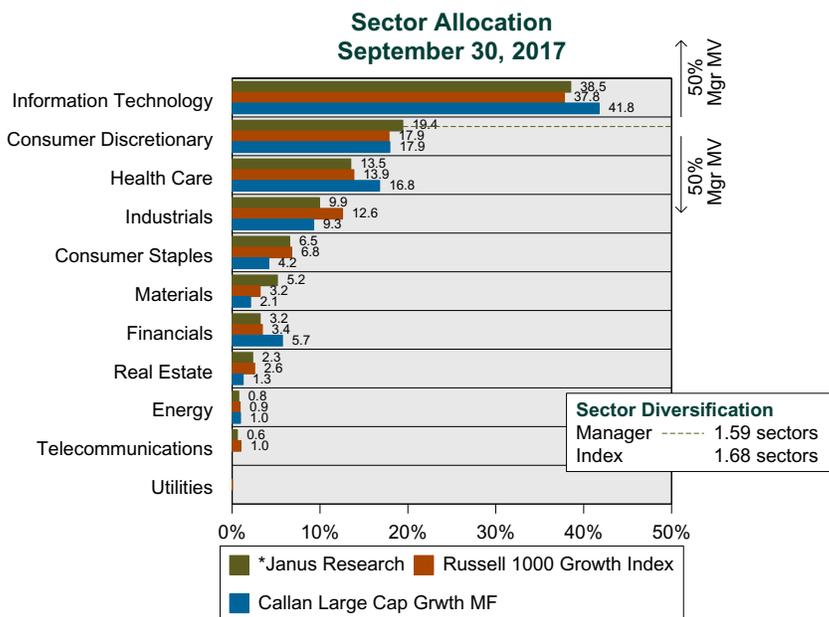
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against Callan Large Cap Growth Mutual Funds as of September 30, 2017



## Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.



\*9/30/17 portfolio characteristics generated using most recently available holdings (6/30/17) modified based on a "buy-and-hold" assumption (repriced and adjusted for corporate actions). Analysis is then done using current market and company financial data.

# Fidelity Low Priced Stock Period Ended September 30, 2017

## Investment Philosophy

The Low Priced Stock team believes that many low priced, non-glamour, small companies are mispriced, providing opportunities, and seeks capital appreciation by investing mostly in common and preferred domestic stocks, but also international equities, convertible securities, and other fixed income securities.

## Quarterly Summary and Highlights

- Fidelity Low Priced Stock's portfolio posted a 5.03% return for the quarter placing it in the 17 percentile of the Callan Mid Cap Value Mutual Funds group for the quarter and in the 42 percentile for the last year.
- Fidelity Low Priced Stock's portfolio outperformed the Russell MidCap Value Idx by 2.89% for the quarter and outperformed the Russell MidCap Value Idx for the year by 3.54%.

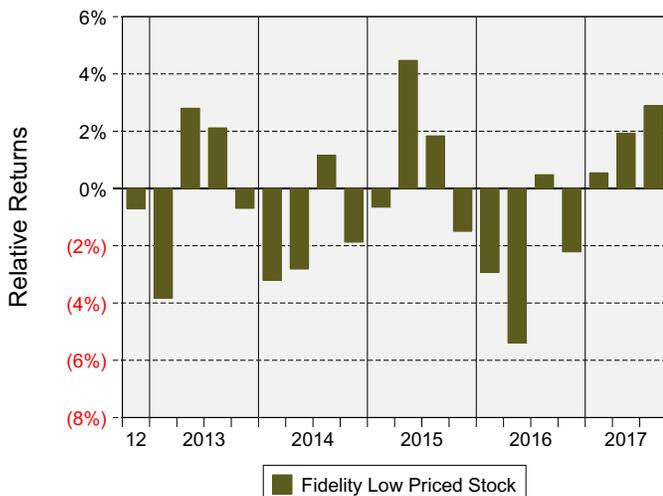
## Quarterly Asset Growth

Beginning Market Value	\$13,696,982
Net New Investment	\$0
Investment Gains/(Losses)	\$688,994
Ending Market Value	\$14,385,976

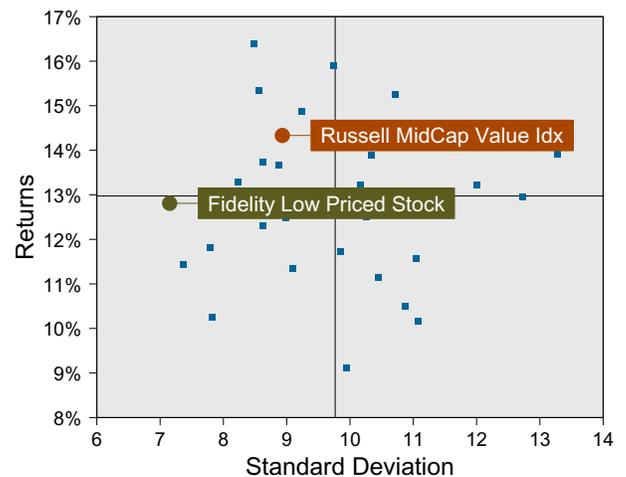
## Performance vs Callan Mid Cap Value Mutual Funds (Net)



## Relative Return vs Russell MidCap Value Idx



## Callan Mid Cap Value Mutual Funds (Net) Annualized Five Year Risk vs Return

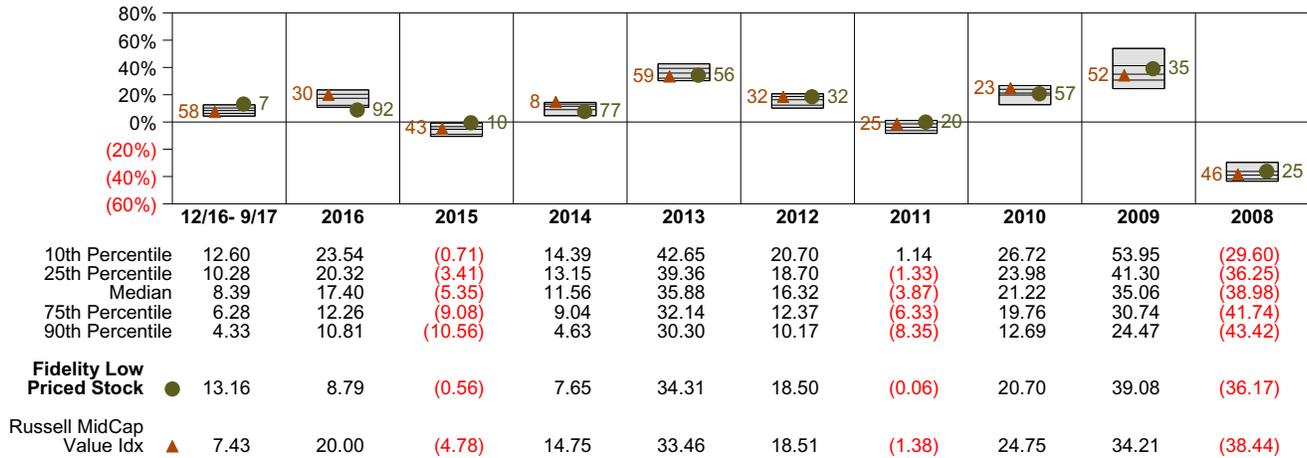


# Fidelity Low Priced Stock Return Analysis Summary

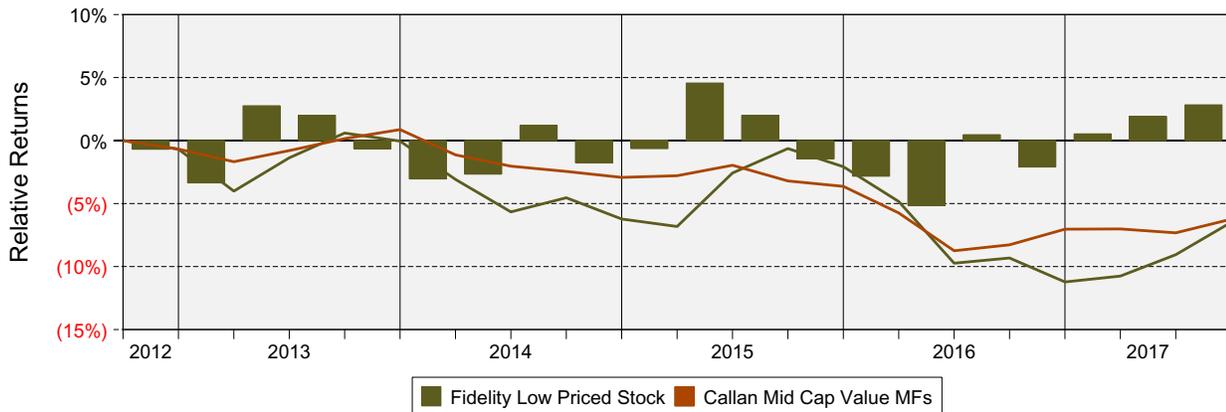
## Return Analysis

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

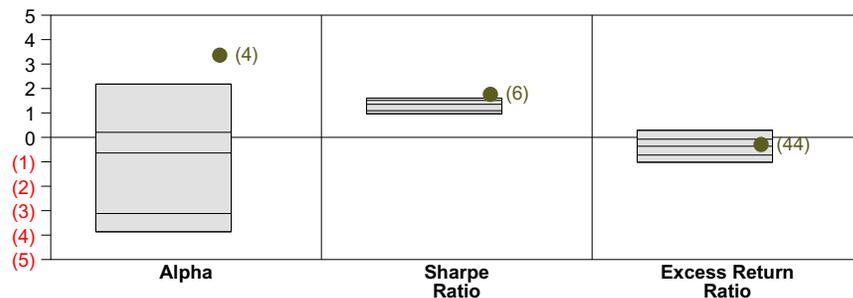
### Performance vs Callan Mid Cap Value Mutual Funds (Net)



### Cumulative and Quarterly Relative Return vs Russell MidCap Value Idx



### Risk Adjusted Return Measures vs Russell MidCap Value Idx Rankings Against Callan Mid Cap Value Mutual Funds (Net) Five Years Ended September 30, 2017



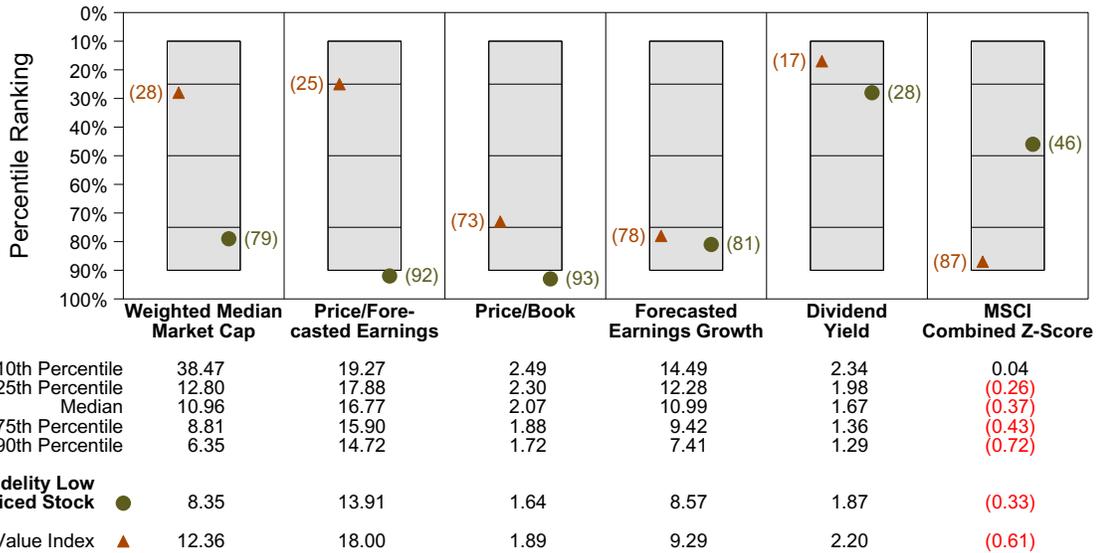
10th Percentile	2.18	1.61	0.29
25th Percentile	0.21	1.51	(0.07)
Median	(0.64)	1.35	(0.36)
75th Percentile	(3.12)	1.09	(0.72)
90th Percentile	(3.86)	0.96	(1.02)
<b>Fidelity Low Priced Stock</b>	<b>3.36</b>	<b>1.76</b>	<b>(0.29)</b>

# Fidelity Low Priced Stock Equity Characteristics Analysis Summary

## Portfolio Characteristics

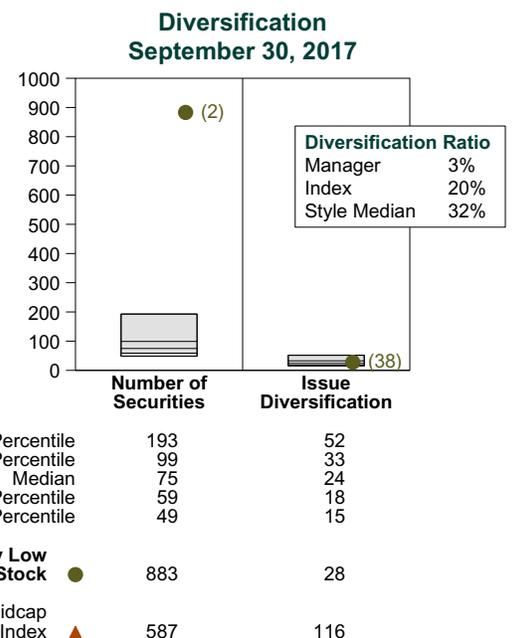
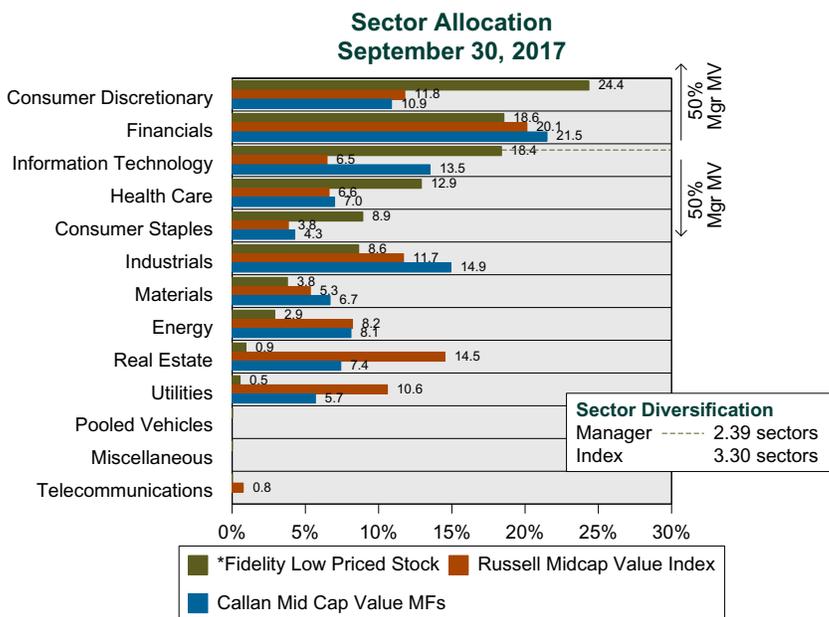
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against Callan Mid Cap Value Mutual Funds as of September 30, 2017



## Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.



\*9/30/17 portfolio characteristics generated using most recently available holdings (6/30/17) modified based on a "buy-and-hold" assumption (repriced and adjusted for corporate actions). Analysis is then done using current market and company financial data.

# Janus Enterprise Period Ended September 30, 2017

## Investment Philosophy

Janus believes that investing in companies with sustainable growth and high return on invested capital can drive consistent returns with moderate risk. The team seeks to identify mid cap companies with high quality management teams that wisely allocate capital to drive growth over time. Switched from Class T Shares to Class I Shares in December 2009 and Class N Shares in July 2016.

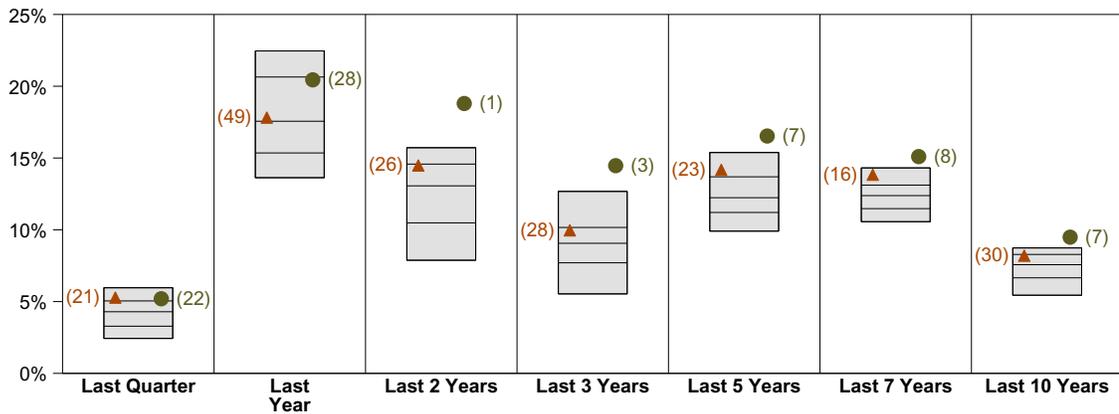
## Quarterly Summary and Highlights

- Janus Enterprise's portfolio posted a 5.20% return for the quarter placing it in the 22 percentile of the Callan Mid Cap Growth Mutual Funds group for the quarter and in the 28 percentile for the last year.
- Janus Enterprise's portfolio underperformed the Russell MidCap Growth Idx by 0.09% for the quarter and outperformed the Russell MidCap Growth Idx for the year by 2.63%.

## Quarterly Asset Growth

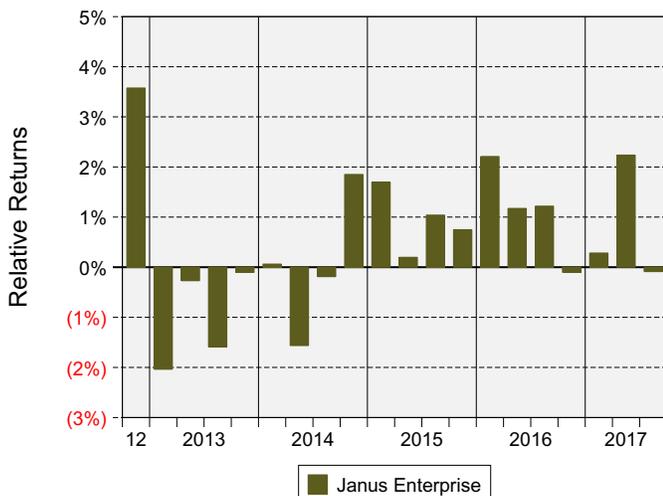
Beginning Market Value	\$13,787,906
Net New Investment	\$0
Investment Gains/(Losses)	\$716,550
Ending Market Value	\$14,504,456

## Performance vs Callan Mid Cap Growth Mutual Funds (Net)

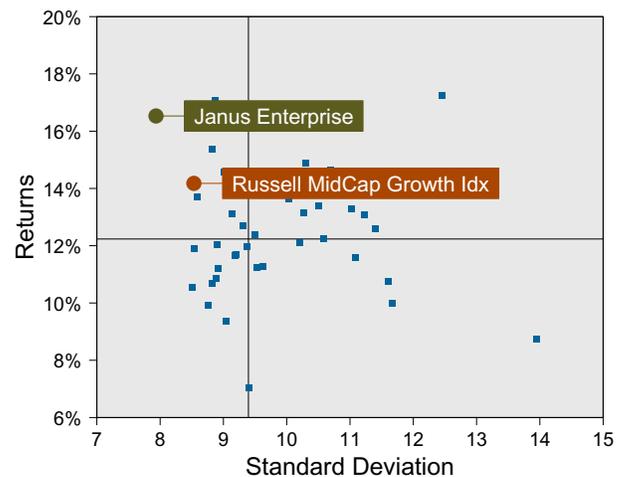


10th Percentile	5.96	22.46	15.72	12.68	15.38	14.31	8.74
25th Percentile	5.05	20.64	14.58	10.16	13.69	13.11	8.28
Median	4.29	17.56	13.06	9.06	12.24	12.38	7.57
75th Percentile	3.29	15.35	10.48	7.70	11.21	11.48	6.65
90th Percentile	2.43	13.63	7.88	5.54	9.91	10.56	5.44
<b>Janus Enterprise</b> ●	5.20	20.45	18.80	14.47	16.53	15.10	9.49
Russell MidCap Growth Idx ▲	5.28	17.82	14.48	9.96	14.18	13.84	8.20

## Relative Return vs Russell MidCap Growth Idx



## Callan Mid Cap Growth Mutual Funds (Net) Annualized Five Year Risk vs Return

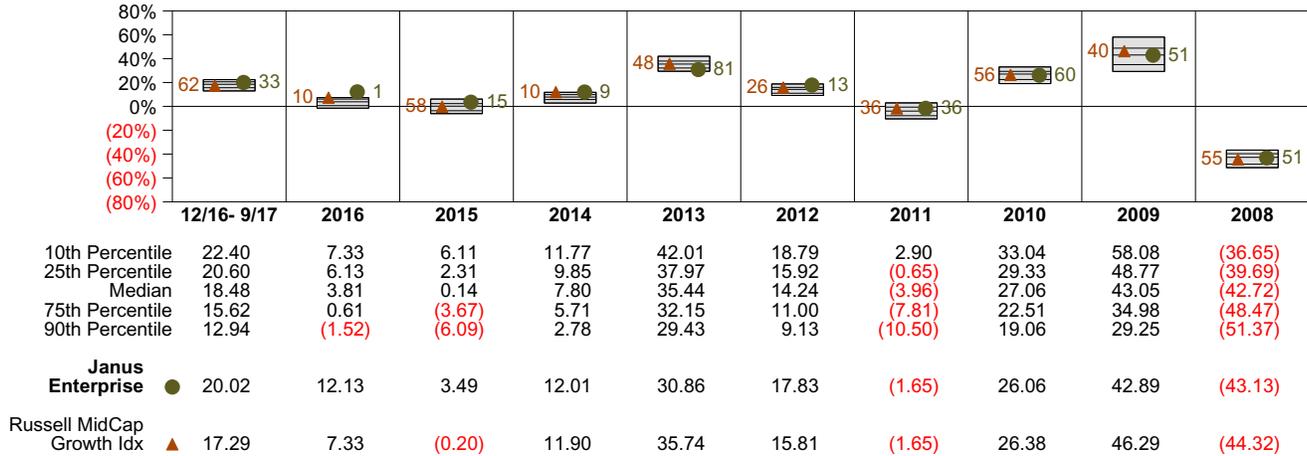


# Janus Enterprise Return Analysis Summary

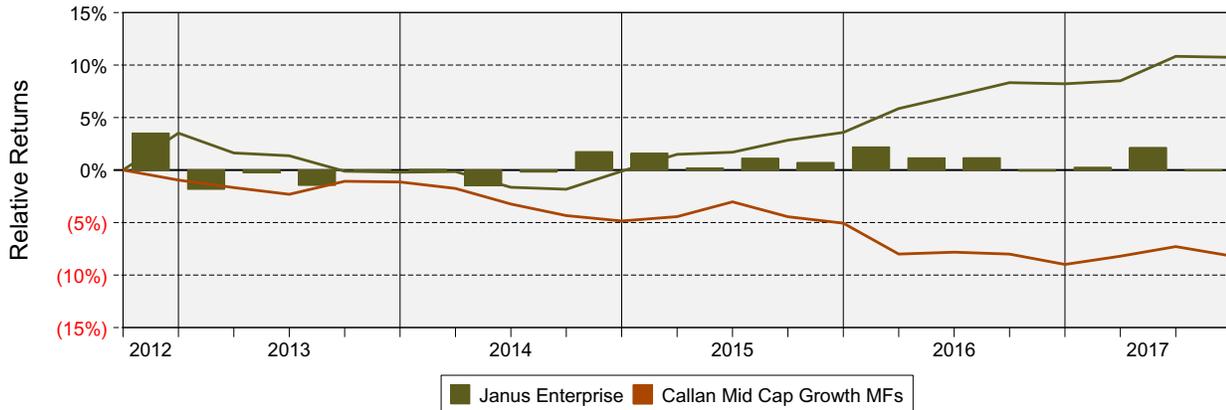
## Return Analysis

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

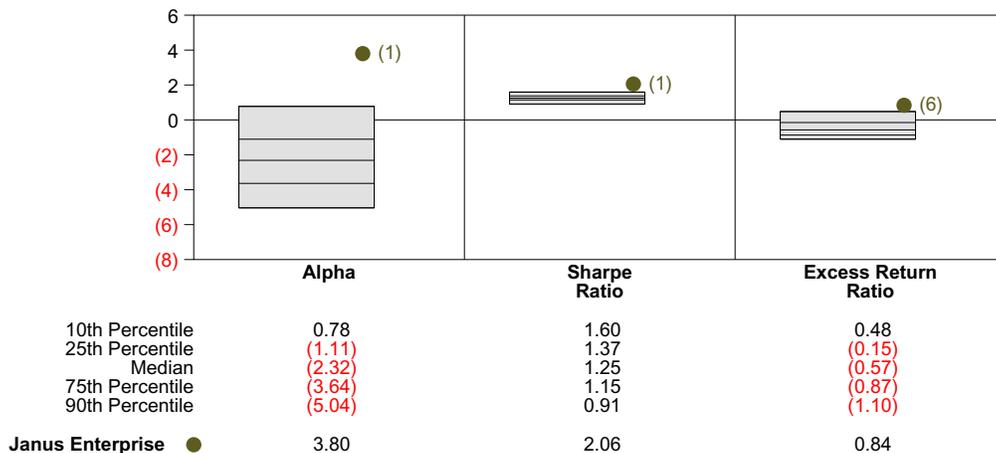
### Performance vs Callan Mid Cap Growth Mutual Funds (Net)



### Cumulative and Quarterly Relative Return vs Russell MidCap Growth Idx



### Risk Adjusted Return Measures vs Russell MidCap Growth Idx Rankings Against Callan Mid Cap Growth Mutual Funds (Net) Five Years Ended September 30, 2017

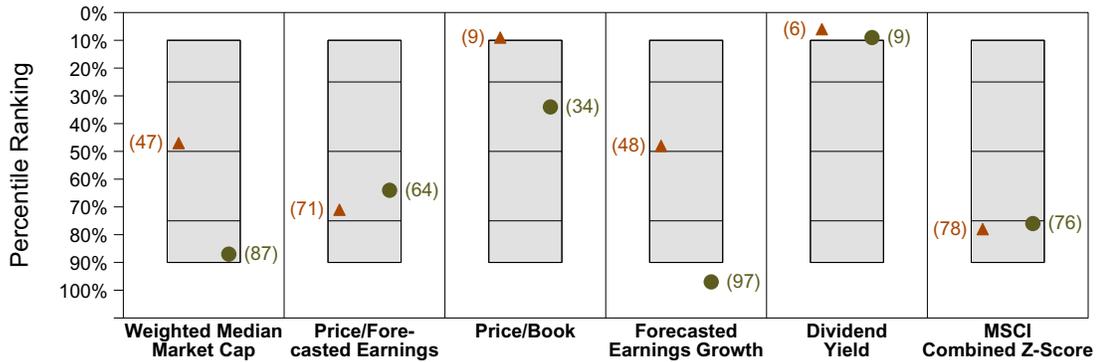


# Janus Enterprise Equity Characteristics Analysis Summary

## Portfolio Characteristics

This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against Callan Mid Cap Growth Mutual Funds as of September 30, 2017

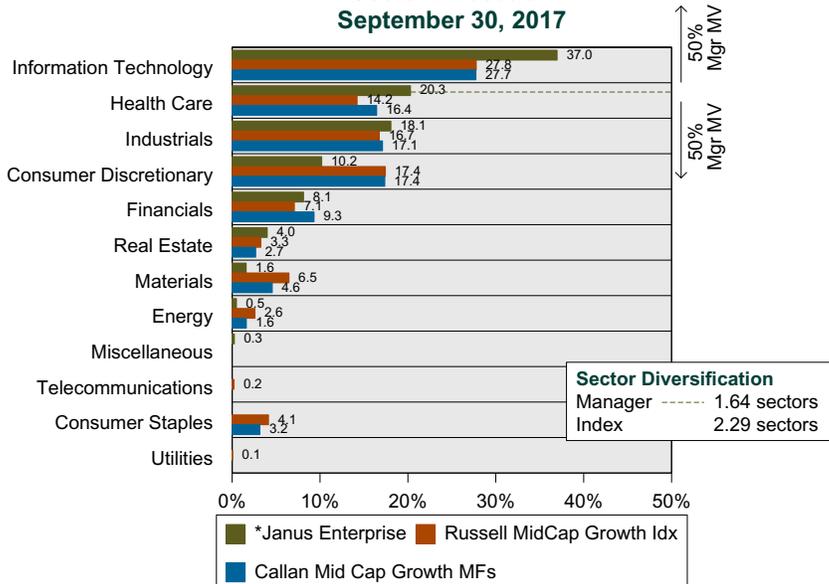


	Weighted Median Market Cap	Price/Forecasted Earnings	Price/Book	Forecasted Earnings Growth	Dividend Yield	MSCI Combined Z-Score
10th Percentile	15.27	28.93	5.27	22.66	0.90	1.03
25th Percentile	13.65	25.32	4.85	18.81	0.81	0.86
Median	12.56	22.89	4.57	15.42	0.69	0.77
75th Percentile	10.52	21.37	3.88	14.20	0.61	0.67
90th Percentile	8.81	21.06	3.60	13.75	0.44	0.50
*Janus Enterprise	9.39	21.87	4.75	12.09	0.91	0.65
Russell MidCap Growth Idx	12.77	21.43	5.36	15.56	1.04	0.62

## Sector Weights

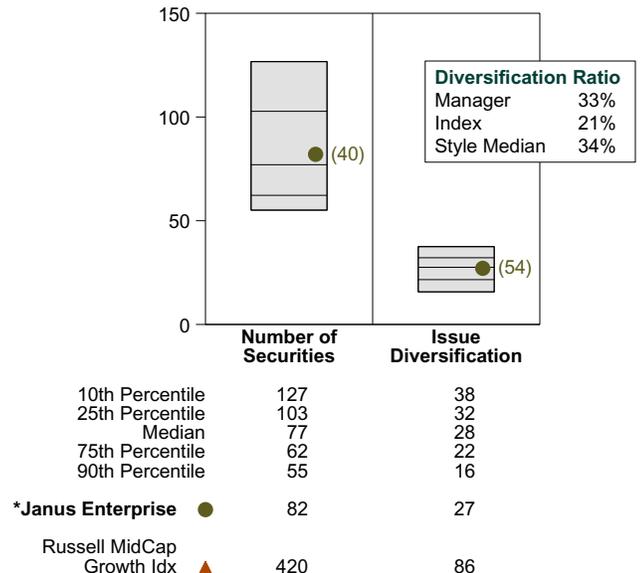
The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.

### Sector Allocation September 30, 2017



Sector Diversification	
Manager	1.64 sectors
Index	2.29 sectors

### Diversification September 30, 2017



\*9/30/17 portfolio characteristics generated using most recently available holdings (6/30/17) modified based on a "buy-and-hold" assumption (repriced and adjusted for corporate actions). Analysis is then done using current market and company financial data.

# Prudential Small Cap Value Period Ended September 30, 2017

## Investment Philosophy

QMA believes a systematic approach that focuses on stocks with low valuations and confirming signals of attractiveness can outperform a small cap value benchmark. Its research shows that adapting to changing market conditions by dynamically shifting the weight on specific factors, while simultaneously maintaining a focus on value stocks, leads to better performance than using static factor exposures. Switched share class in September 2015.

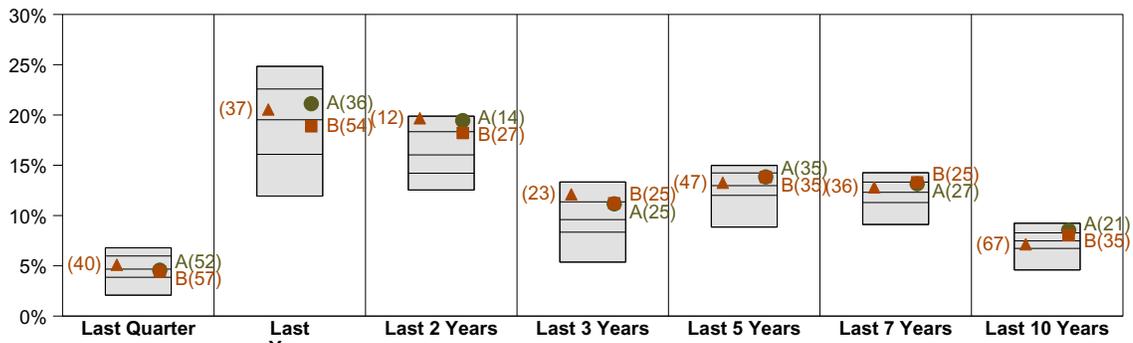
## Quarterly Summary and Highlights

- Prudential Small Cap Value's portfolio posted a 4.57% return for the quarter placing it in the 52 percentile of the Callan Small Cap Value Mutual Funds group for the quarter and in the 36 percentile for the last year.
- Prudential Small Cap Value's portfolio underperformed the Russell 2000 Value Index by 0.54% for the quarter and outperformed the Russell 2000 Value Index for the year by 0.57%.

## Quarterly Asset Growth

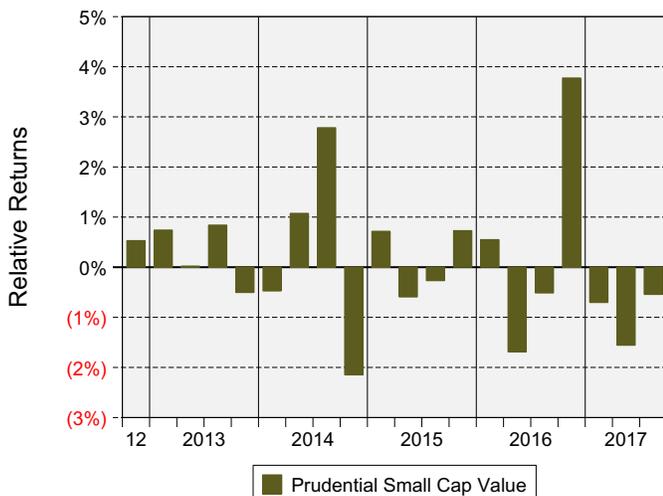
Beginning Market Value	\$12,883,482
Net New Investment	\$0
Investment Gains/(Losses)	\$588,370
Ending Market Value	\$13,471,851

## Performance vs Callan Small Cap Value Mutual Funds (Net)

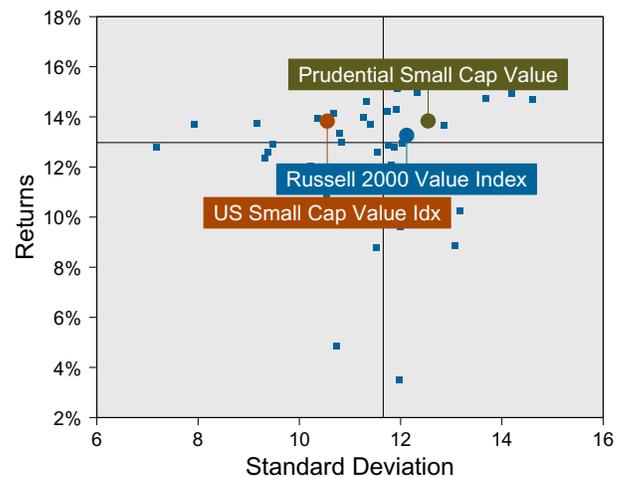


10th Percentile	6.79	24.84	19.88	13.34	14.98	14.26	9.23	
25th Percentile	5.98	22.59	18.34	11.36	14.24	13.33	8.28	
Median	4.67	19.52	16.03	9.60	12.97	12.31	7.48	
75th Percentile	3.86	16.09	14.21	8.35	12.01	11.29	6.73	
90th Percentile	2.08	11.94	12.54	5.37	8.85	9.11	4.59	
Prudential Small Cap Value	● A	4.57	21.12	19.45	11.16	13.84	13.16	8.54
US Small Cap Value Idx	■ B	4.43	18.88	18.21	11.22	13.83	13.30	8.04
Russell 2000 Value Index	▲	5.11	20.55	19.68	12.12	13.27	12.80	7.14

## Relative Return vs Russell 2000 Value Index



## Callan Small Cap Value Mutual Funds (Net) Annualized Five Year Risk vs Return

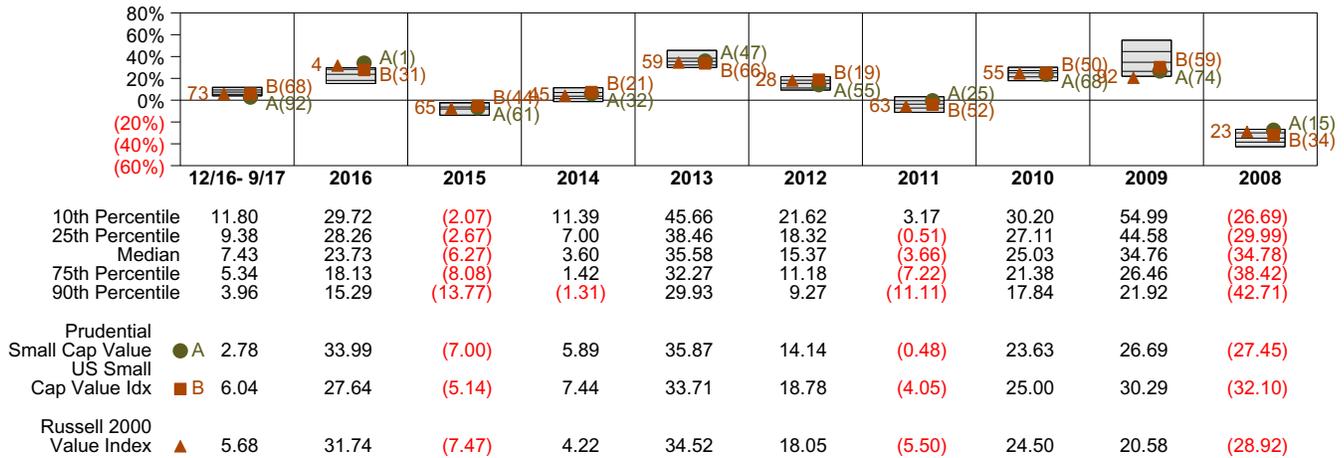


# Prudential Small Cap Value Return Analysis Summary

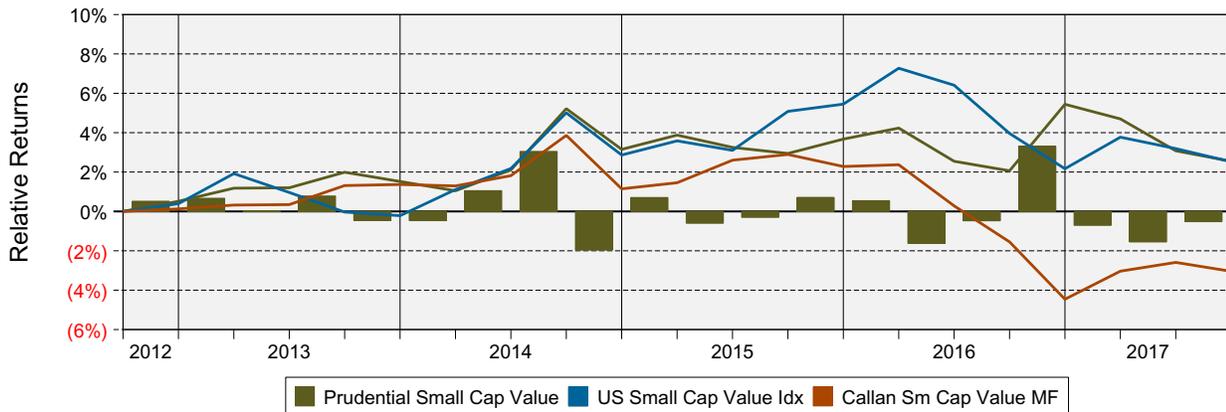
## Return Analysis

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

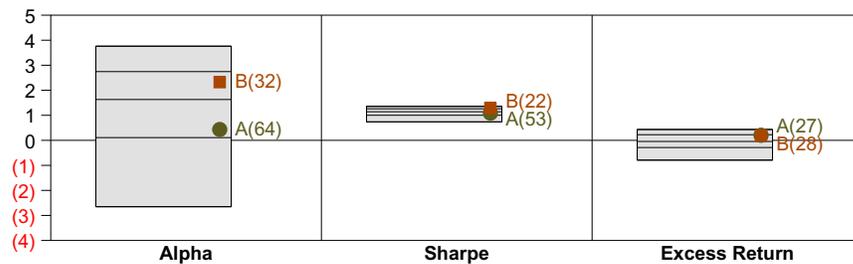
### Performance vs Callan Small Cap Value Mutual Funds (Net)



### Cumulative and Quarterly Relative Return vs Russell 2000 Value Index



### Risk Adjusted Return Measures vs Russell 2000 Value Index Rankings Against Callan Small Cap Value Mutual Funds (Net) Five Years Ended September 30, 2017



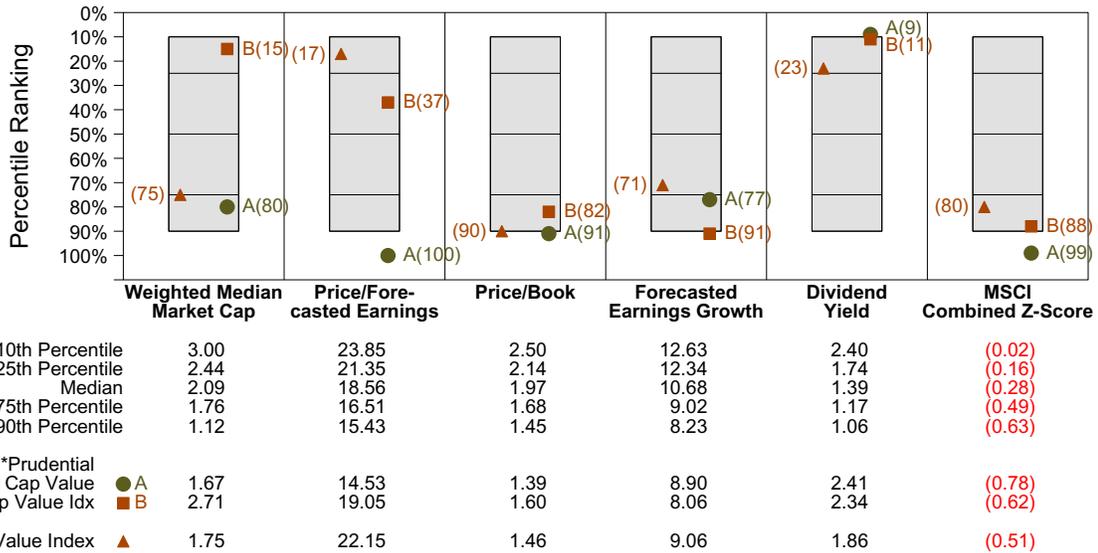
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	3.76	1.36	0.43
25th Percentile	2.75	1.26	0.22
Median	1.63	1.14	(0.04)
75th Percentile	0.11	1.00	(0.29)
90th Percentile	(2.65)	0.74	(0.79)
Prudential Small Cap Value US Small Cap Value Idx	● A 0.43	1.09	0.20
Callan Sm Cap Value MF	■ B 2.33	1.29	0.19

# Prudential Small Cap Value Equity Characteristics Analysis Summary

## Portfolio Characteristics

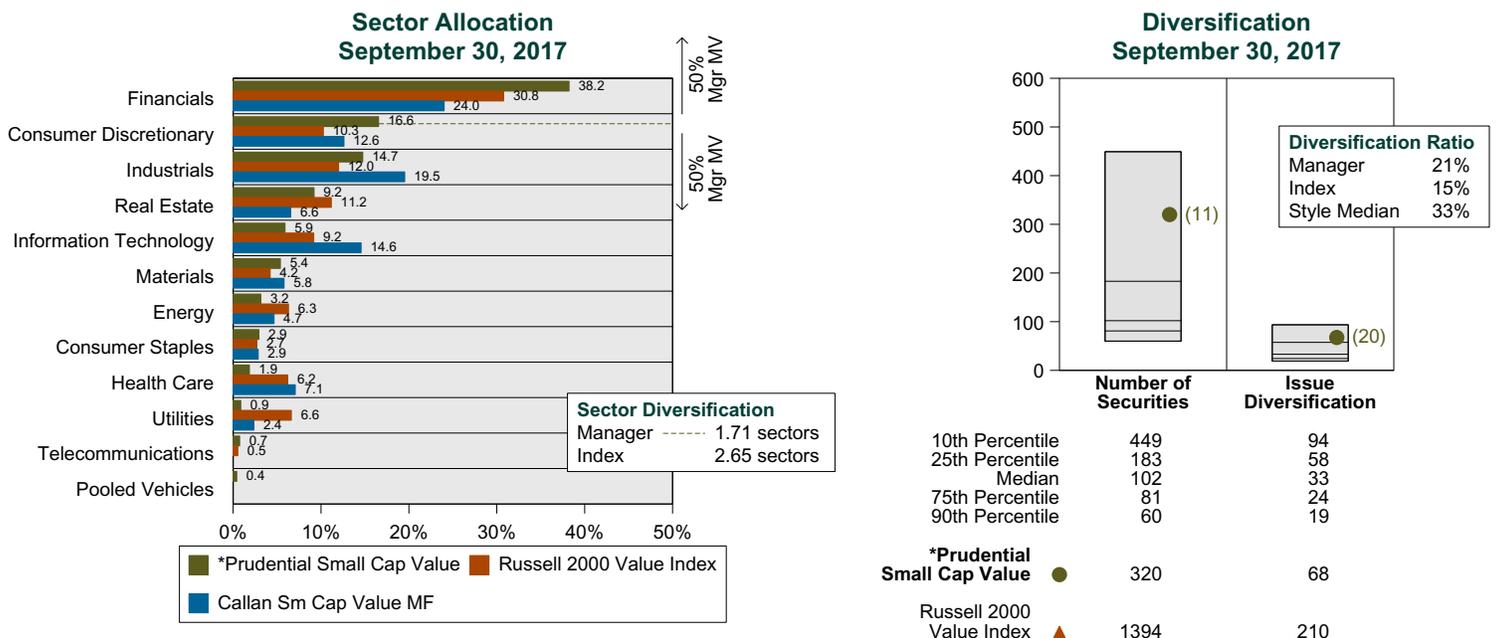
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against Callan Small Cap Value Mutual Funds as of September 30, 2017



## Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.



\*9/30/17 portfolio characteristics generated using most recently available holdings (8/31/17) modified based on a "buy-and-hold" assumption (repriced and adjusted for corporate actions). Analysis is then done using current market and company financial data.

# AB US Small Growth Period Ended September 30, 2017

## Investment Philosophy

AB's small cap growth investment process emphasizes in-house fundamental research and direct management contact in order to identify rapidly growing companies with accelerating earnings power and reasonable valuations.

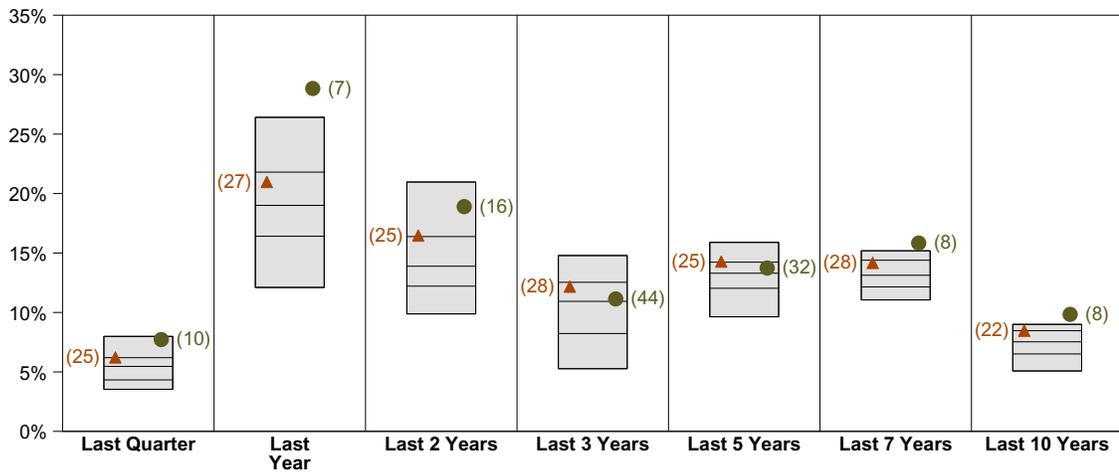
## Quarterly Summary and Highlights

- AB US Small Growth's portfolio posted a 7.72% return for the quarter placing it in the 10 percentile of the Callan Small Cap Growth Mutual Funds group for the quarter and in the 7 percentile for the last year.
- AB US Small Growth's portfolio outperformed the Russell 2000 Growth Index by 1.50% for the quarter and outperformed the Russell 2000 Growth Index for the year by 7.85%.

## Quarterly Asset Growth

Beginning Market Value	\$14,093,794
Net New Investment	\$0
Investment Gains/(Losses)	\$1,088,403
Ending Market Value	\$15,182,198

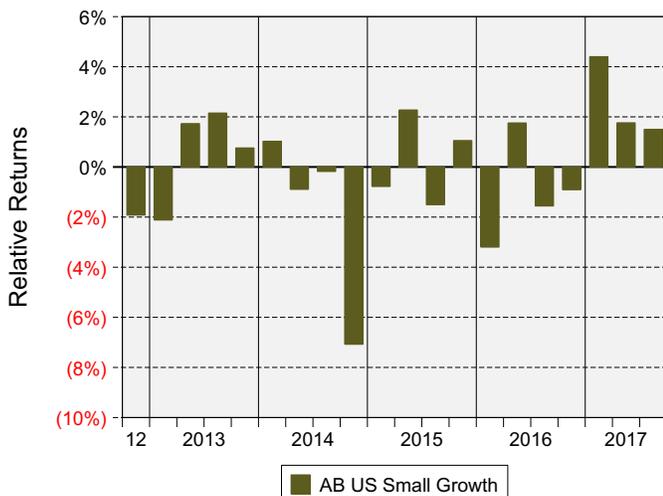
## Performance vs Callan Small Cap Growth Mutual Funds (Net)



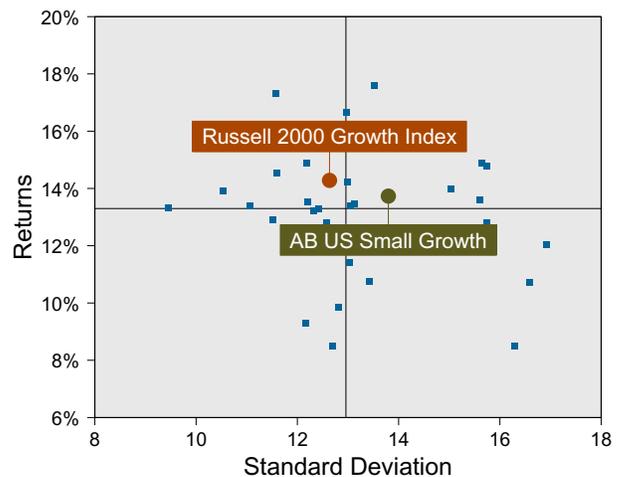
10th Percentile	7.99	26.41	20.97	14.79	15.89	15.18	9.00
25th Percentile	6.20	21.80	16.38	12.54	14.23	14.39	8.46
Median	5.46	19.00	13.89	10.93	13.30	13.13	7.53
75th Percentile	4.33	16.41	12.21	8.23	12.03	12.15	6.51
90th Percentile	3.54	12.10	9.88	5.27	9.64	11.05	5.08

<b>AB US Small Growth</b> ●	7.72	28.84	18.90	11.13	13.73	15.83	9.84
Russell 2000 Growth Index ▲	6.22	20.98	16.47	12.17	14.28	14.17	8.47

## Relative Return vs Russell 2000 Growth Index



## Callan Small Cap Growth Mutual Funds (Net) Annualized Five Year Risk vs Return

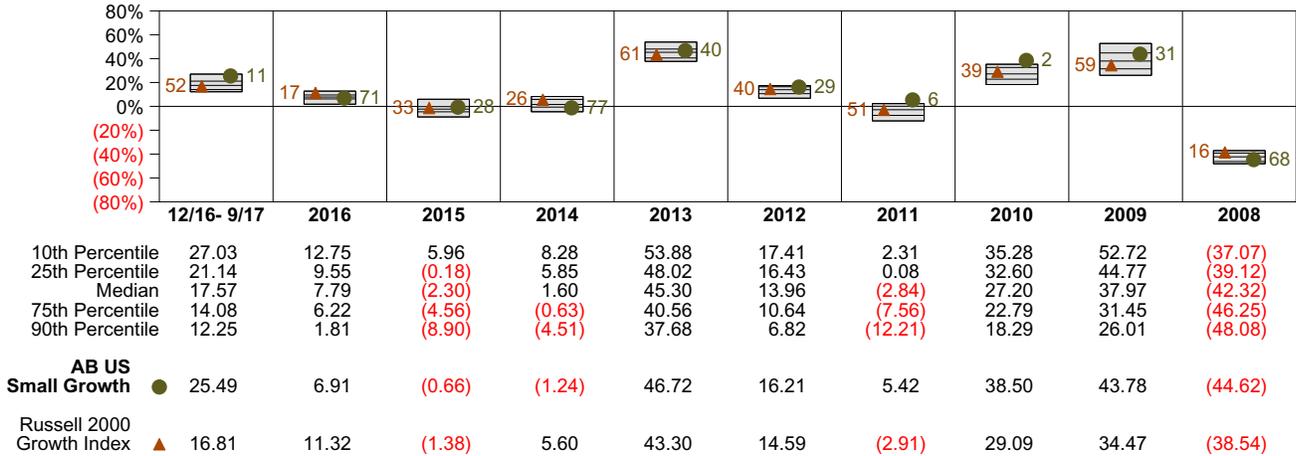


# AB US Small Growth Return Analysis Summary

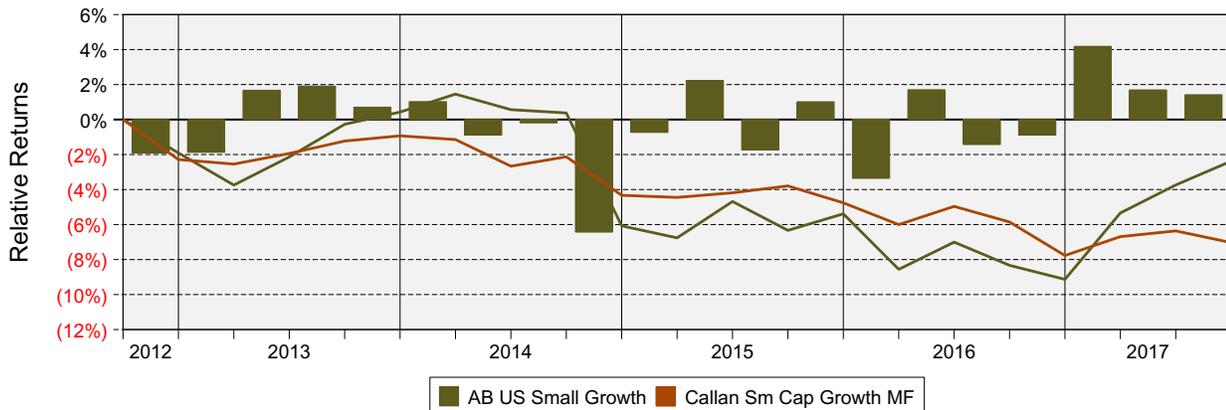
## Return Analysis

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

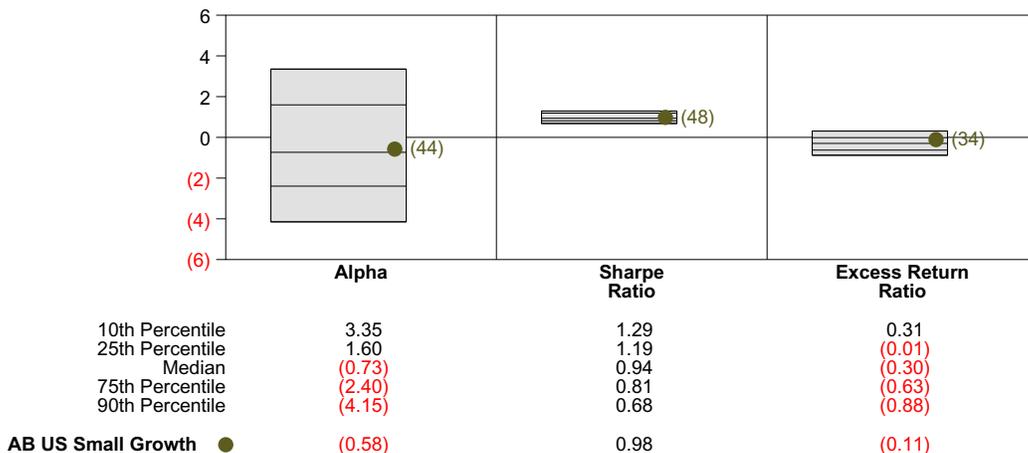
### Performance vs Callan Small Cap Growth Mutual Funds (Net)



### Cumulative and Quarterly Relative Return vs Russell 2000 Growth Index



### Risk Adjusted Return Measures vs Russell 2000 Growth Index Rankings Against Callan Small Cap Growth Mutual Funds (Net) Five Years Ended September 30, 2017

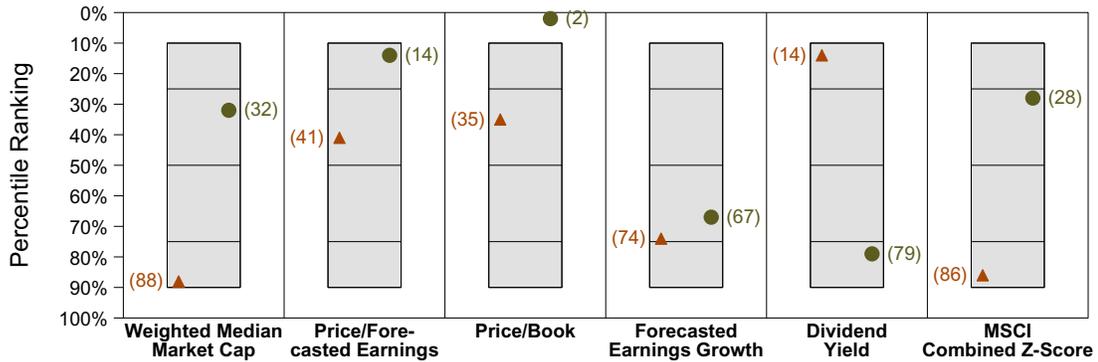


# AB US Small Growth Equity Characteristics Analysis Summary

## Portfolio Characteristics

This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against Callan Small Cap Growth Mutual Funds as of September 30, 2017

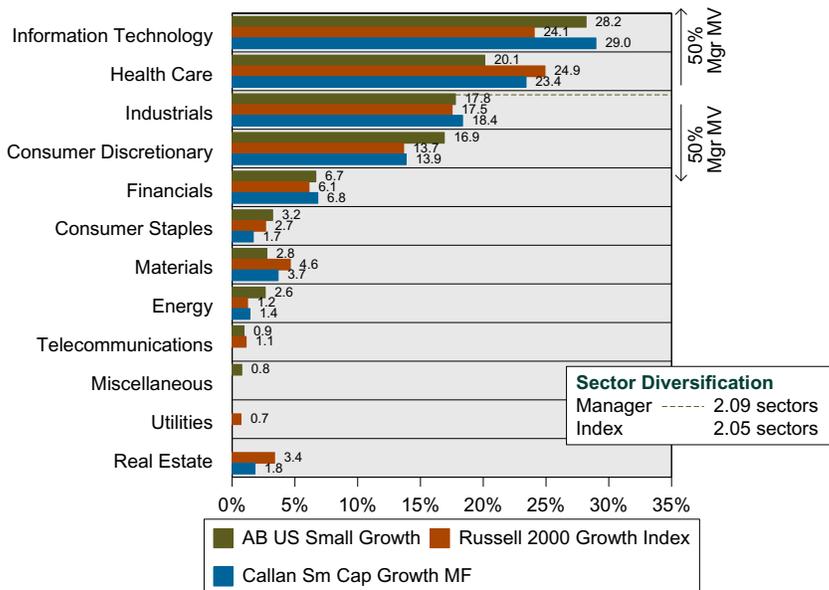


	Weighted Median Market Cap	Price/Forecasted Earnings	Price/Book	Forecasted Earnings Growth	Dividend Yield	MSCI Combined Z-Score
10th Percentile	3.23	51.72	4.42	23.28	0.74	1.00
25th Percentile	3.12	43.87	4.17	21.14	0.56	0.86
Median	2.80	32.99	3.72	19.26	0.45	0.68
75th Percentile	2.34	28.10	3.31	16.65	0.32	0.57
90th Percentile	2.10	24.73	3.15	15.83	0.19	0.43
<b>AB US Small Growth</b> ●	3.04	48.53	4.69	17.59	0.31	0.85
Russell 2000 Growth Index ▲	2.16	34.28	4.04	16.73	0.68	0.52

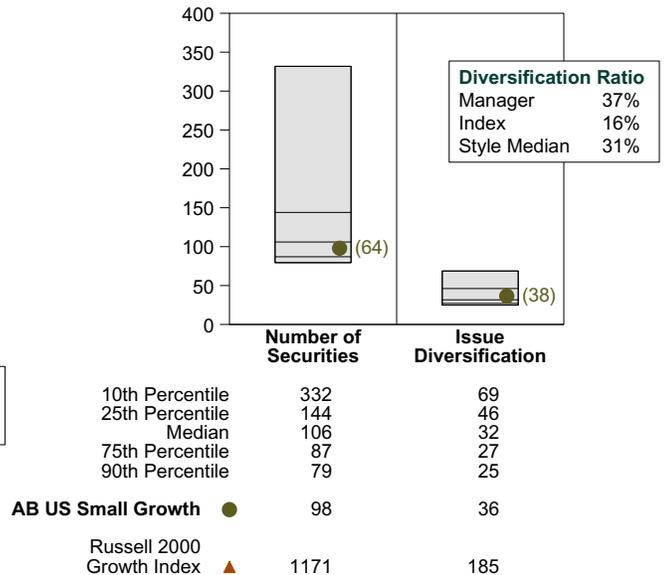
## Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.

### Sector Allocation September 30, 2017



### Diversification September 30, 2017





# International Equity Composite Period Ended September 30, 2017

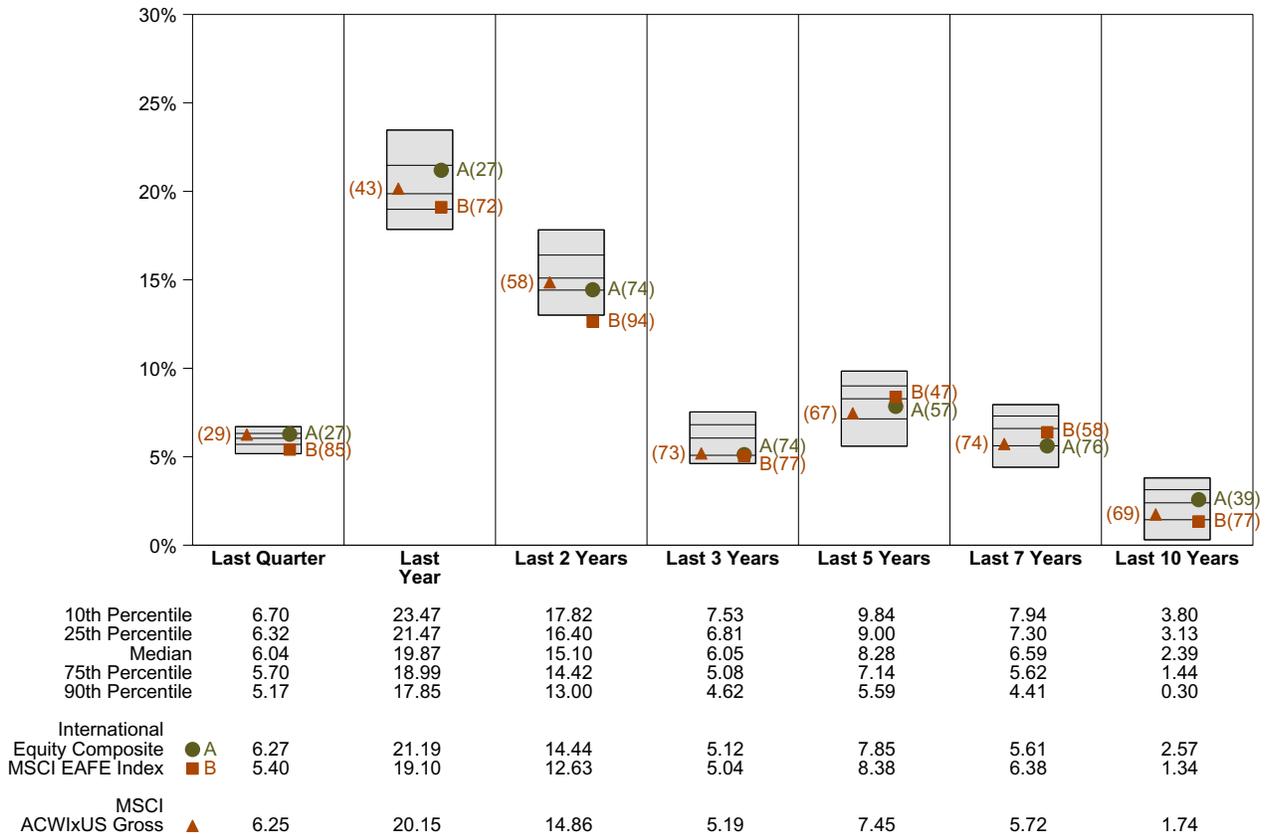
## Quarterly Summary and Highlights

- International Equity Composite's portfolio posted a 6.27% return for the quarter placing it in the 27 percentile of the Pub Pln- International Equity group for the quarter and in the 27 percentile for the last year.
- International Equity Composite's portfolio outperformed the MSCI ACWixUS Gross by 0.02% for the quarter and outperformed the MSCI ACWixUS Gross for the year by 1.04%.

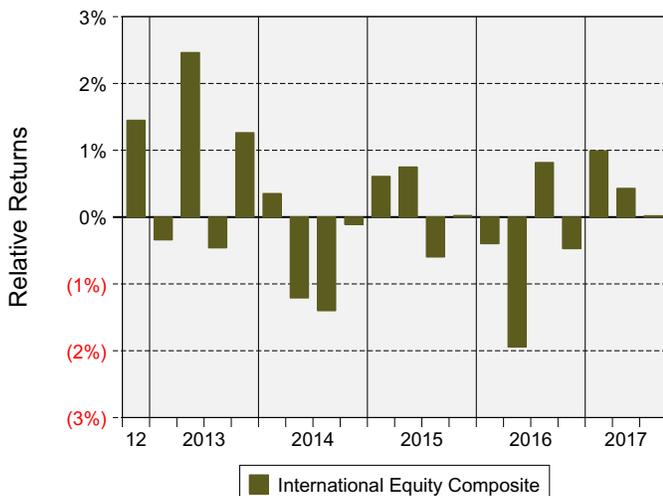
## Quarterly Asset Growth

Beginning Market Value	\$146,094,419
Net New Investment	\$-1,162,112
Investment Gains/(Losses)	\$9,311,767
Ending Market Value	\$154,244,075

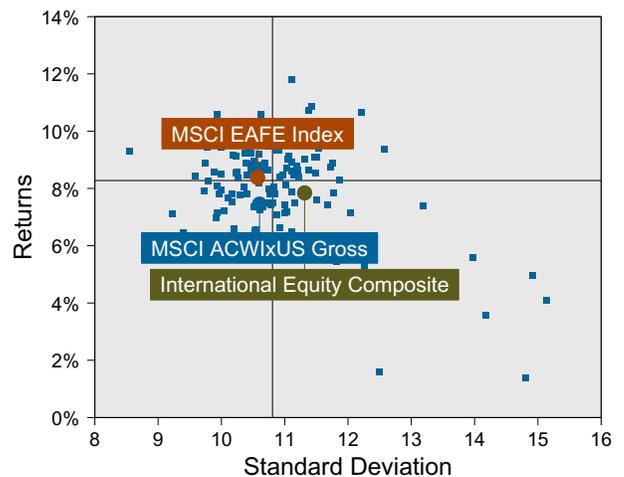
## Performance vs Pub Pln- International Equity (Gross)



## Relative Return vs MSCI ACWixUS Gross



## Pub Pln- International Equity (Gross) Annualized Five Year Risk vs Return

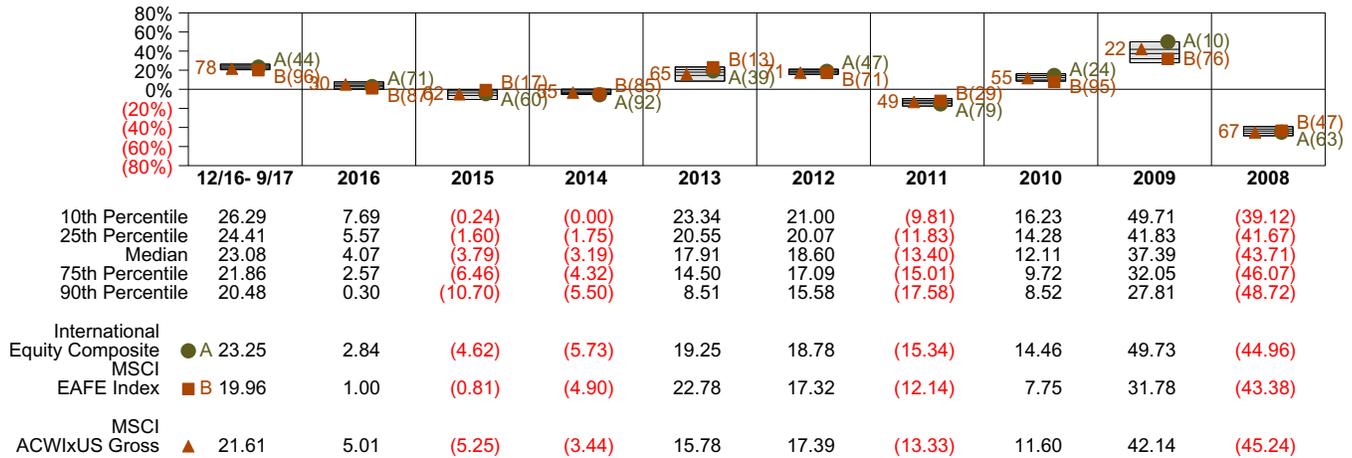


# International Equity Composite Return Analysis Summary

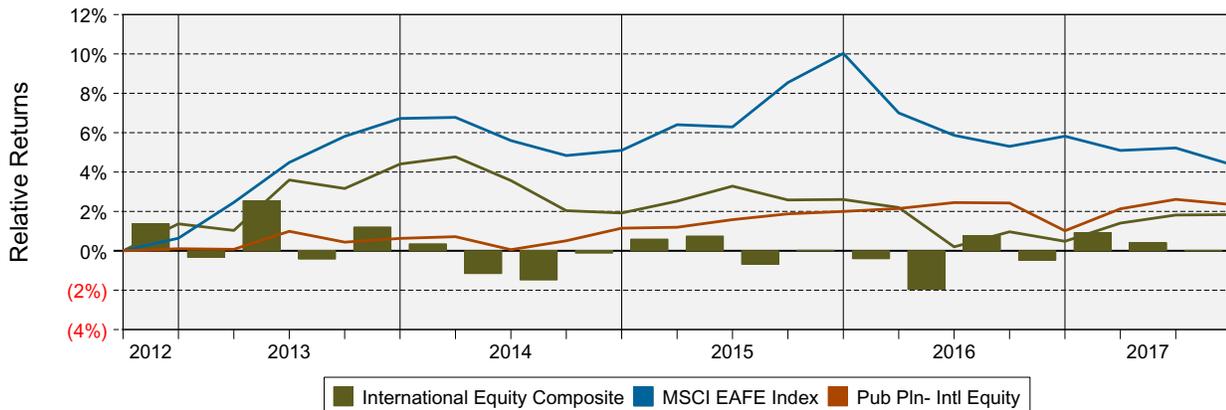
## Return Analysis

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.

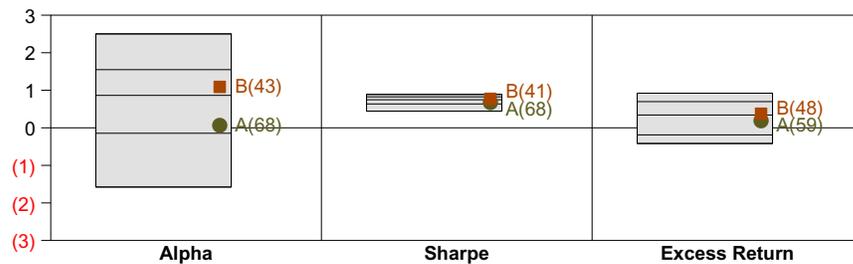
### Performance vs Pub Pln- International Equity (Gross)



### Cumulative and Quarterly Relative Return vs MSCI ACWIxUS Gross



### Risk Adjusted Return Measures vs MSCI ACWIxUS Gross Rankings Against Pub Pln- International Equity (Gross) Five Years Ended September 30, 2017



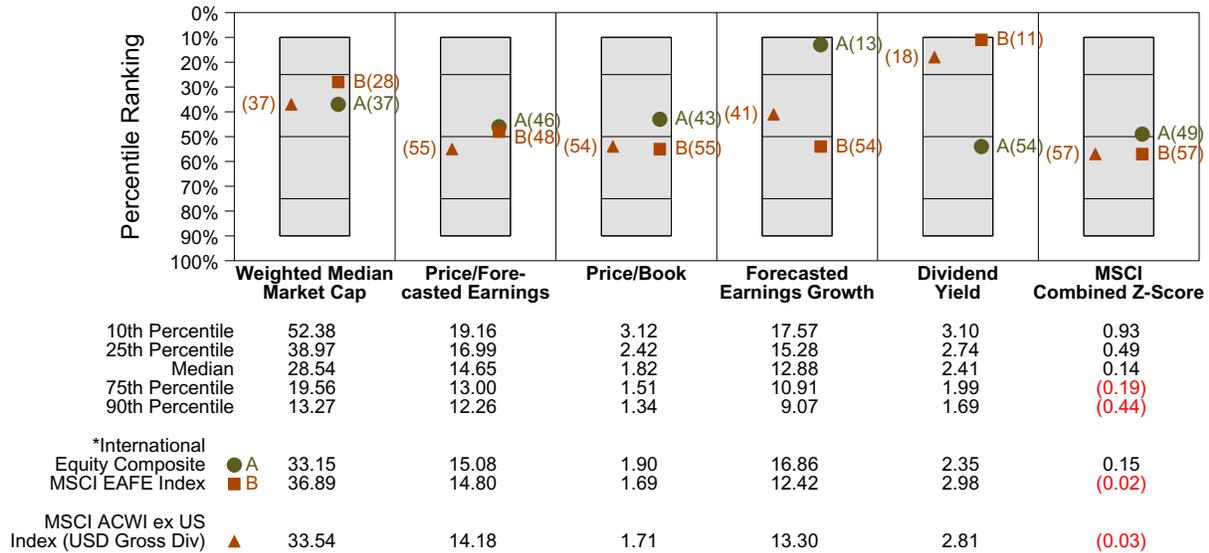
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	2.50	0.89	0.92
25th Percentile	1.55	0.82	0.70
Median	0.86	0.75	0.34
75th Percentile	(0.14)	0.64	(0.19)
90th Percentile	(1.58)	0.44	(0.42)
International Equity Composite	● A 0.06	0.67	0.19
MSCI EAFE Index	■ B 1.09	0.77	0.38

# International Equity Composite Equity Characteristics Analysis Summary

## Portfolio Characteristics

This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

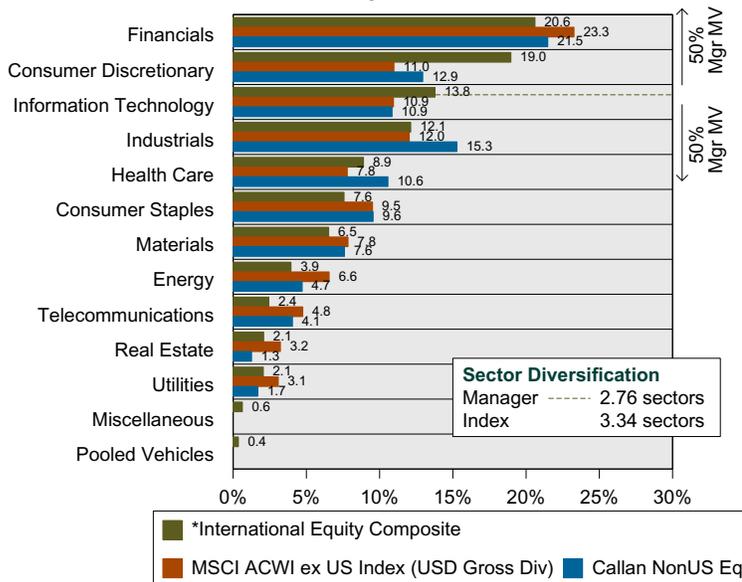
## Portfolio Characteristics Percentile Rankings Rankings Against Callan Non-US Equity as of September 30, 2017



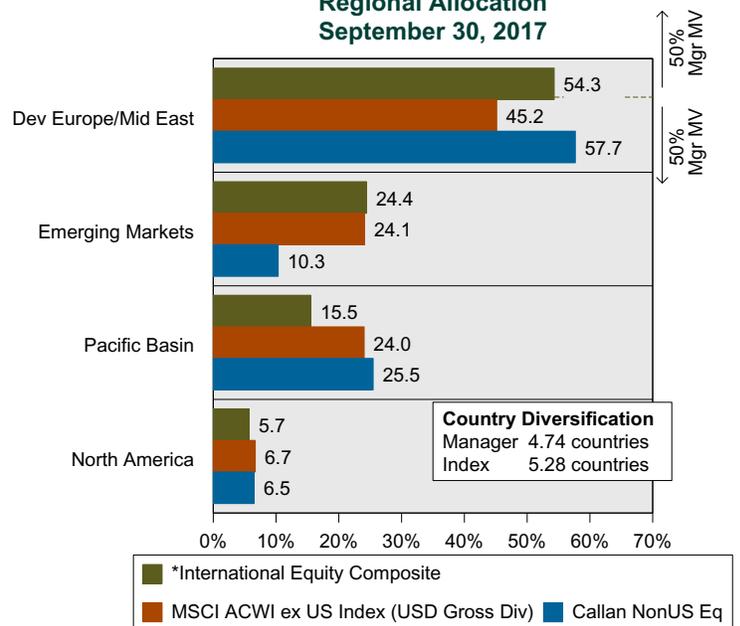
## Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. The regional allocation chart compares the manager's geographical region weights with those of the benchmark as well as the median region weights of the peer group.

### Sector Allocation September 30, 2017



### Regional Allocation September 30, 2017



\*9/30/17 portfolio characteristics generated using most recently available holdings (6/30/17) modified based on a "buy-and-hold" assumption (repriced and adjusted for corporate actions). Analysis is then done using current market and company financial data.

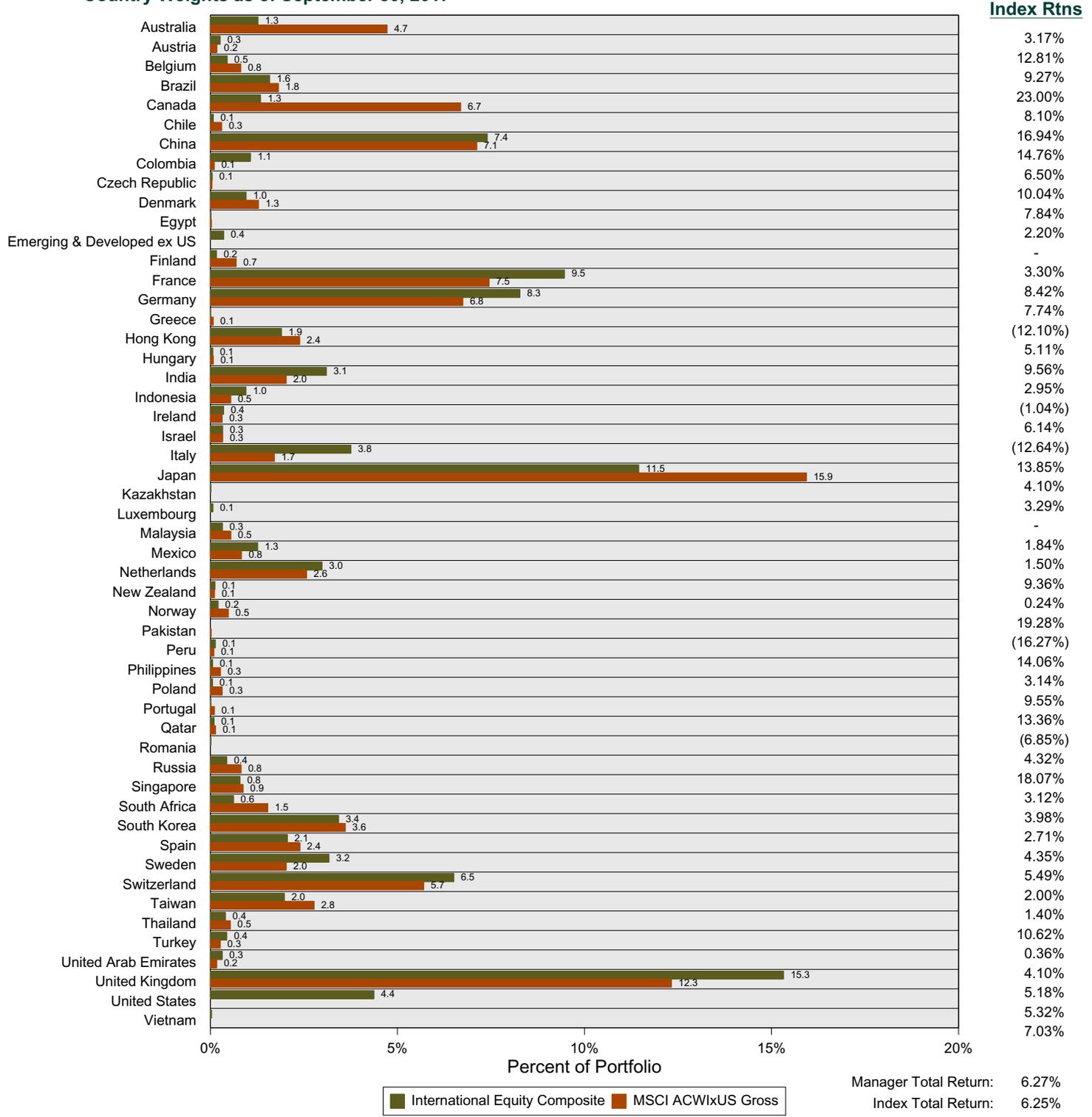
# Country Allocation

## International Equity Composite VS MSCI ACWI ex US Index (USD Gross Div)

### Country Allocation

The chart below contrasts the portfolio's country allocation with that of the index as of September 30, 2017. This chart is useful because large deviations in country allocation relative to the index are often good predictors of tracking error in the subsequent quarter. To the extent that the portfolio allocation is similar to the index, the portfolio should experience more "index-like" performance. In order to illustrate the performance effect on the portfolio and index of these country allocations, the individual index country returns are also shown.

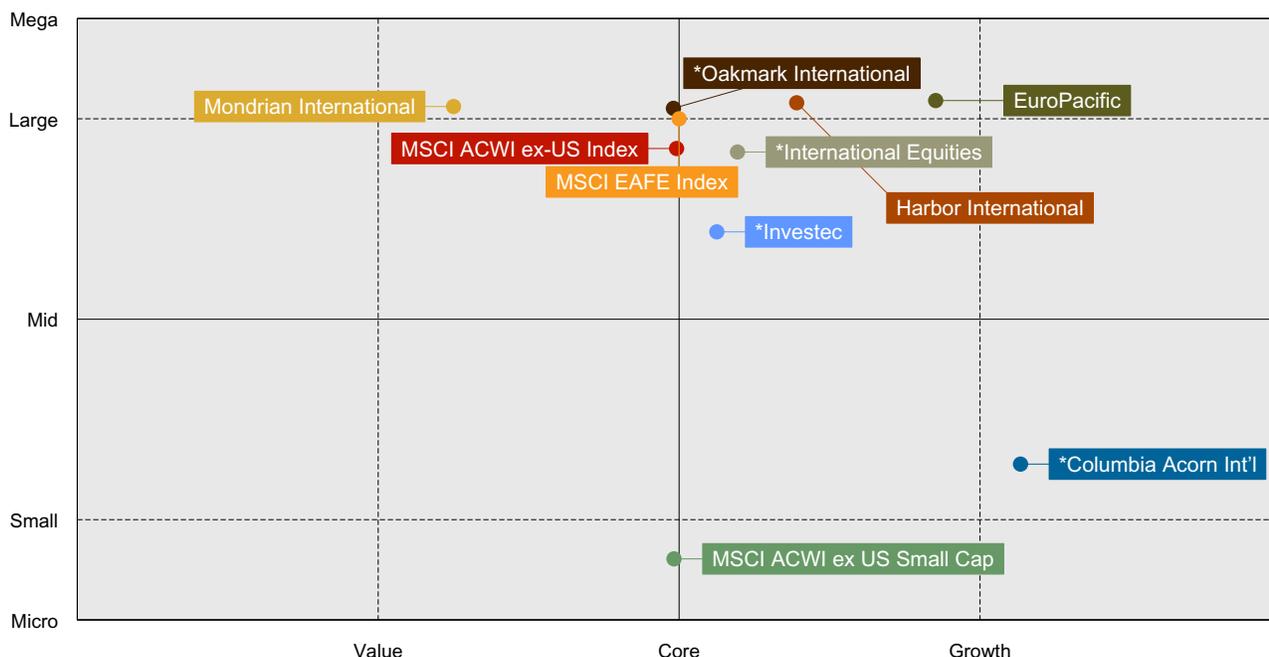
Country Weights as of September 30, 2017



## International Holdings Based Style Analysis For One Quarter Ended September 30, 2017

This page analyzes and compares the investment styles of multiple portfolios using a detailed holdings-based style analysis methodology. The size component of style is measured by the weighted median market capitalization of the holdings. The value/core/growth style dimension is captured by the "Combined Z-Score" of the portfolio. This score is based on eight fundamental factors used in the MSCI stock style scoring system. The table below gives a more detailed breakdown of several relevant style metrics on the portfolios.

### Style Map Holdings for One Quarter Ended September 30, 2017



	Weight %	Wtd Median Mkt Cap	Combined Z-Score	Growth Z-Score	Value Z-Score	Number of Securities	Security Diversification
EuroPacific	17.40%	47.04	0.70	0.31	(0.40)	247	33.11
Harbor International	19.94%	45.79	0.31	0.04	(0.27)	76	18.99
*Columbia Acorn Int'l	0.00%	5.71	0.94	0.31	(0.63)	101	30.54
*Oakmark International	22.23%	42.69	(0.03)	0.03	0.07	58	13.71
Mondrian International	16.94%	43.71	(0.64)	(0.22)	0.42	126	22.78
*Investec	9.56%	24.18	0.09	0.12	0.04	85	19.07
*International Equities	100.00%	33.15	0.15	0.07	(0.08)	774	77.83
MSCI ACWI ex US Small Cap	-	1.92	(0.03)	(0.02)	0.01	4278	731.83
MSCI EAFE Index	-	36.89	(0.02)	(0.01)	0.01	926	111.44
MSCI ACWI ex-US Index	-	33.54	(0.03)	(0.02)	0.01	1851	177.53

\* 9/30/17 portfolio characteristics generated using most recently available holdings (6/30/17) modified based on a "buy-and-hold" assumption (repriced and adjusted for corporate actions). Analysis is then done using current market and company financial data.

# EuroPacific

## Period Ended September 30, 2017

### Investment Philosophy

Capital Group has a research-driven approach to non-U.S. investing. Their bottom-up fundamental approach is blended with macroeconomic and political judgments on the outlook of economies, industries, currencies and markets. The fund uses a "multiple manager" approach where individual portfolio managers, each with different styles, manage separate sleeves of the strategy independently. Sleeves are combined to form the fund. Individual managers are selected so that the aggregate fund adheres to its stated objective of capital appreciation. Switched from Class R-5 Shares to Class R-6 Shares in December 2009.

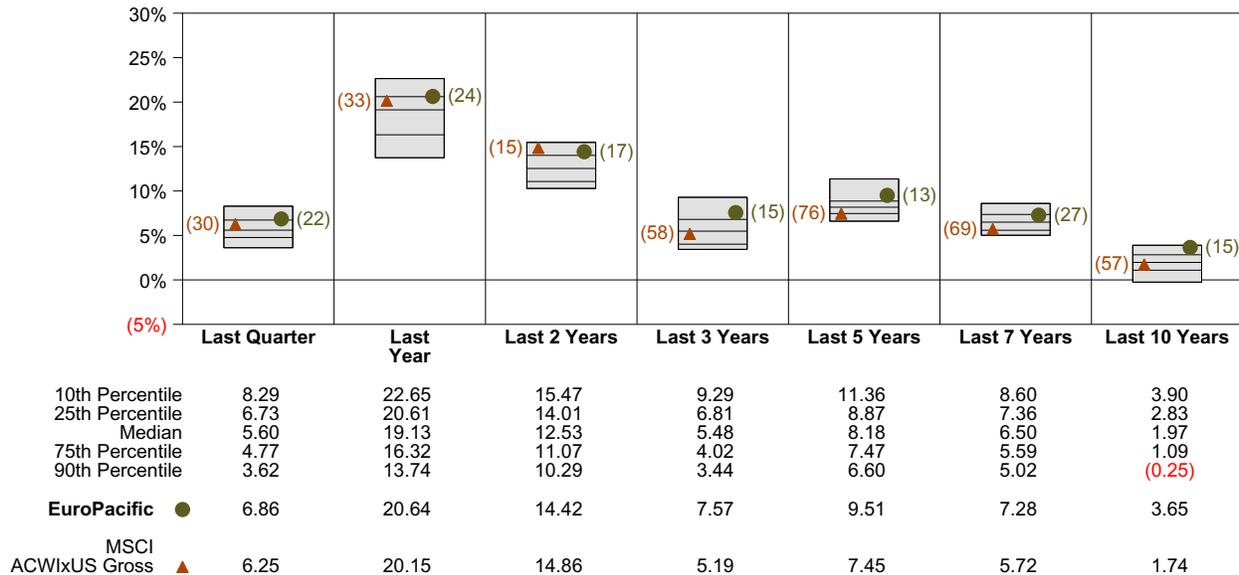
### Quarterly Summary and Highlights

- EuroPacific's portfolio posted a 6.86% return for the quarter placing it in the 22 percentile of the Callan Non US Equity Mutual Funds group for the quarter and in the 24 percentile for the last year.
- EuroPacific's portfolio outperformed the MSCI ACWixUS Gross by 0.60% for the quarter and outperformed the MSCI ACWixUS Gross for the year by 0.48%.

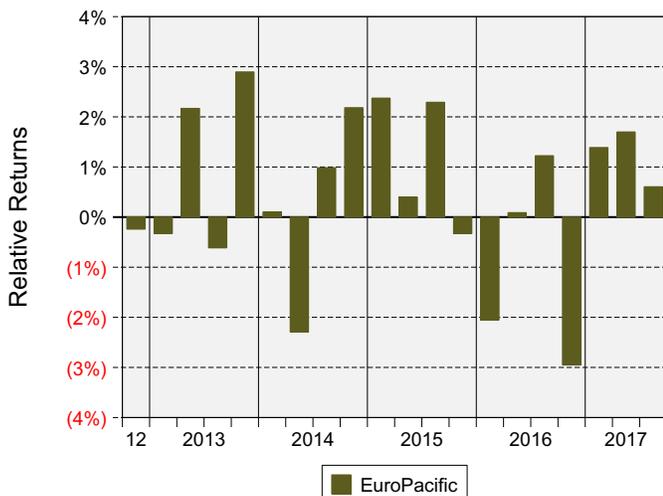
### Quarterly Asset Growth

Beginning Market Value	\$25,122,142
Net New Investment	\$0
Investment Gains/(Losses)	\$1,722,192
Ending Market Value	\$26,844,333

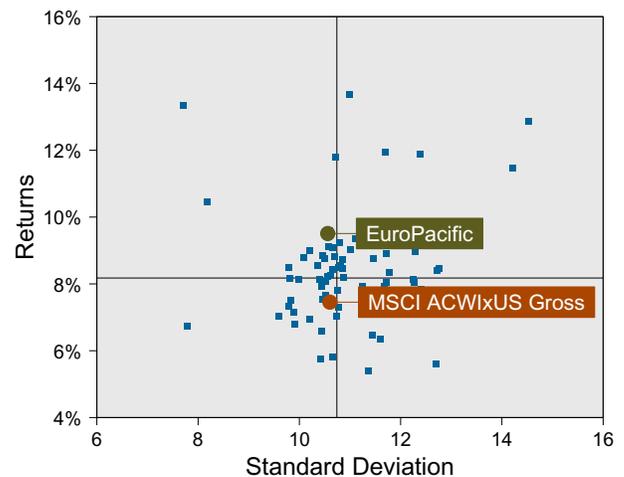
### Performance vs Callan Non US Equity Mutual Funds (Net)



### Relative Return vs MSCI ACWixUS Gross



### Callan Non US Equity Mutual Funds (Net) Annualized Five Year Risk vs Return

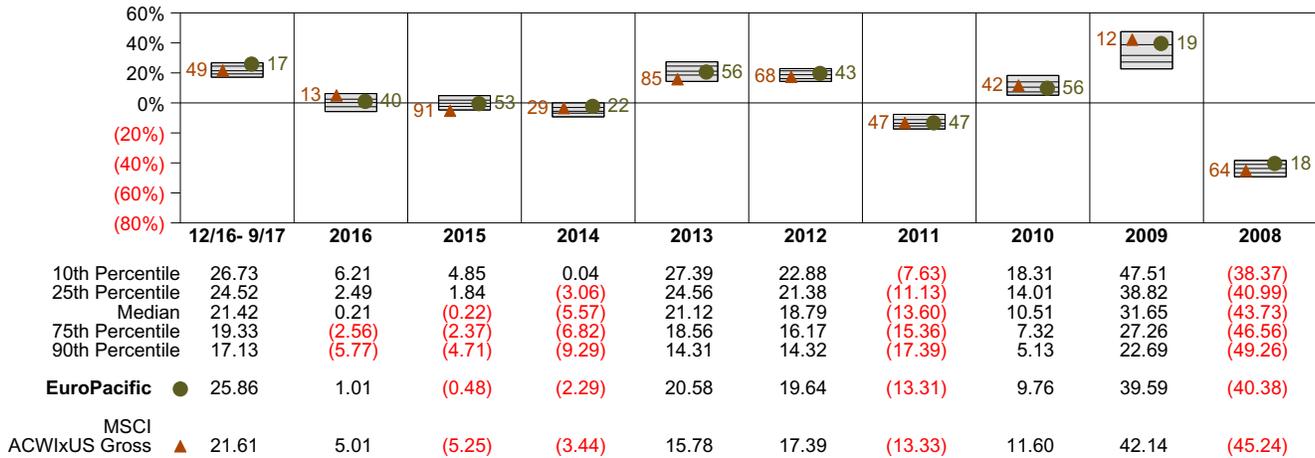


# EuroPacific Return Analysis Summary

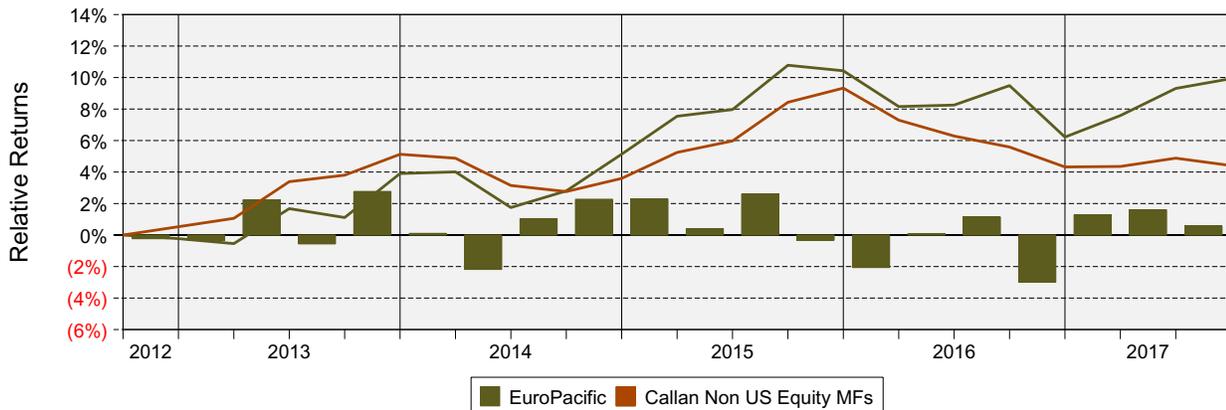
## Return Analysis

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

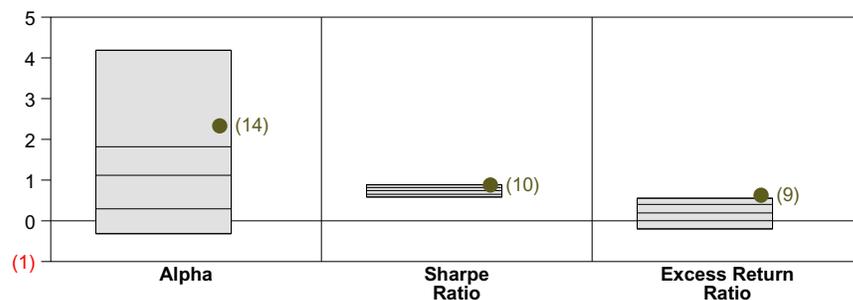
### Performance vs Callan Non US Equity Mutual Funds (Net)



### Cumulative and Quarterly Relative Return vs MSCI ACWixUS Gross



### Risk Adjusted Return Measures vs MSCI ACWixUS Gross Rankings Against Callan Non US Equity Mutual Funds (Net) Five Years Ended September 30, 2017



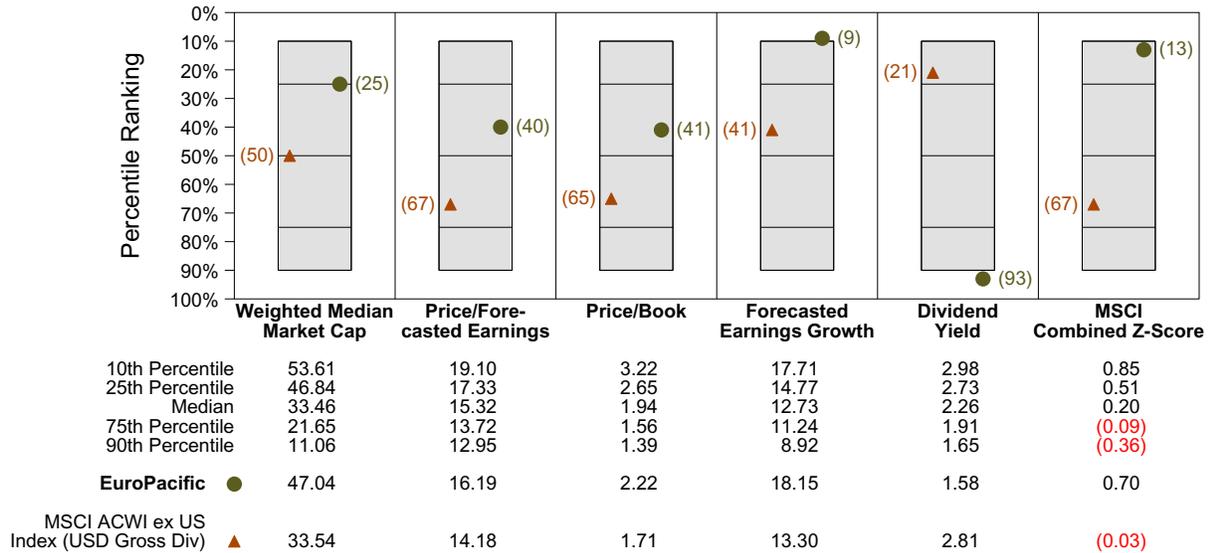
10th Percentile	4.19	0.88	0.55
25th Percentile	1.82	0.82	0.40
Median	1.12	0.74	0.19
75th Percentile	0.29	0.65	0.00
90th Percentile	(0.32)	0.58	(0.20)
<b>EuroPacific</b>	● 2.33	0.88	0.63

# EuroPacific Equity Characteristics Analysis Summary

## Portfolio Characteristics

This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

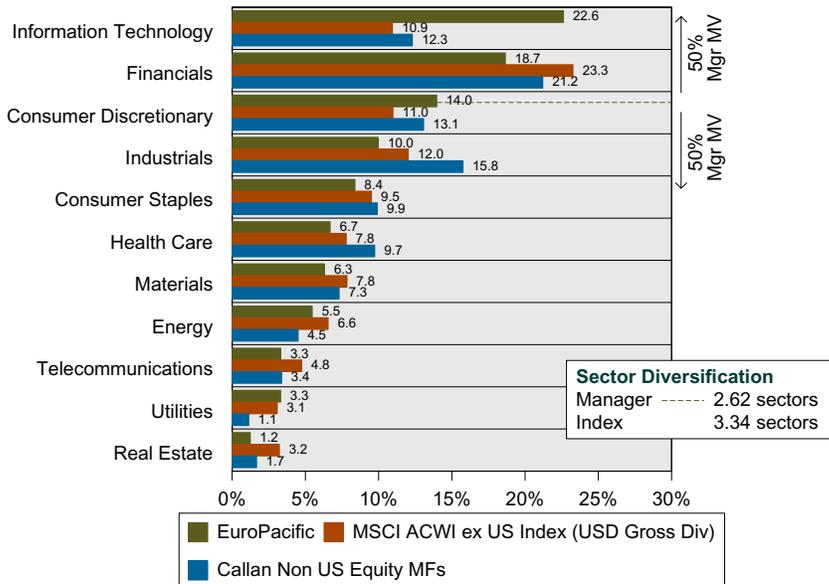
## Portfolio Characteristics Percentile Rankings Rankings Against Callan Non US Equity Mutual Funds as of September 30, 2017



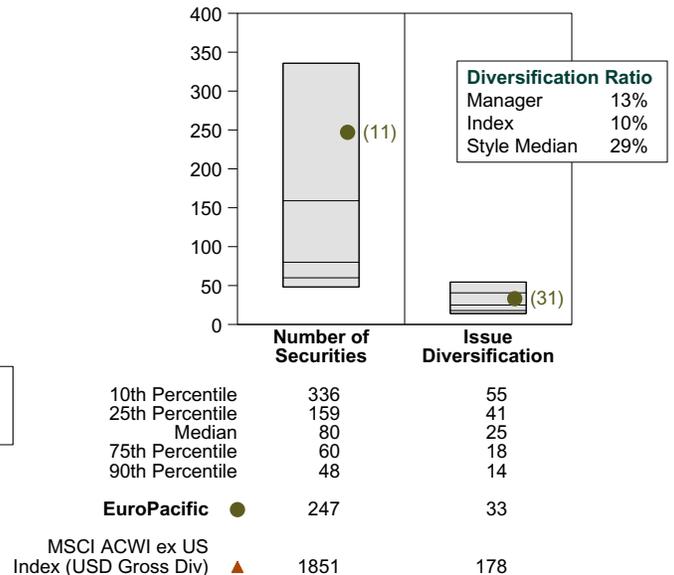
## Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.

### Sector Allocation September 30, 2017



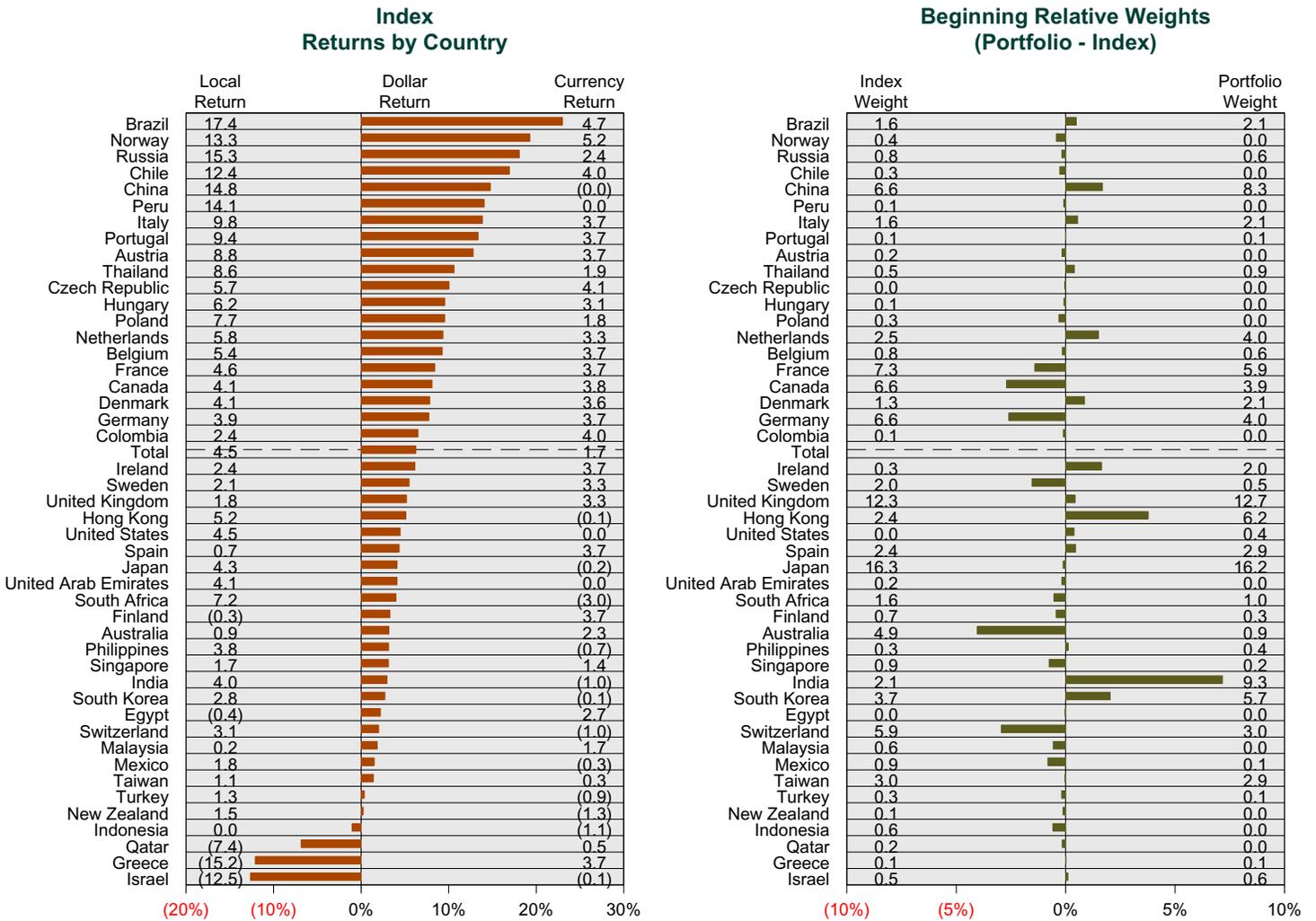
### Diversification September 30, 2017



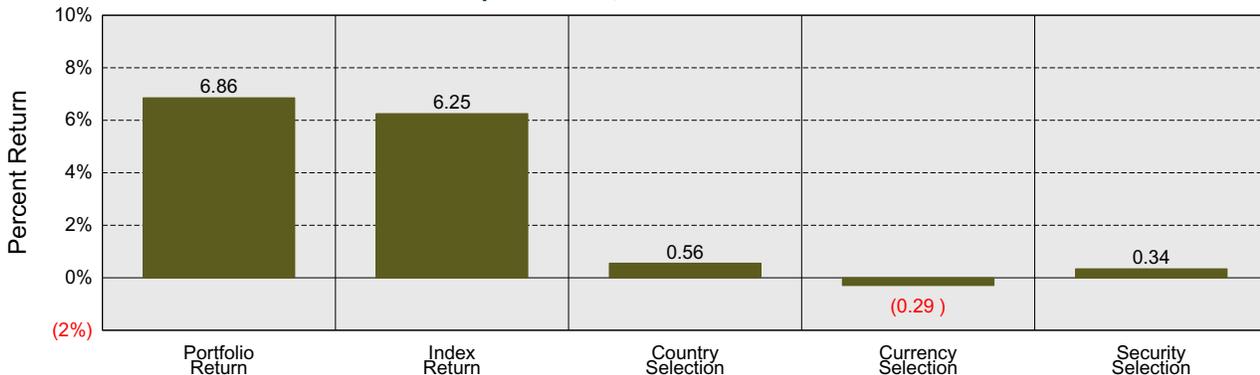
# EuroPacific vs MSCI ACWixUS Gross Attribution for Quarter Ended September 30, 2017

## International Attribution

The first chart below illustrates the return for each country in the index sorted from high to low. The total return for the index is highlighted with a dotted line. The second chart (countries presented in the same order) illustrates the manager's country allocation decisions relative to the index. To the extent that the manager over-weighted a country that had a higher return than the total return for the index (above the dotted line) it contributes positively to the manager's country (or currency) selection effect. The last chart details the manager return, the index return, and the attribution factors for the quarter.



## Attribution Factors for Quarter Ended September 30, 2017



# Harbor International Period Ended September 30, 2017

## Investment Philosophy

The Harbor International Fund is sub-advised by Northern Cross, LLC. The investment philosophy focuses on companies with prospects of margin expansion and those that have strong franchise value or asset value. The fund takes a long-term view, expecting to hold a security for 7-10 years. Patient due diligence of companies, countries, and regions are of the utmost importance to the investment process. The team believes this due diligence, in combination with a top down investment theme, provides the best opportunity to invest in truly undervalued companies. The strategy has remained consistent in this philosophy over the past decades of international investment.

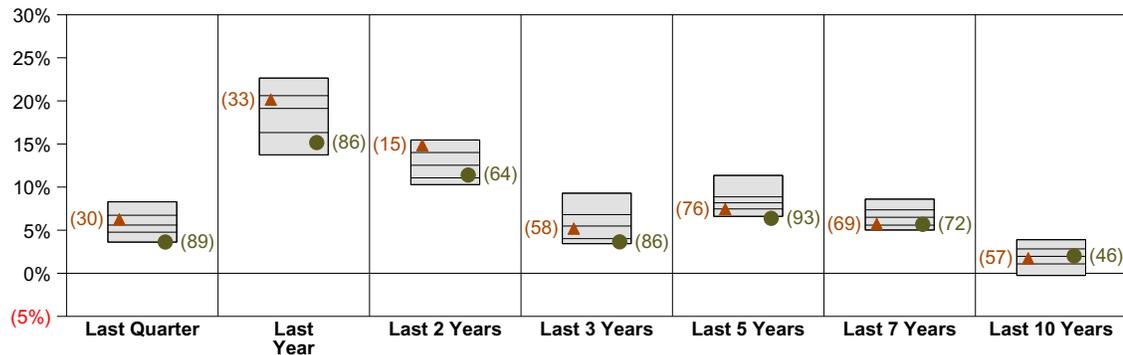
## Quarterly Summary and Highlights

- Harbor International's portfolio posted a 3.63% return for the quarter placing it in the 89 percentile of the Callan Non US Equity Mutual Funds group for the quarter and in the 86 percentile for the last year.
- Harbor International's portfolio underperformed the MSCI ACWIxUS Gross by 2.62% for the quarter and underperformed the MSCI ACWIxUS Gross for the year by 4.99%.

## Quarterly Asset Growth

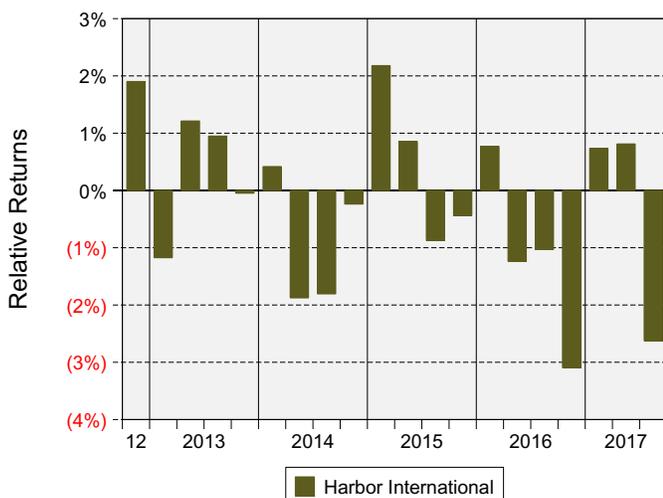
Beginning Market Value	\$31,221,758
Net New Investment	\$-1,600,000
Investment Gains/(Losses)	\$1,134,644
Ending Market Value	\$30,756,402

## Performance vs Callan Non US Equity Mutual Funds (Net)

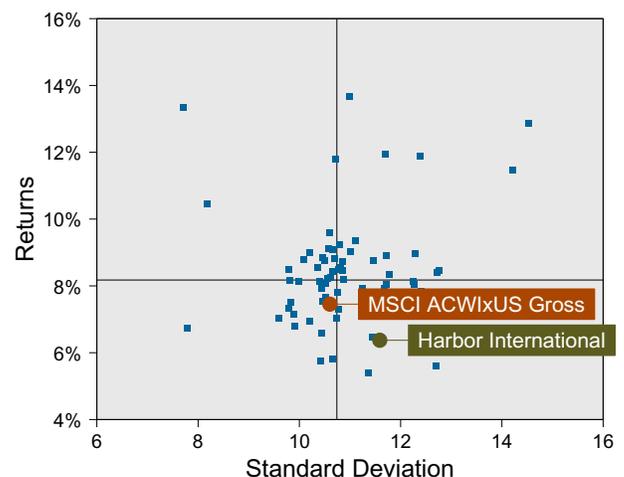


10th Percentile	8.29	22.65	15.47	9.29	11.36	8.60	3.90
25th Percentile	6.73	20.61	14.01	6.81	8.87	7.36	2.83
Median	5.60	19.13	12.53	5.48	8.18	6.50	1.97
75th Percentile	4.77	16.32	11.07	4.02	7.47	5.59	1.09
90th Percentile	3.62	13.74	10.29	3.44	6.60	5.02	(0.25)
<b>Harbor International</b> ●	3.63	15.17	11.40	3.64	6.37	5.68	2.02
MSCI ACWIxUS Gross ▲	6.25	20.15	14.86	5.19	7.45	5.72	1.74

## Relative Return vs MSCI ACWIxUS Gross



## Callan Non US Equity Mutual Funds (Net) Annualized Five Year Risk vs Return

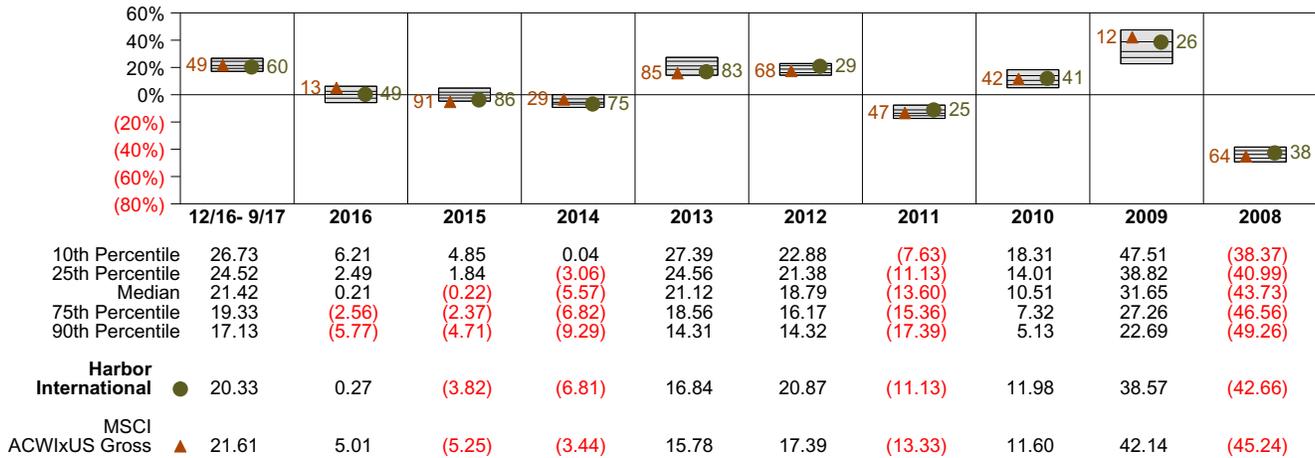


# Harbor International Return Analysis Summary

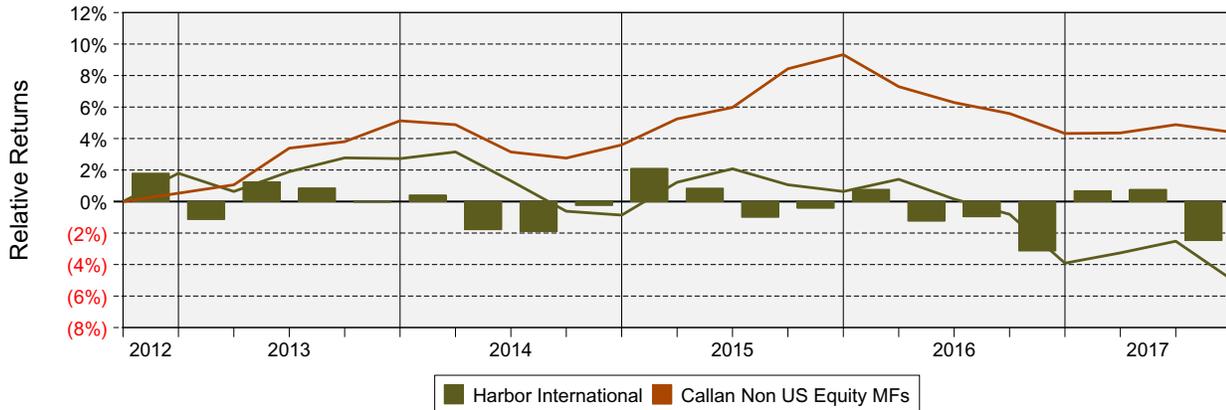
## Return Analysis

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

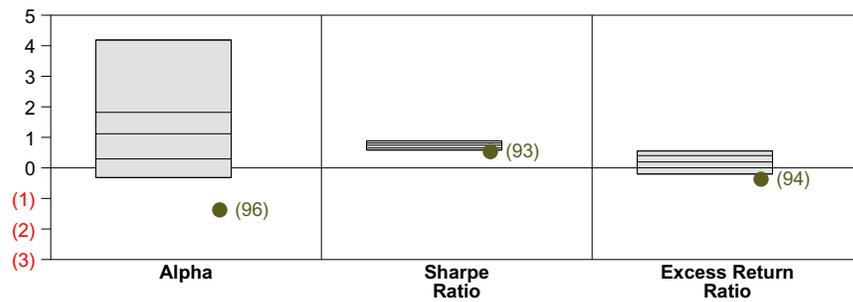
### Performance vs Callan Non US Equity Mutual Funds (Net)



### Cumulative and Quarterly Relative Return vs MSCI ACWixUS Gross



### Risk Adjusted Return Measures vs MSCI ACWixUS Gross Rankings Against Callan Non US Equity Mutual Funds (Net) Five Years Ended September 30, 2017

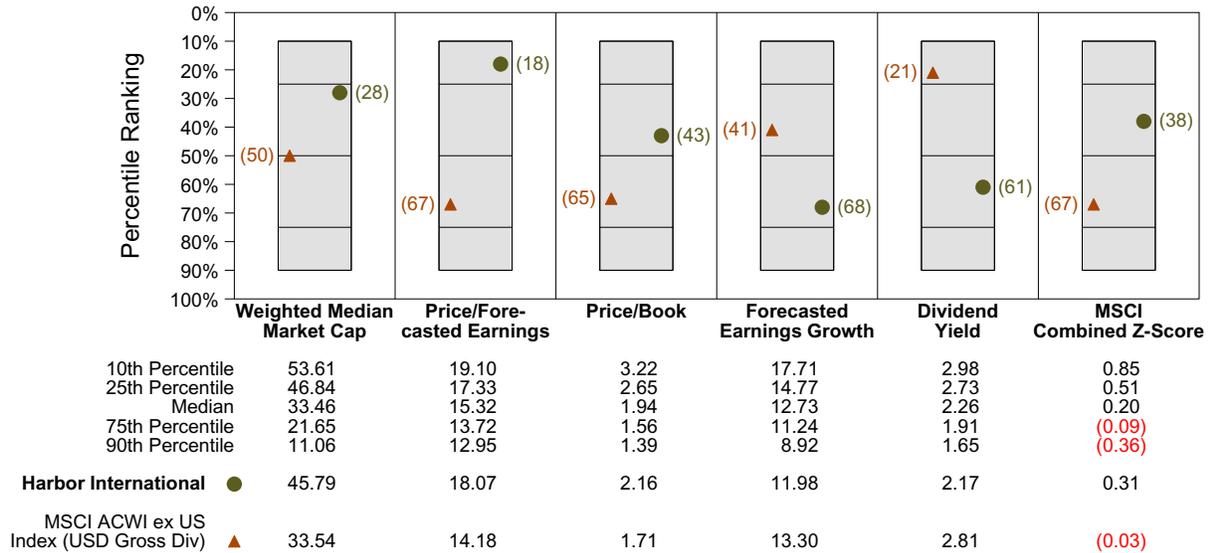


# Harbor International Equity Characteristics Analysis Summary

## Portfolio Characteristics

This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

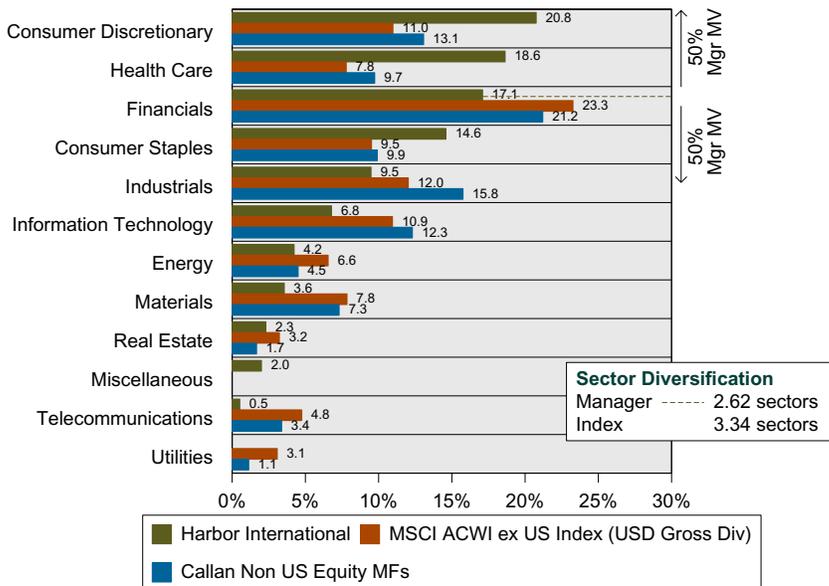
## Portfolio Characteristics Percentile Rankings Rankings Against Callan Non US Equity Mutual Funds as of September 30, 2017



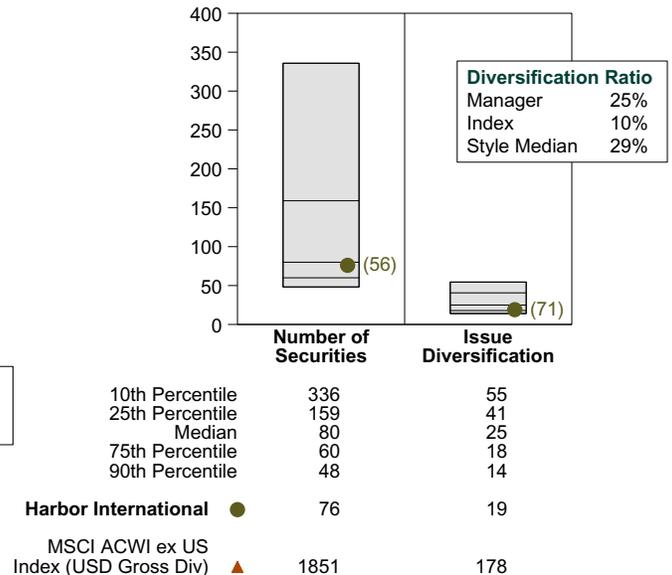
## Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.

### Sector Allocation September 30, 2017



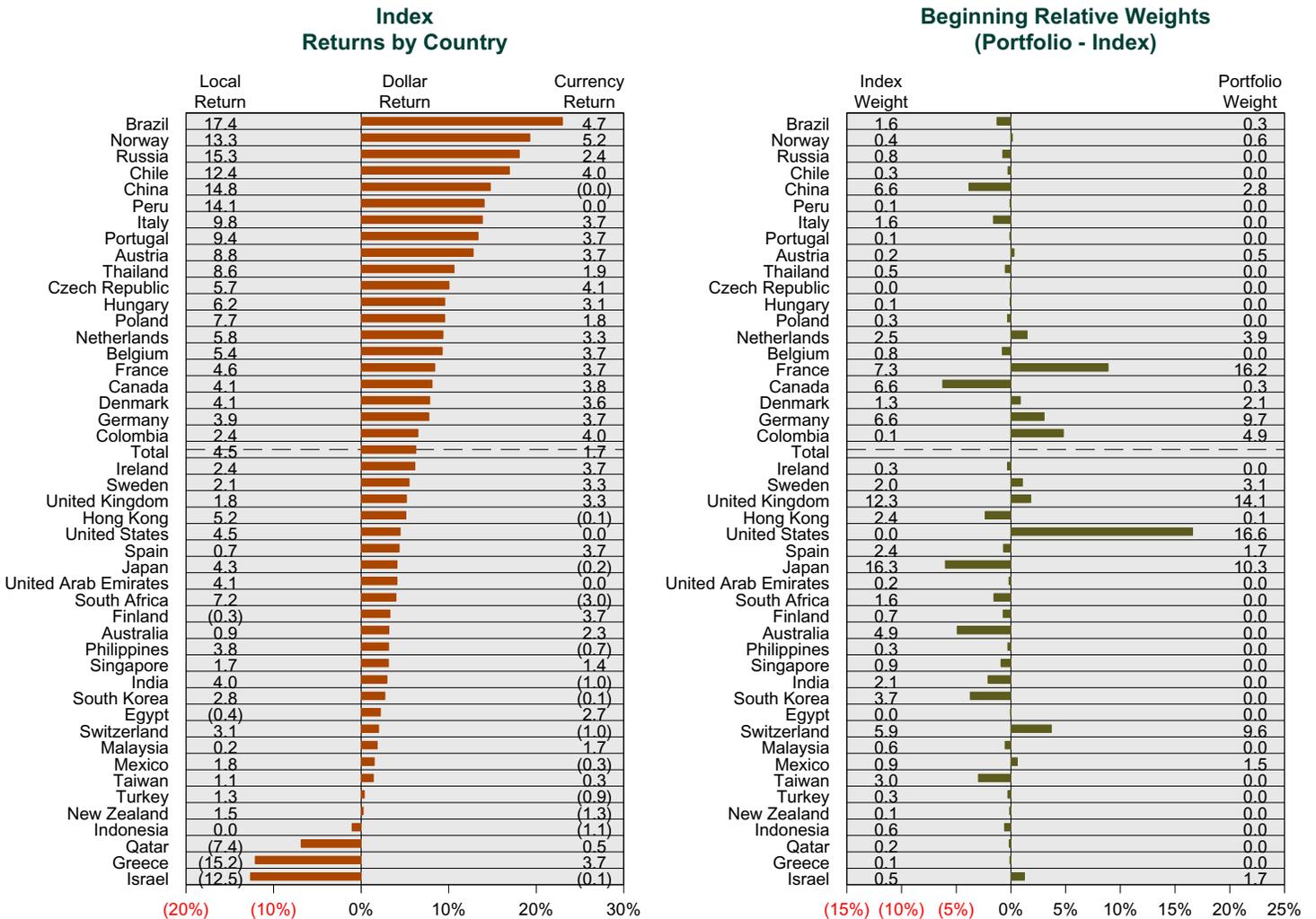
### Diversification September 30, 2017



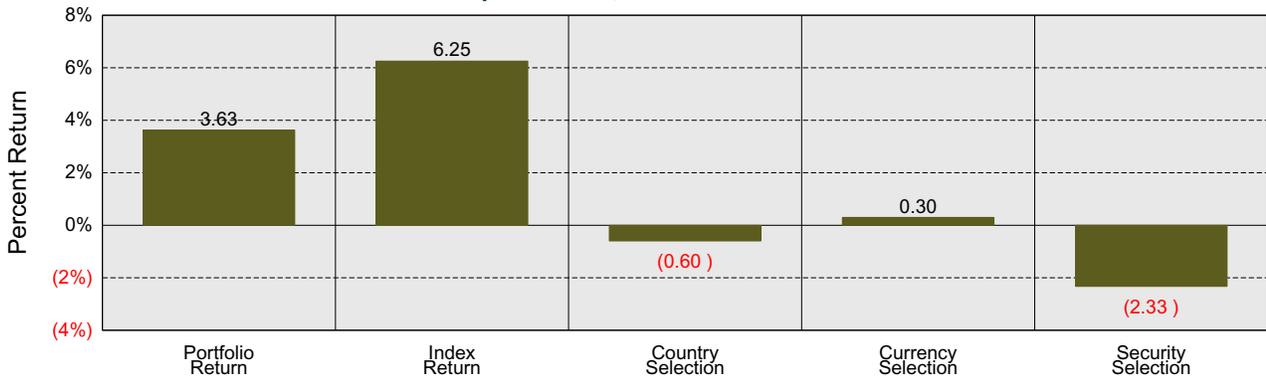
# Harbor International vs MSCI ACWIxUS Gross Attribution for Quarter Ended September 30, 2017

## International Attribution

The first chart below illustrates the return for each country in the index sorted from high to low. The total return for the index is highlighted with a dotted line. The second chart (countries presented in the same order) illustrates the manager's country allocation decisions relative to the index. To the extent that the manager over-weighted a country that had a higher return than the total return for the index (above the dotted line) it contributes positively to the manager's country (or currency) selection effect. The last chart details the manager return, the index return, and the attribution factors for the quarter.



## Attribution Factors for Quarter Ended September 30, 2017



# Oakmark International

## Period Ended September 30, 2017

### Investment Philosophy

Harris Associates are value investors. They seek to invest in companies that trade at a substantial discount to their underlying business values and run by managers who think and act as owners. They believe that purchasing a quality business at a discount to its underlying value minimizes risk while providing substantial profit potential. Over time, they believe the price of a stock will rise to reflect the company's underlying business value; in practice, their investment time horizon is generally three to five years. They are concentrated investors, building focused portfolios that provide diversification but are concentrated enough so that their best ideas can make a meaningful impact on investment performance. They believe they can add value through their stock selection capabilities and low correlation to international indices and peers. Harris believes their greatest competitive advantage is their long-term investment horizon, exploiting the mispricing of securities caused by what they believe is the short-term focus of many market participants. \*This fund was converted into a CIT in November 2015.

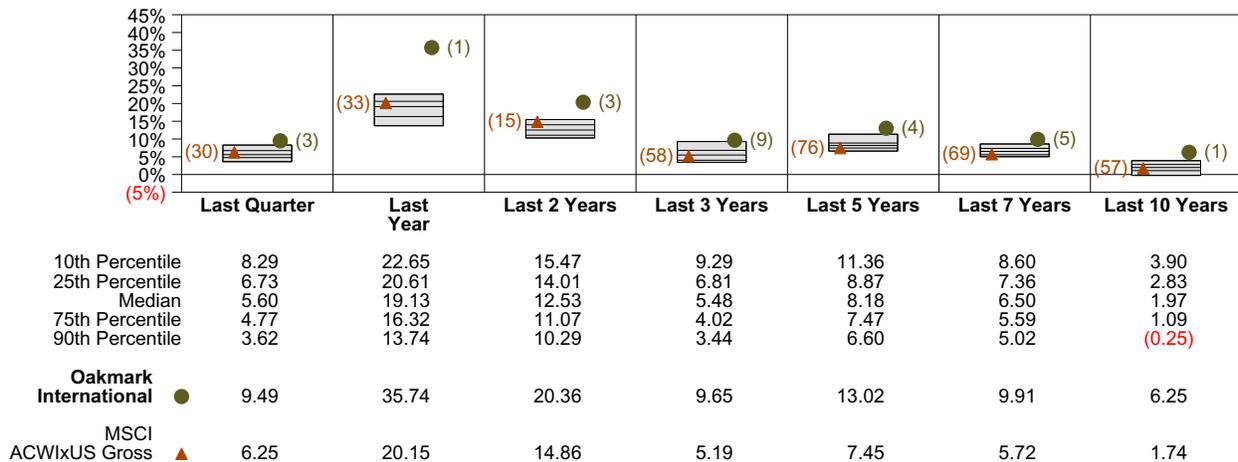
### Quarterly Summary and Highlights

- Oakmark International's portfolio posted a 9.49% return for the quarter placing it in the 3 percentile of the Callan Non US Equity Mutual Funds group for the quarter and in the 1 percentile for the last year.
- Oakmark International's portfolio outperformed the MSCI ACWixUS Gross by 3.24% for the quarter and outperformed the MSCI ACWixUS Gross for the year by 15.59%.

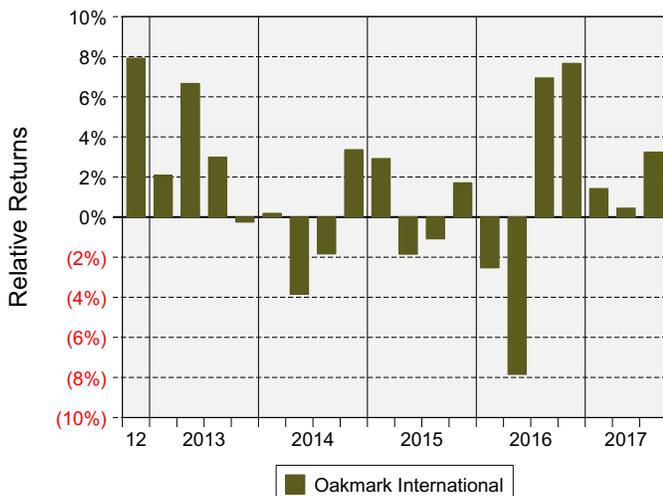
### Quarterly Asset Growth

Beginning Market Value	\$34,105,596
Net New Investment	-\$3,000,000
Investment Gains/(Losses)	\$3,187,697
Ending Market Value	\$34,293,293

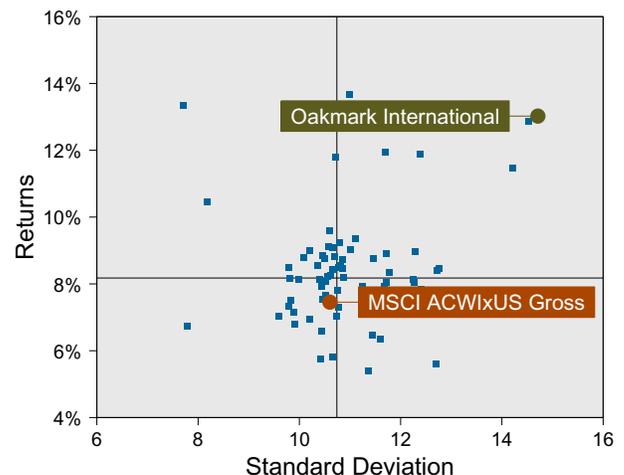
### Performance vs Callan Non US Equity Mutual Funds (Net)



### Relative Return vs MSCI ACWixUS Gross



### Callan Non US Equity Mutual Funds (Net) Annualized Five Year Risk vs Return

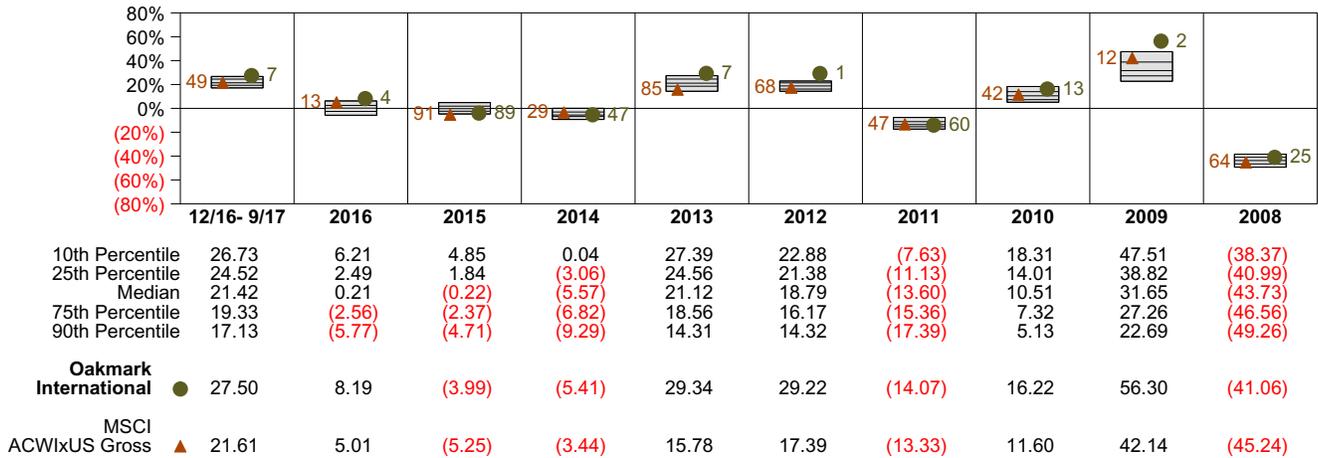


# Oakmark International Return Analysis Summary

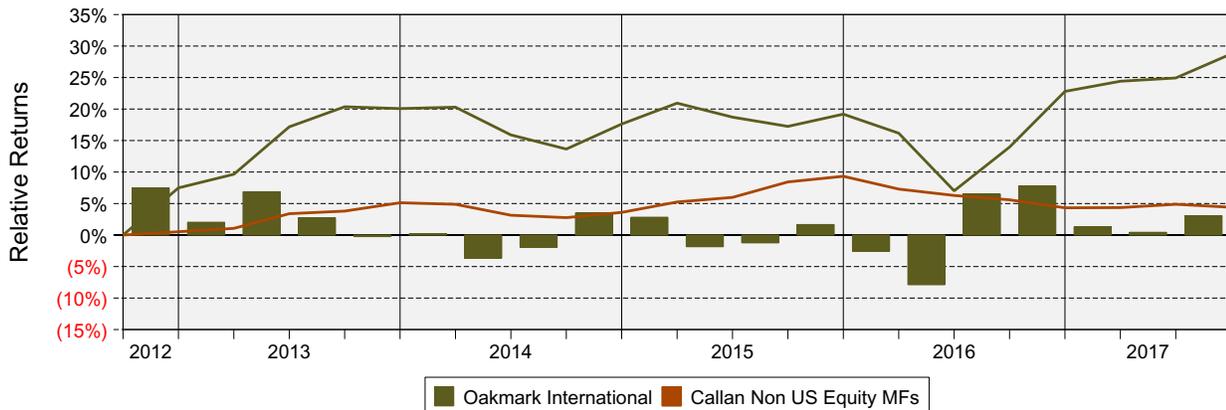
## Return Analysis

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

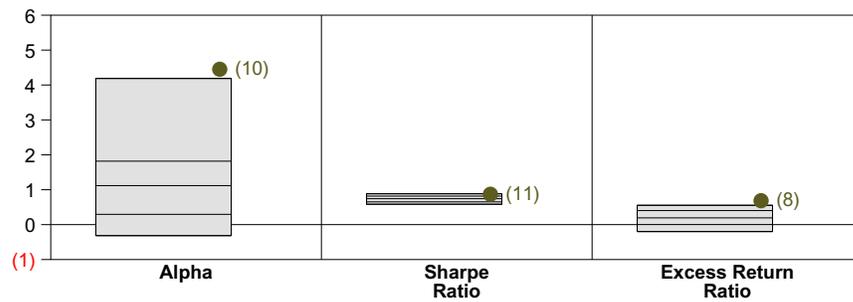
### Performance vs Callan Non US Equity Mutual Funds (Net)



### Cumulative and Quarterly Relative Return vs MSCI ACWixUS Gross



### Risk Adjusted Return Measures vs MSCI ACWixUS Gross Rankings Against Callan Non US Equity Mutual Funds (Net) Five Years Ended September 30, 2017

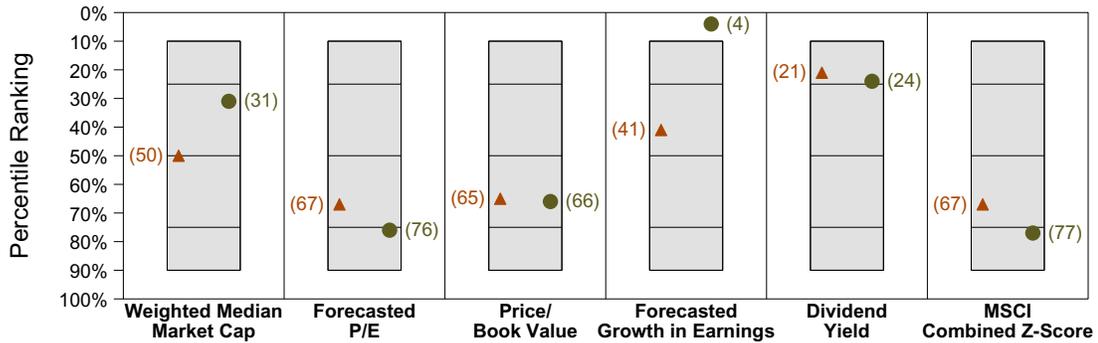


# Oakmark International Equity Characteristics Analysis Summary

## Portfolio Characteristics

This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against Callan Non US Equity Mutual Funds as of September 30, 2017

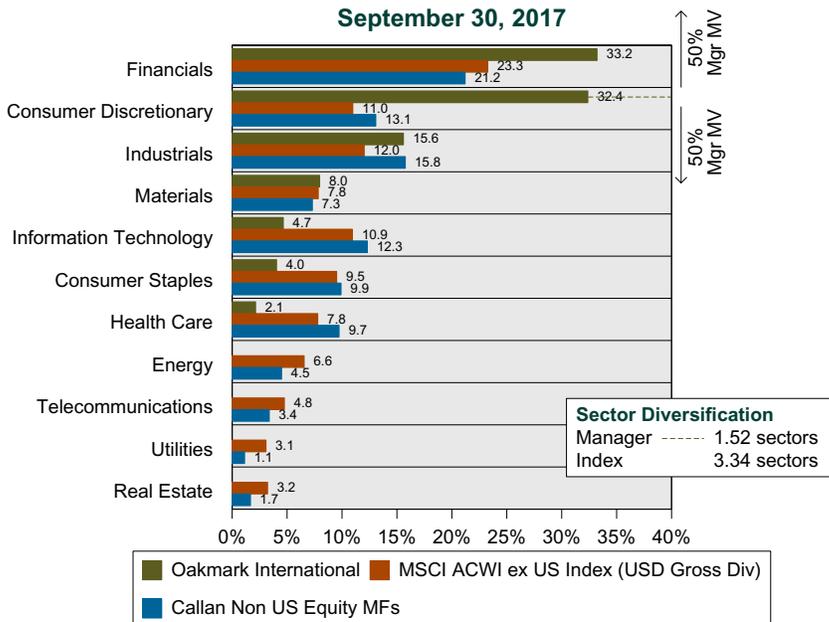


	Weighted Median Market Cap	Forecasted P/E	Price/Book Value	Forecasted Growth in Earnings	Dividend Yield	MSCI Combined Z-Score
10th Percentile	53.61	19.10	3.22	17.71	2.98	0.85
25th Percentile	46.84	17.33	2.65	14.77	2.73	0.51
Median	33.46	15.32	1.94	12.73	2.26	0.20
75th Percentile	21.65	13.72	1.56	11.24	1.91	(0.09)
90th Percentile	11.06	12.95	1.39	8.92	1.65	(0.36)
<b>Oakmark International</b>	<b>41.79</b>	<b>13.58</b>	<b>1.69</b>	<b>21.06</b>	<b>2.77</b>	<b>(0.12)</b>
MSCI ACWI ex US Index (USD Gross Div)	33.54	14.18	1.71	13.30	2.81	(0.03)

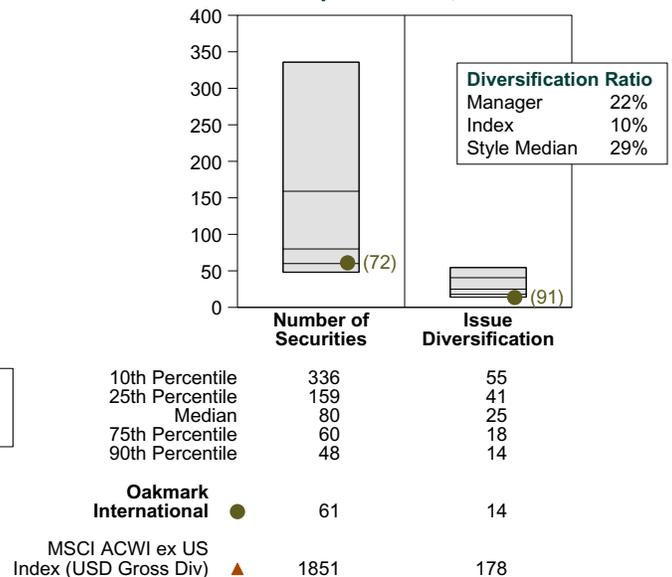
## Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.

### Sector Allocation September 30, 2017



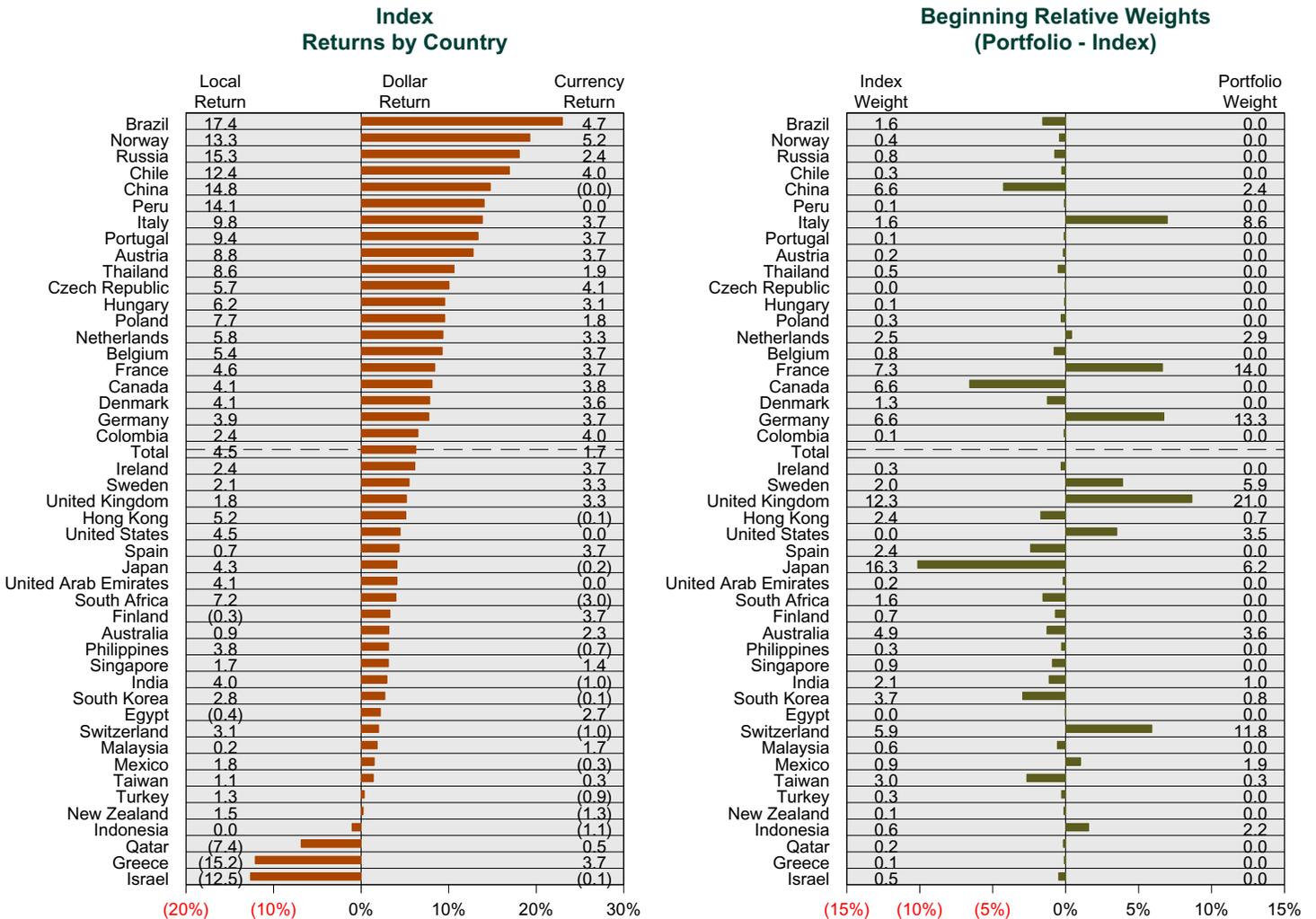
### Diversification September 30, 2017



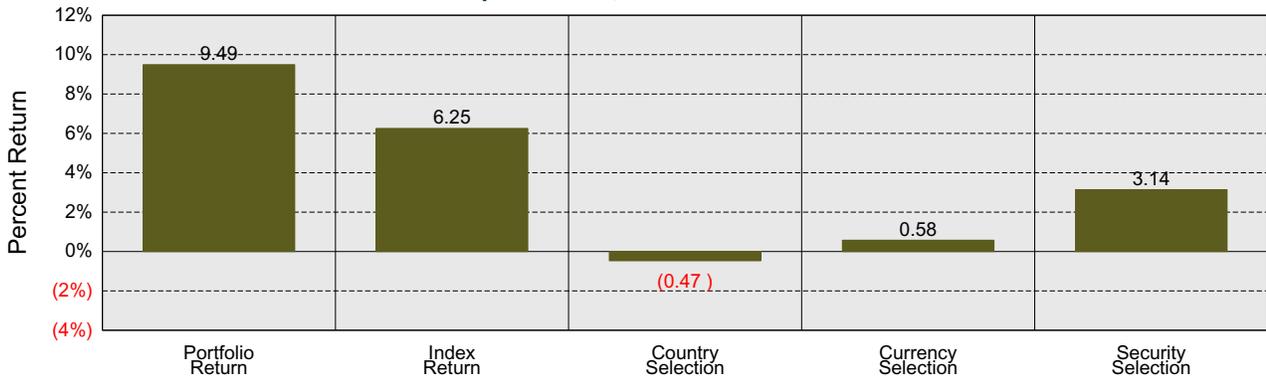
# Oakmark International vs MSCI ACWIxUS Gross Attribution for Quarter Ended September 30, 2017

## International Attribution

The first chart below illustrates the return for each country in the index sorted from high to low. The total return for the index is highlighted with a dotted line. The second chart (countries presented in the same order) illustrates the manager's country allocation decisions relative to the index. To the extent that the manager over-weighted a country that had a higher return than the total return for the index (above the dotted line) it contributes positively to the manager's country (or currency) selection effect. The last chart details the manager return, the index return, and the attribution factors for the quarter.



## Attribution Factors for Quarter Ended September 30, 2017



# Mondrian International Period Ended September 30, 2017

## Investment Philosophy

Mondrian's value driven investment philosophy is based on the belief that investments need to be evaluated in terms of their fundamental long-term value. In the management of international equity assets, they invest in securities where rigorous dividend discount analysis identifies value in terms of the long term flow of income. Mondrian's management fee is 80 bps on all assets.

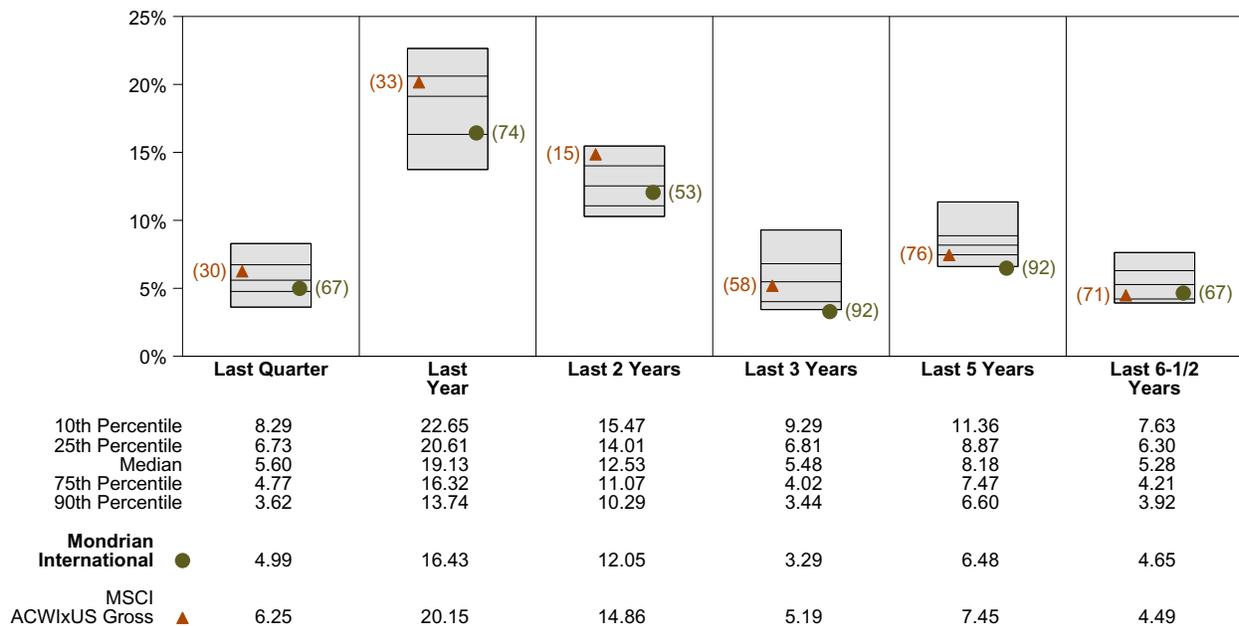
## Quarterly Summary and Highlights

- Mondrian International's portfolio posted a 4.99% return for the quarter placing it in the 67 percentile of the Callan Non US Equity Mutual Funds group for the quarter and in the 74 percentile for the last year.
- Mondrian International's portfolio underperformed the MSCI ACWixUS Gross by 1.26% for the quarter and underperformed the MSCI ACWixUS Gross for the year by 3.72%.

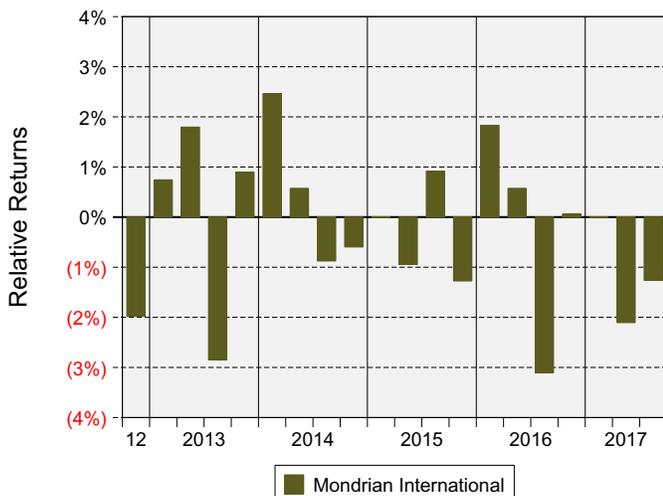
## Quarterly Asset Growth

Beginning Market Value	\$31,638,418
Net New Investment	\$-7,000,000
Investment Gains/(Losses)	\$1,488,114
Ending Market Value	\$26,126,532

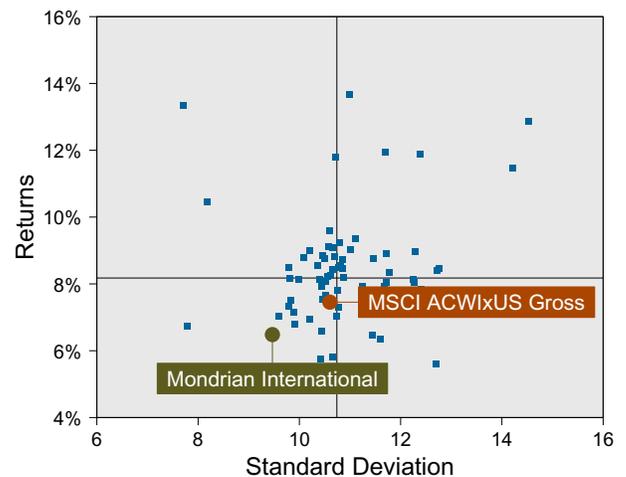
## Performance vs Callan Non US Equity Mutual Funds (Net)



## Relative Return vs MSCI ACWixUS Gross



## Callan Non US Equity Mutual Funds (Net) Annualized Five Year Risk vs Return

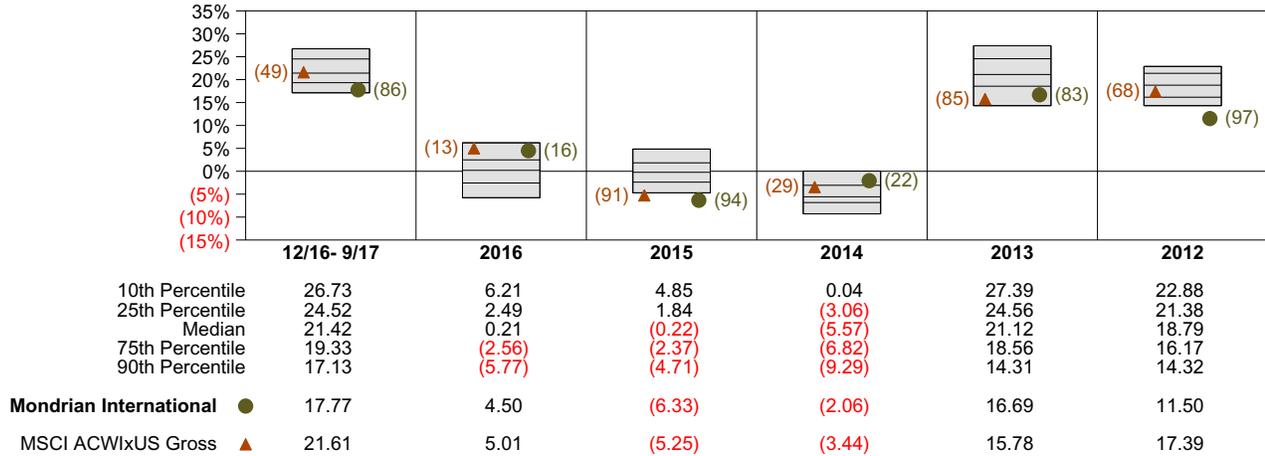


# Mondrian International Return Analysis Summary

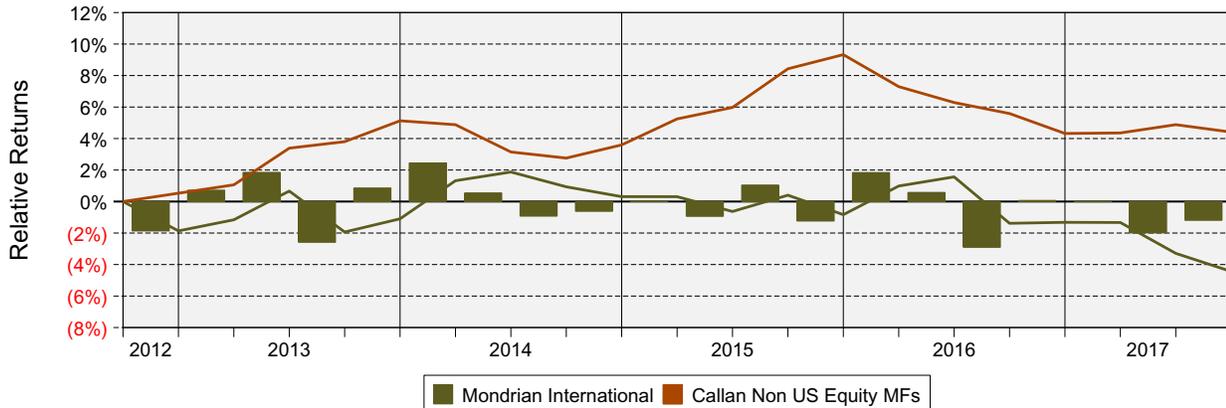
## Return Analysis

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

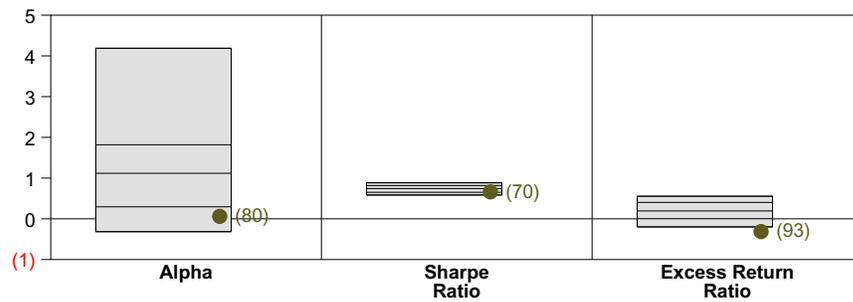
### Performance vs Callan Non US Equity Mutual Funds (Net)



### Cumulative and Quarterly Relative Return vs MSCI ACWixUS Gross



### Risk Adjusted Return Measures vs MSCI ACWixUS Gross Rankings Against Callan Non US Equity Mutual Funds (Net) Five Years Ended September 30, 2017



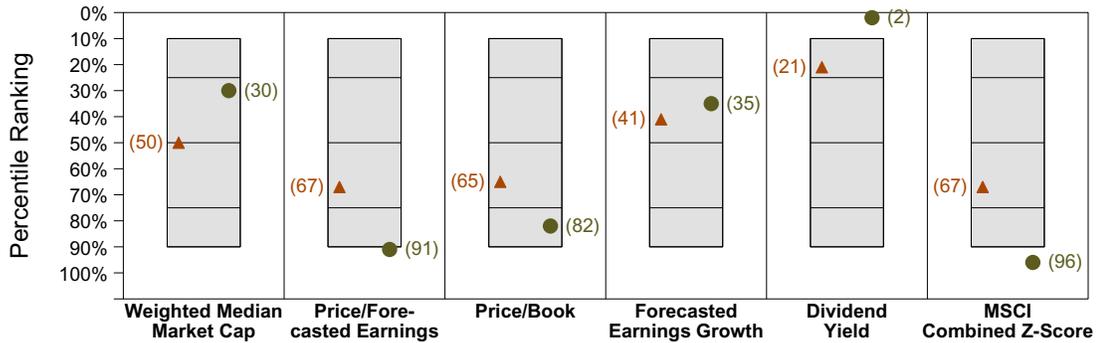
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	4.19	0.88	0.55
25th Percentile	1.82	0.82	0.40
Median	1.12	0.74	0.19
75th Percentile	0.29	0.65	0.00
90th Percentile	(0.32)	0.58	(0.20)
<b>Mondrian International</b> ●	0.06	0.66	(0.31)

# Mondrian International Equity Characteristics Analysis Summary

## Portfolio Characteristics

This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

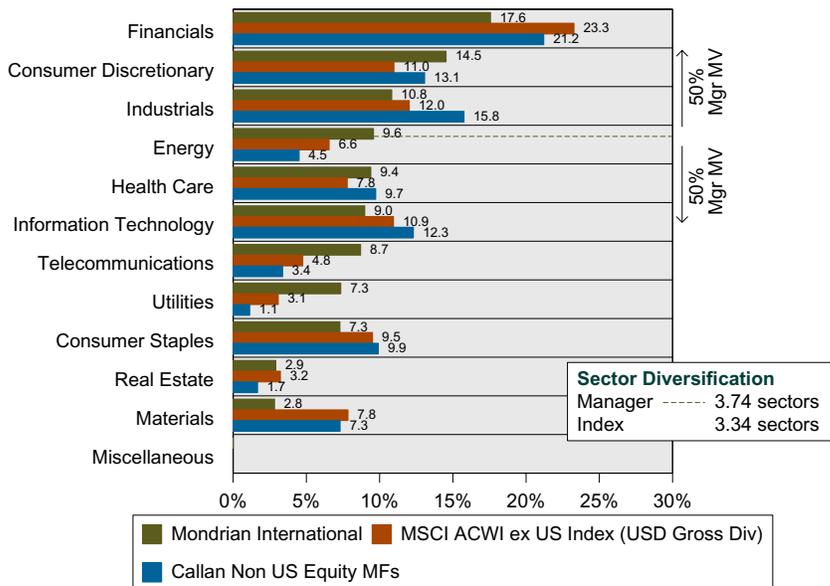
## Portfolio Characteristics Percentile Rankings Rankings Against Callan Non US Equity Mutual Funds as of September 30, 2017



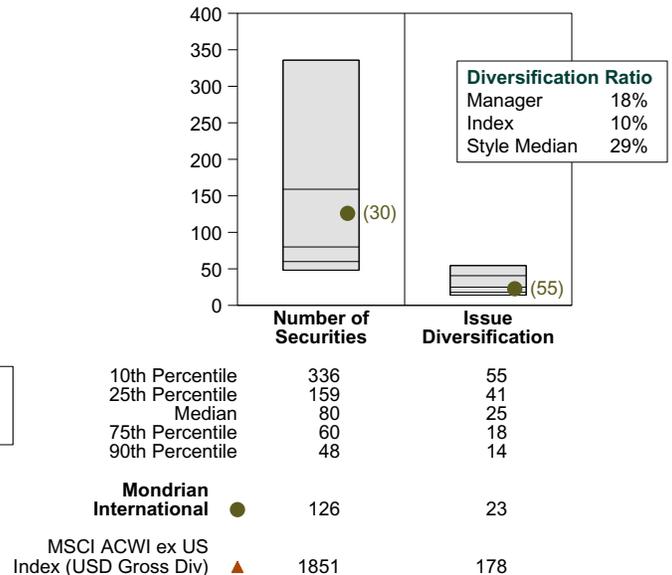
## Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.

### Sector Allocation September 30, 2017



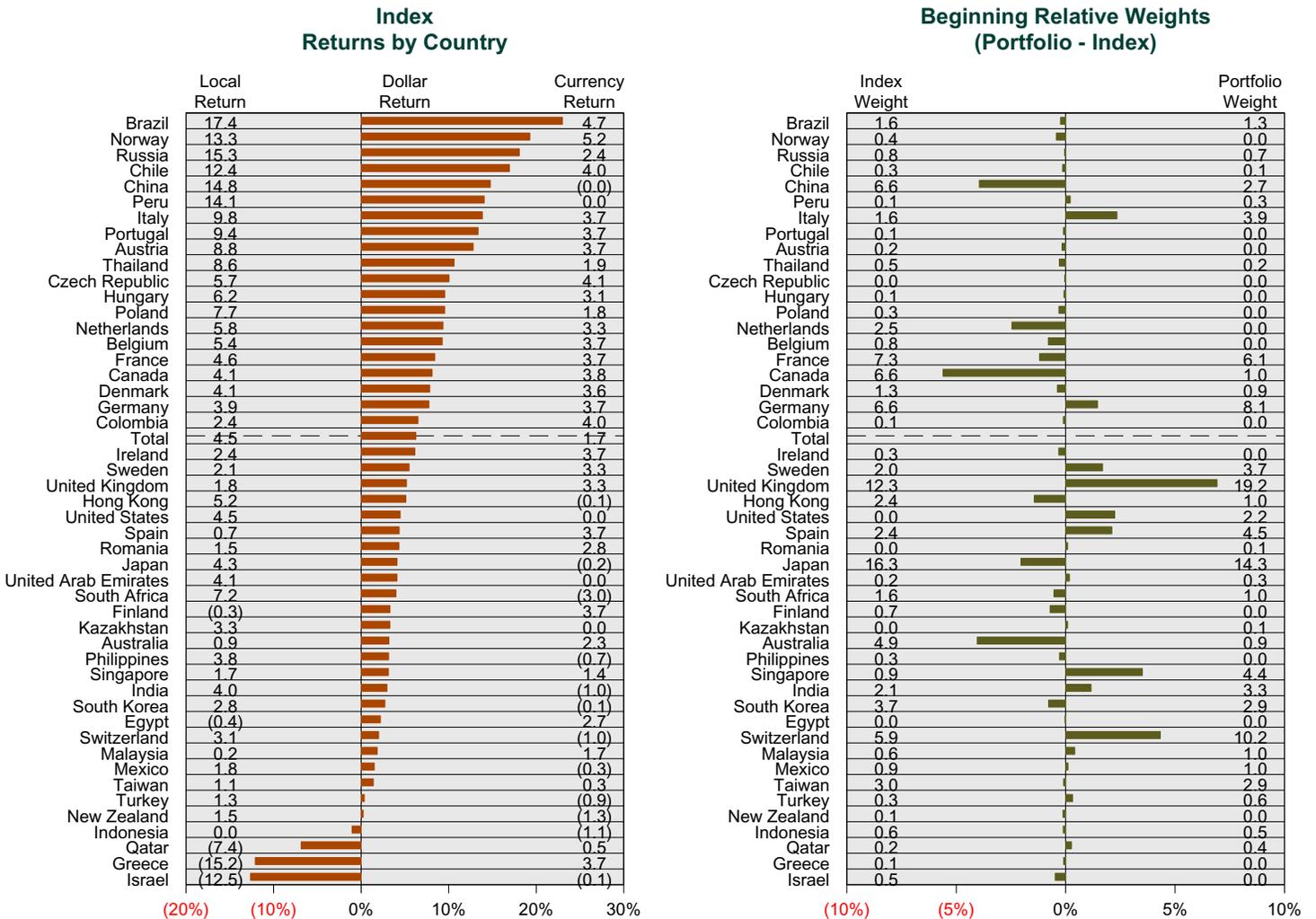
### Diversification September 30, 2017



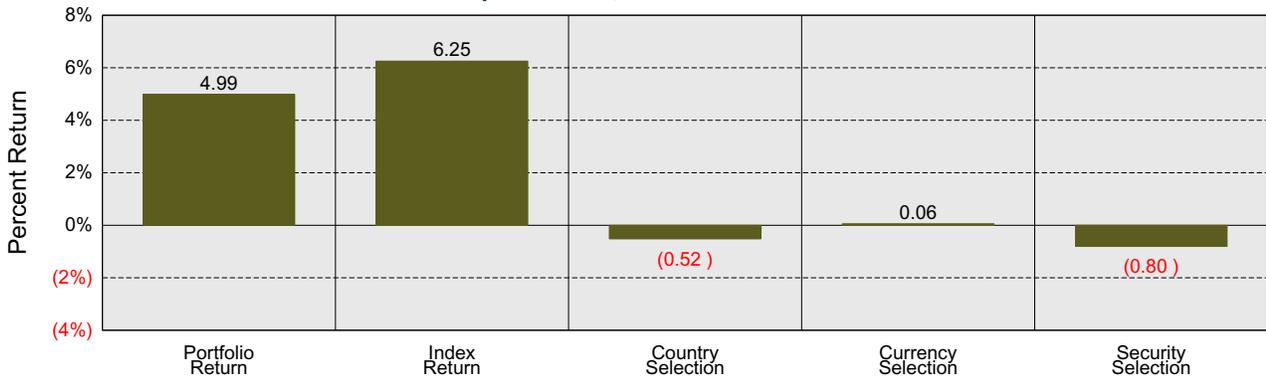
# Mondrian International vs MSCI ACWixUS Gross Attribution for Quarter Ended September 30, 2017

## International Attribution

The first chart below illustrates the return for each country in the index sorted from high to low. The total return for the index is highlighted with a dotted line. The second chart (countries presented in the same order) illustrates the manager's country allocation decisions relative to the index. To the extent that the manager over-weighted a country that had a higher return than the total return for the index (above the dotted line) it contributes positively to the manager's country (or currency) selection effect. The last chart details the manager return, the index return, and the attribution factors for the quarter.



## Attribution Factors for Quarter Ended September 30, 2017



# Investec

## Period Ended September 30, 2017

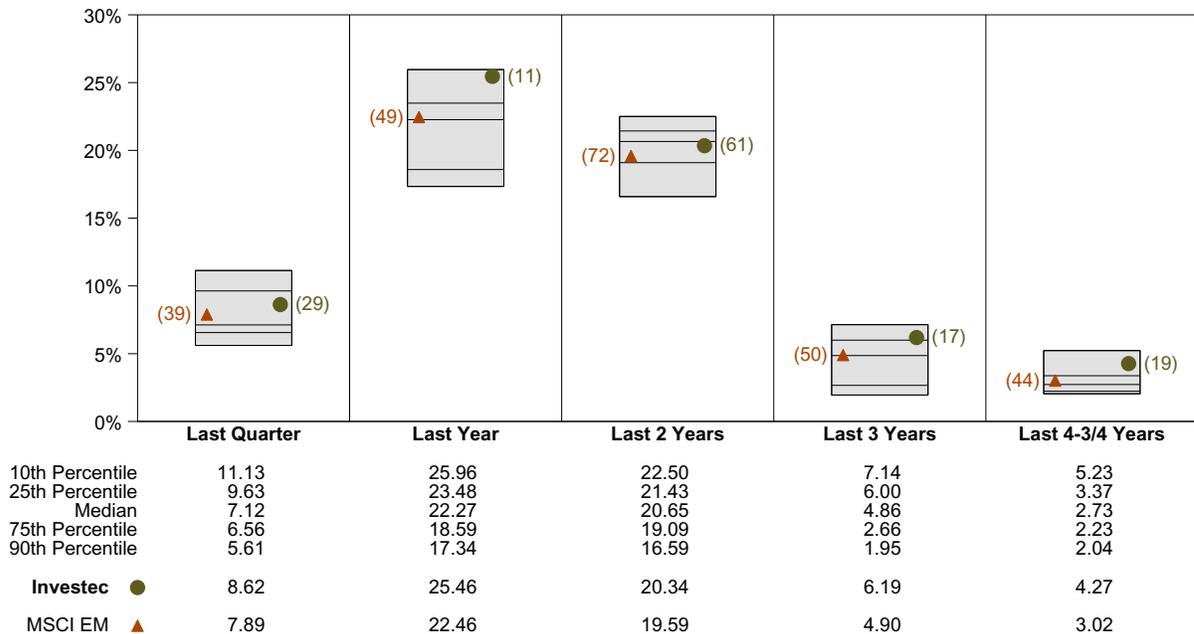
### Investment Philosophy

Investec's 4Factor Equity team believes that share prices are driven by four key attributes over time and investing in companies that display these characteristics will drive long-term performance. They look to invest in high quality, attractively valued companies, which are improving operating performance and receiving increasing investor attention. These four factors (i.e., Strategy, Value, Earnings, and Technicals) are confirmed as performance drivers by academic research, empirical testing and intuitive reasoning. They believe that each factor can be a source of outperformance but in combination they are intended to produce more stable returns over the market cycle. Investec's management fee is 80 bps on all assets. The portfolio was funded June 2017. Historical returns are that of the manager's composite.

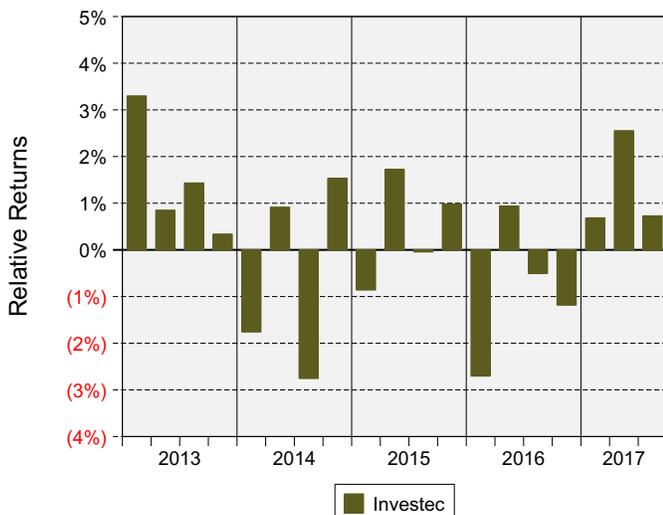
### Quarterly Summary and Highlights

- Investec's portfolio posted a 8.62% return for the quarter placing it in the 29 percentile of the Emerging Markets Equity DB group for the quarter and in the 11 percentile for the last year.
- Investec's portfolio outperformed the MSCI EM by 0.73% for the quarter and outperformed the MSCI EM for the year by 3.00%.

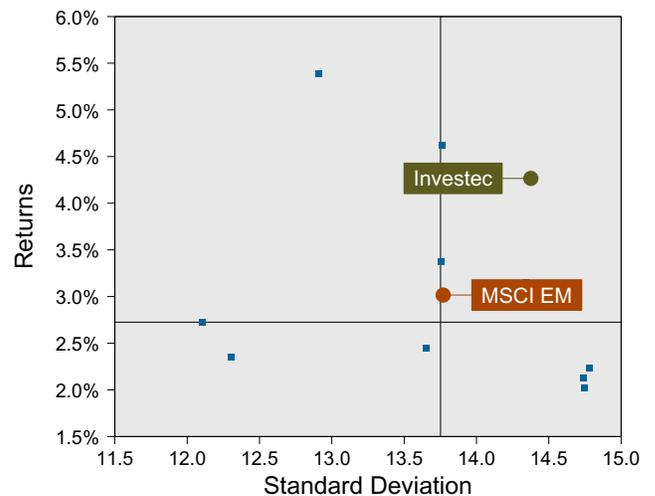
### Performance vs Emerging Markets Equity DB (Net)



### Relative Return vs MSCI EM



### Emerging Markets Equity DB (Net) Annualized Four and Three-Quarter Year Risk vs Return

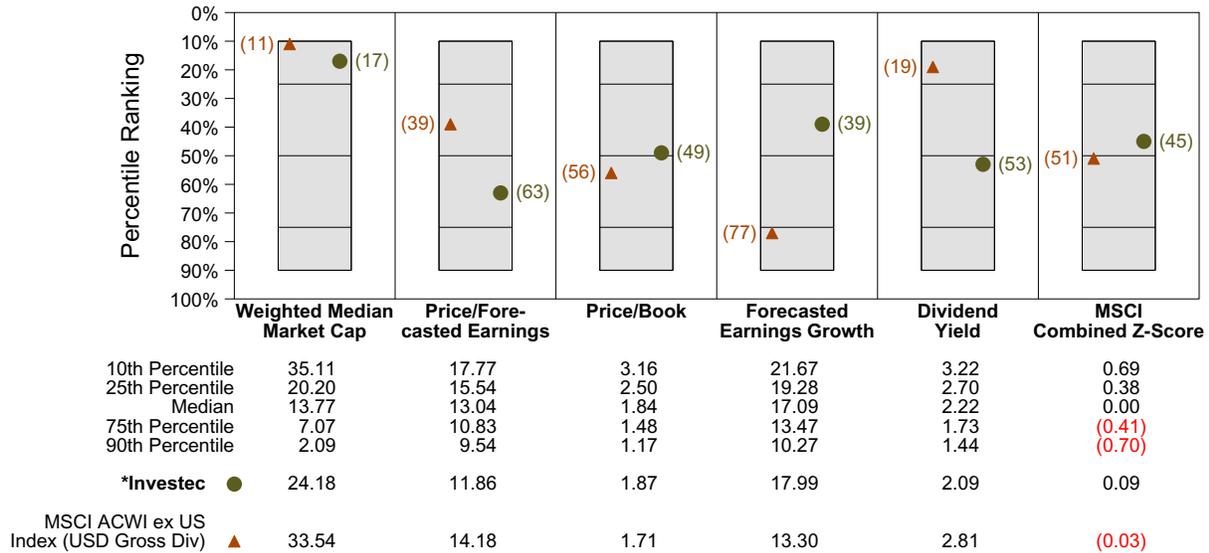


# Investec Equity Characteristics Analysis Summary

## Portfolio Characteristics

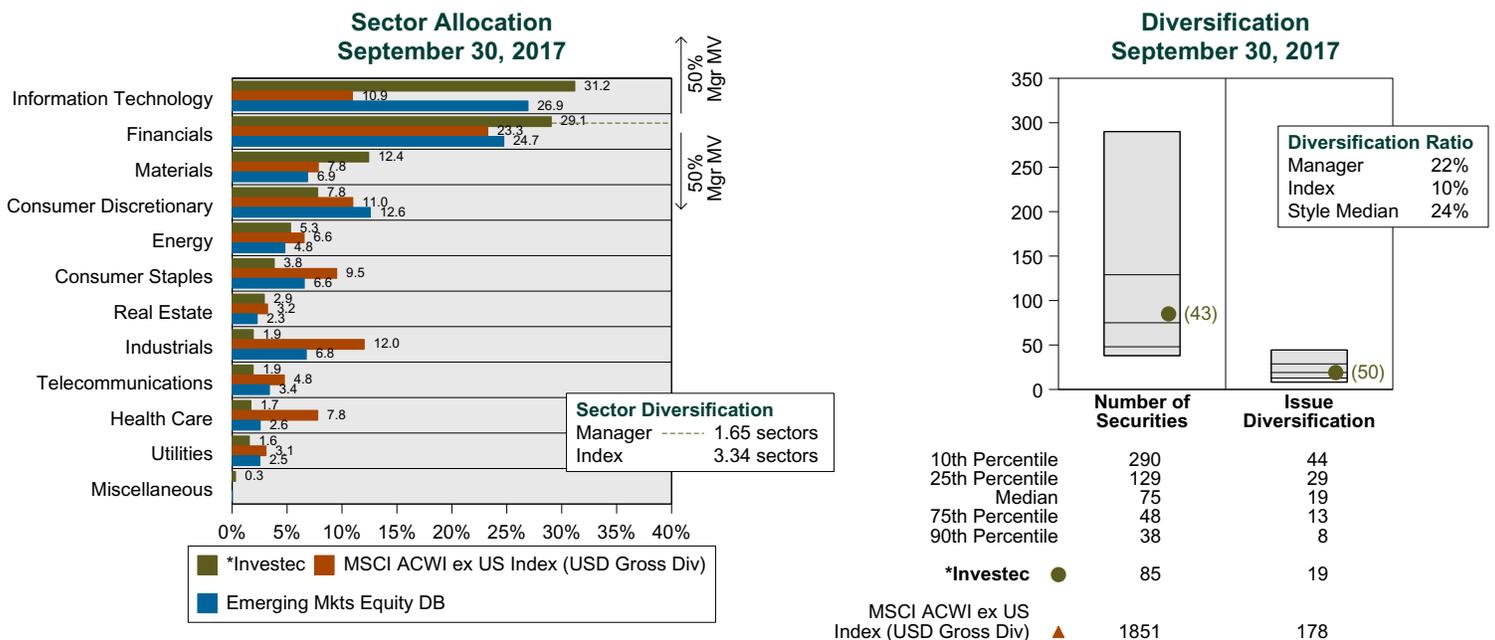
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against Emerging Markets Equity DB as of September 30, 2017



## Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.

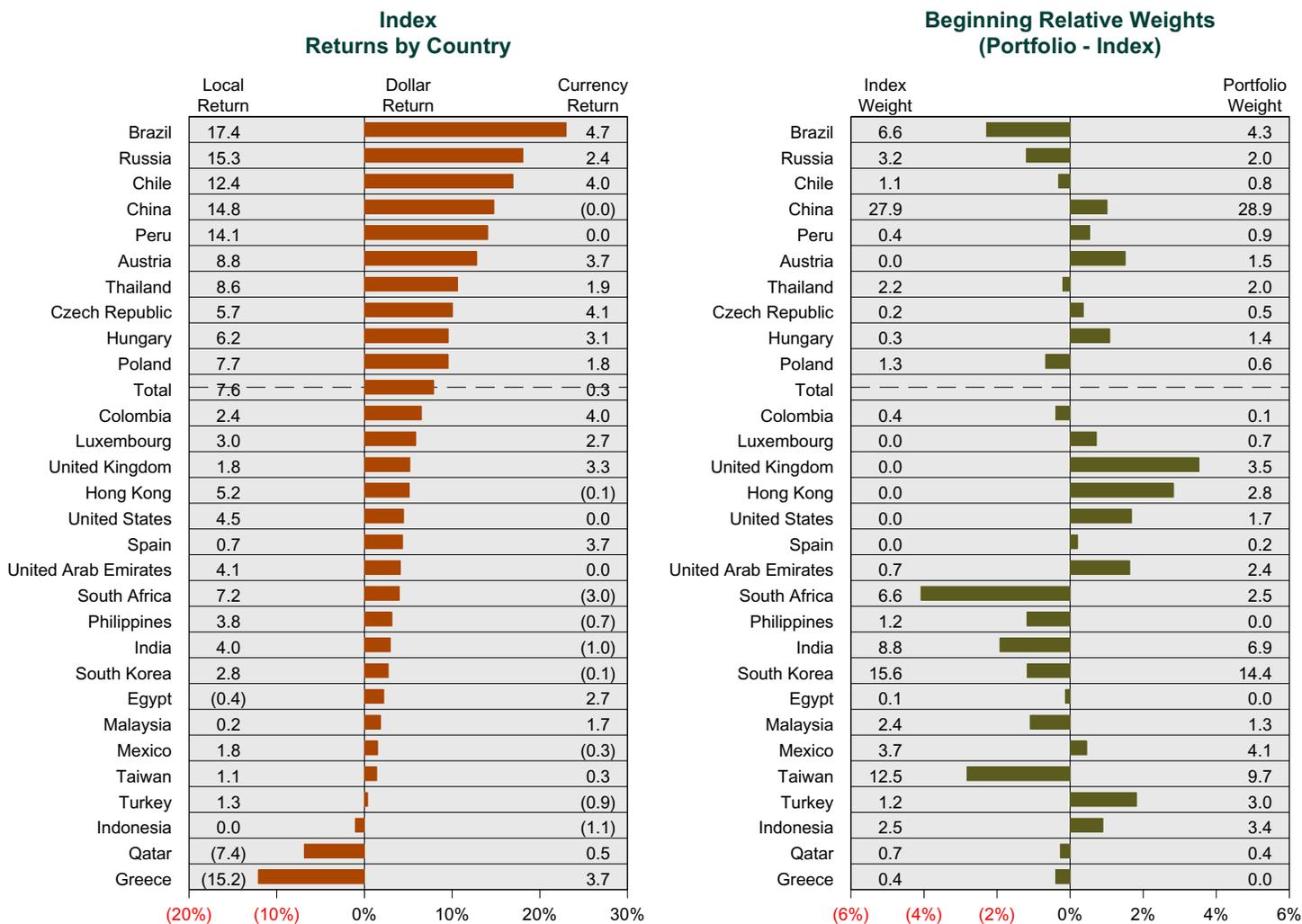


\*9/30/17 portfolio characteristics generated using most recently available holdings (6/30/17) modified based on a "buy-and-hold" assumption (repriced and adjusted for corporate actions). Analysis is then done using current market and company financial data.

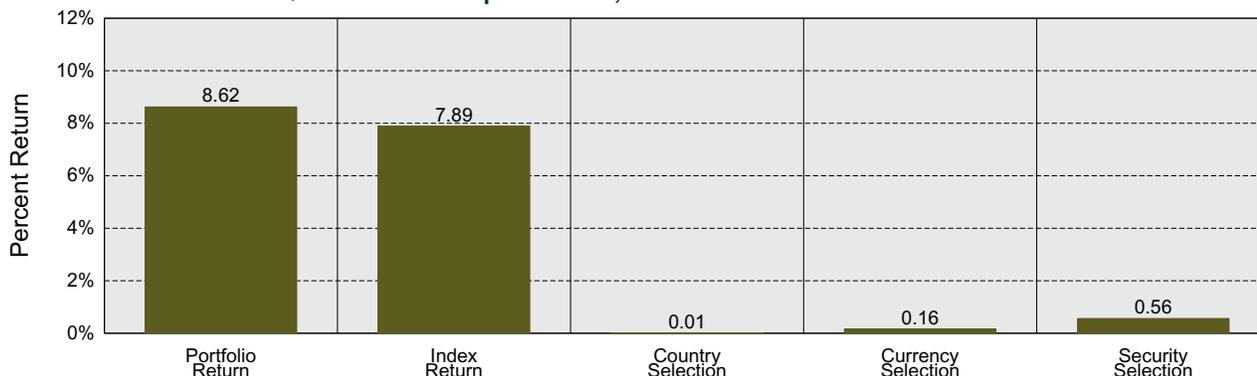
# Investec vs MSCI Emerging Markets Attribution for Quarter Ended September 30, 2017

## International Attribution

The first chart below illustrates the return for each country in the index sorted from high to low. The total return for the index is highlighted with a dotted line. The second chart (countries presented in the same order) illustrates the manager's country allocation decisions relative to the index. To the extent that the manager over-weighted a country that had a higher return than the total return for the index (above the dotted line) it contributes positively to the manager's country (or currency) selection effect. The last chart details the manager return, the index return, and the attribution factors for the quarter.



## Attribution Factors for Quarter Ended September 30, 2017





# Domestic Fixed Income Composite Period Ended September 30, 2017

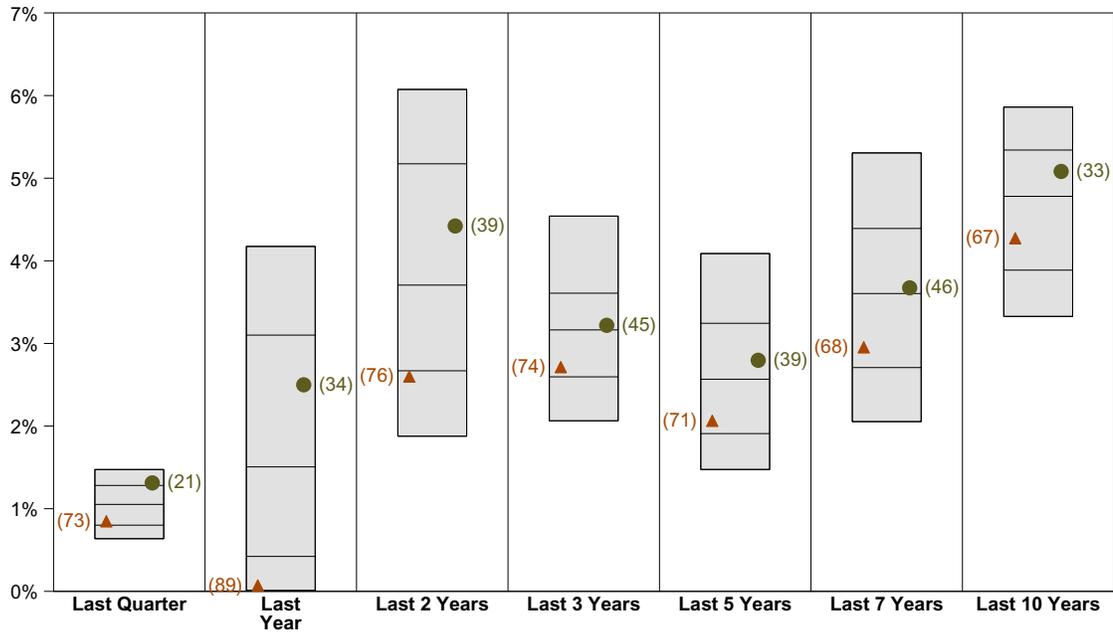
## Quarterly Summary and Highlights

- Domestic Fixed Income Composite's portfolio posted a 1.31% return for the quarter placing it in the 21 percentile of the Pub Pln- Domestic Fixed group for the quarter and in the 34 percentile for the last year.
- Domestic Fixed Income Composite's portfolio outperformed the Blmbg Aggregate by 0.46% for the quarter and outperformed the Blmbg Aggregate for the year by 2.43%.

## Quarterly Asset Growth

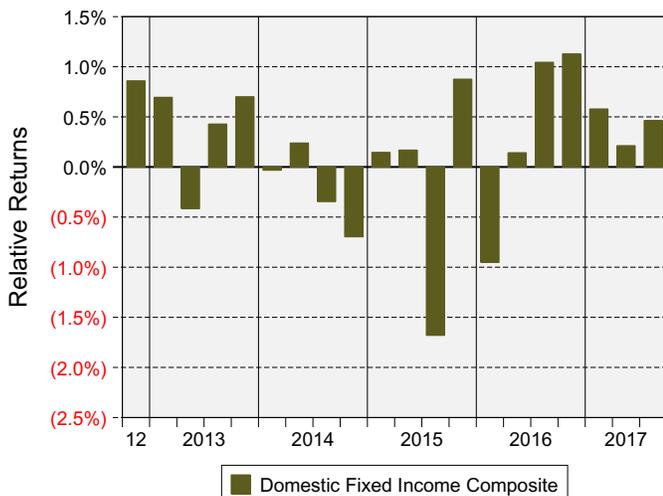
Beginning Market Value	\$103,647,530
Net New Investment	\$0
Investment Gains/(Losses)	\$1,360,315
Ending Market Value	\$105,007,846

## Performance vs Pub Pln- Domestic Fixed (Gross)

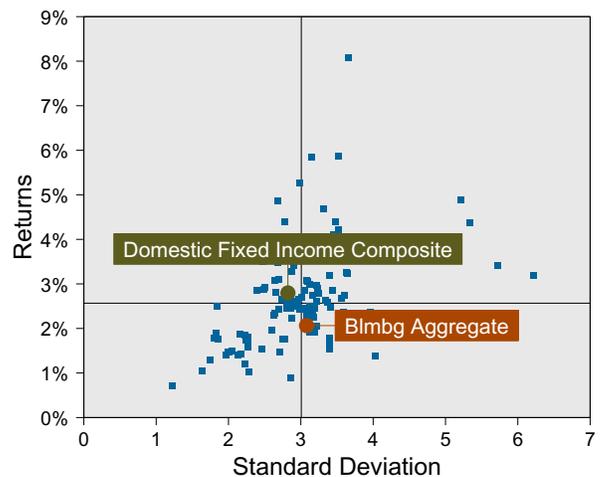


10th Percentile	1.47	4.17	6.07	4.54	4.09	5.31	5.86
25th Percentile	1.28	3.10	5.17	3.61	3.24	4.39	5.34
Median	1.05	1.51	3.71	3.16	2.57	3.60	4.78
75th Percentile	0.80	0.42	2.67	2.60	1.91	2.71	3.89
90th Percentile	0.64	0.01	1.88	2.06	1.47	2.05	3.33
<b>Domestic Fixed Income Composite</b> ●	1.31	2.50	4.42	3.22	2.80	3.67	5.08
Blmbg Aggregate ▲	0.85	0.07	2.60	2.71	2.06	2.95	4.27

## Relative Return vs Blmbg Aggregate



## Pub Pln- Domestic Fixed (Gross) Annualized Five Year Risk vs Return

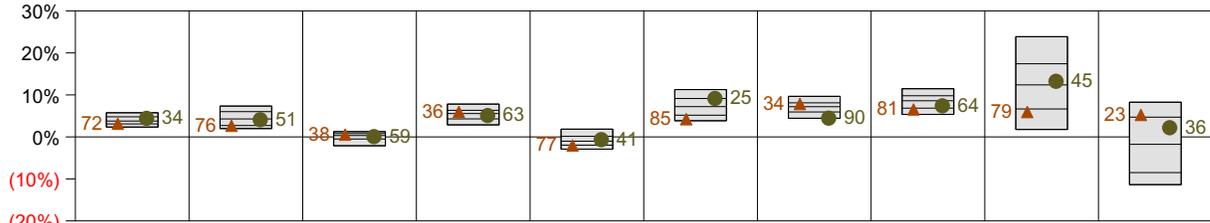


# Domestic Fixed Income Composite Return Analysis Summary

## Return Analysis

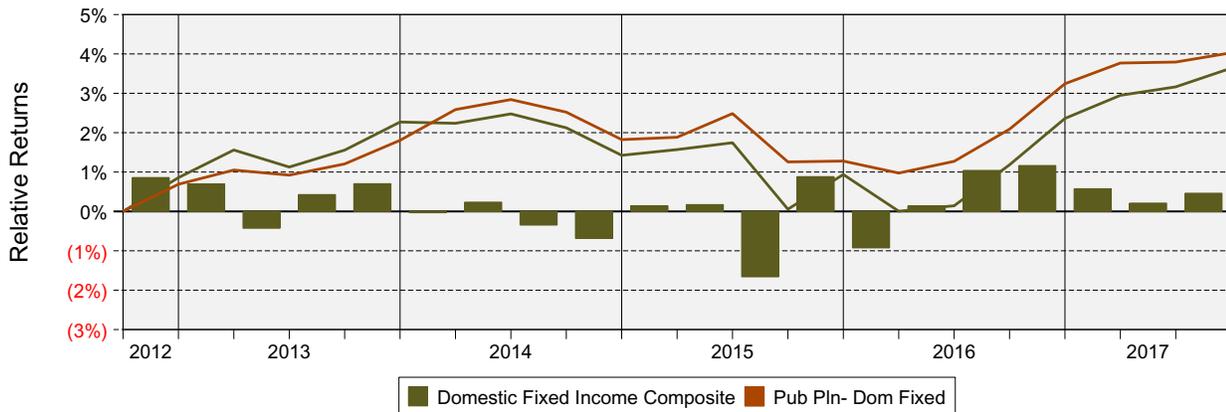
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate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

### Performance vs Pub Pln- Domestic Fixed (Gross)

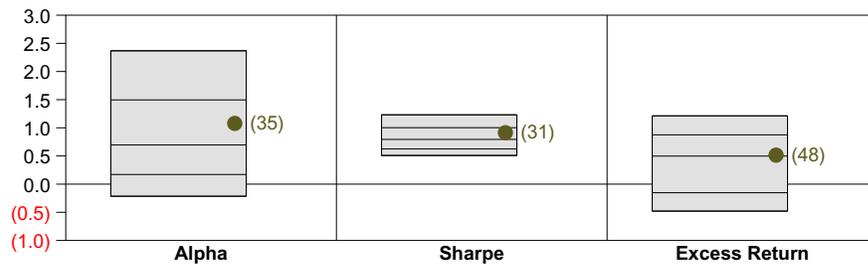


	12/16- 9/17	2016	2015	2014	2013	2012	2011	2010	2009	2008
10th Percentile	5.75	7.34	1.26	7.82	1.85	11.27	9.66	11.47	23.86	8.26
25th Percentile	4.78	6.02	0.80	6.33	0.14	9.14	8.11	9.80	17.41	4.70
Median	3.78	4.28	0.33	5.56	(1.02)	7.21	7.19	8.60	12.39	(1.76)
75th Percentile	3.10	2.71	(0.50)	4.30	(1.96)	5.17	5.94	6.85	6.66	(8.50)
90th Percentile	2.34	1.98	(2.11)	2.87	(2.92)	3.84	4.44	5.36	1.77	(11.37)
<b>Domestic Fixed Income Composite</b>	4.43	4.10	0.07	5.09	(0.65)	9.15	4.47	7.39	13.24	2.19
<b>Blmbg Aggregate</b>	3.14	2.65	0.55	5.97	(2.02)	4.21	7.84	6.54	5.93	5.24

### Cumulative and Quarterly Relative Return vs Blmbg Aggregate



### Risk Adjusted Return Measures vs Blmbg Aggregate Rankings Against Pub Pln- Domestic Fixed (Gross) Five Years Ended September 30, 2017



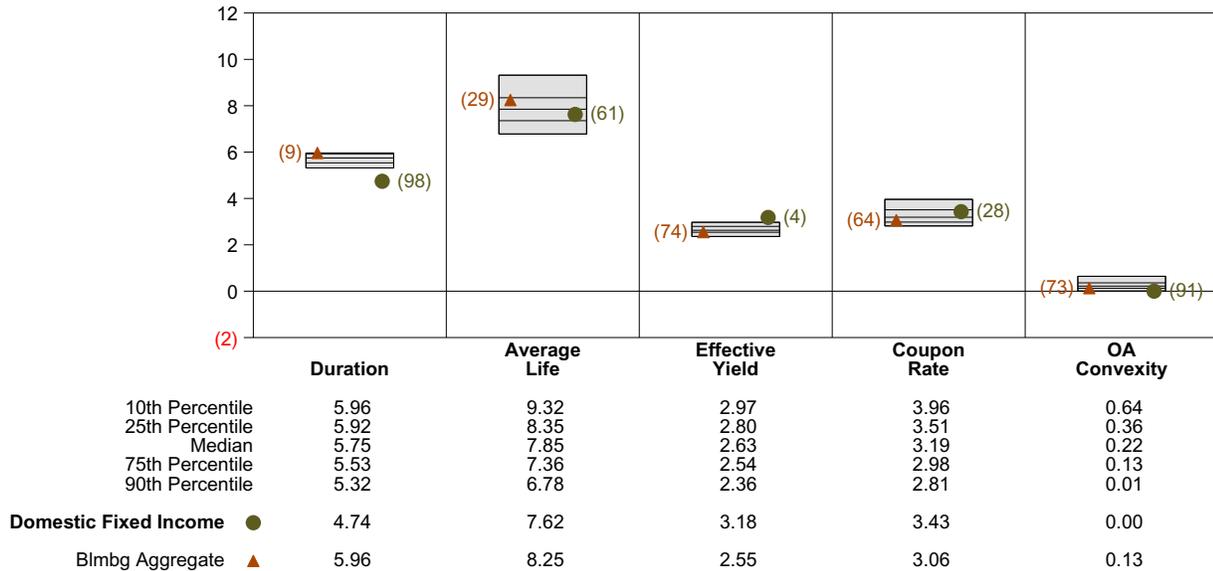
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	2.37	1.23	1.21
25th Percentile	1.50	1.00	0.88
Median	0.70	0.79	0.50
75th Percentile	0.17	0.62	(0.15)
90th Percentile	(0.22)	0.51	(0.48)
<b>Domestic Fixed Income Composite</b>	1.08	0.91	0.51

# Domestic Fixed Income Bond Characteristics Analysis Summary

## Portfolio Characteristics

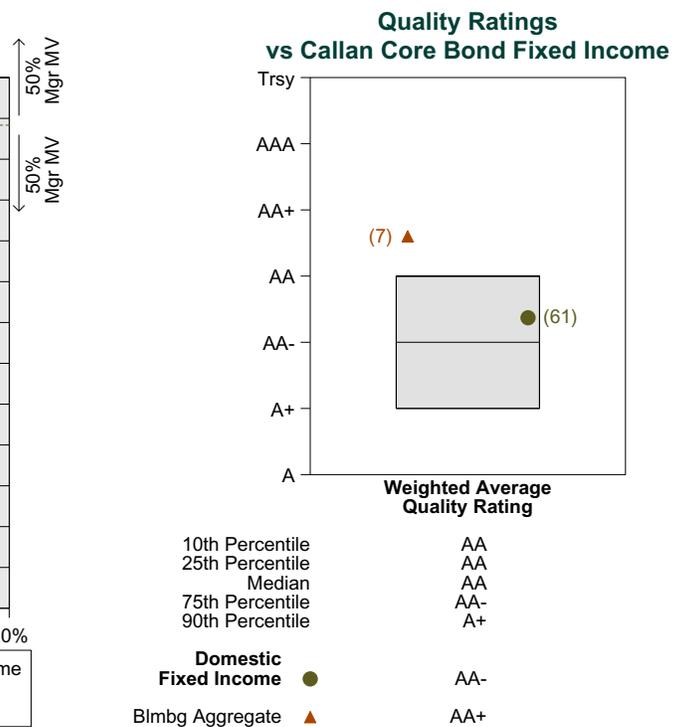
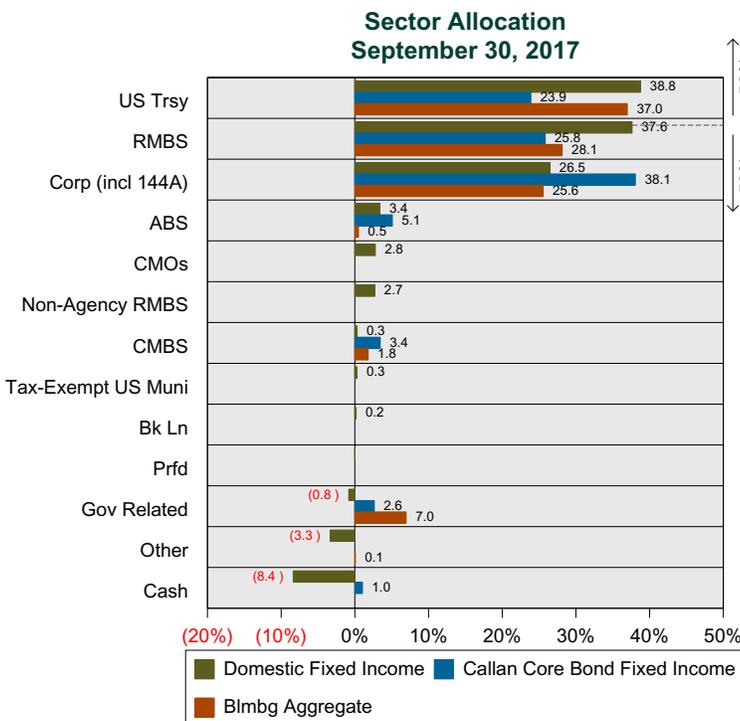
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Fixed Income Portfolio Characteristics Rankings Against Callan Core Bond Fixed Income as of September 30, 2017



## Sector Allocation and Quality Ratings

The first graph compares the manager's sector allocation with the average allocation across all the members of the manager's style. The second graph compares the manager's weighted average quality rating with the range of quality ratings for the style.



# Dodge & Cox Income Period Ended September 30, 2017

## Investment Philosophy

Dodge & Cox's Fixed Income philosophy is to construct and manage a high-quality and diversified portfolio of securities that is selected through bottom-up, fundamental analysis. They believe that by combining fundamental research with a long-term investment horizon, it is possible to uncover and act upon inefficiencies in the valuation of market sectors and individual securities. In their efforts to seek attractive returns, the team: 1) emphasizes market sector and individual security selection; 2) strives to build portfolios which have a higher yield than the composite yield of the broad bond market; and 3) analyzes portfolio and individual security risk. Their credit research focuses on analysis of the fundamental factors that impact an individual issuer's or market sector's credit risk. They also consider economic trends and special circumstances which may affect an industry or a specific issue or issuer.

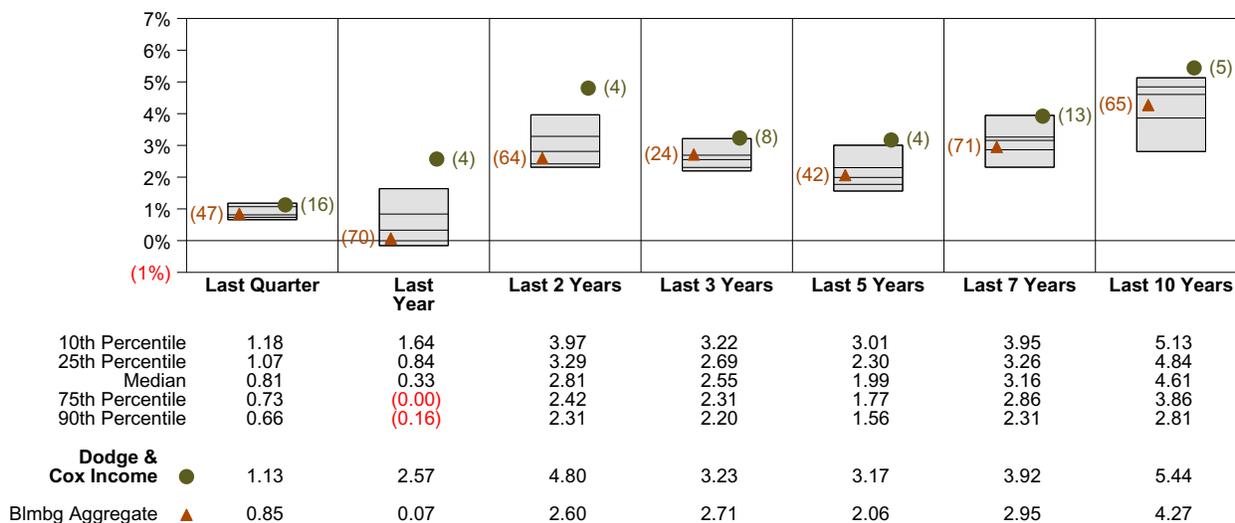
## Quarterly Summary and Highlights

- Dodge & Cox Income's portfolio posted a 1.13% return for the quarter placing it in the 16 percentile of the Callan Core Bond Mutual Funds group for the quarter and in the 4 percentile for the last year.
- Dodge & Cox Income's portfolio outperformed the Blmbg Aggregate by 0.28% for the quarter and outperformed the Blmbg Aggregate for the year by 2.50%.

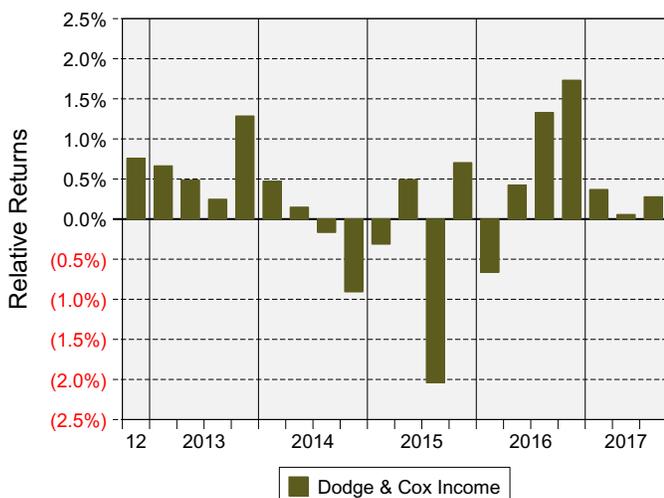
## Quarterly Asset Growth

Beginning Market Value	\$51,906,821
Net New Investment	\$0
Investment Gains/(Losses)	\$584,614
Ending Market Value	\$52,491,436

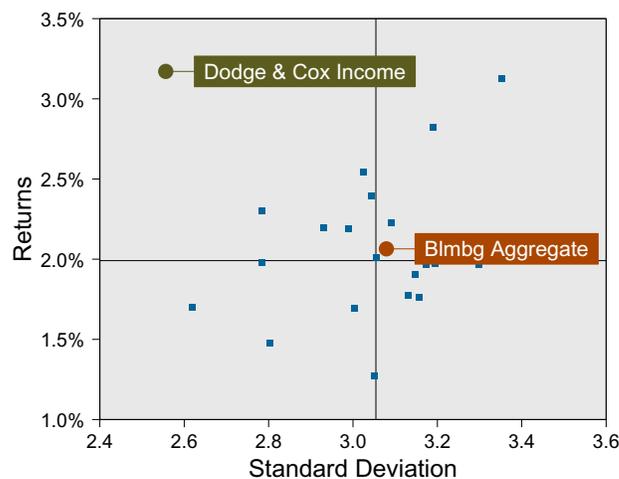
## Performance vs Callan Core Bond Mutual Funds (Net)



## Relative Return vs Blmbg Aggregate



## Callan Core Bond Mutual Funds (Net) Annualized Five Year Risk vs Return

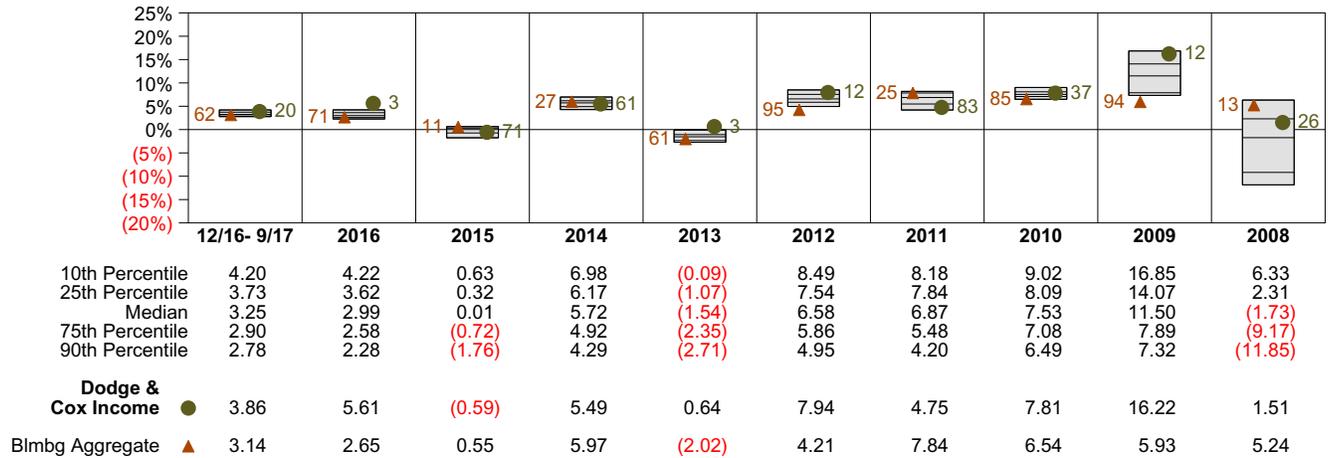


# Dodge & Cox Income Return Analysis Summary

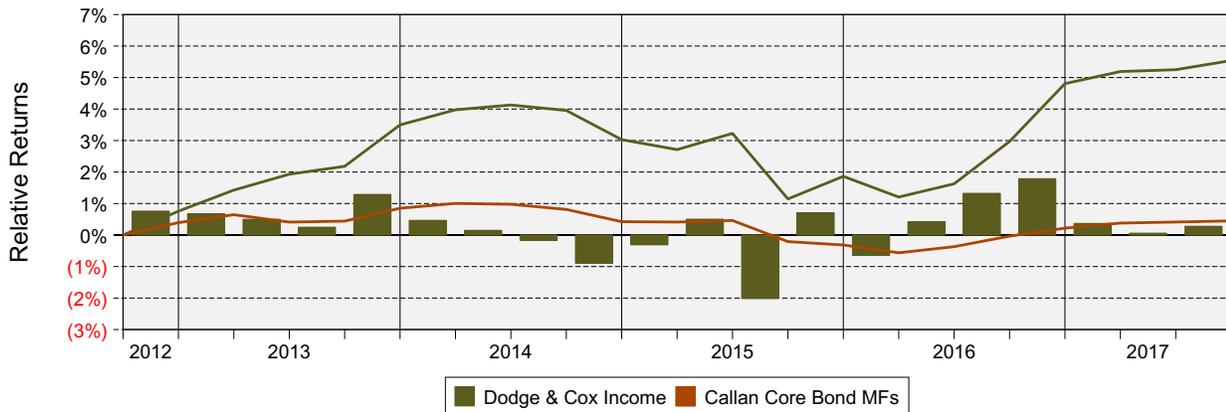
## Return Analysis

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

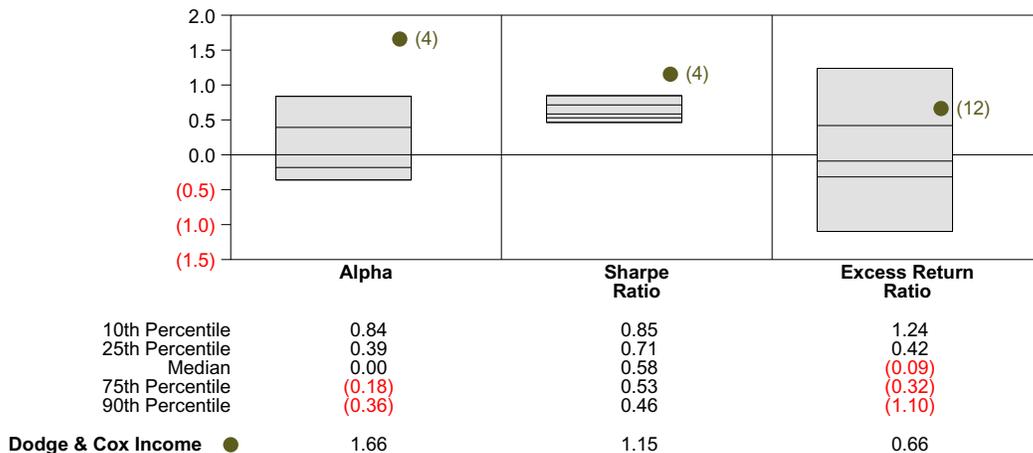
### Performance vs Callan Core Bond Mutual Funds (Net)



### Cumulative and Quarterly Relative Return vs Blmbg Aggregate



### Risk Adjusted Return Measures vs Blmbg Aggregate Rankings Against Callan Core Bond Mutual Funds (Net) Five Years Ended September 30, 2017

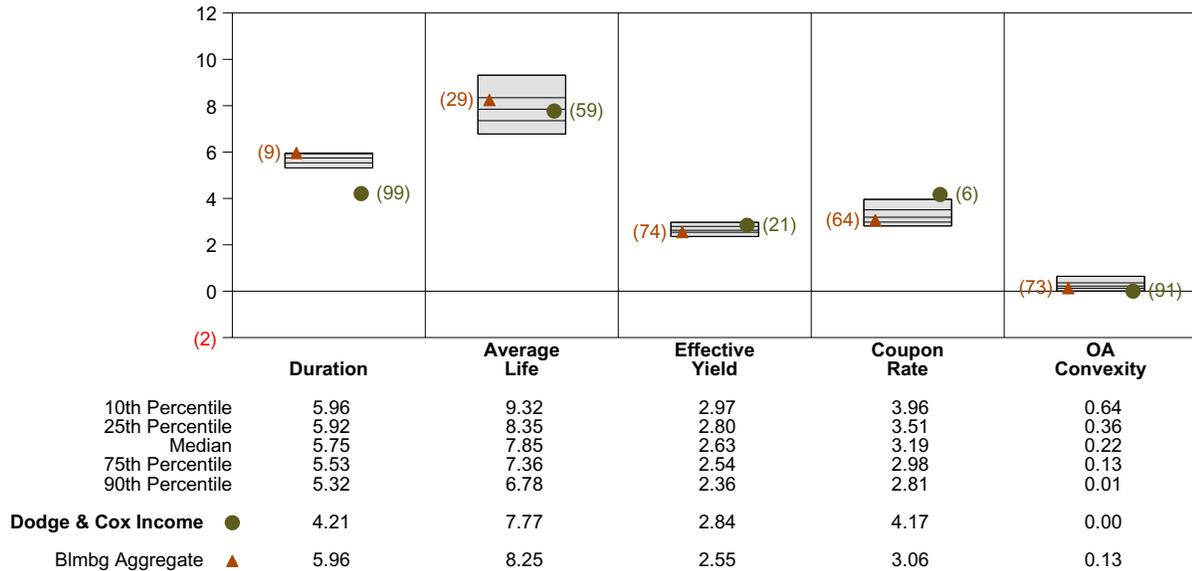


# Dodge & Cox Income Bond Characteristics Analysis Summary

## Portfolio Characteristics

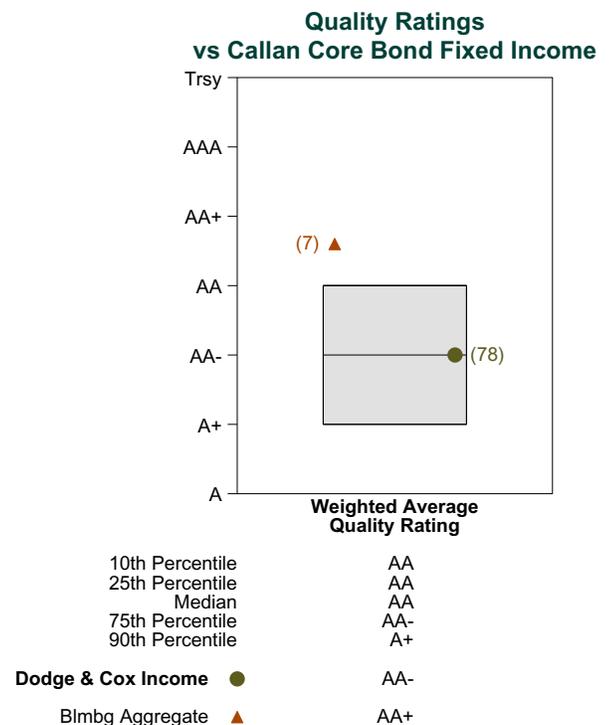
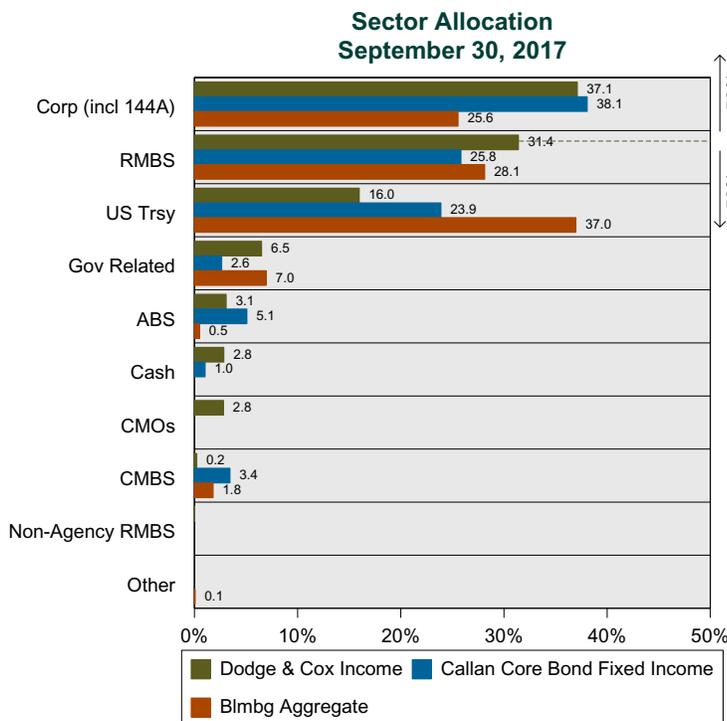
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Fixed Income Portfolio Characteristics Rankings Against Callan Core Bond Fixed Income as of September 30, 2017



## Sector Allocation and Quality Ratings

The first graph compares the manager's sector allocation with the average allocation across all the members of the manager's style. The second graph compares the manager's weighted average quality rating with the range of quality ratings for the style.



# PIMCO

## Period Ended September 30, 2017

### Investment Philosophy

PIMCO emphasizes adding value by rotating through the major sectors of the domestic and international bond markets. They also seek to enhance returns through duration management.

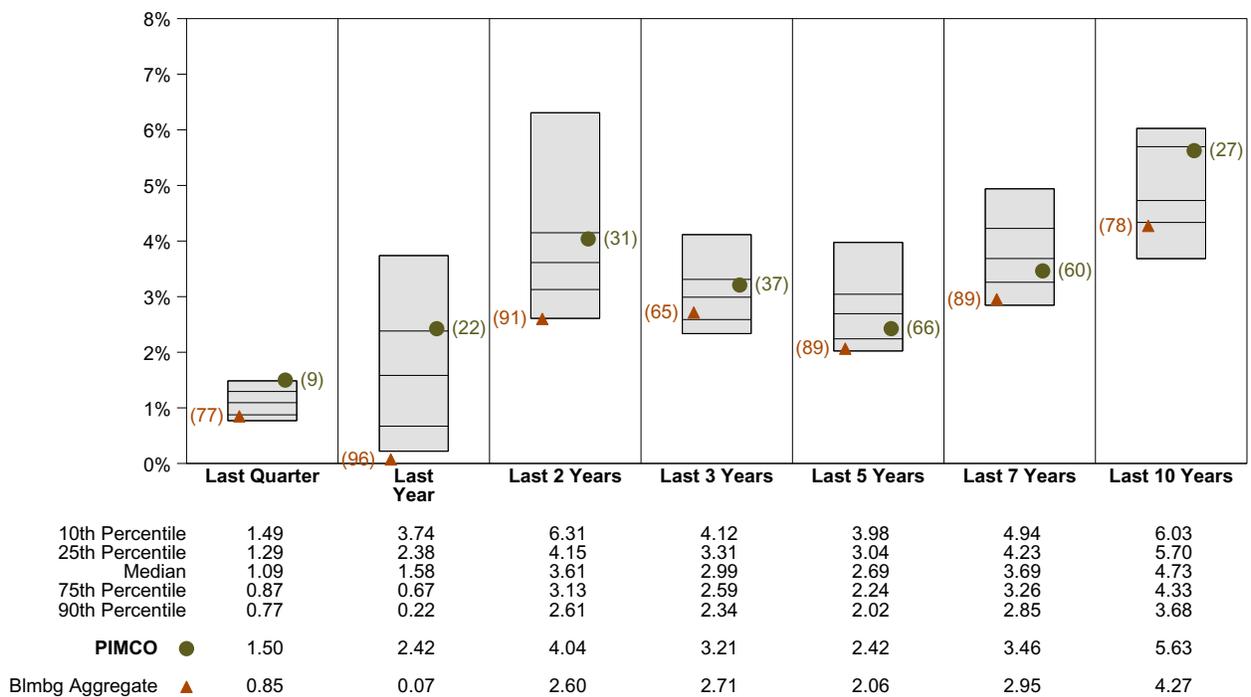
### Quarterly Summary and Highlights

- PIMCO's portfolio posted a 1.50% return for the quarter placing it in the 9 percentile of the Callan Core Plus Mutual Funds group for the quarter and in the 22 percentile for the last year.
- PIMCO's portfolio outperformed the Blmbg Aggregate by 0.65% for the quarter and outperformed the Blmbg Aggregate for the year by 2.35%.

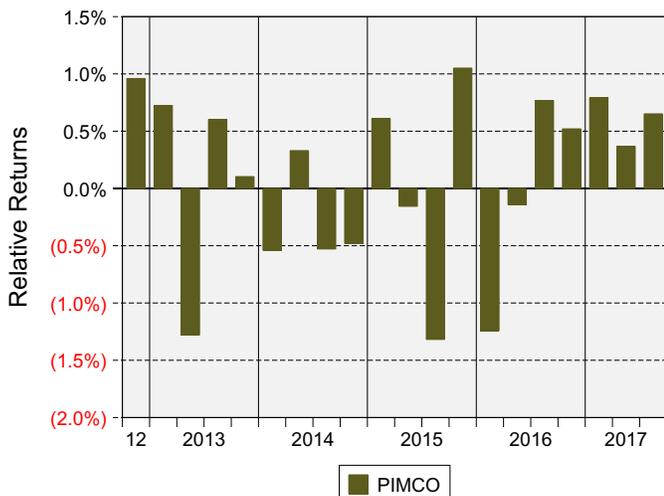
### Quarterly Asset Growth

Beginning Market Value	\$51,740,709
Net New Investment	\$0
Investment Gains/(Losses)	\$775,701
Ending Market Value	\$52,516,410

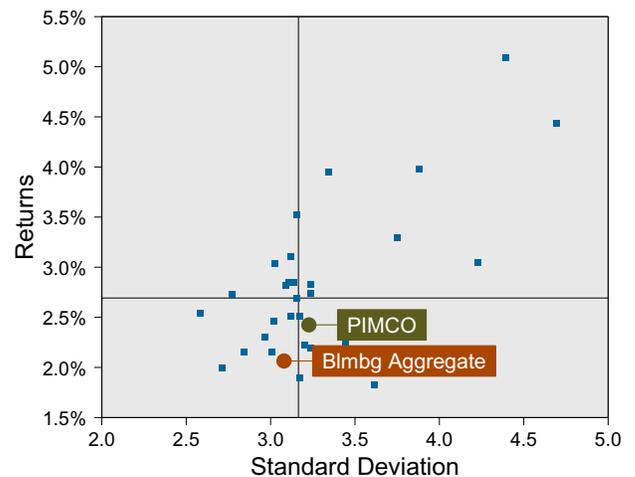
### Performance vs Callan Core Plus Mutual Funds (Net)



### Relative Return vs Blmbg Aggregate



### Callan Core Plus Mutual Funds (Net) Annualized Five Year Risk vs Return

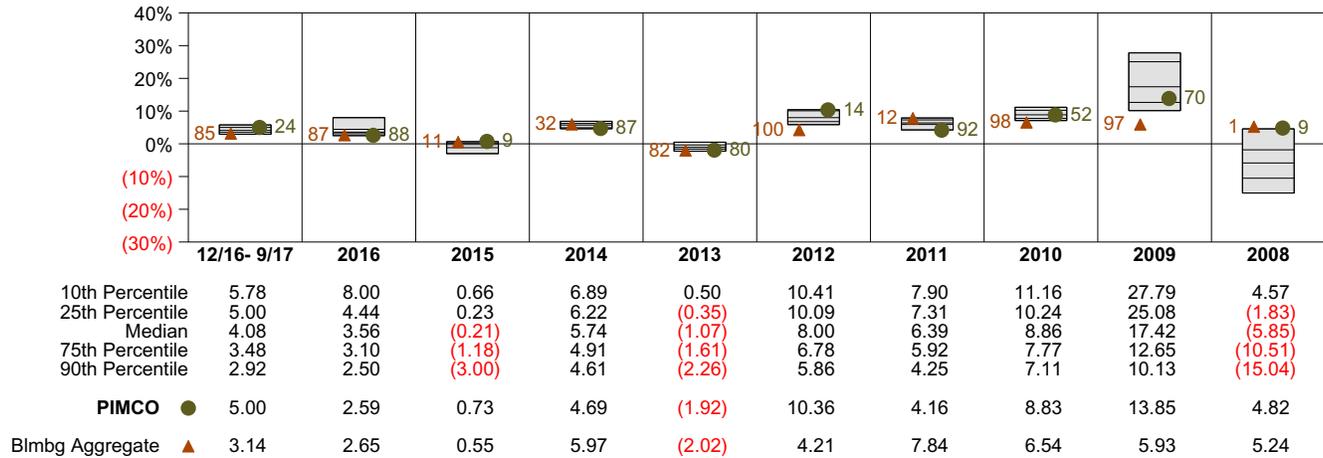


# PIMCO Return Analysis Summary

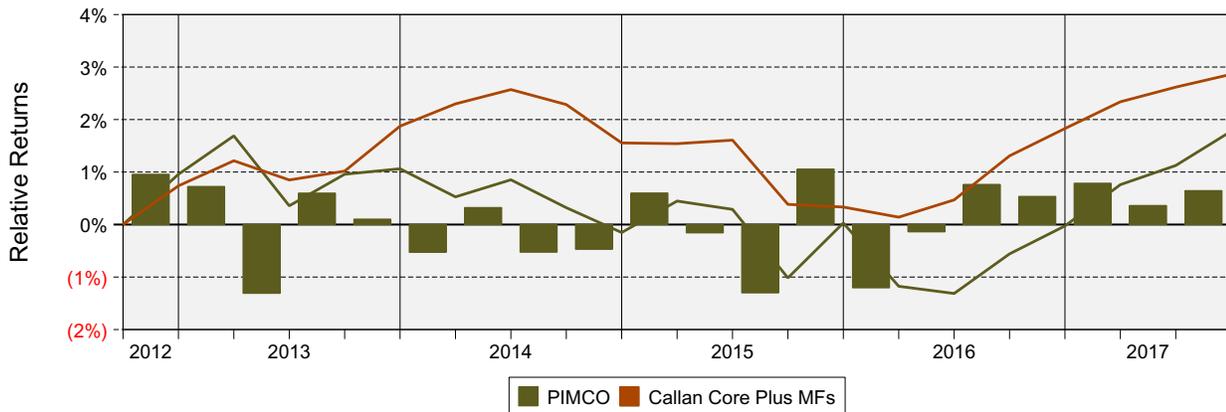
## Return Analysis

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

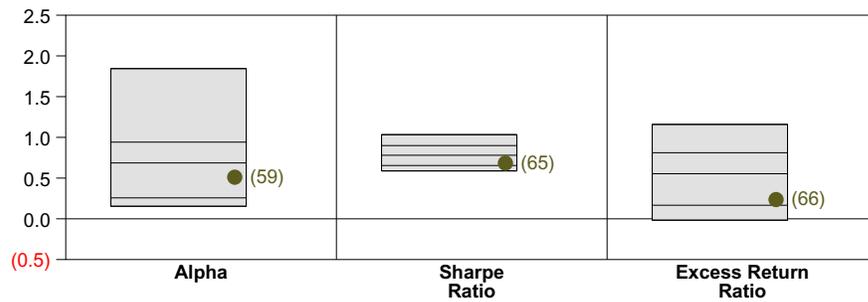
### Performance vs Callan Core Plus Mutual Funds (Net)



### Cumulative and Quarterly Relative Return vs Blmbg Aggregate



### Risk Adjusted Return Measures vs Blmbg Aggregate Rankings Against Callan Core Plus Mutual Funds (Net) Five Years Ended September 30, 2017

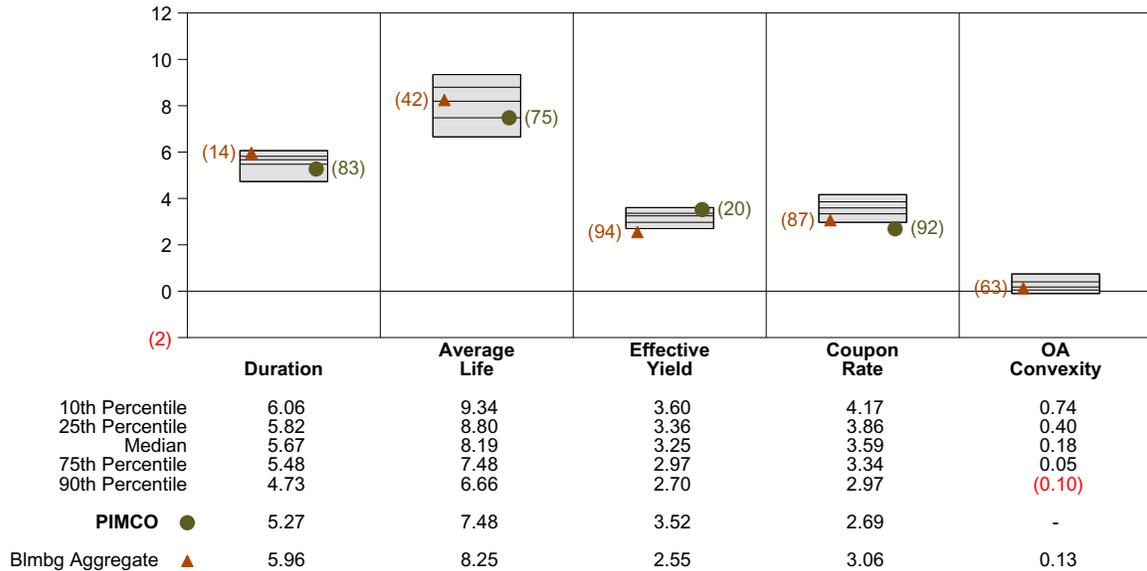


# PIMCO Bond Characteristics Analysis Summary

## Portfolio Characteristics

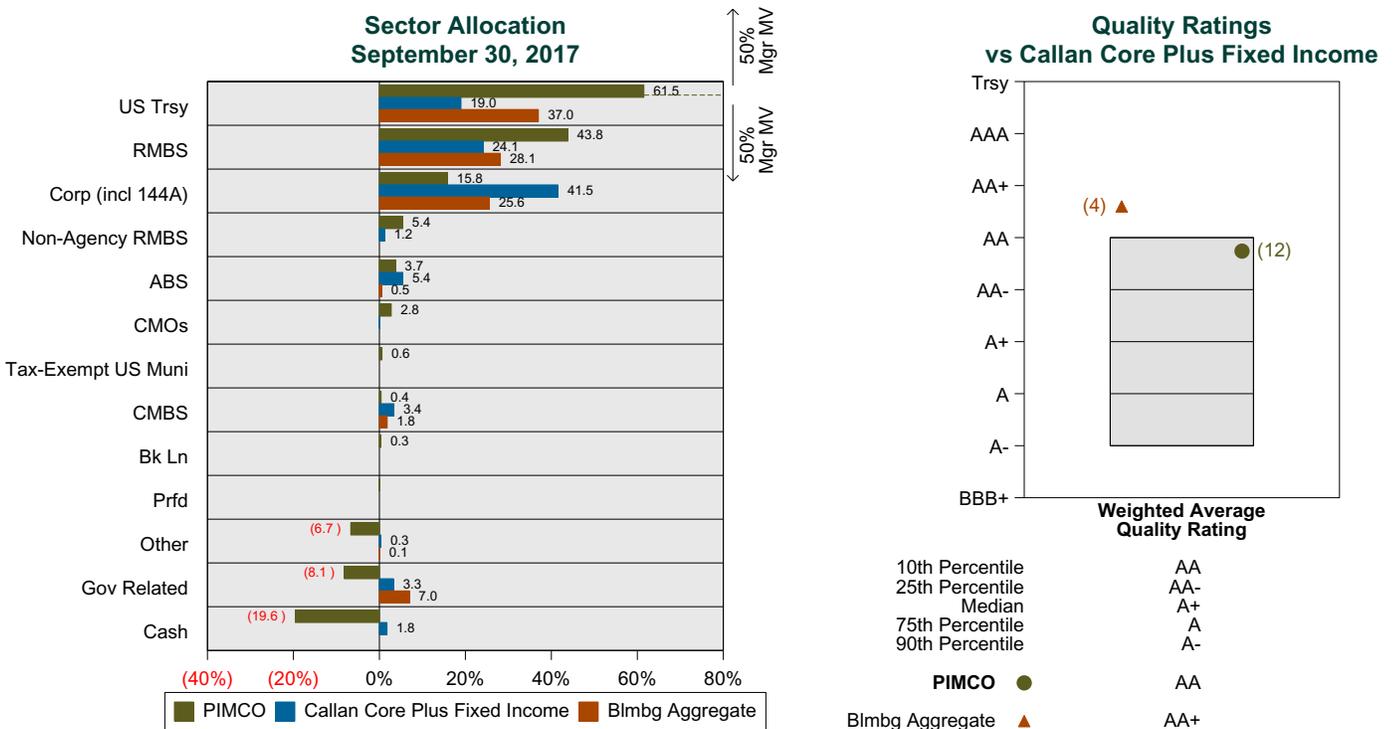
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Fixed Income Portfolio Characteristics Rankings Against Callan Core Plus Fixed Income as of September 30, 2017



## Sector Allocation and Quality Ratings

The first graph compares the manager's sector allocation with the average allocation across all the members of the manager's style. The second graph compares the manager's weighted average quality rating with the range of quality ratings for the style.





# RREEF Private Period Ended September 30, 2017

## Investment Philosophy

RREEF America II acquires 100 percent equity interests in small- to medium-sized (\$10 million to \$70 million) apartment, industrial, retail and office properties in targeted metropolitan areas within the continental United States. The fund capitalizes on RREEF's national research capabilities and market presence to identify superior investment opportunities in major metropolitan areas across the United States.

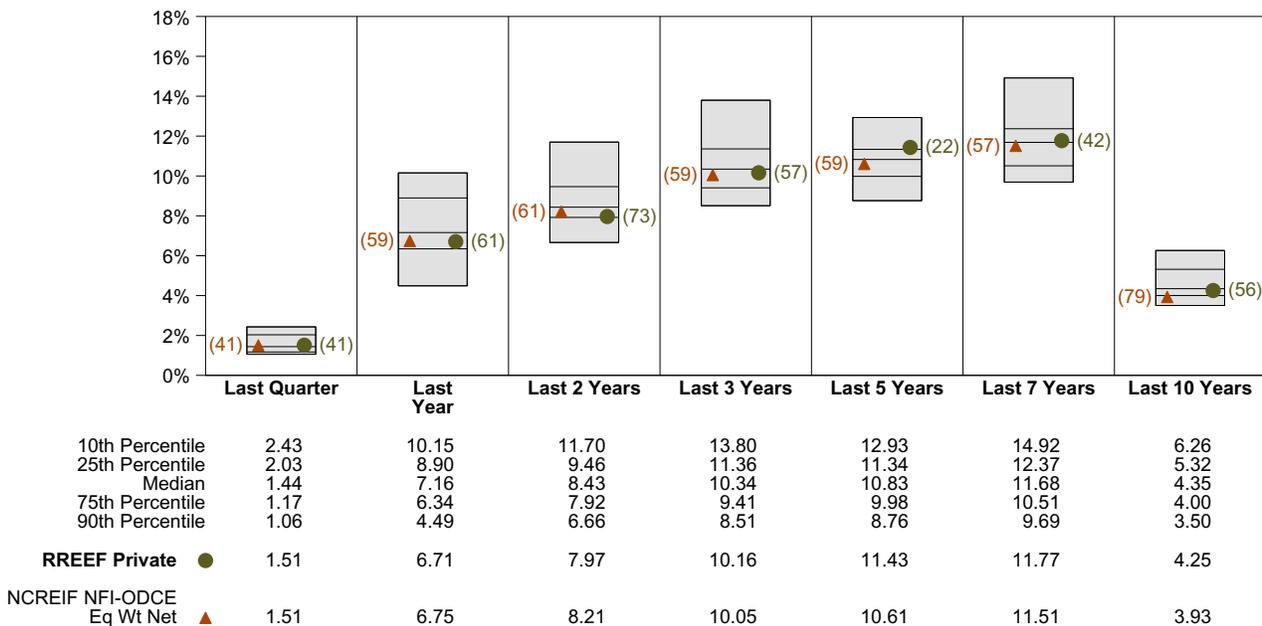
## Quarterly Summary and Highlights

- RREEF Private's portfolio posted a 1.51% return for the quarter placing it in the 41 percentile of the Callan Open-End Core Commingled Real Est group for the quarter and in the 61 percentile for the last year.
- RREEF Private's portfolio outperformed the NCREIF NFI-ODCE Eq Wt Net by 0.00% for the quarter and underperformed the NCREIF NFI-ODCE Eq Wt Net for the year by 0.04%.

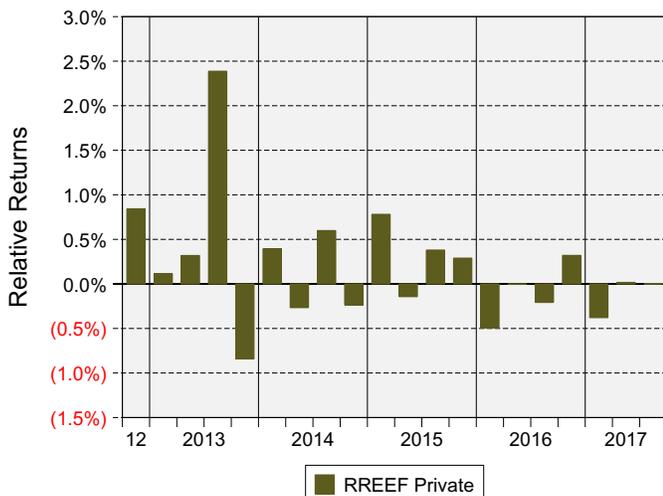
## Quarterly Asset Growth

Beginning Market Value	\$20,997,614
Net New Investment	\$1,500,000
Investment Gains/(Losses)	\$338,888
Ending Market Value	\$22,836,501

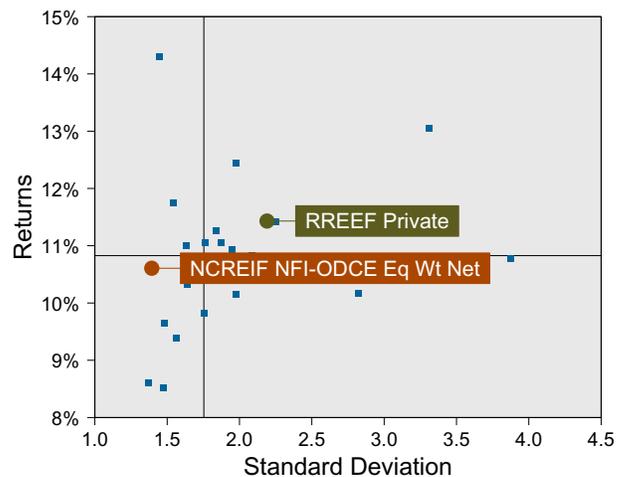
## Performance vs Callan Open-End Core Commingled Real Est (Net)



## Relative Returns vs NCREIF NFI-ODCE Eq Wt Net



## Callan Open-End Core Commingled Real Est (Net) Annualized Five Year Risk vs Return



# Barings Core Property Fund Period Ended September 30, 2017

## Investment Philosophy

Barings believes that the investment strategy for the Core Property Fund is unique with the goal of achieving returns in excess of the benchmark index, the NFI-ODCE Index, with a level of risk associated with a core fund. The construct of the Fund relies heavily on input from Barings Research, which provided the fundamentals for the investment strategy. Strategic targets and fund exposure which differentiate the Fund from its competitors with respect to both its geographic and property type weightings, and we believe will result in performance in excess of industry benchmarks over the long-term.

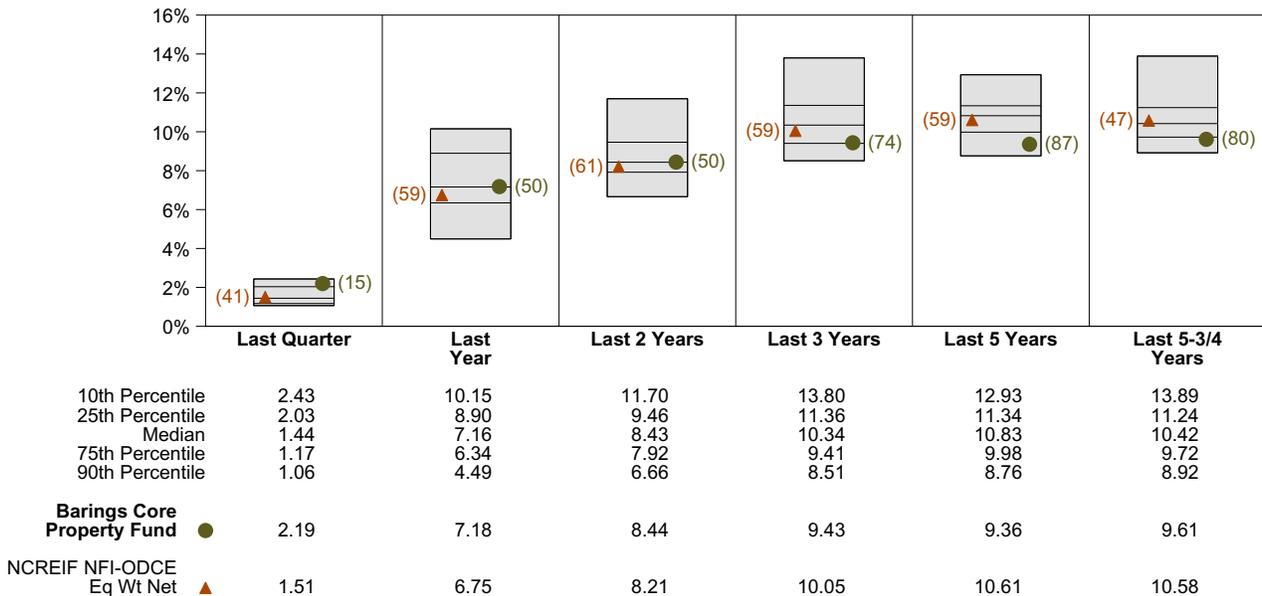
## Quarterly Summary and Highlights

- Barings Core Property Fund's portfolio posted a 2.19% return for the quarter placing it in the 15 percentile of the Callan Open-End Core Commingled Real Est group for the quarter and in the 50 percentile for the last year.
- Barings Core Property Fund's portfolio outperformed the NCREIF NFI-ODCE Eq Wt Net by 0.69% for the quarter and outperformed the NCREIF NFI-ODCE Eq Wt Net for the year by 0.43%.

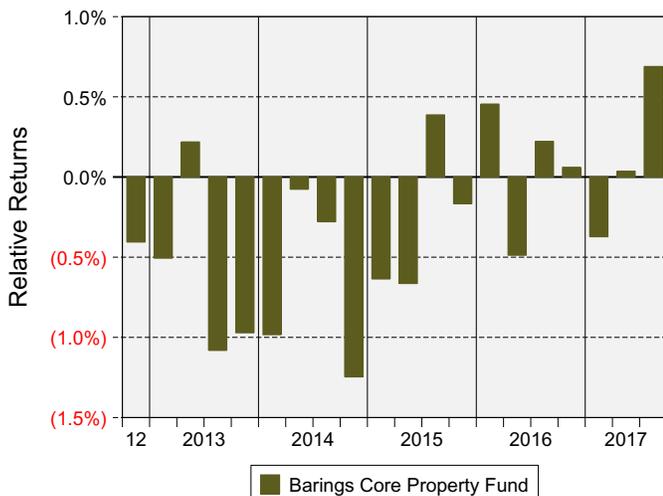
## Quarterly Asset Growth

Beginning Market Value	\$24,605,138
Net New Investment	\$0
Investment Gains/(Losses)	\$539,948
Ending Market Value	\$25,145,085

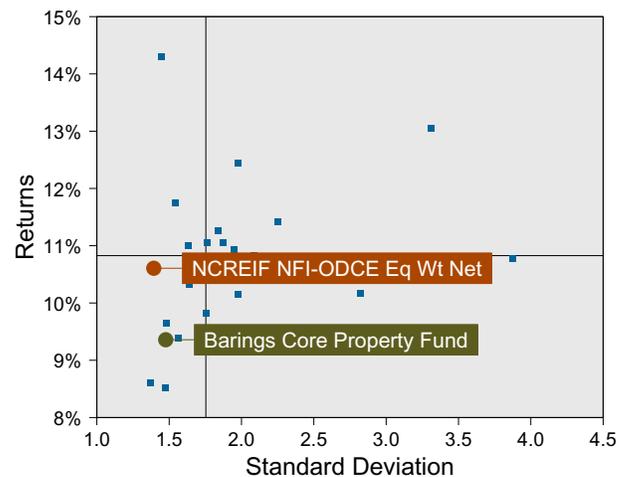
## Performance vs Callan Open-End Core Commingled Real Est (Net)



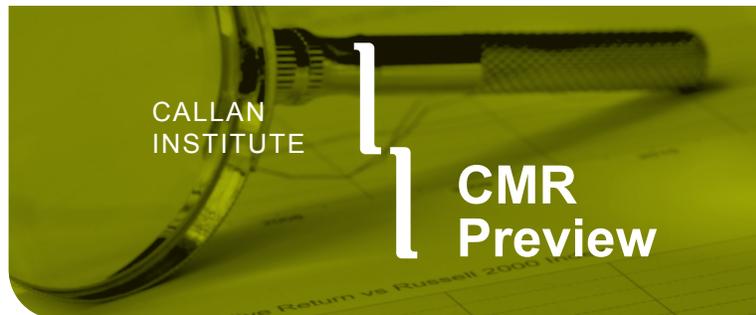
## Relative Returns vs NCREIF NFI-ODCE Eq Wt Net



## Callan Open-End Core Commingled Real Est (Net) Annualized Five Year Risk vs Return







Third Quarter 2017

## Up, Up, Up, and Away

2

### GLOBAL EQUITY

PAGE

- The S&P 500 Index jumped 4.5%, led by Tech and Energy
- U.S. small cap topped large cap; growth outpaced value
- Momentum remained the top-performing factor year-to-date (+27.5%)
- Non-U.S. developed equity bested the U.S. for the third straight quarter
- Emerging markets outpaced developed ones, also for the third consecutive quarter
- Developed non-U.S. small cap surpassed large cap

## Healthy Risk Appetite Drove Yields

5

### GLOBAL FIXED INCOME

PAGE

- The Bloomberg Barclays U.S. Aggregate Bond Index rose 0.8%
- The 10-year Treasury yield ended the quarter at 2.33%
- The Bloomberg Barclays Municipal Bond Index increased 1.1%
- High yield credit performed well, aided by investors' quest for yield
- The Bloomberg Barclays Global Aggregate Index climbed 1.8% (unhedged)
- Emerging market debt also did well; the JPM EMBI Global Diversified Index (\$ denominated) jumped 2.6%

## Additional Callan Newsletters and Resources

### Hedge Fund Monitor

An analysis of hedge fund managers and marketplace issues

### Private Markets Trends

The latest news and trends in private equity investing

### DC Observer

A look at the issues and challenges facing DC plan sponsors

### Real Assets Reporter

A review of real estate and other real assets

### Callan DC Index™

A Web tool tracking performance and fund flows of over 90 DC plans

### Callan Target Date Index™

An online feature tracking returns and allocations of target date funds

Visit our Research Library at [callan.com/library](http://callan.com/library)

## Coming Soon to Our Blog 'Perspectives'

### Economy

U.S. second quarter real GDP growth was revised up to 3.1% (annualized), the fastest pace since the first quarter of 2015. While the major hurricanes may provide a temporary setback to growth in the third quarter, rebuilding efforts are likely to boost GDP in the fourth quarter and beyond.

### Fund Sponsor

Each quarter we track the median return for all fund types, including endowments and foundations, public plans, corporate plans, and Taft-Hartley plans. Our analysis offers insight into the factors that drove performance and how various types of funds fared relative to each other.

Find even more on our blog at [callan.com/blog](http://callan.com/blog)

## Broad Market Quarterly Returns

**U.S. Equity**  
Russell 3000



**+4.6%**

**Non-U.S. Equity**  
MSCI ACWI ex USA



**+6.2%**

**U.S. Fixed Income**  
Bloomberg Barclays Agg



**+0.8%**

**Non-U.S. Fixed Income**  
Bloomberg Barclays Gbl ex US



**+2.5%**

Sources: Bloomberg Barclays, MSCI, Russell Investment Group

# Global Equity

## U.S. Stocks: The ‘Everything Rally’ Marched On

**+4.6%**

RUSSELL 3000

The Goldilocks environment (“Not too hot, not too cold, but just right”) and investor complacency continued to keep volatility at multi-decade lows and propel stock markets to new highs, in spite of escalating tensions with North Korea, several severe natural disasters, and uncertainty around the prospects for tax reform and other U.S. domestic agenda items. The **S&P 500 Index**, **Russell 2000 Index**, and **Nasdaq Composite Index** all hit record highs on the final trading day of the quarter. It was the Nasdaq’s 50th record close this year.

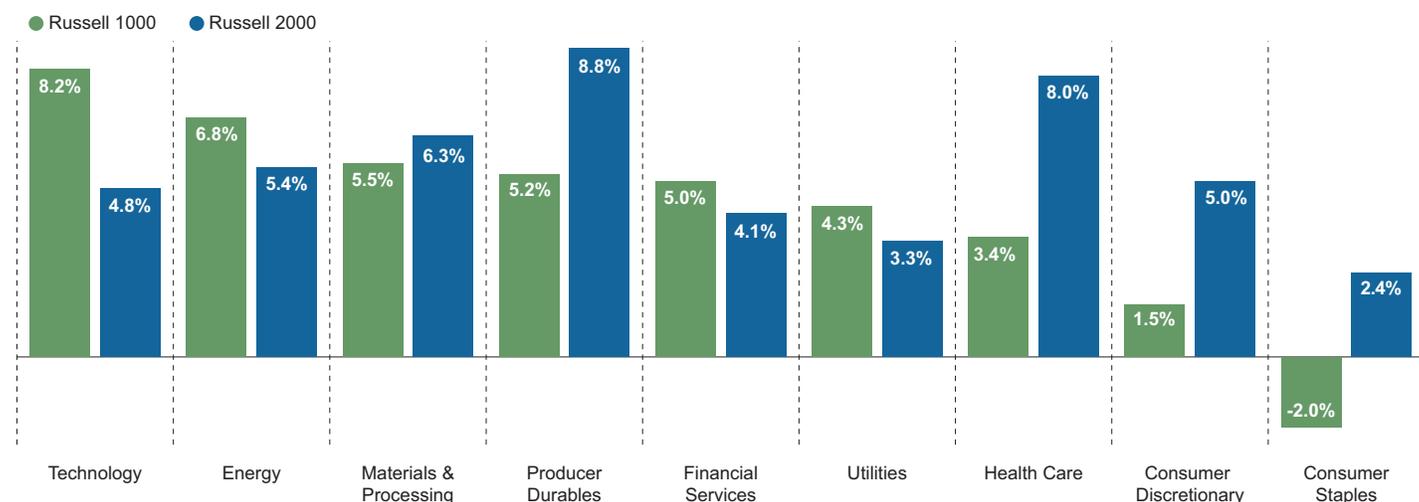
Stocks, bonds, and commodities alike rewarded investors in what’s been coined the “everything rally,” marked by its surprisingly low volatility. Even cash is up from its dismal 0% days and posted a +0.3% quarterly result. Investors’ attention remained focused on the hopeful promise of tax reform along with the generally upbeat picture of the U.S. economy. But contrarians question where longer-term alpha can be found amid stretched equity valuations.

The Tech (+8.6%) and Energy (+6.8%) sectors led the S&P 500 (+4.5%). The globally dominant Tech names (the so-called “FAAMG” stocks, or Facebook, Amazon, Apple, Microsoft, and Google) continued to drive results in the sector, which now accounts for 23% of the S&P 500 and 38% of the **Russell 1000 Growth Index**. Tech alone has accounted for approximately 40% of the S&P 500’s return year-to-date, with key drivers being strong earnings reports, increasing market share, and product innovation. Record-high valuations for several companies raised concern over their influence on the overall performance of the Index should a correction occur.

The Energy sector continued to see signs of incremental improvement during the quarter due to a backdrop of improving supply and demand. Consumer Staples (-1.3%) was the sole sector to deliver a negative result as momentum-oriented stocks and sectors garnered favor.

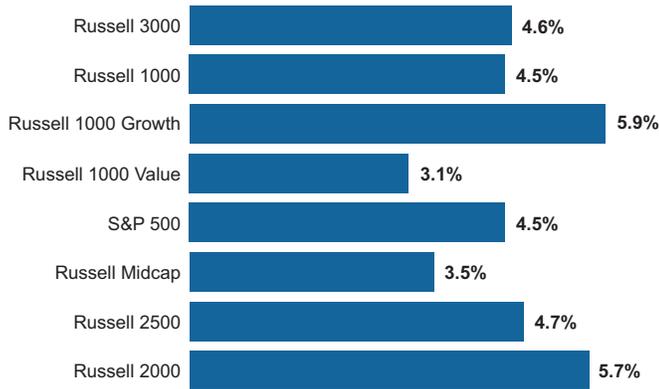
Small cap stocks outperformed large cap. In addition, growth outperformed value (Russell 1000 Growth: +5.9% vs. **Russell 1000 Value**: +3.1%; **Russell 2000 Growth**: +6.2% vs. **Russell**

## Quarterly Performance of Select Sectors



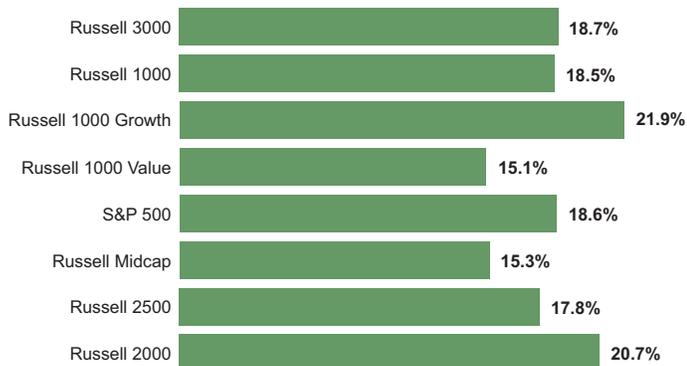
Source: Russell Investment Group

## U.S. Equity: Quarterly Returns



Sources: Russell Investment Group, Standard & Poors'

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



Sources: Russell Investment Group, Standard & Poors'

**2000 Value:** +5.1%). Biotech (+14.5%) and a surge in small cap value on tax reform news in September bolstered small cap stocks during the quarter. Biotech benefited from the easing of pricing risks as well as the FDA's approval of genetics-based therapeutics.

From a factor perspective, momentum (+27.5% YTD) remained the top performer while defensive (+8.5% YTD) was the laggard. Investor behavior has had a meaningful influence on results as investors tend to project their optimism across the broad market and chase momentum during periods of strength.

## Global Stocks: Stronger Outside the U.S.

**+6.2%**

MSCI ACWI ex USA

Non-U.S. developed economies continued to gain traction. Second quarter GDP growth in the euro zone was 2.3% (year-over-year) with consumer confidence and demand both showing strength. The euro gained ground versus the U.S. dollar and the pound continued to strengthen on hawkish comments from the Bank of England. Outside of Europe, Japan's economy continued to slowly recover; second quarter GDP growth was 2.5% (annualized). While this was lower than expected, the economy has now expanded for six consecutive quarters.

Non-U.S. developed equity (**MSCI World ex USA:** +5.6%) outperformed the U.S. for the third consecutive quarter as the European market (**MSCI Europe:** +6.5%) continued to post positive economic data and corporate earnings growth with some signs of political stability.

The dollar's losses against the euro stemmed from an upside surprise with European growth and market-friendly outcomes in European elections. Economically sensitive sectors outperformed defensive securities.

All sectors generated positive returns. Energy and Materials were the top two performers as a result of higher oil and commodity prices. WTI and Brent prices surged by 12% and 20%, respectively, driven by favorable supply and demand dynamics. Copper rallied 9% due to tightening supply and positive economic data from China.

Value outpaced growth as economically sensitive sectors posted strong quarterly results.

## Emerging Markets: Upbeat Signs Across the Board

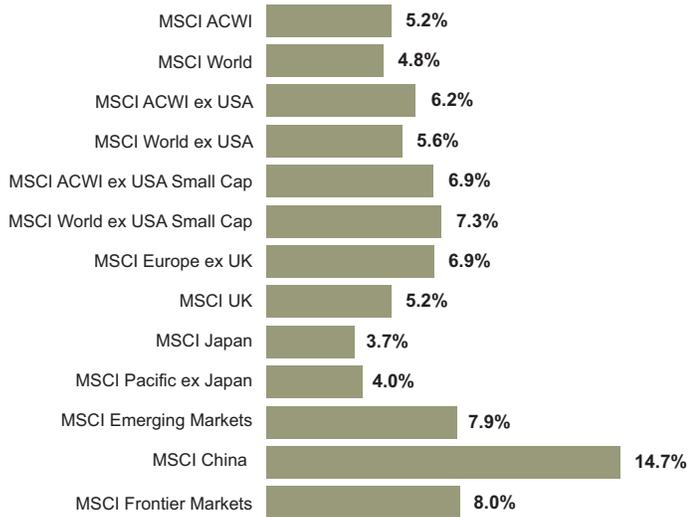
**+7.9%**

MSCI EM

Emerging markets topped developed markets for the third consecutive quarter, fueled by a soft dollar, synchronized global growth, and strong oil and commodity prices. Brazil was the best-performing country within emerging markets given the hope of achieving fiscal

## Global Equity: Quarterly Returns

(U.S. Dollar)



Source: MSCI

reforms to spur economic growth. China continued to fare well with GDP growth of 6.9% exceeding expectations; the Chinese Tech and Real Estate sectors were top performers.

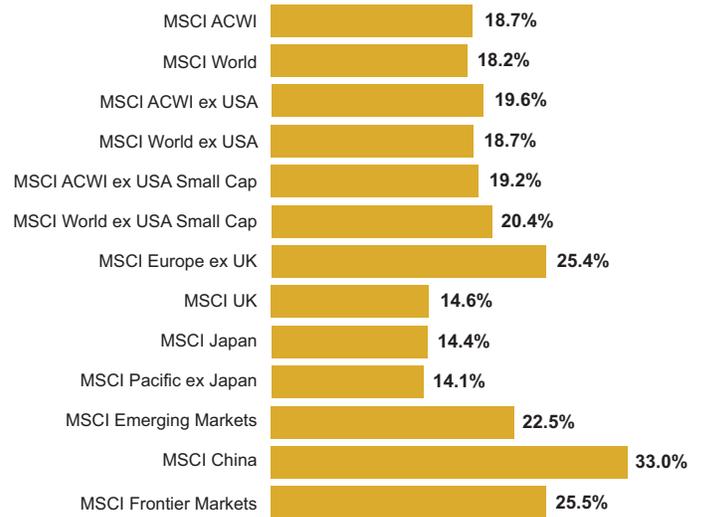
All sectors within emerging markets posted positive returns, led by economically sensitive sectors such as Real Estate, Energy, Materials, and Financials.

Brazilian and Russian banks surged during the quarter, spurred by rising oil and commodity prices and improving lending conditions.

Despite a strong showing by value factors, growth and momentum dominated the market given the returns of large cap Asian tech companies, helped in part by the demand for mobility and connectivity.

## Global Equity: One-Year Returns

(U.S. Dollar)



Source: MSCI

## Non-U.S. Small Cap: Mixed Messages

**+6.9%**

MSCI ACWI ex USA SC

Developed non-U.S. small cap (**MSCI World ex USA Small Cap: +7.3%**) outperformed large cap in the risk-on market environment marked by improving economic activity in Europe. The top three performing countries were Germany (+17.0%), Norway (+16.4%), and Italy (+13.5%). All sectors posted positive returns, led by Energy and Technology.

Small cap (**MSCI Emerging Markets Small Cap: +5.6%**) lagged large cap in emerging markets due to the strong performance of large cap Asian technology companies. The top three performing countries were Peru (+42.8%), Brazil (+31.8%), and Chile (+19.8%), all benefiting from higher oil and commodity prices.

Growth outperformed value in developed small cap, propelled by optimism surrounding European growth. Conversely, value outpaced growth in emerging market small cap, supported by positive oil and commodity prices.

# Global Fixed Income

## U.S. Bonds: Low Volatility Drove Returns

**+0.8%**

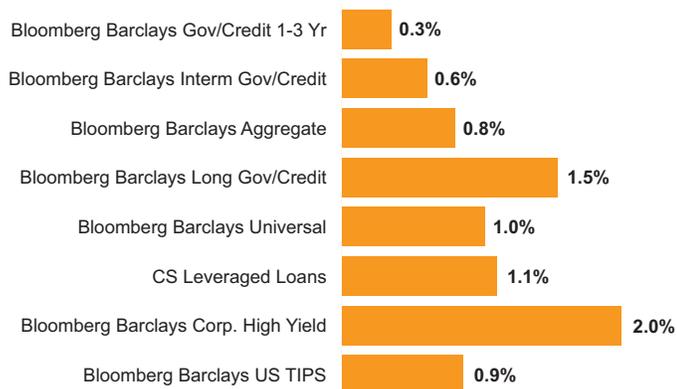
BB AGGREGATE

Yields rose modestly, particularly on the short end of the U.S. Treasury yield curve. The 10-year Treasury yield touched 2.00% during the quarter on geopolitical risks related to North Korea, but ended the quarter at 2.33%. Moderate growth and inflation kept long-term rates low and range bound. Volatility in fixed income markets (as well as equities) sat at near historic lows; the overall risk appetite remained strong. And in general, lower-rated credits again outperformed investment grade.

The **Bloomberg Barclays U.S. Aggregate Bond Index** was up 0.8% in the quarter. The **Bloomberg Barclays U.S. Corporate Bond Index** rose 1.3%. High yield corporates fared even better, with the **Bloomberg Barclays U.S. Corporate High Yield Bond Index** up 2.0%. TIPS rebounded from their underperformance in the previous quarter.

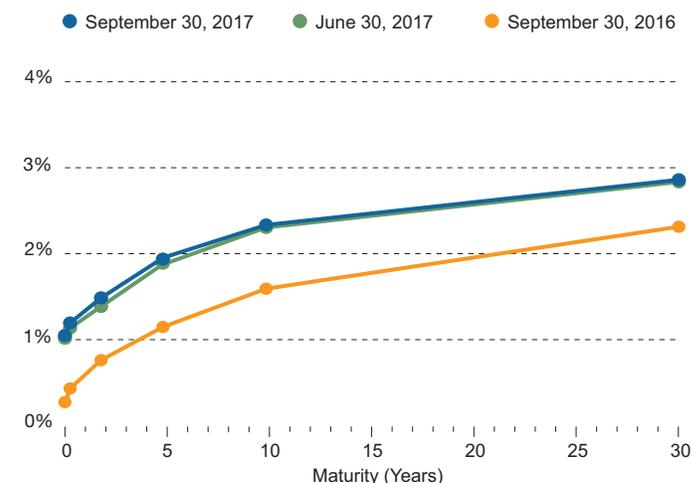
The **Bloomberg Barclays U.S. TIPS Index** rose 0.9% and the 10-year breakeven spread (the difference between nominal and real yields) rose to 1.84% as of quarter-end from 1.73% at the end of the second quarter.

## U.S. Fixed Income: Quarterly Returns



Sources: Bloomberg Barclays, Credit Suisse

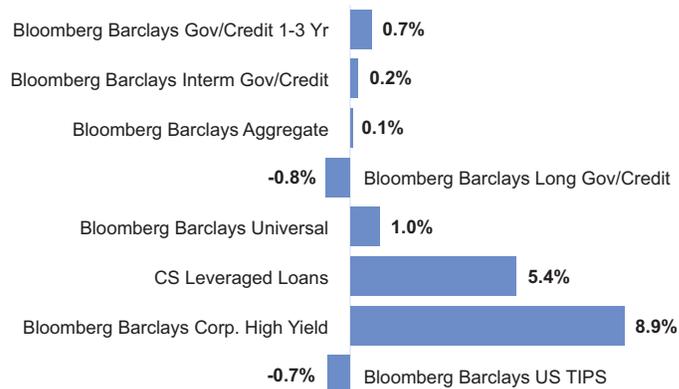
## U.S. Treasury Yield Curves



Source: Bloomberg

Corporate credit spreads tightened on strong demand and robust corporate earnings. Financials and Utilities were the leading sectors during the quarter. High yield credit continued to perform well, aided by the hunt for yield. The upward trend in earnings along with corporate discipline has led to the highest rating agency upgrade-downgrade ratio since 2013.

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



Sources: Bloomberg Barclays, Credit Suisse

The municipal bond market also performed well; the **Bloomberg Barclays Municipal Bond Index** returned 1.1% for the quarter and the shorter duration 1-10 Year Blend Index was up 0.7%.

### Global Bonds: Many Reasons to Cheer

**+2.5%**

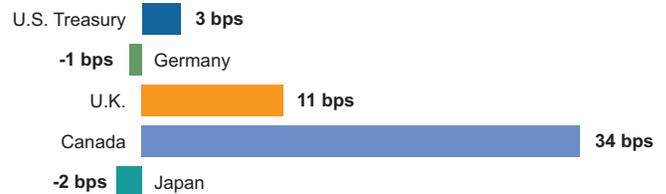
BB GBL AGG EX US

Rates were also steady overseas, though dollar weakness boosted returns. The **Bloomberg Barclays Global Aggregate Index** returned +1.8% (unhedged) versus +0.8% for the hedged version. Emerging market debt posted solid returns. The **JPM EMBI Global Diversified Index** (\$ denominated) was up 2.6%. Gains were broad-based with only beleaguered Venezuela (-11%) down. The local currency **JPM GBI-EM Global Diversified Index** increased +3.6%. Returns were mixed for this index,

with Brazil (+11%) being the best performer and Argentina's first-ever local bonds (-4%) being the worst on worries over the success of reforms.

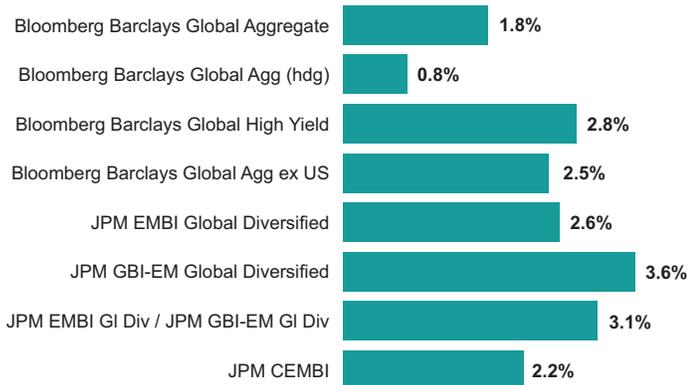
### Change in 10-Year Global Government Bond Yields

2Q17 to 3Q17



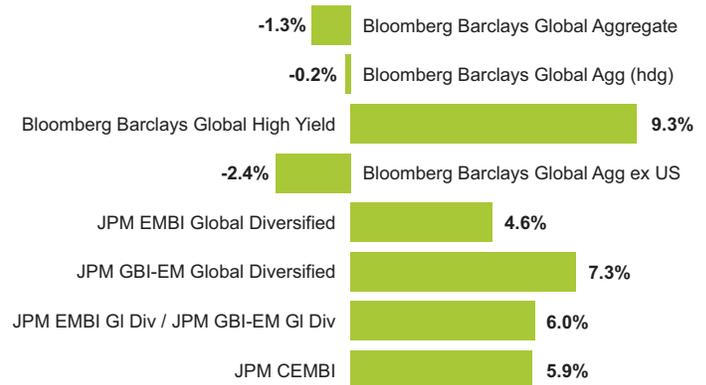
Source: Bloomberg

### Global Fixed Income: Quarterly Returns



Sources: Bloomberg Barclays, JP Morgan

### Global Fixed Income: One-Year Returns



Sources: Bloomberg Barclays, JP Morgan



## 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



**The Private Debt Pie: Do You Want a Slice? Do You Need One?** | As institutional investors consider the merits and risks of constructing private debt allocations in their portfolios, Callan's Jay Kloepfer, the director of Capital Markets Research; and Jay Nayak, a consultant in our Private Equity Research

group, prepared a set of answers to some key questions about private debt.

**Callan 2017 Nuclear Decommissioning Funding Study** | This study, done annually, offers key insights into the status of nuclear decommissioning funding in the U.S. The 2017 study covers 54 utilities with an ownership interest in the 99 operating nuclear reactors and 11 of the non-operating reactors in the U.S. It found that the health of nuclear decommissioning funding has remained fairly stable, hovering near 70% over the past decade.



**Callan 2017 Private Equity Survey**  
Callan conducted a survey of institutional private equity investors. We focused on deployment models, patterns of investment and commitment activities

over time, governance and oversight, staffing and resources, and responsibilities for program administration functions. Our Survey included 69 institutional investors with private equity programs totaling \$103.3 billion. Our Survey found that an array of administration issues affect how institutional private equity portfolios are constructed, monitored, and managed. We found these factors led to less than ideal choices for implementing the programs, often including sub-optimal use of the discretionary consultant/fund-of-funds model for certain private equity programs.

**The Triple Play: Adding Timberland, Farmland, and Infrastructure to Portfolios** | Timberland, farmland, and infrastructure offer diversification, stable income, and inflation protection for institutional investor portfolios. Callan believes a combination of these three real assets offers distinct advantages.

**Reaching for Higher Ground: The Evolution of TDFs** | Target date funds (TDFs) are an improvement over former common defaults, but they need to evolve. The solutions include using uncorrelated asset classes, in-plan annuities, "dynamic" qualified default investment alternatives, or guaranteed income products.

### Periodicals

**Private Markets Trends, Summer 2017** | Gary Robertson discusses the surge of money into the private markets as high prices persist.

**Hedge Fund Monitor, 3rd Quarter 2017** | Jim McKee discusses four major secular trends that are on a predictable course to increasingly weigh on markets over the longer term: demographics, fiscal policy, monetary policy, and market valuations.

**Market Pulse Flipbook, 2nd Quarter 2017** | 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 plans.

**Capital Market Review, 2nd Quarter 2017** | A quarterly newsletter providing insights on the economy and recent performance in equity, fixed income, alternatives, international, real estate, and other capital markets.

**Monthly Periodic Table of Investment Returns** | This update reflects the latest results for major indices.

## Events

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

Mark your calendars for our upcoming **Regional Workshops**, October 24 in New York and October 26 in Chicago, where we'll cover highlights from our soon-to-be published *Investment Management Fee Survey* and other aspects of fees.

Callan's **National Conference** will be held January 29–31, 2018, at the Palace Hotel in San Francisco.

**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, April 10-11, 2018*

*San Francisco, July 24-25, 2018*

*Chicago, October 2-3, 2018*

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

### Customized Sessions

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

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

## Education: By the Numbers

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

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

**3,500** 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, Executive Chairman



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## Equity Market Indicators

The market indicators included in this report are regarded as measures of equity or fixed income performance results. The returns shown reflect both income and capital appreciation.

**Russell 1000 Growth** measures the performance of those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values.

**Russell 1000 Value** measures the performance of those Russell 1000 companies with lower price-to-book ratios and lower forecasted growth values.

**Russell 2000 Growth** contains those Russell 2000 securities with a greater than average growth orientation. Securities in this index tend to exhibit higher price-to-book and price-earning ratios, lower dividend yields and higher forecasted growth values than the Value universe.

**Russell 2000 Value** contains those Russell 2000 securities with a less than average growth orientation. Securities in this index tend to exhibit lower price-to-book and price-earning ratios, higher dividend yields and lower forecasted growth values than the Growth universe.

**Russell 3000 Index** is a composite of 3,000 of the largest U.S. companies by market capitalization. The smallest company's market capitalization is roughly \$20 million and the largest is \$72.5 billion. The index is capitalization-weighted.

**Russell Mid Cap Growth** measures the performance of those Russell Mid Cap Companies with higher price-to-book ratios and higher forecasted growth values. The stocks are also members of the Russell 1000 Growth Index.

**Russell MidCap Value Index** The Russell MidCap Value index contains those Russell MidCap securities with a less than average growth orientation. Securities in this index tend to exhibit lower price-to-book and price-earnings ratio, higher dividend yields and lower forecasted growth values than the Growth universe.

**Standard & Poor's 500 Index** is designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries. The index is capitalization-weighted, with each stock weighted by its proportion of the total market value of all 500 issues. Thus, larger companies have a greater effect on the index.

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## Fixed Income Market Indicators

**Bloomberg Barclays Aggregate Bond Index** is a combination of the Mortgage Backed Securities Index and the intermediate and long-term components of the Government/Credit Bond Index.

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## International Equity Market Indicators

**MSCI ACWI ex US Index** The MSCI ACWI ex US(All Country World Index) Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets, excluding the US. As of May 27, 2010 the MSCI ACWI consisted of 45 country indices comprising 24 developed and 21 emerging market country indices. The developed market country indices included are: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, and the United Kingdom. The emerging market country indices included are: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Morocco, Peru, Philippines, Poland, Russia, South Africa, Taiwan, Thailand, and Turkey.

**Morgan Stanley Capital International (MSCI) EAFE Index** is composed of approximately 1000 equity securities representing the stock exchanges of Europe, Australia, New Zealand and the Far East. The index is capitalization-weighted and is expressed in terms of U.S. dollars.

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## Real Estate Market Indicators

**NCREIF Open Ended Diversified Core Equity** The NFI-ODCE is an equally-weighted, net of fee, time-weighted return index with an inception date of December 31, 1977. Equally-weighting the funds shows what the results would be if all funds were treated equally, regardless of size. Open-end Funds are generally defined as infinite-life vehicles consisting of multiple investors who have the ability to enter or exit the fund on a periodic basis, subject to contribution and/or redemption requests, thereby providing a degree of potential investment liquidity. The term Diversified Core Equity style typically reflects lower risk investment strategies utilizing low leverage and generally represented by equity ownership positions in stable U.S. operating properties.

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## Callan Databases

In order to provide comparative investment results for use in evaluating a fund's performance, Callan gathers rate of return data from investment managers. These data are then grouped by type of assets managed and by the type of investment manager. Except for mutual funds, the results are for tax-exempt fund assets. The databases, excluding mutual funds, represent investment managers who handle over 80% of all tax-exempt fund assets.

### Equity Funds

Equity funds concentrate their investments in common stocks and convertible securities. The funds included maintain well-diversified portfolios.

**Core Equity** - Mutual funds whose portfolio holdings and characteristics are similar to that of the broader market as represented by the Standard & Poor's 500 Index, with the objective of adding value over and above the index, typically from sector or issue selection. The core portfolio exhibits similar risk characteristics to the broad market as measured by low residual risk with Beta and R-Squared close to 1.00.

**International Emerging Markets Equity** - The International Emerging Market Equity Database consists of all separate account international equity products that concentrate on newly emerging second and third world countries in the regions of the Far East, Africa, Europe, and Central and South America.

**Large Cap Growth** - Mutual Funds that invest mainly in large companies that are expected to have above average prospects for long-term growth in earnings and profitability. Future growth prospects take precedence over valuation levels in the stock selection process. Invests in companies with P/E ratios, Price-to-Book values, Return-on-Assets values, Growth-in-Earnings values above the broader market. The companies typically have zero dividends or dividend yields below the broader market. Invests in securities which exhibit greater volatility than the broader market as measured by the securities' Beta and Standard Deviation.

**Large Cap Value** - Mutual funds that invest in predominantly large capitalization companies believed to be currently undervalued in the general market. The companies are expected to have a near-term earnings rebound and eventual realization of expected value. Valuation issues take precedence over near-term earnings prospects in the stock selection process. Invests in companies with P/E ratios and Price-to-Book values below the broader market. Usually exhibits lower risk than the broader market as measured by the Beta and Standard Deviation.

**Non-U.S. Equity** A broad array of active managers who employ various strategies to invest assets in a well-diversified portfolio of non-U.S. equity securities. This group consists of all Core, Core Plus, Growth, and Value international products, as well as products using various mixtures of these strategies. Region-specific, index, emerging market, or small cap products are excluded.

**Non-U.S. Equity Style Mutual Funds** - Mutual funds that invest their assets only in non-U.S. equity securities but exclude regional and index funds.

**Small Capitalization (Growth)** - Mutual funds that invest in small capitalization companies that are expected to have above average prospects for long-term growth in earnings and profitability. Future growth prospects take precedence over valuation levels in the stock selection process. Invests in companies with P/E ratios, Price-to-Book values, and Growth-in-Earnings values above the broader market as well as the small capitalization market segment. The companies typically have zero dividends or dividend yields below the broader market. The securities exhibit greater volatility than the broader market as well as the small capitalization market segment as measured by the risk statistics beta and standard deviation.

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## Callan Databases

**Small Capitalization (Value)** - Mutual funds that invest in small capitalization companies that are believed to be currently undervalued in the general market. Valuation issues take precedence over near-term earnings prospects in the stock selection process. The companies are expected to have a near-term earnings rebound and eventual realization of expected value. Invests in companies with P/E ratios, Return-on-Equity values, and Price-to-Book values below the broader market as well as the small capitalization market segment. The companies typically have dividend yields in the high range for the small capitalization market. Invests in securities with risk/reward profiles in the lower risk range of the small capitalization market.

### Fixed Income Funds

Fixed Income funds concentrate their investments in bonds, preferred stocks, and money market securities. The funds included maintain well-diversified portfolios.

**Core Bond** - Mutual Funds that construct portfolios to approximate the investment results of the Bloomberg Barclays Capital Government/Credit Bond Index or the Bloomberg Barclays Capital Aggregate Bond Index with a modest amount of variability in duration around the index. The objective is to achieve value added from sector and/or issue selection.

**Core Bond** - Managers who construct portfolios to approximate the investment results of the Bloomberg Barclays Capital Government/Credit Bond Index or the Bloomberg Barclays Capital Aggregate Bond Index with a modest amount of variability in duration around the index. The objective is to achieve value added from sector and/or issue selection.

**Core Plus Bond** - Active managers whose objective is to add value by tactically allocating significant portions of their portfolios among non-benchmark sectors (e.g. high yield corporate, non-US\$ bonds, etc.) while maintaining majority exposure similar to the broad market.

### Real Estate Funds

Real estate funds consist of open or closed-end commingled funds. The returns are net of fees and represent the overall performance of commingled institutional capital invested in real estate properties.

**Real Estate Open-End Commingled Funds** - The Open-End Funds Database consists of all open-end commingled real estate funds.

### Other Funds

**Public - Total** - consists of return and asset allocation information for public pension funds at the city, county and state level. The database is made up of Callan clients and non-clients.



## 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. Callan is committed to ensuring that we do not consider an investment manager's business relationship with Callan, or lack thereof, in performing evaluations for or making suggestions or recommendations to its other clients. Please refer to Callan's ADV Part 2A for a more detailed description of the services and products that Callan makes available to investment manager clients through our Institutional Consulting Group, Independent Adviser Group and Fund Sponsor Consulting Group. Due to the complex corporate and organizational ownership structures of many investment management firms, parent and affiliate firm relationships are not indicated on our list.

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

Manager Name
1607 Capital Partners, LLC
Aberdeen Asset Management PLC
Acadian Asset Management LLC
AEGON USA Investment Management
AEW Capital Management
Affiliated Managers Group, Inc.
Alcentra
AllianceBernstein
Allianz Global Investors
Allianz Life Insurance Company of North America
American Century Investments
AMP Capital Investors Limited
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

Manager Name
Brigade Capital Management, LP
Brown Brothers Harriman & Company
Cambiar Investors, LLC
Capital Group
CastleArk Management, LLC
Causeway Capital Management
CBRE Global Investors
Chartwell Investment Partners
ClearBridge Investments, LLC
Cohen & Steers Capital Management, Inc.
Columbia Management Investment Advisers, LLC
Columbus Circle Investors
Conning Asset Management Company
Corbin Capital Partners, L.P.
Cornerstone Capital Management
Cramer Rosenthal McGlynn, LLC
Credit Suisse Asset Management
Crestline Investors, Inc.
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
Fiera Capital Corporation
First Eagle Investment Management, LLC
First Hawaiian Bank Wealth Management Division
Fisher Investments

Manager Name
Franklin Templeton
Franklin Templeton Institutional
Fred Alger Management, Inc.
Fuller & Thaler Asset Management, Inc.
GAM (USA) Inc.
GMO
Goldman Sachs Asset Management
Goodwin Capital Advisers
Guggenheim Investments
Guggenheim Partners Asset Management
GW&K Investment Management
Harbor Capital Group Trust
Hartford Funds
Hartford Investment Management Co.
Heitman LLC
Henderson Global Investors
Holland Capital Management
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
Jarislowsky Fraser Global Investment Management
Jensen Investment Management
Jobs Peak Advisors
Johnson Institutional Management
J.P. Morgan Asset Management
J.P. Morgan Chase & Company
Kayne Anderson Capital Advisors LP
KeyCorp
Lazard Asset Management
Legal & General Investment Management America
Lincoln National Corporation
LM Capital Group, LLC
LMCG Investments, LLC
Longview Partners
Loomis, Sayles & Company, L.P.
Lord Abbett & Company
Los Angeles Capital Management
LSV Asset Management
MackKay Shields LLC
Macquarie Investment Management (formerly Delaware Investments)
Man Investments Inc.
Manulife Asset Management
McKinley Capital Management, LLC
MFS Investment Management
MidFirst Bank
Mondrian Investment Partners Limited
Montag & Caldwell, LLC
Morgan Stanley Investment Management
Mountain Lake Investment Management LLC
MUFG Union Bank, N.A.
Neuberger Berman
Newton Investment Management (fka Newton Capital Mgmt)
Nicholas Investment Partners

Manager Name
Nikko Asset Management Co., Ltd.
Northern Trust Asset Management
Nuveen Investments, Inc.
OFI Global Asset Management
Old Mutual Asset Management
O'Shaughnessy Asset Management, LLC
Pacific Investment Management Company
Parametric Portfolio Associates
Peregrine Capital Management, Inc.
PGIM
PGIM Fixed Income
PGIM Real Estate
PineBridge Investments
Pioneer Investments
PNC Capital Advisors, LLC
PPM America
Principal Global Investors
Private Advisors, LLC
Putnam Investments, LLC
QMA (Quantitative Management Associates)
RBC Global Asset Management
Regions Financial Corporation
RidgeWorth Capital Management, Inc.
Rockefeller & Co., Inc.
Rockpoint Group
Rothschild Asset Management, Inc.
Russell Investments
Santander Global Facilities
Schroder Investment Management North America Inc.
Smith, Graham & Co. Investment Advisors, L.P.
Smith Group Asset Management
Standard Life Investments Limited
Standish
State Street Global Advisors
Stone Harbor Investment Partners, L.P.
T. Rowe Price Associates, Inc.
Taplin, Canida & Habacht
Teachers Insurance & Annuity Association of America
The Boston Company Asset Management, LLC
The Guardian Life Insurance Company of America
The Hartford
The Lionstone Group
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)
WCM Investment Management
WEDGE Capital Management
Wellington Management Company, LLP
Wells Capital Management
Western Asset Management Company
William Blair & Company