

# Kansas Board of Regents Mandatory Retirement Plan

Retirement Plan Committee Meeting  
Spring 2020



Prepared as of December 31, 2019



## Table of Contents

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Recap of Markets and Economy	1
Executive Summary	9
TIAA Mandatory Plan Summary	22
Voya Mandatory Plan Summary	49
TIAA Detailed Investment Analysis	76
Voya Detailed Investment Analysis	158
Voya Manager Searches	240
- Small Cap Growth Search	241
- Foreign Small Cap Search	257
Topical Legal Review	272
Appendix	277



## Recap of Markets and Economy

### Overview

The U.S. economy continued to grow through 2019, marking the longest period of expansion since 1926. Consistent throughout the recovery, consumers continued spending, resulting from modest wage growth amid a competitive labor market. Economic growth was limited due to contraction within capital investment and net exports, both of which can be linked to detrimental effects from trade policy.

In 2019, investors experienced significant gains across most major asset classes, which followed moderate declines in 2018.

### Fixed Income Markets

After two rate cuts in August and September, the Federal Open Market Committee further reduced its short-term interest rates 25 basis points to a target range of 1.50-1.75% in October.

Following the three short-term rate cuts, the U.S. Treasury yield curve normalized, with yields increasing with maturities in an upward manner. With long-term rates increasing, bond investors benefitted from shorter durations.

As the Fed pivoted to more accommodative position, investors perceived a reduced risk of recession and credit spreads subsequently narrowed. With lower bond yields from government securities, investors preferred higher-yielding but more economically-sensitive bond sectors such as corporate investment-grade, high yield and emerging market debt.

### Domestic Equity Markets

The S&P 500 returned +9.1% for the quarter and +31.5% for the year. Large cap stocks outperformed small cap stocks across style groups for the year. Growth stocks outperformed value during the 4<sup>th</sup> quarter. Throughout the past decade, growth stocks outperformed their value counterparts across all capitalizations.

In 2019, all U.S. equity sectors posted double digit gains. The technology sector experienced gains in excess of +50% for the year. Financials (+32%) and communications services (+33%) were also among the strongest performing sectors. The energy sector (+12%) had the weakest returns as oil prices fell 13% in the year.

Equity valuations increased during the quarter to a level above the long-term median. The forward P/E of the S&P 500 increased from 17.4 last quarter to 18.2. The 25-year median P/E ratio was 16.1.

### International Equity Markets

Despite the very strong absolute gains, international equity markets continued to lag the U.S. Weak manufacturing data, global trade volume and slower economic growth throughout the past decade has led to the largest observed valuation dispersion between U.S. and non-U.S. equities since 1997. At the end of the year, the forward P/E for the MSCI All-Country World ex USA index was 14.2.

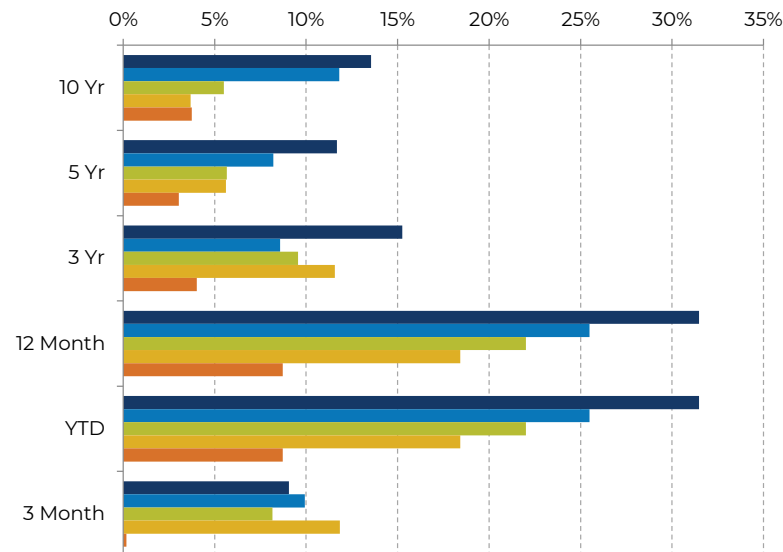
A slightly weaker U.S. Dollar further contributed to returns for U.S.-based investors. Like the U.S. markets, growth stocks outperformed value stocks across all market capitalizations.

Developed markets (+22%) outpaced emerging markets (+18%) in 2019. The strongest country returns were France (+27%), Brazil (+27%) Taiwan (+36%) and Russia (+53%).

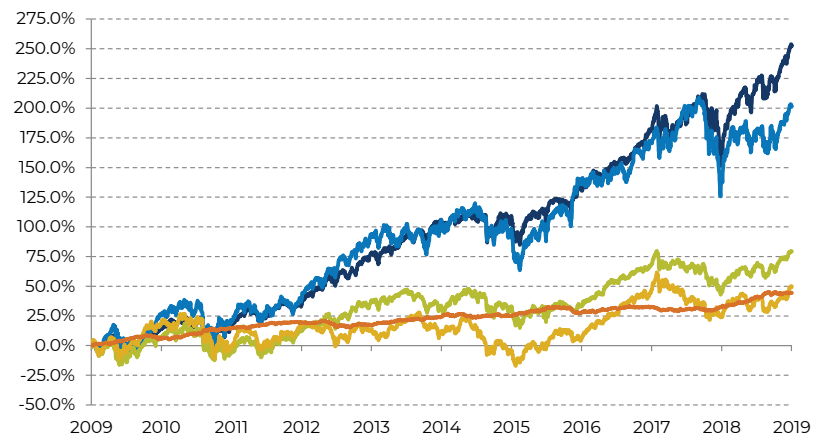
### Economic Overview

GDP growth was 2.1% in the third quarter of 2019, which is consistent with 2.0% growth in the second quarter of 2019. As of January 6, 2020, GDP Now is forecasting Q4 GDP growth to be 2.3%. The economy is benefiting from a strong labor market combined with real wage growth that continued to fuel personal consumption. US export activity has been an area of weakness. Uncertainty regarding trade policy has led to decline in corporate capital expenditures.

Labor markets remained tight as the unemployment rate dropped to 3.5%, which is well-below the 50-year average rate of 6.2%. The tight market led to a 3.7% increase in hourly wages, which translates to an increase of 1.7% in real terms (inflation adjusted).



	3 Month	YTD	12 Month	3 Yr	5 Yr	10 Yr
■ US Large Stocks	9.1%	31.5%	31.5%	15.3%	11.7%	13.6%
■ US Small Stocks	9.9%	25.5%	25.5%	8.6%	8.2%	11.8%
■ Intl Developed	8.2%	22.0%	22.0%	9.6%	5.7%	5.5%
■ Intl Emerging	11.8%	18.4%	18.4%	11.6%	5.6%	3.7%
■ Bonds	0.2%	8.7%	8.7%	4.0%	3.0%	3.7%



— US Large Stocks — US Small Stocks — Intl Developed  
— Intl Emerging — Bonds



# Fixed Income Markets Summary

4th Quarter 2019

Data Source: Bloomberg

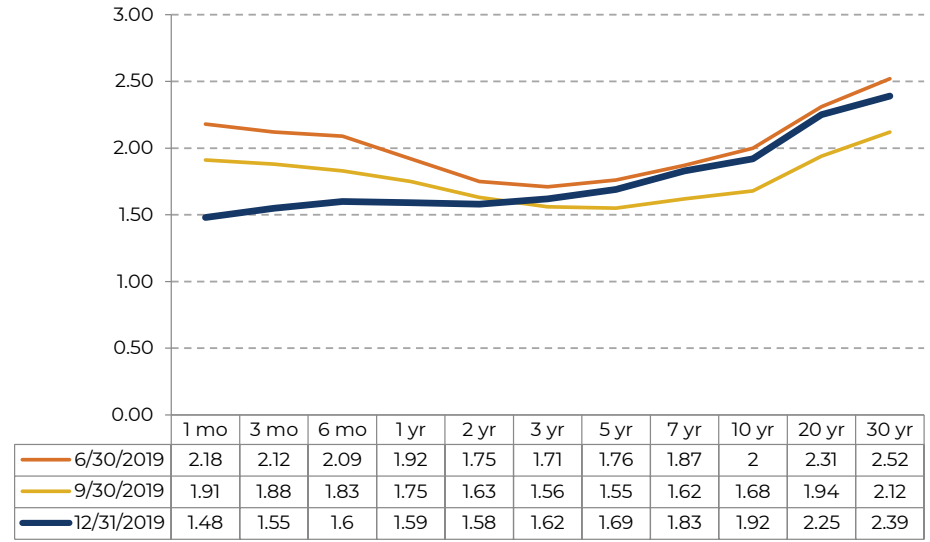
## Broad Fixed Income Sectors

	Qtr	1 Year	3 Year	5 Year	10 Year
Aggregate Bond Index	0.2	8.7	4.0	3.0	3.7
Government	(0.8)	6.8	3.3	2.4	3.0
Mortgage-Backed	0.7	6.4	3.2	2.6	3.2
Corporate	1.1	13.8	5.8	4.4	5.3
High Yield Corporate	2.6	14.3	6.4	6.1	7.6
Global ex US	0.7	5.1	4.4	1.6	1.5
EM Debt	2.1	13.1	6.1	5.8	6.6
TIPS	0.8	8.4	3.3	2.6	3.4
Municipal	1.0	6.7	4.3	3.1	3.9
Inflation	0.6	2.1	2.0	1.8	1.7

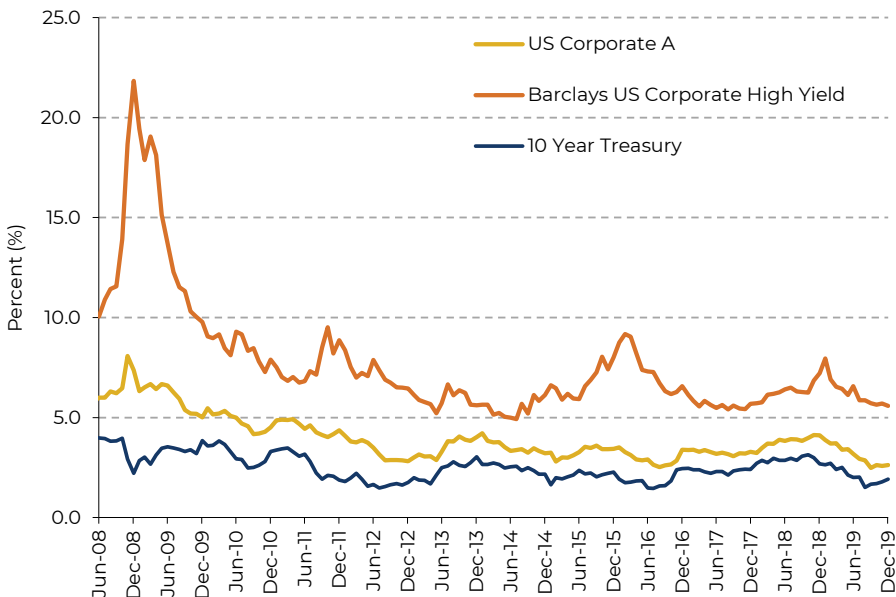
## Maturity

1-3 Year US Aggregate	0.6	4.0	2.2	1.7	1.6
3-5 Year US Aggregate	0.5	6.3	3.0	2.5	2.9
5-7 Year US Aggregate	0.5	7.3	3.6	2.8	3.7
7-10 Year US Aggregate	(0.0)	9.8	4.4	3.3	4.7
10+ Year US Aggregate	(1.1)	19.6	8.0	5.4	7.3

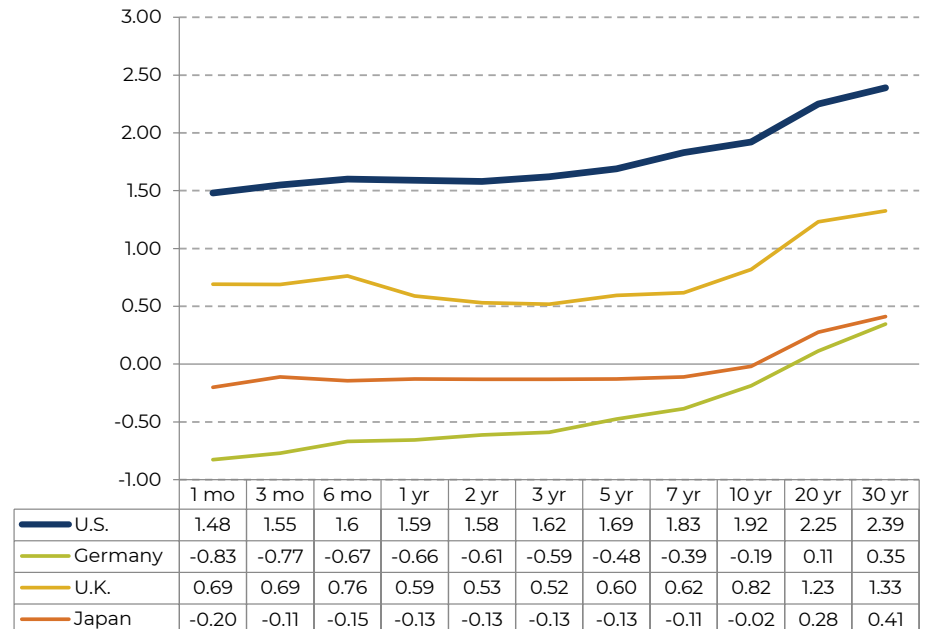
## US Treasury Yield Curve



## Historical Yields



## Global Yield Curve





# Domestic Capital Markets Summary

4th Quarter 2019

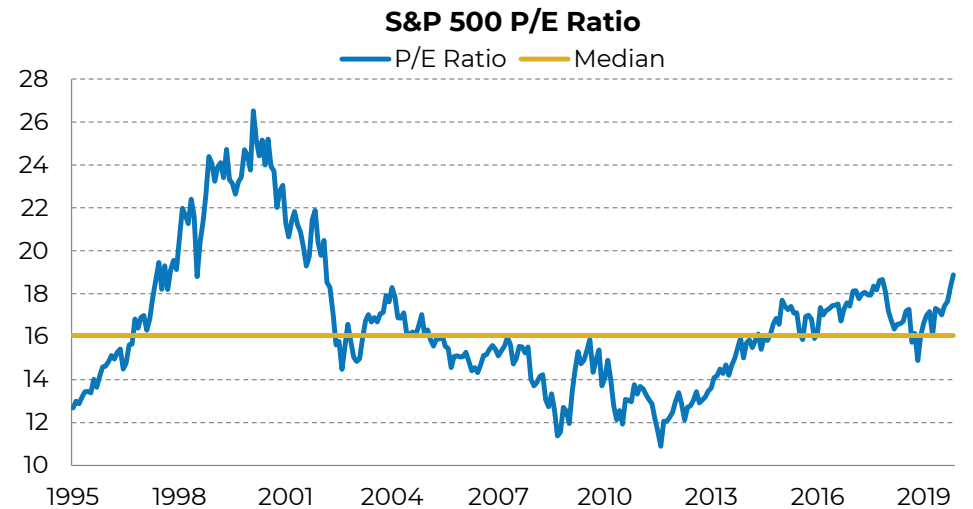
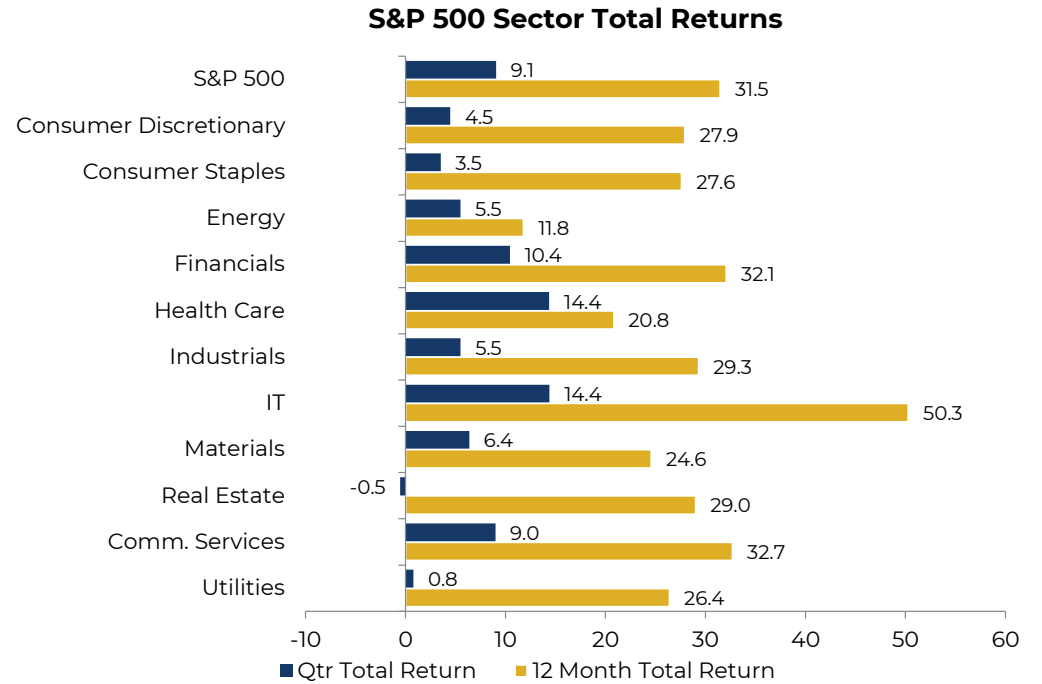
Data Source: Bloomberg

Quarter	Value			Blend			Growth		
	Value	Blend	Growth	Value	Blend	Growth	Value	Blend	Growth
Large	7.4	9.0	10.6	26.5	31.4	36.4	26.5	31.4	36.4
Mid	6.3	7.0	8.2	27.0	30.5	35.5	27.0	30.5	35.5
Small	8.5	9.9	11.4	22.4	25.5	28.4	22.4	25.5	28.4

1 Yr	Value			Blend			Growth		
	Value	Blend	Growth	Value	Blend	Growth	Value	Blend	Growth
Large	26.5	31.4	36.4	9.7	15.0	20.5	9.7	15.0	20.5
Mid	27.0	30.5	35.5	8.1	12.0	17.4	8.1	12.0	17.4
Small	22.4	25.5	28.4	4.8	8.6	12.5	4.8	8.6	12.5

5 Yrs	Value			Blend			Growth		
	Value	Blend	Growth	Value	Blend	Growth	Value	Blend	Growth
Large	8.3	11.5	14.6	11.8	13.5	15.2	11.8	13.5	15.2
Mid	7.6	9.3	11.6	12.4	13.2	14.2	12.4	13.2	14.2
Small	7.0	8.2	9.3	10.6	11.8	13.0	10.6	11.8	13.0

Style box returns represented by Russell Indices



\* Based on 12 month forward looking P/E Estimate



# International Capital Markets Summary

4th Quarter 2019

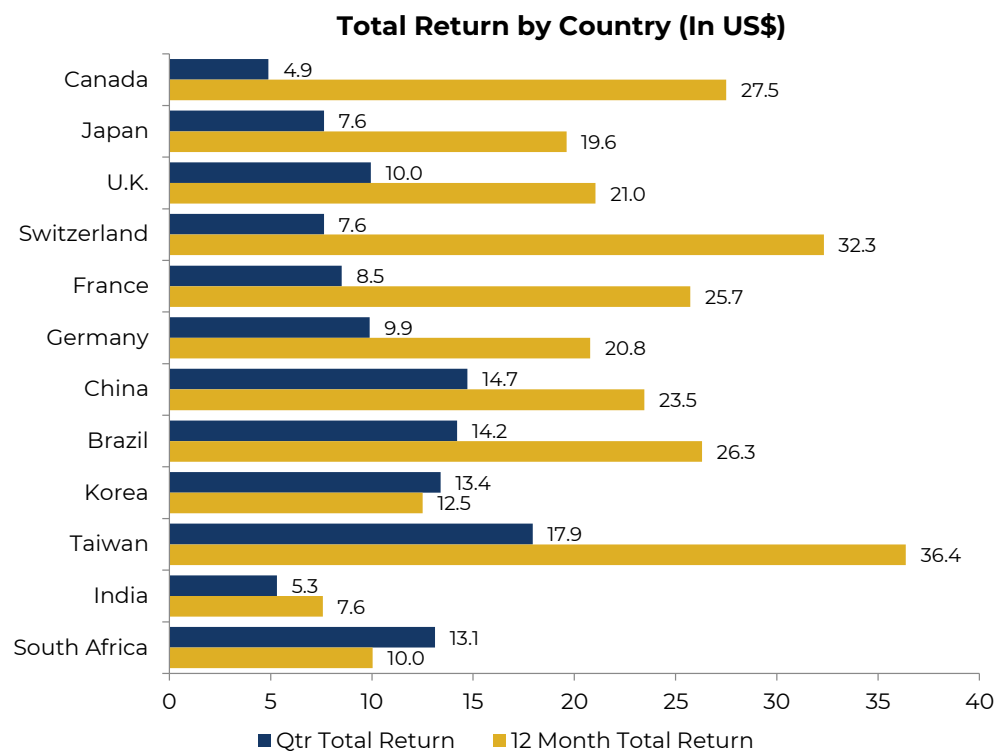
Data Source: Bloomberg

Quarter	Value			YTD	Value		
	Value	Blend	Growth		Value	Blend	Growth
Large	8.0	8.7	9.5	Large	15.4	21.3	28.0
Mid	9.2	9.7	9.9	Mid	17.4	22.3	25.3
Small	10.8	11.0	11.2	Small	20.3	22.4	24.6

1Yr	Value			3 Yrs	Value		
	Value	Blend	Growth		Value	Blend	Growth
Large	15.4	21.3	28.0	Large	6.6	9.9	13.4
Mid	17.4	22.3	25.3	Mid	8.0	9.9	11.2
Small	20.3	22.4	24.6	Small	8.5	9.6	10.8

5 Yrs	Value			10 Yrs	Value		
	Value	Blend	Growth		Value	Blend	Growth
Large	3.4	5.3	7.4	Large	3.3	4.7	6.2
Mid	4.8	6.2	7.2	Mid	5.5	6.0	6.3
Small	6.4	7.0	7.6	Small	6.6	6.9	7.3

Style box returns represented by MSCI ACWI ex USA Indices



Baskets

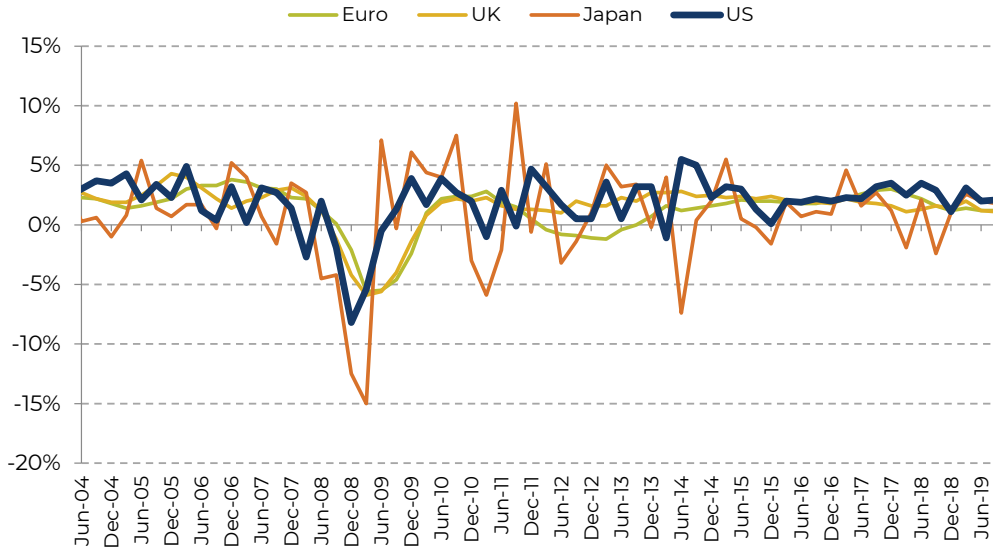
Majors

### Foreign Currency

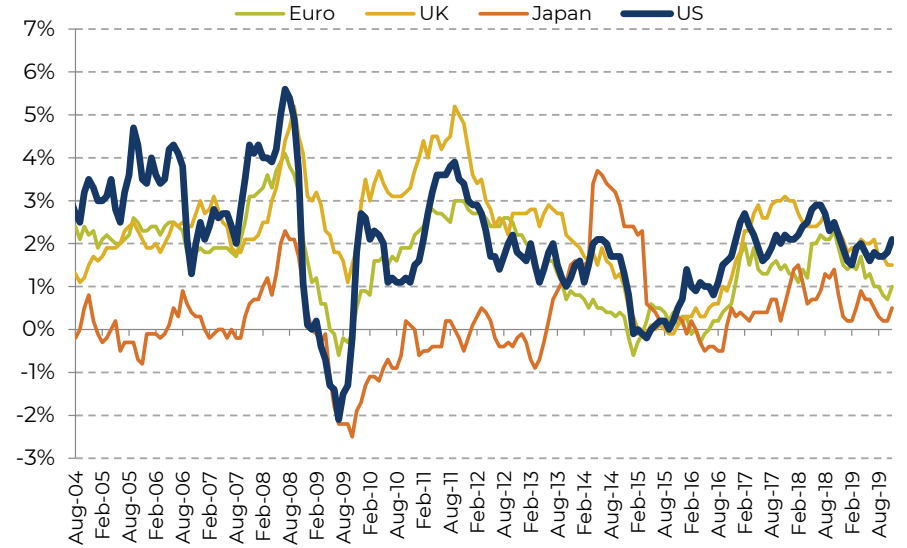
	Quarter	1 Year	3 Year	5 Year	10 Year
Global ex-US	2.7	0.8	1.4	-1.3	-1.9
EAFE	3.0	0.3	1.9	-1.1	-1.7
Emerging	2.3	0.4	0.1	-1.8	-2.5
USD/JPY	0.5	-1.0	-2.4	-1.9	1.6
USD/EUR	-2.8	2.3	-2.1	1.5	2.5
USD/GBP	-7.3	-3.8	-2.4	3.3	2.0



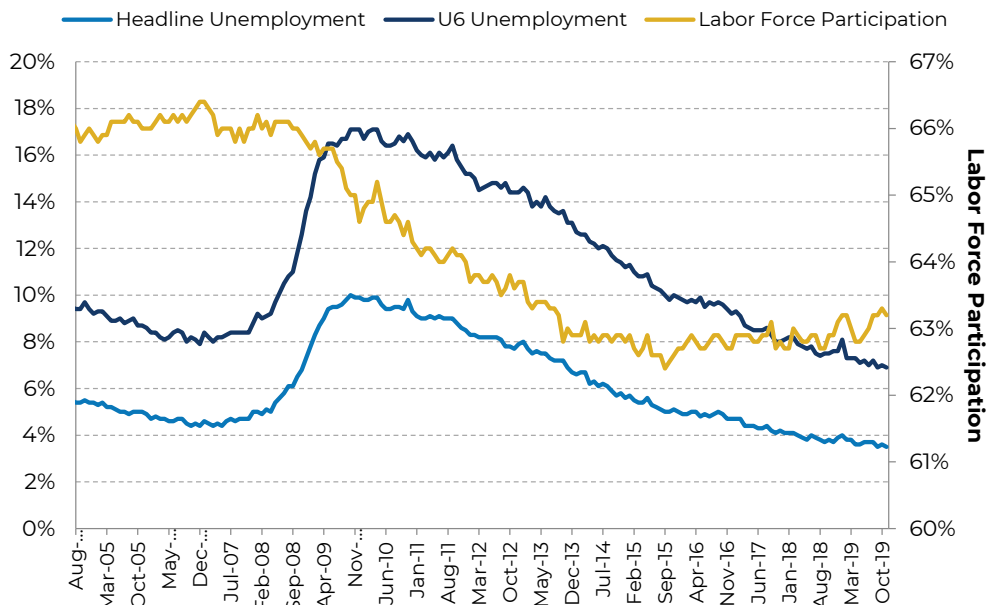
### Gross Domestic Product



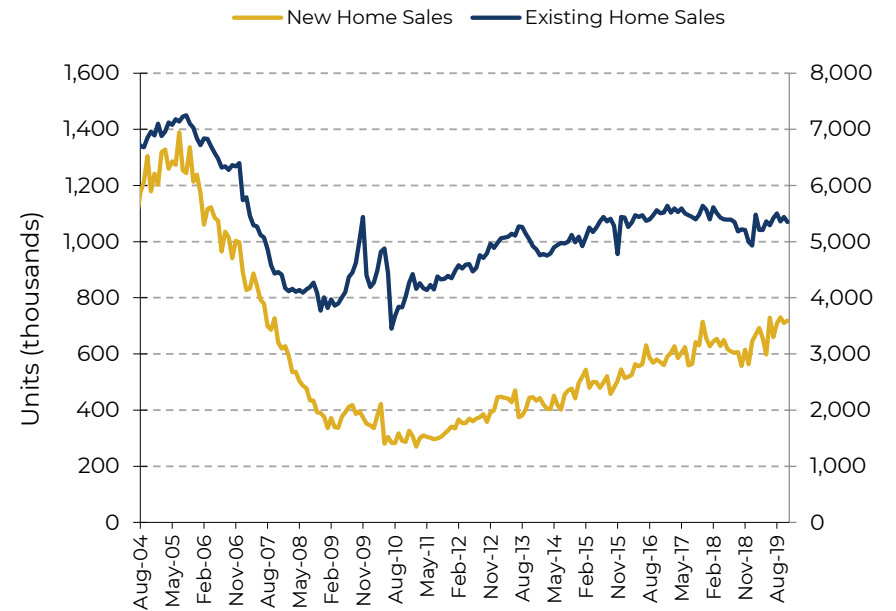
### Consumer Prices (Year over Year in Percent)



### Employment



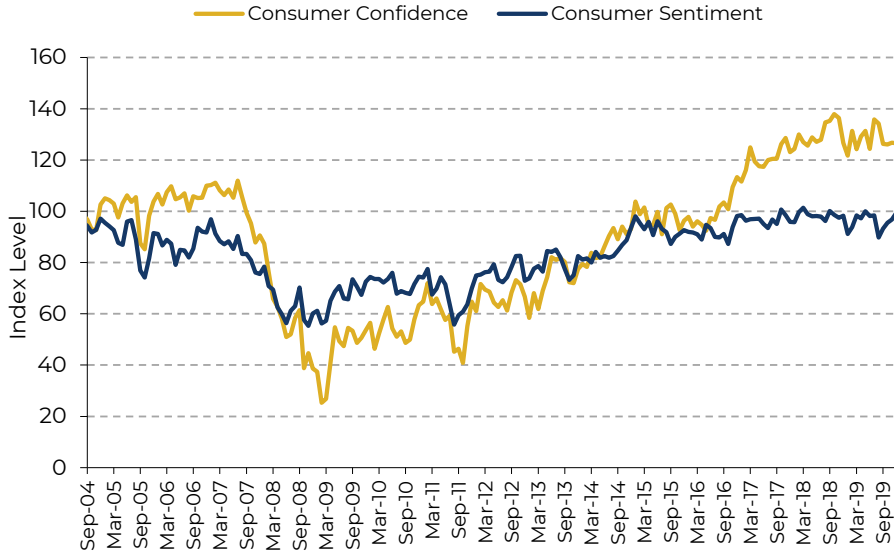
### New and Existing Home Sales



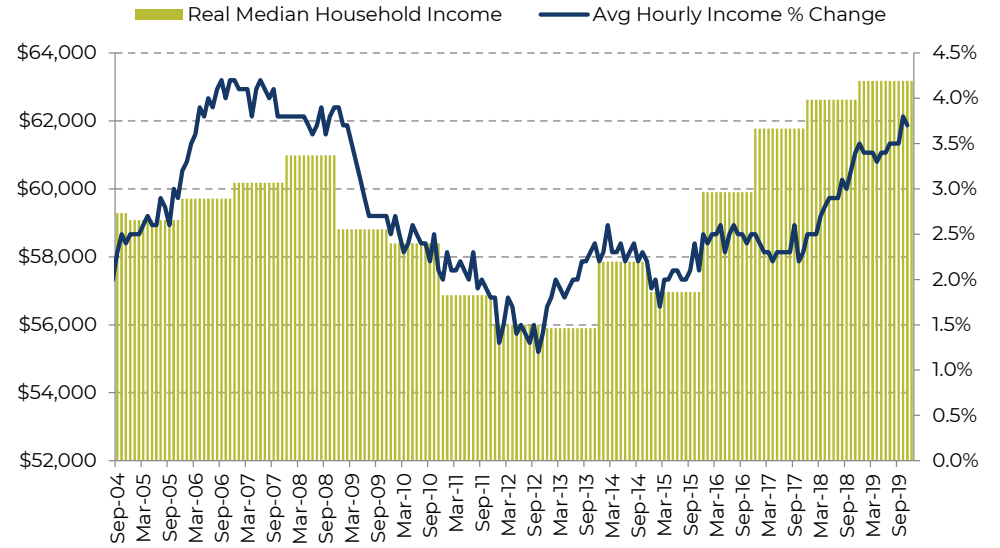




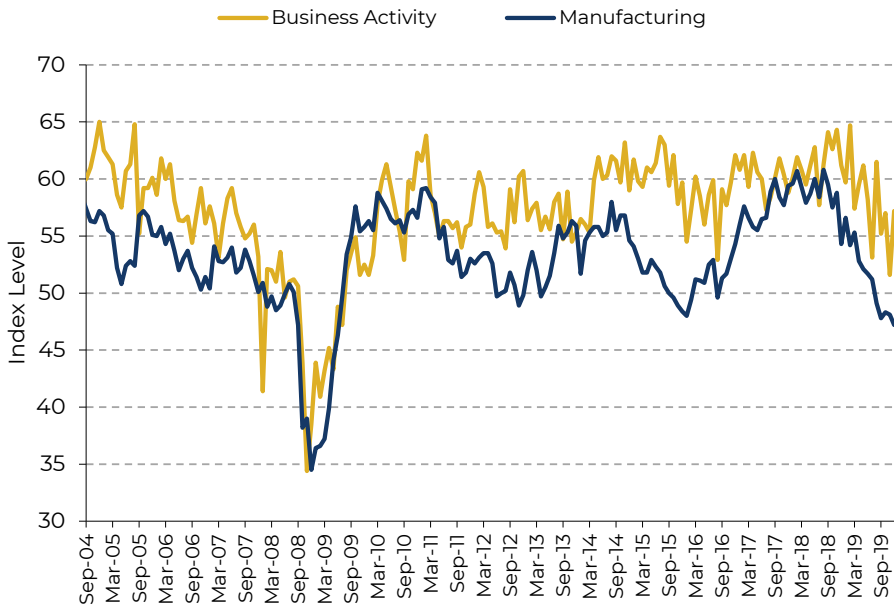
### Consumer Confidence



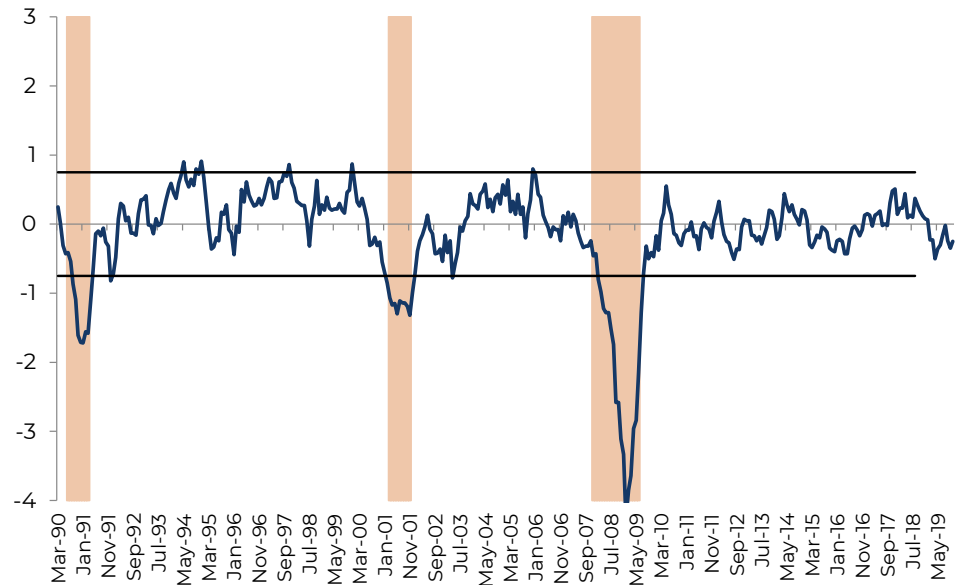
### Income and Wages



### ISM Business Activity & Manufacturing



### CFNAI: (3-Month Moving Average)



# Asset Classes - Annual Returns

Data as of 12/31/2019.



<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
5%	79%	27%	8%	18%	39%	14%	1%	21%	37%	2%	31%
2%	58%	27%	4%	18%	34%	10%	1%	21%	25%	2%	26%
0%	37%	19%	3%	17%	32%	6%	1%	17%	22%	0%	26%
-26%	32%	15%	2%	16%	23%	5%	0%	12%	16%	-2%	22%
-34%	27%	15%	0%	16%	7%	2%	-1%	11%	15%	-4%	18%
-36%	26%	8%	-2%	16%	2%	1%	-2%	3%	7%	-11%	14%
-37%	6%	7%	-4%	4%	0%	0%	-4%	2%	4%	-11%	9%
-43%	3%	1%	-12%	2%	-2%	-2%	-5%	1%	2%	-14%	2%
-53%	0%	0%	-18%	0%	-3%	-5%	-15%	0%	1%	-15%	2%

<b>US Large Cap Stocks</b>
<b>US Mid Cap Stocks</b>
<b>US Small Cap Stocks</b>
<b>Developed Intl Stocks</b>
<b>Emerging Market Stocks</b>

<b>Intermediate-term Bonds</b>
<b>High Yield Bond</b>
<b>Cash</b>
<b>Inflation</b>



## ***Executive Summary***

# Kansas Board of Regents Mandatory Retirement Plan

## Spring 2020 RPC Meeting

- **Outstanding Items from the Fall 2019 RPC Meeting**

Advanced Capital Group reviewed the six-month progress of the three funds placed on Watch at the Spring 2019 RPC meeting. The funds included:

- TIAA-CREF Large-Cap Value Institutional
- TIAA-CREF Mid-Cap Value Institutional
- Voya Small-Cap Opportunities Portfolio I

Listed below is a brief recap of the reasons each fund was placed on watch at the Spring 2019 RCP meeting as well as more a more recent update on how the fund has progressed as well as ACG's recommendation.

- **TIAA**

- **TIAA-CREF Large-Cap Value Institutional (Large Cap Value Option)**

- Rationale for being placed on Watch at Spring 2019 RPC Meeting:

- Underperformance: The second half of 2018 turned out to be quite challenging for the fund. At the end of 2018, the fund's one-year return of -14.10% underperformed the benchmark by 5.83% and peer group average by 5.58%. Much of the weakness was due in large part to poor stock selection in energy, financials, industrials, and materials sectors. As a result of the poor 2018 results as well as poor relative returns in 2017, the fund is trailing both the benchmark index and average large-cap value peer group manager by a wide margin on a one, three, and five-year basis.
- Manager Change: Long-term manager Tom Kolefas retired in November 2018. He had managed the fund the previous 14 years. Charles Carr replaced Mr. Kolefas as the Lead Portfolio Manager on the fund. At the time he had been with TIAA for less than five years, however he had 23 years of equity investment industry experience.

- Investment Process Change: Mr. Carr was committed to keep the fund firmly entrenched in the large cap style box, but looked to cut the number of holdings, focus on large cap companies and reduce the overall foreign exposure of the fund.
- Update since the Fall 2019 RPC Meeting (Plan assets in fund = \$60.5M or 1.8% of TIAA Assets and 2,367 participants)
  - Co-PM Richard Cutler stepped off the fund in January 2020 and departed the firm. This change was one of many changes to investment personnel made following the merger of TIAA and Nuveen. Carr has been the lead decision-maker on the fund since he joined and will continue to be the lead PM going forward. This change is not expected to meaningfully impact the strategy, but it leaves Carr as the sole manager on the fund.
  - Lead Manager Charles Carr posted top quartile performance results on his first full year on the fund. During his first thirteen months at the helm he repositioned it to focus more heavily on a smaller number of domestically domiciled large cap value names.

**As of 12.31.2018 (Placed on Watch - Spring 2019 RPC Meeting)**

Name	3 Mo.	Rank	1 Yr.	Rank	3 Yrs.	Rank	5 Yrs.	Rank	10 Yrs.	Rank
TIAA-CREF Large-Cap Value Instl.	-16.30	92	-14.10	94	4.66	88	3.59	88	10.84	52
+/- Russell 1000 Value Index	-4.58		-5.83		-2.29		-2.36		-0.34	
US Fund Large Value Peer Group	-12.47		-8.52		6.85		5.38		10.91	

**As of 6.30.2019 (Fall 2019 RPC Meeting)**

Name	3 Mo.	Rank	1 Yr.	Rank	3 Yrs.	Rank	5 Yrs.	Rank	10 Yrs.	Rank
TIAA-CREF Large-Cap Value Instl.	4.53	13	1.68	84	8.55	85	5.66	82	11.83	64
+/- Russell 1000 Value Index	0.69		-6.78		-1.64		-1.80		-1.36	
US Fund Large Value Peer Group	3.37		6.00		10.28		6.88		12.21	

**As of 12.31.2019 (Spring 2020 RPC Meeting)**

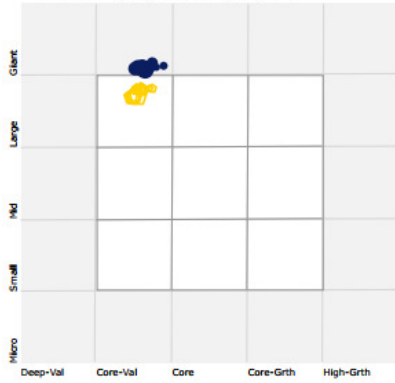
Name	3 Mo.	Rank	1 Yr.	Rank	3 Yrs.	Rank	5 Yrs.	Rank	10 Yrs.	Rank
TIAA-CREF Large-Cap Value Instl.	8.95	18	28.81	15	7.58	90	7.07	76	10.67	61
+/- Russell 1000 Value Index	1.54		2.27		-2.10		-1.22		-1.13	
US Fund Large Value Peer Group	7.29		25.48		9.81		8.06		10.96	

**As of 02.29.2020 (Through end of February 2020)**

Name	3 Mo.	Rank	1 Yr.	Rank	3 Yrs.	Rank	5 Yrs.	Rank	10 Yrs.	Rank
TIAA-CREF Large-Cap Value Instl.	-9.70	42	1.82	24	1.61	85	3.99	73	9.14	64
+/- Russell 1000 Value Index	-0.50		1.28		-2.17		-1.52		-1.26	
US Fund Large Value Peer Group	-10.07		-0.77		3.84		4.90		9.48	

**Holdings-Based Style Trail - Current Manager**

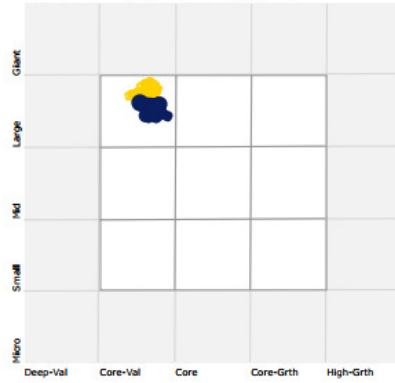
Time Period: 11/30/2018 to 12/31/2019



● TIAA-CREF Large-Cap Value Instl      ● Russell 1000 Value TR USD

**Holdings-Based Style Trail - Previous Manager (3 Year Trailing)**

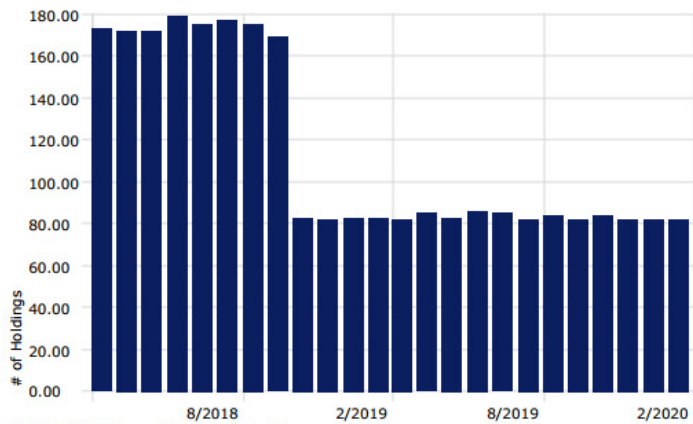
Time Period: 11/30/2015 to 10/31/2018



● TIAA-CREF Large-Cap Value Instl      ● Russell 1000 Value TR USD

**Number of Holdings**

Time Period: 3/1/2018 to 2/29/2020

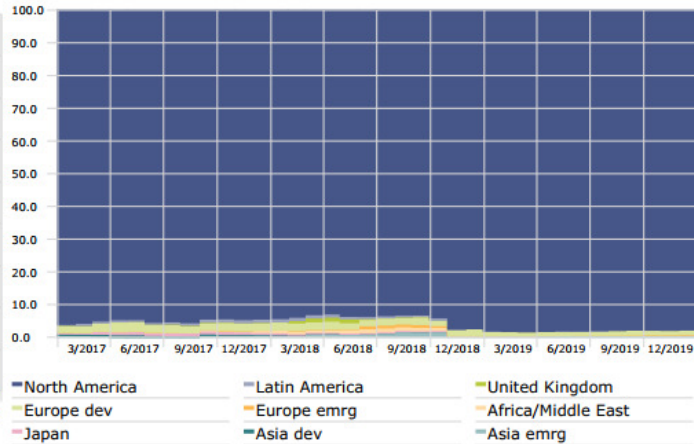


● TIAA-CREF Large-Cap Value Instl

Source: Morningstar Direct

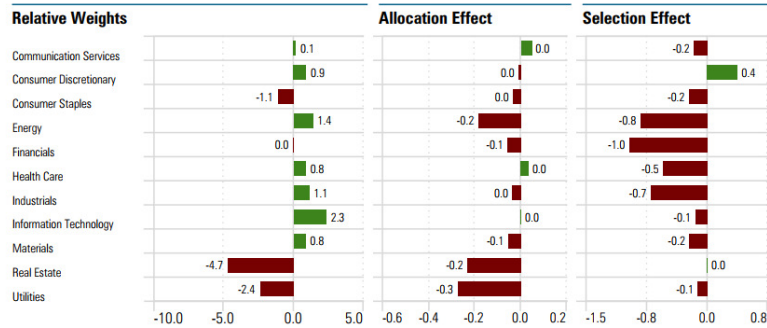
**TIAA-CREF Large-Cap Value Instl - Equity Regional Exposure**

Time Period: 1/1/2017 to 12/31/2019

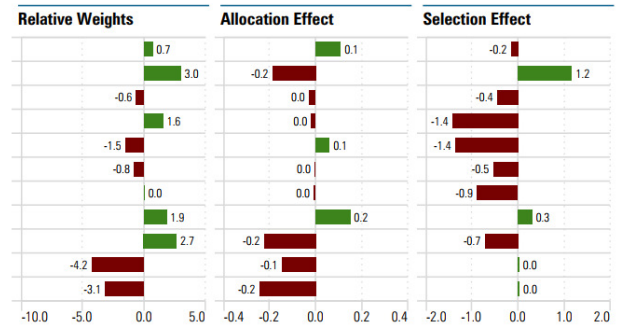


## 4Q 2018 Attribution, Relative to Russell 1000 Value

### One Quarter Performance Attribution

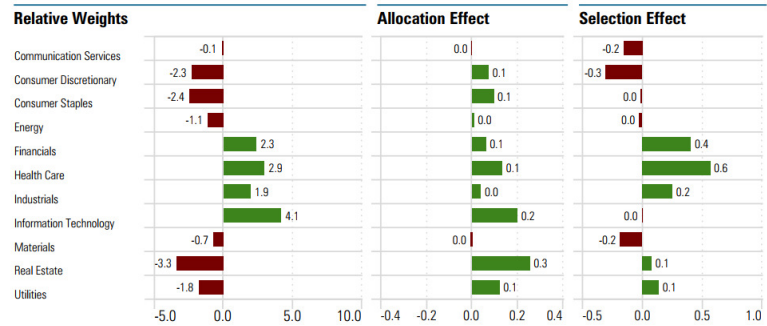


### One Year Performance Attribution

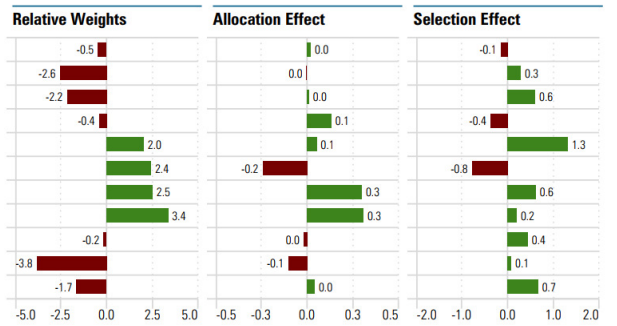


## 4Q 2019 Attribution, Relative to Russell 1000 Value

### One Quarter Performance Attribution



### One Year Performance Attribution



- **ACG Recommendation: Remain on Watch. As you would expect, the near-term performance results have improved significantly. However, it is our preference to see meaningful improvement in the fund's long-term relative performance results and management team stability before we recommend removing the fund from watch. We will evaluate again at the Fall 2020 RPC Meeting.**

- **TIAA-CREF Mid-Cap Value Institutional (Mid-Cap Value Option)**
  - Rationale for being placed on Watch at Spring 2019 RPC Meeting:
    - Manager Change: Lead Portfolio Manager Tom Kolefas (also the previous manager to the TIAA-CREF Large Cap Value Fund) retired in November 15, 2018 after 15 years at the helm. Rich Cutler, who was a Co-PM on the fund, takes over as the lead Portfolio Manager.
    - Performance: has been trailing the benchmark and average mid-cap value peer group manager across most trailing time periods.
  - Update Since Fall 2019 RPC Meeting (Plan assets in fund = \$57.6M or 1.7% of TIAA Assets and 2,766 participants)
    - Additional Manager and Strategy Change: Effective January 17, 2020, Richard Cutler stepped off the strategy and left the firm. This change was part of a larger effort to consolidate investment personnel following the merger of TIAA and Nuveen. He was replaced by two co-PMs, David Chalupnik and Evan Staples, who run several large cap value and blend strategies for Nuveen. The Nuveen Large Cap Select strategy, which Chalupnik has managed since 2003, has outperformed the category average return on a three-, five-, ten-, and fifteen-year basis, although it trails the index over all of those periods. The management team does not appear to have experience in the mid cap value space, however.
    - Richard Cutler's investment style for his brief tenure was deeper value than that of Tom Kolefas. Cutler focused heavily on companies trading at a discount to their intrinsic value and utilized both quantitative and fundamental analysis to identify catalysts that may unlock shareholder value. As a result, quality metrics were lower in 2019 than in previous years. In contrast, Chalupnik and Staples will look for companies with strong or improving fundamentals that have both near-term and long-term catalysts and a yield premium relative to the index. They also plan on reducing the names in the portfolio from around 200 down to 100-125 and will have a turnover of 70-80% (not including initial trading). The resulting portfolio should be expected to outperform when quality and dividend-paying stocks outperform.
    - The fund performed in line with the Russell MidCap Value Index and in the 46<sup>th</sup> percentile of its peers during Mr. Cutler's year as lead portfolio manager of the fund.



- The fund has underperformed relative to the benchmark during the first two months of 2020 as its investment strategy looks to be a little out of step with the recent spike in volatility. With a January 17<sup>th</sup> departure, it will take the new management team some time to reposition the fund to match their dividend-focused investment philosophy and process.

**As of 12.31.2018 (Placed on Watch - Spring 2019 RPC Meeting)**

<b>Name</b>	<b>3 Mo.</b>	<b>Rank</b>	<b>1 Yr.</b>	<b>Rank</b>	<b>3 Yrs.</b>	<b>Rank</b>	<b>5 Yrs.</b>	<b>Rank</b>	<b>10 Yrs.</b>	<b>Rank</b>
TIAA-CREF Mid Cap Value Instl.	-17.25	70	-14.15	67	3.85	77	3.65	57	11.66	56
+/- Russell MidCap Value Index	-2.30		-1.86		-2.21		-1.79		-1.37	
US Fund Mid Value Peer Group	-15.70		-12.84		5.42		3.88		11.66	

**As of 6.30.2019 (Fall 2019 RPC Meeting)**

<b>Name</b>	<b>3 Mo.</b>	<b>Rank</b>	<b>1 Yr.</b>	<b>Rank</b>	<b>3 Yrs.</b>	<b>Rank</b>	<b>5 Yrs.</b>	<b>Rank</b>	<b>10 Yrs.</b>	<b>Rank</b>
Voya SmallCap Opportunities Port I	3.15	51	0.83	46	7.65	79	5.26	55	12.53	59
+/- Russell MidCap Value Index	-0.04		-2.85		-1.30		-1.46		-2.03	
US Fund Mid Value Peer Group	3.16		0.59		8.80		5.48		12.80	

**As of 12.31.2019 (Spring 2020 RPC Meeting)**

<b>Name</b>	<b>3 Mo.</b>	<b>Rank</b>	<b>1 Yr.</b>	<b>Rank</b>	<b>3 Yrs.</b>	<b>Rank</b>	<b>5 Yrs.</b>	<b>Rank</b>	<b>10 Yrs.</b>	<b>Rank</b>
Voya SmallCap Opportunities Port I	7.19	41	27.01	46	6.62	70	6.14	69	10.79	52
+/- Russell MidCap Value Index	0.83		-0.01		-1.48		-1.48		-1.62	
US Fund Mid Value Peer Group	6.83		26.69		7.66		7.08		10.85	

**As of 02.29.2020 (Through end of February 2020)**

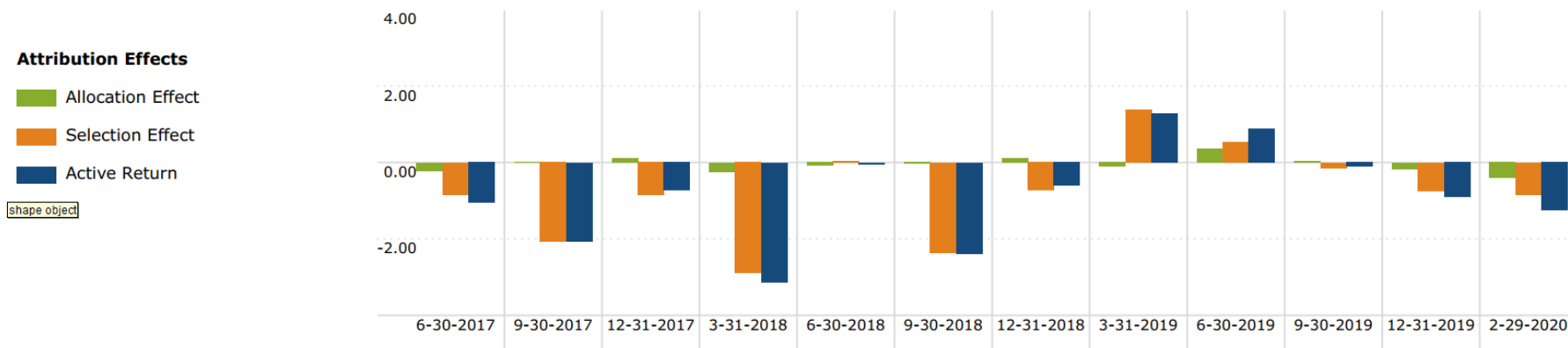
<b>Name</b>	<b>3 Mo.</b>	<b>Rank</b>	<b>1 Yr.</b>	<b>Rank</b>	<b>3 Yrs.</b>	<b>Rank</b>	<b>5 Yrs.</b>	<b>Rank</b>	<b>10 Yrs.</b>	<b>Rank</b>
Voya SmallCap Opportunities Port I	-11.41	55	-5.33	64	0.17	72	2.46	71	9.04	57
+/- Russell MidCap Value Index	-2.44		-3.97		-2.04		-1.98		-1.75	
US Fund Mid Value Peer Group	-11.14		-4.41		1.15		3.39		9.17	

- **ACG Recommendation: Remain on Watch due to the additional management change. We will evaluate again at the Fall 2020 RPC Meeting.**

- **VOYA**

- **Voya Small-Cap Opportunities Portfolio I (Small Cap Growth Option)**

- Rationale for being placed on Watch at Spring 2019 RPC Meeting:
      - Underperformance: Modest underperformance relative to both the Russell 2000 Growth benchmark and average small-cap growth manager in 2017 was followed by significant underperformance to both in 2018.
      - Analyst Turnover: The management team and investment process have not changed. However, there has been significant turnover in their dedicated analyst ranks over the past couple of years. Management has recently replaced both the technology and health care analysts for underlying performance reasons.
  - Update: Since Spring 2020 RPC Meeting (Plan Assets in Fund = \$19.3M or 2.7% of Voya Assets and 1,116 participants)
    - The fund continues to struggle relative to both the benchmark and median peer group manager.
    - The recent underperformance, which has had a meaningful impact on longer-term results, can be categorized into two buckets: selection effects—coming from individual stock holdings and weights relative to the benchmark—and allocation effects from sector weightings relative to the benchmark. The fund's stock selection has consistently detracted from performance relative to the benchmark in the near term.



**As of 12.31.2018 (Placed on Watch - Spring 2019 RPC Meeting)**

<b>Name</b>	<b>3 Mo.</b>	<b>Rank</b>	<b>1 Yr.</b>	<b>Rank</b>	<b>3 Yrs.</b>	<b>Rank</b>	<b>5 Yrs.</b>	<b>Rank</b>	<b>10 Yrs.</b>	<b>Rank</b>
Voya SmallCap Opportunities Port I	-22.96	88	-15.87	95	4.24	81	3.46	82	12.75	64
+/- Russell 2000 Growth Index	-1.31		-6.56		-3.00		-1.67		-0.77	
US Fund Small Growth Peer Group	-20.87		-5.76		8.43		5.13		13.34	

**As of 6.30.2019 (Fall 2019 RPC Meeting)**

<b>Name</b>	<b>3 Mo.</b>	<b>Rank</b>	<b>1 Yr.</b>	<b>Rank</b>	<b>3 Yrs.</b>	<b>Rank</b>	<b>5 Yrs.</b>	<b>Rank</b>	<b>10 Yrs.</b>	<b>Rank</b>
Voya SmallCap Opportunities Port I	2.57	75	-4.50	90	10.62	89	6.86	84	14.10	66
+/- Russell 2000 Growth Index	-0.18		-4.00		-4.07		-1.77		-0.31	
US Fund Small Growth Peer Group	4.12		3.80		15.92		9.28		14.73	

**As of 12.31.2019 (Spring 2020 RPC Meeting)**

<b>Name</b>	<b>3 Mo.</b>	<b>Rank</b>	<b>1 Yr.</b>	<b>Rank</b>	<b>3 Yrs.</b>	<b>Rank</b>	<b>5 Yrs.</b>	<b>Rank</b>	<b>10 Yrs.</b>	<b>Rank</b>
Voya SmallCap Opportunities Port I	10.14	38	25.70	64	7.88	89	7.13	88	12.28	66
+/- Russell 2000 Growth Index	-1.25		-2.78		-4.61		-2.21		-0.73	
US Fund Small Growth Peer Group	9.47		28.03		13.93		9.98		13.00	

**As of 02.29.2020 (Through end of February 2020)**

<b>Name</b>	<b>3 Mo.</b>	<b>Rank</b>	<b>1 Yr.</b>	<b>Rank</b>	<b>3 Yrs.</b>	<b>Rank</b>	<b>5 Yrs.</b>	<b>Rank</b>	<b>10 Yrs.</b>	<b>Rank</b>
Voya SmallCap Opportunities Port I	-8.23	72	-4.11	76	2.42	90	4.18	87	11.01	74
+/- Russell 2000 Growth Index	-2.09		-3.39		-5.43		-2.30		-1.06	
US Fund Small Growth Peer Group	-5.91		0.31		9.42		7.48		11.89	

- **ACG Recommendation: Replace. This is a challenging recommendation from the standpoint that it has only been a year since the fund was put on watch. However, fund assets have continued to decline and now stand at approximately \$296M. At approximately \$19.3M of this, KBOR Mandatory Plan participants account for approximately 6.5% of asset in the share class. KBOR would represent approximately 2.8% of the combined share class assets.**

- **Other Fund Items**

In January 2020, TIAA-CREF announced changes to several management teams as part of an effort to integrate the investment platform with that of Nuveen Asset Management, which it acquired in 2014. These changes effect several TIAA-CREF mutual funds and institutional strategies including:

- TIAA-CREF Large-Cap Value Institutional (discussed previously)
- TIAA-CREF Mid-Cap Value Institutional (discussed previously)
- TIAA-CREF Mid-Cap Growth Institutional

Adrian Almanzan was named lead manager on the strategy on March 1, 2019, joining Ted Scalise who had co-managed the strategy since 2006. Almanzan had no previous management experience prior to 2019. In January 2020, Ted Scalise left the firm and strategy and Terrence Kontos joined the team as co-manager. Mr. Kontos has been a comanager on CREF Growth and TIAA-CREF Large-Cap Growth since 2014. While Scalise's departure was a loss for the strategy, the presence of Kontos as co-manager provides some necessary management experience.

- TIAA-CREF Real Property Fund LP [Which affects the TIAA-CREF Lifecycle Funds]

The lead manager for Real Property Fund (RPF), Adriana de Alcantara, left the firm and strategy on January 6, 2020 to join another firm. Ms. de Alcantara's assistant PM, Cindy Fung Chen, took over management of the portfolio at this time. Ms. Chen has been involved with day-to-date management of the fund for a year and has more than 18 years of experience in the sector. This fund is part of the TIAA-CREF Lifecycle Funds series and provides direct exposure to real estate investments. The fund makes up less than 5% of any Lifecycle vintage.

- CREF Stock Account

Comanager Stephanie Link stepped off the fund and left the firm on January 17, 2020. She had only been on the management team since May 2019. Four other managers remain on the fund, including Hans Erickson, who has been on the team since 1996.

- CREF Global Equities

Comanager Harinder Bagai stepped off the fund and left the firm on January 17, 2020. Mr. Bagai had only been on the management team since May 2019. Two other managers remain on the fund, both of whom have a track record on the strategy of more than twelve years.

These changes were all made after the end of the year and, as a result, several do not have official fund commentary within the report. ACG has indicated relevant management changes on the Fiduciary Scorecard in the TIAA section of the report.

- **Provider Lineup Recommendations**

- At the start of each calendar year, both TIAA and Voya can propose fund changes which if approved by the RPC at the Spring RPC meeting would be implemented at the start of the third quarter on July 1<sup>st</sup>.
- TIAA did not propose any changes to the Mandatory Investment Lineup this year.
- Voya made two recommendations.
  - Replace the Voya Small Cap Opportunities Fund with a different small cap growth option.
  - Add a foreign small cap equity option to their lineup.
- After evaluating each of the proposals, ACG provides a recommendation and the underlying considerations for our recommendation, and in the case of a fund add/replacement we provided the fund recommendation and provided further supporting analysis in the appendix.

Voya Proposal & Reasoning	ACG Recommendation	Considerations
<p><b>Replace the Voya SmallCap Opportunities fund with a different small cap growth alternative</b></p>	<p><b>Agree</b></p>	<p>This fund’s process, which relies on keeping sector weights close to the benchmark and adding value through stock picks, has not managed to add value relative to benchmark or peers in the near or long term. Recent underperformance has led to multiple departures in the analyst team in recent years. While all active managers can be expected to go through periods of underperformance, this fund’s team instability as well as continued underperformance after team changes warrants a fund search.</p>
<p><b>Small Cap Growth Search</b></p> <ul style="list-style-type: none"> <li>• Background: Voya provided two options for consideration: Loomis Sayles Small Cap Growth Instl and Janus Henderson Triton T.</li> <li>• Recommendation: Add the Loomis Sayles Small Cap Growth fund for the following reasons: <ul style="list-style-type: none"> <li>○ Greater diversification benefits than the current option and Janus Triton compared to similar options in the plan (Vanguard Small Cap Index and Champlain Mid Cap Institutional)</li> <li>○ Seasoned team of PMs supported by four analysts, which average 17 years on the strategy</li> <li>○ Style purity relative to Janus Henderson Triton, a small-mid (smid) growth fund</li> <li>○ Better upside/downside capture ratio</li> <li>○ Has outperformed Voya SmallCap Opportunities in 51 of 73 rolling five-year periods (70% of the time) and has positive alpha relative to both other options.</li> </ul> </li> </ul>		
<p><b>Add a Foreign Small Cap Equity Fund to the Plan</b></p>	<p><b>Agree</b></p>	<p>Voya has proposed the addition of a small cap equity fund in the international space. While correlations between various equity options tend to be high overall, the correlation between international small cap equity with domestic equity options across the market cap spectrum tends to be lower than that of international large cap equities. As a result, adding a foreign small/mid cap option to the current lineup could provide some additional diversification benefits.</p>
<p><b>Foreign Small/Mid Cap Equity Search</b></p> <ul style="list-style-type: none"> <li>• Background: Voya provided two options for consideration: DFA International Small Company I (0.54% expense ratio) and Fidelity Advisor® Intl Small Cap Z (1.04%)</li> <li>• Recommendation: Add Fidelity Advisor® Intl Small Cap Z to the lineup <ul style="list-style-type: none"> <li>○ Strongest trailing returns of the two options</li> <li>○ Strongest three and five-year rolling returns, outperforming the DFA International Small Company I in 73 of 73 (100%) of rolling 5-year time periods</li> <li>○ Most favorable five-year risk-reward and up and down-market capture</li> <li>○ Strongest head-to-head rolling-period-of-time analysis</li> <li>○ A slight value bias, resulting in lower historical correlations to current growth-leaning international options</li> </ul> </li> </ul>		

# Plan Asset Summary

	12/31/2019		6/30/2019		12/31/2018		6/30/2018		12/31/2017		6/30/2017							
Money Market/Stable Value	\$ 1,129,662,075	26.8%	\$ 1,138,635,331	28.3%	\$ 1,135,421,245	31.3%	\$ 1,119,342,923	28.8%	\$ 1,099,223,783	28.6%	\$ 1,104,708,594	30.2%						
Fixed Income (Domestic/Foreign)	\$ 215,048,134	5.1%	\$ 193,138,305	4.8%	\$ 180,027,473	5.0%	\$ 178,680,050	4.6%	\$ 178,149,783	4.6%	\$ 171,899,990	4.7%						
Balanced	\$ 694,200,703	16.5%	\$ 631,836,311	15.7%	\$ 532,231,177	14.7%	\$ 558,335,678	14.3%	\$ 535,089,278	13.9%	\$ 480,523,947	13.1%						
Equity - Domestic	\$ 1,659,498,158	39.4%	\$ 1,570,002,632	39.0%	\$ 1,349,040,820	37.2%	\$ 1,564,954,212	40.2%	\$ 1,524,457,716	39.6%	\$ 1,411,281,730	38.5%						
Equity - Foreign	\$ 345,231,948	8.2%	\$ 323,302,238	8.0%	\$ 274,804,021	7.6%	\$ 310,244,101	8.0%	\$ 304,430,972	7.9%	\$ 266,578,539	7.3%						
Real Estate	\$ 171,844,459	4.1%	\$ 167,602,216	4.2%	\$ 158,975,023	4.4%	\$ 159,811,703	4.1%	\$ 157,197,351	4.1%	\$ 154,319,449	4.2%						
<b>KBOR Mandatory Plan Totals</b>	<b>\$ 4,215,485,478</b>		<b>\$ 4,024,517,033</b>		<b>\$ 3,630,499,759</b>		<b>\$ 3,891,368,667</b>		<b>\$ 3,850,080,270</b>		<b>\$ 3,661,487,723</b>							
<b>Voya</b>		<b>% of Provider Assets</b>	<b>% of Plan</b>		<b>% of Provider Assets</b>	<b>% of Plan</b>		<b>% of Provider Assets</b>	<b>% of Plan</b>		<b>% of Provider Assets</b>	<b>% of Plan</b>						
Money Market/Stable Value	\$ 101,917,371	14.2%	2.4%	\$ 103,710,706	15.7%	2.6%	\$ 98,663,504	17.3%	2.7%	\$ 96,878,671	16.0%	2.5%	\$ 94,027,515	0.159659	2.4%	\$ 105,771,341	18.3%	2.9%
Fixed Income (Domestic/Foreign)	\$ 34,849,925	4.8%	0.8%	\$ 23,873,165	3.6%	0.6%	\$ 22,323,859	3.9%	0.6%	\$ 23,509,330	3.9%	0.6%	\$ 23,740,710	4.0%	0.6%	\$ 25,178,595	4.3%	0.7%
Balanced	\$ 151,511,128	21.1%	3.6%	\$ 136,373,931	20.7%	3.4%	\$ 114,631,291	20.1%	3.2%	\$ 113,794,135	18.8%	2.9%	\$ 109,038,579	18.5%	2.8%	\$ 102,264,252	17.7%	2.8%
Equity - Domestic	\$ 335,677,623	46.7%	8.0%	\$ 305,998,134	46.4%	7.6%	\$ 260,430,579	45.6%	7.2%	\$ 285,068,570	47.0%	7.3%	\$ 274,639,059	46.6%	7.1%	\$ 265,919,544	45.9%	7.3%
Equity - Foreign	\$ 72,927,415	10.1%	1.7%	\$ 69,420,864	10.5%	1.7%	\$ 58,269,122	10.2%	1.6%	\$ 68,518,310	11.3%	1.8%	\$ 67,457,618	11.5%	1.8%	\$ 59,386,071	10.3%	1.6%
Real Estate	\$ 21,887,518	3.0%	0.5%	\$ 19,750,430	3.0%	0.5%	\$ 16,713,902	2.9%	0.5%	\$ 19,003,372	3.1%	0.5%	\$ 20,023,597	3.4%	0.5%	\$ 20,376,480	3.5%	0.6%
<b>Voya Total</b>	<b>\$ 718,770,979</b>		<b>17.1%</b>	<b>\$ 659,127,230</b>		<b>16.4%</b>	<b>\$ 571,032,257</b>		<b>15.7%</b>	<b>\$ 606,772,387</b>		<b>15.6%</b>	<b>\$ 588,927,078</b>		<b>15.3%</b>	<b>\$ 578,896,283</b>		<b>15.8%</b>
<b>TIAA-CREF</b>																		
Money Market/Stable Value	\$ 1,014,303,597	29.6%	24.1%	\$ 1,021,114,913	30.9%	25.4%	\$ 1,023,253,907	34.1%	28.2%	\$ 1,008,196,323	31.4%	25.9%	\$ 1,000,041,830	31.4%	26.0%	\$ 998,937,253	33.2%	27.3%
Fixed Income (Domestic/Foreign)	\$ 178,324,012	5.2%	4.2%	\$ 167,433,396	5.1%	4.2%	\$ 155,803,931	5.2%	4.3%	\$ 152,860,208	4.8%	3.9%	\$ 153,316,981	4.8%	4.0%	\$ 146,721,395	4.9%	4.0%
Balanced	\$ 539,390,587	15.7%	12.8%	\$ 492,134,015	14.9%	12.2%	\$ 414,526,748	13.8%	11.4%	\$ 440,915,451	13.7%	11.3%	\$ 425,539,169	13.3%	11.1%	\$ 378,259,695	12.6%	10.3%
Equity - Domestic	\$ 1,282,029,364	37.4%	30.4%	\$ 1,221,922,294	37.0%	30.4%	\$ 1,051,406,807	35.0%	29.0%	\$ 1,234,286,111	38.4%	31.7%	\$ 1,236,245,242	38.8%	32.1%	\$ 1,145,362,186	38.0%	31.3%
Equity - Foreign	\$ 268,226,520	7.8%	6.4%	\$ 249,914,625	7.6%	6.2%	\$ 212,762,778	7.1%	5.9%	\$ 237,002,231	7.4%	6.1%	\$ 235,399,245	7.4%	6.1%	\$ 207,192,468	6.9%	5.7%
Real Estate	\$ 149,951,245	4.4%	3.6%	\$ 147,846,451	4.5%	3.7%	\$ 142,256,584	4.7%	3.9%	\$ 140,803,428	4.4%	3.6%	\$ 137,173,754	4.3%	3.6%	\$ 133,942,969	4.4%	3.7%
<b>TIAA-CREF Total</b>	<b>\$ 3,432,225,325</b>		<b>81.4%</b>	<b>\$ 3,300,365,694</b>		<b>82.0%</b>	<b>\$ 3,000,010,755</b>		<b>82.6%</b>	<b>\$ 3,214,063,752</b>		<b>82.6%</b>	<b>\$ 3,187,716,221</b>		<b>82.8%</b>	<b>\$ 3,010,415,966</b>		<b>82.2%</b>
<b>Lincoln Financial</b>																		
Money Market/Stable Value	\$ 9,429,698	20.4%	0.2%	\$ 9,315,714	20.2%	0.2%	\$ 8,844,821	21.2%	0.2%	\$ 9,230,322	18.8%	0.2%	\$ -	-	-	\$ -	-	-
Fixed Income (Domestic/Foreign)	\$ 1,464,080	3.2%	0.0%	\$ 1,366,204	3.0%	0.0%	\$ 1,305,638	3.1%	0.0%	\$ 1,405,219	2.9%	0.0%	\$ -	-	-	\$ -	-	-
Balanced	\$ 2,500,826	5.4%	0.1%	\$ 2,539,917	5.5%	0.1%	\$ 2,386,190	5.7%	0.1%	\$ 2,694,433	5.5%	0.1%	\$ -	-	-	\$ -	-	-
Equity - Domestic	\$ 30,017,966	65.1%	0.7%	\$ 30,318,526	65.6%	0.8%	\$ 26,627,253	63.8%	0.7%	\$ 32,569,725	66.3%	0.8%	\$ -	-	-	\$ -	-	-
Equity - Foreign	\$ 2,719,184	5.9%	0.1%	\$ 2,648,833	5.7%	0.1%	\$ 2,563,880	6.1%	0.1%	\$ 3,218,827	6.6%	0.1%	\$ -	-	-	\$ -	-	-
Real Estate	\$ 5,696	0.0%	0.0%	\$ 5,336	0.0%	0.0%	\$ 4,537	0.0%	0.0%	\$ 4,903	0.0%	0.0%	\$ -	-	-	\$ -	-	-
<b>Lincoln Financial Total</b>	<b>\$ 46,137,451</b>		<b>1.1%</b>	<b>\$ 46,194,530</b>		<b>1.1%</b>	<b>\$ 41,732,320</b>		<b>1.1%</b>	<b>\$ 49,123,428</b>		<b>1.3%</b>	<b>\$ 51,531,388</b>		<b>0.0%</b>	<b>\$ 50,005,485</b>		<b>0.0%</b>
<b>Security Benefit</b>																		
Money Market/Stable Value	\$ 4,011,409	21.9%	0.1%	\$ 4,493,998	23.9%	0.1%	\$ 4,659,013	26.3%	0.1%	\$ 5,037,607	23.5%	0.1%	\$ 5,154,438	23.5%	0.1%	\$ -	-	-
Fixed Income (Domestic/Foreign)	\$ 410,117	2.2%	0.0%	\$ 465,540	2.5%	0.0%	\$ 594,045	3.4%	0.0%	\$ 905,294	4.2%	0.0%	\$ 1,092,092	5.0%	0.0%	\$ -	-	-
Balanced	\$ 798,162	4.3%	0.0%	\$ 788,448	4.2%	0.0%	\$ 686,948	3.9%	0.0%	\$ 931,659	4.4%	0.0%	\$ 511,530	2.3%	0.0%	\$ -	-	-
Equity - Domestic	\$ 11,773,206	64.2%	0.3%	\$ 11,763,678	62.5%	0.3%	\$ 10,576,181	59.7%	0.3%	\$ 13,029,806	60.9%	0.3%	\$ 13,573,415	62.0%	0.4%	\$ -	-	-
Equity - Foreign	\$ 1,358,829	7.4%	0.0%	\$ 1,317,915	7.0%	0.0%	\$ 1,208,240	6.8%	0.0%	\$ 1,504,734	7.0%	0.0%	\$ 1,574,109	7.2%	0.0%	\$ -	-	-
Real Estate	\$ -	0.0%	0.0%	\$ -	0.0%	0.0%	\$ -	0.0%	0.0%	\$ -	0.0%	0.0%	\$ -	0.0%	0.0%	\$ -	-	-
<b>Security Benefit Total</b>	<b>\$ 18,351,722</b>		<b>0.4%</b>	<b>\$ 18,829,579</b>		<b>0.5%</b>	<b>\$ 17,724,427</b>		<b>0.5%</b>	<b>\$ 21,409,100</b>		<b>0.6%</b>	<b>\$ 21,905,583</b>		<b>0.6%</b>	<b>\$ 22,169,989</b>		<b>0.0%</b>



**Kansas Board of Regents  
TIAA Mandatory Plan Summary**



# TIAA Asset Class Coverage

Domestic Equity			
	Value	Blend	Growth
Large	TIAA-CREF Large-Cap Value	CREF Stock CREF Equity Index TIAA-CREF S&P 500 Index	Amana Growth CREF Growth Wells Fargo Growth
Mid	TIAA-CREF Mid-Cap Value	Vanguard Mid Cap Index	TIAA-CREF Mid-Cap Growth
Small	Royce Opportunity	TIAA-CREF Small-Cap Blend Index	AB Small Cap Growth
International Equity			
	Value	Blend	Growth
Large		TIAA-CREF International Equity Index	American Funds EuroPacific Growth
Mid			
Small	Pear Tree Polaris Foreign Val Small Cap		
Emerging		DFA Emerging Markets	
Global			CREF Global Equities
Domestic Fixed Income			
	Short	Intermediate	Long
High	CREF Money Market TIAA Stable Value TIAA Traditional		CREF Inflation-Linked Bond
Medium		CREF Bond Market PGIM Total Return Bond Fund	
Low			
Other			
	Real Estate	Balanced	Foreign Bond
	TIAA Real Estate Account	CREF Social Choice TIAA-CREF Lifecycle Ret Income, 2010, 2015, 2020, 2025, 2030, 2035, 2040, 2045, 2050, 2055, 2060	Amana Participation
	Other Sectors	Absolute Return	Self-Directed Brokerage

Gold = Passively Managed Index Funds

Navy = Actively Managed Funds

# Plan Activity: TIAA-CREF

July 1, 2019 - December 31, 2019

Fund	Beginning Balance 7/1/2019	Contributions	Withdrawals	Exchanges	Inter Vendor Transfers	Fees	Investment Earnings	Plan Servicing Credit	Ending Balance 12/31/2019	Difference b/t Beg. and Ending Balances
TIAA Traditional	\$ 921,549,916	\$ 3,588,478	\$ (34,251,893)	\$ 4,633,525	\$ (564,518)	\$ (66,657)	\$ 18,372,909	\$ (237,918)	\$ 913,023,842	\$ (8,526,074)
TIAA Stable Value	53,086,239	720,165	(2,011,646)	1,500,183	28,672	-	558,194	17,101	53,898,908	812,668
CREF Money Market R3	46,478,758	695,542	(3,578,124)	3,675,600	(354,821)	-	446,985	16,906	47,380,847	902,089
CREF Bond Market R3	112,689,257	1,395,829	(4,404,228)	45,782	(124,561)	-	2,752,680	36,303	112,391,062	(298,195)
PGIM Total Return Bond R6	-	196,468	(111,950)	9,565,535	(71,788)	-	128,104	2,301	9,708,671	9,708,671
Amana Participation Institutional	451,397	8,594	(4,158)	19,758	-	-	10,500	150	486,242	34,845
CREF Inflation-Linked Bond R3	54,292,741	774,932	(1,918,397)	1,901,375	(138,619)	-	807,921	18,084	55,738,037	1,445,295
TIAA-CREF Large-Cap Value Instl	58,615,322	750,932	(1,837,884)	(2,384,939)	(304,598)	-	5,607,063	18,255	60,464,152	1,848,830
CREF Stock R3	593,435,051	3,638,036	(18,375,514)	(22,442,387)	(1,477,639)	-	48,597,953	183,768	603,559,268	10,124,217
CREF Equity Index R3	89,383,551	947,372	(1,870,330)	(3,479,612)	(40,076)	-	8,785,399	27,569	93,753,874	4,370,323
TIAA-CREF S&P 500 Index Instl	144,334,551	3,142,486	(3,724,280)	11,885,315	(122,597)	-	16,617,401	49,854	172,182,731	27,848,180
Amana Growth Institutional	1,660,668	86,223	(19,835)	242,929	(0)	-	188,972	663	2,159,620	498,952
Wells Fargo Growth Inst	34,458,026	442,457	(843,330)	(607,865)	(86,036)	-	2,308,796	10,594	35,682,642	1,224,616
CREF Growth R3	140,989,047	1,259,879	(3,855,158)	(5,177,826)	(421,084)	-	10,685,808	42,632	143,523,297	2,534,250
TIAA-CREF Mid-Cap Value Instl	57,016,361	884,789	(1,655,373)	(2,551,959)	(104,410)	-	4,010,843	17,597	57,617,848	601,488
Vanguard Mid Cap Index Admiral	-	156,138	(14,671)	3,691,328	7,879	-	200,603	674	4,041,951	4,041,951
TIAA-CREF Mid-Cap Growth Instl	21,723,422	399,299	(653,011)	(202,546)	(77,774)	-	754,050	6,567	21,950,007	226,585
Royce Opportunity Instl	6,880,146	166,014	(531,997)	65,688	-	-	736,135	2,245	7,318,232	438,087
TIAA-CREF Small-Cap Blend Idx Inst	57,431,102	1,055,751	(1,732,843)	573,881	(137,135)	-	4,186,436	17,991	61,395,182	3,964,081
AB Small Cap Growth I	15,995,049	620,331	(287,509)	1,255,095	11,637	-	780,683	5,274	18,380,560	2,385,511
CREF Global Equities R3	92,304,508	994,099	(2,234,862)	(4,988,711)	(391,455)	-	8,283,779	27,858	93,995,217	1,690,709
TIAA-CREF International Eq Idx Instl	66,354,900	1,447,140	(1,726,175)	5,324,014	(74,192)	-	4,799,919	22,420	76,148,026	9,793,126
American Funds Europacific Growth R6	58,795,259	916,257	(1,566,985)	(1,224,126)	(62,710)	-	4,709,407	18,174	61,585,276	2,790,016
Pear Tree Polaris Fgn Val Sm Cap R6	-	61	(33,407)	55,584	-	-	3,555	14	25,807	25,807
DFA Emerging Markets I	32,459,957	750,306	(722,289)	1,825,468	(50,047)	-	2,198,115	10,684	36,472,194	4,012,236
TIAA Real Estate Account	147,846,451	2,065,098	(4,087,656)	886,506	(308,333)	-	3,501,137	48,043	149,951,245	2,104,795
Cref Social Choice R3	86,157,231	912,822	(2,616,350)	225,267	(164,428)	-	6,004,524	27,460	90,546,525	4,389,294
TIAA-CREF Lifecycle Retire Income Instl	4,145,340	56,353	(678,132)	(185,438)	70,183	-	181,761	1,374	3,591,441	(553,899)
TIAA-CREF Lifecycle 2010 Institutional	8,045,652	1,383,012	(213,578)	(216,190)	(24)	-	384,421	9,973	9,393,267	1,347,615
TIAA-CREF Lifecycle 2015 Institutional	23,816,172	900,241	(1,774,516)	(824,785)	58,679	(132,290)	1,136,268	11,268	23,191,037	(625,135)
TIAA-CREF Lifecycle 2020 Institutional	30,524,131	1,324,394	(1,701,551)	(1,144,911)	(21,852)	-	1,626,615	10,814	30,617,639	93,509
TIAA-CREF Lifecycle 2025 Institutional	40,492,644	1,823,971	(328,947)	290,838	(32,418)	-	2,512,188	13,817	44,772,094	4,279,450
TIAA-CREF Lifecycle 2030 Institutional	49,576,014	2,292,890	(492,344)	98,568	(204)	-	3,365,205	16,451	54,856,580	5,280,566
TIAA-CREF Lifecycle 2035 Institutional	60,933,421	3,017,496	(985,524)	(830,432)	(223)	-	4,457,318	19,787	66,611,842	5,678,421
TIAA-CREF Lifecycle 2040 Institutional	88,992,948	4,565,530	(826,087)	(369,875)	(20,671)	-	7,126,966	29,077	99,497,889	10,504,941
TIAA-CREF Lifecycle 2045 Institutional	54,315,178	4,443,386	(569,073)	(856,556)	(53,638)	-	4,665,568	17,684	61,962,549	7,647,371
TIAA-CREF Lifecycle 2050 Institutional	38,448,143	4,165,851	(611,856)	(236,510)	(5,112)	-	3,426,016	12,769	45,199,300	6,751,157
TIAA-CREF Lifecycle 2055 Institutional	5,226,784	1,607,441	(144,860)	(65,968)	(1,167)	-	529,828	1,914	7,153,972	1,927,188
TIAA-CREF Lifecycle 2060 Institutional	1,460,357	385,939	(31,192)	28,781	-	-	152,024	542	1,996,452	536,095
<b>Totals</b>	<b>\$ 3,300,365,694</b>	<b>\$ 53,982,003</b>	<b>\$ (103,027,513)</b>	<b>\$ 389</b>	<b>\$ (5,035,080)</b>	<b>\$ (198,948)</b>	<b>\$ 185,602,047</b>	<b>\$ 536,733</b>	<b>\$ 3,432,225,325</b>	<b>\$ 131,859,631</b>

# Performance: TIAA-CREF

July 1, 2019 - December 31, 2019

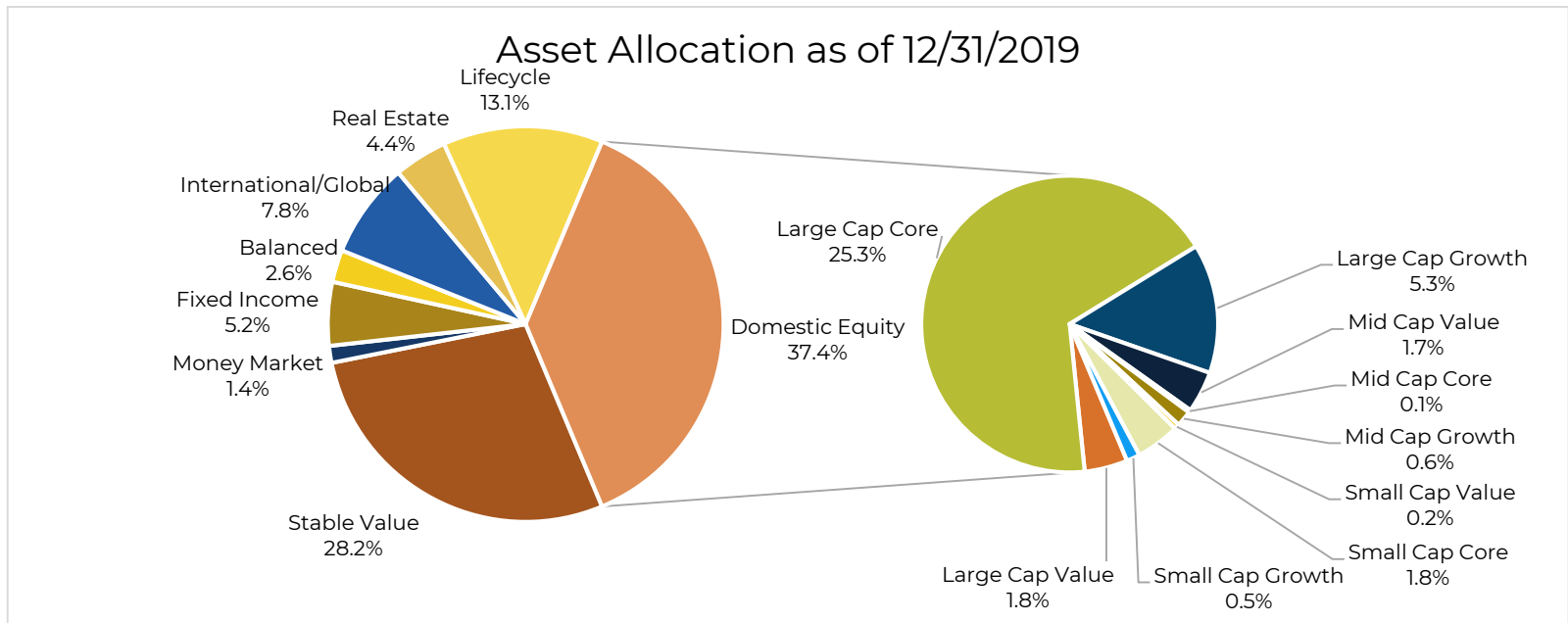
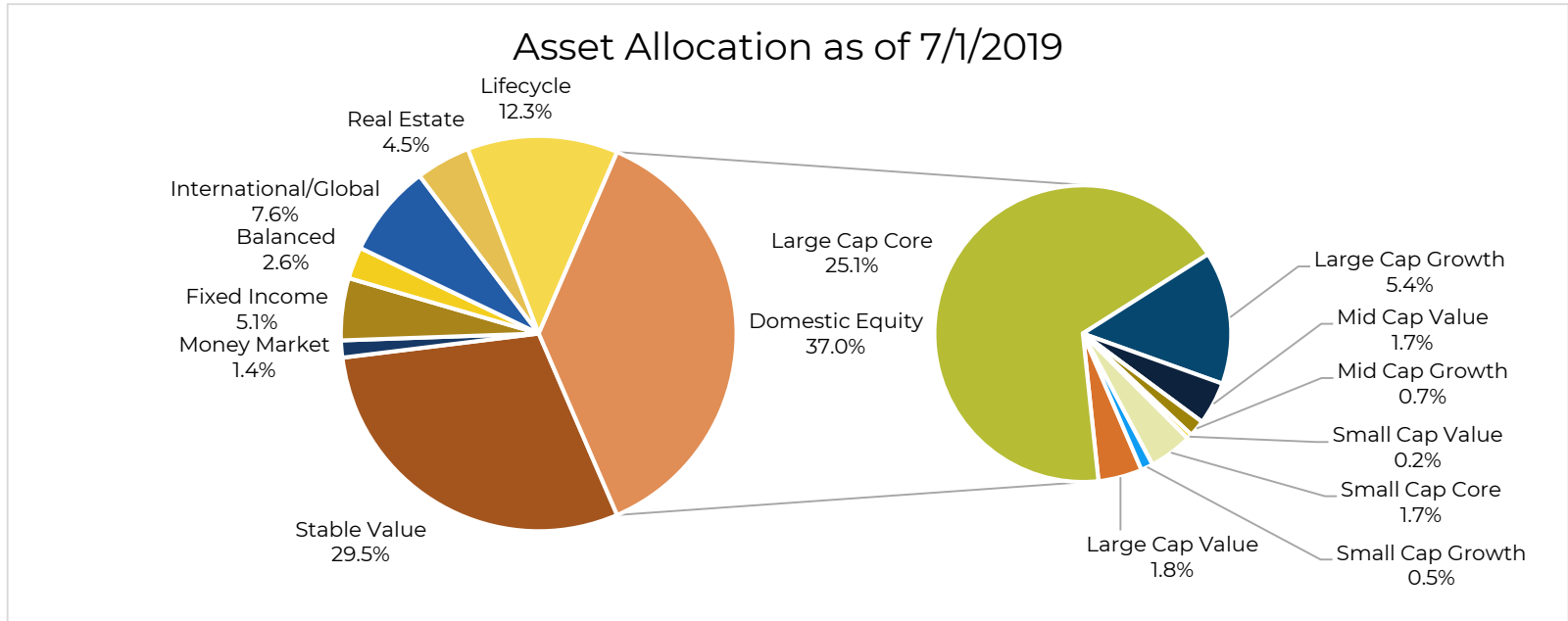
Fund	Beginning Balance: 7/1/2019		Ending Balance: 12/30/2019		Six Month Return
TIAA Traditional	\$	921,549,916	\$	913,023,842	1.86%
TIAA Stable Value		53,086,239		53,898,908	1.05%
CREF Money Market R3		46,478,758		47,380,847	0.92%
CREF Bond Market R3		112,689,257		112,391,062	2.47%
PGIM Total Return Bond R6		-		9,708,671	3.04%
Amana Participation Institutional		451,397		486,242	2.28%
CREF Inflation-Linked Bond R3		54,292,741		55,738,037	1.48%
TIAA-CREF Large-Cap Value Instl		58,615,322		60,464,152	10.09%
CREF Stock R3		593,435,051		603,559,268	8.68%
CREF Equity Index R3		89,383,551		93,753,874	10.27%
TIAA-CREF S&P 500 Index Instl		144,334,551		172,182,731	10.90%
Amana Growth Institutional		1,660,668		2,159,620	9.68%
Wells Fargo Growth Inst		34,458,026		35,682,642	7.00%
CREF Growth R3		140,989,047		143,523,297	8.00%
TIAA-CREF Mid-Cap Value Instl		57,016,361		57,617,848	7.40%
Vanguard Mid Cap Index Admiral		-		4,041,951	7.52%
TIAA-CREF Mid-Cap Growth Instl		21,723,422		21,950,007	3.58%
Royce Opportunity Instl		6,880,146		7,318,232	10.95%
TIAA-CREF Small-Cap Blend Idx Inst		57,431,102		61,395,182	7.34%
AB Small Cap Growth I		15,995,049		18,380,560	4.29%
CREF Global Equities R3		92,304,508		93,995,217	9.59%
TIAA-CREF International Eq Idx Instl		66,354,900		76,148,026	6.78%
American Funds Europacific Growth R6		58,795,259		61,585,276	8.34%
Pear Tree Polaris Fgn Val Sm Cap R6		-		25,807	10.39%
DFA Emerging Markets I		32,459,957		36,472,194	6.34%
TIAA Real Estate Account		147,846,451		149,951,245	2.38%
Cref Social Choice R3		86,157,231		90,546,525	7.12%
TIAA-CREF Lifecycle Retire Income Instl		4,145,340		3,591,441	4.70%
TIAA-CREF Lifecycle 2010 Institutional		8,045,652		9,393,267	4.79%
TIAA-CREF Lifecycle 2015 Institutional		23,816,172		23,191,037	5.09%
TIAA-CREF Lifecycle 2020 Institutional		30,524,131		30,617,639	5.54%
TIAA-CREF Lifecycle 2025 Institutional		40,492,644		44,772,094	6.02%
TIAA-CREF Lifecycle 2030 Institutional		49,576,014		54,856,580	6.62%
TIAA-CREF Lifecycle 2035 Institutional		60,933,421		66,611,842	7.22%
TIAA-CREF Lifecycle 2040 Institutional		88,992,948		99,497,889	7.80%
TIAA-CREF Lifecycle 2045 Institutional		54,315,178		61,962,549	8.31%
TIAA-CREF Lifecycle 2050 Institutional		38,448,143		45,199,300	8.39%
TIAA-CREF Lifecycle 2055 Institutional		5,226,784		7,153,972	8.46%
TIAA-CREF Lifecycle 2060 Institutional		1,460,357		1,996,452	8.50%
Totals/Weighted Average Return	\$	3,300,365,694	\$	3,432,225,325	5.77%
Weighted Average Variable Funds Return					7.33%
Weighted Average Fixed Income Return					1.81%

# Fee Analysis: TIAA-CREF

July 1, 2019 - December 31, 2019

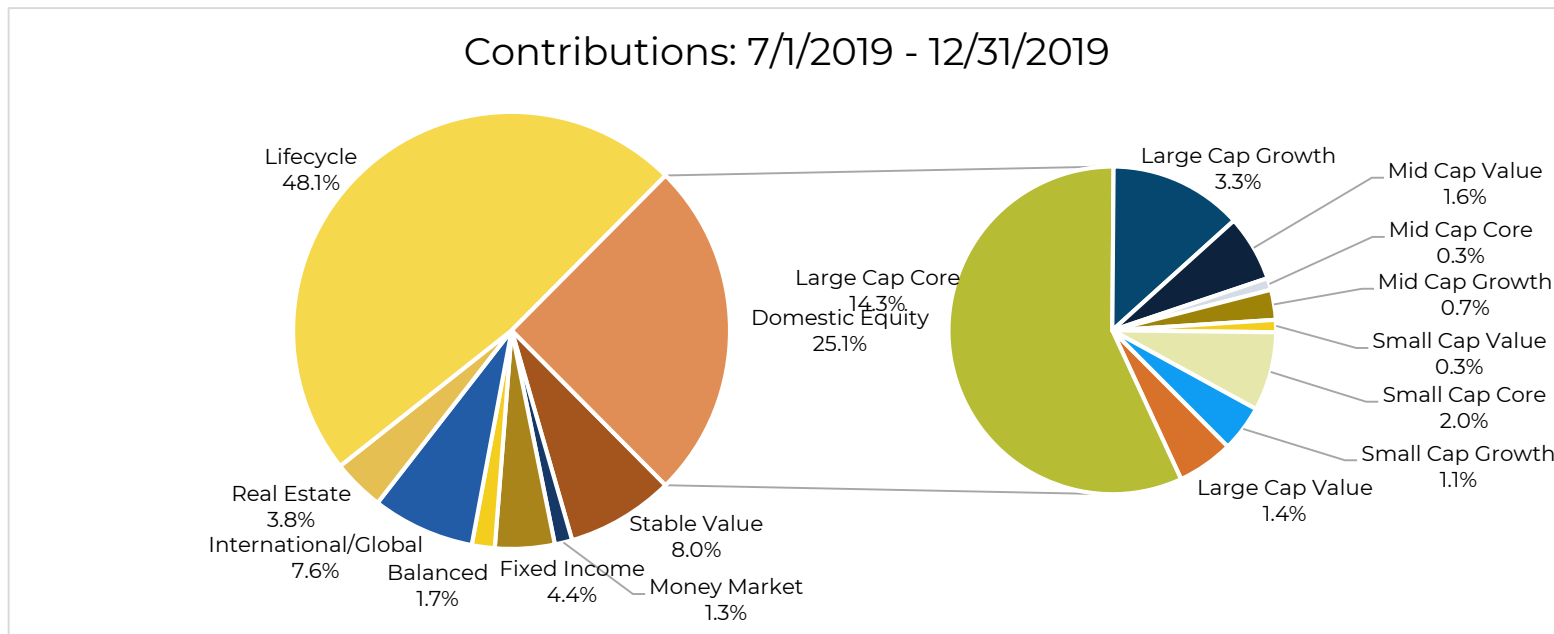
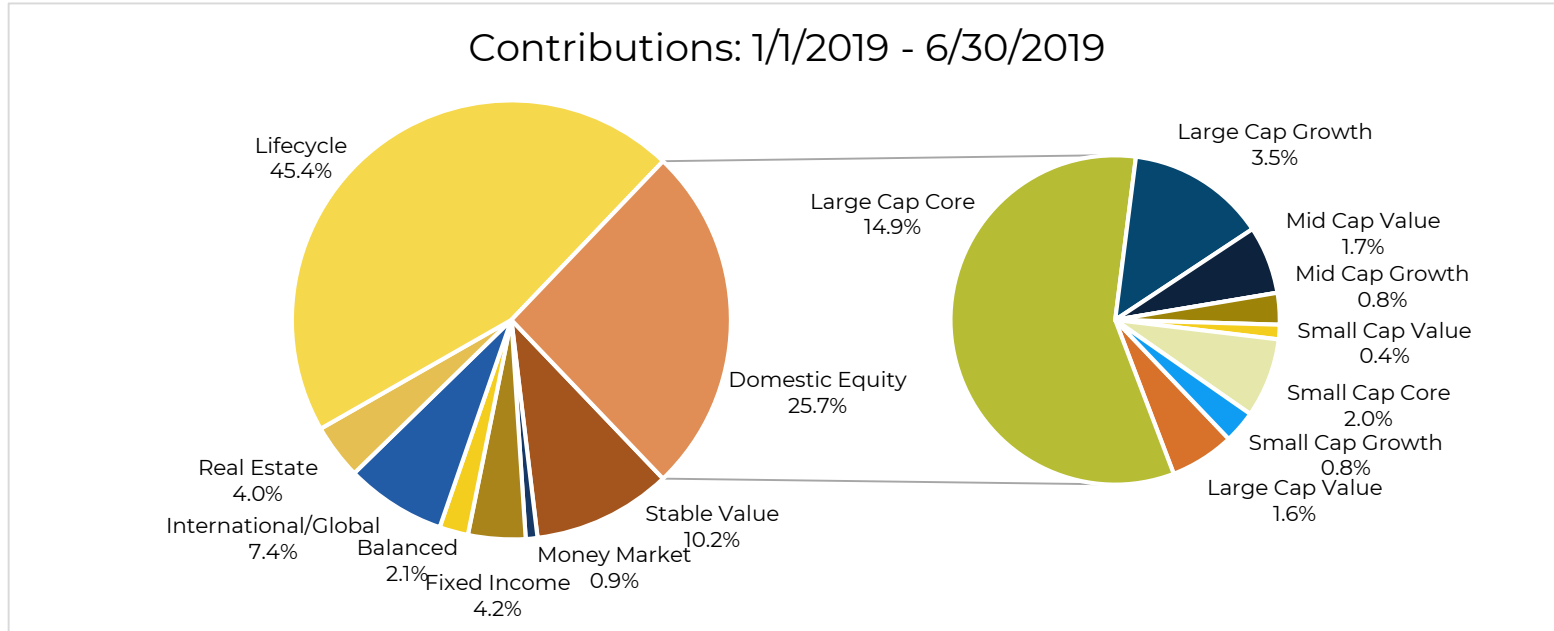
Fund	Ticker	Percent of Balance	Expense Ratio
TIAA Traditional	-	26.6%	0.49%
TIAA Stable Value	-	1.6%	0.74%
CREF Money Market R3	QCMMIX	1.4%	0.23%
CREF Bond Market R3	QCBMIX	3.3%	0.27%
PGIM Total Return Bond R6	PTRQX	0.3%	0.39%
Amana Participation Institutional	AMIPX	0.0%	0.64%
CREF Inflation-Linked Bond R3	QCILIX	1.6%	0.22%
TIAA-CREF Large-Cap Value Instl	TRLIX	1.8%	0.40%
CREF Stock R3	QCSTIX	17.6%	0.30%
CREF Equity Index R3	QCEQIX	2.7%	0.22%
TIAA-CREF S&P 500 Index Instl	TISPX	5.0%	0.05%
Amana Growth Institutional	AMIGX	0.1%	0.79%
Wells Fargo Growth Inst	SGRNX	1.0%	0.75%
CREF Growth R3	QCGRIX	4.2%	0.24%
TIAA-CREF Mid-Cap Value Instl	TIMVX	1.7%	0.42%
Vanguard Mid Cap Index Admiral	VIMAX	0.1%	0.05%
TIAA-CREF Mid-Cap Growth Instl	TRPWX	0.6%	0.47%
Royce Opportunity Instl	ROFIX	0.2%	1.08%
TIAA-CREF Small-Cap Blend Idx Inst	TISBX	1.8%	0.06%
AB Small Cap Growth I	QUAIX	0.5%	0.91%
CREF Global Equities R3	QCGLIX	2.7%	0.27%
TIAA-CREF International Eq Idx Instl	TCIEX	2.2%	0.06%
American Funds Europacific Growth R6	RERGX	1.8%	0.49%
Pear Tree Polaris Fgn Val Sm Cap R6	QUSRX	0.0%	1.05%
DFA Emerging Markets I	DFEMX	1.1%	0.47%
TIAA Real Estate Account	QREARX	4.4%	0.83%
Cref Social Choice R3	QCSCIX	2.6%	0.24%
TIAA-CREF Lifecycle Retire Income Instl	TLRIX	0.1%	0.37%
TIAA-CREF Lifecycle 2010 Institutional	TCTIX	0.3%	0.37%
TIAA-CREF Lifecycle 2015 Institutional	TCNIX	0.7%	0.38%
TIAA-CREF Lifecycle 2020 Institutional	TCWIX	0.9%	0.39%
TIAA-CREF Lifecycle 2025 Institutional	TCYIX	1.3%	0.41%
TIAA-CREF Lifecycle 2030 Institutional	TCRIX	1.6%	0.42%
TIAA-CREF Lifecycle 2035 Institutional	TCIIX	1.9%	0.43%
TIAA-CREF Lifecycle 2040 Institutional	TCOIX	2.9%	0.44%
TIAA-CREF Lifecycle 2045 Institutional	TTFIX	1.8%	0.45%
TIAA-CREF Lifecycle 2050 Institutional	TFTIX	1.3%	0.45%
TIAA-CREF Lifecycle 2055 Institutional	TTRIX	0.2%	0.45%
TIAA-CREF Lifecycle 2060 Institutional	TLXNX	0.1%	0.45%
Totals/Weighted Average Expense Ratio			0.38%
Weighted Average Expense Ratio ex- Stable Value			0.34%

# Asset Allocation: TIAA-CREF



\*Note: CREF Stock is included in the large cap core allocation, but this strategy has the ability to invest in both domestic and international stocks.

# Contributions: TIAA-CREF



\*Note: CREF Stock is included in the large cap core allocation, but this strategy has the ability to invest in both domestic and international stocks.

# Number of Participants: TIAA-CREF

July 1, 2019 - December 31, 2019

Fund	Number of Participants
TIAA Traditional	10,720
TIAA Stable Value	1,862
CREF Money Market R3	1,550
CREF Bond Market R3	3,747
PGIM Total Return Bond R6	323
Amana Participation Instl	32
CREF Inflation-Linked Bond R3	2,904
TIAA-CREF Lg Cap Val Inst	2,367
CREF Equity Index R3	1,834
TIAA-CREF S&P 500 Index Instl	3,415
Amana Growth Institutional	211
Wells Fargo Advantage Growth	811
CREF Growth R3	3,011
TIAA-CREF Mid Cap Val Inst	2,766
Vanguard Mid Cap Index Admiral	336
TIAA-CREF Mid Cap Gr Inst	1,089
Royce Opportunity Fd	518
TIAA-CREF Sm Cap Bl Idx Inst	3,112
AB Small Cap Growth R6	1,327
CREF Stock R3	6,778
CREF Global Equities R3	3,203
TIAA-CREF International Eq Idx Inst	2,890
American Funds Europacific Growth R6	2,696
Pear Tree Polaris Fgn Val Sm Cap R6	4
DFA Emerging Markets I	2,434
TIAA Real Estate	6,201
Cref Social Choice R3	1,988
TIAA-Cref Lifecycle Retirement Inc Inst	81
TIAA-Cref Lifecycle 2010 Inst	828
TIAA-Cref Lifecycle 2015 Inst	666
TIAA-Cref Lifecycle 2020 Inst	739
TIAA-Cref Lifecycle 2025 Inst	839
TIAA-Cref Lifecycle 2030 Inst	939
TIAA-Cref Lifecycle 2035 Inst	1,274
TIAA-Cref Lifecycle 2040 Inst	1,981
TIAA-Cref Lifecycle 2045 Inst	1,936
TIAA-Cref Lifecycle 2050 Inst	2,114
TIAA-Cref Lifecycle 2055 Inst	764
TIAA-Cref Lifecycle 2060 Inst	247

**Total Unique Participants**

**24,901**


**Asset Summary** (in thousands)

	Current Quarter		Previous Quarter		1 Year Ago		Dec-2018		Dec-2017		Dec-2016	
	(\$)	%	(\$)	%	(\$)	%	(\$)	%	(\$)	%	(\$)	%
<b>Total Plan</b>	<b>3,432,225</b>	<b>100.0</b>	<b>3,282,066</b>	<b>100.0</b>	<b>3,000,011</b>	<b>100.0</b>	<b>3,000,011</b>	<b>100.0</b>	-	-	-	-
<b>Cash Equivalents</b>	<b>1,014,304</b>	<b>29.6</b>	<b>1,021,972</b>	<b>31.1</b>	<b>1,023,254</b>	<b>34.1</b>	<b>1,023,254</b>	<b>34.1</b>	-	-	-	-
CREF Money Market R3 (QCMMIX)	47,381	1.4	50,894	1.6	49,851	1.7	49,851	1.7	-	-	-	-
TIAA Stable Value	53,899	1.6	53,755	1.6	54,912	1.8	54,912	1.8	-	-	-	-
TIAA Traditional	913,024	26.6	917,323	27.9	918,490	30.6	918,490	30.6	-	-	-	-
<b>Fixed Income</b>	<b>178,324</b>	<b>5.2</b>	<b>174,617</b>	<b>5.3</b>	<b>155,804</b>	<b>5.2</b>	<b>155,804</b>	<b>5.2</b>	-	-	-	-
CREF Inflation-Linked Bond R3 (QCILIX)	55,738	1.6	54,883	1.7	50,635	1.7	50,635	1.7	-	-	-	-
CREF Bond Market R3 (QCBMIX)	112,391	3.3	113,513	3.5	104,775	3.5	104,775	3.5	-	-	-	-
PGIM Total Return Bond R6 (PTRQX)	9,709	0.3	5,704	0.2	-	0.0	-	0.0	-	-	-	-
Amana Participation Institutional (AMIPX)	486	0.0	517	0.0	394	0.0	394	0.0	-	-	-	-
<b>Domestic Equity</b>	<b>678,470</b>	<b>19.8</b>	<b>624,886</b>	<b>19.0</b>	<b>523,943</b>	<b>17.5</b>	<b>523,943</b>	<b>17.5</b>	-	-	-	-
<b>Large Cap</b>	<b>507,766</b>	<b>14.8</b>	<b>468,911</b>	<b>14.3</b>	<b>392,361</b>	<b>13.1</b>	<b>392,361</b>	<b>13.1</b>	-	-	-	-
TIAA-CREF Large-Cap Value Instl (TRLIX)	60,464	1.8	56,914	1.7	54,211	1.8	54,211	1.8	-	-	-	-
CREF Equity Index R3 (QCEQIX)	93,754	2.7	88,060	2.7	78,162	2.6	78,162	2.6	-	-	-	-
TIAA-CREF S&P 500 Index Instl (TISPX)	172,183	5.0	151,870	4.6	114,076	3.8	114,076	3.8	-	-	-	-
Amana Growth Institutional (AMIGX)	2,160	0.1	1,883	0.1	568	0.0	568	0.0	-	-	-	-
CREF Growth R3 (QCGRIX)	143,523	4.2	136,112	4.1	117,602	3.9	117,602	3.9	-	-	-	-
Wells Fargo Growth Inst (SGRNX)	35,683	1.0	34,072	1.0	27,742	0.9	27,742	0.9	-	-	-	-
<b>Mid Cap</b>	<b>83,610</b>	<b>2.4</b>	<b>77,663</b>	<b>2.4</b>	<b>66,738</b>	<b>2.2</b>	<b>66,738</b>	<b>2.2</b>	-	-	-	-
TIAA-CREF Mid-Cap Value Instl (TIMVX)	57,618	1.7	55,428	1.7	48,791	1.6	48,791	1.6	-	-	-	-
Vanguard Mid Cap Index Adm (VIMAX)	4,042	0.1	1,482	0.0	-	0.0	-	0.0	-	-	-	-
TIAA-CREF Mid-Cap Growth Instl (TRPWX)	21,950	0.6	20,754	0.6	17,947	0.6	17,947	0.6	-	-	-	-
<b>Small Cap</b>	<b>87,094</b>	<b>2.5</b>	<b>78,312</b>	<b>2.4</b>	<b>64,843</b>	<b>2.2</b>	<b>64,843</b>	<b>2.2</b>	-	-	-	-
Royce Opportunity Instl (ROFIX)	7,318	0.2	6,882	0.2	6,532	0.2	6,532	0.2	-	-	-	-
TIAA-CREF Small-Cap Blend Idx Inst (TISBX)	61,395	1.8	55,433	1.7	47,247	1.6	47,247	1.6	-	-	-	-
AB Small Cap Growth I (QUAIX)	18,381	0.5	15,997	0.5	11,065	0.4	11,065	0.4	-	-	-	-
<b>International Equity</b>	<b>268,227</b>	<b>7.8</b>	<b>245,599</b>	<b>7.5</b>	<b>212,763</b>	<b>7.1</b>	<b>212,763</b>	<b>7.1</b>	-	-	-	-
CREF Global Equities R3 (QCGLIX)	93,995	2.7	88,864	2.7	81,579	2.7	81,579	2.7	-	-	-	-
TIAA-CREF International Eq Idx Instl (TCIEX)	76,148	2.2	67,961	2.1	51,261	1.7	51,261	1.7	-	-	-	-
American Funds Europacific Growth R6 (RERGX)	61,585	1.8	56,464	1.7	53,048	1.8	53,048	1.8	-	-	-	-
Pear Tree Polaris Foreign Value Small Cap R6 (QUSRX)	26	0.0	14	0.0	-	0.0	-	0.0	-	-	-	-
DFA Emerging Markets I (DFEMX)	36,472	1.1	32,295	1.0	26,875	0.9	26,875	0.9	-	-	-	-
<b>Specialty</b>	<b>149,951</b>	<b>4.4</b>	<b>148,649</b>	<b>4.5</b>	<b>142,257</b>	<b>4.7</b>	<b>142,257</b>	<b>4.7</b>	-	-	-	-
TIAA Real Estate Account (QREARX)	149,951	4.4	148,649	4.5	142,257	4.7	142,257	4.7	-	-	-	-





# Asset Summary (in thousands)

	Current Quarter		Previous Quarter		1 Year Ago		Dec-2018		Dec-2017		Dec-2016	
	(\$)	%	(\$)	%	(\$)	%	(\$)	%	(\$)	%	(\$)	%
<b>Balanced</b>	<b>694,106</b>	<b>20.2</b>	<b>655,234</b>	<b>20.0</b>	<b>603,756</b>	<b>20.1</b>	<b>603,756</b>	<b>20.1</b>	-	-	-	-
CREF Social Choice R3 (QCSCIX)	90,547	2.6	85,767	2.6	76,292	2.5	76,292	2.5	-	-	-	-
CREF Stock R3 (QCSTIX)	603,559	17.6	569,467	17.4	527,464	17.6	527,464	17.6	-	-	-	-
<b>Target Date</b>	<b>448,844</b>	<b>13.1</b>	<b>411,110</b>	<b>12.5</b>	<b>338,235</b>	<b>11.3</b>	<b>338,235</b>	<b>11.3</b>	-	-	-	-
TIAA-CREF Lifecycle Retire Income Instl (TLRIX)	3,591	0.1	4,253	0.1	3,587	0.1	3,587	0.1	-	-	-	-
TIAA-CREF Lifecycle 2010 Institutional (TCTIX)	9,393	0.3	7,982	0.2	8,147	0.3	8,147	0.3	-	-	-	-
TIAA-CREF Lifecycle 2015 Institutional (TCNIX)	23,191	0.7	22,606	0.7	19,323	0.6	19,323	0.6	-	-	-	-
TIAA-CREF Lifecycle 2020 Institutional (TCWIX)	30,618	0.9	29,593	0.9	26,298	0.9	26,298	0.9	-	-	-	-
TIAA-CREF Lifecycle 2025 Institutional (TCYIX)	44,772	1.3	41,494	1.3	34,651	1.2	34,651	1.2	-	-	-	-
TIAA-CREF Lifecycle 2030 Institutional (TCRIX)	54,857	1.6	50,691	1.5	42,179	1.4	42,179	1.4	-	-	-	-
TIAA-CREF Lifecycle 2035 Institutional (TCIIX)	66,612	1.9	61,292	1.9	51,245	1.7	51,245	1.7	-	-	-	-
TIAA-CREF Lifecycle 2040 Institutional (TCOIX)	99,498	2.9	90,709	2.8	74,386	2.5	74,386	2.5	-	-	-	-
TIAA-CREF Lifecycle 2045 Institutional (TTFIX)	61,963	1.8	55,307	1.7	43,524	1.5	43,524	1.5	-	-	-	-
TIAA-CREF Lifecycle 2050 Institutional (TFTIX)	45,199	1.3	39,665	1.2	30,433	1.0	30,433	1.0	-	-	-	-
TIAA-CREF Lifecycle 2055 Institutional (TTRIX)	7,154	0.2	5,839	0.2	3,404	0.1	3,404	0.1	-	-	-	-
TIAA-CREF Lifecycle 2060 Institutional (TLXNX)	1,996	0.1	1,680	0.1	1,057	0.0	1,057	0.0	-	-	-	-

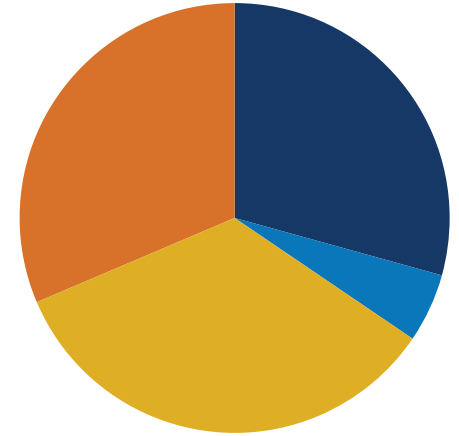
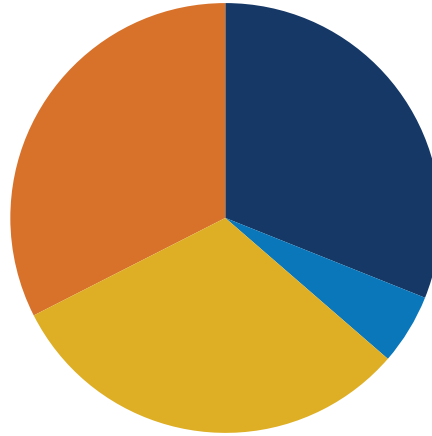
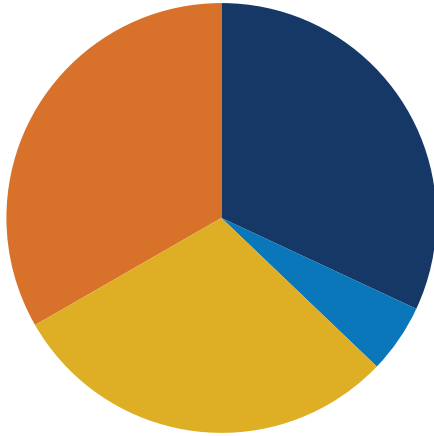


# Historical Asset Allocation (in thousands)

December 31, 2019 | \$3,432,225

September 30, 2019 | \$3,282,066

December 31, 2018 | \$3,000,011

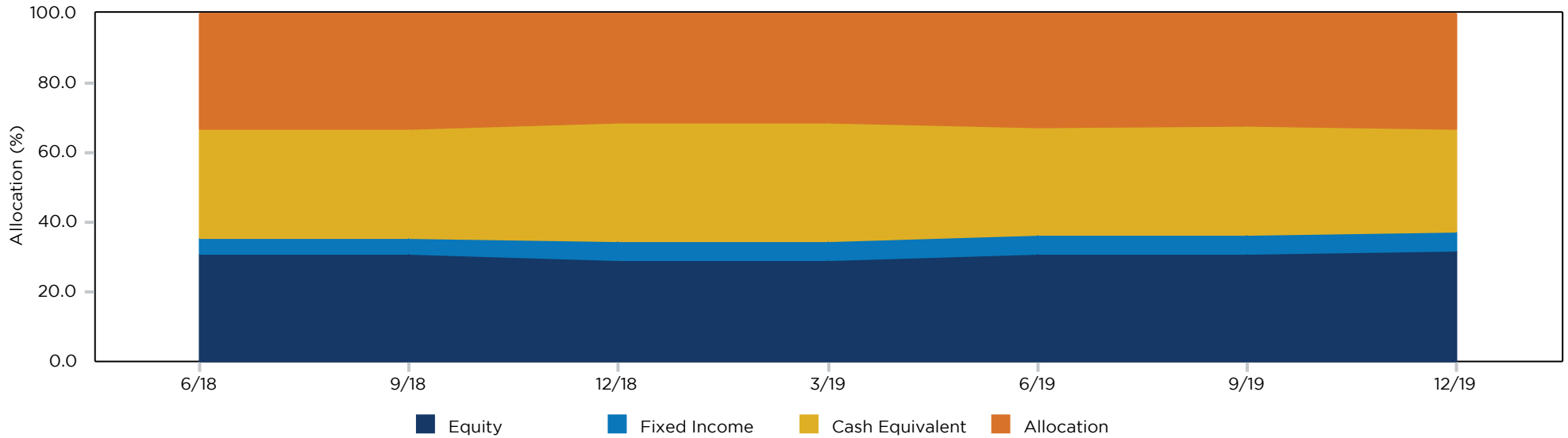


Asset Class	Market Value	Allocation (%)
Equity	1,096,648	32.0
Fixed Income	178,324	5.2
Cash Equivalent	1,014,304	29.6
Allocation	1,142,950	33.3

Asset Class	Market Value	Allocation (%)
Equity	1,019,133	31.1
Fixed Income	174,617	5.3
Cash Equivalent	1,021,972	31.1
Allocation	1,066,344	32.5

Asset Class	Market Value	Allocation (%)
Equity	878,962	29.3
Fixed Income	155,804	5.2
Cash Equivalent	1,023,254	34.1
Allocation	941,991	31.4

As of December 31, 2019





# Fiduciary Scorecard

Fund Name	Mgmt.	Operations	Style	Near-Term Result	Long-Term Return	Long-Term Alpha	Long-Term Up Mkt.	Long-Term Down Mkt.	Long-Term Sharpe	Overall Long-Term Result
CREF Money Market R3 (QCMMIX)	Pass	Pass	Pass	✓	✓	✓	✓		✓	✓
TIAA Stable Value	Pass	Pass	Pass	✓	✓					
TIAA Traditional	Pass	Pass	Pass	✓	✓					
CREF Inflation-Linked Bond R3 (QCILIX)	Pass	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
CREF Bond Market R3 (QCBMIX)	Pass	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
PGIM Total Return Bond R6 (PTRQX)	Pass	Note	Pass	✓	✓	✓	✓	✗	✓	✓
Amana Participation Institutional (AMIPX)	Pass	Pass	Pass	✗						
TIAA-CREF Large-Cap Value Instl (TRLIX)	Pass	Pass	Pass	✗	✓	✗	✓	✗	✗	✗
CREF Equity Index R3 (QCEQIX)	Pass	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
TIAA-CREF S&P 500 Index Instl (TISPX)	Pass	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
Amana Growth Institutional (AMIGX)	Pass	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
CREF Growth R3 (QCGRIX)	Pass	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
Wells Fargo Growth Inst (SGRNX)	Pass	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
TIAA-CREF Mid-Cap Value Instl (TIMVX)	Note	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
Vanguard Mid Cap Index Adm (VIMAX)	Pass	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
TIAA-CREF Mid-Cap Growth Instl (TRPWX)	Note	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
Royce Opportunity Instl (ROFIX)	Pass	Pass	Note	✓	✓	✗	✓	✗	✓	✓
TIAA-CREF Small-Cap Blend Idx Inst (TISBX)	Pass	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
AB Small Cap Growth I (QUAIX)	Pass	Pass	Pass	✓	✓	✓	✓	✗	✓	✓
CREF Global Equities R3 (QCGLIX)	Note	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
TIAA-CREF International Eq Idx Instl (TCIEX)	Pass	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
American Funds Europacific Growth R6 (RERGX)	Pass	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
Pear Tree Polaris Foreign Value Small Cap R6 (QUSRX)	Pass	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
DFA Emerging Markets I (DFEMX)	Pass	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
TIAA Real Estate Account (QREARX)	Pass	Pass	Pass	✓	✓					
CREF Social Choice R3 (QCSCIX)	Pass	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
CREF Stock R3 (QCSTIX)	Note	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
TIAA-CREF Lifecycle Target Date Series	Note	Pass	Pass	✓	✓	✓	✓	✗	✓	✓



## Scorecard Definitions

### Qualitative Factors

Management: An evaluation of an investment's organization and/or personnel.

Operations: An evaluation of an investment's asset size and change. Appropriate expenses.

Style: An evaluation of an investment's style, philosophy and/or consistency.

**Near-Term Result** : An evaluation of relative performance to the investment's designated peer group. A three-year period or a time period that more appropriately represents the Designated Investment Alternative's investment style is typically used.

**Long-Term Performance** : A ten-year period of the performance measures will typically be used.

Return: An evaluation of relative performance to the investment's designated peer group.

Alpha: An evaluation of risk-adjusted return relative to the investment's designated peer group.

Up Market: An evaluation of return relative to the investment's designated peer group in positive market periods.

Down Market: An evaluation of return relative to the investment's designated peer group in negative market periods.

Sharpe Ratio: An evaluation of the Sharpe ratio (return per unit of risk) relative to the investment's designated peer group.

**Overall Long-Term Result** : Aggregate evaluation of relative performance to the investment's designated peer group across factors including return, alpha, up market capture, down market capture and Sharpe ratio.

**PGIM Total Return Bond**

The fund's assets increased by 42% over the past year. The fund's assets are \$52.26 billion. *4Q 2019*

**Recommendation: No Action**

**Amana Participation**

The fund invests in sukuk, which resemble conventional bonds by offering investors income and return of principle but have an equity-like component that link returns and cash flows of financing to an underlying asset. Relative to the emerging market bond peers, the fund's performance is more sensitive to geopolitical turmoil in the Middle East. Although the fund has only 2.8% allocated directly to the energy sector, much of the economic strength of its financial and government holdings rely on oil prices which have slumped amid increased global supply, hampering relative performance. The fund's assets increased by 54% over the past year. The fund's assets are \$0.11 billion. *4Q 2019*

**Recommendation: No Action**

**TIAA-CREF Large-Cap Value**

This fund's performance trailed the peer group median and the Russell 1000 Value index in five of the trailing ten years, including bottom-decile performance in 2018. The strategy has been adjusted recently following a change in lead portfolio manager. The current lead manager, Charlie Carr, joined the strategy in November 2018 when longtime co-manager Tom Kolefas retired. Former lead PM Rich Cutler remains on the fund as a co-manager. When Carr took over the fund, there were minor changes to the overall strategy. Specifically, non-U.S. stock exposure will likely be lower than under the previous manager. Carr also implements a "pragmatic value" approach to investing, characterized by a willingness to invest in low-quality, deeper value names early in the business cycle but favoring high-quality names later in the cycle. Sector weightings will likely remain close to benchmark, similar to the previous manager. Before this change, the portfolio was comprised of deeper value names that management believed could turn around in the next 18-24 months. Over the trailing decade the fund often failed to distinguish itself from the benchmark, and management's deep value stock selection underperformed in the relative value-led market. Near-term performance was driven by poor stock selection in energy and health care, especially in out-of-benchmark holdings such as Cenovus Energy, which lost 30% annualized over the trailing three years. Currently, this fund has higher quality metrics than the benchmark and peer group average, and calendar year performance for 2019 ranked in the top quintile of peers. *4Q 2019*

**Recommendation: Continue on Watch**

**Royce Opportunity**

Fund management tends to invest in smaller-cap companies than peers and these companies tend to be more volatile than more established names. 42% of the portfolio is currently in micro-cap names, compared to a category average allocation of 1%. The team mitigates some of these risks by investing in a large amount of companies and diversifying across four different types of value stocks: asset-rich companies, turnaround stories, companies with earnings volatility, and companies with stronger growth prospects than their market prices implies. The fund has historically fallen near the line between small cap value and small cap blend style boxes in Morningstar and consistently has one of the smallest market caps in the small value peer group. While the fund currently falls just over the line into small cap blend, the portfolio strategy remains consistent. *4Q 2019*

**Recommendation: No Action**



# Performance Summary

	Allocation		Performance (%) as of 12/31/2019					Net Expense Ratio
	Market Value (\$000)	%	1 Quarter	1 Year	3 Years	5 Years	10 Years	
Total Plan	3,432,225	100.0	-	-	-	-	-	-
CREF Money Market R3 (QCMMIX)	47,381	1.4	0.40 (16)	2.02 (24)	1.32 (41)	0.82 (39)	0.41 (40)	0.23
+/- Blmbg. Barc. U.S. Treasury Bills: 1-3 Months			-0.04	-0.19	-0.29	-0.20	-0.14	-
Money Market-Taxable Median			0.35	1.83	1.25	0.75	0.38	-
TIAA Stable Value	53,899	1.6	0.53	1.99	1.77	1.67	-	-
+/- Ryan 3 Yr GIC Master Index			-0.08	-0.39	-0.21	-0.03	-	-
TIAA Traditional	913,024	26.6	0.92	3.75	3.80	3.89	3.99	-
+/- Blmbg. Barc. U.S. Treasury: 7-10 Year			2.15	-4.75	-0.13	1.00	-0.52	-
CREF Inflation-Linked Bond R3 (QCILIX)	55,738	1.6	0.77 (64)	6.53 (75)	2.59 (67)	2.04 (60)	2.86 (48)	0.22
+/- Blmbg. Barc. U.S. TIPS 1-10 Year			-0.23	-0.32	-0.20	-0.32	0.29	-
Inflation-Protected Bond Median			0.85	7.86	2.91	2.19	2.83	0.74
CREF Bond Market R3 (QCBMIX)	112,391	3.3	0.16 (47)	9.03 (29)	4.25 (17)	3.34 (13)	3.89 (30)	0.27
+/- Blmbg. Barc. U.S. Aggregate Index			-0.02	0.31	0.22	0.29	0.14	-
Intermediate Core Bond Median			0.15	8.55	3.81	2.86	3.66	0.67
PGIM Total Return Bond R6 (PTRQX)	9,709	0.3	0.35 (51)	11.13 (12)	5.62 (4)	4.33 (5)	5.52 (7)	0.39
+/- Blmbg. Barc. U.S. Aggregate Index			0.17	2.41	1.59	1.28	1.77	-
Intermediate Core-Plus Bond Median			0.35	9.30	4.16	3.21	4.30	0.79
Amana Participation Institutional (AMIPX)	486	0.0	0.18	6.95	3.21	-	-	0.64
+/- Dow Jones Sukuk Index			-0.51	-3.82	-1.82	-	-	-
TIAA-CREF Large-Cap Value Instl (TRLIX)	60,464	1.8	8.95 (18)	28.81 (15)	7.58 (90)	7.07 (76)	10.67 (61)	0.40
+/- Russell 1000 Value Index			1.54	2.27	-2.10	-1.22	-1.13	-
Large Value Median			7.29	25.48	9.81	8.06	10.96	0.99
CREF Equity Index R3 (QCEQIX)	93,754	2.7	9.02 (36)	30.73 (44)	14.34 (45)	11.01 (37)	13.08 (31)	0.22
+/- Russell 3000 Index			-0.08	-0.29	-0.23	-0.23	-0.34	-
Large Blend Median			8.83	30.17	14.03	10.44	12.52	0.94
TIAA-CREF S&P 500 Index Instl (TISPX)	172,183	5.0	9.07 (29)	31.42 (25)	15.20 (18)	11.63 (12)	13.48 (13)	0.05
+/- S&P 500 Index			0.00	-0.07	-0.07	-0.07	-0.08	-
Large Blend Median			8.83	30.17	14.03	10.44	12.52	0.94



# Performance Summary

	Allocation		Performance (%) as of 12/31/2019					Net Expense Ratio
	Market Value (\$'000)	%	1 Quarter	1 Year	3 Years	5 Years	10 Years	
Amana Growth Institutional (AMIGX)	2,160	0.1	8.65 (73)	33.41 (40)	20.99 (27)	13.77 (32)	12.98 (69)	0.79
+/- S&P 500 Index			-0.42	1.92	5.72	2.07	-0.58	-
Large Growth Median			9.56	32.39	18.89	12.67	13.68	1.06
CREF Growth R3 (QCGRIX)	143,523	4.2	8.88 (68)	31.66 (59)	19.18 (48)	13.15 (43)	14.39 (29)	0.24
+/- Russell 1000 Growth Index			-1.74	-4.73	-1.31	-1.48	-0.83	-
Large Growth Median			9.56	32.39	18.89	12.67	13.68	1.06
Wells Fargo Growth Inst (SGRNX)	35,683	1.0	8.57 (75)	37.65 (11)	23.21 (7)	13.87 (30)	15.69 (8)	0.75
+/- Russell 3000 Growth Index			-2.10	1.80	3.32	-0.36	0.64	-
Large Growth Median			9.56	32.39	18.89	12.67	13.68	1.06
TIAA-CREF Mid-Cap Value Instl (TIMVX)	57,618	1.7	7.19 (41)	27.05 (46)	6.62 (70)	6.14 (69)	10.79 (52)	0.42
+/- Russell Midcap Value Index			0.83	-0.01	-1.48	-1.48	-1.62	-
Mid-Cap Value Median			6.83	26.69	7.66	7.08	10.85	1.09
Vanguard Mid Cap Index Adm (VIMAX)	4,042	0.1	6.88 (62)	31.03 (15)	12.36 (9)	9.25 (13)	13.08 (6)	0.05
+/- CRSP U.S. Mid Cap TR Index			0.00	-0.06	-0.03	-0.04	-0.17	-
Mid-Cap Blend Median			6.99	26.22	9.16	8.04	11.63	1.06
TIAA-CREF Mid-Cap Growth Instl (TRPWX)	21,950	0.6	7.76 (51)	33.39 (52)	15.63 (61)	9.39 (76)	12.73 (59)	0.47
+/- Russell Midcap Growth Index			-0.41	-2.08	-1.73	-2.21	-1.51	-
Mid-Cap Growth Median			7.82	33.55	16.44	10.96	13.05	1.18
Royce Opportunity Instl (ROFIX)	7,318	0.2	9.92 (10)	28.36 (9)	7.89 (5)	7.14 (26)	11.22 (20)	1.08
+/- Russell 2000 Value Index			1.43	5.97	3.12	0.15	0.66	-
Small Value Median			8.01	21.95	4.12	5.83	10.26	1.23
TIAA-CREF Small-Cap Blend Idx Inst (TISBX)	61,395	1.8	9.97 (14)	25.53 (36)	8.73 (23)	8.42 (27)	11.99 (30)	0.06
+/- Russell 2000 Index			0.03	0.00	0.14	0.19	0.16	-
Small Blend Median			8.34	24.67	7.60	7.56	11.44	1.13
AB Small Cap Growth I (QUAIX)	18,381	0.5	12.57 (16)	36.11 (16)	22.18 (5)	14.06 (8)	16.51 (2)	0.91
+/- Russell 2000 Growth Index			1.18	7.63	9.69	4.72	3.50	-
Small Growth Median			9.47	28.03	13.93	9.98	13.00	1.24
CREF Global Equities R3 (QCGLIX)	93,995	2.7	9.86 (23)	28.28 (39)	11.95 (49)	8.01 (51)	9.10 (48)	0.27
+/- MSCI World Index			1.18	-0.12	-1.25	-1.35	-0.98	-
World Large Stock Median			8.58	26.49	11.84	8.03	8.99	1.13



# Performance Summary

	Allocation		Performance (%) as of 12/31/2019							Net Expense Ratio
	Market Value (\$000)	%	1 Quarter	1 Year	3 Years	5 Years	10 Years			
TIAA-CREF International Eq Idx Instl (TCIEX)	76,148	2.2	7.90 (72)	21.79 (52)	9.81 (36)	5.93 (26)	5.65 (31)	0.06		
+/- MSCI EAFE (Net) Index			-0.27	-0.22	0.25	0.26	0.15	-		
Foreign Large Blend Median			8.69	21.85	9.23	5.39	5.25	1.01		
American Funds Europacific Growth R6 (RERGX)	61,585	1.8	10.09 (38)	27.40 (60)	12.45 (51)	7.41 (43)	6.73 (53)	0.49		
+/- MSCI AC World ex USA (Net)			1.17	5.89	2.58	1.90	1.76	-		
Foreign Large Growth Median			9.64	27.86	12.45	7.09	6.79	1.13		
Pear Tree Polaris Foreign Value Small Cap R6 (QUSRX)	26	0.0	12.37 (30)	20.77 (30)	9.37 (17)	5.83 (50)	8.18 (13)	1.05		
+/- MSCI AC World Index Small Mid Cap Value (Net)			4.27	-0.64	1.80	-0.60	-0.37	-		
Foreign Small/Mid Value Median			11.60	18.98	7.42	5.83	6.92	1.14		
DFA Emerging Markets I (DFEMX)	36,472	1.1	10.77 (60)	16.03 (80)	11.03 (48)	5.25 (50)	3.96 (43)	0.47		
+/- MSCI Emerging Markets (Net) Index			-1.07	-2.41	-0.54	-0.36	0.28	-		
Diversified Emerging Mkts Median			11.22	19.76	10.83	5.25	3.67	1.34		
TIAA Real Estate Account (QREARX)	149,951	4.4	1.19	5.51	4.89	5.60	8.57	0.83		
+/- NCREIF Fund Index-Open End Diversified Core (EW)			-0.34	-0.57	-2.48	-3.67	-2.91	-		
CREF Social Choice R3 (QCSCIX)	90,547	2.6	5.14 (56)	20.80 (24)	9.73 (25)	7.06 (27)	8.29 (41)	0.24		
+/- 40% BBg US Agg   42% R3000   18% MSCI EAFE + Can			-0.12	0.34	0.19	-0.03	0.01	-		
Allocation--50% to 70% Equity Median			5.25	19.29	8.64	6.26	8.01	1.10		
CREF Stock R3 (QCSTIX)	603,559	17.6	8.90 (10)	27.45 (15)	12.43 (17)	9.00 (10)	10.44 (13)	0.30		
+/- 70% R3000   30% ACWI ex US			-0.16	-0.68	-0.77	-0.55	-0.44	-		
Allocation--85%+ Equity Median			7.90	25.29	11.12	7.76	9.43	1.25		
TIAA-CREF Lifecycle Retire Income Instl (TLRIX)	3,591	0.1	3.59 (13)	15.30 (18)	7.52 (4)	5.73 (1)	6.77 (3)	0.37		
+/- CREF Lifecycle Composite Income			-0.24	-0.40	0.05	0.16	0.18	-		
Target-Date Retirement Median			2.70	13.22	6.00	4.34	5.15	0.76		
TIAA-CREF Lifecycle 2010 Institutional (TCTIX)	9,393	0.3	3.62 (33)	15.43 (13)	7.74 (9)	5.92 (7)	7.18 (6)	0.37		
+/- CREF Lifecycle Composite 2010			-0.26	-0.51	-0.42	-0.10	0.02	-		
Target-Date 2000-2010 Median			3.33	13.93	6.62	4.99	6.43	0.63		
TIAA-CREF Lifecycle 2015 Institutional (TCNIX)	23,191	0.7	4.13 (32)	16.51 (25)	8.24 (21)	6.26 (16)	7.62 (10)	0.38		
+/- CREF Lifecycle Composite 2015			-0.18	-0.54	0.00	0.13	0.12	-		
Target-Date 2015 Median			3.72	15.04	7.12	5.33	7.09	0.67		





# Performance Summary

	Allocation		Performance (%) as of 12/31/2019							Net Expense Ratio
	Market Value (\$'000)	%	1 Quarter	1 Year	3 Years	5 Years	10 Years			
TIAA-CREF Lifecycle 2020 Institutional (TCWIX)	30,618	0.9	4.51 (27)	17.79 (22)	8.88 (15)	6.69 (11)	8.16 (9)	0.39		
+/- CREF Lifecycle Composite 2020			-0.25	-0.51	-0.02	0.09	0.09	-		
Target-Date 2020 Median			4.05	16.22	7.66	5.65	7.49	0.75		
TIAA-CREF Lifecycle 2025 Institutional (TCYIX)	44,772	1.3	5.20 (31)	19.44 (26)	9.63 (16)	7.19 (9)	8.70 (14)	0.41		
+/- CREF Lifecycle Composite 2025			-0.26	-0.56	-0.06	0.03	0.01	-		
Target-Date 2025 Median			4.84	18.47	8.62	6.37	8.12	0.73		
TIAA-CREF Lifecycle 2030 Institutional (TCRIX)	54,857	1.6	6.01 (29)	21.27 (28)	10.34 (20)	7.67 (17)	9.22 (16)	0.42		
+/- CREF Lifecycle Composite 2030			-0.15	-0.44	-0.14	-0.04	-0.07	-		
Target-Date 2030 Median			5.75	20.52	9.52	6.90	8.66	0.77		
TIAA-CREF Lifecycle 2035 Institutional (TCIIX)	66,612	1.9	6.71 (44)	23.04 (27)	11.07 (21)	8.11 (18)	9.68 (16)	0.43		
+/- CREF Lifecycle Composite 2035			-0.15	-0.36	-0.18	-0.12	-0.18	-		
Target-Date 2035 Median			6.61	22.36	10.27	7.43	9.14	0.76		
TIAA-CREF Lifecycle 2040 Institutional (TCOIX)	99,498	2.9	7.50 (31)	24.56 (24)	11.72 (18)	8.51 (15)	10.03 (13)	0.44		
+/- CREF Lifecycle Composite 2040			-0.09	-0.41	-0.23	-0.20	-0.24	-		
Target-Date 2040 Median			7.15	23.65	10.74	7.70	9.32	0.79		
TIAA-CREF Lifecycle 2045 Institutional (TTFIX)	61,963	1.8	8.23 (26)	25.87 (19)	12.05 (17)	8.76 (14)	10.14 (15)	0.45		
+/- CREF Lifecycle Composite 2045			-0.01	-0.38	-0.32	-0.26	-0.28	-		
Target-Date 2045 Median			7.68	24.63	11.08	7.97	9.55	0.76		
TIAA-CREF Lifecycle 2050 Institutional (TFTIX)	45,199	1.3	8.39 (19)	26.19 (16)	12.18 (15)	8.86 (10)	10.19 (19)	0.45		
+/- CREF Lifecycle Composite 2050			0.04	-0.31	-0.30	-0.26	-0.29	-		
Target-Date 2050 Median			7.65	24.78	11.13	8.05	9.62	0.80		
TIAA-CREF Lifecycle 2055 Institutional (TTRIX)	7,154	0.2	8.53 (25)	26.36 (18)	12.27 (13)	8.93 (10)	-	0.45		
+/- CREF Lifecycle Composite 2055			0.06	-0.38	-0.32	-0.29	-	-		
Target-Date 2055 Median			7.88	25.10	11.30	8.17	-	0.77		
TIAA-CREF Lifecycle 2060 Institutional (TLXNX)	1,996	0.1	8.60 (19)	26.70 (12)	12.34 (14)	9.01 (12)	-	0.45		
+/- CREF Lifecycle Composite 2060			0.02	-0.29	-0.35	-0.32	-	-		
Target-Date 2060+ Median			7.94	25.29	11.44	8.46	-	0.76		



# Performance Summary - Calendar Year

	Performance (%)								
	2018	2017	2016	2015	2014	2013	2012	2011	
CREF Money Market R3 (QCMMIX)	1.46 (53)	0.50 (44)	0.13 (29)	0.00 (84)	0.00 (79)	0.00 (79)	0.00 (76)	0.00 (81)	
+/- Blmbg. Barc. U.S. Treasury Bills: 1-3 Months	-0.36	-0.32	-0.13	-0.03	-0.02	-0.05	-0.08	-0.07	
Money Market-Taxable Median	1.47	0.46	0.03	0.01	0.01	0.01	0.01	0.01	
TIAA Stable Value	1.81	1.51	1.46	1.60	1.77	-	-	-	
+/- Ryan 3 Yr GIC Master Index	-0.15	-0.09	0.07	0.44	0.74	-	-	-	
TIAA Traditional	3.86	3.80	4.11	3.91	4.08	4.08	4.09	4.16	
+/- Blmbg. Barc. U.S. Treasury: 7-10 Year	2.96	1.25	3.06	2.28	-4.92	10.12	-0.07	-11.43	
CREF Inflation-Linked Bond R3 (QCILIX)	-0.49 (17)	1.85 (77)	4.23 (56)	-1.68 (42)	3.32 (29)	-9.02 (70)	6.40 (59)	13.16 (23)	
+/- Blmbg. Barc. U.S. TIPS 1-10 Year	-0.24	-0.05	0.22	-1.16	2.41	-3.44	1.36	4.23	
Inflation-Protected Bond Median	-1.51	2.74	4.42	-1.90	2.74	-8.68	6.52	12.05	
CREF Bond Market R3 (QCBMIX)	-0.19 (42)	4.12 (18)	3.47 (18)	0.51 (33)	5.52 (56)	-2.01 (45)	5.29 (51)	6.96 (51)	
+/- Blmbg. Barc. U.S. Aggregate Index	-0.20	0.58	0.82	-0.04	-0.45	0.01	1.08	-0.88	
Intermediate Core Bond Median	-0.32	3.42	2.60	0.26	5.60	-2.09	5.33	6.96	
Royce Opportunity Instl (ROFIX)	-19.83 (91)	22.02 (1)	29.94 (25)	-13.46 (94)	-0.41 (92)	43.69 (6)	22.70 (7)	-12.86 (97)	
+/- Russell 2000 Value Index	-6.97	14.18	-1.80	-5.99	-4.63	9.17	4.65	-7.36	
Small Value Median	-15.29	8.83	26.03	-6.33	4.34	36.35	16.52	-4.31	
Amana Participation Institutional (AMIPX)	0.11	2.68	2.56	-	-	-	-	-	
+/- Dow Jones Sukuk Index	-0.01	-1.79	-1.79	-	-	-	-	-	
TIAA-CREF Large-Cap Value Instl (TRLIX)	-14.10 (94)	12.52 (87)	18.60 (16)	-4.69 (69)	9.16 (79)	34.43 (28)	19.68 (7)	-5.67 (89)	
+/- Russell 1000 Value Index	-5.83	-1.14	1.26	-0.86	-4.29	1.90	2.17	-6.06	
Large Value Median	-8.87	16.19	14.57	-3.52	11.03	31.87	15.43	-0.25	
CREF Equity Index R3 (QCEQIX)	-5.37 (48)	20.84 (58)	12.49 (22)	0.24 (51)	12.17 (52)	32.99 (36)	15.98 (40)	0.66 (52)	
+/- Russell 3000 Index	-0.13	-0.29	-0.25	-0.24	-0.39	-0.56	-0.44	-0.37	
Large Blend Median	-5.56	21.15	11.16	0.29	12.24	32.19	15.72	0.83	
TIAA-CREF S&P 500 Index Instl (TISPX)	-4.45 (25)	21.77 (31)	11.87 (32)	1.35 (23)	13.60 (21)	32.24 (49)	15.94 (43)	2.01 (24)	
+/- S&P 500 Index	-0.07	-0.06	-0.09	-0.03	-0.09	-0.15	-0.06	-0.10	
Large Blend Median	-5.56	21.15	11.16	0.29	12.24	32.19	15.72	0.83	



# Performance Summary - Calendar Year

	Performance (%)								
	2018	2017	2016	2015	2014	2013	2012	2011	
Amana Growth Institutional (AMIGX)	2.67 (11)	29.29 (46)	7.85 (17)	-0.21 (86)	14.29 (10)	22.95 (100)	11.21 (93)	-1.86 (55)	
+/- S&P 500 Index	7.05	7.46	-4.11	-1.59	0.60	-9.44	-4.79	-3.97	
Large Growth Median	-1.85	28.66	2.94	4.47	10.52	34.47	15.56	-1.46	
CREF Growth R3 (QCGRIX)	-2.46 (55)	31.83 (27)	2.92 (51)	6.46 (31)	13.66 (16)	35.00 (45)	15.87 (46)	1.19 (26)	
+/- Russell 1000 Growth Index	-0.95	1.62	-4.16	0.79	0.61	1.52	0.61	-1.45	
Large Growth Median	-1.85	28.66	2.94	4.47	10.52	34.47	15.56	-1.46	
Wells Fargo Growth Inst (SGRNX)	0.55 (25)	35.14 (10)	-0.56 (82)	2.94 (62)	4.12 (96)	33.72 (58)	17.14 (33)	8.44 (1)	
+/- Russell 3000 Growth Index	2.67	5.55	-7.95	-2.15	-8.32	-0.51	1.93	6.26	
Large Growth Median	-1.85	28.66	2.94	4.47	10.52	34.47	15.56	-1.46	
TIAA-CREF Mid-Cap Value Instl (TIMVX)	-14.15 (58)	11.13 (79)	17.40 (52)	-5.35 (60)	12.85 (24)	32.55 (69)	16.60 (47)	-2.17 (35)	
+/- Russell Midcap Value Index	-1.86	-2.21	-2.60	-0.57	-1.90	-0.91	-1.91	-0.79	
Mid-Cap Value Median	-13.46	13.37	17.59	-4.30	10.11	34.19	16.45	-3.69	
Vanguard Mid Cap Index Adm (VIMAX)	-9.23 (21)	19.25 (18)	11.22 (78)	-1.34 (15)	13.76 (8)	35.15 (40)	15.99 (69)	-1.97 (38)	
+/- CRSP U.S. Mid Cap TR Index	-0.01	-0.05	-0.03	-0.06	-0.07	-0.12	-0.71	-0.18	
Mid-Cap Blend Median	-11.32	16.12	15.96	-3.02	9.28	33.59	17.37	-2.34	
TIAA-CREF Mid-Cap Growth Instl (TRPWX)	-8.17 (77)	26.21 (36)	1.95 (79)	-0.63 (54)	7.74 (47)	36.78 (41)	17.96 (18)	-5.23 (63)	
+/- Russell Midcap Growth Index	-3.42	0.94	-5.38	-0.43	-4.16	1.04	2.15	-3.58	
Mid-Cap Growth Median	-5.54	24.67	5.93	-0.21	7.51	36.01	14.90	-3.82	
Royce Opportunity Instl (ROFIX)	-19.83 (91)	22.02 (1)	29.94 (25)	-13.46 (94)	-0.41 (92)	43.69 (6)	22.70 (7)	-12.86 (97)	
+/- Russell 2000 Value Index	-6.97	14.18	-1.80	-5.99	-4.63	9.17	4.65	-7.36	
Small Value Median	-15.29	8.83	26.03	-6.33	4.34	36.35	16.52	-4.31	
TIAA-CREF Small-Cap Blend Idx Inst (TISBX)	-10.84 (31)	14.83 (25)	21.58 (40)	-4.14 (47)	5.15 (46)	38.98 (37)	16.61 (34)	-4.12 (59)	
+/- Russell 2000 Index	0.17	0.18	0.27	0.27	0.26	0.16	0.26	0.06	
Small Blend Median	-11.87	13.20	20.84	-4.35	4.96	38.15	15.88	-3.34	
AB Small Cap Growth I (QUAIX)	-0.67 (18)	34.91 (6)	6.80 (78)	-0.91 (32)	-1.41 (85)	45.72 (23)	15.42 (36)	4.53 (6)	
+/- Russell 2000 Growth Index	8.64	12.74	-4.52	0.47	-7.01	2.42	0.83	7.44	
Small Growth Median	-5.94	21.90	10.89	-2.26	3.21	41.62	14.37	-2.33	
CREF Global Equities R3 (QCGLIX)	-12.36 (77)	24.81 (40)	5.11 (54)	-0.34 (40)	4.17 (37)	27.27 (37)	18.45 (32)	-7.74 (59)	
+/- MSCI World Index	-4.16	1.74	-3.04	-0.02	-1.33	-0.10	1.91	-2.72	
World Large Stock Median	-9.69	23.76	5.45	-1.35	3.26	25.76	16.23	-7.24	



# Performance Summary - Calendar Year

	Performance (%)									
	2018	2017	2016	2015	2014	2013	2012	2011		
TIAA-CREF International Eq Idx Instl (TCIEIX)	-13.25 (17)	25.32 (52)	1.22 (49)	-0.49 (34)	-5.51 (54)	21.96 (27)	19.09 (27)	-12.09 (32)		
+/- MSCI EAFE (Net) Index	0.54	0.29	0.22	0.32	-0.61	-0.82	1.77	0.05		
Foreign Large Blend Median	-14.64	25.39	1.11	-1.22	-5.33	20.36	17.98	-13.11		
American Funds Europacific Growth R6 (RERGX)	-14.91 (56)	31.17 (46)	1.01 (27)	-0.48 (63)	-2.29 (29)	20.58 (48)	19.64 (43)	-13.31 (56)		
+/- MSCI AC World ex USA (Net)	-0.71	3.98	-3.49	5.18	1.58	5.29	2.81	0.40		
Foreign Large Growth Median	-14.33	30.72	-1.50	0.37	-4.16	20.15	19.12	-12.68		
Pear Tree Polaris Foreign Value Small Cap R6 (QUSRX)	-18.81 (36)	33.44 (24)	2.75 (56)	-1.27 (68)	6.85 (2)	25.20 (39)	27.52 (13)	-19.86 (76)		
+/- MSCI AC World Index Small Mid Cap Value (Net)	-3.94	13.01	-12.44	3.50	3.39	-0.44	8.38	-8.35		
Foreign Small/Mid Value Median	-20.08	30.00	3.20	1.06	-4.99	24.29	22.41	-16.03		
DFA Emerging Markets I (DFEMX)	-13.62 (21)	36.57 (47)	12.09 (24)	-15.81 (68)	-1.71 (38)	-3.12 (65)	19.16 (48)	-17.41 (27)		
+/- MSCI Emerging Markets (Net) Index	0.96	-0.71	0.90	-0.89	0.48	-0.52	0.93	1.01		
Diversified Emerging Mkts Median	-16.30	35.89	8.87	-14.01	-2.85	-1.33	18.98	-18.81		
TIAA Real Estate Account (QREARX)	4.79	4.37	5.20	8.16	12.22	9.65	10.06	12.99		
+/- NCREIF Fund Index-Open End Diversified Core (EW)	-3.46	-3.43	-4.07	-7.01	-0.06	-3.69	-0.97	-2.97		
CREF Social Choice R3 (QCSCIX)	-4.29 (26)	14.27 (49)	7.40 (39)	-0.87 (43)	6.83 (38)	16.67 (56)	10.98 (76)	1.82 (26)		
+/- 40% BBg US Agg   42% R3000   18% MSCI EAFE + Can	0.27	-0.07	0.38	-0.99	0.01	0.54	-0.66	0.29		
Allocation--50% to 70% Equity Median	-5.68	14.18	6.82	-1.16	5.99	17.15	12.24	0.04		
CREF Stock R3 (QCSTIX)	-9.65 (58)	23.43 (10)	9.17 (28)	-0.84 (29)	6.41 (29)	27.83 (36)	17.26 (15)	-4.94 (52)		
+/- 70% R3000   30% ACWI ex US	-1.72	0.47	-1.11	0.51	-1.01	-0.06	0.63	-1.36		
Allocation--85%+ Equity Median	-9.39	20.29	7.53	-1.86	5.09	27.05	15.20	-4.85		
TIAA-CREF Lifecycle Retire Income Instl (TLRIX)	-3.84 (73)	12.10 (2)	6.04 (21)	0.25 (3)	4.53 (46)	9.85 (12)	11.51 (4)	2.78 (49)		
+/- CREF Lifecycle Composite Income	-0.90	1.55	0.23	0.43	-1.33	0.84	2.14	-1.25		
Target-Date Retirement Median	-3.31	8.76	5.24	-1.09	4.41	5.43	8.60	2.67		
TIAA-CREF Lifecycle 2010 Institutional (TCTIX)	-3.92 (78)	12.76 (2)	6.20 (43)	0.38 (5)	4.59 (63)	12.00 (19)	12.67 (5)	1.69 (39)		
+/- CREF Lifecycle Composite 2010	-2.08	1.57	0.11	0.61	-1.54	0.71	2.30	-1.41		
Target-Date 2000-2010 Median	-3.23	10.08	5.93	-0.64	4.83	10.58	10.45	1.12		
TIAA-CREF Lifecycle 2015 Institutional (TCNIX)	-4.41 (68)	13.85 (6)	6.40 (53)	0.42 (3)	4.78 (66)	13.96 (24)	13.47 (9)	0.74 (55)		
+/- CREF Lifecycle Composite 2015	-0.93	1.60	-0.07	0.70	-1.58	0.64	2.25	-1.59		
Target-Date 2015 Median	-3.87	11.51	6.47	-0.92	5.31	12.51	11.72	1.09		



# Performance Summary - Calendar Year

	Performance (%)									
	2018	2017	2016	2015	2014	2013	2012	2011		
TIAA-CREF Lifecycle 2020 Institutional (TCWIX)	-5.18 (74)	15.58 (6)	6.66 (47)	0.42 (4)	4.86 (66)	16.50 (19)	14.62 (5)	-0.29 (59)		
+/- CREF Lifecycle Composite 2020	-1.21	1.90	-0.35	0.82	-1.77	0.57	2.41	-1.76		
Target-Date 2020 Median	-4.45	12.74	6.58	-1.10	5.53	13.43	12.13	0.09		
TIAA-CREF Lifecycle 2025 Institutional (TCYIX)	-6.05 (73)	17.40 (5)	7.00 (55)	0.36 (3)	4.87 (75)	19.33 (20)	15.60 (5)	-1.29 (50)		
+/- CREF Lifecycle Composite 2025	-1.39	2.04	-0.61	0.89	-2.02	0.73	2.41	-1.89		
Target-Date 2025 Median	-5.38	14.89	7.14	-1.13	5.76	16.84	13.62	-1.29		
TIAA-CREF Lifecycle 2030 Institutional (TCRIX)	-7.09 (72)	19.21 (6)	7.33 (59)	0.38 (4)	4.71 (79)	22.07 (15)	16.53 (5)	-2.32 (56)		
+/- CREF Lifecycle Composite 2030	-1.74	2.14	-0.88	1.05	-2.41	0.80	2.34	-2.04		
Target-Date 2030 Median	-6.29	16.73	7.64	-1.27	5.88	18.78	14.07	-2.12		
TIAA-CREF Lifecycle 2035 Institutional (TCIIX)	-8.04 (80)	21.11 (5)	7.52 (68)	0.24 (5)	4.67 (82)	24.76 (11)	17.32 (3)	-3.37 (62)		
+/- CREF Lifecycle Composite 2035	-2.01	2.38	-1.27	1.10	-2.55	0.83	2.14	-2.20		
Target-Date 2035 Median	-7.18	18.39	8.10	-1.34	6.04	20.92	14.94	-2.92		
TIAA-CREF Lifecycle 2040 Institutional (TCOIX)	-8.92 (86)	22.91 (1)	7.78 (66)	0.09 (7)	4.63 (82)	26.33 (7)	17.52 (4)	-3.58 (58)		
+/- CREF Lifecycle Composite 2040	-2.20	2.54	-1.59	1.16	-2.67	0.81	1.98	-2.19		
Target-Date 2040 Median	-7.90	19.49	8.37	-1.49	6.08	21.97	15.22	-3.28		
TIAA-CREF Lifecycle 2045 Institutional (TTFIX)	-9.59 (92)	23.62 (1)	8.06 (62)	0.13 (7)	4.61 (83)	26.25 (8)	17.56 (4)	-3.63 (56)		
+/- CREF Lifecycle Composite 2045	-2.32	2.44	-1.66	1.21	-2.69	0.73	2.02	-2.24		
Target-Date 2045 Median	-8.25	20.36	8.55	-1.48	6.17	23.03	15.67	-3.43		
TIAA-CREF Lifecycle 2050 Institutional (TFTIX)	-9.82 (91)	24.04 (1)	8.10 (62)	0.18 (7)	4.59 (82)	26.25 (11)	17.53 (5)	-3.56 (44)		
+/- CREF Lifecycle Composite 2050	-2.44	2.60	-1.81	1.26	-2.71	0.73	1.99	-2.17		
Target-Date 2050 Median	-8.42	20.59	8.65	-1.50	6.19	23.19	15.76	-3.78		
TIAA-CREF Lifecycle 2055 Institutional (TTRIX)	-9.86 (90)	24.23 (1)	8.27 (62)	0.13 (7)	4.58 (84)	26.24 (10)	17.65 (1)	-		
+/- CREF Lifecycle Composite 2055	-2.38	2.53	-1.84	1.21	-2.72	0.72	2.11	-		
Target-Date 2055 Median	-8.48	20.83	8.58	-1.50	6.35	23.58	15.94	-		
TIAA-CREF Lifecycle 2060 Institutional (TLXNX)	-10.06 (87)	24.40 (1)	8.39 (63)	0.19 (10)	-	-	-	-		
+/- CREF Lifecycle Composite 2060	-2.47	2.43	-1.92	1.27	-	-	-	-		
Target-Date 2060+ Median	-8.59	21.00	8.96	-1.06	-	-	-	-		

	Beta			Alpha			Up Market			Down Market			Standard Deviation		
	3 Yrs	5 Yrs	10 Yrs	3 Yrs	5 Yrs	10 Yrs	3 Yrs	5 Yrs	10 Yrs	3 Yrs	5 Yrs	10 Yrs	3 Yrs	5 Yrs	10 Yrs
CREF Money Market R3 (QCMMIX)	1.04	0.91	0.89	-0.35	-0.11	-0.08	82.12	80.01	74.84		-10.54	-3.90	0.20	0.24	0.20
Money Market-Taxable Median	0.93	0.87	0.83	-0.26	-0.12	-0.07	77.46	73.76	69.85		-64.32	-58.05	0.18	0.22	0.19
Blmbg. Barc. U.S. Treasury Bills: 1-3 Months													0.19	0.25	0.23
TIAA Stable Value	0.62	0.40		0.54	0.99		89.49	98.70					0.07	0.06	
Ryan 3 Yr GIC Master Index													0.09	0.12	0.22
TIAA Traditional	0.00	0.00	0.00	3.80	3.88	3.98	25.95	23.86	21.67	-39.46	-37.74	-35.77	0.04	0.05	0.05
Blmbg. Barc. U.S. Treasury: 7-10 Year													4.54	5.14	5.45
CREF Inflation-Linked Bond R3 (QCILIX)	0.99	1.12	1.25	-0.18	-0.58	-0.34	95.47	101.95	119.35	99.32	116.39	125.43	2.06	2.91	4.11
Inflation-Protected Bond Median	1.27	1.25	1.30	-0.47	-0.55	-0.30	115.04	114.52	122.40	131.17	139.23	133.12	2.83	3.37	4.27
Blmbg. Barc. U.S. TIPS 1-10 Year													2.06	2.53	3.10
CREF Bond Market R3 (QCBMIX)	0.92	0.94	0.96	0.54	0.45	0.29	97.19	100.06	100.07	80.70	89.12	94.06	2.66	2.89	2.78
Intermediate Core Bond Median	0.96	0.95	0.96	0.01	-0.01	0.09	95.01	96.05	98.66	95.92	97.48	97.46	2.78	2.98	2.87
Blmbg. Barc. U.S. Aggregate Index													2.87	3.04	2.86
PGIM Total Return Bond R6 (PTRQX)	1.02	1.07	1.08	1.48	1.04	1.43	118.06	120.72	128.67	76.75	95.91	99.03	3.02	3.39	3.50
Intermediate Core-Plus Bond Median	0.86	0.88	0.90	0.78	0.59	0.96	94.75	95.34	102.88	77.35	86.32	85.05	2.63	2.90	2.92
Blmbg. Barc. U.S. Aggregate Index													2.87	3.04	2.86
Amana Participation Institutional (AMIPX)	0.66			-0.07			63.88			62.87			1.64		
Dow Jones Sukuk Index													2.36	2.42	2.57
TIAA-CREF Large-Cap Value Instl (TRLIX)	1.06	1.09	1.09	-2.43	-1.72	-1.87	99.24	103.14	102.58	115.04	113.77	112.26	12.81	13.14	13.93
Large Value Median	1.00	1.00	1.00	0.28	-0.23	-0.72	100.20	98.83	97.07	98.75	99.68	101.25	11.97	12.14	12.87
Russell 1000 Value Index													11.85	11.88	12.66
CREF Equity Index R3 (QCEQIX)	1.00	1.00	1.00	-0.17	-0.19	-0.27	99.18	99.15	99.01	100.04	100.22	100.47	12.18	12.11	12.78
Large Blend Median	0.97	0.98	0.97	-0.01	-0.32	-0.44	97.81	97.03	96.99	98.15	98.55	98.69	11.98	11.93	12.64
Russell 3000 Index													12.21	12.13	12.81
TIAA-CREF S&P 500 Index Instl (TISPX)	1.00	1.00	1.00	-0.06	-0.05	-0.07	99.78	99.80	99.73	100.04	100.12	100.08	11.93	11.87	12.40
Large Blend Median	1.00	1.00	1.00	-0.90	-0.92	-0.94	96.63	96.80	98.51	100.90	101.56	102.81	11.98	11.93	12.64
S&P 500 Index													11.93	11.88	12.40
Amana Growth Institutional (AMIGX)	0.96	0.97	0.94	5.67	2.29	0.27	112.86	104.97	95.54	83.05	92.89	95.02	12.06	12.09	12.18
Large Growth Median	1.05	1.05	1.07	2.69	0.52	-0.47	112.74	105.64	103.62	100.08	103.50	105.80	13.23	13.15	13.98
S&P 500 Index													11.93	11.88	12.40

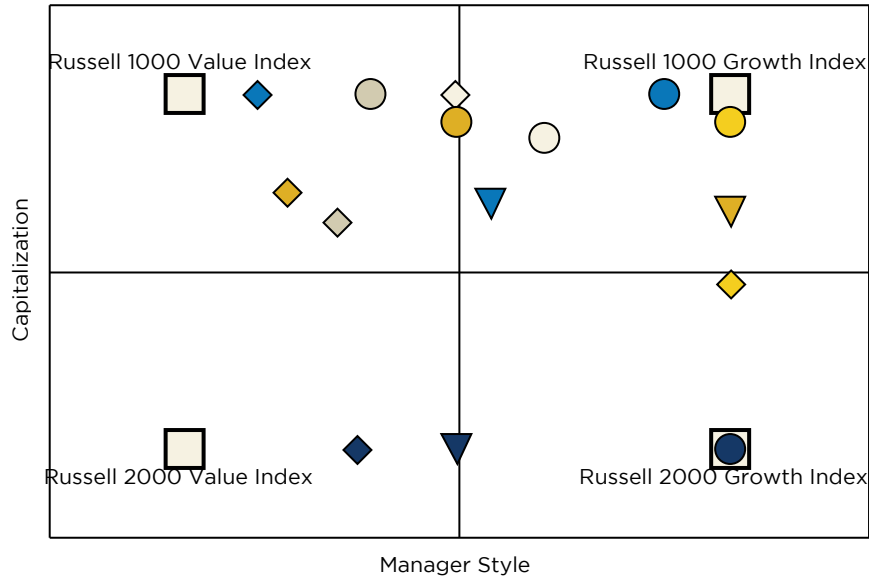
	Beta			Alpha			Up Market			Down Market			Standard Deviation		
	3 Yrs	5 Yrs	10 Yrs	3 Yrs	5 Yrs	10 Yrs	3 Yrs	5 Yrs	10 Yrs	3 Yrs	5 Yrs	10 Yrs	3 Yrs	5 Yrs	10 Yrs
CREF Growth R3 (QCGRIX)	1.02	1.03	1.03	-1.39	-1.66	-1.17	97.66	98.96	100.89	103.63	109.00	107.83	13.37	13.29	13.62
Large Growth Median	0.99	1.00	1.03	-1.05	-1.76	-1.68	95.01	95.66	98.53	99.14	104.23	107.89	13.23	13.15	13.98
Russell 1000 Growth Index													13.07	12.82	13.10
Wells Fargo Growth Inst (SGRNX)	1.07	1.07	1.08	1.60	-1.06	-0.35	109.35	101.55	108.05	97.61	104.32	111.33	14.71	14.56	15.20
Large Growth Median	0.98	0.99	1.02	-0.39	-1.32	-1.33	96.30	95.83	98.22	100.02	103.38	107.18	13.23	13.15	13.98
Russell 3000 Growth Index													13.20	12.95	13.31
TIAA-CREF Mid-Cap Value Instl (TIMVX)	1.08	1.05	1.01	-1.89	-1.68	-1.57	97.20	96.03	95.49	105.40	103.93	102.31	13.90	13.28	13.89
Mid-Cap Value Median	1.03	1.05	1.04	-0.59	-0.71	-1.90	101.09	100.72	98.69	105.70	104.34	108.61	13.61	13.47	14.51
Russell Midcap Value Index													12.79	12.51	13.58
Vanguard Mid Cap Index Adm (VIMAX)	1.00	1.00	1.01	-0.03	-0.03	-0.28	99.94	99.88	100.11	100.14	100.08	101.29	12.82	12.64	13.87
Mid-Cap Blend Median	1.07	1.05	1.04	-3.70	-1.27	-1.75	96.16	101.05	98.96	113.85	110.10	109.97	14.21	13.78	14.75
CRSP U.S. Mid Cap TR Index													12.81	12.65	13.71
TIAA-CREF Mid-Cap Growth Instl (TRPWX)	1.06	1.05	1.05	-2.30	-2.50	-1.91	98.98	98.08	101.11	109.92	111.78	111.47	14.89	14.49	15.41
Mid-Cap Growth Median	0.99	0.99	1.01	-0.39	-0.52	-1.02	95.82	97.27	97.62	98.74	99.59	104.30	14.21	14.08	15.01
Russell Midcap Growth Index													13.88	13.53	14.48
Royce Opportunity Instl (ROFIX)	1.16	1.16	1.17	2.55	-0.61	-0.76	113.43	110.00	113.43	98.21	110.65	115.29	18.82	18.88	20.07
Small Value Median	1.00	0.99	0.98	-0.60	-0.94	0.02	99.05	95.87	97.42	100.22	98.44	97.45	16.16	15.91	16.69
Russell 2000 Value Index													15.68	15.74	16.71
TIAA-CREF Small-Cap Blend Idx Inst (TISBX)	1.00	1.00	1.00	0.13	0.19	0.17	100.19	100.33	100.18	99.57	99.50	99.50	15.68	15.88	16.89
Small Blend Median	0.98	0.96	0.96	-0.72	-0.29	0.06	94.91	93.74	95.01	100.07	95.84	94.06	15.70	15.58	16.58
Russell 2000 Index													15.71	15.90	16.93
AB Small Cap Growth I (QUAIX)	1.06	1.06	1.02	8.17	4.02	2.98	124.32	113.72	106.52	87.75	95.78	93.24	17.97	18.30	18.68
Small Growth Median	0.96	0.94	0.94	1.96	1.24	0.83	99.02	95.94	94.85	90.86	91.85	92.14	16.32	16.36	17.06
Russell 2000 Growth Index													16.37	16.76	17.61
CREF Global Equities R3 (QCGLIX)	1.09	1.04	1.03	-2.16	-1.54	-1.14	100.72	99.06	99.70	112.01	108.74	106.00	12.22	12.13	13.41
World Large Stock Median	1.01	0.98	1.02	-0.75	-0.88	-0.86	96.81	94.90	97.77	99.04	97.65	102.28	11.51	11.79	13.46
MSCI World Index													11.13	11.58	12.94
TIAA-CREF International Eq Idx Instl (TCIEX)	1.00	0.96	0.99	0.23	0.47	0.21	99.57	97.16	99.55	97.07	94.52	98.62	10.90	11.72	14.49
Foreign Large Blend Median	1.03	0.97	0.98	-0.31	-0.02	-0.07	99.73	95.97	96.27	99.40	95.92	97.27	11.37	12.02	14.56
MSCI EAFE (Net) Index													10.81	12.13	14.53
American Funds Europacific Growth R6 (RERGX)	1.04	0.93	0.94	2.05	2.19	1.95	108.61	97.93	98.33	95.22	84.98	88.15	12.08	12.06	14.06
Foreign Large Growth Median	1.00	0.92	0.95	2.53	1.96	2.11	104.47	94.59	98.22	86.08	84.10	86.70	12.08	12.26	14.42
MSCI AC World ex USA (Net)													11.34	12.43	14.53

	Beta			Alpha			Up Market			Down Market			Standard Deviation		
	3 Yrs	5 Yrs	10 Yrs	3 Yrs	5 Yrs	10 Yrs	3 Yrs	5 Yrs	10 Yrs	3 Yrs	5 Yrs	10 Yrs	3 Yrs	5 Yrs	10 Yrs
Pear Tree Polaris Foreign Value Small Cap R6 (QUSRX)	0.88	0.87	0.88	2.67	0.34	0.73	108.34	96.69	91.93	99.69	99.25	89.43	11.88	12.23	13.53
Foreign Small/Mid Value Median	0.97	0.94	0.92	0.20	-0.17	-0.80	103.60	97.64	91.93	101.86	99.47	94.85	12.72	13.02	14.15
MSCI AC World Index Small Mid Cap Value (Net)													11.89	12.19	13.96
DFA Emerging Markets I (DFEMX)	0.95	0.94	0.97	0.05	-0.08	0.36	97.58	96.55	98.94	99.54	97.76	97.63	13.61	14.96	16.74
Diversified Emerging Mkts Median	0.95	0.91	0.97	0.17	0.10	0.20	96.49	94.22	97.38	96.39	92.65	95.72	14.02	14.97	17.02
MSCI Emerging Markets (Net) Index													14.17	15.66	17.08
TIAA Real Estate Account (QREARX)													0.76	0.97	2.05
NCREIF Fund Index-Open End Diversified Core (EW)															
CREF Social Choice R3 (QCSCIX)	0.98	0.98	0.97	0.35	0.14	0.24	99.34	98.20	97.99	95.12	96.72	95.61	6.65	6.78	7.39
Allocation--50% to 70% Equity Median	1.06	1.04	1.07	-1.23	-1.02	-0.88	99.69	99.97	103.72	111.06	109.68	110.32	7.33	7.44	8.31
40% BBg US Agg   42% R3000   18% MSCI EAFE + Can													6.76	6.93	7.57
CREF Stock R3 (QCSTIX)	1.03	1.01	1.02	-0.99	-0.57	-0.56	98.52	98.72	99.59	103.04	102.03	102.21	11.84	11.86	13.14
Allocation--85%+ Equity Median	0.96	0.94	0.96	-1.55	-1.17	-0.76	90.56	90.24	92.50	97.82	96.72	96.63	11.22	11.34	12.47
70% R3000   30% ACWI ex US													11.52	11.75	12.89
TIAA-CREF Lifecycle Retire Income Instl (TLRIX)	1.02	1.04	1.07	-0.08	-0.08	-0.28	100.82	103.64	104.60	101.24	104.53	107.32	4.77	5.03	5.58
Target-Date Retirement Median	0.81	0.79	0.79	-0.12	-0.16	-0.11	80.16	80.16	80.85	78.53	84.64	83.08	3.86	3.95	4.25
CREF Lifecycle Composite Income													4.64	4.77	5.17
TIAA-CREF Lifecycle 2010 Institutional (TCTIX)													4.92	5.31	6.44
Target-Date 2000-2010 Median													4.38	4.84	6.02
CREF Lifecycle Composite 2010															
TIAA-CREF Lifecycle 2015 Institutional (TCNIX)	1.03	1.04	1.07	-0.21	-0.09	-0.38	100.76	102.62	104.46	102.17	103.06	107.58	5.54	5.89	7.27
Target-Date 2015 Median	0.97	0.95	1.03	-0.12	-0.32	-0.48	90.03	92.16	99.32	98.62	99.65	104.55	5.26	5.38	6.99
CREF Lifecycle Composite 2015													5.36	5.63	6.74
TIAA-CREF Lifecycle 2020 Institutional (TCWIX)	1.02	1.03	1.06	-0.21	-0.11	-0.40	100.61	101.85	103.55	101.83	102.15	106.04	6.21	6.65	8.23
Target-Date 2020 Median	0.91	0.92	1.01	-0.27	-0.35	-0.49	87.69	89.24	96.85	91.42	95.84	100.47	5.53	6.04	7.80
CREF Lifecycle Composite 2020													6.02	6.39	7.69
TIAA-CREF Lifecycle 2025 Institutional (TCYIX)	1.04	1.04	1.07	-0.39	-0.23	-0.52	101.28	102.70	104.01	104.24	104.89	107.68	7.22	7.64	9.34
Target-Date 2025 Median	0.96	0.97	1.02	-0.36	-0.40	-0.49	92.06	93.28	98.33	96.48	98.54	102.47	6.73	7.13	8.89
CREF Lifecycle Composite 2025													6.92	7.30	8.70
TIAA-CREF Lifecycle 2030 Institutional (TCRIX)	1.05	1.05	1.07	-0.61	-0.36	-0.61	101.51	102.72	103.57	105.49	105.47	107.28	8.26	8.68	10.43
Target-Date 2030 Median	0.99	0.98	1.00	-0.55	-0.49	-0.51	95.00	94.96	97.76	99.76	99.82	100.34	7.82	8.16	9.80
CREF Lifecycle Composite 2030													7.83	8.23	9.74

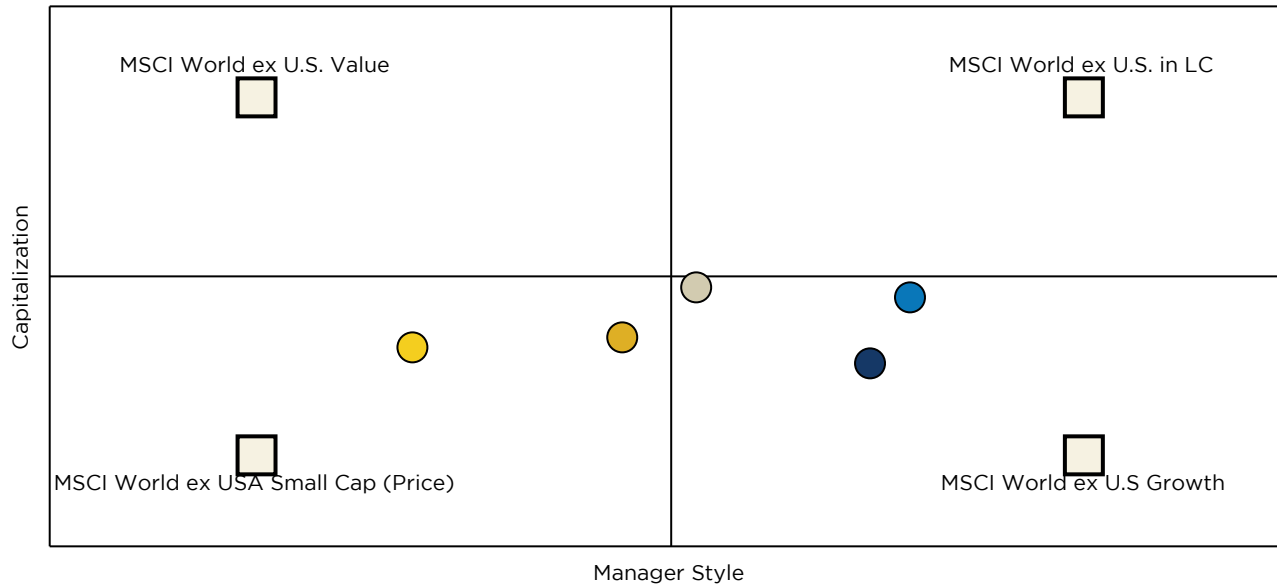


	Beta			Alpha			3 Yrs	Up Market		3 Yrs	Down Market		3 Yrs	Standard Deviation	
	3 Yrs	5 Yrs	10 Yrs	3 Yrs	5 Yrs	10 Yrs		5 Yrs	10 Yrs		5 Yrs	10 Yrs		5 Yrs	10 Yrs
TIAA-CREF Lifecycle 2035 Institutional (TCIIX)	1.05	1.05	1.06	-0.71	-0.44	-0.68	101.78	102.49	103.03	105.99	105.67	106.82	9.28	9.66	11.50
Target-Date 2035 Median	1.01	0.98	1.00	-0.73	-0.51	-0.53	96.14	95.11	96.93	100.92	99.32	100.36	8.91	9.06	10.79
CREF Lifecycle Composite 2035													8.75	9.18	10.79
TIAA-CREF Lifecycle 2040 Institutional (TCOIX)	1.06	1.04	1.06	-0.82	-0.52	-0.71	101.66	102.68	102.94	105.83	106.59	107.04	10.31	10.65	12.05
Target-Date 2040 Median	0.99	0.96	0.99	-0.74	-0.44	-0.64	94.11	93.19	94.98	97.94	95.79	98.56	9.59	9.76	11.32
CREF Lifecycle Composite 2040													9.69	10.13	11.35
TIAA-CREF Lifecycle 2045 Institutional (TTFIX)	1.06	1.05	1.06	-0.96	-0.60	-0.76	101.73	102.75	102.77	106.50	107.05	107.01	11.07	11.15	12.27
Target-Date 2045 Median	0.97	0.96	1.00	-0.58	-0.54	-0.78	93.27	93.31	96.36	96.44	97.13	100.52	10.15	10.32	11.64
CREF Lifecycle Composite 2045													10.38	10.58	11.55
TIAA-CREF Lifecycle 2050 Institutional (TFTIX)	1.07	1.05	1.06	-0.99	-0.61	-0.78	101.95	102.60	102.72	106.70	106.80	106.96	11.27	11.25	12.32
Target-Date 2050 Median	0.96	0.97	1.01	-0.58	-0.59	-0.88	93.67	93.86	98.06	96.68	97.31	101.68	10.23	10.40	11.74
CREF Lifecycle Composite 2050													10.53	10.69	11.60
TIAA-CREF Lifecycle 2055 Institutional (TTRIX)	1.06	1.04		-0.94	-0.62		101.40	102.39		105.60	106.65		11.37	11.35	
Target-Date 2055 Median	0.97	0.98		-0.51	-0.63		93.83	94.28		95.71	98.09		10.43	10.60	11.86
CREF Lifecycle Composite 2055													10.68	10.79	
TIAA-CREF Lifecycle 2060 Institutional (TLXNX)	1.06	1.04		-1.01	-0.64		101.36	102.05		105.76	106.19		11.55	11.45	
Target-Date 2060+ Median	0.95	0.99		-0.44	-0.59		93.35	94.73		93.95	99.03		10.35	10.76	
CREF Lifecycle Composite 2060													10.83	10.90	

## Domestic Equity Style Analysis | Time Period: 5 Years



## International Equity Style Analysis | Time Period: 5 Years





**Kansas Board of Regents  
Voya Mandatory Plan Summary**

# Voya Asset Class Coverage

Domestic Equity			
	Value	Blend	Growth
Large	BlackRock Equity Dividend	American Fds Fundamental Inv. Parnassus Core Equity Vanguard Institutional Index	Amana Growth Voya Large Cap Growth
Mid	American Century Mid Cap Value	Vanguard Mid Cap Index	Champlain Mid Cap
Small	American Beacon Small Cap Value	Vanguard Small Cap Index	Voya SmallCap Opportunities
International Equity			
	Value	Blend	Growth
Large		Vanguard Total Intl Stock Idx.	American Fds EuroPacific Growth
Mid			
Small			
Emerging			Invesco Oppenheimer Dev Markets
Global			VY Invesco Oppenheimer Global
Domestic Fixed Income			
	Short	Intermediate	Long
High	Vanguard Treasury Money Market Voya Fixed Plus III	Fidelity U.S. Bond Index	American Funds Inflation Linked Bds
Medium		PIMCO Total Return	
Low			
Other			
	Real Estate	Balanced	Foreign Bond
	Vanguard Real Estate Index	VY T. Rowe Price Cap. App. Vanguard Target Retirement Income, 2015, 2020, 2025, 2030, 2035, 2040, 2045, 2050, 2055, 2060	Amana Participation
	Other Sectors	Absolute Return	Self-Directed Brokerage

Gold = Passively Managed Index Funds

Navy = Actively Managed Funds

# Plan Activity: Voya

July 1, 2019 - December 31, 2019

Fund	Beginning Balance 7/1/2019	Contributions	Withdrawals	Exchanges	Intra Vendor Transfers	Fees	Investment Earnings	Plan Servicing Credit	Ending Balance 12/31/2019	Difference Between Beginning and Ending Balances
Voya Fixed Plus Fund 4020	\$ 97,797,206	\$ 2,518,730	\$ (3,306,669)	\$ (2,630,515)	\$ 659,780	\$ -	\$ 998,865	\$ -	\$ 96,037,398	\$ (1,759,808)
Vanguard Treasury Money Market Investor	5,913,500	334,164	(860,294)	97,863	337,189	-	57,552	-	5,879,973	(33,527)
Amana Participation Institutional	37,992	61,283	-	234,561	2,714	-	2,454	-	339,003	301,011
PIMCO Total Return Instl	16,161,102	581,440	(500,583)	3,487,437	539,464	-	336,620	-	20,605,480	4,444,378
Fidelity® US Bond Index	-	107,879	-	3,599,022	302,925	-	10,623	-	4,020,449	4,020,449
PIMCO Real Return Instl	7,674,071	-	(1,149)	(7,664,158)	-	-	(8,765)	-	-	(7,674,071)
American Funds Inflation Linked Bd R6	-	230,351	(157,866)	9,494,286	171,925	-	146,297	-	9,884,993	9,884,993
Blackrock Equity Dividend Instl	13,486,347	542,704	(286,727)	1,172,329	150,031	-	1,481,840	-	16,546,524	3,060,177
American Funds Fundamental Invs R6	64,480,288	1,102,485	(1,518,724)	(2,982,196)	432,053	-	6,887,316	-	68,401,221	3,920,932
Vanguard Institutional Index I	17,767,450	1,094,274	(252,672)	2,477,261	225,026	-	2,157,087	-	23,468,425	5,700,975
Parnassus Core Equity Institutional	17,421,941	586,689	(468,202)	(125,859)	353,296	-	1,564,988	-	19,332,854	1,910,913
Amana Growth Institutional	2,391,548	182,610	(52,897)	676,527	140,083	-	311,850	-	3,649,720	1,258,173
Voya Large Cap Growth Port I	72,967,232	1,903,173	(1,603,303)	(1,284,390)	573,928	-	8,155,996	-	80,712,636	7,745,404
American Century Mid Cap Value I	20,865,159	458,731	(249,290)	(1,233,140)	147,893	-	2,045,036	-	22,034,389	1,169,229
Vanguard Mid Cap Index Institutional	29,021,793	934,090	(537,159)	(325,254)	186,932	-	2,178,824	-	31,459,227	2,437,434
Champlain Mid Cap Institutional	14,115,929	669,326	(251,711)	(832,697)	305,383	-	820,636	-	14,826,866	710,937
American Beacon Small Cp Val Inst	1,495,830	105,240	(10,033)	(81,590)	1,807	-	124,714	-	1,635,968	140,138
Vanguard Small Cap Index I	32,705,937	1,129,872	(397,132)	(1,491,497)	216,246	-	2,104,448	-	34,267,874	1,561,937
Voya SmallCap Opportunities Port I	19,278,678	452,233	(306,174)	(921,408)	56,440	-	782,147	-	19,341,917	63,239
VY® Invesco Oppenheimer Global I	22,585,461	884,811	(357,284)	(1,613,050)	138,053	-	1,847,260	-	23,485,251	899,790
Vanguard Total Intl Stock Index Admiral	-	88,116	(72,249)	344,169	79,497	-	25,345	-	464,879	464,879
American Funds Europacific Growth R6	34,861,222	1,054,953	(447,120)	(1,662,732)	98,308	-	2,830,234	-	36,734,865	1,873,643
Invesco Oppenheimer Developing Mkts R6	11,974,181	568,254	(172,586)	(1,039,818)	44,115	-	868,274	-	12,242,420	268,240
Vanguard Real Estate Index Institutional	19,750,430	563,462	(341,754)	38,138	262,150	-	1,615,092	-	21,887,518	2,137,088
VY® T. Rowe Price Capital Apprec I	64,799,168	2,419,451	(1,477,305)	3,370,455	848,877	-	4,283,686	-	74,244,332	9,445,163
Vanguard Target Retirement Income Inv	20,062,155	469,862	(413,172)	(10,581)	315	-	836,531	-	20,945,109	882,954
Vanguard Target Retirement 2015 Inv	3,105,670	45,224	(28,041)	19,625	5,512	-	147,647	-	3,295,638	189,968
Vanguard Target Retirement 2020 Inv	2,631,137	56,146	(4,316)	174,767	-	-	160,842	-	3,018,577	387,440
Vanguard Target Retirement 2025 Inv	11,073,435	333,996	(324,948)	(104,998)	81,683	-	696,323	-	11,755,491	682,055
Vanguard Target Retirement 2030 Inv	3,345,847	144,606	(23,281)	(74,483)	-	-	232,537	-	3,625,226	279,379
Vanguard Target Retirement 2035 Inv	11,656,324	609,682	(103,789)	(414,043)	3,331	-	890,929	-	12,642,433	986,109
Vanguard Target Retirement 2040 Inv	4,267,948	331,494	(28,825)	(207,934)	-	-	339,097	-	4,701,780	433,832
Vanguard Target Retirement 2045 Inv	9,820,875	505,672	(196,919)	(244,232)	2,557	-	813,313	-	10,701,265	880,390
Vanguard Target Retirement 2050 Inv	4,050,095	481,379	(157,702)	(48,022)	3,265	-	347,815	-	4,676,830	626,735
Vanguard Target Retirement 2055 Inv	685,114	212,816	-	18,295	-	-	70,903	-	987,128	302,014
Vanguard Target Retirement 2060 Inv	876,162	177,029	(4,768)	(212,140)	8,568	-	72,468	-	917,320	41,157
<b>Totals</b>	<b>\$ 659,127,230</b>	<b>\$ 21,942,225</b>	<b>\$ (14,914,642)</b>	<b>\$ 0</b>	<b>\$ 6,379,345</b>	<b>\$ -</b>	<b>\$ 46,236,822</b>	<b>\$ -</b>	<b>\$ 718,770,979</b>	<b>\$ 59,643,750</b>

# Performance: Voya

July 1, 2019 - December 31, 2019

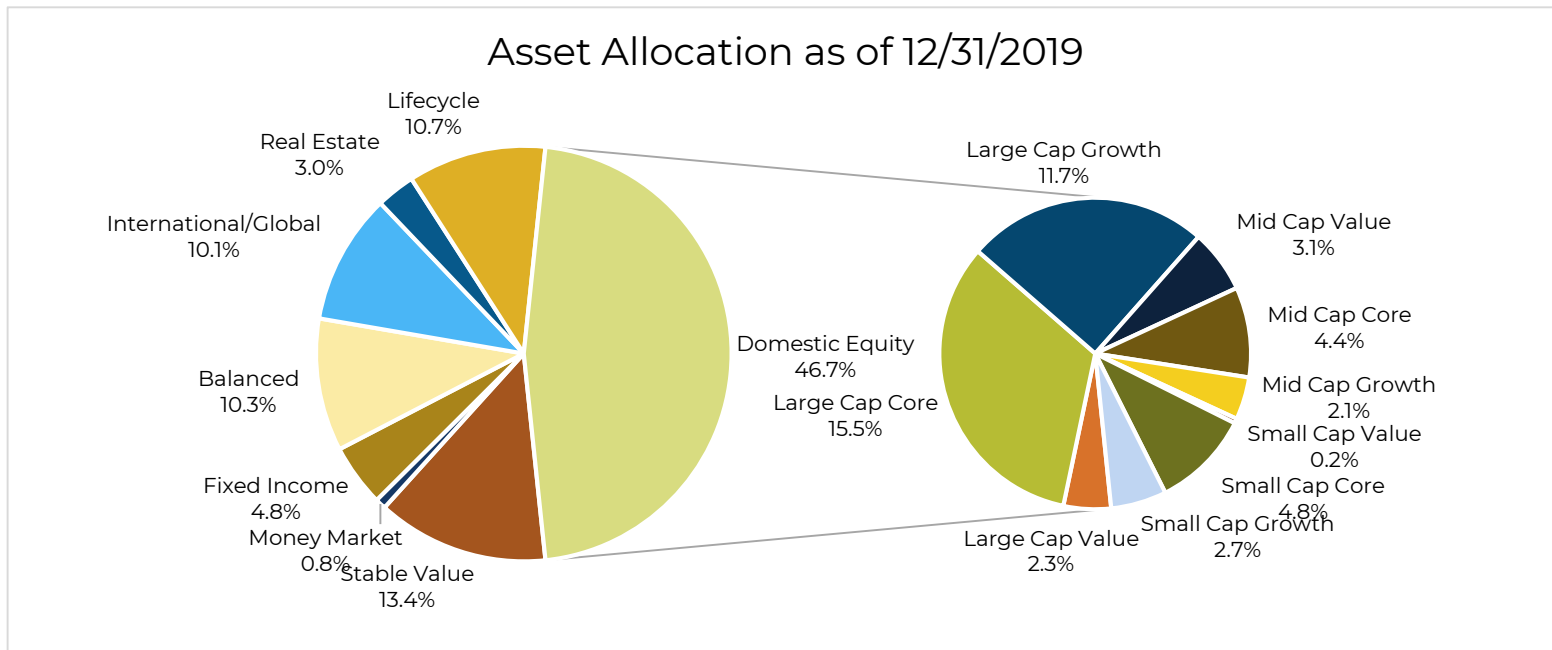
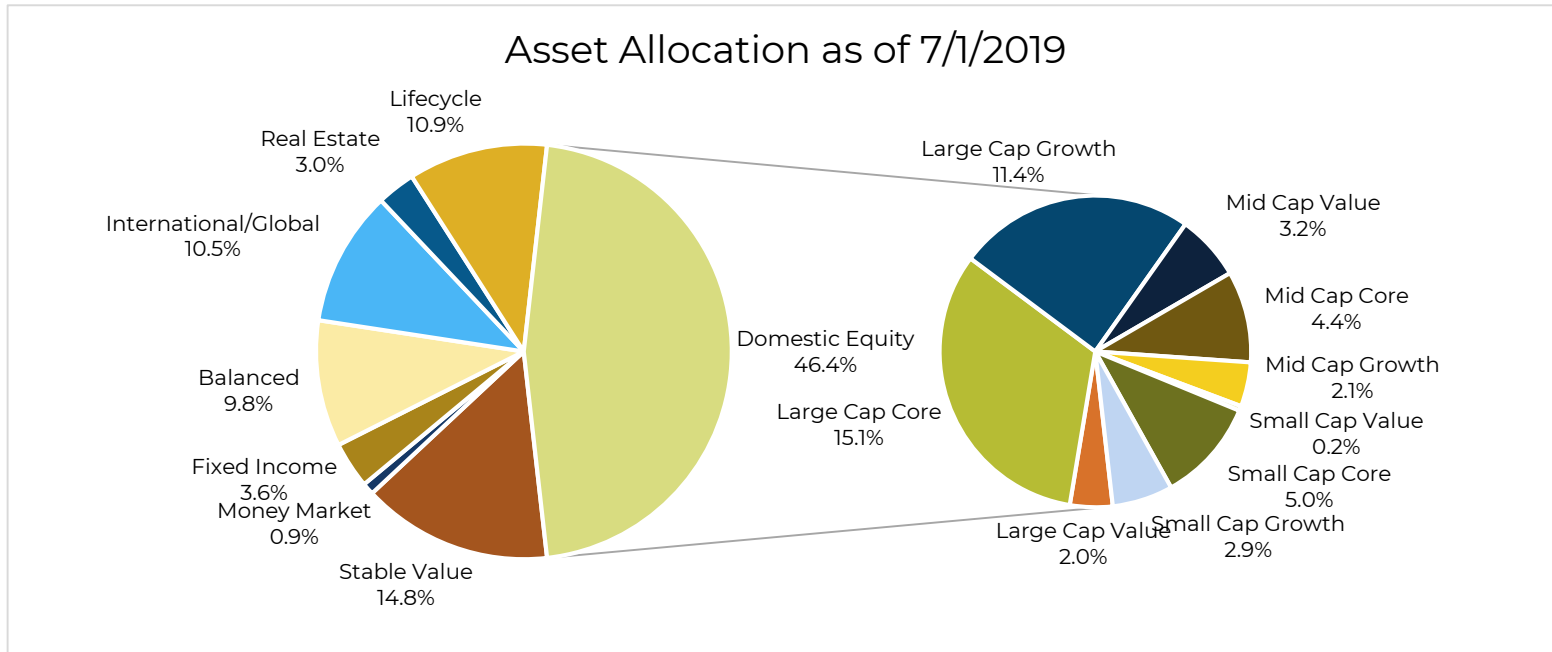
Fund	Beginning Balance: 7/1/2019	Ending Balance: 12/31/2019	Six Month Return
Voya Fixed Plus Fund 4020	\$ 97,797,206	\$ 96,037,398	1.04%
Vanguard Treasury Money Market Investor	\$ 5,913,500	\$ 5,879,973	0.96%
Amana Participation Institutional	\$ 37,992	\$ 339,003	2.28%
PIMCO Total Return Instl	\$ 16,161,102	\$ 20,605,480	2.06%
Fidelity® US Bond Index	\$ -	\$ 4,020,449	2.33%
PIMCO Real Return Instl	\$ 7,674,071	\$ -	2.06%
American Funds Inflation Linked Bd R6	\$ -	\$ 9,884,993	1.33%
Blackrock Equity Dividend Instl	\$ 13,486,347	\$ 16,546,524	10.49%
American Funds Fundamental Invs R6	\$ 64,480,288	\$ 68,401,221	11.06%
Vanguard Institutional Index I	\$ 17,767,450	\$ 23,468,425	10.90%
Parnassus Core Equity Institutional	\$ 17,421,941	\$ 19,332,854	8.85%
Amana Growth Institutional	\$ 2,391,548	\$ 3,649,720	9.68%
Voya Large Cap Growth Port I	\$ 72,967,232	\$ 80,712,636	11.29%
American Century Mid Cap Value I	\$ 20,865,159	\$ 22,034,389	10.12%
Vanguard Mid Cap Index Institutional	\$ 29,021,793	\$ 31,459,227	7.52%
Champlain Mid Cap Institutional	\$ 14,115,929	\$ 14,826,866	5.67%
American Beacon Small Cp Val Inst	\$ 1,495,830	\$ 1,635,968	8.10%
Vanguard Small Cap Index I	\$ 32,705,937	\$ 34,267,874	6.58%
Voya SmallCap Opportunities Port I	\$ 19,278,678	\$ 19,341,917	4.35%
VY® Invesco Oppenheimer Global I	\$ 22,585,461	\$ 23,485,251	8.48%
Vanguard Total Intl Stock Index Admiral	\$ -	\$ 464,879	7.27%
American Funds Europacific Growth R6	\$ 34,861,222	\$ 36,734,865	8.34%
Invesco Oppenheimer Developing Mkts R6	\$ 11,974,181	\$ 12,242,420	7.68%
Vanguard Real Estate Index Institutional	\$ 19,750,430	\$ 21,887,518	8.10%
VY® T. Rowe Price Capital Apprec I	\$ 64,799,168	\$ 74,244,332	6.19%
Vanguard Target Retirement Income Inv	\$ 20,062,155	\$ 20,945,109	4.17%
Vanguard Target Retirement 2015 Inv	\$ 3,105,670	\$ 3,295,638	4.62%
Vanguard Target Retirement 2020 Inv	\$ 2,631,137	\$ 3,018,577	5.71%
Vanguard Target Retirement 2025 Inv	\$ 11,073,435	\$ 11,755,491	6.37%
Vanguard Target Retirement 2030 Inv	\$ 3,345,847	\$ 3,625,226	6.89%
Vanguard Target Retirement 2035 Inv	\$ 11,656,324	\$ 12,642,433	7.43%
Vanguard Target Retirement 2040 Inv	\$ 4,267,948	\$ 4,701,780	7.90%
Vanguard Target Retirement 2045 Inv	\$ 9,820,875	\$ 10,701,265	8.28%
Vanguard Target Retirement 2050 Inv	\$ 4,050,095	\$ 4,676,830	8.33%
Vanguard Target Retirement 2055 Inv	\$ 685,114	\$ 987,128	8.32%
Vanguard Target Retirement 2060 Inv	\$ 876,162	\$ 917,320	8.32%
Totals/Weighted Average Return	\$ 659,127,230	\$ 718,770,979	7.03%
Weighted Average Variable Funds Return			8.14%
Weighted Average Fixed Income Return			1.04%

# Fee Analysis: Voya

July 1, 2019 - December 31, 2019

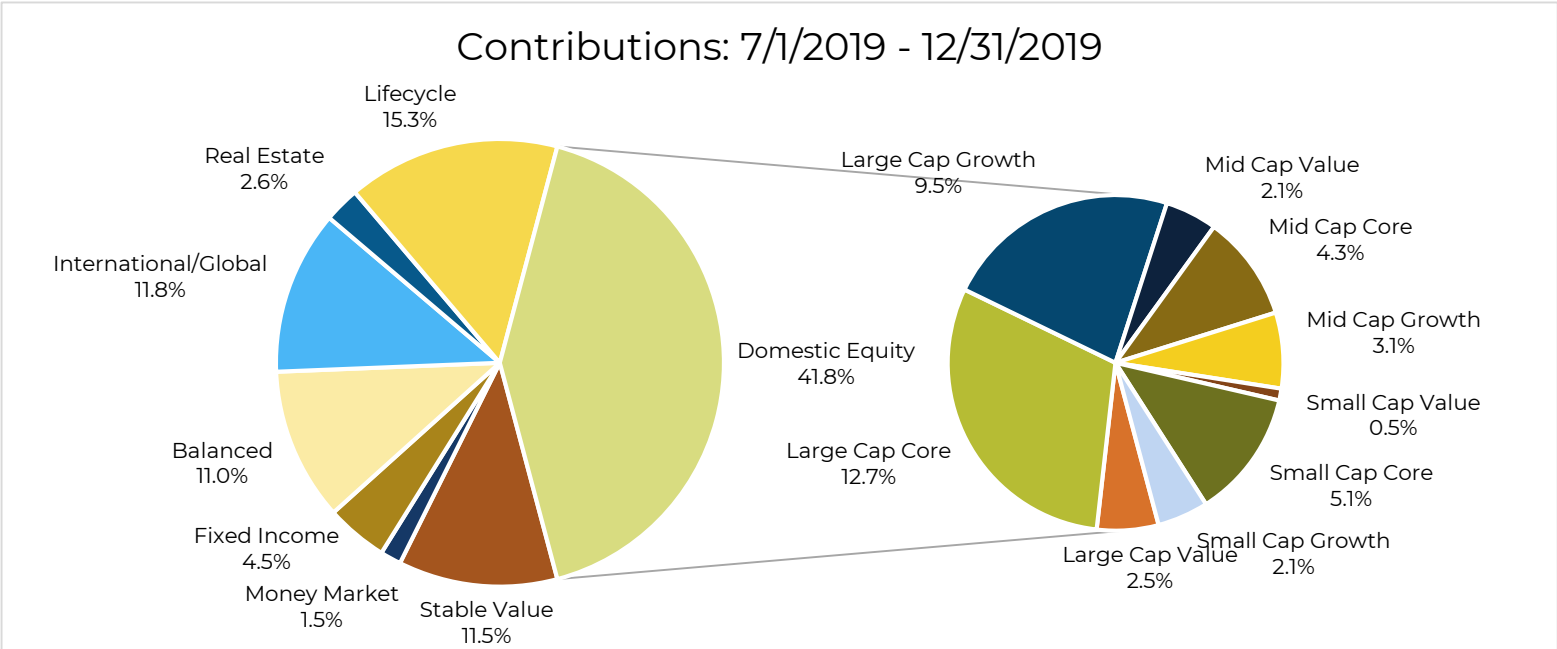
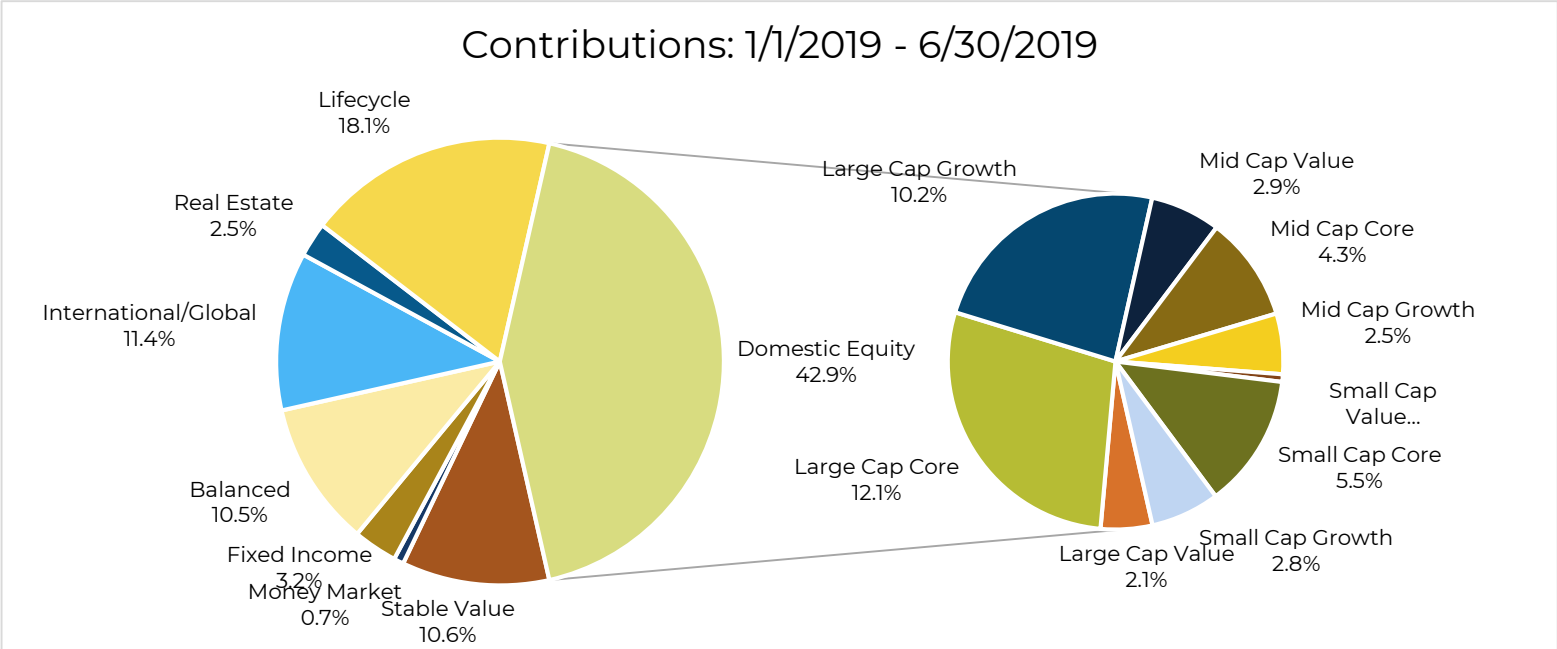
Fund	Ticker	Percent of Balance	Expense Ratio
Voya Fixed Plus Fund 4020	-	13.4%	0.36%
Vanguard Treasury Money Market Investor	VUSXX	0.8%	0.09%
Amana Participation Institutional	AMIPX	0.0%	0.64%
PIMCO Total Return Instl	PTTRX	2.9%	0.71%
Fidelity® US Bond Index	FXNAX	0.6%	0.03%
PIMCO Real Return Instl	PRRIX	0.0%	0.98%
American Funds Inflation Linked Bd R6	RILFX	1.4%	0.32%
Blackrock Equity Dividend Instl	MADVX	2.3%	0.71%
American Funds Fundamental Invs R6	RFNGX	9.5%	0.30%
Vanguard Institutional Index I	VINIX	3.3%	0.04%
Parnassus Core Equity Institutional	PRILX	2.7%	0.63%
Amana Growth Institutional	AMIGX	0.5%	0.79%
Voya Large Cap Growth Port I	IEOHX	11.2%	0.67%
American Century Mid Cap Value I	AVUAX	3.1%	0.78%
Vanguard Mid Cap Index Institutional	VMCIX	4.4%	0.04%
Champlain Mid Cap Institutional	CIPIX	2.1%	0.87%
American Beacon Small Cp Val Inst	AVFIX	0.2%	0.81%
Vanguard Small Cap Index I	VSCIX	4.8%	0.04%
Voya SmallCap Opportunities Port I	IVSOX	2.7%	0.88%
VY® Invesco Oppenheimer Global I	IGMIX	3.3%	0.75%
Vanguard Total Intl Stock Index Admiral	VTIAX	0.1%	0.11%
American Funds Europacific Growth R6	RERGX	5.1%	0.49%
Invesco Oppenheimer Developing Mkts R6	ODVIX	1.7%	0.83%
Vanguard Real Estate Index Institutional	VGSNX	3.0%	0.10%
VY® T. Rowe Price Capital Apprec I	ITRIX	10.3%	0.64%
Vanguard Target Retirement Income Inv	VTINX	2.9%	0.12%
Vanguard Target Retirement 2015 Inv	VTXVX	0.5%	0.13%
Vanguard Target Retirement 2020 Inv	VTWNX	0.4%	0.13%
Vanguard Target Retirement 2025 Inv	VTTVX	1.6%	0.13%
Vanguard Target Retirement 2030 Inv	VTHRX	0.5%	0.14%
Vanguard Target Retirement 2035 Inv	VTTHX	1.8%	0.14%
Vanguard Target Retirement 2040 Inv	VFORX	0.7%	0.14%
Vanguard Target Retirement 2045 Inv	VTIVX	1.5%	0.15%
Vanguard Target Retirement 2050 Inv	VFIFX	0.7%	0.15%
Vanguard Target Retirement 2055 Inv	VFFVX	0.1%	0.15%
Vanguard Target Retirement 2060 Inv	VTTSX	0.1%	0.15%
Totals/Weighted Average Expense Ratio			0.43%
Weighted Average Expense Ratio ex- Stable Value			0.45%

# Asset Allocation: Voya





# Contributions by Asset Class: Voya



# Number of Participants: Voya

July 1, 2019 - December 31, 2019

Fund	Number of Participants
Voya Fixed Plus Fund 4020	1,520
Vanguard Treasury Money Market Investor	187
Amana Participation Institutional	26
PIMCO Total Return Instl	955
Fidelity® US Bond Index	109
PIMCO Real Return Instl	0
American Funds Inflation Linked Bd R6	707
Blackrock Equity Dividend Instl	797
American Funds Fundamental Invs R6	1,815
Vanguard Institutional Index I	826
Parnassus Core Equity Institutional	1,140
Amana Growth Institutional	186
Voya Large Cap Growth Port I	2,786
American Century Mid Cap Value I	1,016
Vanguard Mid Cap Index Institutional	1,812
Champlain Mid Cap Institutional	966
American Beacon Small Cp Val Inst	226
Vanguard Small Cap Index I	2,183
Voya SmallCap Opportunities Port I	1,116
VY® Invesco Oppenheimer Global I	1,494
Vanguard Total Intl Stock Index Admiral	42
American Funds Europacific Growth R6	1,988
Invesco Oppenheimer Developing Mkts R6	1,482
Vanguard Real Estate Index Institutional	1,705
VY® T. Rowe Price Capital Apprec I	2,309
Vanguard Target Retirement Income Inv	232
Vanguard Target Retirement 2015 Inv	58
Vanguard Target Retirement 2020 Inv	47
Vanguard Target Retirement 2025 Inv	162
Vanguard Target Retirement 2030 Inv	82
Vanguard Target Retirement 2035 Inv	269
Vanguard Target Retirement 2040 Inv	138
Vanguard Target Retirement 2045 Inv	283
Vanguard Target Retirement 2050 Inv	223
Vanguard Target Retirement 2055 Inv	98
Vanguard Target Retirement 2060 Inv	83

**Total Unique Participants**

**5,390**


**Asset Summary** (in thousands)

	Current Quarter		Previous Quarter		1 Year Ago		Dec-2018		Dec-2017		Dec-2016	
	(\$)	%	(\$)	%	(\$)	%	(\$)	%	(\$)	%	(\$)	%
<b>Total Plan</b>	<b>718,771</b>	<b>100.0</b>	<b>669,565</b>	<b>100.0</b>	<b>571,032</b>	<b>100.0</b>	<b>571,032</b>	<b>100.0</b>	-	-	-	-
<b>Cash Equivalents</b>	<b>101,917</b>	<b>14.2</b>	<b>106,029</b>	<b>15.8</b>	<b>98,664</b>	<b>17.3</b>	<b>98,664</b>	<b>17.3</b>	-	-	-	-
Vanguard Treasury Money Market Investor (VUSXX)	5,880	0.8	6,161	0.9	3,654	0.6	3,654	0.6	-	-	-	-
Voya Fixed Plus Account III	96,037	13.4	99,868	14.9	95,009	16.6	95,009	16.6	-	-	-	-
<b>Fixed Income</b>	<b>34,850</b>	<b>4.8</b>	<b>27,353</b>	<b>4.1</b>	<b>22,324</b>	<b>3.9</b>	<b>22,324</b>	<b>3.9</b>	-	-	-	-
American Funds Inflation Linked Bond R6 (RILFX)	9,885	1.4	7,815	1.2	-	0.0	-	0.0	-	-	-	-
Fidelity US Bond Index (FXNAX)	4,020	0.6	1,198	0.2	-	0.0	-	0.0	-	-	-	-
PIMCO Total Return Instl (PTTRX)	20,605	2.9	18,166	2.7	15,144	2.7	15,144	2.7	-	-	-	-
Amana Participation Institutional (AMIPX)	339	0.0	174	0.0	33	0.0	33	0.0	-	-	-	-
<b>Domestic Equity</b>	<b>335,678</b>	<b>46.7</b>	<b>307,072</b>	<b>45.9</b>	<b>260,431</b>	<b>45.6</b>	<b>260,431</b>	<b>45.6</b>	-	-	-	-
<b>Large Cap</b>	<b>212,111</b>	<b>29.5</b>	<b>190,971</b>	<b>28.5</b>	<b>162,113</b>	<b>28.4</b>	<b>162,113</b>	<b>28.4</b>	-	-	-	-
BlackRock Equity Dividend Instl (MADVX)	16,547	2.3	13,792	2.1	11,712	2.1	11,712	2.1	-	-	-	-
American Funds Fundamental Invs R6 (RFNGX)	68,401	9.5	63,445	9.5	56,850	10.0	56,850	10.0	-	-	-	-
Parnassus Core Equity Institutional (PRILX)	19,333	2.7	18,036	2.7	14,678	2.6	14,678	2.6	-	-	-	-
Vanguard Institutional Index I (VINIX)	23,468	3.3	19,098	2.9	14,294	2.5	14,294	2.5	-	-	-	-
Amana Growth Institutional (AMIGX)	3,650	0.5	3,095	0.5	1,004	0.2	1,004	0.2	-	-	-	-
Voya Large Cap Growth Port I (IEOHX)	80,713	11.2	73,505	11.0	63,575	11.1	63,575	11.1	-	-	-	-
<b>Mid Cap</b>	<b>68,320</b>	<b>9.5</b>	<b>64,778</b>	<b>9.7</b>	<b>52,922</b>	<b>9.3</b>	<b>52,922</b>	<b>9.3</b>	-	-	-	-
American Century Mid Cap Value I (AVUAX)	22,034	3.1	21,103	3.2	18,668	3.3	18,668	3.3	-	-	-	-
Vanguard Mid Cap Index Institutional (VMCIX)	31,459	4.4	29,233	4.4	24,074	4.2	24,074	4.2	-	-	-	-
Champlain Mid Cap Institutional (CIPIX)	14,827	2.1	14,442	2.2	10,180	1.8	10,180	1.8	-	-	-	-
<b>Small Cap</b>	<b>55,246</b>	<b>7.7</b>	<b>51,323</b>	<b>7.7</b>	<b>45,395</b>	<b>7.9</b>	<b>45,395</b>	<b>7.9</b>	-	-	-	-
American Beacon Small Cp Val Inst (AVFIX)	1,636	0.2	1,430	0.2	1,490	0.3	1,490	0.3	-	-	-	-
Vanguard Small Cap Index I (VSCIX)	34,268	4.8	32,050	4.8	27,166	4.8	27,166	4.8	-	-	-	-
Voya SmallCap Opportunities Port I (IVSOX)	19,342	2.7	17,843	2.7	16,739	2.9	16,739	2.9	-	-	-	-
<b>International Equity</b>	<b>72,927</b>	<b>10.1</b>	<b>66,990</b>	<b>10.0</b>	<b>58,269</b>	<b>10.2</b>	<b>58,269</b>	<b>10.2</b>	-	-	-	-
American Funds Europacific Growth R6 (RERGX)	36,735	5.1	33,933	5.1	29,740	5.2	29,740	5.2	-	-	-	-
Vanguard Total Intl Stock Index Admiral (VTIAX)	465	0.1	128	0.0	-	0.0	-	0.0	-	-	-	-
VY® Oppenheimer Global I (IGMIX)	23,485	3.3	21,540	3.2	18,420	3.2	18,420	3.2	-	-	-	-
Oppenheimer Developing Markets I (ODVIX)	12,242	1.7	11,389	1.7	10,110	1.8	10,110	1.8	-	-	-	-
<b>Specialty</b>	<b>21,888</b>	<b>3.0</b>	<b>21,426</b>	<b>3.2</b>	<b>16,714</b>	<b>2.9</b>	<b>16,714</b>	<b>2.9</b>	-	-	-	-
Vanguard Real Estate Index Institutional (VGSNX)	21,888	3.0	21,426	3.2	16,714	2.9	16,714	2.9	-	-	-	-
<b>Balanced</b>	<b>74,244</b>	<b>10.3</b>	<b>67,788</b>	<b>10.1</b>	<b>51,219</b>	<b>9.0</b>	<b>51,219</b>	<b>9.0</b>	-	-	-	-
VY® T. Rowe Price Capital Apprec I (ITRIX)	74,244	10.3	67,788	10.1	51,219	9.0	51,219	9.0	-	-	-	-



# Asset Summary (in thousands)

Target Date	Current Quarter		Previous Quarter		1 Year Ago		Dec-2018		Dec-2017		Dec-2016	
	(\$)	%	(\$)	%	(\$)	%	(\$)	%	(\$)	%	(\$)	%
<b>Target Date</b>	<b>77,267</b>	<b>10.7</b>	<b>72,907</b>	<b>10.9</b>	<b>63,412</b>	<b>11.1</b>	<b>63,412</b>	<b>11.1</b>	-	-	-	-
Vanguard Target Retirement Income Inv (VTINX)	20,945	2.9	20,317	3.0	19,143	3.4	19,143	3.4	-	-	-	-
Vanguard Target Retirement 2015 Inv (VTXVX)	3,296	0.5	3,211	0.5	3,273	0.6	3,273	0.6	-	-	-	-
Vanguard Target Retirement 2020 Inv (VTWVX)	3,019	0.4	2,776	0.4	2,199	0.4	2,199	0.4	-	-	-	-
Vanguard Target Retirement 2025 Inv (VTTVX)	11,755	1.6	11,346	1.7	10,000	1.8	10,000	1.8	-	-	-	-
Vanguard Target Retirement 2030 Inv (VTHR3)	3,625	0.5	3,414	0.5	2,461	0.4	2,461	0.4	-	-	-	-
Vanguard Target Retirement 2035 Inv (VTTH3)	12,642	1.8	12,034	1.8	10,273	1.8	10,273	1.8	-	-	-	-
Vanguard Target Retirement 2040 Inv (VFOR3)	4,702	0.7	4,234	0.6	3,431	0.6	3,431	0.6	-	-	-	-
Vanguard Target Retirement 2045 Inv (VTIV3)	10,701	1.5	9,739	1.5	8,403	1.5	8,403	1.5	-	-	-	-
Vanguard Target Retirement 2050 Inv (VFIF3)	4,677	0.7	4,097	0.6	3,181	0.6	3,181	0.6	-	-	-	-
Vanguard Target Retirement 2055 Inv (VFFV3)	987	0.1	790	0.1	438	0.1	438	0.1	-	-	-	-
Vanguard Target Retirement 2060 Inv (VTTS3)	917	0.1	950	0.1	608	0.1	608	0.1	-	-	-	-

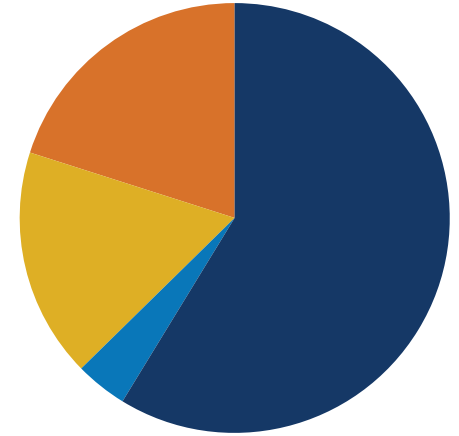
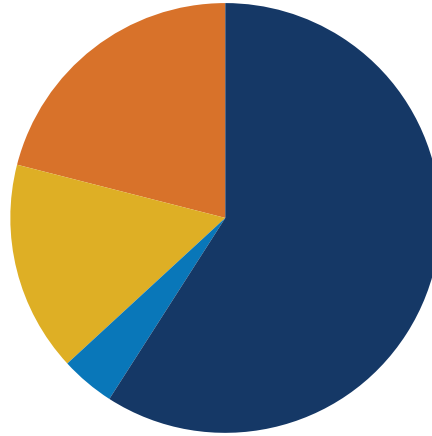
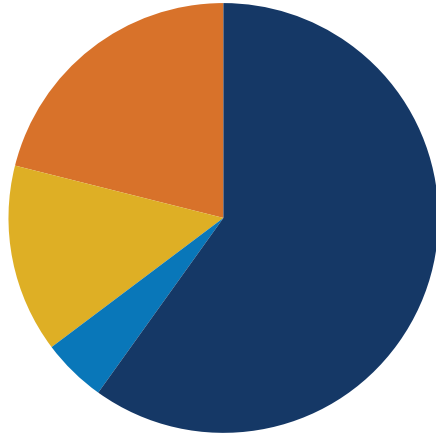


# Historical Asset Allocation (in thousands)

December 31, 2019 | \$718,771

September 30, 2019 | \$669,565

December 31, 2018 | \$571,032

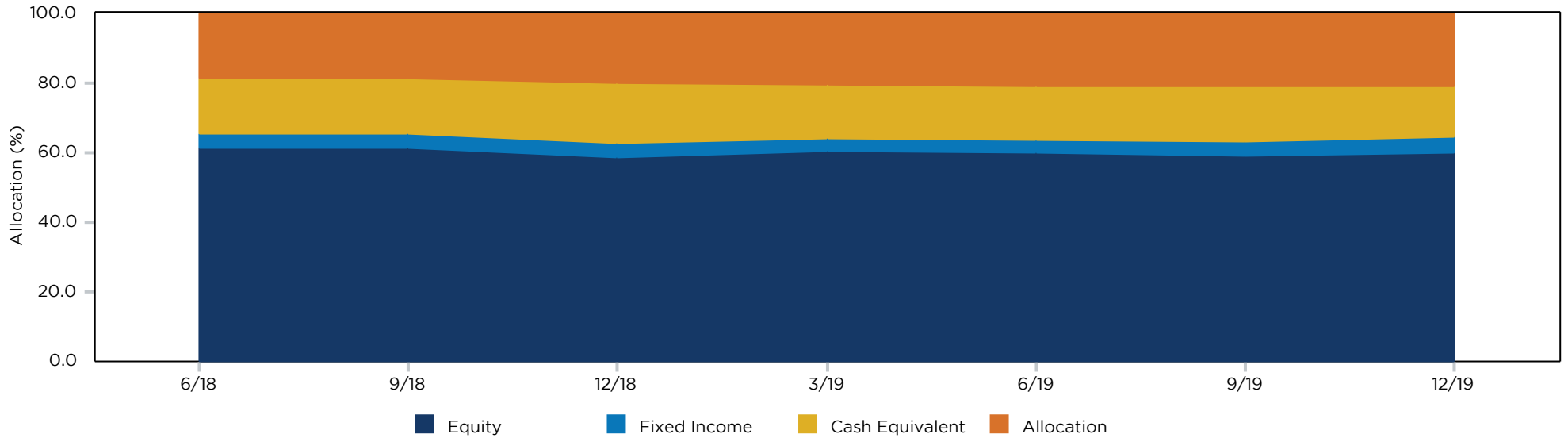


Asset Class	Market Value	Allocation (%)
Equity	430,493	59.9
Fixed Income	34,850	4.8
Cash Equivalent	101,917	14.2
Allocation	151,511	21.1

Asset Class	Market Value	Allocation (%)
Equity	395,488	59.1
Fixed Income	27,353	4.1
Cash Equivalent	106,029	15.8
Allocation	140,695	21.0

Asset Class	Market Value	Allocation (%)
Equity	335,414	58.7
Fixed Income	22,324	3.9
Cash Equivalent	98,664	17.3
Allocation	114,631	20.1

As of December 31, 2019





# Fiduciary Scorecard

Fund Name	Mgmt.	Operations	Style	Near-Term Result	Long-Term Return	Long-Term Alpha	Long-Term Up Mkt.	Long-Term Down Mkt.	Long-Term Sharpe	Overall Long-Term Result
Vanguard Treasury Money Market Investor (VUSXX)	Pass	Pass	Pass	✓	✓	✓	✓		✓	✓
Voya Fixed Plus Account III	Pass	Pass	Pass	✓	✓					
American Funds Inflation Linked Bond R6 (RILFX)	Pass	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
Fidelity US Bond Index (FXNAX)	Pass	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
PIMCO Total Return Instl (PTTRX)	Note	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
Amana Participation Institutional (AMIPX)	Pass	Pass	Pass	✗						
BlackRock Equity Dividend Instl (MADVX)	Pass	Pass	Pass	✓	✓	✓	✗	✓	✓	✓
American Funds Fundamental Invs R6 (RFNGX)	Pass	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
Parnassus Core Equity Institutional (PRILX)	Pass	Pass	Pass	✓	✓	✓	✗	✓	✓	✓
Vanguard Institutional Index I (VINIX)	Pass	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
Amana Growth Institutional (AMIGX)	Pass	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
Voya Large Cap Growth Port I (IEOHX)	Pass	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
American Century Mid Cap Value I (AVUAX)	Pass	Pass	Pass	✓	✓	✓	✗	✓	✓	✓
Vanguard Mid Cap Index Institutional (VMCIX)	Pass	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
Champlain Mid Cap Institutional (CIPIX)	Pass	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
American Beacon Small Cp Val Inst (AVFIX)	Pass	Pass	Pass	✓	✓	✓	✓	✗	✓	✓
Vanguard Small Cap Index I (VSCIX)	Pass	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
Voya SmallCap Opportunities Port I (IVSOX)	Pass	Pass	Pass	✗	✓	✗	✓	✓	✓	✓
American Funds Europacific Growth R6 (RERGX)	Pass	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
Vanguard Total Intl Stock Index Admiral (VTIAX)	Pass	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
VY® Oppenheimer Global I (IGMIX)	Pass	Pass	Pass	✓	✓	✓	✓	✗	✓	✓
Oppenheimer Developing Markets I (ODVIX)	Pass	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
Vanguard Real Estate Index Institutional (VGSNX)	Pass	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
VY® T. Rowe Price Capital Apprec I (ITRIX)	Pass	Pass	Pass	✓	✓	✓	✓	✓	✓	✓
Vanguard Target Retirement Target Date Series	Pass	Note	Pass	✓	✓	✓	✓	✓	✓	✓



## Scorecard Definitions

### Qualitative Factors

Management: An evaluation of an investment's organization and/or personnel.

Operations: An evaluation of an investment's asset size and change. Appropriate expenses.

Style: An evaluation of an investment's style, philosophy and/or consistency.

**Near-Term Result** : An evaluation of relative performance to the investment's designated peer group. A three-year period or a time period that more appropriately represents the Designated Investment Alternative's investment style is typically used.

**Long-Term Performance** : A ten-year period of the performance measures will typically be used.

Return: An evaluation of relative performance to the investment's designated peer group.

Alpha: An evaluation of risk-adjusted return relative to the investment's designated peer group.

Up Market: An evaluation of return relative to the investment's designated peer group in positive market periods.

Down Market: An evaluation of return relative to the investment's designated peer group in negative market periods.

Sharpe Ratio: An evaluation of the Sharpe ratio (return per unit of risk) relative to the investment's designated peer group.

**Overall Long-Term Result** : Aggregate evaluation of relative performance to the investment's designated peer group across factors including return, alpha, up market capture, down market capture and Sharpe ratio.

**PIMCO Total Return**

Mihir Worah, CIO of Asset Allocation and Real Return, will be retiring from PIMCO and the industry at the end of March 2020. PIMCO began transitioning his portfolio management responsibilities during the 4th quarter, promoting Mohit Mittal to co-portfolio manager. Scott Mather remains as the fund's lead portfolio manager with Mark Kiesel offering corporate credit expertise. Mohit has been with PIMCO for 13 years. The fund trailed its index and peer group in 2019 following strong performance during volatile credit markets in the latter part of 2018. The fund managers' overweight positioning in US government and securitized investments coupled with a bias towards higher credit quality, hurt relative performance, particularly versus the intermediate core-plus peer group. *4Q 2019*

**Recommendation: No Action**

**Amana Participation**

The fund invests in sukuk, which resemble conventional bonds by offering investors income and return of principle but have an equity-like component that link returns and cash flows of financing to an underlying asset. Relative to the emerging market bond peers, the fund's performance is more sensitive to geopolitical turmoil in the Middle East. Although the fund has only 2.8% allocated directly to the energy sector, much of the economic strength of its financial and government holdings rely on oil prices which have slumped amid increased global supply, hampering relative performance. The fund's assets increased by 54% over the past year. The fund's assets are \$0.11 billion. *4Q 2019*

**Recommendation: No Action**

**Vanguard Target Retirement Date Series**

The 2065 vintage fund's assets increased by 101% over the past year. The fund's assets are \$0.48 billion. *4Q 2019*

**Recommendation: No Action**





# Performance Summary

	Allocation		Performance (%) as of 12/31/2019					Net Expense Ratio
	Market Value (\$000)	%	1 Quarter	1 Year	3 Years	5 Years	10 Years	
Total Plan	718,771	100.0	-	-	-	-	-	-
Vanguard Treasury Money Market Investor (VUSXX)	5,880	0.8	0.43 (3)	2.14 (4)	1.57 (3)	1.00 (2)	0.50 (5)	0.09
+/- Blmbg. Barc. U.S. Treasury Bills: 1-3 Months			-0.01	-0.07	-0.04	-0.02	-0.05	-
Money Market-Taxable Median			0.35	1.83	1.25	0.75	0.38	-
Voya Fixed Plus Account III	96,037	13.4	0.50	2.15	2.18	2.32	2.65	-
+/- Ryan 3 Yr GIC Master Index			-0.11	-0.23	0.20	0.62	0.85	-
American Funds Inflation Linked Bond R6 (RILFX)	9,885	1.4	1.23 (14)	7.06 (64)	3.08 (39)	2.61 (16)	-	0.32
+/- Bloomberg Barclays U.S. TIPS Index			0.44	-1.37	-0.24	-0.01	-	-
Inflation-Protected Bond Median			0.85	7.86	2.91	2.19	-	0.74
Fidelity US Bond Index (FXNAX)	4,020	0.6	0.06 (64)	8.48 (54)	3.94 (43)	2.99 (40)	3.67 (50)	0.03
+/- Blmbg. Barc. U.S. Aggregate Index			-0.12	-0.24	-0.09	-0.06	-0.08	-
Intermediate Core Bond Median			0.15	8.55	3.81	2.86	3.66	0.67
PIMCO Total Return Instl (PTTRX)	20,605	2.9	-0.30 (94)	8.26 (73)	4.31 (36)	3.25 (45)	4.19 (54)	0.71
+/- Blmbg. Barc. U.S. Aggregate Index			-0.48	-0.46	0.28	0.20	0.44	-
Intermediate Core-Plus Bond Median			0.38	8.94	4.12	3.14	4.27	0.80
Amana Participation Institutional (AMIPX)	339	0.0	0.18	6.95	3.21	-	-	0.64
+/- Dow Jones Sukuk Index			-0.51	-3.82	-1.82	-	-	-
BlackRock Equity Dividend Instl (MADVX)	16,547	2.3	8.33 (28)	27.52 (25)	11.39 (22)	9.92 (8)	11.40 (35)	0.71
+/- Russell 1000 Value Index			0.92	0.98	1.71	1.63	-0.40	-
Large Value Median			7.29	25.48	9.81	8.06	10.96	0.99
American Funds Fundamental Invs R6 (RFNGX)	68,401	9.5	11.07 (4)	28.02 (71)	14.05 (50)	11.67 (10)	12.73 (44)	0.30
+/- S&P 500 Index			2.00	-3.47	-1.22	-0.03	-0.83	-
Large Blend Median			8.83	30.17	14.03	10.44	12.52	0.94
Parnassus Core Equity Institutional (PRILX)	19,333	2.7	6.32 (88)	30.96 (38)	15.24 (16)	11.03 (36)	12.97 (35)	0.63
+/- S&P 500 Index			-2.75	-0.53	-0.03	-0.67	-0.59	-
Large Blend Median			8.83	30.17	14.03	10.44	12.52	0.94
Vanguard Institutional Index I (VINIX)	23,468	3.3	9.06 (30)	31.46 (23)	15.24 (17)	11.67 (10)	13.53 (9)	0.04
+/- S&P 500 Index			-0.01	-0.03	-0.03	-0.03	-0.03	-
Large Blend Median			8.83	30.17	14.03	10.44	12.52	0.94



# Performance Summary

	Allocation		Performance (%) as of 12/31/2019					Net Expense Ratio
	Market Value (\$000)	%	1 Quarter	1 Year	3 Years	5 Years	10 Years	
Amana Growth Institutional (AMIGX)	3,650	0.5	8.65 (73)	33.41 (40)	20.99 (27)	13.77 (32)	12.98 (69)	0.79
+/- S&P 500 Index			-0.42	1.92	5.72	2.07	-0.58	-
Large Growth Median			9.56	32.39	18.89	12.67	13.68	1.06
Voya Large Cap Growth Port I (IEOHX)	80,713	11.2	9.26 (58)	32.76 (47)	19.28 (47)	13.42 (39)	14.50 (27)	0.67
+/- Russell 1000 Growth Index			-1.36	-3.63	-1.21	-1.21	-0.72	-
Large Growth Median			9.56	32.39	18.89	12.67	13.68	1.06
American Century Mid Cap Value I (AVUAX)	22,034	3.1	6.75 (54)	29.12 (29)	7.96 (42)	8.84 (12)	12.42 (13)	0.78
+/- Russell Midcap Value Index			0.39	2.06	-0.14	1.22	0.01	-
Mid-Cap Value Median			6.83	26.69	7.66	7.08	10.85	1.09
Vanguard Mid Cap Index Institutional (VMCIX)	31,459	4.4	6.87 (63)	31.04 (15)	12.37 (9)	9.26 (12)	13.09 (6)	0.04
+/- CRSP U.S. Mid Cap TR Index			-0.01	-0.05	-0.02	-0.03	-0.16	-
Mid-Cap Blend Median			6.99	26.22	9.16	8.04	11.63	1.06
Champlain Mid Cap Institutional (CIPIX)	14,827	2.1	6.51 (77)	26.55 (94)	16.21 (54)	13.56 (11)	14.49 (19)	0.87
+/- Russell Midcap Growth Index			-1.66	-8.92	-1.15	1.96	0.25	-
Mid-Cap Growth Median			7.82	33.55	16.44	10.96	13.05	1.18
American Beacon Small Cp Val Inst (AVFIX)	1,636	0.2	9.29 (18)	23.51 (29)	4.23 (49)	6.39 (38)	10.93 (28)	0.81
+/- Russell 2000 Value Index			0.80	1.12	-0.54	-0.60	0.37	-
Small Value Median			8.01	21.95	4.12	5.83	10.26	1.23
Vanguard Small Cap Index I (VSCIX)	34,268	4.8	8.14 (57)	27.40 (17)	10.33 (7)	8.90 (17)	12.83 (10)	0.04
+/- CRSP U.S. Small Cap TR Index			0.02	0.05	0.02	0.04	-0.16	-
Small Blend Median			8.34	24.67	7.60	7.56	11.44	1.13
Voya SmallCap Opportunities Port I (IVSOX)	19,342	2.7	10.14 (38)	25.70 (64)	7.88 (89)	7.13 (88)	12.28 (66)	0.88
+/- Russell 2000 Growth Index			-1.25	-2.78	-4.61	-2.21	-0.73	-
Small Growth Median			9.47	28.03	13.93	9.98	13.00	1.24
American Funds Europacific Growth R6 (RERGX)	36,735	5.1	10.09 (38)	27.40 (60)	12.45 (51)	7.41 (43)	6.73 (53)	0.49
+/- MSCI AC World ex USA (Net)			1.17	5.89	2.58	1.90	1.76	-
Foreign Large Growth Median			9.64	27.86	12.45	7.09	6.79	1.13
Vanguard Total Intl Stock Index Admiral (VTIAX)	465	0.1	9.01 (37)	21.51 (61)	9.87 (34)	5.85 (31)	5.10 (58)	0.11
+/- FTSE Global ex USA All Cap Index (Net)			-0.25	-0.29	0.03	0.01	-0.29	-
Foreign Large Blend Median			8.69	21.85	9.23	5.39	5.25	1.01



# Performance Summary

	Allocation		Performance (%) as of 12/31/2019					Net Expense Ratio
	Market Value (\$000)	%	1 Quarter	1 Year	3 Years	5 Years	10 Years	
VY® Invesco Oppenheimer Global I (IGMIX)	23,485	3.3	13.14 (3)	31.80 (13)	16.02 (19)	10.26 (21)	10.65 (16)	0.75
+/- MSCI World Index			4.46	3.40	2.82	0.90	0.57	-
World Large Stock Median			8.58	26.49	11.84	8.03	8.99	1.13
Invesco Oppenheimer Developing Markets I (ODVIX)	12,242	1.7	11.88 (29)	24.53 (24)	14.13 (16)	6.62 (24)	6.12 (7)	0.83
+/- MSCI Emerging Markets (Net) Index			0.04	6.09	2.56	1.01	2.44	-
Diversified Emerging Mkts Median			11.22	19.76	10.83	5.25	3.67	1.34
Vanguard Real Estate Index Institutional (VGSNX)	21,888	3.0	0.63 (27)	29.02 (32)	8.39 (43)	7.20 (37)	12.01 (25)	0.10
+/- Spliced Index*			-0.02	-0.01	-0.07	-0.07	-0.05	-
Real Estate Median			0.14	27.15	7.97	6.70	11.36	1.21
VY® T. Rowe Price Capital Apprec I (ITRIX)	74,244	10.3	5.50 (36)	24.71 (2)	13.17 (2)	10.61 (1)	11.93 (1)	0.64
+/- 40% BBg US Agg   60% SP500			0.04	2.53	2.30	2.24	2.16	-
Allocation--50% to 70% Equity Median			5.25	19.29	8.64	6.26	8.01	1.10
Vanguard Target Retirement Income Inv (VTINX)	20,945	2.9	2.60 (60)	13.16 (53)	6.36 (40)	4.80 (31)	5.82 (23)	0.12
+/- Vanguard Target Income Composite Index			-0.12	-0.25	-0.15	-0.17	-0.15	-
Target-Date Retirement Median			2.70	13.22	6.00	4.34	5.15	0.76
Vanguard Target Retirement 2015 Inv (VTXVX)	3,296	0.5	3.20 (84)	14.81 (63)	7.50 (35)	5.59 (40)	7.25 (37)	0.13
+/- Vanguard Target 2015 Composite Index			-0.14	-0.28	-0.15	-0.19	-0.14	-
Target-Date 2015 Median			3.72	15.04	7.12	5.33	7.09	0.67
Vanguard Target Retirement 2020 Inv (VTWNX)	3,019	0.4	4.46 (30)	17.63 (24)	8.72 (17)	6.42 (17)	8.03 (17)	0.13
+/- Vanguard Target 2020 Composite Index			-0.09	-0.24	-0.16	-0.20	-0.23	-
Target-Date 2020 Median			4.05	16.22	7.66	5.65	7.49	0.75
Vanguard Target Retirement 2025 Inv (VTTVX)	11,755	1.6	5.22 (30)	19.63 (24)	9.57 (18)	6.99 (17)	8.59 (22)	0.13
+/- Vanguard Target 2025 Composite Index			-0.14	-0.30	-0.19	-0.21	-0.24	-
Target-Date 2025 Median			4.84	18.47	8.62	6.37	8.12	0.73
Vanguard Target Retirement 2030 Inv (VTHR30)	3,625	0.5	5.95 (34)	21.07 (33)	10.24 (24)	7.41 (23)	9.07 (27)	0.14
+/- Vanguard Target 2030 Composite Index			-0.12	-0.27	-0.17	-0.21	-0.24	-
Target-Date 2030 Median			5.75	20.52	9.52	6.90	8.66	0.77
Vanguard Target Retirement 2035 Inv (VTTHX)	12,642	1.8	6.68 (47)	22.44 (48)	10.86 (28)	7.81 (27)	9.54 (23)	0.14
+/- Vanguard Target 2035 Composite Index			-0.11	-0.32	-0.19	-0.22	-0.24	-
Target-Date 2035 Median			6.61	22.36	10.27	7.43	9.14	0.76

\*Spliced Index: MSCI US REIT Index through 1/31/2018; MSCI US IMI Real Estate 25/50 Transition through 7/24/2018; MSCI US IMI Real Estate 25/50 thereafter.



# Performance Summary

	Allocation		Performance (%) as of 12/31/2019					Net Expense Ratio
	Market Value (\$000)	%	1 Quarter	1 Year	3 Years	5 Years	10 Years	
Vanguard Target Retirement 2040 Inv (VFORX)	4,702	0.7	7.38 (36)	23.86 (43)	11.48 (24)	8.20 (23)	9.87 (21)	0.14
+/- Vanguard Target 2040 Composite Index			-0.12	-0.33	-0.19	-0.23	-0.27	-
Target-Date 2040 Median			7.15	23.65	10.74	7.70	9.32	0.79
Vanguard Target Retirement 2045 Inv (VTIVX)	10,701	1.5	8.00 (35)	24.94 (39)	11.80 (25)	8.41 (24)	9.98 (25)	0.15
+/- Vanguard Target 2045 Composite Index			-0.15	-0.43	-0.21	-0.25	-0.27	-
Target-Date 2045 Median			7.68	24.63	11.08	7.97	9.55	0.76
Vanguard Target Retirement 2050 Inv (VFIFX)	4,677	0.7	8.01 (33)	24.98 (45)	11.80 (29)	8.41 (27)	9.98 (31)	0.15
+/- Vanguard Target 2050 Composite Index			-0.14	-0.39	-0.21	-0.25	-0.27	-
Target-Date 2050 Median			7.65	24.78	11.13	8.05	9.62	0.80
Vanguard Target Retirement 2055 Inv (VFFVX)	987	0.1	8.02 (43)	24.98 (55)	11.80 (33)	8.38 (36)	-	0.15
+/- Vanguard Target 2055 Composite Index			-0.13	-0.39	-0.21	-0.28	-	-
Target-Date 2055 Median			7.88	25.10	11.30	8.17	-	0.77
Vanguard Target Retirement 2060 Inv (VTTSX)	917	0.1	8.02 (44)	24.96 (62)	11.79 (36)	8.38 (62)	-	0.15
+/- Vanguard Target 2060 Composite Index			-0.13	-0.41	-0.22	-0.28	-	-
Target-Date 2060+ Median			7.94	25.29	11.44	8.46	-	0.76



# Performance Summary - Calendar Year

	Performance (%)									
	2018	2017	2016	2015	2014	2013	2012	2011		
Vanguard Treasury Money Market Investor (VUSXX)	1.80 (2)	0.79 (4)	0.25 (8)	0.02 (20)	0.01 (52)	0.01 (26)	0.02 (23)	0.02 (25)		
+/- Blmbg. Barc. U.S. Treasury Bills: 1-3 Months	-0.02	-0.03	-0.01	-0.01	-0.01	-0.04	-0.06	-0.05		
Money Market-Taxable Median	1.47	0.46	0.03	0.01	0.01	0.01	0.01	0.01		
Voya Fixed Plus Account III	1.75	1.75	2.06	2.12	2.12	2.24	2.50	2.86		
+/- Ryan 3 Yr GIC Master Index	-0.21	0.15	0.67	0.96	1.09	1.18	1.02	0.42		
American Funds Inflation Linked Bond R6 (RILFX)	-0.57 (18)	2.88 (44)	4.88 (25)	-0.96 (16)	4.94 (6)	-7.75 (27)	-	-		
+/- Bloomberg Barclays U.S. TIPS Index	0.69	-0.13	0.20	0.48	1.30	0.86	-	-		
Inflation-Protected Bond Median	-1.51	2.74	4.42	-1.90	2.74	-8.68	-	-		
Fidelity US Bond Index (FXNAX)	0.01 (28)	3.50 (45)	2.52 (57)	0.63 (20)	5.99 (27)	-2.19 (57)	4.23 (68)	7.79 (17)		
+/- Blmbg. Barc. U.S. Aggregate Index	0.00	-0.04	-0.13	0.08	0.02	-0.17	0.02	-0.05		
Intermediate Core Bond Median	-0.32	3.42	2.60	0.26	5.60	-2.09	5.33	6.96		
PIMCO Total Return Instl (PTTRX)	-0.26 (30)	5.13 (17)	2.60 (82)	0.73 (11)	4.69 (72)	-1.92 (78)	10.36 (12)	4.16 (89)		
+/- Blmbg. Barc. U.S. Aggregate Index	-0.27	1.59	-0.05	0.18	-1.28	0.10	6.15	-3.68		
Intermediate Core-Plus Bond Median	-0.61	4.27	3.86	-0.45	5.42	-0.90	7.76	6.62		
Amana Participation Institutional (AMIPX)	0.11	2.68	2.56	-	-	-	-	-		
+/- Dow Jones Sukuk Index	-0.16	-1.63	-1.45	-	-	-	-	-		
BlackRock Equity Dividend Instl (MADVX)	-7.17 (27)	16.76 (41)	16.21 (33)	-0.10 (10)	9.35 (77)	24.67 (95)	12.18 (81)	5.92 (13)		
+/- Russell 1000 Value Index	1.10	3.10	-1.13	3.73	-4.10	-7.86	-5.33	5.53		
Large Value Median	-8.87	16.19	14.57	-3.52	11.03	31.87	15.43	-0.25		
American Funds Fundamental Invs R6 (RFNGX)	-6.33 (60)	23.72 (11)	12.88 (17)	3.71 (6)	9.27 (83)	31.94 (57)	17.53 (14)	-1.57 (75)		
+/- S&P 500 Index	-1.95	1.89	0.92	2.33	-4.42	-0.45	1.53	-3.68		
Large Blend Median	-5.56	21.15	11.16	0.29	12.24	32.19	15.72	0.83		
Parnassus Core Equity Institutional (PRILX)	0.05 (2)	16.81 (88)	10.60 (57)	-0.33 (60)	14.70 (9)	34.15 (23)	15.64 (53)	3.38 (12)		
+/- S&P 500 Index	4.43	-5.02	-1.36	-1.71	1.01	1.76	-0.36	1.27		
Large Blend Median	-5.56	21.15	11.16	0.29	12.24	32.19	15.72	0.83		
Vanguard Institutional Index I (VINIX)	-4.42 (24)	21.79 (30)	11.93 (30)	1.37 (22)	13.65 (19)	32.35 (45)	15.98 (40)	2.09 (21)		
+/- S&P 500 Index	-0.04	-0.04	-0.03	-0.01	-0.04	-0.04	-0.02	-0.02		
Large Blend Median	-5.56	21.15	11.16	0.29	12.24	32.19	15.72	0.83		



# Performance Summary - Calendar Year

	Performance (%)									
	2018	2017	2016	2015	2014	2013	2012	2011		
Amana Growth Institutional (AMIGX)	2.67 (11)	29.29 (46)	7.85 (17)	-0.21 (86)	14.29 (10)	22.95 (100)	11.21 (93)	-1.86 (55)		
+/- S&P 500 Index	7.05	7.46	-4.11	-1.59	0.60	-9.44	-4.79	-3.97		
Large Growth Median	-1.85	28.66	2.94	4.47	10.52	34.47	15.56	-1.46		
Voya Large Cap Growth Port I (IEOHX)	-1.48 (45)	29.74 (42)	3.96 (44)	6.38 (32)	13.62 (17)	30.95 (80)	18.10 (24)	2.48 (15)		
+/- Russell 1000 Growth Index	0.03	-0.47	-3.12	0.71	0.57	-2.53	2.84	-0.16		
Large Growth Median	-1.85	28.66	2.94	4.47	10.52	34.47	15.56	-1.46		
American Century Mid Cap Value I (AVUAX)	-12.84 (40)	11.79 (71)	23.07 (14)	-1.36 (15)	16.55 (4)	30.26 (90)	16.66 (45)	-0.52 (22)		
+/- Russell Midcap Value Index	-0.55	-1.55	3.07	3.42	1.80	-3.20	-1.85	0.86		
Mid-Cap Value Median	-13.46	13.37	17.59	-4.30	10.11	34.19	16.45	-3.69		
Vanguard Mid Cap Index Institutional (VMCIX)	-9.24 (21)	19.29 (18)	11.23 (78)	-1.33 (14)	13.78 (8)	35.17 (40)	16.01 (69)	-1.96 (38)		
+/- CRSP U.S. Mid Cap TR Index	-0.02	-0.01	-0.02	-0.05	-0.05	-0.10	-0.69	-0.17		
Mid-Cap Blend Median	-11.32	16.12	15.96	-3.02	9.28	33.59	17.37	-2.34		
Champlain Mid Cap Institutional (CIPIX)	3.76 (6)	19.50 (86)	18.68 (3)	1.41 (33)	7.98 (43)	37.56 (32)	11.88 (77)	2.52 (13)		
+/- Russell Midcap Growth Index	8.51	-5.77	11.35	1.61	-3.92	1.82	-3.93	4.17		
Mid-Cap Growth Median	-5.54	24.67	5.93	-0.21	7.51	36.01	14.90	-3.82		
American Beacon Small Cp Val Inst (AVFIX)	-15.63 (54)	8.67 (53)	26.77 (41)	-5.04 (36)	4.70 (45)	40.06 (19)	16.52 (51)	-4.05 (47)		
+/- Russell 2000 Value Index	-2.77	0.83	-4.97	2.43	0.48	5.54	-1.53	1.45		
Small Value Median	-15.29	8.83	26.03	-6.33	4.34	36.35	16.52	-4.31		
Vanguard Small Cap Index I (VSCIX)	-9.32 (19)	16.25 (13)	18.32 (74)	-3.63 (39)	7.53 (17)	37.80 (55)	18.26 (18)	-2.65 (42)		
+/- CRSP U.S. Small Cap TR Index	0.01	0.01	0.06	0.05	-0.01	-0.68	-0.33	-0.80		
Small Blend Median	-11.87	13.20	20.84	-4.35	4.96	38.15	15.88	-3.34		
Voya SmallCap Opportunities Port I (IVSOX)	-15.87 (95)	18.73 (69)	13.40 (32)	-0.91 (32)	5.62 (27)	39.07 (69)	15.18 (39)	0.85 (22)		
+/- Russell 2000 Growth Index	-6.56	-3.44	2.08	0.47	0.02	-4.23	0.59	3.76		
Small Growth Median	-5.94	21.90	10.89	-2.26	3.21	41.62	14.37	-2.33		
American Funds Europacific Growth R6 (RERGX)	-14.91 (56)	31.17 (46)	1.01 (27)	-0.48 (63)	-2.29 (29)	20.58 (48)	19.64 (43)	-13.31 (56)		
+/- MSCI AC World ex USA (Net)	-0.71	3.98	-3.49	5.18	1.58	5.29	2.81	0.40		
Foreign Large Growth Median	-14.33	30.72	-1.50	0.37	-4.16	20.15	19.12	-12.68		
Vanguard Total Intl Stock Index Admiral (VTIAX)	-14.43 (47)	27.55 (25)	4.67 (15)	-4.26 (78)	-4.17 (31)	15.14 (84)	18.21 (45)	-14.52 (71)		
+/- FTSE Global ex USA All Cap Index (Net)	0.18	0.14	-0.05	0.03	-0.78	-0.45	0.61	-0.27		
Foreign Large Blend Median	-14.64	25.39	1.11	-1.22	-5.33	20.36	17.98	-13.11		



# Performance Summary - Calendar Year

	Performance (%)									
	2018	2017	2016	2015	2014	2013	2012	2011		
VY® Oppenheimer Global I (IGMIX)	-13.19 (82)	36.49 (4)	0.22 (87)	4.13 (12)	2.32 (63)	27.12 (38)	21.70 (9)	-8.13 (63)		
+/- MSCI World Index	-4.99	13.42	-7.93	4.45	-3.18	-0.25	5.16	-3.11		
World Large Stock Median	-9.69	23.76	5.45	-1.35	3.26	25.76	16.23	-7.24		
Oppenheimer Developing Markets I (ODVIX)	-11.79 (8)	35.33 (54)	7.38 (60)	-13.67 (46)	-4.39 (70)	8.85 (14)	21.43 (25)	-18.10 (37)		
+/- MSCI Emerging Markets (Net) Index	2.79	-1.95	-3.81	1.25	-2.20	11.45	3.20	0.32		
Diversified Emerging Mkts Median	-16.30	35.89	8.87	-14.01	-2.85	-1.33	18.98	-18.81		
Vanguard Real Estate Index Institutional (VGSNX)	-5.93 (58)	4.93 (62)	8.51 (18)	2.45 (64)	30.28 (37)	2.48 (31)	17.65 (31)	8.70 (40)		
+/- Spliced Index	-0.05	-0.14	-0.09	-0.07	-0.10	0.01	-0.12	0.01		
Real Estate Median	-5.40	5.44	6.47	3.04	29.75	1.77	16.94	7.96		
VY® T. Rowe Price Capital Apprec I (ITRIX)	0.74 (1)	15.39 (26)	8.31 (26)	5.47 (1)	12.47 (2)	22.49 (7)	14.78 (7)	3.16 (12)		
+/- 40% BBg US Agg   60% SP500	3.09	1.18	0.00	4.19	1.85	4.93	3.47	-1.53		
Allocation--50% to 70% Equity Median	-5.68	14.18	6.82	-1.16	5.99	17.15	12.24	0.04		
Vanguard Target Retirement Income Inv (VTINX)	-1.99 (15)	8.47 (56)	5.25 (49)	-0.17 (10)	5.54 (10)	5.87 (41)	8.23 (58)	5.25 (5)		
+/- Vanguard Target Income Composite Index	-0.02	-0.21	-0.10	-0.30	-0.22	-0.16	-0.19	-0.05		
Target-Date Retirement Median	-3.31	8.76	5.24	-1.09	4.41	5.43	8.60	2.67		
Vanguard Target Retirement 2015 Inv (VTXVX)	-2.97 (17)	11.50 (51)	6.16 (64)	-0.46 (25)	6.56 (6)	13.00 (42)	11.37 (58)	1.71 (40)		
+/- Vanguard Target 2015 Composite Index	-0.10	-0.11	-0.24	-0.24	-0.21	-0.27	-0.09	0.15		
Target-Date 2015 Median	-3.87	11.51	6.47	-0.92	5.31	12.51	11.72	1.09		
Vanguard Target Retirement 2020 Inv (VTWNX)	-4.24 (44)	14.08 (18)	6.95 (37)	-0.68 (37)	7.11 (4)	15.85 (28)	12.35 (46)	0.60 (43)		
+/- Vanguard Target 2020 Composite Index	-0.11	-0.14	-0.22	-0.28	-0.26	-0.36	-0.12	-0.39		
Target-Date 2020 Median	-4.45	12.74	6.58	-1.10	5.53	13.43	12.13	0.09		
Vanguard Target Retirement 2025 Inv (VTTVX)	-5.15 (44)	15.94 (21)	7.48 (35)	-0.85 (39)	7.17 (7)	18.14 (29)	13.29 (58)	-0.37 (37)		
+/- Vanguard Target 2025 Composite Index	-0.15	-0.14	-0.19	-0.27	-0.28	-0.38	-0.10	-0.44		
Target-Date 2025 Median	-5.38	14.89	7.14	-1.13	5.76	16.84	13.62	-1.29		
Vanguard Target Retirement 2030 Inv (VTHRX)	-5.86 (37)	17.52 (32)	7.85 (43)	-1.03 (43)	7.17 (11)	20.49 (29)	14.24 (44)	-1.27 (38)		
+/- Vanguard Target 2030 Composite Index	-0.14	-0.14	-0.26	-0.24	-0.34	-0.39	-0.07	-0.38		
Target-Date 2030 Median	-6.29	16.73	7.64	-1.27	5.88	18.78	14.07	-2.12		
Vanguard Target Retirement 2035 Inv (VTTHX)	-6.58 (32)	19.12 (34)	8.26 (44)	-1.26 (49)	7.24 (11)	22.82 (27)	15.16 (44)	-2.24 (39)		
+/- Vanguard Target 2035 Composite Index	-0.12	-0.13	-0.29	-0.24	-0.33	-0.45	-0.07	-0.38		
Target-Date 2035 Median	-7.18	18.39	8.10	-1.34	6.04	20.92	14.94	-2.92		



# Performance Summary - Calendar Year

	Performance (%)									
	2018	2017	2016	2015	2014	2013	2012	2011		
Vanguard Target Retirement 2040 Inv (VFORX)	-7.32 (38)	20.71 (25)	8.73 (39)	-1.59 (54)	7.15 (18)	24.37 (24)	15.56 (39)	-2.55 (33)		
+/- Vanguard Target 2040 Composite Index	-0.10	-0.15	-0.25	-0.34	-0.46	-0.42	-0.02	-0.44		
Target-Date 2040 Median	-7.90	19.49	8.37	-1.49	6.08	21.97	15.22	-3.28		
Vanguard Target Retirement 2045 Inv (VTIVX)	-7.90 (39)	21.42 (20)	8.87 (42)	-1.57 (53)	7.16 (17)	24.37 (29)	15.58 (58)	-2.51 (30)		
+/- Vanguard Target 2045 Composite Index	-0.13	-0.13	-0.26	-0.32	-0.45	-0.42	0.00	-0.40		
Target-Date 2045 Median	-8.25	20.36	8.55	-1.48	6.17	23.03	15.67	-3.43		
Vanguard Target Retirement 2050 Inv (VFIFX)	-7.90 (34)	21.39 (26)	8.85 (45)	-1.58 (54)	7.18 (20)	24.34 (32)	15.58 (59)	-2.54 (26)		
+/- Vanguard Target 2050 Composite Index	-0.13	-0.16	-0.28	-0.33	-0.43	-0.45	0.00	-0.43		
Target-Date 2050 Median	-8.42	20.59	8.65	-1.50	6.19	23.19	15.76	-3.78		
Vanguard Target Retirement 2055 Inv (VFFVX)	-7.89 (28)	21.38 (30)	8.88 (43)	-1.72 (60)	7.19 (22)	24.33 (32)	15.58 (69)	-2.27 (19)		
+/- Vanguard Target 2055 Composite Index	-0.12	-0.17	-0.25	-0.47	-0.42	-0.46	0.00	-0.16		
Target-Date 2055 Median	-8.48	20.83	8.58	-1.50	6.35	23.58	15.94	-3.86		
Vanguard Target Retirement 2060 Inv (VTTSX)	-7.87 (28)	21.36 (33)	8.84 (53)	-1.68 (70)	7.16 (41)	24.35 (-)	10.68 (-)	-		
+/- Vanguard Target 2060 Composite Index	-0.10	-0.19	-0.29	-0.43	-0.45	-0.44	-4.90	-		
Target-Date 2060+ Median	-8.59	21.00	8.96	-1.06	6.36	-	-	-		



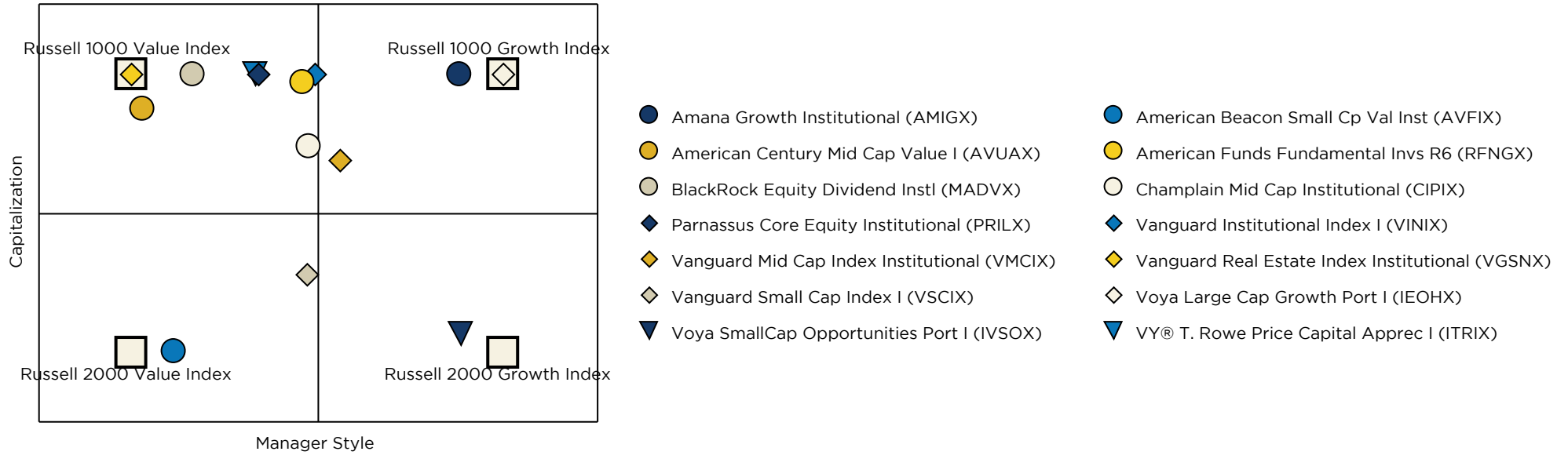
	Beta			Alpha			Up Market			Down Market			Standard Deviation		
	3 Yrs	5 Yrs	10 Yrs	3 Yrs	5 Yrs	10 Yrs	3 Yrs	5 Yrs	10 Yrs	3 Yrs	5 Yrs	10 Yrs	3 Yrs	5 Yrs	10 Yrs
Vanguard Treasury Money Market Investor (VUSXX)	0.95	0.96	0.99	0.05	0.01	-0.03	97.47	97.27	91.99		-63.51	-55.50	0.18	0.25	0.22
Money Market-Taxable Median	0.93	0.87	0.83	-0.26	-0.12	-0.07	77.46	73.76	69.85		-64.32	-58.05	0.18	0.22	0.19
Blmbg. Barc. U.S. Treasury Bills: 1-3 Months													0.19	0.25	0.23
Voya Fixed Plus Account III	0.36	-0.10	0.29	1.13	2.11	1.71	93.40	114.49	124.24				0.05	0.05	0.11
Ryan 3 Yr GIC Master Index													0.09	0.12	0.22
American Funds Inflation Linked Bond R6 (RILFX)	0.82	0.91		0.36	0.23		92.40	97.54		92.05	95.96		2.58	3.26	
Inflation-Protected Bond Median	0.91	0.96	0.97	0.06	-0.10	-0.24	89.85	91.40	92.24	92.05	99.52	99.48	2.83	3.37	4.27
Bloomberg Barclays U.S. TIPS Index													2.96	3.41	4.33
Fidelity US Bond Index (FXNAX)	1.01	1.03	1.03	-0.12	-0.16	-0.19	99.84	101.76	101.38	103.83	106.17	106.88	2.91	3.14	2.96
Intermediate Core Bond Median	0.96	0.95	0.96	0.01	-0.01	0.09	95.07	96.09	98.73	95.90	97.36	97.43	2.78	2.98	2.87
Blmbg. Barc. U.S. Aggregate Index													2.87	3.04	2.86
PIMCO Total Return Instl (PTTRX)	0.90	0.93	0.97	0.68	0.41	0.56	98.22	99.25	108.23	80.74	90.59	102.14	2.71	3.11	3.34
Intermediate Core-Plus Bond Median	0.96	0.95	0.96	0.01	-0.01	0.09	95.07	96.09	98.73	95.90	97.36	97.43	2.78	2.98	2.87
Blmbg. Barc. U.S. Aggregate Index													2.87	3.04	2.86
Amana Participation Institutional (AMIPX)	0.66			-0.07			63.88			62.87			1.64		
FTSE Sukuk Index													2.36	2.42	2.57
BlackRock Equity Dividend Instl (MADVX)	0.92	0.94	0.88	2.27	1.96	0.90	99.91	101.16	91.00	86.42	89.61	86.19	11.17	11.44	11.47
Large Value Median	1.00	1.00	1.00	0.27	-0.22	-0.71	100.23	98.88	97.15	98.83	99.71	101.27	11.98	12.16	12.87
Russell 1000 Value Index													11.85	11.88	12.66
American Funds Fundamental Invs R6 (RFNGX)	0.95	0.97	1.00	-0.42	0.28	-0.74	95.38	99.70	98.46	99.50	99.66	102.97	11.69	11.82	12.65
Large Blend Median	1.00	1.00	1.00	-0.89	-0.92	-0.94	96.66	96.85	98.53	100.90	101.60	102.83	11.97	11.93	12.64
S&P 500 Index													11.93	11.88	12.40
Parnassus Core Equity Institutional (PRILX)	0.85	0.85	0.87	2.16	1.07	1.13	89.90	87.66	90.26	76.58	81.16	84.40	10.58	10.50	11.21
Large Blend Median	1.00	1.00	1.00	-0.89	-0.92	-0.94	96.66	96.85	98.53	100.90	101.60	102.83	11.97	11.93	12.64
S&P 500 Index													11.93	11.88	12.40
Vanguard Institutional Index I (VINIX)	1.00	1.00	1.00	-0.03	-0.03	-0.03	99.90	99.91	99.92	100.05	100.06	100.06	11.93	11.88	12.40
Large Blend Median	1.00	1.00	1.00	-0.89	-0.92	-0.94	96.66	96.85	98.53	100.90	101.60	102.83	11.97	11.93	12.64
S&P 500 Index													11.93	11.88	12.40
Amana Growth Institutional (AMIGX)	0.96	0.97	0.94	5.67	2.29	0.27	112.86	104.97	95.54	83.05	92.89	95.02	12.06	12.09	12.18
Large Growth Median	1.05	1.05	1.07	2.69	0.52	-0.47	112.75	105.64	103.62	100.06	103.50	105.81	13.23	13.15	13.98
S&P 500 Index													11.93	11.88	12.40

	Beta			Alpha			3 Yrs	Up Market		3 Yrs	Down Market		Standard Deviation		
	3 Yrs	5 Yrs	10 Yrs	3 Yrs	5 Yrs	10 Yrs		5 Yrs	10 Yrs		5 Yrs	10 Yrs	3 Yrs	5 Yrs	10 Yrs
Voya Large Cap Growth Port I (IEOHX)	0.92	0.95	1.00	0.43	-0.41	-0.56	94.06	95.10	98.76	93.78	98.96	102.53	12.16	12.31	13.23
Large Growth Median	0.99	1.00	1.03	-1.05	-1.76	-1.68	95.02	95.66	98.53	99.13	104.23	107.89	13.23	13.15	13.98
Russell 1000 Growth Index													13.07	12.82	13.10
American Century Mid Cap Value I (AVUAX)	1.01	0.97	0.88	-0.14	1.37	1.42	100.49	100.93	92.39	101.56	92.29	86.08	13.12	12.43	12.18
Mid-Cap Value Median	1.03	1.05	1.04	-0.57	-0.70	-1.90	101.11	100.72	98.69	105.66	104.33	108.61	13.59	13.47	14.51
Russell Midcap Value Index													12.79	12.51	13.58
Vanguard Mid Cap Index Institutional (VMCIX)	1.00	1.00	1.01	-0.02	-0.02	-0.26	99.97	99.86	100.11	100.10	99.96	101.17	12.82	12.64	13.87
Mid-Cap Blend Median	1.07	1.05	1.04	-3.73	-1.27	-1.74	96.15	101.10	98.97	113.85	110.14	109.97	14.22	13.78	14.75
CRSP U.S. Mid Cap TR Index													12.81	12.65	13.71
Champlain Mid Cap Institutional (CIPIX)	0.84	0.85	0.84	1.58	3.49	2.32	83.84	87.38	87.97	69.24	61.58	74.61	12.47	12.38	12.91
Mid-Cap Growth Median	0.99	0.99	1.01	-0.40	-0.53	-1.02	95.80	97.25	97.60	98.76	99.60	104.28	14.21	14.08	15.02
Russell Midcap Growth Index													13.88	13.53	14.48
American Beacon Small Cp Val Inst (AVFIX)	1.11	1.06	1.04	-0.83	-0.85	0.07	108.20	102.18	103.19	112.00	105.34	102.62	17.58	16.90	17.52
Small Value Median	1.00	0.99	0.98	-0.60	-0.94	0.02	99.05	95.87	97.42	100.22	98.44	97.45	16.16	15.91	16.69
Russell 2000 Value Index													15.68	15.74	16.71
Vanguard Small Cap Index I (VSCIX)	1.00	1.00	1.01	0.01	0.03	-0.27	100.11	100.12	100.42	100.04	99.98	101.57	14.73	14.53	15.89
Small Blend Median	1.04	1.04	1.03	-2.66	-1.42	-1.68	97.21	100.55	99.62	114.32	110.56	108.06	15.69	15.58	16.57
CRSP U.S. Small Cap TR Index													14.72	14.52	15.70
Voya SmallCap Opportunities Port I (IVSOX)	1.03	0.99	0.94	-4.45	-1.95	0.04	90.81	93.73	93.16	110.17	101.74	92.24	17.15	16.90	16.83
Small Growth Median	0.96	0.94	0.94	2.03	1.26	0.86	99.19	96.02	94.87	90.77	91.87	92.17	16.32	16.36	17.06
Russell 2000 Growth Index													16.37	16.76	17.61
American Funds Europacific Growth R6 (REGX)	1.04	0.93	0.94	2.05	2.19	1.95	108.61	97.93	98.33	95.22	84.98	88.15	12.08	12.06	14.06
Foreign Large Growth Median	1.00	0.92	0.95	2.53	1.96	2.11	104.52	94.60	98.23	86.05	84.05	86.67	12.08	12.26	14.42
MSCI AC World ex USA (Net)													11.34	12.43	14.53
Vanguard Total Intl Stock Index Admiral (VTIAX)	1.01	0.97	1.00	-0.04	0.17	-0.24	100.42	98.03	99.50	100.39	97.28	100.88	11.42	12.04	14.64
Foreign Large Blend Median	0.99	0.94	0.97	-0.15	-0.10	0.09	97.08	93.98	97.86	98.79	94.59	98.31	11.37	12.02	14.56
FTSE Global ex USA All Cap Index (Net)													11.26	12.31	14.57
VY® Oppenheimer Global I (IGMIX)	1.24	1.19	1.14	-0.26	-0.63	-0.61	123.24	117.75	112.91	124.76	122.15	116.94	14.35	14.51	15.22
World Large Stock Median	1.01	0.98	1.02	-0.76	-0.88	-0.84	96.79	94.87	97.76	99.09	97.57	102.20	11.51	11.80	13.45
MSCI World Index													11.13	11.58	12.94
Oppenheimer Developing Markets I (ODVIX)	0.90	0.88	0.91	3.40	1.62	2.68	97.09	89.88	96.19	79.59	81.95	84.51	13.26	14.34	16.16
Diversified Emerging Mkts Median	0.95	0.91	0.97	0.18	0.10	0.20	96.50	94.24	97.39	96.40	92.69	95.83	14.02	14.97	17.02
MSCI Emerging Markets (Net) Index													14.17	15.66	17.08

	Beta			Alpha			3 Yrs	Up Market 5 Yrs	10 Yrs	3 Yrs	Down Market 5 Yrs	10 Yrs	3 Yrs	Standard Deviation	
	3 Yrs	5 Yrs	10 Yrs	3 Yrs	5 Yrs	10 Yrs								5 Yrs	10 Yrs
Vanguard Real Estate Index Institutional (VGSNX)	1.00	1.00	1.00	-0.07	-0.07	-0.04	99.96	99.97	99.96	100.55	100.44	100.22	11.90	13.59	15.18
Real Estate Median	0.95	0.96	0.97	0.20	-0.13	-0.27	94.17	94.61	96.56	92.69	96.14	97.83	11.60	13.21	14.96
Spliced Index													11.90	13.59	15.18
VY® T. Rowe Price Capital Apprec I (ITRIX)	1.01	1.03	1.12	2.04	1.89	0.95	107.59	109.50	113.91	83.51	87.24	101.95	7.38	7.46	8.40
Allocation--50% to 70% Equity Median	1.01	1.02	1.10	-1.92	-2.01	-2.58	89.43	91.61	99.23	104.88	110.42	121.17	7.34	7.45	8.30
40% BBg US Agg   60% SP500													7.07	7.02	7.28
Vanguard Target Retirement Income Inv (VTINX)	0.99	0.99	0.99	-0.07	-0.10	-0.10	98.29	97.77	98.51	99.78	99.65	100.32	3.50	3.67	4.00
Target-Date Retirement Median	1.07	1.05	1.02	-1.02	-0.84	-1.01	99.35	97.73	98.04	117.16	115.32	117.29	3.86	3.95	4.25
Vanguard Target Income Composite Index													3.53	3.71	4.02
Vanguard Target Retirement 2015 Inv (VTXVX)	0.99	0.98	0.99	-0.10	-0.09	-0.09	98.32	97.43	98.67	99.02	98.34	99.39	4.51	5.05	6.59
Target-Date 2015 Median	1.15	1.04	1.05	-0.86	-0.53	-0.52	101.53	99.44	101.63	122.46	109.73	108.29	5.26	5.38	6.99
Vanguard Target 2015 Composite Index													4.53	5.12	6.63
Vanguard Target Retirement 2020 Inv (VTWNX)	1.00	0.99	1.00	-0.13	-0.11	-0.20	98.43	97.62	98.67	98.63	98.23	100.16	5.92	6.35	7.79
Target-Date 2020 Median	0.92	0.92	0.99	-0.38	-0.35	-0.56	88.60	89.10	95.53	93.75	95.91	100.13	5.53	6.04	7.80
Vanguard Target 2020 Composite Index													5.93	6.42	7.79
Vanguard Target Retirement 2025 Inv (VTTVX)	1.00	0.99	1.00	-0.18	-0.11	-0.21	98.66	97.95	98.86	99.52	98.75	100.33	6.95	7.31	8.81
Target-Date 2025 Median	0.96	0.96	1.00	-0.40	-0.37	-0.53	91.74	92.11	97.21	96.72	96.69	101.81	6.73	7.13	8.89
Vanguard Target 2025 Composite Index													6.94	7.39	8.80
Vanguard Target Retirement 2030 Inv (VTHRX)	1.00	0.99	1.00	-0.18	-0.11	-0.21	98.83	98.48	99.07	99.46	99.61	100.54	7.82	8.17	9.79
Target-Date 2030 Median	1.00	0.98	1.00	-0.55	-0.38	-0.49	95.48	95.29	97.56	99.80	99.57	100.31	7.82	8.16	9.80
Vanguard Target 2030 Composite Index													7.79	8.26	9.79
Vanguard Target Retirement 2035 Inv (VTTHX)	1.00	0.99	1.00	-0.17	-0.13	-0.22	98.89	98.72	99.18	99.50	99.96	100.53	8.67	9.07	10.79
Target-Date 2035 Median	1.03	0.98	1.00	-0.68	-0.36	-0.48	97.04	96.10	97.44	101.99	99.37	100.70	8.91	9.06	10.79
Vanguard Target 2035 Composite Index													8.65	9.15	10.78
Vanguard Target Retirement 2040 Inv (VFORX)	1.00	0.99	1.00	-0.19	-0.13	-0.23	98.96	98.44	98.99	99.51	99.40	100.31	9.55	9.94	11.32
Target-Date 2040 Median	1.00	0.97	0.99	-0.66	-0.25	-0.54	95.92	94.84	95.77	99.22	96.27	99.02	9.59	9.76	11.32
Vanguard Target 2040 Composite Index													9.52	10.04	11.32
Vanguard Target Retirement 2045 Inv (VTIVX)	1.00	0.99	1.00	-0.22	-0.15	-0.24	98.92	98.45	99.04	99.66	99.50	100.37	10.18	10.34	11.50
Target-Date 2045 Median	0.99	0.98	1.00	-0.53	-0.32	-0.68	95.60	95.47	97.41	98.33	97.95	101.15	10.15	10.32	11.64
Vanguard Target 2045 Composite Index													10.14	10.44	11.50
Vanguard Target Retirement 2050 Inv (VFIFX)	1.00	0.99	1.00	-0.24	-0.16	-0.24	99.06	98.52	99.01	99.92	99.63	100.33	10.20	10.36	11.50
Target-Date 2050 Median	1.00	0.99	1.02	-0.59	-0.35	-0.76	97.18	97.05	99.59	100.18	99.10	102.78	10.23	10.40	11.74
Vanguard Target 2050 Composite Index													10.14	10.44	11.50

	Beta			Alpha			Up Market			Down Market			Standard Deviation		
	3 Yrs	5 Yrs	10 Yrs	3 Yrs	5 Yrs	10 Yrs	3 Yrs	5 Yrs	10 Yrs	3 Yrs	5 Yrs	10 Yrs	3 Yrs	5 Yrs	10 Yrs
Vanguard Target Retirement 2055 Inv (VFFVX)	1.00	0.99		-0.21	-0.17		98.88	98.29		99.56	99.50		10.17	10.34	
Target-Date 2055 Median	1.02	1.01		-0.59	-0.38		98.53	98.53		100.78	100.88		10.43	10.60	11.86
Vanguard Target 2055 Composite Index													10.14	10.44	
Vanguard Target Retirement 2060 Inv (VTTSX)	1.00	0.99		-0.23	-0.19		98.94	98.40		99.72	99.68		10.19	10.36	
Target-Date 2060+ Median	1.02	1.03		-0.58	-0.34		99.20	100.03		100.51	102.84		10.35	10.76	
Vanguard Target 2060 Composite Index													10.14	10.44	

## Domestic Equity Style Analysis | Time Period: 5 Years



## International Equity Style Analysis | Time Period: 5 Years





## Detailed Analysis: TIAA Mandatory Plan



# CREF Money Market R3 (QCMMIX)

Index: Blmbg. Barc. U.S. Treasury Bills: 1-3 Months

Category: Money Market-Taxable

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	0.40 (16)	2.02 (24)	2.02 (24)	1.32 (41)	0.82 (39)	0.41 (40)	1.46 (53)	0.50 (44)	0.13 (29)	0.00 (84)
Benchmark	0.44	2.21	2.21	1.61	1.02	0.55	1.82	0.82	0.26	0.03
Peer Group	0.35	1.83	1.83	1.25	0.75	0.38	1.47	0.46	0.03	0.01
Population	596	574	574	536	463	418	591	596	592	575

## Fund Information

Fund Inception	04/24/2015
Fund Assets	10,044 Million
Portfolio Assets	5,154 Million
Total # of Holdings	171
% Assets in Top 10 Holdings	17.19 %
PM	Rolston,J
PM Tenure	8 Years 4 Months
Turnover	-
Gross Expense (%)	0.23 %
Net Expense (%)	0.23 %
New Investors	Open

## Fixed Income Characteristics

Avg. Effective Duration	-
Avg. Effective Maturity	-
Avg. Credit Quality	-
Avg. Weighted Coupon	-

## Top Holdings (%)

United States Treasury Notes 1.6%	2.25
United States Treasury Bills	2.08
Federal Home Loan Banks 0.01%	1.99
Federal Home Loan Mortgage Cor	1.81
Federal Home Loan Banks	1.75
Federal Home Loan Banks 0.01%	1.59
United States Treasury Bills	1.48
Federal Home Loan Banks	1.42
Federal Home Loan Banks	1.41
Federal Home Loan Banks	1.40

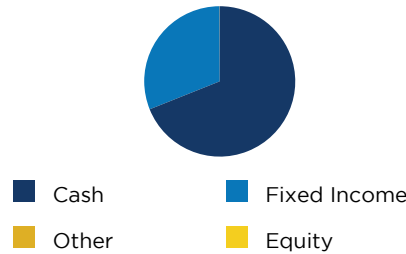
## Fund Statistics

	3 Years	10 Years
Standard Deviation	0.20	0.20
<b>vs. Blmbg. Barc. U.S. Treasury Bills: 1-3 Months</b>		
Beta	1.04	0.89
Alpha	-0.35	-0.08
Information Ratio	-5.75	-3.17
Tracking Error	0.05	0.04
R-Squared	0.94	0.97
Up Market Capture	82.12	74.84
Down Market Capture	-	-3.90
Consistency	5.56	8.33

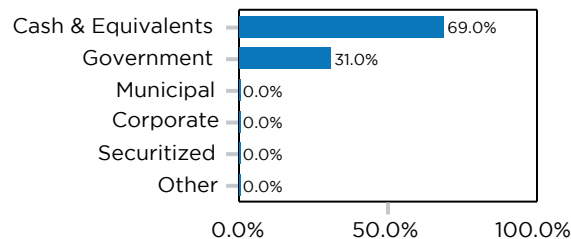
## vs. Risk Free

Sharpe Ratio	-5.30	-2.73
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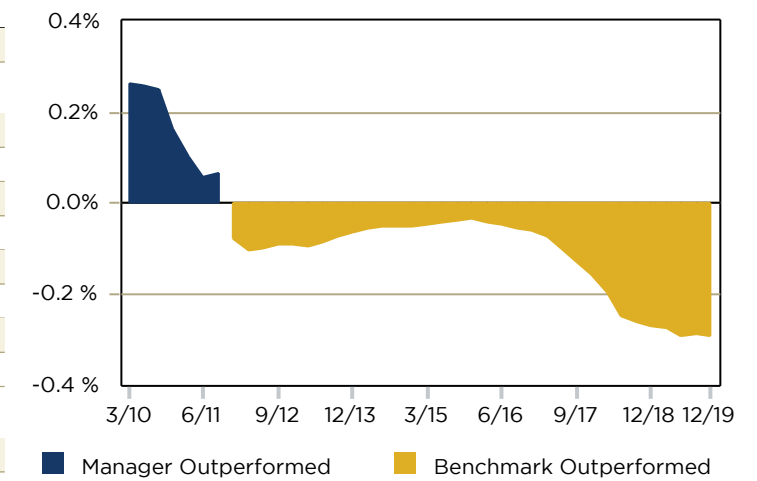
## Asset Allocation



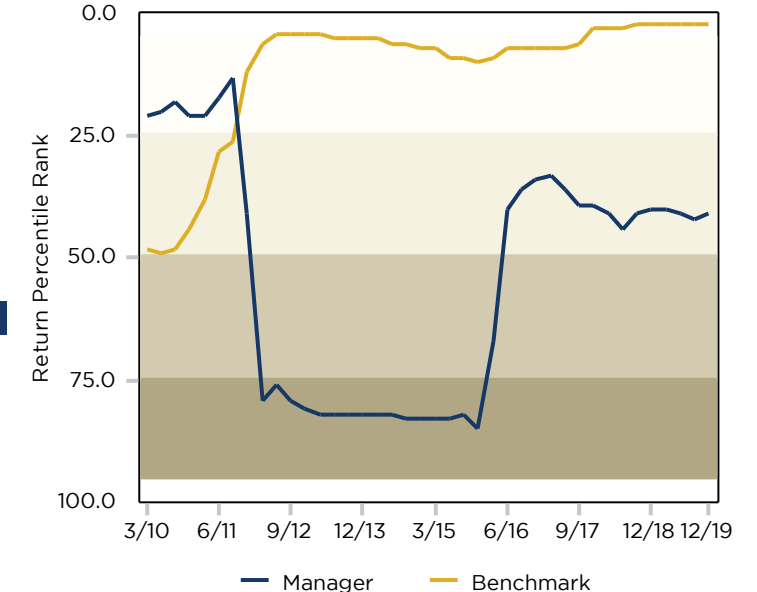
## Sector Allocation



## 3 Years Rolling Excess Performance

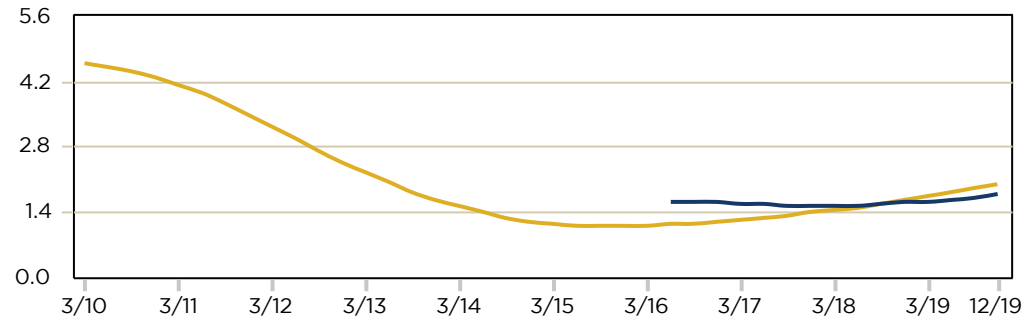
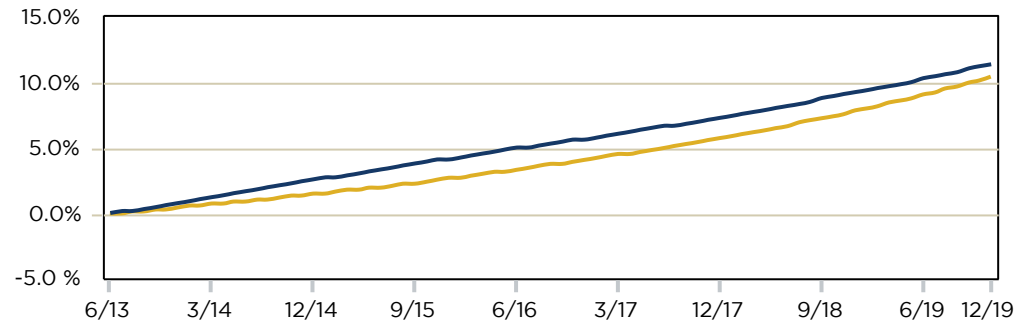
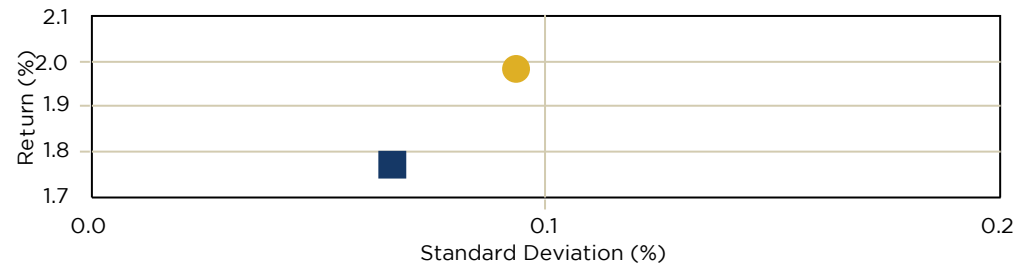


## 3 Years Rolling Percentile Ranking



**Trailing Performance**

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	0.53	1.99	1.99	1.77	1.67	-	1.81	1.51	1.46	1.60
Benchmark	0.61	2.38	2.38	1.98	1.70	-	1.96	1.60	1.39	1.16

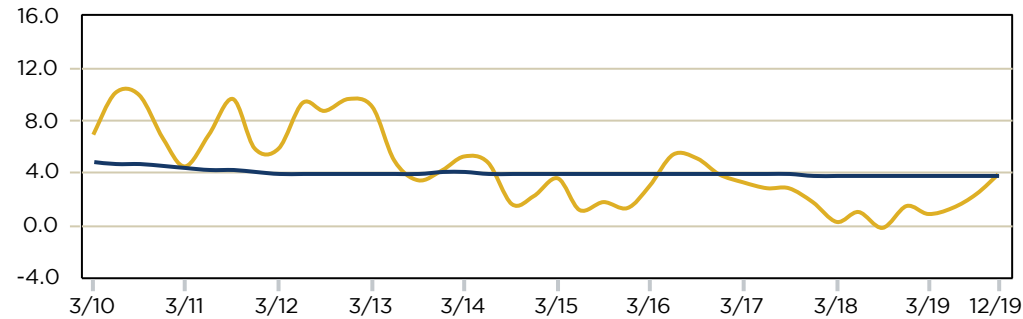
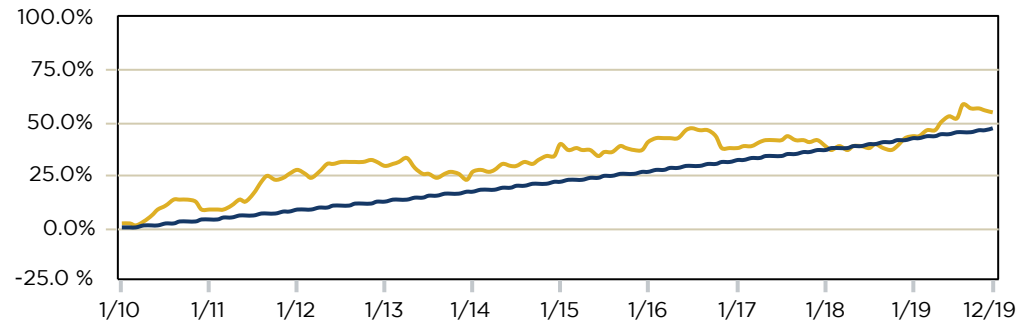
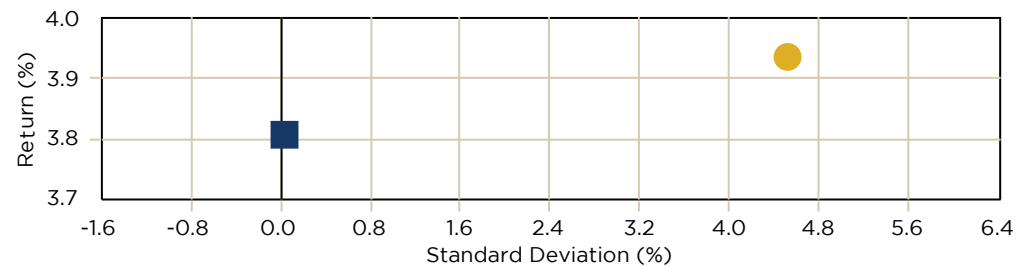
**Return (Rolling 36 Months)**

**Growth of a Dollar**

**Risk-Reward**


■ Manager    ● Benchmark



**Trailing Performance**

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	0.92	3.75	3.75	3.80	3.89	3.99	3.86	3.80	4.11	3.91
Benchmark	-1.23	8.50	8.50	3.93	2.89	4.51	0.90	2.55	1.05	1.63

**Return (Rolling 36 Months)**

**Growth of a Dollar**

**Risk-Reward**


■ Manager    ● Benchmark

**Trailing Performance**

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	0.77 (64)	6.53 (75)	6.53 (75)	2.59 (67)	2.04 (60)	2.86 (48)	-0.49 (17)	1.85 (77)	4.23 (56)	-1.68 (42)
Benchmark	1.00	6.85	6.85	2.79	2.36	2.57	-0.25	1.90	4.01	-0.52
Peer Group	0.85	7.86	7.86	2.91	2.19	2.83	-1.51	2.74	4.42	-1.90
Population	319	316	316	299	286	203	327	334	339	340

**Fund Information**

Fund Inception	04/24/2015
Fund Assets	6,632 Million
Portfolio Assets	3,490 Million
Total # of Holdings	49
% Assets in Top 10 Holdings	44.97 %
PM	Cerra,J/Travaglino,N
PM Tenure	16 Years
Turnover	21.00 %
Gross Expense (%)	0.22 %
Net Expense (%)	0.22 %
New Investors	Open

**Fixed Income Characteristics**

Avg. Effective Duration	5.09 Years
Avg. Effective Maturity	5.41 Years
Avg. Credit Quality	AA
Avg. Weighted Coupon	0.99 %

**Top Holdings (%)**

United States Treasury Notes 0.12%	5.38
United States Treasury Notes 0.12%	5.17
United States Treasury Notes 0.12%	4.99
United States Treasury Notes 0.12%	4.92
United States Treasury Notes 0.62%	4.52
United States Treasury Bonds 2.38%	4.50
United States Treasury Notes 0.12%	4.19
United States Treasury Bonds 3.88%	4.10
United States Treasury Notes 0.38%	3.61
United States Treasury Bonds 2%	3.59

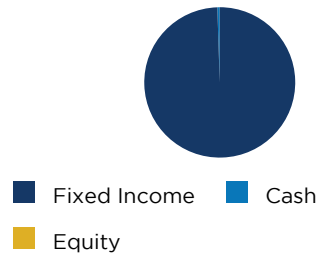
**Fund Statistics**

	3 Years	10 Years
Standard Deviation	2.06	4.11
<b>vs. Blmbg. Barc. U.S. TIPS 1-10 Year</b>		
Beta	0.99	1.25
Alpha	-0.18	-0.34
Information Ratio	-0.83	0.21
Tracking Error	0.24	1.52
R-Squared	0.99	0.90
Up Market Capture	95.47	119.35
Down Market Capture	99.32	125.43
Consistency	44.44	53.33

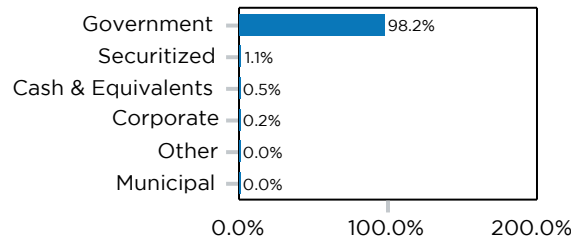
**vs. Risk Free**

Sharpe Ratio	0.46	0.57
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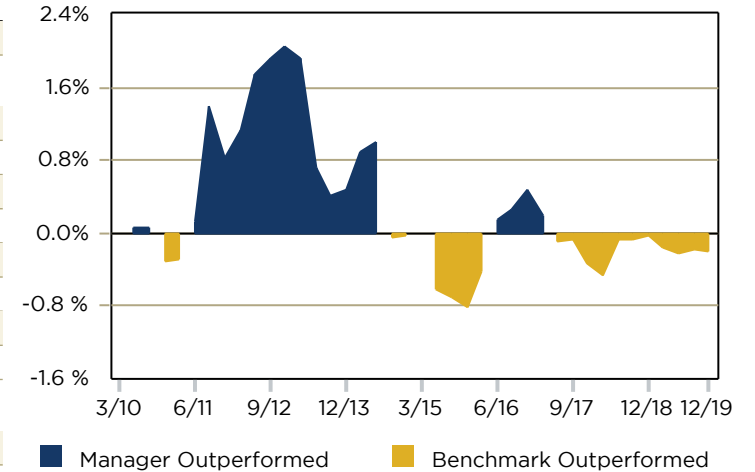
**Asset Allocation**



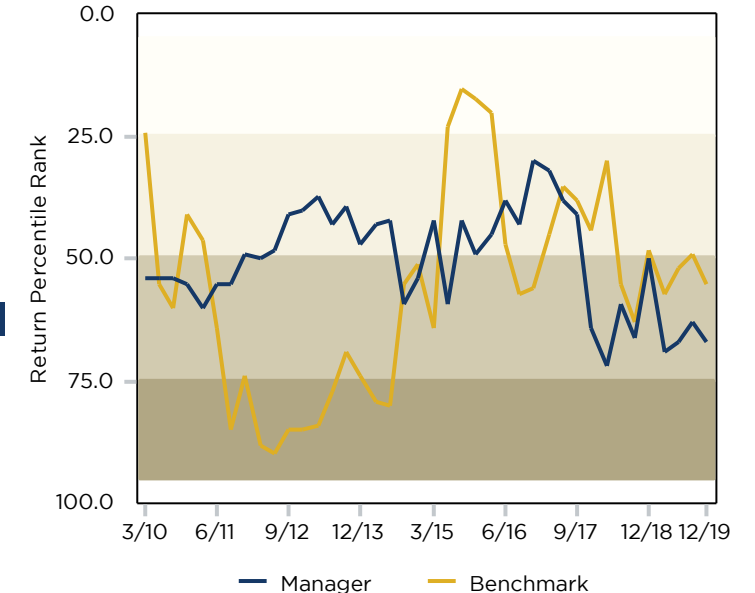
**Sector Allocation**



**3 Years Rolling Excess Performance**



**3 Years Rolling Percentile Ranking**



**Trailing Performance**

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	0.16 (47)	9.03 (29)	9.03 (29)	4.25 (17)	3.34 (13)	3.89 (30)	-0.19 (42)	4.12 (18)	3.47 (18)	0.51 (33)
Benchmark	0.18	8.72	8.72	4.03	3.05	3.75	0.01	3.54	2.65	0.55
Peer Group	0.15	8.55	8.55	3.81	2.86	3.66	-0.32	3.42	2.60	0.26
Population	791	774	774	701	647	571	851	816	853	864

**Fund Information**

Fund Inception	04/24/2015
Fund Assets	14,192 Million
Portfolio Assets	7,111 Million
Total # of Holdings	1871
% Assets in Top 10 Holdings	8.64 %
PM	Cerra,J/Higgins,J
PM Tenure	8 Years 4 Months
Turnover	106.00 %
Gross Expense (%)	0.27 %
Net Expense (%)	0.27 %
New Investors	Open

**Fixed Income Characteristics**

Avg. Effective Duration	5.62 Years
Avg. Effective Maturity	7.85 Years
Avg. Credit Quality	A
Avg. Weighted Coupon	3.46 %

**Top Holdings (%)**

Federal National Mortgage Asso	1.17
Federal National Mortgage Asso	1.10
Federal National Mortgage Asso	1.06
Federal National Mortgage Asso	0.86
United States Treasury Bonds 3.38%	0.84
Federal Home Loan Mortgage Cor	0.82
United States Treasury Bonds 2.5%	0.77
United States Treasury Bonds 3%	0.71
Federal National Mortgage Asso	0.67
United States Treasury Bonds 2.88%	0.65

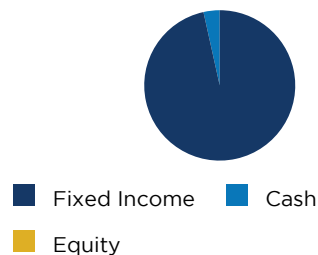
**Fund Statistics**

	3 Years	10 Years
Standard Deviation	2.66	2.78
<b>vs. Blmbg. Barc. U.S. Aggregate Index</b>		
Beta	0.92	0.96
Alpha	0.54	0.29
Information Ratio	0.52	0.27
Tracking Error	0.41	0.49
R-Squared	0.98	0.97
Up Market Capture	97.19	100.07
Down Market Capture	80.70	94.06
Consistency	63.89	58.33

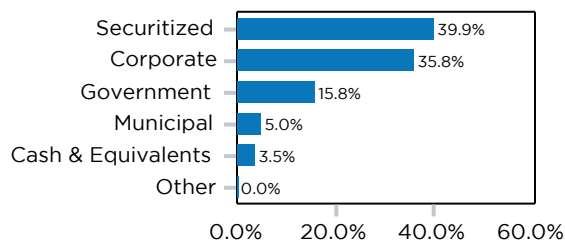
**vs. Risk Free**

Sharpe Ratio	0.98	1.19
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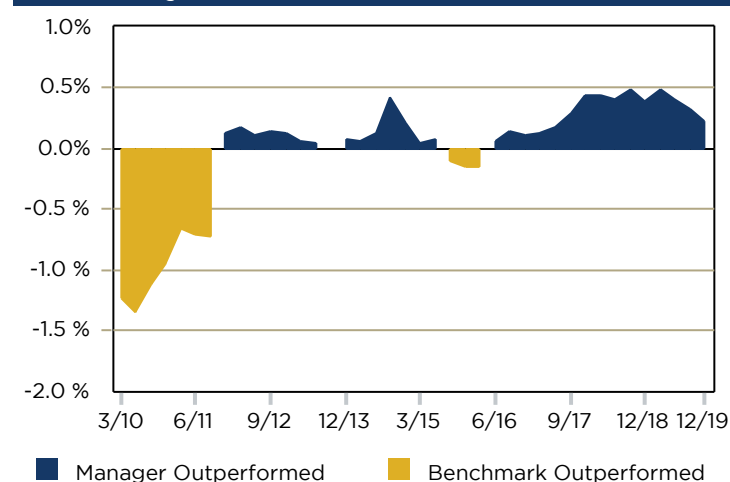
**Asset Allocation**



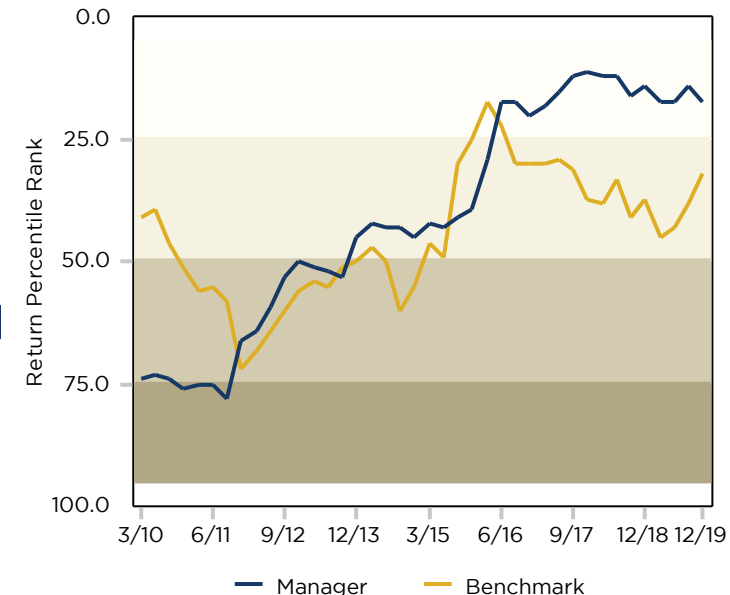
**Sector Allocation**



**3 Years Rolling Excess Performance**



**3 Years Rolling Percentile Ranking**





# PGIM Total Return Bond R6 (PTRQX)

Index: Blmbg. Barc. U.S. Aggregate Index

Category: Intermediate Core-Plus Bond

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	0.35 (51)	11.13 (12)	11.13 (12)	5.62 (4)	4.33 (5)	5.52 (7)	-0.63 (45)	6.71 (3)	4.83 (26)	0.09 (37)
Benchmark	0.18	8.72	8.72	4.03	3.05	3.75	0.01	3.54	2.65	0.55
Peer Group	0.35	9.30	9.30	4.16	3.21	4.30	-0.77	4.31	3.92	-0.25
Population	786	783	783	717	646	546	785	740	707	667

## Fund Information

Fund Inception	12/27/2010
Fund Assets	52,257 Million
Portfolio Assets	19,283 Million
Total # of Holdings	4399
% Assets in Top 10 Holdings	7.86 %
PM	Team Managed
PM Tenure	17 Years 2 Months
Turnover	45.00 %
Gross Expense (%)	0.41 %
Net Expense (%)	0.39 %
New Investors	Open

## Fixed Income Characteristics

Avg. Effective Duration	6.56 Years
Avg. Effective Maturity	-
Avg. Credit Quality	BBB
Avg. Weighted Coupon	3.91 %

## Top Holdings (%)

PGIM Core Short-Term Bond	1.46
Portugal (Republic Of) 5.12%	1.32
Federal National Mortgage Asso	1.16
Bvrt_19-1f	0.71
Hungary (Republic Of) 6.38%	0.65
Republika Slovenija 5.25%	0.56
Greece (Republic Of) 5.2%	0.55
Serbia (Republic Of) 7.25%	0.52
SOFI ALTERNATIVE TRUST 1.87%	0.47
SOFI ALTERNATIVE TRUST 2.46%	0.46

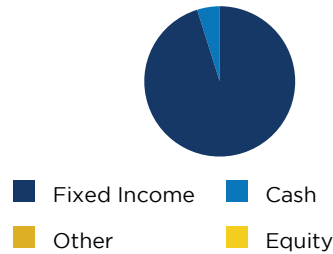
## Fund Statistics

	3 Years	10 Years
Standard Deviation	3.02	3.50
<b>vs. Blmbg. Barc. U.S. Aggregate Index</b>		
Beta	1.02	1.08
Alpha	1.48	1.43
Information Ratio	1.98	1.03
Tracking Error	0.77	1.66
R-Squared	0.93	0.78
Up Market Capture	118.06	128.67
Down Market Capture	76.75	99.03
Consistency	77.78	70.00

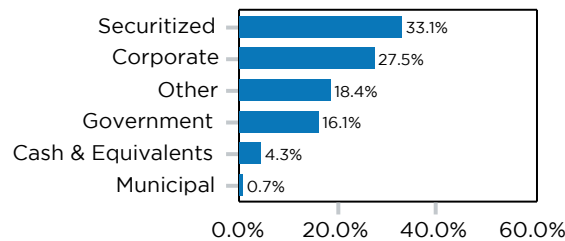
## vs. Risk Free

Sharpe Ratio	1.31	1.40
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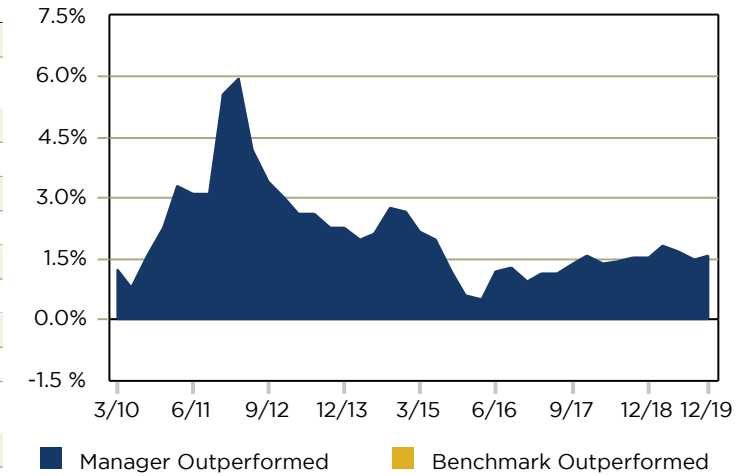
## Asset Allocation



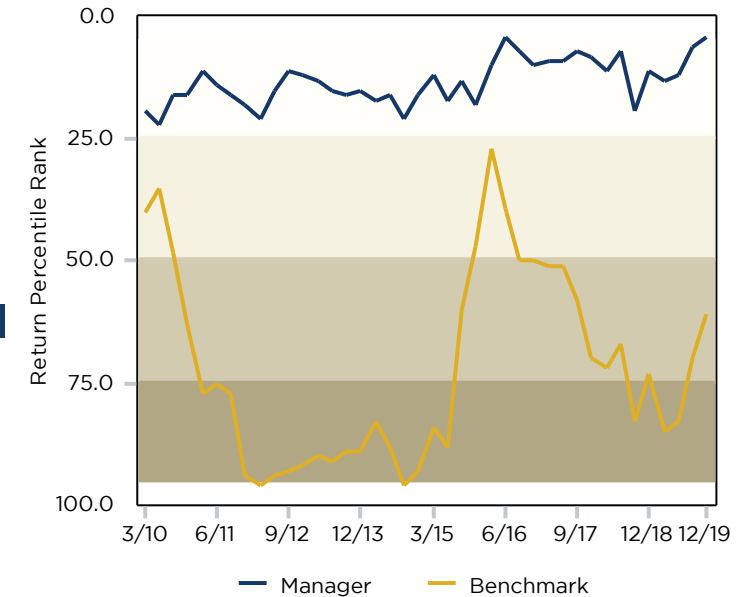
## Sector Allocation



## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking



## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	0.18	6.95	6.95	3.21	-	-	0.11	2.68	2.56	-
Benchmark	0.69	10.77	10.77	5.03	-	-	0.12	4.47	4.35	-

## Fund Information

Fund Inception	09/28/2015
Fund Assets	108 Million
Portfolio Assets	85 Million
Total # of Holdings	31
% Assets in Top 10 Holdings	41.29 %
PM	Alm,E/Drum,P
PM Tenure	4 Years 3 Months
Turnover	23.00 %
Gross Expense (%)	0.64 %
Net Expense (%)	0.64 %
New Investors	Open

## Fixed Income Characteristics

Avg. Effective Duration	3.20 Years
Avg. Effective Maturity	3.74 Years
Avg. Credit Quality	BB
Avg. Weighted Coupon	3.91 %

## Top Holdings (%)

Dp World Crescent Ltd Tr Ctf 3.91%	4.48
Oman Sovereign Sukuk S.A.O.C 4.4%	4.36
Dib Sukuk Co 2.92%	4.33
NMC Healthcare Sukuk Limited 5.95%	4.06
KSA Sukuk Limited 3.63%	4.06
ICD Sukuk Co. Ltd 5%	4.05
Difc Sukuk 4.32%	4.04
Emg Sukuk 4.56%	4.03
EQUATE Sukuk SPC Limited 3.94	3.99
EI Sukuk Company Limited 3.54	3.89

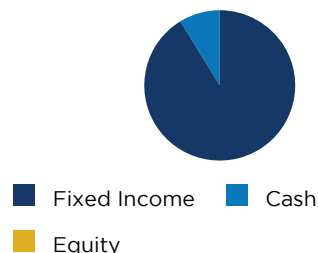
## Fund Statistics

	3 Years	10 Years
Standard Deviation	1.64	-
<b>vs. Dow Jones Sukuk Index</b>		
Beta	0.66	-
Alpha	-0.07	-
Information Ratio	-1.83	-
Tracking Error	0.97	-
R-Squared	0.89	-
Up Market Capture	63.88	-
Down Market Capture	62.87	-
Consistency	27.78	-

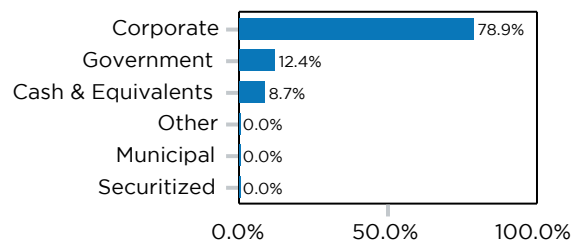
## vs. Risk Free

Sharpe Ratio	0.96	-
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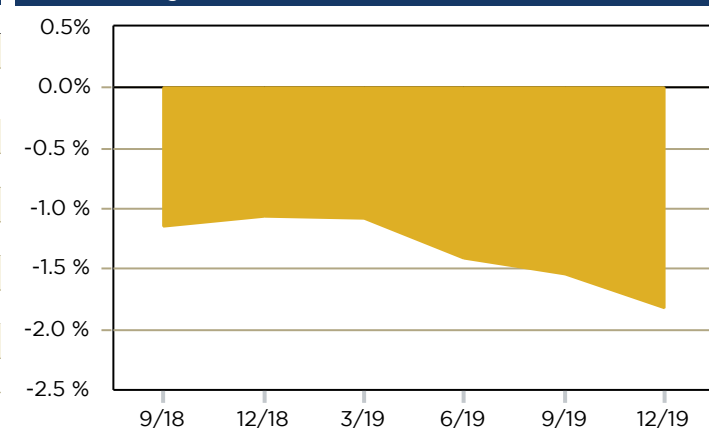
## Asset Allocation



## Sector Allocation



## 3 Years Rolling Excess Performance



■ Manager Outperformed ■ Benchmark Outperformed



# TIAA-CREF Large-Cap Value Instl (TRLIX)

Index: Russell 1000 Value Index

Category: Large Value

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	8.95 (18)	28.81 (15)	28.81 (15)	7.58 (90)	7.07 (76)	10.67 (61)	-14.10 (94)	12.52 (87)	18.60 (16)	-4.69 (69)
Benchmark	7.41	26.54	26.54	9.68	8.29	11.80	-8.27	13.66	17.34	-3.83
Peer Group	7.29	25.48	25.48	9.81	8.06	10.96	-8.87	16.19	14.57	-3.52
Population	1,582	1,552	1,552	1,476	1,377	1,192	1,793	1,674	1,733	1,683

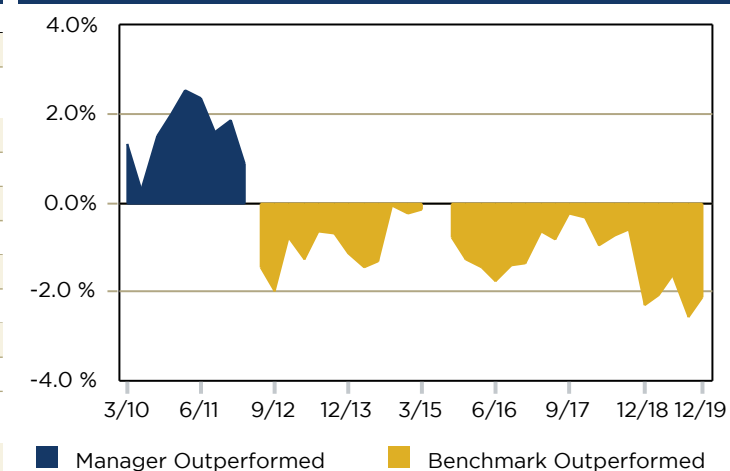
## Fund Information

Fund Inception	10/01/2002
Fund Assets	5,789 Million
Portfolio Assets	1,869 Million
Total # of Holdings	84
% in Top 10	29.76 %
PM	Carr,C/Cutler,R
PM Tenure	1 Year 1 Month
Turnover	79.00 %
Gross Expense (%)	0.40 %
Net Expense (%)	0.40 %
New Investors	Open

## Fund Statistics

	3 Years	10 Years
Standard Deviation	12.81	13.93
<b>vs. Russell 1000 Value Index</b>		
Beta	1.06	1.09
Alpha	-2.43	-1.87
Information Ratio	-0.74	-0.34
Tracking Error	2.45	2.55
R-Squared	0.97	0.97
Up Market Capture	99.24	102.58
Down Market Capture	115.04	112.26
Consistency	44.44	50.00

## 3 Years Rolling Excess Performance



## Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	185,360	131,913
Median Mkt. Cap (\$M)	76,362	9,882
Price/Earnings ratio	18.2	18.4
Price/Book ratio	2.6	2.3
5 Yr. EPS Growth Rate (%)	8.7	6.2
Current Yield (%)	2.2	2.5
Beta (5 Years, Monthly)	1.09	1.00
Number of Stocks	81	764
Debt to Equity	0.4	0.5
Forecast P/E	21.6	18.7
Forecast EPS Growth	8.7	8.1
Return on Equity	0.0	0.0

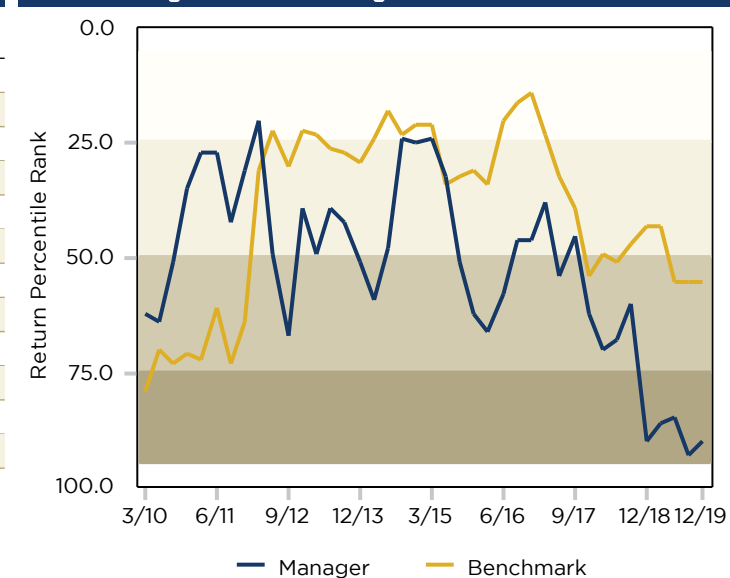
## vs. Risk Free

Sharpe Ratio	0.51	0.76
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## Sector Allocation

Sector	Portfolio Weight (%)	Benchmark Weight (%)
Communication Services	8.1	8.2
Consumer Discretionary	3.4	5.9
Consumer Staples	6.3	8.9
Energy	6.9	8.2
Financials	27.1	23.9
Health Care	16.3	13.0
Industrials	11.5	9.7
Information Technology	10.6	6.3
Materials	3.4	4.3
Real Estate	1.9	5.2
Utilities	4.5	6.6
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

## 3 Years Rolling Percentile Ranking



## Country/Region Allocation

United States	91.7	95.0
Non-US Developed	8.3	4.9
Emerging Markets	0.0	0.1
Other	0.0	0.0
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

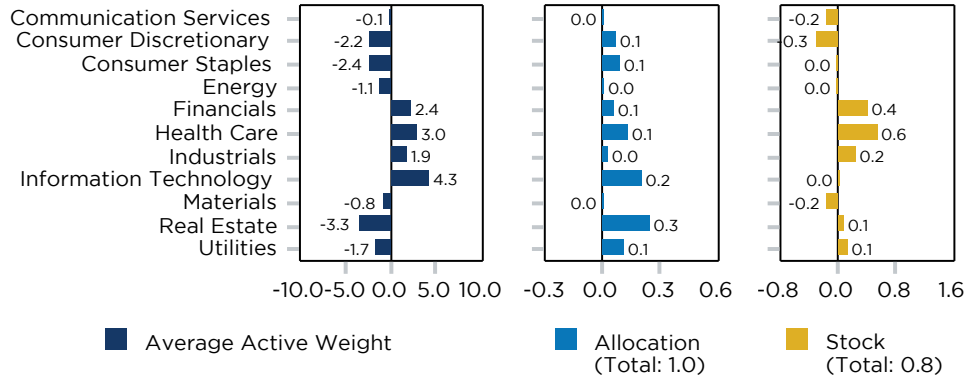


# TIAA-CREF Large-Cap Value Instl (TRLIX)

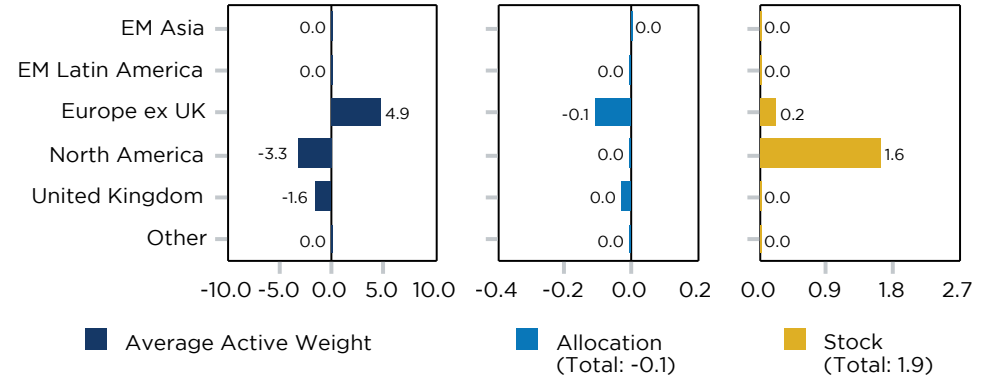
Index: Russell 1000 Value Index

Report Date: 12/31/2019

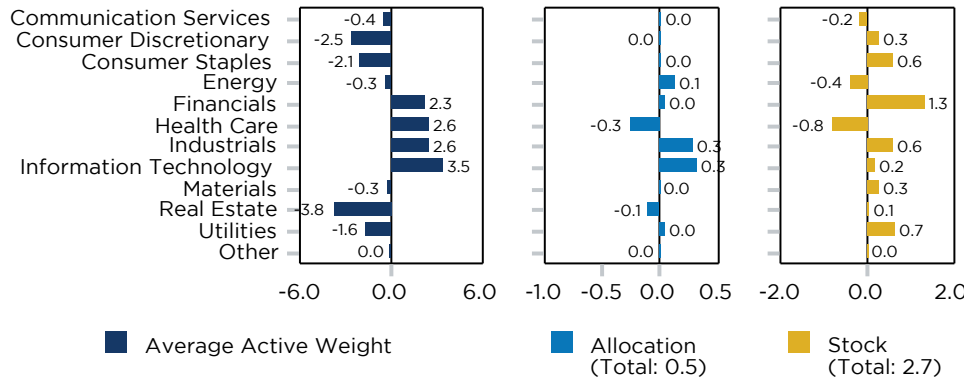
## 1 Quarter Sector Attribution



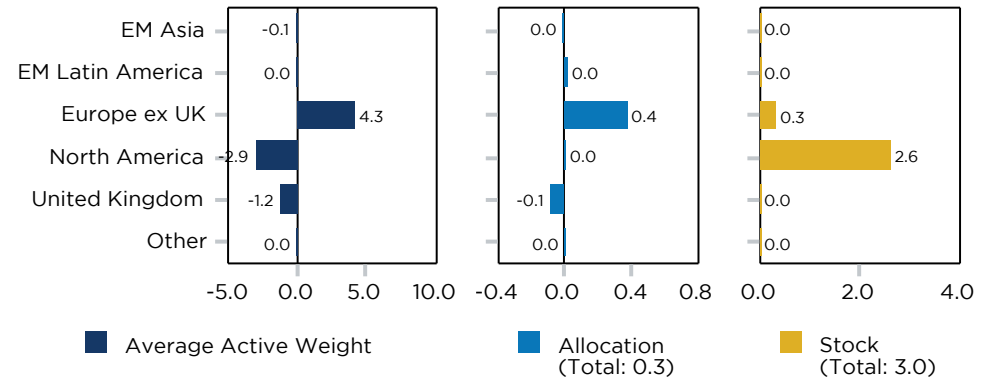
## 1 Quarter Region Attribution



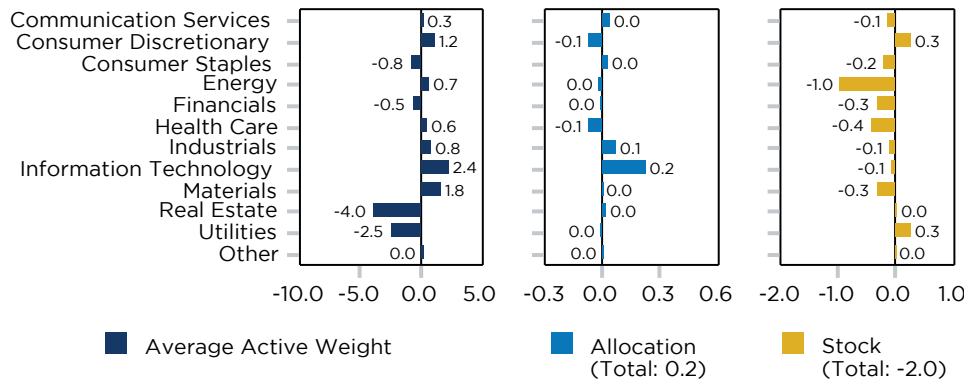
## 1 Year Sector Attribution



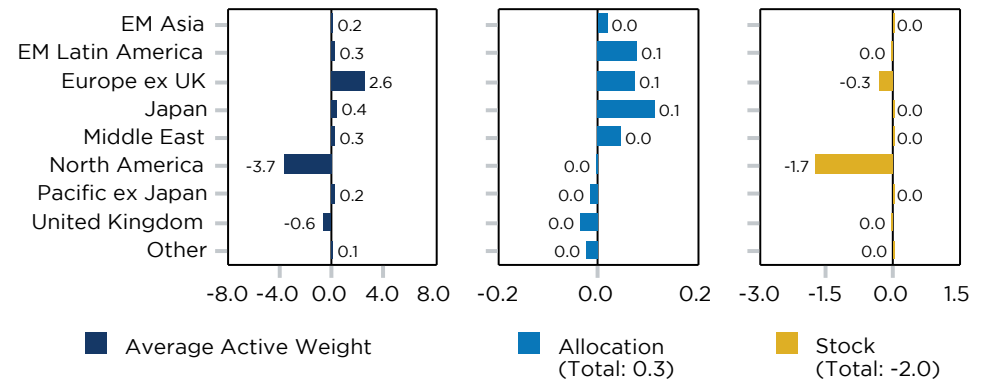
## 1 Year Region Attribution



## 3 Years Sector Attribution



## 3 Years Region Attribution





# TIAA-CREF Large-Cap Value Instl (TRLIX)

Index: Russell 1000 Value Index

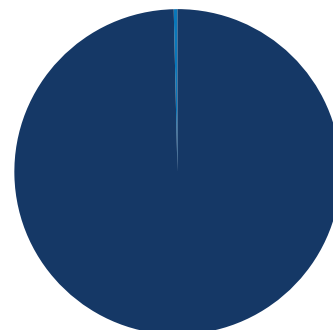
Report Date: 12/31/2019

## Top Ten Securities

JPMorgan Chase & Co	5.1 %
Bank of America Corp	4.1 %
Citigroup Inc	3.4 %
Johnson & Johnson	3.0 %
The Walt Disney Co	2.6 %
Verizon Communications Inc	2.4 %
Chevron Corp	2.4 %
Procter & Gamble Co	2.4 %
Pfizer Inc	2.2 %
Berkshire Hathaway Inc B	2.1 %
<b>Total</b>	<b>29.8 %</b>

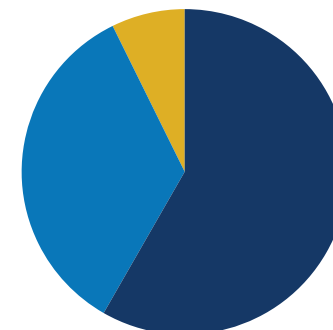
## Asset Allocation

- Equity
- Cash
- Fixed Income



## Market Capitalization

- Giant
- Large
- Medium
- Small
- Micro



## Top Ten Contributors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Bank of America Corp	3.73	1.81	0.27	21.40
JPMorgan Chase & Co	5.00	2.76	0.27	19.40
Citigroup Inc	3.26	1.15	0.19	16.45
Unitedhealth Group Inc	0.65	0.00	0.18	35.80
Cigna Corp	0.81	0.29	0.14	34.72
Applied Materials Inc.	1.06	0.16	0.14	22.75
Anthem Inc	0.99	0.32	0.13	26.14
Johnson & Johnson	3.00	2.16	0.05	13.53
Walt Disney Co (The)	2.24	1.68	0.02	11.65
Intel Corp	1.77	1.69	0.01	16.78

## Top Ten Contributors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Advanced Micro Devices Inc	1.09	0.00	0.54	59.32
IAC/InterActiveCorp	0.64	0.01	0.30	56.66
Abbott Laboratories	1.44	0.51	0.22	33.59
NextEra Energy Inc	1.07	0.50	0.12	29.89
Bank of America Corp	2.99	2.06	0.09	19.02
Union Pacific Corp	1.21	0.67	0.07	23.00
Cisco Systems Inc	1.21	1.38	-0.02	20.32
Intel Corp	1.05	1.42	-0.04	21.24
Procter & Gamble Co (The)	1.27	1.95	-0.05	17.72
JPMorgan Chase & Co	1.60	2.85	-0.13	20.33

## Top Ten Detractors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
American Int'l Group Inc	1.58	0.36	-0.18	-7.26
Ball Corp	0.97	0.00	-0.18	-10.98
Home Depot Inc. (The)	1.87	0.81	-0.13	-5.28
Cisco Systems Inc	1.21	0.00	-0.12	-2.21
Chubb Ltd	1.51	0.54	-0.10	-3.11
Oracle Corp	0.70	0.00	-0.07	-3.30
Lincoln National Corp	0.83	0.09	-0.07	-1.51
DuPont De Nemours Inc	0.67	0.39	-0.05	-9.56
AvalonBay Communities Inc.	0.70	0.22	-0.04	-1.90
McDonald's Corp	1.03	1.02	0.00	-7.38

## Top Ten Detractors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Weatherford Intl	0.56	0.04	-0.49	-84.39
J.C. Penney Company Inc.	0.68	0.02	-0.39	-48.73
Nabors Industries Ltd	0.68	0.04	-0.33	-42.23
The Kraft Heinz Co	1.10	0.41	-0.24	-25.27
Fossil Group Inc	0.50	0.00	-0.21	-32.71
Mattel Inc.	0.67	0.00	-0.20	-19.98
Deutsche Bank AG	0.56	0.00	-0.19	-24.11
PG&E Corp	0.38	0.27	-0.06	-43.22
Schlumberger Ltd	0.81	1.06	0.07	-18.64
General Electric Co	1.63	2.13	0.18	-26.85



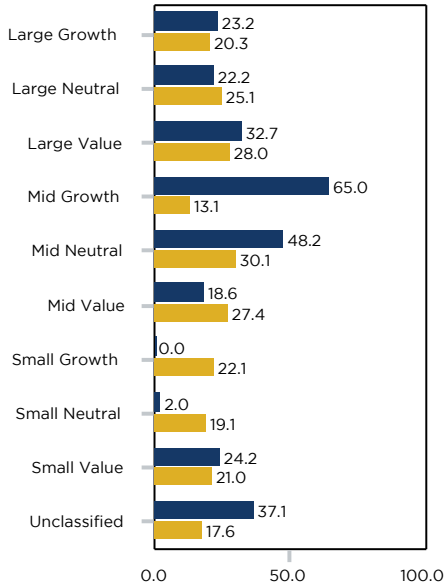


# TIAA-CREF Large-Cap Value Instl (TRLIX)

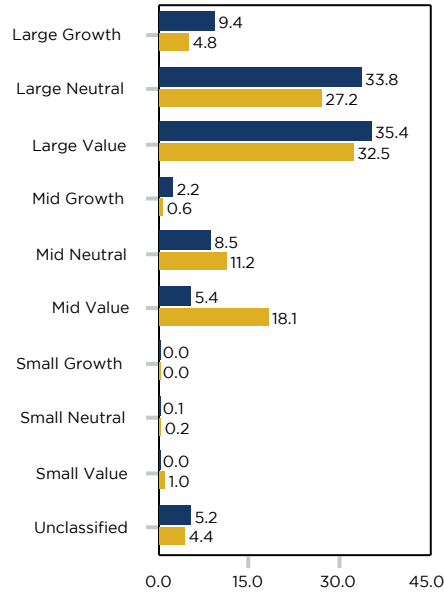
Index: Russell 1000 Value Index

Report Date: 12/31/2019

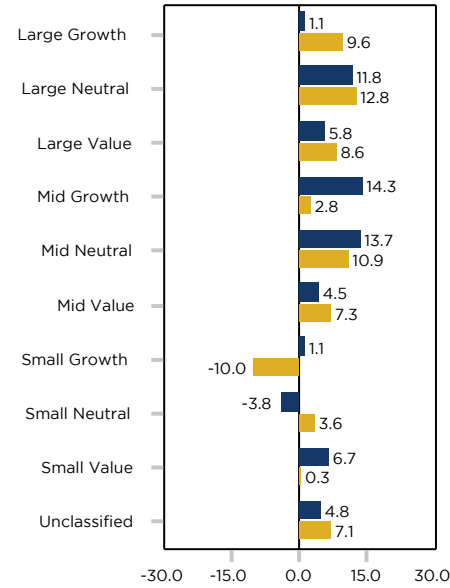
## Performance | 1 Year



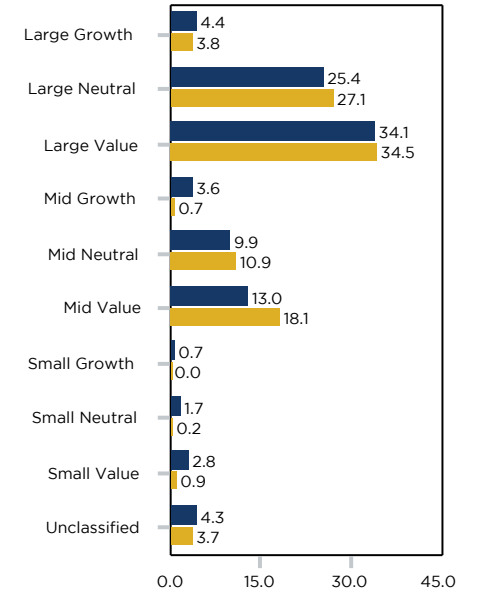
## Allocation | 1 Year



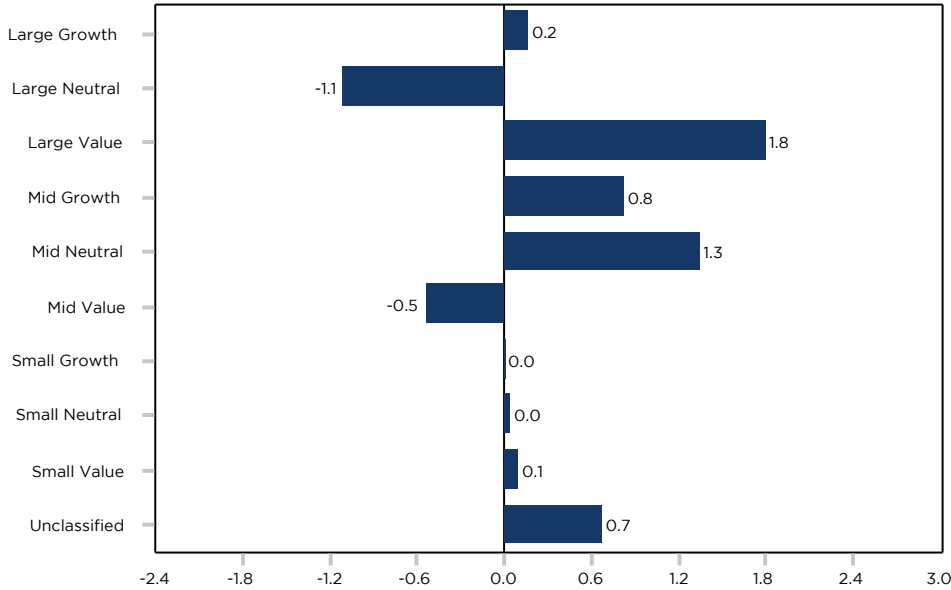
## Performance | 3 Years



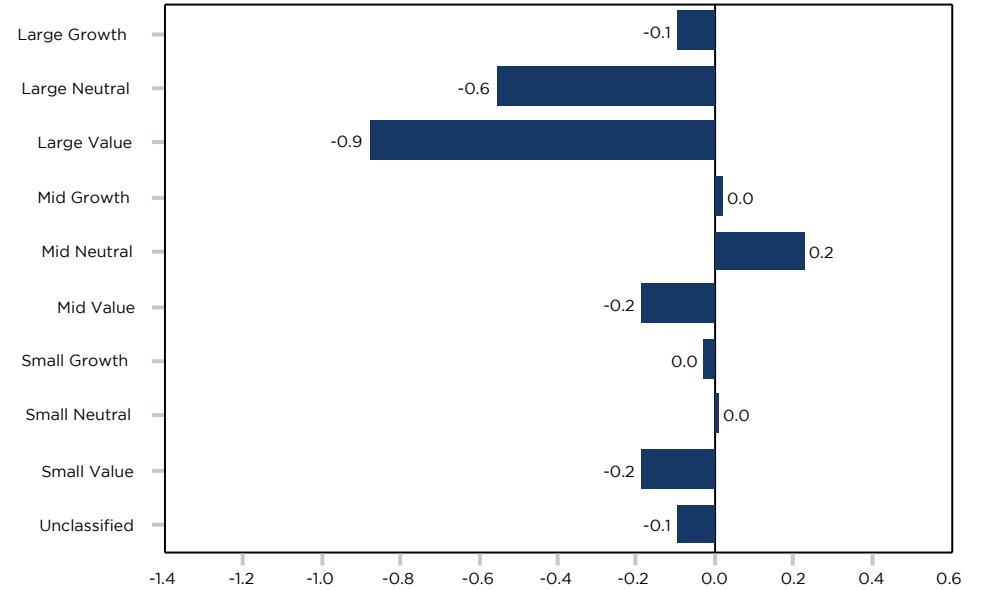
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years



**Trailing Performance**

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	9.02 (36)	30.73 (44)	30.73 (44)	14.34 (45)	11.01 (37)	13.08 (31)	-5.37 (48)	20.84 (58)	12.49 (22)	0.24 (51)
Benchmark	9.10	31.02	31.02	14.57	11.24	13.42	-5.24	21.13	12.74	0.48
Peer Group	8.83	30.17	30.17	14.03	10.44	12.52	-5.56	21.15	11.16	0.29
Population	1,992	1,939	1,939	1,773	1,632	1,408	2,158	2,012	2,063	2,049

**Fund Information**

Fund Inception	04-2015
Fund Assets	20,279 Million
Portfolio Assets	9,434 Million
Total # of Holdings	2744
% Assets in Top 10 Holdings	18.7 %
PM	Campagna,P/Liao,L/Tran,D
PM Tenure	14 Years
Turnover	3.0 %
Gross Expense (%)	0.2 %
Net Expense (%)	0.2 %
New Investors	Open

**Equity Characteristics**

Avg. Market Cap	68,889 (Million)
Price/Earnings	19
Price/Book	3
Dividend Yield	1.9 %

**Top Holdings (%)**

Apple Inc	3.7
Microsoft Corp	3.6
Amazon.com Inc	2.4
Facebook Inc A	1.5
Berkshire Hathaway Inc B	1.4
JPMorgan Chase & Co	1.3
Alphabet Inc Class C	1.3
Alphabet Inc A	1.3
Johnson & Johnson	1.2
Visa Inc Class A	1.0

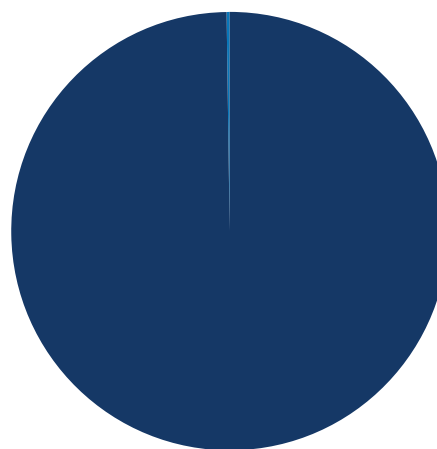
**Fund Statistics**

	3 Years	10 Years
Standard Deviation	12.18	12.78
<b>vs. Russell 3000 Index</b>		
Beta	1.00	1.00
Alpha	-0.17	-0.27
Information Ratio	-5.45	-6.67
Tracking Error	0.04	0.05
R-Squared	1.00	1.00
Up Market Capture	99.18	99.01
Down Market Capture	100.04	100.47
Consistency	5.56	2.50

**vs. Risk Free**

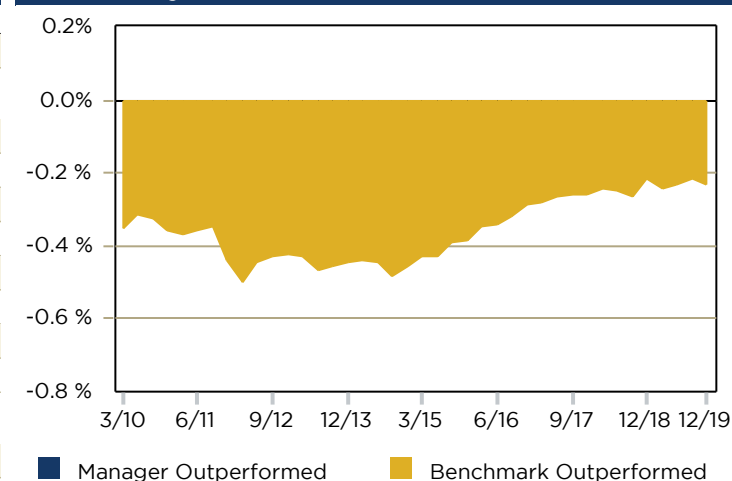
Sharpe Ratio	1.03	0.99
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**Asset Allocation**

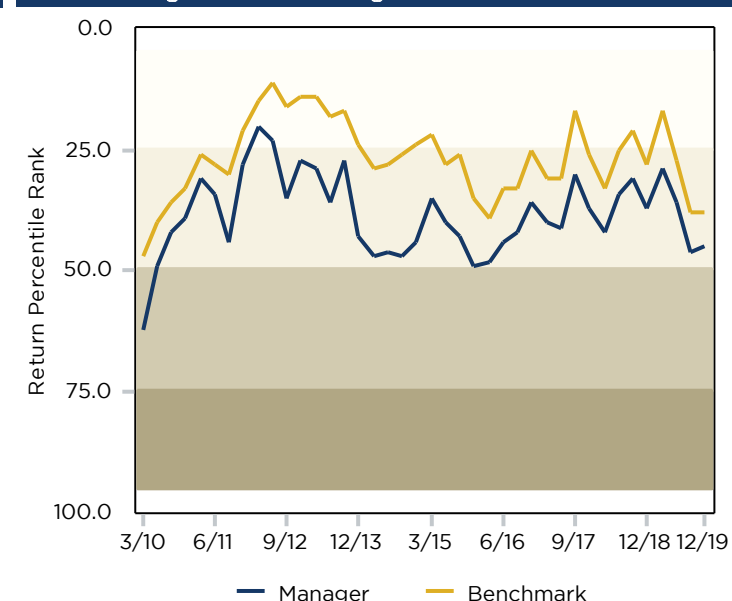


■ Equity    ■ Cash  
■ Fixed Income

**3 Years Rolling Excess Performance**



**3 Years Rolling Percentile Ranking**





## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	9.07 (29)	31.42 (25)	31.42 (25)	15.20 (18)	11.63 (12)	13.48 (13)	-4.45 (25)	21.77 (31)	11.87 (32)	1.35 (23)
Benchmark	9.07	31.49	31.49	15.27	11.70	13.56	-4.38	21.83	11.96	1.38
Peer Group	8.83	30.17	30.17	14.03	10.44	12.52	-5.56	21.15	11.16	0.29
Population	1,992	1,939	1,939	1,773	1,632	1,408	2,158	2,012	2,063	2,049

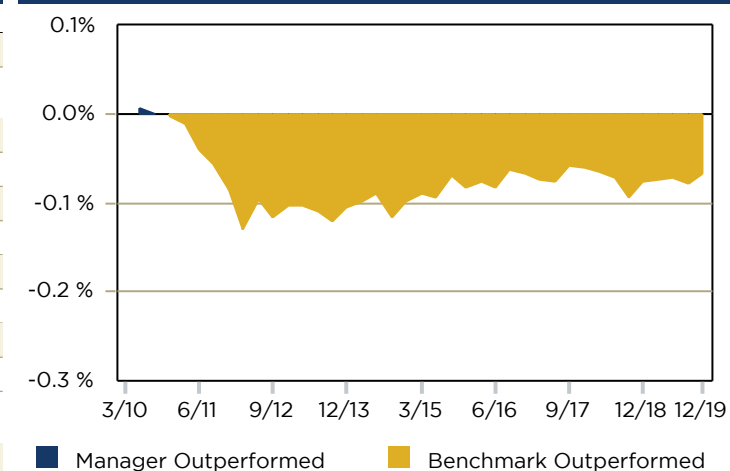
## Fund Information

Fund Inception	10/01/2002
Fund Assets	6,034 Million
Portfolio Assets	4,408 Million
Total # of Holdings	510
% in Top 10	21.96 %
PM	Campagna,P/Liao,L/Tran,D
PM Tenure	14 Years
Turnover	5.00 %
Gross Expense (%)	0.05 %
Net Expense (%)	0.05 %
New Investors	Open

## Fund Statistics

	3 Years	10 Years
Standard Deviation	11.93	12.40
<b>vs. S&amp;P 500 Index</b>		
Beta	1.00	1.00
Alpha	-0.06	-0.07
Information Ratio	-1.12	-1.09
Tracking Error	0.05	0.07
R-Squared	1.00	1.00
Up Market Capture	99.78	99.73
Down Market Capture	100.04	100.08
Consistency	33.33	36.67

## 3 Years Rolling Excess Performance



## Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	289,063	287,781
Median Mkt. Cap (\$M)	24,036	23,997
Price/Earnings ratio	22.9	22.9
Price/Book ratio	3.7	3.7
5 Yr. EPS Growth Rate (%)	14.3	14.3
Current Yield (%)	1.9	1.9
Beta (5 Years, Monthly)	1.00	1.00
Number of Stocks	505	505
Debt to Equity	0.6	0.6
Forecast P/E	22.6	22.6
Forecast EPS Growth	11.2	11.2
Return on Equity	0.0	0.0

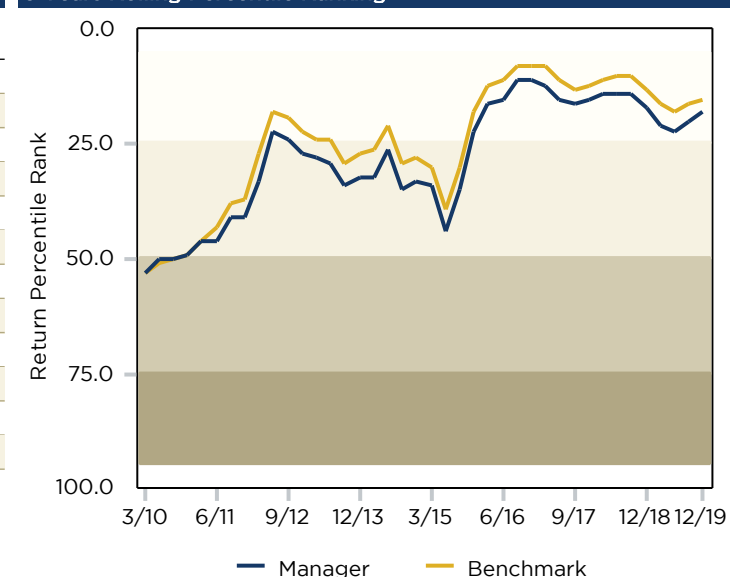
## vs. Risk Free

Sharpe Ratio	1.11	1.04
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## Sector Allocation

Sector	Portfolio Weight (%)	Benchmark Weight (%)
Communication Services	10.3	10.4
Consumer Discretionary	9.8	9.8
Consumer Staples	7.2	7.2
Energy	4.4	4.3
Financials	13.0	13.0
Health Care	14.2	14.2
Industrials	9.0	9.1
Information Technology	23.2	23.2
Materials	2.7	2.7
Real Estate	2.9	2.9
Utilities	3.3	3.3
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

## 3 Years Rolling Percentile Ranking

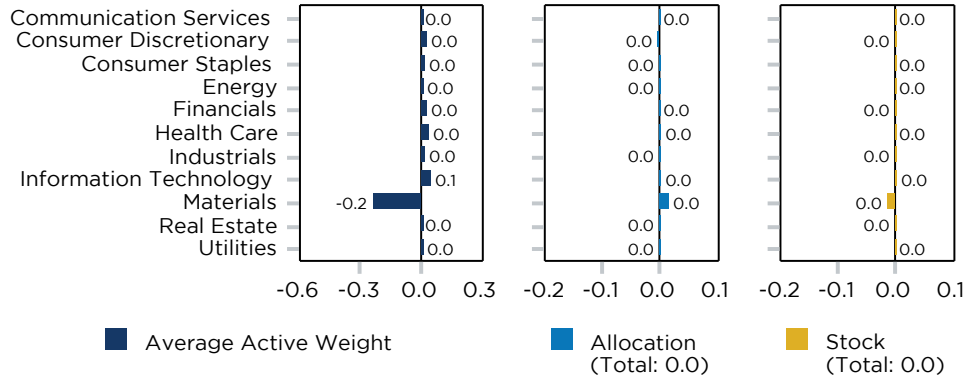


## Country/Region Allocation

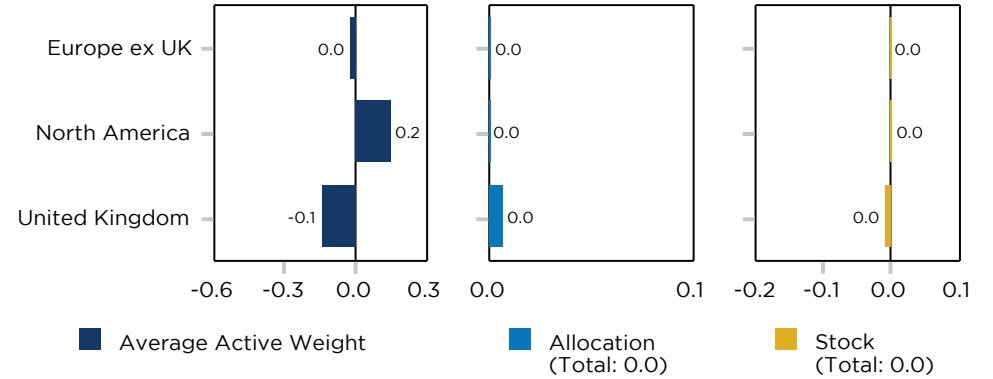
United States	96.5	96.5
Non-US Developed	3.5	3.5
<b>Total</b>	<b>100.0</b>	<b>100.0</b>



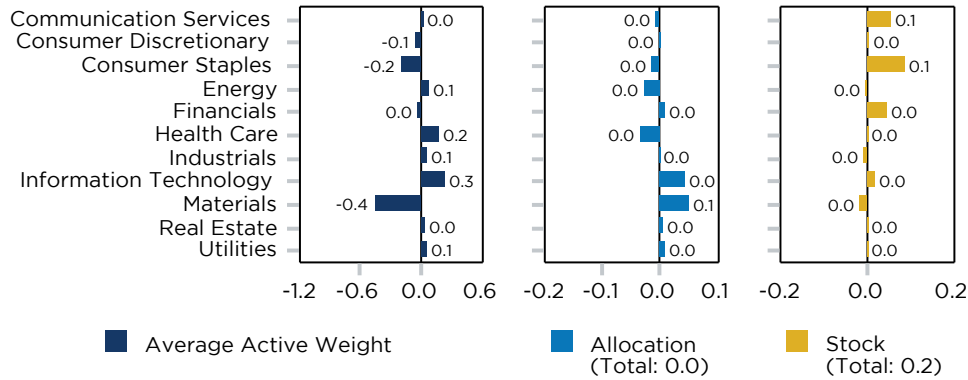
## 1 Quarter Sector Attribution



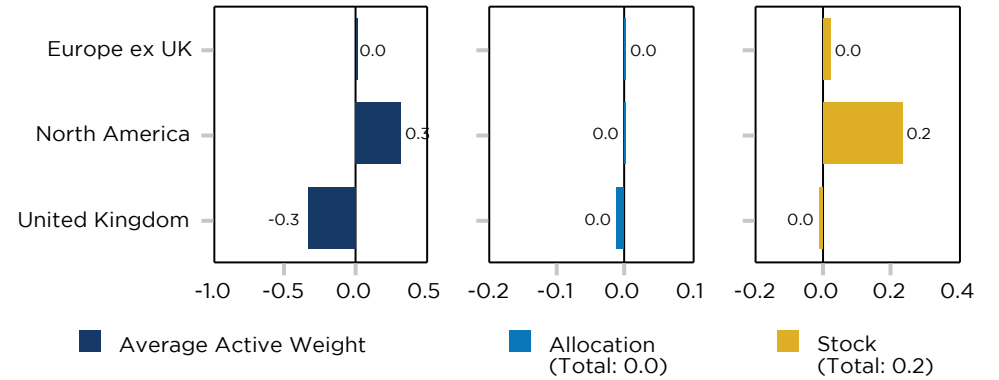
## 1 Quarter Region Attribution



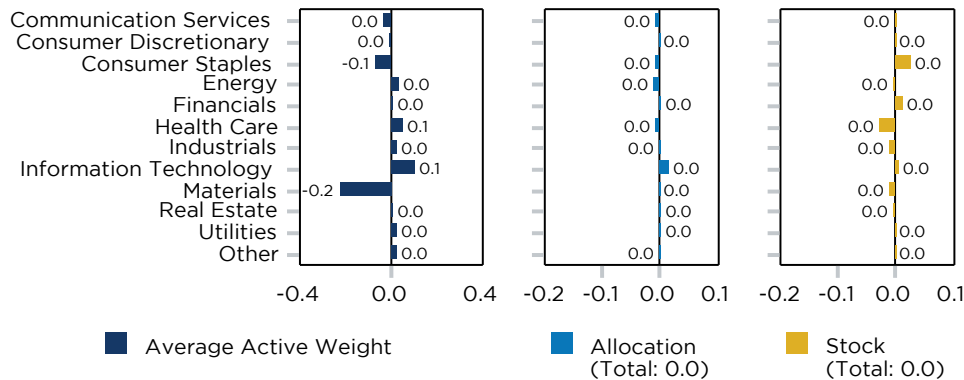
## 1 Year Sector Attribution



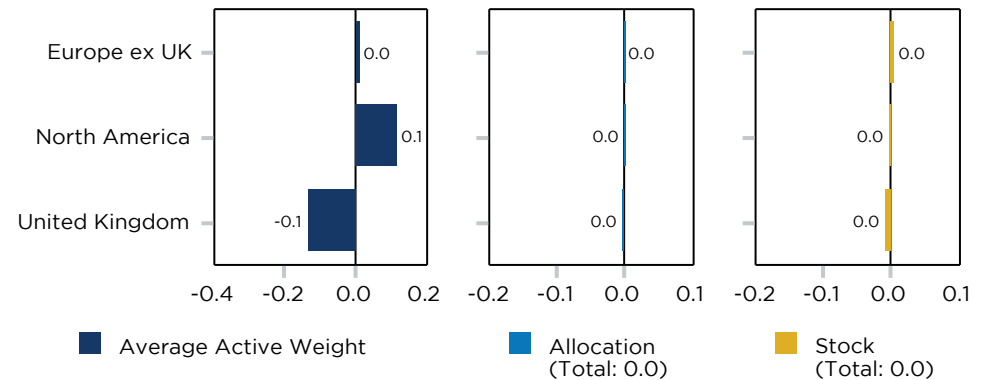
## 1 Year Region Attribution



## 3 Years Sector Attribution



## 3 Years Region Attribution





# TIAA-CREF S&P 500 Index Instl (TISPX)

Index: S&P 500 Index

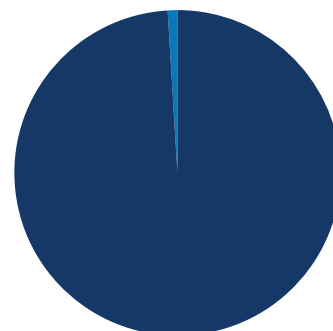
Report Date: 12/31/2019

## Top Ten Securities

Microsoft Corp	4.3 %
Apple Inc	4.3 %
Amazon.com Inc	2.8 %
Facebook Inc A	1.8 %
Berkshire Hathaway Inc B	1.6 %
JPMorgan Chase & Co	1.6 %
Alphabet Inc Class C	1.5 %
Alphabet Inc A	1.5 %
Johnson & Johnson	1.4 %
Visa Inc Class A	1.2 %
<b>Total</b>	<b>22.0 %</b>

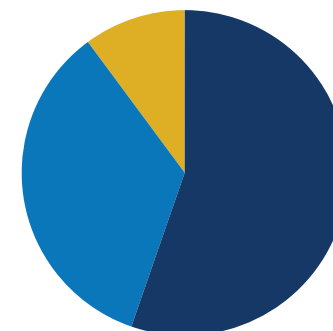
## Asset Allocation

- Equity
- Cash
- Fixed Income



## Market Capitalization

- Giant
- Large
- Medium
- Small
- Micro



## Top Ten Contributors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Apple Inc	3.88	3.85	0.01	31.50
Unitedhealth Group Inc	0.84	0.83	0.00	35.80
JPMorgan Chase & Co	1.54	1.52	0.00	19.40
Microsoft Corp	4.33	4.30	0.00	13.82
Facebook Inc	1.75	1.73	0.00	15.26
Bank of America Corp	1.00	0.99	0.00	21.40
Intel Corp	0.93	0.92	0.00	16.78
Johnson & Johnson	1.39	1.38	0.00	13.53
NVIDIA Corporation	0.43	0.43	0.00	35.27
Amazon.com Inc	2.94	2.92	0.00	6.45

## Top Ten Contributors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Amazon.com Inc	1.54	1.53	0.00	35.07
Apple Inc	3.21	3.21	0.00	38.46
Microsoft Corp	2.51	2.51	0.00	38.88
JPMorgan Chase & Co	1.60	1.60	0.00	20.33
Facebook Inc	1.40	1.40	0.00	21.28
Visa Inc	0.76	0.76	0.00	34.94
Alphabet Inc	1.19	1.19	0.00	20.10
Alphabet Inc	1.22	1.22	0.00	19.12
Mastercard Inc	0.51	0.51	0.00	43.35
Bank of America Corp	1.16	1.16	0.00	19.02

## Top Ten Detractors | 1 Quarter

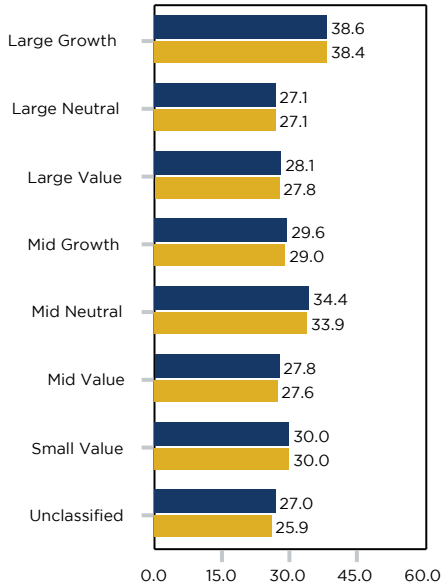
	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Boeing Co	0.83	0.82	0.00	-13.89
McDonald's Corp	0.67	0.66	0.00	-7.38
IBM Corp.	0.53	0.52	0.00	-6.74
Home Depot Inc. (The)	1.04	1.03	0.00	-5.28
Cisco Systems Inc	0.86	0.85	0.00	-2.21
Twitter Inc	0.13	0.13	0.00	-22.21
Ventas Inc.	0.11	0.11	0.00	-19.86
Dollar Tree Inc	0.11	0.11	0.00	-17.62
Northrop Grumman Corp	0.24	0.24	0.00	-7.88
DuPont De Nemours Inc	0.21	0.22	0.00	-9.56

## Top Ten Detractors | 3 Years

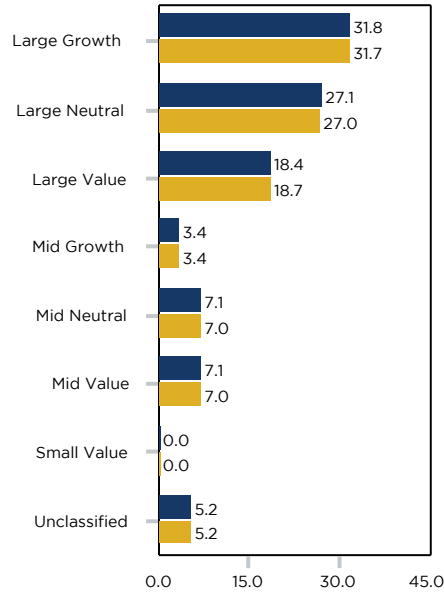
	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Altria Group Inc	0.69	0.68	0.00	-4.85
General Electric Co	1.45	1.45	0.00	-26.85
Schlumberger Ltd	0.61	0.61	0.00	-18.64
Exxon Mobil Corp	1.94	1.94	0.00	-4.32
PG&E Corp	0.16	0.16	0.00	-43.22
The Kraft Heinz Co	0.27	0.27	0.00	-25.27
Halliburton Co	0.24	0.24	0.00	-21.52
DuPont De Nemours Inc	0.33	0.33	0.00	-12.26
Occidental Petroleum Corp	0.28	0.28	0.00	-12.16
Walgreens Boots Alliance Inc	0.37	0.37	0.00	-8.47



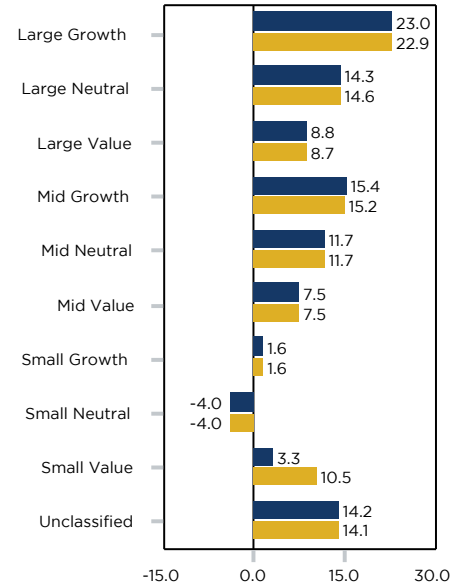
### Performance | 1 Year



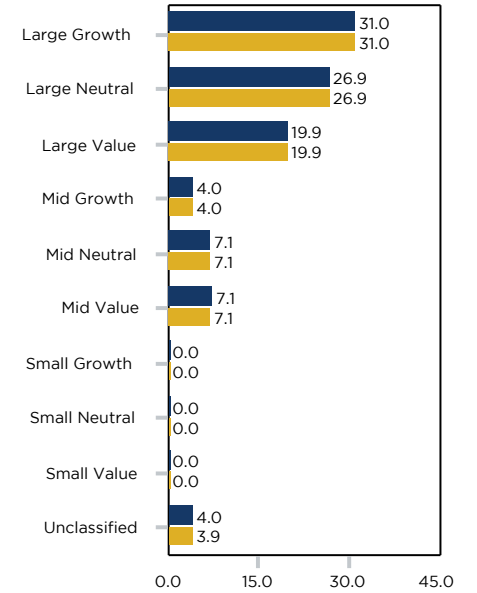
### Allocation | 1 Year



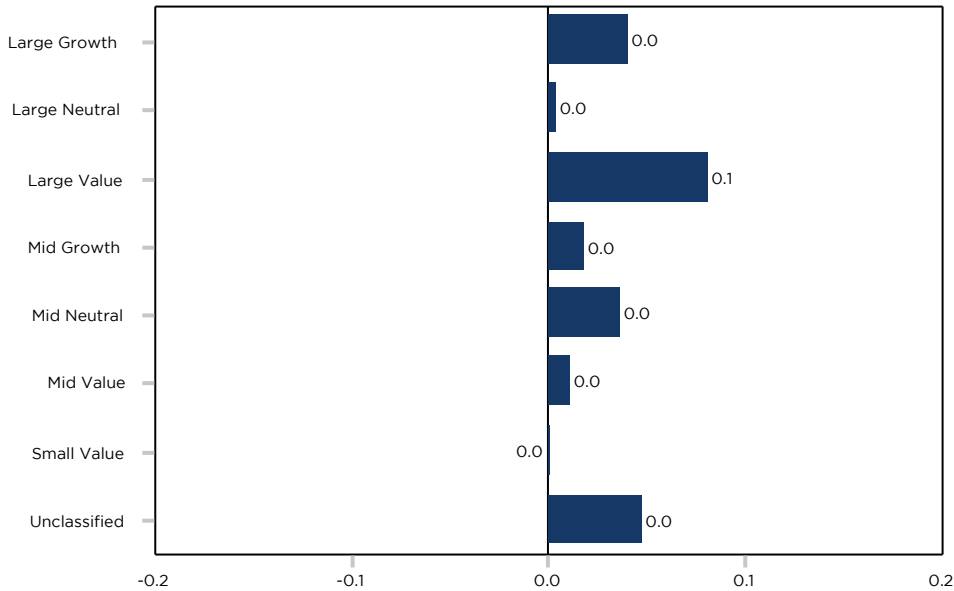
### Performance | 3 Years



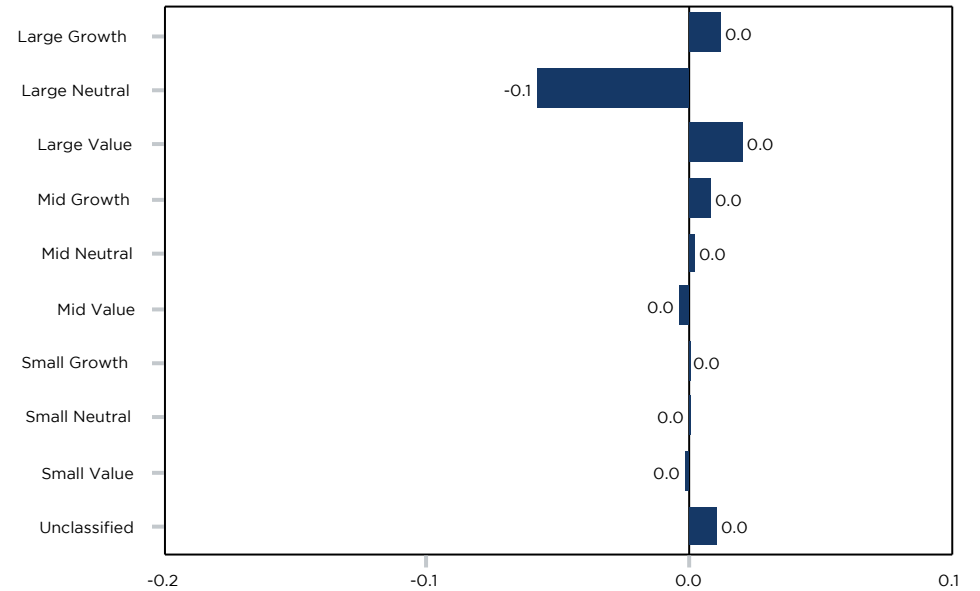
### Allocation | 3 Years



### Total Attribution | 1 Year



### Total Attribution | 3 Years



## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	8.65 (73)	33.41 (40)	33.41 (40)	20.99 (27)	13.77 (32)	12.98 (69)	2.67 (11)	29.29 (46)	7.85 (17)	-0.21 (86)
Benchmark	9.07	31.49	31.49	15.27	11.70	13.56	-4.38	21.83	11.96	1.38
Peer Group	9.56	32.39	32.39	18.89	12.67	13.68	-1.85	28.66	2.94	4.47
Population	1,828	1,791	1,791	1,698	1,614	1,392	2,026	1,899	2,003	2,013

## Fund Information

Fund Inception	09/25/2013
Fund Assets	2,221 Million
Portfolio Assets	838 Million
Total # of Holdings	35
% in Top 10	44.70 %
PM	Kaiser,N/Klimo,S/Salam,M
PM Tenure	25 Years 10 Months
Turnover	0.00 %
Gross Expense (%)	0.79 %
Net Expense (%)	0.79 %
New Investors	Open

## Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	184,171	287,781
Median Mkt. Cap (\$M)	78,602	23,997
Price/Earnings ratio	26.7	22.9
Price/Book ratio	8.2	3.7
5 Yr. EPS Growth Rate (%)	15.0	14.3
Current Yield (%)	1.5	1.9
Beta (5 Years, Monthly)	0.97	1.00
Number of Stocks	33	505
Debt to Equity	1.3	0.6
Forecast P/E	24.0	22.6
Forecast EPS Growth	11.9	11.2
Return on Equity	0.1	0.0

## Country/Region Allocation

United States	87.5	96.5
Non-US Developed	9.1	3.5
Emerging Markets	3.4	0.0
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

## Fund Statistics

	3 Years	10 Years
Standard Deviation	12.06	12.18
<b>vs. S&amp;P 500 Index</b>		
Beta	0.96	0.94
Alpha	5.67	0.27
Information Ratio	1.29	-0.15
Tracking Error	3.81	3.61
R-Squared	0.90	0.92
Up Market Capture	112.86	95.54
Down Market Capture	83.05	95.02
Consistency	52.78	44.17

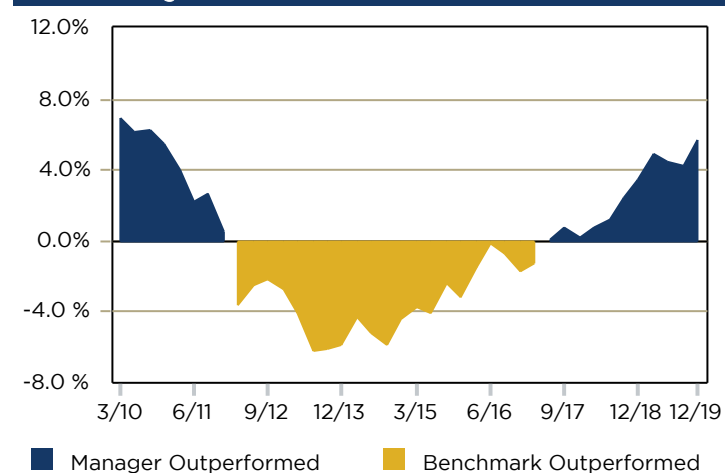
## vs. Risk Free

Sharpe Ratio	1.51	1.02
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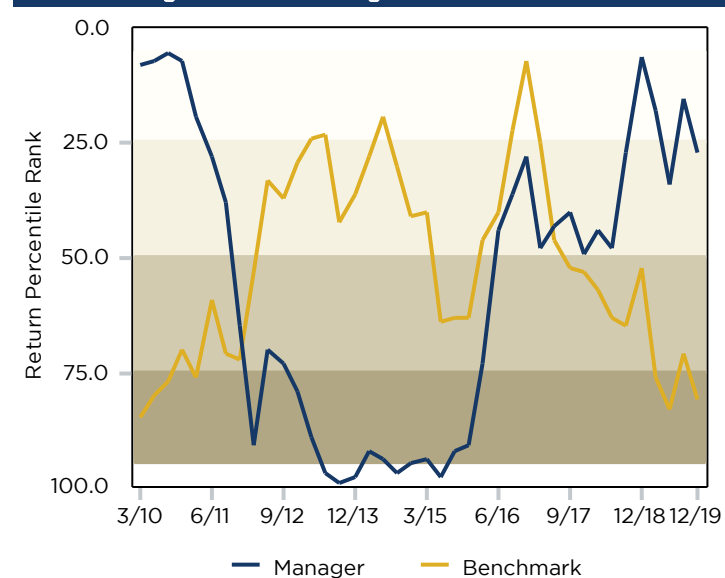
## Sector Allocation

Sector	Portfolio Weight (%)	Benchmark Weight (%)
Communication Services	0.0	10.4
Consumer Discretionary	6.4	9.8
Consumer Staples	11.9	7.2
Energy	0.0	4.3
Financials	0.0	13.0
Health Care	19.0	14.2
Industrials	15.7	9.1
Information Technology	47.1	23.2
Materials	0.0	2.7
Real Estate	0.0	2.9
Utilities	0.0	3.3
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

## 3 Years Rolling Excess Performance

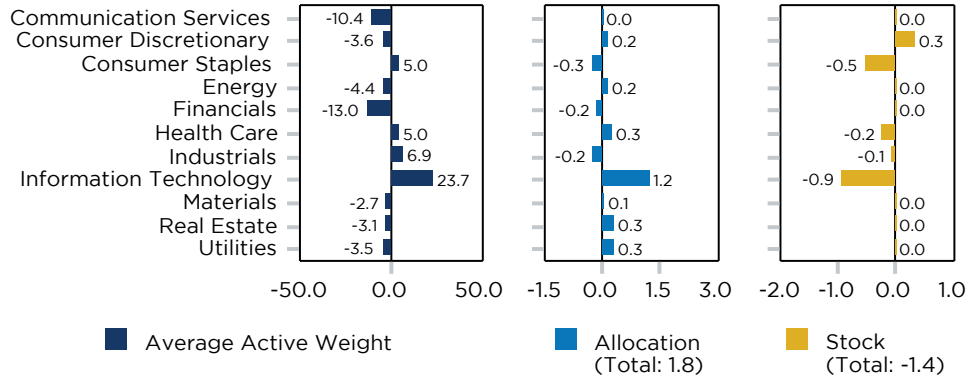


## 3 Years Rolling Percentile Ranking

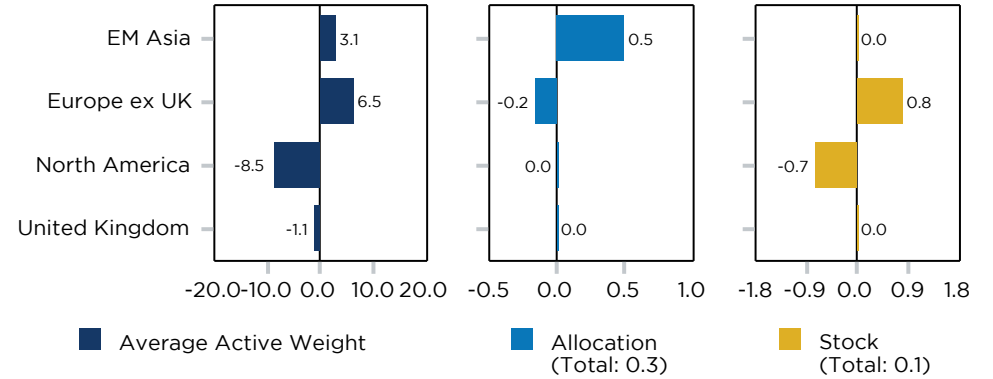




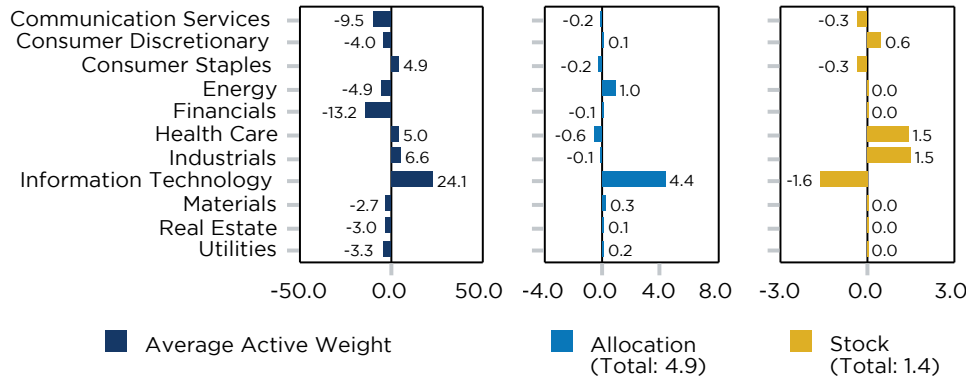
## 1 Quarter Sector Attribution



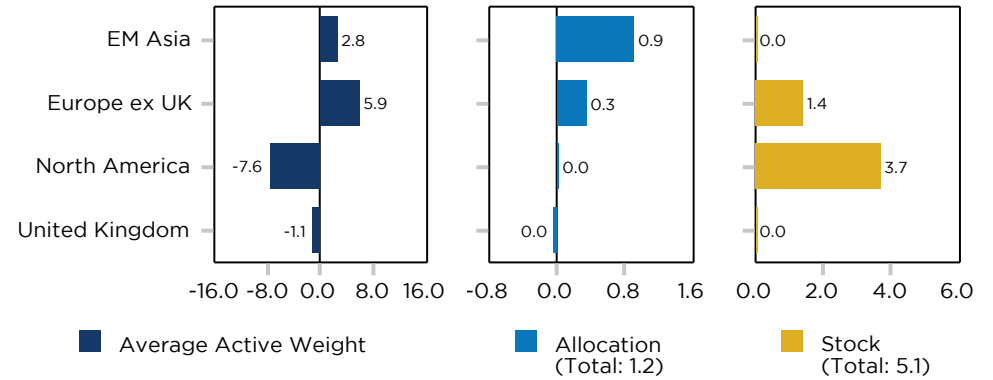
## 1 Quarter Region Attribution



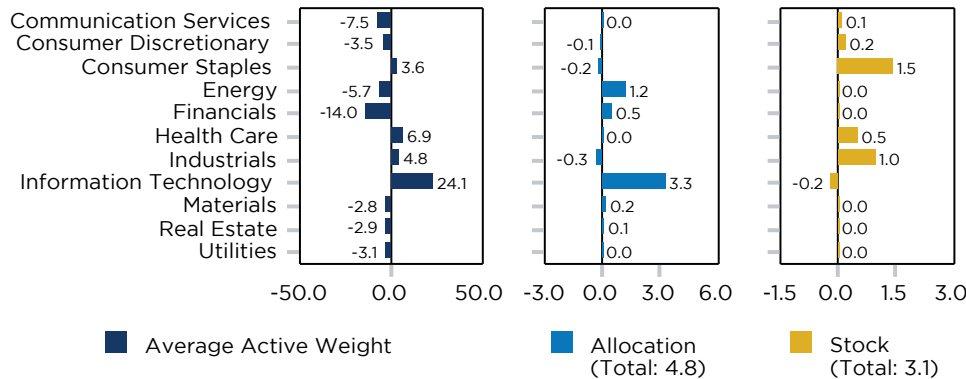
## 1 Year Sector Attribution



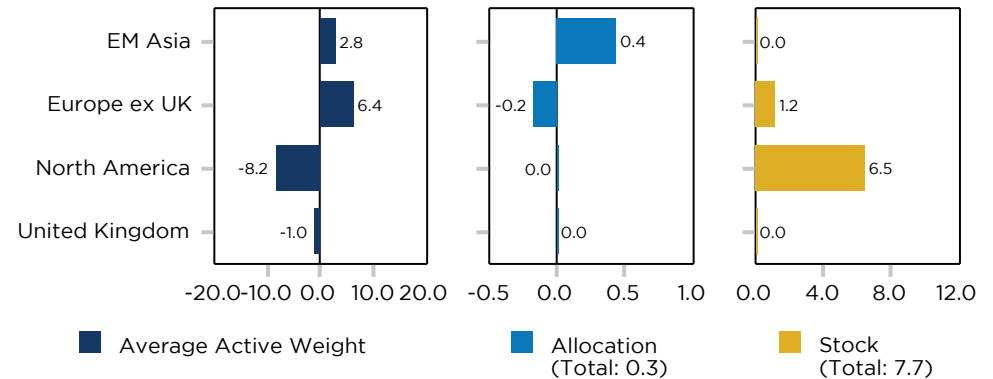
## 1 Year Region Attribution



## 3 Years Sector Attribution



## 3 Years Region Attribution



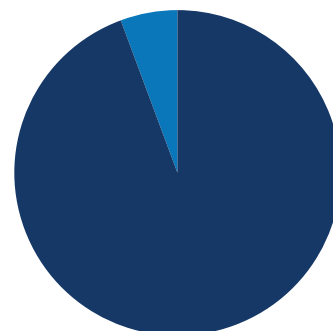


## Top Ten Securities

Apple Inc	6.7 %
Adobe Inc	5.9 %
Intuit Inc	5.3 %
The Estee Lauder Companies Inc	4.3 %
ASML Holding NV ADR	4.1 %
Amgen Inc	3.9 %
TJX Companies Inc	3.8 %
Church & Dwight Co Inc	3.8 %
L3Harris Technologies Inc	3.5 %
Agilent Technologies Inc	3.5 %
<b>Total</b>	<b>44.7 %</b>

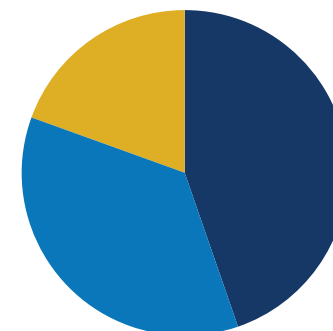
## Asset Allocation

■ Equity  
■ Cash  
■ Fixed Income



## Market Capitalization

■ Giant  
■ Large  
■ Medium  
■ Small  
■ Micro



## Top Ten Contributors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Adobe Inc	5.71	0.54	0.53	19.39
Amgen Inc	3.55	0.47	0.50	25.40
Taiwan Semiconductor	2.94	0.00	0.49	25.88
Apple Inc	5.84	3.85	0.45	31.50
ASML Holding NV	3.96	0.00	0.42	19.64
QUALCOMM Inc.	3.15	0.38	0.21	16.54
Eli Lilly and Co	2.02	0.38	0.15	18.21
Agilent Technologies Inc	3.57	0.10	0.09	11.56
Johnson & Johnson	2.81	1.38	0.06	13.53
TJX Companies Inc (The)	4.03	0.27	0.03	9.98

## Top Ten Contributors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Adobe Inc	4.25	0.27	1.28	47.42
ASML Holding NV	3.03	0.00	0.74	39.73
Intuit Inc.	4.01	0.15	0.68	32.94
Estee Lauder Companies Inc	2.46	0.09	0.61	40.88
Taiwan Semiconductor	2.50	0.00	0.40	31.30
Apple Inc	4.43	3.21	0.28	38.46
Eli Lilly and Co	3.14	0.37	0.25	24.33
Lowe's Cos Inc	3.93	0.32	0.22	21.28
Amgen Inc	3.79	0.56	0.20	21.58
Church & Dwight Co. Inc.	4.33	0.06	0.14	18.52

## Top Ten Detractors | 1 Quarter

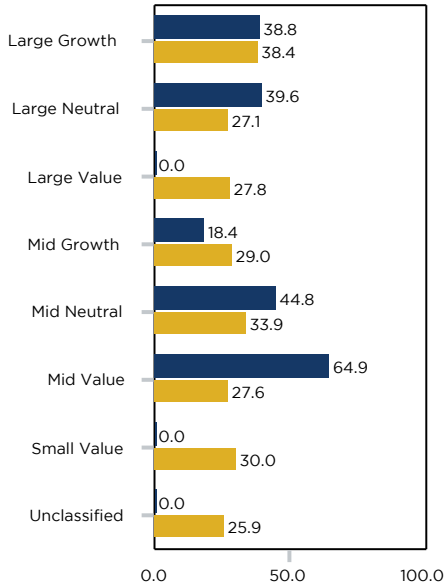
	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Church & Dwight Co. Inc.	4.67	0.08	-0.70	-6.20
Intuit Inc.	6.19	0.28	-0.61	-1.31
L3Harris Technologies Inc	4.21	0.19	-0.56	-4.80
Stryker Corp	3.35	0.28	-0.36	-2.67
Cisco Systems Inc	3.83	0.85	-0.34	-2.21
EMCOR Group Inc.	3.04	0.00	-0.27	0.30
Oracle Corp	1.85	0.49	-0.17	-3.30
Clorox Co (The)	1.96	0.08	-0.14	1.82
PepsiCo Inc	1.67	0.78	-0.08	0.38
SYNNEX Corp	0.26	0.00	0.01	14.46

## Top Ten Detractors | 3 Years

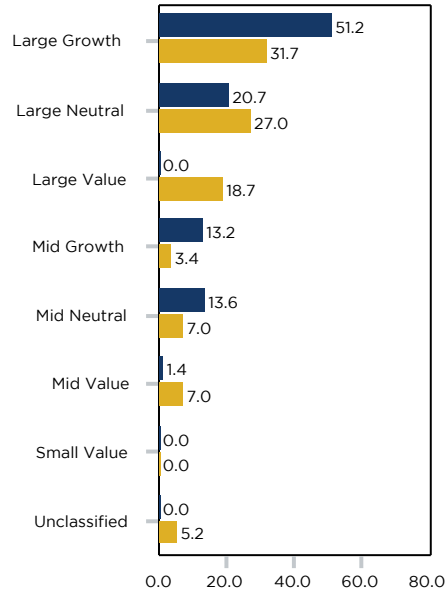
	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
EMCOR Group Inc.	3.38	0.00	-0.27	7.31
DENTSPLY SIRONA Inc	0.87	0.07	-0.12	0.03
Lincoln Electric Holdings Inc	1.93	0.00	-0.10	10.12
Clorox Co (The)	2.44	0.08	-0.09	11.45
Johnson & Johnson	3.39	1.63	-0.07	11.10
Oracle Corp	1.75	0.60	-0.03	13.10
PepsiCo Inc	1.72	0.78	-0.02	12.62
Gartner Inc	1.47	0.00	0.00	15.10
Novartis AG	0.89	0.00	0.02	17.95
SAP AG	1.92	0.00	0.04	17.32



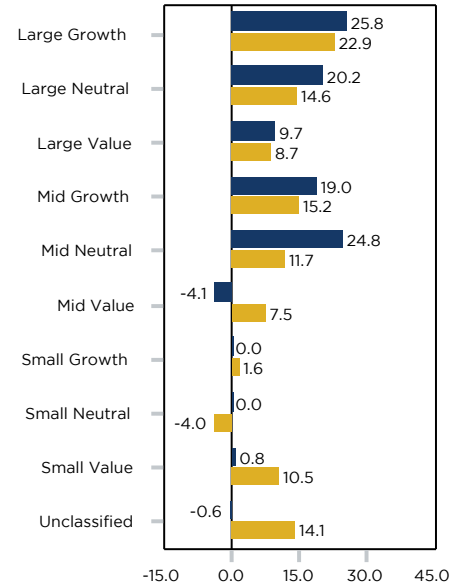
## Performance | 1 Year



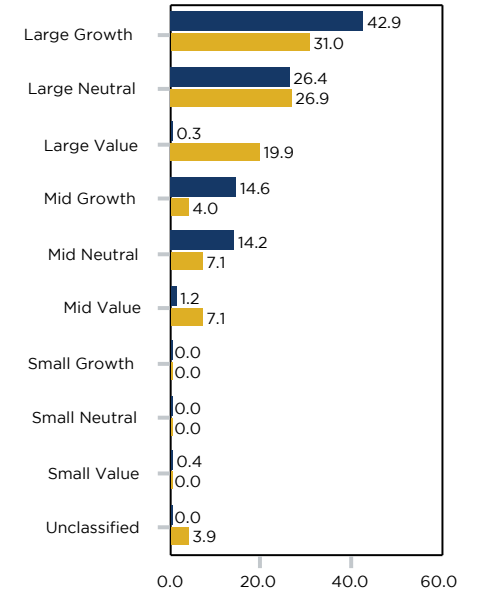
## Allocation | 1 Year



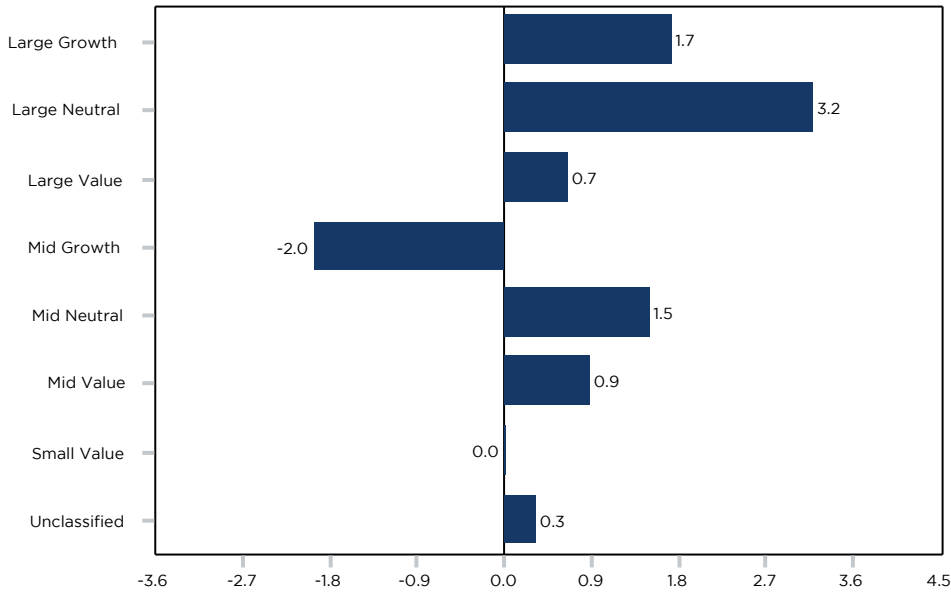
## Performance | 3 Years



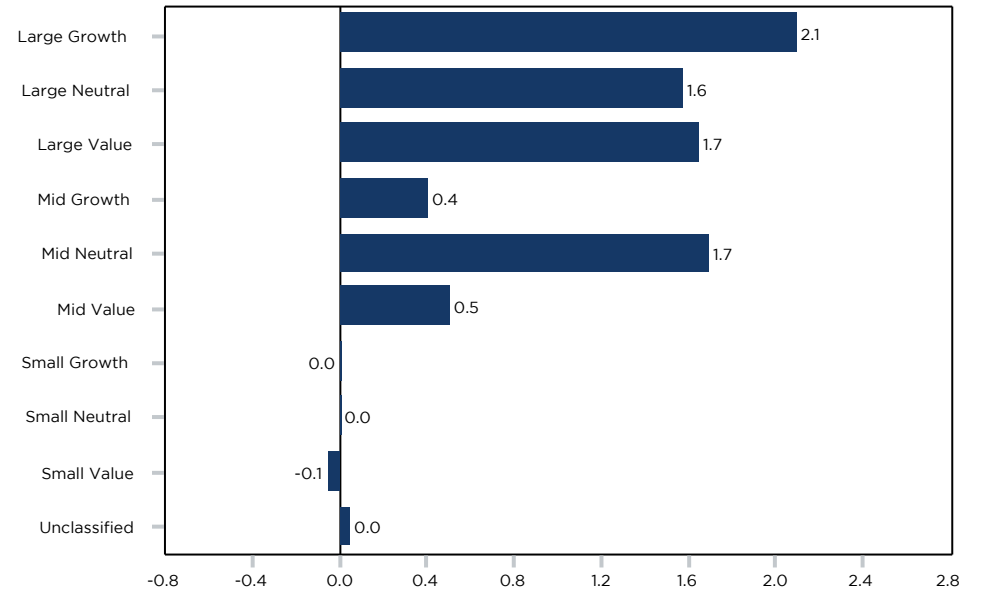
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years



**Trailing Performance**

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	8.88 (68)	31.66 (59)	31.66 (59)	19.18 (48)	13.15 (43)	14.39 (29)	-2.46 (55)	31.83 (27)	2.92 (51)	6.46 (31)
Benchmark	10.62	36.39	36.39	20.49	14.63	15.22	-1.51	30.21	7.08	5.67
Peer Group	9.56	32.39	32.39	18.89	12.67	13.68	-1.85	28.66	2.94	4.47
Population	1,828	1,791	1,791	1,698	1,614	1,392	2,026	1,899	2,003	2,013

**Fund Information**

Fund Inception	04-2015
Fund Assets	27,929 Million
Portfolio Assets	13,407 Million
Total # of Holdings	582
% Assets in Top 10 Holdings	36.7 %
PM	Franks,T/Hirsch,S/Kontos,T
PM Tenure	14 Years
Turnover	62.0 %
Gross Expense (%)	0.2 %
Net Expense (%)	0.2 %
New Investors	Open

**Equity Characteristics**

Avg. Market Cap	114,324 (Million)
Price/Earnings	26
Price/Book	7
Dividend Yield	0.9 %

**Top Holdings (%)**

Microsoft Corp	6.2
Amazon.com Inc	5.7
Apple Inc	4.4
Facebook Inc A	4.3
Alphabet Inc Class C	4.0
Visa Inc Class A	3.2
Salesforce.com Inc	2.8
PayPal Holdings Inc	2.3
Intuit Inc	2.1
Mastercard Inc A	1.8

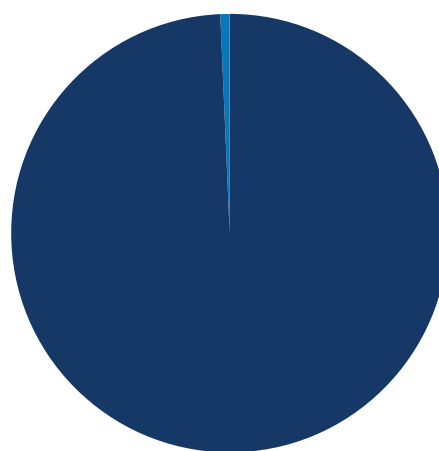
**Fund Statistics**

	3 Years	10 Years
Standard Deviation	13.37	13.62
<b>vs. Russell 1000 Growth Index</b>		
Beta	1.02	1.03
Alpha	-1.39	-1.17
Information Ratio	-0.73	-0.45
Tracking Error	1.45	1.45
R-Squared	0.99	0.99
Up Market Capture	97.66	100.89
Down Market Capture	103.63	107.83
Consistency	41.67	47.50

**vs. Risk Free**

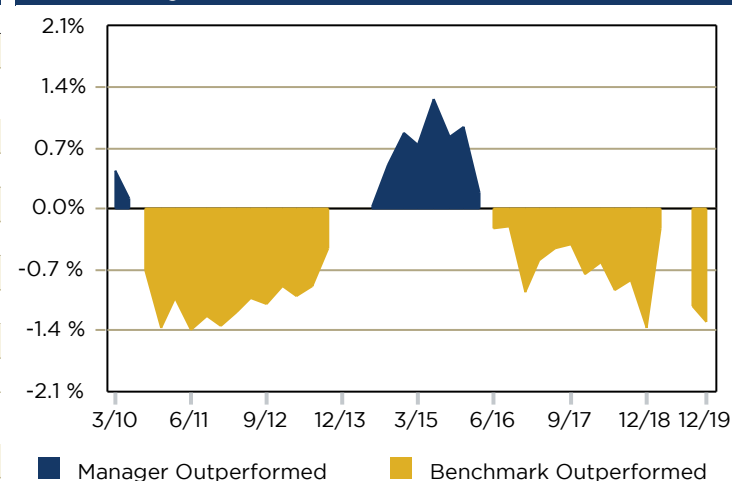
Sharpe Ratio	1.26	1.02
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**Asset Allocation**

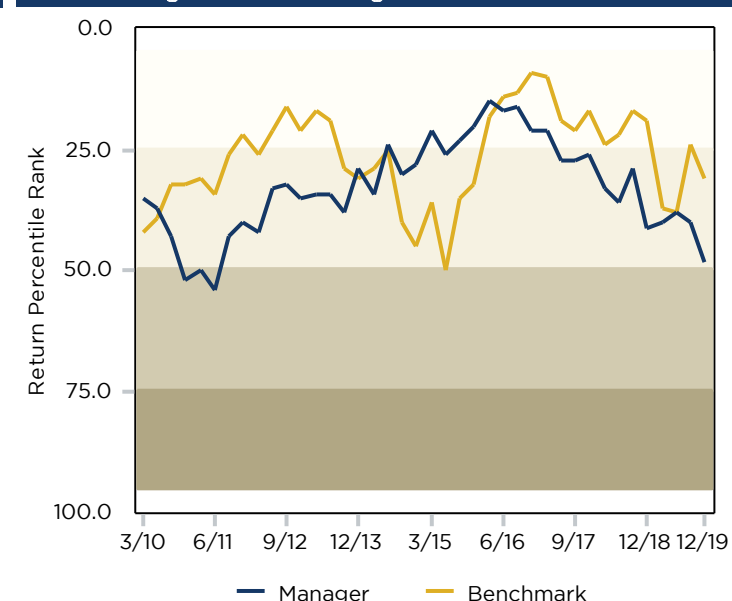


■ Equity    ■ Cash  
■ Fixed Income

**3 Years Rolling Excess Performance**



**3 Years Rolling Percentile Ranking**



## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	8.57 (75)	37.65 (11)	37.65 (11)	23.21 (7)	13.87 (30)	15.69 (8)	0.55 (25)	35.14 (10)	-0.56 (82)	2.94 (62)
Benchmark	10.67	35.85	35.85	19.89	14.23	15.05	-2.12	29.59	7.39	5.09
Peer Group	9.56	32.39	32.39	18.89	12.67	13.68	-1.85	28.66	2.94	4.47
Population	1,828	1,791	1,791	1,698	1,614	1,392	2,026	1,899	2,003	2,013

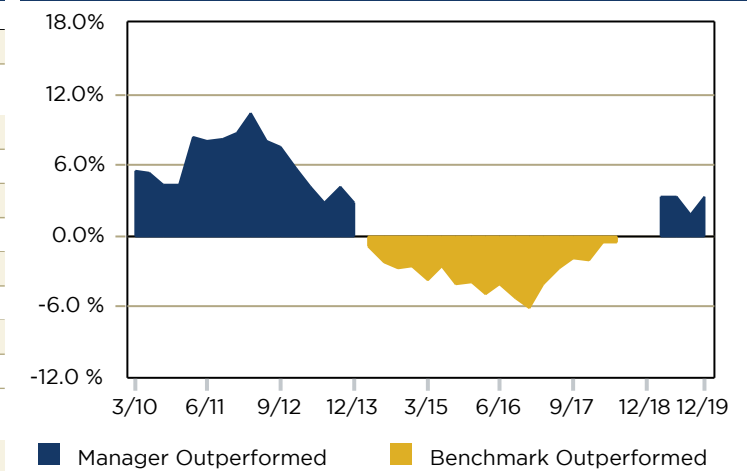
## Fund Information

Fund Inception	02/24/2000
Fund Assets	4,671 Million
Portfolio Assets	1,498 Million
Total # of Holdings	95
% in Top 10	36.38 %
PM	Eberhardy,J/Ognar,T
PM Tenure	17 Years 7 Months
Turnover	39.00 %
Gross Expense (%)	0.85 %
Net Expense (%)	0.75 %
New Investors	Open

## Fund Statistics

	3 Years	10 Years
Standard Deviation	14.71	15.20
<b>vs. Russell 3000 Growth Index</b>		
Beta	1.07	1.08
Alpha	1.60	-0.35
Information Ratio	0.73	0.16
Tracking Error	4.11	5.10
R-Squared	0.93	0.89
Up Market Capture	109.35	108.05
Down Market Capture	97.61	111.33
Consistency	55.56	52.50

## 3 Years Rolling Excess Performance



## Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	278,228	361,619
Median Mkt. Cap (\$M)	14,470	1,853
Price/Earnings ratio	36.6	29.2
Price/Book ratio	6.9	7.4
5 Yr. EPS Growth Rate (%)	28.0	21.5
Current Yield (%)	0.5	1.1
Beta (5 Years, Monthly)	1.07	1.00
Number of Stocks	93	1,702
Debt to Equity	0.9	0.8
Forecast P/E	28.9	24.8
Forecast EPS Growth	18.5	15.0
Return on Equity	0.0	0.1

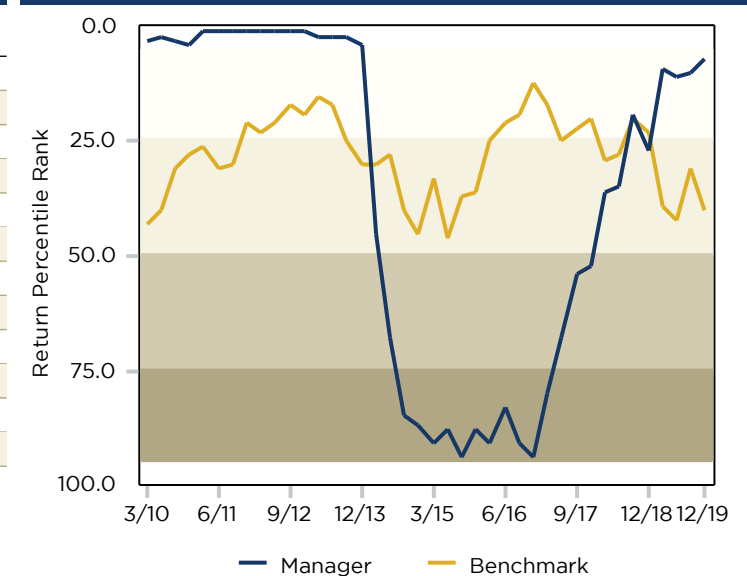
## vs. Risk Free

Sharpe Ratio	1.39	1.00
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## Sector Allocation

Sector	Portfolio Weight (%)	Benchmark Weight (%)
Communication Services	10.9	11.0
Consumer Discretionary	16.9	13.7
Consumer Staples	2.3	4.6
Energy	0.0	0.3
Financials	4.3	3.3
Health Care	10.6	15.8
Industrials	12.1	9.9
Information Technology	41.4	37.5
Materials	1.4	1.5
Real Estate	0.0	2.5
Utilities	0.0	0.1
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

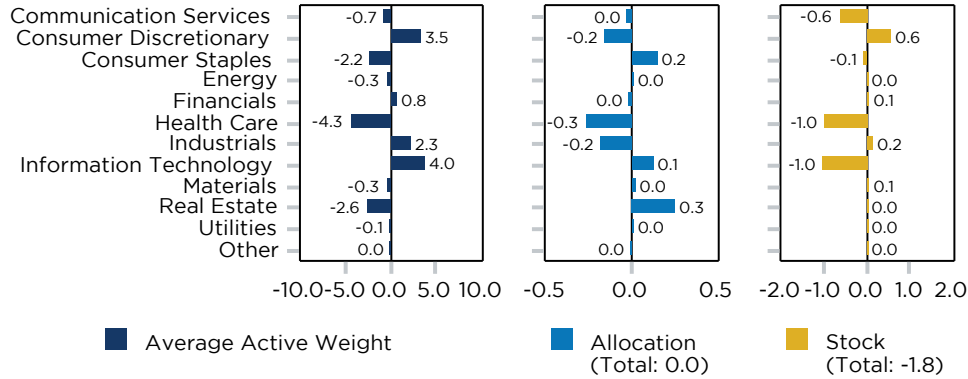
## 3 Years Rolling Percentile Ranking



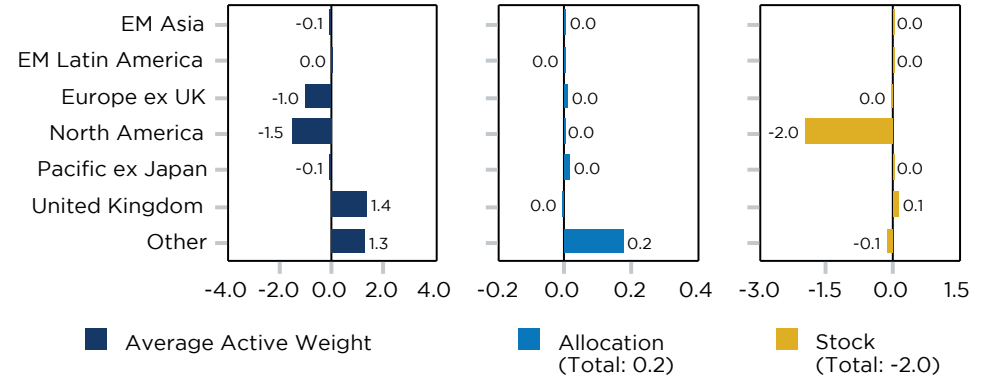
## Country/Region Allocation

United States	94.5	97.6
Non-US Developed	4.2	2.1
Emerging Markets	0.0	0.1
Other	1.4	0.2
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

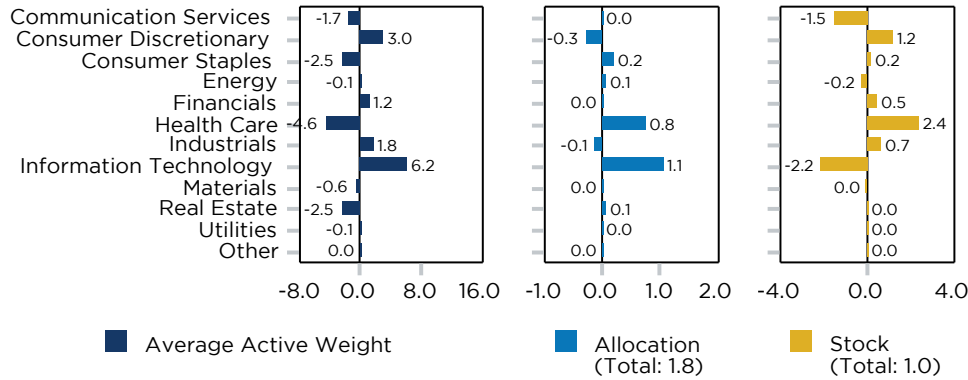
**1 Quarter Sector Attribution**



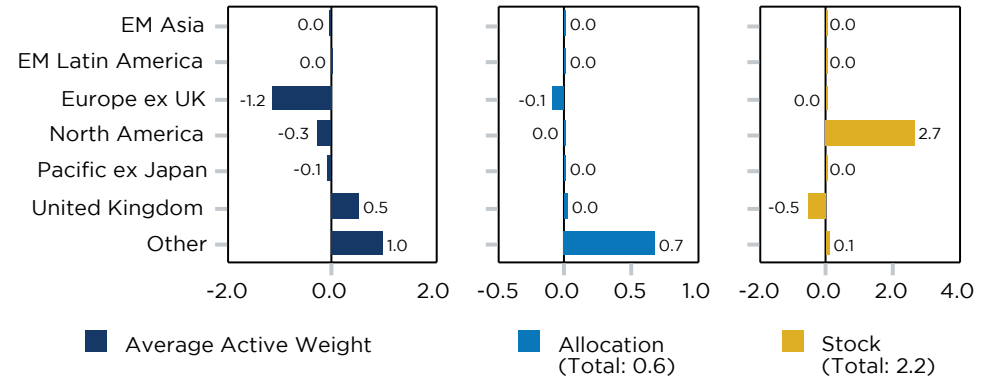
**1 Quarter Region Attribution**



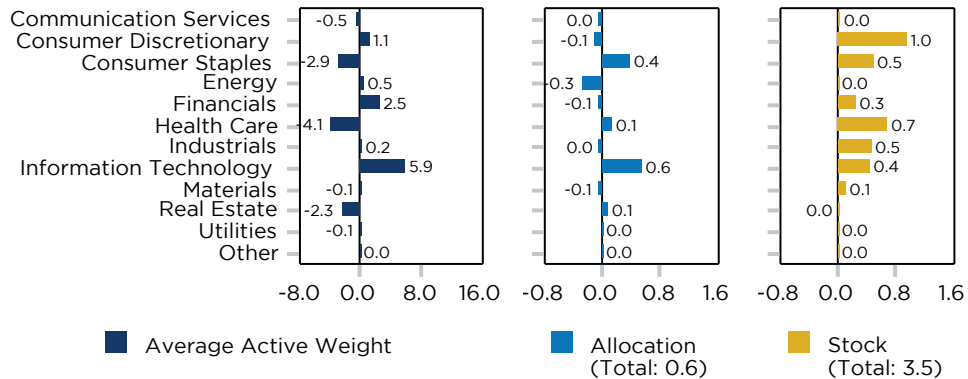
**1 Year Sector Attribution**



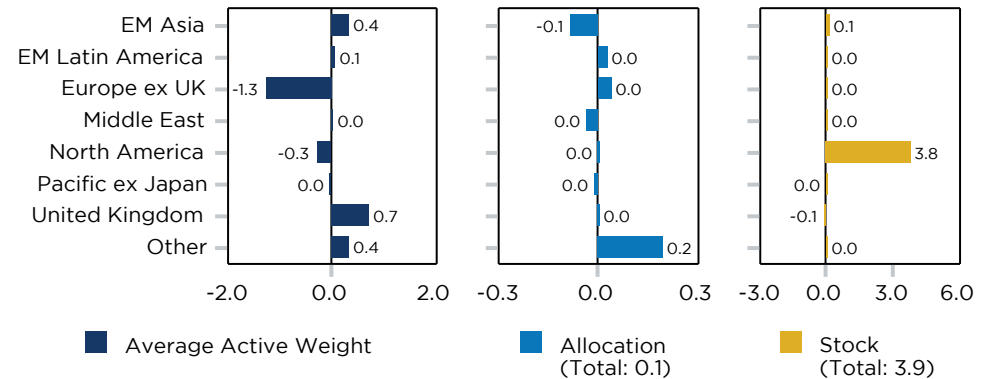
**1 Year Region Attribution**



**3 Years Sector Attribution**



**3 Years Region Attribution**

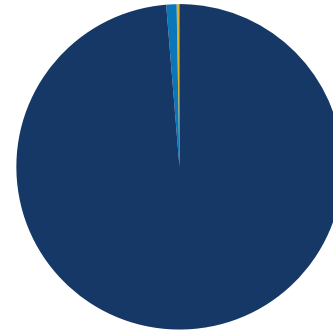


### Top Ten Securities

Amazon.com Inc	6.9 %
Alphabet Inc A	5.2 %
Microsoft Corp	5.1 %
Mastercard Inc A	3.3 %
Microchip Technology Inc	3.2 %
Visa Inc Class A	3.1 %
Apple Inc	2.6 %
Envestnet Inc	2.4 %
Facebook Inc A	2.4 %
Burlington Stores Inc	2.3 %
<b>Total</b>	<b>36.4 %</b>

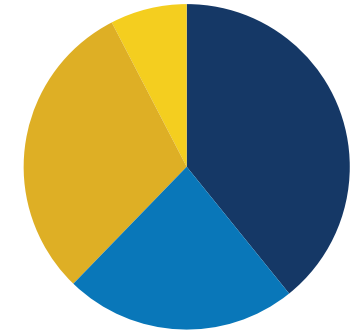
### Asset Allocation

- Equity
- Other
- Cash
- Fixed Income



### Market Capitalization

- Giant
- Large
- Medium
- Small
- Micro



### Top Ten Contributors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Envestnet Inc	2.20	0.02	0.26	22.80
DexCom Inc	0.73	0.09	0.23	46.57
Monolithic Power Systems Inc	2.60	0.04	0.10	14.64
Microchip Technology Inc	3.63	0.04	0.09	13.16
Burlington Stores Inc	2.38	0.09	0.08	14.12
Mastercard Inc	3.50	1.63	-0.01	10.08
Alphabet Inc	5.51	2.45	-0.03	9.68
Microsoft Corp	5.26	7.05	-0.06	13.82
Amazon.com Inc	7.41	4.81	-0.11	6.45
Apple Inc	2.43	6.79	-0.91	31.50

### Top Ten Contributors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Veeva Systems Inc	1.88	0.03	0.58	51.19
Burlington Stores Inc	2.98	0.03	0.57	39.09
Splunk Inc	1.97	0.06	0.44	43.06
MarketAxess Holdings Inc	2.36	0.05	0.42	38.20
Amazon.com Inc	5.25	2.56	0.41	35.07
Mastercard Inc	2.60	0.87	0.41	43.35
Visa Inc	2.99	1.30	0.25	34.94
Facebook Inc	5.96	2.26	0.05	21.28
Alphabet Inc	5.93	2.04	-0.03	19.12
Apple Inc	1.92	5.10	-0.59	38.46

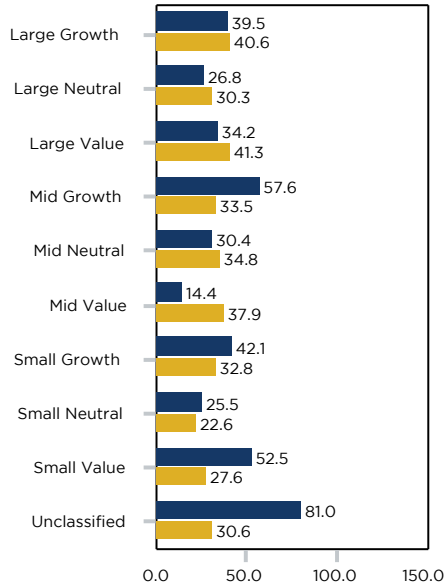
### Top Ten Detractors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Veeva Systems Inc	1.67	0.13	-0.29	-7.88
RealPage Inc	1.13	0.03	-0.28	-14.49
Proofpoint Inc	1.32	0.05	-0.28	-11.06
Dropbox Inc	0.87	0.03	-0.18	-11.20
Sage Therapeutics Inc	0.35	0.05	-0.18	-48.54
Constellation Brands Inc	0.32	0.00	-0.06	-8.10
Twilio Inc	0.36	0.09	-0.06	-10.62
Twitter Inc	0.35	0.21	-0.05	-22.21
Boeing Co	1.38	1.35	-0.01	-13.89
Home Depot Inc. (The)	0.88	0.98	0.02	-5.28

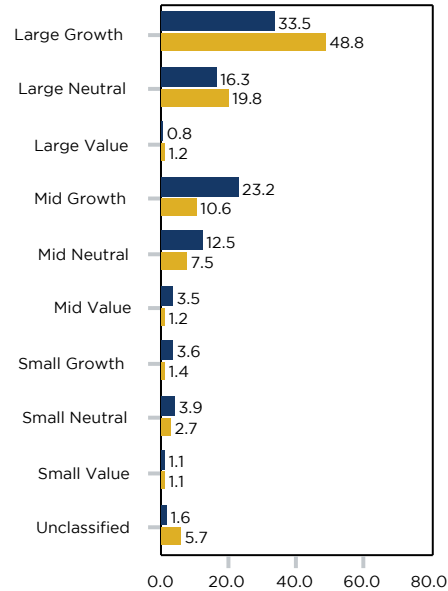
### Top Ten Detractors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Concho Resources Inc	1.42	0.00	-0.46	-12.75
Ultragenyx Pharmaceutical Inc	0.65	0.02	-0.22	-15.31
Halliburton Co	0.52	0.00	-0.22	-21.52
Habit Restaurants Inc (The)	0.54	0.00	-0.19	-15.44
Alexion Pharmaceuticals	0.78	0.23	-0.13	-4.03
trivago N.V.	0.21	0.00	-0.12	-39.36
Schlumberger Ltd	0.30	0.00	-0.12	-18.64
Incyte Corp	0.61	0.14	-0.11	-4.51
Under Armour Inc	0.29	0.04	-0.07	-8.66
Extraction Oil & Gas Inc	0.08	0.00	-0.06	-52.71

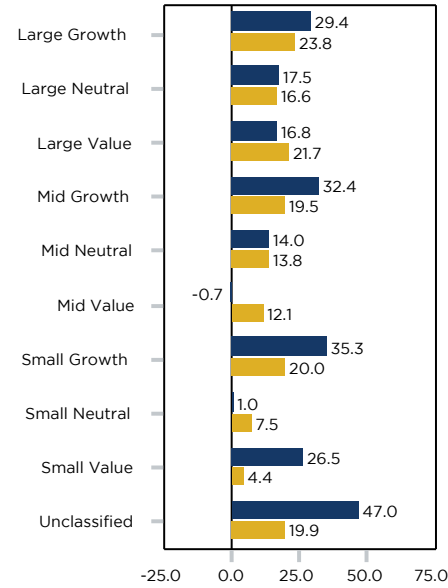
### Performance | 1 Year



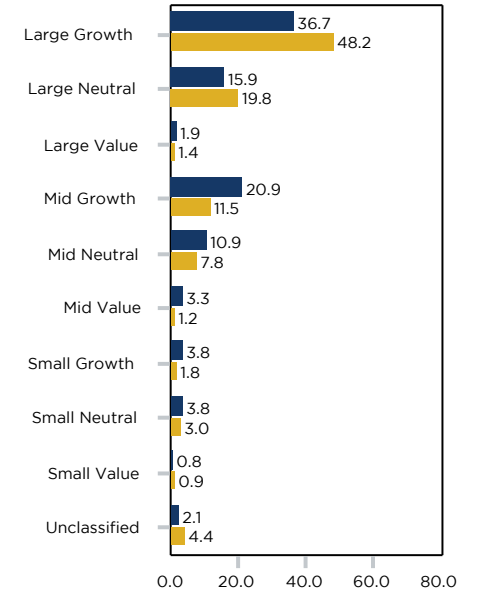
### Allocation | 1 Year



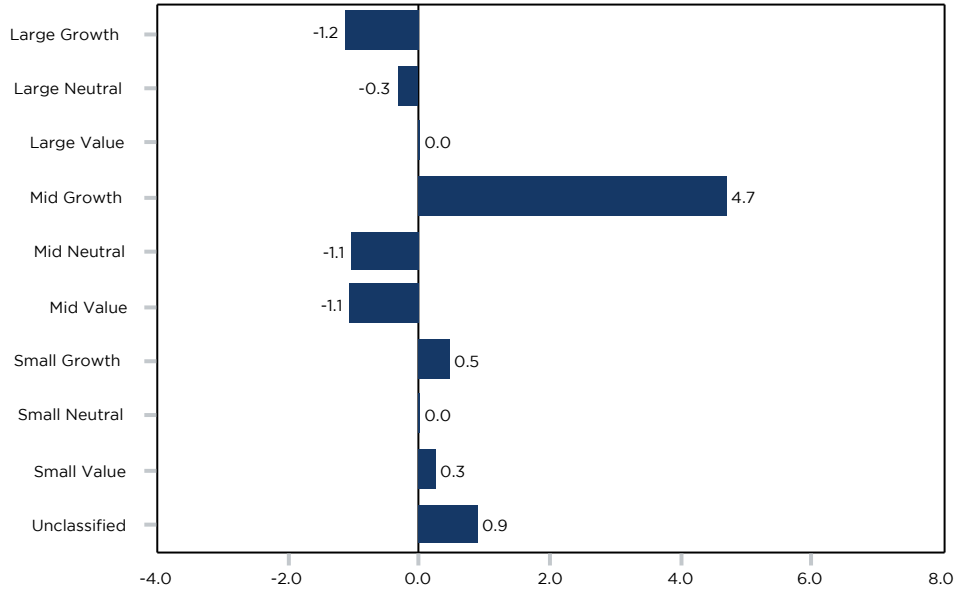
### Performance | 3 Years



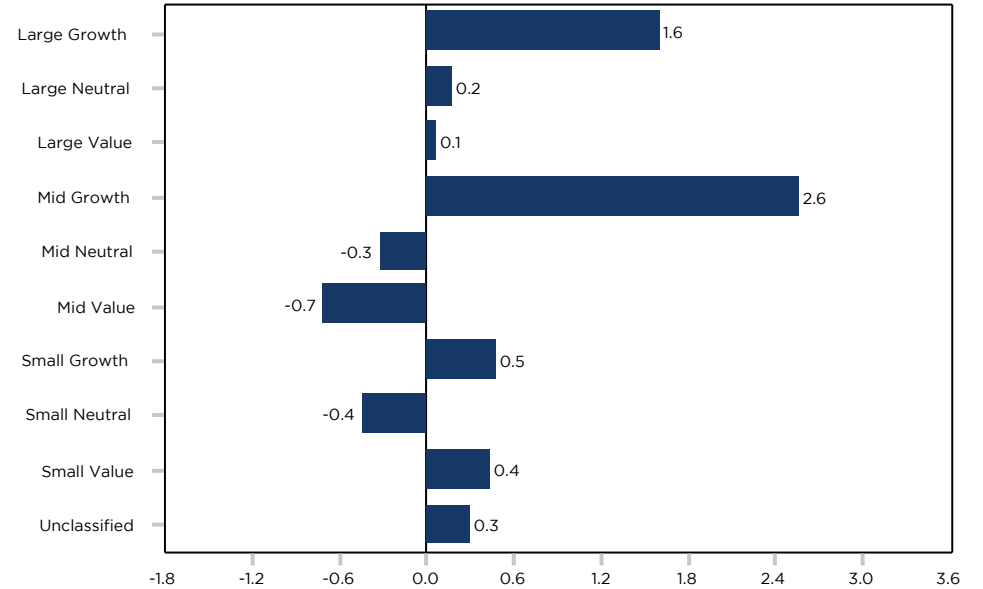
### Allocation | 3 Years



### Total Attribution | 1 Year



### Total Attribution | 3 Years



## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	7.19 (41)	27.05 (46)	27.05 (46)	6.62 (70)	6.14 (69)	10.79 (52)	-14.15 (58)	11.13 (79)	17.40 (52)	-5.35 (60)
Benchmark	6.36	27.06	27.06	8.10	7.62	12.41	-12.29	13.34	20.00	-4.78
Peer Group	6.83	26.69	26.69	7.66	7.08	10.85	-13.46	13.37	17.59	-4.30
Population	543	534	534	508	489	403	613	571	571	567

## Fund Information

Fund Inception	10/01/2002
Fund Assets	2,911 Million
Portfolio Assets	1,935 Million
Total # of Holdings	195
% in Top 10	13.08 %
PM	Cutler,R
PM Tenure	
Turnover	81.00 %
Gross Expense (%)	0.42 %
Net Expense (%)	0.42 %
New Investors	Open

## Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	14,264	15,840
Median Mkt. Cap (\$M)	9,360	8,019
Price/Earnings ratio	18.1	18.9
Price/Book ratio	2.2	2.3
5 Yr. EPS Growth Rate (%)	5.3	7.7
Current Yield (%)	2.0	2.3
Beta (5 Years, Monthly)	1.05	1.00
Number of Stocks	192	631
Debt to Equity	0.6	1.2
Forecast P/E	13.9	15.7
Forecast EPS Growth	11.1	8.5
Return on Equity	0.0	0.0

## Country/Region Allocation

United States	91.2	95.4
Non-US Developed	8.8	4.3
Emerging Markets	0.0	0.2
Other	0.0	0.1
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

## Fund Statistics

	3 Years	10 Years
Standard Deviation	13.90	13.89
<b>vs. Russell Midcap Value Index</b>		
Beta	1.08	1.01
Alpha	-1.89	-1.57
Information Ratio	-0.59	-0.71
Tracking Error	2.08	2.00
R-Squared	0.98	0.98
Up Market Capture	97.20	95.49
Down Market Capture	105.40	102.31
Consistency	44.44	44.17

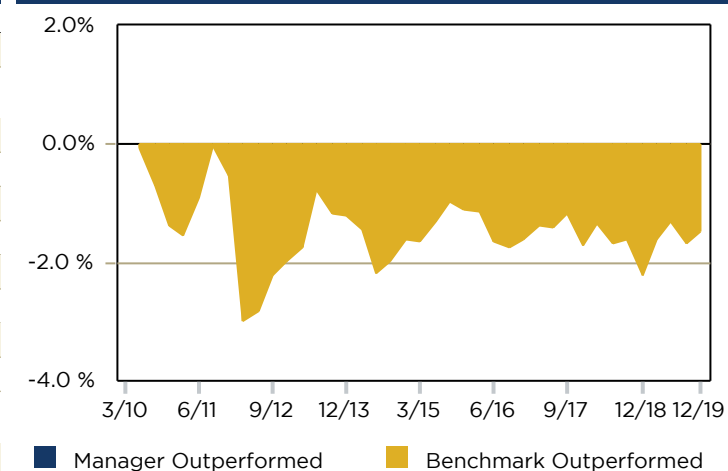
## vs. Risk Free

Sharpe Ratio	0.41	0.77
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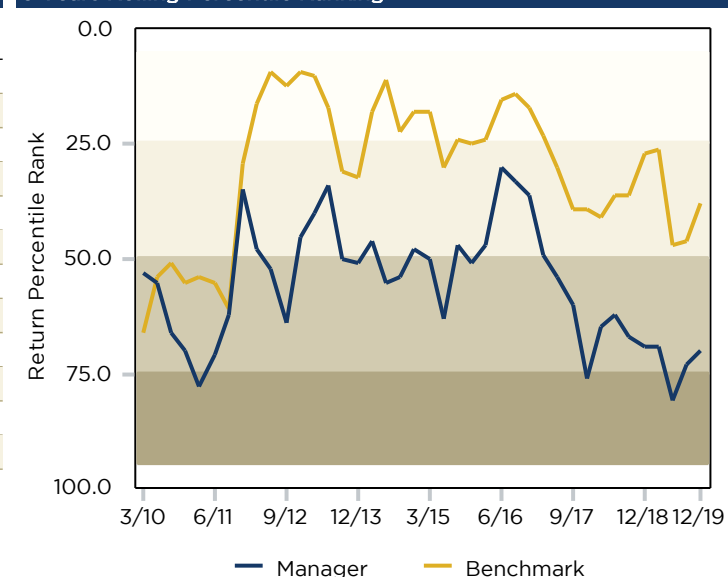
## Sector Allocation

Sector	Portfolio Weight (%)	Benchmark Weight (%)
Communication Services	2.5	3.9
Consumer Discretionary	10.0	9.1
Consumer Staples	4.6	4.7
Energy	6.8	5.7
Financials	19.5	18.4
Health Care	7.7	6.9
Industrials	11.7	11.8
Information Technology	8.8	7.6
Materials	7.9	6.7
Real Estate	10.9	14.0
Utilities	8.8	11.2
<b>Total</b>	<b>99.3</b>	<b>100.0</b>

## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking





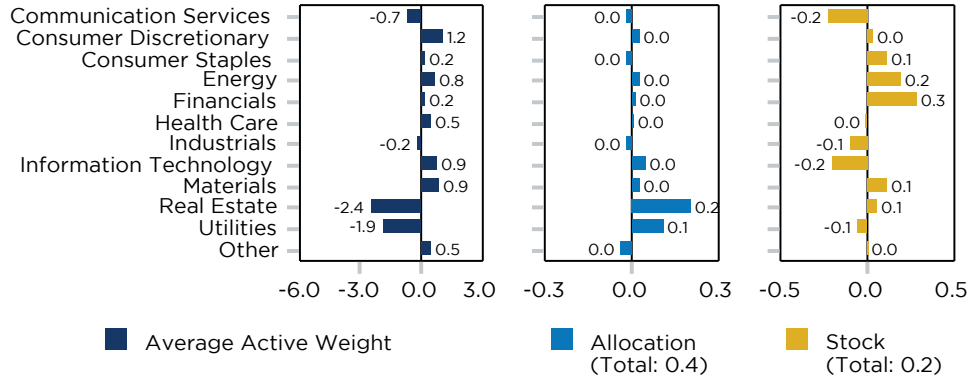


# TIAA-CREF Mid-Cap Value Instl (TIMVX)

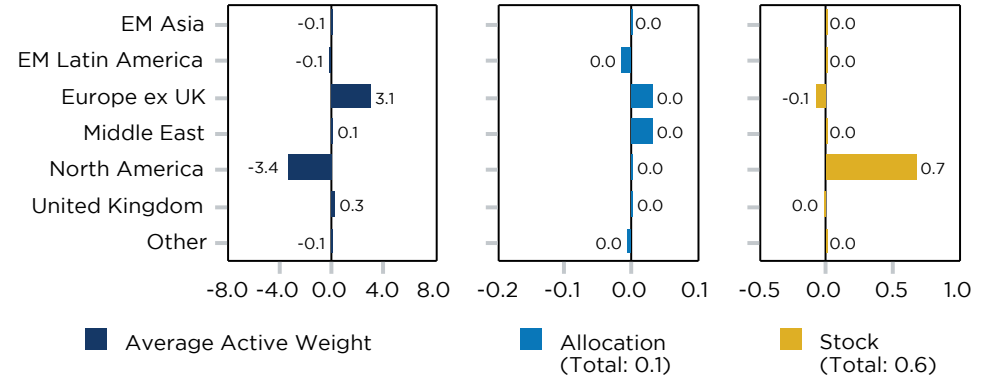
Index: Russell Midcap Value Index

Report Date: 12/31/2019

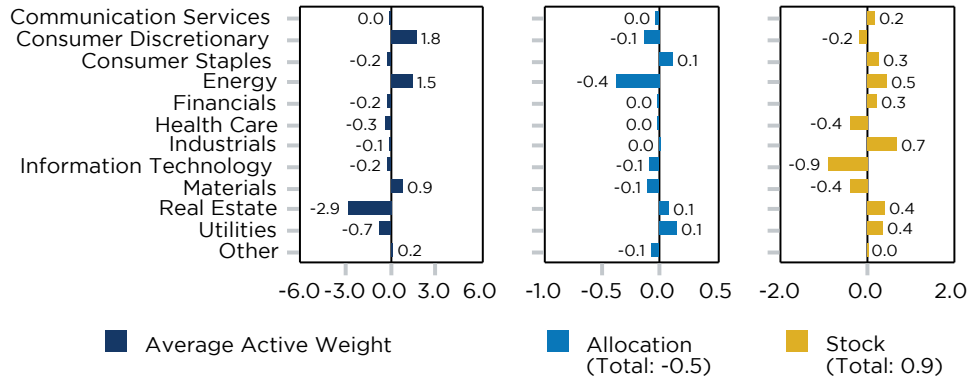
## 1 Quarter Sector Attribution



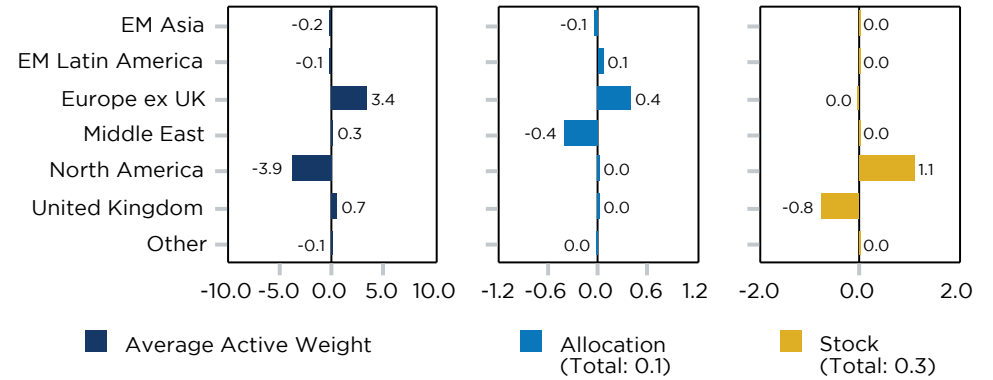
## 1 Quarter Region Attribution



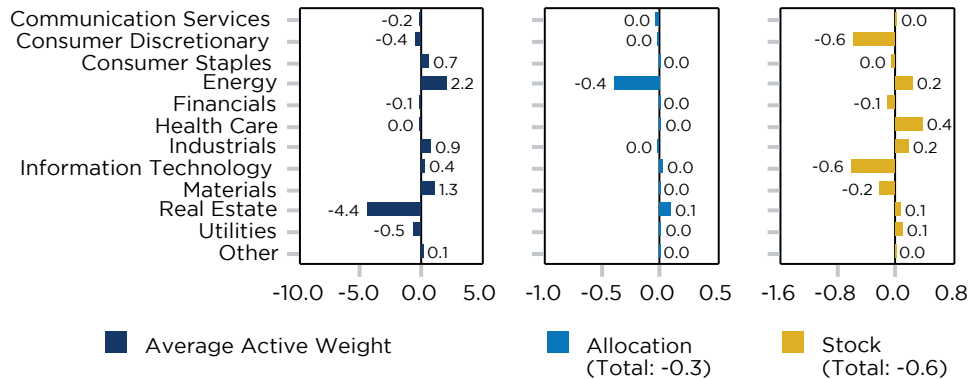
## 1 Year Sector Attribution



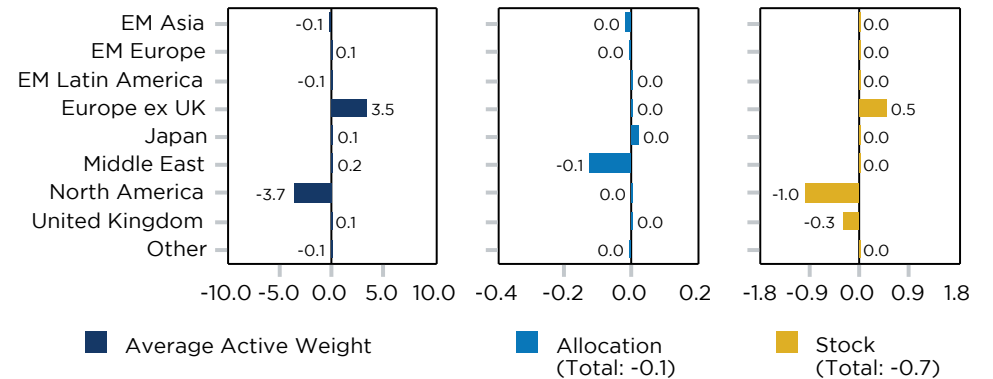
## 1 Year Region Attribution



## 3 Years Sector Attribution



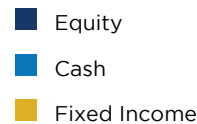
## 3 Years Region Attribution



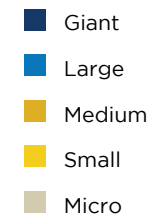
### Top Ten Securities

Zimmer Biomet Holdings Inc	1.7 %
FirstEnergy Corp	1.6 %
Ameriprise Financial Inc	1.6 %
Citizens Financial Group Inc	1.5 %
Cummins Inc	1.2 %
Western Digital Corp	1.2 %
AvalonBay Communities Inc	1.1 %
McKesson Corp	1.1 %
Sempra Energy	1.1 %
The Hartford Financial Services	1.0 %
<b>Total</b>	<b>13.1 %</b>

### Asset Allocation



### Market Capitalization



### Top Ten Contributors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Penn National Gaming Inc	0.68	0.00	0.21	37.24
Lumentum Holdings Inc	0.34	0.00	0.14	48.06
WPX Energy Inc	0.67	0.10	0.13	29.74
NXP Semiconductors NV	1.04	0.00	0.11	16.98
Citizens Financial Group Inc	1.32	0.34	0.09	15.97
Freeport-McMoran Cpr & Gld	0.56	0.30	0.08	37.81
Arconic Inc	0.85	0.22	0.08	18.43
Baker Hughes a GE Co	1.51	0.32	0.06	11.37
Zimmer Biomet Holdings Inc	1.71	0.61	0.03	9.21
State Street Corp	0.58	0.48	0.03	34.51

### Top Ten Contributors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Lam Research Corp	0.60	0.10	0.17	42.98
Boston Scientific Corp	0.79	0.00	0.16	27.87
CSX Corp	0.60	0.00	0.12	28.06
IAC/InterActiveCorp	0.27	0.03	0.12	56.66
Ciena Corp	0.81	0.00	0.10	20.48
Agilent Technologies Inc	0.79	0.32	0.08	24.36
Ameriprise Financial Inc	1.07	0.35	0.07	17.44
Republic Services Inc.	0.82	0.39	0.05	18.57
Sempra Energy	1.03	0.73	0.03	18.06
Micron Technology Inc.	0.59	0.66	-0.02	34.87

### Top Ten Detractors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
CyrusOne Inc	1.17	0.19	-0.23	-16.65
Expedia Group Inc	0.77	0.05	-0.18	-19.26
AXIS Capital Holdings Ltd	0.94	0.11	-0.13	-9.75
Proofpoint Inc	0.50	0.00	-0.09	-11.06
Teradata Corp	0.38	0.00	-0.08	-13.65
Southwest Gas Holdings Inc	0.33	0.00	-0.07	-15.96
Welltower Inc	1.06	0.80	-0.04	-8.83
Dollar Tree Inc	0.41	0.27	-0.03	-17.62
Vistra Energy Corp	0.38	0.25	-0.03	-13.54
Ventas Inc.	0.48	0.59	0.03	-19.86

### Top Ten Detractors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Babcock & Wilcox Enterprises Inc	0.41	0.00	-0.30	-64.53
PG&E Corp	0.52	0.00	-0.27	-43.22
Callon Petroleum Co/DE	0.50	0.00	-0.20	-32.01
Newell Brands Inc	0.57	0.00	-0.17	-21.54
Cimarex Energy Co.	0.77	0.31	-0.16	-26.59
Dean Foods Co	0.16	0.00	-0.15	-85.69
J.C. Penney Company Inc.	0.33	0.07	-0.15	-48.73
Superior Energy Services Inc.	0.26	0.07	-0.15	-69.04
Parsley Energy Inc	0.63	0.15	-0.13	-18.65
American Airlines Group Inc	0.93	0.72	-0.05	-14.12

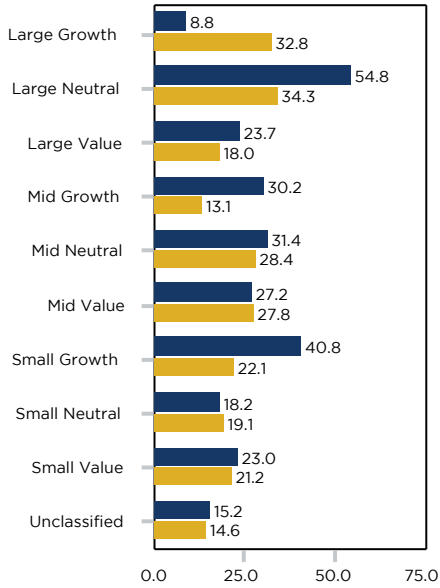


# TIAA-CREF Mid-Cap Value Instl (TIMVX)

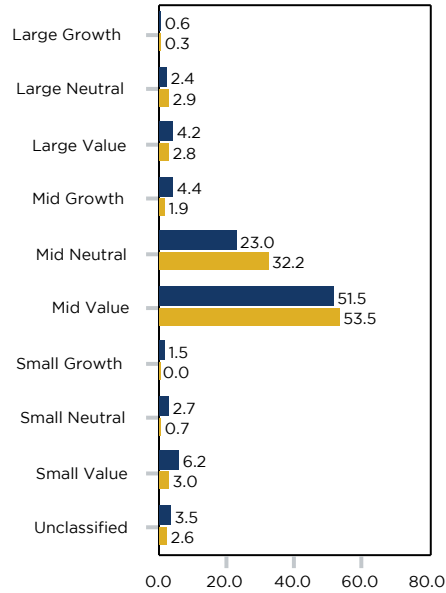
Index: Russell Midcap Value Index

Report Date: 12/31/2019

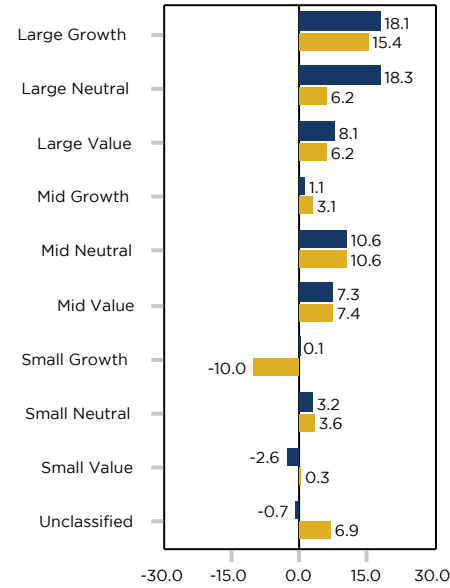
## Performance | 1 Year



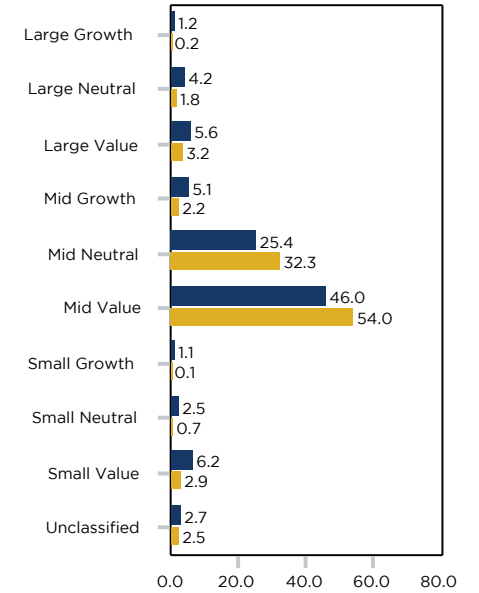
## Allocation | 1 Year



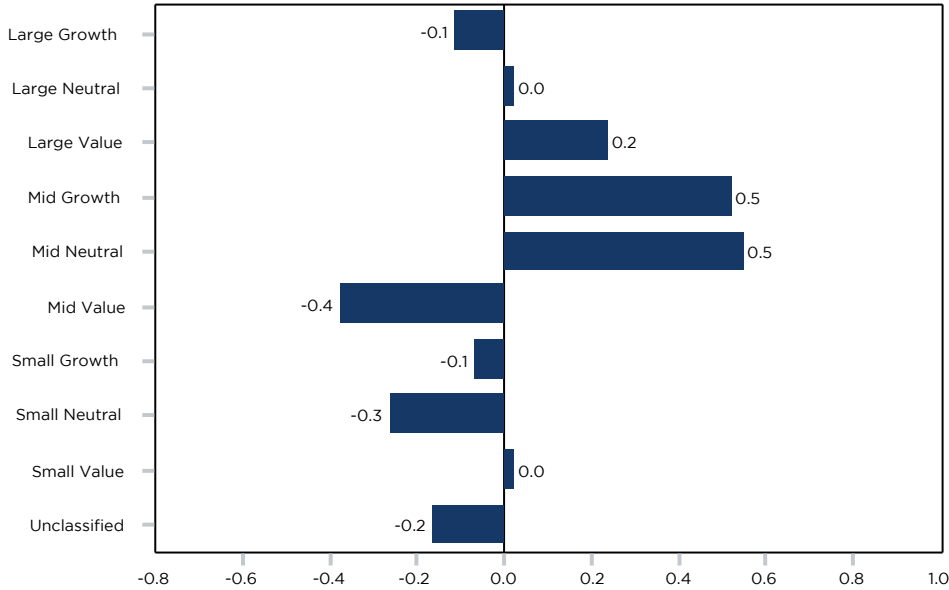
## Performance | 3 Years



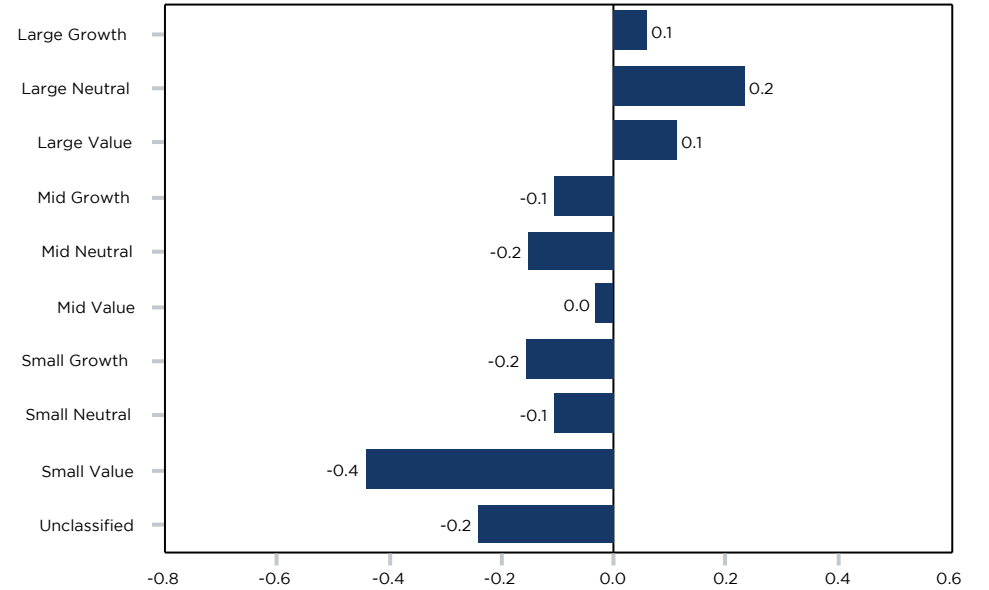
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years





# Vanguard Mid Cap Index Adm (VIMAX)

Index: CRSP U.S. Mid Cap TR Index

Category: Mid-Cap Blend

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	6.88 (62)	31.03 (15)	31.03 (15)	12.36 (9)	9.25 (13)	13.08 (6)	-9.23 (21)	19.25 (18)	11.22 (78)	-1.34 (15)
Benchmark	6.88	31.09	31.09	12.39	9.29	13.25	-9.22	19.30	11.25	-1.28
Peer Group	6.99	26.22	26.22	9.16	8.04	11.63	-11.32	16.12	15.96	-3.02
Population	589	578	578	536	483	413	638	600	606	588

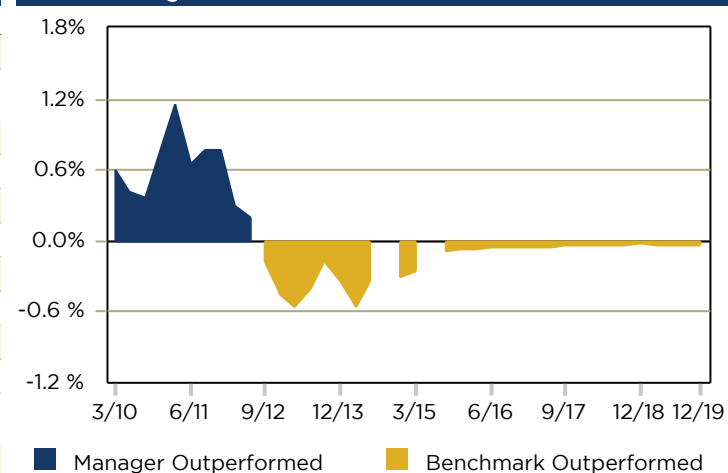
## Fund Information

Fund Inception	11/12/2001
Fund Assets	111,567 Million
Portfolio Assets	47,640 Million
Total # of Holdings	377
% in Top 10	6.63 %
PM	Butler,D/Johnson,M
PM Tenure	21 Years 7 Months
Turnover	16.00 %
Gross Expense (%)	0.05 %
Net Expense (%)	0.05 %
New Investors	Open

## Fund Statistics

	3 Years	10 Years
Standard Deviation	12.82	13.87
<b>vs. CRSP U.S. Mid Cap TR Index</b>		
Beta	1.00	1.01
Alpha	-0.03	-0.28
Information Ratio	-1.44	-0.25
Tracking Error	0.02	0.53
R-Squared	1.00	1.00
Up Market Capture	99.94	100.11
Down Market Capture	100.14	101.29
Consistency	38.89	35.83

## 3 Years Rolling Excess Performance



## Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	17,783	17,771
Median Mkt. Cap (\$M)	14,163	14,118
Price/Earnings ratio	22.8	22.8
Price/Book ratio	3.2	3.2
5 Yr. EPS Growth Rate (%)	11.7	11.7
Current Yield (%)	1.6	1.6
Beta (5 Years, Monthly)	1.00	1.00
Number of Stocks	340	338
Debt to Equity	1.0	1.0
Forecast P/E	20.3	20.3
Forecast EPS Growth	11.9	11.9
Return on Equity	0.0	0.0

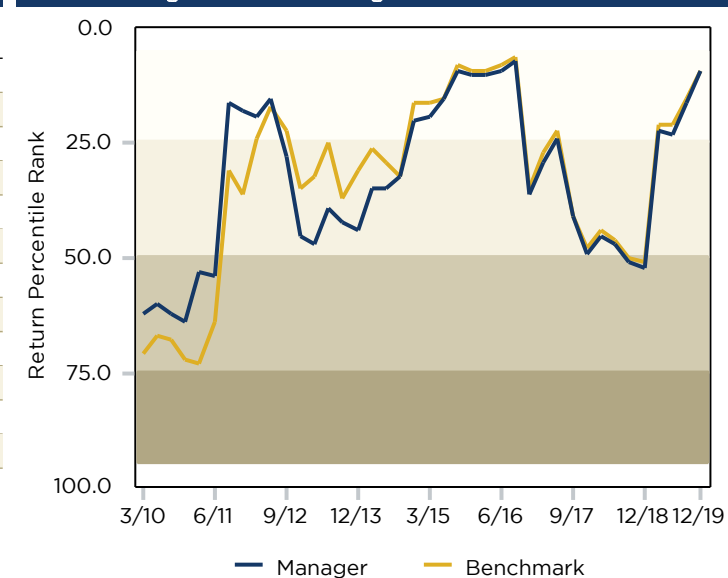
## vs. Risk Free

Sharpe Ratio	0.85	0.92
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## Sector Allocation

Sector	Portfolio Weight (%)	Benchmark Weight (%)
Communication Services	5.4	5.4
Consumer Discretionary	11.6	11.6
Consumer Staples	3.4	3.5
Energy	4.5	4.5
Financials	12.5	12.8
Health Care	11.3	11.2
Industrials	12.9	12.9
Information Technology	16.9	16.8
Materials	6.5	6.5
Real Estate	8.4	8.4
Utilities	6.6	6.6
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

## 3 Years Rolling Percentile Ranking



## Country/Region Allocation

United States	94.8	94.8
Non-US Developed	5.2	5.2
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

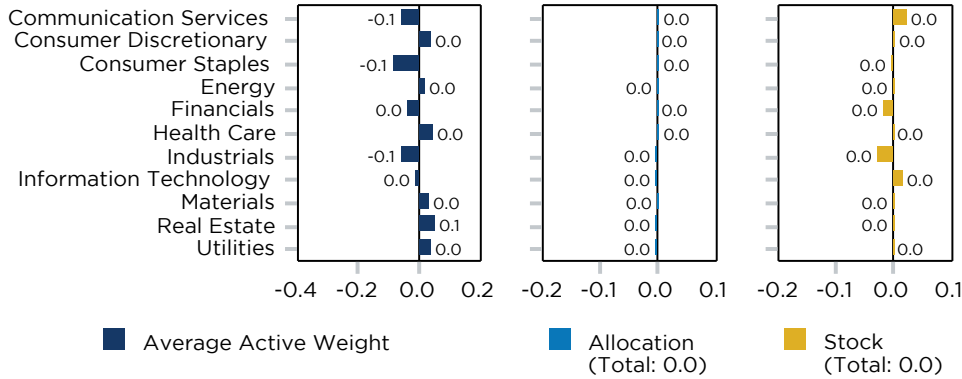


# Vanguard Mid Cap Index Adm (VIMAX)

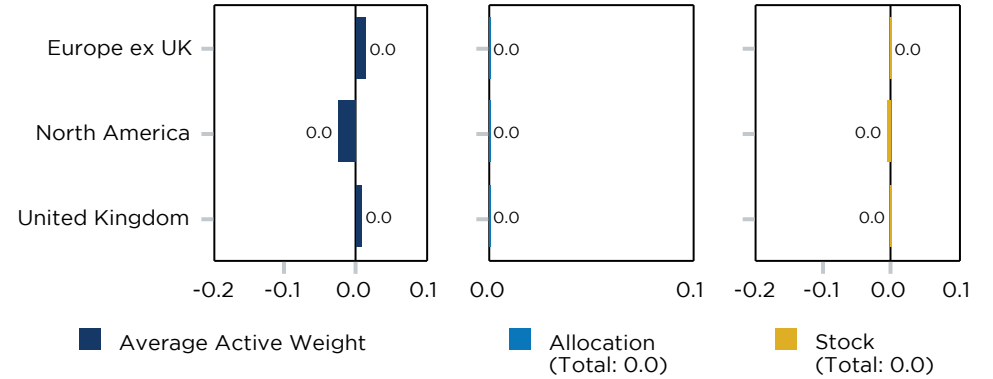
Index: CRSP U.S. Mid Cap TR Index

Report Date: 12/31/2019

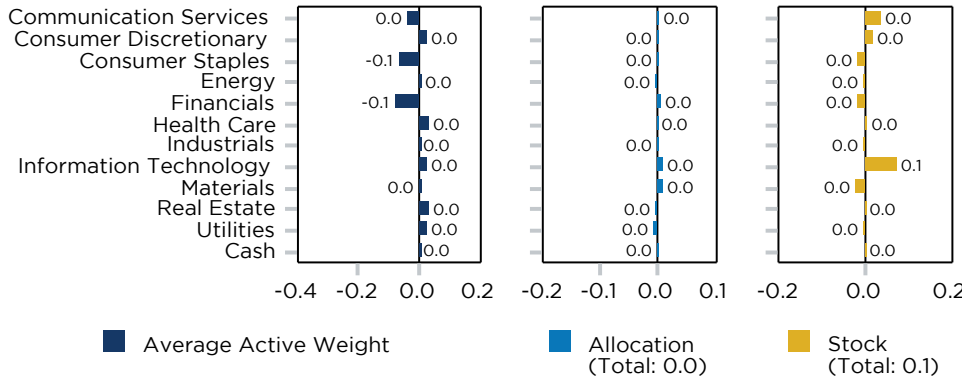
## 1 Quarter Sector Attribution



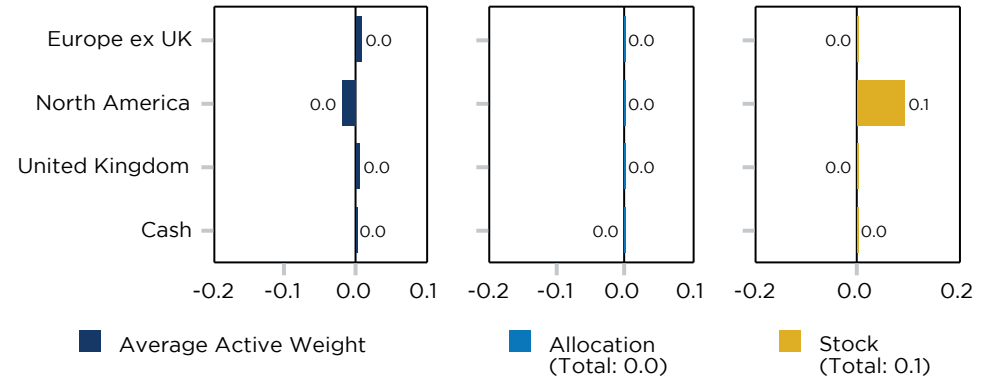
## 1 Quarter Region Attribution



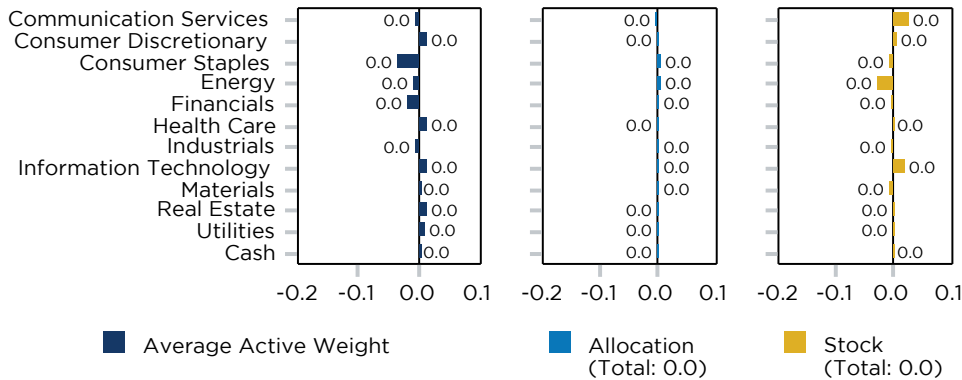
## 1 Year Sector Attribution



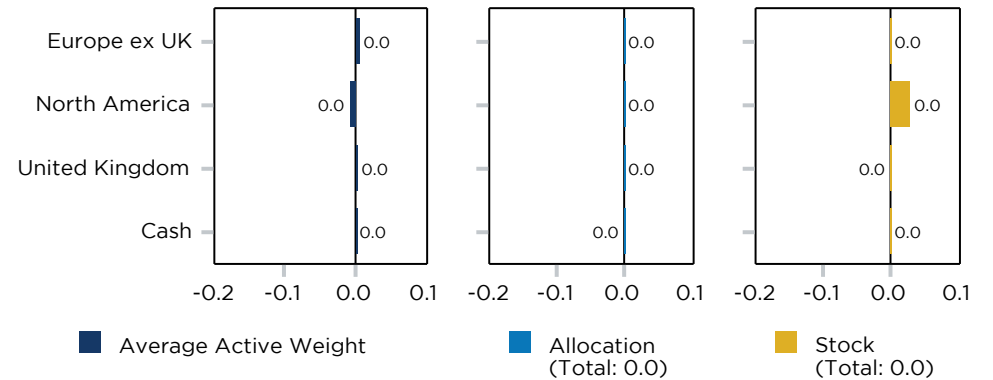
## 1 Year Region Attribution



## 3 Years Sector Attribution



## 3 Years Region Attribution





# Vanguard Mid Cap Index Adm (VIMAX)

Index: CRSP U.S. Mid Cap TR Index

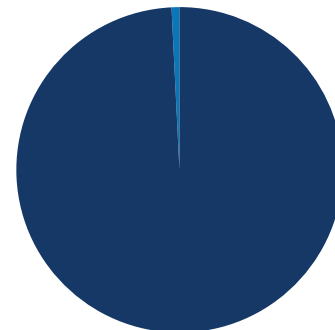
Report Date: 12/31/2019

## Top Ten Securities

Newmont Corp	0.8 %
Amphenol Corp Class A	0.7 %
ONEOK Inc	0.7 %
WEC Energy Group Inc	0.7 %
IHS Markit Ltd	0.6 %
TransDigm Group Inc	0.6 %
KLA Corp	0.6 %
Motorola Solutions Inc	0.6 %
Eversource Energy	0.6 %
SBA Communications Corp	0.6 %
<b>Total</b>	<b>6.6 %</b>

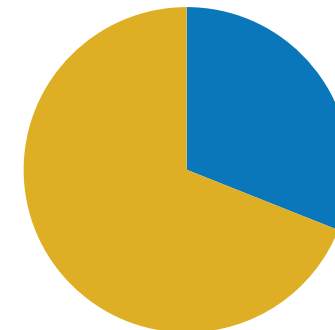
## Asset Allocation

- Equity
- Cash
- Fixed Income



## Market Capitalization

- Giant
- Large
- Medium
- Small
- Micro



## Top Ten Contributors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Advanced Micro Devices Inc	0.76	0.75	0.01	58.19
Tiffany & Co.	0.26	0.25	0.00	44.91
Splunk Inc	0.43	0.42	0.00	27.07
Newmont Goldcorp Corp	0.75	0.74	0.00	14.99
Centene Corp	0.41	0.41	0.00	45.33
Skyworks Solutions Inc	0.33	0.33	0.00	53.21
Align Technology Inc	0.31	0.31	0.00	54.23
DexCom Inc	0.33	0.33	0.00	46.57
Freeport-McMoran Cpr & Gld	0.32	0.32	0.00	37.81
Qorvo Inc	0.21	0.21	0.00	56.77

## Top Ten Contributors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Lam Research Corp	0.53	0.53	0.00	42.98
Edwards Lifesciences Corp	0.61	0.61	0.00	35.54
Fiserv Inc.	0.71	0.71	0.00	29.58
ServiceNow Inc	0.36	0.36	0.00	56.02
Moody's Corp.	0.47	0.47	0.00	37.56
Autodesk Inc.	0.48	0.48	0.00	35.34
Equinix Inc	0.78	0.78	0.00	20.19
TransDigm Group Inc	0.39	0.39	0.00	39.76
Roper Technologies Inc	0.57	0.57	0.00	25.36
KLA Corp	0.38	0.38	0.00	34.62

## Top Ten Detractors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Twitter Inc	0.73	0.72	0.00	-22.21
Cincinnati Financial Corp	0.44	0.43	0.00	-9.39
Essex Property Trust Inc.	0.52	0.51	0.00	-7.30
Dollar Tree Inc	0.65	0.65	0.00	-17.62
Expedia Group Inc	0.41	0.41	0.00	-19.26
Ball Corp	0.58	0.58	0.00	-10.98
Arista Networks Inc	0.31	0.31	0.00	-14.87
Digital Realty Trust Inc	0.65	0.65	0.00	-6.89
Veeva Systems Inc	0.48	0.48	0.00	-7.88
Hasbro Inc.	0.34	0.34	0.00	-10.40

## Top Ten Detractors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Newell Brands Inc	0.66	0.66	0.00	-21.54
Range Resources Corp.	0.26	0.26	0.00	-47.53
EQT Corp	0.35	0.35	0.00	-32.07
Cimarex Energy Co.	0.40	0.40	0.00	-26.59
Mallinckrodt Plc	0.16	0.16	0.00	-58.78
Nielsen Holdings plc	0.46	0.46	0.00	-17.99
Molson Coors Brewing Co	0.52	0.52	0.00	-15.69
Antero Resources Corp	0.16	0.16	0.00	-50.61
Signet Jewelers Ltd	0.22	0.22	0.00	-36.14
Alliance Data Systems Corp	0.38	0.38	0.00	-20.09

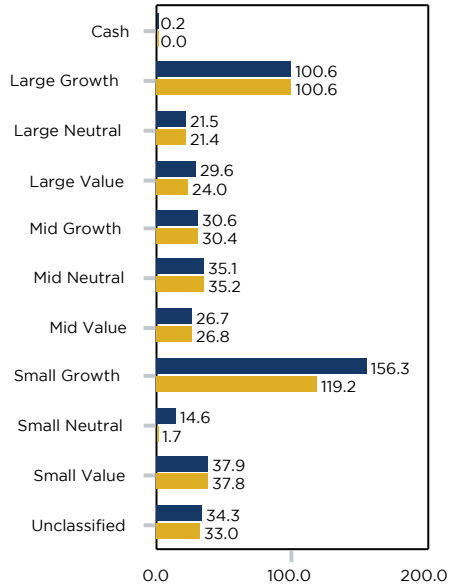


# Vanguard Mid Cap Index Adm (VIMAX)

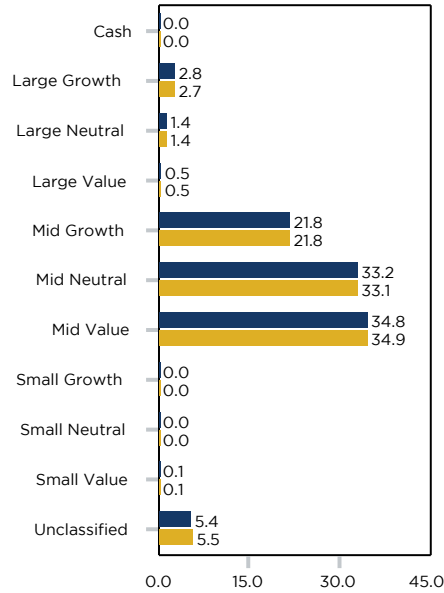
Index: CRSP U.S. Mid Cap TR Index

Report Date: 12/31/2019

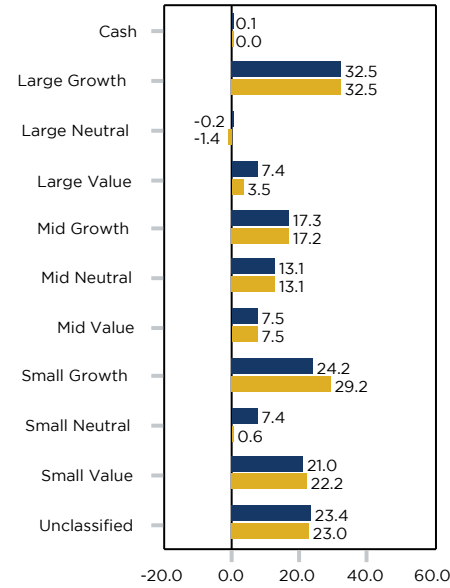
## Performance | 1 Year



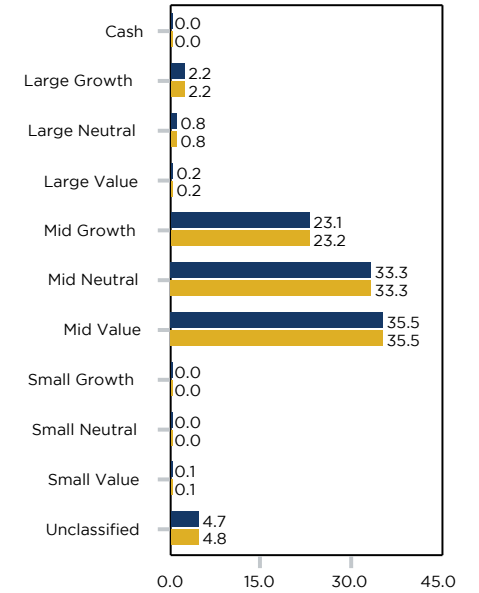
## Allocation | 1 Year



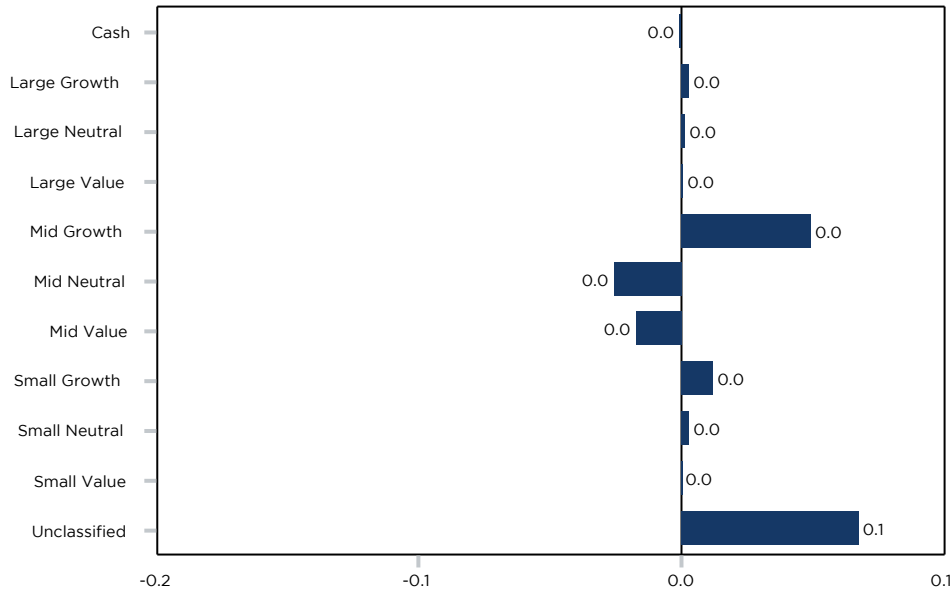
## Performance | 3 Years



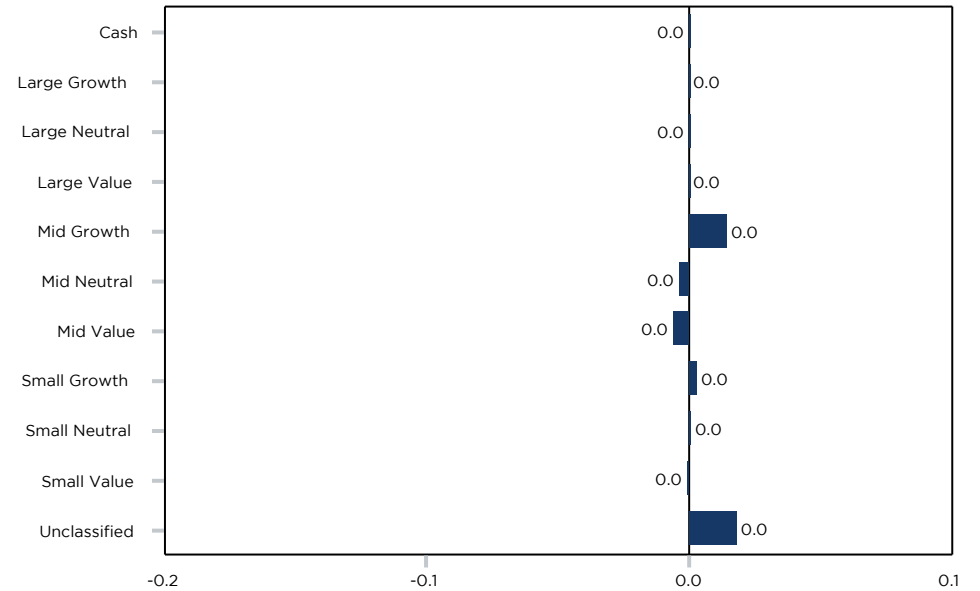
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years





# TIAA-CREF Mid-Cap Growth Instl (TRPWX)

Index: Russell Midcap Growth Index

Category: Mid-Cap Growth

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	7.76 (51)	33.39 (52)	33.39 (52)	15.63 (61)	9.39 (76)	12.73 (59)	-8.17 (77)	26.21 (36)	1.95 (79)	-0.63 (54)
Benchmark	8.17	35.47	35.47	17.36	11.60	14.24	-4.75	25.27	7.33	-0.20
Peer Group	7.82	33.55	33.55	16.44	10.96	13.05	-5.54	24.67	5.93	-0.21
Population	816	801	801	756	711	637	879	817	850	847

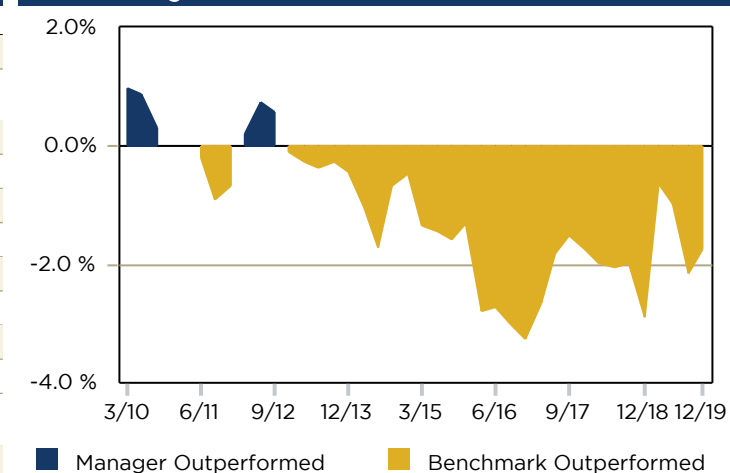
## Fund Information

Fund Inception	10/01/2002
Fund Assets	1,431 Million
Portfolio Assets	799 Million
Total # of Holdings	133
% in Top 10	18.38 %
PM	Almazan,A/Scalise,G
PM Tenure	9 Months
Turnover	81.00 %
Gross Expense (%)	0.47 %
Net Expense (%)	0.47 %
New Investors	Open

## Fund Statistics

	3 Years	10 Years
Standard Deviation	14.89	15.41
<b>vs. Russell Midcap Growth Index</b>		
Beta	1.06	1.05
Alpha	-2.30	-1.91
Information Ratio	-0.50	-0.47
Tracking Error	2.70	2.57
R-Squared	0.97	0.97
Up Market Capture	98.98	101.11
Down Market Capture	109.92	111.47
Consistency	38.89	43.33

## 3 Years Rolling Excess Performance



## Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	20,699	19,976
Median Mkt. Cap (\$M)	14,899	9,644
Price/Earnings ratio	32.4	29.3
Price/Book ratio	5.6	6.0
5 Yr. EPS Growth Rate (%)	16.7	17.2
Current Yield (%)	0.4	0.7
Beta (5 Years, Monthly)	1.05	1.00
Number of Stocks	117	403
Debt to Equity	0.9	0.7
Forecast P/E	24.7	25.5
Forecast EPS Growth	19.6	17.1
Return on Equity	0.0	0.0

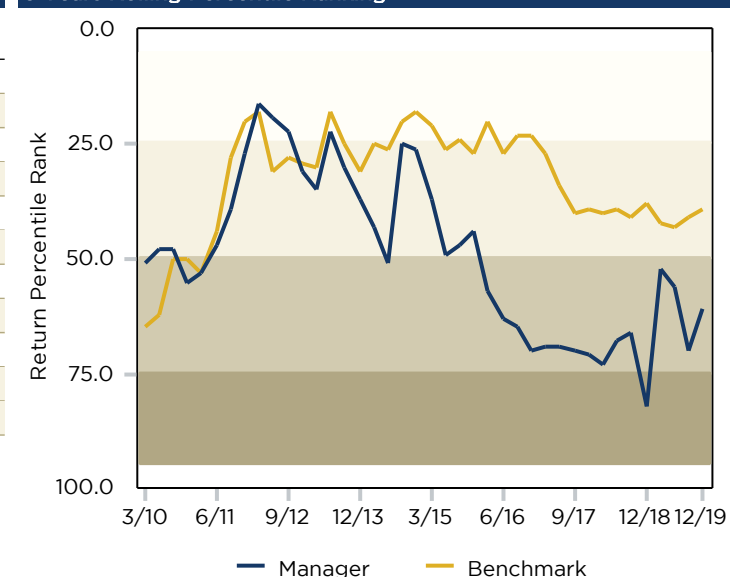
## vs. Risk Free

Sharpe Ratio	0.94	0.82
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## Sector Allocation

Sector	Portfolio Weight (%)	Benchmark Weight (%)
Communication Services	5.6	4.9
Consumer Discretionary	15.4	14.7
Consumer Staples	0.7	3.2
Energy	0.8	1.2
Financials	1.3	4.5
Health Care	17.4	15.3
Industrials	16.5	17.0
Information Technology	33.7	33.7
Materials	3.0	2.7
Real Estate	2.5	2.7
<b>Total</b>	<b>97.1</b>	<b>100.0</b>

## 3 Years Rolling Percentile Ranking



## Country/Region Allocation

United States	90.4	94.6
Non-US Developed	8.5	4.4
Emerging Markets	1.1	0.5
Other	0.0	0.6
<b>Total</b>	<b>100.0</b>	<b>100.0</b>



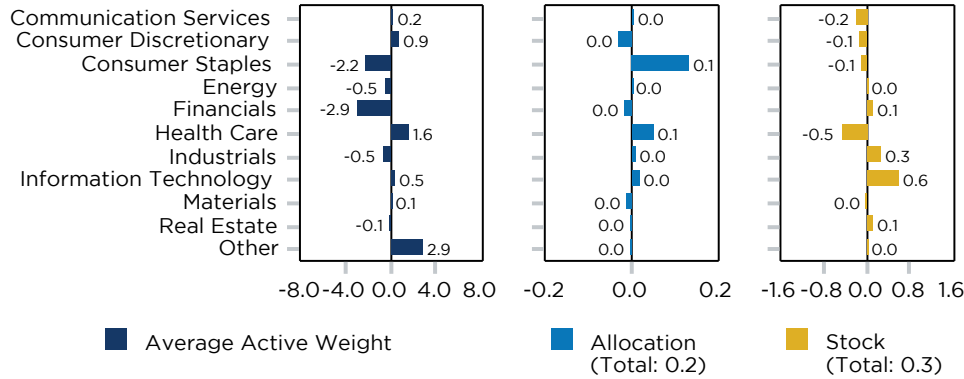


# TIAA-CREF Mid-Cap Growth Instl (TRPWX)

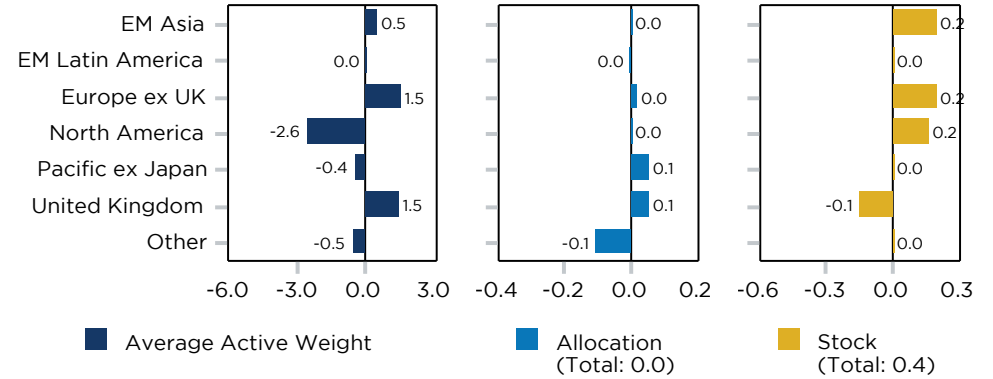
Index: Russell Midcap Growth Index

Report Date: 12/31/2019

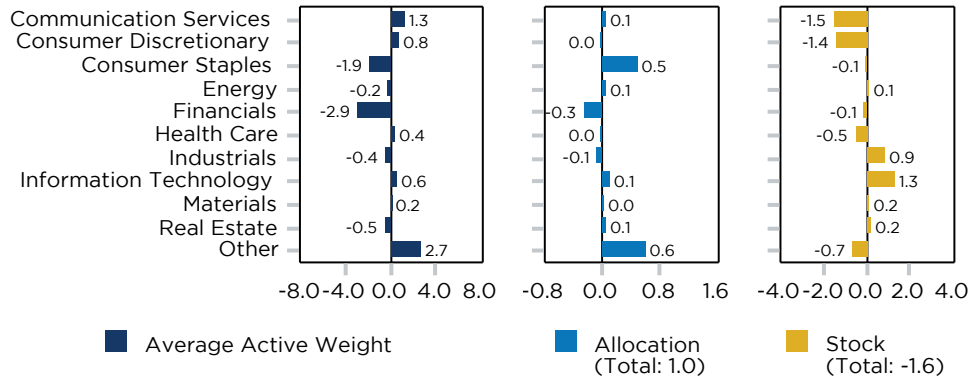
## 1 Quarter Sector Attribution



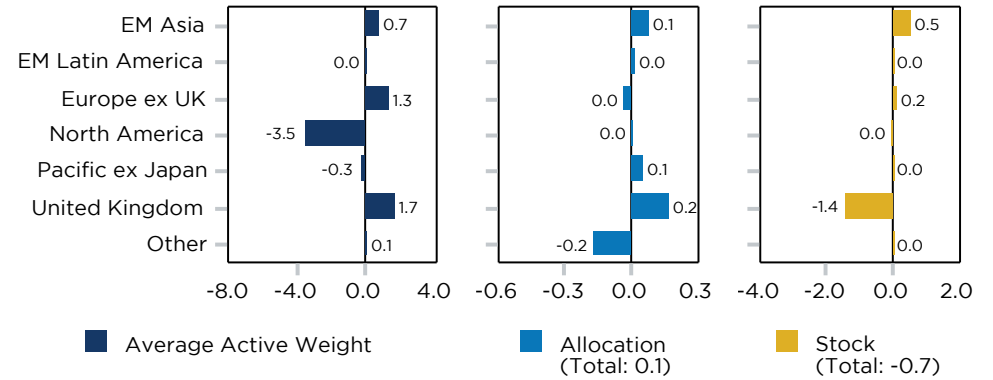
## 1 Quarter Region Attribution



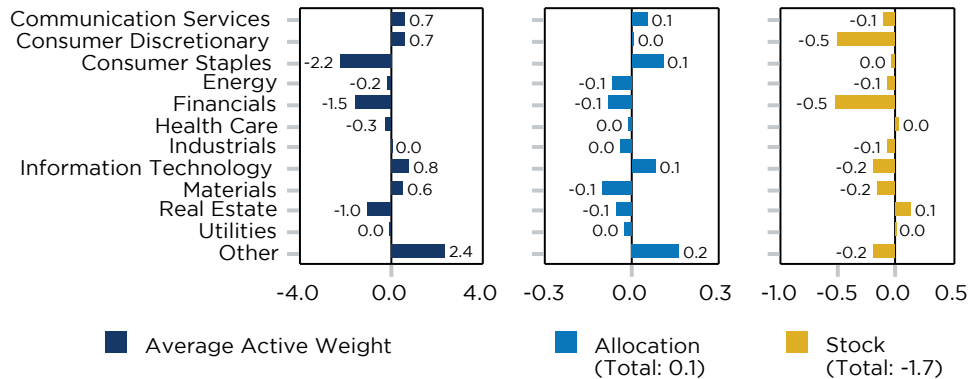
## 1 Year Sector Attribution



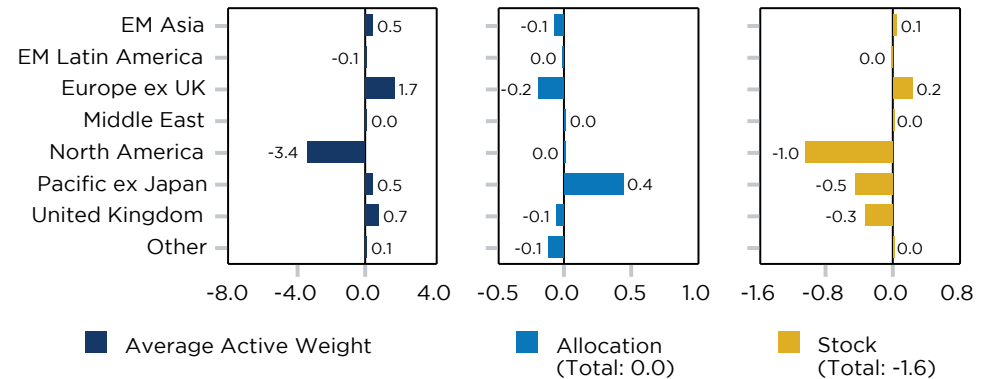
## 1 Year Region Attribution



## 3 Years Sector Attribution



## 3 Years Region Attribution





# TIAA-CREF Mid-Cap Growth Instl (TRPWX)

Index: Russell Midcap Growth Index

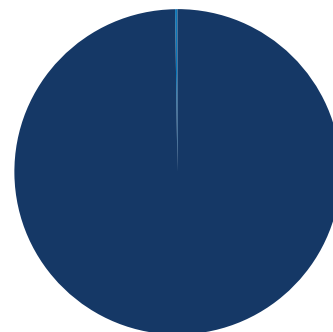
Report Date: 12/31/2019

## Top Ten Securities

iShares Russell Mid-Cap Growth	2.9 %
Advanced Micro Devices Inc	2.3 %
Fiserv Inc	2.2 %
O'Reilly Automotive Inc	1.7 %
Global Payments Inc	1.7 %
L3Harris Technologies Inc	1.6 %
TransDigm Group Inc	1.6 %
Fleetcor Technologies Inc	1.5 %
Keysight Technologies Inc	1.5 %
Ingersoll-Rand PLC	1.4 %
<b>Total</b>	<b>18.4 %</b>

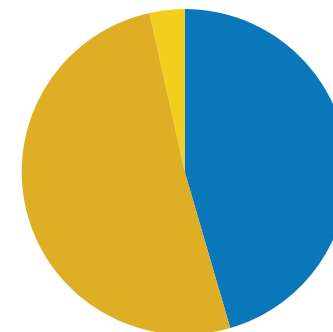
## Asset Allocation

- Equity
- Cash
- Fixed Income



## Market Capitalization

- Giant
- Large
- Medium
- Small
- Micro



## Top Ten Contributors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Advanced Micro Devices Inc	1.81	0.98	0.42	58.19
Lumentum Holdings Inc	0.91	0.00	0.36	48.06
Horizon Therapeutics Public Ltd Co	0.82	0.02	0.20	32.94
GDS Holdings Ltd	0.92	0.00	0.19	28.69
RingCentral Inc	0.95	0.30	0.17	34.23
DexCom Inc	0.85	0.46	0.15	46.57
Splunk Inc	1.27	0.60	0.13	27.07
Align Technology Inc	0.69	0.48	0.10	54.23
Global Payments Inc.	2.33	1.61	0.05	14.95
Lam Research Corp	1.15	0.99	0.03	27.06

## Top Ten Contributors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
RingCentral Inc	0.95	0.00	0.80	101.55
Insulet Corp	0.68	0.00	0.33	65.63
ServiceNow Inc	0.97	0.43	0.21	56.02
Zoetis Inc	1.78	0.89	0.17	36.10
TransDigm Group Inc	1.16	0.45	0.16	39.76
Lam Research Corp	1.02	0.49	0.14	42.98
Intuitive Surgical Inc	1.43	0.87	0.13	40.89
Ross Stores Inc	1.74	0.94	0.04	22.30
NVIDIA Corporation	2.21	1.98	0.03	30.60
iShares Russell Mid-Cap Growth ETF	3.08	0.00	-0.01	17.08

## Top Ten Detractors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Sage Therapeutics Inc	0.73	0.24	-0.28	-48.54
Coherus BioSciences Inc	1.01	0.00	-0.19	-11.13
RealPage Inc	0.87	0.17	-0.16	-14.49
Proofpoint Inc	1.06	0.24	-0.16	-11.06
Etsy Inc	0.75	0.23	-0.15	-21.59
Twilio Inc	1.14	0.44	-0.13	-10.62
L3Harris Technologies Inc	1.75	0.78	-0.13	-4.80
Twitter Inc	1.46	1.05	-0.12	-22.21
Expedia Group Inc	0.85	0.55	-0.08	-19.26
Dollar Tree Inc	0.50	0.49	0.00	-17.62

## Top Ten Detractors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
comScore Inc	0.59	0.00	-0.37	-46.12
CommScope Holding Co Inc	0.86	0.17	-0.31	-27.48
Mattel Inc.	1.06	0.34	-0.27	-19.98
Signet Jewelers Ltd	0.62	0.22	-0.21	-36.14
Mednax Inc	0.62	0.16	-0.20	-25.30
AK Steel Holding Corp	0.39	0.00	-0.19	-31.44
Mohawk Industries Inc.	0.97	0.36	-0.18	-11.93
Merrimack Pharmaceuticals Inc	0.28	0.00	-0.17	-43.70
Newell Brands Inc	1.07	0.77	-0.12	-21.54
Alliance Data Systems Corp	0.54	0.48	-0.02	-20.09

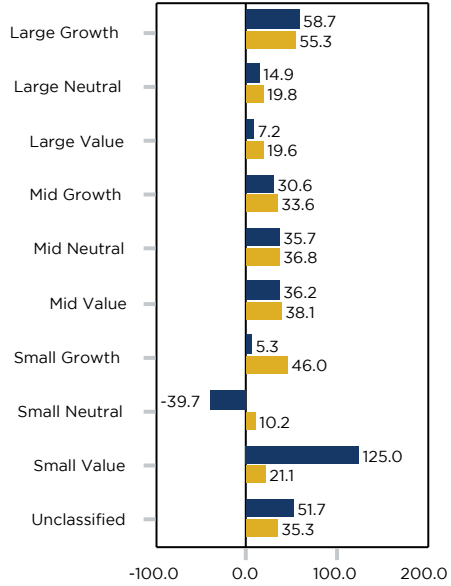


# TIAA-CREF Mid-Cap Growth Instl (TRPWX)

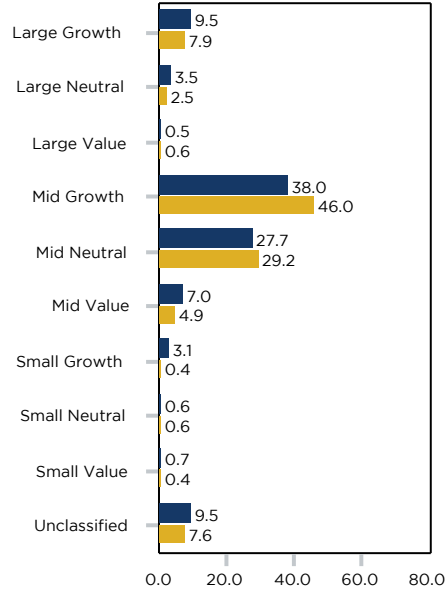
Index: Russell Midcap Growth Index

Report Date: 12/31/2019

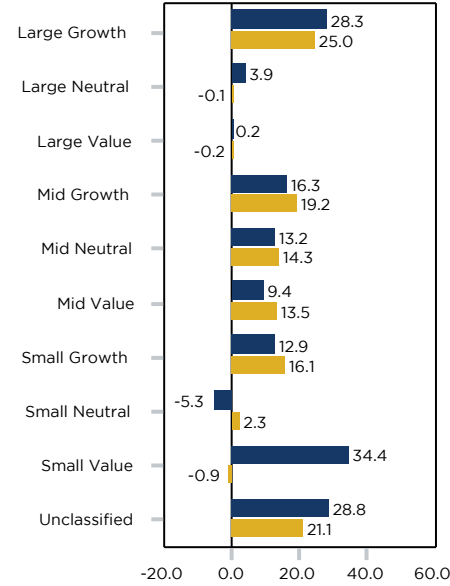
## Performance | 1 Year



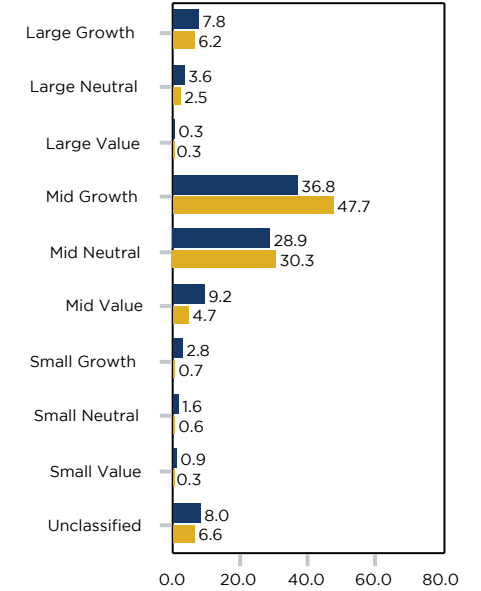
## Allocation | 1 Year



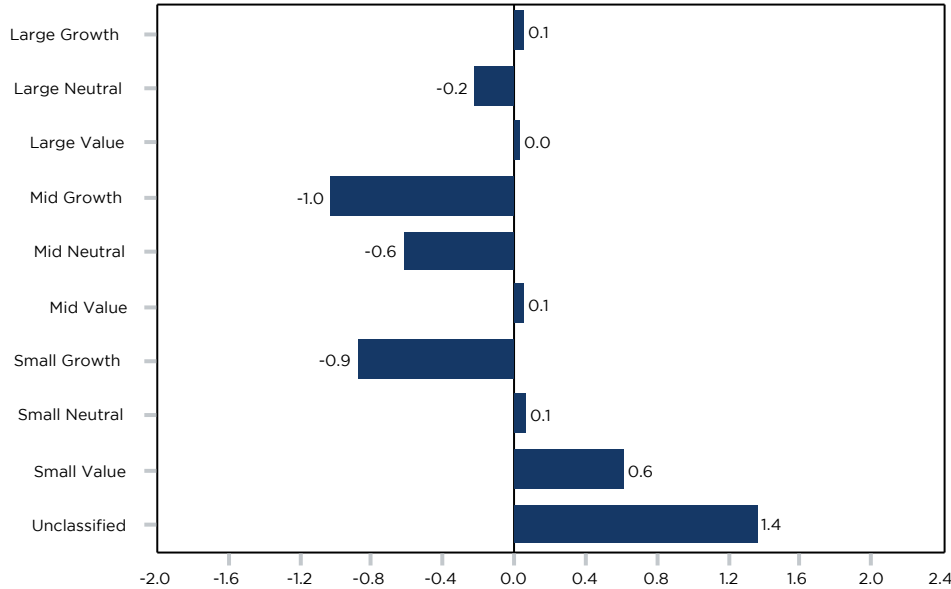
## Performance | 3 Years



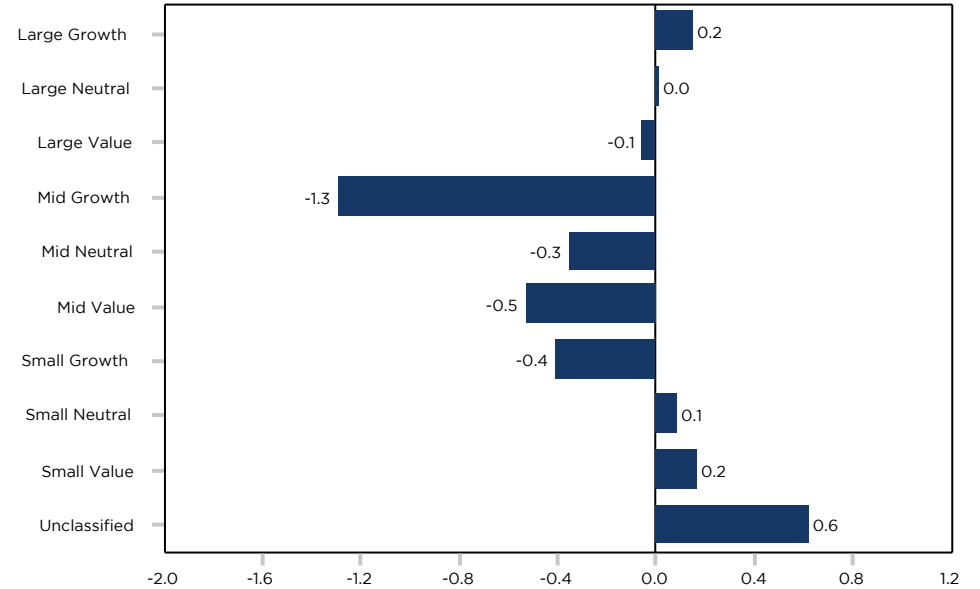
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years



## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	9.92 (10)	28.36 (9)	28.36 (9)	7.89 (5)	7.14 (26)	11.22 (20)	-19.83 (91)	22.02 (1)	29.94 (25)	-13.46 (94)
Benchmark	8.49	22.39	22.39	4.77	6.99	10.56	-12.86	7.84	31.74	-7.47
Peer Group	8.01	21.95	21.95	4.12	5.83	10.26	-15.29	8.83	26.03	-6.33
Population	530	518	518	495	477	418	584	533	546	531

## Fund Information

Fund Inception	12/12/2001
Fund Assets	927 Million
Portfolio Assets	231 Million
Total # of Holdings	257
% in Top 10	9.91 %
PM	Franks,S/Hench,W/Kosowsky,R
PM Tenure	15 Years 7 Months
Turnover	47.00 %
Gross Expense (%)	1.08 %
Net Expense (%)	1.08 %
New Investors	Open

## Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	1,439	2,198
Median Mkt. Cap (\$M)	683	718
Price/Earnings ratio	17.3	15.3
Price/Book ratio	1.9	1.7
5 Yr. EPS Growth Rate (%)	9.1	9.2
Current Yield (%)	0.7	2.1
Beta (5 Years, Monthly)	1.16	1.00
Number of Stocks	252	1,402
Debt to Equity	1.9	0.8
Forecast P/E	13.5	14.8
Forecast EPS Growth	13.4	9.4
Return on Equity	0.0	0.0

## Country/Region Allocation

United States	95.2	96.4
Non-US Developed	3.4	2.7
Emerging Markets	0.6	0.4
Other	0.8	0.5
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

## Fund Statistics

	3 Years	10 Years
Standard Deviation	18.82	20.07
<b>vs. Russell 2000 Value Index</b>		
Beta	1.16	1.17
Alpha	2.55	-0.76
Information Ratio	0.66	0.23
Tracking Error	5.26	5.25
R-Squared	0.94	0.95
Up Market Capture	113.43	113.43
Down Market Capture	98.21	115.29
Consistency	63.89	55.00

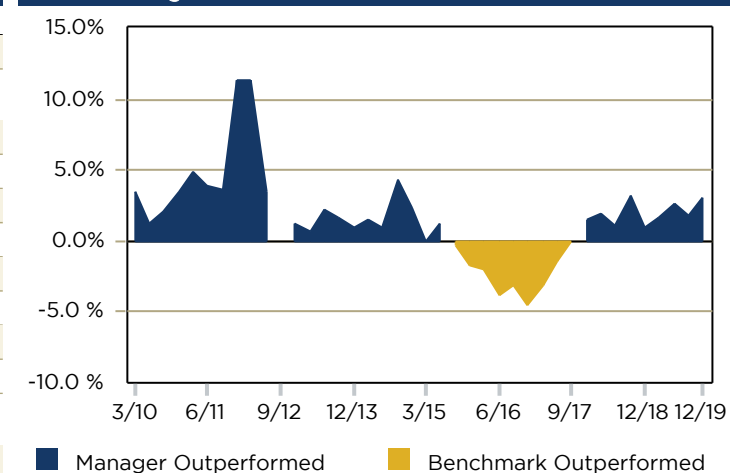
## vs. Risk Free

Sharpe Ratio	0.41	0.60
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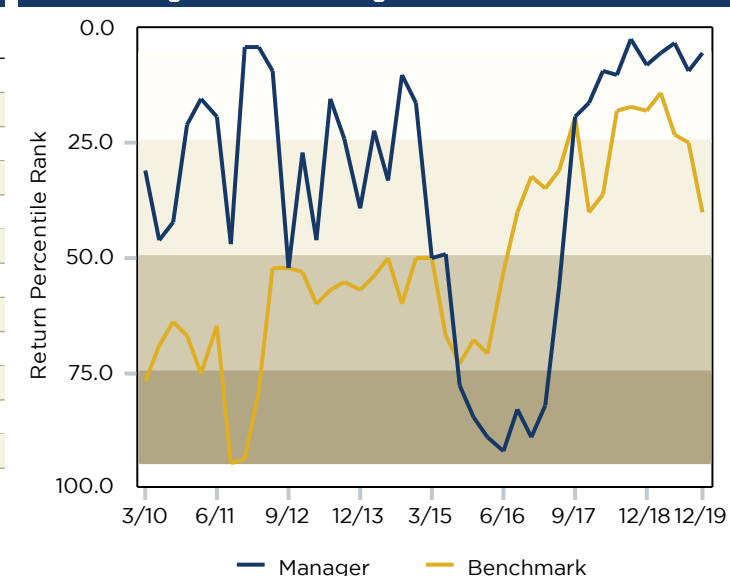
## Sector Allocation

Sector	Portfolio Weight (%)	Benchmark Weight (%)
Communication Services	2.0	2.2
Consumer Discretionary	10.3	9.7
Consumer Staples	0.3	2.7
Energy	7.4	5.8
Financials	9.7	30.2
Health Care	13.3	5.4
Industrials	21.4	12.7
Information Technology	25.4	9.6
Materials	8.7	4.7
Real Estate	1.2	11.1
Utilities	0.3	5.9
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

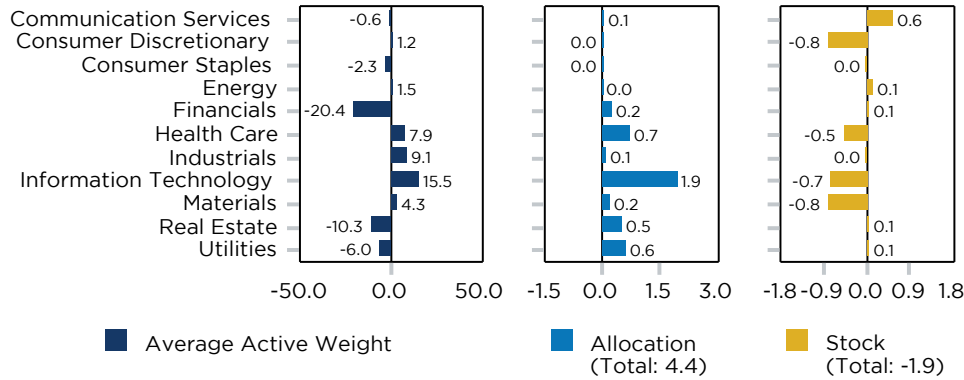
## 3 Years Rolling Excess Performance



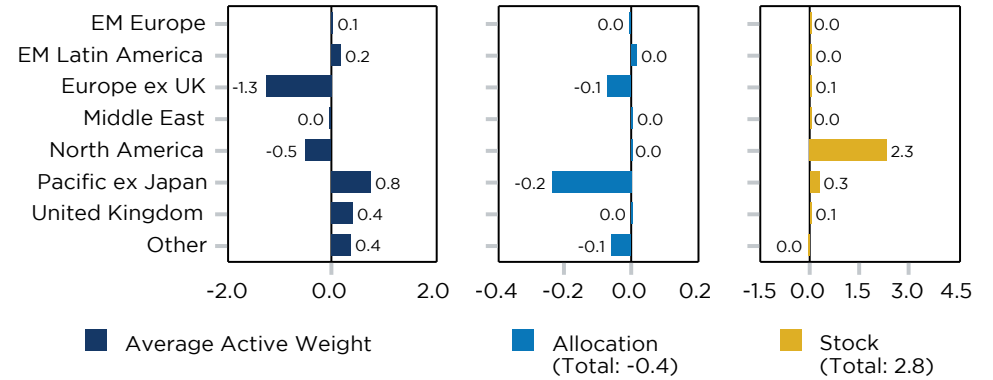
## 3 Years Rolling Percentile Ranking



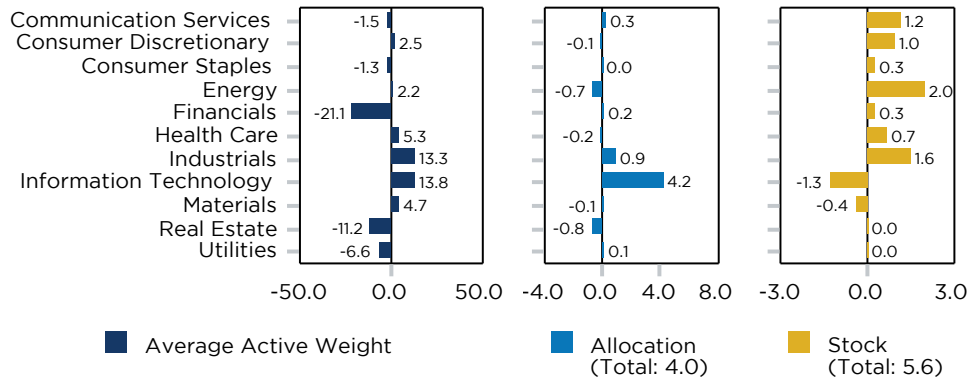
## 1 Quarter Sector Attribution



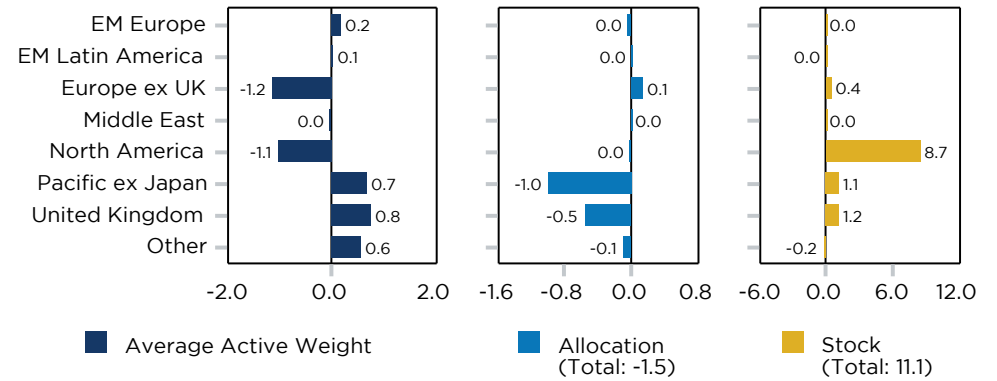
## 1 Quarter Region Attribution



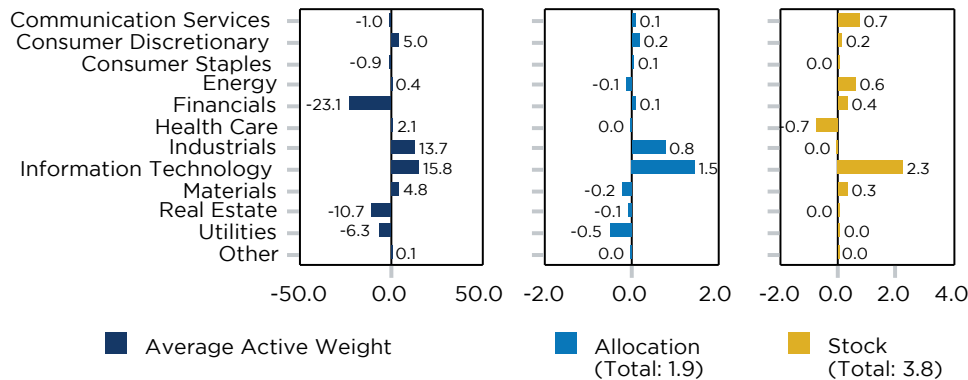
## 1 Year Sector Attribution



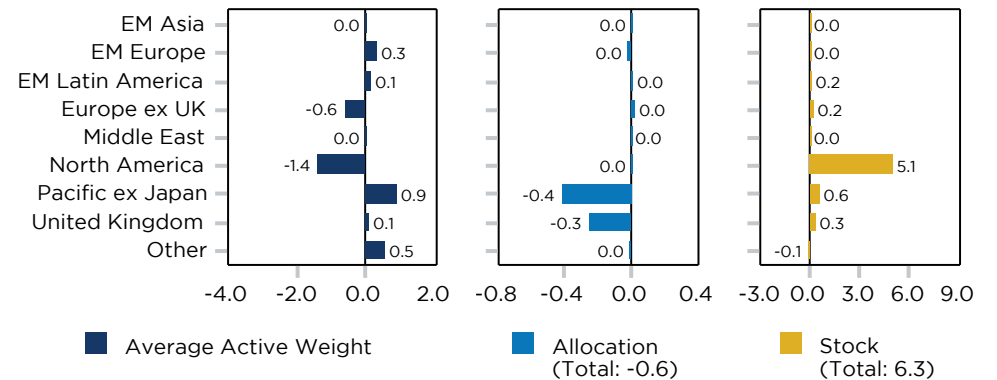
## 1 Year Region Attribution



## 3 Years Sector Attribution



## 3 Years Region Attribution

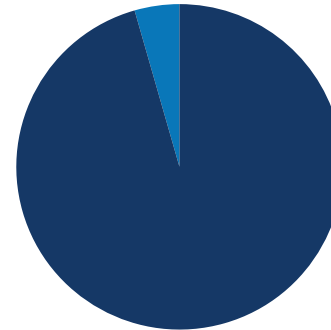


## Top Ten Securities

Alpha & Omega Semiconductor Ltd	1.2 %
MACOM Technology Solutions Holdings	1.1 %
Northwest Pipe Co	1.0 %
Air Lease Corp Class A	1.0 %
Herc Holdings Inc	1.0 %
Beazer Homes USA Inc	1.0 %
Comtech Telecommunications Corp	1.0 %
Hilltop Holdings Inc	0.9 %
Generac Holdings Inc	0.9 %
Kraton Corp	0.9 %
<b>Total</b>	<b>9.9 %</b>

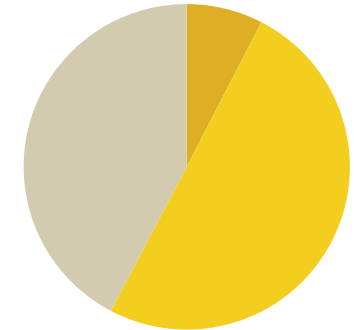
## Asset Allocation

■ Equity  
■ Cash  
■ Fixed Income



## Market Capitalization

■ Giant  
■ Large  
■ Medium  
■ Small  
■ Micro



## Top Ten Contributors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Stage Stores Inc	0.19	0.00	0.61	331.92
Surgery Partners Inc	0.59	0.02	0.59	111.98
Forterra Inc	0.81	0.00	0.42	59.89
Dorian LPG Ltd	0.92	0.02	0.37	49.42
Ultra Clean Holdings Inc	0.68	0.06	0.32	60.37
EverQuote Inc	0.55	0.00	0.29	60.97
KEMET Corp	0.72	0.11	0.25	48.79
R1 RCM INC	0.61	0.00	0.22	45.35
FormFactor Inc	0.84	0.13	0.22	39.29
Onto Innovation Inc	0.72	0.07	0.20	38.62

## Top Ten Contributors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
KEMET Corp	1.04	0.00	0.58	60.37
Brooks Automation Inc	1.34	0.12	0.39	36.77
Novanta Inc	0.64	0.05	0.33	61.49
RH	0.45	0.12	0.28	90.88
Comtech Telecommunications Corp.	0.66	0.03	0.26	46.80
Kratos Defense & Security	0.92	0.04	0.26	34.51
Mercury Systems Inc	0.78	0.11	0.18	31.75
Kulicke and Soffa Industries Inc	1.09	0.00	0.18	20.94
FormFactor Inc	0.63	0.03	0.17	32.36
Ultra Clean Holdings Inc	0.55	0.03	0.15	34.25

## Top Ten Detractors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Ribbon Communications Inc	0.53	0.04	-0.27	-46.92
Kraton Corp	0.95	0.08	-0.26	-21.59
Newpark Resources Inc.	0.86	0.07	-0.21	-17.72
Synalloy Corp	0.72	0.01	-0.20	-19.06
US Concrete Inc	0.54	0.00	-0.18	-24.64
LGI Homes Inc	0.75	0.00	-0.18	-15.21
Modine Manufacturing Co	0.47	0.06	-0.17	-32.28
FreightCar America Inc	0.22	0.00	-0.14	-57.32
U S Silica Holdings Inc	0.34	0.07	-0.12	-34.97
Conn's Inc	0.24	0.05	-0.11	-50.16

## Top Ten Detractors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
J.C. Penney Company Inc.	0.45	0.00	-0.24	-48.73
McClatchy Co (The)	0.33	0.00	-0.24	-66.85
Cornerstone Building Brands Inc	0.87	0.00	-0.20	-18.38
Ascena Retail Group Inc	0.37	0.07	-0.20	-60.44
Pengrowth Energy Corp	0.26	0.00	-0.19	-68.24
Unisys Corp	1.38	0.02	-0.17	-7.43
NN Inc	0.61	0.05	-0.14	-19.94
Revolution Lighting Tech	0.16	0.00	-0.13	-79.13
AK Steel Holding Corp	0.66	0.32	-0.12	-31.44
Kopin Corp	0.23	0.02	-0.11	-47.92



# Royce Opportunity Instl (ROFIX)

Index: Russell 2000 Value Index

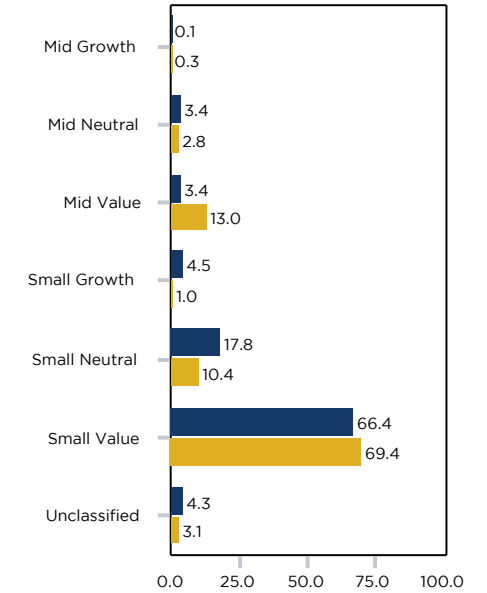
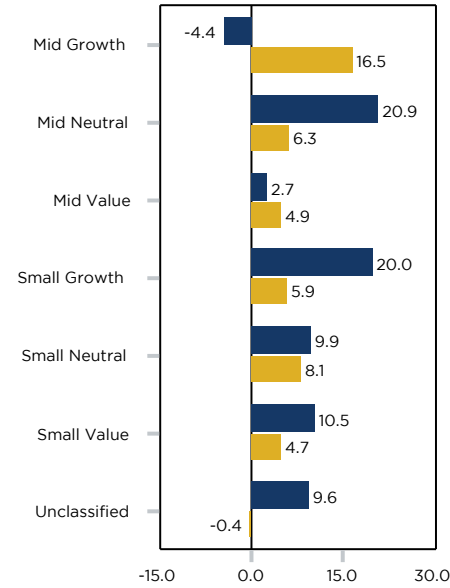
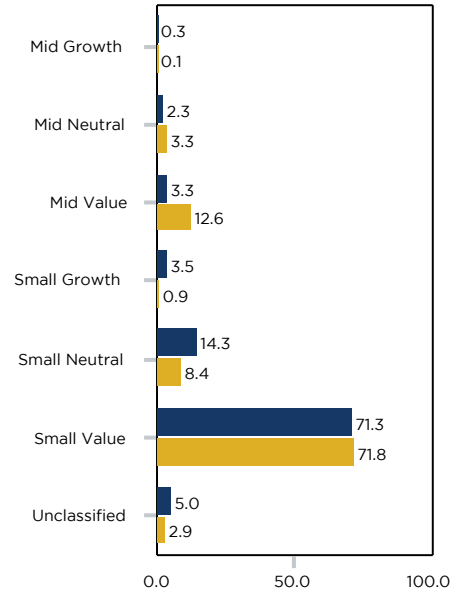
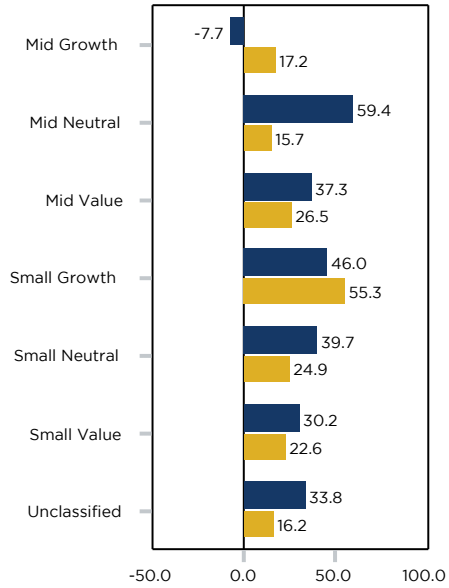
Report Date: 12/31/2019

## Performance | 1 Year

## Allocation | 1 Year

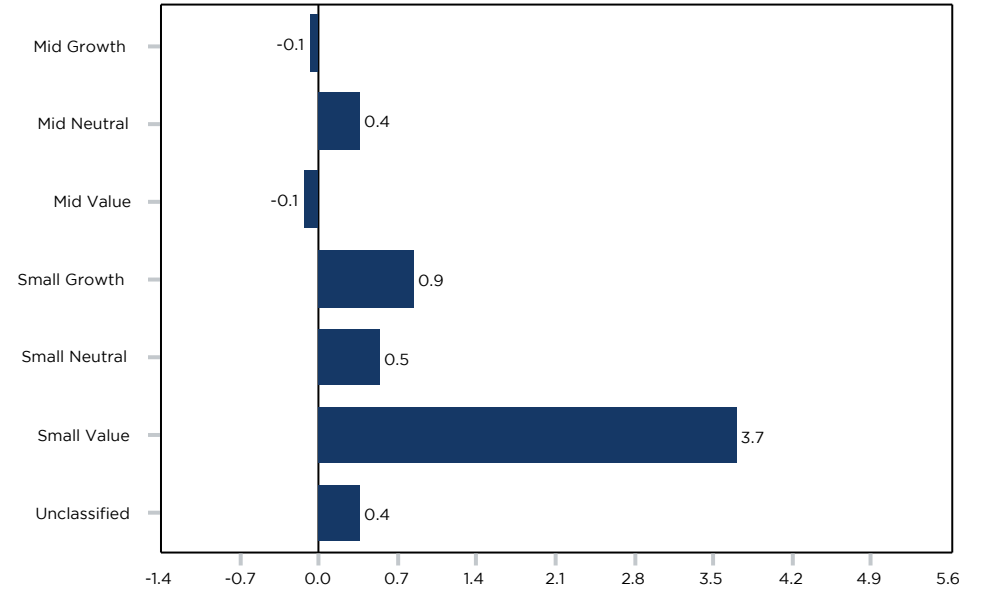
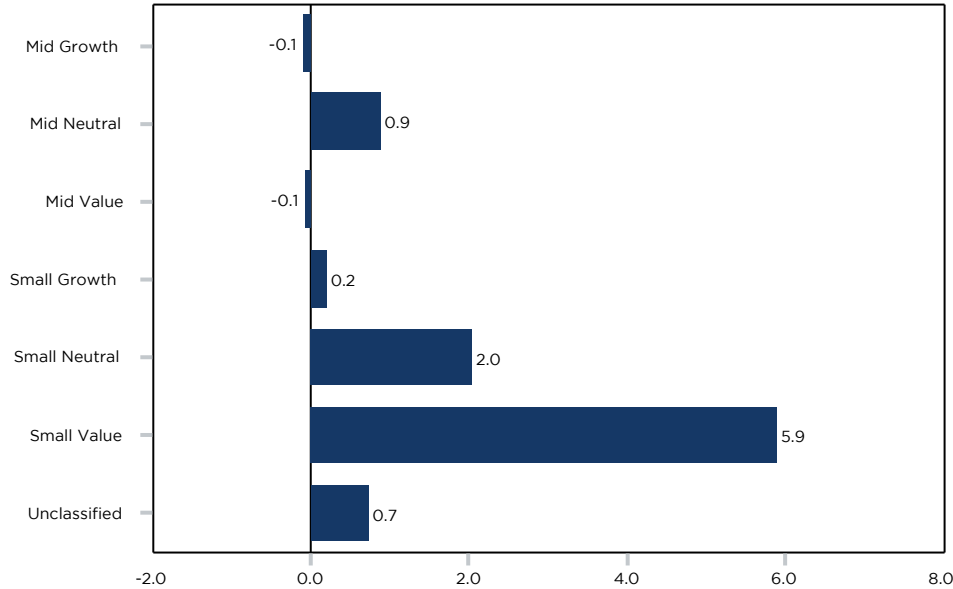
## Performance | 3 Years

## Allocation | 3 Years



## Total Attribution | 1 Year

## Total Attribution | 3 Years





# TIAA-CREF Small-Cap Blend Idx Inst (TISBX)

Index: Russell 2000 Index

Category: Small Blend

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	9.97 (14)	25.53 (36)	25.53 (36)	8.73 (23)	8.42 (27)	11.99 (30)	-10.84 (31)	14.83 (25)	21.58 (40)	-4.14 (47)
Benchmark	9.94	25.53	25.53	8.59	8.23	11.83	-11.01	14.65	21.31	-4.41
Peer Group	8.34	24.67	24.67	7.60	7.56	11.44	-11.87	13.20	20.84	-4.35
Population	988	977	977	920	828	689	1,093	1,086	1,078	1,038

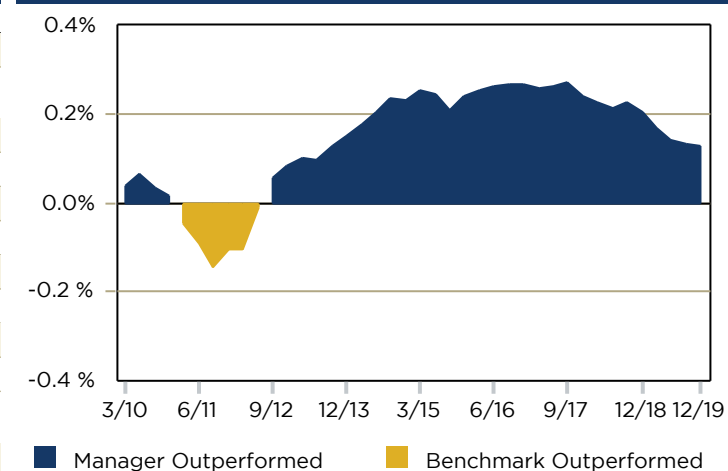
## Fund Information

Fund Inception	10/01/2002
Fund Assets	3,339 Million
Portfolio Assets	2,471 Million
Total # of Holdings	1975
% in Top 10	3.41 %
PM	Campagna,P/Liao,L/Tran,D
PM Tenure	14 Years 4 Months
Turnover	32.00 %
Gross Expense (%)	0.06 %
Net Expense (%)	0.06 %
New Investors	Open

## Fund Statistics

	3 Years	10 Years
Standard Deviation	15.68	16.89
<b>vs. Russell 2000 Index</b>		
Beta	1.00	1.00
Alpha	0.13	0.17
Information Ratio	1.36	1.24
Tracking Error	0.09	0.11
R-Squared	1.00	1.00
Up Market Capture	100.19	100.18
Down Market Capture	99.57	99.50
Consistency	66.67	66.67

## 3 Years Rolling Excess Performance



## Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	2,808	2,473
Median Mkt. Cap (\$M)	824	803
Price/Earnings ratio	19.1	19.1
Price/Book ratio	2.4	2.5
5 Yr. EPS Growth Rate (%)	11.2	11.2
Current Yield (%)	1.4	1.4
Beta (5 Years, Monthly)	1.00	1.00
Number of Stocks	1,962	1,995
Debt to Equity	1.1	1.1
Forecast P/E	16.9	17.0
Forecast EPS Growth	12.3	12.3
Return on Equity	0.0	0.0

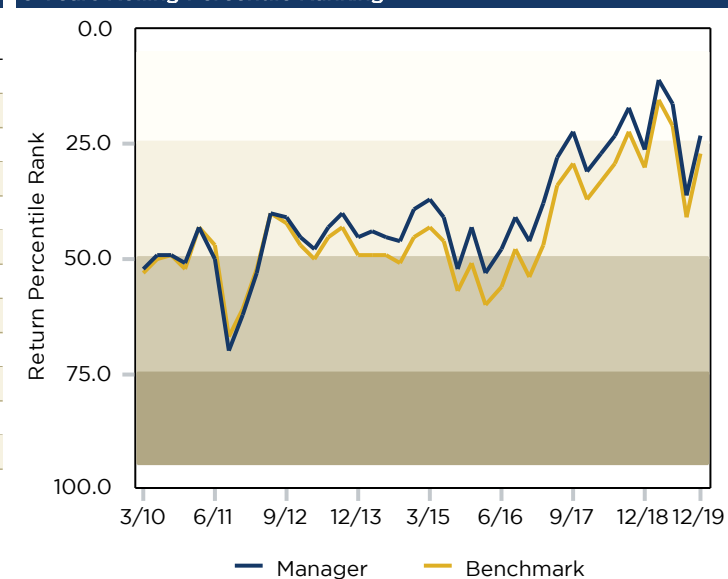
## vs. Risk Free

Sharpe Ratio	0.51	0.72
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## Sector Allocation

Sector	Portfolio Weight (%)	Benchmark Weight (%)
Communication Services	2.3	2.3
Consumer Discretionary	10.8	10.9
Consumer Staples	3.0	3.0
Energy	3.2	3.2
Financials	17.7	17.7
Health Care	17.7	18.2
Industrials	15.9	15.8
Information Technology	13.5	13.5
Materials	3.9	3.9
Real Estate	7.6	7.8
Utilities	3.7	3.7
<b>Total</b>	<b>99.3</b>	<b>100.0</b>

## 3 Years Rolling Percentile Ranking



## Country/Region Allocation

United States	96.6	96.6
Non-US Developed	2.4	2.4
Emerging Markets	0.4	0.3
Other	0.6	0.6
<b>Total</b>	<b>100.0</b>	<b>100.0</b>



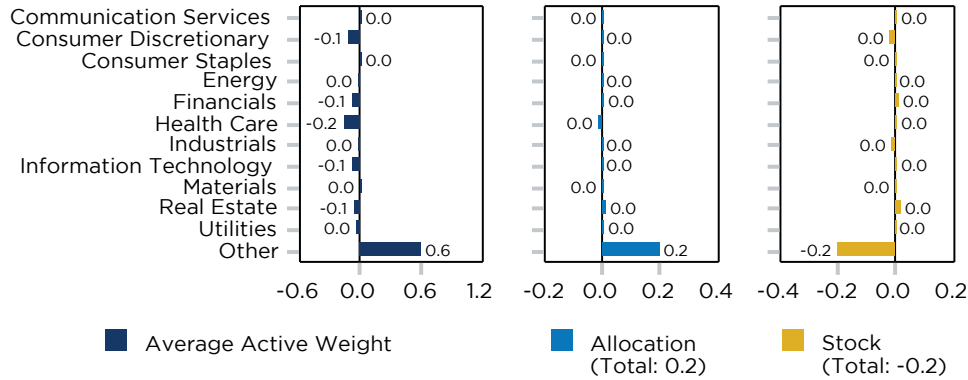


# TIAA-CREF Small-Cap Blend Idx Inst (TISBX)

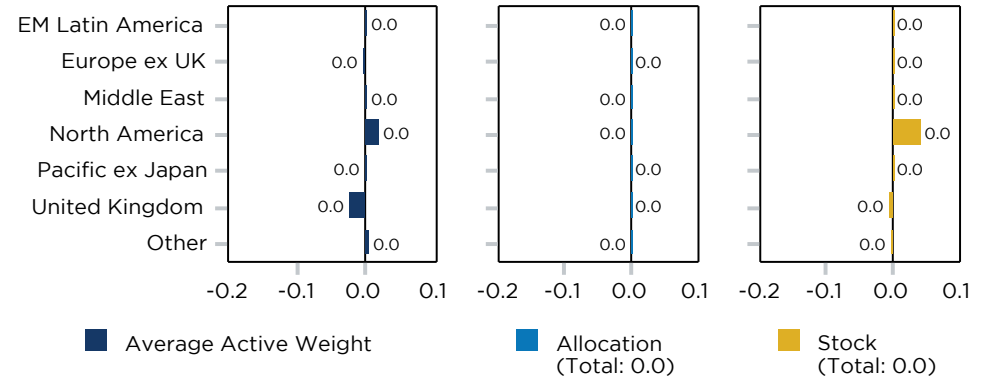
Index: Russell 2000 Index

Report Date: 12/31/2019

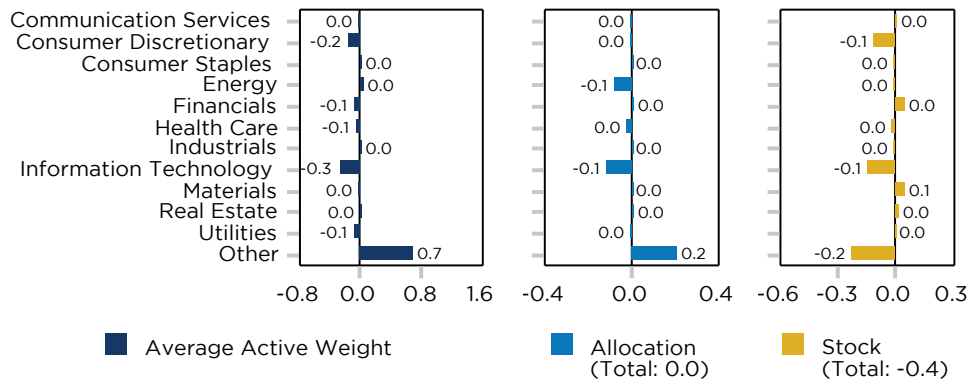
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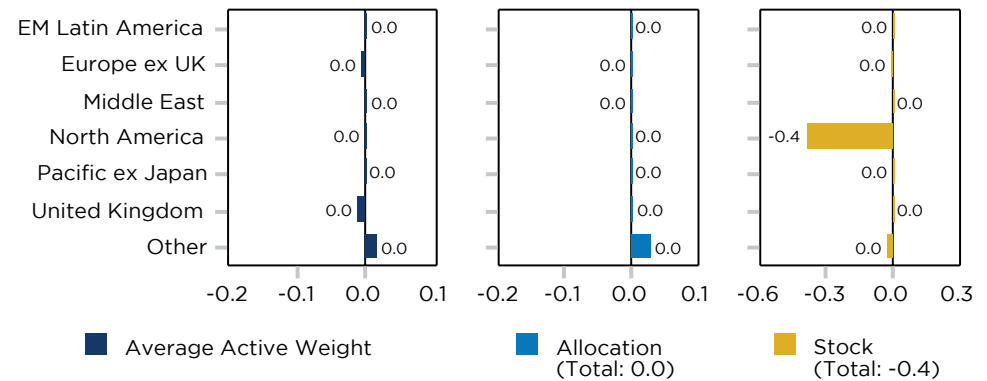
## 1 Quarter Region Attribution



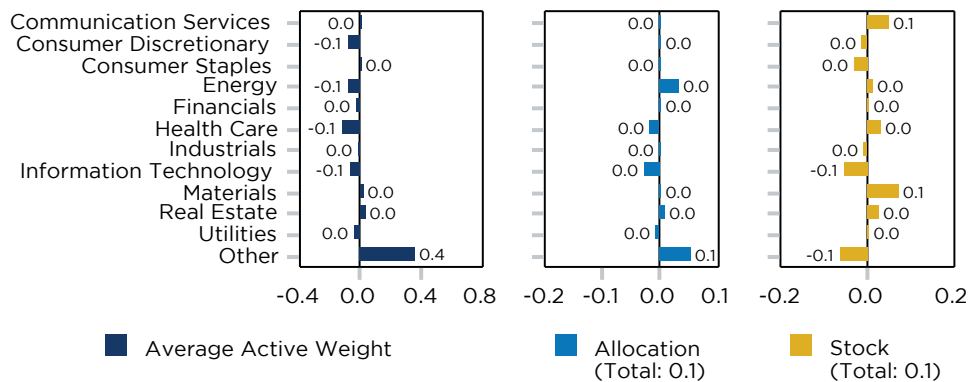
## 1 Year Sector Attribution



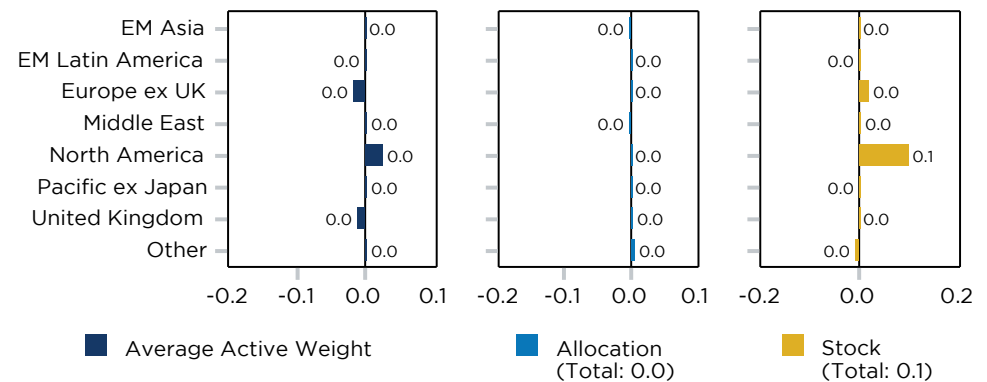
## 1 Year Region Attribution



## 3 Years Sector Attribution



## 3 Years Region Attribution





# TIAA-CREF Small-Cap Blend Idx Inst (TISBX)

Index: Russell 2000 Index

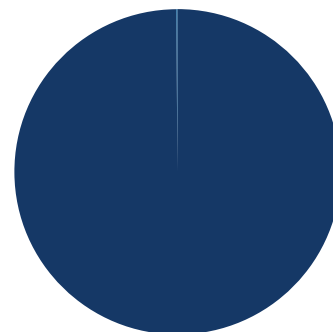
Report Date: 12/31/2019

## Top Ten Securities

iShares Russell 2000 ETF	0.7 %
NovoCure Ltd	0.4 %
Arrowhead Pharmaceuticals Inc	0.3 %
The Medicines Co	0.3 %
Haemonetics Corp	0.3 %
Generac Holdings Inc	0.3 %
Teladoc Health Inc	0.3 %
Lumentum Holdings Inc	0.3 %
First Industrial Realty Trust Inc	0.3 %
Radian Group Inc	0.3 %
<b>Total</b>	<b>3.4 %</b>

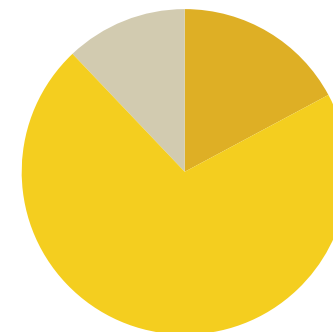
## Asset Allocation

- Equity
- Cash
- Fixed Income



## Market Capitalization

- Giant
- Large
- Medium
- Small
- Micro



## Top Ten Contributors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Reata Pharmaceuticals Inc	0.09	0.08	0.01	154.62
Darling Ingredients Inc	0.17	0.16	0.00	46.79
Arrowhead Pharmaceuticals Inc	0.14	0.14	0.00	125.09
Medicines Co (The)	0.20	0.20	0.00	69.88
Axsome Therapeutics Inc	0.03	0.03	0.00	410.67
Lumentum Holdings Inc	0.21	0.21	0.00	48.06
Global Blood Therapeutics Inc	0.15	0.15	0.00	63.83
Cirrus Logic Inc.	0.16	0.16	0.00	53.81
Tenet Healthcare Corp	0.12	0.12	0.00	71.93
Intercept Pharmaceuticals Inc	0.09	0.09	0.00	86.74

## Top Ten Contributors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Advanced Micro Devices Inc	0.45	0.45	0.00	59.32
Teledyne Technologies	0.22	0.22	0.00	41.24
Fair Isaac Corp	0.20	0.20	0.00	46.48
Paycom Software Inc	0.11	0.11	0.00	79.88
EPAM Systems Inc	0.16	0.16	0.00	48.87
Take-Two Interactive	0.22	0.22	0.00	35.43
Aspen Technology Inc	0.23	0.23	0.00	30.29
Universal Display Corp	0.12	0.12	0.00	54.40
Insulet Corp	0.11	0.12	-0.01	65.63
EXACT Sciences Corp	0.07	0.08	-0.01	90.58

## Top Ten Detractors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Vonage Holdings Corp	0.14	0.13	0.00	-34.42
Aaron's Inc	0.23	0.22	0.00	-11.07
Haemonetics Corp	0.34	0.33	0.00	-8.91
Shake Shack Inc	0.15	0.15	0.00	-39.24
Intelsat SA	0.08	0.08	0.00	-69.17
Southwest Gas Holdings Inc	0.26	0.26	0.00	-15.96
Mercury Systems Inc	0.23	0.23	0.00	-14.86
Selective Insurance Group Inc	0.23	0.23	0.00	-13.00
Spectrum Pharmaceuticals Inc	0.05	0.05	0.00	-56.12
Blackbaud Inc	0.23	0.23	0.00	-11.76

## Top Ten Detractors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
U S Silica Holdings Inc	0.22	0.22	0.00	-51.56
Oasis Petroleum Inc	0.19	0.19	0.00	-40.06
Tenneco Inc	0.19	0.19	0.00	-39.64
McDermott International Inc.	0.09	0.09	0.00	-68.75
Owens & Minor Inc.	0.12	0.12	0.00	-45.52
AK Steel Holding Corp	0.17	0.17	0.00	-31.44
CBL & Associates Properties Inc.	0.10	0.10	0.00	-49.62
PDC Energy Inc	0.21	0.22	0.00	-28.83
United Natural Foods Inc	0.12	0.13	0.01	-43.17
Dean Foods Co	0.10	0.11	0.01	-85.69

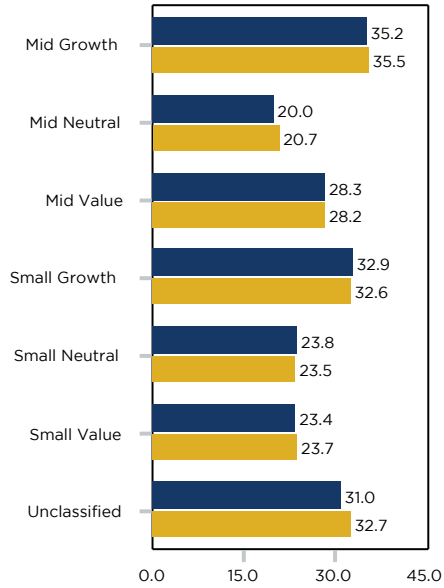


# TIAA-CREF Small-Cap Blend Idx Inst (TISBX)

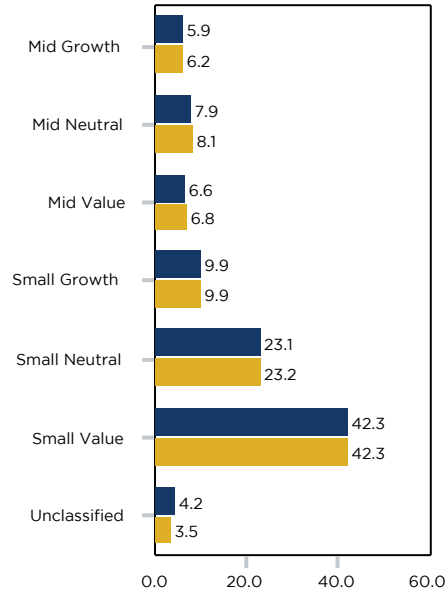
Index: Russell 2000 Index

Report Date: 12/31/2019

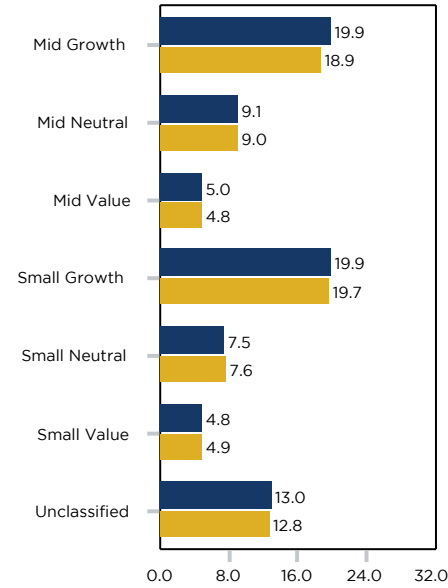
## Performance | 1 Year



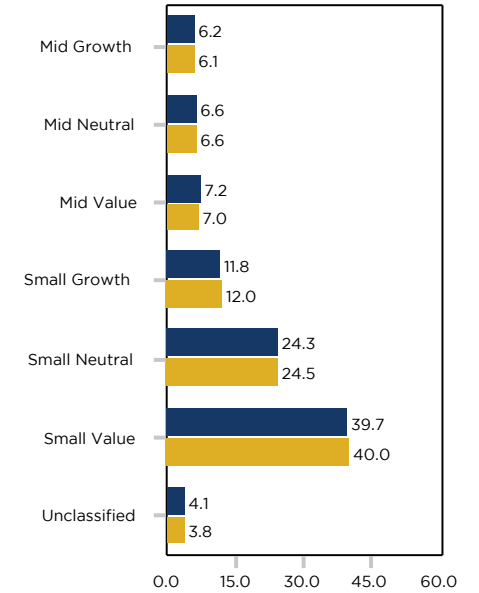
## Allocation | 1 Year



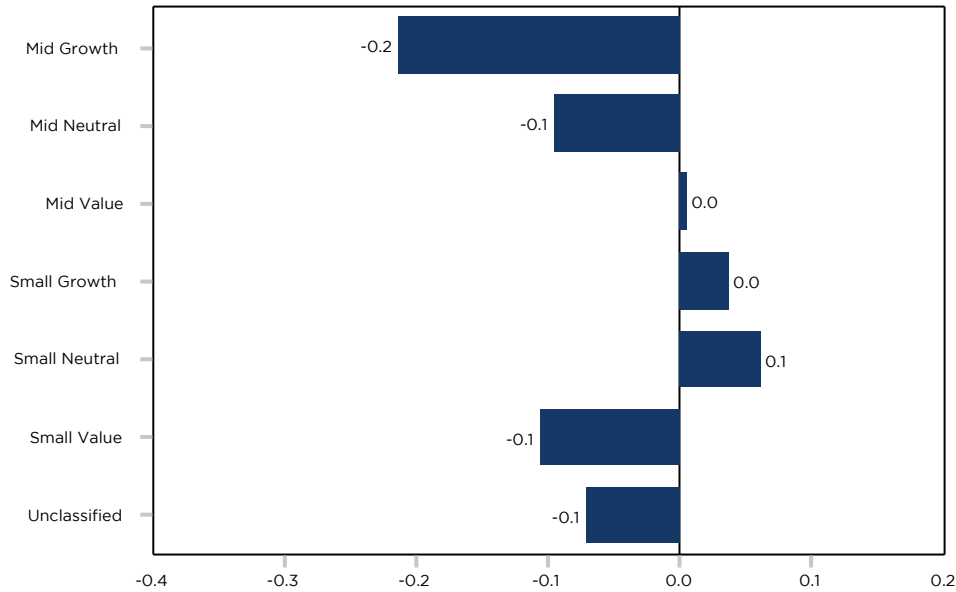
## Performance | 3 Years



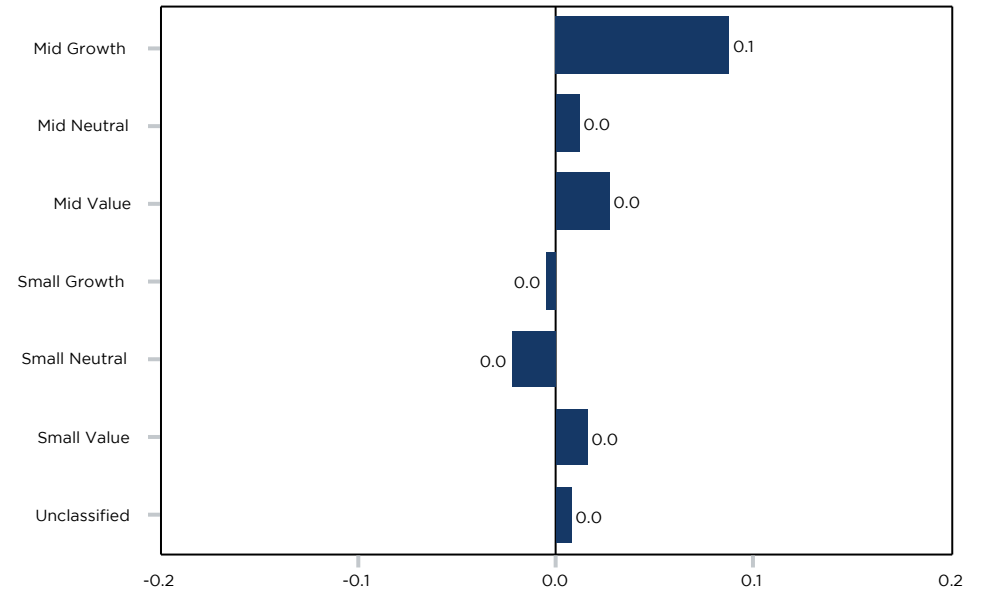
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years



## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	12.57 (16)	36.11 (16)	36.11 (16)	22.18 (5)	14.06 (8)	16.51 (2)	-0.67 (18)	34.91 (6)	6.80 (78)	-0.91 (32)
Benchmark	11.39	28.48	28.48	12.49	9.34	13.01	-9.31	22.17	11.32	-1.38
Peer Group	9.47	28.03	28.03	13.93	9.98	13.00	-5.94	21.90	10.89	-2.26
Population	808	794	794	762	741	644	919	857	888	883

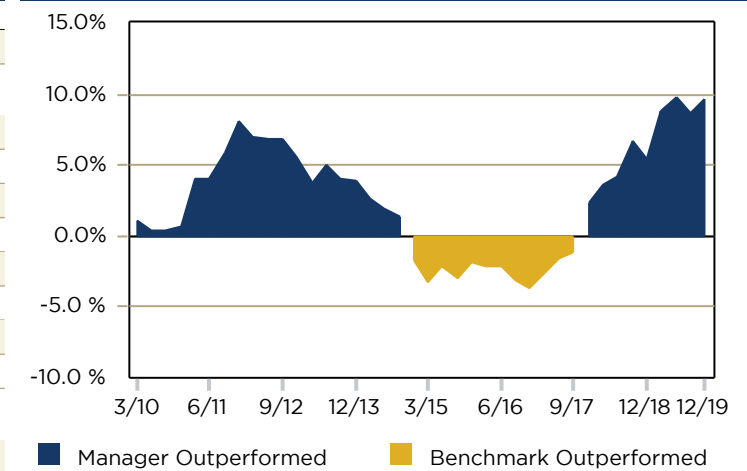
## Fund Information

Fund Inception	03/01/2005
Fund Assets	2,314 Million
Portfolio Assets	510 Million
Total # of Holdings	105
% in Top 10	16.52 %
PM	Team Managed
PM Tenure	19 Years
Turnover	70.00 %
Gross Expense (%)	0.91 %
Net Expense (%)	0.91 %
New Investors	Open

## Fund Statistics

	3 Years	10 Years
Standard Deviation	17.97	18.68
<b>vs. Russell 2000 Growth Index</b>		
Beta	1.06	1.02
Alpha	8.17	2.98
Information Ratio	1.75	0.67
Tracking Error	4.93	4.88
R-Squared	0.93	0.93
Up Market Capture	124.32	106.52
Down Market Capture	87.75	93.24
Consistency	75.00	54.17

## 3 Years Rolling Excess Performance



## Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	4,414	2,738
Median Mkt. Cap (\$M)	3,698	927
Price/Earnings ratio	33.1	26.7
Price/Book ratio	5.1	4.2
5 Yr. EPS Growth Rate (%)	13.5	13.5
Current Yield (%)	0.3	0.7
Beta (5 Years, Monthly)	1.06	1.00
Number of Stocks	102	1,172
Debt to Equity	0.6	1.4
Forecast P/E	26.8	19.7
Forecast EPS Growth	20.2	14.8
Return on Equity	-0.1	0.0

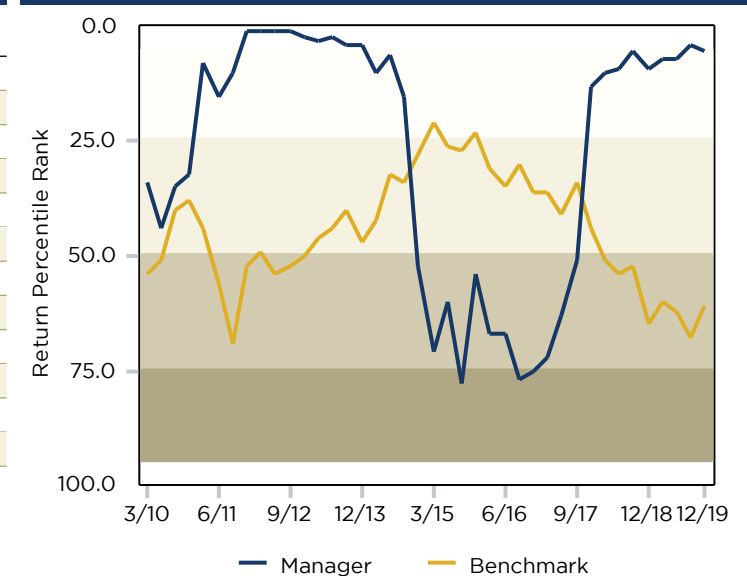
## vs. Risk Free

Sharpe Ratio	1.12	0.89
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## Sector Allocation

Sector	Portfolio Weight (%)	Benchmark Weight (%)
Communication Services	0.0	2.4
Consumer Discretionary	15.3	12.0
Consumer Staples	4.3	3.3
Energy	0.5	0.6
Financials	8.1	5.7
Health Care	26.9	30.5
Industrials	19.6	18.9
Information Technology	21.9	17.3
Materials	1.7	3.1
Real Estate	0.0	4.6
Utilities	0.0	1.5
<b>Total</b>	<b>98.3</b>	<b>100.0</b>

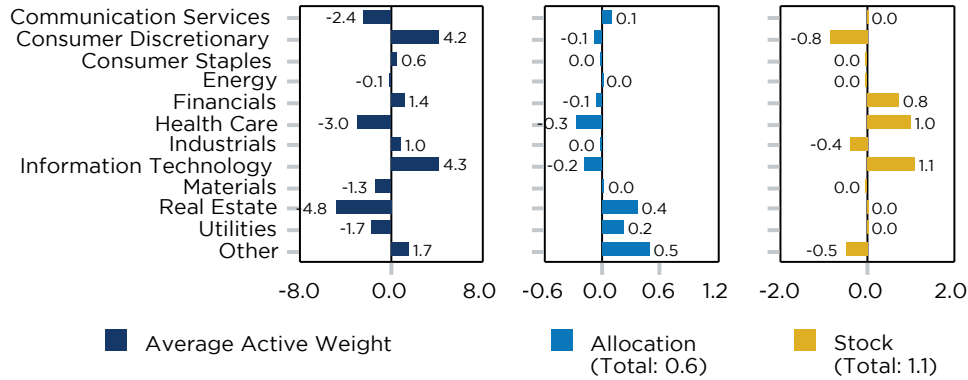
## 3 Years Rolling Percentile Ranking



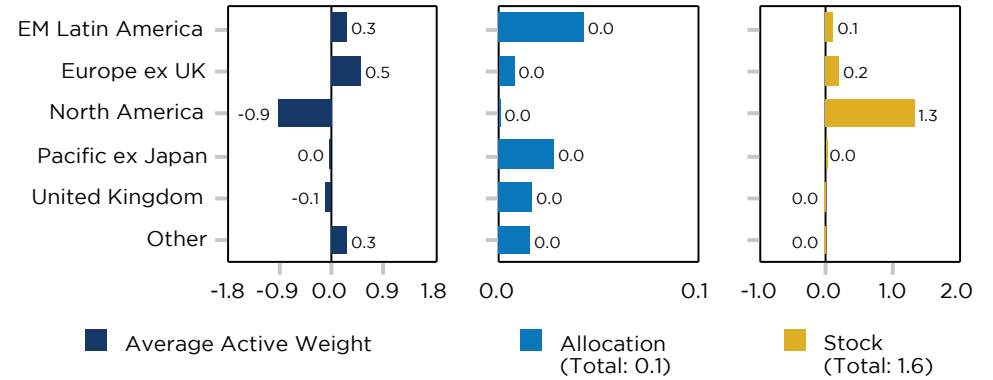
## Country/Region Allocation

United States	96.2	96.8
Non-US Developed	2.3	2.1
Emerging Markets	0.4	0.3
Other	1.0	0.8
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

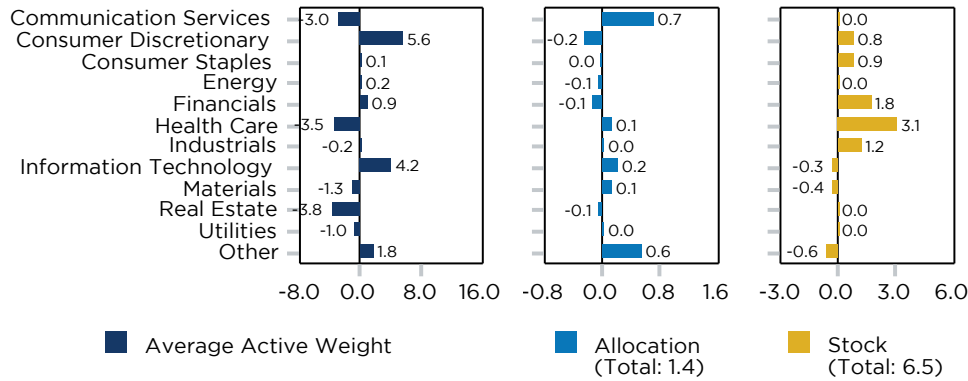
## 1 Quarter Sector Attribution



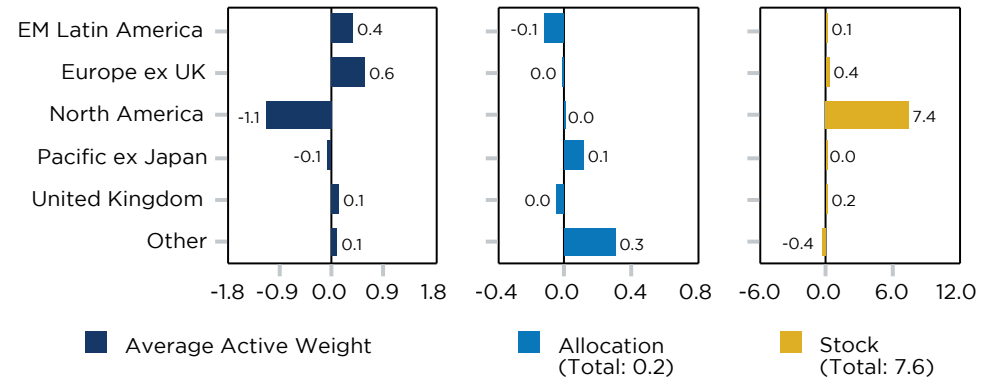
## 1 Quarter Region Attribution



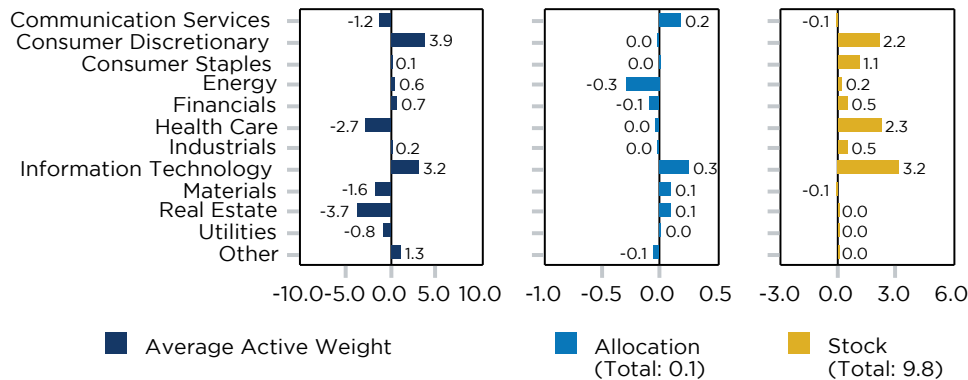
## 1 Year Sector Attribution



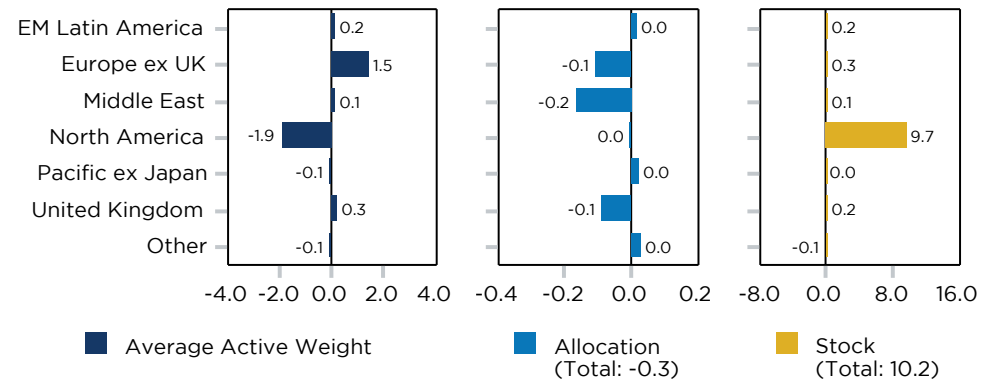
## 1 Year Region Attribution



## 3 Years Sector Attribution



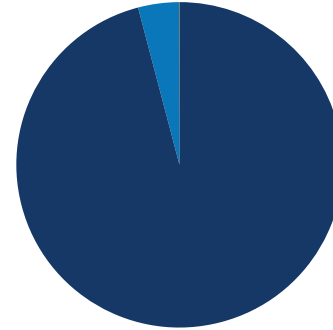
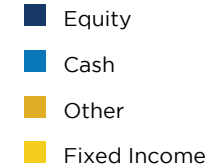
## 3 Years Region Attribution



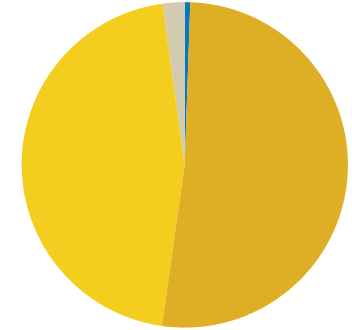
## Top Ten Securities

Teladoc Health Inc	1.9 %
Axon Enterprise Inc	1.8 %
Silicon Laboratories Inc	1.8 %
LHC Group Inc	1.7 %
Chegg Inc	1.7 %
iShares Russell 2000 Growth ETF	1.6 %
Five9 Inc	1.6 %
Mercury Systems Inc	1.5 %
Planet Fitness Inc A	1.5 %
Freshpet Inc	1.5 %
<b>Total</b>	<b>16.5 %</b>

## Asset Allocation



## Market Capitalization



## Top Ten Contributors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Axsome Therapeutics Inc	0.38	0.05	1.32	410.67
Tactile Systems Technology Inc	1.09	0.08	0.49	59.52
Trupanion Inc	1.37	0.07	0.47	47.36
Ra Pharmaceuticals Inc	0.49	0.09	0.35	98.44
Deciphera Pharmaceuticals Inc	0.52	0.07	0.32	83.38
Planet Fitness Inc	1.43	0.00	0.25	29.05
Axon Enterprise Inc	1.55	0.34	0.21	29.06
Teladoc Health Inc	2.06	0.50	0.19	23.63
Chegg Inc	1.59	0.36	0.19	26.58
LHC Group Inc	1.80	0.35	0.14	21.31

## Top Ten Contributors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
RingCentral Inc	1.42	0.14	1.14	101.55
Planet Fitness Inc	1.34	0.06	0.54	54.88
Freshpet Inc	0.81	0.03	0.53	79.89
Five Below Inc	1.65	0.24	0.49	47.36
Paylocity Holding Corp	1.00	0.07	0.43	59.08
Q2 Holdings Inc	1.28	0.08	0.34	41.12
HubSpot Inc	0.98	0.15	0.31	49.96
Take-Two Interactive	1.74	0.46	0.29	35.43
Bright Horizons Family	1.72	0.34	0.23	28.99
Aspen Technology Inc	1.74	0.48	0.22	30.29

## Top Ten Detractors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Etsy Inc	1.23	0.00	-0.41	-21.59
Mercury Systems Inc	1.81	0.46	-0.35	-14.86
Hexcel Corp	1.41	0.00	-0.31	-10.54
Chefs' Warehouse Inc (The)	1.85	0.10	-0.30	-5.48
iRhythm Technologies Inc	1.50	0.19	-0.26	-8.12
Sage Therapeutics Inc	0.40	0.00	-0.24	-48.54
Invitae Corp	0.95	0.17	-0.22	-16.30
Lovesac Co (The)	0.74	0.02	-0.18	-14.03
RBC Bearings Inc	1.36	0.42	-0.15	-4.56
Cree Inc.	0.64	0.00	-0.11	-5.82

## Top Ten Detractors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Tile Shop Holdings Inc	1.18	0.07	-0.74	-54.58
Akorn Inc	0.84	0.00	-0.60	-59.04
Forum Energy Tech	0.78	0.00	-0.55	-57.57
Oil States International Inc.	1.02	0.00	-0.38	-25.22
Imax Corp	1.37	0.21	-0.30	-13.35
Astec Industries Inc.	1.17	0.07	-0.29	-13.78
Dave & Buster's Entertainment Inc	1.44	0.24	-0.27	-10.14
Dycom Industries Inc.	1.12	0.28	-0.24	-16.26
Adamas Pharmaceuticals Inc	0.47	0.02	-0.23	-39.24
Prothena Corp Plc	0.60	0.19	-0.18	-31.47

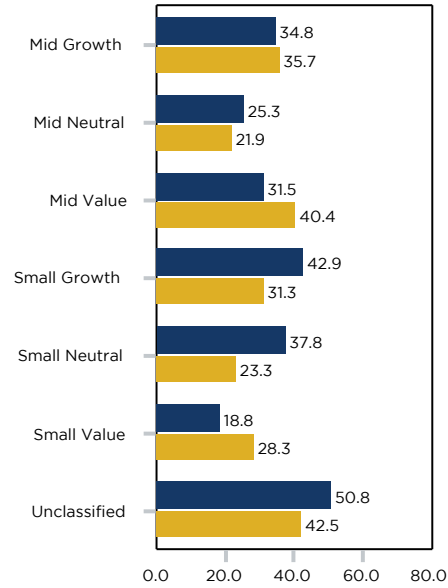


# AB Small Cap Growth I (QUAIX)

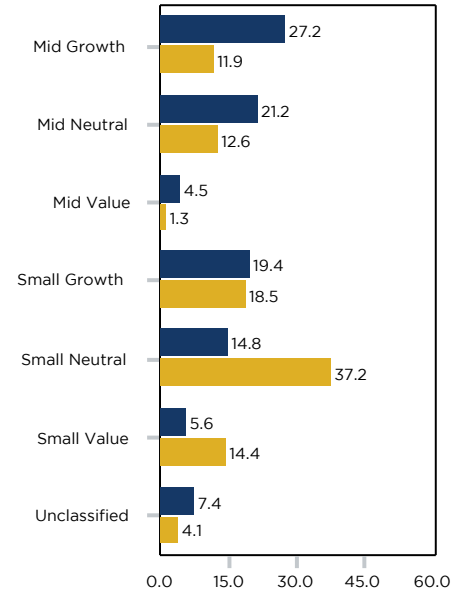
Index: Russell 2000 Growth Index

Report Date: 12/31/2019

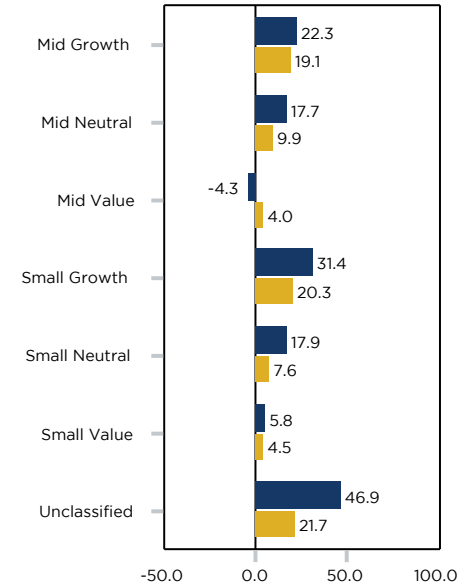
## Performance | 1 Year



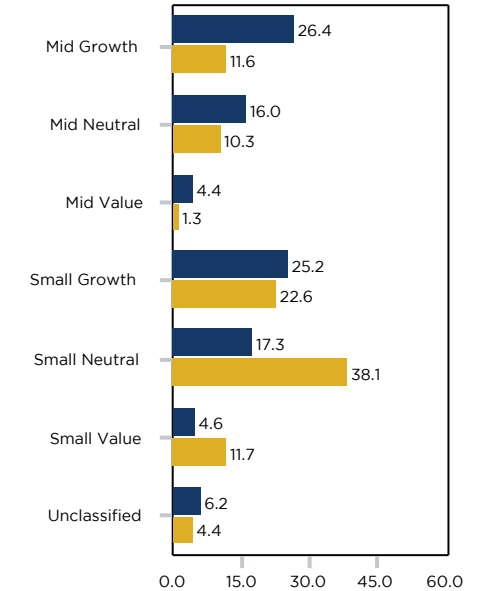
## Allocation | 1 Year



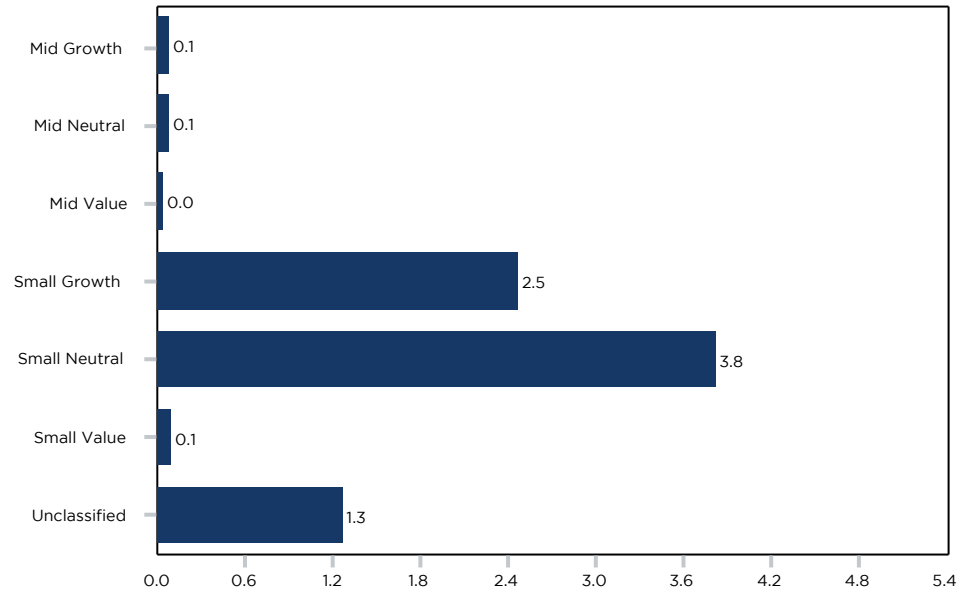
## Performance | 3 Years



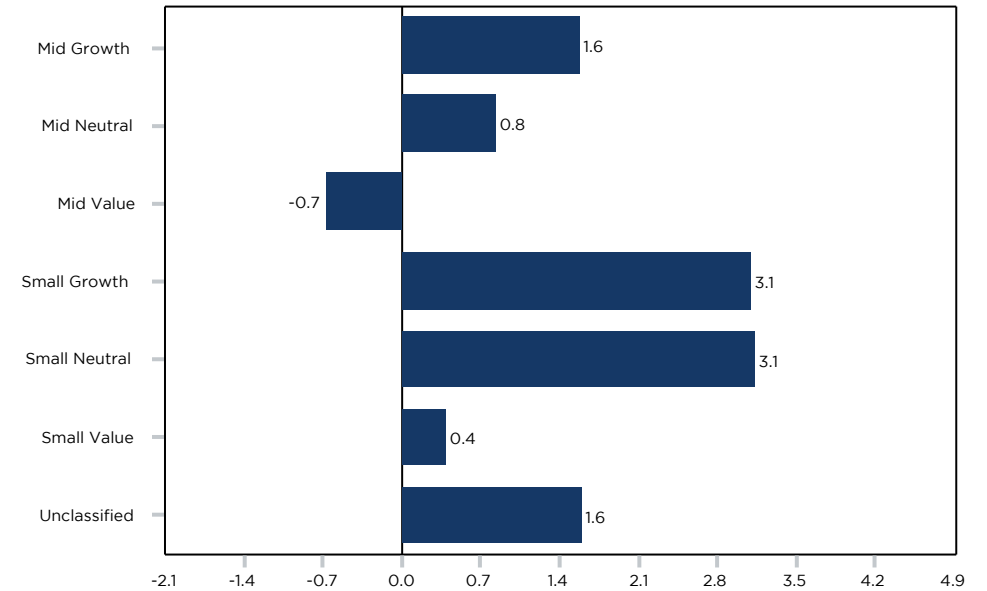
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years





# CREF Global Equities R3 (QCGLIX)

Index: MSCI World Index  
 Category: World Large Stock  
 Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	9.86 (23)	28.28 (39)	28.28 (39)	11.95 (49)	8.01 (51)	9.10 (48)	-12.36 (77)	24.81 (40)	5.11 (54)	-0.34 (40)
Benchmark	8.68	28.40	28.40	13.20	9.36	10.08	-8.20	23.07	8.15	-0.32
Peer Group	8.58	26.49	26.49	11.84	8.03	8.99	-9.69	23.76	5.45	-1.35
Population	1,118	1,088	1,088	976	858	608	1,252	1,113	1,115	1,068

## Fund Information

Fund Inception	04-2015
Fund Assets	21,327 Million
Portfolio Assets	10,492 Million
Total # of Holdings	3022
% Assets in Top 10 Holdings	15.2 %
PM	Bagai,H/Franks,T/Tribolet,J
PM Tenure	13 Years 7 Months
Turnover	77.0 %
Gross Expense (%)	0.3 %
Net Expense (%)	0.3 %
New Investors	Open

## Equity Characteristics

Avg. Market Cap	73,671 (Million)
Price/Earnings	18
Price/Book	2
Dividend Yield	2.3 %

## Top Holdings (%)

Apple Inc	3.3
Microsoft Corp	2.6
Amazon.com Inc	1.7
Boeing Co	1.2
Coca-Cola Co	1.2
Facebook Inc A	1.1
Alphabet Inc Class C	1.1
Taiwan Semiconductor Manufacturing	1.0
Linde PLC	1.0
The Home Depot Inc	1.0

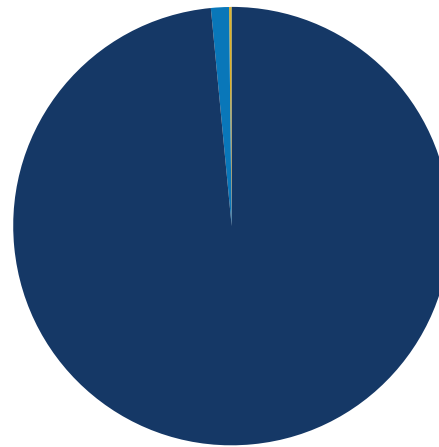
## Fund Statistics

	3 Years	10 Years
Standard Deviation	12.22	13.41
<b>vs. MSCI World Index</b>		
Beta	1.09	1.03
Alpha	-2.16	-1.14
Information Ratio	-0.57	-0.53
Tracking Error	1.73	1.58
R-Squared	0.99	0.99
Up Market Capture	100.72	99.70
Down Market Capture	112.01	106.00
Consistency	44.44	48.33

## vs. Risk Free

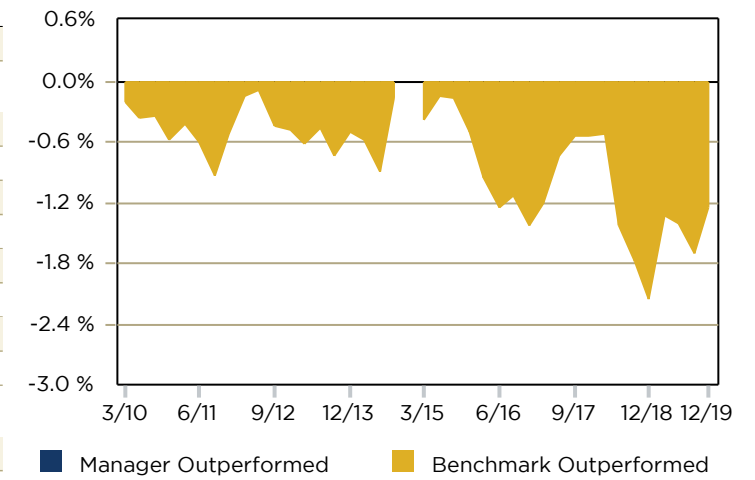
Sharpe Ratio	0.85	0.68
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## Asset Allocation

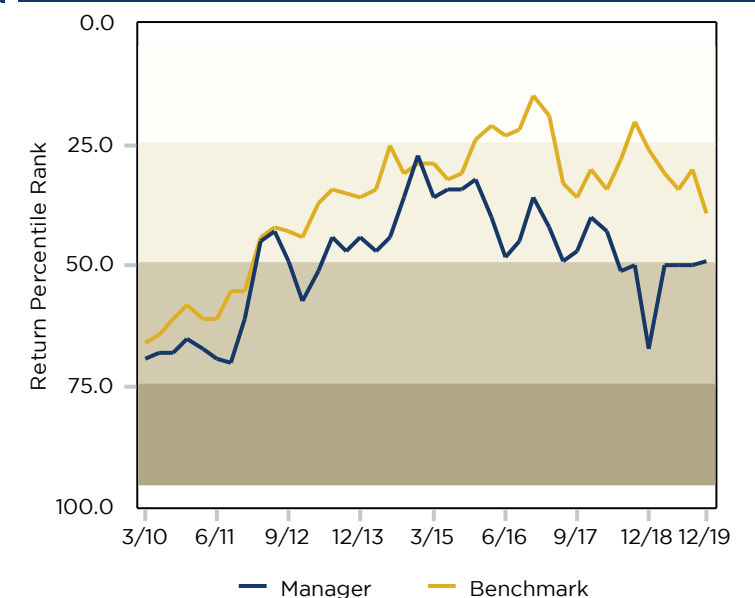


■ Equity    ■ Cash  
 ■ Fixed Income    ■ Other

## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking







## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	7.90 (72)	21.79 (52)	21.79 (52)	9.81 (36)	5.93 (26)	5.65 (31)	-13.25 (17)	25.32 (52)	1.22 (49)	-0.49 (34)
Benchmark	8.17	22.01	22.01	9.56	5.67	5.50	-13.79	25.03	1.00	-0.81
Peer Group	8.69	21.85	21.85	9.23	5.39	5.25	-14.64	25.39	1.11	-1.22
Population	1,161	1,119	1,119	1,007	857	688	1,179	1,126	1,134	1,046

## Fund Information

Fund Inception	10/01/2002
Fund Assets	13,832 Million
Portfolio Assets	8,280 Million
Total # of Holdings	945
% in Top 10	12.06 %
PM	Campagna,P/Liao,L/Tran,D
PM Tenure	14 Years 4 Months
Turnover	10.00 %
Gross Expense (%)	0.06 %
Net Expense (%)	0.06 %
New Investors	Open

## Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	76,582	66,590
Median Mkt. Cap (\$M)	11,911	11,162
Price/Earnings ratio	14.4	17.2
Price/Book ratio	2.2	2.3
5 Yr. EPS Growth Rate (%)	6.1	6.0
Current Yield (%)	1.7	3.4
Beta (5 Years, Monthly)	0.96	1.00
Number of Stocks	921	918
Debt to Equity	1.2	1.1
Forecast P/E	14.7	15.3
Forecast EPS Growth	9.1	8.4
Return on Equity	0.0	0.0

## Country/Region Allocation

United States	0.5	0.2
Non-US Developed	99.0	99.3
Emerging Markets	0.1	0.1
Other	0.4	0.4
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

## Fund Statistics

	3 Years	10 Years
Standard Deviation	10.90	14.49
<b>vs. MSCI EAFE (Net) Index</b>		
Beta	1.00	0.99
Alpha	0.23	0.21
Information Ratio	0.18	0.07
Tracking Error	1.30	1.94
R-Squared	0.99	0.98
Up Market Capture	99.57	99.55
Down Market Capture	97.07	98.62
Consistency	50.00	50.83

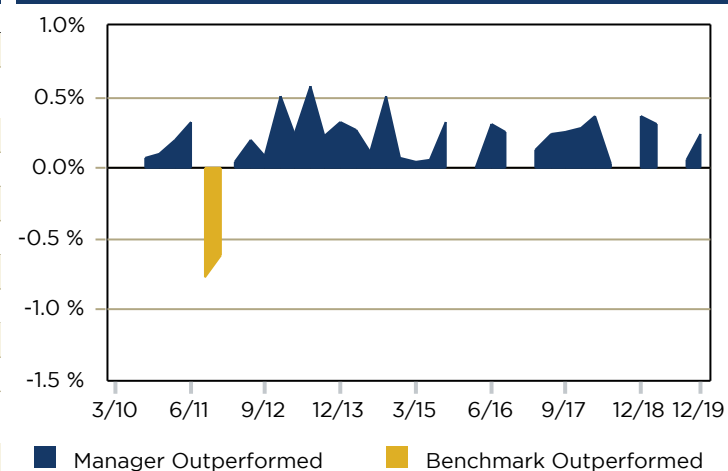
## vs. Risk Free

Sharpe Ratio	0.76	0.41
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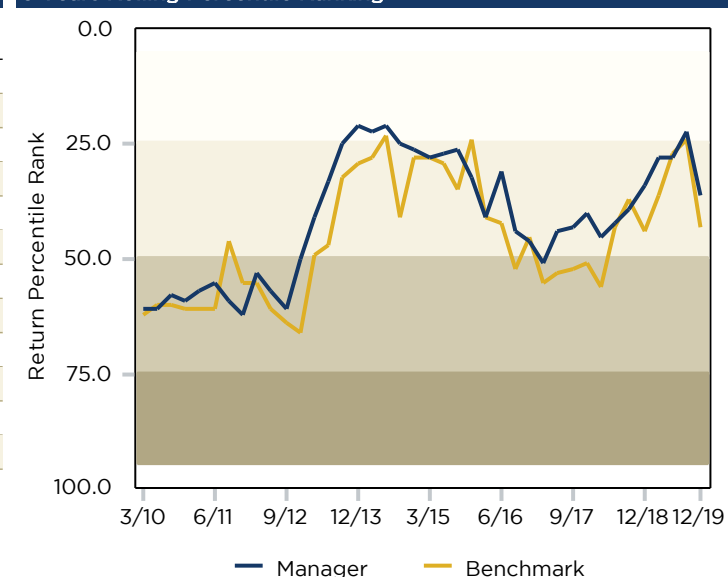
## Sector Allocation

Sector	Portfolio Weight (%)	Benchmark Weight (%)
Communication Services	5.7	5.2
Consumer Discretionary	11.8	11.6
Consumer Staples	12.1	11.3
Energy	5.4	4.9
Financials	18.7	18.6
Health Care	9.3	12.2
Industrials	12.6	15.0
Information Technology	6.8	7.1
Materials	11.7	7.1
Real Estate	2.7	3.5
Utilities	3.3	3.7
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

## 3 Years Rolling Excess Performance

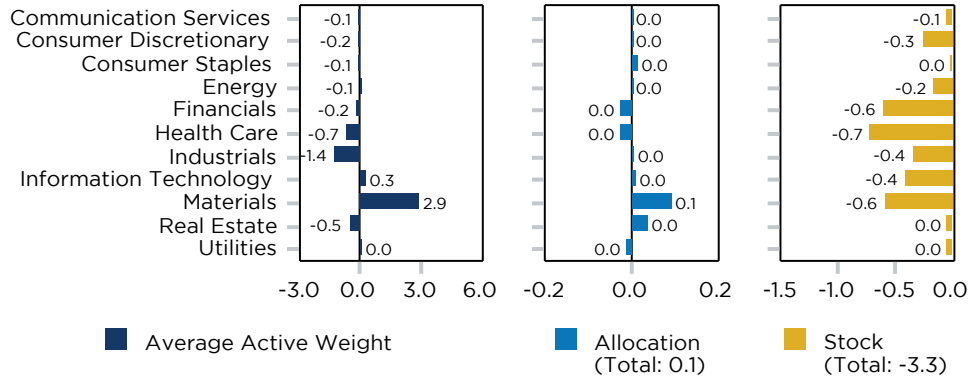


## 3 Years Rolling Percentile Ranking

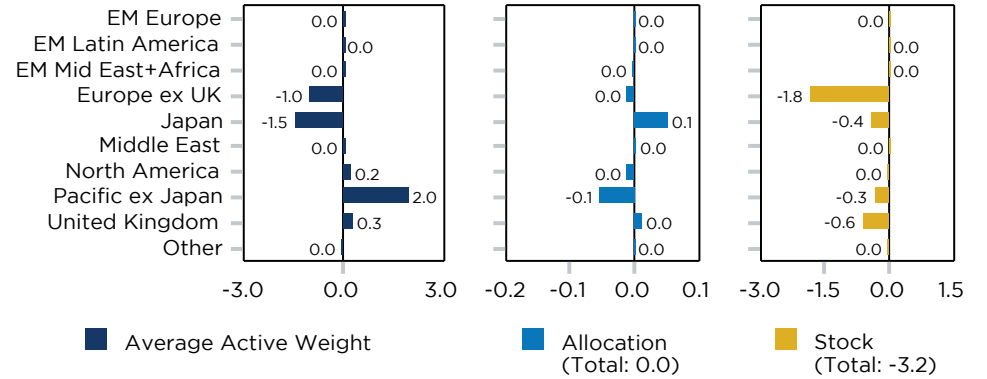




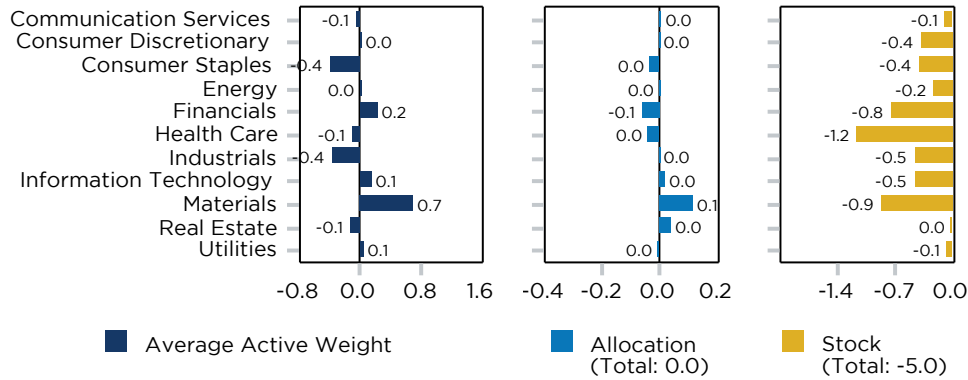
## 1 Quarter Sector Attribution



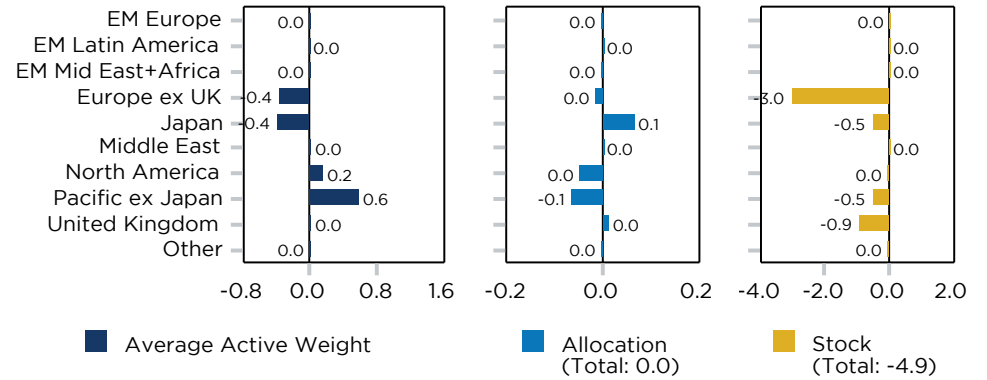
## 1 Quarter Region Attribution



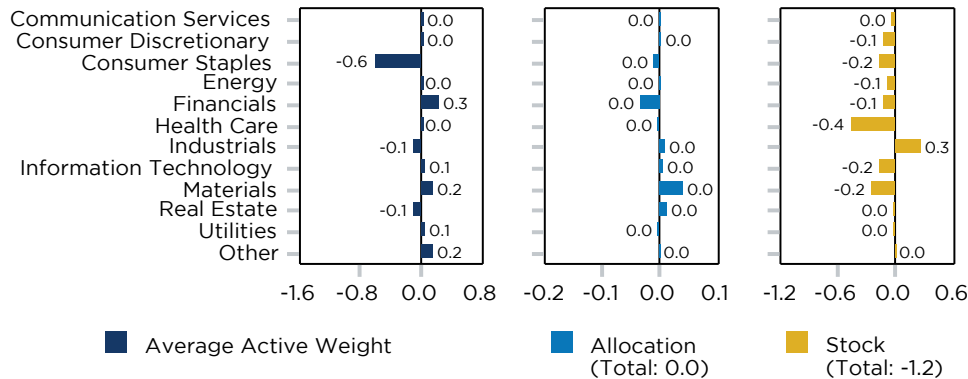
## 1 Year Sector Attribution



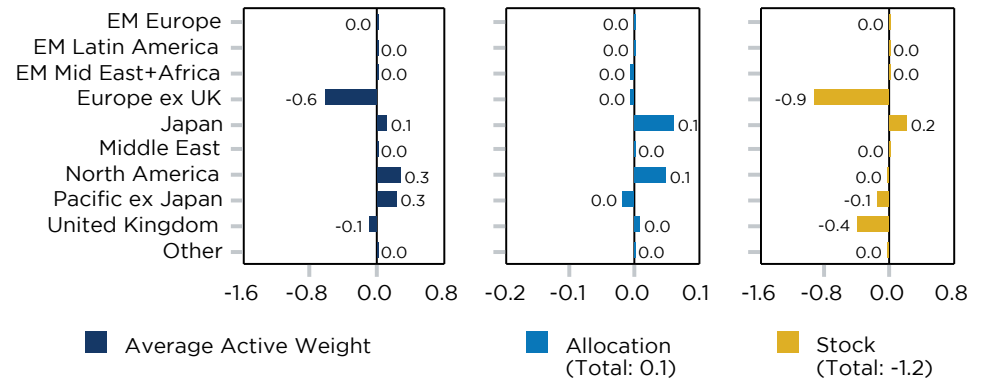
## 1 Year Region Attribution



## 3 Years Sector Attribution



## 3 Years Region Attribution





# TIAA-CREF International Eq Idx Instl (TCIEX)

Index: MSCI EAFE (Net) Index

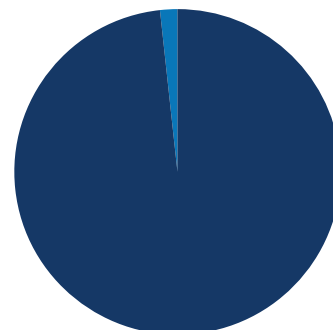
Report Date: 12/31/2019

## Top Ten Securities

Nestle SA	2.1 %
Msci Eafe Dec19 Ifus 20191220	1.7 %
Roche Holding AG Dividend Right	1.5 %
Novartis AG	1.3 %
Toyota Motor Corp	1.1 %
HSBC Holdings PLC	1.0 %
SAP SE	0.9 %
AstraZeneca PLC	0.9 %
BP PLC	0.9 %
Total SA	0.8 %
<b>Total</b>	<b>12.1 %</b>

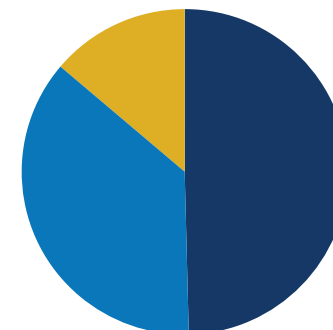
## Asset Allocation

- Equity
- Cash
- Fixed Income



## Market Capitalization

- Giant
- Large
- Medium
- Small
- Micro



## Top Ten Contributors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Siemens AG	0.61	0.59	0.00	22.07
Louis Vuitton Moet Hennessy	0.82	0.80	0.00	17.54
CSL Ltd	0.53	0.52	0.00	22.91
SAP AG	0.86	0.84	0.00	14.78
Roche Holding AG	1.52	1.48	0.00	11.37
ASML Holding NV	0.78	0.77	0.00	19.93
Novo Nordisk A/S	0.68	0.66	0.00	12.91
Astrazeneca PLC	0.87	0.85	0.00	12.81
AIA Group Ltd	0.85	0.83	0.00	11.20
British American Tobacco	0.62	0.62	0.00	15.81

## Top Ten Contributors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Nestle SA	1.91	1.83	0.01	17.95
ASML Holding NV	0.35	0.34	0.00	39.61
Louis Vuitton Moet Hennessy	0.45	0.44	0.00	36.93
Roche Holding AG	1.37	1.32	0.00	14.43
Astrazeneca PLC	0.58	0.57	0.00	27.50
AIA Group Ltd	0.57	0.56	0.00	24.98
SAP AG	0.72	0.70	0.00	17.18
Novo Nordisk A/S	0.58	0.57	0.00	20.29
Allianz SE	0.63	0.62	0.00	18.91
Toyota Motor Corp	1.31	1.29	0.00	9.53

## Top Ten Detractors | 1 Quarter

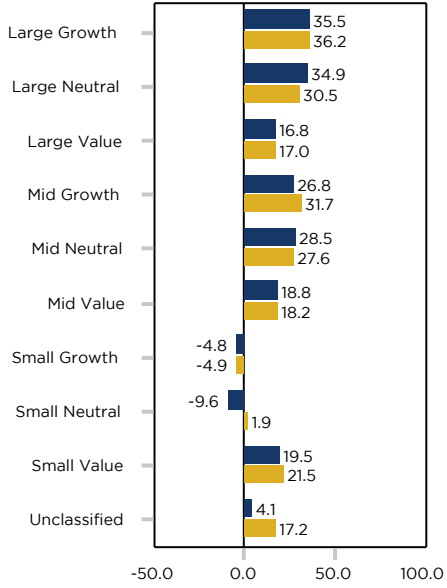
	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Westpac Banking Corp	0.51	0.50	0.00	-12.31
National Australia Bank Ltd	0.42	0.41	0.00	-11.04
Oriental Land Co Ltd	0.23	0.22	0.00	-9.98
Shiseido Co Ltd	0.24	0.23	0.00	-9.96
Danone SA	0.41	0.40	0.00	-5.90
The Unilever Group	0.65	0.64	0.00	-3.66
Nokia Corp	0.21	0.21	0.00	-27.05
Wirecard AG	0.14	0.14	0.00	-24.61
AUS & NZ Banking Group	0.40	0.40	0.00	-7.24
Subaru Corp	0.13	0.13	0.00	-11.22

## Top Ten Detractors | 3 Years

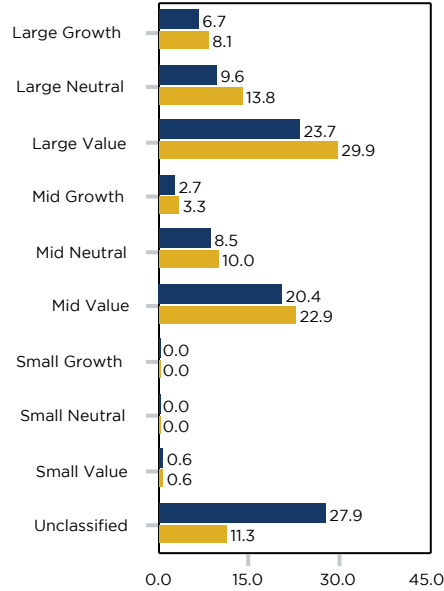
	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
British American Tobacco	0.89	0.87	0.00	-9.59
BT Group PLC	0.32	0.31	0.00	-11.76
Imperial Brands PLC	0.35	0.34	0.00	-11.64
Telefonica SA	0.36	0.35	0.00	-9.81
Daimler AG	0.60	0.59	0.00	-9.77
Westpac Banking Corp	0.66	0.65	0.00	-4.45
Teva Pharmaceutical	0.27	0.27	0.00	-35.00
Deutsche Bank AG	0.21	0.21	0.00	-24.11
Pandora AS	0.12	0.12	0.00	-27.15
Danske Bank As	0.17	0.17	0.00	-14.96



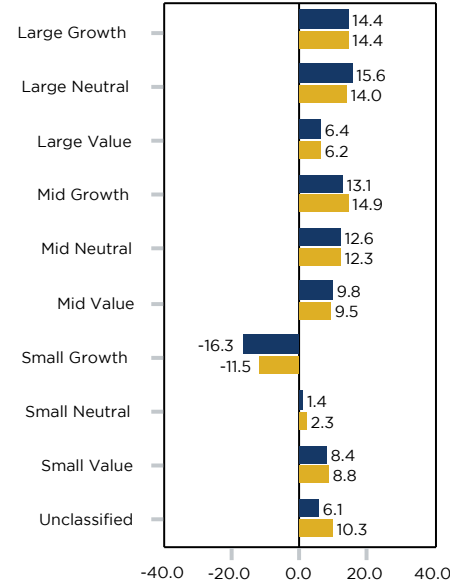
## Performance | 1 Year



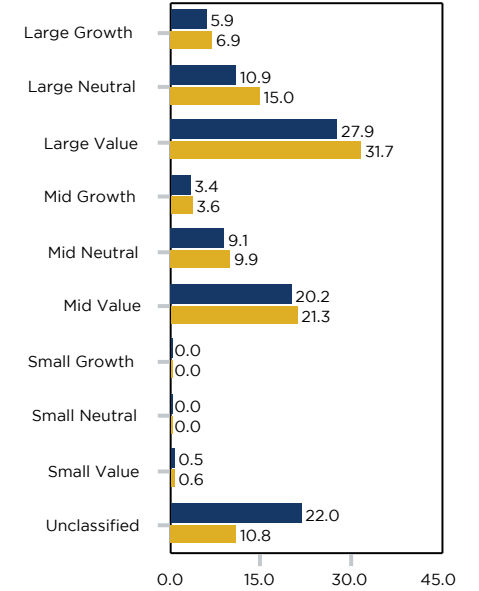
## Allocation | 1 Year



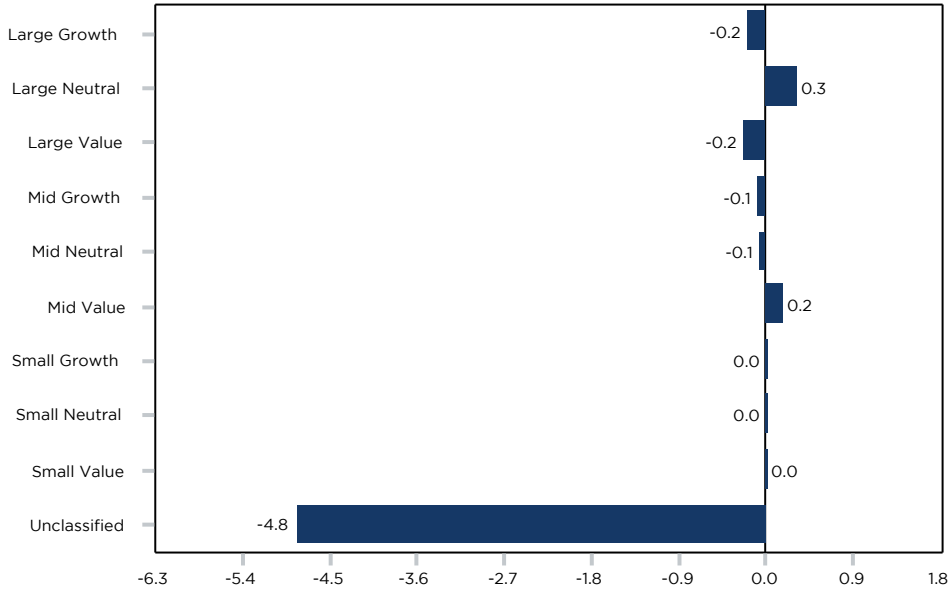
## Performance | 3 Years



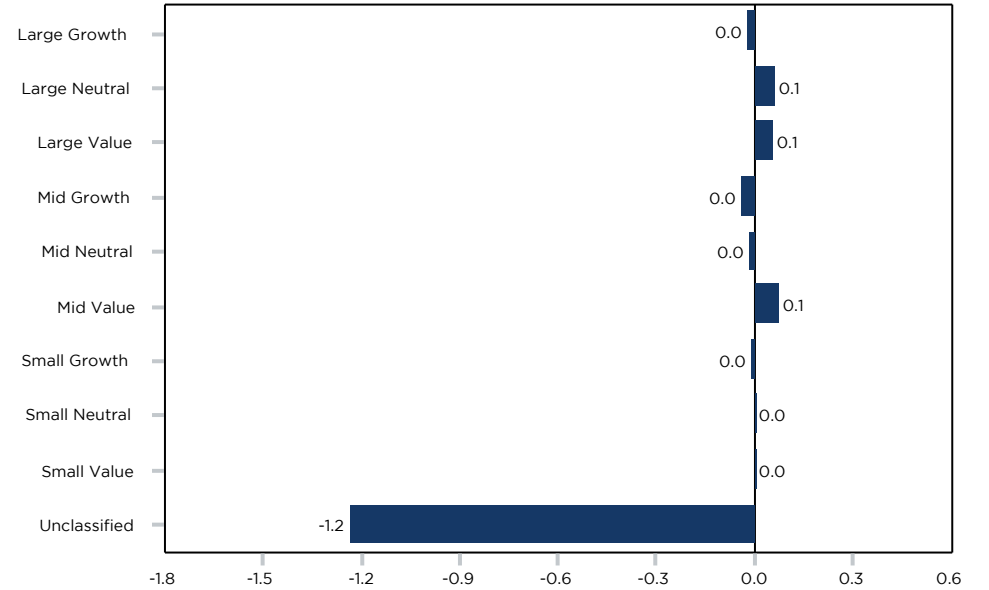
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years





# American Funds Europacific Growth R6 (RERGX)

Index: MSCI AC World ex USA (Net)

Category: Foreign Large Growth

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	10.09 (38)	27.40 (60)	27.40 (60)	12.45 (51)	7.41 (43)	6.73 (53)	-14.91 (56)	31.17 (46)	1.01 (27)	-0.48 (63)
Benchmark	8.92	21.51	21.51	9.87	5.51	4.97	-14.20	27.19	4.50	-5.66
Peer Group	9.64	27.86	27.86	12.45	7.09	6.79	-14.33	30.72	-1.50	0.37
Population	653	636	636	601	544	430	693	654	651	625

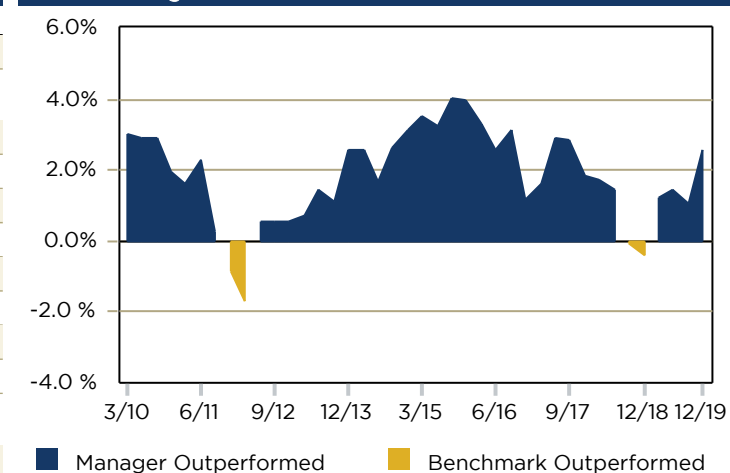
## Fund Information

Fund Inception	05/01/2009
Fund Assets	171,482 Million
Portfolio Assets	77,654 Million
Total # of Holdings	326
% in Top 10	19.75 %
PM	Team Managed
PM Tenure	18 Years 6 Months
Turnover	35.00 %
Gross Expense (%)	0.49 %
Net Expense (%)	0.49 %
New Investors	Open

## Fund Statistics

	3 Years	10 Years
Standard Deviation	12.08	14.06
<b>vs. MSCI AC World ex USA (Net)</b>		
Beta	1.04	0.94
Alpha	2.05	1.95
Information Ratio	0.93	0.50
Tracking Error	2.62	3.19
R-Squared	0.95	0.95
Up Market Capture	108.61	98.33
Down Market Capture	95.22	88.15
Consistency	58.33	50.83

## 3 Years Rolling Excess Performance



## Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	93,189	75,601
Median Mkt. Cap (\$M)	24,315	8,444
Price/Earnings ratio	20.5	16.1
Price/Book ratio	3.1	2.3
5 Yr. EPS Growth Rate (%)	19.0	8.1
Current Yield (%)	0.9	3.2
Beta (5 Years, Monthly)	0.93	1.00
Number of Stocks	309	2,412
Debt to Equity	0.6	1.0
Forecast P/E	15.7	13.5
Forecast EPS Growth	13.4	9.5
Return on Equity	0.0	0.0

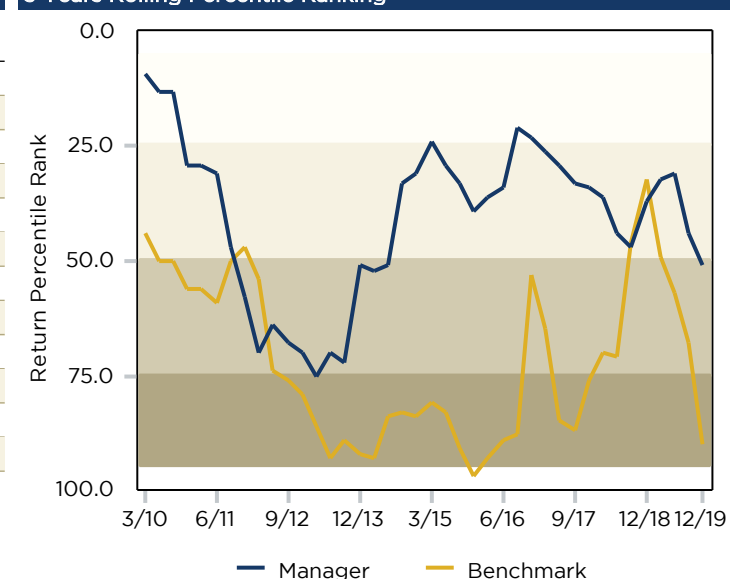
## vs. Risk Free

Sharpe Ratio	0.90	0.50
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## Sector Allocation

Sector	Portfolio Weight (%)	Benchmark Weight (%)
Communication Services	6.5	6.7
Consumer Discretionary	18.7	11.8
Consumer Staples	5.3	9.4
Energy	6.6	6.5
Financials	18.9	21.4
Health Care	8.6	8.9
Industrials	10.4	11.9
Information Technology	13.7	9.4
Materials	6.9	7.4
Real Estate	1.2	3.2
Utilities	3.2	3.4
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

## 3 Years Rolling Percentile Ranking



## Country/Region Allocation

United States	1.1	0.2
Non-US Developed	66.5	75.6
Emerging Markets	31.4	23.9
Frontier Markets	0.1	0.0
Other	0.9	0.3

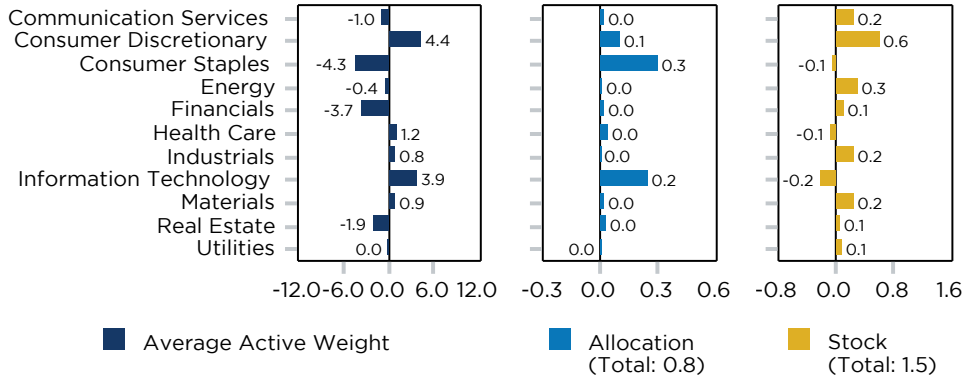


# American Funds Europacific Growth R6 (RERGX)

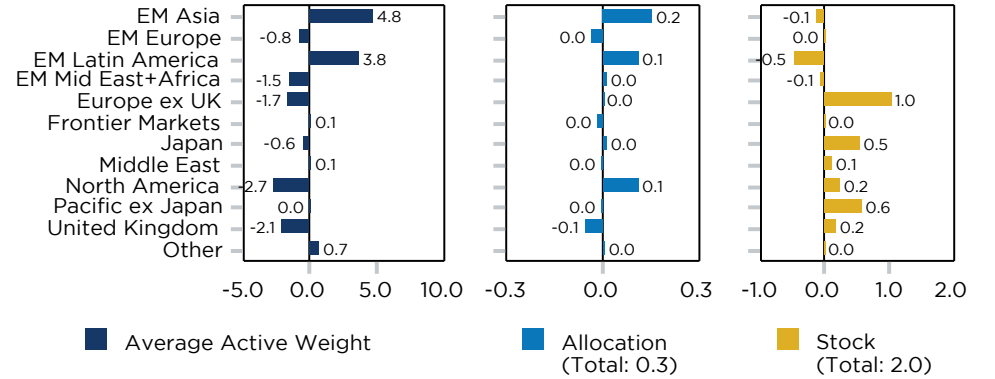
Index: MSCI AC World ex USA (Net)

Report Date: 12/31/2019

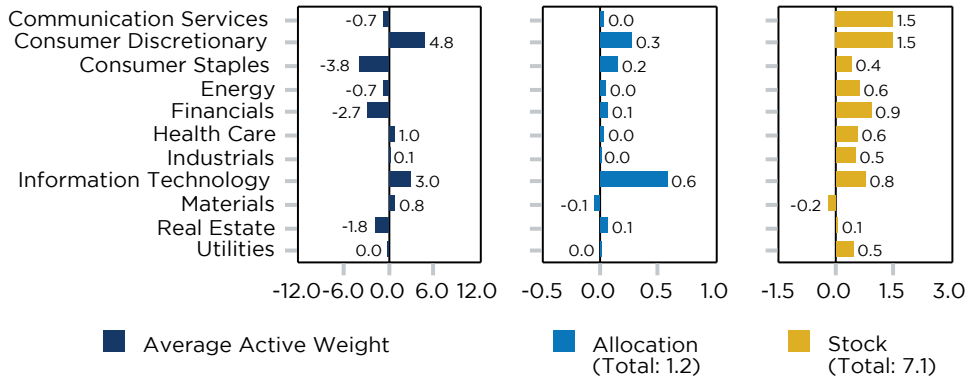
## 1 Quarter Sector Attribution



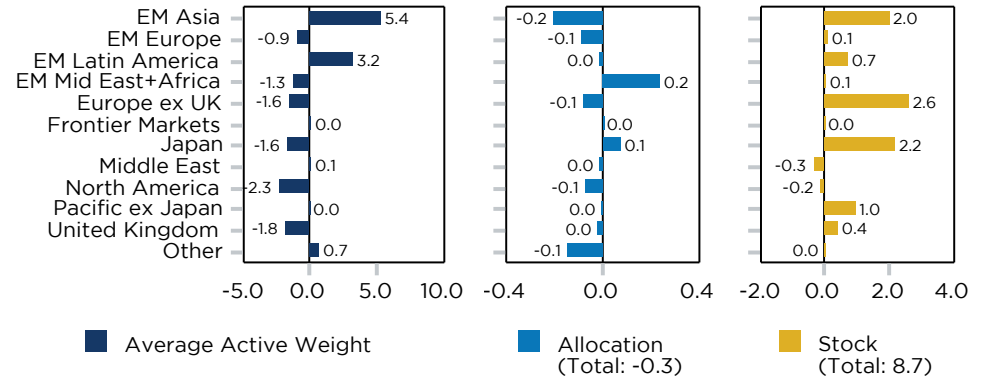
## 1 Quarter Region Attribution



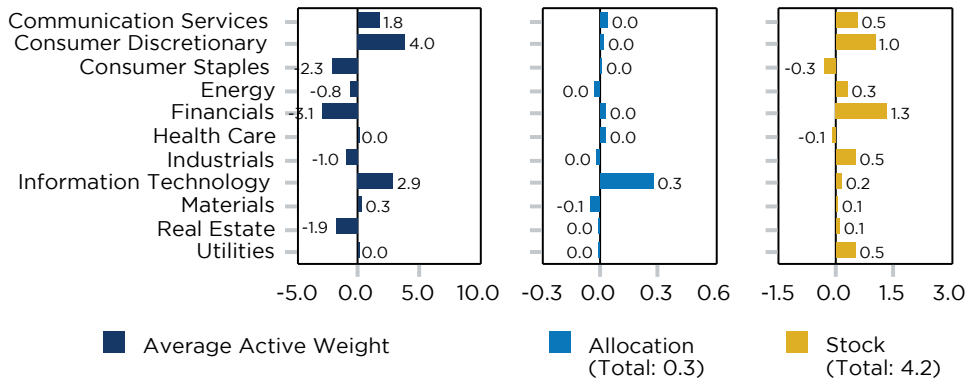
## 1 Year Sector Attribution



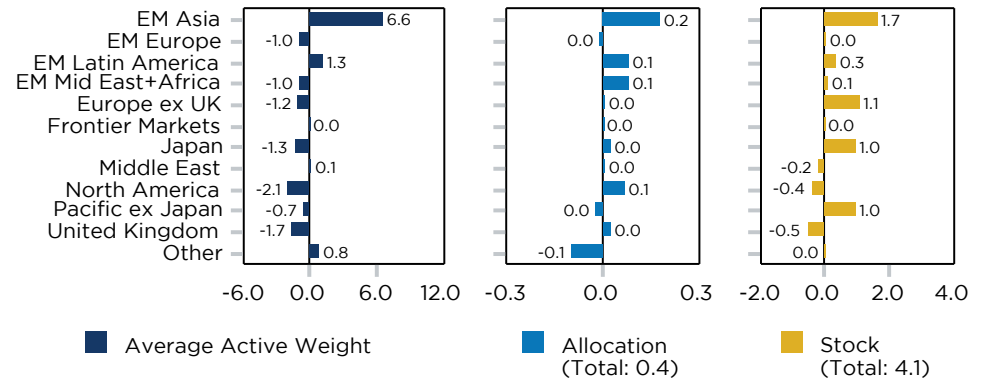
## 1 Year Region Attribution



## 3 Years Sector Attribution



## 3 Years Region Attribution





# American Funds Europacific Growth R6 (RERGX)

Index: MSCI AC World ex USA (Net)

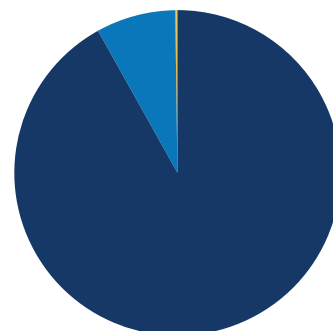
Report Date: 12/31/2019

## Top Ten Securities

Reliance Industries Ltd	2.7 %
Airbus SE	2.7 %
HDFC Bank Ltd	2.2 %
AIA Group Ltd	2.2 %
Nintendo Co Ltd	2.2 %
ASML Holding NV	2.2 %
Daiichi Sankyo Co Ltd	1.5 %
Recruit Holdings Co Ltd	1.4 %
Taiwan Semiconductor Manufacturing	1.4 %
Keyence Corp	1.4 %
<b>Total</b>	<b>19.7 %</b>

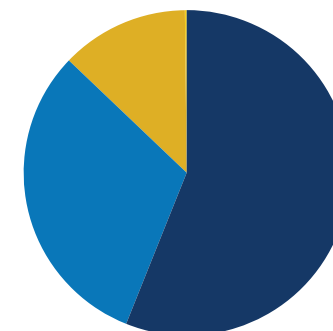
## Asset Allocation

- Equity
- Cash
- Fixed Income
- Other



## Market Capitalization

- Giant
- Large
- Medium
- Small
- Micro



## Top Ten Contributors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Alibaba Group Holding Ltd	2.43	1.16	0.23	26.83
ASML Holding NV	2.23	0.51	0.19	19.93
Recruit Holdings Co Ltd	1.19	0.20	0.15	24.06
SK Hynix Inc	1.30	0.18	0.13	20.71
Vale SA	1.52	0.18	0.12	17.80
European Aeronautic	2.99	0.37	0.10	12.65
Reliance Industries Ltd	2.73	0.26	0.10	12.81
Taiwan Semiconductor	1.47	1.05	0.08	27.33
AIA Group Ltd	2.93	0.56	0.05	11.20
Nintendo Co Ltd	2.76	0.20	0.01	9.27

## Top Ten Contributors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Toshiba Corp	0.65	0.06	0.75	137.25
Alibaba Group Holding Ltd	2.14	0.57	0.38	34.17
ASML Holding NV	1.44	0.24	0.36	39.61
European Aeronautic	1.73	0.22	0.34	32.39
Reliance Industries Ltd	1.22	0.12	0.33	39.60
Sony Corp	1.47	0.20	0.32	35.16
Nintendo Co Ltd	2.07	0.14	0.32	26.34
Taiwan Semiconductor	2.20	0.79	0.29	30.10
AIA Group Ltd	2.04	0.39	0.25	24.98
Tencent Holdings LTD	2.04	0.80	0.20	25.68

## Top Ten Detractors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
PagSeguro Digital Ltd	0.87	0.00	-0.31	-26.24
Kose Corp	0.42	0.03	-0.08	-12.80
NMC Health Plc	0.23	0.02	-0.08	-29.79
Wisetech Global Ltd	0.18	0.00	-0.07	-29.91
JBS SA	0.31	0.04	-0.07	-16.60
Rolls Royce Holdings PLC	0.45	0.08	-0.07	-8.95
Adani Ports & Special Economic Zone Ltd	0.30	0.02	-0.06	-12.23
Chr.Hansen Holdings AS	0.45	0.04	-0.06	-5.07
Rakuten Inc	0.22	0.04	-0.04	-12.27
Treasury Wine Estates Ltd	0.25	0.04	-0.04	-8.91

## Top Ten Detractors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
British American Tobacco	1.86	0.61	-0.24	-9.59
Schlumberger Ltd	0.68	0.00	-0.19	-18.64
Amorepacific Corp	0.86	0.05	-0.18	-12.92
Heidelbergcement AG	1.13	0.08	-0.16	-5.74
Seven Generations Energy Ltd	0.34	0.03	-0.14	-34.06
Nitto Denko Corp	0.79	0.07	-0.12	-7.38
Arcelormittal SA	0.80	0.08	-0.12	-7.10
Tourmaline Oil Corp	0.38	0.03	-0.11	-22.81
Steinhoff Investment Holdings Ltd	0.22	0.09	-0.11	-77.38
Teva Pharmaceutical	0.30	0.19	-0.05	-34.64

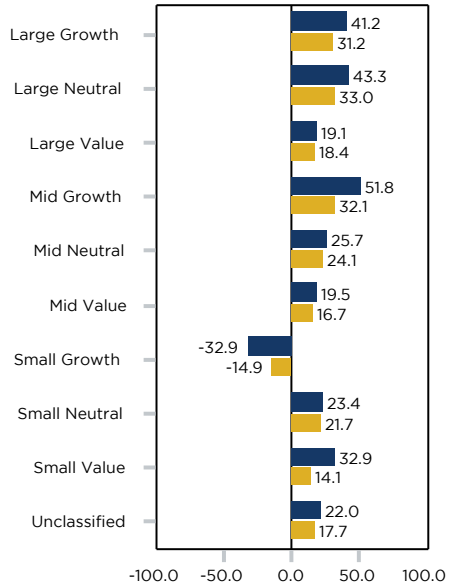


# American Funds Europacific Growth R6 (RERGX)

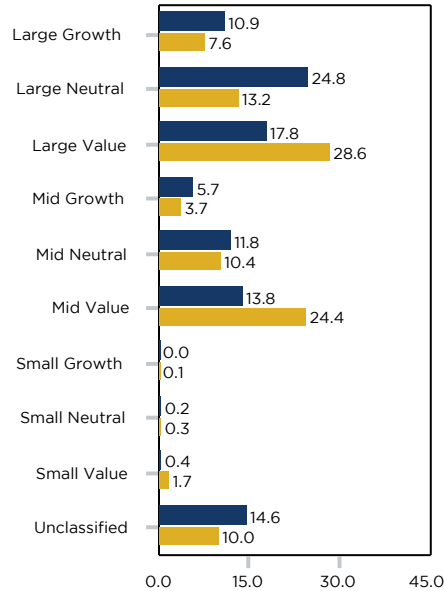
Index: MSCI AC World ex USA (Net)

Report Date: 12/31/2019

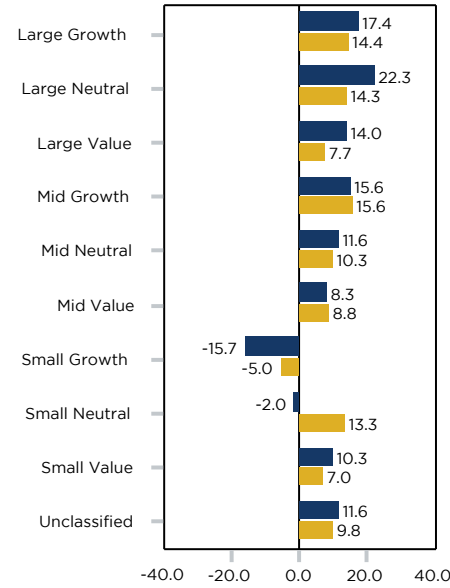
## Performance | 1 Year



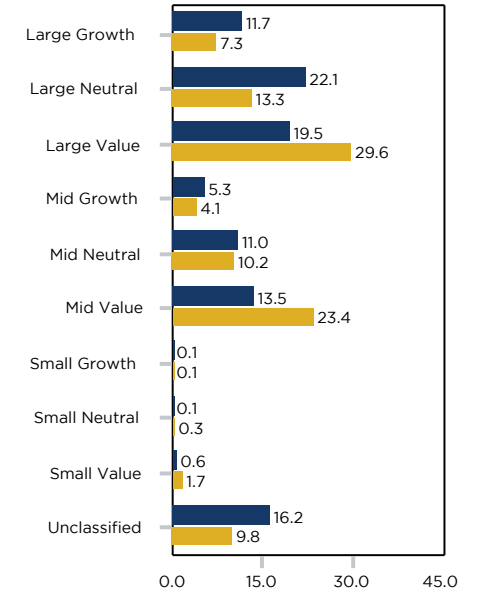
## Allocation | 1 Year



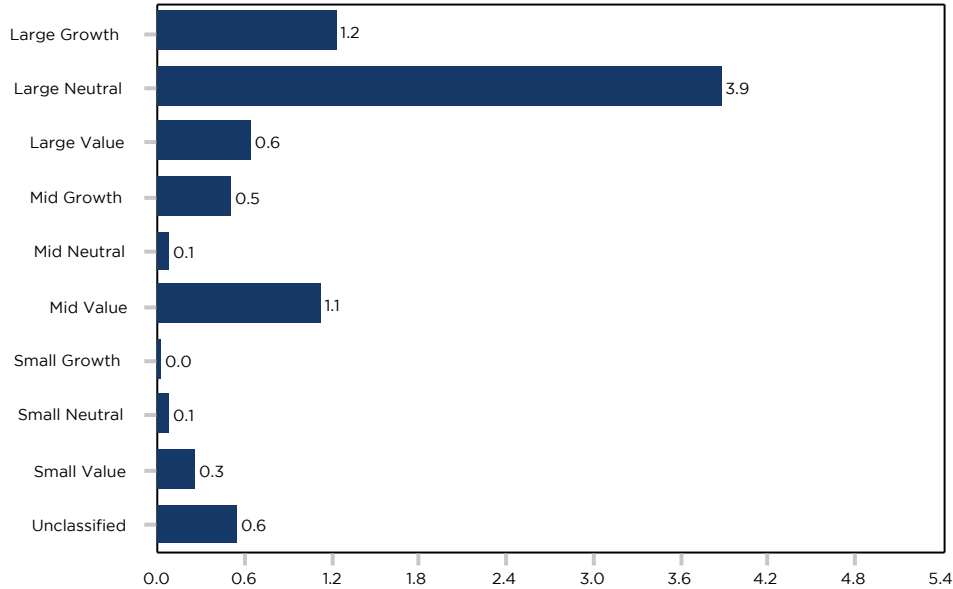
## Performance | 3 Years



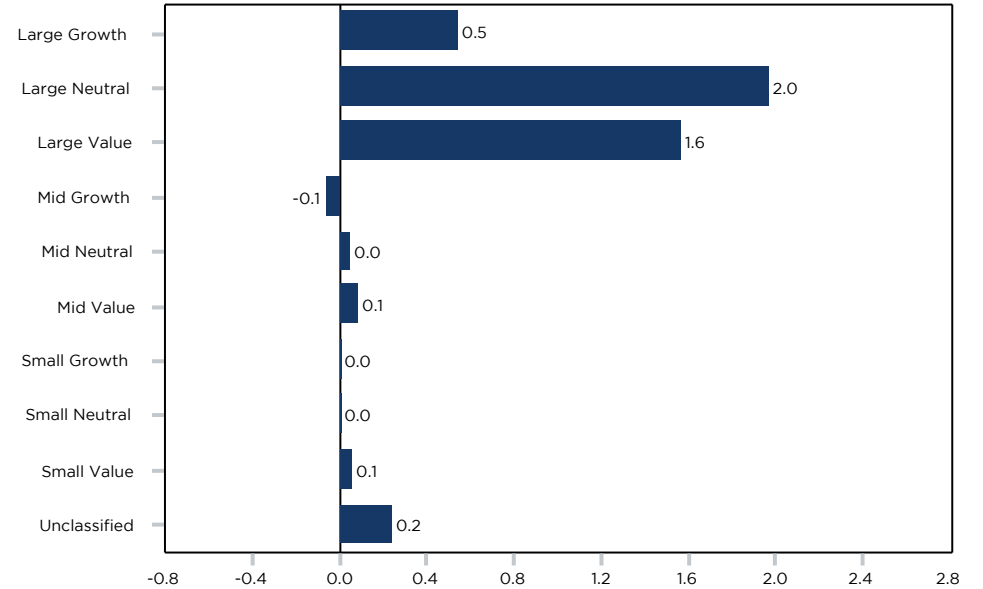
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years







# Pear Tree Polaris Foreign Value Small Cap R6 (QUSRX)

Index: MSCI AC World Index Small Mid Cap Value

Category: Foreign Small/Mid Value

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	12.37 (30)	20.77 (30)	20.77 (30)	9.37 (17)	5.83 (50)	8.18 (13)	-18.81 (36)	33.44 (24)	2.75 (56)	-1.27 (68)
Benchmark	8.10	21.41	21.41	7.57	6.43	8.55	-14.87	20.43	15.19	-4.77
Peer Group	11.60	18.98	18.98	7.42	5.83	6.92	-20.08	30.00	3.20	1.06
Population	55	52	52	50	39	17	68	68	60	59

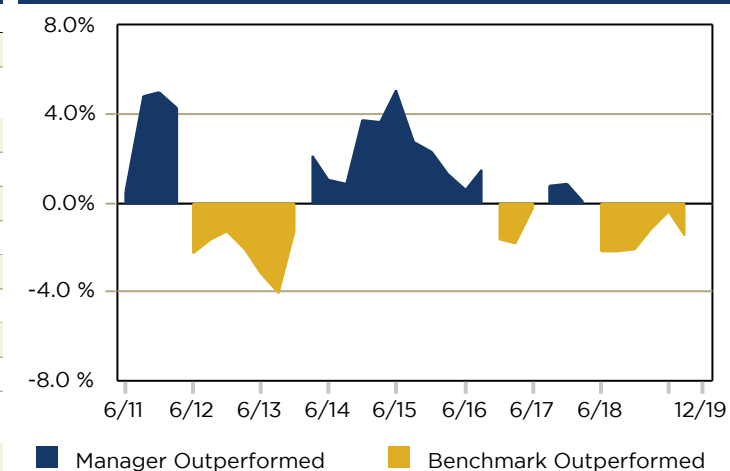
## Fund Information

Fund Inception	02/06/2017
Fund Assets	952 Million
Portfolio Assets	105 Million
Total # of Holdings	73
% in Top 10	24.77 %
PM	Team Managed
PM Tenure	11 Years 7 Months
Turnover	52.00 %
Gross Expense (%)	1.15 %
Net Expense (%)	1.05 %
New Investors	Open

## Fund Statistics

	3 Years	10 Years
Standard Deviation	11.88	13.53
<b>vs. MSCI AC World Index Small Mid Cap Value (Net)</b>		
Beta	0.88	0.88
Alpha	2.67	0.73
Information Ratio	0.29	-0.07
Tracking Error	5.83	5.96
R-Squared	0.77	0.82
Up Market Capture	108.34	91.93
Down Market Capture	99.69	89.43
Consistency	52.78	49.17

## 3 Years Rolling Excess Performance



## Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	1,763	6,912
Median Mkt. Cap (\$M)	1,199	1,273
Price/Earnings ratio	11.0	14.2
Price/Book ratio	1.8	1.9
5 Yr. EPS Growth Rate (%)	8.4	6.9
Current Yield (%)	3.9	3.2
Beta (5 Years, Monthly)	0.87	1.00
Number of Stocks	70	4,584
Debt to Equity	1.6	1.1
Forecast P/E	10.8	13.2
Forecast EPS Growth	9.3	6.9
Return on Equity	0.0	0.0

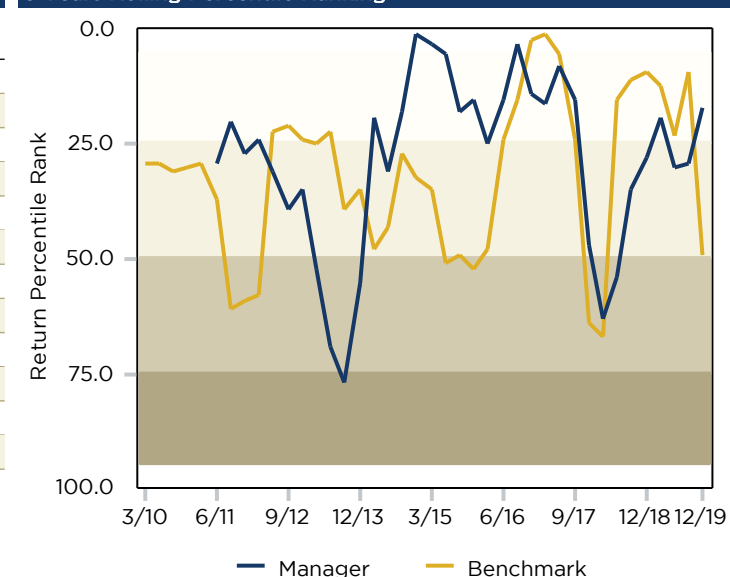
## vs. Risk Free

Sharpe Ratio	0.67	0.61
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## Sector Allocation

Sector	Portfolio Weight (%)	Benchmark Weight (%)
Communication Services	2.2	3.4
Consumer Discretionary	15.3	11.5
Consumer Staples	9.0	2.9
Energy	2.4	4.7
Financials	23.6	21.6
Health Care	1.3	4.4
Industrials	15.5	13.9
Information Technology	15.1	6.6
Materials	6.8	8.9
Real Estate	2.4	14.9
Utilities	6.4	7.3
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

## 3 Years Rolling Percentile Ranking



## Country/Region Allocation

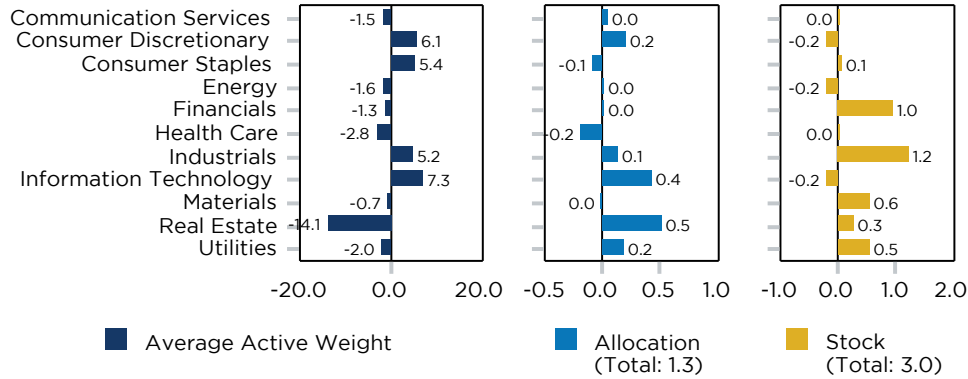
United States	0.0	48.3
Non-US Developed	63.5	41.2
Emerging Markets	36.5	10.1
Other	0.0	0.3
<b>Total</b>	<b>100.0</b>	<b>100.0</b>



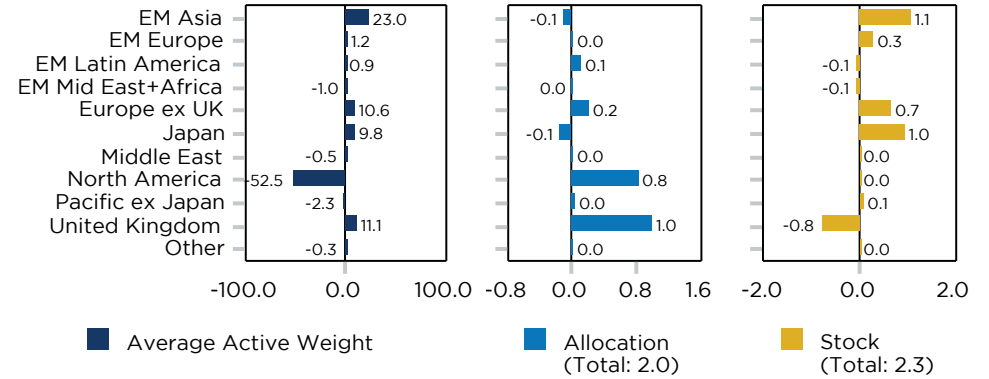
# Pear Tree Polaris Foreign Value Small Cap R6 (QUSRX)

Index: MSCI AC World Index Small Mid Cap Value  
Report Date: 12/31/2019

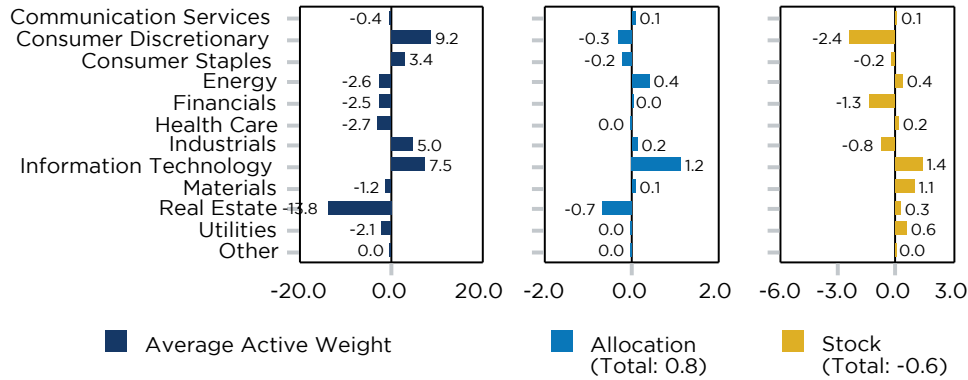
## 1 Quarter Sector Attribution



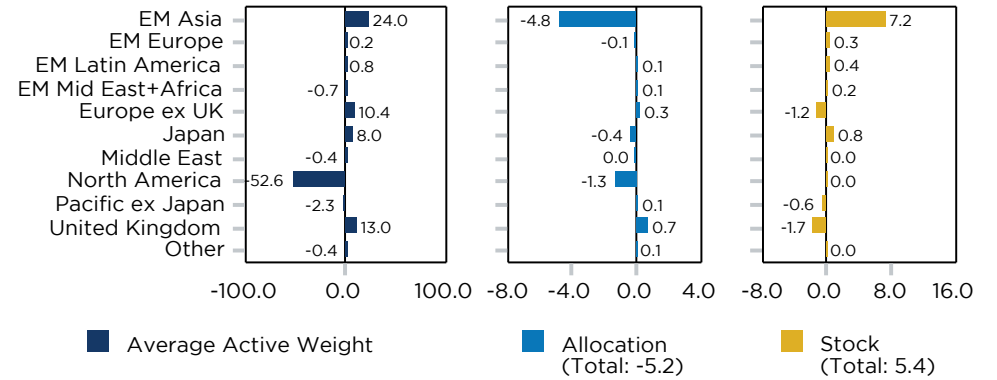
## 1 Quarter Region Attribution



## 1 Year Sector Attribution



## 1 Year Region Attribution



## 3 Years Sector Attribution

No data available.

## 3 Years Region Attribution

No data available.



# Pear Tree Polaris Foreign Value Small Cap R6 (QUSRX)

Index: MSCI AC World Index Small Mid Cap Value

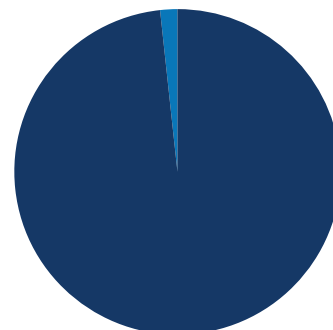
Report Date: 12/31/2019

## Top Ten Securities

Onesavings Bank PLC	2.8 %
DFDS A/S	2.8 %
Galliford Try Holdings PLC	2.7 %
Mizuho Leasing Co Ltd	2.6 %
Kanematsu Corp	2.4 %
Greencore Group PLC	2.4 %
Tsubakimoto Chain Co	2.4 %
Loomis AB B	2.2 %
Crest Nicholson Holdings PLC	2.2 %
Inchcape PLC	2.2 %
<b>Total</b>	<b>24.8 %</b>

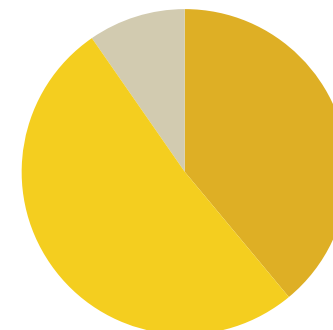
## Asset Allocation

- Equity
- Cash
- Fixed Income



## Market Capitalization

- Giant
- Large
- Medium
- Small
- Micro



## Top Ten Contributors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Galliford Try PLC	2.16	0.01	0.79	44.90
DFDS A/S Copenhagen	2.26	0.01	0.59	34.44
Enf Tech Co Ltd	0.98	0.00	0.48	57.25
Hitron Technologies Inc	1.04	0.00	0.46	52.25
OneSavings Bank Plc	2.43	0.01	0.44	26.33
Greencore Group PLC	2.06	0.02	0.40	27.64
Keller Group PLC	1.09	0.01	0.37	42.43
Restaurant Group PLC	2.16	0.01	0.33	23.43
Crest Nicholson Holdings Plc	2.00	0.02	0.29	22.68
Kanematsu Corp	2.19	0.01	0.27	20.68

## Top Ten Contributors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Taiwan Union Technology Corp	1.80	0.00	1.08	67.45
Yageo Corp	1.00	0.00	1.00	107.25
J D Wetherspoon PLC	2.17	0.00	0.43	27.35
Sixt SE	2.17	0.00	0.43	27.17
Arcadis NV, Arnhem	2.44	0.00	0.34	21.69
NIIT Technologies Ltd	0.69	0.00	0.33	55.05
Thanachart Capital	1.70	0.00	0.31	25.99
Worley Ltd	2.76	0.00	0.31	18.90
Equatorial Energia SA	2.16	0.00	0.30	21.59
Mizuho Leasing Co Ltd	2.70	0.00	0.20	14.86

## Top Ten Detractors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Shanghai Mechanical & Electrical Industry Co Ltd	1.81	0.00	-0.35	-11.41
Origin Enterprises PLC	1.14	0.01	-0.34	-21.77
Unipres Corp	1.86	0.01	-0.32	-9.41
Glanbia PLC	2.02	0.00	-0.31	-7.38
The South Indian Bank Ltd	1.29	0.00	-0.20	-7.59
Nihon House Holdings Co Ltd	1.22	0.00	-0.14	-3.41
Cuckoo Holdings Co Ltd	1.14	0.00	-0.14	-4.17
The Vitec Group PLC	0.57	0.00	-0.07	-4.87
Egypt-Kuwait Hldg Co	0.35	0.00	-0.05	-6.31
VSTECs Holdings Limited	0.57	0.00	-0.05	-0.58

## Top Ten Detractors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Carillion PLC	1.96	0.00	-1.31	-59.11
Halfords Group PLC	2.20	0.00	-0.48	-14.42
Draegerwerk AG, Luebeck	2.83	0.00	-0.47	-8.95
Unipres Corp	2.46	0.00	-0.40	-8.68
Texwinca Holdings Ltd	1.46	0.00	-0.39	-19.08
Glanbia PLC	1.96	0.00	-0.36	-10.58
Lic Housing Finance Ltd	1.84	0.00	-0.29	-8.42
Shanghai Mechanical & Electrical Industry Co Ltd	1.71	0.00	-0.28	-8.88
The South Indian Bank Ltd	1.00	0.00	-0.25	-16.98
Manila Water Co Inc	0.64	0.00	-0.22	-27.20

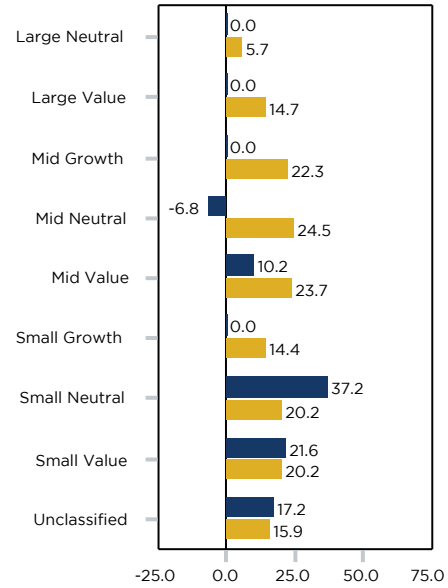


# Pear Tree Polaris Foreign Value Small Cap R6 (QUSRX)

Index: MSCI AC World Index Small Mid Cap Value

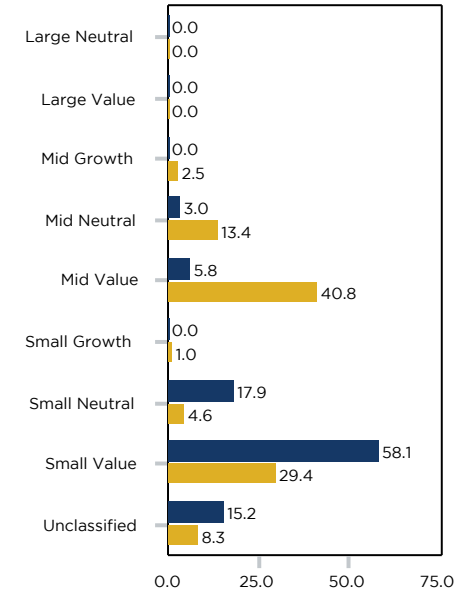
Report Date: 12/31/2019

## Performance | 1 Year

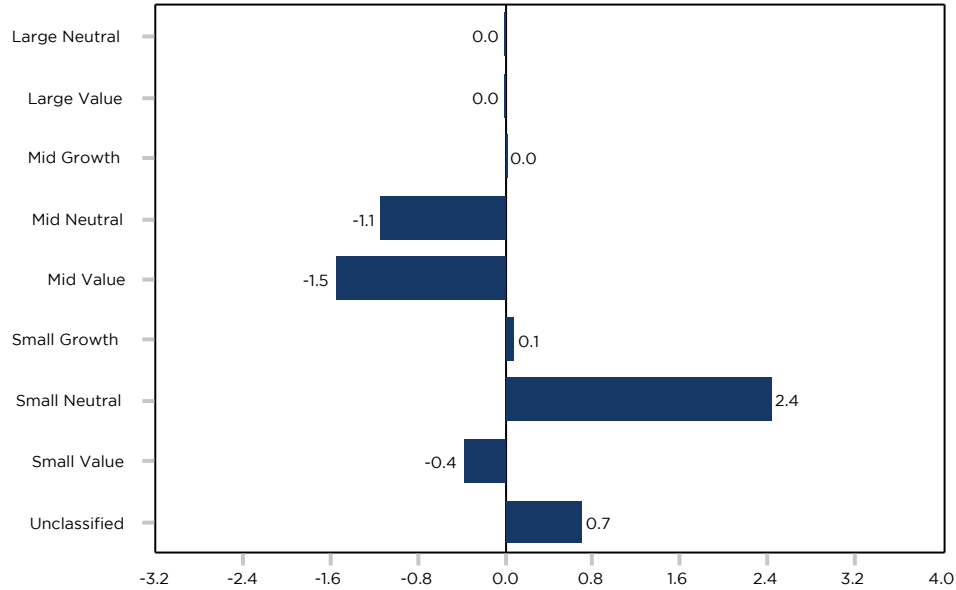


## Allocation | 1 Year

No data available.



## Total Attribution | 1 Year



## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	10.77 (60)	16.03 (80)	16.03 (80)	11.03 (48)	5.25 (50)	3.96 (43)	-13.62 (21)	36.57 (47)	12.09 (24)	-15.81 (68)
Benchmark	11.84	18.44	18.44	11.57	5.61	3.68	-14.58	37.28	11.19	-14.92
Peer Group	11.22	19.76	19.76	10.83	5.25	3.67	-16.30	35.89	8.87	-14.01
Population	1,071	1,041	1,041	930	819	466	1,127	1,053	1,085	1,015

## Fund Information

Fund Inception	04/25/1994
Fund Assets	6,189 Million
Portfolio Assets	6,189 Million
Total # of Holdings	1199
% in Top 10	17.79 %
PM	Fogdall,J/Phillips,M/Singh,B
PM Tenure	9 Years 10 Months
Turnover	8.00 %
Gross Expense (%)	0.57 %
Net Expense (%)	0.47 %
New Investors	Open

## Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	69,474	104,152
Median Mkt. Cap (\$M)	4,396	5,792
Price/Earnings ratio	15.3	14.3
Price/Book ratio	2.4	2.5
5 Yr. EPS Growth Rate (%)	11.4	13.0
Current Yield (%)	2.4	2.8
Beta (5 Years, Monthly)	0.94	1.00
Number of Stocks	1,169	1,404
Debt to Equity	1.0	0.9
Forecast P/E	14.2	9.1
Forecast EPS Growth	13.1	12.9
Return on Equity	0.0	0.0

## Country/Region Allocation

United States	0.0	0.1
Non-US Developed	5.4	13.1
Emerging Markets	94.5	86.7
Other	0.0	0.1
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

## Fund Statistics

	3 Years	10 Years
Standard Deviation	13.61	16.74
<b>vs. MSCI Emerging Markets (Net) Index</b>		
Beta	0.95	0.97
Alpha	0.05	0.36
Information Ratio	-0.26	0.09
Tracking Error	2.24	2.41
R-Squared	0.98	0.98
Up Market Capture	97.58	98.94
Down Market Capture	99.54	97.63
Consistency	41.67	51.67

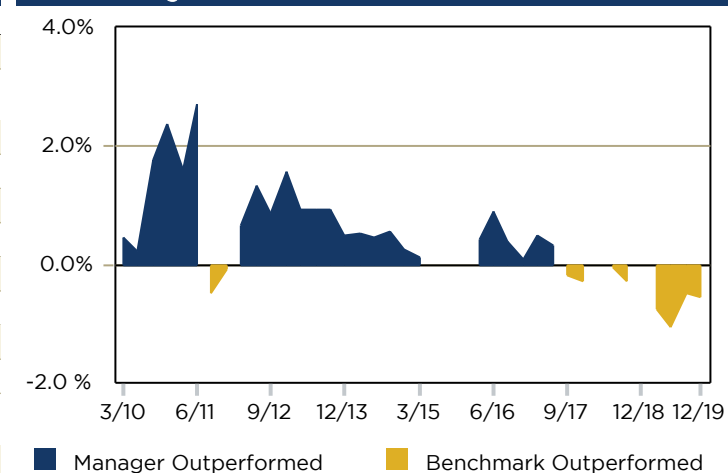
## vs. Risk Free

Sharpe Ratio	0.72	0.28
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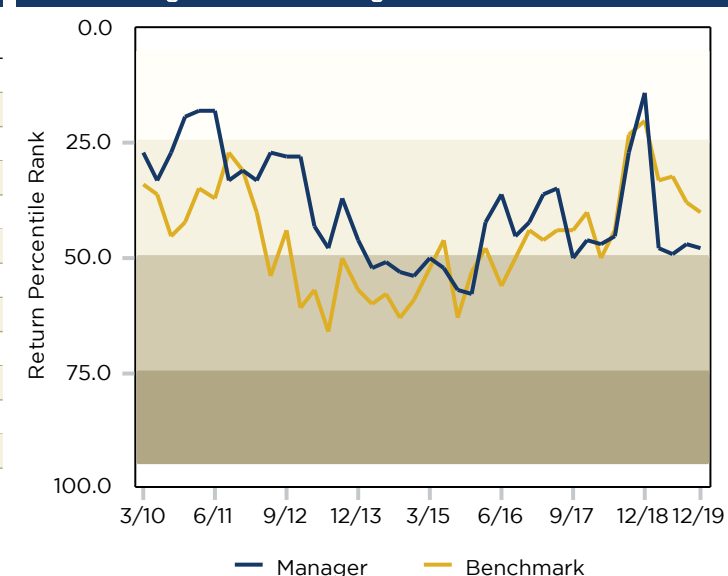
## Sector Allocation

Sector	Portfolio Weight (%)	Benchmark Weight (%)
Communication Services	9.7	11.0
Consumer Discretionary	10.1	14.2
Consumer Staples	7.7	6.3
Energy	7.5	7.4
Financials	23.0	24.2
Health Care	2.2	2.8
Industrials	6.7	5.3
Information Technology	18.1	15.7
Materials	10.3	7.4
Real Estate	2.6	3.0
Utilities	2.1	2.6
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

## 3 Years Rolling Excess Performance

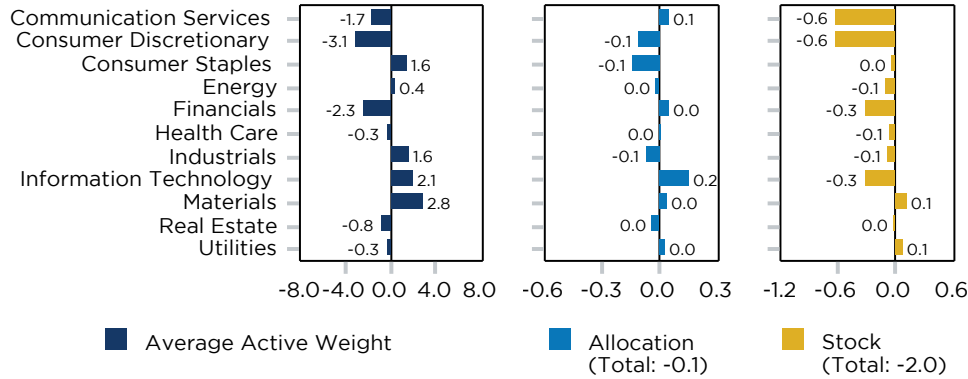


## 3 Years Rolling Percentile Ranking

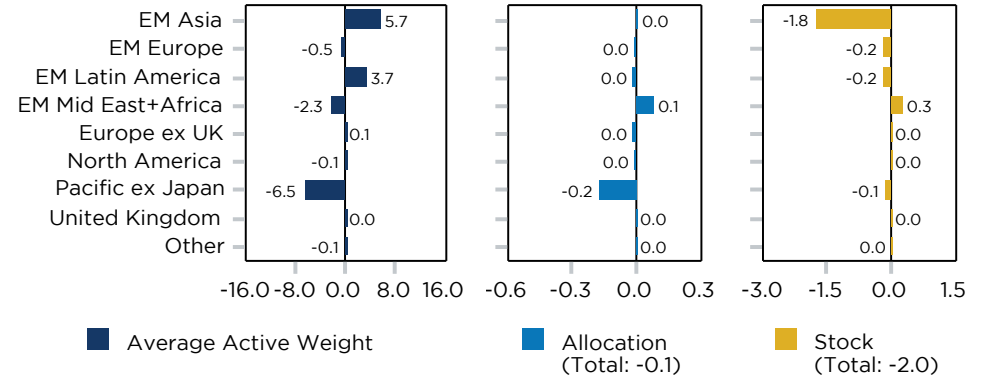




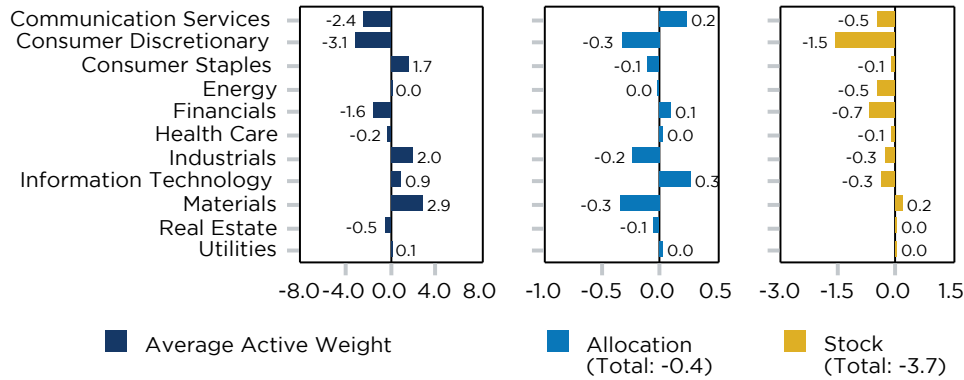
## 1 Quarter Sector Attribution



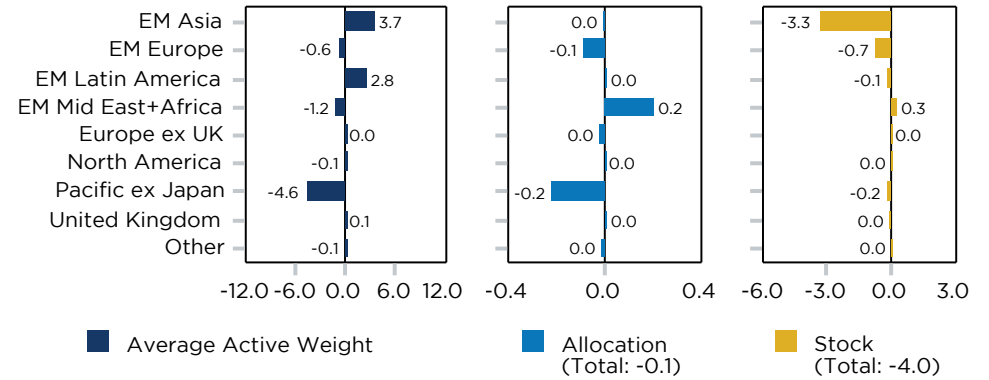
## 1 Quarter Region Attribution



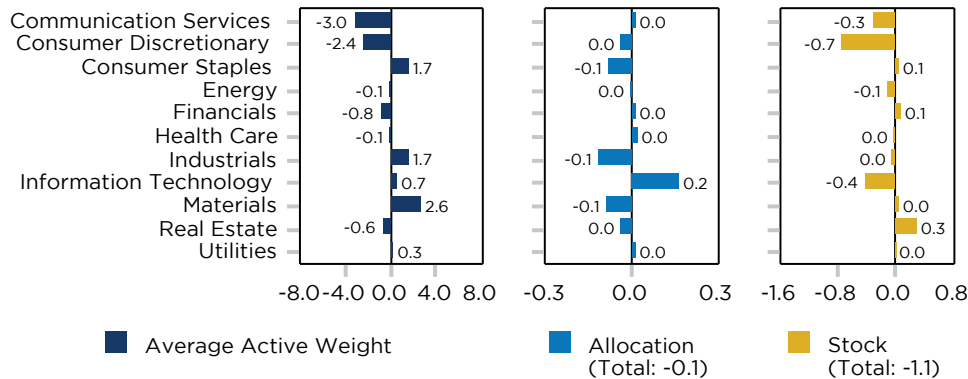
## 1 Year Sector Attribution



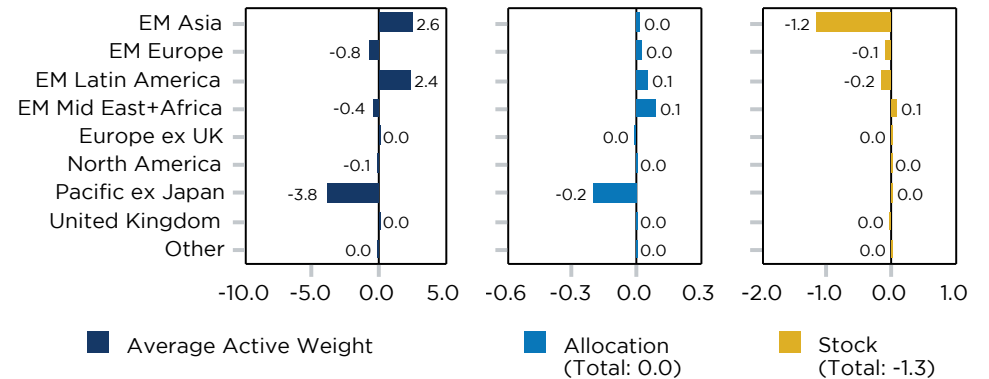
## 1 Year Region Attribution



## 3 Years Sector Attribution



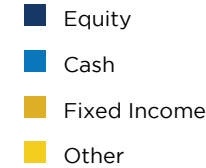
## 3 Years Region Attribution



## Top Ten Securities

Taiwan Semiconductor Manufacturing	3.8 %
Samsung Electronics Co Ltd	3.5 %
Tencent Holdings Ltd	2.6 %
Alibaba Group Holding Ltd ADR	1.7 %
Taiwan Semiconductor Manufacturing	1.4 %
Reliance Industries Ltd	1.1 %
Samsung Electronics Co Ltd GDR	0.9 %
SK Hynix Inc	0.9 %
Ping An Insurance (Group) Co. of	0.8 %
HDFC Bank Ltd	0.8 %
<b>Total</b>	<b>17.8 %</b>

## Asset Allocation



## Market Capitalization



## Top Ten Contributors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
AngloGold Ashanti Ltd	0.55	0.15	0.04	22.28
SK Hynix Inc	1.04	0.70	0.03	20.71
Samsung Electronics Co Ltd	0.99	0.51	0.03	17.67
Vale SA	0.69	0.68	0.00	22.25
Reliance Industries Ltd	1.10	1.00	0.00	12.81
HDFC	0.68	0.86	-0.02	21.13
Tencent Holdings LTD	2.87	4.49	-0.04	14.50
Taiwan Semiconductor	3.68	4.03	-0.05	27.33
Taiwan Semiconductor	1.54	4.03	-0.35	25.88
Alibaba Group Holding Ltd	1.66	4.44	-0.42	26.83

## Top Ten Contributors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
H D F C Bank Ltd	0.60	0.00	0.09	27.15
Reliance Industries Ltd	0.57	0.52	0.01	39.60
SK Hynix Inc	0.58	0.55	0.01	31.71
Itau Unibanco Holding SA	0.90	0.85	0.00	17.65
Gazprom PJSC	0.59	0.76	-0.02	25.63
Naspers Ltd	1.20	1.64	-0.03	18.93
Ping An Insurance Group	0.51	0.66	-0.04	36.48
Taiwan Semiconductor	3.12	3.50	-0.07	30.10
Tencent Holdings LTD	2.35	3.53	-0.17	25.68
Taiwan Semiconductor	1.06	3.50	-0.48	31.30

## Top Ten Detractors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
JBS SA	0.46	0.16	-0.09	-16.60
MTN Group Ltd	0.47	0.20	-0.05	-7.20
Polski Koncern Naftowy Orlen S.A.	0.26	0.14	-0.02	-8.04
Aurobindo Pharma Ltd	0.10	0.04	-0.02	-22.78
ITC Ltd	0.32	0.24	-0.02	-9.19
Banco De Credito E Inversiones Sa Credito	0.09	0.06	-0.01	-28.08
Larsen And Toubro Ltd	0.22	0.19	-0.01	-12.59
Infosys Ltd	0.76	0.74	0.00	-8.80
CP All Public Co Ltd	0.28	0.29	0.00	-8.57
Infosys Ltd	0.36	0.74	0.08	-8.10

## Top Ten Detractors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Imperial Logistics Ltd	0.18	0.05	-0.05	-29.49
Hyosung Corp	0.16	0.06	-0.05	-37.39
Cielo SA	0.29	0.22	-0.03	-27.46
MTN Group Ltd	0.51	0.39	-0.02	-8.96
LG Display Co Ltd	0.23	0.15	-0.02	-18.56
Grupo Televisa SAB	0.31	0.26	-0.01	-18.23
Tata Motors Ltd	0.30	0.28	-0.01	-27.93
Aspen Pharmacare Holdings Plc	0.20	0.19	0.00	-24.94
Cemex SAB de CV	0.30	0.29	0.00	-20.53
Steinhoff Investment Holdings Ltd	0.38	0.39	0.01	-77.38

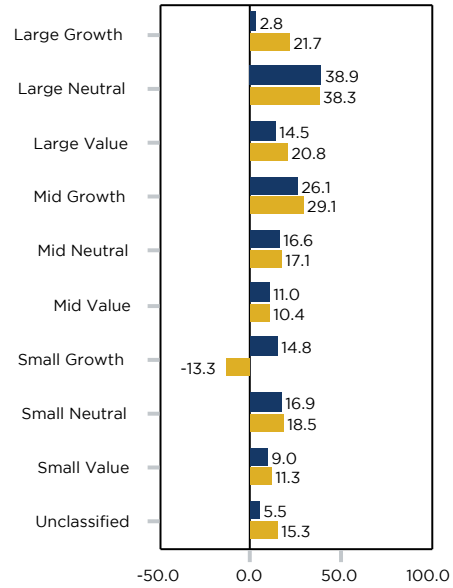


# DFA Emerging Markets I (DFEMX)

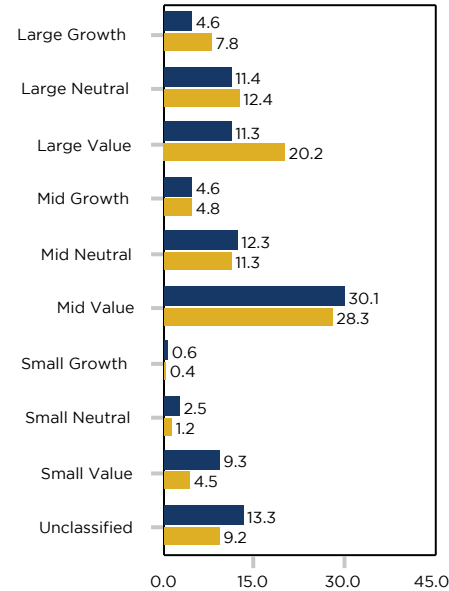
Index: MSCI Emerging Markets (Net) Index

Report Date: 12/31/2019

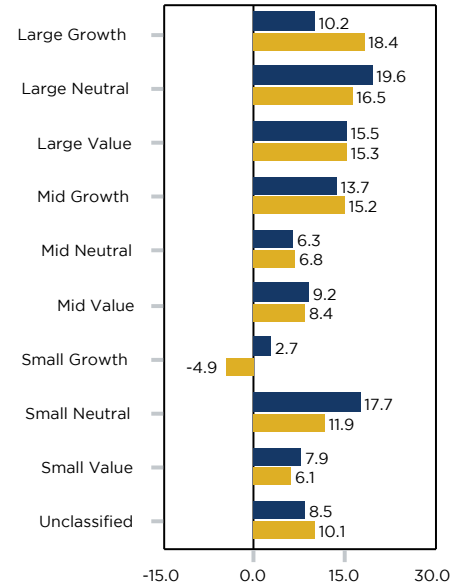
## Performance | 1 Year



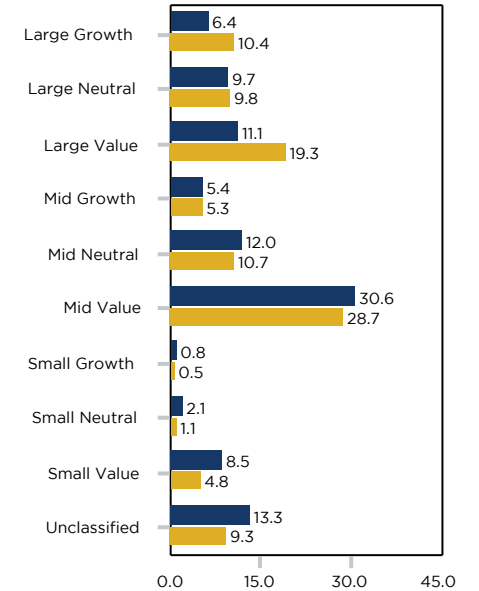
## Allocation | 1 Year



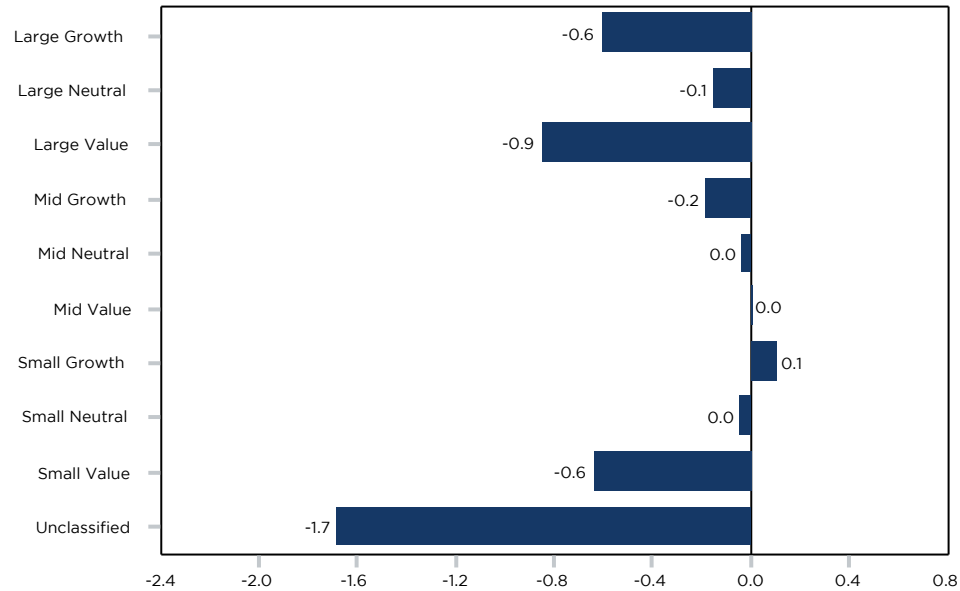
## Performance | 3 Years



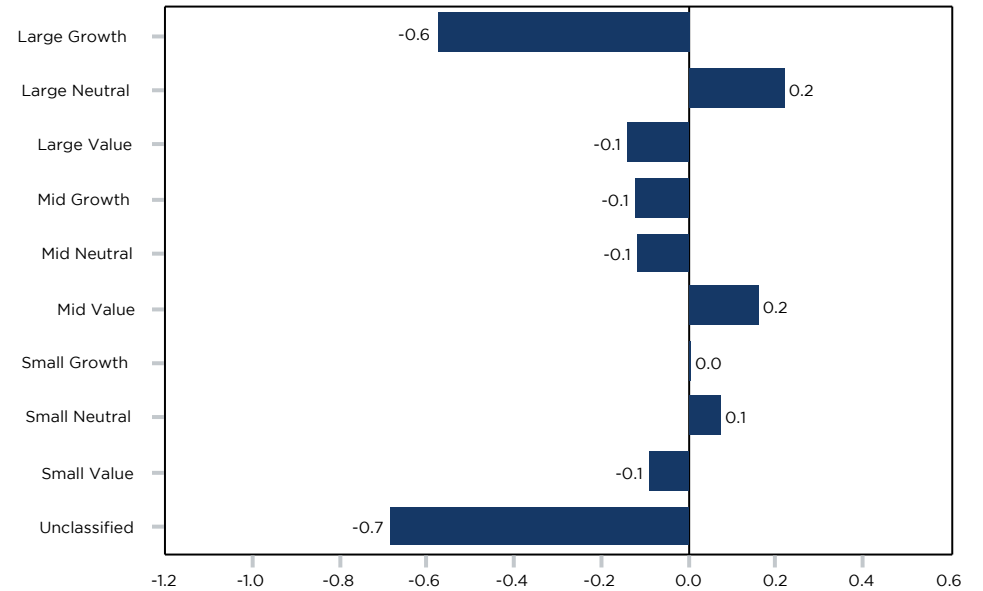
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years





## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	1.19	5.51	5.51	4.89	5.60	8.57	4.79	4.37	5.20	8.16
Benchmark	1.53	6.08	6.08	7.37	9.27	11.48	8.25	7.80	9.27	15.17

## Fund Information

Fund Inception	10-1995
Fund Assets	27,306 Million
Portfolio Assets	27,306 Million
Total # of Holdings	449
% Assets in Top 10 Holdings	21.1 %
PM	Giraldo,R/McGibbon,G
PM Tenure	3 Years 7 Months
Turnover	11.8 %
Gross Expense (%)	0.8 %
Net Expense (%)	0.8 %
New Investors	Open

## Equity Characteristics

Avg. Market Cap	18,135 (Million)
Price/Earnings	43
Price/Book	3
Dividend Yield	3.3 %

## Top Holdings (%)

1001 Pennsylvania Avenue	2.7
Ddrtc Core Retail Fund Llc	2.7
Florida Mall	2.6
Fashion Show Mall	2.5
United States Treasury Notes 0.03%	2.2
425 Park Avenue	2.1
99 High Street	1.9
Ontario Industrial Portfolio	1.7
Trea Sh Investor Member Llc Int	1.4
701 Brickell Avenue	1.4

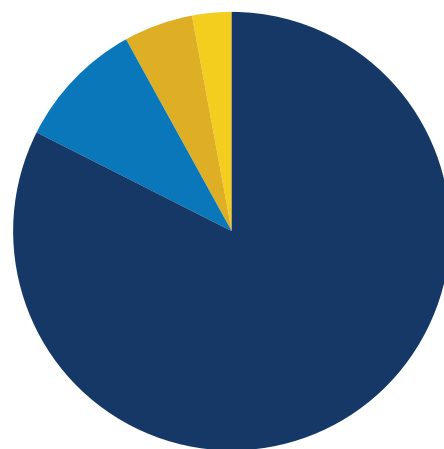
## Fund Statistics

	3 Years	10 Years
Standard Deviation	0.51	2.66
<b>vs. NCREIF Fund Index-Open End Diversified Core (EW)</b>		
Beta	0.04	1.07
Alpha	4.56	-3.38
Information Ratio	-3.19	-1.79
Tracking Error	0.74	1.51
R-Squared	0.00	0.68
Up Market Capture	66.95	75.64
Down Market Capture	-	-
Consistency	8.33	15.00

## vs. Risk Free

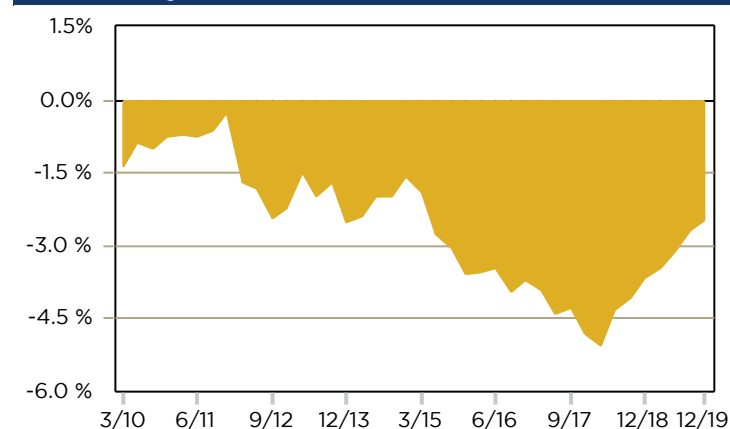
Sharpe Ratio	6.76	2.75
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## Asset Allocation



■ Other      ■ Fixed Income  
■ Cash      ■ Equity

## 3 Years Rolling Excess Performance



■ Manager Outperformed      ■ Benchmark Outperformed



# CREF Social Choice R3 (QCSCIX)

Index: 40% BBg US Agg | 42% R3000 | 18% MSCI

Category: Allocation--50% to 70% Equity

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	5.14 (56)	20.80 (24)	20.80 (24)	9.73 (25)	7.06 (27)	8.29 (41)	-4.29 (26)	14.27 (49)	7.40 (39)	-0.87 (43)
Benchmark	5.26	20.46	20.46	9.54	7.09	8.28	-4.56	14.34	7.02	0.12
Peer Group	5.25	19.29	19.29	8.64	6.26	8.01	-5.68	14.18	6.82	-1.16
Population	1,186	1,152	1,152	1,105	1,027	784	1,404	1,227	1,272	1,225

## Fund Information

Fund Inception	04-2015
Fund Assets	15,155 Million
Portfolio Assets	7,466 Million
Total # of Holdings	1933
% Assets in Top 10 Holdings	8.6 %
PM	Campagna,P/Liao,L/Liberatore,S
PM Tenure	15 Years
Turnover	52.0 %
Gross Expense (%)	0.2 %
Net Expense (%)	0.2 %
New Investors	Open

## Equity Characteristics

Avg. Market Cap	53,955 (Million)
Price/Earnings	18
Price/Book	2
Dividend Yield	2.3 %

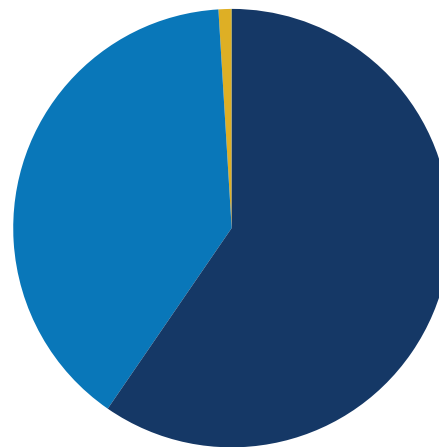
## Fund Statistics

	3 Years	10 Years
Standard Deviation	6.65	7.39
<b>vs. 40% BBg US Agg   42% R3000   18% MSCI EAFE + Can</b>		
Beta	0.98	0.97
Alpha	0.35	0.24
Information Ratio	0.27	-0.01
Tracking Error	0.60	0.81
R-Squared	0.99	0.99
Up Market Capture	99.34	97.99
Down Market Capture	95.12	95.61
Consistency	47.22	52.50

## vs. Risk Free

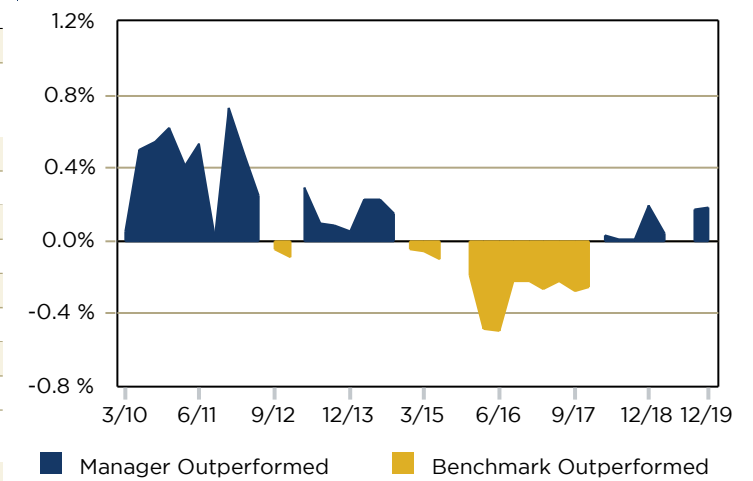
Sharpe Ratio	1.18	1.04
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## Asset Allocation

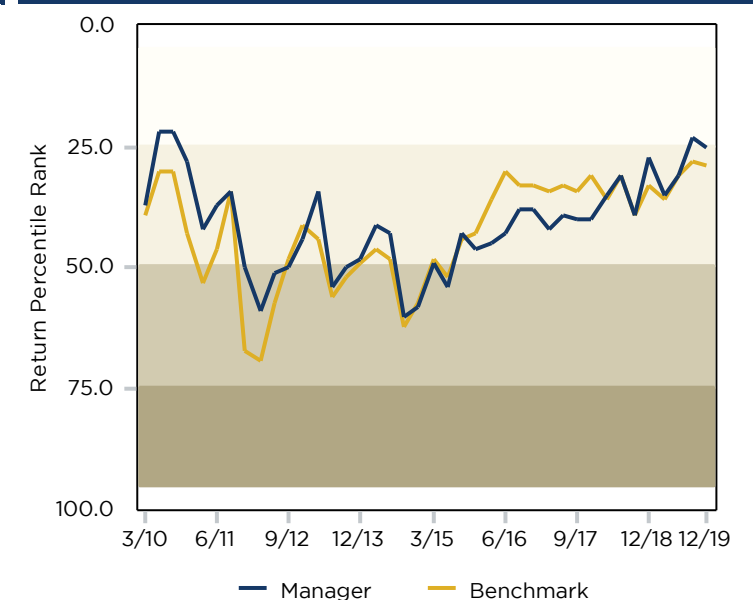


■ Equity      ■ Fixed Income  
■ Cash      ■ Other

## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking



## Top Holdings (%)

Microsoft Corp	1.8
Apple Inc	1.8
Amazon.com Inc	1.0
Alphabet Inc Class C	0.7
Alphabet Inc A	0.6
Procter & Gamble Co	0.6
Intel Corp	0.6
Verizon Communications Inc	0.5
United States Treasury Bonds 2.25%	0.5
Merck & Co Inc	0.5

**Trailing Performance**

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	8.90 (10)	27.45 (15)	27.45 (15)	12.43 (18)	9.00 (10)	10.44 (13)	-9.65 (58)	23.43 (10)	9.17 (28)	-0.84 (29)
Benchmark	9.06	28.13	28.13	13.20	9.55	10.88	-7.93	22.96	10.28	-1.35
Peer Group	7.91	25.30	25.30	11.13	7.76	9.43	-9.39	20.29	7.53	-1.86
Population	278	268	268	253	241	179	330	313	320	317

**Fund Information**

Fund Inception	04-2015
Fund Assets	119,470 Million
Portfolio Assets	69,438 Million
Total # of Holdings	9669
% Assets in Top 10 Holdings	12.2 %
PM	Team Managed
PM Tenure	9 Years 7 Months
Turnover	55.0 %
Gross Expense (%)	0.3 %
Net Expense (%)	0.3 %
New Investors	Open

**Equity Characteristics**

Avg. Market Cap	46,416 (Million)
Price/Earnings	17
Price/Book	2
Dividend Yield	2.2 %

**Top Holdings (%)**

Apple Inc	2.5
Microsoft Corp	2.1
Amazon.com Inc	1.7
Facebook Inc A	1.1
Alphabet Inc Class C	1.0
Berkshire Hathaway Inc B	0.8
Visa Inc Class A	0.7
Procter & Gamble Co	0.7
Alphabet Inc A	0.7
JPMorgan Chase & Co	0.7

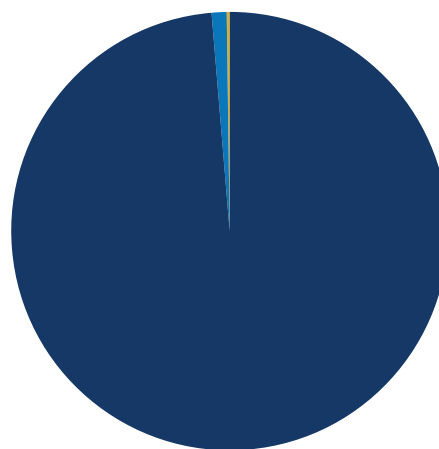
**Fund Statistics**

	3 Years	10 Years
Standard Deviation	11.84	13.14
<b>vs. 70% R3000   30% ACWI ex US</b>		
Beta	1.03	1.02
Alpha	-0.99	-0.56
Information Ratio	-0.95	-0.47
Tracking Error	0.68	0.79
R-Squared	1.00	1.00
Up Market Capture	98.52	99.59
Down Market Capture	103.04	102.21
Consistency	36.11	45.00

**vs. Risk Free**

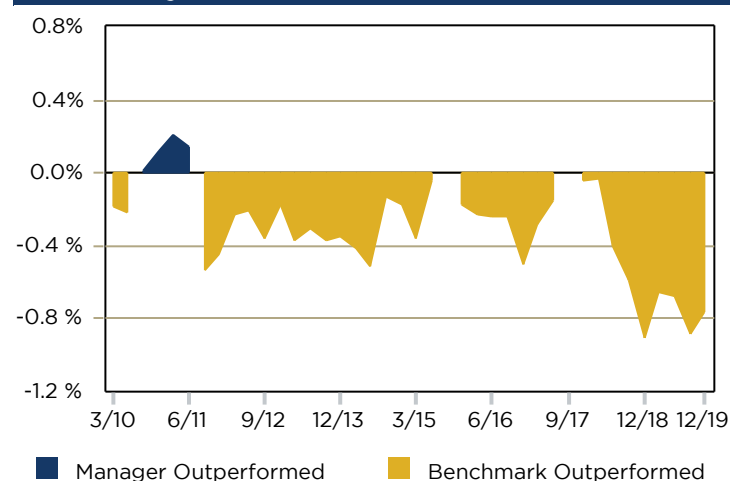
Sharpe Ratio	0.91	0.78
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**Asset Allocation**

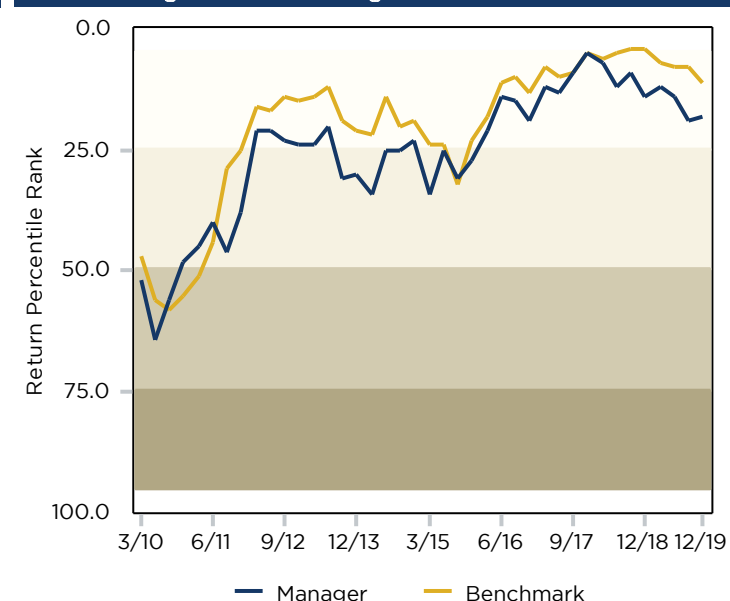


■ Equity    ■ Cash  
■ Fixed Income    ■ Other

**3 Years Rolling Excess Performance**



**3 Years Rolling Percentile Ranking**





# TIAA-CREF Lifecycle Retire Income Instl (TLRIX)

Index: CREF Lifecycle Composite Income

Category: Target-Date Retirement

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	3.59 (13)	15.30 (18)	15.30 (18)	7.52 (4)	5.73 (1)	6.77 (3)	-3.84 (73)	12.10 (2)	6.04 (21)	0.25 (3)
Benchmark	3.83	15.70	15.70	7.47	5.57	6.59	-2.94	10.55	5.81	-0.18
Peer Group	2.70	13.22	13.22	6.00	4.34	5.15	-3.31	8.76	5.24	-1.09
Population	463	446	446	400	331	240	476	463	470	423

## Fund Information

Fund Inception	11-2007
Fund Assets	571 Million
Portfolio Assets	224 Million
Total # of Holdings	22
% Assets in Top 10 Holdings	80.3 %
PM	Cunniff,J/Erickson,H/Sedmak,S
PM Tenure	12 Years 1 Month
Turnover	25.0 %
Gross Expense (%)	0.5 %
Net Expense (%)	0.4 %
New Investors	Open

## Equity Characteristics

Avg. Market Cap	53,121 (Million)
Price/Earnings	17
Price/Book	3
Dividend Yield	2.0 %

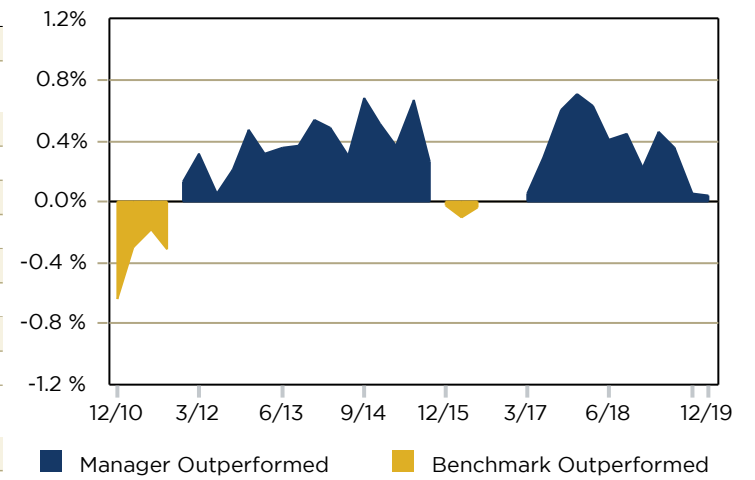
## Fund Statistics

	3 Years	10 Years
Standard Deviation	4.77	5.58
<b>vs. CREF Lifecycle Composite Income</b>		
Beta	1.02	1.07
Alpha	-0.08	-0.28
Information Ratio	0.07	0.23
Tracking Error	0.67	0.79
R-Squared	0.98	0.98
Up Market Capture	100.82	104.60
Down Market Capture	101.24	107.32
Consistency	44.44	54.17

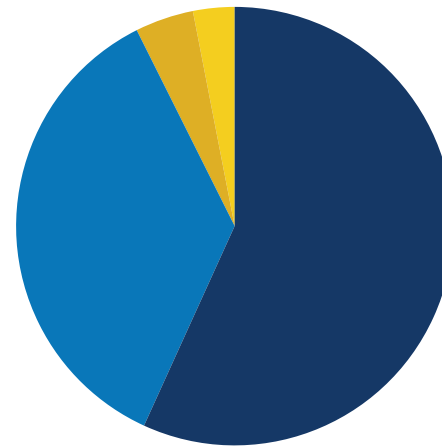
## vs. Risk Free

Sharpe Ratio	1.20	1.10
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## 3 Years Rolling Excess Performance

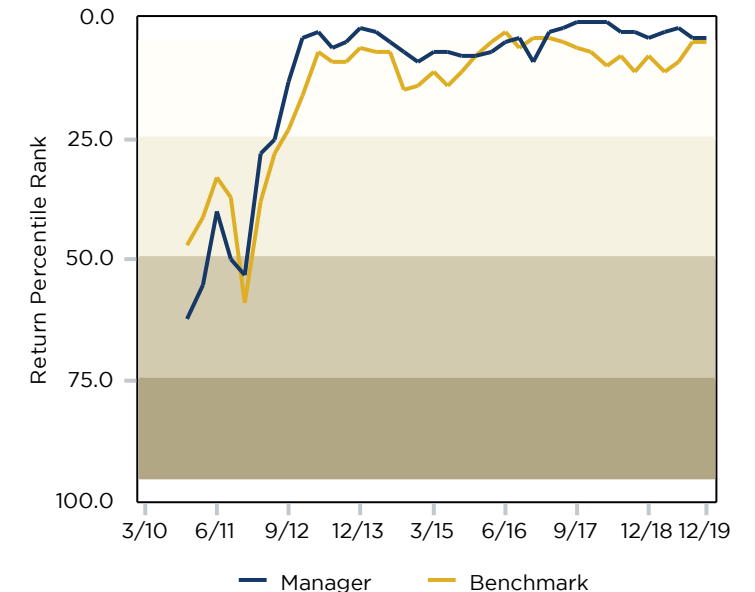


## Asset Allocation



■ Fixed Income   ■ Equity  
■ Other   ■ Cash

## 3 Years Rolling Percentile Ranking



## Top Holdings (%)

TIAA-CREF Bond W	20.9
TIAA-CREF Bond Plus W	12.9
TIAA-CREF Short-Term Bond W	10.1
TIAA-CREF Inflation Link Bd W	9.9
TIAA-CREF Growth & Income W	5.3
TIAA-CREF Large-Cap Growth W	4.9
TIAA-CREF Large-Cap Value W	4.6
TIAA-CREF Quant Large-Cap Growth	4.3
Tiaa Cref Real Property Fnd Lp	4.2
TIAA-CREF Quant Intl Eq W	3.3



# TIAA-CREF Lifecycle 2010 Institutional (TCTIX)

Index: CREF Lifecycle Composite 2010

Category: Target-Date 2000-2010

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	3.62 (33)	15.43 (13)	15.43 (13)	7.74 (9)	5.92 (7)	7.18 (6)	-3.92 (78)	12.76 (2)	6.20 (43)	0.38 (5)
Benchmark	3.88	15.94	15.94	8.16	6.02	7.16	-1.84	11.19	6.09	-0.23
Peer Group	3.33	13.93	13.93	6.62	4.99	6.43	-3.23	10.08	5.93	-0.64
Population	312	302	302	260	244	196	322	322	334	329

## Fund Information

Fund Inception	01-2007
Fund Assets	1,219 Million
Portfolio Assets	757 Million
Total # of Holdings	22
% Assets in Top 10 Holdings	80.1 %
PM	Cunniff,J/Erickson,H/Sedmak,S
PM Tenure	13 Years 9 Months
Turnover	22.0 %
Gross Expense (%)	0.5 %
Net Expense (%)	0.4 %
New Investors	Open

## Equity Characteristics

Avg. Market Cap	53,118 (Million)
Price/Earnings	17
Price/Book	3
Dividend Yield	2.0 %

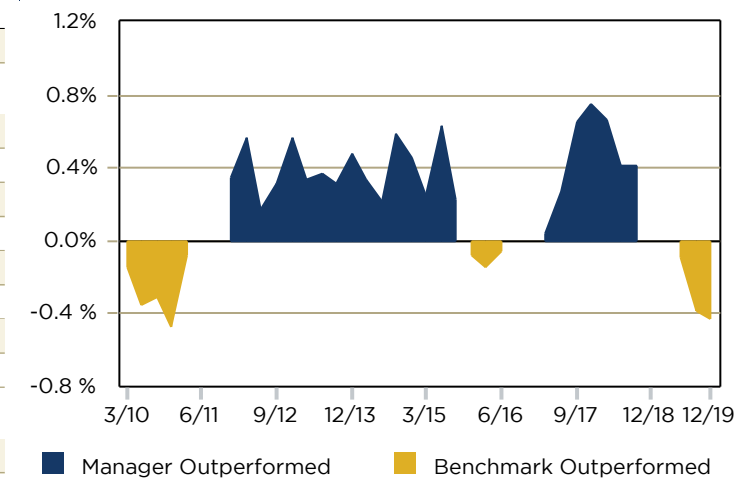
## Fund Statistics

	3 Years	10 Years
Standard Deviation	5.78	6.63
<b>vs. CREF Lifecycle Composite 2010</b>		
Beta	1.14	1.12
Alpha	-1.44	-0.76
Information Ratio	-0.29	0.06
Tracking Error	1.23	1.18
R-Squared	0.97	0.98
Up Market Capture	100.97	105.41
Down Market Capture	128.65	119.15
Consistency	41.67	47.50

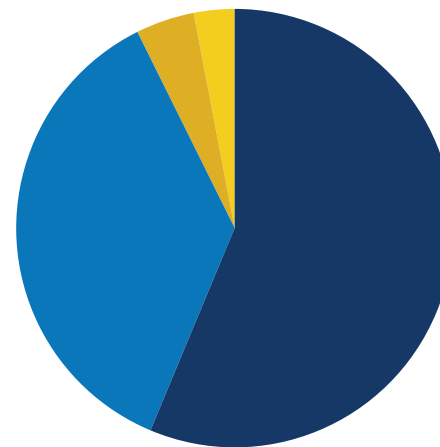
## vs. Risk Free

Sharpe Ratio	1.03	1.00
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## 3 Years Rolling Excess Performance

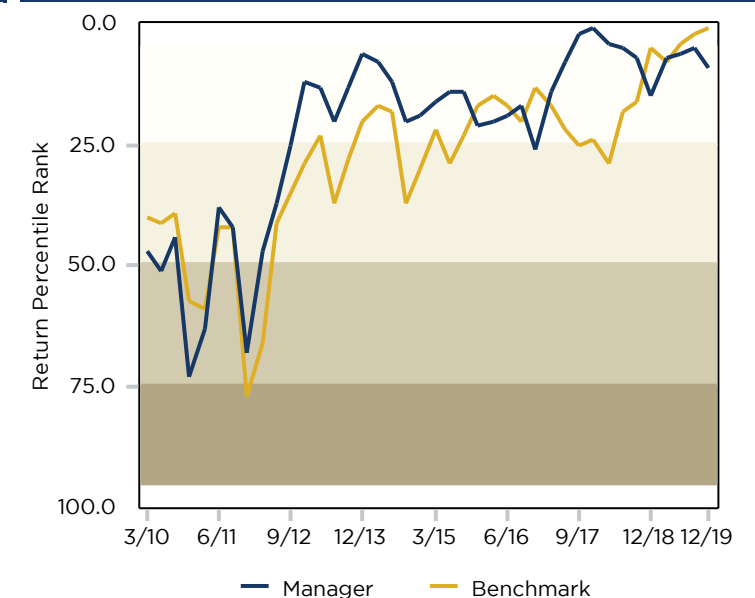


## Asset Allocation



■ Fixed Income ■ Equity  
■ Other ■ Cash

## 3 Years Rolling Percentile Ranking



## Top Holdings (%)

TIAA-CREF Bond W	20.8
TIAA-CREF Bond Plus W	12.8
TIAA-CREF Short-Term Bond W	9.9
TIAA-CREF Inflation Link Bd W	9.7
TIAA-CREF Growth & Income W	5.4
TIAA-CREF Large-Cap Growth W	5.0
TIAA-CREF Large-Cap Value W	4.7
TIAA-CREF Quant Large-Cap Growth	4.3
Tiaa Cref Real Property Fnd Lp	4.2
TIAA-CREF Quant Intl Eq W	3.3



# TIAA-CREF Lifecycle 2015 Institutional (TCNIX)

Index: CREF Lifecycle Composite 2015

Category: Target-Date 2015

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	4.13 (32)	16.51 (25)	16.51 (25)	8.24 (21)	6.26 (16)	7.62 (10)	-4.41 (68)	13.85 (6)	6.40 (53)	0.42 (3)
Benchmark	4.31	17.05	17.05	8.24	6.13	7.50	-3.48	12.25	6.47	-0.28
Peer Group	3.72	15.04	15.04	7.12	5.33	7.09	-3.87	11.51	6.47	-0.92
Population	297	290	290	258	228	169	307	310	335	323

## Fund Information

Fund Inception	01-2007
Fund Assets	1,832 Million
Portfolio Assets	1,156 Million
Total # of Holdings	22
% Assets in Top 10 Holdings	78.2 %
PM	Cunniff,J/Erickson,H/Sedmak,S
PM Tenure	13 Years 9 Months
Turnover	21.0 %
Gross Expense (%)	0.5 %
Net Expense (%)	0.4 %
New Investors	Open

## Equity Characteristics

Avg. Market Cap	52,845 (Million)
Price/Earnings	17
Price/Book	3
Dividend Yield	2.0 %

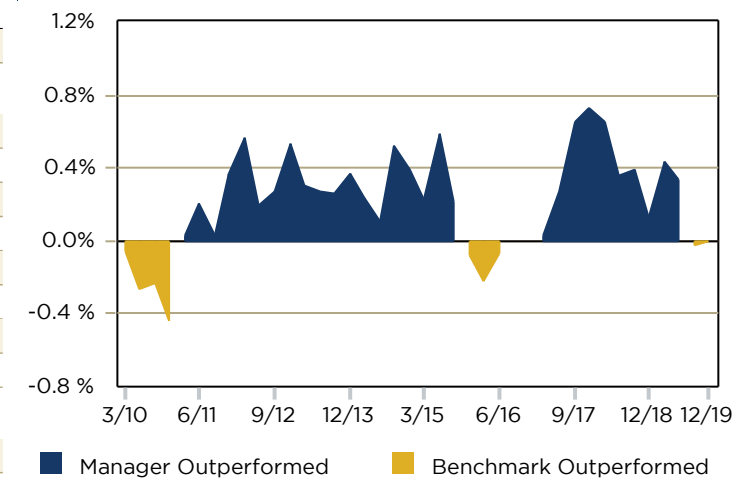
## Fund Statistics

	3 Years	10 Years
Standard Deviation	5.54	7.27
<b>vs. CREF Lifecycle Composite 2015</b>		
Beta	1.03	1.07
Alpha	-0.21	-0.38
Information Ratio	0.01	0.16
Tracking Error	0.70	0.93
R-Squared	0.98	0.99
Up Market Capture	100.76	104.46
Down Market Capture	102.17	107.58
Consistency	47.22	54.17

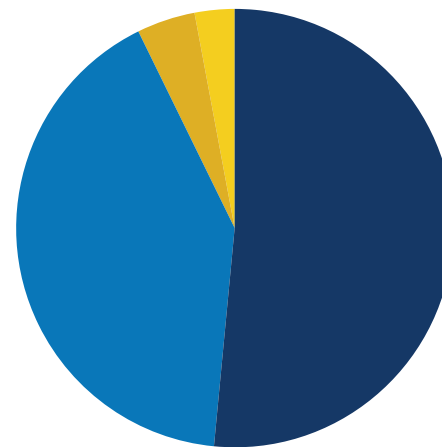
## vs. Risk Free

Sharpe Ratio	1.16	0.97
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## 3 Years Rolling Excess Performance

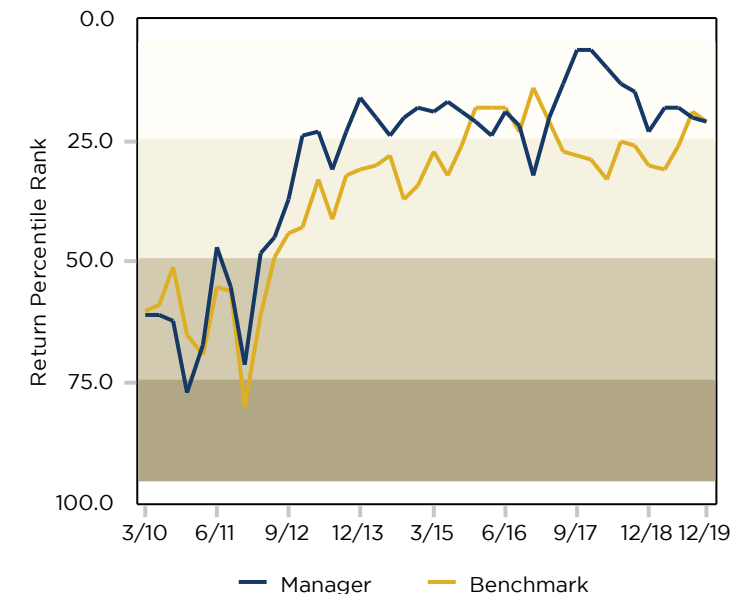


## Asset Allocation



■ Fixed Income ■ Equity  
■ Other ■ Cash

## 3 Years Rolling Percentile Ranking



## Top Holdings (%)

TIAA-CREF Bond W	20.3
TIAA-CREF Bond Plus W	12.5
TIAA-CREF Short-Term Bond W	7.9
TIAA-CREF Inflation Link Bd W	7.7
TIAA-CREF Growth & Income W	6.1
TIAA-CREF Large-Cap Growth W	5.6
TIAA-CREF Large-Cap Value W	5.3
TIAA-CREF Quant Large-Cap Growth	4.9
Tiaa Cref Real Property Fnd Lp	4.2
TIAA-CREF Quant Intl Eq W	3.7



# TIAA-CREF Lifecycle 2020 Institutional (TCWIX)

Index: CREF Lifecycle Composite 2020

Category: Target-Date 2020

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	4.51 (27)	17.79 (22)	17.79 (22)	8.88 (15)	6.69 (11)	8.16 (9)	-5.18 (74)	15.58 (6)	6.66 (47)	0.42 (4)
Benchmark	4.76	18.30	18.30	8.90	6.60	8.07	-3.97	13.68	7.01	-0.40
Peer Group	4.05	16.22	16.22	7.66	5.65	7.49	-4.45	12.74	6.58	-1.10
Population	488	475	475	430	381	255	530	536	540	512

## Fund Information

Fund Inception	01-2007
Fund Assets	3,866 Million
Portfolio Assets	2,520 Million
Total # of Holdings	22
% Assets in Top 10 Holdings	76.2 %
PM	Cunniff,J/Erickson,H/Sedmak,S
PM Tenure	13 Years 9 Months
Turnover	23.0 %
Gross Expense (%)	0.5 %
Net Expense (%)	0.4 %
New Investors	Open

## Equity Characteristics

Avg. Market Cap	52,627 (Million)
Price/Earnings	17
Price/Book	3
Dividend Yield	2.0 %

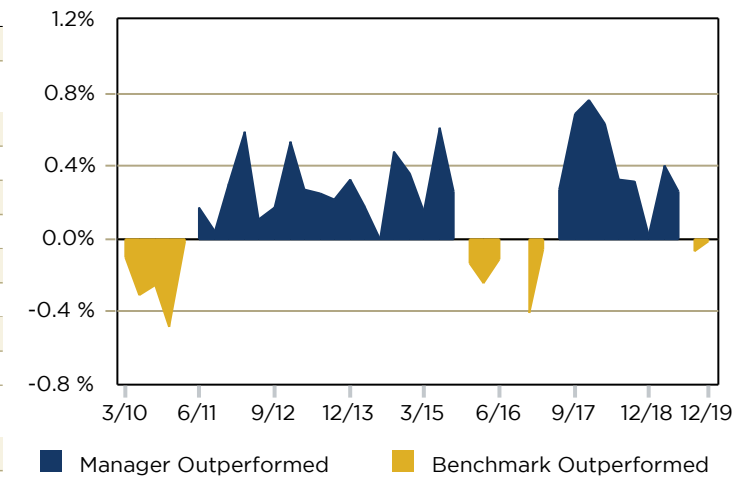
## Fund Statistics

	3 Years	10 Years
Standard Deviation	6.21	8.23
<b>vs. CREF Lifecycle Composite 2020</b>		
Beta	1.02	1.06
Alpha	-0.21	-0.40
Information Ratio	0.00	0.11
Tracking Error	0.79	1.04
R-Squared	0.98	0.99
Up Market Capture	100.61	103.55
Down Market Capture	101.83	106.04
Consistency	41.67	48.33

## vs. Risk Free

Sharpe Ratio	1.13	0.93
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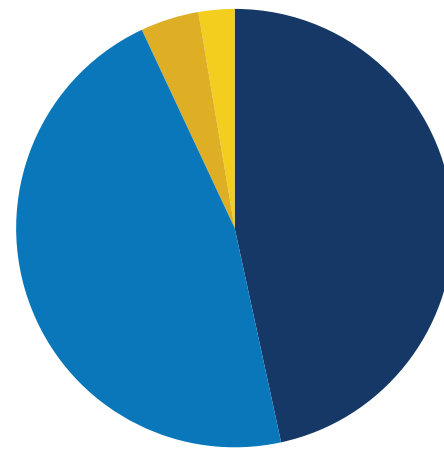
## 3 Years Rolling Excess Performance



## Top Holdings (%)

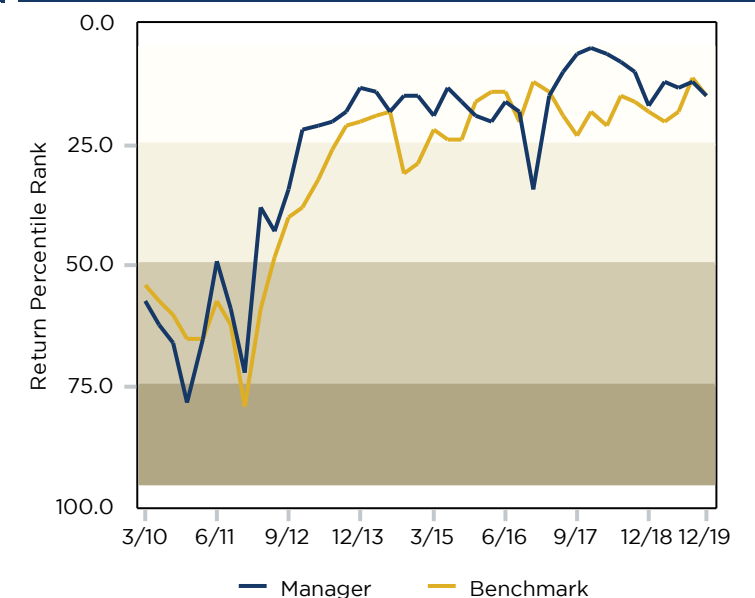
TIAA-CREF Bond W	19.5
TIAA-CREF Bond Plus W	12.0
TIAA-CREF Growth & Income W	6.9
TIAA-CREF Large-Cap Growth W	6.4
TIAA-CREF Large-Cap Value W	6.0
TIAA-CREF Short-Term Bond W	5.9
TIAA-CREF Inflation Link Bd W	5.7
TIAA-CREF Quant Large-Cap Growth	5.5
Tiaa Cref Real Property Fnd Lp	4.2
TIAA-CREF Quant Intl Eq W	4.1

## Asset Allocation



■ Equity      ■ Fixed Income  
■ Other      ■ Cash

## 3 Years Rolling Percentile Ranking





# TIAA-CREF Lifecycle 2025 Institutional (TCYIX)

Index: CREF Lifecycle Composite 2025

Category: Target-Date 2025

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	5.20 (31)	19.44 (26)	19.44 (26)	9.63 (16)	7.19 (9)	8.70 (14)	-6.05 (73)	17.40 (5)	7.00 (55)	0.36 (3)
Benchmark	5.46	20.00	20.00	9.69	7.16	8.69	-4.66	15.36	7.61	-0.53
Peer Group	4.84	18.47	18.47	8.62	6.37	8.12	-5.38	14.89	7.14	-1.13
Population	541	513	513	454	378	247	521	510	514	456

## Fund Information

Fund Inception	01-2007
Fund Assets	4,859 Million
Portfolio Assets	3,302 Million
Total # of Holdings	22
% Assets in Top 10 Holdings	73.5 %
PM	Cunniff,J/Erickson,H/Sedmak,S
PM Tenure	13 Years 9 Months
Turnover	20.0 %
Gross Expense (%)	0.5 %
Net Expense (%)	0.4 %
New Investors	Open

## Equity Characteristics

Avg. Market Cap	52,396 (Million)
Price/Earnings	17
Price/Book	3
Dividend Yield	2.0 %

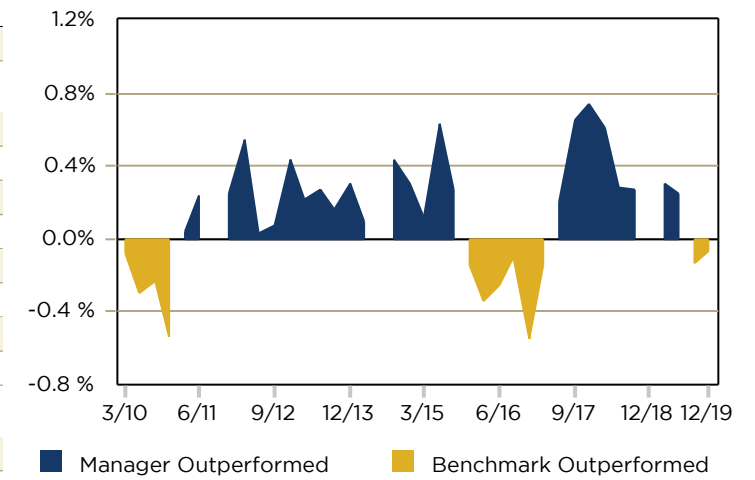
## Fund Statistics

	3 Years	10 Years
Standard Deviation	7.22	9.34
<b>vs. CREF Lifecycle Composite 2025</b>		
Beta	1.04	1.07
Alpha	-0.39	-0.52
Information Ratio	-0.05	0.05
Tracking Error	0.86	1.14
R-Squared	0.99	0.99
Up Market Capture	101.28	104.01
Down Market Capture	104.24	107.68
Consistency	44.44	50.83

## vs. Risk Free

Sharpe Ratio	1.08	0.88
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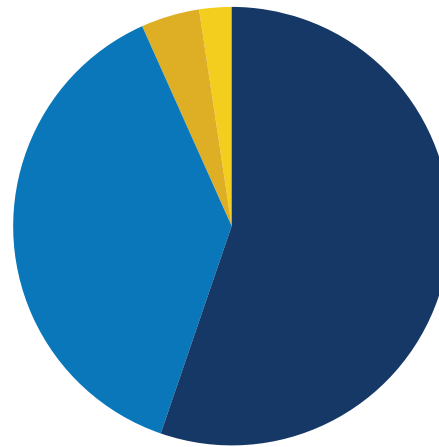
## 3 Years Rolling Excess Performance



## Top Holdings (%)

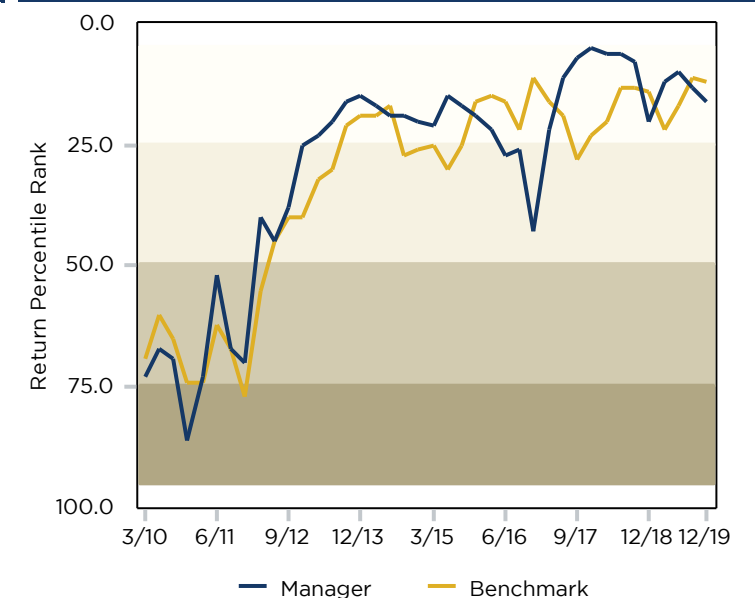
TIAA-CREF Bond W	17.0
TIAA-CREF Bond Plus W	10.5
TIAA-CREF Growth & Income W	8.2
TIAA-CREF Large-Cap Growth W	7.5
TIAA-CREF Large-Cap Value W	7.1
TIAA-CREF Quant Large-Cap Growth	6.6
TIAA-CREF Quant Intl Eq W	4.8
Tiaa Cref Real Property Fnd Lp	4.2
TIAA-CREF Short-Term Bond W	3.9
TIAA-CREF Inflation Link Bd W	3.8

## Asset Allocation



■ Equity      ■ Fixed Income  
■ Other      ■ Cash

## 3 Years Rolling Percentile Ranking







# TIAA-CREF Lifecycle 2030 Institutional (TCRIX)

Index: CREF Lifecycle Composite 2030

Category: Target-Date 2030

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	6.01 (29)	21.27 (28)	21.27 (28)	10.34 (20)	7.67 (17)	9.22 (16)	-7.09 (72)	19.21 (6)	7.33 (59)	0.38 (4)
Benchmark	6.16	21.71	21.71	10.48	7.71	9.29	-5.35	17.07	8.21	-0.67
Peer Group	5.75	20.52	20.52	9.52	6.90	8.66	-6.29	16.73	7.64	-1.27
Population	523	503	503	457	406	274	515	522	525	497

## Fund Information

Fund Inception	01-2007
Fund Assets	4,899 Million
Portfolio Assets	3,370 Million
Total # of Holdings	22
% Assets in Top 10 Holdings	75.5 %
PM	Cunniff,J/Erickson,H/Sedmak,S
PM Tenure	13 Years 9 Months
Turnover	20.0 %
Gross Expense (%)	0.5 %
Net Expense (%)	0.4 %
New Investors	Open

## Equity Characteristics

Avg. Market Cap	52,252 (Million)
Price/Earnings	17
Price/Book	3
Dividend Yield	2.0 %

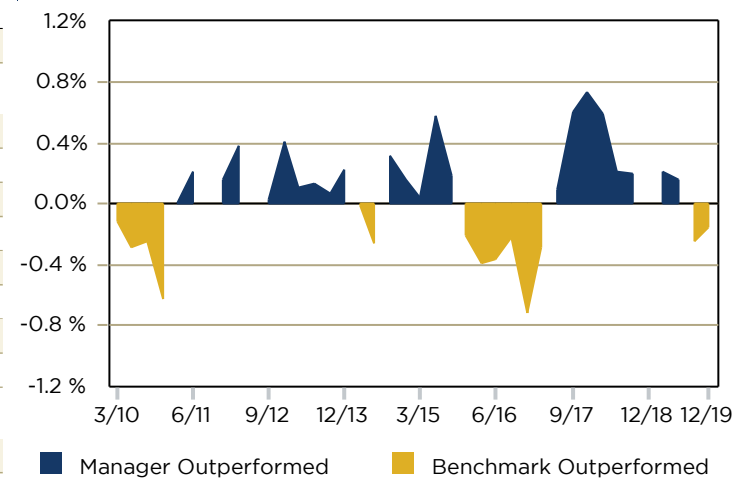
## Fund Statistics

	3 Years	10 Years
Standard Deviation	8.26	10.43
<b>vs. CREF Lifecycle Composite 2030</b>		
Beta	1.05	1.07
Alpha	-0.61	-0.61
Information Ratio	-0.10	0.00
Tracking Error	0.98	1.24
R-Squared	0.99	0.99
Up Market Capture	101.51	103.57
Down Market Capture	105.49	107.28
Consistency	44.44	52.50

## vs. Risk Free

Sharpe Ratio	1.03	0.85
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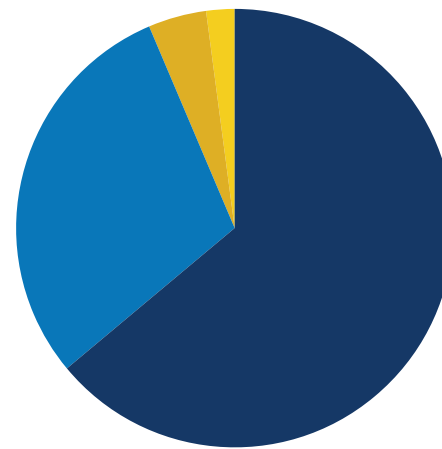
## 3 Years Rolling Excess Performance



## Top Holdings (%)

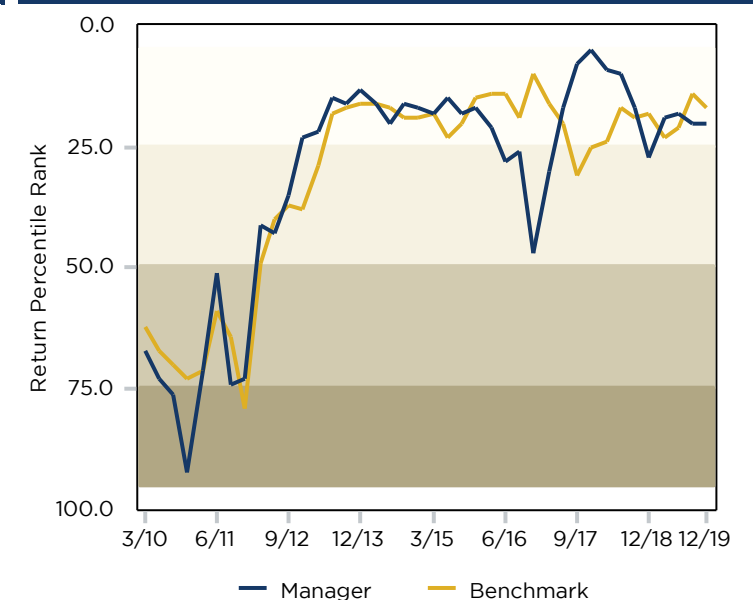
TIAA-CREF Bond W	14.5
TIAA-CREF Growth & Income W	9.5
TIAA-CREF Bond Plus W	8.9
TIAA-CREF Large-Cap Growth W	8.7
TIAA-CREF Large-Cap Value W	8.2
TIAA-CREF Quant Large-Cap Growth	7.6
TIAA-CREF Quant Intl Eq W	5.5
TIAA-CREF International Opps W	4.2
Tiaa Cref Real Property Fnd Lp	4.2
TIAA-CREF International Eq W	4.2

## Asset Allocation



■ Equity      ■ Fixed Income  
 ■ Other      ■ Cash

## 3 Years Rolling Percentile Ranking





# TIAA-CREF Lifecycle 2035 Institutional (TCIIX)

Index: CREF Lifecycle Composite 2035

Category: Target-Date 2035

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	6.71 (44)	23.04 (27)	23.04 (27)	11.07 (21)	8.11 (18)	9.68 (16)	-8.04 (80)	21.11 (5)	7.52 (68)	0.24 (5)
Benchmark	6.86	23.40	23.40	11.25	8.23	9.86	-6.03	18.73	8.79	-0.86
Peer Group	6.61	22.36	22.36	10.27	7.43	9.14	-7.18	18.39	8.10	-1.34
Population	530	506	506	446	369	239	512	500	505	446

## Fund Information

Fund Inception	01-2007
Fund Assets	5,011 Million
Portfolio Assets	3,518 Million
Total # of Holdings	20
% Assets in Top 10 Holdings	77.3 %
PM	Cunniff,J/Erickson,H/Sedmak,S
PM Tenure	13 Years 9 Months
Turnover	17.0 %
Gross Expense (%)	0.5 %
Net Expense (%)	0.4 %
New Investors	Open

## Equity Characteristics

Avg. Market Cap	52,074 (Million)
Price/Earnings	17
Price/Book	3
Dividend Yield	2.0 %

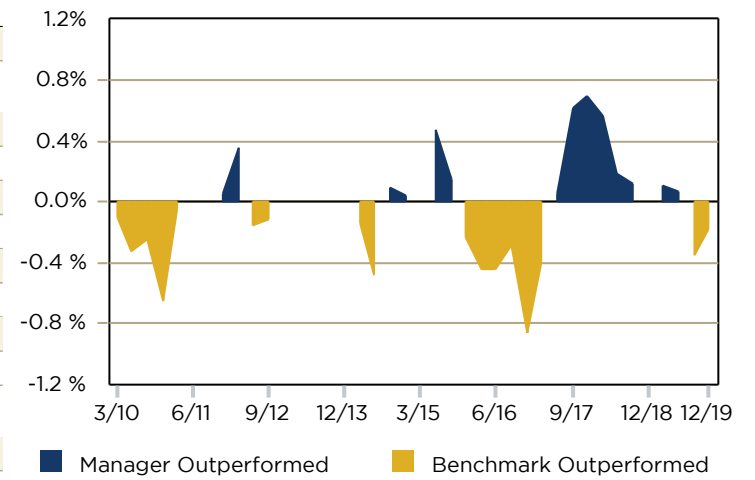
## Fund Statistics

	3 Years	10 Years
Standard Deviation	9.28	11.50
<b>vs. CREF Lifecycle Composite 2035</b>		
Beta	1.05	1.06
Alpha	-0.71	-0.68
Information Ratio	-0.10	-0.06
Tracking Error	1.11	1.34
R-Squared	0.99	0.99
Up Market Capture	101.78	103.03
Down Market Capture	105.99	106.82
Consistency	50.00	52.50

## vs. Risk Free

Sharpe Ratio	1.00	0.81
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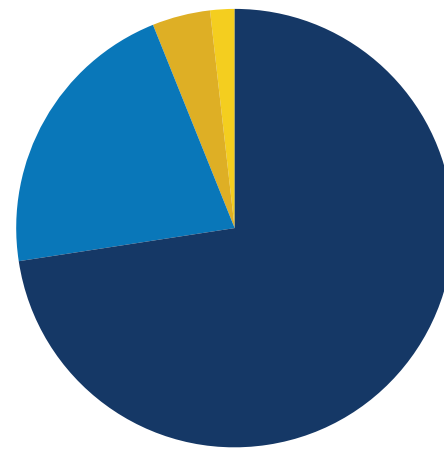
## 3 Years Rolling Excess Performance



## Top Holdings (%)

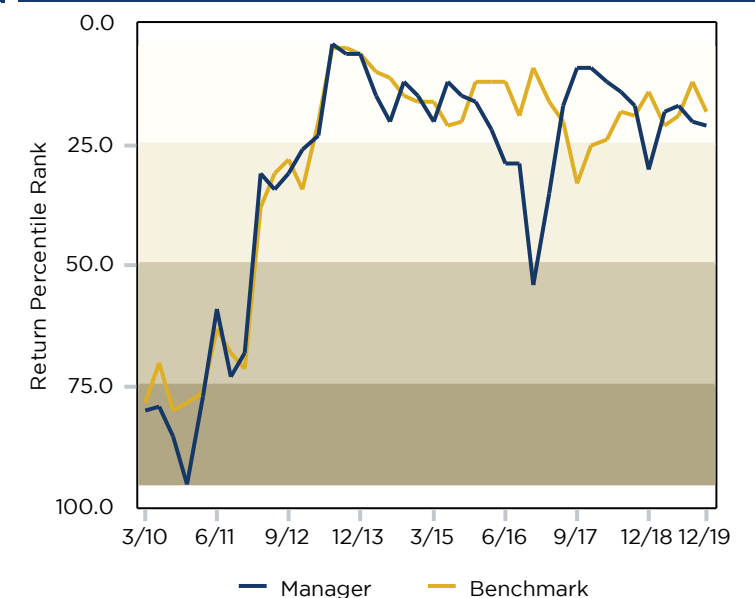
TIAA-CREF Bond W	11.6
TIAA-CREF Growth & Income W	10.8
TIAA-CREF Large-Cap Growth W	9.9
TIAA-CREF Large-Cap Value W	9.3
TIAA-CREF Quant Large-Cap Growth	8.6
TIAA-CREF Bond Plus W	7.2
TIAA-CREF Quant Intl Eq W	6.2
TIAA-CREF International Opps W	4.8
TIAA-CREF International Eq W	4.7
Tiaa Cref Real Property Fnd Lp	4.2

## Asset Allocation



■ Equity      ■ Fixed Income  
■ Other      ■ Cash

## 3 Years Rolling Percentile Ranking





# TIAA-CREF Lifecycle 2040 Institutional (TCOIX)

Index: CREF Lifecycle Composite 2040

Category: Target-Date 2040

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	7.50 (31)	24.56 (24)	24.56 (24)	11.72 (18)	8.51 (15)	10.03 (13)	-8.92 (86)	22.91 (1)	7.78 (66)	0.09 (7)
Benchmark	7.59	24.97	24.97	11.95	8.71	10.27	-6.72	20.37	9.37	-1.07
Peer Group	7.15	23.65	23.65	10.74	7.70	9.32	-7.90	19.49	8.37	-1.49
Population	514	502	502	456	405	273	514	521	523	496

## Fund Information

Fund Inception	01-2007
Fund Assets	5,931 Million
Portfolio Assets	4,133 Million
Total # of Holdings	20
% Assets in Top 10 Holdings	76.9 %
PM	Cunniff,J/Erickson,H/Sedmak,S
PM Tenure	13 Years 9 Months
Turnover	18.0 %
Gross Expense (%)	0.6 %
Net Expense (%)	0.4 %
New Investors	Open

## Equity Characteristics

Avg. Market Cap	51,980 (Million)
Price/Earnings	17
Price/Book	3
Dividend Yield	2.0 %

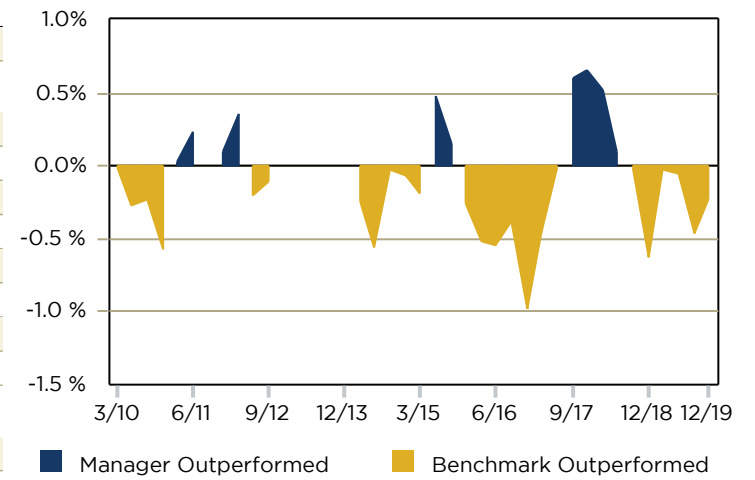
## Fund Statistics

	3 Years	10 Years
Standard Deviation	10.31	12.05
<b>vs. CREF Lifecycle Composite 2040</b>		
Beta	1.06	1.06
Alpha	-0.82	-0.71
Information Ratio	-0.12	-0.10
Tracking Error	1.25	1.40
R-Squared	0.99	0.99
Up Market Capture	101.66	102.94
Down Market Capture	105.83	107.04
Consistency	47.22	50.00

## vs. Risk Free

Sharpe Ratio	0.97	0.81
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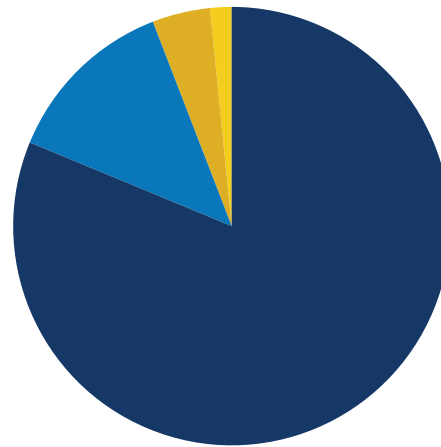
## 3 Years Rolling Excess Performance



## Top Holdings (%)

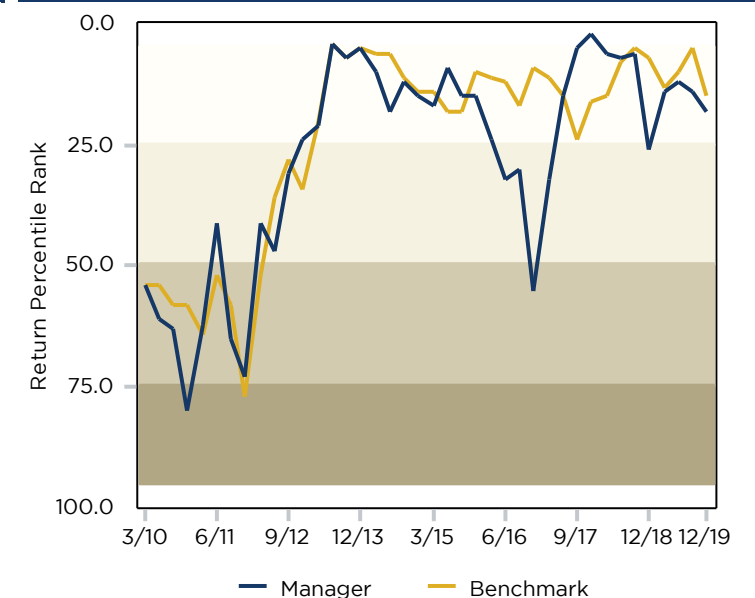
TIAA-CREF Growth & Income W	12.1
TIAA-CREF Large-Cap Growth W	11.1
TIAA-CREF Large-Cap Value W	10.4
TIAA-CREF Quant Large-Cap Growth	9.7
TIAA-CREF Bond W	7.0
TIAA-CREF Quant Intl Eq W	6.9
TIAA-CREF International Opps W	5.4
TIAA-CREF International Eq W	5.3
TIAA-CREF Quant Large-Cap Value	4.6
Nuveen Dividend Value R6	4.5

## Asset Allocation



Equity Fixed Income  
Other Cash

## 3 Years Rolling Percentile Ranking





# TIAA-CREF Lifecycle 2045 Institutional (TTFIX)

Index: CREF Lifecycle Composite 2045

Category: Target-Date 2045

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	8.23 (26)	25.87 (19)	25.87 (19)	12.05 (17)	8.76 (14)	10.14 (15)	-9.59 (92)	23.62 (1)	8.06 (62)	0.13 (7)
Benchmark	8.24	26.25	26.25	12.37	9.02	10.42	-7.27	21.18	9.72	-1.08
Peer Group	7.68	24.63	24.63	11.08	7.97	9.55	-8.25	20.36	8.55	-1.48
Population	530	506	506	447	369	238	508	498	503	445

## Fund Information

Fund Inception	11-2007
Fund Assets	3,511 Million
Portfolio Assets	2,511 Million
Total # of Holdings	20
% Assets in Top 10 Holdings	81.3 %
PM	Cunniff,J/Erickson,H/Sedmak,S
PM Tenure	12 Years 1 Month
Turnover	13.0 %
Gross Expense (%)	0.6 %
Net Expense (%)	0.5 %
New Investors	Open

## Equity Characteristics

Avg. Market Cap	51,873 (Million)
Price/Earnings	17
Price/Book	3
Dividend Yield	2.0 %

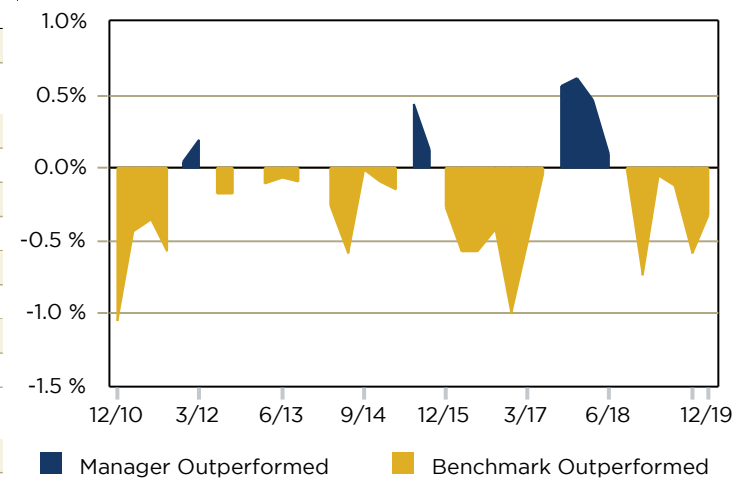
## Fund Statistics

	3 Years	10 Years
Standard Deviation	11.07	12.27
<b>vs. CREF Lifecycle Composite 2045</b>		
Beta	1.06	1.06
Alpha	-0.96	-0.76
Information Ratio	-0.17	-0.12
Tracking Error	1.28	1.41
R-Squared	0.99	0.99
Up Market Capture	101.73	102.77
Down Market Capture	106.50	107.01
Consistency	52.78	51.67

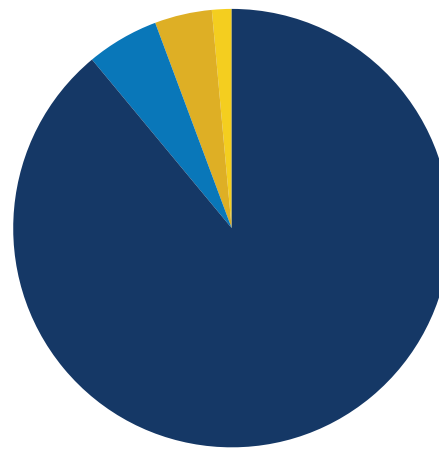
## vs. Risk Free

Sharpe Ratio	0.94	0.81
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## 3 Years Rolling Excess Performance

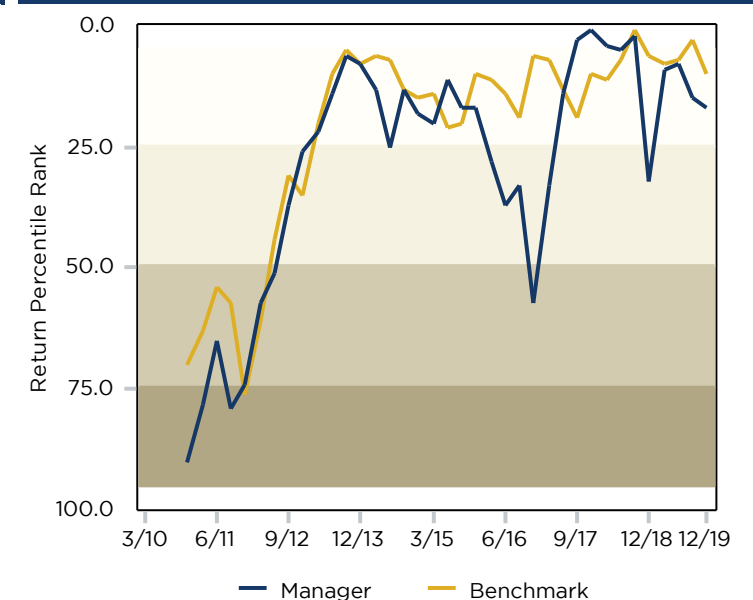


## Asset Allocation



■ Equity      ■ Fixed Income  
 ■ Other      ■ Cash

## 3 Years Rolling Percentile Ranking



## Top Holdings (%)

TIAA-CREF Growth & Income W	13.3
TIAA-CREF Large-Cap Growth W	12.1
TIAA-CREF Large-Cap Value W	11.4
TIAA-CREF Quant Large-Cap Growth	10.6
TIAA-CREF Quant Intl Eq W	7.5
TIAA-CREF International Opps W	5.9
TIAA-CREF International Eq W	5.8
TIAA-CREF Quant Large-Cap Value	5.0
Nuveen Dividend Value R6	5.0
TIAA-CREF Emerging Markets Eq W	4.9



# TIAA-CREF Lifecycle 2050 Institutional (TFTIX)

Index: CREF Lifecycle Composite 2050

Category: Target-Date 2050

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	8.39 (19)	26.19 (16)	26.19 (16)	12.18 (15)	8.86 (10)	10.19 (19)	-9.82 (91)	24.04 (1)	8.10 (62)	0.18 (7)
Benchmark	8.35	26.50	26.50	12.48	9.12	10.48	-7.38	21.44	9.91	-1.08
Peer Group	7.65	24.78	24.78	11.13	8.05	9.62	-8.42	20.59	8.65	-1.50
Population	512	498	498	453	399	234	508	514	513	484

## Fund Information

Fund Inception	11-2007
Fund Assets	2,410 Million
Portfolio Assets	1,733 Million
Total # of Holdings	20
% Assets in Top 10 Holdings	82.4 %
PM	Cunniff,J/Erickson,H/Sedmak,S
PM Tenure	12 Years 1 Month
Turnover	12.0 %
Gross Expense (%)	0.6 %
Net Expense (%)	0.5 %
New Investors	Open

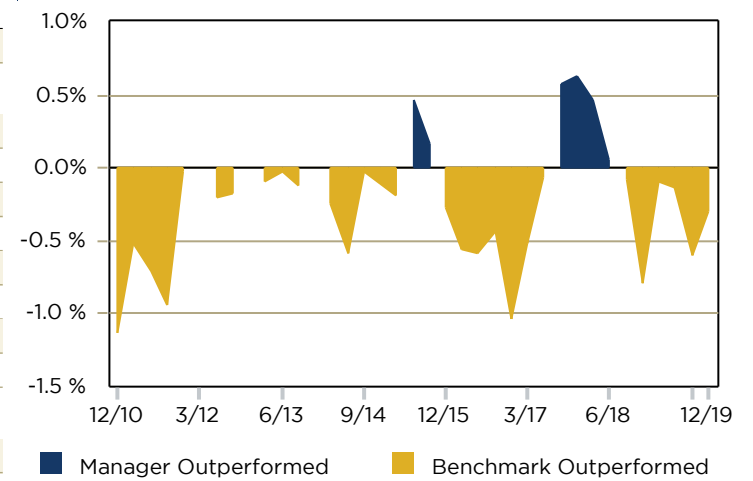
## Equity Characteristics

Avg. Market Cap	51,859 (Million)
Price/Earnings	17
Price/Book	3
Dividend Yield	2.0 %

## Fund Statistics

	3 Years	10 Years
Standard Deviation	11.27	12.32
<b>vs. CREF Lifecycle Composite 2050</b>		
Beta	1.07	1.06
Alpha	-0.99	-0.78
Information Ratio	-0.14	-0.12
Tracking Error	1.30	1.42
R-Squared	0.99	0.99
Up Market Capture	101.95	102.72
Down Market Capture	106.70	106.96
Consistency	50.00	50.83
<b>vs. Risk Free</b>		
Sharpe Ratio	0.93	0.81

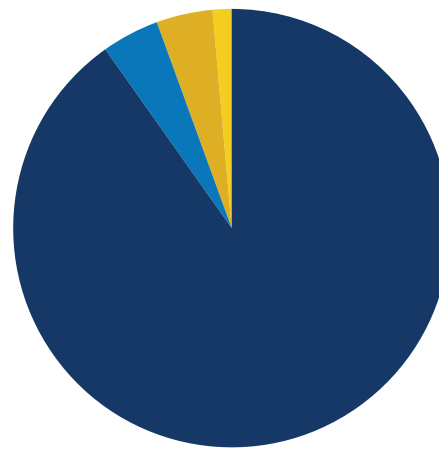
## 3 Years Rolling Excess Performance



## Top Holdings (%)

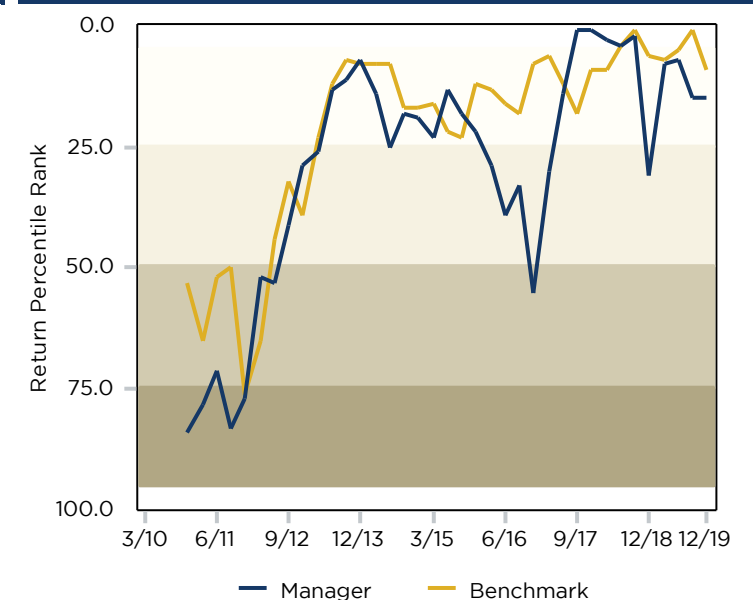
TIAA-CREF Growth & Income W	13.4
TIAA-CREF Large-Cap Growth W	12.3
TIAA-CREF Large-Cap Value W	11.6
TIAA-CREF Quant Large-Cap Growth	10.7
TIAA-CREF Quant Intl Eq W	7.5
TIAA-CREF International Opps W	6.0
TIAA-CREF International Eq W	5.9
TIAA-CREF Quant Large-Cap Value	5.1
Nuveen Dividend Value R6	5.0
TIAA-CREF Emerging Markets Eq W	4.9

## Asset Allocation



■ Equity    ■ Other  
■ Fixed Income    ■ Cash

## 3 Years Rolling Percentile Ranking





# TIAA-CREF Lifecycle 2055 Institutional (TTRIX)

Index: CREF Lifecycle Composite 2055

Category: Target-Date 2055

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	8.53 (25)	26.36 (18)	26.36 (18)	12.27 (13)	8.93 (10)	-	-9.86 (90)	24.23 (1)	8.27 (62)	0.13 (7)
Benchmark	8.47	26.74	26.74	12.59	9.22	-	-7.48	21.70	10.11	-1.08
Peer Group	7.88	25.10	25.10	11.30	8.17	-	-8.48	20.83	8.58	-1.50
Population	530	501	501	437	347	-	506	487	481	413

## Fund Information

Fund Inception	04-2011
Fund Assets	898 Million
Portfolio Assets	620 Million
Total # of Holdings	20
% Assets in Top 10 Holdings	83.5 %
PM	Cunniff,J/Erickson,H/Sedmak,S
PM Tenure	8 Years 8 Months
Turnover	10.0 %
Gross Expense (%)	0.6 %
Net Expense (%)	0.5 %
New Investors	Open

## Equity Characteristics

Avg. Market Cap	51,852 (Million)
Price/Earnings	17
Price/Book	3
Dividend Yield	2.0 %

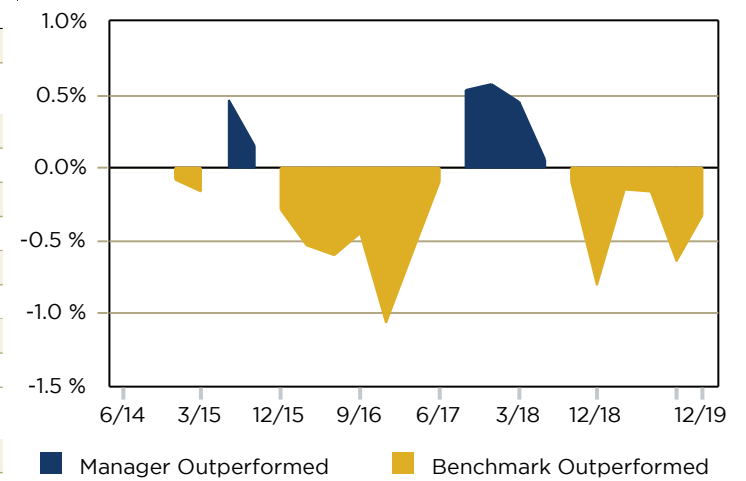
## Fund Statistics

	3 Years	10 Years
Standard Deviation	11.37	-
<b>vs. CREF Lifecycle Composite 2055</b>		
Beta	1.06	-
Alpha	-0.94	-
Information Ratio	-0.16	-
Tracking Error	1.32	-
R-Squared	0.99	-
Up Market Capture	101.40	-
Down Market Capture	105.60	-
Consistency	50.00	-

## vs. Risk Free

Sharpe Ratio	0.93	-
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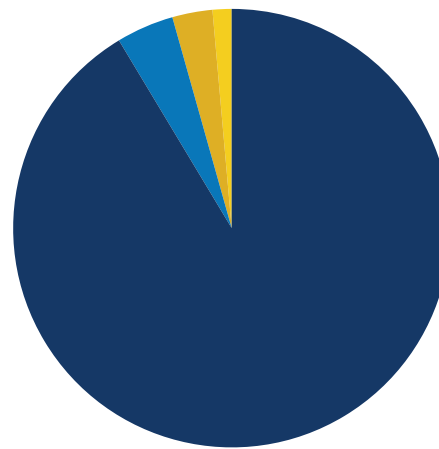
## 3 Years Rolling Excess Performance



## Top Holdings (%)

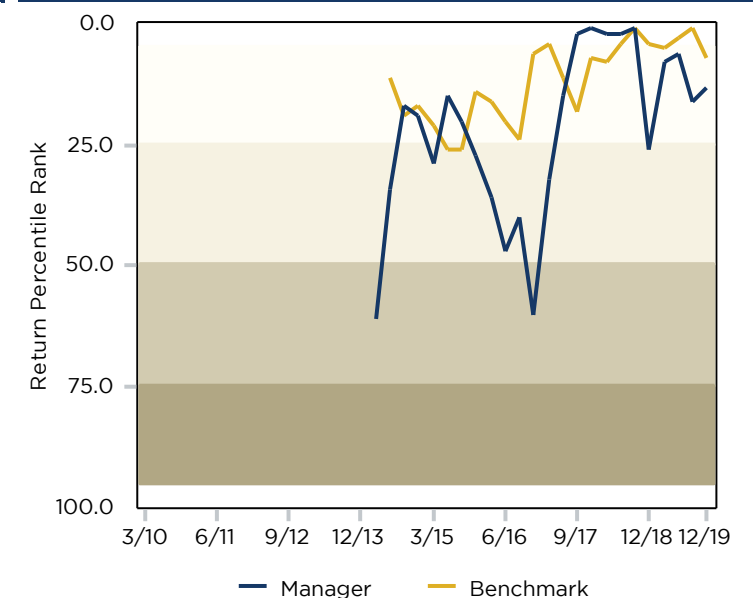
TIAA-CREF Growth & Income W	13.6
TIAA-CREF Large-Cap Growth W	12.4
TIAA-CREF Large-Cap Value W	11.7
TIAA-CREF Quant Large-Cap Growth	10.9
TIAA-CREF Quant Intl Eq W	7.7
TIAA-CREF International Opps W	6.0
TIAA-CREF International Eq W	6.0
TIAA-CREF Quant Large-Cap Value	5.1
Nuveen Dividend Value R6	5.1
TIAA-CREF Emerging Markets Eq W	5.0

## Asset Allocation



■ Equity ■ Other  
■ Fixed Income ■ Cash

## 3 Years Rolling Percentile Ranking





# TIAA-CREF Lifecycle 2060 Institutional (TLXNX)

Index: CREF Lifecycle Composite 2060

Category: Target-Date 2060+

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	8.60 (19)	26.70 (12)	26.70 (12)	12.34 (14)	9.01 (12)	-	-10.06 (87)	24.40 (1)	8.39 (63)	0.19 (10)
Benchmark	8.58	26.99	26.99	12.69	9.33	-	-7.59	21.97	10.31	-1.08
Peer Group	7.94	25.29	25.29	11.44	8.46	-	-8.59	21.00	8.96	-1.06
Population	549	461	461	331	121	-	430	370	292	139

## Fund Information

Fund Inception	09-2014
Fund Assets	187 Million
Portfolio Assets	135 Million
Total # of Holdings	20
% Assets in Top 10 Holdings	84.7 %
PM	Cunniff,J/Erickson,H/Sedmak,S
PM Tenure	5 Years 3 Months
Turnover	36.0 %
Gross Expense (%)	0.7 %
Net Expense (%)	0.5 %
New Investors	Open

## Equity Characteristics

Avg. Market Cap	51,825 (Million)
Price/Earnings	17
Price/Book	3
Dividend Yield	2.0 %

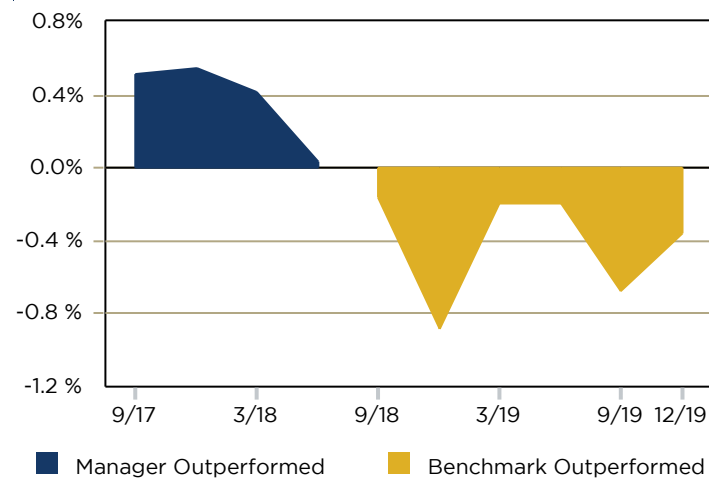
## Fund Statistics

	3 Years	10 Years
Standard Deviation	11.55	-
<b>vs. CREF Lifecycle Composite 2060</b>		
Beta	1.06	-
Alpha	-1.01	-
Information Ratio	-0.18	-
Tracking Error	1.36	-
R-Squared	0.99	-
Up Market Capture	101.36	-
Down Market Capture	105.76	-
Consistency	50.00	-

## vs. Risk Free

Sharpe Ratio	0.92	-
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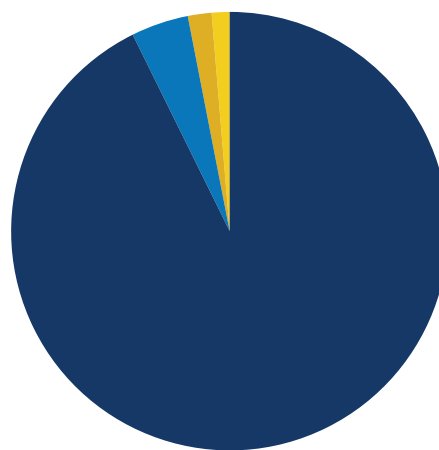
## 3 Years Rolling Excess Performance



## Top Holdings (%)

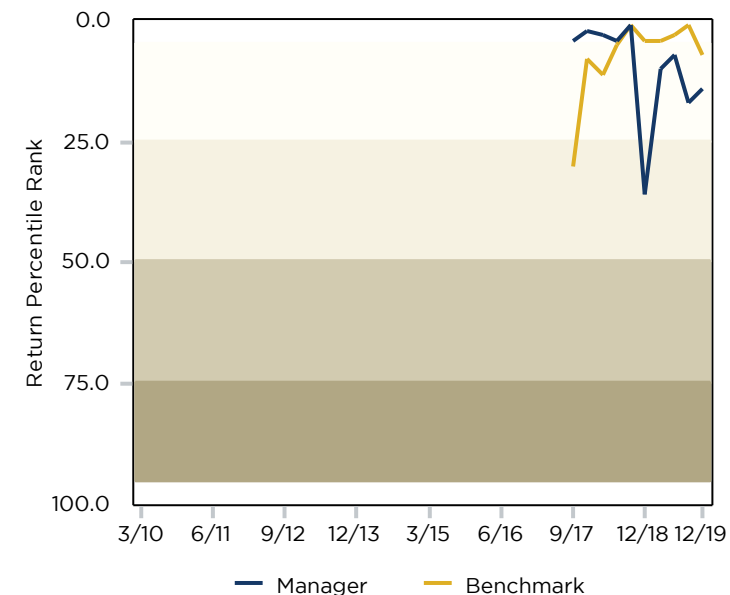
TIAA-CREF Growth & Income W	13.8
TIAA-CREF Large-Cap Growth W	12.6
TIAA-CREF Large-Cap Value W	11.9
TIAA-CREF Quant Large-Cap Growth	11.0
TIAA-CREF Quant Intl Eq W	7.8
TIAA-CREF International Opps W	6.1
TIAA-CREF International Eq W	6.0
TIAA-CREF Quant Large-Cap Value	5.2
Nuveen Dividend Value R6	5.2
TIAA-CREF Emerging Markets Eq W	5.1

## Asset Allocation



■ Equity ■ Other  
■ Fixed Income ■ Cash

## 3 Years Rolling Percentile Ranking





## Detailed Analysis: Voya Mandatory Plan





# Vanguard Treasury Money Market Investor (VUSXX)

Index: Blmbg. Barc. U.S. Treasury Bills: 1-3 Months

Category: Money Market-Taxable

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	0.43 (3)	2.14 (4)	2.14 (4)	1.57 (3)	1.00 (2)	0.50 (5)	1.80 (2)	0.79 (4)	0.25 (8)	0.02 (20)
Benchmark	0.44	2.21	2.21	1.61	1.02	0.55	1.82	0.82	0.26	0.03
Peer Group	0.35	1.83	1.83	1.25	0.75	0.38	1.47	0.46	0.03	0.01
Population	596	574	574	536	463	418	591	596	592	575

## Fund Information

Fund Inception	12/14/1992
Fund Assets	30,800 Million
Portfolio Assets	30,800 Million
Total # of Holdings	40
% Assets in Top 10 Holdings	51.04 %
PM	Smith,N
PM Tenure	2 Years
Turnover	-
Gross Expense (%)	0.09 %
Net Expense (%)	0.09 %
New Investors	Open

## Fixed Income Characteristics

Avg. Effective Duration	-
Avg. Effective Maturity	-
Avg. Credit Quality	-
Avg. Weighted Coupon	-

## Top Holdings (%)

United States Treasury Bills 1.89%	7.88
United States Treasury Bills 1.86%	6.50
United States Treasury Bills 2.03%	5.63
United States Treasury Bills 1.84%	4.92
United States Treasury Bills 1.96%	4.92
United States Treasury Bills 1.6%	4.76
United States Treasury Bills 1.57%	4.53
United States Treasury Bills 2.1%	4.28
United States Treasury Bills 1.84%	3.96
United States Treasury Notes 1.83%	3.66

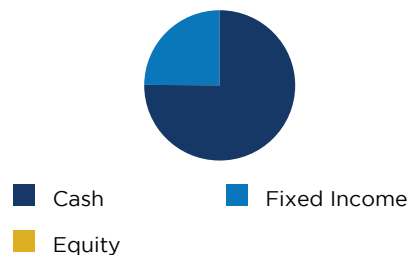
## Fund Statistics

	3 Years	10 Years
Standard Deviation	0.18	0.22
<b>vs. Blmbg. Barc. U.S. Treasury Bills: 1-3 Months</b>		
Beta	0.95	0.99
Alpha	0.05	-0.03
Information Ratio	-1.42	-1.85
Tracking Error	0.03	0.02
R-Squared	0.98	0.99
Up Market Capture	97.47	91.99
Down Market Capture	-	-55.50
Consistency	22.22	24.17

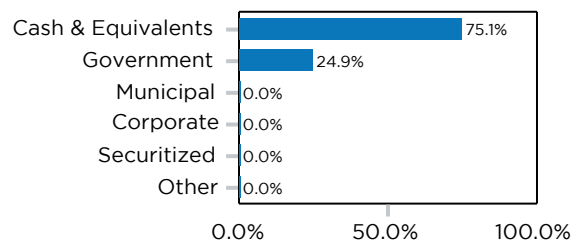
## vs. Risk Free

Sharpe Ratio	-1.93	-1.56
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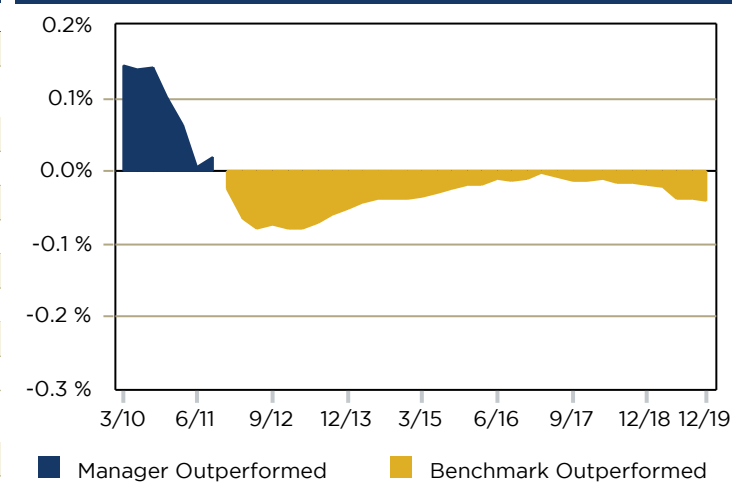
## Asset Allocation



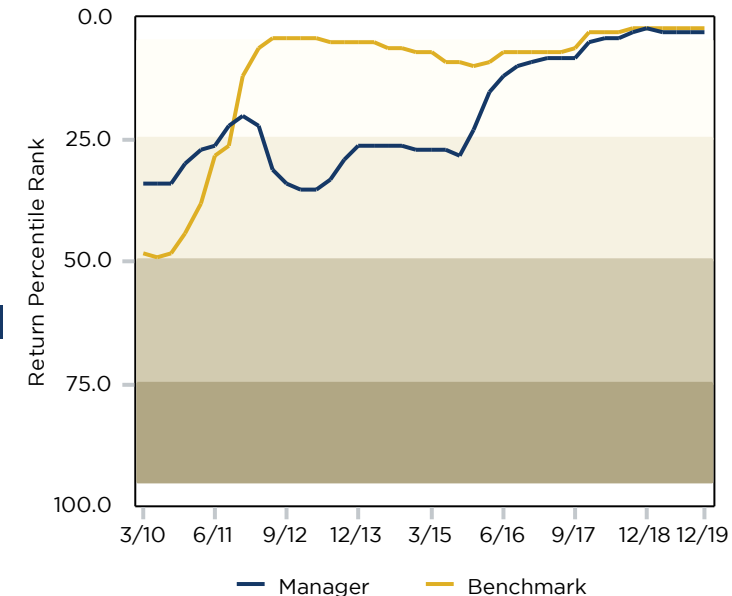
## Sector Allocation



## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking

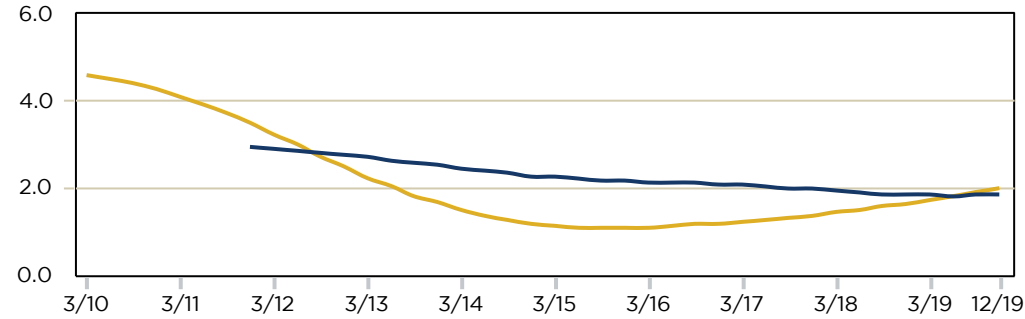




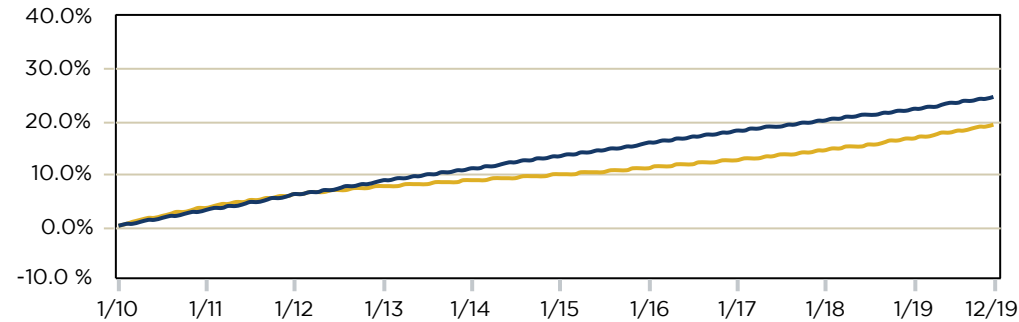
## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	0.50	2.15	2.15	2.18	2.32	2.65	1.75	1.75	2.06	2.12
Benchmark	0.61	2.38	2.38	1.98	1.70	1.80	1.96	1.60	1.39	1.16

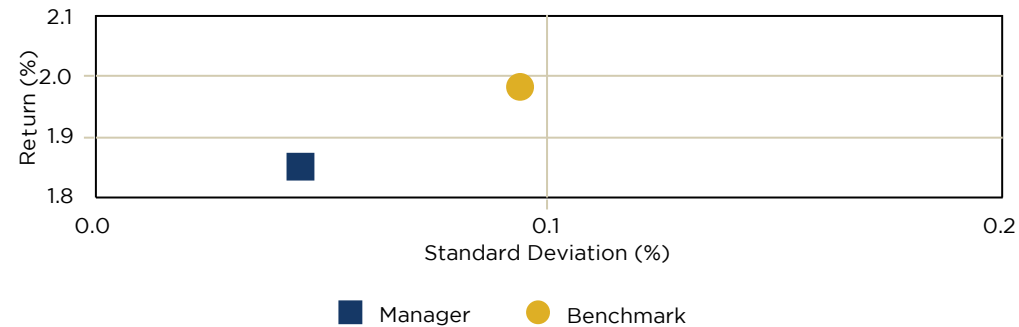
### Return (Rolling 36 Months)



### Growth of a Dollar



### Risk-Reward





# American Funds Inflation Linked Bond R6 (RILFX)

Index: Bloomberg Barclays U.S. TIPS Index

Category: Inflation-Protected Bond

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	1.23 (14)	7.06 (64)	7.06 (64)	3.08 (39)	2.61 (16)	-	-0.57 (18)	2.88 (44)	4.88 (25)	-0.96 (16)
Benchmark	0.79	8.43	8.43	3.32	2.62	-	-1.26	3.01	4.68	-1.44
Peer Group	0.85	7.86	7.86	2.91	2.19	-	-1.51	2.74	4.42	-1.90
Population	319	316	316	299	286	-	327	334	339	340

## Fund Information

Fund Inception	11/01/2013
Fund Assets	6,265 Million
Portfolio Assets	4,860 Million
Total # of Holdings	82
% Assets in Top 10 Holdings	51.83 %
PM	Hoag,D/Tuazon,R
PM Tenure	7 Years
Turnover	57.00 %
Gross Expense (%)	0.36 %
Net Expense (%)	0.36 %
New Investors	Open

## Fixed Income Characteristics

Avg. Effective Duration	5.42 Years
Avg. Effective Maturity	-
Avg. Credit Quality	AA
Avg. Weighted Coupon	0.85 %

## Top Holdings (%)

United States Treasury Notes 0.25%	11.16
United States Treasury Notes 0.38%	7.81
United States Treasury Bonds 1%	4.66
United States Treasury Notes 0.12%	4.52
United States Treasury Notes 0.25%	4.34
United States Treasury Notes 0.12%	4.33
United States Treasury Notes 0.5%	3.92
United States Treasury Notes 0.12%	3.92
United States Treasury Notes 0.62%	3.60
United States Treasury Bonds 2.38%	3.58

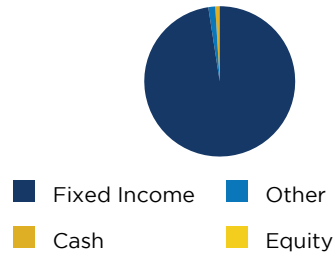
## Fund Statistics

	3 Years	10 Years
Standard Deviation	2.58	-
<b>vs. Bloomberg Barclays U.S. TIPS Index</b>		
Beta	0.82	-
Alpha	0.36	-
Information Ratio	-0.23	-
Tracking Error	1.04	-
R-Squared	0.88	-
Up Market Capture	92.40	-
Down Market Capture	92.05	-
Consistency	58.33	-

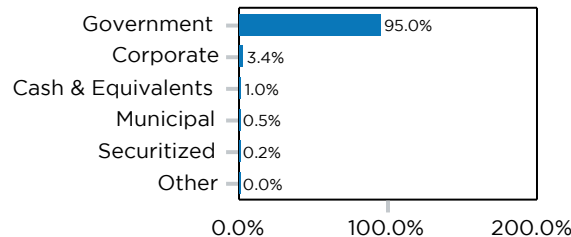
## vs. Risk Free

Sharpe Ratio	0.56	-
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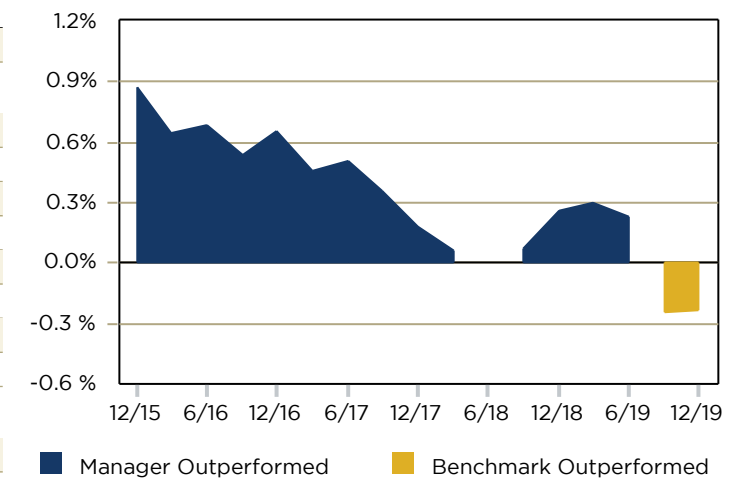
## Asset Allocation



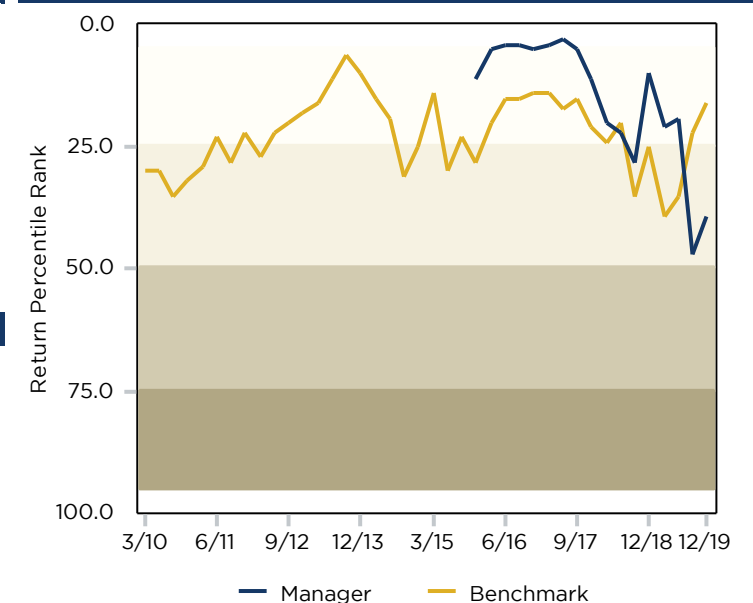
## Sector Allocation



## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking



**Trailing Performance**

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	0.06 (64)	8.48 (54)	8.48 (54)	3.94 (43)	2.99 (40)	3.67 (50)	0.01 (28)	3.50 (45)	2.52 (57)	0.63 (20)
Benchmark	0.18	8.72	8.72	4.03	3.05	3.75	0.01	3.54	2.65	0.55
Peer Group	0.15	8.55	8.55	3.81	2.86	3.66	-0.32	3.42	2.60	0.26
Population	791	774	774	701	647	571	851	816	853	864

**Fund Information**

Fund Inception	05/04/2011
Fund Assets	46,117 Million
Portfolio Assets	46,117 Million
Total # of Holdings	2095
% Assets in Top 10 Holdings	20.33 %
PM	Bettencourt,B/Small,J
PM Tenure	5 Years 7 Months
Turnover	35.00 %
Gross Expense (%)	0.03 %
Net Expense (%)	0.03 %
New Investors	Open

**Fixed Income Characteristics**

Avg. Effective Duration	5.66 Years
Avg. Effective Maturity	-
Avg. Credit Quality	AA
Avg. Weighted Coupon	3.14 %

**Top Holdings (%)**

Fannie Mae 3.5% 30 Year	2.72
Ginnie Mae 3.5% 30 Year	2.70
Fannie Mae 4% 30 Year	2.62
Fannie Mae 3% 30 Year	2.53
Freddie Mac 3.5% 30 Year	2.32
Ginnie Mae 3% 30 Year	1.74
Ginnie Mae 4% 30 Year	1.60
United States Treasury Notes 2.25%	1.50
Freddie Mac 3% 30 Year	1.38
Freddie Mac 4% 30 Year	1.21

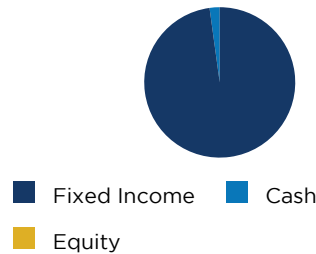
**Fund Statistics**

	3 Years	10 Years
Standard Deviation	2.91	2.96
<b>vs. Blmbg. Barc. U.S. Aggregate Index</b>		
Beta	1.01	1.03
Alpha	-0.12	-0.19
Information Ratio	-0.40	-0.27
Tracking Error	0.21	0.25
R-Squared	0.99	0.99
Up Market Capture	99.84	101.38
Down Market Capture	103.83	106.88
Consistency	50.00	46.67

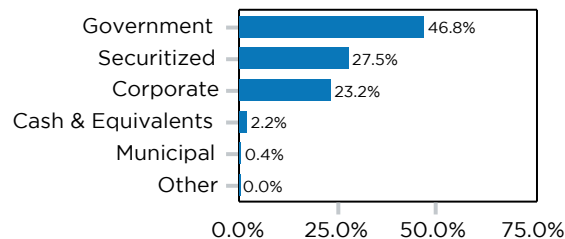
**vs. Risk Free**

Sharpe Ratio	0.79	1.05
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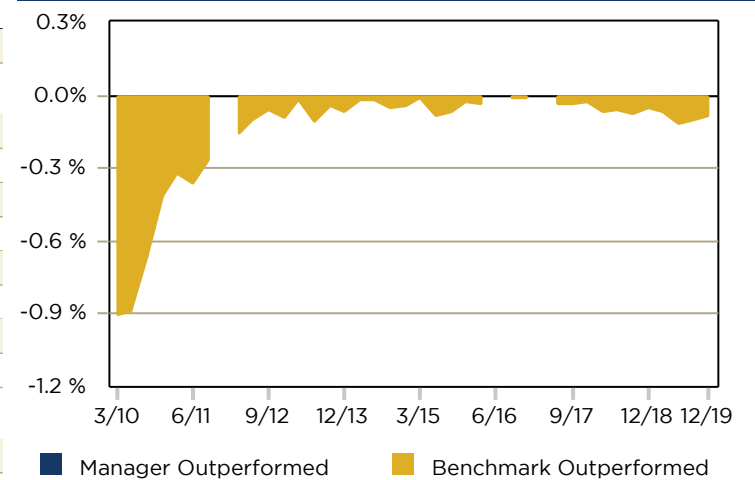
**Asset Allocation**



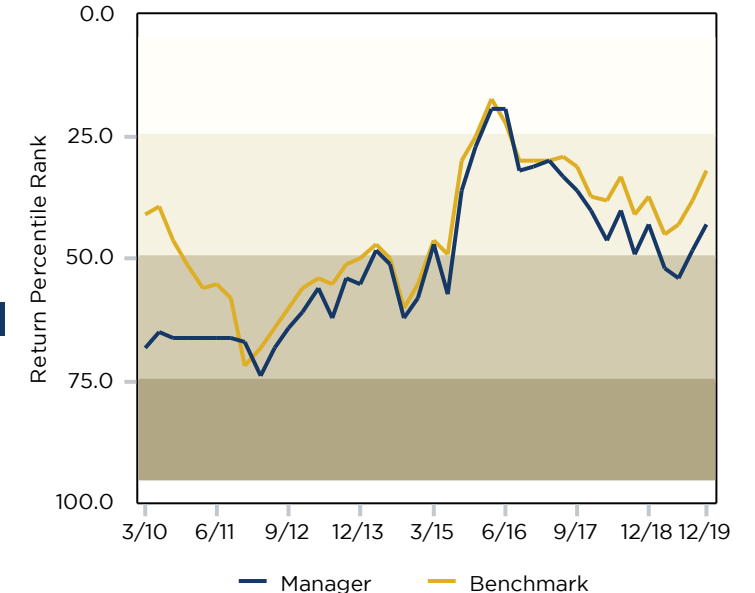
**Sector Allocation**



**3 Years Rolling Excess Performance**



**3 Years Rolling Percentile Ranking**



## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	-0.30 (94)	8.26 (73)	8.26 (73)	4.31 (36)	3.25 (45)	4.19 (54)	-0.26 (47)	5.13 (3)	2.60 (51)	0.73 (17)
Benchmark	0.18	8.72	8.72	4.03	3.05	3.75	0.01	3.54	2.65	0.55
Peer Group	0.38	8.94	8.94	4.12	3.14	4.27	-0.61	4.27	3.86	-0.45

## Fund Information

Fund Inception	05/11/1987
Fund Assets	67,096 Million
Portfolio Assets	51,990 Million
Total # of Holdings	7702
% Assets in Top 10 Holdings	21.21 %
PM	Kiesel,M/Mather,S/Mittal,M
PM Tenure	5 Years 3 Months
Turnover	723.00 %
Gross Expense (%)	0.71 %
Net Expense (%)	0.71 %
New Investors	Open

## Fixed Income Characteristics

Avg. Effective Duration	5.65 Years
Avg. Effective Maturity	7.65 Years
Avg. Credit Quality	
Avg. Weighted Coupon	4.09 %

## Top Holdings (%)

Fin Fut Us 5yr Cbt 12/31/19	32.13
US 10 Year Note (CBT) Dec19	9.72
Pimco Fds	7.51
Long-Term Euro-BTP Futures Dec19	6.43
Federal National Mortgage Asso	5.02
Irs Jpy 0.30000 03/18/16-10y Cme	-5.61
Federal National Mortgage Asso	-6.15
Euro OAT Dec19	-6.32
Fin Fut Euribor Ice (Wht) 09/14/20	-9.10
Fin Fut Euribor Ice (Red) 12/14/20	-12.43

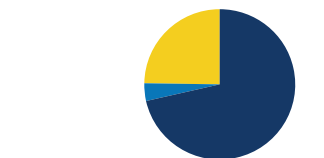
## Fund Statistics

	3 Years	10 Years
Standard Deviation	2.71	3.34
<b>vs. Blmbg. Barc. U.S. Aggregate Index</b>		
Beta	0.90	0.97
Alpha	0.68	0.56
Information Ratio	0.30	0.24
Tracking Error	0.89	1.87
R-Squared	0.90	0.69
Up Market Capture	98.22	108.23
Down Market Capture	80.74	102.14
Consistency	63.89	63.33

## vs. Risk Free

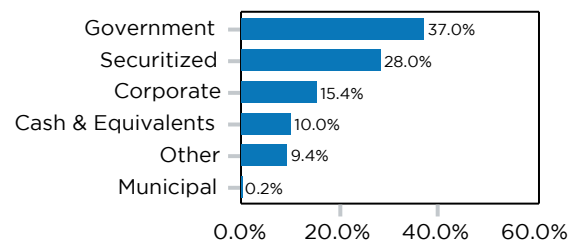
Sharpe Ratio	0.98	1.08
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## Asset Allocation

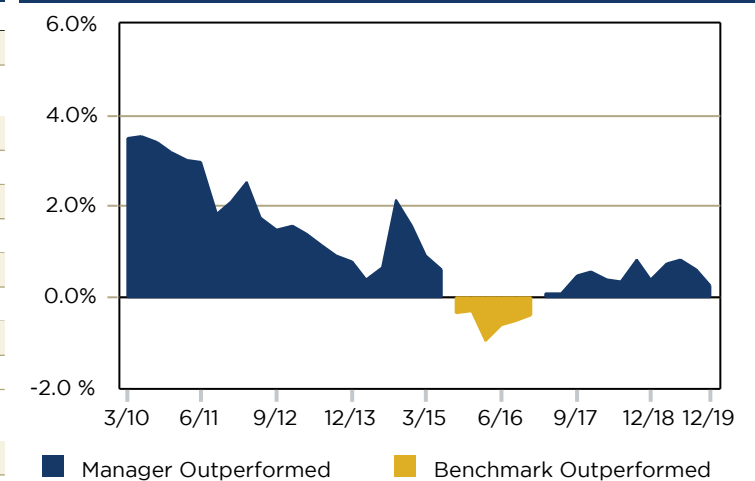


■ Fixed Income    ■ Other  
■ Equity            ■ Cash

## Sector Allocation



## 3 Years Rolling Excess Performance





## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	0.18	6.95	6.95	3.21	-	-	0.11	2.68	2.56	-
Benchmark	0.69	10.77	10.77	5.03	-	-	0.12	4.47	4.35	-

## Fund Information

Fund Inception	09/28/2015
Fund Assets	108 Million
Portfolio Assets	85 Million
Total # of Holdings	31
% Assets in Top 10 Holdings	41.29 %
PM	Alm,E/Drum,P
PM Tenure	4 Years 3 Months
Turnover	23.00 %
Gross Expense (%)	0.64 %
Net Expense (%)	0.64 %
New Investors	Open

## Fixed Income Characteristics

Avg. Effective Duration	3.20 Years
Avg. Effective Maturity	3.74 Years
Avg. Credit Quality	BB
Avg. Weighted Coupon	3.91 %

## Top Holdings (%)

Dp World Crescent Ltd Tr Ctf 3.91%	4.48
Oman Sovereign Sukuk S.A.O.C 4.4%	4.36
Dib Sukuk Co 2.92%	4.33
NMC Healthcare Sukuk Limited 5.95%	4.06
KSA Sukuk Limited 3.63%	4.06
ICD Sukuk Co. Ltd 5%	4.05
Difc Sukuk 4.32%	4.04
Emg Sukuk 4.56%	4.03
EQUATE Sukuk SPC Limited 3.94	3.99
EI Sukuk Company Limited 3.54	3.89

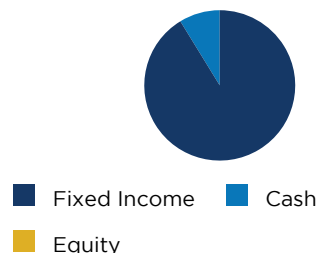
## Fund Statistics

	3 Years	10 Years
Standard Deviation	1.64	-
<b>vs. FTSE Sukuk Index</b>		
Beta	0.66	-
Alpha	-0.07	-
Information Ratio	-1.83	-
Tracking Error	0.97	-
R-Squared	0.89	-
Up Market Capture	63.88	-
Down Market Capture	62.87	-
Consistency	27.78	-

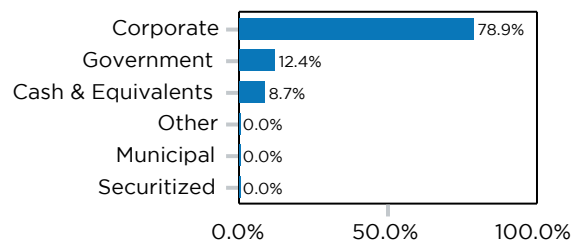
## vs. Risk Free

Sharpe Ratio	0.96	-
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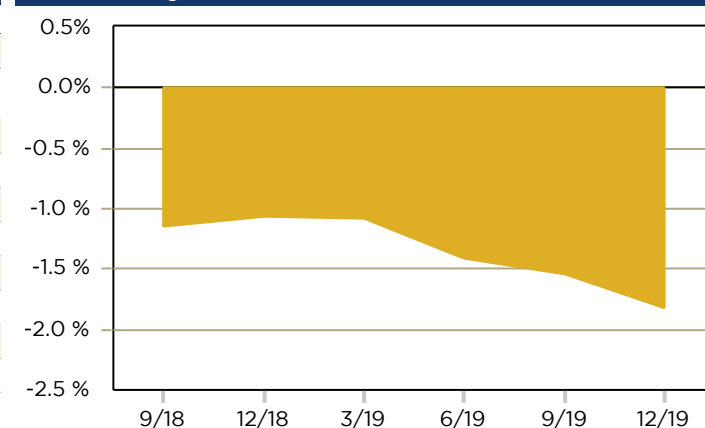
## Asset Allocation



## Sector Allocation



## 3 Years Rolling Excess Performance



■ Manager Outperformed ■ Benchmark Outperformed

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	8.33 (28)	27.52 (25)	27.52 (25)	11.39 (22)	9.92 (8)	11.40 (35)	-7.17 (27)	16.76 (41)	16.21 (33)	-0.10 (10)
Benchmark	7.41	26.54	26.54	9.68	8.29	11.80	-8.27	13.66	17.34	-3.83
Peer Group	7.29	25.48	25.48	9.81	8.06	10.96	-8.87	16.19	14.57	-3.52
Population	1,582	1,552	1,552	1,476	1,377	1,192	1,793	1,674	1,733	1,683

## Fund Information

Fund Inception	11/29/1988
Fund Assets	20,002 Million
Portfolio Assets	10,307 Million
Total # of Holdings	99
% in Top 10	28.18 %
PM	DeSpirito,T/Tapia,F/Zhao,D
PM Tenure	5 Years 4 Months
Turnover	43.00 %
Gross Expense (%)	0.71 %
Net Expense (%)	0.71 %
New Investors	Open

## Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	156,052	131,913
Median Mkt. Cap (\$M)	57,970	9,882
Price/Earnings ratio	16.6	18.4
Price/Book ratio	2.5	2.3
5 Yr. EPS Growth Rate (%)	7.8	6.2
Current Yield (%)	2.6	2.5
Beta (5 Years, Monthly)	0.94	1.00
Number of Stocks	82	764
Debt to Equity	1.5	0.5
Forecast P/E	18.7	18.7
Forecast EPS Growth	10.4	8.1
Return on Equity	0.0	0.0

## Country/Region Allocation

United States	74.1	95.0
Non-US Developed	25.3	4.9
Emerging Markets	0.6	0.1
Other	0.0	0.0
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

## Fund Statistics

	3 Years	10 Years
Standard Deviation	11.17	11.47
<b>vs. Russell 1000 Value Index</b>		
Beta	0.92	0.88
Alpha	2.27	0.90
Information Ratio	0.61	-0.17
Tracking Error	2.44	2.95
R-Squared	0.96	0.95
Up Market Capture	99.91	91.00
Down Market Capture	86.42	86.19
Consistency	58.33	45.00

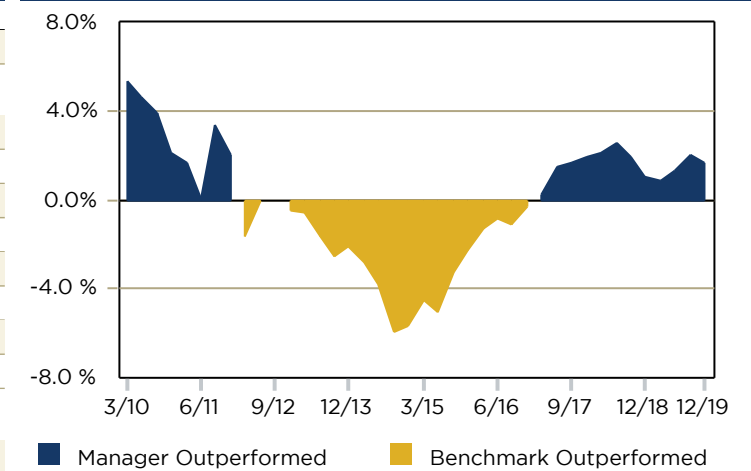
## vs. Risk Free

Sharpe Ratio	0.88	0.95
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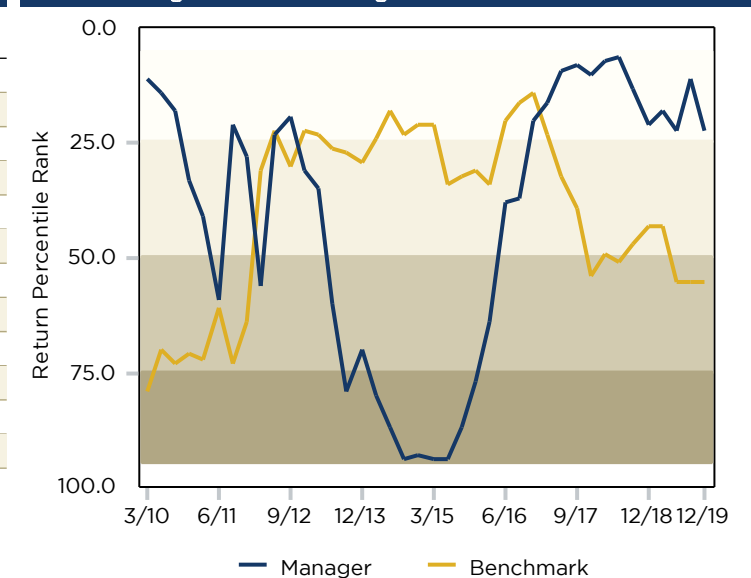
## Sector Allocation

Sector	Portfolio Weight (%)	Benchmark Weight (%)
Communication Services	6.7	8.2
Consumer Discretionary	6.6	5.9
Consumer Staples	8.0	8.9
Energy	9.6	8.2
Financials	29.6	23.9
Health Care	19.0	13.0
Industrials	7.7	9.7
Information Technology	8.5	6.3
Materials	1.5	4.3
Real Estate	0.0	5.2
Utilities	2.9	6.6
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking



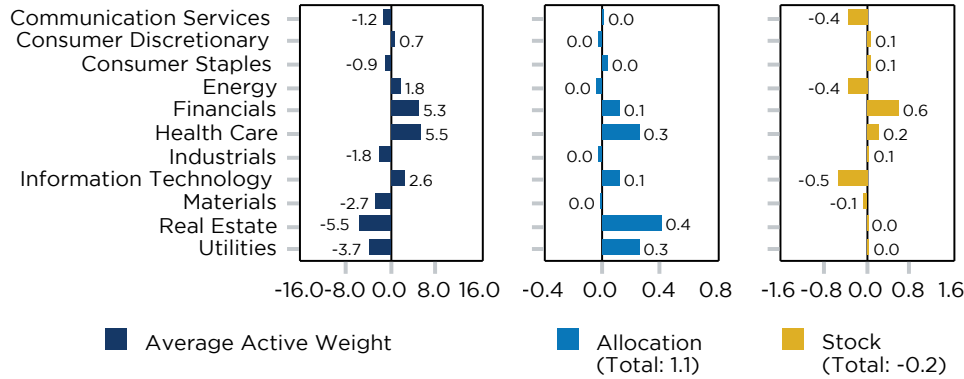


# BlackRock Equity Dividend Instl (MADVX)

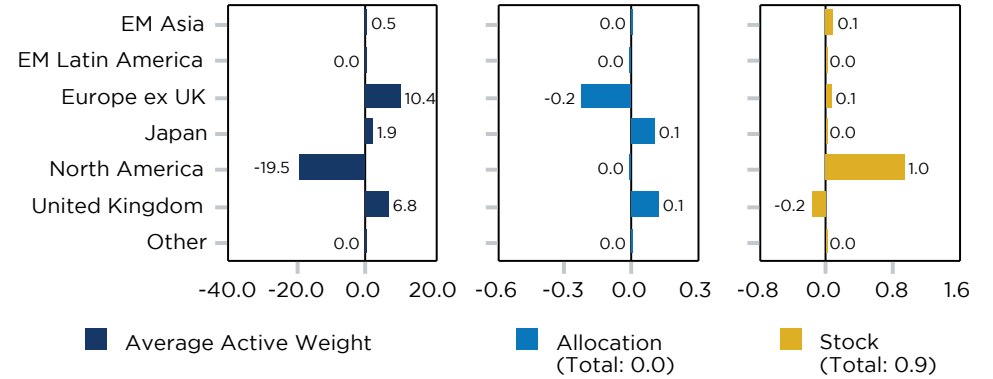
Index: Russell 1000 Value Index

Report Date: 12/31/2019

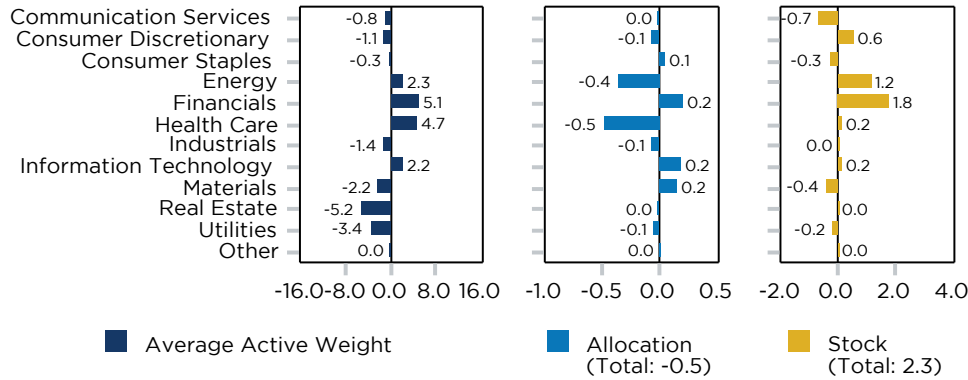
## 1 Quarter Sector Attribution



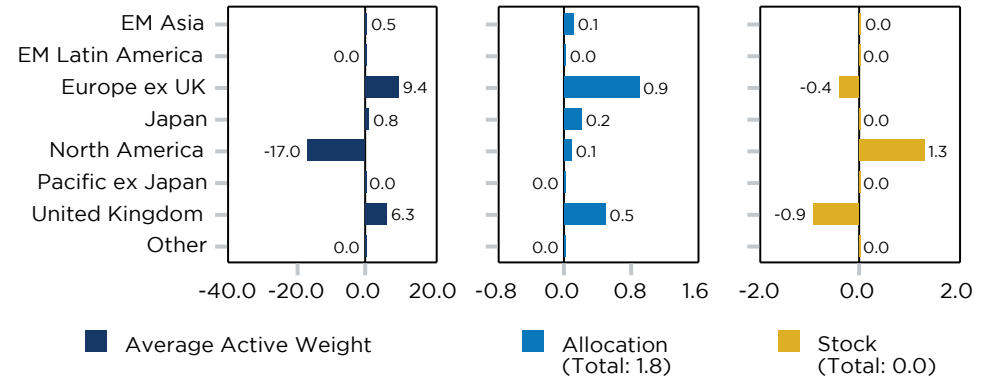
## 1 Quarter Region Attribution



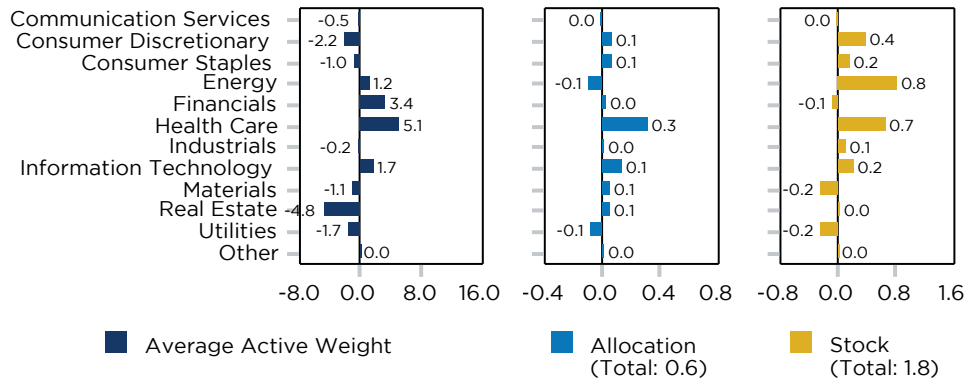
## 1 Year Sector Attribution



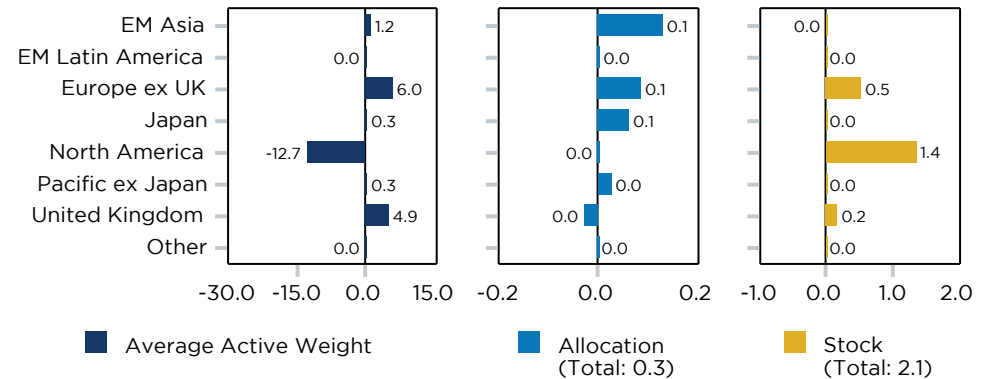
## 1 Year Region Attribution



## 3 Years Sector Attribution



## 3 Years Region Attribution







# BlackRock Equity Dividend Instl (MADVX)

Index: Russell 1000 Value Index

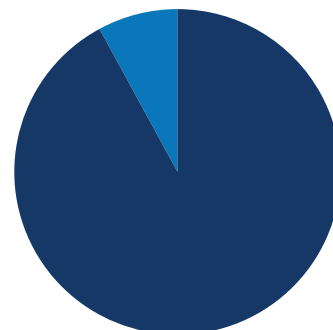
Report Date: 12/31/2019

## Top Ten Securities

JPMorgan Chase & Co	4.0 %
Verizon Communications Inc	3.9 %
Wells Fargo & Co	3.4 %
Citigroup Inc	3.4 %
Bank of America Corp	2.9 %
Medtronic PLC	2.4 %
Anthem Inc	2.1 %
Royal Philips NV	2.1 %
American International Group Inc	2.0 %
BP PLC	1.9 %
<b>Total</b>	<b>28.2 %</b>

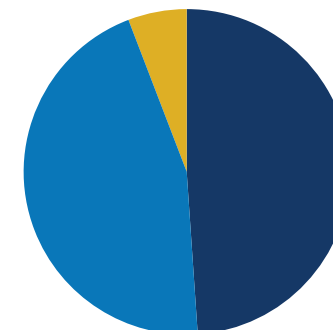
## Asset Allocation

- Equity
- Cash
- Fixed Income



## Market Capitalization

- Giant
- Large
- Medium
- Small
- Micro



## Top Ten Contributors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Humana Inc.	1.39	0.15	0.45	43.57
Anthem Inc	1.89	0.32	0.29	26.14
State Street Corp	1.02	0.16	0.23	34.51
Citigroup Inc	3.68	1.15	0.23	16.45
JPMorgan Chase & Co	4.20	2.76	0.17	19.40
Bank of America Corp	3.03	1.81	0.17	21.40
Morgan Stanley	1.57	0.37	0.16	20.71
Microsoft Corp	2.27	0.00	0.15	13.82
Altria Group Inc	1.14	0.29	0.14	24.07
Wells Fargo & Co	4.07	1.48	0.01	7.67

## Top Ten Contributors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Microsoft Corp	2.28	0.00	0.67	38.88
Dollar General Corporation	1.52	0.00	0.30	29.54
Anthem Inc	1.68	0.25	0.29	29.68
Unitedhealth Group Inc	1.38	0.00	0.20	24.32
Bank of America Corp	4.15	2.06	0.20	19.02
NextEra Energy Inc	1.28	0.50	0.16	29.89
JPMorgan Chase & Co	4.01	2.85	0.12	20.33
Merck & Co Inc.	2.09	1.48	0.06	19.03
Citigroup Inc	2.75	1.58	0.04	12.75
Pfizer Inc	3.24	1.65	0.01	10.43

## Top Ten Detractors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
American Int'l Group Inc	2.34	0.36	-0.29	-7.26
Dollar General Corporation	1.88	0.02	-0.17	-1.67
Travelers Companies Inc (The)	1.32	0.24	-0.16	-7.34
Motorola Solutions Inc	1.16	0.05	-0.14	-5.07
The Unilever Group	1.03	0.00	-0.11	-3.55
Oracle Corp	1.04	0.00	-0.11	-3.30
Northrop Grumman Corp	0.69	0.00	-0.11	-7.88
Constellation Brands Inc	0.80	0.24	-0.09	-8.10
Johnson Controls Intl	0.80	0.26	-0.08	-6.65
DuPont De Nemours Inc	0.74	0.39	-0.06	-9.56

## Top Ten Detractors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
General Electric Co	3.09	2.13	-0.35	-26.85
Occidental Petroleum Corp	1.89	0.49	-0.31	-12.16
Kroger Co. (The)	1.48	0.00	-0.20	-3.72
DuPont De Nemours Inc	1.28	0.58	-0.15	-12.26
American Int'l Group Inc	1.48	0.60	-0.13	-5.46
Invesco Ltd	0.63	0.09	-0.12	-11.74
Nielsen Holdings plc	0.44	0.03	-0.11	-17.99
Publicis Groupe SA	0.45	0.00	-0.09	-9.99
Schlumberger Ltd	0.46	1.06	0.17	-18.64
Exxon Mobil Corp	1.61	3.42	0.25	-4.32

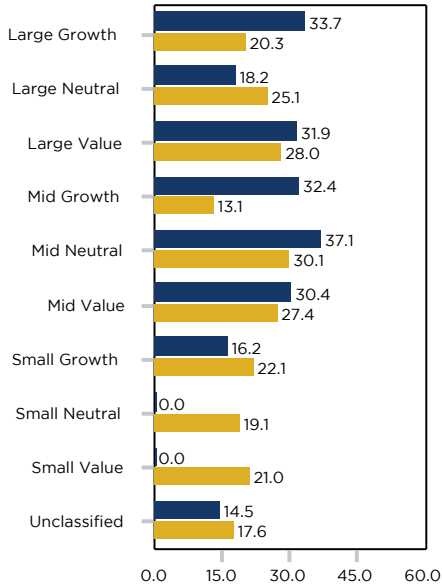


# BlackRock Equity Dividend Instl (MADVX)

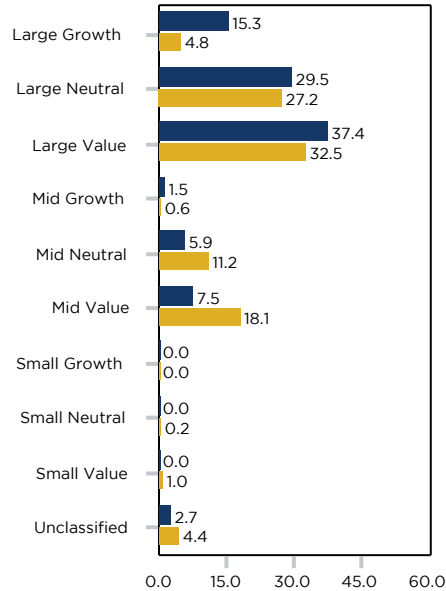
Index: Russell 1000 Value Index

Report Date: 12/31/2019

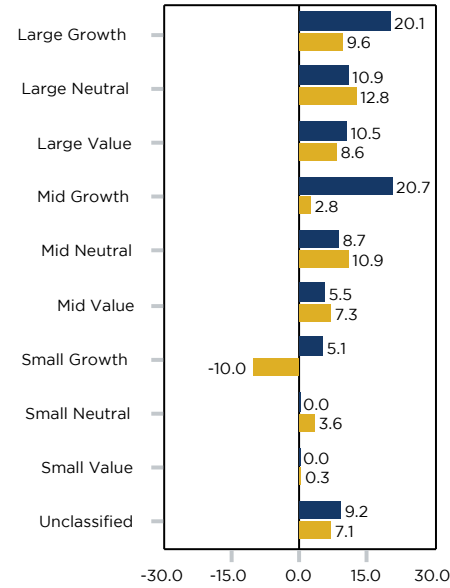
## Performance | 1 Year



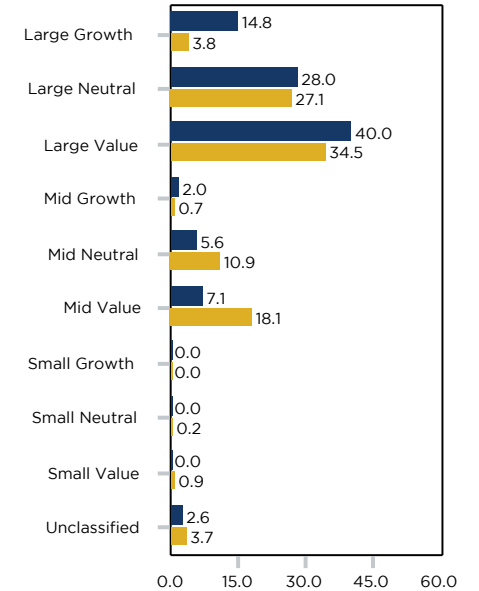
## Allocation | 1 Year



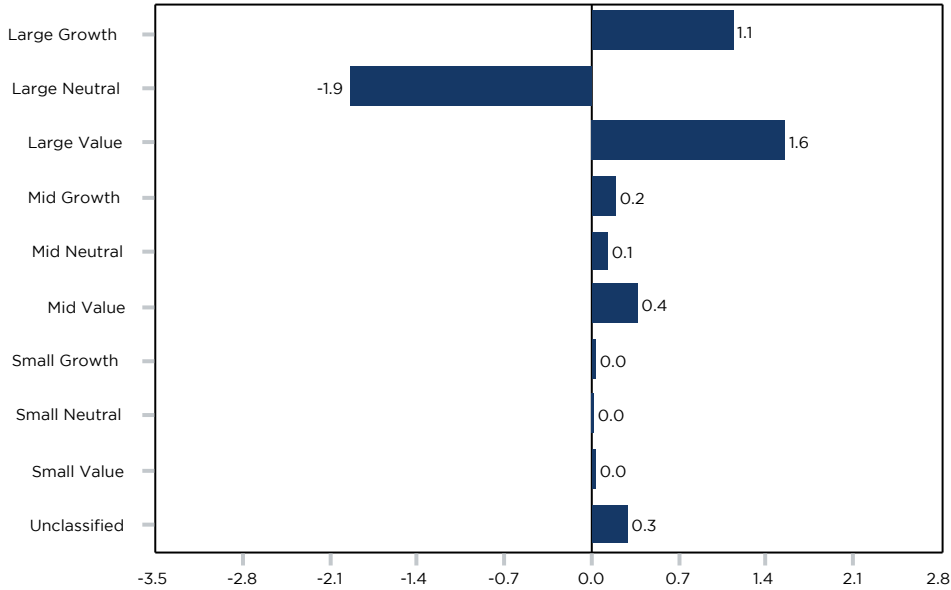
## Performance | 3 Years



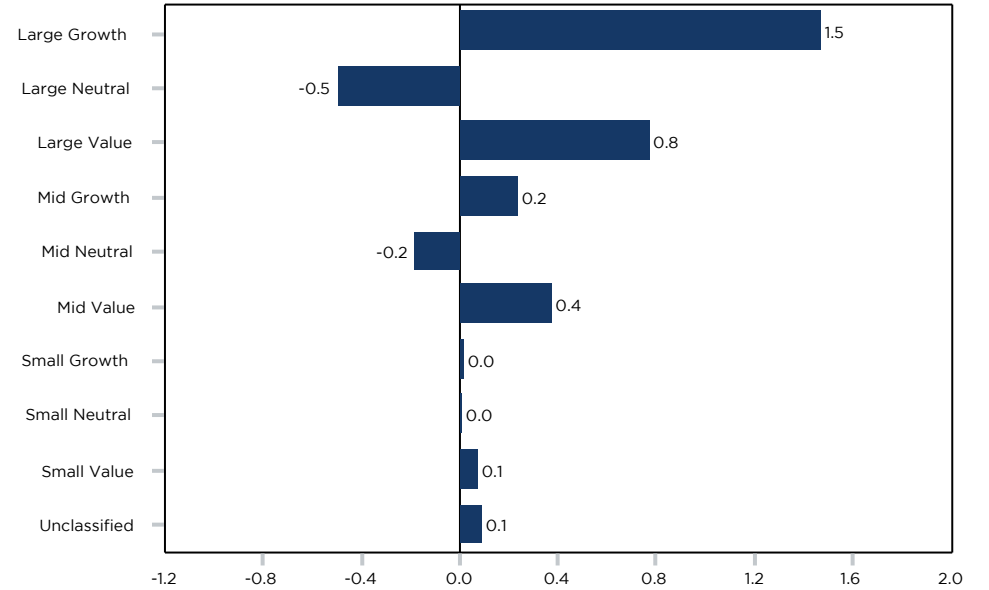
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years





# American Funds Fundamental Invs R6 (RFNGX)

Index: S&P 500 Index  
 Category: Large Blend  
 Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	11.07 (4)	28.02 (71)	28.02 (71)	14.05 (50)	11.67 (10)	12.73 (44)	-6.33 (60)	23.72 (11)	12.88 (17)	3.71 (6)
Benchmark	9.07	31.49	31.49	15.27	11.70	13.56	-4.38	21.83	11.96	1.38
Peer Group	8.83	30.17	30.17	14.03	10.44	12.52	-5.56	21.15	11.16	0.29
Population	1,992	1,939	1,939	1,773	1,632	1,408	2,158	2,012	2,063	2,049

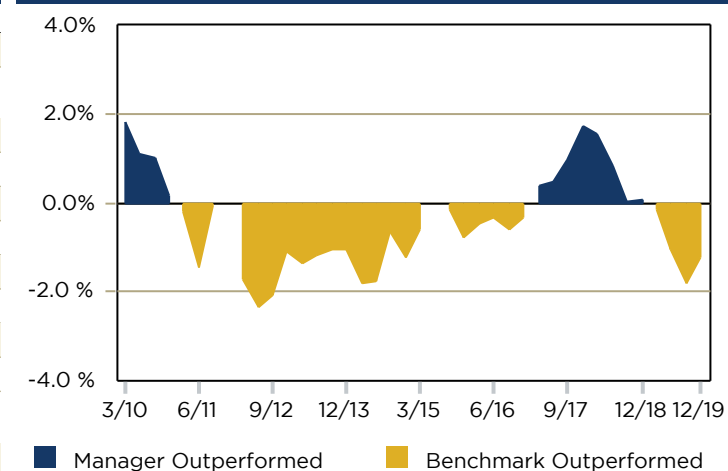
## Fund Information

Fund Inception	05/01/2009
Fund Assets	108,537 Million
Portfolio Assets	18,459 Million
Total # of Holdings	287
% in Top 10	25.86 %
PM	Team Managed
PM Tenure	26 Years 9 Months
Turnover	34.00 %
Gross Expense (%)	0.30 %
Net Expense (%)	0.30 %
New Investors	Open

## Fund Statistics

	3 Years	10 Years
Standard Deviation	11.69	12.65
<b>vs. S&amp;P 500 Index</b>		
Beta	0.95	1.00
Alpha	-0.42	-0.74
Information Ratio	-0.41	-0.30
Tracking Error	2.69	2.35
R-Squared	0.95	0.97
Up Market Capture	95.38	98.46
Down Market Capture	99.50	102.97
Consistency	41.67	43.33

## 3 Years Rolling Excess Performance



## Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	229,694	287,781
Median Mkt. Cap (\$M)	48,347	23,997
Price/Earnings ratio	23.5	22.9
Price/Book ratio	3.5	3.7
5 Yr. EPS Growth Rate (%)	18.1	14.3
Current Yield (%)	2.2	1.9
Beta (5 Years, Monthly)	0.97	1.00
Number of Stocks	284	505
Debt to Equity	0.6	0.6
Forecast P/E	21.8	22.6
Forecast EPS Growth	13.6	11.2
Return on Equity	0.0	0.0

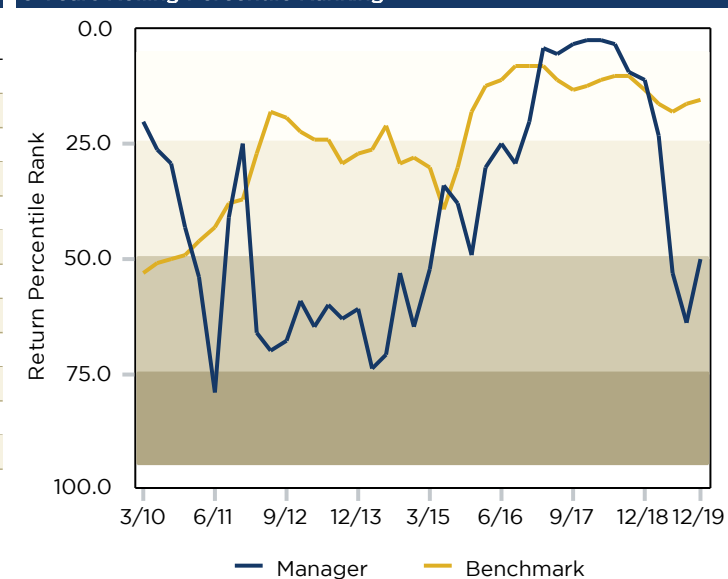
## vs. Risk Free

Sharpe Ratio	1.05	0.97
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## Sector Allocation

Sector	Portfolio Weight (%)	Benchmark Weight (%)
Communication Services	10.9	10.4
Consumer Discretionary	7.9	9.8
Consumer Staples	6.2	7.2
Energy	5.0	4.3
Financials	13.1	13.0
Health Care	13.2	14.2
Industrials	10.1	9.1
Information Technology	22.4	23.2
Materials	8.8	2.7
Real Estate	1.6	2.9
Utilities	0.9	3.3
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

## 3 Years Rolling Percentile Ranking



## Country/Region Allocation

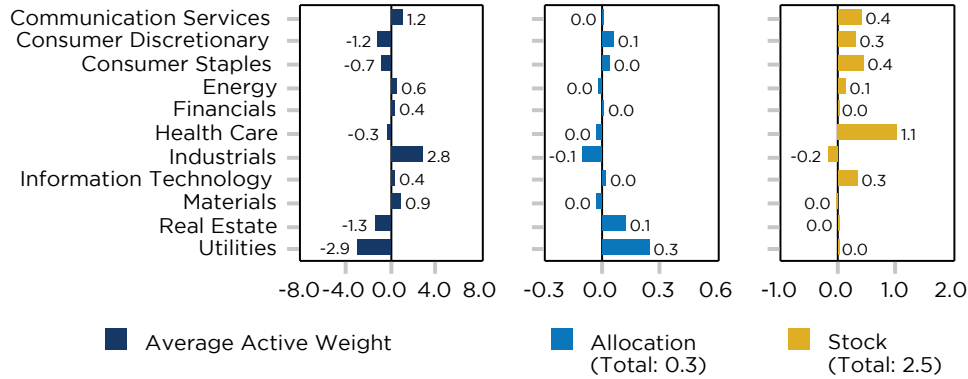
United States	76.5	96.5
Non-US Developed	20.2	3.5
Emerging Markets	3.2	0.0
Other	0.0	0.0
<b>Total</b>	<b>100.0</b>	<b>100.0</b>



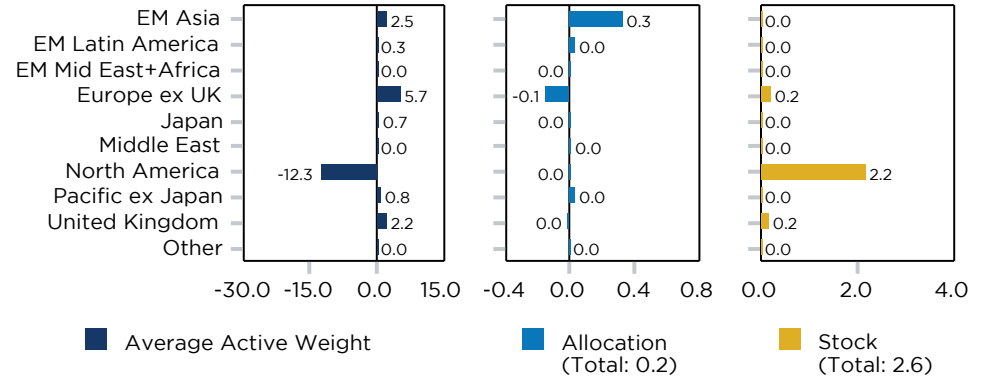
# American Funds Fundamental Invs R6 (RFNGX)

Index: S&P 500 Index  
Report Date: 12/31/2019

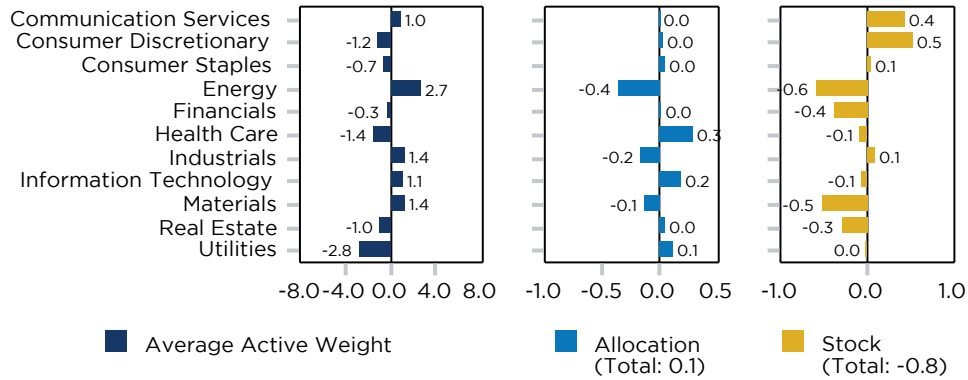
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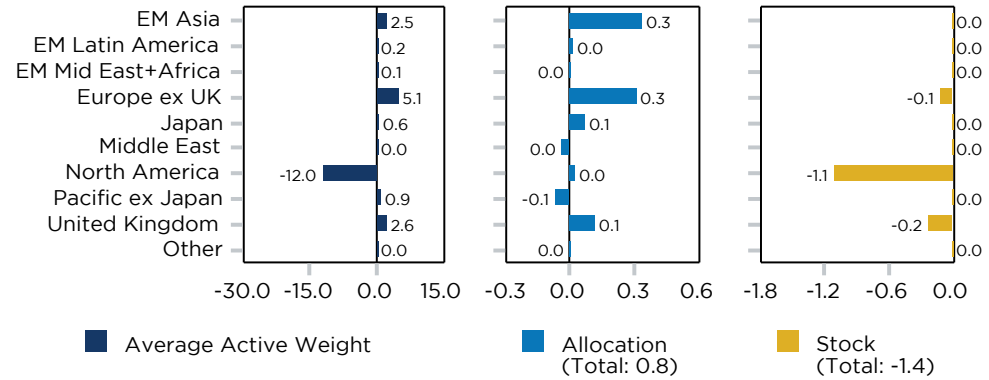
## 1 Quarter Region Attribution



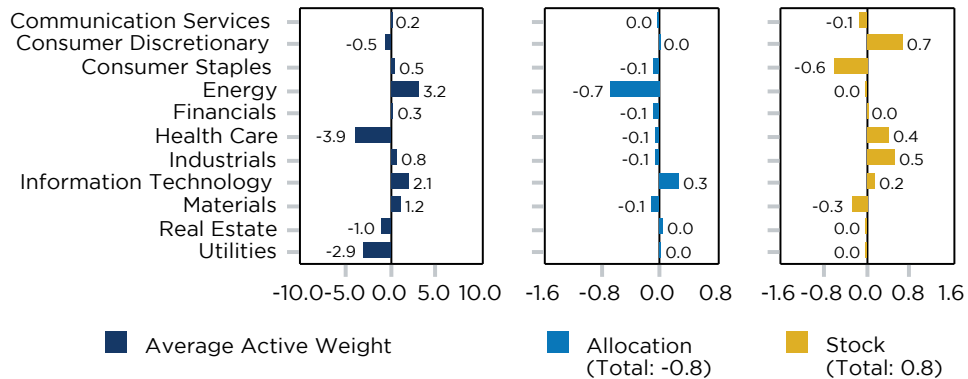
## 1 Year Sector Attribution



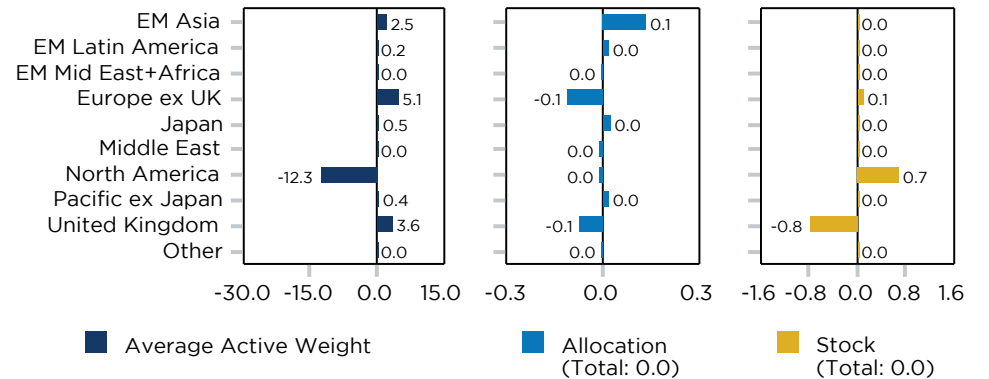
## 1 Year Region Attribution



## 3 Years Sector Attribution



## 3 Years Region Attribution





# American Funds Fundamental Invs R6 (RFNGX)

Index: S&P 500 Index

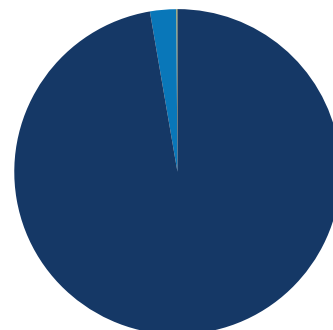
Report Date: 12/31/2019

## Top Ten Securities

Microsoft Corp	5.5 %
Broadcom Inc	3.5 %
UnitedHealth Group Inc	2.9 %
Facebook Inc A	2.7 %
Berkshire Hathaway Inc A	2.4 %
Amazon.com Inc	2.2 %
Charter Communications Inc A	1.8 %
Taiwan Semiconductor Manufacturing	1.8 %
Boeing Co	1.7 %
JPMorgan Chase & Co	1.6 %
<b>Total</b>	<b>25.9 %</b>

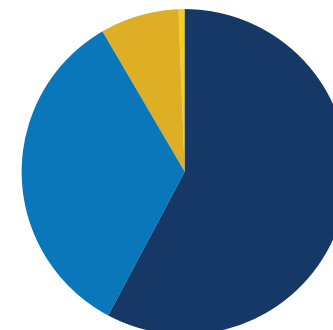
## Asset Allocation

- Equity
- Cash
- Fixed Income



## Market Capitalization

- Giant
- Large
- Medium
- Small
- Micro



## Top Ten Contributors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Unitedhealth Group Inc	2.44	0.83	0.43	35.80
Taiwan Semiconductor	1.64	0.00	0.30	27.33
Broadcom Inc	3.39	0.44	0.19	15.64
Regeneron Pharma	0.81	0.09	0.19	35.36
Centene Corp	0.56	0.07	0.18	45.33
Charter Communications Inc	2.24	0.27	0.17	17.70
Microsoft Corp	5.90	4.30	0.08	13.82
Intel Corp	1.64	0.92	0.06	16.78
Facebook Inc	2.55	1.73	0.05	15.26
JPMorgan Chase & Co	1.61	1.52	0.01	19.40

## Top Ten Contributors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Microsoft Corp	4.84	2.51	0.55	38.88
Amazon.com Inc	4.04	1.53	0.50	35.07
Broadcom Inc	3.20	0.36	0.28	25.03
Boeing Co	2.08	0.46	0.25	30.93
Taiwan Semiconductor	1.43	0.00	0.21	30.10
ASML Holding NV	0.81	0.00	0.20	39.61
Texas Instruments Inc	1.43	0.38	0.09	23.88
Home Depot Inc. (The)	2.35	0.85	0.08	20.50
JPMorgan Chase & Co	2.25	1.60	0.03	20.33
Apple Inc	1.75	3.21	-0.34	38.46

## Top Ten Detractors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Boeing Co	2.28	0.82	-0.34	-13.89
Home Depot Inc. (The)	1.78	1.03	-0.11	-5.28
Simon Property Group Inc.	1.04	0.19	-0.10	-2.99
DuPont De Nemours Inc	0.69	0.22	-0.09	-9.56
CME Group Inc	0.82	0.31	-0.06	-3.49
Sage Therapeutics Inc	0.08	0.00	-0.05	-48.54
Johnson Controls Intl	0.34	0.14	-0.03	-6.65
Restaurant Brands International Inc	0.15	0.00	-0.03	-9.68
Northrop Grumman Corp	0.39	0.24	-0.03	-7.88
Occidental Petroleum Corp	0.26	0.16	-0.01	-5.37

## Top Ten Detractors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Schlumberger Ltd	2.21	0.61	-0.54	-18.64
Peyto Exploration & Development Corp	0.34	0.00	-0.21	-47.70
British American Tobacco	0.69	0.00	-0.17	-9.59
The Kraft Heinz Co	0.63	0.27	-0.15	-25.27
Helmerich & Payne Inc.	0.51	0.04	-0.13	-11.91
Newell Brands Inc	0.42	0.11	-0.11	-21.54
Concho Resources Inc	0.49	0.10	-0.11	-12.75
Halliburton Co	0.49	0.24	-0.09	-21.52
Cimarex Energy Co.	0.26	0.07	-0.08	-26.59
General Electric Co	1.27	1.45	0.08	-26.85

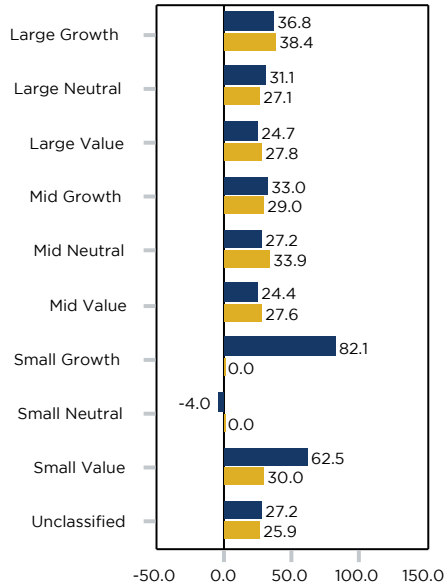


# American Funds Fundamental Invs R6 (RFNGX)

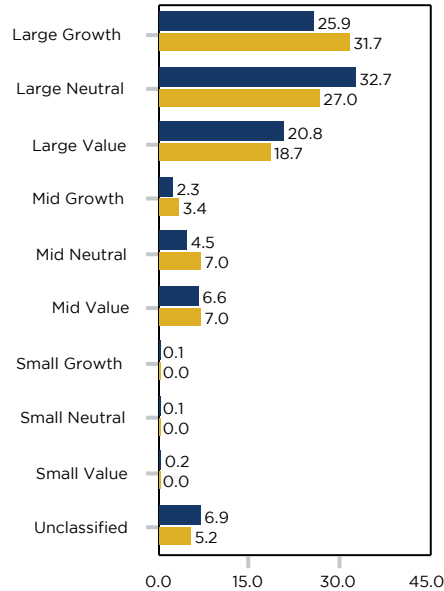
Index: S&P 500 Index

Report Date: 12/31/2019

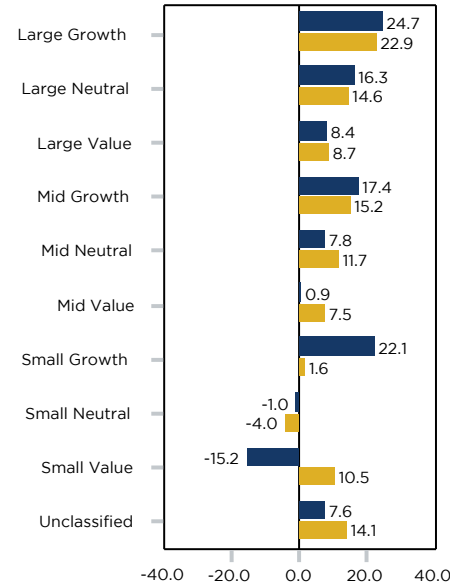
## Performance | 1 Year



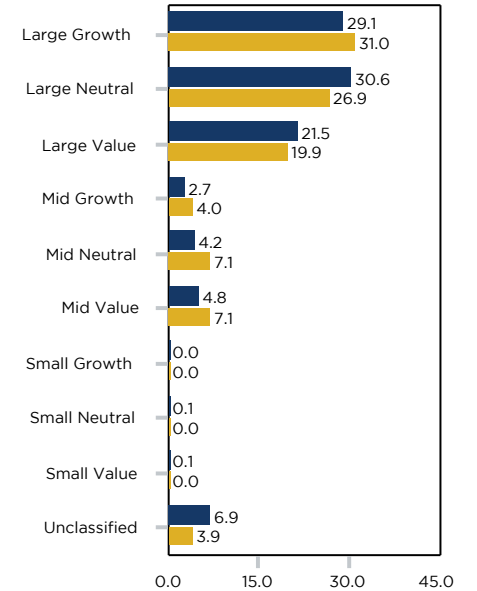
## Allocation | 1 Year



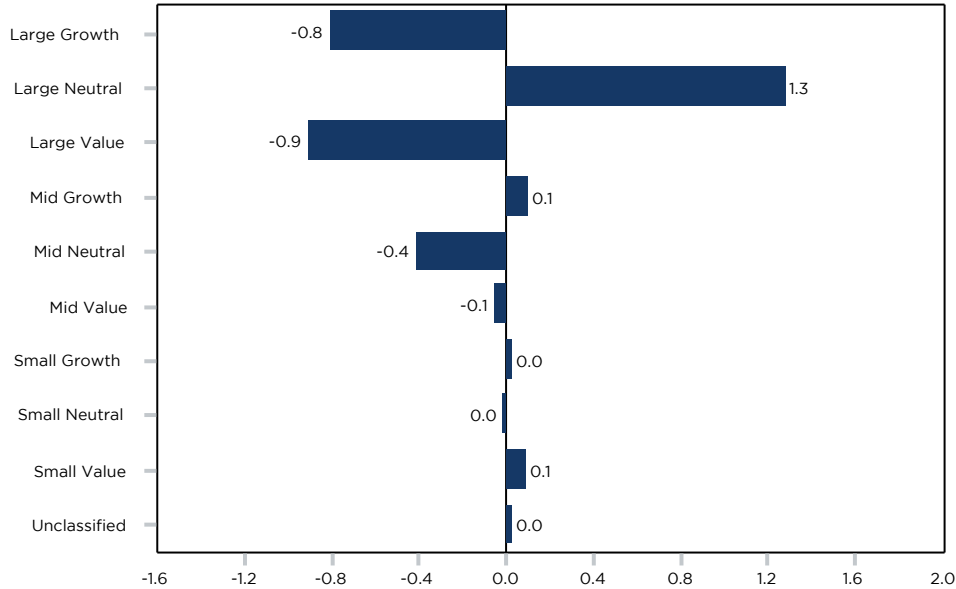
## Performance | 3 Years



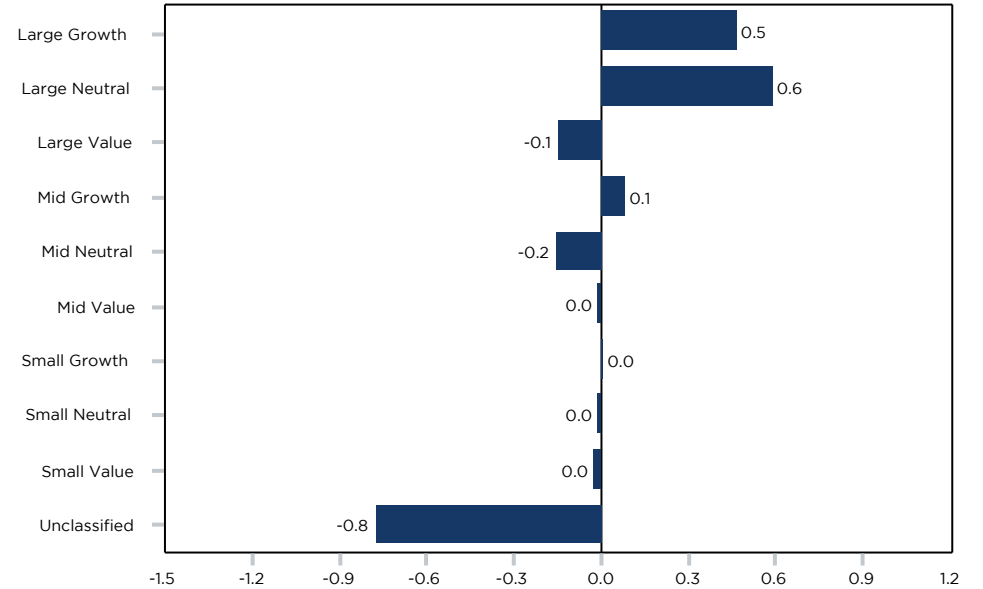
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years





# Parnassus Core Equity Institutional (PRILX)

Index: S&P 500 Index  
 Category: Large Blend  
 Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	6.32 (88)	30.96 (38)	30.96 (38)	15.24 (16)	11.03 (36)	12.97 (35)	0.05 (2)	16.81 (88)	10.60 (57)	-0.33 (60)
Benchmark	9.07	31.49	31.49	15.27	11.70	13.56	-4.38	21.83	11.96	1.38
Peer Group	8.83	30.17	30.17	14.03	10.44	12.52	-5.56	21.15	11.16	0.29
Population	1,992	1,939	1,939	1,773	1,632	1,408	2,158	2,012	2,063	2,049

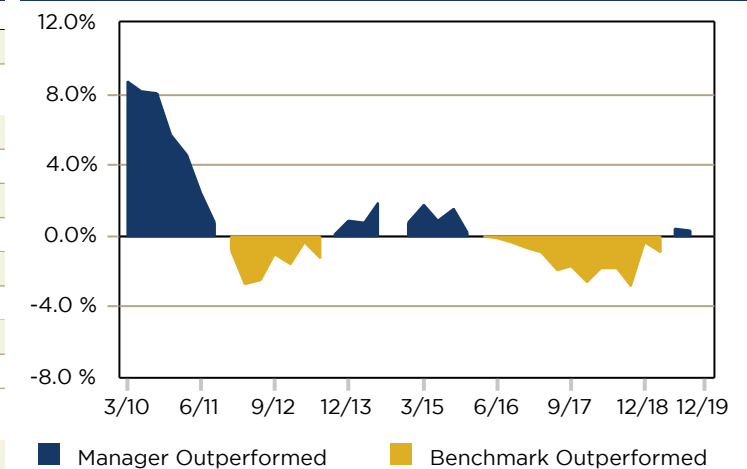
## Fund Information

Fund Inception	04/28/2006
Fund Assets	18,659 Million
Portfolio Assets	8,656 Million
Total # of Holdings	41
% in Top 10	37.67 %
PM	Ahlsten,T/Allen,B
PM Tenure	18 Years 7 Months
Turnover	31.43 %
Gross Expense (%)	0.63 %
Net Expense (%)	0.63 %
New Investors	Open

## Fund Statistics

	3 Years	10 Years
Standard Deviation	10.58	11.21
<b>vs. S&amp;P 500 Index</b>		
Beta	0.85	0.87
Alpha	2.16	1.13
Information Ratio	-0.05	-0.19
Tracking Error	3.68	3.54
R-Squared	0.91	0.92
Up Market Capture	89.90	90.26
Down Market Capture	76.58	84.40
Consistency	47.22	45.83

## 3 Years Rolling Excess Performance



## Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	226,384	287,781
Median Mkt. Cap (\$M)	62,514	23,997
Price/Earnings ratio	27.6	22.9
Price/Book ratio	4.3	3.7
5 Yr. EPS Growth Rate (%)	9.8	14.3
Current Yield (%)	1.7	1.9
Beta (5 Years, Monthly)	0.85	1.00
Number of Stocks	39	505
Debt to Equity	1.2	0.6
Forecast P/E	24.2	22.6
Forecast EPS Growth	9.6	11.2
Return on Equity	0.1	0.0

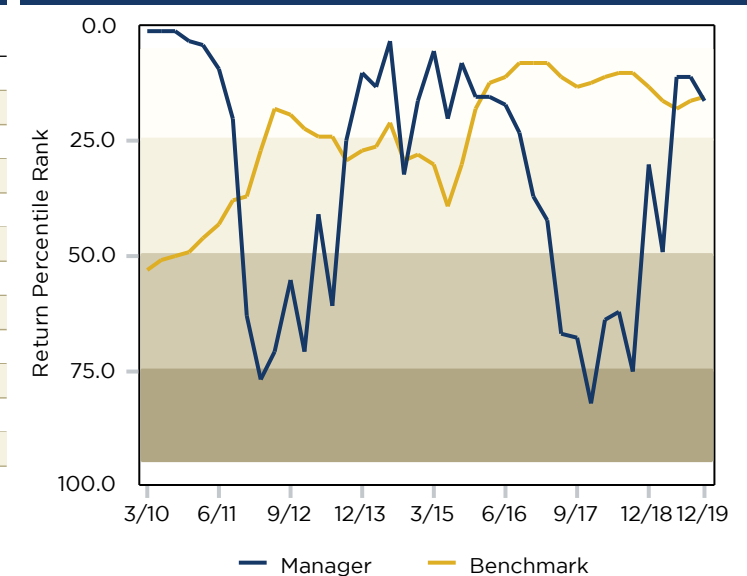
## vs. Risk Free

Sharpe Ratio	1.25	1.10
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## Sector Allocation

Sector	Portfolio Weight (%)	Benchmark Weight (%)
Communication Services	9.8	10.4
Consumer Discretionary	4.0	9.8
Consumer Staples	14.9	7.2
Energy	0.0	4.3
Financials	10.9	13.0
Health Care	11.9	14.2
Industrials	14.3	9.1
Information Technology	24.0	23.2
Materials	5.9	2.7
Real Estate	4.3	2.9
Utilities	0.0	3.3
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

## 3 Years Rolling Percentile Ranking



## Country/Region Allocation

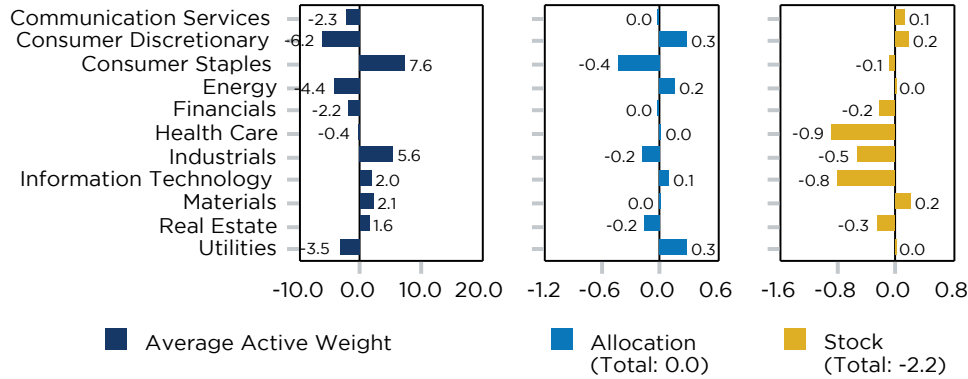
United States	95.0	96.5
Non-US Developed	5.0	3.5
<b>Total</b>	<b>100.0</b>	<b>100.0</b>



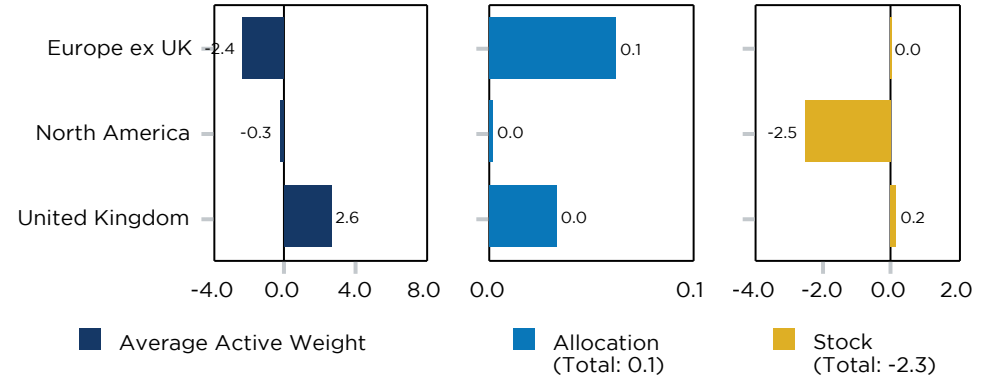
# Parnassus Core Equity Institutional (PRILX)

Index: S&P 500 Index  
Report Date: 12/31/2019

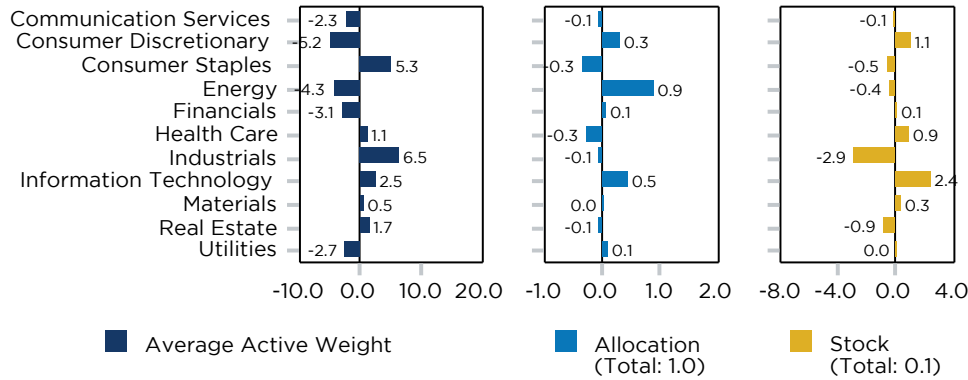
## 1 Quarter Sector Attribution



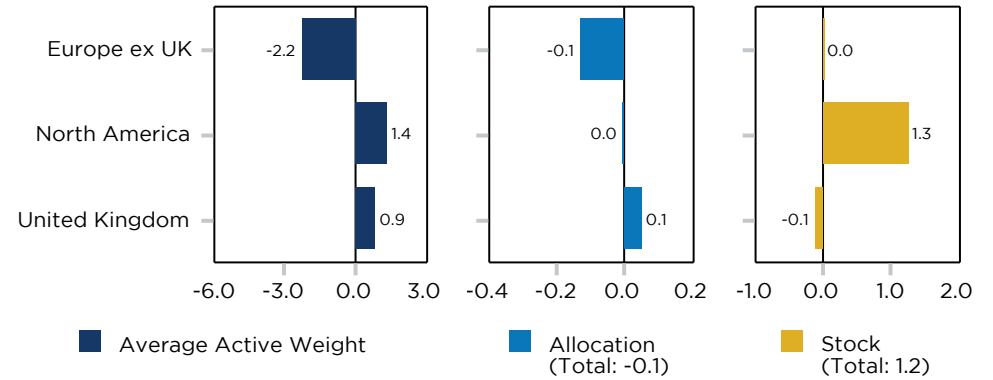
## 1 Quarter Region Attribution



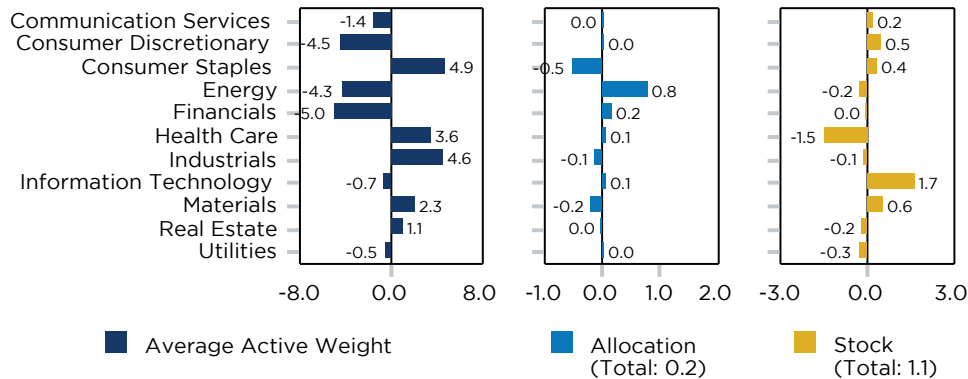
## 1 Year Sector Attribution



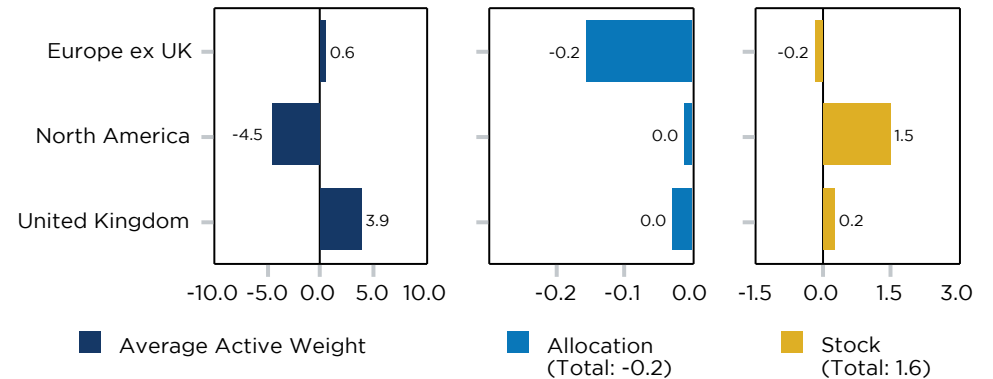
## 1 Year Region Attribution



## 3 Years Sector Attribution



## 3 Years Region Attribution







# Parnassus Core Equity Institutional (PRILX)

Index: S&P 500 Index

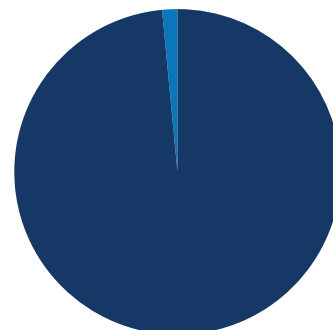
Report Date: 12/31/2019

## Top Ten Securities

Microsoft Corp	6.3 %
The Walt Disney Co	4.9 %
Danaher Corp	3.6 %
Verizon Communications Inc	3.5 %
American Express Co	3.3 %
CME Group Inc Class A	3.3 %
Costco Wholesale Corp	3.2 %
Linde PLC	3.2 %
Clorox Co	3.2 %
Bank of America Corp	3.2 %
<b>Total</b>	<b>37.7 %</b>

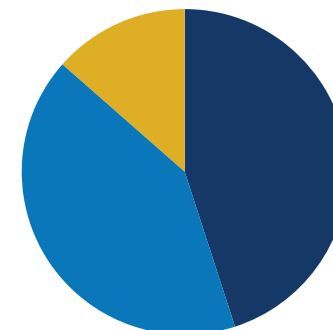
## Asset Allocation

- Equity
- Cash
- Fixed Income



## Market Capitalization

- Giant
- Large
- Medium
- Small
- Micro



## Top Ten Contributors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
NVIDIA Corporation	2.00	0.43	0.41	35.27
CVS Health Corp	2.67	0.33	0.23	18.69
Bank of America Corp	2.81	0.99	0.22	21.40
Pentair plc	1.51	0.03	0.19	21.92
Microsoft Corp	6.48	4.30	0.10	13.82
Walt Disney Co (The)	4.87	0.95	0.10	11.65
V.F. Corp	2.99	0.12	0.10	12.58
PPG Industries Inc.	2.54	0.11	0.10	13.09
Mastercard Inc	3.71	0.98	0.03	10.08
Apple Inc	2.40	3.85	-0.33	31.50

## Top Ten Contributors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
PayPal Holdings Inc	2.29	0.23	0.51	39.94
Micron Technology Inc.	2.51	0.12	0.47	34.87
Mastercard Inc	2.13	0.51	0.45	43.35
Danaher Corp	3.79	0.25	0.38	26.13
V.F. Corp	2.93	0.09	0.38	28.74
Motorola Solutions Inc	3.11	0.07	0.36	27.12
Linde Plc	3.13	0.17	0.28	24.63
Apple Inc	4.07	3.21	0.20	38.46
Intel Corp	3.65	0.89	0.16	21.24
Sysco Corp	3.27	0.14	0.10	18.32

## Top Ten Detractors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Verisk Analytics Inc	3.36	0.10	-0.47	-5.40
CME Group Inc	3.09	0.31	-0.35	-3.49
Motorola Solutions Inc	2.58	0.11	-0.35	-5.07
Digital Realty Trust Inc	1.90	0.11	-0.29	-6.89
Waste Management Inc.	3.11	0.18	-0.28	-0.45
Xylem Inc	2.06	0.06	-0.20	-0.76
Public Storage	1.05	0.15	-0.19	-12.32
Cisco Systems Inc	2.21	0.85	-0.15	-2.21
AvalonBay Communities Inc.	1.04	0.12	-0.10	-1.90
Starbucks Corp	0.96	0.43	-0.05	-0.08

## Top Ten Detractors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
National Oilwell Varco Inc	3.18	0.07	-0.85	-11.96
Gilead Sciences Inc	4.60	0.49	-0.63	0.02
Patterson Cos Inc	1.63	0.02	-0.53	-17.82
Wells Fargo & Co	5.07	1.29	-0.49	2.41
Allergan PLC	3.30	0.41	-0.48	-1.46
CVS Health Corp	3.01	0.44	-0.37	0.91
United Parcel Service Inc	3.38	0.41	-0.33	4.00
MDU Resources Group Inc.	2.27	0.00	-0.25	4.10
Compass Minerals International Inc.	1.21	0.00	-0.23	-3.50
Iron Mountain Inc	2.08	0.04	-0.18	6.37

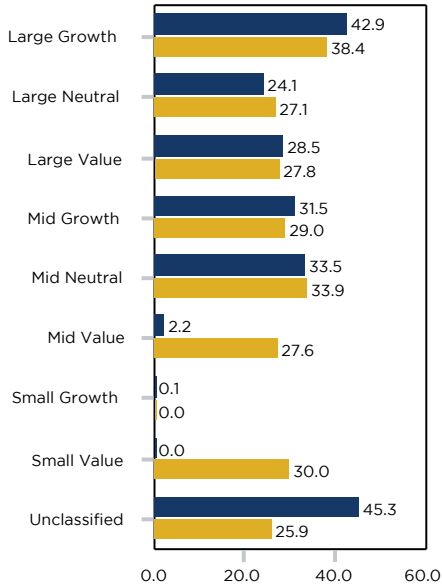


# Parnassus Core Equity Institutional (PRILX)

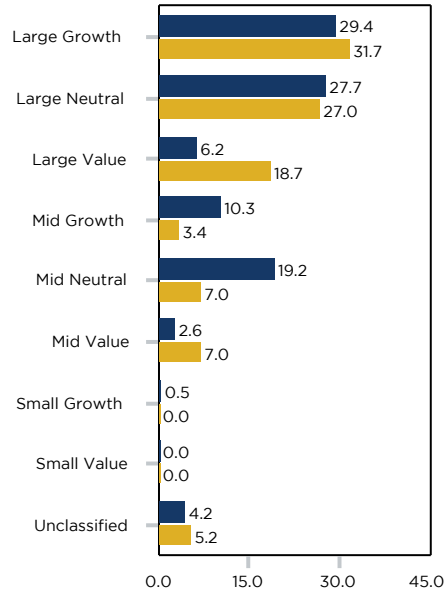
Index: S&P 500 Index

Report Date: 12/31/2019

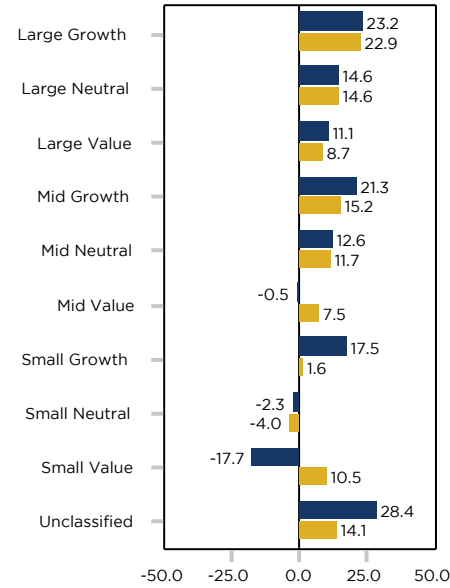
## Performance | 1 Year



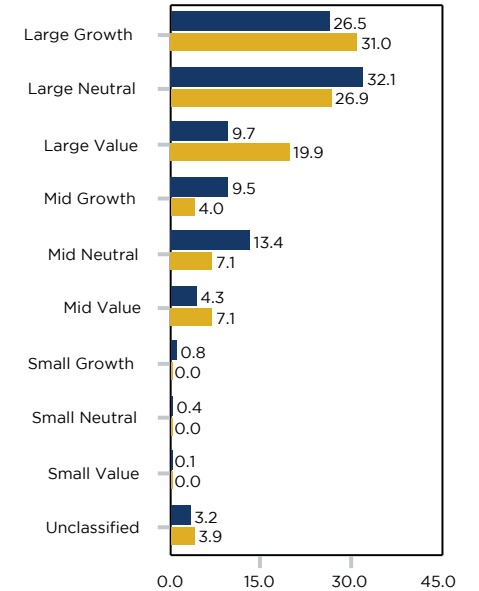
## Allocation | 1 Year



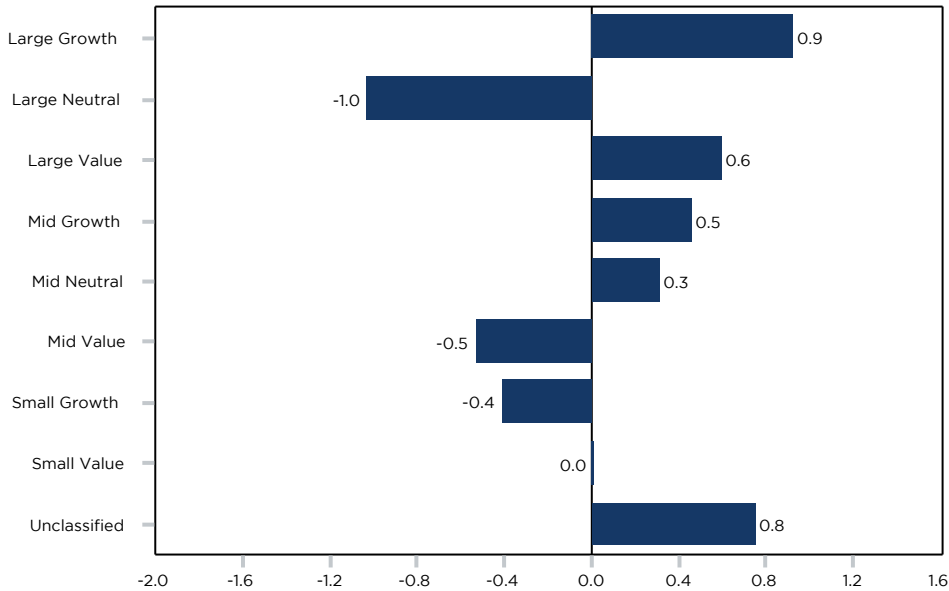
## Performance | 3 Years



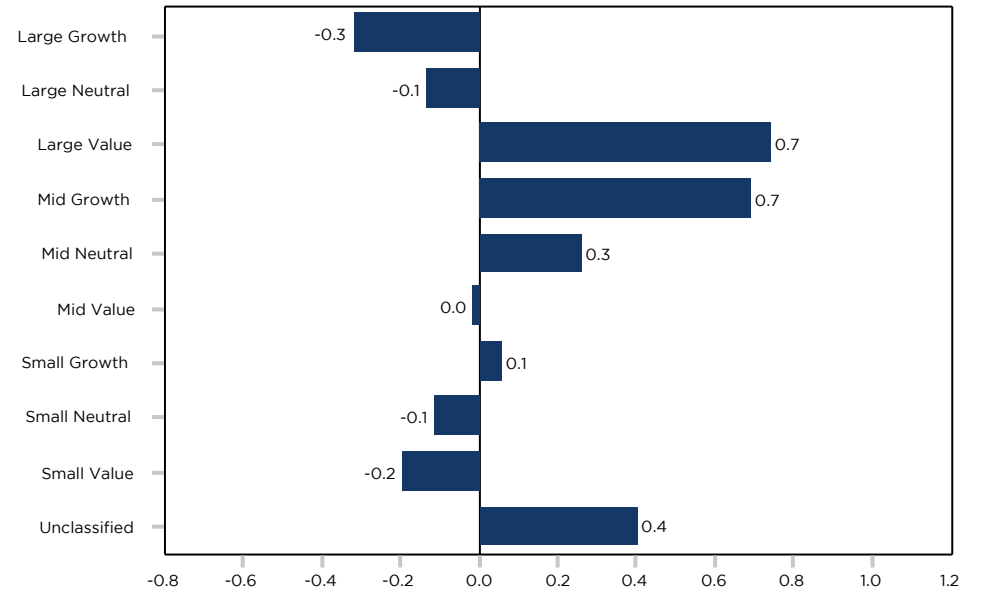
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years



## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	9.06 (30)	31.46 (23)	31.46 (23)	15.24 (17)	11.67 (10)	13.53 (9)	-4.42 (24)	21.79 (30)	11.93 (30)	1.37 (22)
Benchmark	9.07	31.49	31.49	15.27	11.70	13.56	-4.38	21.83	11.96	1.38
Peer Group	8.83	30.17	30.17	14.03	10.44	12.52	-5.56	21.15	11.16	0.29
Population	1,992	1,939	1,939	1,773	1,632	1,408	2,158	2,012	2,063	2,049

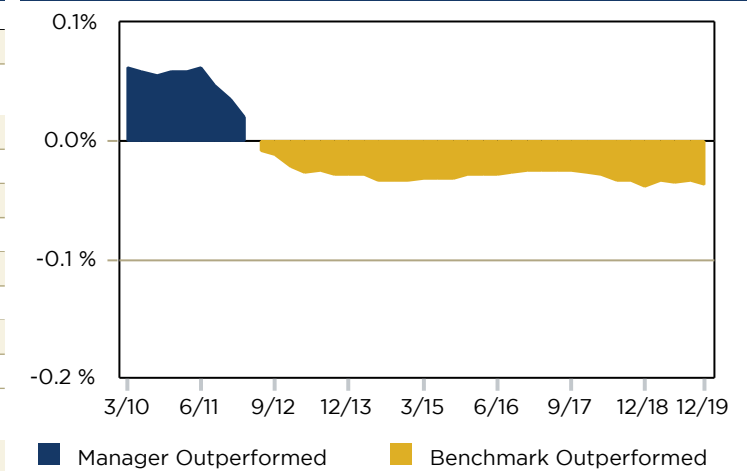
## Fund Information

Fund Inception	07/31/1990
Fund Assets	242,173 Million
Portfolio Assets	116,814 Million
Total # of Holdings	510
% in Top 10	22.63 %
PM	Butler,D/Louie,M
PM Tenure	19 Years
Turnover	6.00 %
Gross Expense (%)	0.04 %
Net Expense (%)	0.04 %
New Investors	Open

## Fund Statistics

	3 Years	10 Years
Standard Deviation	11.93	12.40
<b>vs. S&amp;P 500 Index</b>		
Beta	1.00	1.00
Alpha	-0.03	-0.03
Information Ratio	-2.90	-1.95
Tracking Error	0.01	0.01
R-Squared	1.00	1.00
Up Market Capture	99.90	99.92
Down Market Capture	100.05	100.06
Consistency	16.67	25.00

## 3 Years Rolling Excess Performance



## Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	287,803	287,781
Median Mkt. Cap (\$M)	23,933	23,997
Price/Earnings ratio	22.9	22.9
Price/Book ratio	3.7	3.7
5 Yr. EPS Growth Rate (%)	14.3	14.3
Current Yield (%)	1.9	1.9
Beta (5 Years, Monthly)	1.00	1.00
Number of Stocks	509	505
Debt to Equity	0.6	0.6
Forecast P/E	22.6	22.6
Forecast EPS Growth	11.2	11.2
Return on Equity	0.0	0.0

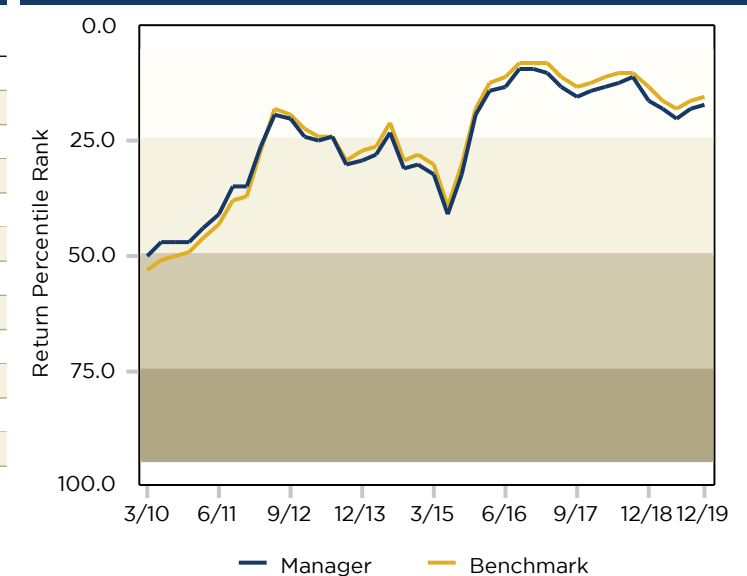
## vs. Risk Free

Sharpe Ratio	1.12	1.04
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## Sector Allocation

Sector	Portfolio Weight (%)	Benchmark Weight (%)
Communication Services	10.4	10.4
Consumer Discretionary	9.8	9.8
Consumer Staples	7.2	7.2
Energy	4.3	4.3
Financials	12.9	13.0
Health Care	14.2	14.2
Industrials	9.1	9.1
Information Technology	23.2	23.2
Materials	2.7	2.7
Real Estate	2.9	2.9
Utilities	3.3	3.3
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

## 3 Years Rolling Percentile Ranking

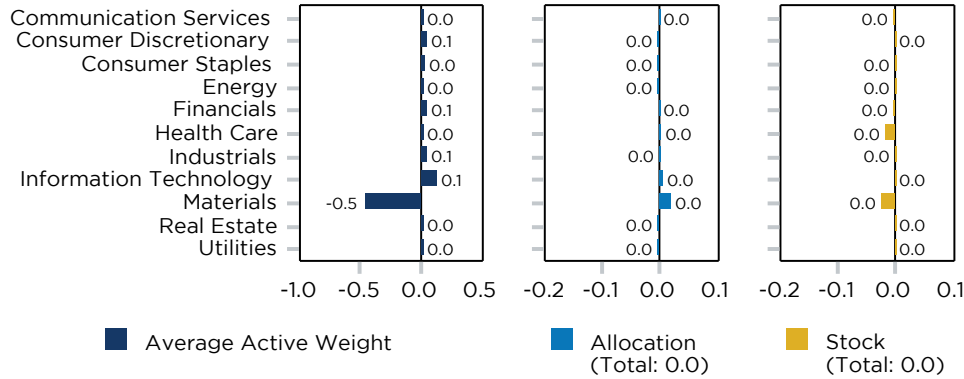


## Country/Region Allocation

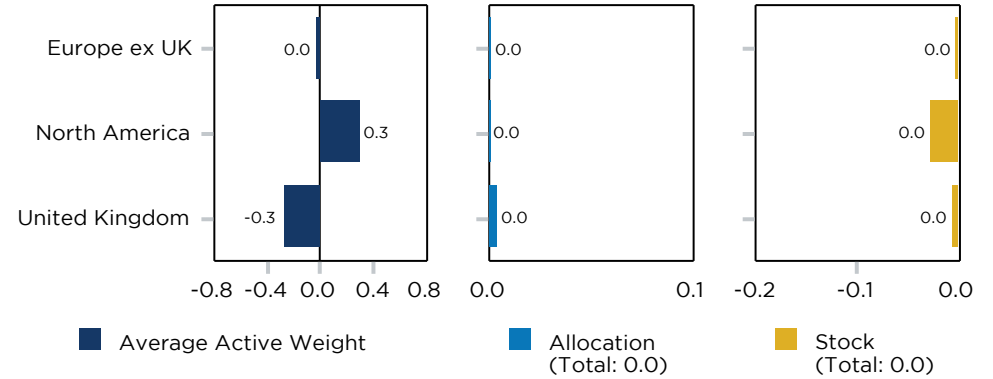
United States	96.5	96.5
Non-US Developed	3.5	3.5
<b>Total</b>	<b>100.0</b>	<b>100.0</b>



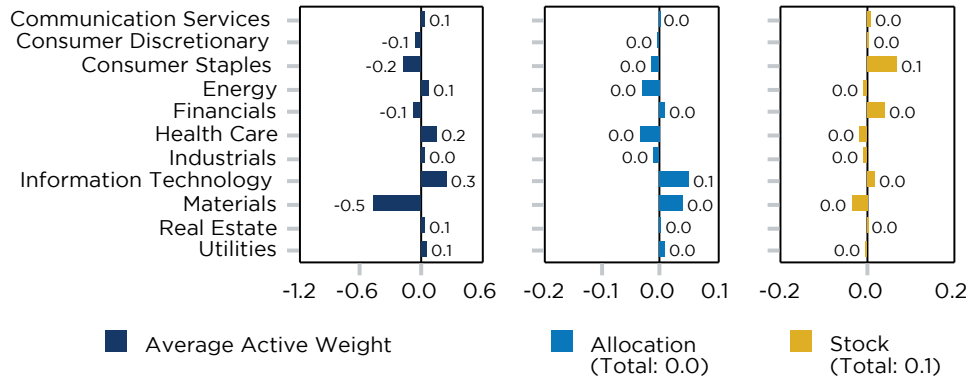
## 1 Quarter Sector Attribution



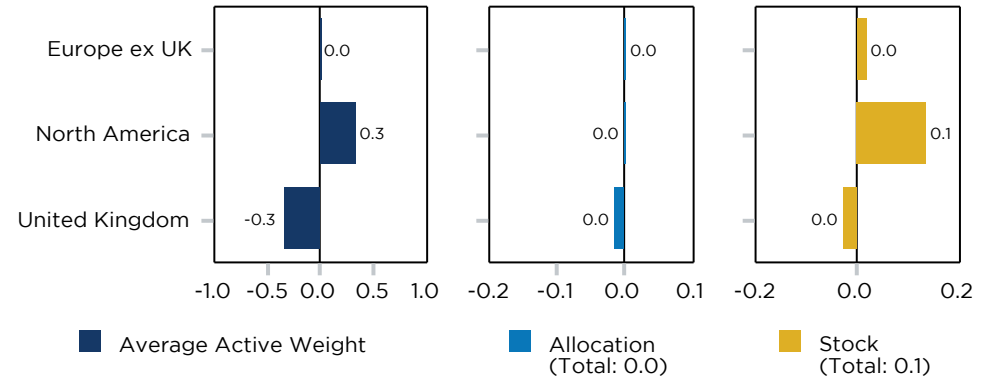
## 1 Quarter Region Attribution



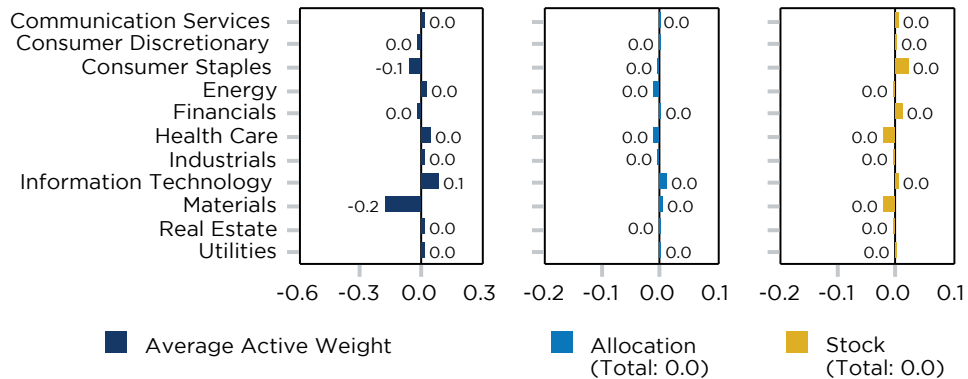
## 1 Year Sector Attribution



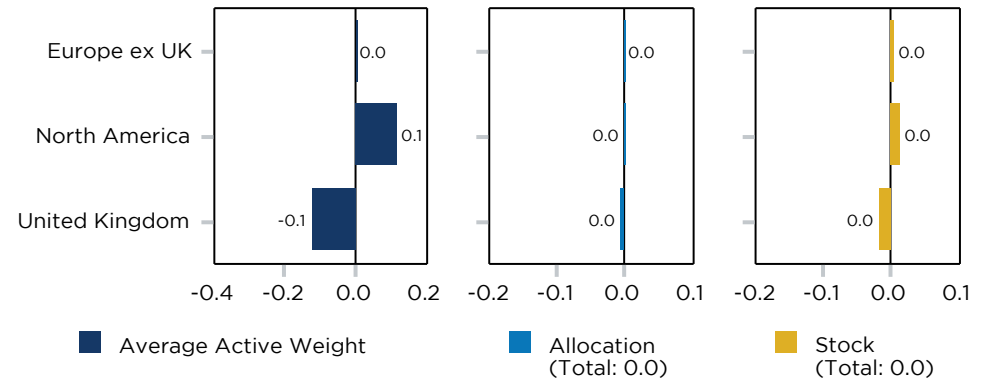
## 1 Year Region Attribution



## 3 Years Sector Attribution



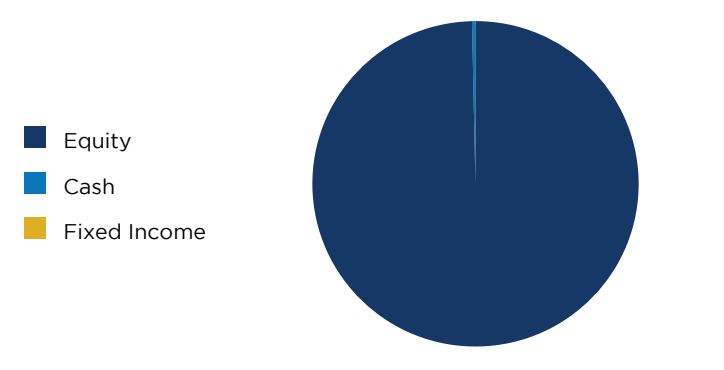
## 3 Years Region Attribution



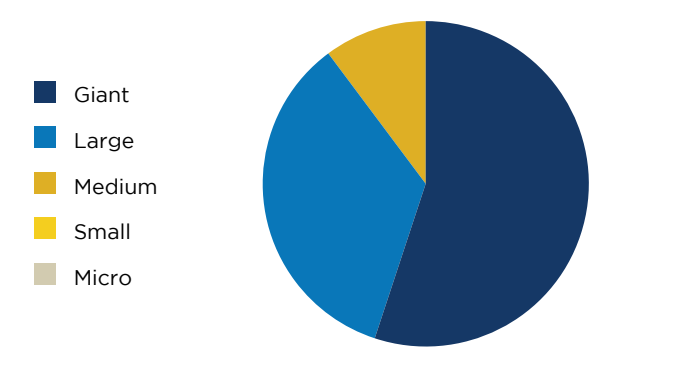
## Top Ten Securities

Apple Inc	4.6 %
Microsoft Corp	4.5 %
Amazon.com Inc	2.9 %
Facebook Inc A	1.8 %
Berkshire Hathaway Inc B	1.7 %
JPMorgan Chase & Co	1.6 %
Alphabet Inc A	1.5 %
Alphabet Inc Class C	1.5 %
Johnson & Johnson	1.4 %
Visa Inc Class A	1.2 %
<b>Total</b>	<b>22.6 %</b>

## Asset Allocation



## Market Capitalization



## Top Ten Contributors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Apple Inc	3.88	3.85	0.01	31.50
JPMorgan Chase & Co	1.54	1.52	0.00	19.40
Microsoft Corp	4.33	4.30	0.00	13.82
Facebook Inc	1.75	1.73	0.00	15.26
Bank of America Corp	1.00	0.99	0.00	21.40
Intel Corp	0.93	0.92	0.00	16.78
Johnson & Johnson	1.39	1.38	0.00	13.53
NVIDIA Corporation	0.43	0.43	0.00	35.27
Amazon.com Inc	2.94	2.92	0.00	6.45
Unitedhealth Group Inc	0.82	0.83	0.00	35.80

## Top Ten Contributors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Apple Inc	3.21	3.21	0.00	38.46
Microsoft Corp	2.51	2.51	0.00	38.88
Amazon.com Inc	1.53	1.53	0.00	35.07
JPMorgan Chase & Co	1.60	1.60	0.00	20.33
Facebook Inc	1.40	1.40	0.00	21.28
Visa Inc	0.76	0.76	0.00	34.94
Alphabet Inc	1.19	1.19	0.00	20.10
Alphabet Inc	1.22	1.22	0.00	19.12
Mastercard Inc	0.51	0.51	0.00	43.35
Bank of America Corp	1.16	1.16	0.00	19.02

## Top Ten Detractors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Boeing Co	0.83	0.82	0.00	-13.89
McDonald's Corp	0.67	0.66	0.00	-7.38
IBM Corp.	0.53	0.52	0.00	-6.74
Home Depot Inc. (The)	1.04	1.03	0.00	-5.28
Cisco Systems Inc	0.86	0.85	0.00	-2.21
Twitter Inc	0.13	0.13	0.00	-22.21
Ventas Inc.	0.11	0.11	0.00	-19.86
DuPont De Nemours Inc	0.22	0.22	0.00	-9.56
Dollar Tree Inc	0.11	0.11	0.00	-17.62
Northrop Grumman Corp	0.24	0.24	0.00	-7.88

## Top Ten Detractors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
General Electric Co	1.45	1.45	0.00	-26.85
Schlumberger Ltd	0.61	0.61	0.00	-18.64
Exxon Mobil Corp	1.94	1.94	0.00	-4.32
PG&E Corp	0.16	0.16	0.00	-43.22
The Kraft Heinz Co	0.27	0.27	0.00	-25.27
Halliburton Co	0.24	0.24	0.00	-21.52
DuPont De Nemours Inc	0.33	0.33	0.00	-12.26
Occidental Petroleum Corp	0.28	0.28	0.00	-12.16
Altria Group Inc	0.68	0.68	0.00	-4.85
Walgreens Boots Alliance Inc	0.37	0.37	0.00	-8.47

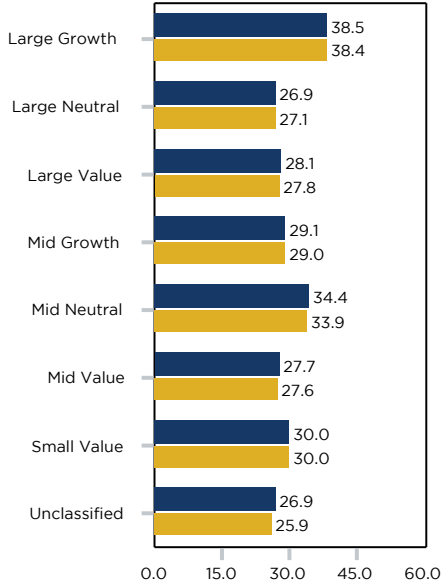


# Vanguard Institutional Index I (VINIX)

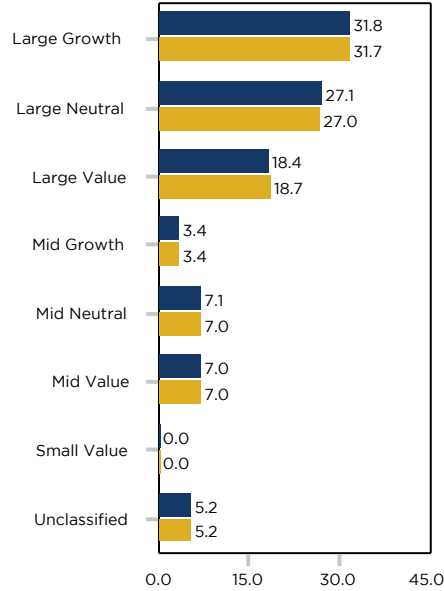
Index: S&P 500 Index

Report Date: 12/31/2019

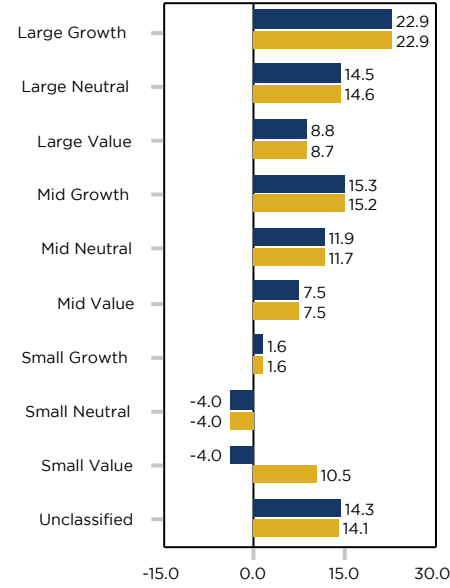
## Performance | 1 Year



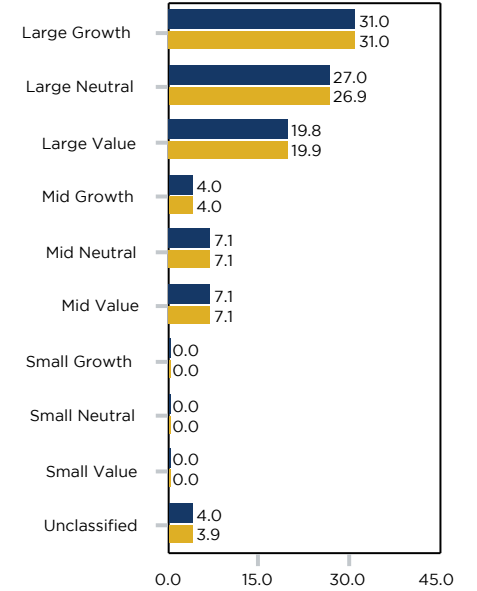
## Allocation | 1 Year



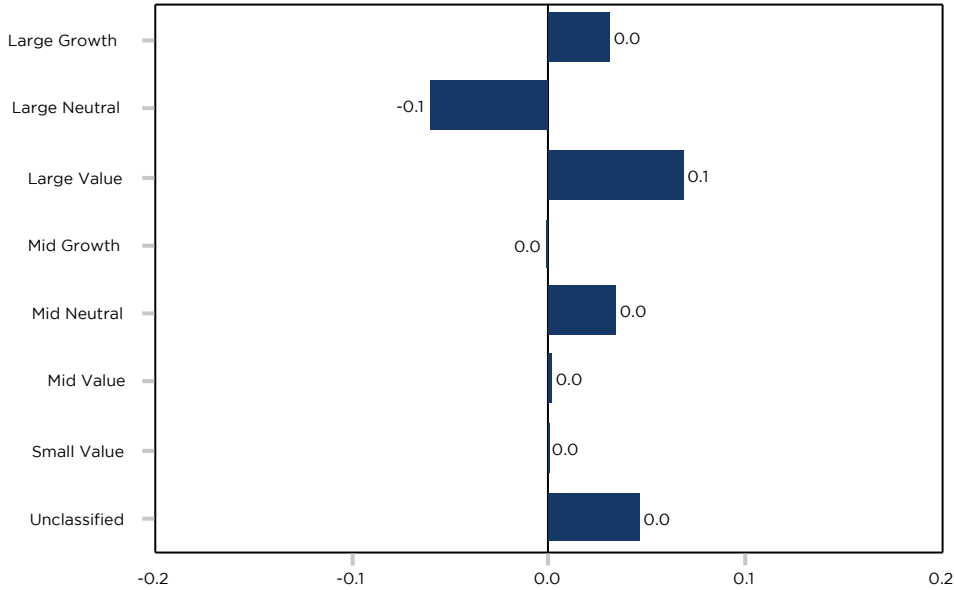
## Performance | 3 Years



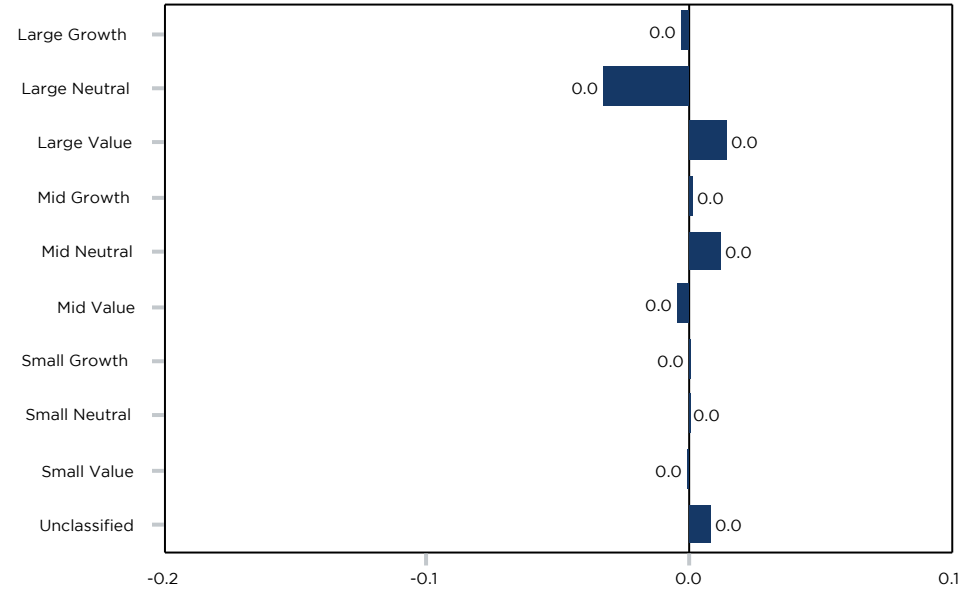
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years



## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	8.65 (73)	33.41 (40)	33.41 (40)	20.99 (27)	13.77 (32)	12.98 (69)	2.67 (11)	29.29 (46)	7.85 (17)	-0.21 (86)
Benchmark	9.07	31.49	31.49	15.27	11.70	13.56	-4.38	21.83	11.96	1.38
Peer Group	9.56	32.39	32.39	18.89	12.67	13.68	-1.85	28.66	2.94	4.47
Population	1,828	1,791	1,791	1,698	1,614	1,392	2,026	1,899	2,003	2,013

## Fund Information

Fund Inception	09/25/2013
Fund Assets	2,221 Million
Portfolio Assets	838 Million
Total # of Holdings	35
% in Top 10	44.70 %
PM	Kaiser,N/Klimo,S/Salam,M
PM Tenure	25 Years 10 Months
Turnover	0.00 %
Gross Expense (%)	0.79 %
Net Expense (%)	0.79 %
New Investors	Open

## Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	184,171	287,781
Median Mkt. Cap (\$M)	78,602	23,997
Price/Earnings ratio	26.7	22.9
Price/Book ratio	8.2	3.7
5 Yr. EPS Growth Rate (%)	15.0	14.3
Current Yield (%)	1.5	1.9
Beta (5 Years, Monthly)	0.97	1.00
Number of Stocks	33	505
Debt to Equity	1.3	0.6
Forecast P/E	24.0	22.6
Forecast EPS Growth	11.9	11.2
Return on Equity	0.1	0.0

## Country/Region Allocation

United States	87.5	96.5
Non-US Developed	9.1	3.5
Emerging Markets	3.4	0.0
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

## Fund Statistics

	3 Years	10 Years
Standard Deviation	12.06	12.18
<b>vs. S&amp;P 500 Index</b>		
Beta	0.96	0.94
Alpha	5.67	0.27
Information Ratio	1.29	-0.15
Tracking Error	3.81	3.61
R-Squared	0.90	0.92
Up Market Capture	112.86	95.54
Down Market Capture	83.05	95.02
Consistency	52.78	44.17

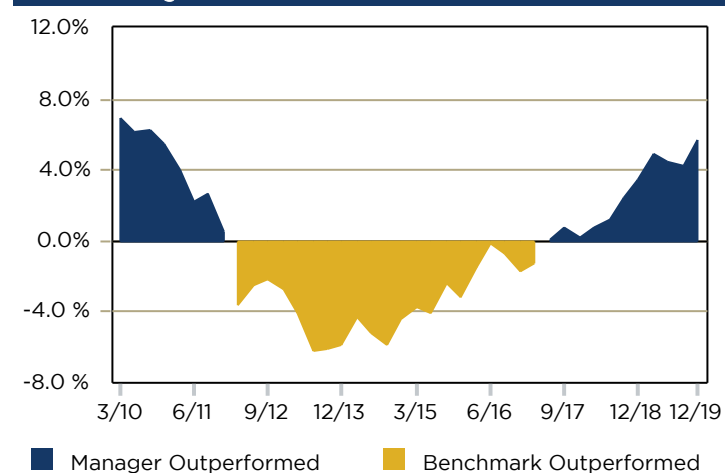
## vs. Risk Free

Sharpe Ratio	1.51	1.02
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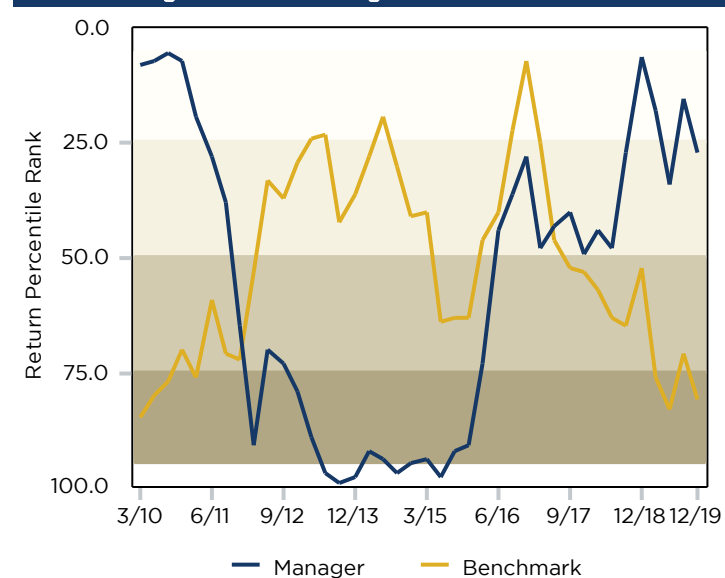
## Sector Allocation

Sector	Portfolio Weight (%)	Benchmark Weight (%)
Communication Services	0.0	10.4
Consumer Discretionary	6.4	9.8
Consumer Staples	11.9	7.2
Energy	0.0	4.3
Financials	0.0	13.0
Health Care	19.0	14.2
Industrials	15.7	9.1
Information Technology	47.1	23.2
Materials	0.0	2.7
Real Estate	0.0	2.9
Utilities	0.0	3.3
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

## 3 Years Rolling Excess Performance

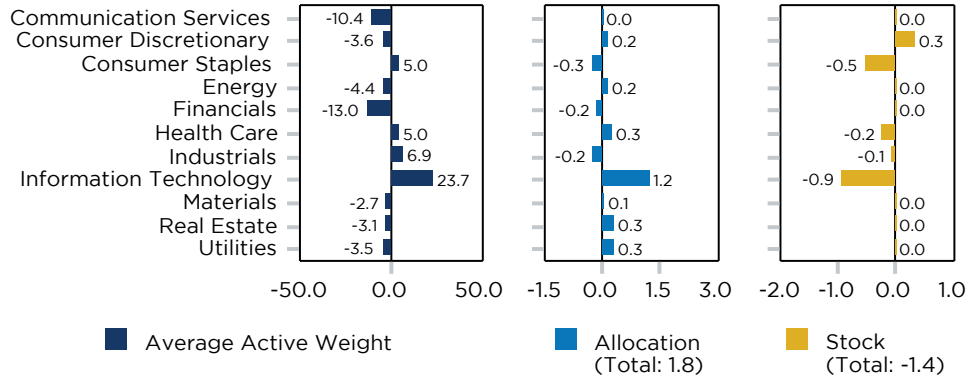


## 3 Years Rolling Percentile Ranking

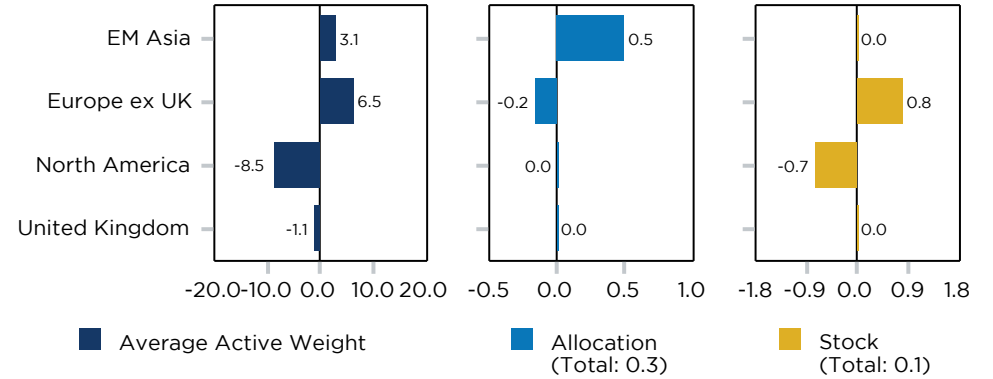




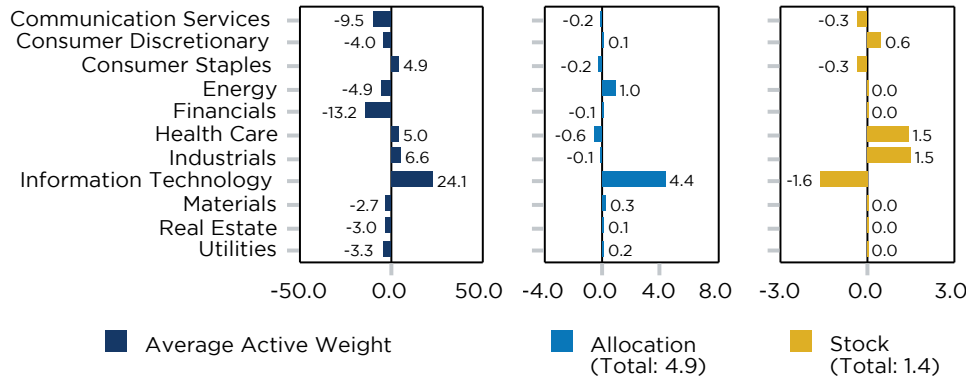
## 1 Quarter Sector Attribution



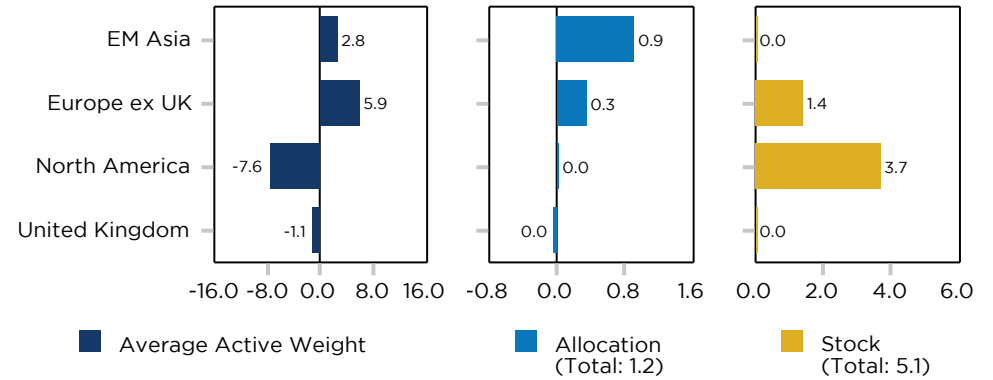
## 1 Quarter Region Attribution



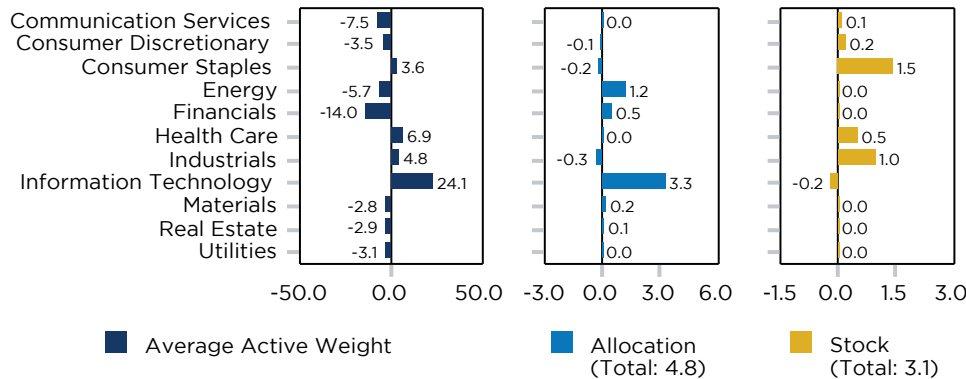
## 1 Year Sector Attribution



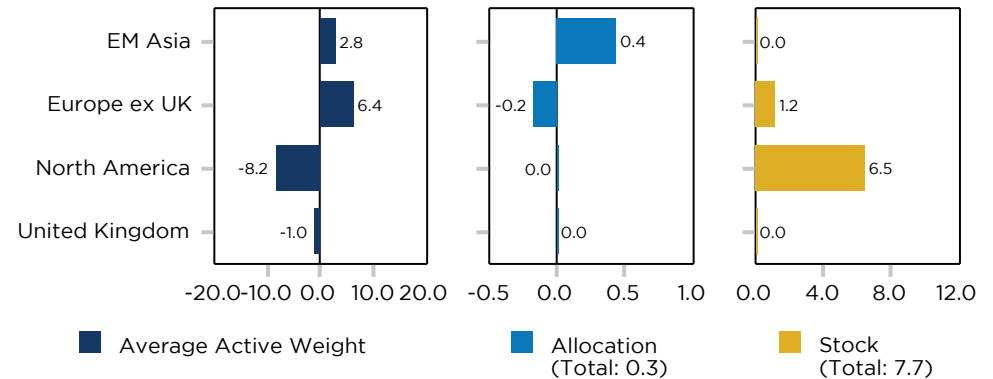
## 1 Year Region Attribution



## 3 Years Sector Attribution



## 3 Years Region Attribution



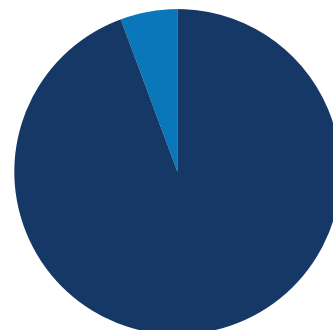


## Top Ten Securities

Apple Inc	6.7 %
Adobe Inc	5.9 %
Intuit Inc	5.3 %
The Estee Lauder Companies Inc	4.3 %
ASML Holding NV ADR	4.1 %
Amgen Inc	3.9 %
TJX Companies Inc	3.8 %
Church & Dwight Co Inc	3.8 %
L3Harris Technologies Inc	3.5 %
Agilent Technologies Inc	3.5 %
<b>Total</b>	<b>44.7 %</b>

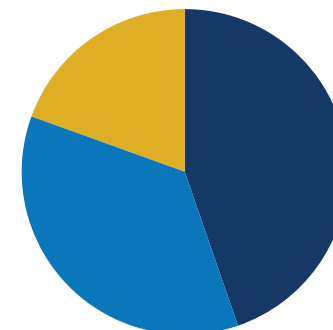
## Asset Allocation

■ Equity  
■ Cash  
■ Fixed Income



## Market Capitalization

■ Giant  
■ Large  
■ Medium  
■ Small  
■ Micro



## Top Ten Contributors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Adobe Inc	5.71	0.54	0.53	19.39
Amgen Inc	3.55	0.47	0.50	25.40
Taiwan Semiconductor	2.94	0.00	0.49	25.88
Apple Inc	5.84	3.85	0.45	31.50
ASML Holding NV	3.96	0.00	0.42	19.64
QUALCOMM Inc.	3.15	0.38	0.21	16.54
Eli Lilly and Co	2.02	0.38	0.15	18.21
Agilent Technologies Inc	3.57	0.10	0.09	11.56
Johnson & Johnson	2.81	1.38	0.06	13.53
TJX Companies Inc (The)	4.03	0.27	0.03	9.98

## Top Ten Contributors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Adobe Inc	4.25	0.27	1.28	47.42
ASML Holding NV	3.03	0.00	0.74	39.73
Intuit Inc.	4.01	0.15	0.68	32.94
Estee Lauder Companies Inc	2.46	0.09	0.61	40.88
Taiwan Semiconductor	2.50	0.00	0.40	31.30
Apple Inc	4.43	3.21	0.28	38.46
Eli Lilly and Co	3.14	0.37	0.25	24.33
Lowe's Cos Inc	3.93	0.32	0.22	21.28
Amgen Inc	3.79	0.56	0.20	21.58
Church & Dwight Co. Inc.	4.33	0.06	0.14	18.52

## Top Ten Detractors | 1 Quarter

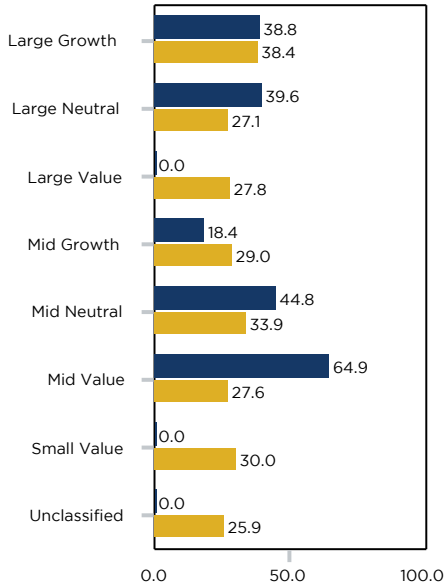
	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Church & Dwight Co. Inc.	4.67	0.08	-0.70	-6.20
Intuit Inc.	6.19	0.28	-0.61	-1.31
L3Harris Technologies Inc	4.21	0.19	-0.56	-4.80
Stryker Corp	3.35	0.28	-0.36	-2.67
Cisco Systems Inc	3.83	0.85	-0.34	-2.21
EMCOR Group Inc.	3.04	0.00	-0.27	0.30
Oracle Corp	1.85	0.49	-0.17	-3.30
Clorox Co (The)	1.96	0.08	-0.14	1.82
PepsiCo Inc	1.67	0.78	-0.08	0.38
SYNNEX Corp	0.26	0.00	0.01	14.46

## Top Ten Detractors | 3 Years

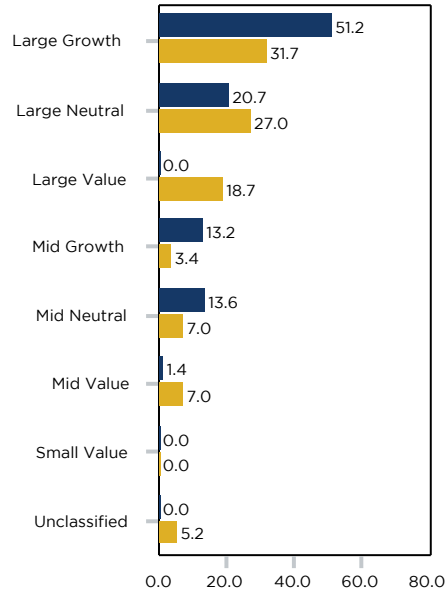
	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
EMCOR Group Inc.	3.38	0.00	-0.27	7.31
DENTSPLY SIRONA Inc	0.87	0.07	-0.12	0.03
Lincoln Electric Holdings Inc	1.93	0.00	-0.10	10.12
Clorox Co (The)	2.44	0.08	-0.09	11.45
Johnson & Johnson	3.39	1.63	-0.07	11.10
Oracle Corp	1.75	0.60	-0.03	13.10
PepsiCo Inc	1.72	0.78	-0.02	12.62
Gartner Inc	1.47	0.00	0.00	15.10
Novartis AG	0.89	0.00	0.02	17.95
SAP AG	1.92	0.00	0.04	17.32



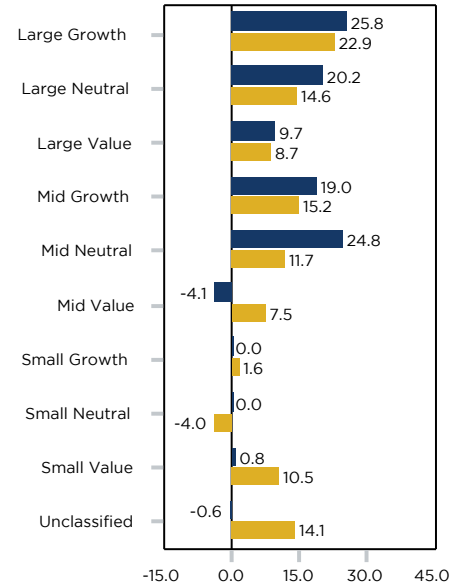
## Performance | 1 Year



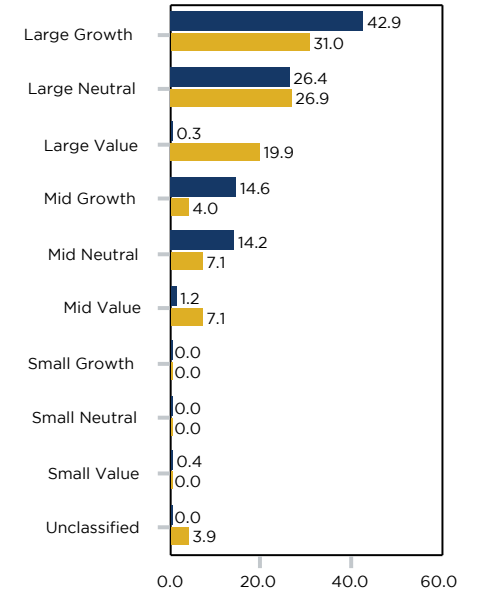
## Allocation | 1 Year



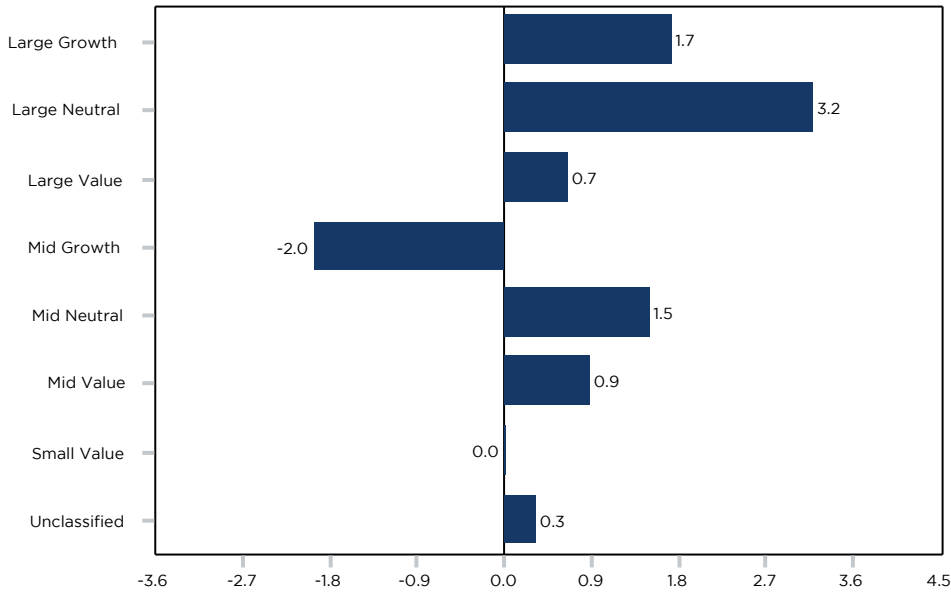
## Performance | 3 Years



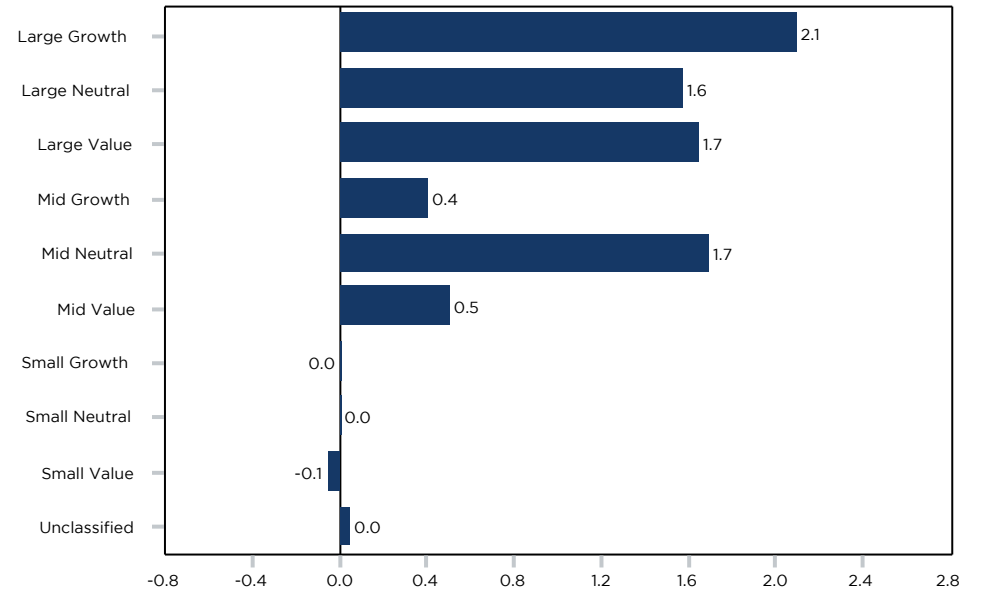
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years



## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	9.26 (58)	32.76 (47)	32.76 (47)	19.28 (47)	13.42 (39)	14.50 (27)	-1.48 (45)	29.74 (42)	3.96 (44)	6.38 (32)
Benchmark	10.62	36.39	36.39	20.49	14.63	15.22	-1.51	30.21	7.08	5.67
Peer Group	9.56	32.39	32.39	18.89	12.67	13.68	-1.85	28.66	2.94	4.47
Population	1,828	1,791	1,791	1,698	1,614	1,392	2,026	1,899	2,003	2,013

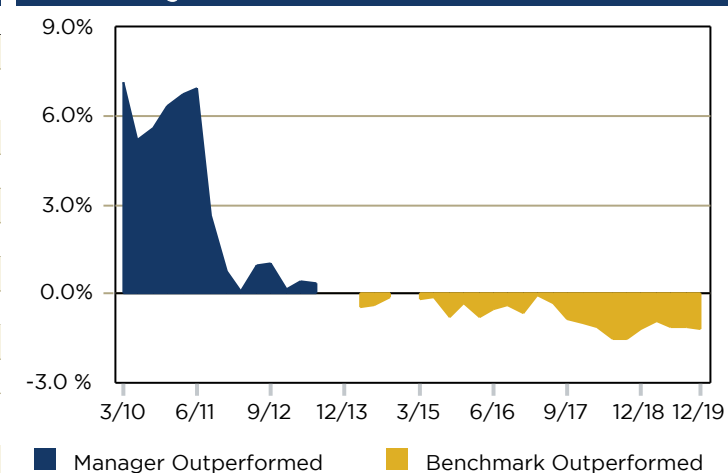
## Fund Information

Fund Inception	05/02/2005
Fund Assets	5,873 Million
Portfolio Assets	2,001 Million
Total # of Holdings	54
% in Top 10	41.75 %
PM	Bianchi,J/Finnegan,K/Pytosh,M
PM Tenure	9 Years 6 Months
Turnover	85.00 %
Gross Expense (%)	0.67 %
Net Expense (%)	0.67 %
New Investors	Open

## Fund Statistics

	3 Years	10 Years
Standard Deviation	12.16	13.23
<b>vs. Russell 1000 Growth Index</b>		
Beta	0.92	1.00
Alpha	0.43	-0.56
Information Ratio	-0.55	-0.29
Tracking Error	2.07	2.13
R-Squared	0.98	0.97
Up Market Capture	94.06	98.76
Down Market Capture	93.78	102.53
Consistency	44.44	47.50

## 3 Years Rolling Excess Performance



## Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	383,533	386,597
Median Mkt. Cap (\$M)	46,139	13,375
Price/Earnings ratio	31.2	29.4
Price/Book ratio	6.8	7.9
5 Yr. EPS Growth Rate (%)	22.3	21.8
Current Yield (%)	1.0	1.2
Beta (5 Years, Monthly)	0.95	1.00
Number of Stocks	54	530
Debt to Equity	1.2	0.7
Forecast P/E	26.2	25.0
Forecast EPS Growth	18.0	15.0
Return on Equity	0.1	0.1

## vs. Risk Free

Sharpe Ratio	1.38	1.05
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## Sector Allocation

Sector	Portfolio Weight (%)	Benchmark Weight (%)
Communication Services	12.0	11.6
Consumer Discretionary	14.0	13.8
Consumer Staples	4.0	4.6
Energy	0.0	0.3
Financials	3.1	3.1
Health Care	15.1	14.7
Industrials	9.3	9.3
Information Technology	38.7	38.9
Materials	1.5	1.3
Real Estate	2.4	2.4
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

## 3 Years Rolling Percentile Ranking



## Country/Region Allocation

United States	96.9	97.7
Non-US Developed	3.1	2.1
Emerging Markets	0.0	0.1
Other	0.0	0.1
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

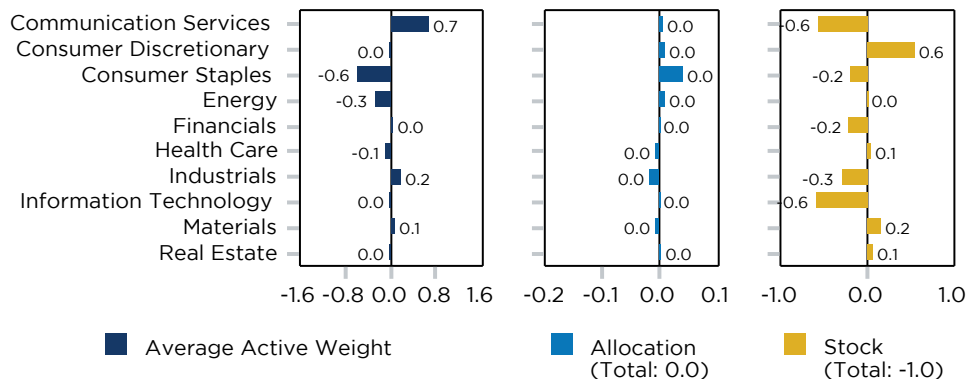


# Voya Large Cap Growth Port I (IEOHX)

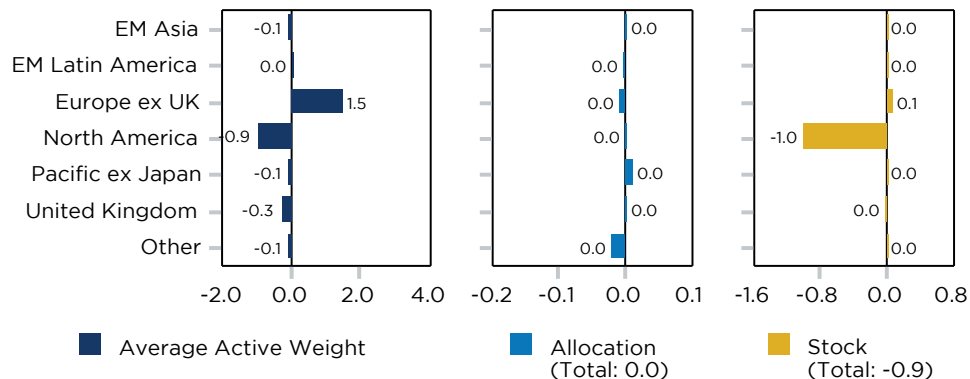
Index: Russell 1000 Growth Index

Report Date: 12/31/2019

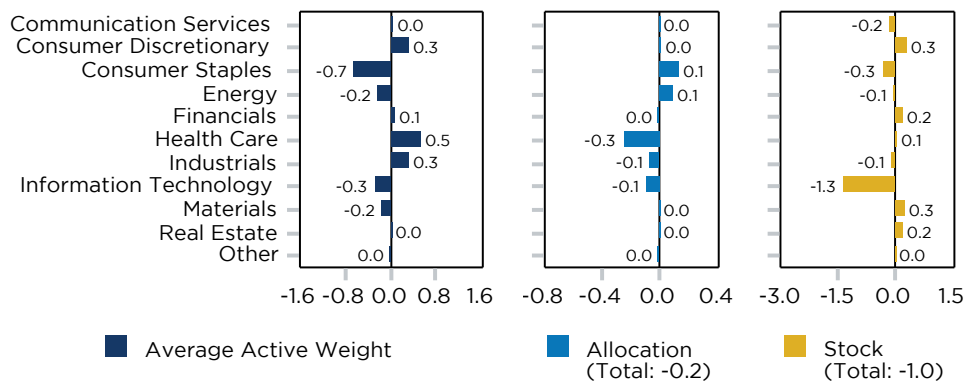
## 1 Quarter Sector Attribution



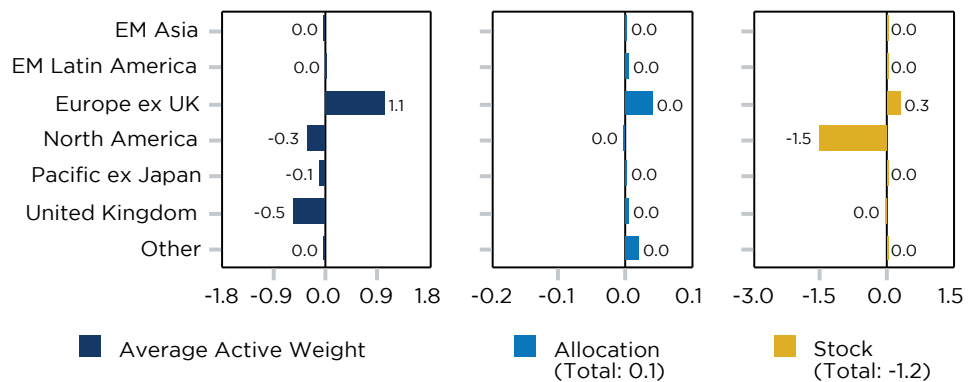
## 1 Quarter Region Attribution



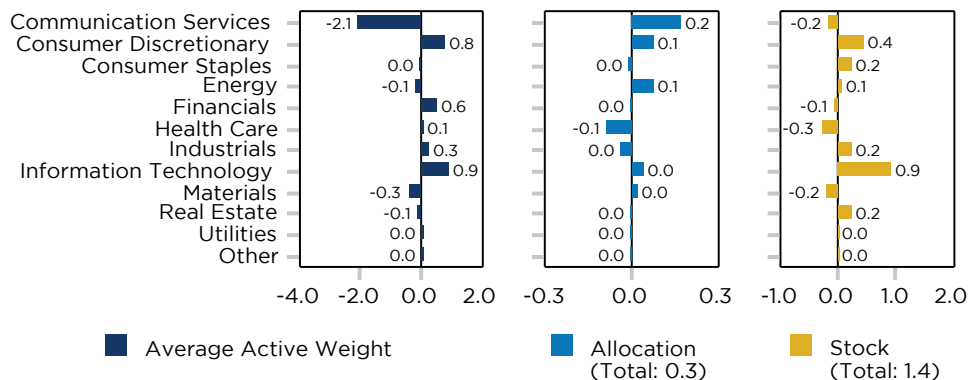
## 1 Year Sector Attribution



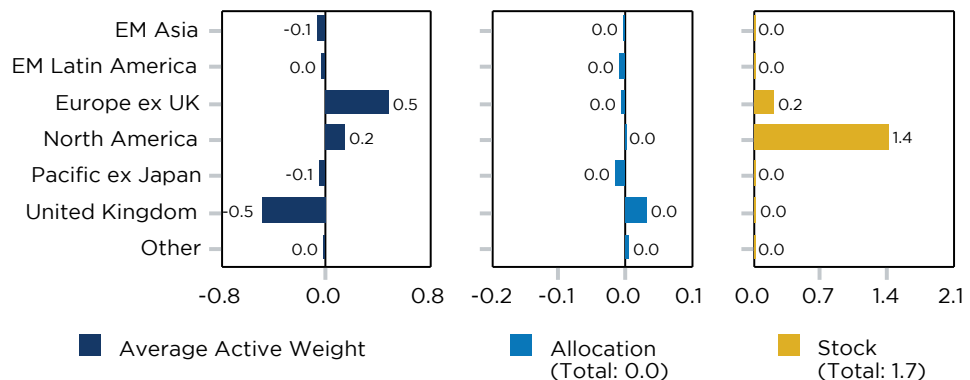
## 1 Year Region Attribution



## 3 Years Sector Attribution



## 3 Years Region Attribution





# Voya Large Cap Growth Port I (IEOHX)

Index: Russell 1000 Growth Index

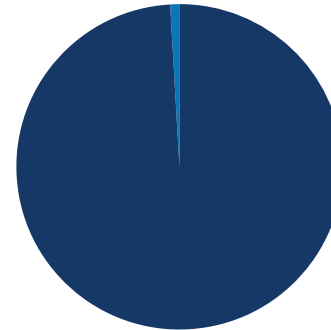
Report Date: 12/31/2019

## Top Ten Securities

Amazon.com Inc	6.5 %
Microsoft Corp	6.3 %
Apple Inc	5.9 %
Facebook Inc A	5.6 %
Visa Inc Class A	4.4 %
Merck & Co Inc	2.9 %
Intuit Inc	2.9 %
Alphabet Inc A	2.5 %
American Tower Corp	2.4 %
O'Reilly Automotive Inc	2.4 %
<b>Total</b>	<b>41.7 %</b>

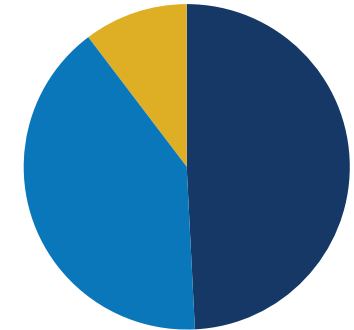
## Asset Allocation

■ Equity  
■ Cash  
■ Fixed Income



## Market Capitalization

■ Giant  
■ Large  
■ Medium  
■ Small  
■ Micro



## Top Ten Contributors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Humana Inc.	1.52	0.11	0.46	43.57
DexCom Inc	1.00	0.10	0.32	46.57
Vertex Pharmaceuticals Inc	1.37	0.31	0.20	29.24
Lam Research Corp	1.26	0.21	0.17	27.06
Hilton Worldwide Holdings Inc	1.51	0.19	0.11	19.30
Microsoft Corp	9.22	7.53	0.05	13.82
Alphabet Inc	4.97	2.62	-0.02	9.68
Visa Inc	4.48	2.14	-0.03	9.42
Amazon.com Inc	6.80	5.14	-0.07	6.45
Apple Inc	4.98	7.25	-0.47	31.50

## Top Ten Contributors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Microsoft Corp	5.67	4.47	0.22	38.88
Amazon.com Inc	4.06	2.77	0.19	35.07
Adobe Inc	1.11	0.48	0.17	47.42
Intuit Inc.	1.54	0.27	0.16	32.94
Visa Inc	2.46	1.41	0.15	34.94
Unitedhealth Group Inc	2.86	1.43	0.05	24.32
Apple Inc	5.60	5.53	0.01	38.46
Home Depot Inc. (The)	3.45	1.59	0.00	20.50
Facebook Inc	2.48	2.45	0.00	21.28
Alphabet Inc	4.58	2.21	-0.03	19.12

## Top Ten Detractors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Baxter International Inc	2.02	0.14	-0.28	-4.15
Constellation Brands Inc	1.47	0.00	-0.28	-8.10
Intuit Inc.	2.71	0.47	-0.27	-1.31
Boeing Co	2.49	1.44	-0.26	-13.89
Motorola Solutions Inc	1.63	0.15	-0.23	-5.07
Altice usa inc	1.52	0.06	-0.22	-4.67
L3Harris Technologies Inc	1.29	0.17	-0.17	-4.80
Progressive Corp (The)	1.04	0.11	-0.16	-6.17
Church & Dwight Co. Inc.	0.80	0.13	-0.11	-6.20
Hershey Co (The)	0.87	0.14	-0.11	-4.67

## Top Ten Detractors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
DISH Network Corp	1.75	0.09	-0.59	-14.97
DuPont De Nemours Inc	1.54	0.00	-0.50	-12.26
Foot Locker Inc.	0.99	0.08	-0.33	-15.80
Tapestry Inc	1.02	0.02	-0.25	-4.89
Biogen Inc	2.10	0.59	-0.24	4.31
Interpublic Group	1.39	0.09	-0.22	3.34
Allergan PLC	1.39	0.40	-0.22	-1.46
Berry Global Group Inc	0.69	0.06	-0.13	-0.86
Equifax Inc.	1.11	0.13	-0.13	7.16
Post Holdings Inc	0.20	0.03	-0.02	10.72

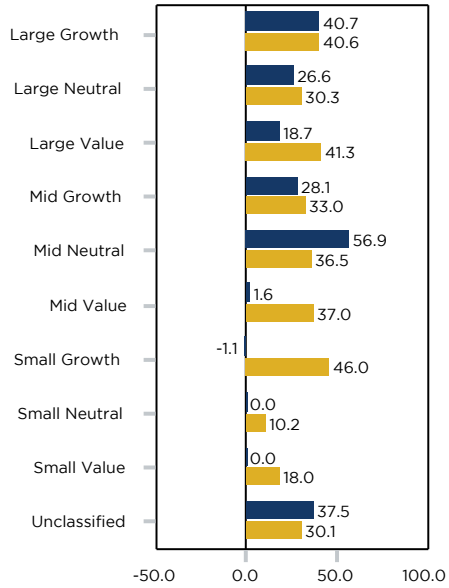


# Voya Large Cap Growth Port I (IEOHX)

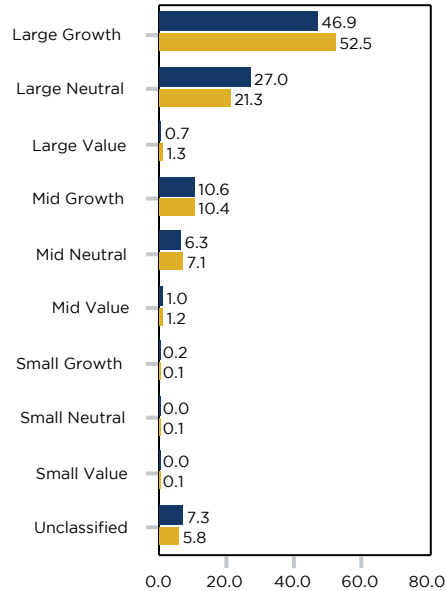
Index: Russell 1000 Growth Index

Report Date: 12/31/2019

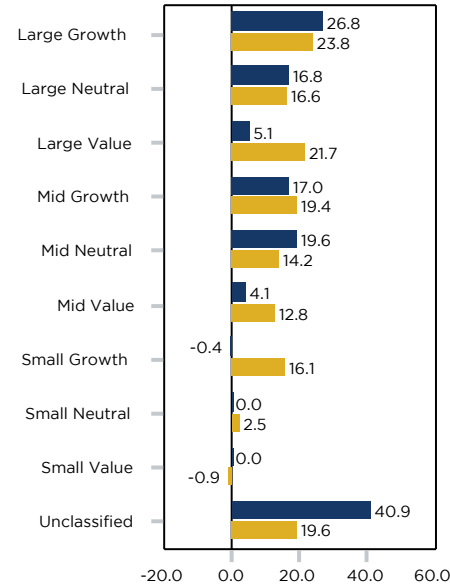
## Performance | 1 Year



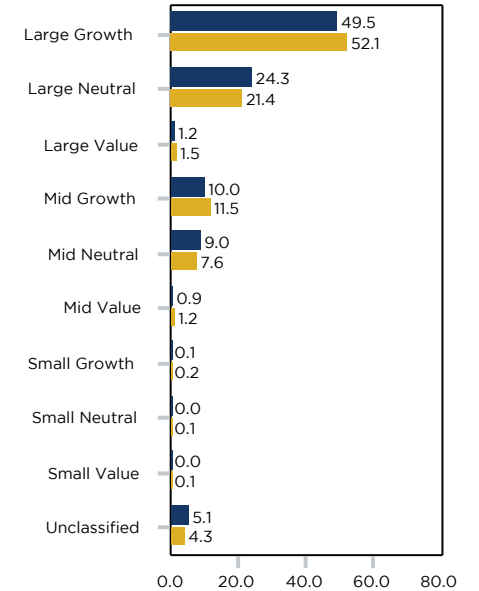
## Allocation | 1 Year



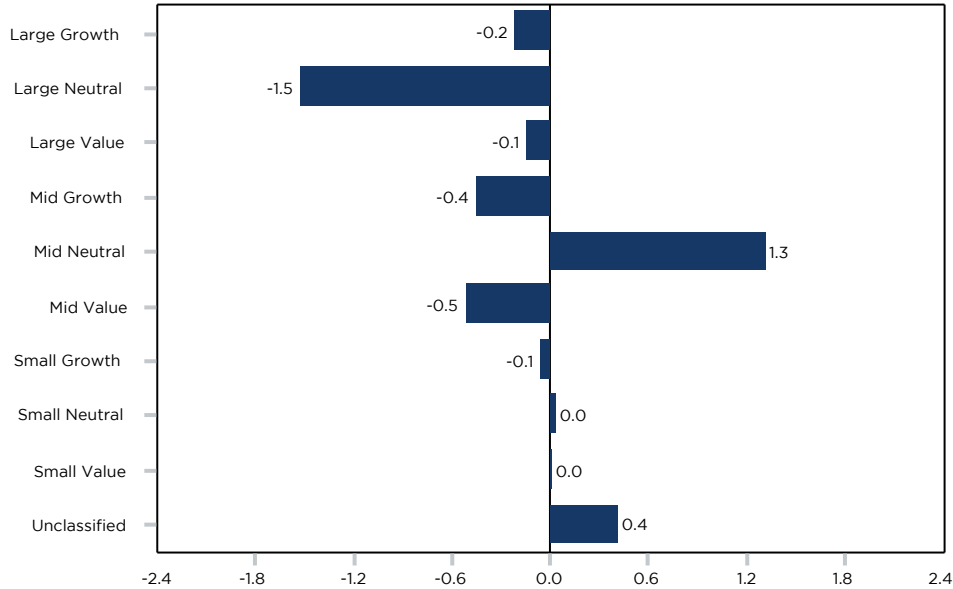
## Performance | 3 Years



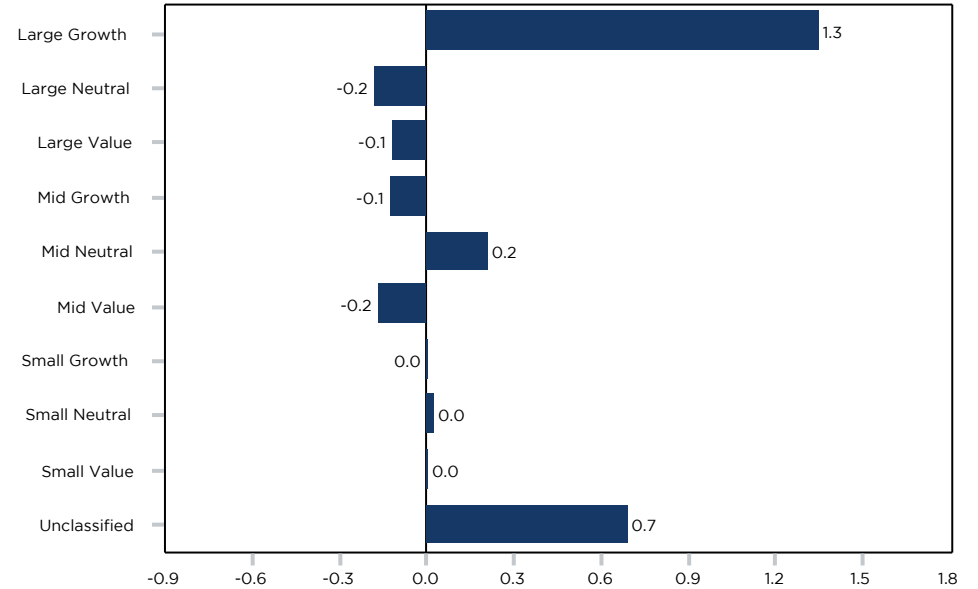
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years



## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	6.75 (54)	29.12 (29)	29.12 (29)	7.96 (42)	8.84 (12)	12.42 (13)	-12.84 (40)	11.79 (71)	23.07 (14)	-1.36 (15)
Benchmark	6.36	27.06	27.06	8.10	7.62	12.41	-12.29	13.34	20.00	-4.78
Peer Group	6.83	26.69	26.69	7.66	7.08	10.85	-13.46	13.37	17.59	-4.30
Population	543	534	534	508	489	403	613	571	571	567

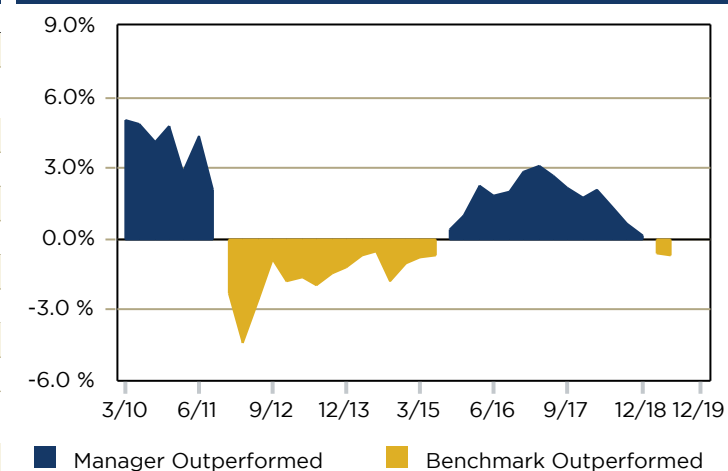
## Fund Information

Fund Inception	08/02/2004
Fund Assets	8,667 Million
Portfolio Assets	2,506 Million
Total # of Holdings	98
% in Top 10	21.30 %
PM	Team Managed
PM Tenure	15 Years 9 Months
Turnover	53.00 %
Gross Expense (%)	0.78 %
Net Expense (%)	0.78 %
New Investors	Closed

## Fund Statistics

	3 Years	10 Years
Standard Deviation	13.12	12.18
<b>vs. Russell Midcap Value Index</b>		
Beta	1.01	0.88
Alpha	-0.14	1.42
Information Ratio	-0.03	-0.06
Tracking Error	2.59	3.15
R-Squared	0.96	0.95
Up Market Capture	100.49	92.39
Down Market Capture	101.56	86.08
Consistency	44.44	47.50

## 3 Years Rolling Excess Performance



## Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	23,878	15,840
Median Mkt. Cap (\$M)	17,267	8,019
Price/Earnings ratio	17.0	18.9
Price/Book ratio	2.3	2.3
5 Yr. EPS Growth Rate (%)	8.5	7.7
Current Yield (%)	2.5	2.3
Beta (5 Years, Monthly)	0.97	1.00
Number of Stocks	93	631
Debt to Equity	0.4	1.2
Forecast P/E	15.6	15.7
Forecast EPS Growth	8.1	8.5
Return on Equity	-0.1	0.0

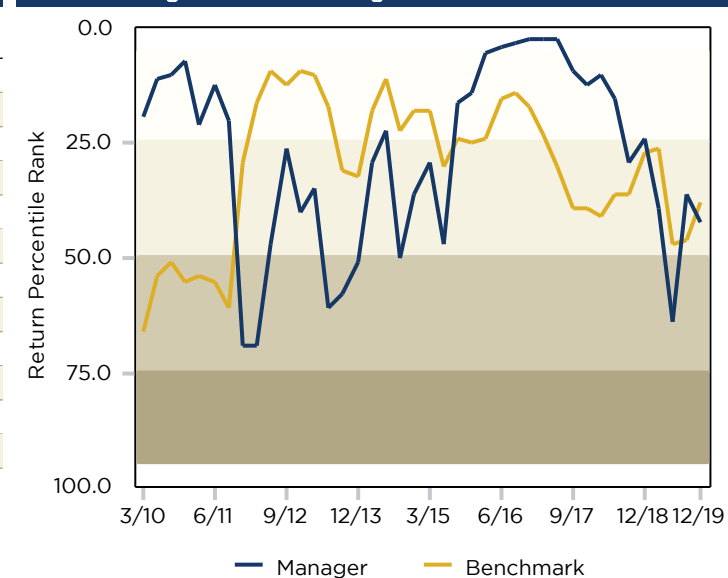
## vs. Risk Free

Sharpe Ratio	0.53	0.98
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## Sector Allocation

Sector	Portfolio Weight (%)	Benchmark Weight (%)
Communication Services	0.7	3.9
Consumer Discretionary	9.1	9.1
Consumer Staples	7.0	4.7
Energy	5.0	5.7
Financials	21.8	18.4
Health Care	11.6	6.9
Industrials	16.9	11.8
Information Technology	5.3	7.6
Materials	3.7	6.7
Real Estate	5.9	14.0
Utilities	10.0	11.2
<b>Total</b>	<b>96.8</b>	<b>100.0</b>

## 3 Years Rolling Percentile Ranking



## Country/Region Allocation

United States	83.8	95.4
Non-US Developed	16.2	4.3
Emerging Markets	0.0	0.2
Other	0.0	0.1
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

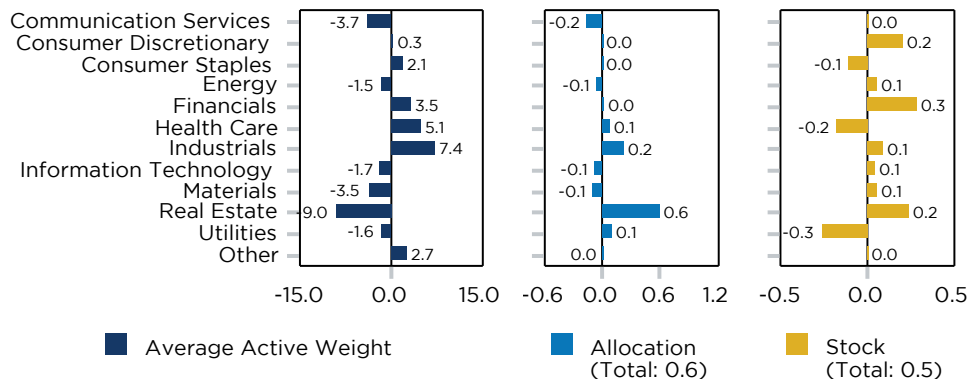


# American Century Mid Cap Value I (AVUAX)

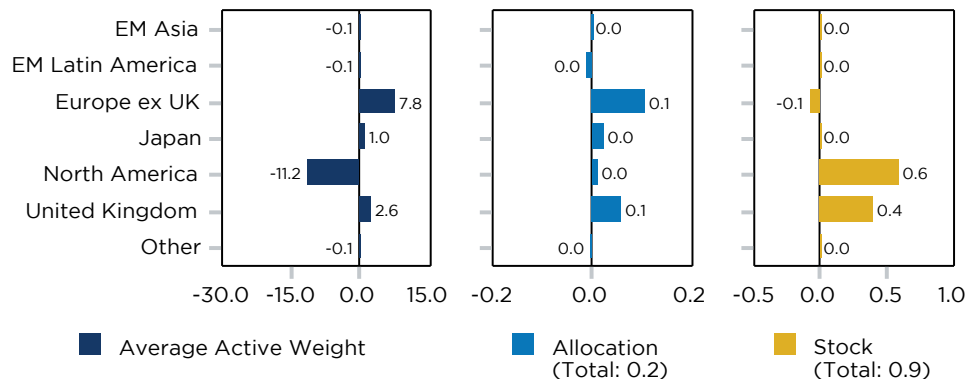
Index: Russell Midcap Value Index

Report Date: 12/31/2019

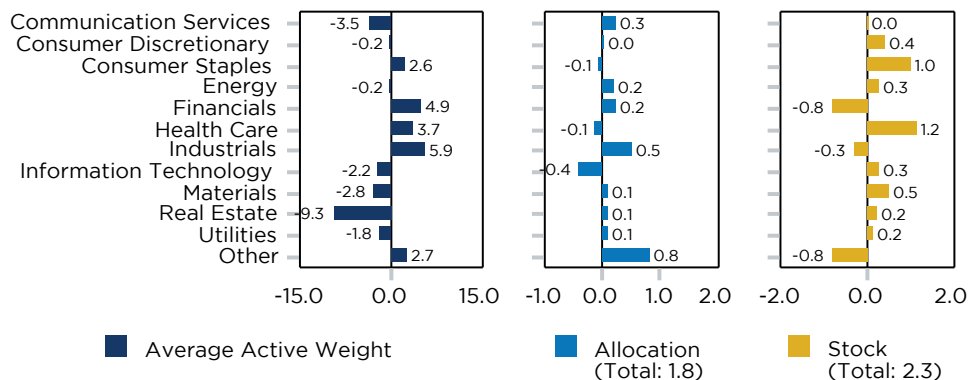
## 1 Quarter Sector Attribution



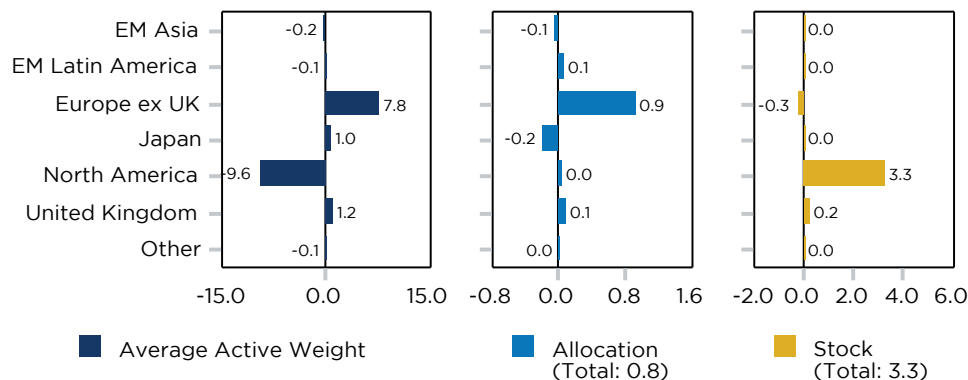
## 1 Quarter Region Attribution



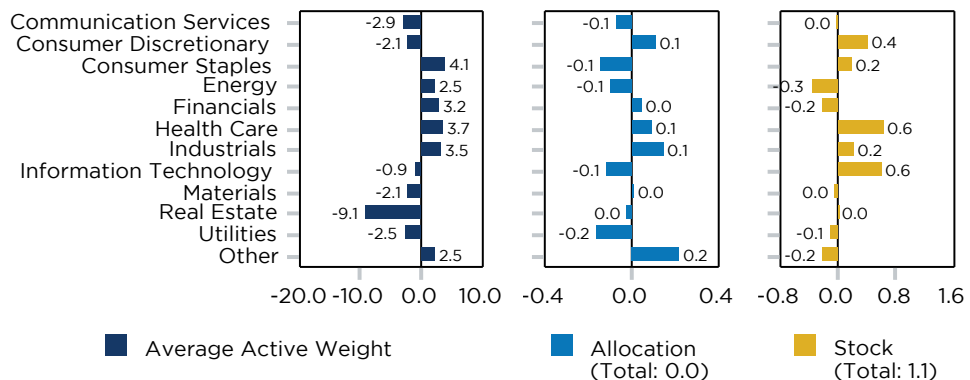
## 1 Year Sector Attribution



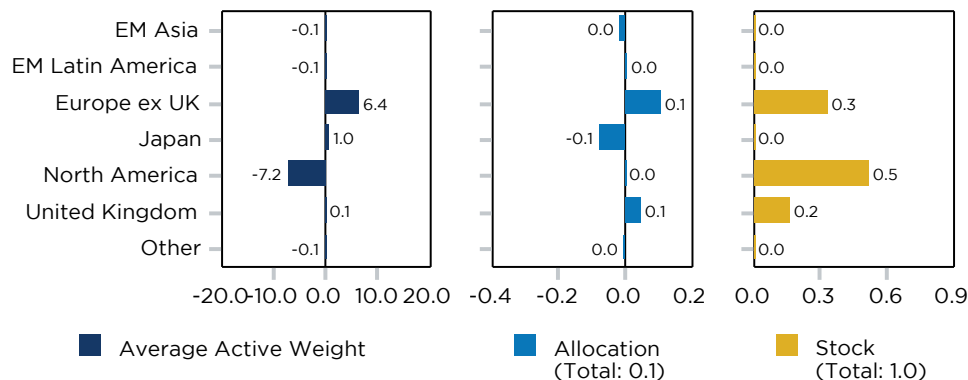
## 1 Year Region Attribution



## 3 Years Sector Attribution



## 3 Years Region Attribution







# American Century Mid Cap Value I (AVUAX)

Index: Russell Midcap Value Index

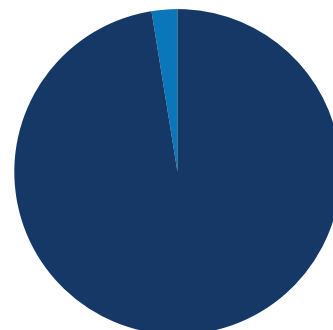
Report Date: 12/31/2019

## Top Ten Securities

iShares Russell Mid-Cap Value ETF	3.1 %
Zimmer Biomet Holdings Inc	2.9 %
Truist Financial Corp	2.5 %
Northern Trust Corp	2.5 %
Xcel Energy Inc	1.9 %
Emerson Electric Co	1.9 %
Weyerhaeuser Co	1.8 %
Hubbell Inc	1.6 %
Quest Diagnostics Inc	1.6 %
Comerica Inc	1.5 %
<b>Total</b>	<b>21.3 %</b>

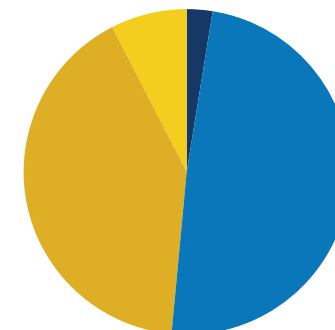
## Asset Allocation

- Equity
- Cash
- Fixed Income



## Market Capitalization

- Giant
- Large
- Medium
- Small
- Micro



## Top Ten Contributors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Applied Materials Inc.	1.71	0.00	0.28	22.75
IMI PLC	0.92	0.00	0.24	32.21
Northern Trust Corp	3.14	0.40	0.23	14.57
Emerson Electric Co.	2.03	0.00	0.17	14.84
Thor Industries Inc.	0.67	0.06	0.16	32.67
Hubbell Inc	2.30	0.07	0.15	13.19
State Street Corp	0.95	0.48	0.13	34.51
nVent Electric plc	1.28	0.07	0.13	17.03
Ameriprise Financial Inc	1.60	0.36	0.09	13.96
Zimmer Biomet Holdings Inc	3.19	0.61	0.07	9.21

## Top Ten Contributors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Keysight Technologies Inc	1.19	0.18	0.33	41.05
Lam Research Corp	1.02	0.10	0.32	42.98
Applied Materials Inc.	1.66	0.00	0.29	25.47
Teradyne Inc.	1.05	0.15	0.29	40.12
CSX Corp	0.93	0.00	0.19	28.06
Maxim Integrated Products Inc.	1.25	0.00	0.16	20.52
Ingersoll-Rand PLC	1.27	0.28	0.15	23.37
Zimmer Biomet Holdings Inc	1.86	0.26	0.10	14.10
Xcel Energy Inc.	1.34	0.60	0.08	19.53
Northern Trust Corp	3.22	0.54	0.01	8.35

## Top Ten Detractors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Johnson Controls Intl	1.43	0.00	-0.19	-6.65
ProAssurance Corp	1.00	0.00	-0.16	-9.48
Pinnacle West Capital Corp	1.40	0.24	-0.15	-6.58
Chubb Ltd	1.41	0.00	-0.13	-3.11
Advance Auto Parts Inc.	1.47	0.19	-0.12	-3.13
NorthWestern Corp	1.19	0.00	-0.12	-3.72
Spire Inc	1.04	0.00	-0.11	-3.75
Textron Inc	0.68	0.24	-0.07	-8.86
Ameren Corp	1.08	0.43	-0.06	-3.42
Welltower Inc	0.94	0.80	-0.02	-8.83

## Top Ten Detractors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
PG&E Corp	1.42	0.00	-0.73	-43.22
EQT Corp	1.65	0.33	-0.53	-32.07
Imperial Oil Ltd	1.80	0.00	-0.27	-6.85
Occidental Petroleum Corp	1.23	0.00	-0.25	-12.16
Halliburton Co	0.81	0.00	-0.24	-21.52
Noble Energy Inc	1.58	0.47	-0.22	-11.82
Invesco Ltd	1.10	0.30	-0.16	-11.74
Unum Group	1.05	0.30	-0.14	-10.59
National Oilwell Varco Inc	0.91	0.41	-0.10	-11.96
Devon Energy Corp	0.98	0.63	-0.09	-16.35

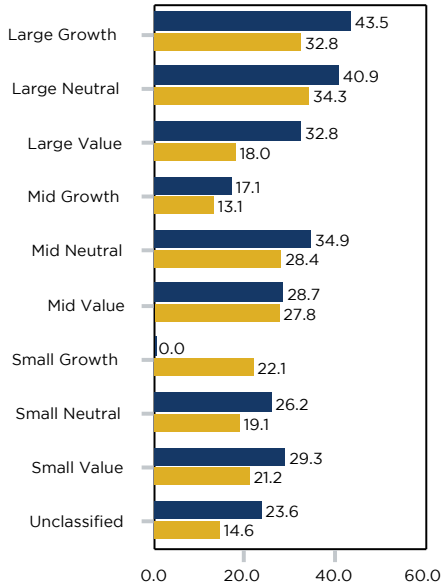


# American Century Mid Cap Value I (AVUAX)

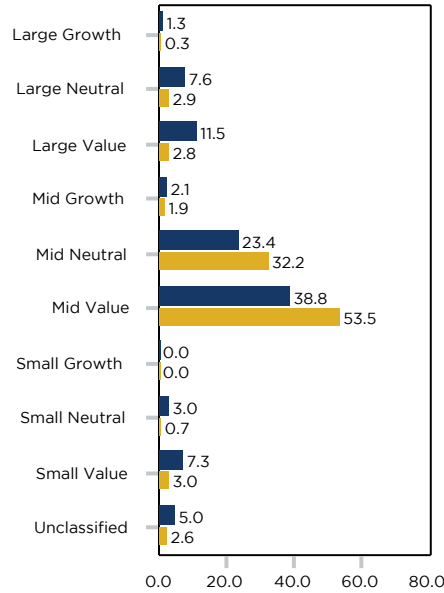
Index: Russell Midcap Value Index

Report Date: 12/31/2019

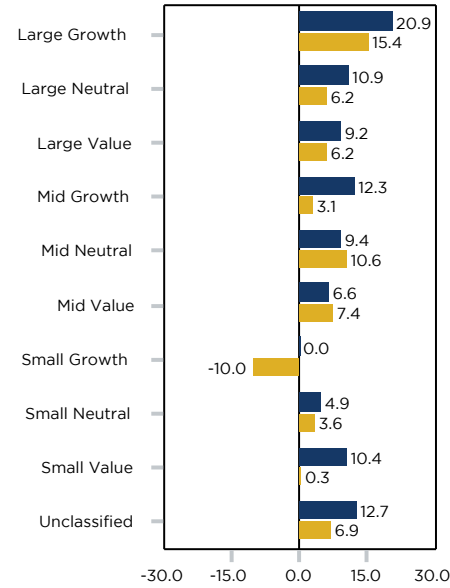
## Performance | 1 Year



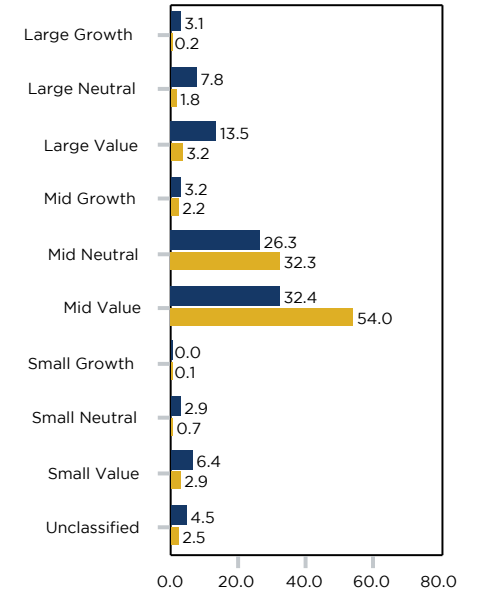
## Allocation | 1 Year



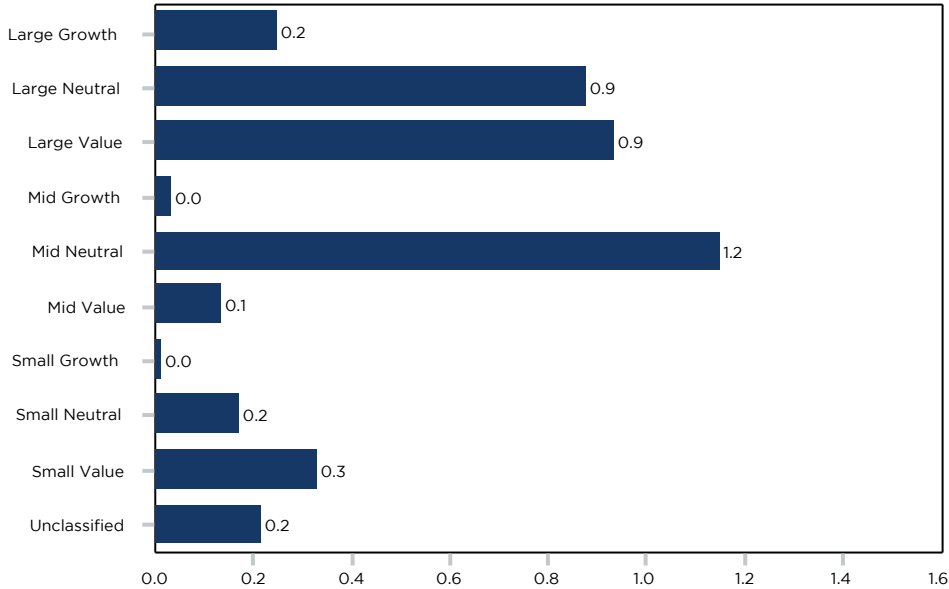
## Performance | 3 Years



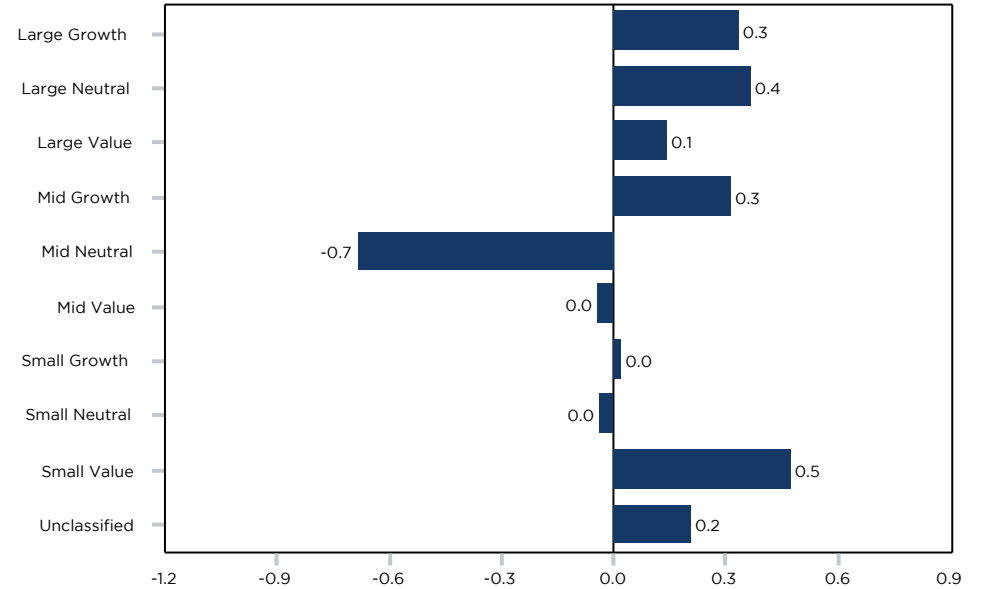
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years



## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	6.87 (63)	31.04 (15)	31.04 (15)	12.37 (9)	9.26 (12)	13.09 (6)	-9.24 (21)	19.29 (18)	11.23 (78)	-1.33 (14)
Benchmark	6.88	31.09	31.09	12.39	9.29	13.25	-9.22	19.30	11.25	-1.28
Peer Group	6.99	26.22	26.22	9.16	8.04	11.63	-11.32	16.12	15.96	-3.02
Population	589	578	578	536	483	413	638	600	606	588

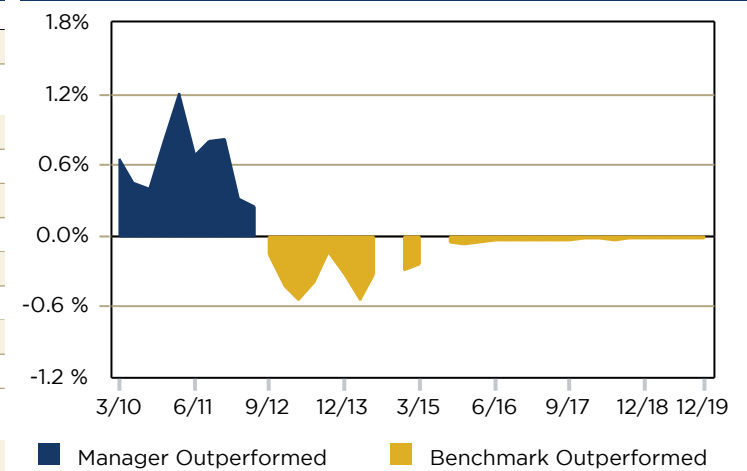
## Fund Information

Fund Inception	05/21/1998
Fund Assets	111,567 Million
Portfolio Assets	20,425 Million
Total # of Holdings	377
% in Top 10	6.63 %
PM	Butler,D/Johnson,M
PM Tenure	21 Years 7 Months
Turnover	16.00 %
Gross Expense (%)	0.04 %
Net Expense (%)	0.04 %
New Investors	Open

## Fund Statistics

	3 Years	10 Years
Standard Deviation	12.82	13.87
<b>vs. CRSP U.S. Mid Cap TR Index</b>		
Beta	1.00	1.01
Alpha	-0.02	-0.26
Information Ratio	-0.43	-0.22
Tracking Error	0.04	0.53
R-Squared	1.00	1.00
Up Market Capture	99.97	100.11
Down Market Capture	100.10	101.17
Consistency	44.44	45.83

## 3 Years Rolling Excess Performance



## Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	17,783	17,771
Median Mkt. Cap (\$M)	14,163	14,118
Price/Earnings ratio	22.8	22.8
Price/Book ratio	3.2	3.2
5 Yr. EPS Growth Rate (%)	11.7	11.7
Current Yield (%)	1.6	1.6
Beta (5 Years, Monthly)	1.00	1.00
Number of Stocks	340	338
Debt to Equity	1.0	1.0
Forecast P/E	20.3	20.3
Forecast EPS Growth	11.9	11.9
Return on Equity	0.0	0.0

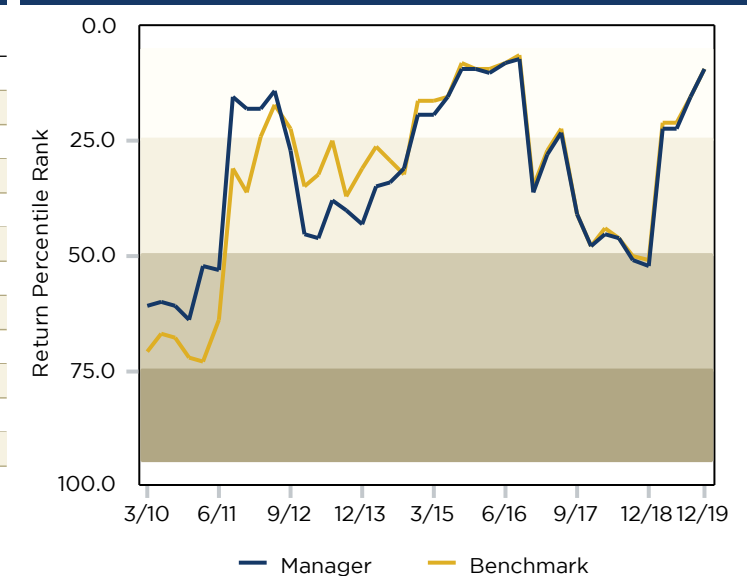
## vs. Risk Free

Sharpe Ratio	0.85	0.92
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## Sector Allocation

Sector	Portfolio Weight (%)	Benchmark Weight (%)
Communication Services	5.4	5.4
Consumer Discretionary	11.6	11.6
Consumer Staples	3.4	3.5
Energy	4.5	4.5
Financials	12.5	12.8
Health Care	11.3	11.2
Industrials	12.9	12.9
Information Technology	16.9	16.8
Materials	6.5	6.5
Real Estate	8.4	8.4
Utilities	6.6	6.6
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

## 3 Years Rolling Percentile Ranking



## Country/Region Allocation

United States	94.8	94.8
Non-US Developed	5.2	5.2
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

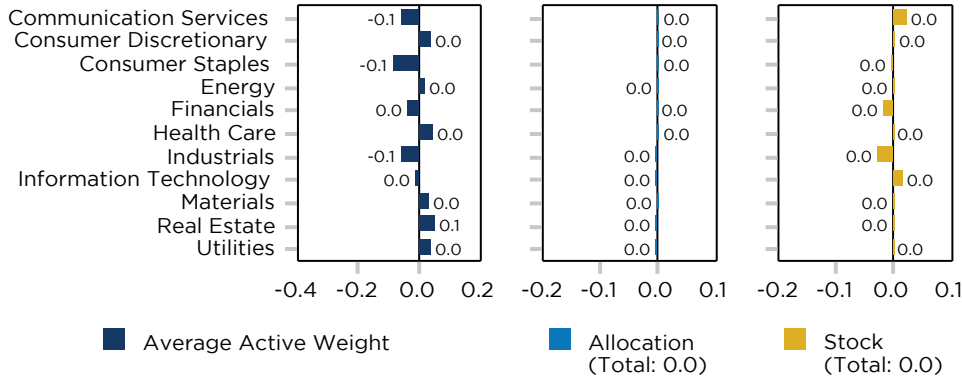


# Vanguard Mid Cap Index Institutional (VMCIX)

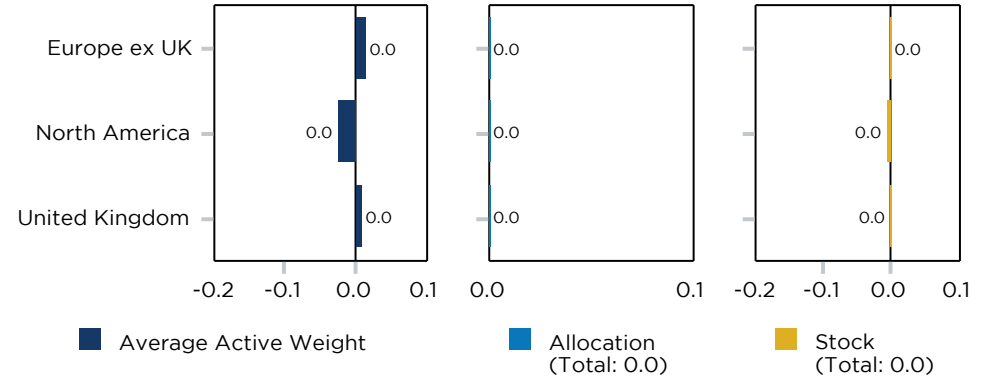
Index: CRSP U.S. Mid Cap TR Index

Report Date: 12/31/2019

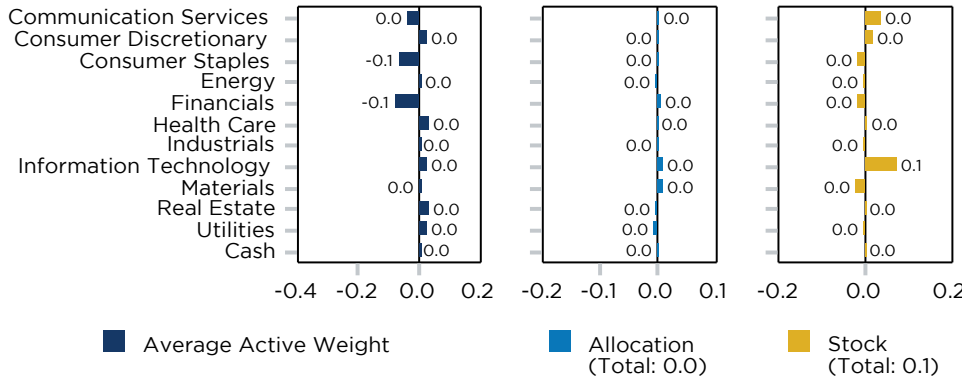
## 1 Quarter Sector Attribution



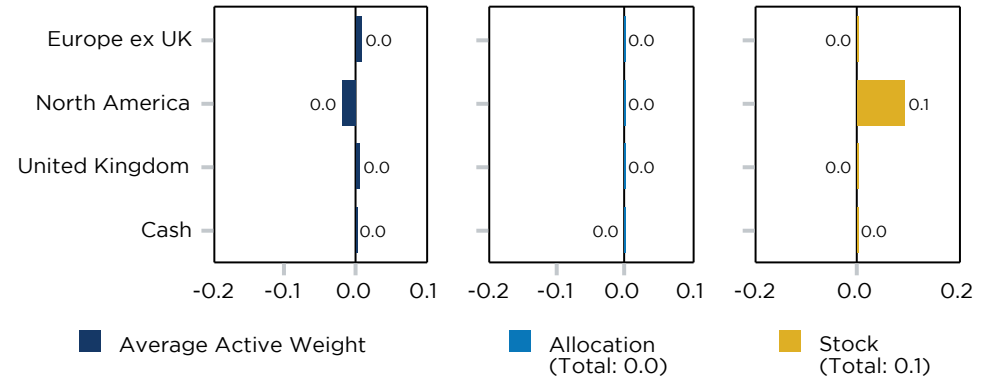
## 1 Quarter Region Attribution



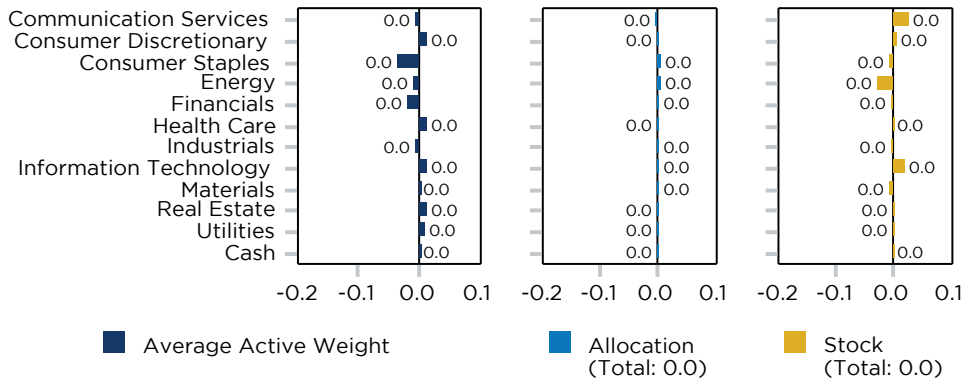
## 1 Year Sector Attribution



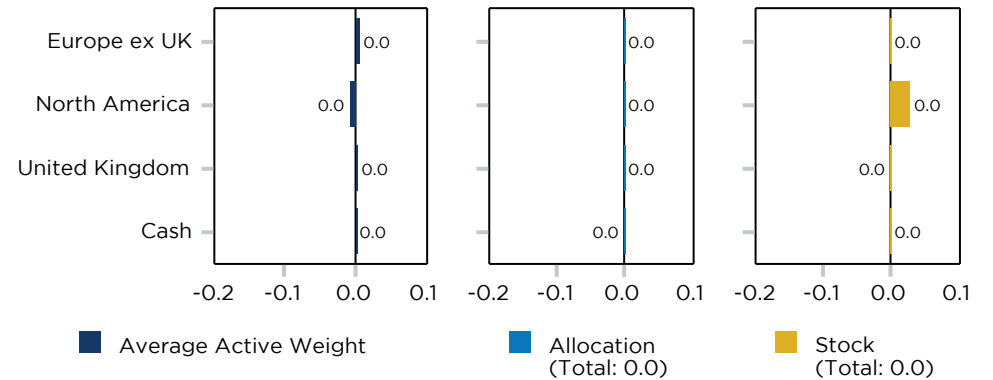
## 1 Year Region Attribution



## 3 Years Sector Attribution



## 3 Years Region Attribution





# Vanguard Mid Cap Index Institutional (VMCIX)

Index: CRSP U.S. Mid Cap TR Index

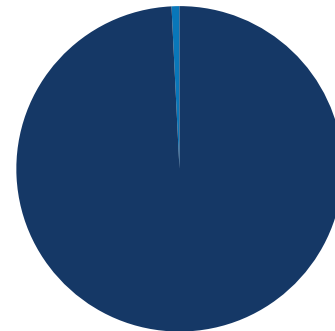
Report Date: 12/31/2019

## Top Ten Securities

Newmont Corp	0.8 %
Amphenol Corp Class A	0.7 %
ONEOK Inc	0.7 %
WEC Energy Group Inc	0.7 %
IHS Markit Ltd	0.6 %
TransDigm Group Inc	0.6 %
KLA Corp	0.6 %
Motorola Solutions Inc	0.6 %
Eversource Energy	0.6 %
SBA Communications Corp	0.6 %
<b>Total</b>	<b>6.6 %</b>

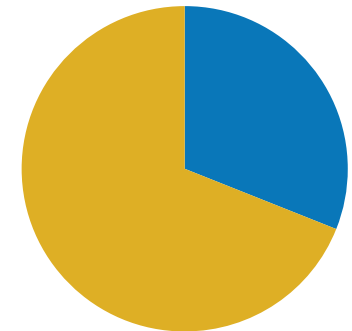
## Asset Allocation

- Equity
- Cash
- Fixed Income



## Market Capitalization

- Giant
- Large
- Medium
- Small
- Micro



## Top Ten Contributors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Advanced Micro Devices Inc	0.76	0.75	0.01	58.19
Tiffany & Co.	0.26	0.25	0.00	44.91
Splunk Inc	0.43	0.42	0.00	27.07
Newmont Goldcorp Corp	0.75	0.74	0.00	14.99
Centene Corp	0.41	0.41	0.00	45.33
Skyworks Solutions Inc	0.33	0.33	0.00	53.21
Align Technology Inc	0.31	0.31	0.00	54.23
DexCom Inc	0.33	0.33	0.00	46.57
Freeport-McMoran Cpr & Gld	0.32	0.32	0.00	37.81
Qorvo Inc	0.21	0.21	0.00	56.77

## Top Ten Contributors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Lam Research Corp	0.53	0.53	0.00	42.98
Edwards Lifesciences Corp	0.61	0.61	0.00	35.54
Fiserv Inc.	0.71	0.71	0.00	29.58
ServiceNow Inc	0.36	0.36	0.00	56.02
Moody's Corp.	0.47	0.47	0.00	37.56
Autodesk Inc.	0.48	0.48	0.00	35.34
Equinix Inc	0.78	0.78	0.00	20.19
TransDigm Group Inc	0.39	0.39	0.00	39.76
Roper Technologies Inc	0.57	0.57	0.00	25.36
KLA Corp	0.38	0.38	0.00	34.62

## Top Ten Detractors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Twitter Inc	0.73	0.72	0.00	-22.21
Cincinnati Financial Corp	0.44	0.43	0.00	-9.39
Essex Property Trust Inc.	0.52	0.51	0.00	-7.30
Dollar Tree Inc	0.65	0.65	0.00	-17.62
Expedia Group Inc	0.41	0.41	0.00	-19.26
Ball Corp	0.58	0.58	0.00	-10.98
Arista Networks Inc	0.31	0.31	0.00	-14.87
Digital Realty Trust Inc	0.65	0.65	0.00	-6.89
Veeva Systems Inc	0.48	0.48	0.00	-7.88
Hasbro Inc.	0.34	0.34	0.00	-10.40

## Top Ten Detractors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Newell Brands Inc	0.66	0.66	0.00	-21.54
Range Resources Corp.	0.26	0.26	0.00	-47.53
EQT Corp	0.35	0.35	0.00	-32.07
Cimarex Energy Co.	0.40	0.40	0.00	-26.59
Mallinckrodt Plc	0.16	0.16	0.00	-58.78
Nielsen Holdings plc	0.46	0.46	0.00	-17.99
Molson Coors Brewing Co	0.52	0.52	0.00	-15.69
Antero Resources Corp	0.16	0.16	0.00	-50.61
Signet Jewelers Ltd	0.22	0.22	0.00	-36.14
Alliance Data Systems Corp	0.38	0.38	0.00	-20.09

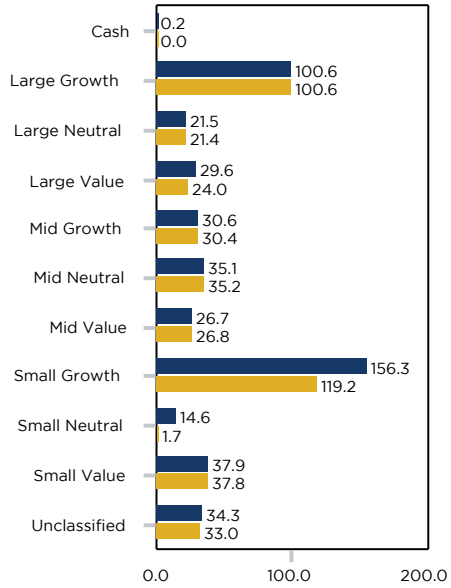


# Vanguard Mid Cap Index Institutional (VMCIX)

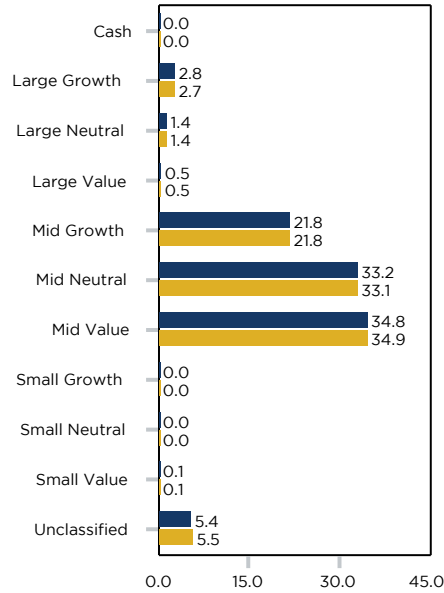
Index: CRSP U.S. Mid Cap TR Index

Report Date: 12/31/2019

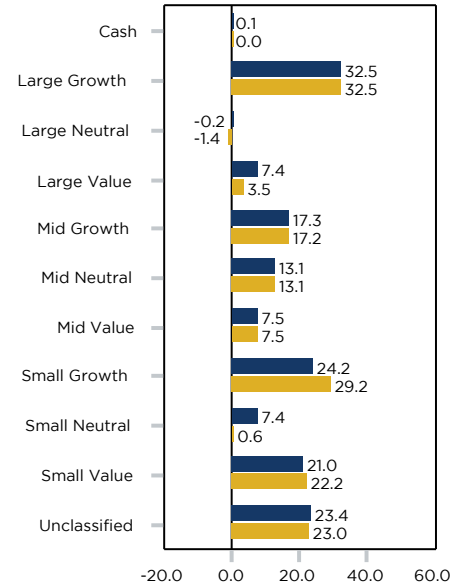
## Performance | 1 Year



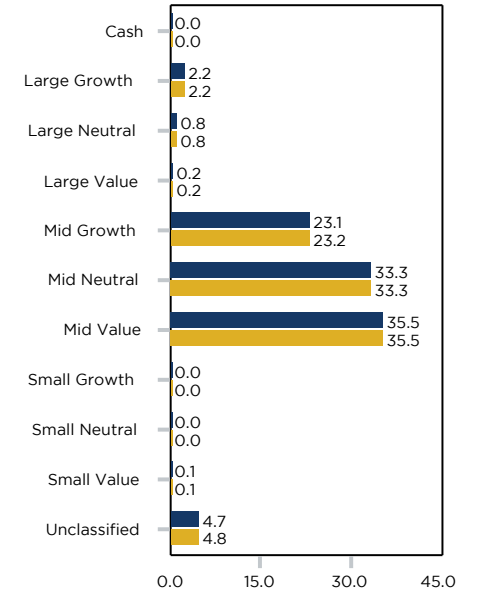
## Allocation | 1 Year



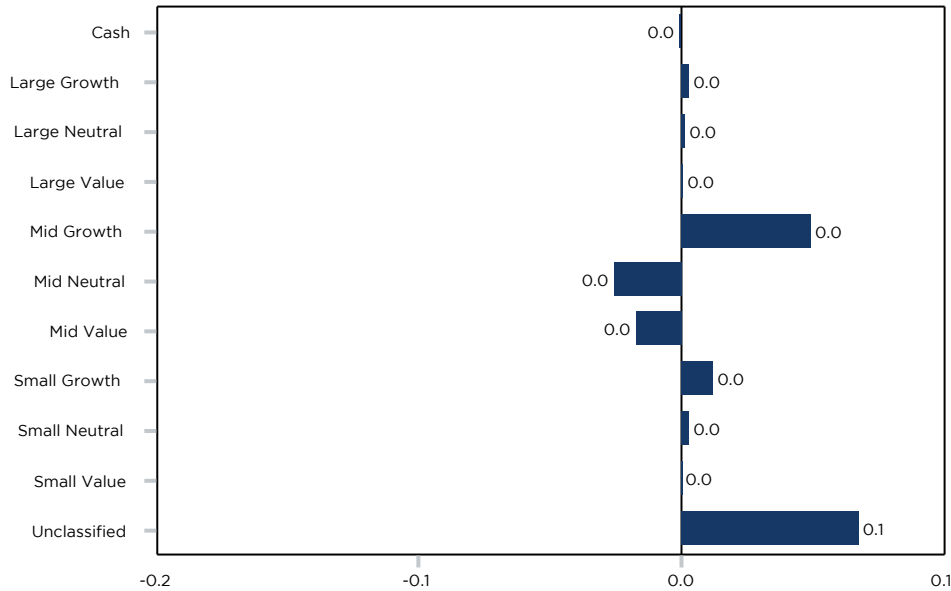
## Performance | 3 Years



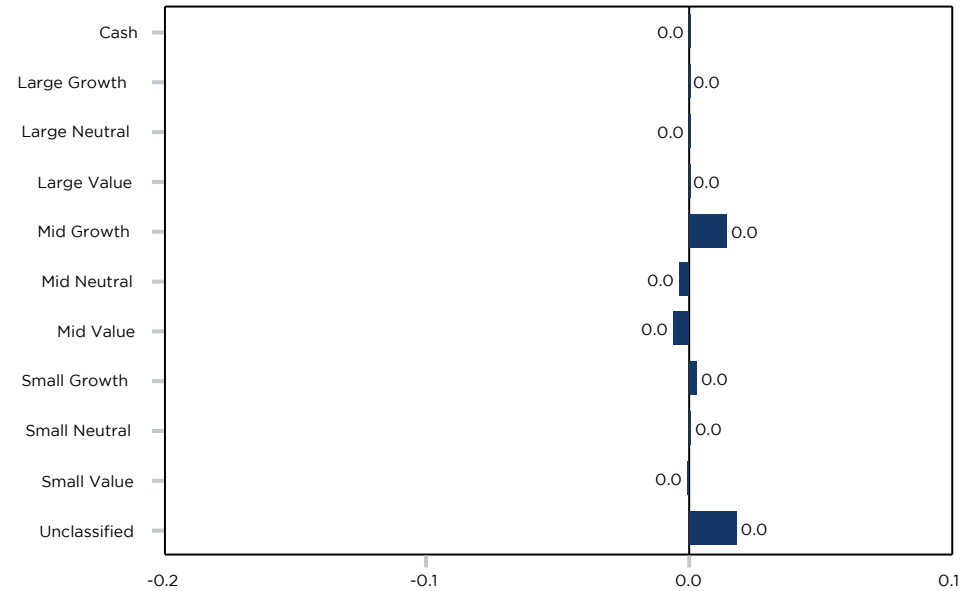
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years



## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	6.51 (77)	26.55 (94)	26.55 (94)	16.21 (54)	13.56 (11)	14.49 (19)	3.76 (6)	19.50 (86)	18.68 (3)	1.41 (33)
Benchmark	8.17	35.47	35.47	17.36	11.60	14.24	-4.75	25.27	7.33	-0.20
Peer Group	7.82	33.55	33.55	16.44	10.96	13.05	-5.54	24.67	5.93	-0.21
Population	816	801	801	756	711	637	879	817	850	847

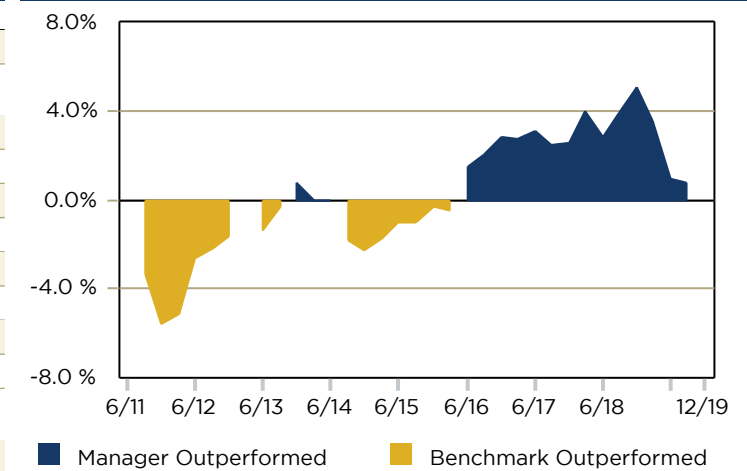
## Fund Information

Fund Inception	01/03/2011
Fund Assets	3,799 Million
Portfolio Assets	3,489 Million
Total # of Holdings	61
% in Top 10	26.24 %
PM	Team Managed
PM Tenure	11 Years 6 Months
Turnover	19.00 %
Gross Expense (%)	0.87 %
Net Expense (%)	0.87 %
New Investors	Closed

## Fund Statistics

	3 Years	10 Years
Standard Deviation	12.47	12.91
<b>vs. Russell Midcap Growth Index</b>		
Beta	0.84	0.84
Alpha	1.58	2.32
Information Ratio	-0.24	0.00
Tracking Error	5.01	4.83
R-Squared	0.87	0.89
Up Market Capture	83.84	87.97
Down Market Capture	69.24	74.61
Consistency	33.33	47.50

## 3 Years Rolling Excess Performance



## Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	15,907	19,976
Median Mkt. Cap (\$M)	12,221	9,644
Price/Earnings ratio	30.5	29.3
Price/Book ratio	4.3	6.0
5 Yr. EPS Growth Rate (%)	6.6	17.2
Current Yield (%)	0.9	0.7
Beta (5 Years, Monthly)	0.85	1.00
Number of Stocks	58	403
Debt to Equity	1.8	0.7
Forecast P/E	29.4	25.5
Forecast EPS Growth	14.0	17.1
Return on Equity	0.0	0.0

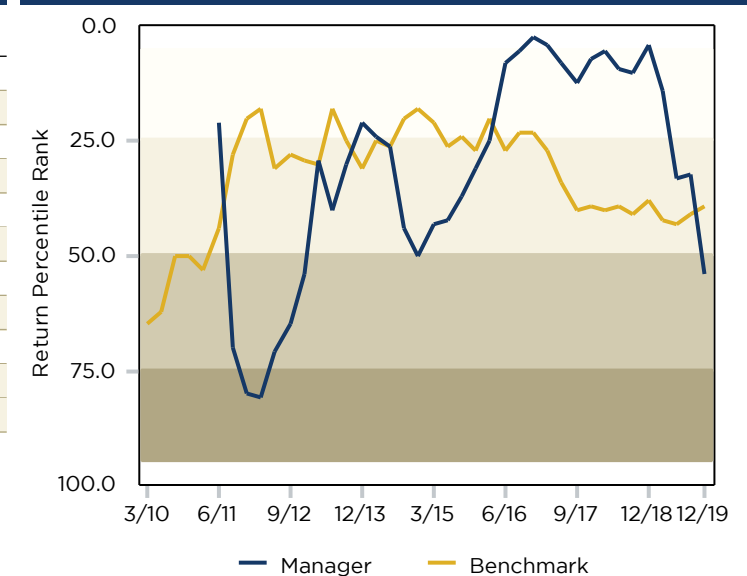
## vs. Risk Free

Sharpe Ratio	1.14	1.07
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## Sector Allocation

Sector	Portfolio Weight (%)	Benchmark Weight (%)
Communication Services	1.2	4.9
Consumer Discretionary	6.6	14.7
Consumer Staples	13.2	3.2
Energy	0.0	1.2
Financials	13.6	4.5
Health Care	23.9	15.3
Industrials	16.4	17.0
Information Technology	21.7	33.7
Materials	3.3	2.7
Real Estate	0.0	2.7
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

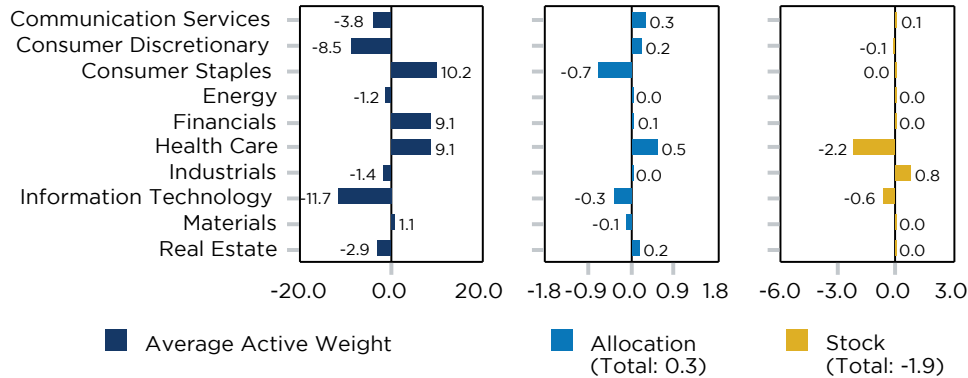
## 3 Years Rolling Percentile Ranking



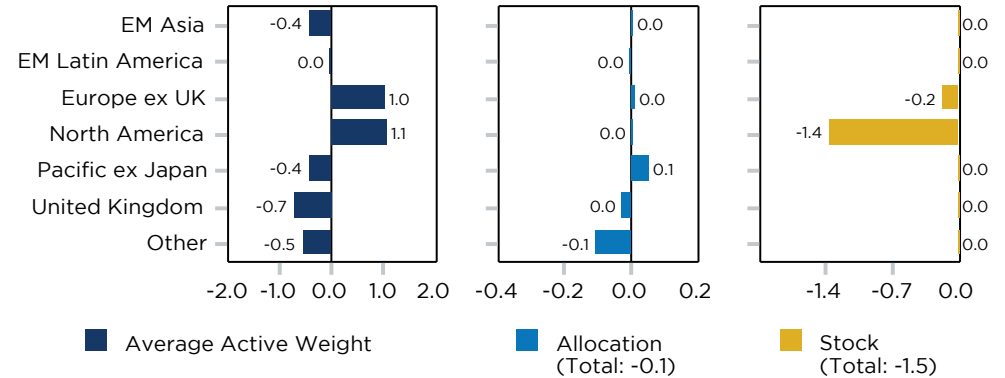
## Country/Region Allocation

United States	96.7	94.6
Non-US Developed	3.3	4.4
Emerging Markets	0.0	0.5
Other	0.0	0.6
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

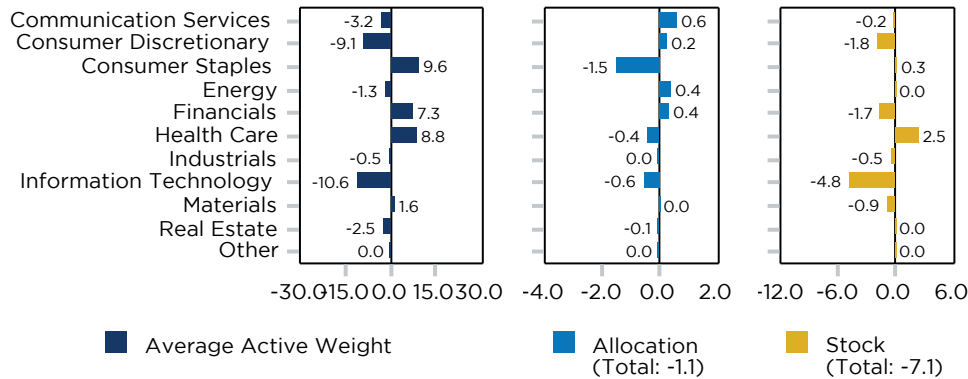
## 1 Quarter Sector Attribution



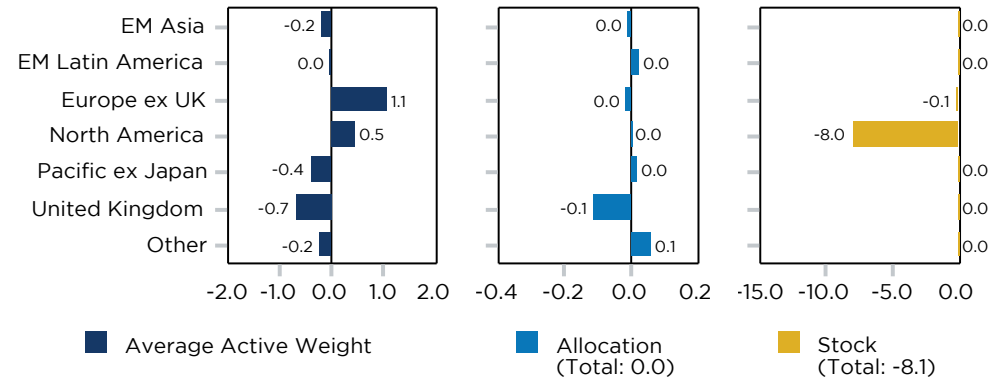
## 1 Quarter Region Attribution



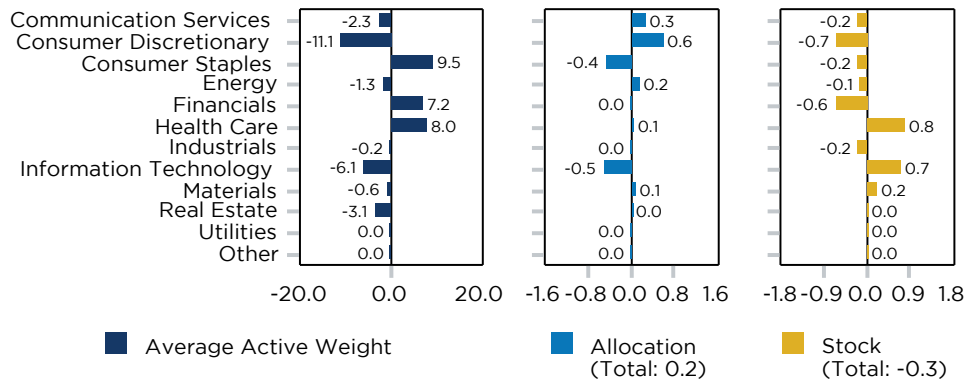
## 1 Year Sector Attribution



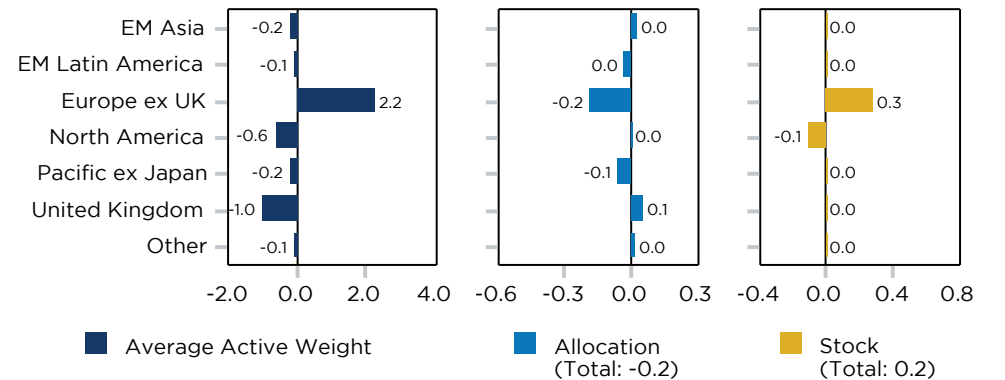
## 1 Year Region Attribution



## 3 Years Sector Attribution

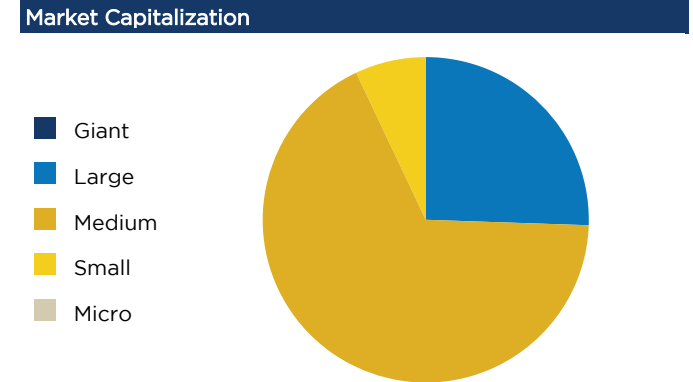
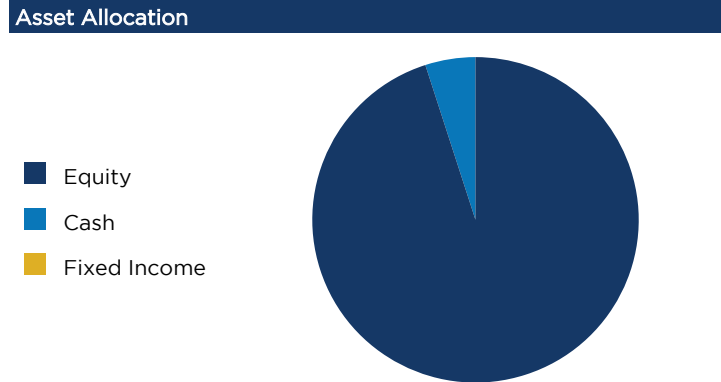


## 3 Years Region Attribution





Top Ten Securities	
Everest Re Group Ltd	3.1 %
Nordson Corp	2.9 %
Fortive Corp	2.7 %
Rockwell Automation Inc	2.6 %
Edwards Lifesciences Corp	2.6 %
Waters Corp	2.6 %
AMETEK Inc	2.5 %
Splunk Inc	2.4 %
Arthur J. Gallagher & Co	2.4 %
Palo Alto Networks Inc	2.3 %
<b>Total</b>	<b>26.2 %</b>



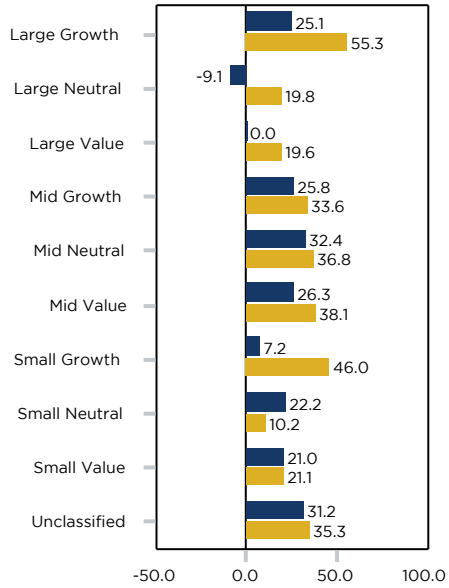
Top Ten Contributors   1 Quarter				
	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Splunk Inc	2.45	0.60	0.35	27.07
Rockwell Automation Inc.	2.34	0.65	0.26	23.69
Gates Industrial Corp PLC	0.80	0.00	0.23	36.64
Stericycle Inc	1.10	0.00	0.19	25.29
Catalent Inc	1.57	0.00	0.16	18.13
Nutanix Inc	1.46	0.12	0.15	19.09
Northern Trust Corp	2.25	0.00	0.14	14.57
Nordson Corp	2.88	0.26	0.09	11.59
Palo Alto Networks Inc	2.13	0.65	0.08	13.45
Fortive Corp	2.25	0.15	0.07	11.53

Top Ten Contributors   3 Years				
	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Align Technology Inc	1.64	0.25	0.35	42.65
ANSYS Inc	1.58	0.08	0.35	40.66
Splunk Inc	1.58	0.24	0.34	43.06
Steris Plc	2.11	0.00	0.33	32.90
Dover Corp	2.97	0.00	0.28	26.70
Fortinet Inc	0.89	0.16	0.26	52.47
Arthur J. Gallagher & Co.	2.20	0.23	0.15	25.22
WEX Inc	2.57	0.16	0.14	23.35
Cooper Cos Inc (The)	2.42	0.24	0.11	22.50
Rockwell Automation Inc.	2.97	0.50	-0.01	17.09

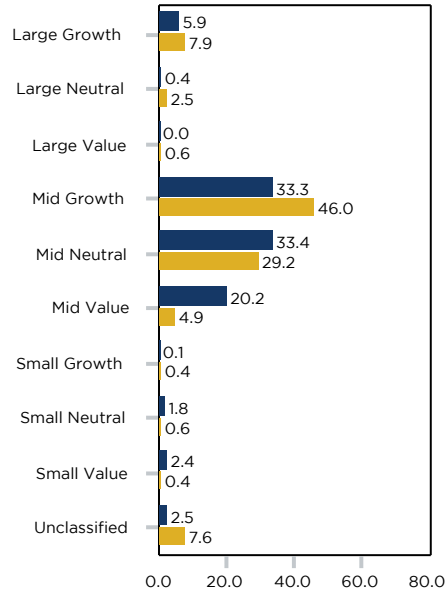
Top Ten Detractors   1 Quarter				
	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Blackbaud Inc	1.73	0.00	-0.34	-11.76
Integra LifeSciences Holdings Corp	2.67	0.00	-0.30	-2.98
Flowers Foods Inc.	2.02	0.00	-0.27	-5.19
TreeHouse Foods Inc	1.32	0.02	-0.27	-12.53
J.M. Smucker Co (The)	1.93	0.00	-0.25	-4.56
Advance Auto Parts Inc.	2.11	0.09	-0.23	-3.13
Molson Coors Brewing Co	1.49	0.00	-0.20	-5.21
Veeva Systems Inc	1.76	0.67	-0.17	-7.88
Cantel Medical Corp.	1.26	0.05	-0.16	-5.21
Verisk Analytics Inc	1.82	0.85	-0.13	-5.40

Top Ten Detractors   3 Years				
	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Core Laboratories NV	1.44	0.00	-0.69	-30.21
TreeHouse Foods Inc	2.03	0.05	-0.59	-12.42
Sally Beauty Holdings Inc	2.15	0.14	-0.58	-11.60
Molson Coors Brewing Co	1.39	0.00	-0.46	-15.69
Advance Auto Parts Inc.	2.34	0.44	-0.36	-1.62
J.M. Smucker Co (The)	1.48	0.00	-0.32	-3.98
John Wiley & Sons Inc.	1.63	0.00	-0.31	-1.36
Denbury Resources Inc.	0.63	0.00	-0.28	-27.37
Stericycle Inc	1.28	0.22	-0.25	-6.09
Wabtec Corp	1.07	0.26	-0.15	-1.57

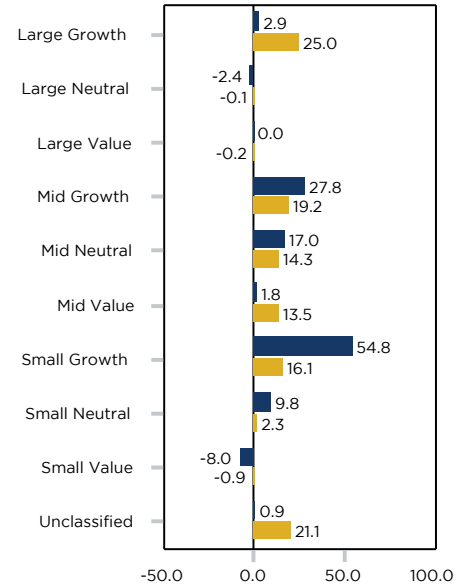
### Performance | 1 Year



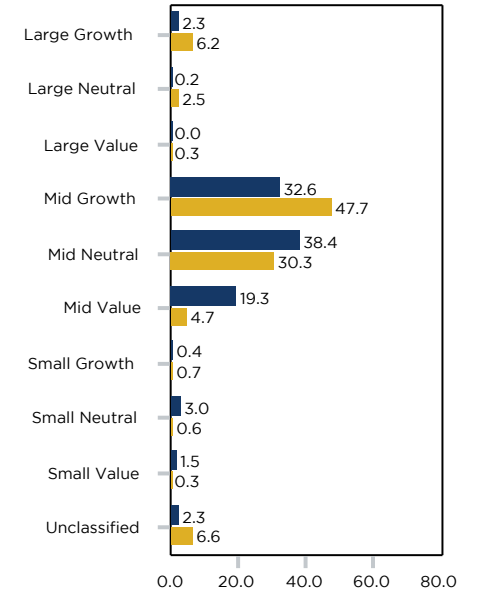
### Allocation | 1 Year



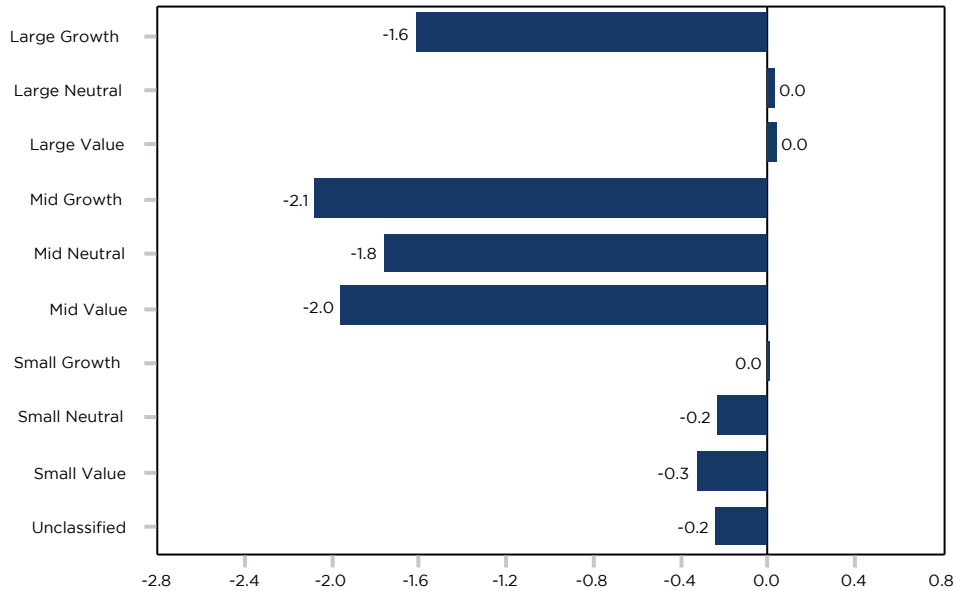
### Performance | 3 Years



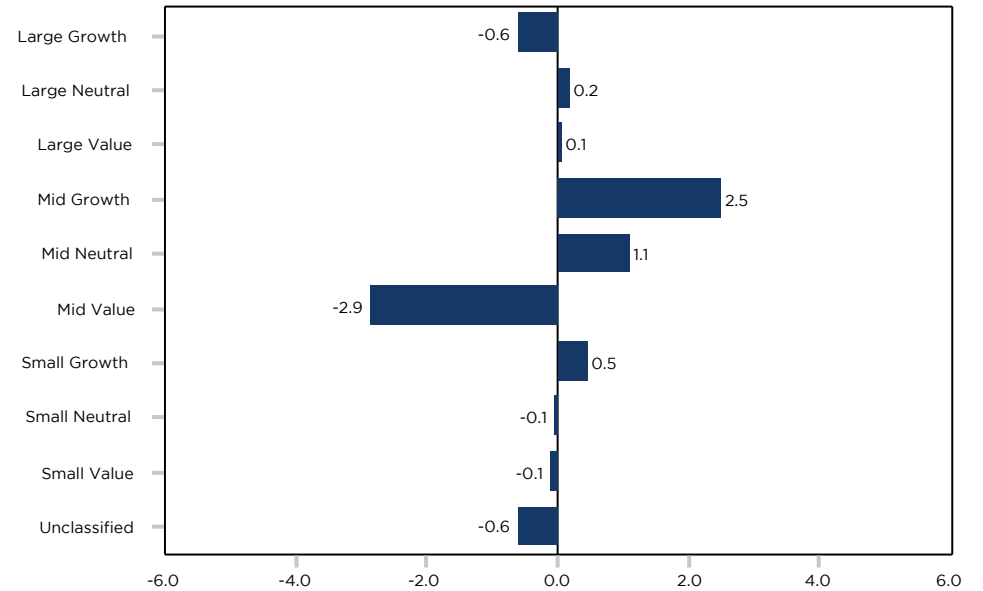
### Allocation | 3 Years



### Total Attribution | 1 Year



### Total Attribution | 3 Years





# American Beacon Small Cp Val Inst (AVFIX)

Index: Russell 2000 Value Index

Category: Small Value

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	9.29 (18)	23.51 (29)	23.51 (29)	4.23 (49)	6.39 (38)	10.93 (28)	-15.63 (54)	8.67 (53)	26.77 (41)	-5.04 (36)
Benchmark	8.49	22.39	22.39	4.77	6.99	10.56	-12.86	7.84	31.74	-7.47
Peer Group	8.01	21.95	21.95	4.12	5.83	10.26	-15.29	8.83	26.03	-6.33
Population	530	518	518	495	477	418	584	533	546	531

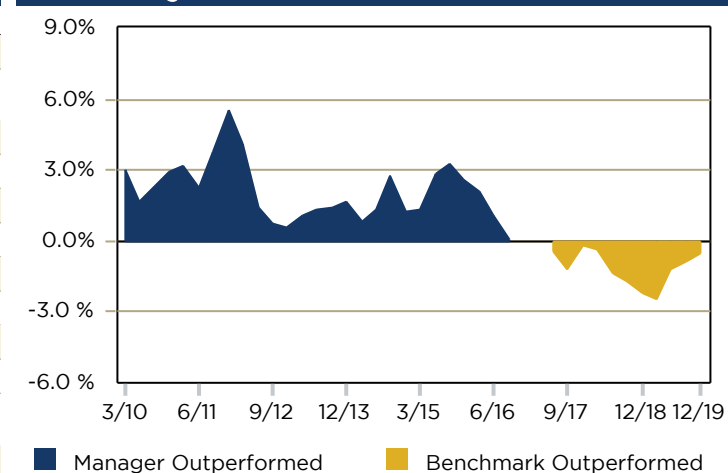
## Fund Information

Fund Inception	12/31/1998
Fund Assets	6,561 Million
Portfolio Assets	4,260 Million
Total # of Holdings	535
% in Top 10	12.61 %
PM	Team Managed
PM Tenure	21 Years
Turnover	48.00 %
Gross Expense (%)	0.81 %
Net Expense (%)	0.81 %
New Investors	Open

## Fund Statistics

	3 Years	10 Years
Standard Deviation	17.58	17.52
<b>vs. Russell 2000 Value Index</b>		
Beta	1.11	1.04
Alpha	-0.83	0.07
Information Ratio	-0.06	0.16
Tracking Error	3.02	2.85
R-Squared	0.98	0.97
Up Market Capture	108.20	103.19
Down Market Capture	112.00	102.62
Consistency	50.00	56.67

## 3 Years Rolling Excess Performance



## Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	2,833	2,198
Median Mkt. Cap (\$M)	1,523	718
Price/Earnings ratio	14.7	15.3
Price/Book ratio	1.8	1.7
5 Yr. EPS Growth Rate (%)	10.5	9.2
Current Yield (%)	1.7	2.1
Beta (5 Years, Monthly)	1.06	1.00
Number of Stocks	707	1,402
Debt to Equity	1.2	0.8
Forecast P/E	14.9	14.8
Forecast EPS Growth	10.4	9.4
Return on Equity	0.0	0.0

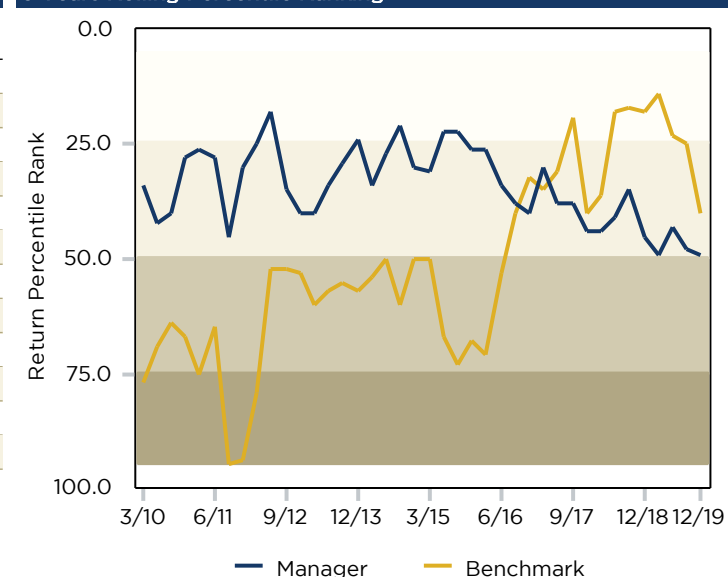
## vs. Risk Free

Sharpe Ratio	0.23	0.65
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## Sector Allocation

Sector	Portfolio Weight (%)	Benchmark Weight (%)
Communication Services	2.1	2.2
Consumer Discretionary	12.7	9.7
Consumer Staples	2.0	2.7
Energy	4.6	5.8
Financials	27.8	30.2
Health Care	3.0	5.4
Industrials	20.9	12.7
Information Technology	14.5	9.6
Materials	4.4	4.7
Real Estate	5.1	11.1
Utilities	2.7	5.9
<b>Total</b>	<b>99.8</b>	<b>100.0</b>

## 3 Years Rolling Percentile Ranking



## Country/Region Allocation

United States	93.7	96.4
Non-US Developed	5.1	2.7
Emerging Markets	1.3	0.4
Other	0.0	0.5
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

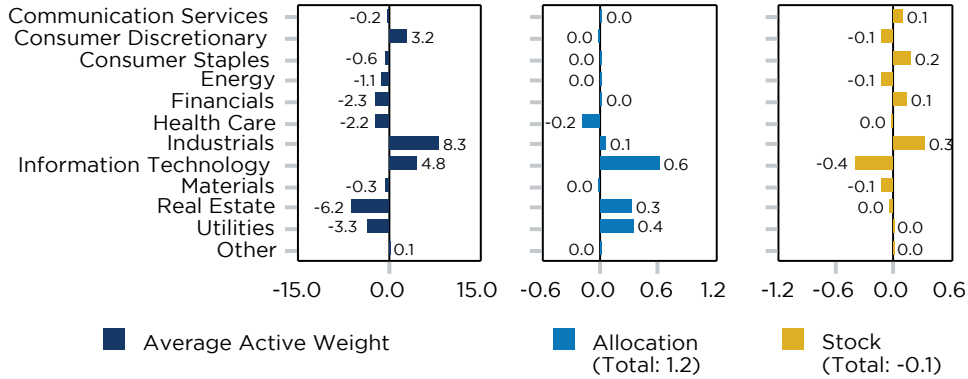


# American Beacon Small Cp Val Inst (AVFIX)

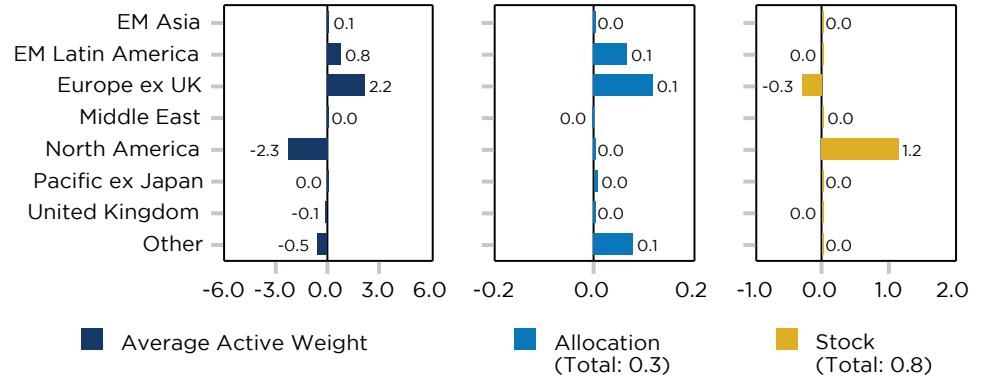
Index: Russell 2000 Value Index

Report Date: 12/31/2019

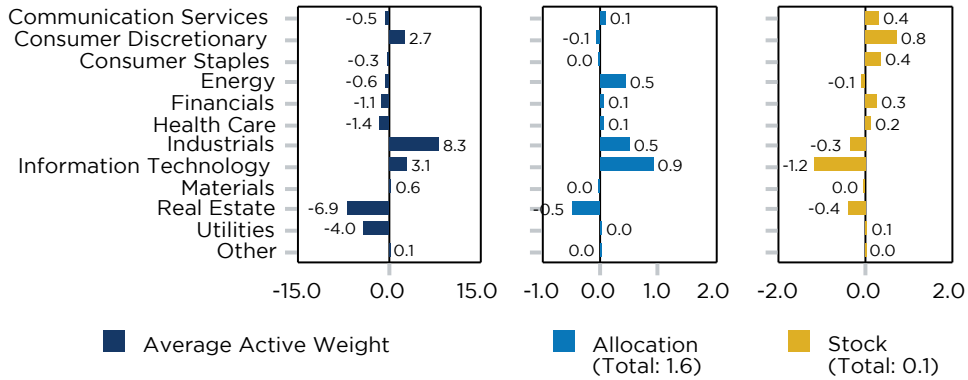
## 1 Quarter Sector Attribution



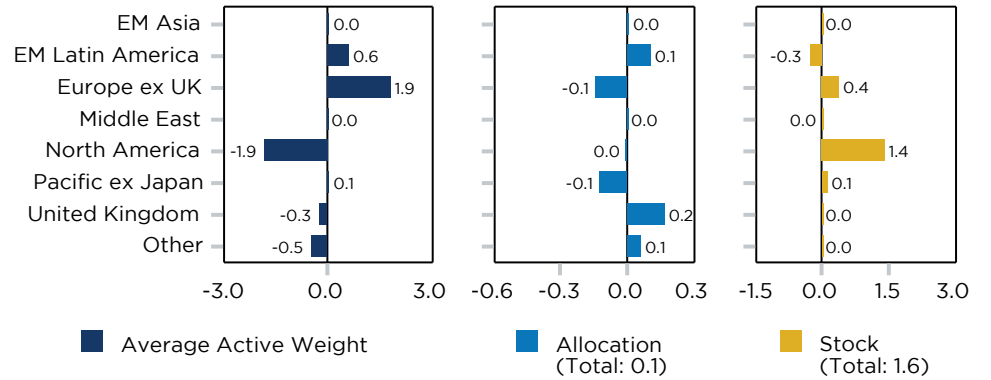
## 1 Quarter Region Attribution



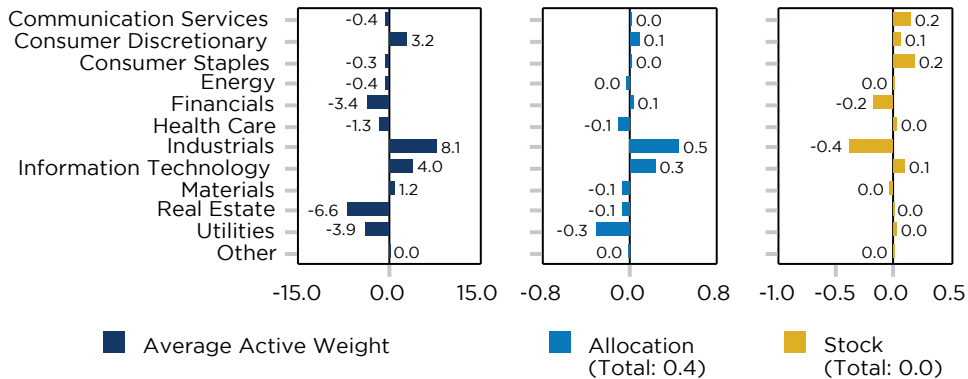
## 1 Year Sector Attribution



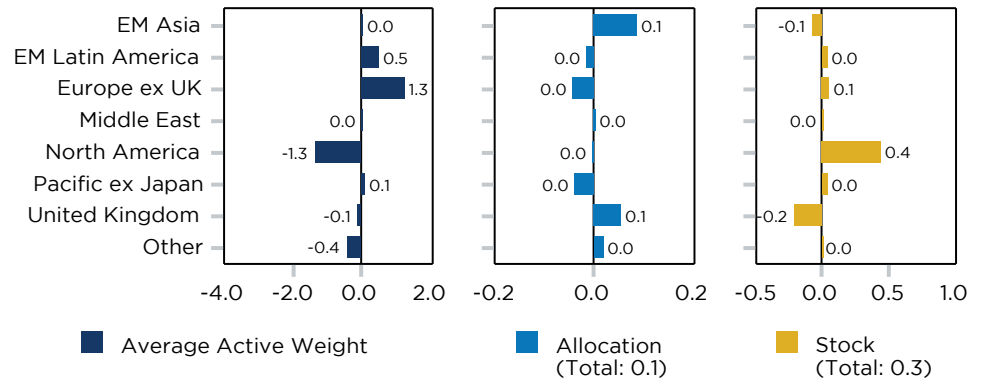
## 1 Year Region Attribution



## 3 Years Sector Attribution



## 3 Years Region Attribution





# American Beacon Small Cp Val Inst (AVFIX)

Index: Russell 2000 Value Index

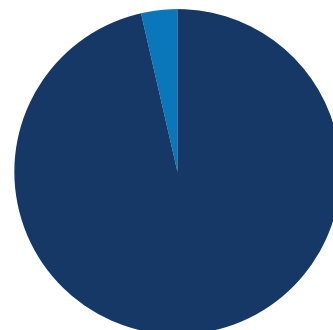
Report Date: 12/31/2019

## Top Ten Securities

Future on Russell 2000 Dec19	3.9 %
Diodes Inc	1.4 %
Brooks Automation Inc	1.1 %
Portland General Electric Co	1.1 %
Vishay Intertechnology Inc	1.0 %
Enstar Group Ltd	0.9 %
Seritage Growth Properties Class	0.9 %
MGIC Investment Corp	0.9 %
Simpson Manufacturing Co Inc	0.8 %
CNO Financial Group Inc	0.8 %
<b>Total</b>	<b>12.6 %</b>

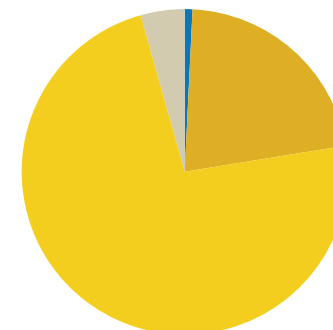
## Asset Allocation

- Equity
- Cash
- Fixed Income



## Market Capitalization

- Giant
- Large
- Medium
- Small
- Micro



## Top Ten Contributors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Diodes Inc	1.25	0.13	0.36	40.40
Office Depot Inc	0.35	0.10	0.12	57.77
Cohu Inc	0.24	0.06	0.11	69.70
Vishay Intertechnology Inc.	0.80	0.23	0.10	26.34
Photronics Inc	0.34	0.07	0.10	44.85
American Axle & Manufact	0.46	0.10	0.08	30.90
Bank Butterfield & Son Ltd	0.49	0.11	0.07	26.58
Darling Ingredients Inc	0.49	0.33	0.06	46.79
KBR Inc	0.54	0.36	0.03	24.62
Tech Data Corp	0.39	0.39	0.00	37.76

## Top Ten Contributors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
RH	0.51	0.12	0.34	90.88
Diodes Inc	0.72	0.10	0.16	29.98
Brooks Automation Inc	0.60	0.12	0.15	36.77
Trex Co Inc	0.41	0.00	0.15	40.80
Keysight Technologies Inc	0.28	0.00	0.10	41.05
Teradyne Inc.	0.27	0.00	0.10	40.12
KBR Inc	0.46	0.00	0.09	24.37
Encompass Health Corp	0.51	0.00	0.08	21.03
Deckers Outdoor Corp	0.32	0.17	0.06	45.00
Vishay Intertechnology Inc.	0.96	0.22	0.05	11.36

## Top Ten Detractors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Seritage Growth Properties	0.89	0.13	-0.11	-5.67
Whirlpool Corp	0.68	0.00	-0.10	-6.09
MTS Systems Corp	0.35	0.07	-0.06	-12.51
Adient Plc	0.57	0.21	-0.06	-7.45
Colony Capital Inc	0.19	0.00	-0.05	-19.25
Quad/Graphics Inc	0.12	0.04	-0.05	-53.97
Newpark Resources Inc.	0.25	0.07	-0.05	-17.72
Taylor Morrison Home Corp	0.40	0.24	-0.04	-15.73
NETGEAR Inc	0.19	0.10	-0.03	-23.93
Southwest Gas Holdings Inc	0.26	0.46	0.05	-15.96

## Top Ten Detractors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Callon Petroleum Co/DE	0.61	0.00	-0.22	-32.01
Tenneco Inc	0.41	0.00	-0.18	-39.64
Ferroglobe PLC	0.35	0.07	-0.17	-55.53
Whiting Petroleum Corp	0.30	0.00	-0.15	-46.55
American Axle & Manufact	0.65	0.00	-0.15	-17.70
Range Resources Corp.	0.27	0.00	-0.14	-47.53
United Natural Foods Inc	0.50	0.24	-0.12	-43.17
Tutor Perini Corp	0.53	0.09	-0.12	-22.85
McDermott International Inc.	0.18	0.18	0.00	-68.75
Oasis Petroleum Inc	0.33	0.36	0.01	-40.06

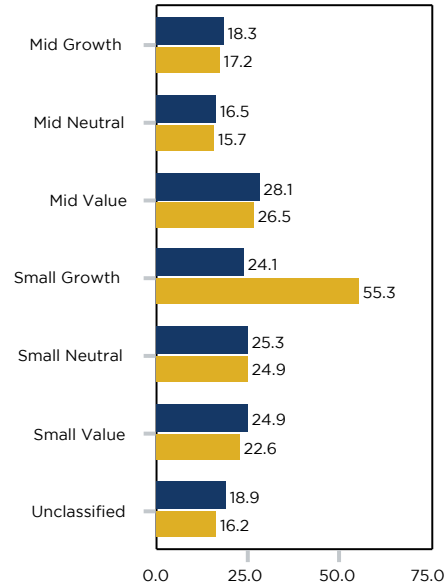


# American Beacon Small Cp Val Inst (AVFIX)

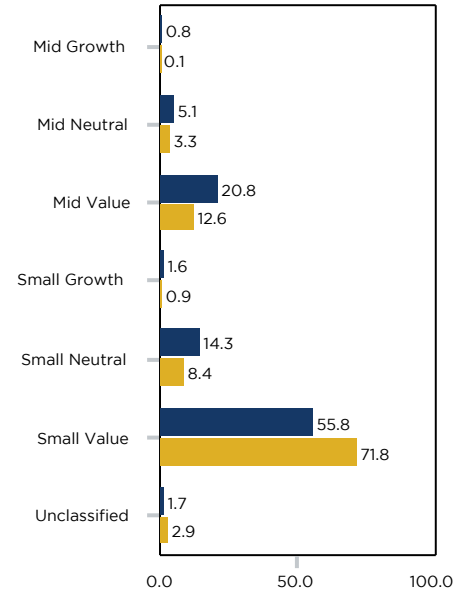
Index: Russell 2000 Value Index

Report Date: 12/31/2019

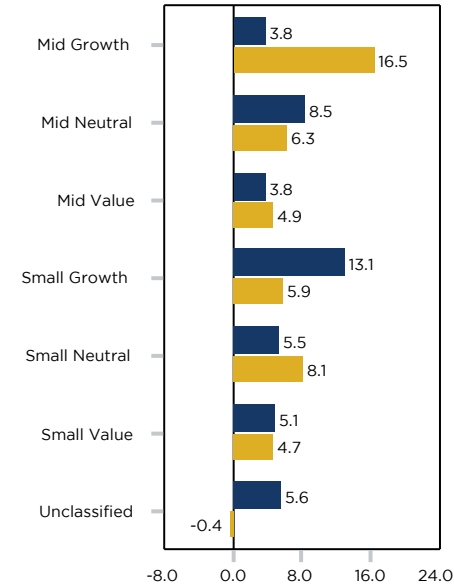
## Performance | 1 Year



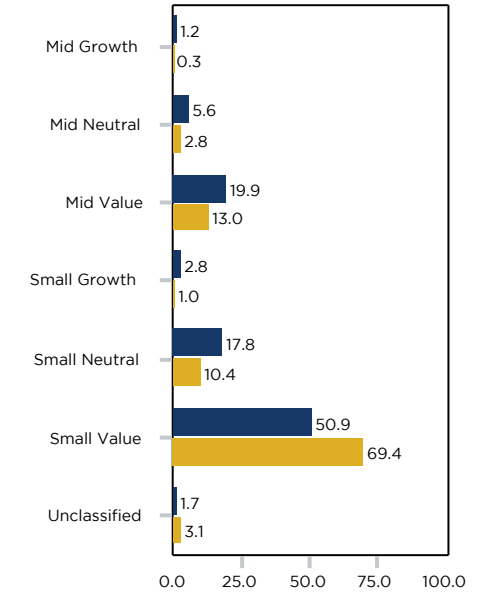
## Allocation | 1 Year



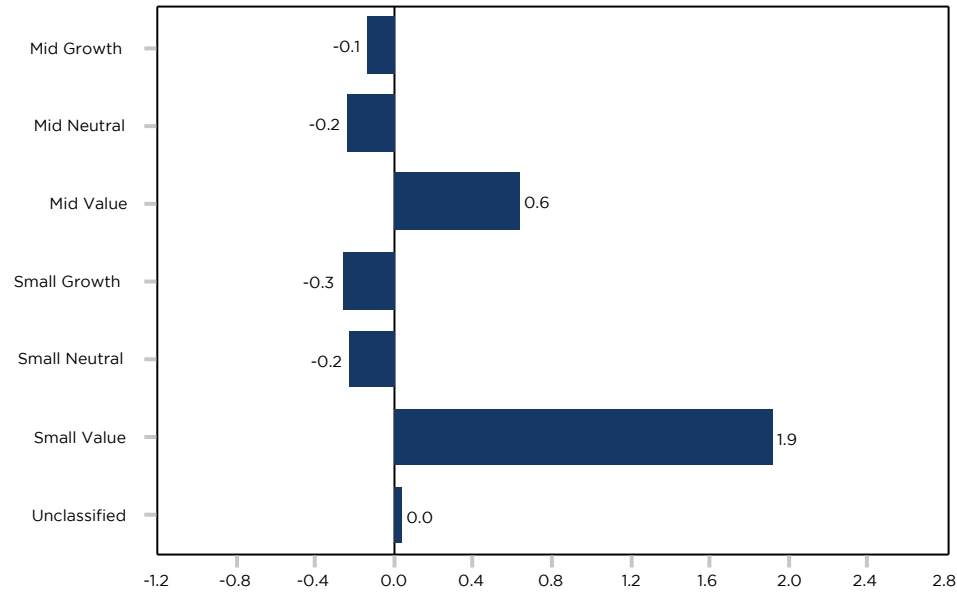
## Performance | 3 Years



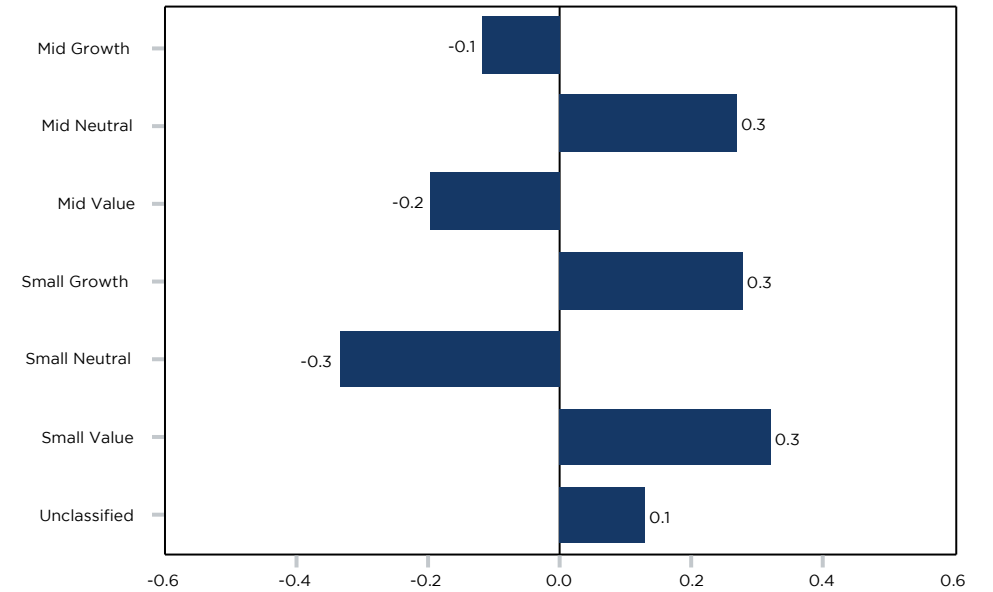
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years



## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	8.14 (57)	27.40 (17)	27.40 (17)	10.33 (7)	8.90 (17)	12.83 (10)	-9.32 (19)	16.25 (13)	18.32 (74)	-3.63 (39)
Benchmark	8.12	27.35	27.35	10.31	8.86	12.99	-9.33	16.24	18.26	-3.68
Peer Group	8.34	24.67	24.67	7.60	7.56	11.44	-11.87	13.20	20.84	-4.35
Population	988	977	977	920	828	689	1,093	1,086	1,078	1,038

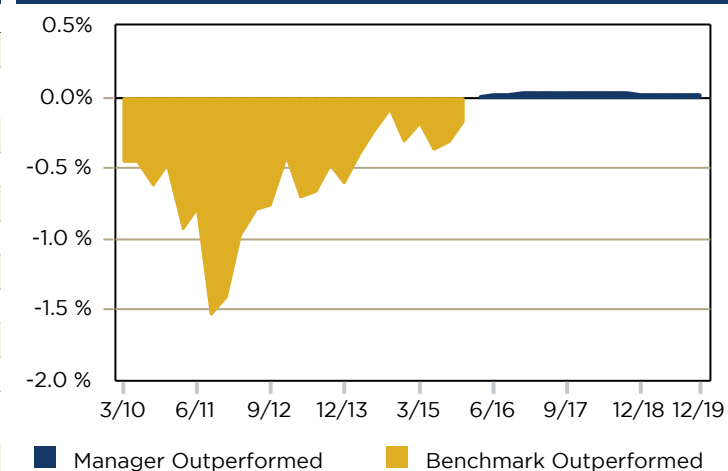
## Fund Information

Fund Inception	07/07/1997
Fund Assets	96,752 Million
Portfolio Assets	17,337 Million
Total # of Holdings	1363
% in Top 10	3.22 %
PM	Coleman,W/O'Reilly,G
PM Tenure	3 Years 8 Months
Turnover	15.00 %
Gross Expense (%)	0.04 %
Net Expense (%)	0.04 %
New Investors	Open

## Fund Statistics

	3 Years	10 Years
Standard Deviation	14.73	15.89
<b>vs. CRSP U.S. Small Cap TR Index</b>		
Beta	1.00	1.01
Alpha	0.01	-0.27
Information Ratio	0.70	-0.21
Tracking Error	0.03	0.58
R-Squared	1.00	1.00
Up Market Capture	100.11	100.42
Down Market Capture	100.04	101.57
Consistency	58.33	55.00

## 3 Years Rolling Excess Performance



## Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	5,242	5,248
Median Mkt. Cap (\$M)	2,518	2,556
Price/Earnings ratio	20.4	20.3
Price/Book ratio	2.7	2.7
5 Yr. EPS Growth Rate (%)	11.5	11.5
Current Yield (%)	1.6	1.6
Beta (5 Years, Monthly)	1.00	1.00
Number of Stocks	1,358	1,343
Debt to Equity	1.0	1.0
Forecast P/E	18.3	18.3
Forecast EPS Growth	12.9	12.9
Return on Equity	0.0	0.0

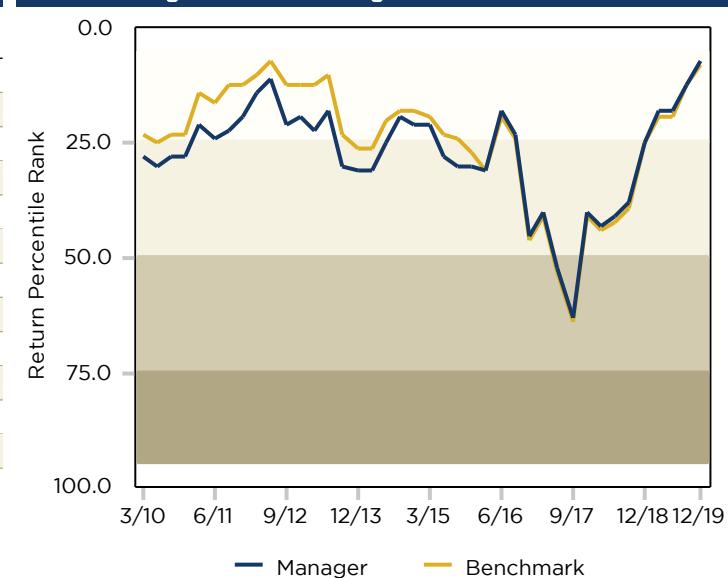
## vs. Risk Free

Sharpe Ratio	0.63	0.81
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## Sector Allocation

Sector	Portfolio Weight (%)	Benchmark Weight (%)
Communication Services	2.7	2.7
Consumer Discretionary	11.4	11.4
Consumer Staples	2.9	2.9
Energy	2.5	2.5
Financials	15.2	15.2
Health Care	12.7	12.7
Industrials	15.7	15.7
Information Technology	17.9	17.9
Materials	4.8	4.8
Real Estate	10.5	10.5
Utilities	3.5	3.5
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

## 3 Years Rolling Percentile Ranking



## Country/Region Allocation

United States	96.4	96.4
Non-US Developed	3.1	3.1
Emerging Markets	0.3	0.3
Other	0.2	0.2
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

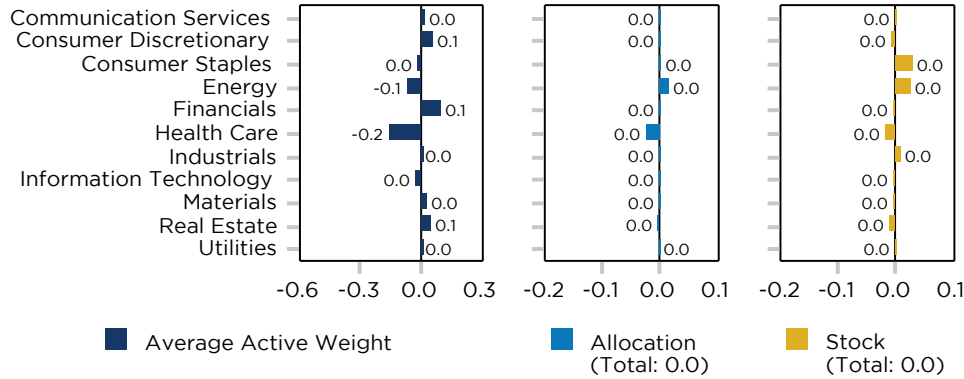


# Vanguard Small Cap Index I (VSCIX)

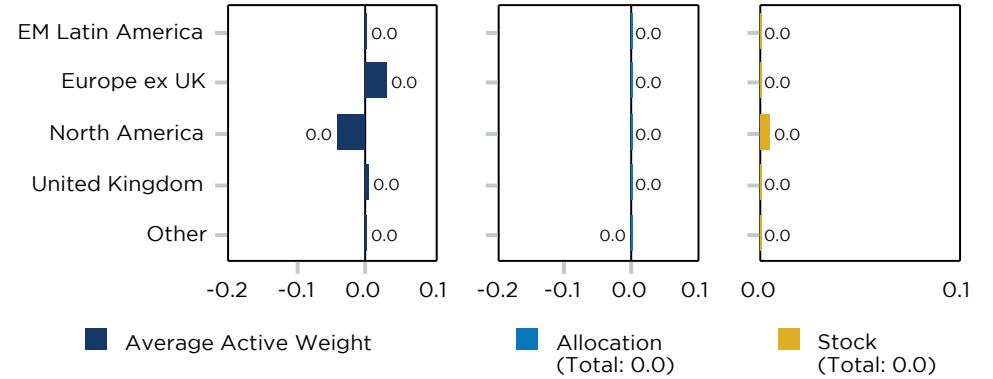
Index: CRSP U.S. Small Cap TR Index

Report Date: 12/31/2019

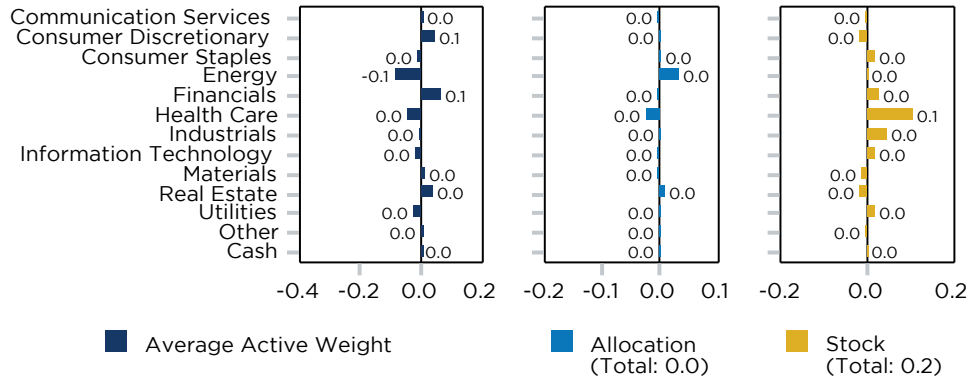
## 1 Quarter Sector Attribution



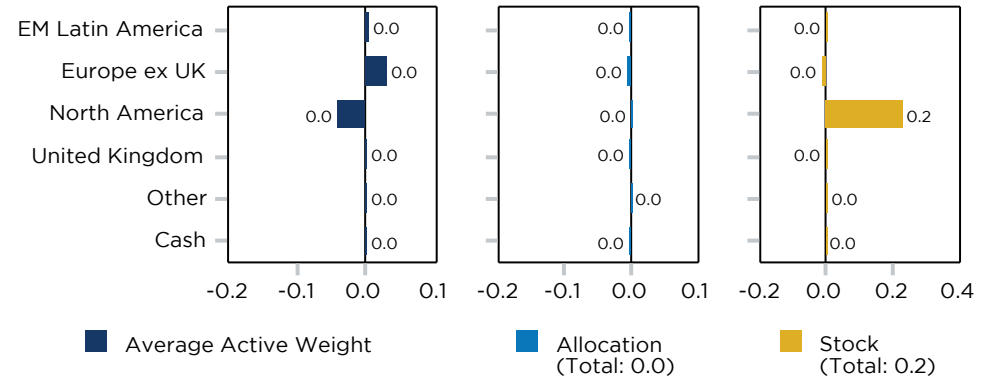
## 1 Quarter Region Attribution



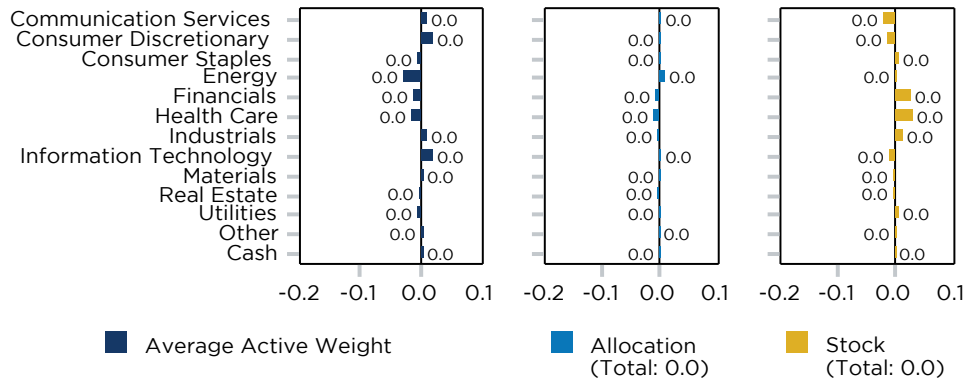
## 1 Year Sector Attribution



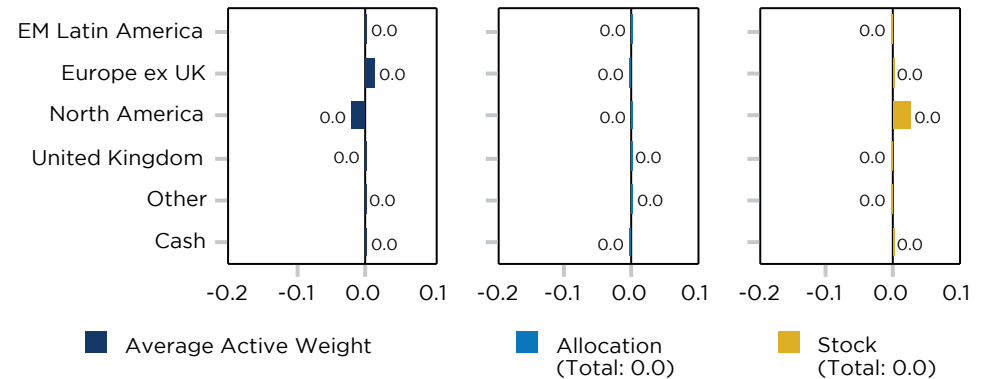
## 1 Year Region Attribution



## 3 Years Sector Attribution

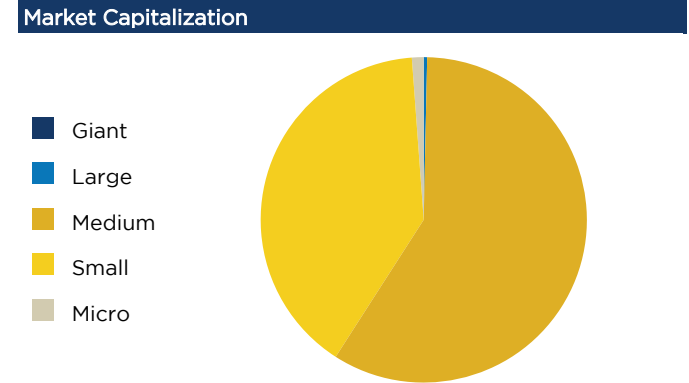
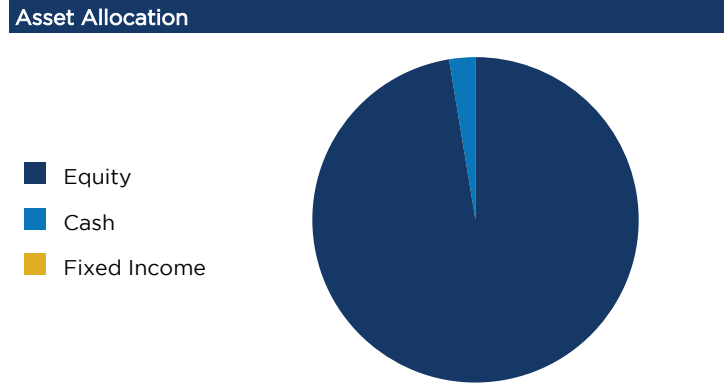


## 3 Years Region Attribution





Top Ten Securities	
Leidos Holdings Inc	0.4 %
Zebra Technologies Corp	0.4 %
Atmos Energy Corp	0.3 %
IDEX Corp	0.3 %
Steris PLC	0.3 %
Teledyne Technologies Inc	0.3 %
Equity Lifestyle Properties Inc	0.3 %
Tyler Technologies Inc	0.3 %
Allegion PLC	0.3 %
Teradyne Inc	0.3 %
<b>Total</b>	<b>3.2 %</b>



Top Ten Contributors   1 Quarter				
	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
RingCentral Inc	0.26	0.25	0.00	34.23
Zebra Technologies Corp.	0.32	0.31	0.00	23.78
Fair Isaac Corp	0.24	0.23	0.00	23.44
Allegion Plc	0.28	0.27	0.00	20.42
Sarepta Therapeutics Inc	0.15	0.15	0.00	71.32
Arrowhead Pharmaceuticals Inc	0.07	0.07	0.00	125.09
Trade Desk Inc (The)	0.21	0.21	0.00	38.51
Medicines Co (The)	0.10	0.10	0.00	69.88
Reata Pharmaceuticals Inc	0.04	0.04	0.00	154.62
ON Semiconductor Corp	0.22	0.22	0.00	26.91

Top Ten Contributors   3 Years				
	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Advanced Micro Devices Inc	0.29	0.29	0.00	59.32
CDW Corp	0.27	0.27	0.00	41.56
Align Technology Inc	0.22	0.22	0.00	42.65
Cadence Design Systems Inc	0.23	0.23	0.00	40.10
CoStar Group Inc	0.20	0.20	0.00	46.96
DexCom Inc	0.16	0.16	0.00	54.16
IAC/InterActiveCorp	0.15	0.15	0.00	56.66
Copart Inc	0.17	0.17	0.00	48.62
Keysight Technologies Inc	0.20	0.20	0.00	41.05
Teleflex Inc	0.23	0.23	0.00	33.40

Top Ten Detractors   1 Quarter				
	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Sage Therapeutics Inc	0.21	0.20	-0.01	-48.54
ServiceMaster Global Inc.	0.22	0.21	0.00	-30.84
Proofpoint Inc	0.21	0.20	0.00	-11.06
UGI Corp	0.30	0.29	0.00	-9.50
CyrusOne Inc	0.25	0.25	0.00	-16.65
Etsy Inc	0.18	0.18	0.00	-21.59
Intelsat SA	0.05	0.05	0.00	-69.17
Shake Shack Inc	0.07	0.07	0.00	-39.24
Spirit Aerosystems Holdings Inc	0.24	0.24	0.00	-11.25
Vonage Holdings Corp	0.07	0.07	0.00	-34.42

Top Ten Detractors   3 Years				
	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Chesapeake Energy Corp	0.20	0.20	0.00	-51.01
Rite Aid Corp.	0.14	0.14	0.00	-54.55
U S Silica Holdings Inc	0.15	0.15	0.00	-51.56
Southwestern Energy Co	0.17	0.17	0.00	-39.30
Weatherford Intl	0.08	0.08	0.00	-84.39
CommScope Holding Co Inc	0.23	0.23	0.00	-27.48
Nabors Industries Ltd	0.14	0.14	0.00	-42.23
Superior Energy Services Inc.	0.08	0.08	0.00	-69.04
Dean Foods Co	0.06	0.06	0.00	-85.69
United States Steel Corp	0.18	0.18	0.00	-29.18

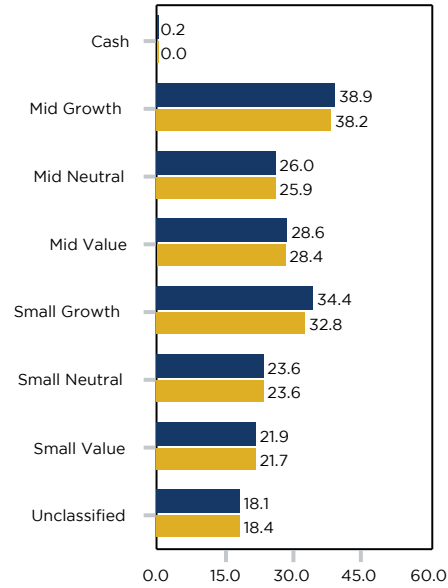


# Vanguard Small Cap Index I (VSCIX)

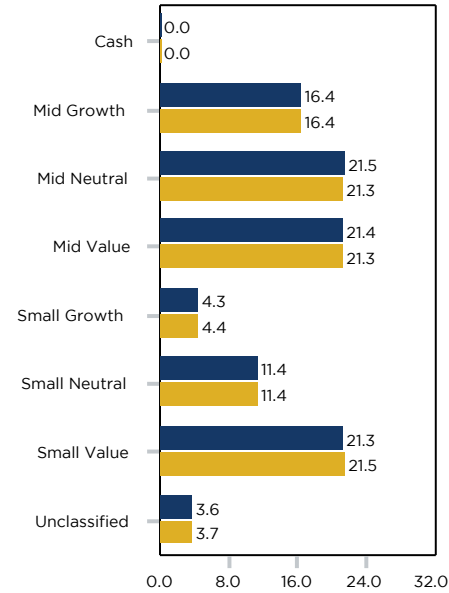
Index: CRSP U.S. Small Cap TR Index

Report Date: 12/31/2019

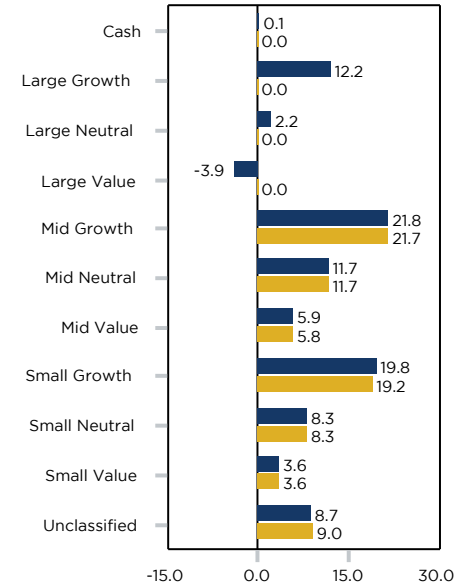
## Performance | 1 Year



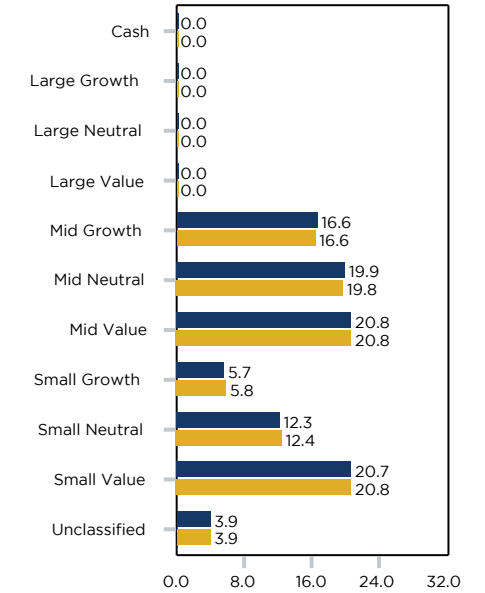
## Allocation | 1 Year



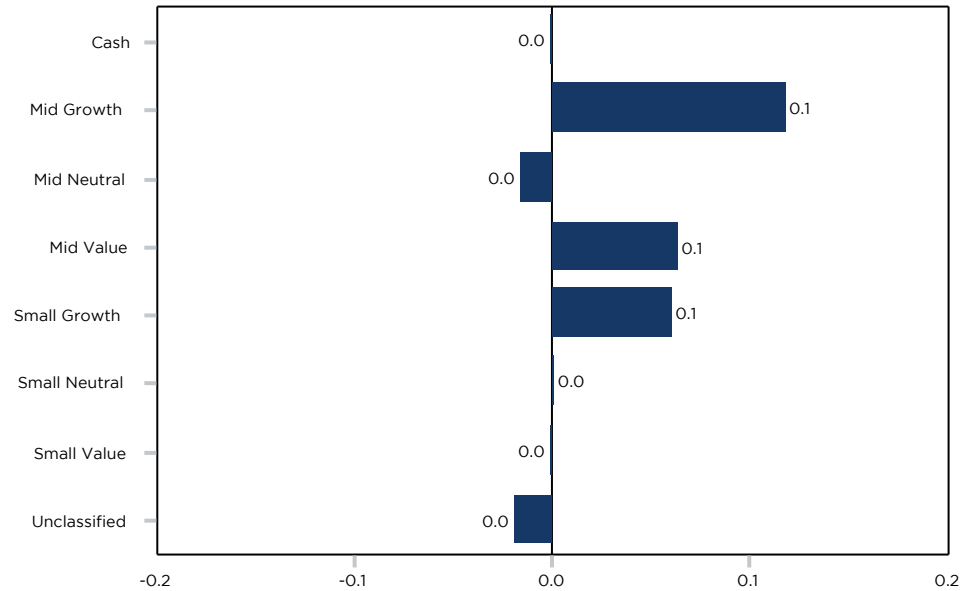
## Performance | 3 Years



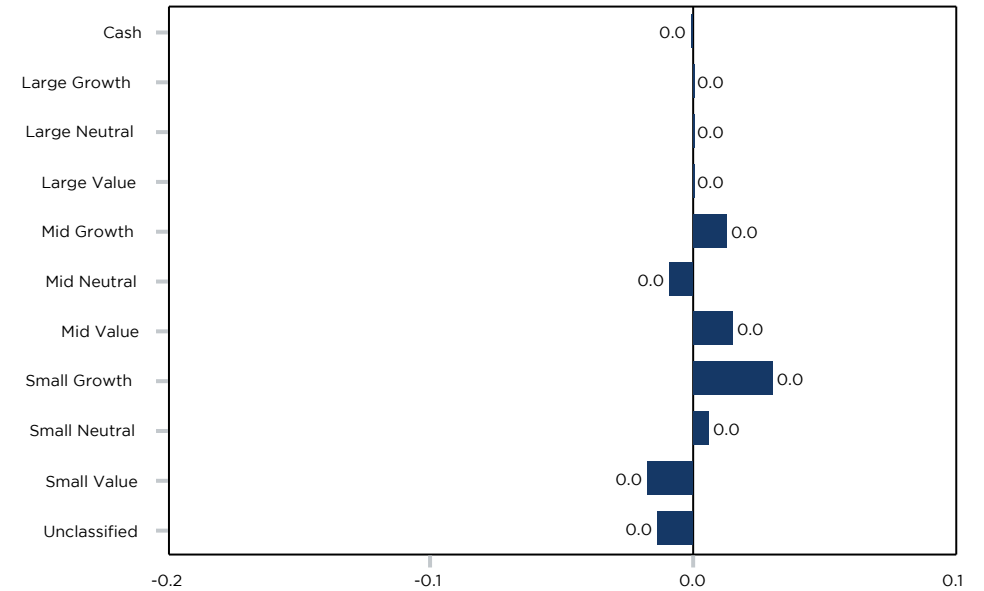
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years



## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	10.14 (38)	25.70 (64)	25.70 (64)	7.88 (89)	7.13 (88)	12.28 (66)	-15.87 (95)	18.73 (69)	13.40 (32)	-0.91 (32)
Benchmark	11.39	28.48	28.48	12.49	9.34	13.01	-9.31	22.17	11.32	-1.38
Peer Group	9.47	28.03	28.03	13.93	9.98	13.00	-5.94	21.90	10.89	-2.26
Population	808	794	794	762	741	644	919	857	888	883

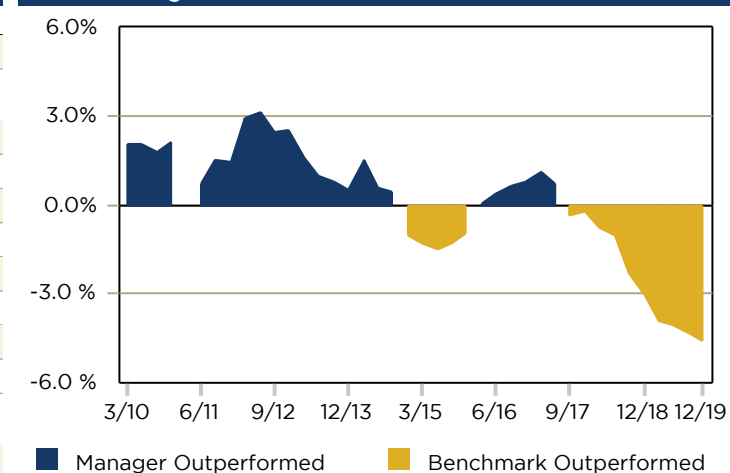
## Fund Information

Fund Inception	05/06/1994
Fund Assets	335 Million
Portfolio Assets	199 Million
Total # of Holdings	154
% in Top 10	13.23 %
PM	Basset,J/Hasso,J
PM Tenure	11 Years 2 Months
Turnover	108.00 %
Gross Expense (%)	0.88 %
Net Expense (%)	0.88 %
New Investors	Open

## Fund Statistics

	3 Years	10 Years
Standard Deviation	17.15	16.83
<b>vs. Russell 2000 Growth Index</b>		
Beta	1.03	0.94
Alpha	-4.45	0.04
Information Ratio	-1.47	-0.25
Tracking Error	2.77	3.16
R-Squared	0.98	0.97
Up Market Capture	90.81	93.16
Down Market Capture	110.17	92.24
Consistency	30.56	45.00

## 3 Years Rolling Excess Performance



## Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	3,680	2,738
Median Mkt. Cap (\$M)	3,123	927
Price/Earnings ratio	25.4	26.7
Price/Book ratio	3.7	4.2
5 Yr. EPS Growth Rate (%)	15.4	13.5
Current Yield (%)	0.7	0.7
Beta (5 Years, Monthly)	0.99	1.00
Number of Stocks	140	1,172
Debt to Equity	1.2	1.4
Forecast P/E	20.4	19.7
Forecast EPS Growth	13.7	14.8
Return on Equity	0.0	0.0

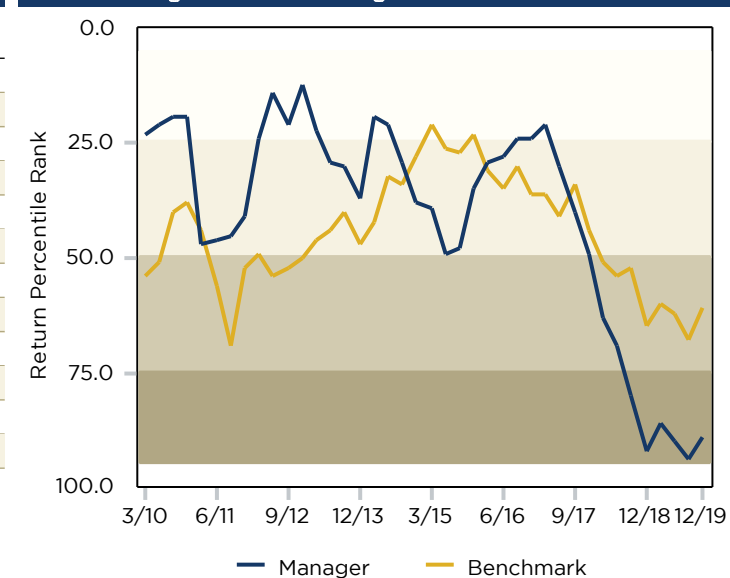
## vs. Risk Free

Sharpe Ratio	0.43	0.74
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## Sector Allocation

Sector	Portfolio Weight (%)	Benchmark Weight (%)
Communication Services	3.0	2.4
Consumer Discretionary	13.2	12.0
Consumer Staples	3.8	3.3
Energy	0.2	0.6
Financials	6.8	5.7
Health Care	26.6	30.5
Industrials	20.2	18.9
Information Technology	18.3	17.3
Materials	3.7	3.1
Real Estate	3.6	4.6
Utilities	0.6	1.5
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

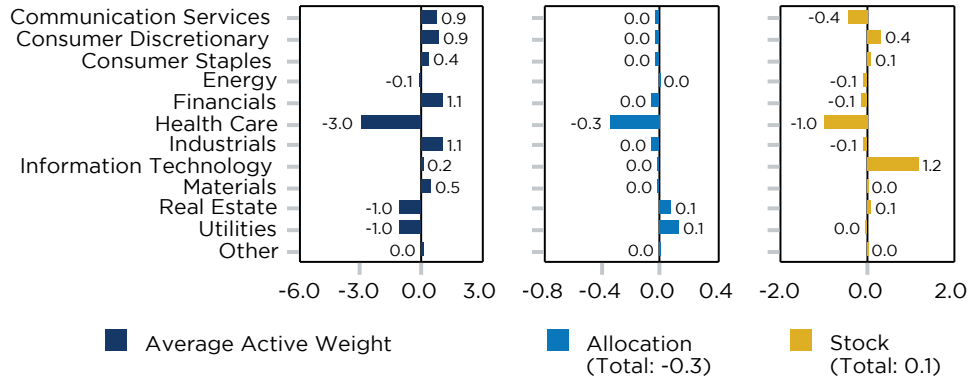
## 3 Years Rolling Percentile Ranking



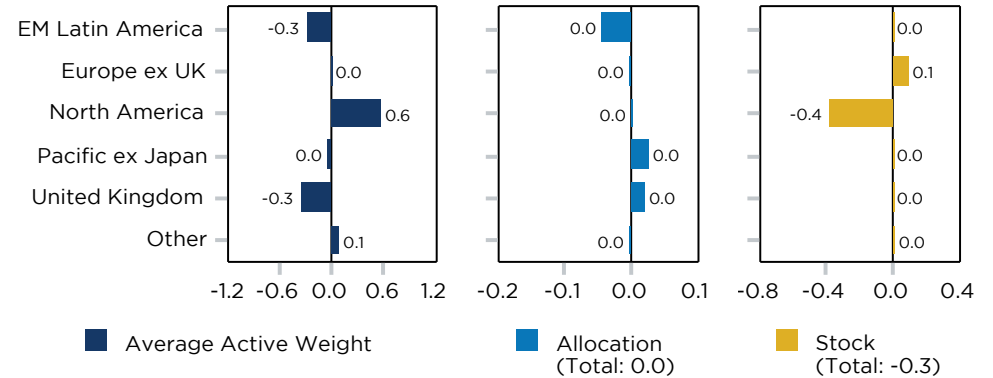
## Country/Region Allocation

United States	97.5	96.8
Non-US Developed	1.6	2.1
Emerging Markets	0.0	0.3
Other	0.9	0.8
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

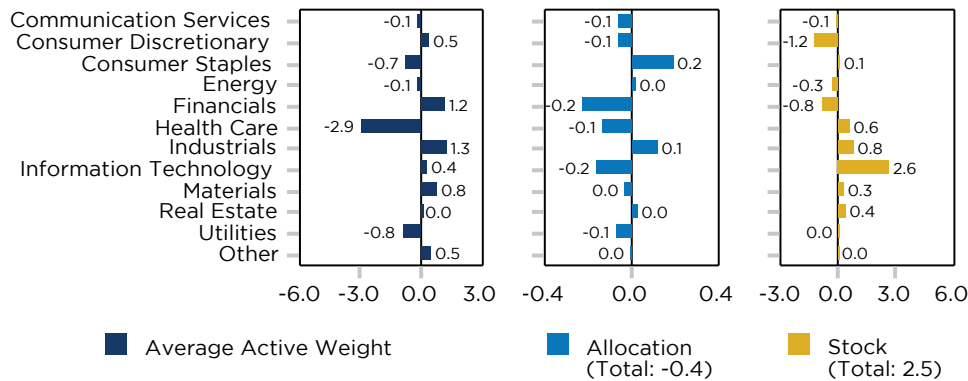
## 1 Quarter Sector Attribution



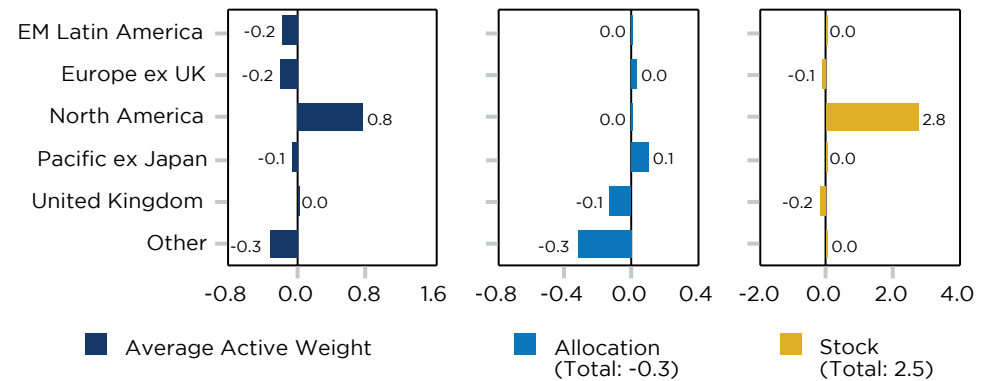
## 1 Quarter Region Attribution



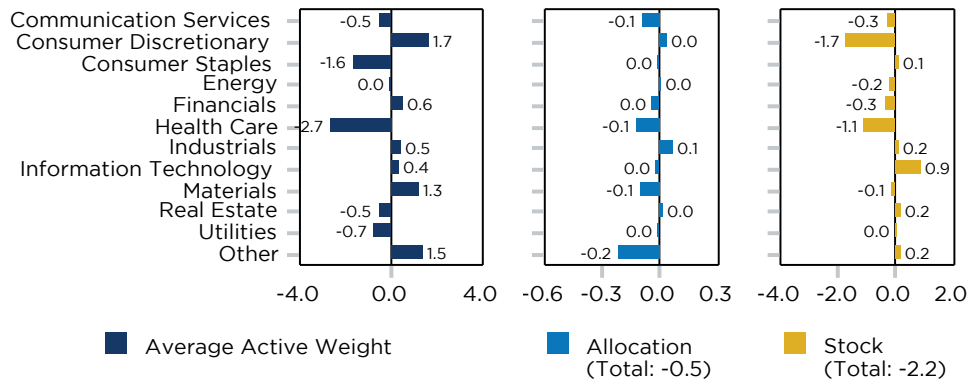
## 1 Year Sector Attribution



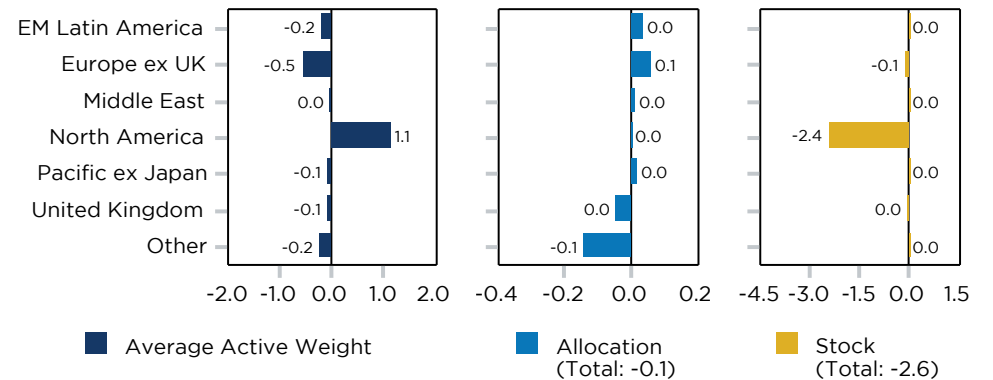
## 1 Year Region Attribution



## 3 Years Sector Attribution



## 3 Years Region Attribution



# Voya SmallCap Opportunities Port I (IVSOX)

Index: Russell 2000 Growth Index

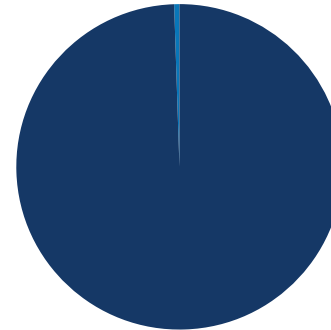
Report Date: 12/31/2019

## Top Ten Securities

Generac Holdings Inc	1.5 %
Performance Food Group Co	1.4 %
J2 Global Inc	1.4 %
The Brink's Co	1.4 %
Ryman Hospitality Properties Inc	1.3 %
Trex Co Inc	1.3 %
Helen Of Troy Ltd	1.3 %
Repligen Corp	1.3 %
Amedisys Inc	1.2 %
ACI Worldwide Inc	1.2 %
<b>Total</b>	<b>13.2 %</b>

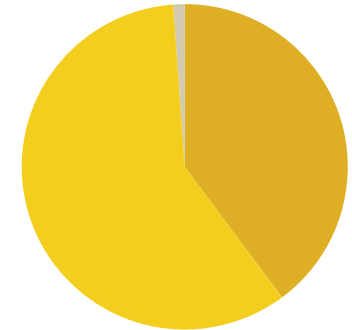
## Asset Allocation

- Equity
- Cash
- Fixed Income



## Market Capitalization

- Giant
- Large
- Medium
- Small
- Micro



## Top Ten Contributors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Crocs Inc	0.84	0.18	0.26	50.90
Lumentum Holdings Inc	0.64	0.00	0.23	48.06
Ra Pharmaceuticals Inc	0.35	0.09	0.23	98.44
Select Medical Holdings Corp	0.92	0.19	0.22	40.86
Bottomline Technologies Inc	0.95	0.17	0.19	36.21
R1 RCM INC	0.67	0.10	0.19	45.35
Intercept Pharmaceuticals Inc	0.41	0.17	0.18	86.74
Generac Holdings Inc	1.49	0.50	0.17	28.40
Amedisys Inc	1.33	0.43	0.14	27.41
HealthEquity Inc	1.02	0.41	0.11	29.62

## Top Ten Contributors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
RingCentral Inc	0.72	0.14	0.52	101.55
EPAM Systems Inc	1.28	0.35	0.34	48.87
Fair Isaac Corp	1.31	0.41	0.31	46.48
Amedisys Inc	0.77	0.13	0.29	57.61
Planet Fitness Inc	0.74	0.06	0.29	54.88
Teledyne Technologies	0.99	0.13	0.25	41.24
FTI Consulting Inc.	1.08	0.02	0.24	34.90
Bright Horizons Family	1.39	0.34	0.17	28.99
Masimo Corp	0.88	0.31	0.12	32.86
Paycom Software Inc	0.35	0.22	0.09	79.88

## Top Ten Detractors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Vonage Holdings Corp	0.74	0.18	-0.26	-34.42
LGI Homes Inc	1.01	0.17	-0.22	-15.21
BJ's Wholesale Club Holdings Inc	1.01	0.10	-0.21	-12.10
Cinemark Holdings Inc	0.92	0.00	-0.21	-11.52
Jack in the Box Inc.	0.82	0.04	-0.20	-13.92
Spectrum Pharmaceuticals Inc	0.37	0.09	-0.19	-56.12
Lantheus Holdings Inc	0.70	0.10	-0.18	-18.17
HMS Holdings Corp	1.00	0.31	-0.18	-14.12
FirstCash Inc	1.15	0.40	-0.17	-11.75
Insperty Inc.	0.95	0.40	-0.13	-12.42

## Top Ten Detractors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Unit Corp	0.45	0.00	-0.37	-70.42
Synchronoss Technologies	0.75	0.18	-0.36	-50.13
Nautilus Inc	0.59	0.06	-0.35	-54.44
Carrizo Oil & Gas Inc	0.74	0.26	-0.25	-40.26
AMC Entertainment Holdings Inc	0.50	0.03	-0.22	-35.08
Cheesecake Factory Inc. (The)	1.24	0.31	-0.22	-11.18
Bank OZK	1.32	0.52	-0.22	-14.87
Big Lots Inc	1.02	0.25	-0.21	-14.35
Owens & Minor Inc.	0.37	0.03	-0.20	-45.52
Prothena Corp Plc	0.44	0.19	-0.11	-31.47



# Voya SmallCap Opportunities Port I (IVSOX)

Index: Russell 2000 Growth Index

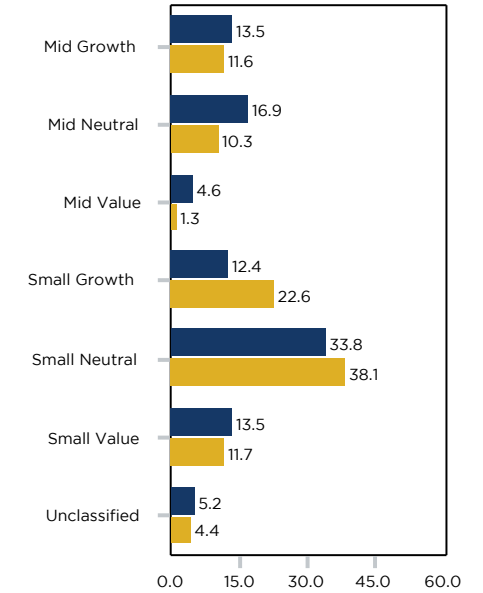
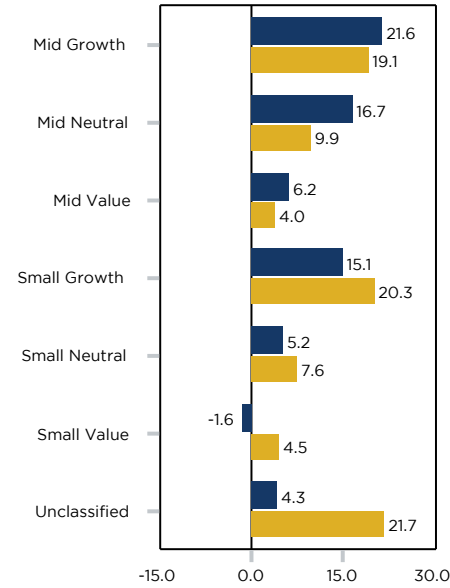
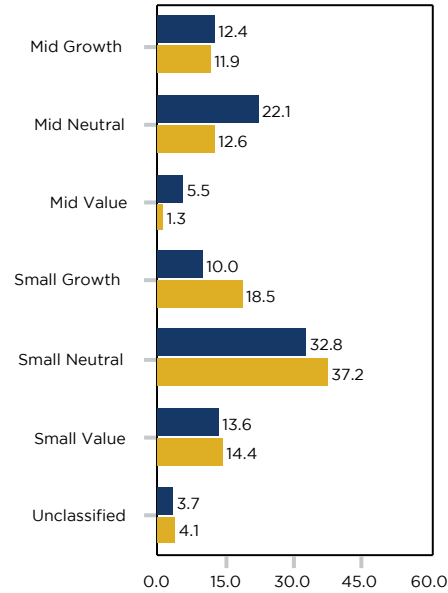
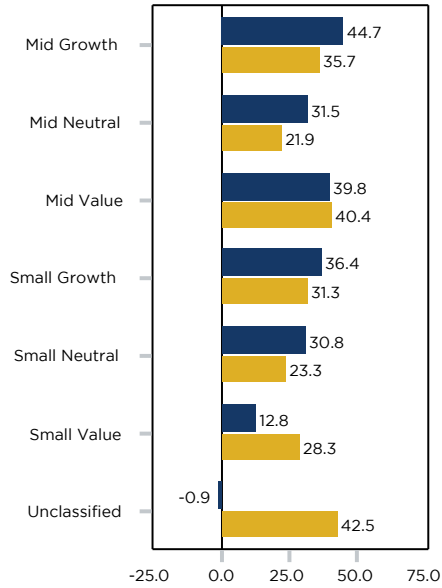
Report Date: 12/31/2019

## Performance | 1 Year

## Allocation | 1 Year

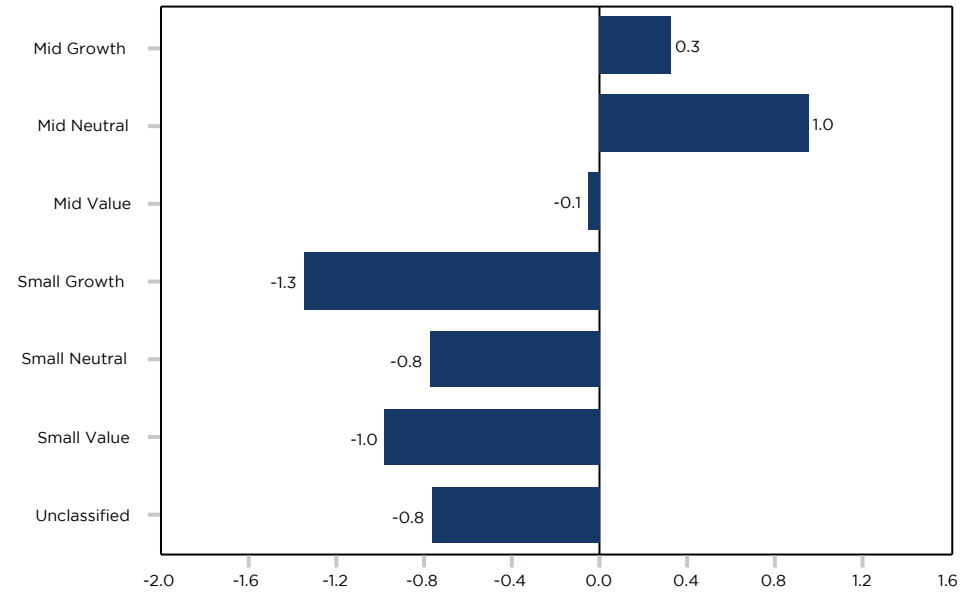
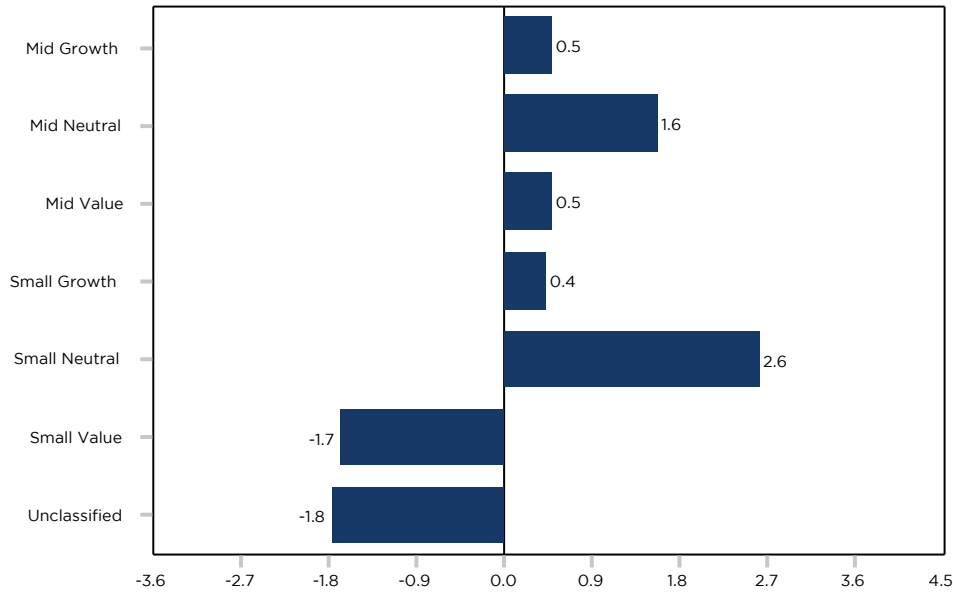
## Performance | 3 Years

## Allocation | 3 Years



## Total Attribution | 1 Year

## Total Attribution | 3 Years





# American Funds Europacific Growth R6 (RERGX)

Index: MSCI AC World ex USA (Net)

Category: Foreign Large Growth

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	10.09 (38)	27.40 (60)	27.40 (60)	12.45 (51)	7.41 (43)	6.73 (53)	-14.91 (56)	31.17 (46)	1.01 (27)	-0.48 (63)
Benchmark	8.92	21.51	21.51	9.87	5.51	4.97	-14.20	27.19	4.50	-5.66
Peer Group	9.64	27.86	27.86	12.45	7.09	6.79	-14.33	30.72	-1.50	0.37
Population	653	636	636	601	544	430	693	654	651	625

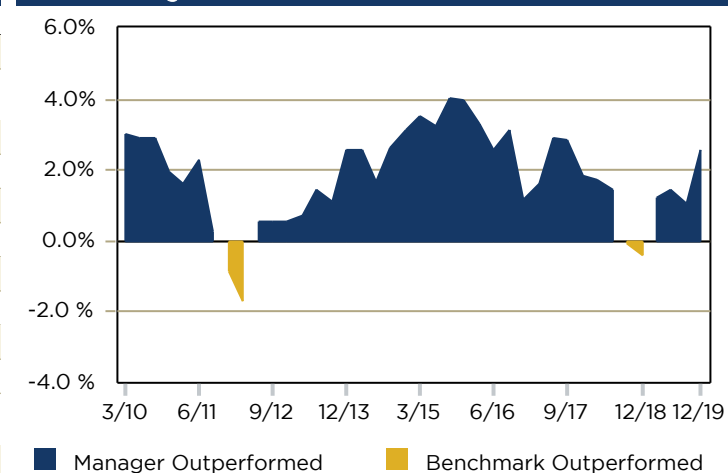
## Fund Information

Fund Inception	05/01/2009
Fund Assets	171,482 Million
Portfolio Assets	77,654 Million
Total # of Holdings	326
% in Top 10	19.75 %
PM	Team Managed
PM Tenure	18 Years 6 Months
Turnover	35.00 %
Gross Expense (%)	0.49 %
Net Expense (%)	0.49 %
New Investors	Open

## Fund Statistics

	3 Years	10 Years
Standard Deviation	12.08	14.06
<b>vs. MSCI AC World ex USA (Net)</b>		
Beta	1.04	0.94
Alpha	2.05	1.95
Information Ratio	0.93	0.50
Tracking Error	2.62	3.19
R-Squared	0.95	0.95
Up Market Capture	108.61	98.33
Down Market Capture	95.22	88.15
Consistency	58.33	50.83

## 3 Years Rolling Excess Performance



## Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	93,189	75,601
Median Mkt. Cap (\$M)	24,315	8,444
Price/Earnings ratio	20.5	16.1
Price/Book ratio	3.1	2.3
5 Yr. EPS Growth Rate (%)	19.0	8.1
Current Yield (%)	0.9	3.2
Beta (5 Years, Monthly)	0.93	1.00
Number of Stocks	309	2,412
Debt to Equity	0.6	1.0
Forecast P/E	15.7	13.5
Forecast EPS Growth	13.4	9.5
Return on Equity	0.0	0.0

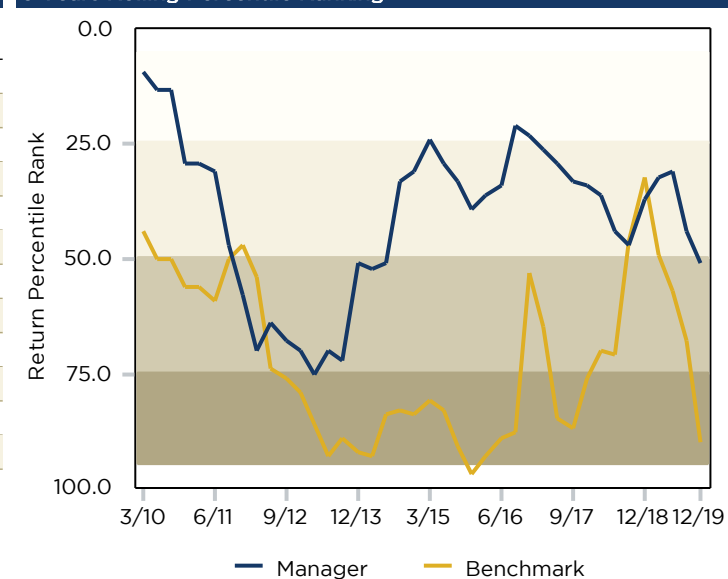
## vs. Risk Free

Sharpe Ratio	0.90	0.50
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## Sector Allocation

Sector	Portfolio Weight (%)	Benchmark Weight (%)
Communication Services	6.5	6.7
Consumer Discretionary	18.7	11.8
Consumer Staples	5.3	9.4
Energy	6.6	6.5
Financials	18.9	21.4
Health Care	8.6	8.9
Industrials	10.4	11.9
Information Technology	13.7	9.4
Materials	6.9	7.4
Real Estate	1.2	3.2
Utilities	3.2	3.4
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

## 3 Years Rolling Percentile Ranking



## Country/Region Allocation

United States	1.1	0.2
Non-US Developed	66.5	75.6
Emerging Markets	31.4	23.9
Frontier Markets	0.1	0.0
Other	0.9	0.3

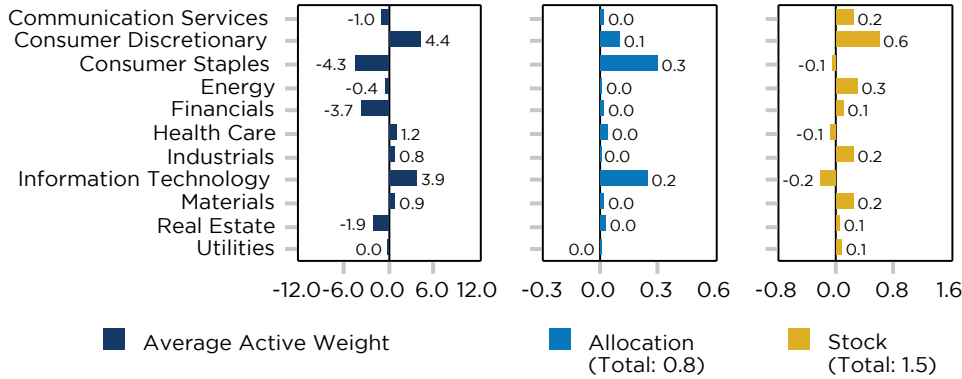


# American Funds Europacific Growth R6 (RERGX)

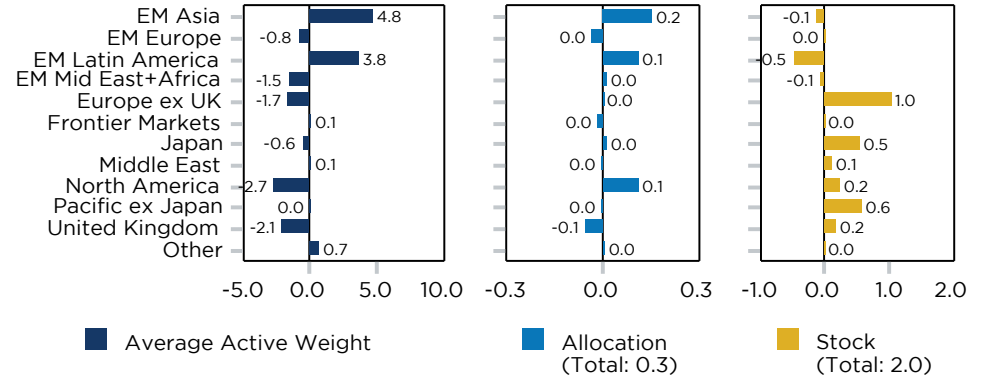
Index: MSCI AC World ex USA (Net)

Report Date: 12/31/2019

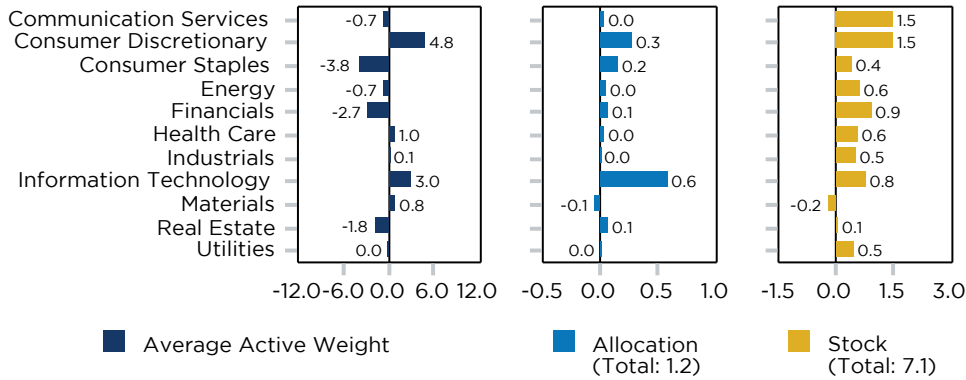
## 1 Quarter Sector Attribution



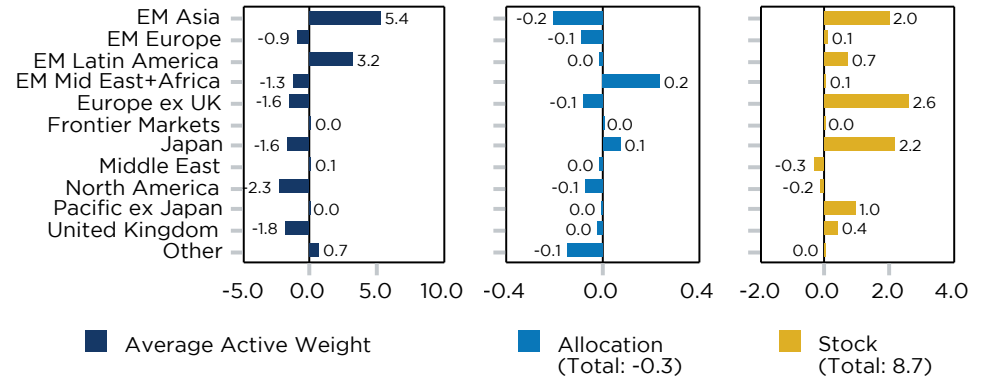
## 1 Quarter Region Attribution



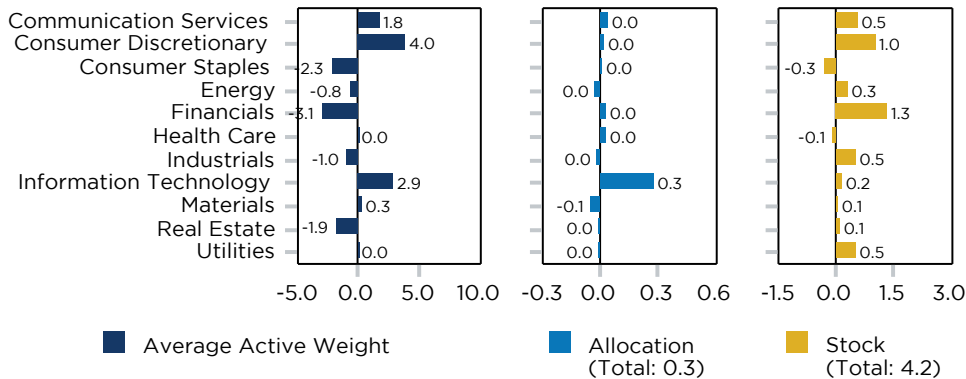
## 1 Year Sector Attribution



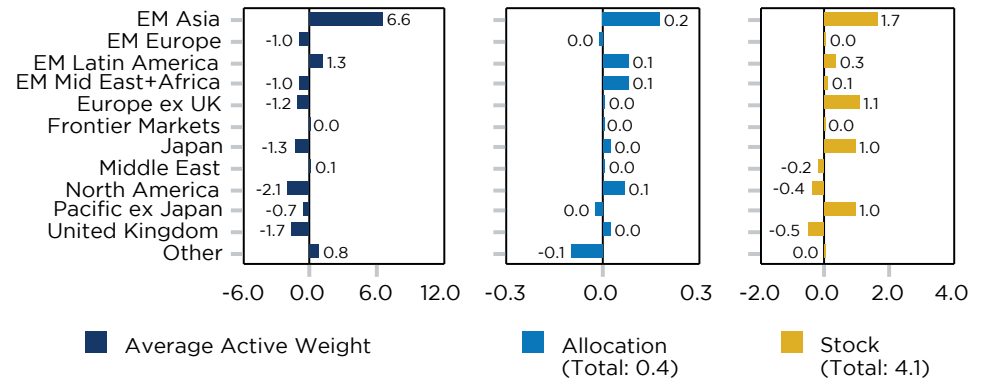
## 1 Year Region Attribution



## 3 Years Sector Attribution



## 3 Years Region Attribution







# American Funds Europacific Growth R6 (RERGX)

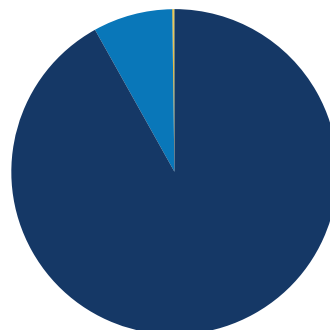
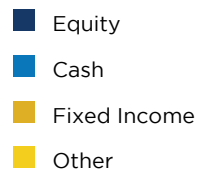
Index: MSCI AC World ex USA (Net)

Report Date: 12/31/2019

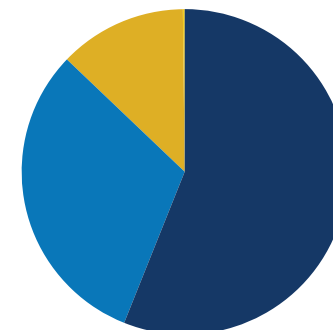
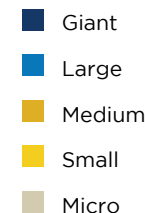
## Top Ten Securities

Reliance Industries Ltd	2.7 %
Airbus SE	2.7 %
HDFC Bank Ltd	2.2 %
AIA Group Ltd	2.2 %
Nintendo Co Ltd	2.2 %
ASML Holding NV	2.2 %
Daiichi Sankyo Co Ltd	1.5 %
Recruit Holdings Co Ltd	1.4 %
Taiwan Semiconductor Manufacturing	1.4 %
Keyence Corp	1.4 %
<b>Total</b>	<b>19.7 %</b>

## Asset Allocation



## Market Capitalization



## Top Ten Contributors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Alibaba Group Holding Ltd	2.43	1.16	0.23	26.83
ASML Holding NV	2.23	0.51	0.19	19.93
Recruit Holdings Co Ltd	1.19	0.20	0.15	24.06
SK Hynix Inc	1.30	0.18	0.13	20.71
Vale SA	1.52	0.18	0.12	17.80
European Aeronautic	2.99	0.37	0.10	12.65
Reliance Industries Ltd	2.73	0.26	0.10	12.81
Taiwan Semiconductor	1.47	1.05	0.08	27.33
AIA Group Ltd	2.93	0.56	0.05	11.20
Nintendo Co Ltd	2.76	0.20	0.01	9.27

## Top Ten Contributors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Toshiba Corp	0.65	0.06	0.75	137.25
Alibaba Group Holding Ltd	2.14	0.57	0.38	34.17
ASML Holding NV	1.44	0.24	0.36	39.61
European Aeronautic	1.73	0.22	0.34	32.39
Reliance Industries Ltd	1.22	0.12	0.33	39.60
Sony Corp	1.47	0.20	0.32	35.16
Nintendo Co Ltd	2.07	0.14	0.32	26.34
Taiwan Semiconductor	2.20	0.79	0.29	30.10
AIA Group Ltd	2.04	0.39	0.25	24.98
Tencent Holdings LTD	2.04	0.80	0.20	25.68

## Top Ten Detractors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
PagSeguro Digital Ltd	0.87	0.00	-0.31	-26.24
Kose Corp	0.42	0.03	-0.08	-12.80
NMC Health Plc	0.23	0.02	-0.08	-29.79
Wisetech Global Ltd	0.18	0.00	-0.07	-29.91
JBS SA	0.31	0.04	-0.07	-16.60
Rolls Royce Holdings PLC	0.45	0.08	-0.07	-8.95
Adani Ports & Special Economic Zone Ltd	0.30	0.02	-0.06	-12.23
Chr.Hansen Holdings AS	0.45	0.04	-0.06	-5.07
Rakuten Inc	0.22	0.04	-0.04	-12.27
Treasury Wine Estates Ltd	0.25	0.04	-0.04	-8.91

## Top Ten Detractors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
British American Tobacco	1.86	0.61	-0.24	-9.59
Schlumberger Ltd	0.68	0.00	-0.19	-18.64
Amorepacific Corp	0.86	0.05	-0.18	-12.92
Heidelbergcement AG	1.13	0.08	-0.16	-5.74
Seven Generations Energy Ltd	0.34	0.03	-0.14	-34.06
Nitto Denko Corp	0.79	0.07	-0.12	-7.38
Arcelormittal SA	0.80	0.08	-0.12	-7.10
Tourmaline Oil Corp	0.38	0.03	-0.11	-22.81
Steinhoff Investment Holdings Ltd	0.22	0.09	-0.11	-77.38
Teva Pharmaceutical	0.30	0.19	-0.05	-34.64

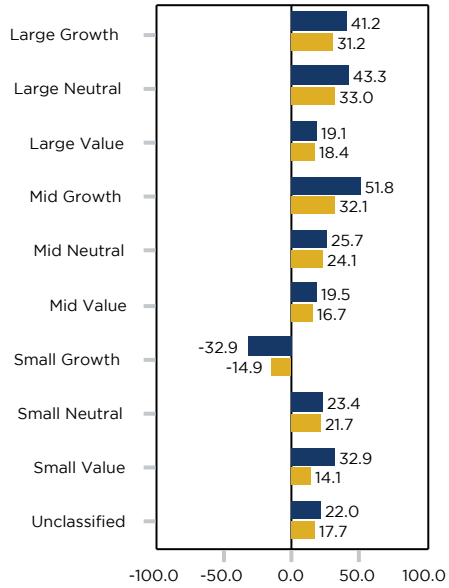


# American Funds Europacific Growth R6 (RERGX)

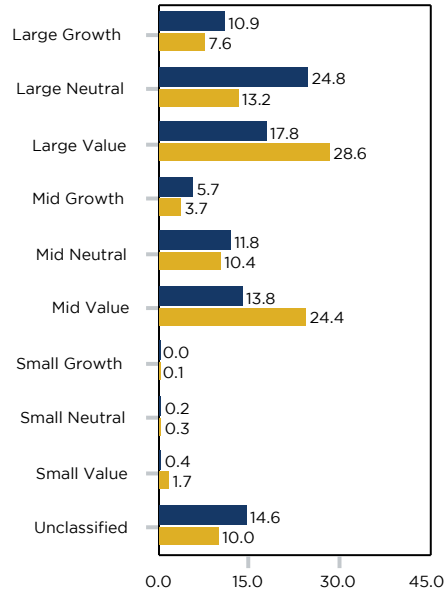
Index: MSCI AC World ex USA (Net)

Report Date: 12/31/2019

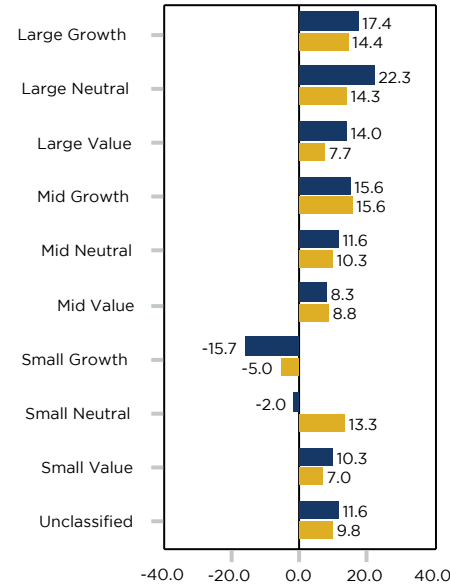
## Performance | 1 Year



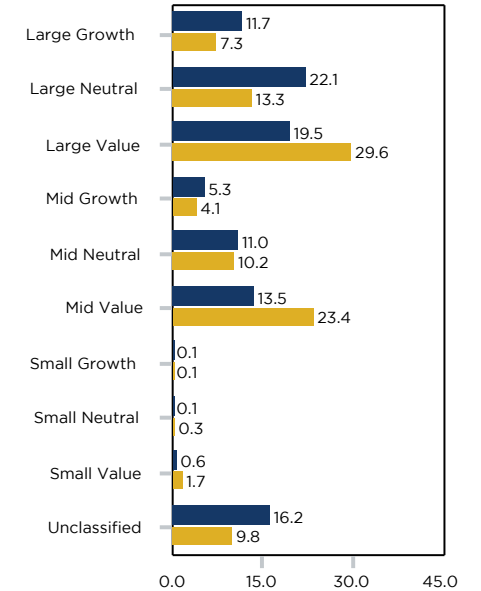
## Allocation | 1 Year



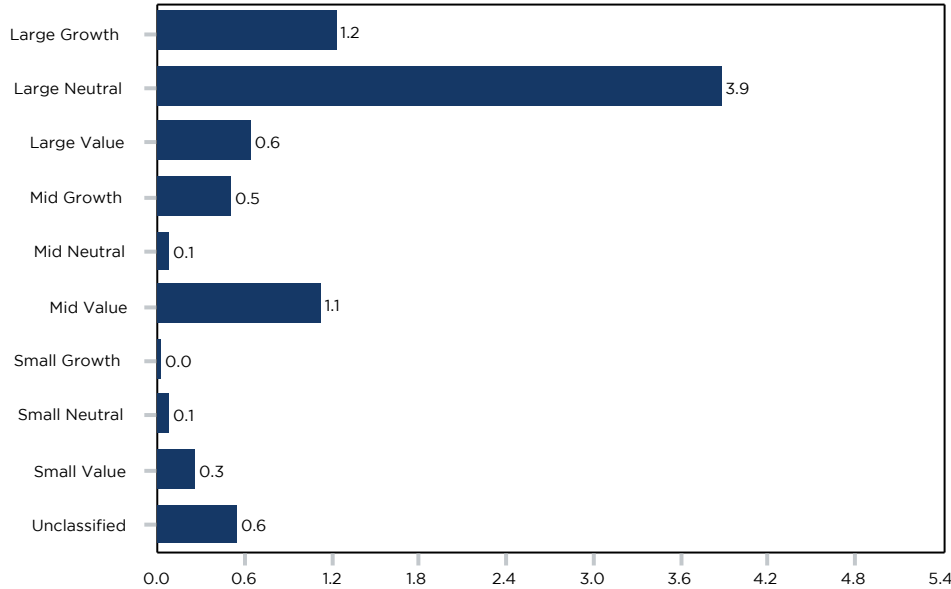
## Performance | 3 Years



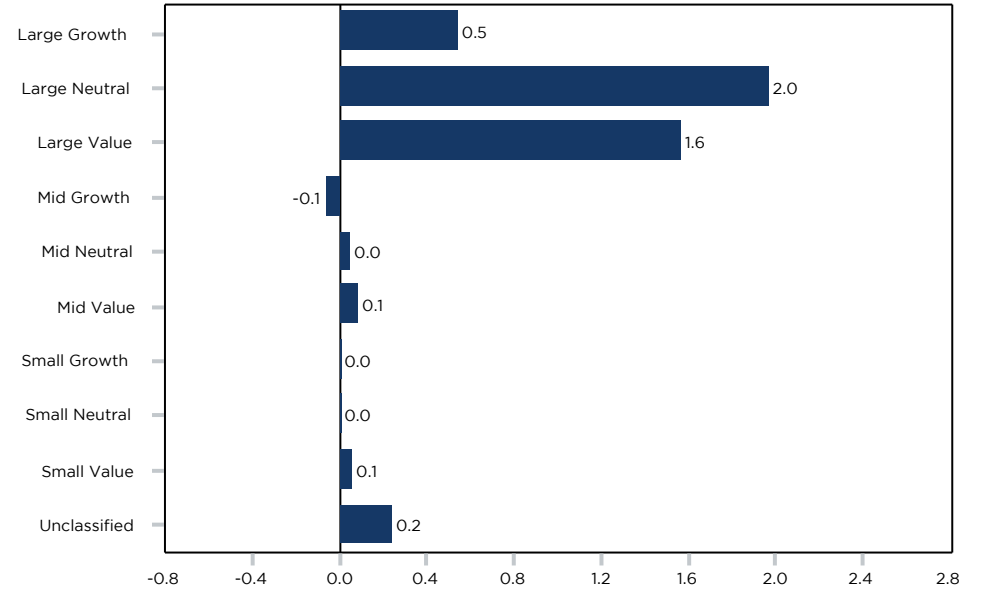
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years





# Vanguard Total Intl Stock Index Admiral (VTIAX)

Index: FTSE Global ex USA All Cap Index (Net)

Category: Foreign Large Blend

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	9.01 (37)	21.51 (61)	21.51 (61)	9.87 (34)	5.85 (31)	5.10 (58)	-14.43 (47)	27.55 (25)	4.67 (15)	-4.26 (78)
Benchmark	9.26	21.80	21.80	9.84	5.84	5.39	-14.61	27.41	4.72	-4.29
Peer Group	8.69	21.85	21.85	9.23	5.39	5.25	-14.64	25.39	1.11	-1.22
Population	1,161	1,119	1,119	1,007	857	688	1,179	1,126	1,134	1,046

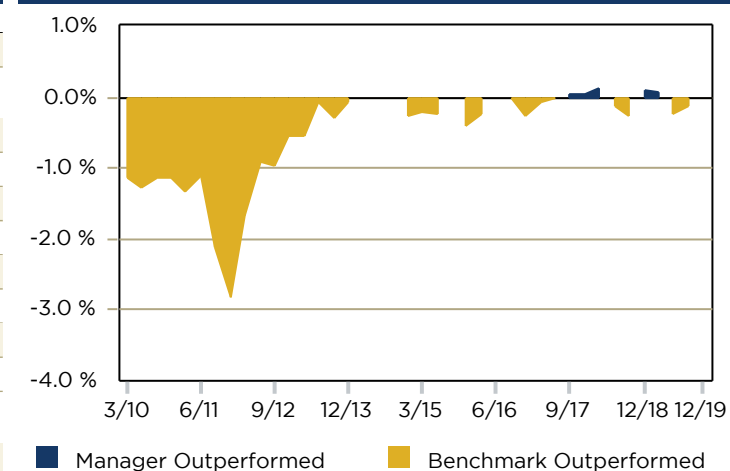
## Fund Information

Fund Inception	11/29/2010
Fund Assets	420,632 Million
Portfolio Assets	79,870 Million
Total # of Holdings	7373
% in Top 10	8.90 %
PM	Franquin,C/Perre,M
PM Tenure	11 Years 4 Months
Turnover	4.00 %
Gross Expense (%)	0.11 %
Net Expense (%)	0.11 %
New Investors	Open

## Fund Statistics

	3 Years	10 Years
Standard Deviation	11.42	14.64
<b>vs. FTSE Global ex USA All Cap Index (Net)</b>		
Beta	1.01	1.00
Alpha	-0.04	-0.24
Information Ratio	0.04	-0.14
Tracking Error	1.22	1.79
R-Squared	0.99	0.98
Up Market Capture	100.42	99.50
Down Market Capture	100.39	100.88
Consistency	52.78	47.50

## 3 Years Rolling Excess Performance



## Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	71,655	66,146
Median Mkt. Cap (\$M)	1,706	1,733
Price/Earnings ratio	14.7	15.9
Price/Book ratio	2.3	2.3
5 Yr. EPS Growth Rate (%)	10.7	8.5
Current Yield (%)	2.0	3.1
Beta (5 Years, Monthly)	0.97	1.00
Number of Stocks	7,307	7,070
Debt to Equity	1.1	1.2
Forecast P/E	12.2	13.7
Forecast EPS Growth	11.2	9.7
Return on Equity	0.0	0.0

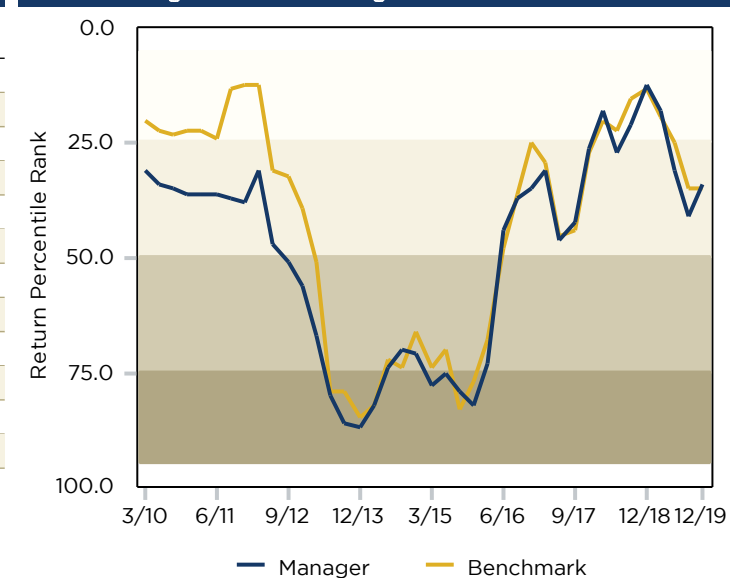
## vs. Risk Free

Sharpe Ratio	0.74	0.38
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## Sector Allocation

Sector	Portfolio Weight (%)	Benchmark Weight (%)
Communication Services	6.9	6.3
Consumer Discretionary	12.4	12.0
Consumer Staples	9.1	8.8
Energy	6.6	6.2
Financials	21.0	20.2
Health Care	6.7	8.6
Industrials	11.5	13.1
Information Technology	8.9	9.4
Materials	10.3	7.9
Real Estate	3.4	4.0
Utilities	3.0	3.4
<b>Total</b>	<b>99.8</b>	<b>100.0</b>

## 3 Years Rolling Percentile Ranking



## Country/Region Allocation

United States	0.5	0.2
Non-US Developed	72.2	75.7
Emerging Markets	26.7	23.6
Frontier Markets	0.2	0.2
Other	0.3	0.3

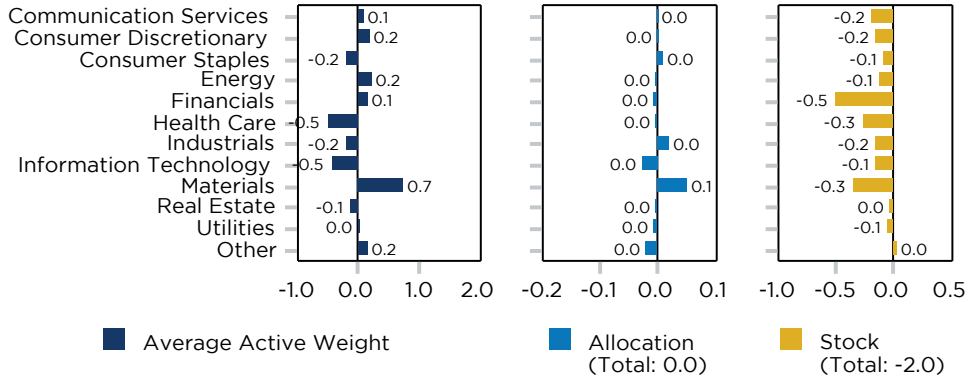


# Vanguard Total Intl Stock Index Admiral (VTIAX)

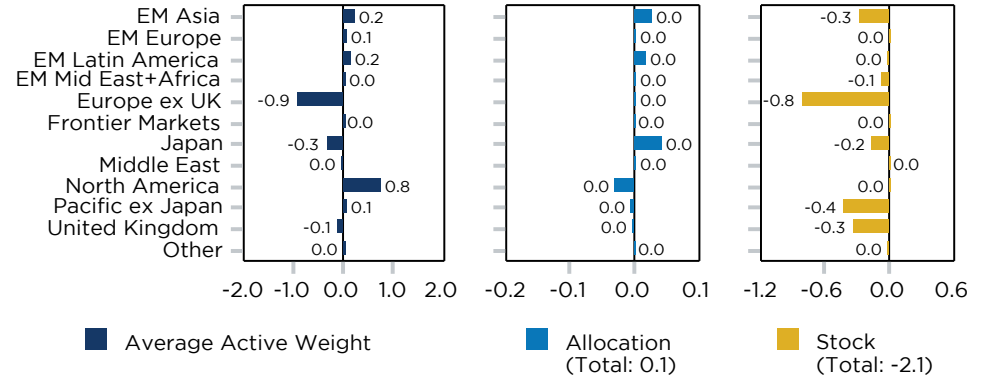
Index: FTSE Global ex USA All Cap Index (Net)

Report Date: 12/31/2019

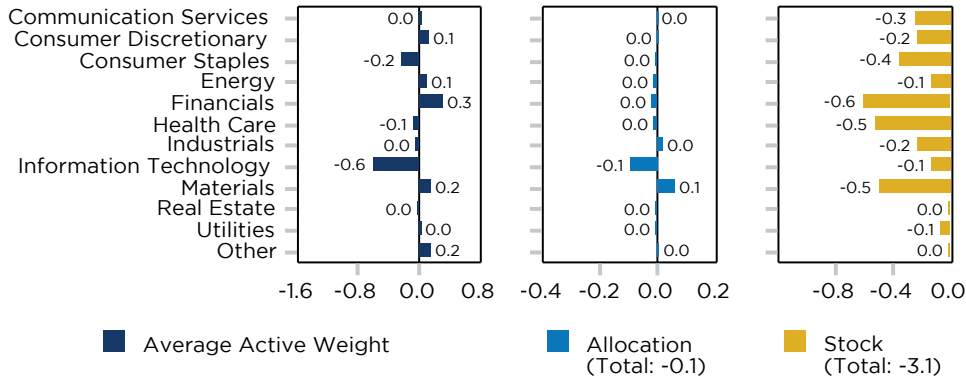
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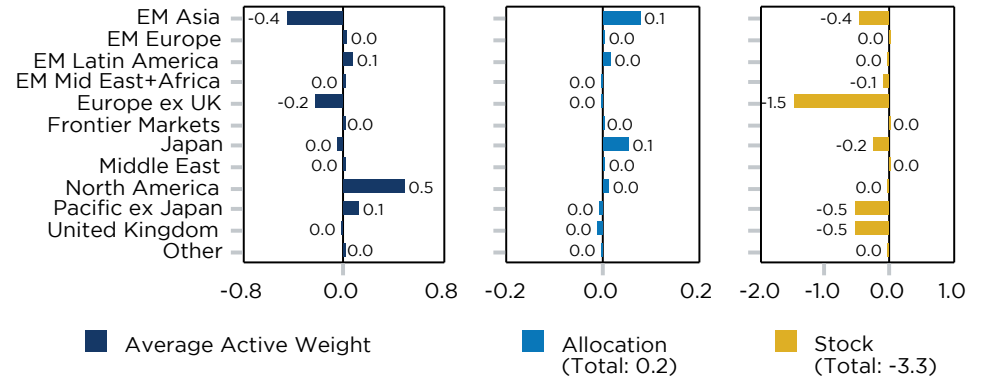
## 1 Quarter Region Attribution



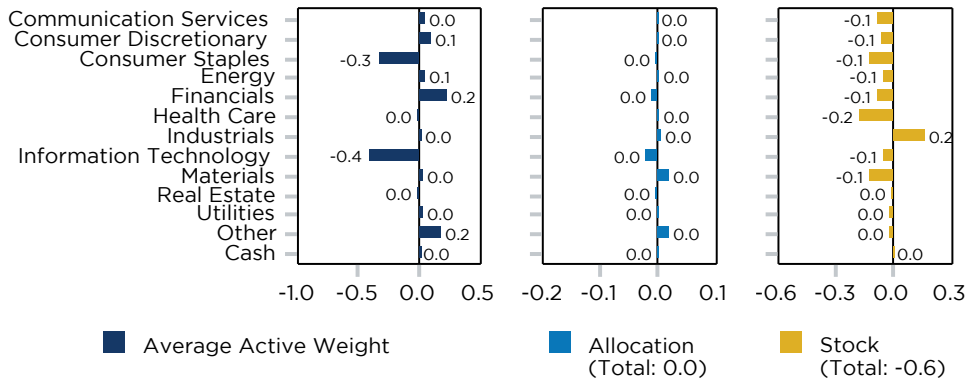
## 1 Year Sector Attribution



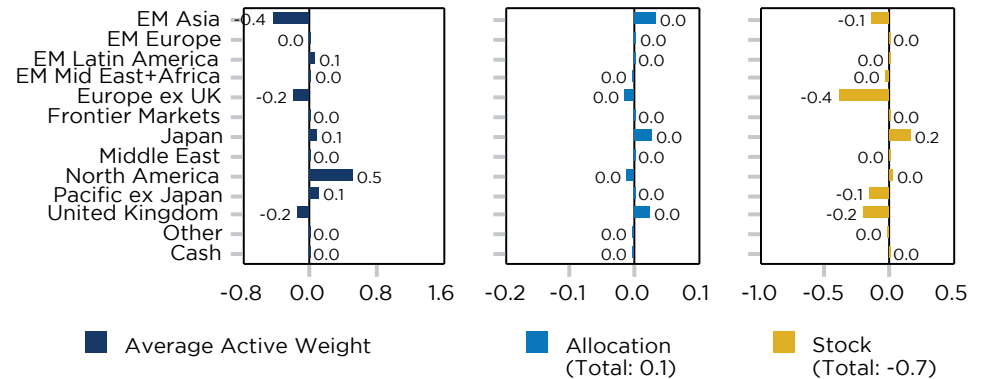
## 1 Year Region Attribution



## 3 Years Sector Attribution



## 3 Years Region Attribution





# Vanguard Total Intl Stock Index Admiral (VTIAX)

Index: FTSE Global ex USA All Cap Index (Net)

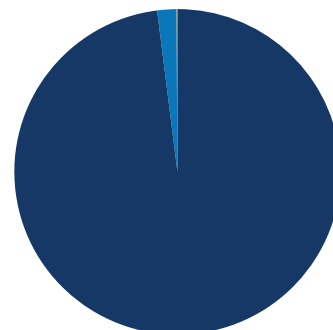
Report Date: 12/31/2019

## Top Ten Securities

Alibaba Group Holding Ltd ADR	1.4 %
Nestle SA	1.2 %
Tencent Holdings Ltd	1.0 %
Taiwan Semiconductor Manufacturing	1.0 %
Samsung Electronics Co Ltd	0.9 %
Roche Holding AG Dividend Right	0.9 %
Novartis AG	0.8 %
Toyota Motor Corp	0.7 %
HSBC Holdings PLC	0.6 %
Total SA	0.5 %
<b>Total</b>	<b>8.9 %</b>

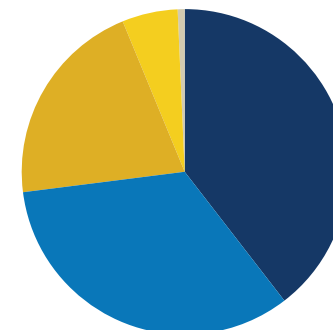
## Asset Allocation

- Equity
- Cash
- Other
- Fixed Income



## Market Capitalization

- Giant
- Large
- Medium
- Small
- Micro



## Top Ten Contributors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Taiwan Semiconductor	0.91	0.89	0.00	27.33
Alibaba Group Holding Ltd	1.04	1.02	0.00	26.83
Tencent Holdings LTD	1.05	1.02	0.00	14.50
CSL Ltd	0.31	0.30	0.00	22.91
Siemens AG	0.35	0.34	0.00	22.07
SAP AG	0.50	0.48	0.00	14.78
ASML Holding NV	0.43	0.42	0.00	19.93
Louis Vuitton Moet Hennessy	0.43	0.42	0.00	17.54
Roche Holding AG	0.88	0.86	0.00	11.37
Astrazeneca PLC	0.51	0.50	0.00	12.81

## Top Ten Contributors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Roche Holding AG	0.83	0.81	0.00	16.13
Nestle SA	1.12	1.12	0.00	17.95
Tencent Holdings LTD	0.67	0.67	0.00	25.68
Novartis AG	0.87	0.87	0.00	17.68
Samsung Electronics Co Ltd	0.77	0.77	0.00	19.77
Astrazeneca PLC	0.35	0.35	0.00	27.50
Louis Vuitton Moet Hennessy	0.24	0.24	0.00	36.93
AIA Group Ltd	0.34	0.34	0.00	24.98
Toyota Motor Corp	0.82	0.81	0.00	9.53
Taiwan Semiconductor	0.64	0.68	-0.01	30.10

## Top Ten Detractors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
AUS & NZ Banking Group	0.24	0.23	0.00	-7.24
Danone SA	0.23	0.22	0.00	-5.90
The Unilever Group	0.38	0.37	0.00	-3.66
Toronto-Dominion Bank (The)	0.47	0.46	0.00	-2.68
Westpac Banking Corp	0.30	0.30	0.00	-12.31
Nokia Corp	0.12	0.12	0.00	-27.05
National Australia Bank Ltd	0.25	0.25	0.00	-11.04
Wirecard AG	0.08	0.08	0.00	-24.61
Infosys Ltd	0.18	0.18	0.00	-8.80
Shiseido Co Ltd	0.13	0.13	0.00	-9.96

## Top Ten Detractors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Steinhoff International	0.07	0.07	0.00	-77.37
Deutsche Bank AG	0.13	0.13	0.00	-20.81
Imperial Brands PLC	0.21	0.21	0.00	-11.64
Anheuser-Busch InBev SA/NV	0.43	0.43	0.00	-5.42
BT Group PLC	0.19	0.19	0.00	-11.76
British American Tobacco	0.54	0.54	0.00	-3.91
Magnit	0.06	0.06	0.00	-32.74
Pandora AS	0.07	0.07	0.00	-27.15
Bayer AG	0.44	0.44	0.00	-4.34
Teva Pharmaceutical	0.16	0.17	0.00	-35.00

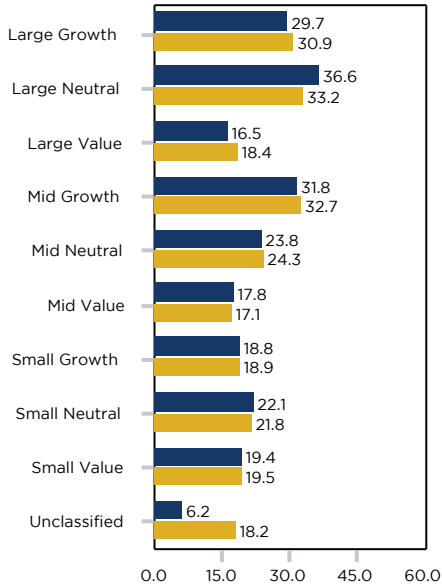


# Vanguard Total Intl Stock Index Admiral (VTIAX)

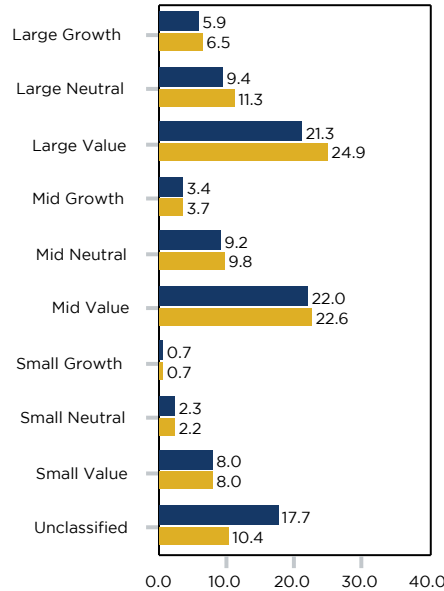
Index: FTSE Global ex USA All Cap Index (Net)

Report Date: 12/31/2019

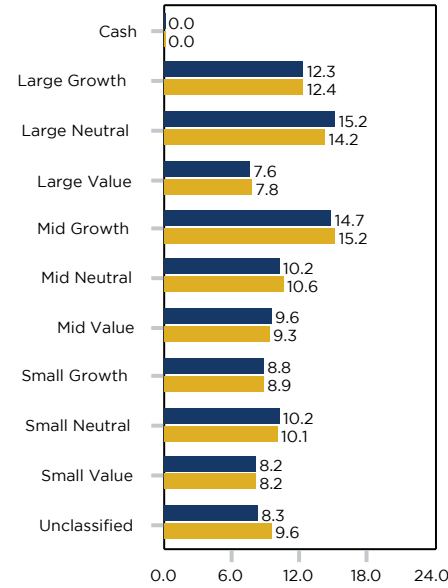
## Performance | 1 Year



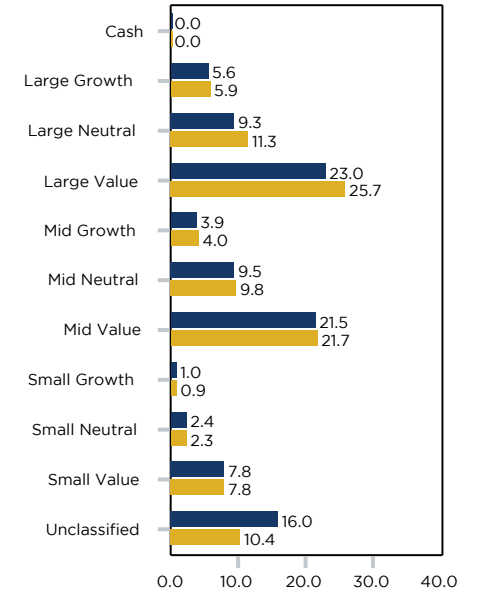
## Allocation | 1 Year



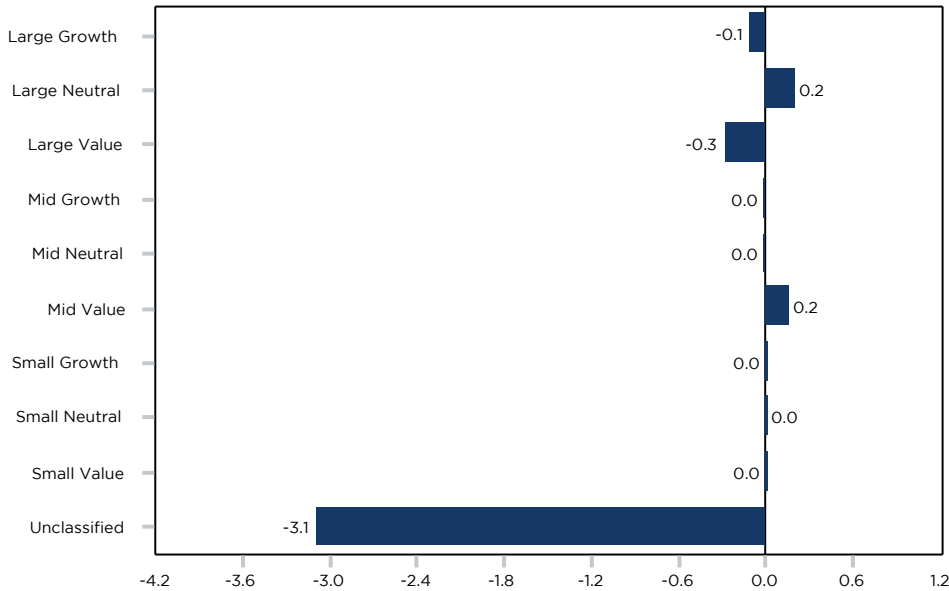
## Performance | 3 Years



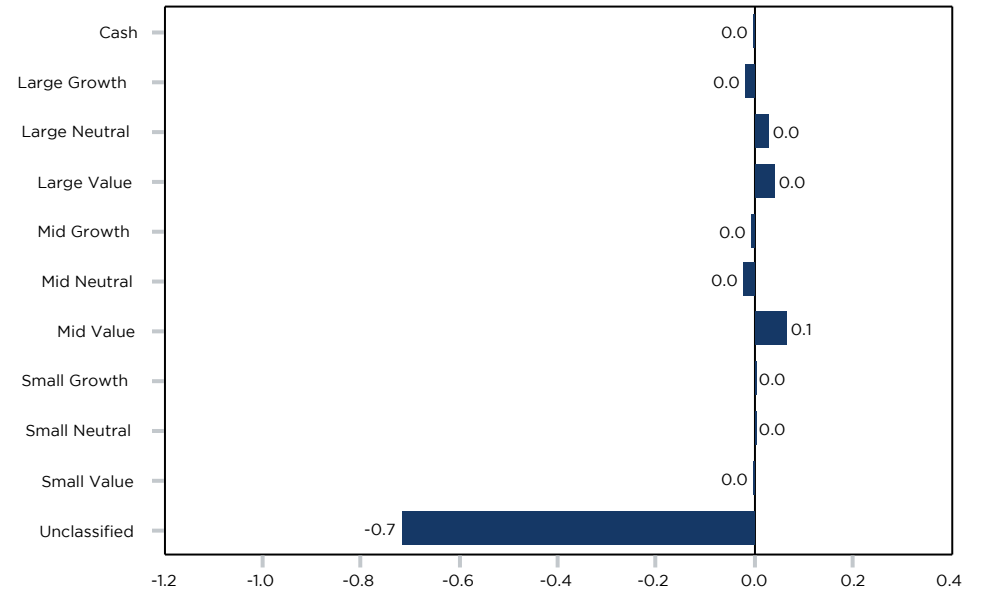
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years



### Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	13.14 (3)	31.80 (13)	31.80 (13)	16.02 (19)	10.26 (21)	10.65 (16)	-13.19 (82)	36.49 (4)	0.22 (87)	4.13 (12)
Benchmark	8.68	28.40	28.40	13.20	9.36	10.08	-8.20	23.07	8.15	-0.32
Peer Group	8.58	26.49	26.49	11.84	8.03	8.99	-9.69	23.76	5.45	-1.35
Population	1,118	1,088	1,088	976	858	608	1,252	1,113	1,115	1,068

### Fund Information

Fund Inception	05-2002
Fund Assets	1,537 Million
Portfolio Assets	1,226 Million
Total # of Holdings	68
% Assets in Top 10 Holdings	37.8 %
PM	Delano, J
PM Tenure	2 Years 9 Months
Turnover	17.0 %
Gross Expense (%)	0.8 %
Net Expense (%)	0.8 %
New Investors	Open

### Equity Characteristics

Avg. Market Cap	70,614 (Million)
Price/Earnings	21
Price/Book	3
Dividend Yield	1.5 %

### Top Holdings (%)

Alphabet Inc A	7.3
LVMH Moet Hennessy Louis Vuitton	4.3
Airbus SE	4.1
S&P Global Inc	3.7
Adobe Inc	3.6
Facebook Inc A	3.5
Intuit Inc	3.2
SAP SE	2.9
Anthem Inc	2.8
Kering SA	2.7

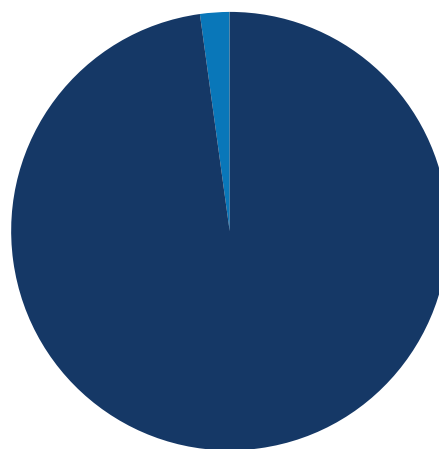
### Fund Statistics

	3 Years	10 Years
Standard Deviation	14.35	15.22
<b>vs. MSCI World Index</b>		
Beta	1.24	1.14
Alpha	-0.26	-0.61
Information Ratio	0.61	0.20
Tracking Error	4.74	4.24
R-Squared	0.93	0.94
Up Market Capture	123.24	112.91
Down Market Capture	124.76	116.94
Consistency	52.78	53.33

### vs. Risk Free

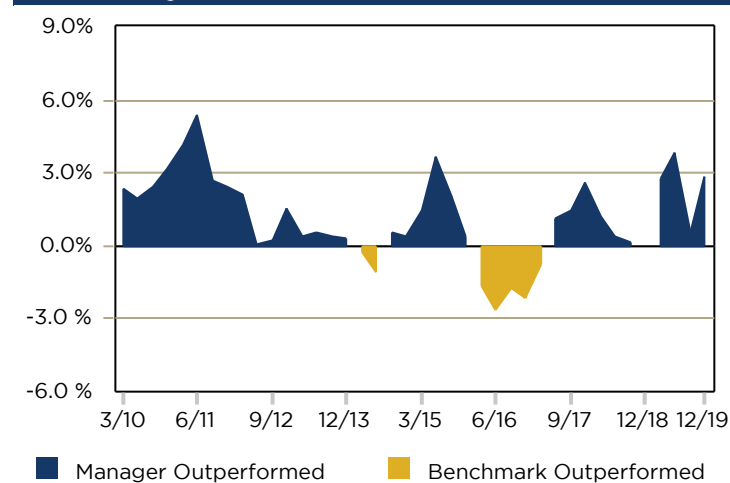
Sharpe Ratio	1.00	0.71
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### Asset Allocation

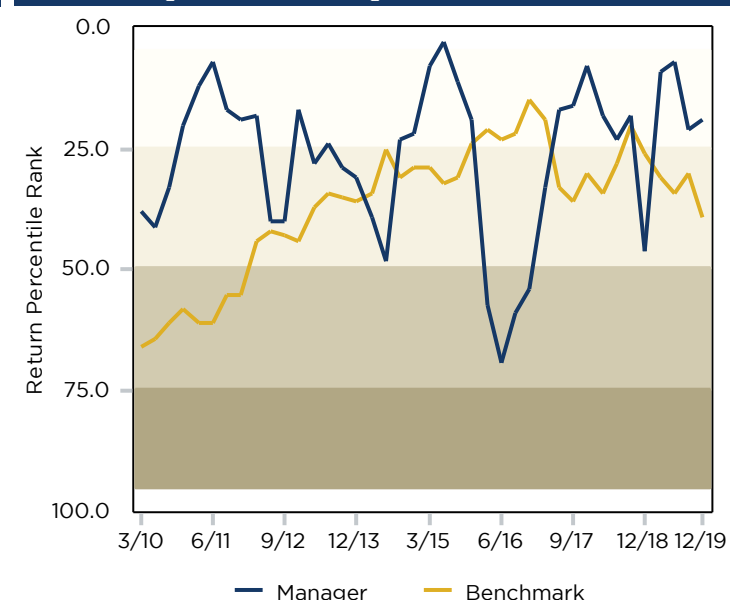


■ Equity    ■ Cash  
 ■ Fixed Income

### 3 Years Rolling Excess Performance



### 3 Years Rolling Percentile Ranking



## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	11.88 (29)	24.53 (24)	24.53 (24)	14.13 (16)	6.62 (24)	6.12 (7)	-11.79 (8)	35.33 (54)	7.38 (60)	-13.67 (46)
Benchmark	11.84	18.44	18.44	11.57	5.61	3.68	-14.58	37.28	11.19	-14.92
Peer Group	11.22	19.76	19.76	10.83	5.25	3.67	-16.30	35.89	8.87	-14.01
Population	1,071	1,041	1,041	930	819	466	1,127	1,053	1,085	1,015

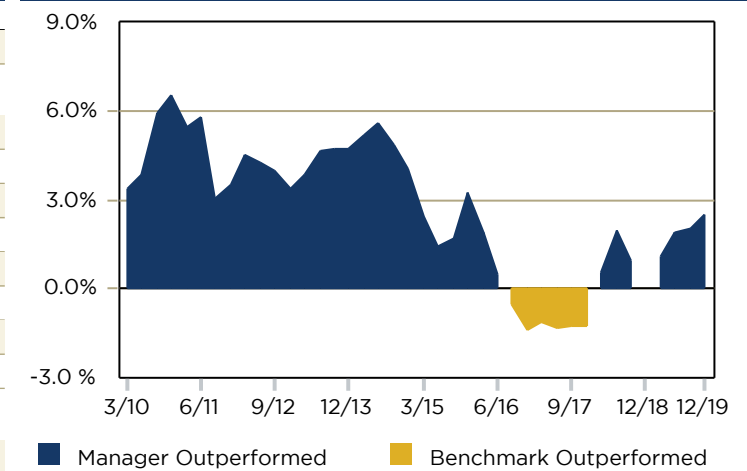
## Fund Information

Fund Inception	12/29/2011
Fund Assets	44,598 Million
Portfolio Assets	18,142 Million
Total # of Holdings	103
% in Top 10	41.78 %
PM	Leverenz, J
PM Tenure	12 Years 7 Months
Turnover	7.00 %
Gross Expense (%)	0.83 %
Net Expense (%)	0.83 %
New Investors	Closed

## Fund Statistics

	3 Years	10 Years
Standard Deviation	13.26	16.16
<b>vs. MSCI Emerging Markets (Net) Index</b>		
Beta	0.90	0.91
Alpha	3.40	2.68
Information Ratio	0.57	0.46
Tracking Error	3.82	4.76
R-Squared	0.93	0.92
Up Market Capture	97.09	96.19
Down Market Capture	79.59	84.51
Consistency	47.22	54.17

## 3 Years Rolling Excess Performance



## Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	133,673	104,152
Median Mkt. Cap (\$M)	17,029	5,792
Price/Earnings ratio	21.1	14.3
Price/Book ratio	3.6	2.5
5 Yr. EPS Growth Rate (%)	18.2	13.0
Current Yield (%)	1.3	2.8
Beta (5 Years, Monthly)	0.88	1.00
Number of Stocks	78	1,404
Debt to Equity	1.1	0.9
Forecast P/E	8.3	9.1
Forecast EPS Growth	17.9	12.9
Return on Equity	0.1	0.0

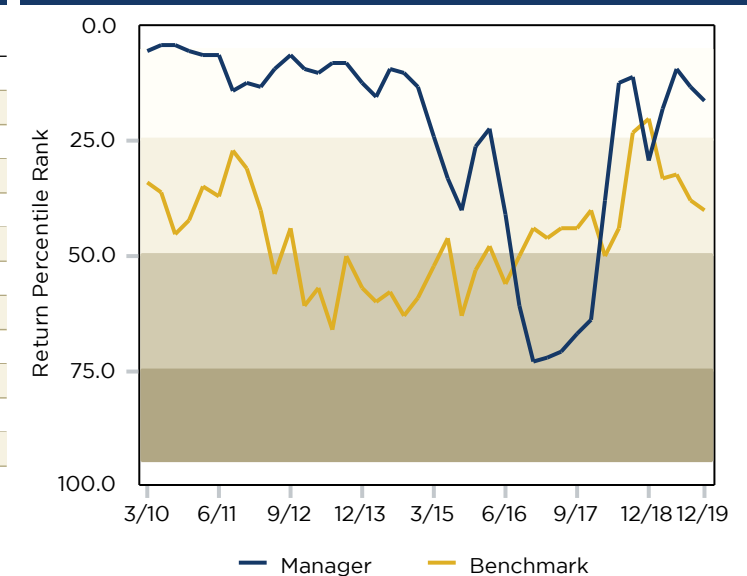
## vs. Risk Free

Sharpe Ratio	0.94	0.41
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## Sector Allocation

Sector	Portfolio Weight (%)	Benchmark Weight (%)
Communication Services	7.2	11.0
Consumer Discretionary	29.4	14.2
Consumer Staples	6.3	6.3
Energy	6.3	7.4
Financials	29.2	24.2
Health Care	3.8	2.8
Industrials	3.6	5.3
Information Technology	8.4	15.7
Materials	5.6	7.4
Real Estate	0.3	3.0
Utilities	0.0	2.6
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

## 3 Years Rolling Percentile Ranking



## Country/Region Allocation

United States	0.0	0.1
Non-US Developed	24.6	13.1
Emerging Markets	75.1	86.7
Frontier Markets	0.1	0.0
Other	0.2	0.1



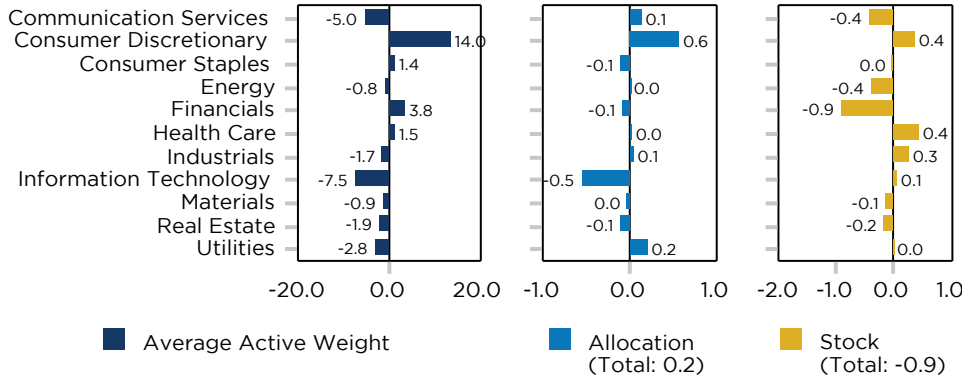


# Oppenheimer Developing Markets I (ODVIX)

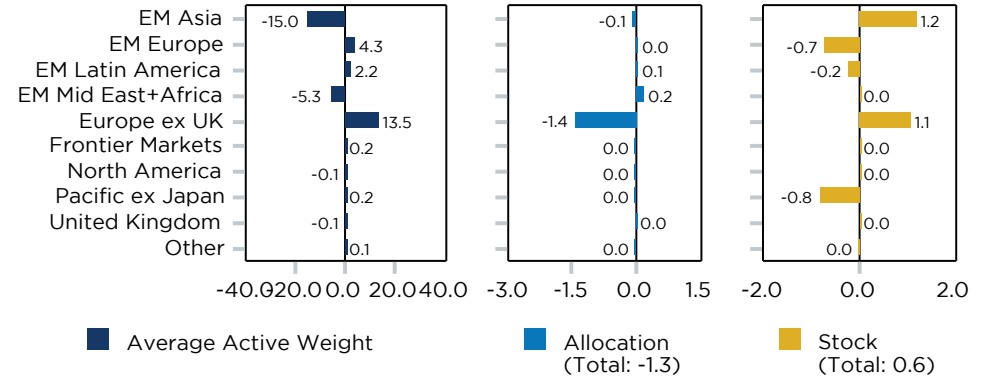
Index: MSCI Emerging Markets (Net) Index

Report Date: 12/31/2019

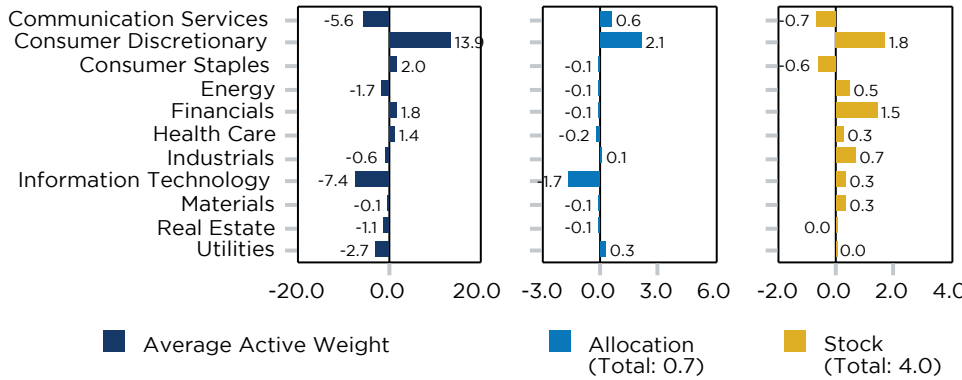
## 1 Quarter Sector Attribution



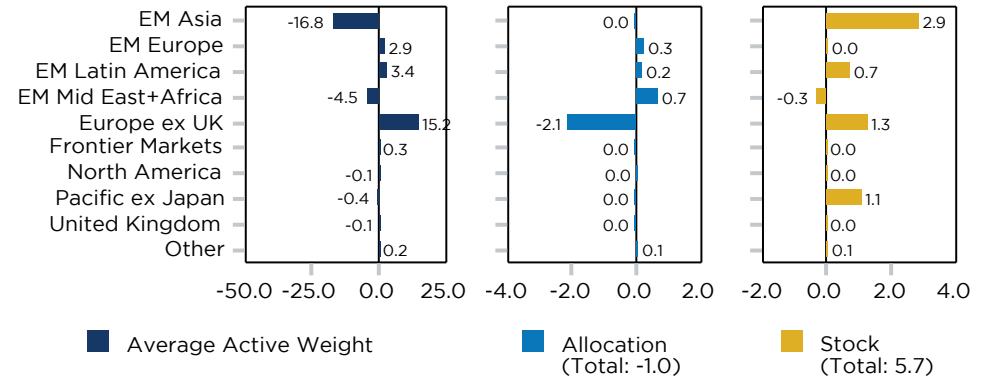
## 1 Quarter Region Attribution



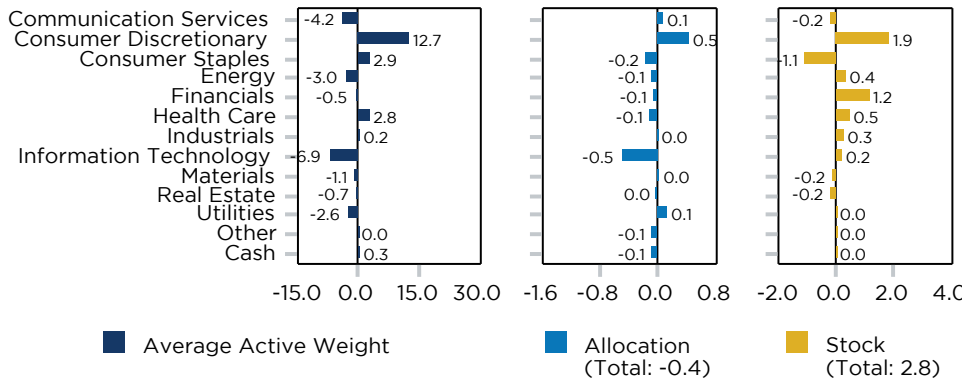
## 1 Year Sector Attribution



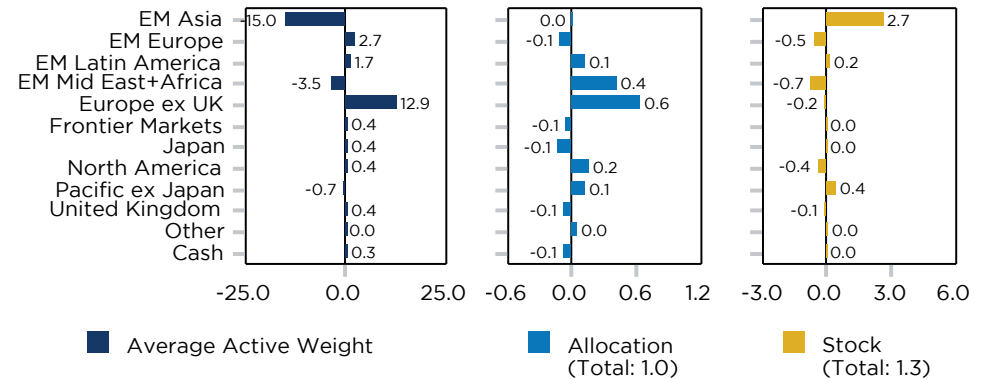
## 1 Year Region Attribution



## 3 Years Sector Attribution



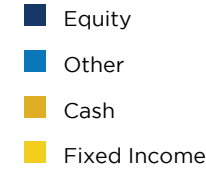
## 3 Years Region Attribution



## Top Ten Securities

Alibaba Group Holding Ltd ADR	6.9 %
Master China Series 1	6.2 %
NOVATEK PJSC GDR	4.8 %
Taiwan Semiconductor Manufacturing	4.3 %
Kering SA	3.9 %
Housing Development Finance Corp	3.5 %
Kotak Mahindra Bank Ltd	3.4 %
Tencent Holdings Ltd	3.3 %
AIA Group Ltd	2.8 %
Yum China Holdings Inc	2.6 %
<b>Total</b>	<b>41.8 %</b>

## Asset Allocation



## Market Capitalization



## Top Ten Contributors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Kering	4.46	0.00	0.76	28.81
Alibaba Group Holding Ltd	7.80	4.44	0.50	26.83
Lojas Americanas SA	1.46	0.07	0.40	40.41
Samsung Biologics Co Ltd	1.11	0.08	0.35	46.20
Meituan Dianping	2.02	0.19	0.30	28.06
Prada SPA	0.97	0.00	0.29	42.16
HDFC	3.99	0.86	0.29	21.13
Huazhu Group Ltd	2.72	0.08	0.25	21.35
Taiwan Semiconductor	4.91	4.03	0.14	27.33
Tencent Holdings LTD	3.75	4.49	-0.02	14.50

## Top Ten Contributors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Kering	1.62	0.00	0.61	48.98
Alibaba Group Holding Ltd	4.71	2.50	0.50	34.17
HDFC	4.88	0.71	0.49	23.43
Louis Vuitton Moet Hennessy	1.89	0.00	0.48	36.93
AIA Group Ltd	2.40	0.00	0.32	24.98
New Oriental Education	1.15	0.14	0.31	42.53
B3 S.A.-Brasil Bolsa Balcao	1.66	0.22	0.29	31.53
Novatek JSC	3.51	0.30	0.23	18.62
Taiwan Semiconductor	4.28	3.50	0.14	30.10
Tencent Holdings LTD	4.53	3.53	0.14	25.68

## Top Ten Detractors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Budweiser Brewing Co APAC Ltd	2.20	0.00	-0.40	-6.12
Akbank	0.95	0.08	-0.15	-5.25
Baozun Inc	0.45	0.03	-0.14	-22.44
Ayala Land Inc	0.85	0.13	-0.12	-5.42
Emaar Properties	0.44	0.08	-0.09	-12.80
Vietnam Dairy Product Co	0.32	0.00	-0.07	-9.30
Bim Birlesik Magazalar	0.32	0.07	-0.05	-7.88
Hang Lung Properties Ltd	0.16	0.00	-0.02	-3.30
Shanghai Junshi Biosciences Co Ltd	0.08	0.00	-0.02	-7.16
Ayala Corp	0.15	0.09	-0.01	-8.72

## Top Ten Detractors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Magnit	3.90	0.34	-1.46	-29.47
Baidu Inc	3.64	1.13	-0.50	-8.39
Zee Entertainment Ent	1.70	0.10	-0.41	-14.36
Old Mutual Ltd	1.21	0.00	-0.31	-14.09
Trip com Group Ltd	1.92	0.38	-0.27	-5.70
DP World Plc	1.43	0.07	-0.26	-7.87
Genting Berhad	1.43	0.10	-0.20	-3.66
Glenmark Pharmaceuticals Ltd	0.54	0.05	-0.19	-27.72
Nigerian Breweries PLC	0.38	0.00	-0.15	-28.95
CognaEducacao S.A	0.64	0.14	-0.10	-7.63

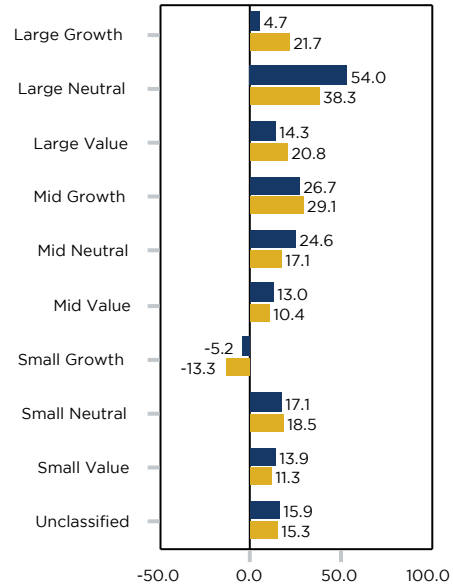


# Oppenheimer Developing Markets I (ODVIX)

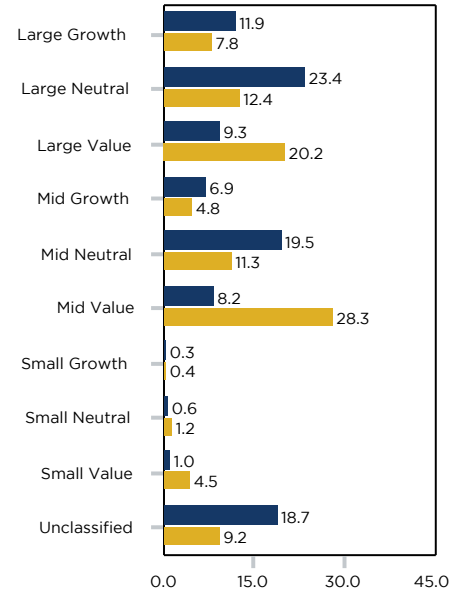
Index: MSCI Emerging Markets (Net) Index

Report Date: 12/31/2019

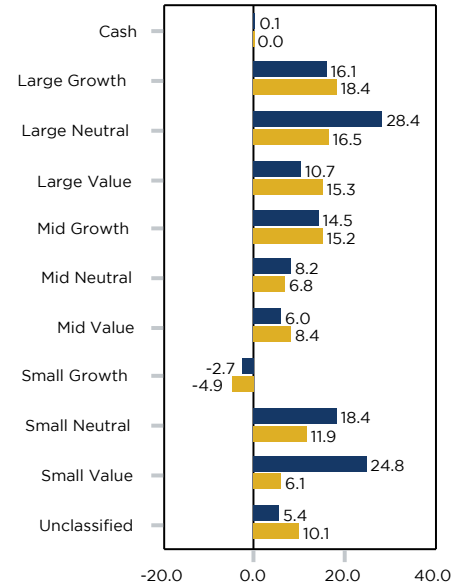
## Performance | 1 Year



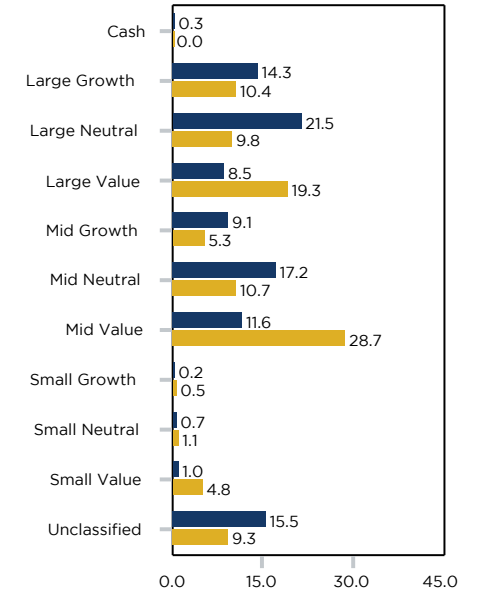
## Allocation | 1 Year



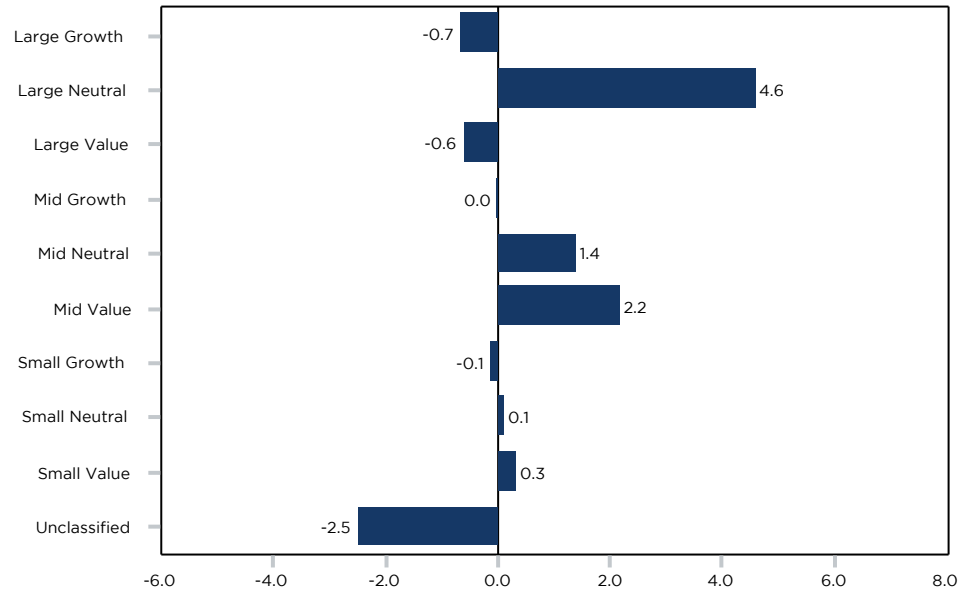
## Performance | 3 Years



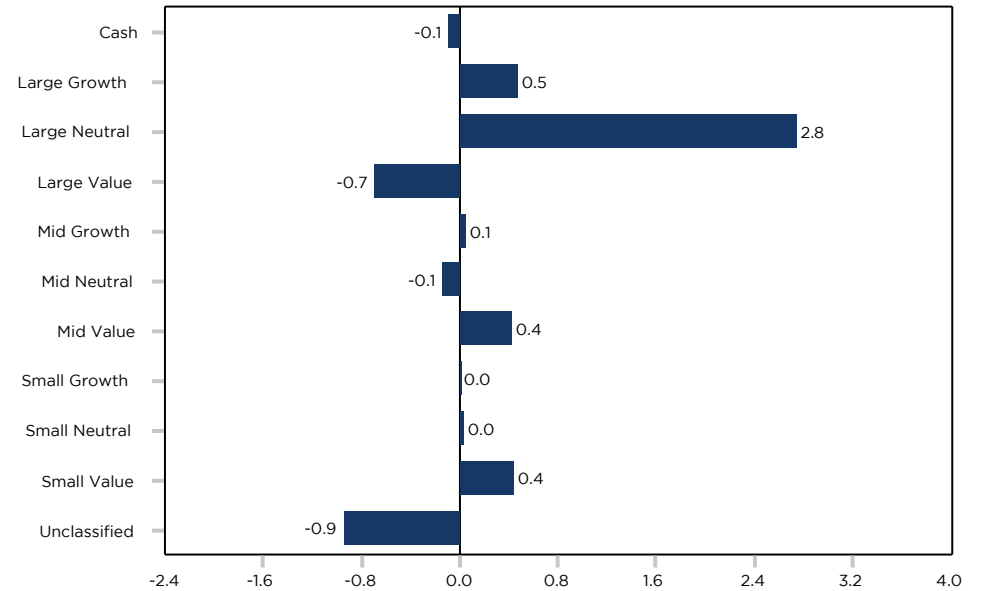
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years





# Vanguard Real Estate Index Institutional (VGSNX)

Index: Spliced Index  
 Category: Real Estate  
 Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	0.63 (27)	29.02 (32)	29.02 (32)	8.39 (43)	7.20 (37)	12.01 (25)	-5.93 (58)	4.93 (62)	8.51 (18)	2.45 (64)
Benchmark	0.65	29.03	29.03	8.46	7.27	12.06	-5.88	5.07	8.60	2.52
Peer Group	0.14	27.15	27.15	7.97	6.70	11.36	-5.40	5.44	6.47	3.04
Population	362	355	355	328	307	263	367	367	382	367

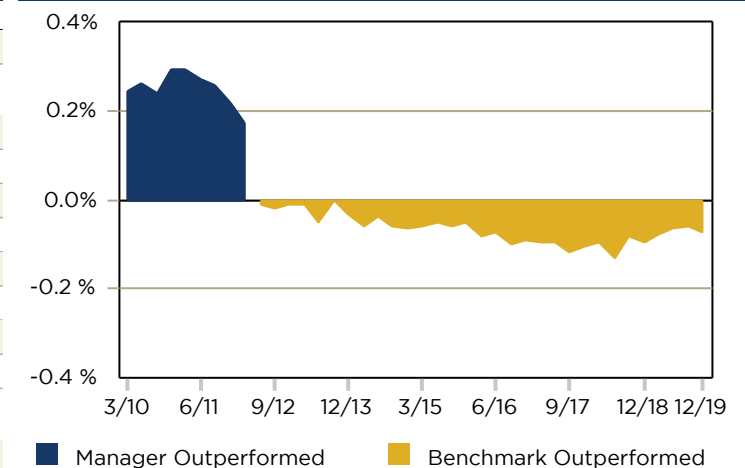
## Fund Information

Fund Inception	12/02/2003
Fund Assets	71,255 Million
Portfolio Assets	10,027 Million
Total # of Holdings	187
% in Top 10	41.51 %
PM	Nejman,W/O'Reilly,G
PM Tenure	23 Years 7 Months
Turnover	24.00 %
Gross Expense (%)	0.10 %
Net Expense (%)	0.10 %
New Investors	Open

## Fund Statistics

	3 Years	10 Years
Standard Deviation	11.90	15.18
<b>vs. Spliced Index</b>		
Beta	1.00	1.00
Alpha	-0.07	-0.04
Information Ratio	-0.77	-0.49
Tracking Error	0.08	0.09
R-Squared	1.00	1.00
Up Market Capture	99.96	99.96
Down Market Capture	100.55	100.22
Consistency	38.89	44.17

## 3 Years Rolling Excess Performance



## Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	27,954	27,895
Median Mkt. Cap (\$M)	3,177	3,292
Price/Earnings ratio	33.4	33.4
Price/Book ratio	2.9	2.9
5 Yr. EPS Growth Rate (%)	14.2	14.2
Current Yield (%)	3.6	3.6
Beta (5 Years, Monthly)	1.00	1.00
Number of Stocks	183	181
Debt to Equity	1.9	1.9
Forecast P/E	26.9	27.0
Forecast EPS Growth	6.8	6.8
Return on Equity	0.0	0.0

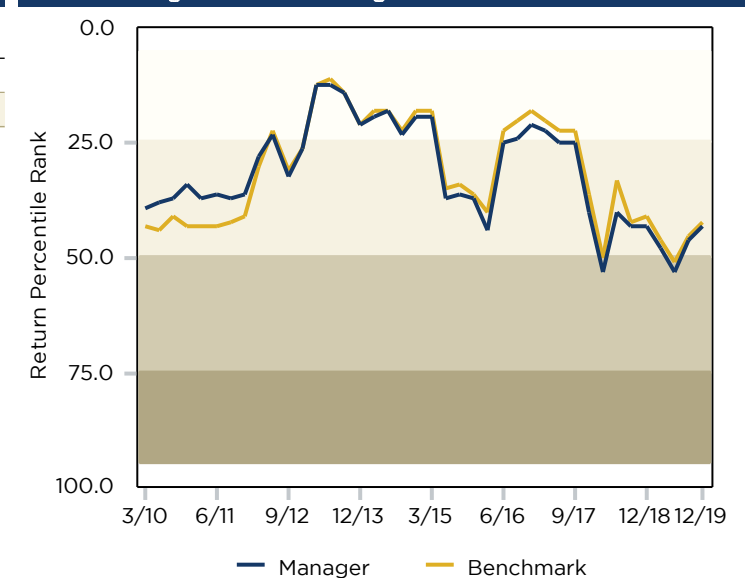
## vs. Risk Free

Sharpe Ratio	0.60	0.79
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## Sector Allocation

Sector	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)
Real Estate	100.0	100.0	0.0
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>0.0</b>

## 3 Years Rolling Percentile Ranking



## Country/Region Allocation

United States	99.9	99.9
Non-US Developed	0.1	0.1
Other	0.0	0.0
<b>Total</b>	<b>100.0</b>	<b>100.0</b>



# Vanguard Real Estate Index Institutional (VGSNX)

Index: Spliced Index

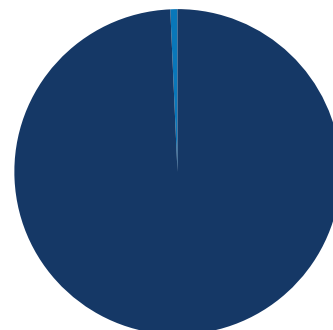
Report Date: 12/31/2019

## Top Ten Securities

Vanguard Real Estate II Index	11.0 %
American Tower Corp	7.1 %
Crown Castle International Corp	4.1 %
Prologis Inc	3.9 %
Equinix Inc	3.4 %
Simon Property Group Inc	3.2 %
Public Storage	2.3 %
Welltower Inc	2.3 %
Equity Residential	2.1 %
AvalonBay Communities Inc	2.0 %
<b>Total</b>	<b>41.5 %</b>

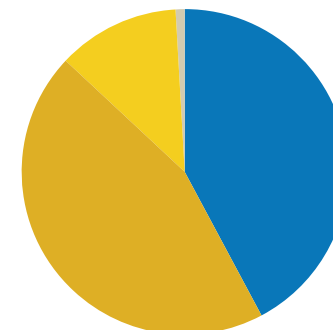
## Asset Allocation

- Equity
- Cash
- Fixed Income



## Market Capitalization

- Giant
- Large
- Medium
- Small
- Micro



## Top Ten Contributors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Liberty Property Trust	0.64	0.63	0.00	17.79
American Tower Corp	7.74	7.71	0.00	4.39
Prologis Inc	4.26	4.24	0.00	5.23
Boston Properties Inc	1.59	1.58	0.00	7.09
Crown Castle International Corp	4.58	4.56	0.00	3.19
CBRE Group Inc	1.34	1.34	0.00	15.62
Weyerhaeuser Co	1.63	1.63	0.00	10.29
Jones Lang LaSalle Inc	0.57	0.57	0.00	25.52
Gaming and Leisure Properties Inc	0.62	0.62	0.00	14.50
VICI Properties Inc	0.63	0.73	-0.01	14.15

## Top Ten Contributors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Prologis Inc	3.45	0.00	0.49	22.55
Equinix Inc	3.15	0.00	0.37	20.19
Equity Lifestyle Properties Inc	0.72	0.00	0.14	27.78
Welltower Inc	2.97	0.00	0.12	12.44
Realty Income Corp.	1.84	0.00	0.09	13.38
Equity Residential	2.92	0.00	0.08	11.34
Mid-America Apartment Communities Inc	1.38	0.00	0.08	14.09
Essex Property Trust Inc.	1.89	0.00	0.07	12.11
Digital Realty Trust Inc	1.94	0.00	0.04	10.61
AvalonBay Communities Inc.	3.02	0.00	0.02	9.17

## Top Ten Detractors | 1 Quarter

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Ventas Inc.	2.07	2.06	0.00	-19.86
Public Storage	3.05	3.04	0.00	-12.32
W. P. Carey Inc	1.21	1.20	0.00	-9.40
Welltower Inc	2.91	2.90	0.00	-8.83
Extra Space Storage Inc	1.18	1.17	0.00	-8.79
Essex Property Trust Inc.	1.70	1.69	0.00	-7.30
Simon Property Group Inc.	3.81	3.79	0.00	-2.99
Equity Residential	2.53	2.52	0.00	-5.53
CyrusOne Inc	0.71	0.71	0.00	-16.65
Digital Realty Trust Inc	2.09	2.13	0.00	-6.89

## Top Ten Detractors | 3 Years

	Portfolio Weight (%)	Benchmark Weight (%)	Contrib. to Rel. Rtn. (%)	Quarterly Return (%)
Simon Property Group Inc.	6.92	0.00	-0.67	-1.16
Macerich Co (The)	1.07	0.00	-0.34	-22.94
Vornado Realty Trust	2.20	0.00	-0.26	-3.41
Taubman Centers Inc.	0.55	0.00	-0.16	-21.13
Diversified Healthcare Trust	0.56	0.00	-0.14	-16.90
CBL & Associates Properties Inc.	0.24	0.00	-0.14	-49.62
Tanger Factory Outlet Centers Inc.	0.43	0.00	-0.13	-20.91
Site Centers Corp	0.59	0.00	-0.12	-11.44
Washington Prime Group Inc	0.24	0.00	-0.06	-16.69
Pennsylvania REIT	0.16	0.00	-0.06	-27.68



# VY® T. Rowe Price Capital Apprec I (ITRIX)

Index: 40% BBg US Agg | 60% SP500  
 Category: Allocation--50% to 70% Equity  
 Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	5.50 (36)	24.71 (2)	24.71 (2)	13.17 (2)	10.61 (1)	11.93 (1)	0.74 (1)	15.39 (26)	8.31 (26)	5.47 (1)
Benchmark	5.46	22.18	22.18	10.87	8.37	9.77	-2.35	14.21	8.31	1.28
Peer Group	5.25	19.29	19.29	8.64	6.26	8.01	-5.68	14.18	6.82	-1.16
Population	1,186	1,152	1,152	1,105	1,027	784	1,404	1,227	1,272	1,225

## Fund Information

Fund Inception	05-2003
Fund Assets	7,449 Million
Portfolio Assets	1,674 Million
Total # of Holdings	299
% Assets in Top 10 Holdings	30.5 %
PM	Giroux,D
PM Tenure	13 Years 5 Months
Turnover	75.0 %
Gross Expense (%)	0.6 %
Net Expense (%)	0.6 %
New Investors	Open

## Equity Characteristics

Avg. Market Cap	76,995 (Million)
Price/Earnings	23
Price/Book	4
Dividend Yield	1.0 %

## Top Holdings (%)

Microsoft Corp	4.2
Visa Inc Class A	3.6
General Electric Co	3.6
PerkinElmer Inc	3.2
Fiserv Inc	3.2
Marsh & McLennan Companies Inc	3.1
Danaher Corp	2.6
Becton, Dickinson and Co	2.5
Thermo Fisher Scientific Inc	2.3
Alphabet Inc Class C	2.3

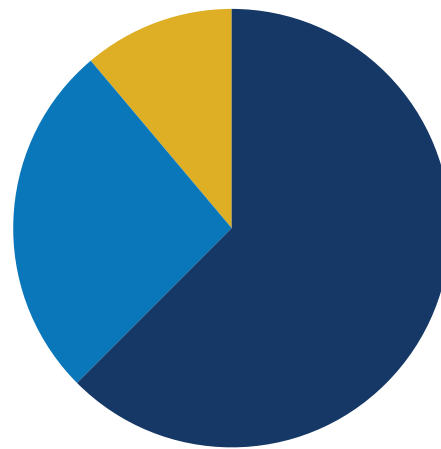
## Fund Statistics

	3 Years	10 Years
Standard Deviation	7.38	8.40
<b>vs. 40% BBg US Agg   60% SP500</b>		
Beta	1.01	1.12
Alpha	2.04	0.95
Information Ratio	1.08	0.90
Tracking Error	1.94	2.30
R-Squared	0.93	0.94
Up Market Capture	107.59	113.91
Down Market Capture	83.51	101.95
Consistency	63.89	60.83

## vs. Risk Free

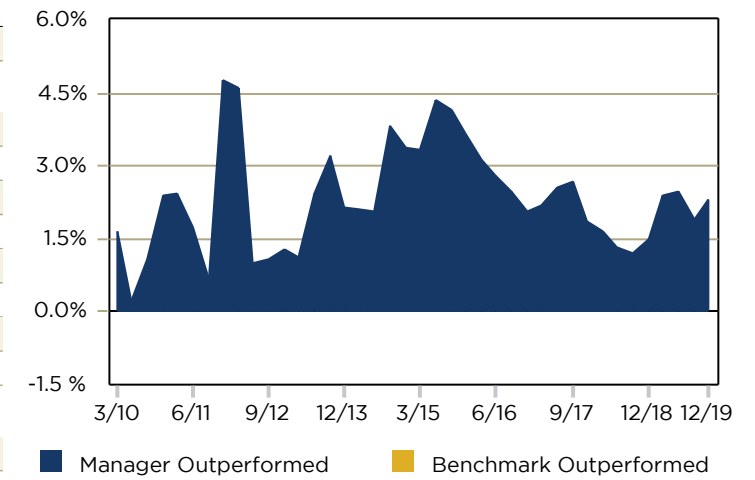
Sharpe Ratio	1.50	1.32
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## Asset Allocation

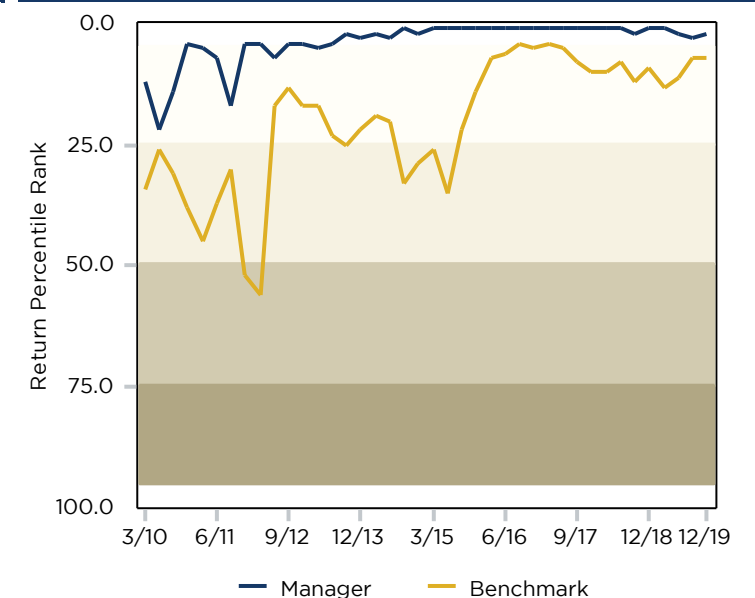


■ Equity    ■ Fixed Income  
 ■ Cash

## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking





# Vanguard Target Retirement Income Inv (VTINX)

Index: Vanguard Target Income Composite Index

Category: Target-Date Retirement

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	2.60 (60)	13.16 (53)	13.16 (53)	6.36 (40)	4.80 (31)	5.82 (23)	-1.99 (15)	8.47 (56)	5.25 (49)	-0.17 (10)
Benchmark	2.72	13.41	13.41	6.51	4.97	5.97	-1.97	8.68	5.35	0.13
Peer Group	2.70	13.22	13.22	6.00	4.34	5.15	-3.31	8.76	5.24	-1.09
Population	463	446	446	400	331	240	476	463	470	423

## Fund Information

Fund Inception	10-2003
Fund Assets	17,261 Million
Portfolio Assets	17,261 Million
Total # of Holdings	6
% Assets in Top 10 Holdings	100.0 %
PM	Coleman,W/Nejman,W
PM Tenure	6 Years 10 Months
Turnover	10.0 %
Gross Expense (%)	0.1 %
Net Expense (%)	0.1 %
New Investors	Open

## Equity Characteristics

Avg. Market Cap	46,958 (Million)
Price/Earnings	17
Price/Book	2
Dividend Yield	2.4 %

## Top Holdings (%)

Vanguard Total Bond Market II Idx	37.2
Vanguard Total Stock Mkt Idx Inv	18.2
Vanguard Shrt-Term Infl-Prot Sec	16.7
Vanguard Total Intl Bd Idx Investor	15.6
Vanguard Total Intl Stock Index	12.4

## Top Countries (%)

United States	69.4
Japan	5.6
United Kingdom	2.9
France	2.8
Germany	2.5

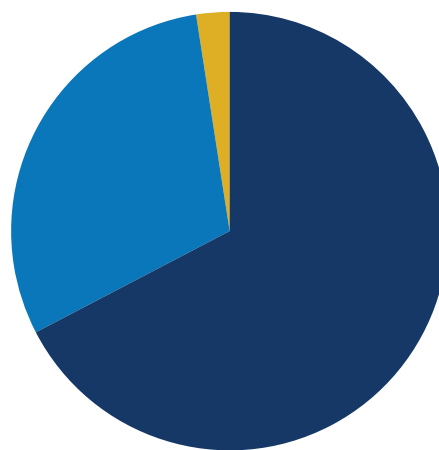
## Fund Statistics

	3 Years	10 Years
Standard Deviation	3.50	4.00
<b>vs. Vanguard Target Income Composite Index</b>		
Beta	0.99	0.99
Alpha	-0.07	-0.10
Information Ratio	-0.69	-0.59
Tracking Error	0.21	0.24
R-Squared	1.00	1.00
Up Market Capture	98.29	98.51
Down Market Capture	99.78	100.32
Consistency	44.44	44.17

## vs. Risk Free

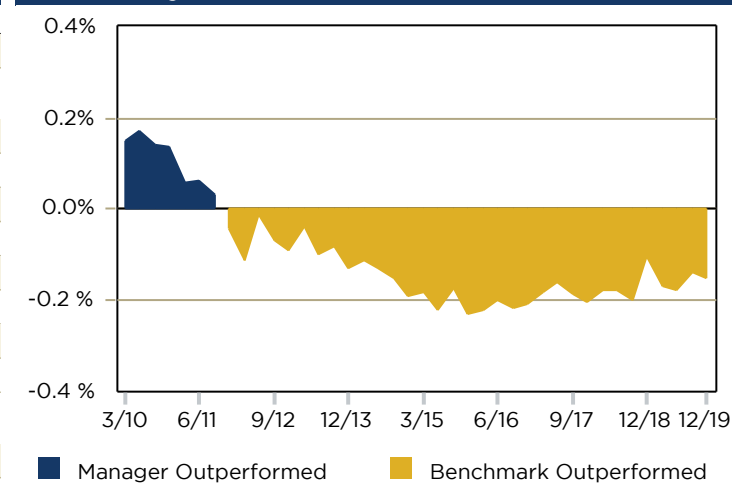
Sharpe Ratio	1.31	1.30
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## Asset Allocation

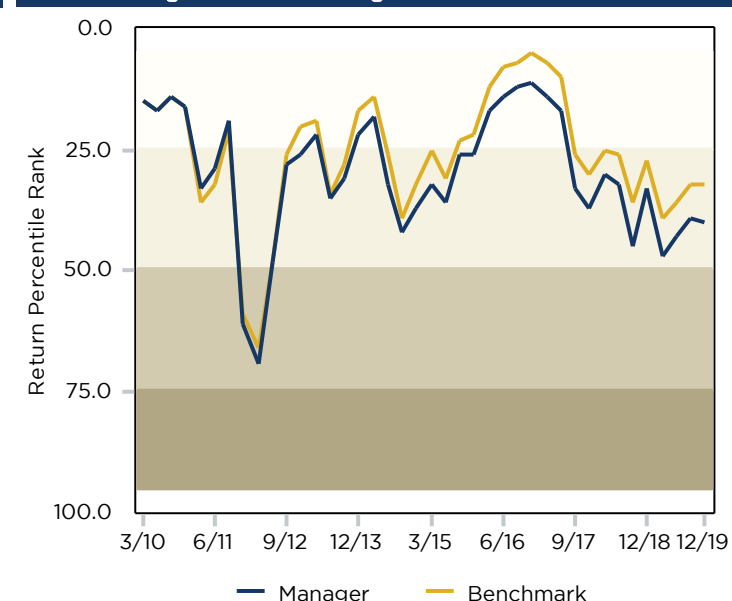


■ Fixed Income
 ■ Equity
 ■ Cash

## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking



# Vanguard Target Retirement 2015 Inv (VTXVX)

Index: Vanguard Target 2015 Composite Index

Category: Target-Date 2015

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	3.20 (84)	14.81 (63)	14.81 (63)	7.50 (35)	5.59 (40)	7.25 (37)	-2.97 (17)	11.50 (51)	6.16 (64)	-0.46 (25)
Benchmark	3.34	15.09	15.09	7.65	5.78	7.39	-2.87	11.61	6.40	-0.22
Peer Group	3.72	15.04	15.04	7.12	5.33	7.09	-3.87	11.51	6.47	-0.92
Population	297	290	290	258	228	169	307	310	335	323

## Fund Information

Fund Inception	10-2003
Fund Assets	15,836 Million
Portfolio Assets	15,836 Million
Total # of Holdings	6
% Assets in Top 10 Holdings	100.0 %
PM	Coleman,W/Nejman,W
PM Tenure	6 Years 10 Months
Turnover	10.0 %
Gross Expense (%)	0.1 %
Net Expense (%)	0.1 %
New Investors	Open

## Equity Characteristics

Avg. Market Cap	46,950 (Million)
Price/Earnings	17
Price/Book	2
Dividend Yield	2.4 %

## Top Holdings (%)

Vanguard Total Bond Market II Idx	34.5
Vanguard Total Stock Mkt Idx Inv	22.0
Vanguard Total Intl Stock Index	15.0
Vanguard Total Intl Bd Idx Investor	14.8
Vanguard Shrt-Term Infl-Prot Sec	13.7

## Top Countries (%)

United States	67.8
Japan	5.8
United Kingdom	3.1
France	2.9
Germany	2.5

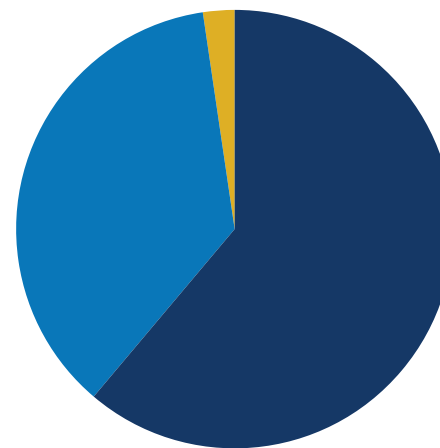
## Fund Statistics

	3 Years	10 Years
Standard Deviation	4.51	6.59
<b>vs. Vanguard Target 2015 Composite Index</b>		
Beta	0.99	0.99
Alpha	-0.10	-0.09
Information Ratio	-0.63	-0.42
Tracking Error	0.24	0.33
R-Squared	1.00	1.00
Up Market Capture	98.32	98.67
Down Market Capture	99.02	99.39
Consistency	41.67	45.00

## vs. Risk Free

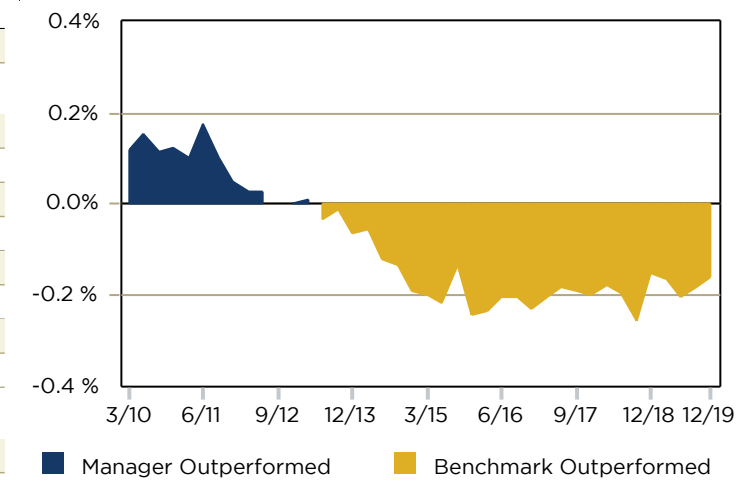
Sharpe Ratio	1.26	1.01
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## Asset Allocation

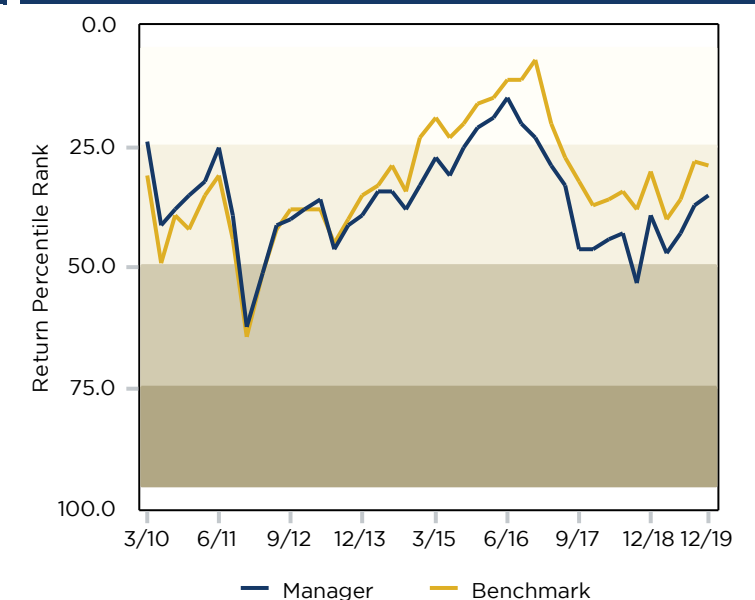


■ Fixed Income ■ Equity  
■ Cash

## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking







# Vanguard Target Retirement 2020 Inv (VTWNX)

Index: Vanguard Target 2020 Composite Index

Category: Target-Date 2020

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	4.46 (30)	17.63 (24)	17.63 (24)	8.72 (17)	6.42 (17)	8.03 (17)	-4.24 (44)	14.08 (18)	6.95 (37)	-0.68 (37)
Benchmark	4.55	17.87	17.87	8.88	6.62	8.26	-4.13	14.22	7.17	-0.40
Peer Group	4.05	16.22	16.22	7.66	5.65	7.49	-4.45	12.74	6.58	-1.10
Population	488	475	475	430	381	255	530	536	540	512

## Fund Information

Fund Inception	06-2006
Fund Assets	33,719 Million
Portfolio Assets	33,719 Million
Total # of Holdings	6
% Assets in Top 10 Holdings	100.0 %
PM	Coleman,W/Nejman,W
PM Tenure	6 Years 10 Months
Turnover	13.0 %
Gross Expense (%)	0.1 %
Net Expense (%)	0.1 %
New Investors	Open

## Equity Characteristics

Avg. Market Cap	47,042 (Million)
Price/Earnings	17
Price/Book	2
Dividend Yield	2.4 %

## Top Holdings (%)

Vanguard Total Stock Mkt Idx Inv	30.5
Vanguard Total Bond Market II Idx	29.2
Vanguard Total Intl Stock Index	20.6
Vanguard Total Intl Bd Idx Investor	12.4
Vanguard Shrt-Term Infl-Prot Sec	7.5

## Top Countries (%)

United States	65.1
Japan	6.3
United Kingdom	3.5
France	3.0
Germany	2.6

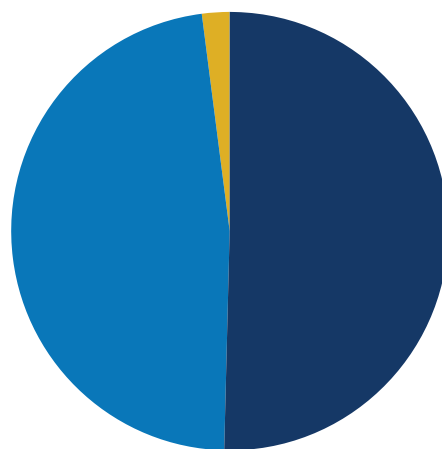
## Fund Statistics

	3 Years	10 Years
Standard Deviation	5.92	7.79
<b>vs. Vanguard Target 2020 Composite Index</b>		
Beta	1.00	1.00
Alpha	-0.13	-0.20
Information Ratio	-0.56	-0.59
Tracking Error	0.26	0.36
R-Squared	1.00	1.00
Up Market Capture	98.43	98.67
Down Market Capture	98.63	100.16
Consistency	41.67	37.50

## vs. Risk Free

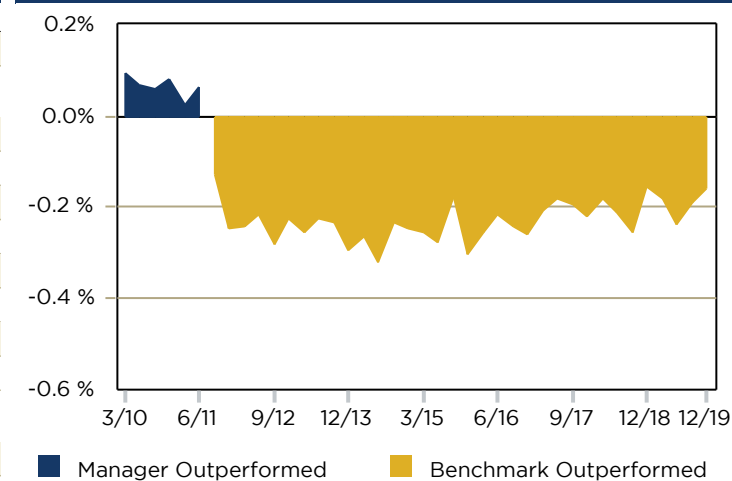
Sharpe Ratio	1.16	0.96
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## Asset Allocation

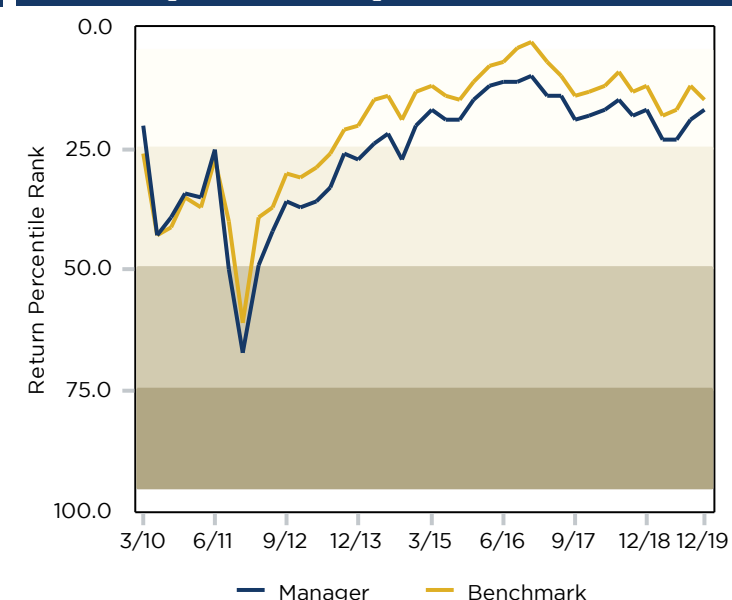


■ Equity      ■ Fixed Income  
■ Cash      ■ Other

## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking





# Vanguard Target Retirement 2025 Inv (VTIVX)

Index: Vanguard Target 2025 Composite Index

Category: Target-Date 2025

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	5.22 (30)	19.63 (24)	19.63 (24)	9.57 (18)	6.99 (17)	8.59 (22)	-5.15 (44)	15.94 (21)	7.48 (35)	-0.85 (39)
Benchmark	5.36	19.93	19.93	9.76	7.20	8.83	-5.00	16.08	7.67	-0.58
Peer Group	4.84	18.47	18.47	8.62	6.37	8.12	-5.38	14.89	7.14	-1.13
Population	541	513	513	454	378	247	521	510	514	456

## Fund Information

Fund Inception	10-2003
Fund Assets	46,628 Million
Portfolio Assets	46,628 Million
Total # of Holdings	5
% Assets in Top 10 Holdings	100.0 %
PM	Coleman,W/Nejman,W
PM Tenure	6 Years 10 Months
Turnover	11.0 %
Gross Expense (%)	0.1 %
Net Expense (%)	0.1 %
New Investors	Open

## Equity Characteristics

Avg. Market Cap	47,087 (Million)
Price/Earnings	17
Price/Book	2
Dividend Yield	2.4 %

## Top Holdings (%)

Vanguard Total Stock Mkt Idx Inv	36.4
Vanguard Total Bond Market II Idx	27.8
Vanguard Total Intl Stock Index	24.5
Vanguard Total Intl Bd Idx Investor	11.3

## Top Countries (%)

United States	62.3
Japan	6.7
United Kingdom	3.8
France	3.1
Germany	2.7

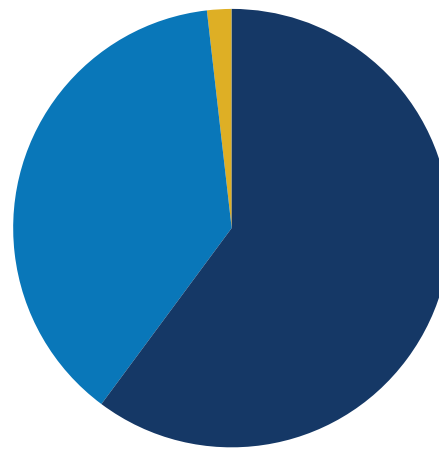
## Fund Statistics

	3 Years	10 Years
Standard Deviation	6.95	8.81
<b>vs. Vanguard Target 2025 Composite Index</b>		
Beta	1.00	1.00
Alpha	-0.18	-0.21
Information Ratio	-0.57	-0.53
Tracking Error	0.31	0.41
R-Squared	1.00	1.00
Up Market Capture	98.66	98.86
Down Market Capture	99.52	100.33
Consistency	47.22	43.33

## vs. Risk Free

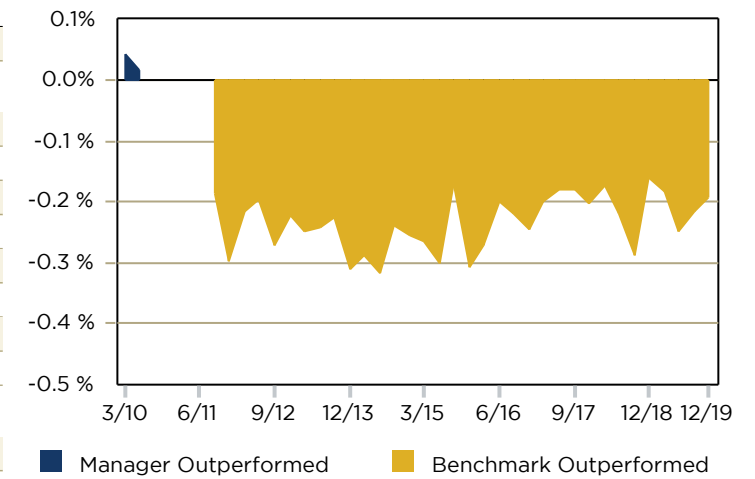
Sharpe Ratio	1.11	0.92
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## Asset Allocation

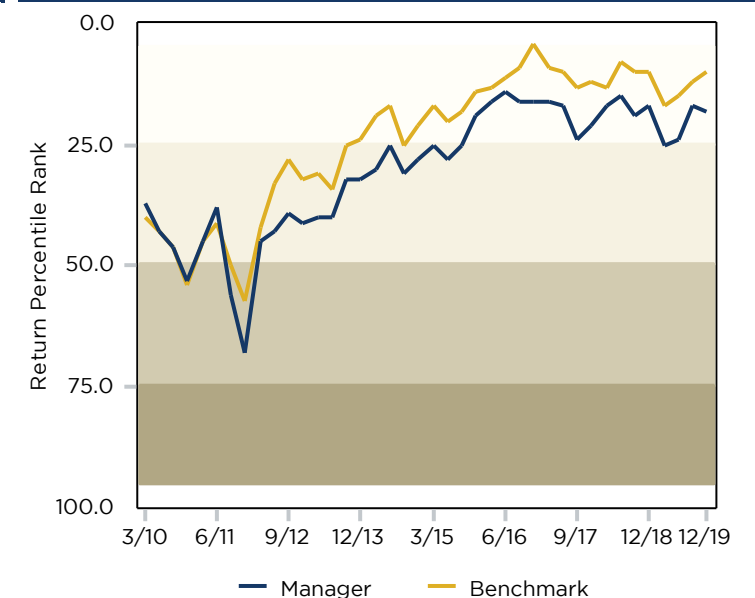


■ Equity      ■ Fixed Income  
■ Cash      ■ Other

## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking





# Vanguard Target Retirement 2030 Inv (VTHRX)

Index: Vanguard Target 2030 Composite Index

Category: Target-Date 2030

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	5.95 (34)	21.07 (33)	21.07 (33)	10.24 (24)	7.41 (23)	9.07 (27)	-5.86 (37)	17.52 (32)	7.85 (43)	-1.03 (43)
Benchmark	6.07	21.34	21.34	10.41	7.62	9.31	-5.72	17.66	8.11	-0.79
Peer Group	5.75	20.52	20.52	9.52	6.90	8.66	-6.29	16.73	7.64	-1.27
Population	523	503	503	457	406	274	515	522	525	497

## Fund Information

Fund Inception	06-2006
Fund Assets	41,571 Million
Portfolio Assets	41,571 Million
Total # of Holdings	5
% Assets in Top 10 Holdings	100.0 %
PM	Coleman,W/Nejman,W
PM Tenure	6 Years 10 Months
Turnover	8.0 %
Gross Expense (%)	0.1 %
Net Expense (%)	0.1 %
New Investors	Open

## Equity Characteristics

Avg. Market Cap	47,090 (Million)
Price/Earnings	17
Price/Book	2
Dividend Yield	2.4 %

## Top Holdings (%)

Vanguard Total Stock Mkt Idx Inv	40.9
Vanguard Total Intl Stock Index	27.5
Vanguard Total Bond Market II Idx	22.5
Vanguard Total Intl Bd Idx Investor	9.1

## Top Countries (%)

United States	61.9
Japan	6.7
United Kingdom	4.0
France	3.0
Canada	2.7

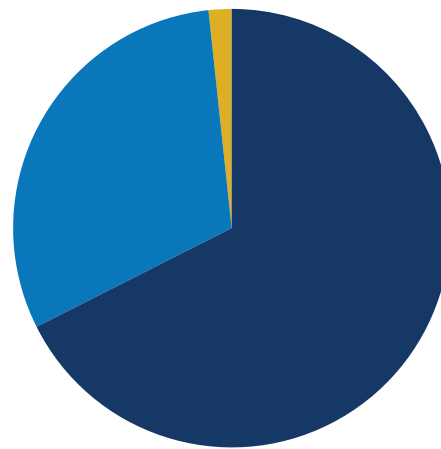
## Fund Statistics

	3 Years	10 Years
Standard Deviation	7.82	9.79
<b>vs. Vanguard Target 2030 Composite Index</b>		
Beta	1.00	1.00
Alpha	-0.18	-0.21
Information Ratio	-0.49	-0.51
Tracking Error	0.33	0.43
R-Squared	1.00	1.00
Up Market Capture	98.83	99.07
Down Market Capture	99.46	100.54
Consistency	44.44	42.50

## vs. Risk Free

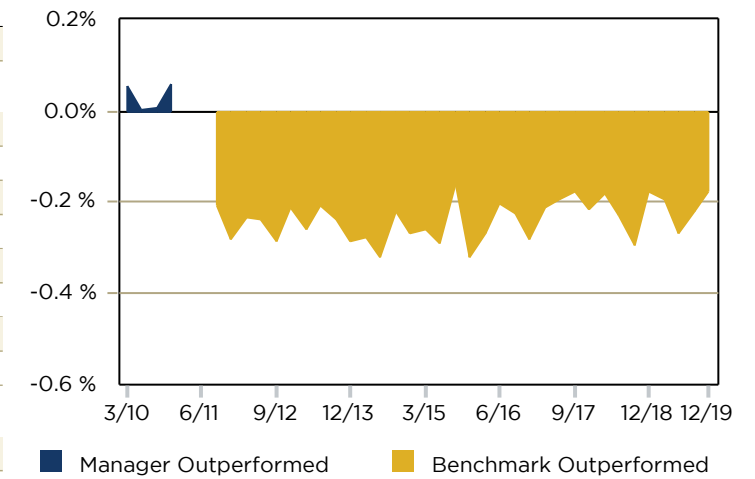
Sharpe Ratio	1.08	0.88
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## Asset Allocation

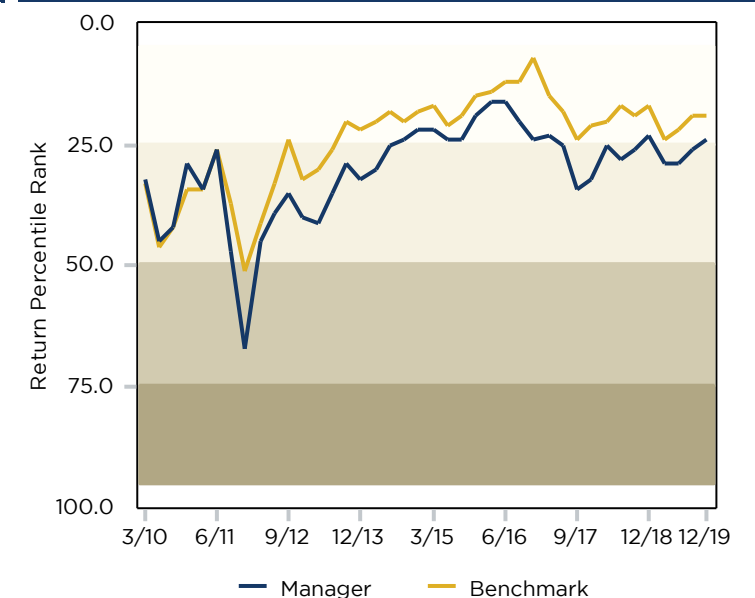


■ Equity      ■ Fixed Income  
■ Cash      ■ Other

## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking



# Vanguard Target Retirement 2035 Inv (VTTHX)

Index: Vanguard Target 2035 Composite Index

Category: Target-Date 2035

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	6.68 (47)	22.44 (48)	22.44 (48)	10.86 (28)	7.81 (27)	9.54 (23)	-6.58 (32)	19.12 (34)	8.26 (44)	-1.26 (49)
Benchmark	6.79	22.76	22.76	11.05	8.03	9.78	-6.46	19.25	8.55	-1.02
Peer Group	6.61	22.36	22.36	10.27	7.43	9.14	-7.18	18.39	8.10	-1.34
Population	530	506	506	446	369	239	512	500	505	446

## Fund Information

Fund Inception	10-2003
Fund Assets	39,752 Million
Portfolio Assets	39,752 Million
Total # of Holdings	5
% Assets in Top 10 Holdings	100.0 %
PM	Coleman,W/Nejman,W
PM Tenure	6 Years 10 Months
Turnover	7.0 %
Gross Expense (%)	0.1 %
Net Expense (%)	0.1 %
New Investors	Open

## Equity Characteristics

Avg. Market Cap	47,096 (Million)
Price/Earnings	17
Price/Book	2
Dividend Yield	2.4 %

## Top Holdings (%)

Vanguard Total Stock Mkt Idx Inv	45.4
Vanguard Total Intl Stock Index	30.5
Vanguard Total Bond Market II Idx	17.3
Vanguard Total Intl Bd Idx Investor	6.9

## Top Countries (%)

United States	61.5
Japan	6.8
United Kingdom	4.1
France	2.9
Canada	2.7

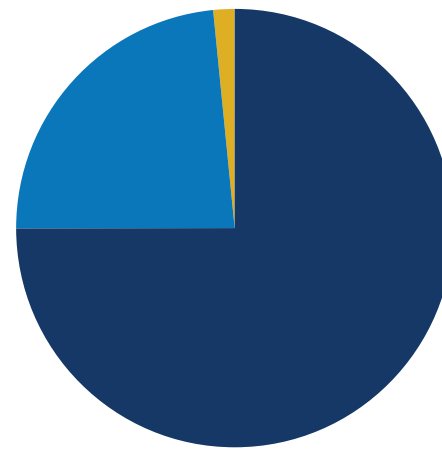
## Fund Statistics

	3 Years	10 Years
Standard Deviation	8.67	10.79
<b>vs. Vanguard Target 2035 Composite Index</b>		
Beta	1.00	1.00
Alpha	-0.17	-0.22
Information Ratio	-0.42	-0.44
Tracking Error	0.39	0.49
R-Squared	1.00	1.00
Up Market Capture	98.89	99.18
Down Market Capture	99.50	100.53
Consistency	47.22	42.50

## vs. Risk Free

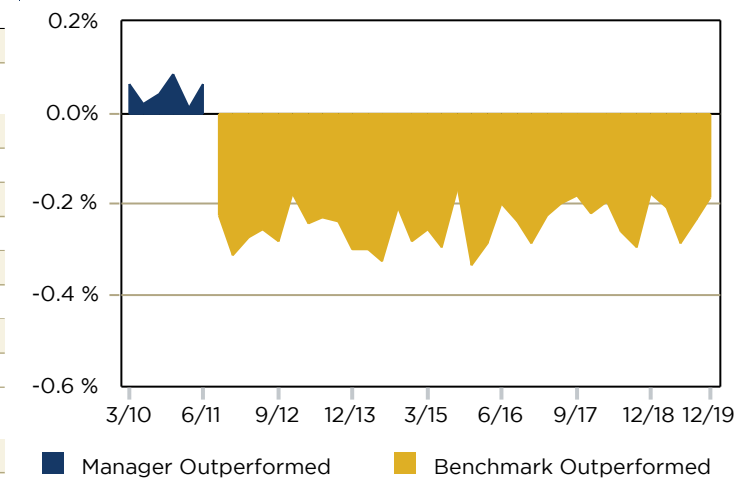
Sharpe Ratio	1.04	0.85
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## Asset Allocation

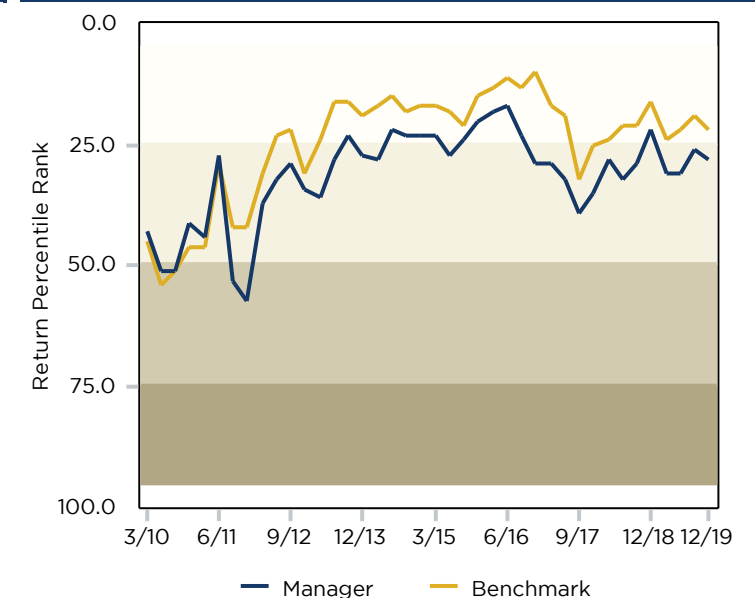


■ Equity      ■ Fixed Income  
■ Cash      ■ Other

## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking





# Vanguard Target Retirement 2040 Inv (VFORX)

Index: Vanguard Target 2040 Composite Index

Category: Target-Date 2040

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	7.38 (36)	23.86 (43)	23.86 (43)	11.48 (24)	8.20 (23)	9.87 (21)	-7.32 (38)	20.71 (25)	8.73 (39)	-1.59 (54)
Benchmark	7.50	24.19	24.19	11.67	8.43	10.14	-7.22	20.86	8.98	-1.25
Peer Group	7.15	23.65	23.65	10.74	7.70	9.32	-7.90	19.49	8.37	-1.49
Population	514	502	502	456	405	273	514	521	523	496

## Fund Information

Fund Inception	06-2006
Fund Assets	31,328 Million
Portfolio Assets	31,328 Million
Total # of Holdings	5
% Assets in Top 10 Holdings	100.0 %
PM	Coleman,W/Nejman,W
PM Tenure	6 Years 10 Months
Turnover	5.0 %
Gross Expense (%)	0.1 %
Net Expense (%)	0.1 %
New Investors	Open

## Equity Characteristics

Avg. Market Cap	47,194 (Million)
Price/Earnings	17
Price/Book	2
Dividend Yield	2.4 %

## Top Holdings (%)

Vanguard Total Stock Mkt Idx Inv	49.9
Vanguard Total Intl Stock Index	33.3
Vanguard Total Bond Market II Idx	11.9
Vanguard Total Intl Bd Idx Investor	4.9

## Top Countries (%)

United States	61.1
Japan	6.8
United Kingdom	4.2
France	2.8
China	2.7

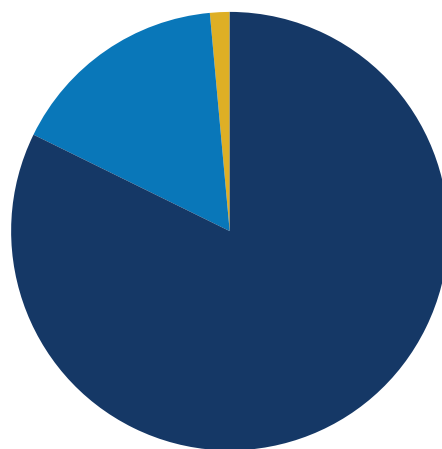
## Fund Statistics

	3 Years	10 Years
Standard Deviation	9.55	11.32
<b>vs. Vanguard Target 2040 Composite Index</b>		
Beta	1.00	1.00
Alpha	-0.19	-0.23
Information Ratio	-0.41	-0.48
Tracking Error	0.40	0.51
R-Squared	1.00	1.00
Up Market Capture	98.96	98.99
Down Market Capture	99.51	100.31
Consistency	44.44	40.83

## vs. Risk Free

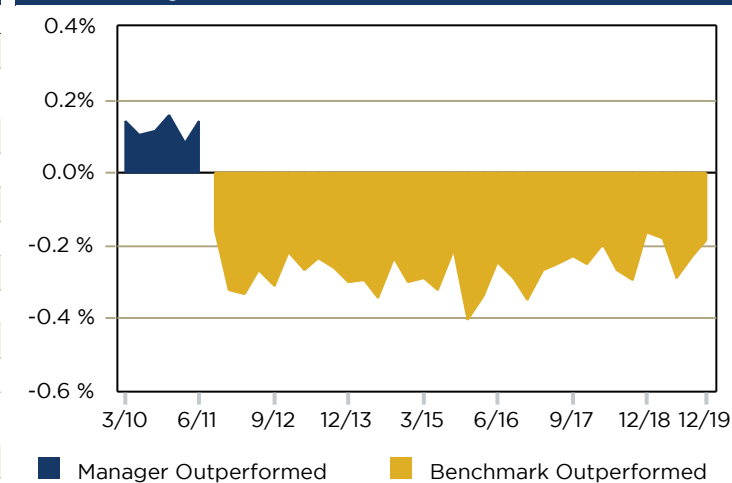
Sharpe Ratio	1.02	0.84
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## Asset Allocation

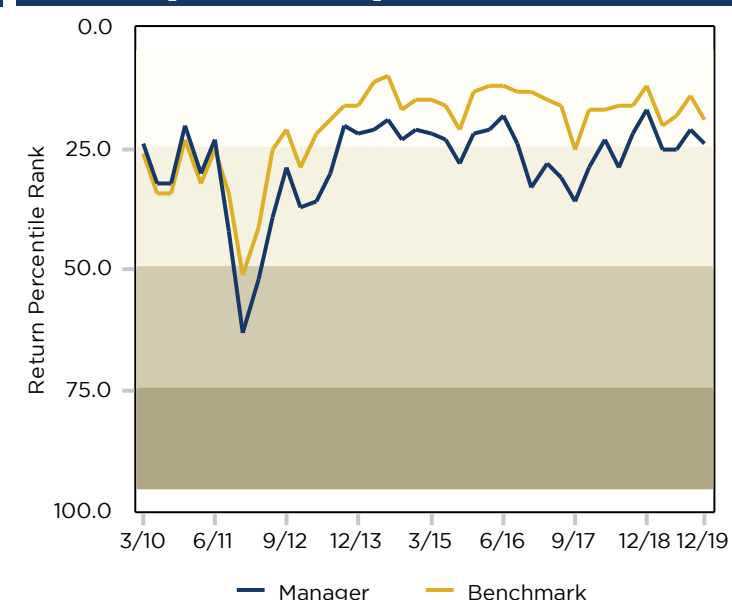


■ Equity      ■ Fixed Income  
■ Cash      ■ Other

## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking





# Vanguard Target Retirement 2045 Inv (VTIVX)

Index: Vanguard Target 2045 Composite Index

Category: Target-Date 2045

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	8.00 (35)	24.94 (39)	24.94 (39)	11.80 (25)	8.41 (24)	9.98 (25)	-7.90 (39)	21.42 (20)	8.87 (42)	-1.57 (53)
Benchmark	8.15	25.37	25.37	12.01	8.66	10.25	-7.77	21.55	9.13	-1.25
Peer Group	7.68	24.63	24.63	11.08	7.97	9.55	-8.25	20.36	8.55	-1.48
Population	530	506	506	447	369	238	508	498	503	445

## Fund Information

Fund Inception	10-2003
Fund Assets	28,962 Million
Portfolio Assets	28,962 Million
Total # of Holdings	5
% Assets in Top 10 Holdings	100.0 %
PM	Coleman,W/Nejman,W
PM Tenure	6 Years 10 Months
Turnover	4.0 %
Gross Expense (%)	0.2 %
Net Expense (%)	0.2 %
New Investors	Open

## Equity Characteristics

Avg. Market Cap	47,214 (Million)
Price/Earnings	17
Price/Book	2
Dividend Yield	2.4 %

## Top Holdings (%)

Vanguard Total Stock Mkt Idx Inv	54.0
Vanguard Total Intl Stock Index	36.0
Vanguard Total Bond Market II Idx	7.1
Vanguard Total Intl Bd Idx Investor	2.9

## Top Countries (%)

United States	60.7
Japan	6.8
United Kingdom	4.3
China	2.9
France	2.8

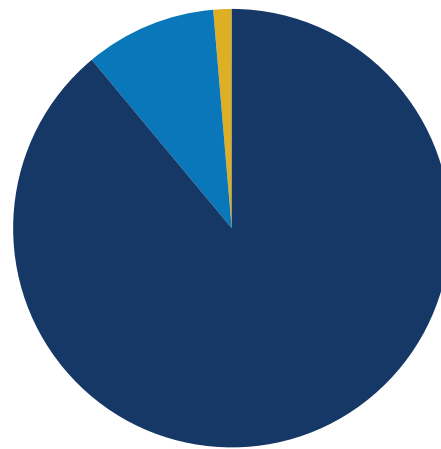
## Fund Statistics

	3 Years	10 Years
Standard Deviation	10.18	11.50
<b>vs. Vanguard Target 2045 Composite Index</b>		
Beta	1.00	1.00
Alpha	-0.22	-0.24
Information Ratio	-0.46	-0.48
Tracking Error	0.42	0.51
R-Squared	1.00	1.00
Up Market Capture	98.92	99.04
Down Market Capture	99.66	100.37
Consistency	38.89	42.50

## vs. Risk Free

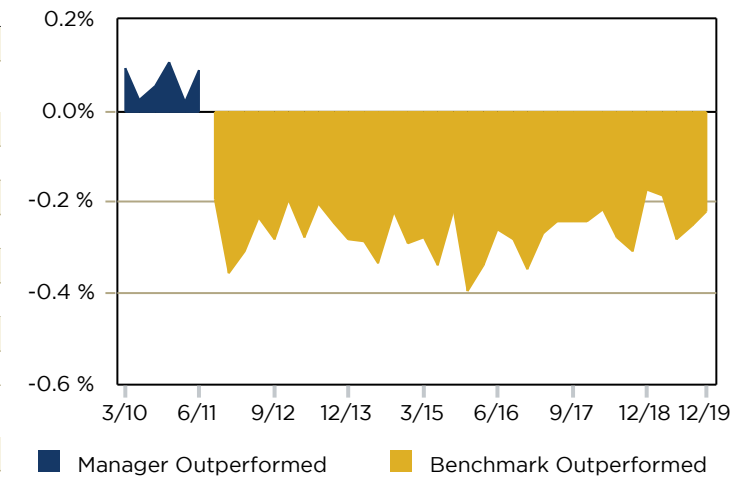
Sharpe Ratio	0.99	0.84
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## Asset Allocation

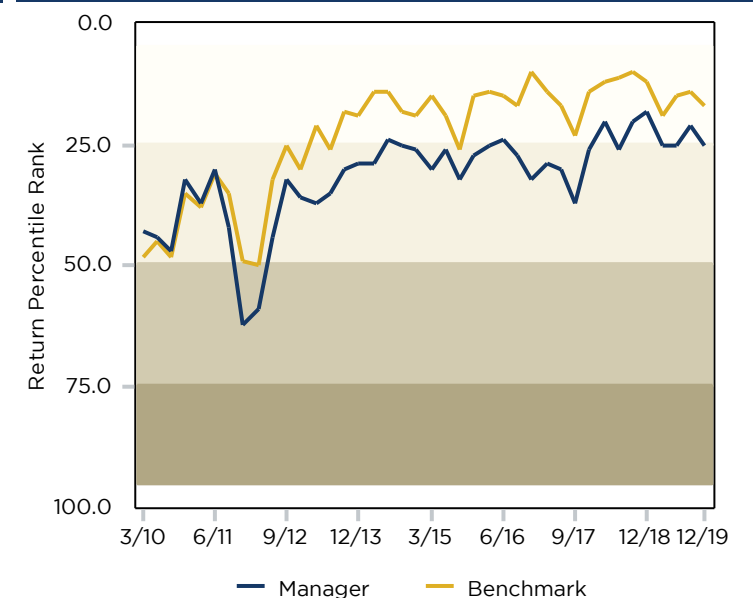


■ Equity      ■ Fixed Income  
■ Cash      ■ Other

## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking



# Vanguard Target Retirement 2050 Inv (VFIFX)

Index: Vanguard Target 2050 Composite Index

Category: Target-Date 2050

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	8.01 (33)	24.98 (45)	24.98 (45)	11.80 (29)	8.41 (27)	9.98 (31)	-7.90 (34)	21.39 (26)	8.85 (45)	-1.58 (54)
Benchmark	8.15	25.37	25.37	12.01	8.66	10.25	-7.77	21.55	9.13	-1.25
Peer Group	7.65	24.78	24.78	11.13	8.05	9.62	-8.42	20.59	8.65	-1.50
Population	512	498	498	453	399	234	508	514	513	484

## Fund Information

Fund Inception	06-2006
Fund Assets	21,305 Million
Portfolio Assets	21,305 Million
Total # of Holdings	5
% Assets in Top 10 Holdings	100.0 %
PM	Coleman,W/Nejman,W
PM Tenure	6 Years 10 Months
Turnover	3.0 %
Gross Expense (%)	0.2 %
Net Expense (%)	0.2 %
New Investors	Open

## Equity Characteristics

Avg. Market Cap	47,213 (Million)
Price/Earnings	17
Price/Book	2
Dividend Yield	2.4 %

## Top Holdings (%)

Vanguard Total Stock Mkt Idx Inv	54.0
Vanguard Total Intl Stock Index	36.0
Vanguard Total Bond Market II Idx	7.0
Vanguard Total Intl Bd Idx Investor	2.9

## Top Countries (%)

United States	60.7
Japan	6.8
United Kingdom	4.3
China	2.9
France	2.8

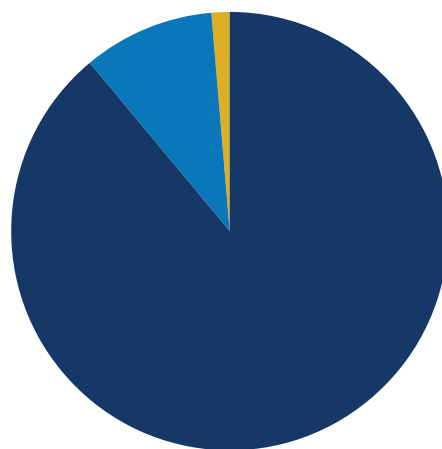
## Fund Statistics

	3 Years	10 Years
Standard Deviation	10.20	11.50
<b>vs. Vanguard Target 2050 Composite Index</b>		
Beta	1.00	1.00
Alpha	-0.24	-0.24
Information Ratio	-0.43	-0.47
Tracking Error	0.43	0.53
R-Squared	1.00	1.00
Up Market Capture	99.06	99.01
Down Market Capture	99.92	100.33
Consistency	47.22	42.50

## vs. Risk Free

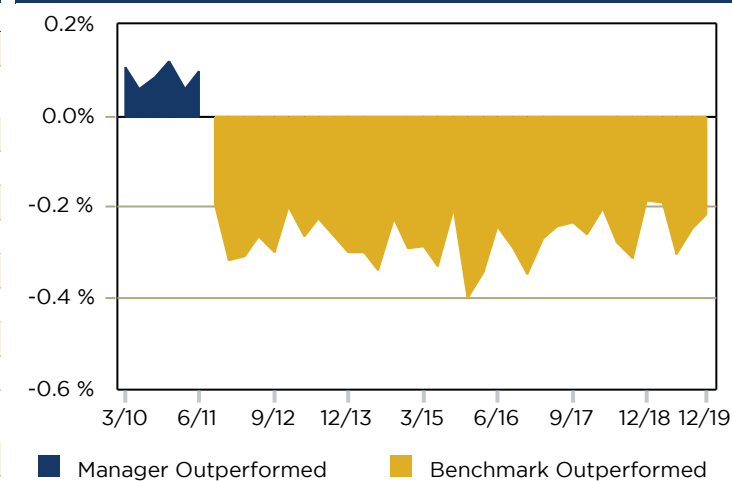
Sharpe Ratio	0.99	0.84
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## Asset Allocation

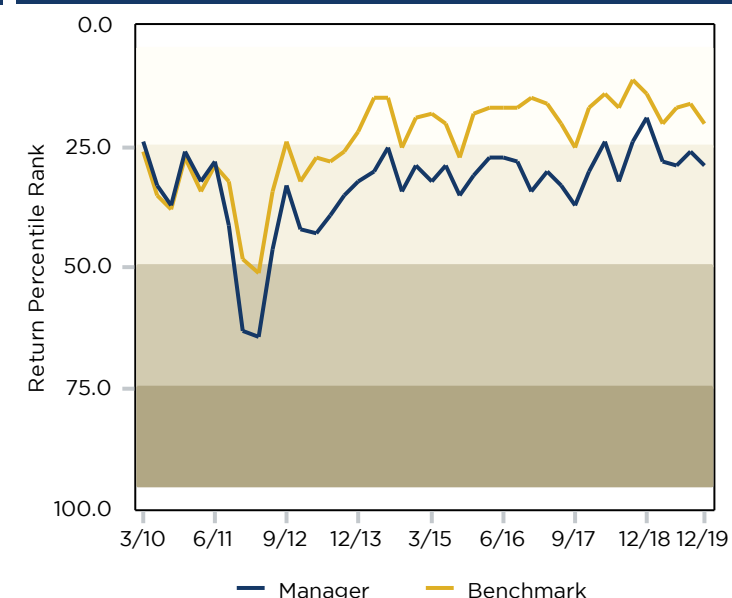


■ Equity      ■ Fixed Income  
■ Cash      ■ Other

## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking





# Vanguard Target Retirement 2055 Inv (VFFVX)

Index: Vanguard Target 2055 Composite Index

Category: Target-Date 2055

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	8.02 (43)	24.98 (55)	24.98 (55)	11.80 (33)	8.38 (36)	-	-7.89 (28)	21.38 (30)	8.88 (43)	-1.72 (60)
Benchmark	8.15	25.37	25.37	12.01	8.66	-	-7.77	21.55	9.13	-1.25
Peer Group	7.88	25.10	25.10	11.30	8.17	-	-8.48	20.83	8.58	-1.50
Population	530	501	501	437	347	-	506	487	481	413

## Fund Information

Fund Inception	08-2010
Fund Assets	11,351 Million
Portfolio Assets	11,351 Million
Total # of Holdings	5
% Assets in Top 10 Holdings	100.0 %
PM	Coleman,W/Nejman,W
PM Tenure	6 Years 10 Months
Turnover	3.0 %
Gross Expense (%)	0.2 %
Net Expense (%)	0.2 %
New Investors	Open

## Equity Characteristics

Avg. Market Cap	47,221 (Million)
Price/Earnings	17
Price/Book	2
Dividend Yield	2.4 %

## Top Holdings (%)

Vanguard Total Stock Mkt Idx Inv	54.1
Vanguard Total Intl Stock Index	36.0
Vanguard Total Bond Market II Idx	7.0
Vanguard Total Intl Bd Idx Investor	2.9

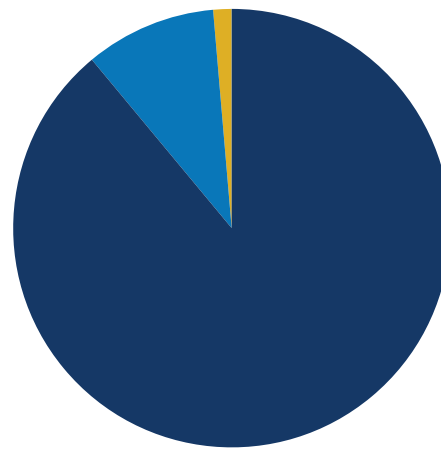
## Top Countries (%)

United States	60.7
Japan	6.8
United Kingdom	4.3
China	2.9
France	2.8

## Fund Statistics

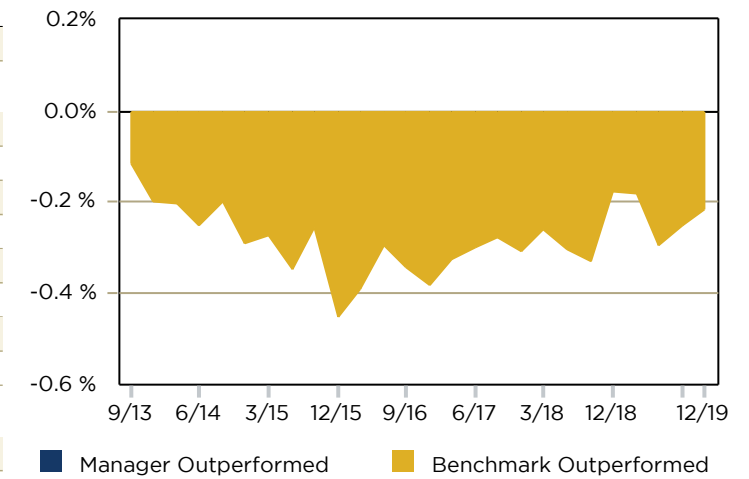
	3 Years	10 Years
Standard Deviation	10.17	-
<b>vs. Vanguard Target 2055 Composite Index</b>		
Beta	1.00	-
Alpha	-0.21	-
Information Ratio	-0.46	-
Tracking Error	0.42	-
R-Squared	1.00	-
Up Market Capture	98.88	-
Down Market Capture	99.56	-
Consistency	44.44	-
<b>vs. Risk Free</b>		
Sharpe Ratio	0.99	-

## Asset Allocation

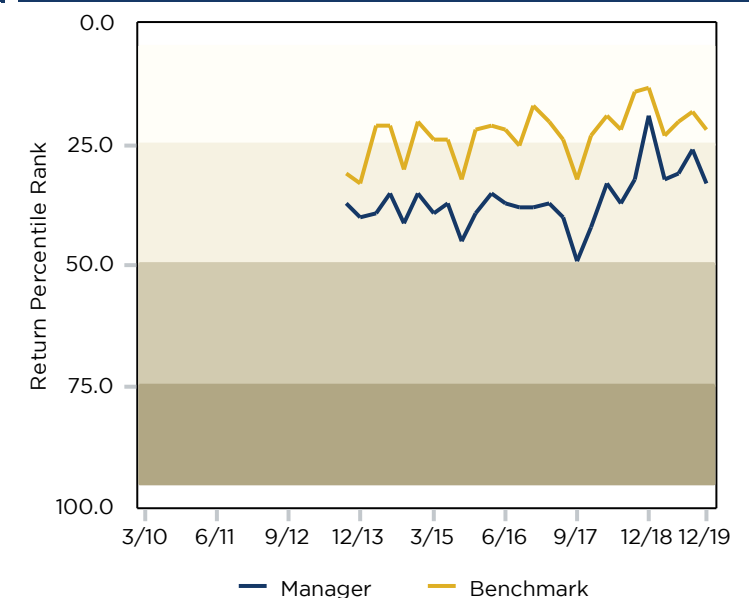


■ Equity      ■ Fixed Income  
■ Cash      ■ Other

## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking





# Vanguard Target Retirement 2060 Inv (VTTSX)

Index: Vanguard Target 2060 Composite Index

Category: Target-Date 2060+

Report Date: 12/31/2019

## Trailing Performance

	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2018	2017	2016	2015
Manager	8.02 (44)	24.96 (62)	24.96 (62)	11.79 (36)	8.38 (62)	-	-7.87 (28)	21.36 (33)	8.84 (53)	-1.68 (70)
Benchmark	8.15	25.37	25.37	12.01	8.66	-	-7.77	21.55	9.13	-1.25
Peer Group	7.94	25.29	25.29	11.44	8.46	-	-8.59	21.00	8.96	-1.06
Population	549	461	461	331	121	-	430	370	292	139

## Fund Information

Fund Inception	01-2012
Fund Assets	4,958 Million
Portfolio Assets	4,958 Million
Total # of Holdings	5
% Assets in Top 10 Holdings	100.0 %
PM	Coleman,W/Nejman,W
PM Tenure	6 Years 10 Months
Turnover	2.0 %
Gross Expense (%)	0.2 %
Net Expense (%)	0.2 %
New Investors	Open

## Equity Characteristics

Avg. Market Cap	47,217 (Million)
Price/Earnings	17
Price/Book	2
Dividend Yield	2.4 %

## Top Holdings (%)

Vanguard Total Stock Mkt Idx Inv	54.0
Vanguard Total Intl Stock Index	36.0
Vanguard Total Bond Market II Idx	7.1
Vanguard Total Intl Bd Idx Investor	2.9

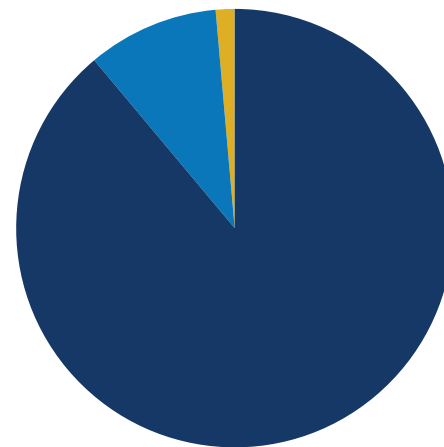
## Top Countries (%)

United States	60.7
Japan	6.8
United Kingdom	4.3
China	2.9
France	2.8

## Fund Statistics

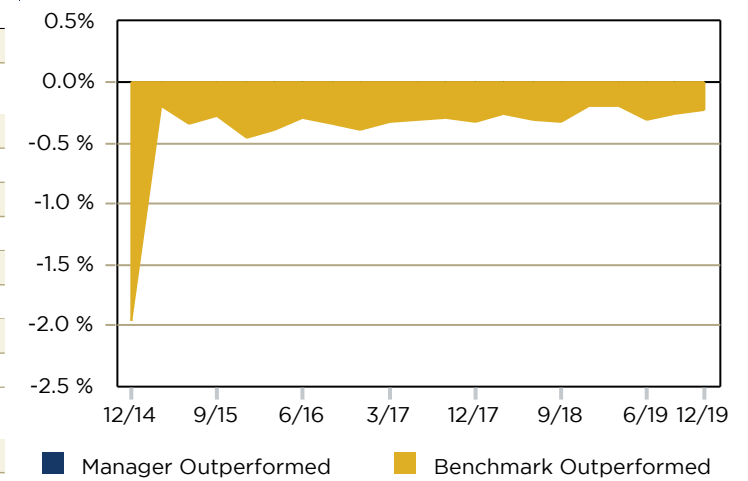
	3 Years	10 Years
Standard Deviation	10.19	-
<b>vs. Vanguard Target 2060 Composite Index</b>		
Beta	1.00	-
Alpha	-0.23	-
Information Ratio	-0.45	-
Tracking Error	0.43	-
R-Squared	1.00	-
Up Market Capture	98.94	-
Down Market Capture	99.72	-
Consistency	47.22	-
<b>vs. Risk Free</b>		
Sharpe Ratio	0.99	-

## Asset Allocation

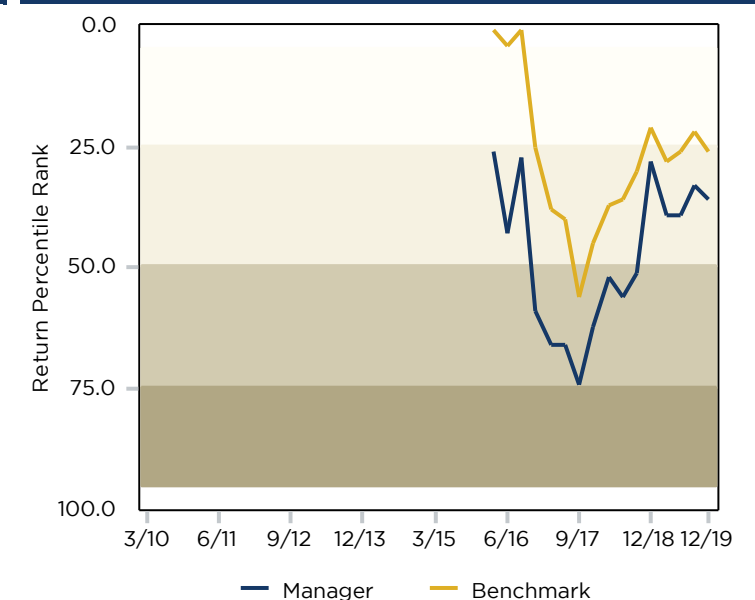


■ Equity      ■ Fixed Income  
■ Cash      ■ Other

## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking





## Voya Manager Searches

# Small Growth Search

As of 1/31/2020



# US Fund Small Growth

## Voya SmallCap Opportunities Port I

### Investment Strategy

The investment seeks long-term capital appreciation. The fund normally invests at least 80% of its net assets (plus borrowings for investment purposes) in common stock of smaller, lesser-known U.S. companies. The Sub-Adviser defines smaller companies as those with market capitalizations that fall within the range of companies in the Russell 2000® Growth Index at the time of purchase. It normally invests in companies that the sub-adviser believes have above average prospects for growth.

### Manager Biography

James Hasso since 10/1/2008

Joseph Basset since 4/30/2012

### Voya SmallCap Opportunities Port I - Operations

Inception Date	5/6/1994
Fund Size (\$mm)	320
Annual Report Net Expense Ratio	0.87
Prospectus Net Expense Ratio	0.88
Prospectus Gross Expense Ratio	0.88
Ticker	IVSOX
Manager Tenure (Longest)	11.33
Manager Tenure (Average)	9.58
Morningstar Inst Cat	Small Core Growth

### Other Notes:

None

## Janus Henderson Triton T

### Investment Strategy

The investment seeks long-term growth of capital. The fund pursues its investment objective by investing at least 50% of its equity assets in small- and medium-sized companies. It may also invest in larger companies with strong growth potential. Small- and medium-sized companies are defined by the portfolio managers as those companies whose market capitalization falls within the range of companies in the Russell 2500® Growth Index at the time of initial purchase. The fund may also invest in foreign securities, which may include investments in emerging markets.

### Manager Biography

Jonathan D. Coleman since 5/13/2013

Scott Stutzman since 7/1/2016

### Janus Henderson Triton T - Operations

Inception Date	2/25/2005
Fund Size (\$mm)	11,785
Annual Report Net Expense Ratio	0.90
Prospectus Net Expense Ratio	0.91
Prospectus Gross Expense Ratio	0.91
Ticker	JATTX
Manager Tenure (Longest)	6.75
Manager Tenure (Average)	5.17
Morningstar Inst Cat	SMID Growth

### Other Notes:

None

## Loomis Sayles Small Cap Growth Instl

### Investment Strategy

The investment seeks long-term capital growth. The fund normally will invest at least 80% of its net assets (plus any borrowings made for investment purposes) in the equity securities of "small-cap companies," including preferred stocks, warrants, securities convertible into common or preferred stocks and other equity-like interests in an entity. Currently, the manager defines a small-cap company to be one whose market capitalization either falls within the capitalization range of the Russell 2000® Index, an index that tracks stocks of 2,000 of the smallest U.S. companies, or is \$3 billion or less at the time of investment.

### Manager Biography

Mark F. Burns since 1/6/2005

John J. Slavik since 4/1/2005

### Loomis Sayles Small Cap Growth Instl - Operations

Inception Date	12/31/1996
Fund Size (\$mm)	1,915
Annual Report Net Expense Ratio	0.95
Prospectus Net Expense Ratio	0.95
Prospectus Gross Expense Ratio	0.95
Ticker	LSSIX
Manager Tenure (Longest)	15.08
Manager Tenure (Average)	14.96
Morningstar Inst Cat	Small High Growth

### Other Notes:

None

# Portfolio Analysis

## Voya SmallCap Opportunities Port I

## Janus Henderson Triton T

## Loomis Sayles Small Cap Growth Instl

### Style Allocation

Portfolio Date: 12/31/2019

	Value	Blend	Growth	Market Cap	%
Large	0	0	0	Market Cap Giant %	0
				Market Cap Large %	0
Mid	3	14	23	Market Cap Mid %	40
				Market Cap Small %	59
Small	7	17	35	Market Cap Micro %	1

### Style Allocation

Portfolio Date: 12/31/2019

	Value	Blend	Growth	Market Cap	%
Large	0	0	0	Market Cap Giant %	0
				Market Cap Large %	0
Mid	8	12	43	Market Cap Mid %	63
				Market Cap Small %	36
Small	5	8	25	Market Cap Micro %	0

### Style Allocation

Portfolio Date: 12/31/2019

	Value	Blend	Growth	Market Cap	%
Large	0	0	0	Market Cap Giant %	0
				Market Cap Large %	0
Mid	0	7	20	Market Cap Mid %	25
				Market Cap Small %	75
Small	4	13	57	Market Cap Micro %	0

### Valuation Data

Display Benchmark 1: Russell 2000 Growth TR USD

	Inv	Bmk1
Average Market Cap (bil)	3.4	2.3
Forward P/E	20.2	20.6
P/E Ratio (TTM)	24.6	24.4
LT Earn Growth	13.3	13.4
P/B Ratio (TTM)	4.0	4.1
Dividend Yield	0.6	0.8
ROE %	9.5	4.9
ROA %	1.5	-1.7
Debt to Capital %	42	37

### Valuation Data

Display Benchmark 1: Russell 2000 Growth TR USD

	Inv	Bmk1
Average Market Cap (bil)	5.2	2.3
Forward P/E	21.5	20.6
P/E Ratio (TTM)	26.1	24.4
LT Earn Growth	11.8	13.4
P/B Ratio (TTM)	3.8	4.1
Dividend Yield	0.7	0.8
ROE %	12.3	4.9
ROA %	3.6	-1.7
Debt to Capital %	44	37

### Valuation Data

Display Benchmark 1: Russell 2000 Growth TR USD

	Inv	Bmk1
Average Market Cap (bil)	3.0	2.3
Forward P/E	26.7	20.6
P/E Ratio (TTM)	32.4	24.4
LT Earn Growth	14.1	13.4
P/B Ratio (TTM)	4.3	4.1
Dividend Yield	0.3	0.8
ROE %	6.4	4.9
ROA %	0.8	-1.7
Debt to Capital %	33	37

### Portfolio Data

	Inv	Bmk1
Turnover Ratio	108	
# of Stock Holdings	141	1,164
% in Top 10	13.6	5.6
Cash %	0.0	0.0
Developed %	100.0	100.0
US Equity %	98.8	99.2
Non-US Equity %	1	1
Emerging Mkt %	0.0	0.0

### Portfolio Data

	Inv	Bmk1
Turnover Ratio	26	
# of Stock Holdings	120	1,164
% in Top 10	20.0	5.6
Cash %	2.5	0.0
Developed %	97.0	100.0
US Equity %	95.8	99.2
Non-US Equity %	2	1
Emerging Mkt %	0.5	0.0

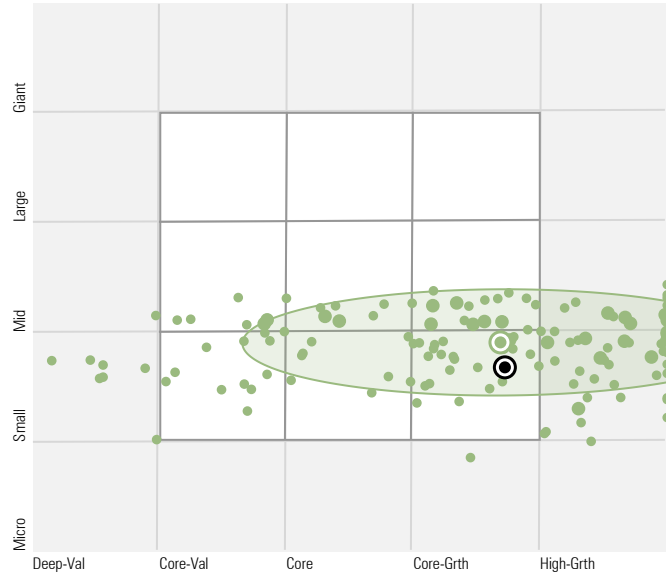
### Portfolio Data

	Inv	Bmk1
Turnover Ratio	67	
# of Stock Holdings	100	1,164
% in Top 10	15.6	5.6
Cash %	4.6	0.0
Developed %	94.8	100.0
US Equity %	92.0	99.2
Non-US Equity %	3	1
Emerging Mkt %	0.6	0.0

# Holdings-Based Style Analysis

## Voya SmallCap Opportunities Port I

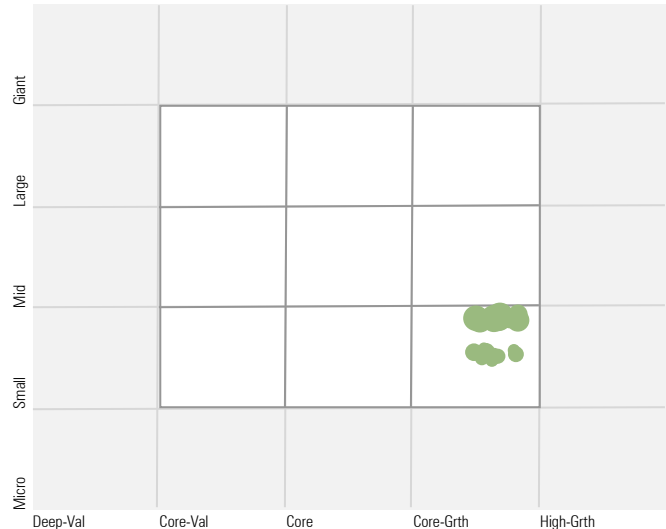
### Holdings-Based Style Map



● Voya SmallCap Opportunities Port I 12/31/2019 ● Russell 2000 Growth TR USD 1/31/2020

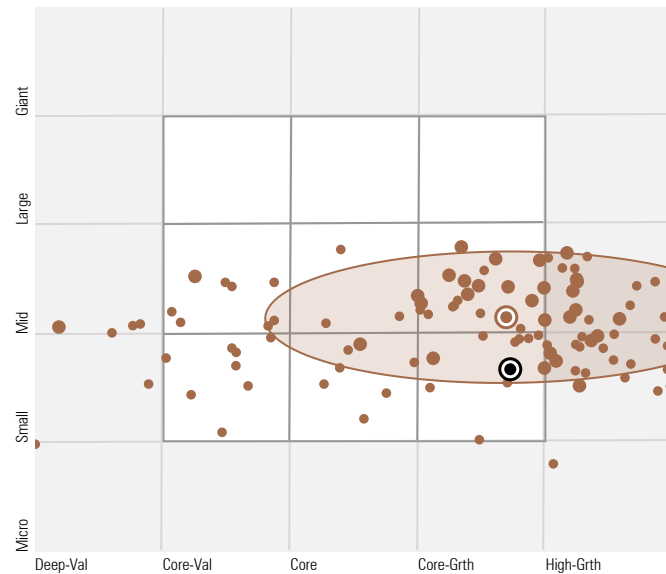
### Holdings-Based Style Trail

Time Period: 3/31/2015 to 12/31/2019



## Janus Henderson Triton T

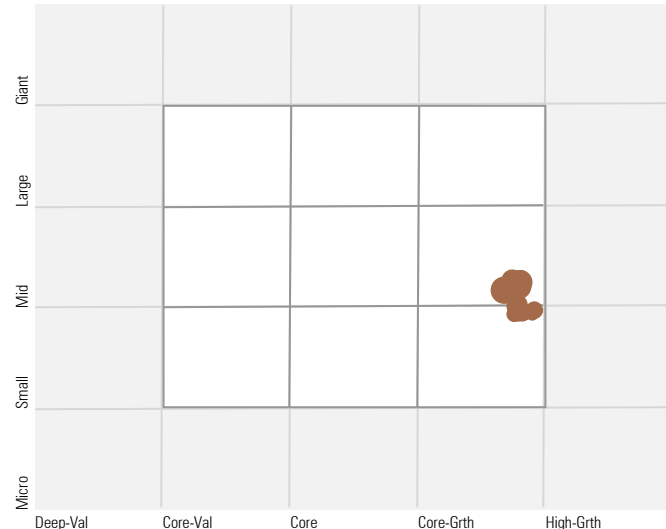
### Holdings-Based Style Map



● Janus Henderson Triton T 12/31/2019 ● Russell 2000 Growth TR USD 1/31/2020

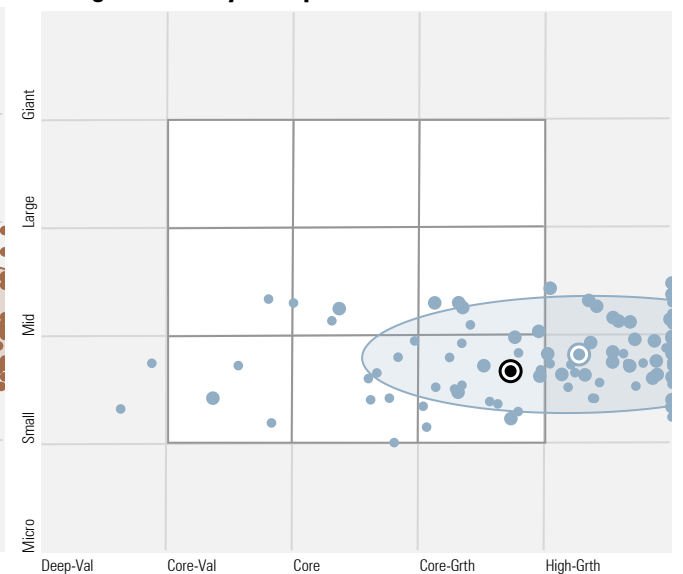
### Holdings-Based Style Trail

Time Period: 3/31/2015 to 12/31/2019



## Loomis Sayles Small Cap Growth Instl

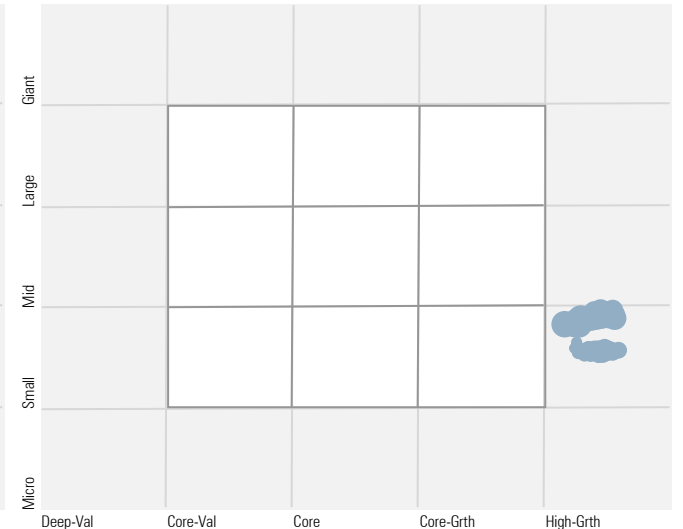
### Holdings-Based Style Map



● Loomis Sayles Small Cap Growth Instl 12/31/2019 ● Russell 2000 Growth TR USD 1/31/2020

### Holdings-Based Style Trail

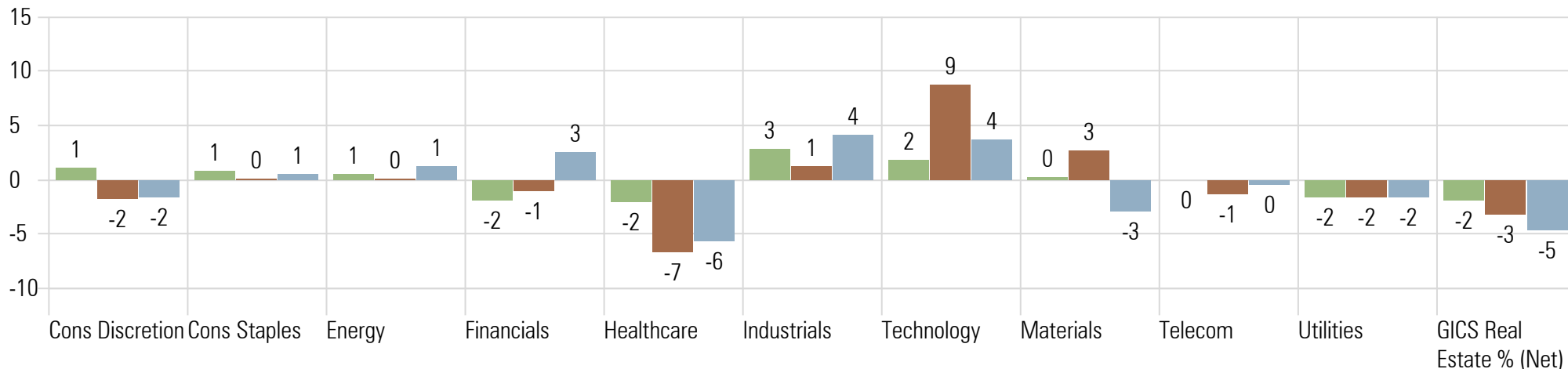
Time Period: 2/28/2015 to 12/31/2019



# Sector Exposure and Top 15 Holdings

## Relative Sector Allocation

Calculation Benchmark: Russell 2000 Growth TR USD



Voya SmallCap Opportunities Port I  
 Russell 2000 Growth TR USD

Janus Henderson Triton T

Loomis Sayles Small Cap Growth Instl

### Voya SmallCap Opportunities Port I - Top Holdings

Portfolio Date: 12/31/2019

Company	Equity Style Box	Portfolio Weighting %
Performance Food Group Co	■	1.6
Generac Holdings Inc	■	1.5
J2 Global Inc	■	1.4
Helen Of Troy Ltd	■	1.4
The Brink's Co	■	1.3
Repligen Corp	■	1.3
John Bean Technologies Corp	■	1.3
Trex Co Inc	■	1.3
Ryman Hospitality Properties Inc	■	1.3
Amedisys Inc	■	1.3
Silicon Laboratories Inc	■	1.3
Exponent Inc	■	1.2
EMCOR Group Inc	■	1.2
FirstCash Inc	■	1.1
Semtech Corp	■	1.1

### Janus Henderson Triton T - Top Holdings

Portfolio Date: 12/31/2019

Company	Equity Style Box	Portfolio Weighting %
Catalent Inc	■	2.7
Crown Holdings Inc	■	2.2
LPL Financial Holdings Inc	■	2.2
Euronet Worldwide Inc	■	2.1
SS&C Technologies Holdings Inc	■	2.0
ON Semiconductor Corp	■	2.0
Blackbaud Inc	■	1.7
ITT Inc	■	1.7
Carlisle Companies Inc	■	1.7
Integra Lifesciences Holdings Corp	■	1.6
Sensient Technologies Corp	■	1.6
ServiceMaster Global Holdings Inc	■	1.5
Teledyne Technologies Inc	■	1.5
Broadridge Financial Solutions Inc	■	1.4
Bruker Corp	■	1.4

### Loomis Sayles Small Cap Growth Instl - Top Holdings

Portfolio Date: 12/31/2019

Company	Equity Style Box	Portfolio Weighting %
WNS (Holdings) Ltd ADR	■	1.8
SiteOne Landscape Supply Inc	■	1.7
Kinsale Capital Group Inc	■	1.6
Freshpet Inc	■	1.6
InterXion Holding NV	■	1.6
Five9 Inc	■	1.5
PRA Health Sciences Inc	■	1.5
Trex Co Inc	■	1.4
Conmed Corp	■	1.4
Monolithic Power Systems Inc	■	1.4
Q2 Holdings Inc	■	1.3
Amedisys Inc	■	1.3
RBC Bearings Inc	■	1.3
LHC Group Inc	■	1.3
Albany International Corp	■	1.3

# International Exposure

## Voya SmallCap Opportunities Port I

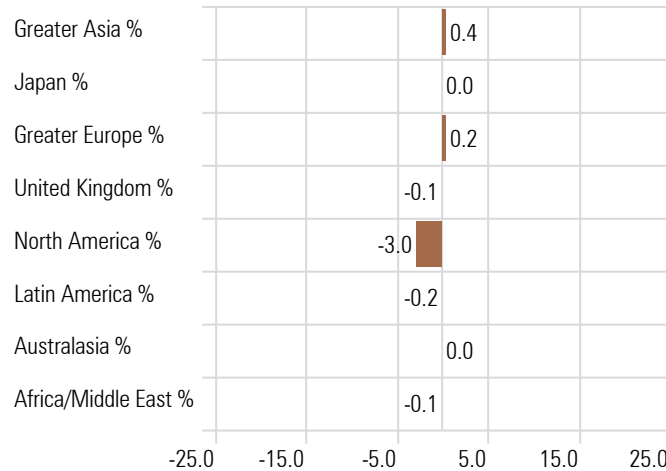
### Regional Allocation +/- Index



■ Voya SmallCap Opportunities Port I ■ Russell 2000 Growth TR USD

## Janus Henderson Triton T

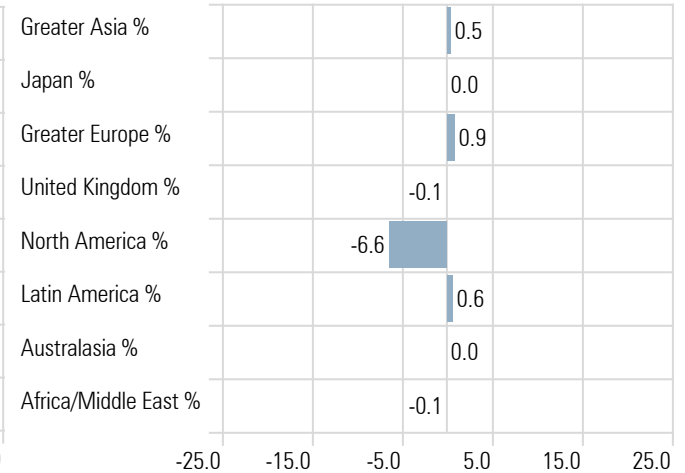
### Regional Allocation +/- Index



■ Janus Henderson Triton T ■ Russell 2000 Growth TR USD

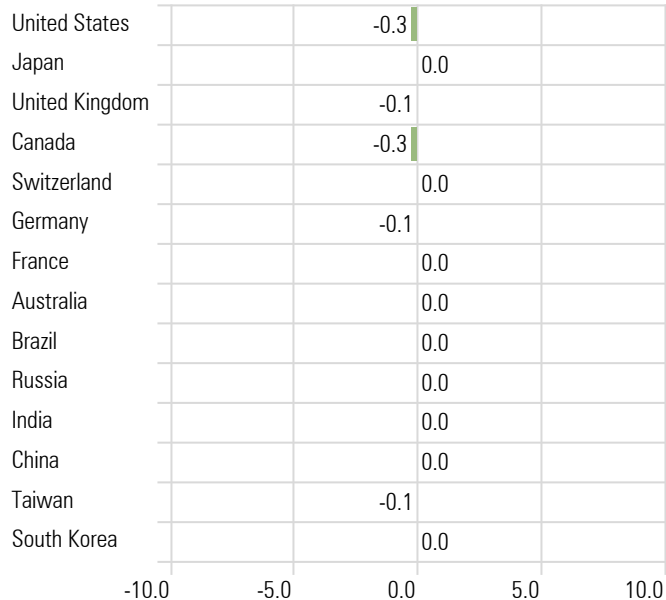
## Loomis Sayles Small Cap Growth Instl

### Regional Allocation +/- Index



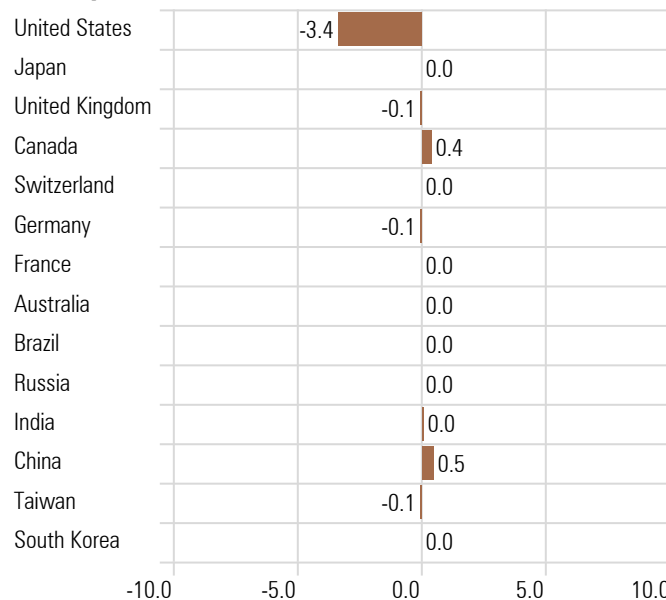
■ Loomis Sayles Small Cap Growth Instl ■ Russell 2000 Growth TR USD

### Country Allocation +/- Index



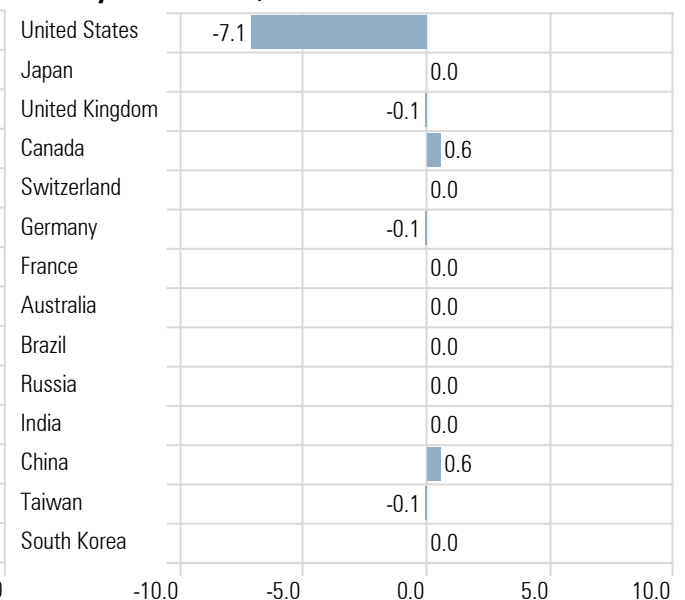
■ Voya SmallCap Opportunities Port I ■ Russell 2000 Growth TR USD

### Country Allocation +/- Index



■ Janus Henderson Triton T ■ Russell 2000 Growth TR USD

### Country Allocation +/- Index

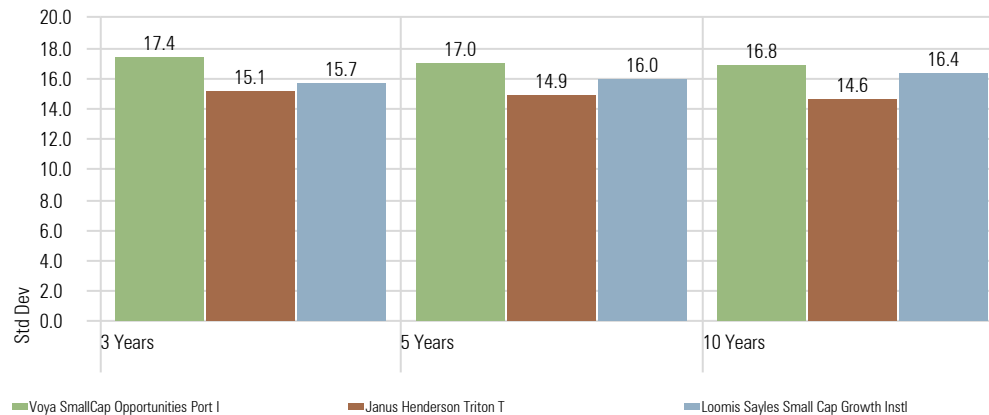


■ Loomis Sayles Small Cap Growth Instl ■ Russell 2000 Growth TR USD

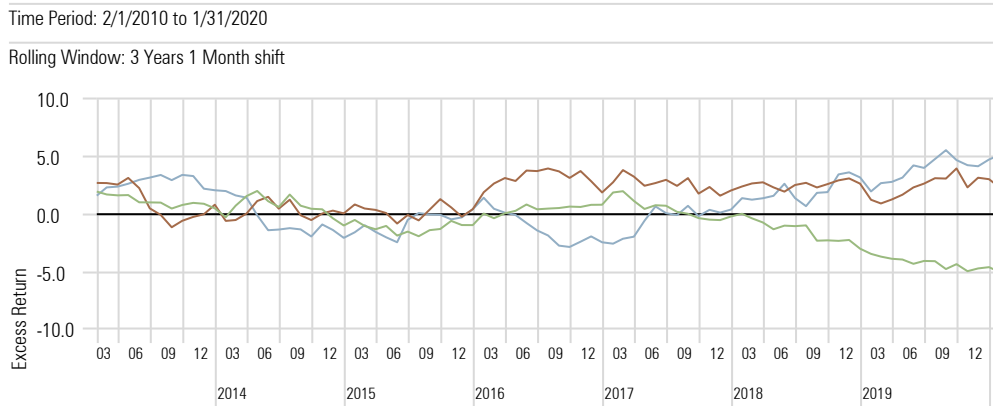


# Risk/Return Performance Analysis

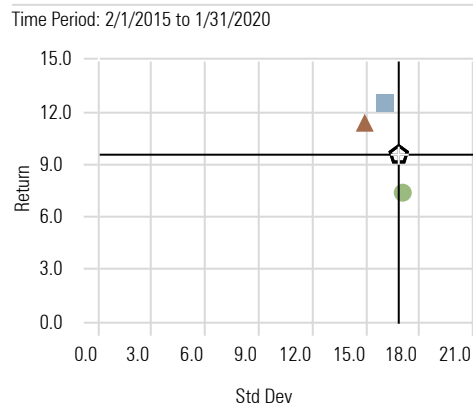
## Standard Deviation



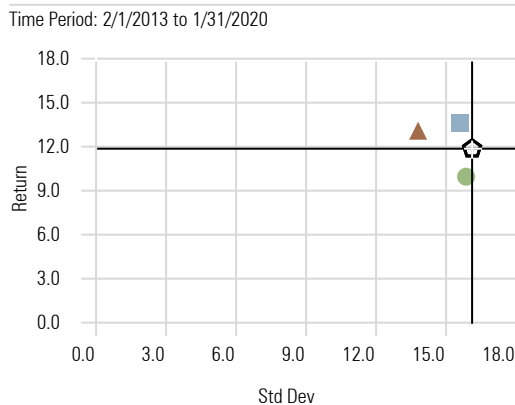
## 3 Year Relative Rolling Returns



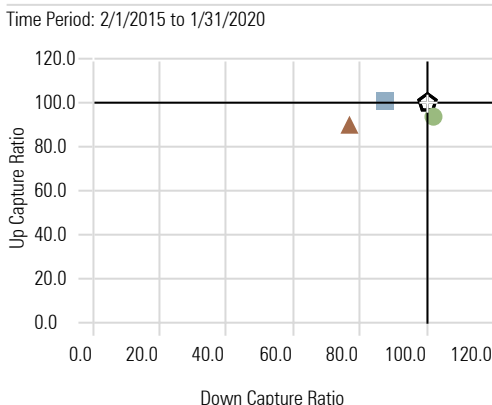
## 5 Year Risk-Reward



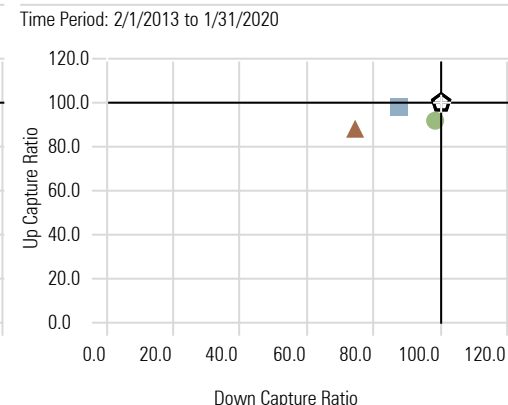
## 7 Year Risk-Reward



## 5 Year Market Capture



## 7 Year Market Capture



● Voya SmallCap Opportunities Port I

● Janus Henderson Triton T

● Loomis Sayles Small Cap Growth Instl

⬠ Russell 2000 Growth TR USD

## Annualized Performance & Risk Statistics - Since Common Inception

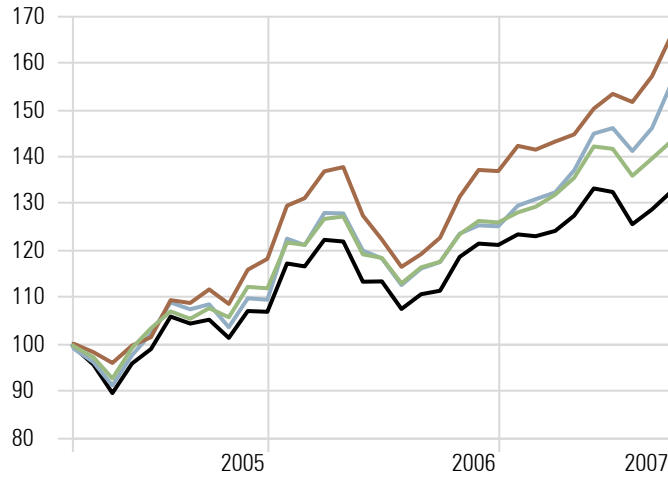
Time Period: Since Common Inception (3/1/2005) to 1/31/2020

	Return	Std Dev	Alpha	Beta	R2	Best Quarter	Worst Quarter	Sharpe Ratio	Tracking Error
Voya SmallCap Opportunities Port I	9.3	18.0	0.7	0.93	97	22.8	-25.3	0.44	3.4
Janus Henderson Triton T	12.5	16.9	4.2	0.85	92	24.8	-23.8	0.66	5.5
Loomis Sayles Small Cap Growth Instl	11.2	18.0	2.6	0.91	94	18.1	-26.9	0.55	4.7
Russell 2000 Growth TR USD	9.0	19.1	0.0	1.00	100	23.4	-27.4	0.40	0.0

# Time Period Performance Analysis

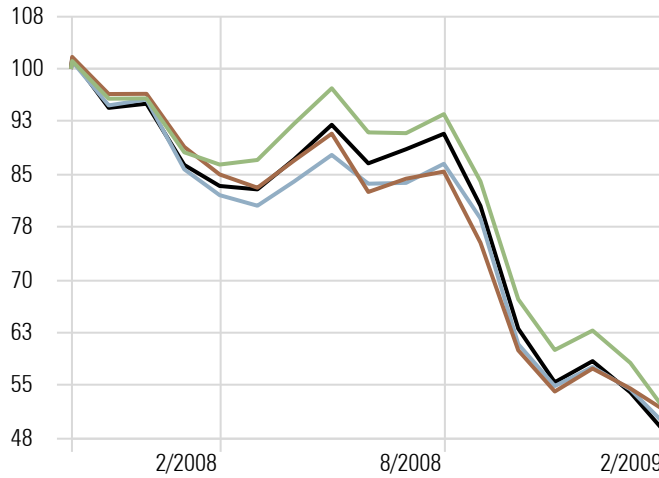
## Credit Buildup - Housing and Oil Boom

Time Period: 2/26/2005 to 9/30/2007



## Credit Crunch - Financial Crisis

Time Period: 10/31/2007 to 2/28/2009



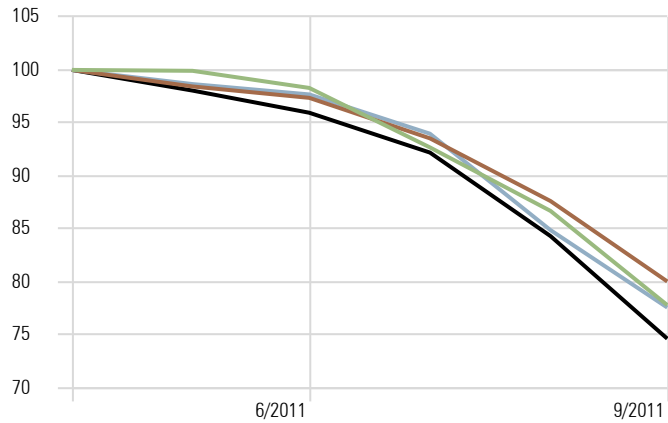
## Financial Crisis Recovery - QE1&2

Time Period: 3/1/2009 to 4/30/2011



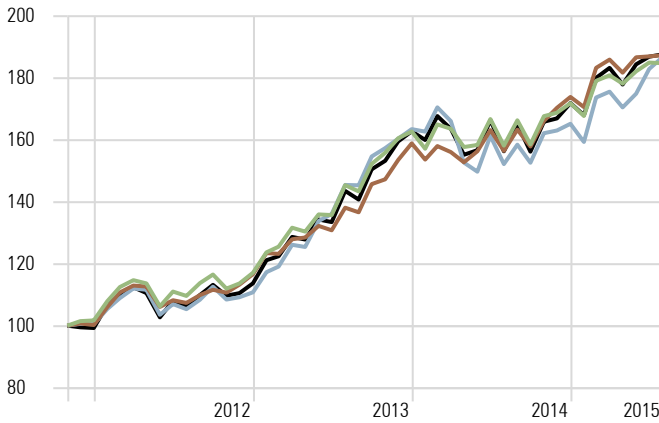
## Double Dip

Time Period: 5/1/2011 to 9/30/2011



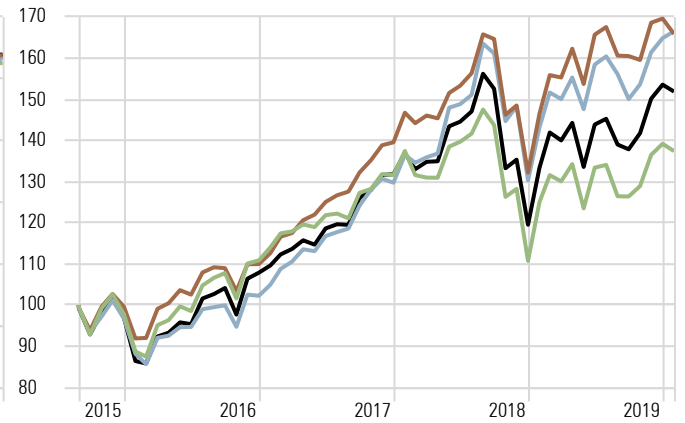
## US Recovery Continues - Global Markets Lag

Time Period: 11/1/2011 to 7/31/2015



## Global Economic Strength

Time Period: 8/31/2015 to 1/31/2020



● Voya SmallCap Opportunities Port I  
◻ Russell 2000 Growth TR USD

● Janus Henderson Triton T

● Loomis Sayles Small Cap Growth Instl

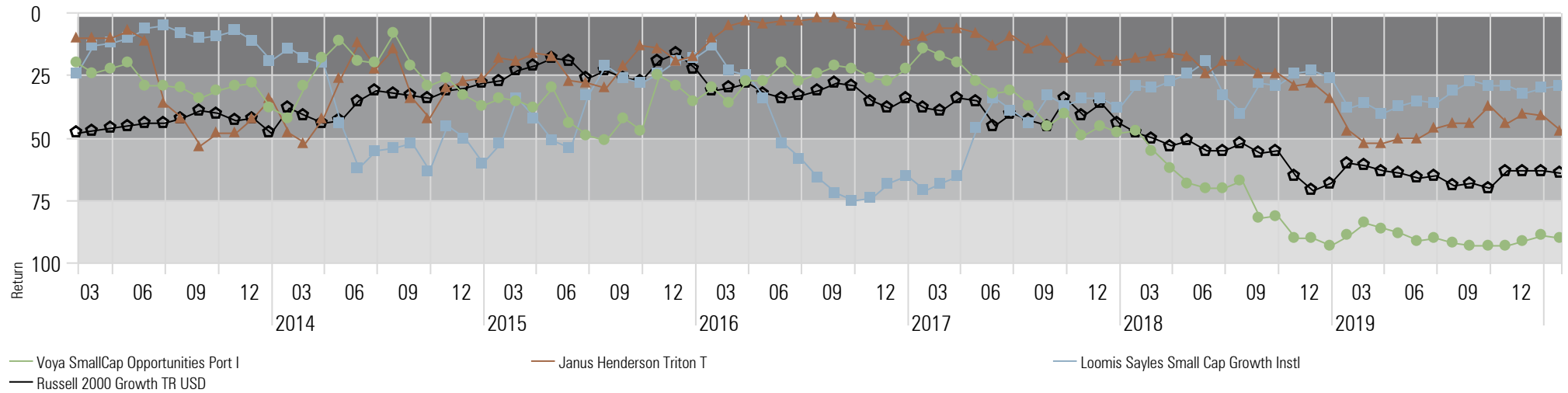
# Rolling Peer Group Rankings

## Rolling Returns (Descending Rank)

Time Period: 2/1/2010 to 1/31/2020

Rolling Window: 3 Years 1 Month shift

1st to 25th Percentile    26th to Median    51st to 75th Percentile    76th to 100th Percentile

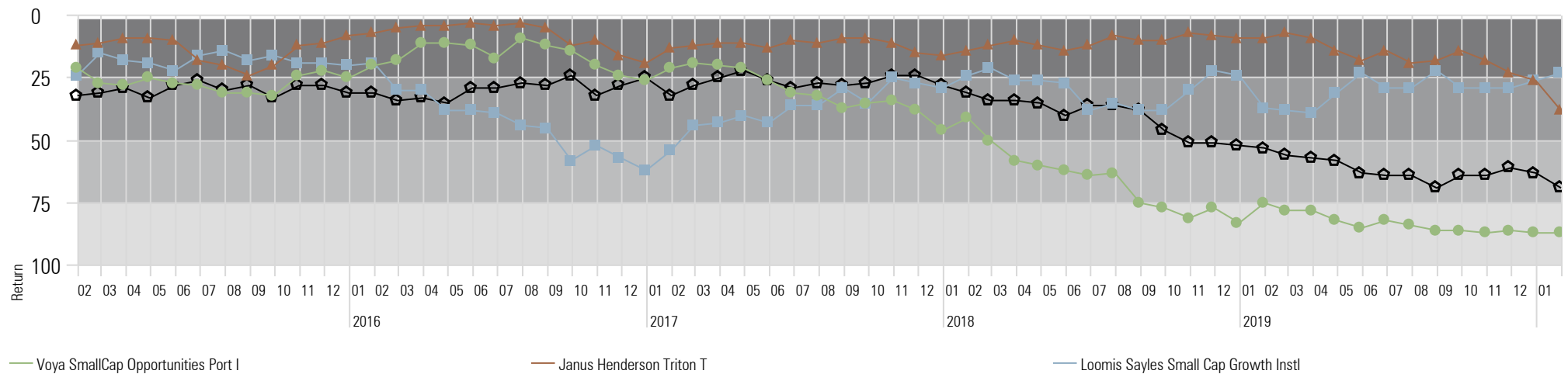


## Rolling Returns (Descending Rank)

Time Period: 2/1/2010 to 1/31/2020

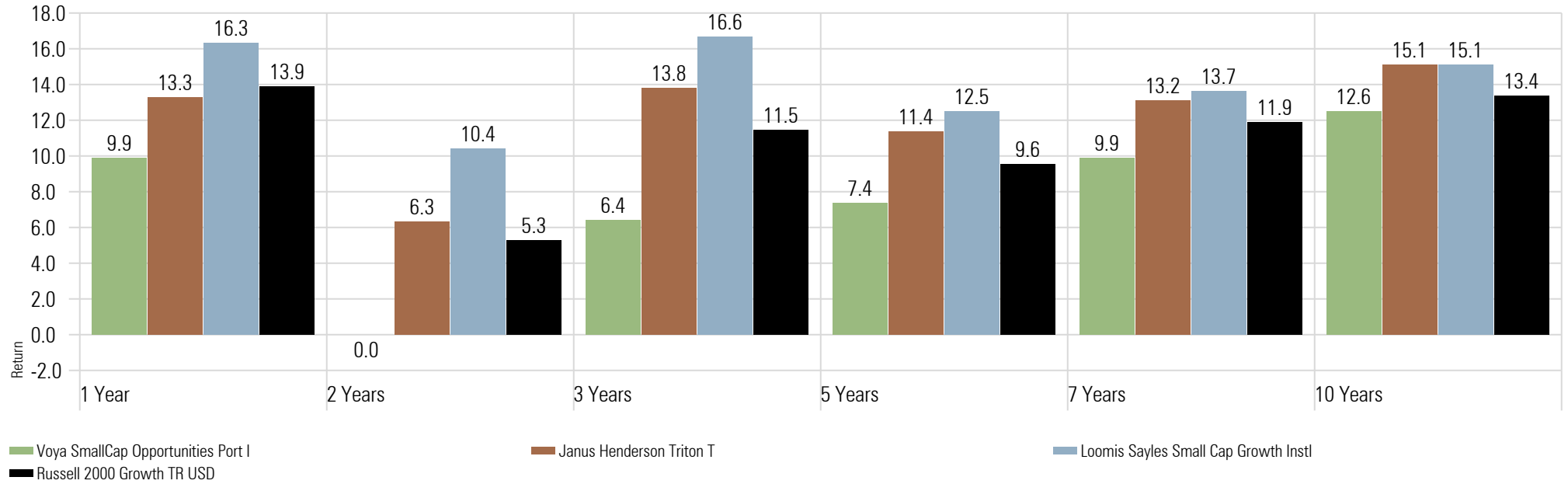
Rolling Window: 5 Years 1 Month shift

1st to 25th Percentile    26th to Median    51st to 75th Percentile    76th to 100th Percentile

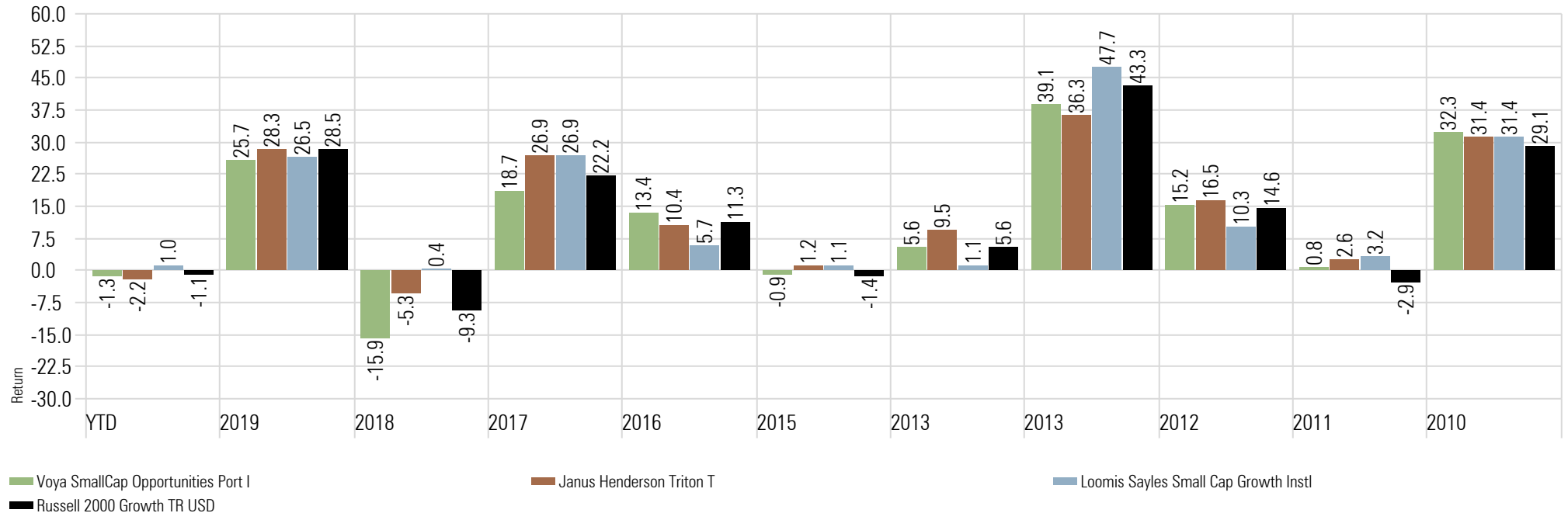


# Trailing Performance

## Cumulative Returns



## Annual Returns



## Performance Summary - Cumulative Periods

	Quarter			YTD			1 Year			3 Years			5 Years			10 Years		
	Return	Rank	+/- Idx	Rtn	Rank	+/- Idx	Return	Rank	+/- Idx	Return	Rank	+/- Idx	Return	Rank	+/- Idx	Return	Rank	+/- Idx
<b>Small Growth</b>																		
Voya SmallCap Opportunities Port I	10.1	<b>38</b>	-1.26	25.7	<b>62</b>	-2.78	25.7	<b>62</b>	-2.78	7.9	<b>89</b>	-4.61	7.1	<b>87</b>	-2.21	12.3	<b>65</b>	-0.72
Janus Henderson Triton T	5.7	<b>92</b>	-5.72	28.3	<b>49</b>	-0.19	28.3	<b>49</b>	-0.19	15.5	<b>41</b>	3.05	11.5	<b>26</b>	2.16	15.0	<b>12</b>	1.97
Loomis Sayles Small Cap Growth Instl	9.9	<b>41</b>	-1.53	26.5	<b>58</b>	-1.97	26.5	<b>58</b>	-1.97	17.3	<b>30</b>	4.76	11.5	<b>26</b>	2.16	14.4	<b>22</b>	1.42
Russell 2000 Growth TR USD	11.4			28.5			28.5			12.5			9.3			13.0		
Average	9.5			28.7			28.7			14.4			10.1			12.9		

## Performance Summary - Calendar Year Periods

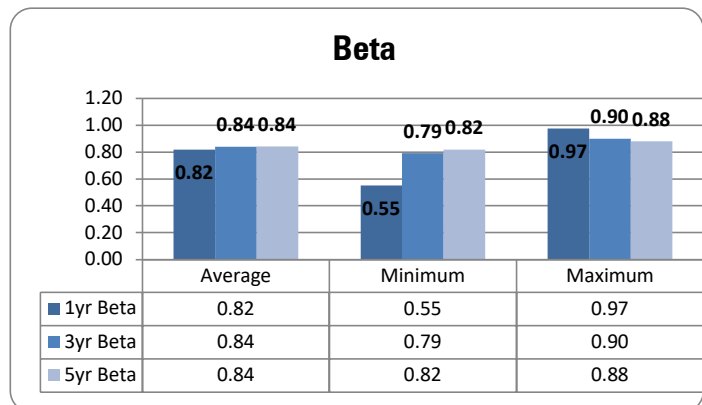
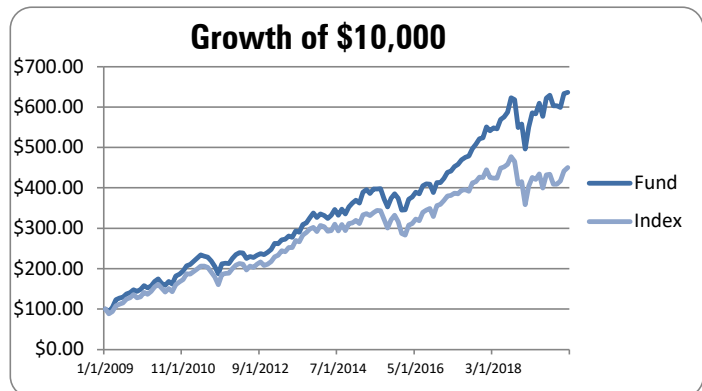
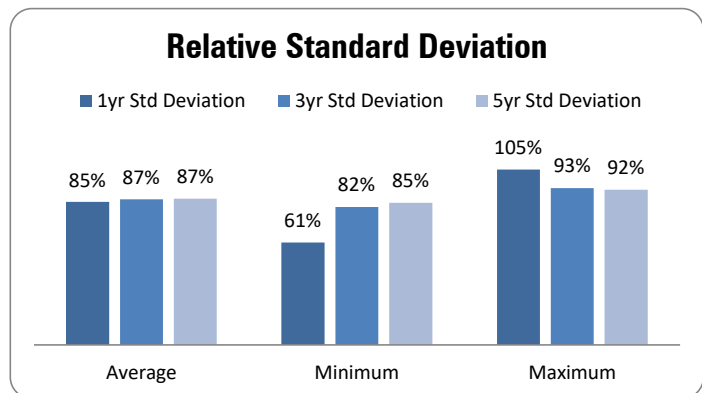
	Return			Return			Return			Return			Return			Return					
	2019	Rank	+/- Idx	2018	Rank	+/- Idx	2017	Rank	+/- Idx	2016	Rank	+/- Idx	2015	Rank	+/- Idx	2014	Rank	+/- Idx	2013	Rank	+/- Idx
<b>Small Growth</b>																					
Voya SmallCap Opportunities Port I	25.7	<b>62</b>	-2.78	-15.9	<b>96</b>	-6.56	18.7	<b>72</b>	-3.44	13.4	<b>28</b>	2.08	-0.9	<b>31</b>	0.48	5.6	<b>27</b>	0.02	39.1	<b>69</b>	-4.23
Janus Henderson Triton T	28.3	<b>49</b>	-0.19	-5.3	<b>51</b>	4.04	26.9	<b>25</b>	4.74	10.4	<b>51</b>	-0.90	1.2	<b>16</b>	2.59	9.5	<b>4</b>	3.85	36.3	<b>83</b>	-7.02
Loomis Sayles Small Cap Growth Instl	26.5	<b>58</b>	-1.97	0.4	<b>17</b>	9.76	26.9	<b>25</b>	4.69	5.7	<b>85</b>	-5.60	1.1	<b>17</b>	2.49	1.1	<b>73</b>	-4.55	47.7	<b>16</b>	4.41
Russell 2000 Growth TR USD	28.5			-9.3			22.2			11.3			-1.4		5.6				43.3		
Average	28.7			-5.2			23.0			11.1			-2.4		2.9				42.2		

Fund Name	Comparative Index/Fund
Janus Henderson Triton T	100% Voya SmallCap Opportunities Port I

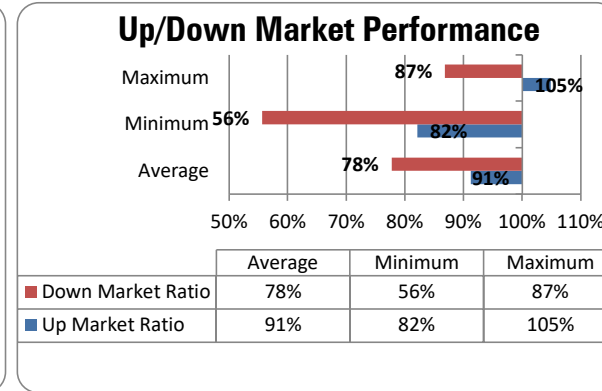
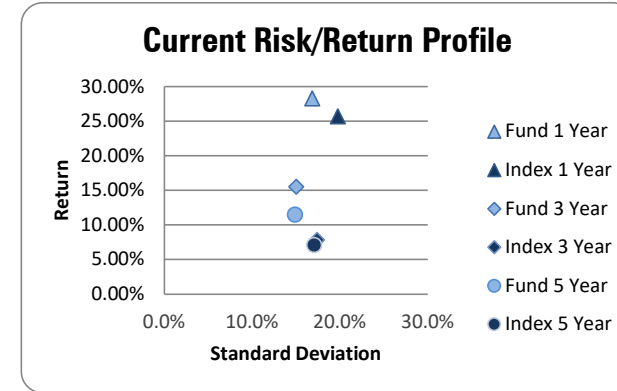
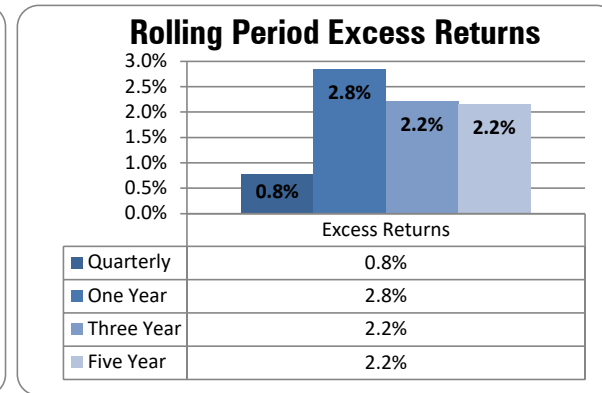
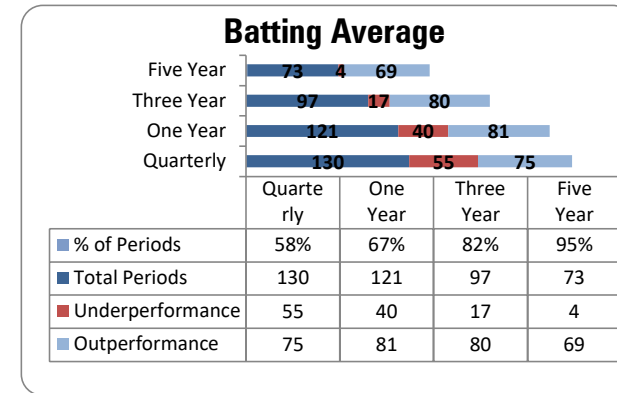
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## Risk Analysis



## Absolute Performance Summary



## Annualized Performance and Risk Statistics

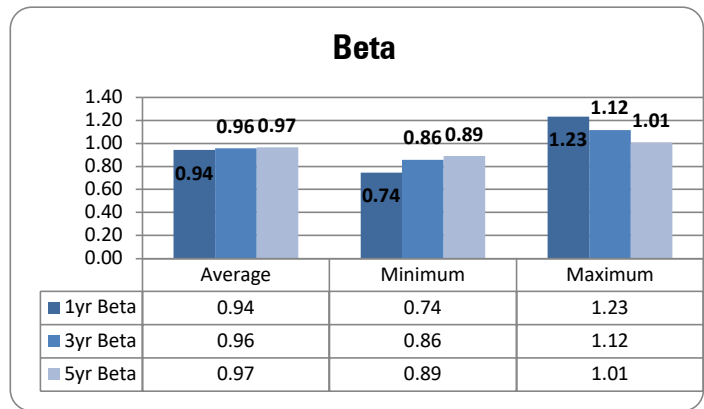
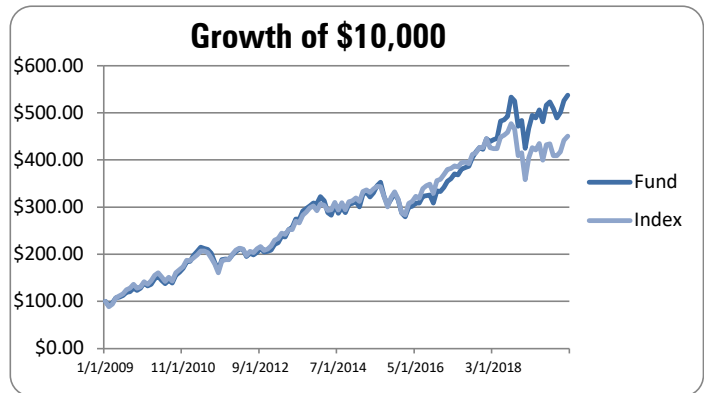
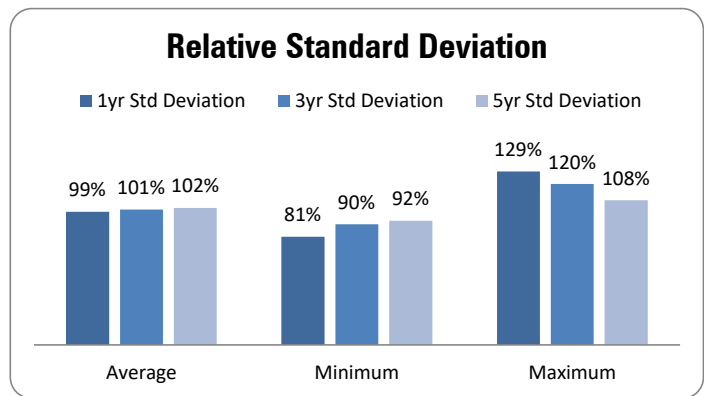
	Return	Alpha	Standard Deviation	Best Qtr	Worst Qtr
<b>Latest One Year</b>					
Janus Henderson Triton T	28.30%	7.07%	16.84%	17.47%	-4.77%
100% Voya SmallCap Opportunities f	25.70%		19.75%	17.45%	-6.14%
<b>Latest Three Years</b>					
Janus Henderson Triton T	15.54%	8.92%	15.02%	17.47%	-19.71%
100% Voya SmallCap Opportunities f	7.88%		17.40%	17.45%	-22.96%
<b>Latest Five Years</b>					
Janus Henderson Triton T	11.50%	5.44%	14.86%	17.47%	-19.71%
100% Voya SmallCap Opportunities f	7.13%		17.04%	17.45%	-22.96%
<b>Latest Ten Years</b>					
Janus Henderson Triton T	14.97%	4.62%	14.66%	19.82%	-19.71%
100% Voya SmallCap Opportunities f	12.28%		16.90%	21.43%	-22.96%

Fund Name	Comparative Index/Fund
Loomis Sayles Small Cap Growth Instl	100% Voya SmallCap Opportunities Port I

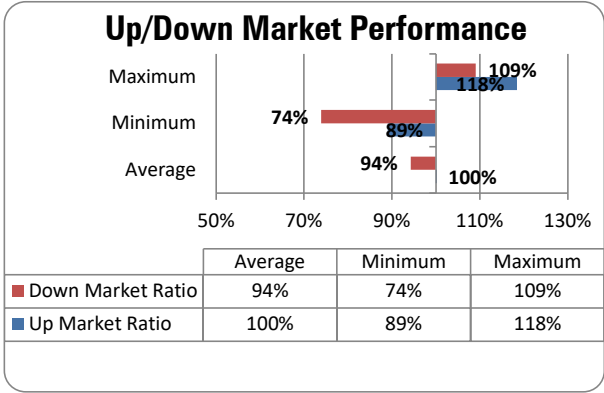
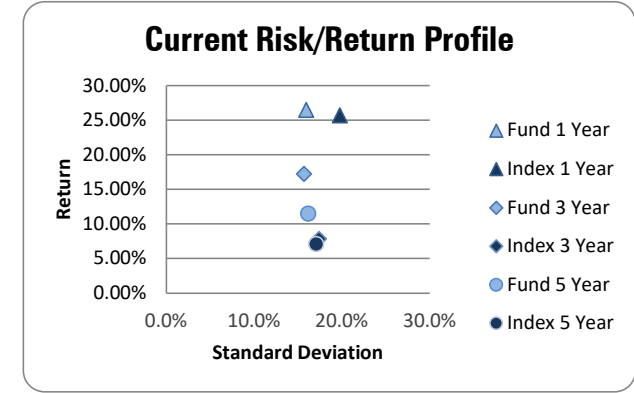
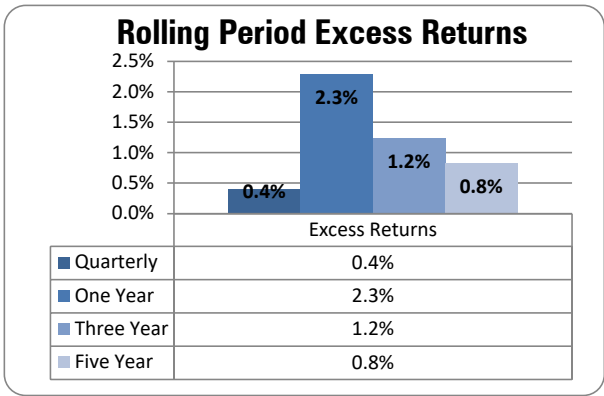
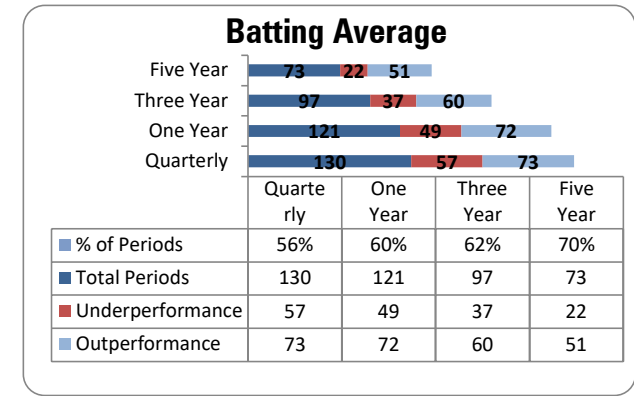
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## Risk Analysis



## Absolute Performance Summary



## Annualized Performance and Risk Statistics

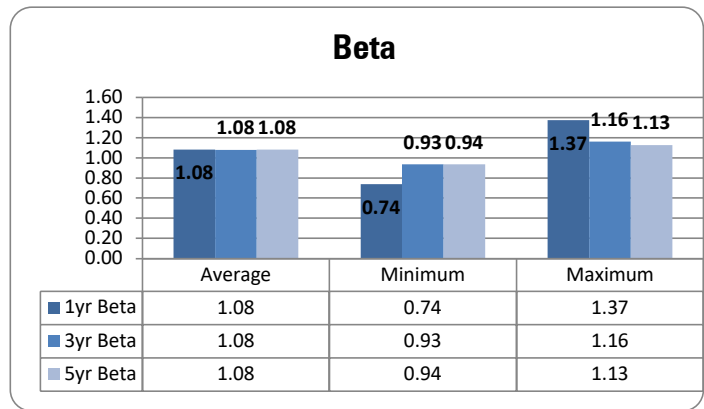
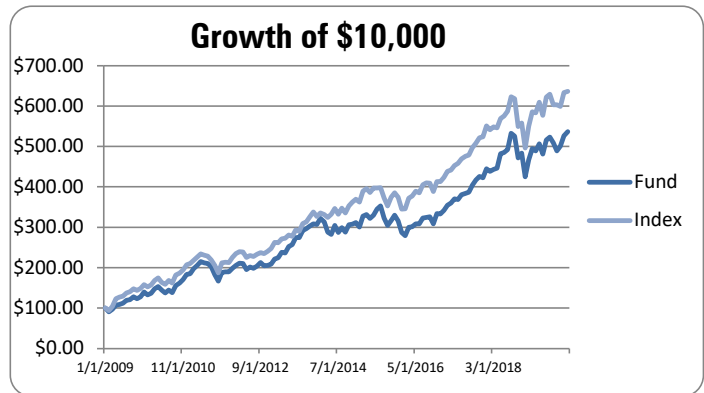
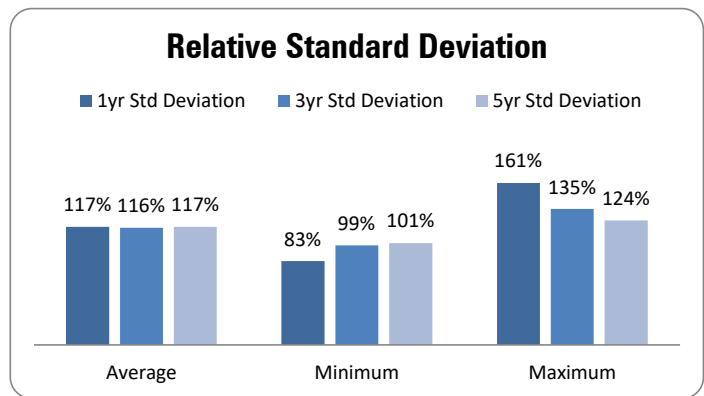
	Return	Alpha	Standard Deviation	Best Qtr	Worst Qtr
<b>Latest One Year</b>					
Loomis Sayles Small Cap Growth Ins	26.51%	6.91%	15.92%	15.15%	-5.29%
100% Voya SmallCap Opportunities f	25.70%		19.75%	17.45%	-6.14%
<b>Latest Three Years</b>					
Loomis Sayles Small Cap Growth Ins	17.25%	10.49%	15.67%	15.15%	-19.13%
100% Voya SmallCap Opportunities f	7.88%		17.40%	17.45%	-22.96%
<b>Latest Five Years</b>					
Loomis Sayles Small Cap Growth Ins	11.50%	5.10%	16.15%	15.15%	-19.13%
100% Voya SmallCap Opportunities f	7.13%		17.04%	17.45%	-22.96%
<b>Latest Ten Years</b>					
Loomis Sayles Small Cap Growth Ins	14.42%	3.01%	16.53%	22.94%	-20.61%
100% Voya SmallCap Opportunities f	12.28%		16.90%	21.43%	-22.96%

Fund Name	Comparative Index/Fund
Loomis Sayles Small Cap Growth Instl	100% Janus Henderson Triton T

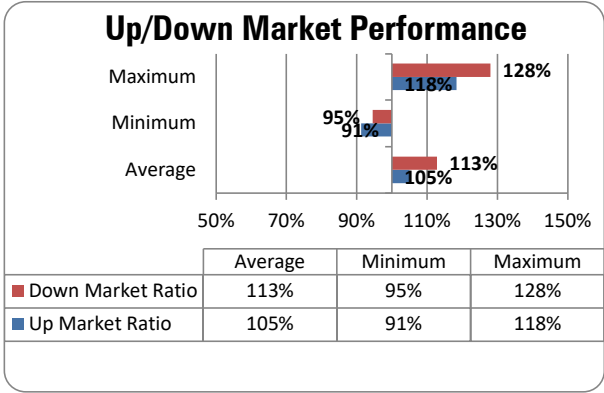
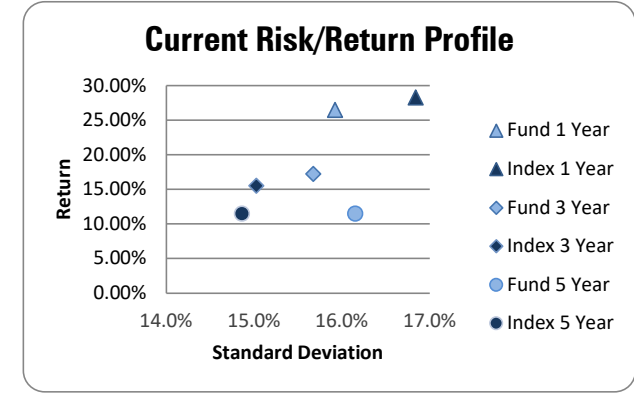
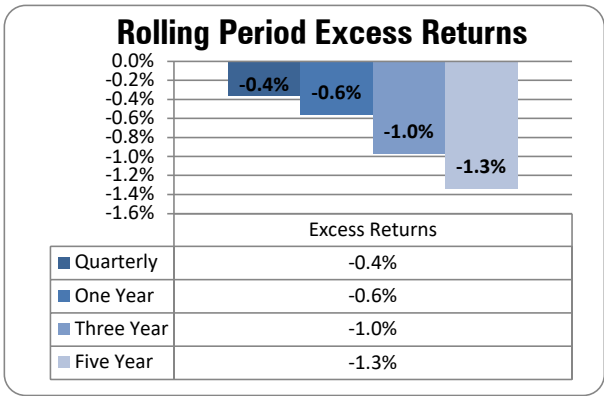
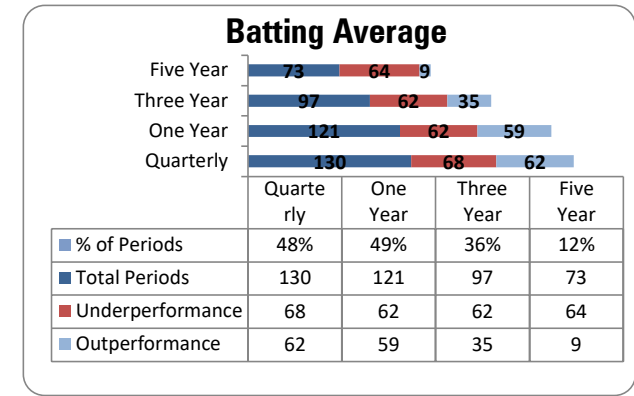
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## Risk Analysis



## Absolute Performance Summary



## Annualized Performance and Risk Statistics

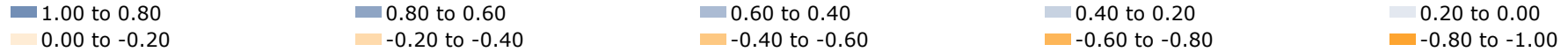
	Return	Alpha	Standard Deviation	Best Qtr	Worst Qtr
<b>Latest One Year</b>					
Loomis Sayles Small Cap Growth Ins	26.51%	1.40%	15.92%	15.15%	-5.29%
100% Janus Henderson Triton T	28.30%		16.84%	17.47%	-4.77%
<b>Latest Three Years</b>					
Loomis Sayles Small Cap Growth Ins	17.25%	1.78%	15.67%	15.15%	-19.13%
100% Janus Henderson Triton T	15.54%		15.02%	17.47%	-19.71%
<b>Latest Five Years</b>					
Loomis Sayles Small Cap Growth Ins	11.50%	-0.39%	16.15%	15.15%	-19.13%
100% Janus Henderson Triton T	11.50%		14.86%	17.47%	-19.71%
<b>Latest Ten Years</b>					
Loomis Sayles Small Cap Growth Ins	14.42%	-1.46%	16.53%	22.94%	-20.61%
100% Janus Henderson Triton T	14.97%		14.66%	19.82%	-19.71%



### Correlation Matrix - 3 Years

Time Period: 3/1/2017 to 2/29/2020

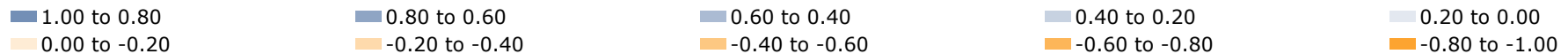
	1	2	3	4	5	6
1 Voya SmallCap Opportunities Port I	1.00					
2 Champlain Mid Cap Institutional	0.94	1.00				
3 Vanguard Small Cap Index I	0.99	0.95	1.00			
4 Vanguard Mid Cap Index Institutional	0.96	0.95	0.97	1.00		
5 Janus Henderson Triton T	0.97	0.95	0.97	0.95	1.00	
6 Loomis Sayles Small Cap Growth Instl	0.96	0.89	0.94	0.88	0.95	1.00



### Correlation Matrix - 5 Years

Time Period: 3/1/2015 to 2/29/2020

	1	2	3	4	5	6
1 Voya SmallCap Opportunities Port I	1.00					
2 Champlain Mid Cap Institutional	0.93	1.00				
3 Vanguard Small Cap Index I	0.98	0.94	1.00			
4 Vanguard Mid Cap Index Institutional	0.95	0.95	0.96	1.00		
5 Janus Henderson Triton T	0.97	0.94	0.97	0.95	1.00	
6 Loomis Sayles Small Cap Growth Instl	0.95	0.87	0.92	0.87	0.95	1.00



## Correlation Matrix - 10 Years

Time Period: 3/1/2010 to 2/29/2020

	1	2	3	4	5	6
1 Voya SmallCap Opportunities Port I	1.00					
2 Champlain Mid Cap Institutional	0.94	1.00				
3 Vanguard Small Cap Index I	0.98	0.94	1.00			
4 Vanguard Mid Cap Index Institutional	0.95	0.95	0.97	1.00		
5 Janus Henderson Triton T	0.97	0.93	0.96	0.95	1.00	
6 Loomis Sayles Small Cap Growth Instl	0.95	0.89	0.93	0.89	0.94	1.00

1.00 to 0.80

0.80 to 0.60

0.60 to 0.40

0.40 to 0.20

0.20 to 0.00

0.00 to -0.20

-0.20 to -0.40

-0.40 to -0.60

-0.60 to -0.80

-0.80 to -1.00

## Correlation Matrix - Since Common Inception

Time Period: Since Common Inception (2/1/2011) to 2/29/2020

	1	2	3	4	5	6
1 Voya SmallCap Opportunities Port I	1.00					
2 Champlain Mid Cap Institutional	0.93	1.00				
3 Vanguard Small Cap Index I	0.98	0.95	1.00			
4 Vanguard Mid Cap Index Institutional	0.95	0.95	0.97	1.00		
5 Janus Henderson Triton T	0.97	0.93	0.96	0.95	1.00	
6 Loomis Sayles Small Cap Growth Instl	0.95	0.88	0.93	0.88	0.93	1.00

1.00 to 0.80

0.80 to 0.60

0.60 to 0.40

0.40 to 0.20

0.20 to 0.00

0.00 to -0.20

-0.20 to -0.40

-0.40 to -0.60

-0.60 to -0.80

-0.80 to -1.00

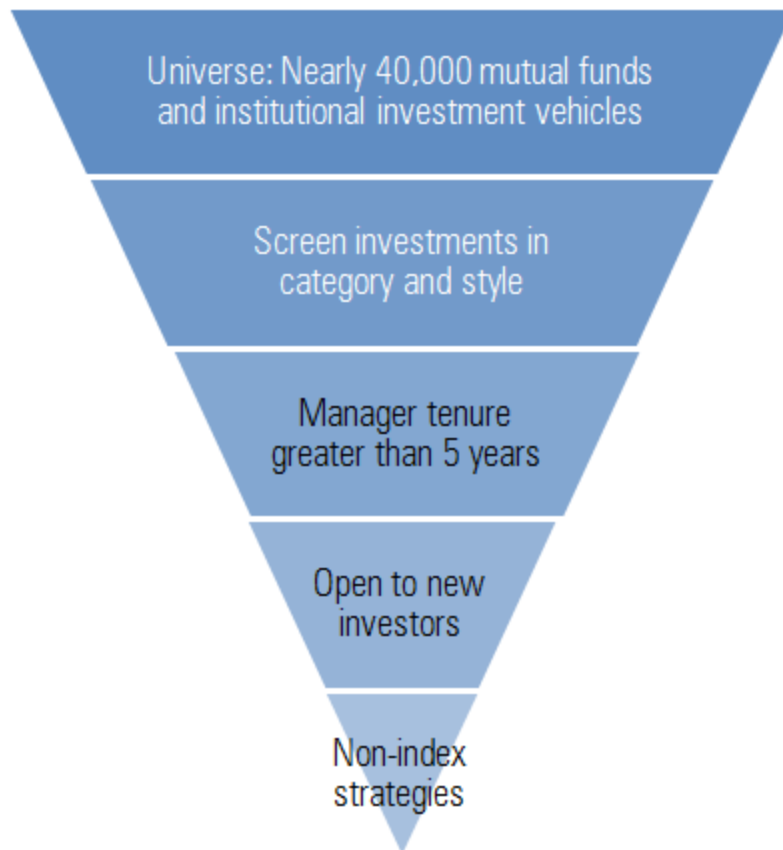
# Foreign Small Cap Search

As of 1/31/2020



# Investment Screening and Selection Process

## Basic screening method:



## Other factors considered in final candidate selection:

- Performance versus the index
- Performance versus the peer group
- Risk (beta, standard deviation, up capture, down capture)
- Style consistency
- Relative positioning with other plan/portfolio investment options
- Fund assets
- Expense ratios
- Portfolio managers' extended track record
- Special circumstances

# US Fund Foreign Small/Mid Blend

## DFA International Small Company I

### Investment Strategy

The investment seeks long-term capital appreciation. As a non-fundamental policy, under normal circumstances, the International Small Company Portfolio, through its investments in the underlying funds, will invest at least 80% of its net assets in securities of small companies. The International Small Company Portfolio and each underlying fund may invest in affiliated and unaffiliated registered and unregistered money market funds to manage its cash pending investment in other securities or to maintain liquidity for the payment of redemptions or other purposes.

### Manager Biography

Jed S. Fogdall since 2/28/2010

Bhanu P. Singh since 7/21/2015

Arun C. Keswani since 7/21/2015

Mary T. Phillips since 2/28/2017

### DFA International Small Company I - Operations

Inception Date	9/30/1996
Fund Size (\$mm)	12,467
Annual Report Net Expense Ratio	0.54
Prospectus Net Expense Ratio	0.53
Prospectus Gross Expense Ratio	0.53
Ticker	DFISX
Manager Tenure (Longest)	10.00
Manager Tenure (Average)	5.54
Morningstar Inst Cat	Foreign Small/Mid Value

### Other Notes:

None

## Fidelity Advisor® Intl Small Cap Z

### Investment Strategy

The investment seeks capital appreciation. The fund invests primarily in non-U.S. securities, including securities of issuers located in emerging markets. It invests at least 80% of assets in securities of companies with small market capitalizations (which, for purposes of this fund, are those companies with market capitalizations of \$5 billion or less). The fund invests primarily in common stocks. It allocates investments across different countries and regions. The fund uses fundamental analysis of factors such as each issuer's financial condition and industry position, as well as market and economic conditions, to select investments.

### Manager Biography

Sam Chamovitz since 3/1/2014

### Fidelity Advisor® Intl Small Cap Z - Operations

Inception Date	10/2/2018
Fund Size (\$mm)	2,586
Annual Report Net Expense Ratio	1.04
Prospectus Net Expense Ratio	1.05
Prospectus Gross Expense Ratio	1.05
Ticker	FIQIX
Manager Tenure (Longest)	5.92
Manager Tenure (Average)	5.92
Morningstar Inst Cat	Foreign Small/Mid Core

### Other Notes:

None

# Portfolio Analysis

## DFA International Small Company I

## Fidelity Advisor® Intl Small Cap Z

### Style Allocation

Portfolio Date: 12/31/2019

	Value	Blend	Growth
Large	0	0	0
Mid	12	13	12
Small	23	22	18

Market Cap	%
Market Cap Giant %	0
Market Cap Large %	0
Market Cap Mid %	36
Market Cap Small %	49
Market Cap Micro %	14

### Style Allocation

Portfolio Date: 10/31/2019

	Value	Blend	Growth
Large	2	2	4
Mid	13	15	8
Small	25	17	14

Market Cap	%
Market Cap Giant %	0
Market Cap Large %	8
Market Cap Mid %	36
Market Cap Small %	42
Market Cap Micro %	14

### Valuation Data

Display Benchmark 1: MSCI World Ex USA SMID NR USD

	Inv	Bmk1
Average Market Cap (bil)	1.7	4.7
Forward P/E	13.9	15.8
P/E Ratio (TTM)	15.1	16.8
LT Earn Growth	10.9	9.4
P/B Ratio (TTM)	1.3	1.6
Dividend Yield	3.0	2.8
ROE %	11.9	13.1
ROA %	5.1	5.6
Debt to Capital %	33	34

### Valuation Data

Display Benchmark 1: MSCI World Ex USA SMID NR USD

	Inv	Bmk1
Average Market Cap (bil)	1.5	4.7
Forward P/E	13.1	15.8
P/E Ratio (TTM)	14.4	16.8
LT Earn Growth	9.3	9.4
P/B Ratio (TTM)	1.4	1.6
Dividend Yield	3.7	2.8
ROE %	11.4	13.1
ROA %	5.5	5.6
Debt to Capital %	28	34

### Portfolio Data

	Inv	Bmk1
Turnover Ratio	22	
# of Stock Holdings	4,282	3,107
% in Top 10	3.1	3.7
Cash %	1.0	0.0
Developed %	97.6	99.0
US Equity %	1.3	1.9
Non-US Equity %	98	98
Emerging Mkt %	1.1	0.6

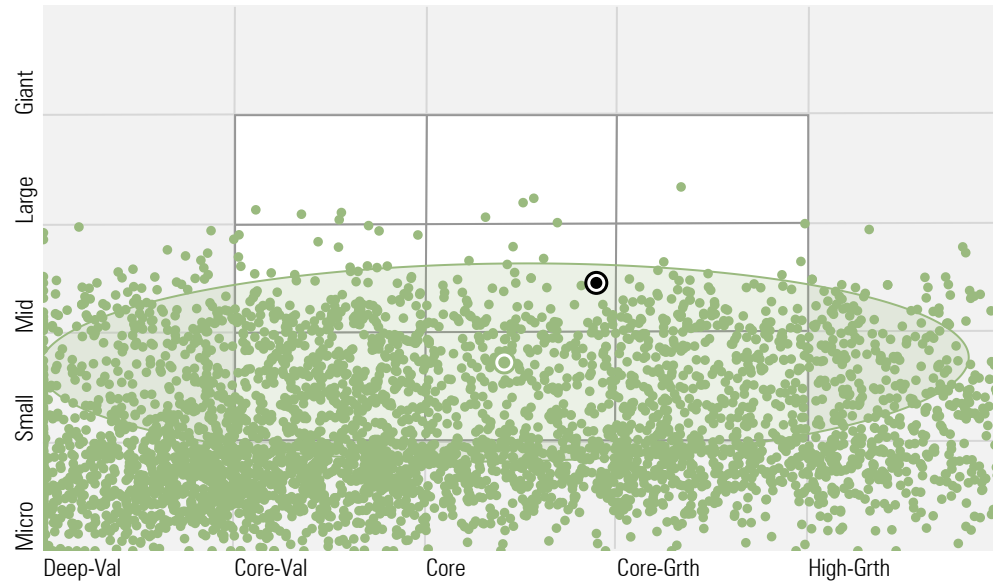
### Portfolio Data

	Inv	Bmk1
Turnover Ratio	28	
# of Stock Holdings	185	3,107
% in Top 10	10.4	3.7
Cash %	4.2	0.0
Developed %	84.7	99.0
US Equity %	1.3	1.9
Non-US Equity %	95	98
Emerging Mkt %	11.3	0.6

# Holdings-Based Style Analysis

## DFA International Small Company I

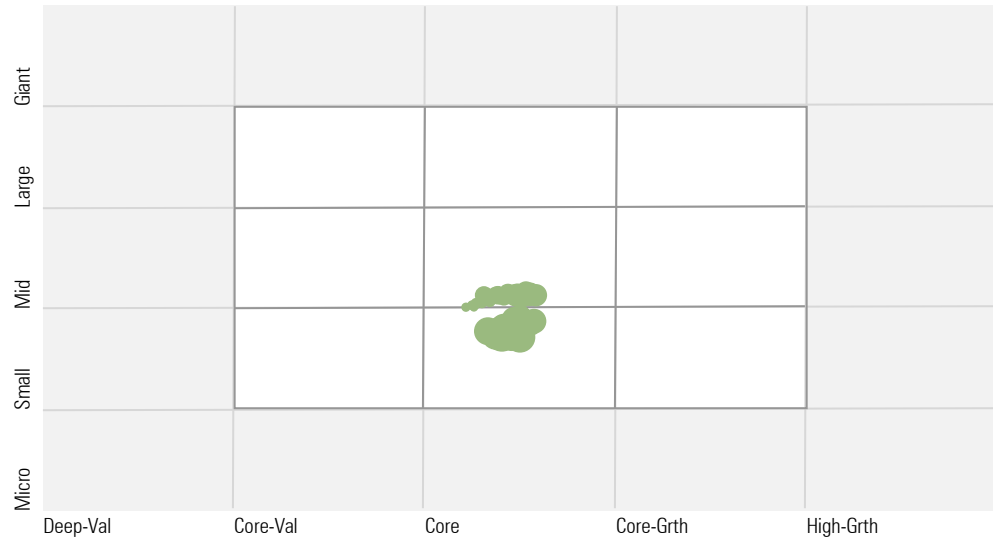
### Holdings-Based Style Map



● DFA International Small Company I 12/31/2019 ● MSCI World Ex USA SMID NR USD 1/31/2020

### Holdings-Based Style Trail

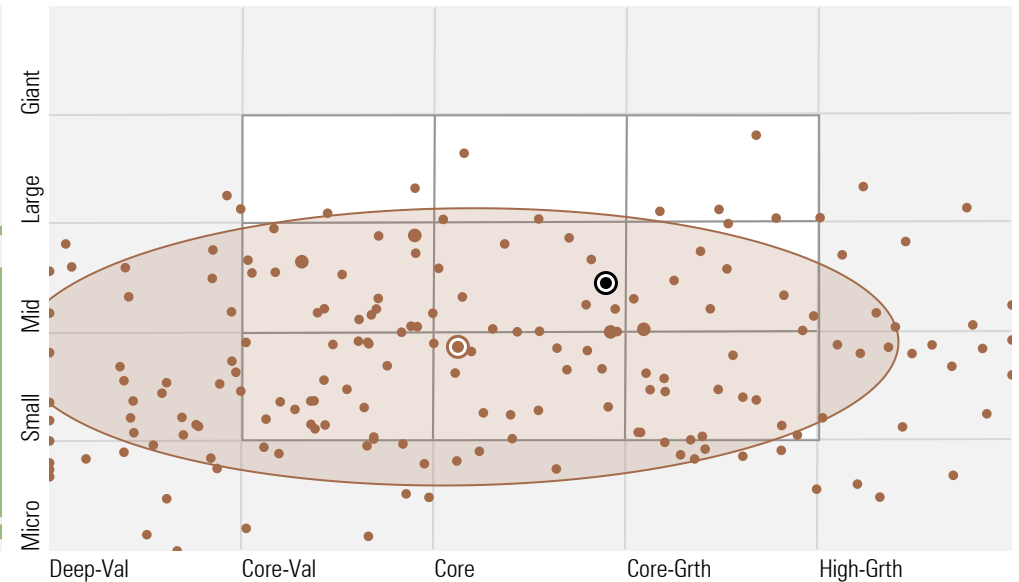
Time Period: 2/28/2015 to 12/31/2019



Source: Morningstar Direct

## Fidelity Advisor® Intl Small Cap Z

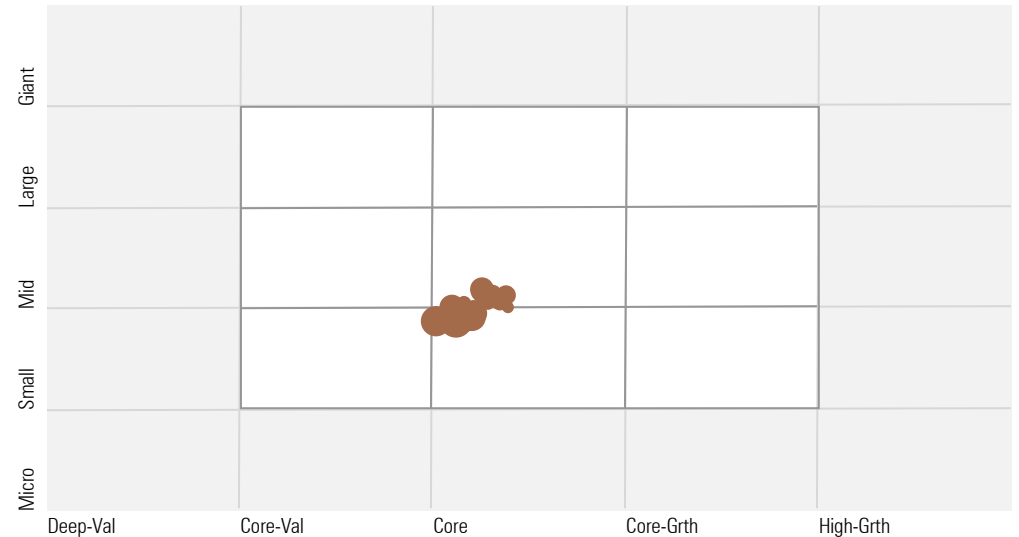
### Holdings-Based Style Map



● Fidelity Advisor® Intl Small Cap Z 10/31/2019 ● MSCI World Ex USA SMID NR USD 1/31/2020

### Holdings-Based Style Trail

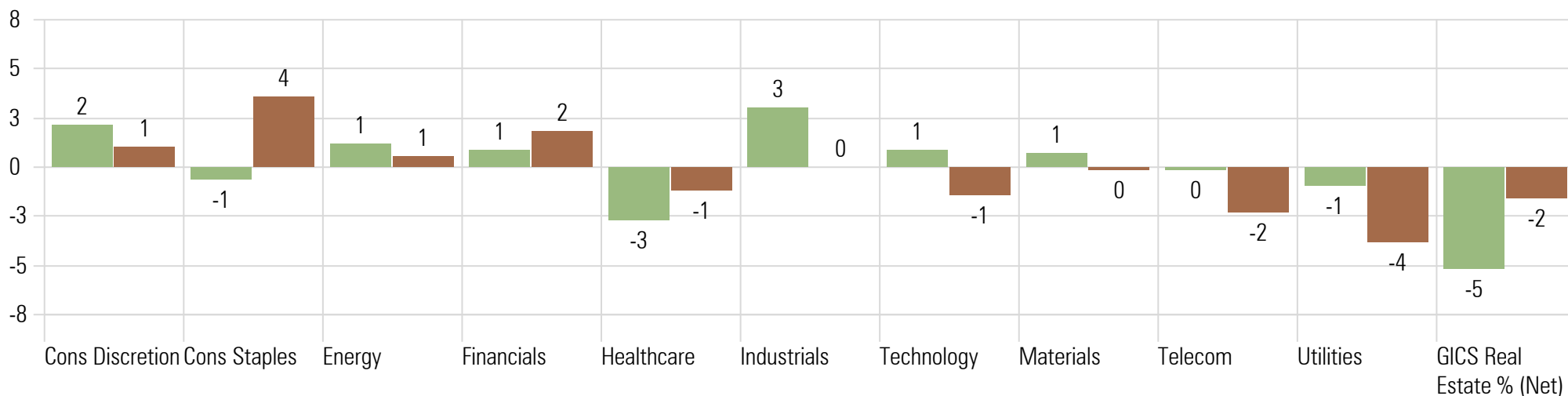
Time Period: 4/30/2015 to 10/31/2019



# Sector Exposure and Top 15 Holdings

## Relative Sector Allocation

Calculation Benchmark: MSCI World Ex USA SMID NR USD



■ DFA International Small Company I

■ Fidelity Advisor® Intl Small Cap Z

■ MSCI World Ex USA SMID NR USD

## DFA International Small Company I - Top Holdings

Portfolio Date: 12/31/2019

Equity Style Box	Portfolio Weighting %
E-mini S&P 500 Futures Mar20	0.7
PSP Swiss Property AG	0.3
Ingenico Group SA	0.3
Howden Joinery Group PLC	0.3
Lanxess AG	0.3
Cobham PLC	0.3
Travis Perkins PLC	0.3
Rheinmetall AG	0.3
Pennon Group PLC	0.2
Rubis SCA	0.2
Tate & Lyle PLC	0.2
Intermediate Capital Group PLC	0.2
ASM International NV	0.2
Pan American Silver Corp	0.2
Huhtamäki Oyj	0.2

## Fidelity Advisor® Intl Small Cap Z - Top Holdings

Portfolio Date: 10/31/2019

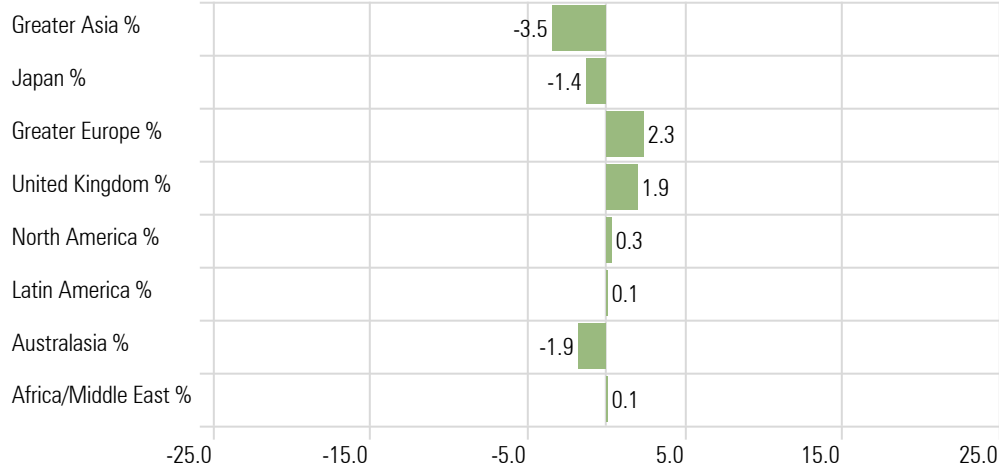
Equity Style Box	Portfolio Weighting %
iShares MSCI EAFE Small-Cap ETF	1.5
JSR Corp	1.3
Wood Group (John) PLC	1.1
SITC International Holdings Co Ltd	1.0
Arata Corp	0.9
GUD Holdings Ltd	0.9
Isuzu Motors Ltd	0.9
Cineworld Group PLC	0.9
AEON DELIGHT Co Ltd	0.9
Star Petroleum Refining PCL	0.9
Nihon Parkerizing Co Ltd	0.9
Shinsei Bank Ltd	0.9
Renesas Electronics Corp	0.9
Tsuruha Holdings Inc	0.9
Wienerberger AG	0.9



# International Exposure

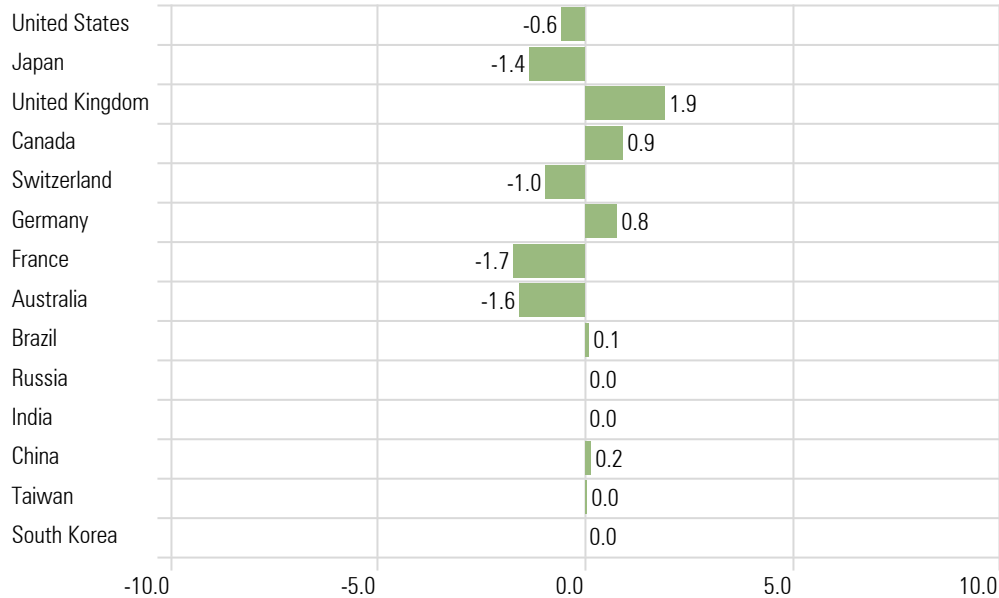
## DFA International Small Company I

### Regional Allocation +/- Index



■ DFA International Small Company I ■ MSCI World Ex USA SMID NR USD

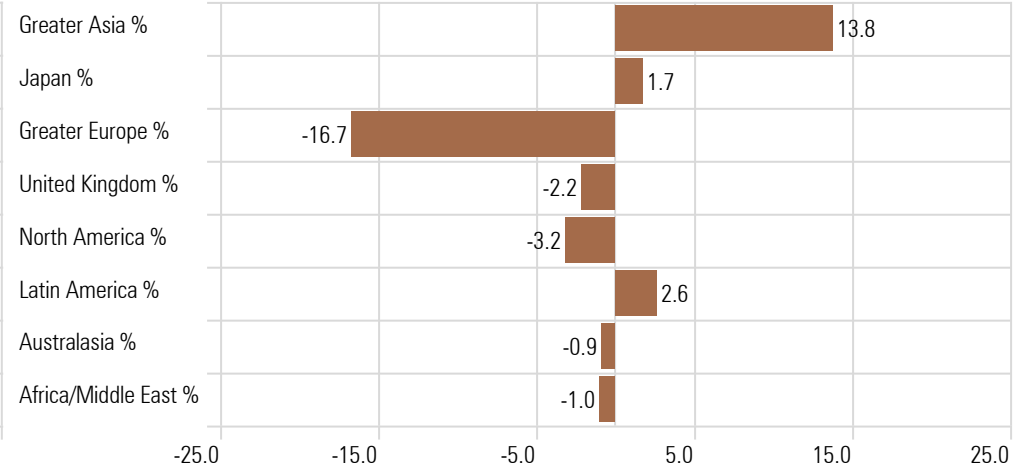
### Country Allocation +/- Index



■ DFA International Small Company I ■ MSCI World Ex USA SMID NR USD

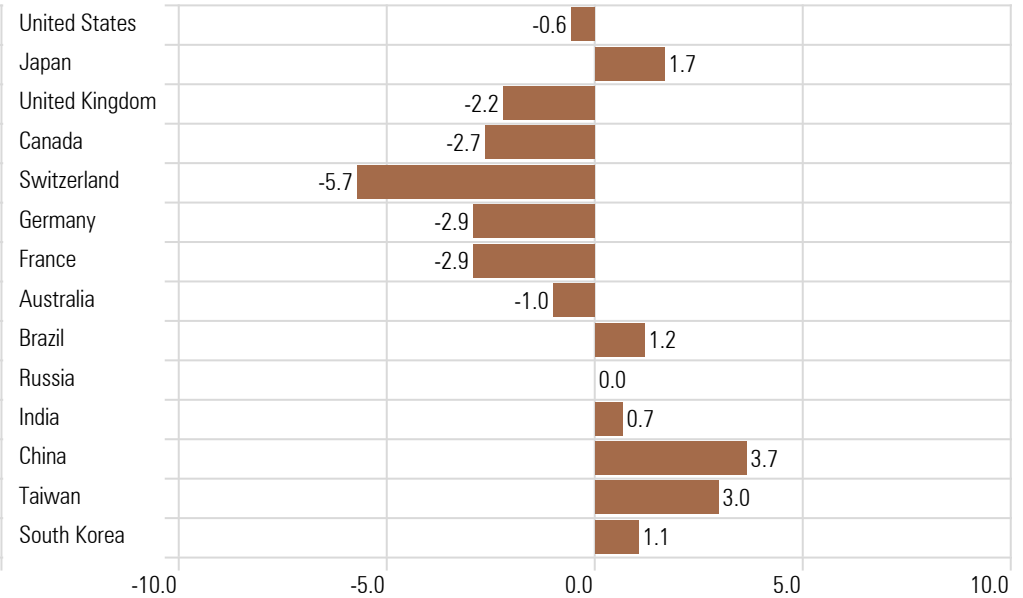
## Fidelity Advisor® Intl Small Cap Z

### Regional Allocation +/- Index



■ Fidelity Advisor® Intl Small Cap Z ■ MSCI World Ex USA SMID NR USD

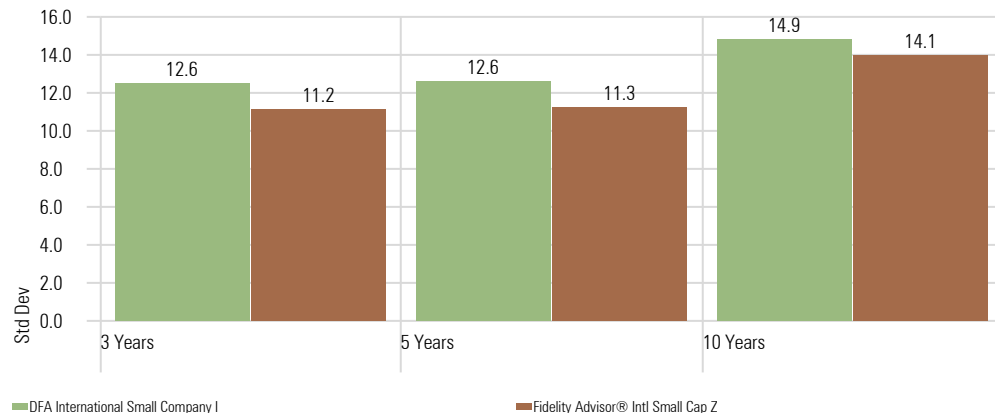
### Country Allocation +/- Index



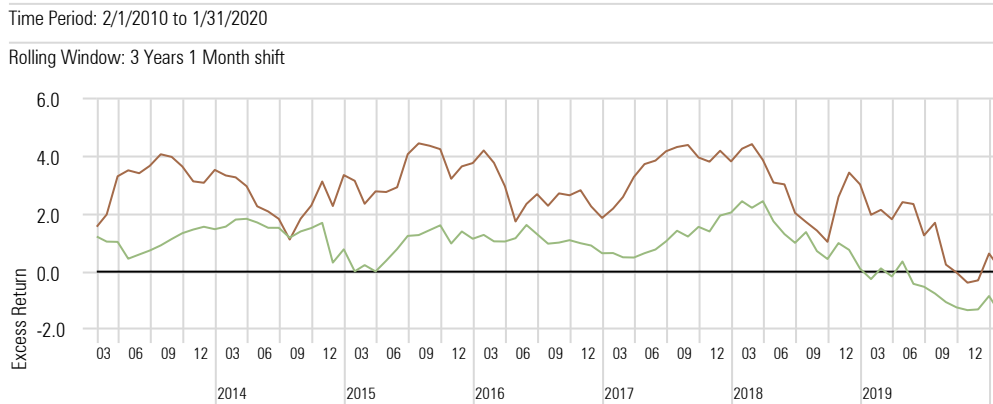
■ Fidelity Advisor® Intl Small Cap Z ■ MSCI World Ex USA SMID NR USD

# Risk/Return Performance Analysis

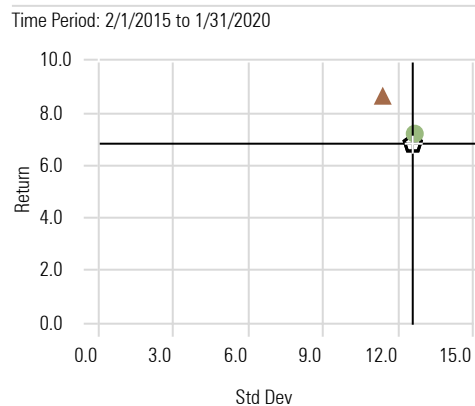
## Standard Deviation



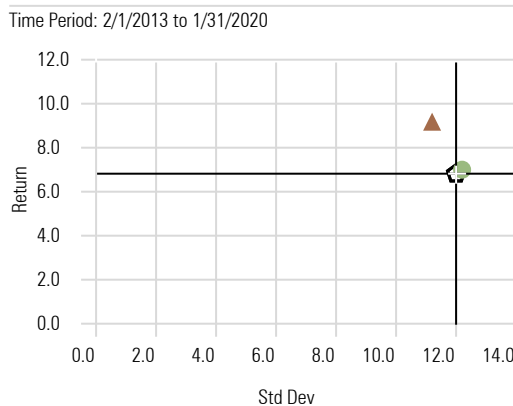
## 3 Year Relative Rolling Returns



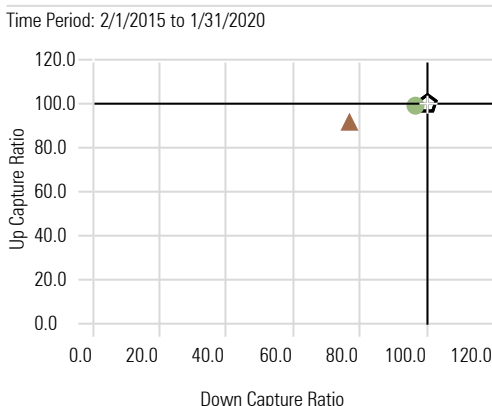
## 5 Year Risk-Reward



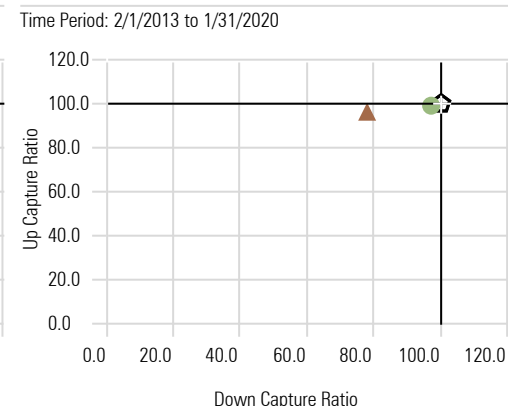
## 7 Year Risk-Reward



## 5 Year Market Capture



## 7 Year Market Capture



● DFA International Small Company I

● Fidelity Advisor® Intl Small Cap Z

⬠ MSCI World Ex USA SMID NR USD

## Annualized Performance & Risk Statistics - Since Common Inception

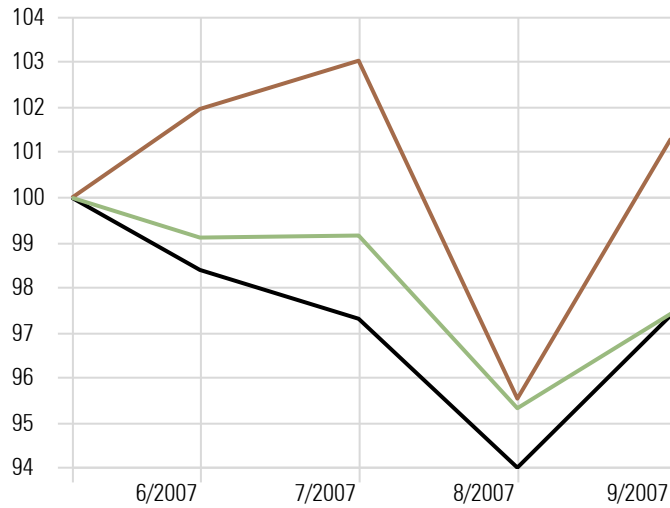
Time Period: Since Common Inception (11/1/2018) to 1/31/2020

	Return	Std Dev	Alpha	Beta	R2	Best Quarter	Worst Quarter	Sharpe Ratio	Tracking Error
DFA International Small Company I	8.0	15.1	-3.0	1.11	98	12.3	-1.5	0.39	2.5
Fidelity Advisor® Intl Small Cap Z	9.3	12.7	-0.3	0.89	90	10.8	-2.3	0.56	4.3
MSCI World Ex USA SMID NR USD	10.5	13.5	0.0	1.00	100	11.0	-0.5	0.62	0.0

# Time Period Performance Analysis

## Credit Buildup - Housing and Oil Boom

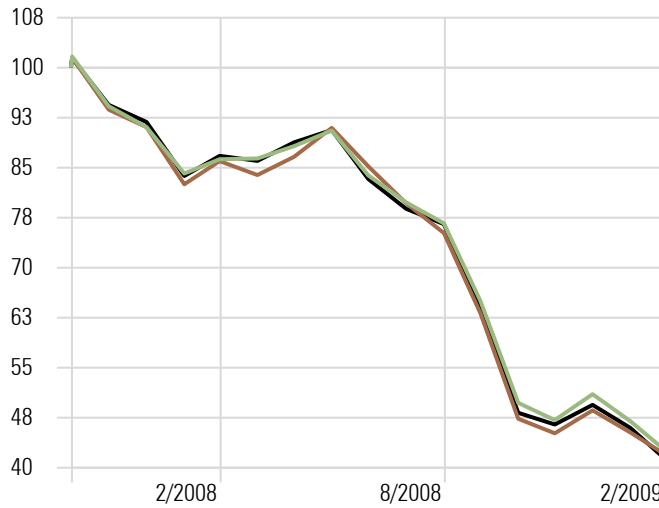
Time Period: 6/6/2007 to 9/30/2007



97 DFA International Small Company I 97 Fidelity Advisor® Intl Small Cap Z 101 MSCI World Ex USA SMID NR USD

## Credit Crunch - Financial Crisis

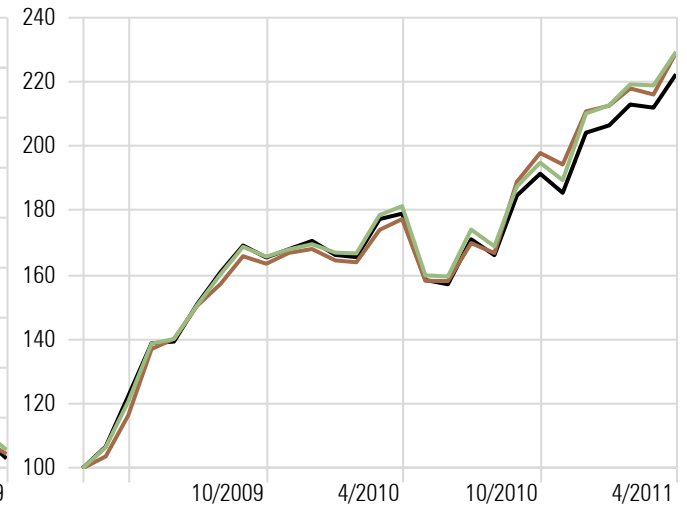
Time Period: 10/31/2007 to 2/28/2009



97 DFA International Small Company I 43 Fidelity Advisor® Intl Small Cap Z 42 MSCI World Ex USA SMID NR USD

## Financial Crisis Recovery - QE1&2

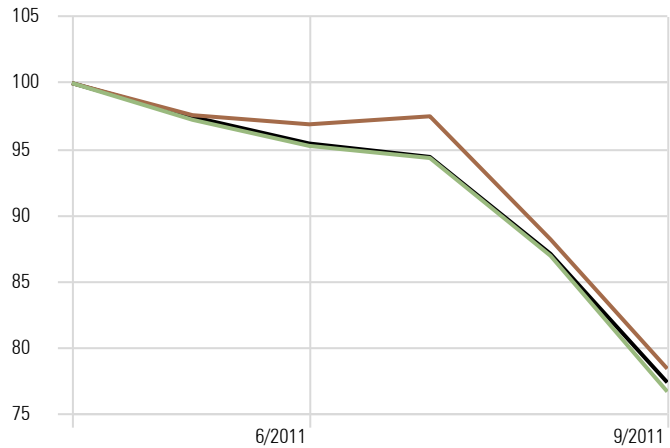
Time Period: 3/1/2009 to 4/30/2011



41 DFA International Small Company I 229.3 Fidelity Advisor® Intl Small Cap Z 229.0 MSCI World Ex USA SMID NR USD 222.3

## Double Dip

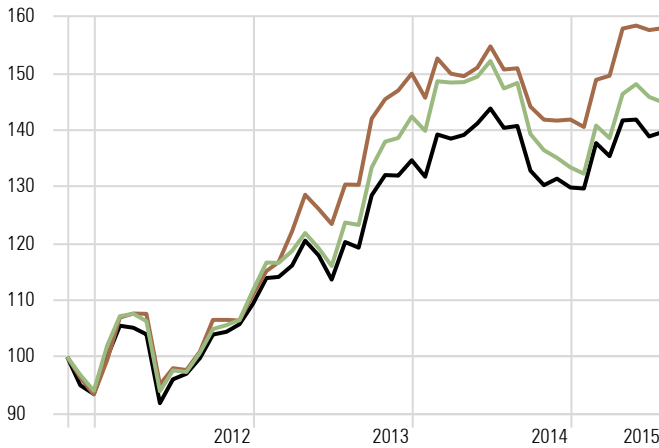
Time Period: 5/1/2011 to 9/30/2011



76.7 DFA International Small Company I 78.4 Fidelity Advisor® Intl Small Cap Z 77.4 MSCI World Ex USA SMID NR USD

## US Recovery Continues - Global Markets Lag

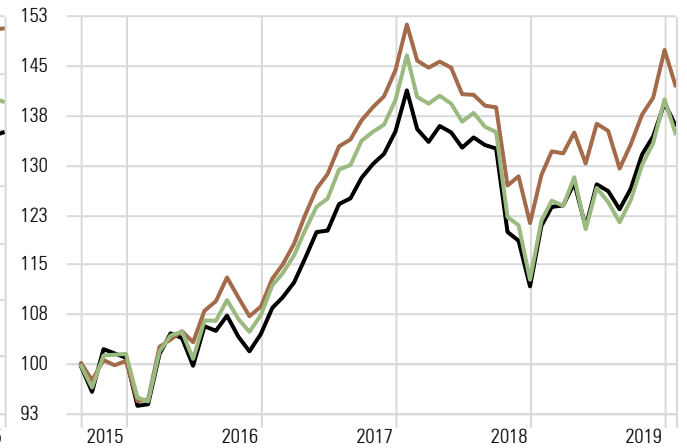
Time Period: 11/1/2011 to 7/31/2015



145.0 DFA International Small Company I 158.0 Fidelity Advisor® Intl Small Cap Z 139.7 MSCI World Ex USA SMID NR USD

## Global Economic Strength

Time Period: 8/31/2015 to 1/31/2020



134.6 DFA International Small Company I 141.9 Fidelity Advisor® Intl Small Cap Z 135.9 MSCI World Ex USA SMID NR USD

● DFA International Small Company I

● Fidelity Advisor® Intl Small Cap Z

⬠ MSCI World Ex USA SMID NR USD

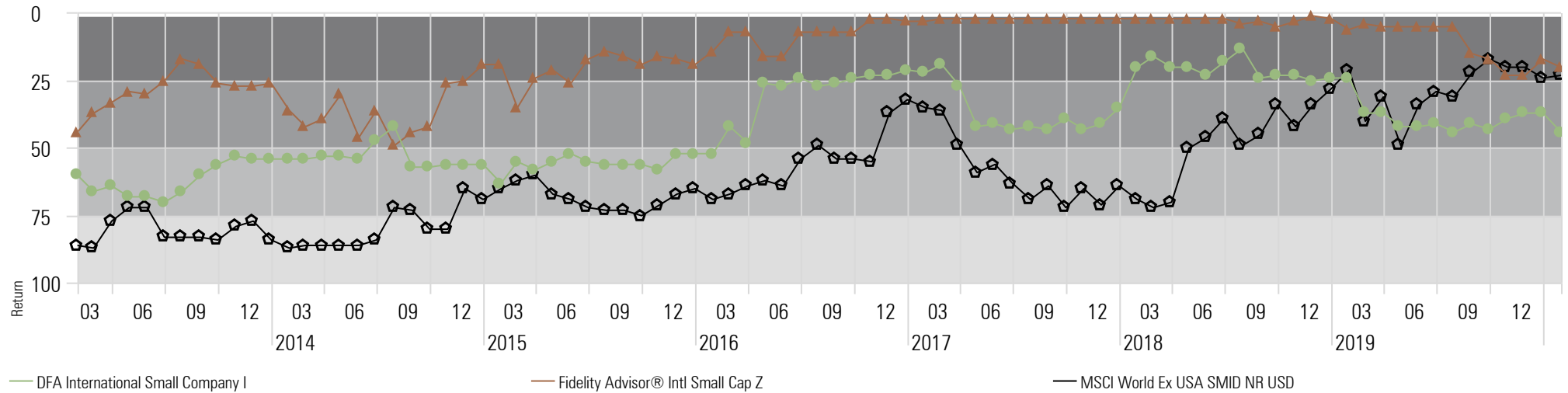
# Rolling Peer Group Rankings

## Rolling Returns (Descending Rank)

Time Period: 2/1/2010 to 1/31/2020

Rolling Window: 3 Years 1 Month shift

1st to 25th Percentile 26th to Median 51st to 75th Percentile 76th to 100th Percentile

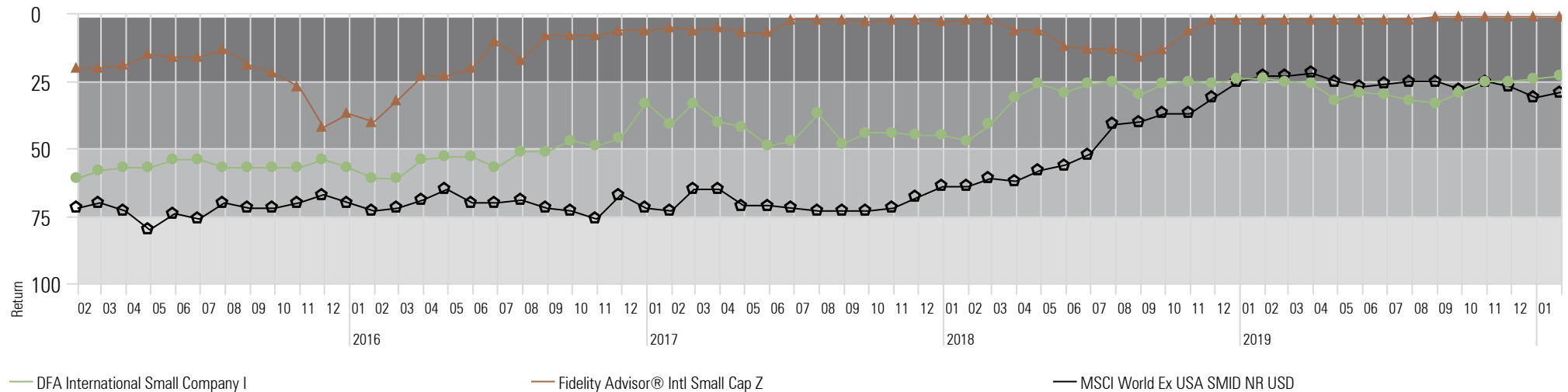


## Rolling Returns (Descending Rank)

Time Period: 2/1/2010 to 1/31/2020

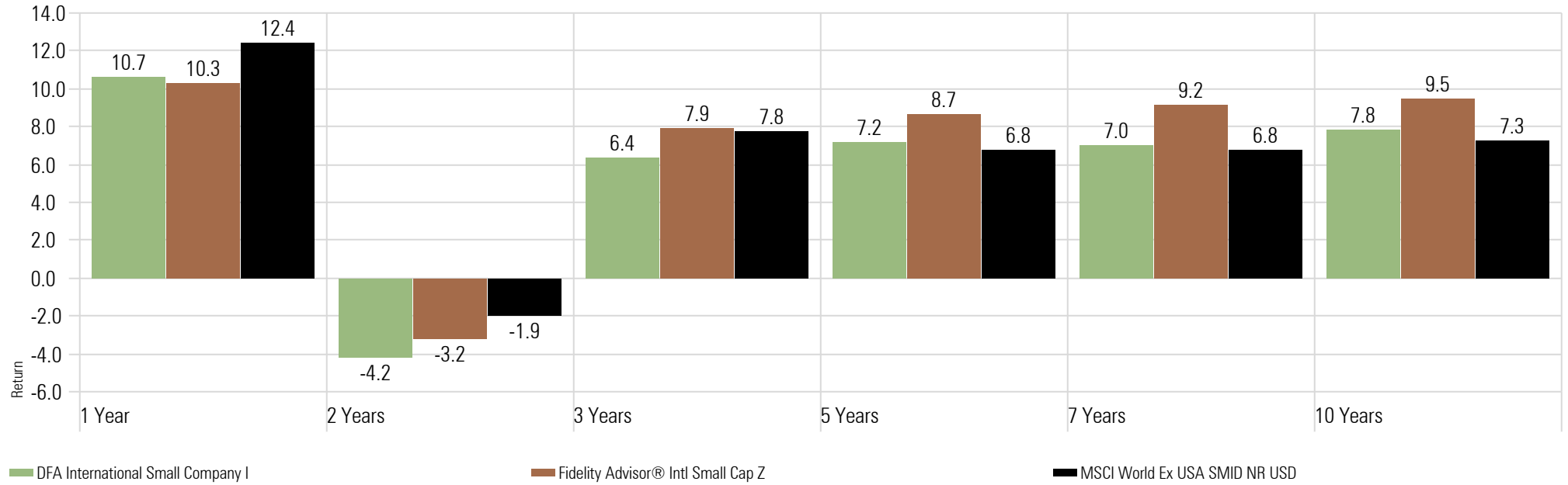
Rolling Window: 5 Years 1 Month shift

1st to 25th Percentile 26th to Median 51st to 75th Percentile 76th to 100th Percentile

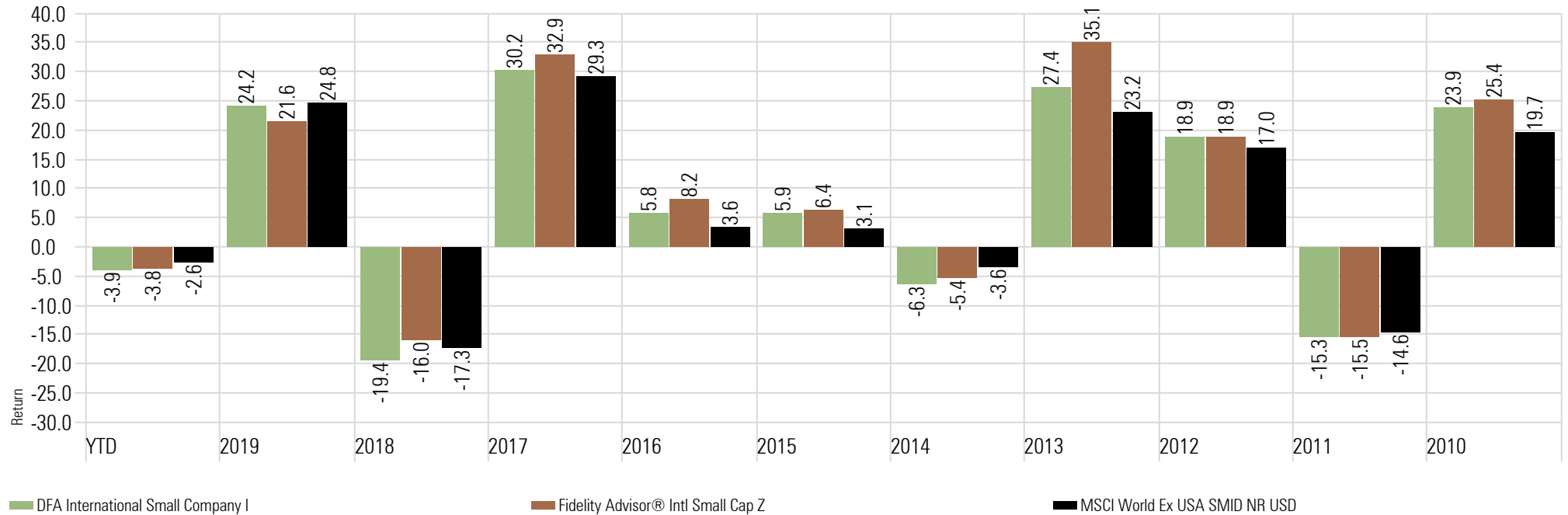


# Trailing Performance

## Cumulative Returns



## Annual Returns



## Performance Summary - Cumulative Periods

	Quarter			YTD			1 Year			3 Years			5 Years			10 Years		
	Return	Rank	+/- Idx	Rtn	Rank	+/- Idx	Return	Rank	+/- Idx	Return	Rank	+/- Idx	Return	Rank	+/- Idx	Return	Rank	+/- Idx
<b>Foreign Small/Mid Blend</b>																		
DFA International Small Company I	12.3	<b>15</b>	1.77	24.2	<b>30</b>	-0.17	24.2	<b>30</b>	-0.17	9.2	<b>37</b>	-1.31	7.9	<b>24</b>	0.02	8.1	<b>26</b>	0.27
Fidelity Advisor® Intl Small Cap Z	10.8	<b>51</b>	0.28	21.6	<b>56</b>	-2.78	21.6	<b>56</b>	-2.78	10.7	<b>17</b>	0.18	9.3	<b>1</b>	1.47	9.7	<b>8</b>	1.85
MSCI EAFE SMID NR USD	10.5			24.4			24.4			10.5			7.9			7.8		
Average	10.9			22.9			22.9			9.1			6.7			7.5		

## Performance Summary - Calendar Year Periods

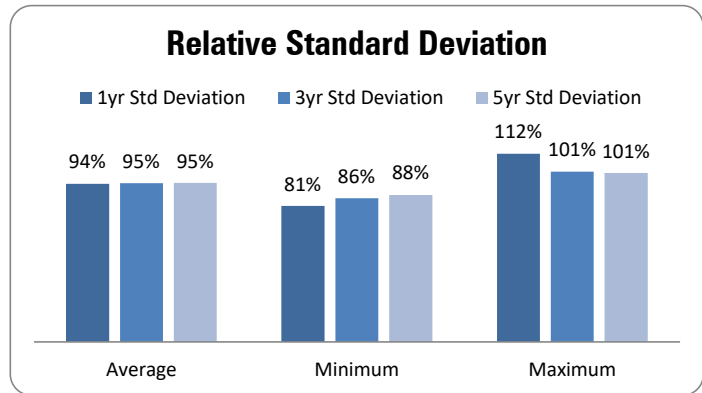
	Return			Return			Return			Return			Return			Return					
	2019	Rank	+/- Idx	2018	Rank	+/- Idx	2017	Rank	+/- Idx	2016	Rank	+/- Idx	2015	Rank	+/- Idx	2014	Rank	+/- Idx	2013	Rank	+/- Idx
<b>Foreign Small/Mid Blend</b>																					
DFA International Small Company I	24.2	<b>30</b>	-0.17	-19.4	<b>37</b>	-2.46	30.2	<b>81</b>	-0.54	5.8	<b>22</b>	4.47	5.9	<b>50</b>	-0.70	-6.3	<b>58</b>	-2.99	27.4	<b>62</b>	0.96
Fidelity Advisor® Intl Small Cap Z	21.6	<b>56</b>	-2.78	-16.0	<b>2</b>	0.94	32.9	<b>55</b>	2.12	8.2	<b>8</b>	6.85	6.4	<b>44</b>	-0.24	-5.4	<b>27</b>	-2.09	35.1	<b>9</b>	8.63
MSCI EAFE SMID NR USD	24.4			-17.0			30.8			1.3			6.6			-3.3			26.5		
Average	22.9			-20.5			33.1			1.7			4.7			-6.5			27.6		

Fund Name	Comparative Index/Fund
Fidelity Advisor® Intl Small Cap I	100% DFA International Small Company I

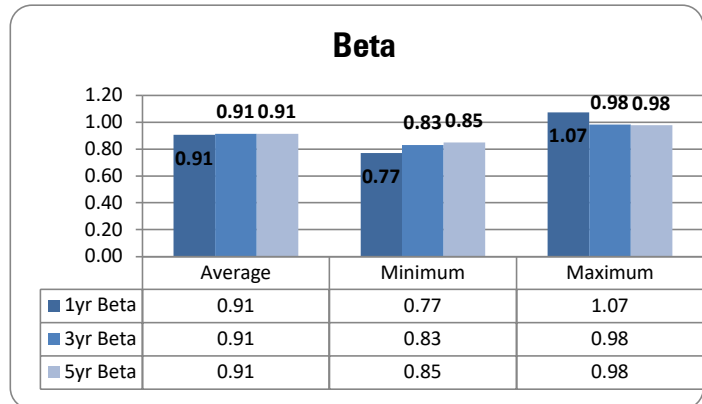
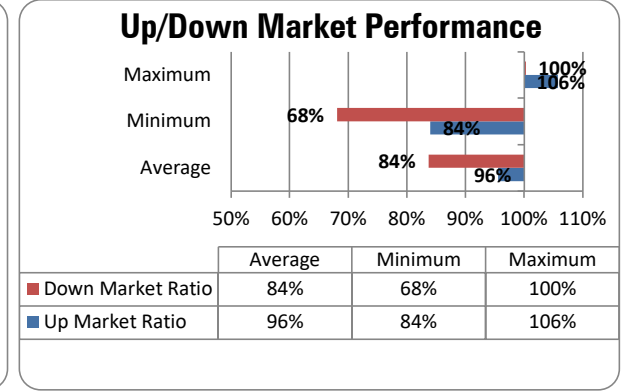
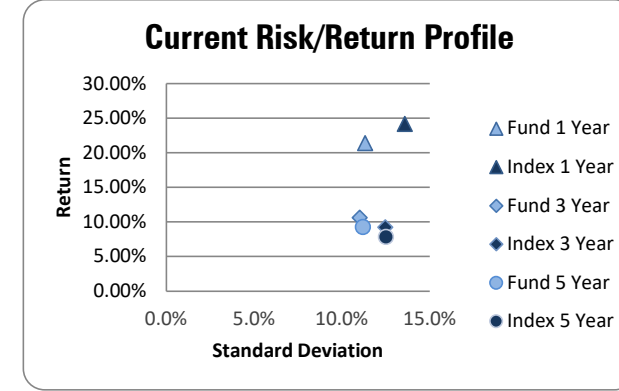
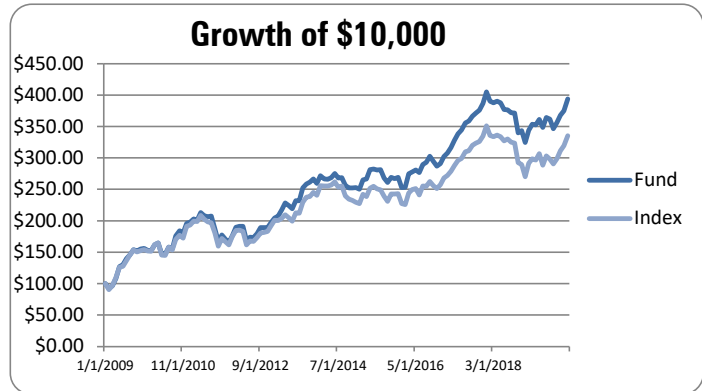
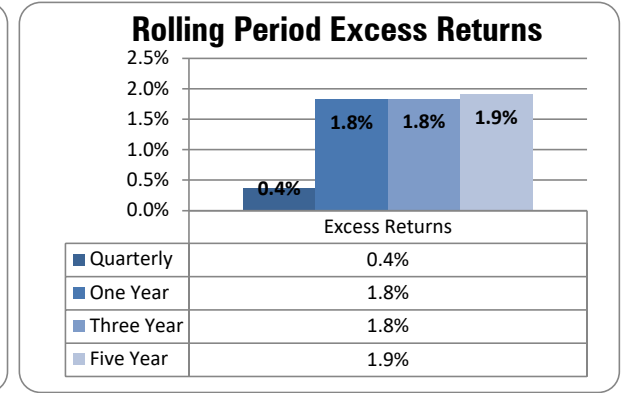
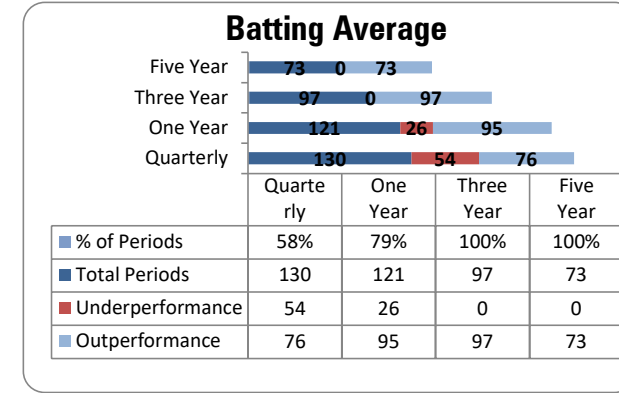
Home

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## Risk Analysis



## Absolute Performance Summary



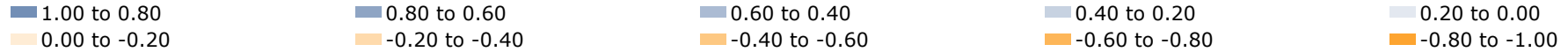
## Annualized Performance and Risk Statistics

	Return	Alpha	Standard Deviation	Best Qtr	Worst Qtr
<b>Latest One Year</b>					
Fidelity Advisor® Intl Small Cap I	21.44%	2.13%	11.31%	10.71%	-2.35%
100% DFA International Small Comp	24.20%		13.56%	12.25%	-3.46%
<b>Latest Three Years</b>					
Fidelity Advisor® Intl Small Cap I	10.64%	2.71%	11.01%	10.71%	-12.65%
100% DFA International Small Comp	9.24%		12.47%	12.25%	-16.54%
<b>Latest Five Years</b>					
Fidelity Advisor® Intl Small Cap I	9.30%	2.48%	11.19%	12.36%	-12.65%
100% DFA International Small Comp	7.87%		12.50%	12.25%	-16.54%
<b>Latest Ten Years</b>					
Fidelity Advisor® Intl Small Cap I	9.70%	2.28%	14.06%	19.52%	-19.08%
100% DFA International Small Comp	8.08%		14.84%	17.54%	-19.51%

### Correlation Matrix - 3 Years

Time Period: 3/1/2017 to 2/29/2020

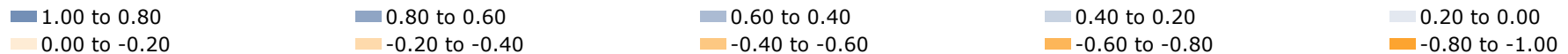
	1	2	3	4	5	6
1 Vanguard Total Intl Stock Index Admiral	1.00					
2 American Funds Europacific Growth R6	0.98	1.00				
3 VY® Invesco Oppenheimer Global I	0.92	0.94	1.00			
4 Invesco Oppenheimer Developing Mkts R6	0.95	0.96	0.88	1.00		
5 DFA International Small Company I	0.97	0.96	0.93	0.90	1.00	
6 Fidelity Advisor® Intl Small Cap Z	0.96	0.95	0.90	0.92	0.98	1.00



### Correlation Matrix - 5 Years

Time Period: 3/1/2015 to 2/29/2020

	1	2	3	4	5	6
1 Vanguard Total Intl Stock Index Admiral	1.00					
2 American Funds Europacific Growth R6	0.97	1.00				
3 VY® Invesco Oppenheimer Global I	0.90	0.94	1.00			
4 Invesco Oppenheimer Developing Mkts R6	0.93	0.92	0.82	1.00		
5 DFA International Small Company I	0.95	0.94	0.90	0.85	1.00	
6 Fidelity Advisor® Intl Small Cap Z	0.94	0.94	0.87	0.87	0.97	1.00





## Correlation Matrix - 10 Years

Time Period: 3/1/2010 to 2/29/2020

	1	2	3	4	5	6
1 Vanguard Total Intl Stock Index Admiral	1.00					
2 American Funds Europacific Growth R6	0.98	1.00				
3 VY® Invesco Oppenheimer Global I	0.93	0.95	1.00			
4 Invesco Oppenheimer Developing Mkts R6	0.93	0.92	0.85	1.00		
5 DFA International Small Company I	0.96	0.95	0.92	0.87	1.00	
6 Fidelity Advisor® Intl Small Cap Z	0.94	0.93	0.89	0.86	0.97	1.00

1.00 to 0.80

0.80 to 0.60

0.60 to 0.40

0.40 to 0.20

0.20 to 0.00

0.00 to -0.20

-0.20 to -0.40

-0.40 to -0.60

-0.60 to -0.80

-0.80 to -1.00

## Correlation Matrix - Since Common Inception

Time Period: Since Common Inception (11/1/2018) to 2/29/2020

	1	2	3	4	5	6
1 Vanguard Total Intl Stock Index Admiral	1.00					
2 American Funds Europacific Growth R6	0.99	1.00				
3 VY® Invesco Oppenheimer Global I	0.94	0.96	1.00			
4 Invesco Oppenheimer Developing Mkts R6	0.96	0.96	0.90	1.00		
5 DFA International Small Company I	0.98	0.97	0.94	0.90	1.00	
6 Fidelity Advisor® Intl Small Cap Z	0.97	0.96	0.91	0.92	0.97	1.00

1.00 to 0.80

0.80 to 0.60

0.60 to 0.40

0.40 to 0.20

0.20 to 0.00

0.00 to -0.20

-0.20 to -0.40

-0.40 to -0.60

-0.60 to -0.80

-0.80 to -1.00



## Topical Legal Review

## Topical Legal Review

Recent litigation updates have focused on the lawsuits involving private higher education institutions. While it is important to continue monitoring that caselaw, the following summary focuses on other developments that also impact this sector.

### I. Litigation Update

#### 1. U.S. Supreme Court Denies Review of Case Alleging Conflict re: Insurer/Recordkeeper setting Fixed Account crediting rate – John Teets vs. Great-West Life & Annuity Insurance Company

***Take-away:** Insurance-company Recordkeepers – e.g. TIAA and Voya – use their General Reserves to provide “guaranteed” returns in their Fixed Accounts. Thus, an important question is whether there is a conflict-of-interest as both Recordkeeper and Fixed Account manager. The 10<sup>th</sup> Circuit Court of Appeals said, “no.”*

On November 25th, the U.S. Supreme Court denied a retirement plan participant’s petition to review a case in which the 10th U.S. Circuit Court of Appeals found that Great-West, as a non-fiduciary party in interest, was not liable for breaches alleged regarding its group annuity contract offered to retirement plans.

According to his complaint, Great-West had breached its general duty of loyalty under ERISA Section 404 by setting the credited rate of its Key Guaranteed Portfolio Fund for its own benefit rather than for the plans’ and participants’ benefit; setting the credited rate artificially low and retaining the difference as profit; and charging excessive fees.

Previously, the 10th Circuit held that Great-West’s contractual power to choose the credited rate did not render it a fiduciary under ERISA because participants could “veto” the chosen rate by withdrawing their money from the fund in question. As to Great-West’s ability to set its own compensation, the 10th Circuit held that Great-West did not have control over its compensation and thus was not a fiduciary because the ultimate amount it earned depended on participants’ electing to keep their money in the investment fund each quarter.

## 2. Retirement Plan Sponsors & Cybersecurity Defenses – Naomi Berman vs. Estee Lauder.

*Take-away: ACG will work with KBOR to explore TIAA/Voya Cybersecurity protections.*

In October, a former participant in the Estee Lauder 401(k) plan sued the plan sponsor and plan providers for failing to safeguard her retirement account. According to the

complaint, in September and October 2016, an unknown person or persons stole the participant's retirement savings by withdrawing a total of \$99,000 in three separate unauthorized distributions from her account in the plan.

The case is still pending, but it highlights the need to ensure that adequate protections exist to prevent and rectify any fraud. There are a variety of solutions. By way of example, John Hancock Retirement Plan Services (JHRPS) offers a Cybersecurity Guarantee to reimburse eligible participants for unauthorized transfers from their 401(k) retirement accounts, and ACG would recommend the Board consider something similar.

## 3. Vanderbilt 403(b) settlement & restricting Cross-Selling – Cassell vs. Vanderbilt University

*Take-away: "Cross-Selling" means a Recordkeeper's representatives that meet with Plan Participants about the Plan also attempt to sell additional products/services like life insurance. The concern is the representatives will leverage the "trust" gained by having been directed to meet with Plan Participants, and whether that is permitted is an evolving issue addressed in part by the SEC's "new" Best Interest Rule. (See Regulatory Update at the end of this Memo).*

The settlement agreement also stipulates that on or before April 1, 2022, the plan's fiduciaries shall conduct a request for proposals (RFP) for recordkeeping and administrative services for the plan to at least three qualified service providers. The RFP shall request that any proposal for basic recordkeeping services express fees on a per-participant basis.

Whether plan fiduciaries retain the current recordkeeper or a new one, they will contractually prohibit the recordkeeper from using information about participants acquired throughout the course of providing services to the plan, to market or sell unrelated products or services to the participants unless a request for such products or services is initiated.

#### 4. “Actual” knowledge - Intel Corporation Investment Policy Committee vs. Sulyma

**Take-away:** *The essence of this very-recent United States Supreme Court opinion is that the “written” word in plan disclosures may not be enough if the participant is required to have actual knowledge. Here, the 3-year ERISA statute of limitations tolls until the participant has actual knowledge and providing the written disclosures required by ERISA was inadequate to show actual knowledge. One possible take-away for the Board’s non-ERISA plans is the importance of Participant Education.*

Respondent Sulyma worked at Intel Corporation from 2010 to 2012. He participated in two Intel retirement plans, the Intel Retirement Contribution Plan and the Intel 401(k) Savings Plan. Payments into these plans were in turn invested in two funds managed by the Intel Investment Policy Committee. These funds mostly comprised stocks and bonds. After the stock market decline in 2008, however, the committee increased the funds’ shares of alternative assets, such as hedge funds, private equity, and commodities. These assets carried relatively high fees. And as the stock market rebounded, Sulyma’s funds lagged behind others such as index funds. Like most plan sponsors, Intel distributed e-mails describing the Intel 401(k) Plan’s investment options. These e-mails directed plaintiff to “fund fact sheets” describing the characteristics (risk, fees, etc.) of plan investment options. The Summary Plan Description explained that plan funds included alternative options and directed the plaintiff to the fund fact sheets that explained these assets included hedge funds, private equity, and commodities investments. Annual disclosures identified all fund investments, respective asset performance, and relevant fees.

Agreeing with the Ninth Circuit, the United States Supreme Court held that “actual knowledge” means knowledge that is actual. To have “actual knowledge” of a piece of information, plaintiff must in fact be aware of it. The Court distinguished between “actual knowledge” versus hypothetical knowledge a reasonably diligent plaintiff would know from reading the plan sponsor’s disclosures. The Court held that “actual knowledge” requires more than disclosing all relevant information to plaintiff; plaintiff must in fact have become aware of that information.

## II. Regulatory Update

### 1. SEC “Best Interest” Rule

**Take-away:** *When Plan Participants retire, they must decide what to do with their assets. The Security Exchange Commission (SEC)’s new “best interest” rule is going to require that broker-dealers and persons associated with a broker-dealer act in the retail customers best interest. These requirements include a fee*

*disclosure. ACG and Board Staff will work with TIAA and Voya to review and standardize the terms of the Fee Disclosure form.*

The heart of this important Rule is the concern that Plan Participants may be encouraged to roll monies out of a Retirement Plan (with low expenses) into an IRA (with high expenses). To address that, the SEC will require that effective June of 2020 Plan Participants be provided with a Fee Disclosure (e.g. “Form CRS”) when solicited by Plan Provider Representatives.

## 2. The SECURE Act

***Take-away:*** *The SECURE Act will begin encouraging Plan Sponsors to offer Lifetime Income products “in” their retirement plans. TIAA and Voya both offer these types of products, but they are not currently in the Plans. Given the complexities of Participant Education coupled with the evolving landscape of applicable products, we recommend a period of analysis.*

This important and wide-ranging Legislation was passed in December 2019. One of its thrusts was to mandate a second retirement-readiness orientation – e.g. Lifetime Income. To make sense of that, today Recordkeepers (e.g. TIAA/Voya) show account balances in dollar terms. The SECURE Act will require them to build a second screen on each Participant website that shows the equivalent value in terms of “guaranteed” lifetime (ex: monthly) income.

The word “guaranteed” necessarily involves insurance products – e.g. annuities. And there are two basic types: 1) fixed vs 2) variable. Each has pros and cons. Interestingly, TIAA has developed a “fixed” solution while Voya’s is a “variable” solution. An additional nuance is that, separately, insurance company Fixed Accounts (both TIAA and Voya) must offer “annuitization” as an optional form of distribution – which is, itself, a form of “guaranteed lifetime income.” Taken together, that’s a lot of “new” information to digest.



## Appendix



Provisions	Description	Effective Dates
<p><b>Division M: Bipartisan American Miners Act</b></p> <p>Reduction in minimum age for allowable in-service distributions (Section 104)</p>	<p>Moves the voluntary in-service distribution age under IRC Section 401(a)(36) for defined benefit plans and 457(b) plans from age 62 to age 59 1/2.</p>	<p>Plan years beginning after December 31, 2019</p>
<p><b>Division O: SECURE Act</b> <b>Title I: Expanding and Preserving Retirement Savings</b></p>		
<p>Multiple Employer Plans / Pooled Employer Plans (Section 101)</p>	<p>Allows two or more unrelated employers to join a pooled employer plan. The one bad apple rule is eliminated with further guidance forthcoming. Designated pooled plan provider must be a named fiduciary, be responsible as the ERISA Section 3(16) plan administrator, must register with the DOL/IRS, with the ERISA bond limits increased to \$1 million. Each adopting employer maintains responsibility for selection and monitoring of the pooled plan provider or any other named fiduciary. IRS and DOL have the authority to audit the pooled plan provider for Code and ERISA compliance.</p>	<p>Plan years beginning after December 31, 2020</p>
<p>Increase in 10% cap for automatic enrollment safe harbor after 1st plan year (Section 102)</p>	<p>Modifies the automatic enrollment safe harbor to raise the automatic escalation cap from 10% of pay to 15% of pay.</p>	<p>Plan years beginning after December 31, 2019</p>
<p>Rules relating to election of safe harbor 401(k) status (Section 103)</p>	<p>The safe harbor notice requirement for nonelective contributions is eliminated, but maintains the requirement to allow employees to make or change an election at least once per year. The bill also permits plan sponsors to switch to a safe harbor 401(k) plan with nonelective contributions at any time before the 30th day before the close of the plan year. Amendments after that time would be allowed if the amendment provides (1) a nonelective contribution of at least 4% of compensation (up from 3%) for all eligible employees for that plan year, and (2) the plan is amended no later than the last day for distributing excess contributions for the plan year, that is, by the close of following plan year.</p>	<p>Plan years beginning after December 31, 2019</p>
<p>Increase credit limitation for small employer pension plan startup costs (Section 104)</p>	<p>Increases the credit by changing the calculation of the flat dollar amount limit on the credit to the greater of: (1) \$500, or (2) the lesser of: (a) \$250 for each employee of the eligible employer who is not a highly compensated employee and who is eligible to participate in the eligible employer plan maintained by the eligible employer, or (b) \$5,000. The credit applies for up to three years.</p>	<p>Tax years beginning after December 31, 2019</p>
<p>Small employer automatic enrollment credit (Section 105)</p>	<p>Creates a new tax credit of up to \$500 per year to employers to defray startup costs for new 401(k) plans and SIMPLE IRA plans that include automatic enrollment. The credit is in addition to the plan start-up credit allowed under present law and would be available for three years. The credit would also be available to employers that convert an existing plan to an automatic enrollment design.</p>	<p>Tax years beginning after December 31, 2019</p>
<p>Certain taxable non-tuition fellowship and stipend payments treated as compensation for IRA purposes (Section 106)</p>	<p>Stipends and non-tuition fellowship payments received by graduate and postdoctoral students are not treated as compensation and cannot be used as the basis for IRA contributions. This provision removes this obstacle by taking such amounts that are includible in income into account for IRA contribution purposes.</p>	<p>Tax years beginning after December 31, 2019</p>
<p>Repeal of maximum age for traditional IRA contributions (Section 107)</p>	<p>Repeals the prohibition on contributions to a traditional IRA by an individual who has attained age 70½.</p>	<p>Contributions and distributions made for tax years after December 31, 2019</p>





Provisions	Description	Effective Date
Qualified plans prohibited from making loans through credit cards and similar arrangements (Section 108)	Prohibits the distribution of plan loans through credit cards or similar arrangements.	Applies to loans made after date of enactment
Portability of lifetime income options (Section 109)	Permits qualified DC plans, 403(b) plans or governmental 457(b) plans to make a direct trustee-to-trustee transfer to another employer-sponsored retirement plan or IRA of lifetime income investments or distributions of a lifetime income investment in the form of a qualified plan distribution annuity, if a lifetime income investment is no longer authorized to be held as an investment option under the plan.	Plan years beginning after December 31, 2019
Treatment of custodial accounts on termination of section 403(b) plans (Section 110)	Under the provision, not later than six months after the date of enactment, Treasury will issue guidance under which if an employer terminates a 403(b) custodial account, the distribution needed to effectuate the plan termination may be the distribution of an individual custodial account in kind to a participant or beneficiary. The individual custodial account will be maintained on a tax-deferred basis as a 403(b) custodial account until paid out, subject to the 403(b) rules in effect at the time that the individual custodial account is distributed. The Treasury guidance shall be retroactively effective for taxable years beginning after December 31, 2008.	Treasury to issues guidance no later than 6 months after enactment
Clarification of retirement income account rules relating to church- controlled organizations (Section 111)	Clarifies individuals that may be covered by plans maintained by church-controlled organizations. Covered individuals include duly ordained, commissioned, or licensed ministers, regardless of the source of compensation; employees of a tax-exempt organization, controlled by or associated with a church or a convention or association of churches; and certain employees after separation from service with a church, a convention or association of churches, or an organization described above.	Applies to years beginning before, on or after enactment
Qualified cash or deferred arrangements must allow long-term, part-time employees to participate (Section 112)	Under current law, employers generally may exclude part-time employees (employees who work less than 1,000 hours per year) when providing a defined contribution plan to their employees. Except in the case of collectively bargained plans, the bill will require employers maintaining a 401(k) plan to have a dual eligibility requirement under which an employee must complete either a one year of service requirement (with the 1,000-hour rule) or three consecutive years of service where the employee completes more than 500 hours of service. In the case of employees who are eligible solely by reason of the latter new rule, the employer may elect to exclude such employees from testing under the non-discrimination and coverage rules, and from the application of the top-heavy rules.	Applies to plan years beginning after December 31, 2020; 12-month periods beginning before January 1, 2021 shall not be taken into account
Penalty-free withdrawals for individuals in case of birth or adoption (Section 113)	This provision creates a new waiver from the IRC Section 72(t) additional income tax on retirement plan distributions used for childbirth or adoption expenses up to \$5,000.	Distributions made after December 31, 2019
Increase in age for required minimum distributions (Section 114)	Under current law, participants are generally required to begin taking distributions from their retirement plan at age 70½. The policy behind this rule is to ensure that individuals spend their retirement savings during their lifetime and not use their retirement plans for estate planning purposes to transfer wealth to beneficiaries. However, the age 70½ was first applied in the retirement plan context in the early 1960s and has never been adjusted to take into account increases in life expectancy. The provision increases the required minimum distribution age from 70½ to 72.	Distributions made after December 31, 2019, for individuals who attain age 70½ after such date
Special rules for minimum funding standards for community newspaper plans (Section 115)	This provision provides pension funding relief for community newspaper plan sponsors by increasing the interest rate to calculate those funding obligations to 8%. Additionally, this bill provides for a longer amortization period of 30 years from 7 years. These two changes would reduce the annual amount struggling community newspaper employers would be required to contribute to their pension plan.	Applies to plan years ending after December 31, 2017



Provisions	Description	Effective Date
Treat difficulty of care payments as compensation for determining contribution limitations (Section 116)	Many home health care workers do not have a taxable income because their only compensation comes from “difficulty of care” payments exempt from taxation under Code Section 131. Since such workers do not have taxable income, they cannot save for retirement in a DC plan or IRA. This provision would allow home health care workers to contribute to a plan or IRA by amending Code Sections 415(c) and 408(o) to provide that tax-exempt difficulty of care payments are treated as compensation for purposes of calculating the contribution limits to DC plans and IRAs.	Applies to contributions after date of enactment; 415(c) changes are effective for plan years beginning after December 31, 2015
<b>SECURE Act, Title II: Administrative Improvements</b>		
Plan adopted by filing due date for year may be treated as in effect as of close of year (Section 201)	Permits businesses to treat qualified retirement plans adopted before the due date (including extensions) of the tax return for the taxable year to treat the plan as having been adopted as of the last day of the taxable year. The additional time to establish a plan provides flexibility for employers that are considering adopting a plan and the opportunity for employees to receive contributions for that earlier year and begin to accumulate retirement savings.	Applies to plans adopted for tax years beginning after December 31, 2019
Combined annual report for group of plans (Section 202)	Directs the IRS and DOL to effectuate the filing of a consolidated Form 5500 for similar plans. Plans eligible for consolidated filing must be DC plans, with the same trustee, the same fiduciary (or named fiduciaries) under ERISA, and the same administrator, using the same plan year, and providing the same investments or investment options to participants and beneficiaries. The change will reduce aggregate administrative costs, making it easier for small employers to sponsor a retirement plan and thus improving retirement savings.	Implemented no later than January 1, 2022, and shall apply to returns/ reports for plan years after December 31, 2021
Disclosure regarding lifetime income (Section 203)	Requires benefit statements provided to DC plan participants to include a lifetime income disclosure at least once during any 12-month period. The disclosure would illustrate the monthly payments the participant would receive if the total account balance were used to provide lifetime income streams, including a qualified joint and survivor annuity for the participant and the participant’s surviving spouse and a single life annuity. The Secretary of Labor is directed to develop a model disclosure. Disclosure in terms of monthly payments will provide useful information to plan participants in correlating the funds in their defined contribution plan to lifetime income. Plan fiduciaries, plan sponsors, or other persons will have no liability under ERISA solely by reason of the provision of lifetime income stream equivalents that are derived in accordance with the assumptions and guidance under the provision and that include the explanations contained in the model disclosure.	Applies to pension benefit statements furnished more than 12 months after DOL issues interim final rules, the model disclosure and assumptions
Fiduciary safe harbor for selection of lifetime income provider (Section 204)	Provides certainty for plan sponsors in the selection of lifetime income providers, a fiduciary act under ERISA. Under the bill, fiduciaries are afforded an optional safe harbor to satisfy the prudence requirement with respect to the selection of insurers for a guaranteed retirement income contract and are protected from liability for any losses that may result to the participant or beneficiary due to an insurer’s inability in the future to satisfy its financial obligations under the terms of the contract. Removing ambiguity about the applicable fiduciary standard eliminates a roadblock to offering lifetime income benefit options under a DC plan.	Effective on date of enactment
Modification of nondiscrimination rules to protect older, longer service participants (Section 205)	Provides nondiscrimination testing relief for large employers with defined benefit plans that are closed to new entrants. The non-discrimination testing relief includes benefits, rights and features relief for the closed participant class; benefit accrual relief for the closed participant class; and minimum participation requirement relief.	Effective on date of enactment, without regard to when the plans are modified



Provisions	Description	Effective Date
Modification of PBGC premiums for CSEC plans (Section 206)	In 2014, different funding rules were adopted for three types of pension plans: single-employer, multiemployer and cooperative and small employer charity (CSEC) plans. The legislation establishes individualized rules for calculating PBGC premiums. For CSEC plans, the legislation specifies flat-rate premiums of \$19 per participant, and variable rate premiums of \$9 for each \$1,000 of unfunded vested benefits.	No effective date
<b>SECURE Act, Title III: Other Benefits</b>		
Benefits provided to volunteer firefighters and emergency medical responders (Section 301)	Reinstates for one year the exclusions for qualified state or local tax benefits and qualified reimbursement payments provided to members of qualified volunteer emergency response organizations and increases the exclusion for qualified reimbursement payments to \$50 for each month during which a volunteer performs services.	Applies to tax years beginning after December 31, 2019
Expansion of Section 529 plans (Section 302)	Expands IRC Section 529 qualified tuition program accounts to cover costs associated with registered apprenticeships and qualified education loan repayments.	Applies to distributions made after December 31, 2018
<b>SECURE Act, Title IV: Revenue Provisions</b>		
Modification of required distribution rules for designated beneficiaries (Section 401)	Modifies the required minimum distribution rules with respect to DC plan and IRA balances upon the death of the account owner. Under the legislation, distributions to individuals other than the surviving spouse of the employee (or IRA owner), disabled or chronically ill individuals, individuals who are not more than 10 years younger than the employee (or IRA owner), or child of the employee (or IRA owner) who has not reached the age of majority are generally required to be distributed by the end of the 10th calendar year following the year of the employee or IRA owner's death.	Applies to distributions with respect to employees who die after December 31, 2019
Increase in penalty for failure to file (Section 402)	Increases the failure to file penalty to the lesser of \$435 or 100% of the amount of the tax due. Increasing the penalties will encourage the filing of timely and accurate returns which, in turn, will improve overall tax administration.	Applies to returns due after December 31, 2019
Increased penalties for failure to file retirement plan returns (Section 403)	Modifies the failure to file penalties for retirement plan returns. The Form 5500 penalty would be modified to \$250 per day, not to exceed \$150,000. Failure to file a registration statement would incur a penalty of \$10 per participant per day, not to exceed \$50,000. Failure to file a required notification of change would result in a penalty of \$10 per day, not to exceed \$10,000 for any failure. Failure to provide a required withholding notice results in a penalty of \$100 for each failure, not to exceed \$50,000 for all failures during any calendar year. Increasing the penalties will encourage the filing of timely and accurate information returns and statements and the provision of required notices, which, in turn, will improve overall tax administration.	Applies to returns, statements and notifications required to be filed, and notices required to be provided after December 31, 2019
Increase information sharing to administer excise taxes (Section 404)	Allows the IRS to share returns and return information with the U.S. Customs and Border Protection for purposes of administering and collecting the heavy vehicle use tax.	No effective date



Provisions	Description	Effective Date
<b>SECURE Act, Title V: Tax Relief for Certain Children</b>		
Modification of the rules relating to the taxation of unearned income of certain children (Section 501)	Reduces taxes levied on children’s military survivor benefits and certain other non-earned income.	Tax years beginning after December 31, 2018 (with elective retroactive application)
<b>SECURE Act, Title VI: Administrative Provisions</b>		
Provisions relating to plan amendments (Section 601)	Provides for a remedial plan amendment period until the 2022 plan year (2024 plan year for Section 414(d) governmental plans) or a later date if Treasury provides for any plan amendment required under the SECURE Act.	No effective date
<b>Division Q of Appropriations Act (H.R. 1865)</b> <b>Title II: Disaster Tax Relief</b> Special disaster-related rules for use of retirement funds (Section 202)	This provision creates a waiver from the Section 72(t) additional income tax penalty for qualified disaster distributions from retirement plans up to \$100,000. Individuals can spread income tax payment on the qualified disaster distribution ratably over a three-year period. Individuals are permitted three years to repay the distribution back into the retirement plan. Individuals who took a hardship distribution from a retirement plan for a first-time home purchase in the disaster area whose transaction was terminated due to the disaster is able to re contribute the amount back into the retirement plan without tax penalty. The loan limits on retirement plans subject to this relief can be increased from \$50,000 to \$100,000 and retirement plan loan repayment periods extended.	Applies to individuals who suffered losses in a qualified disaster area beginning after 2017 and ending 60 days after the date of enactment.

*\*In addition to the SECURE Act, this chart also includes other retirement-related provisions that were incorporated into the Further Consolidated Appropriations Act, 2020 (H.R.*



# Broad Benchmark Descriptions

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Listed below are descriptions of a selection of commonly used broad market indices. Each broad market index has a variety of sub-indices which represent segments within a given broad market universe (e.g., Russell 1000 Value, Russell 1000 Growth).

## Domestic Equities

**S&P 500 Index (Standard & Poor's 500):** Includes 500 U.S. companies chosen on the basis of market capitalization, liquidity, industry, among other factors.

**Russell 3000 Index:** Contains 3000 U.S. companies representing nearly the entire investable U.S. equity market. The index consists of large, mid and small cap companies with the vast majority of exposure weighted to large cap companies.

**Russell 1000 Index:** Contains the largest 1000 companies in the Russell 3000 by market capitalization, generally representing more than 90% of the investable U.S. equity market.

**Russell 2000 Index:** Contains the smallest 2000 companies in the Russell 3000 by market capitalization representing substantially less than 10% of the investable U.S. equity market.

## International Equities

**MSCI ACWI ex U.S. Index (All Country World ex U.S. Index):** Consists of 46 country indexes, including 22 developed (excluding the U.S.) and 23 emerging markets around the world. Developed countries are defined by MSCI as nations that meet economic development sustainability, size and liquidity, and market accessibility criteria. Developing or emerging markets are markets that meet slightly lower size and liquidity, and market accessibility criteria.

**MSCI EAFE Index (Europe, Australasia and Far East):** Represents the performance of large and mid-cap companies in 21 developed markets around the world, excluding U.S. and Canada.

**MSCI EM Index (Emerging Market):** Consists of 23 emerging market economies around the world, representing 10% of the world market capitalization.

## Fixed Income

**Bloomberg Barclays US Aggregate:** Represents investment grade bonds (rating of Baa3 or higher from Moody's, rating of BBB- or higher from S&P) traded in the U.S. The index includes government, agency, and corporate credits.

**ICE BofAML US HY Master II:** Represents the performance of below investment grade bonds (rating of Ba1 or lower from Moody's, rating of BB+ or lower from S&P) publicly issued in the US domestic market.

**% Assets in Top 10 Holdings:** The aggregate assets, expressed as a percentage, of the fund's top 10 portfolio holdings.

**Alpha:** A measure of performance on a risk-adjusted basis. Alpha takes the volatility (price risk) of a mutual fund and compares its risk-adjusted performance to a benchmark index. The excess return of the fund relative to the return of the benchmark index is a fund's alpha.

**Beta:** A measure of the volatility, or systematic risk, of a security or a portfolio in comparison to the market as a whole.

**Down Market Capture:** Downside Capture Ratio measures manager's performance in down markets. A down-market is defined as those periods (months or quarters) in which market return is less than 0. In essence, it tells you what percentage of the down-market was captured by the manager. For example, if the ratio is 110%, the manager has captured 110% of the down-market and therefore underperformed the market on the downside.

**Expense Ratio:** A measure of what it costs an investment company to operate a mutual fund. An expense ratio is determined through an annual calculation, where a fund's operating expenses are divided by the average dollar value of its assets under management. Operating expenses are taken out of a fund's assets and lower the return to a fund's investors.

**Information Ratio:** A ratio of portfolio returns above the returns of a benchmark to the volatility of those returns. The information ratio (IR) measures a portfolio manager's ability to generate excess returns relative to a benchmark, but also attempts to identify the consistency of the investor. The higher the IR the more consistent a manager is.

**PM Tenure:** This represents the number of years that the current portfolio manager has been managing the fund. For funds with more than one manager, the average tenure is shown.

**Price/Book Ratio:** The price/book (P/B) ratio compares a stock's market price with its book value. (Book value is the equity balance on a firm's balance sheet divided by the number of shares outstanding.) Conservative investors often prefer the P/B ratio, because it offers a more tangible measure of a company's value than earnings do. Legendary investor Benjamin Graham, one of Warren Buffett's mentors, was a big advocate of book value and P/B in valuing stocks.

**Price/Cash Flow Ratio:** The price/cash flow (P/CF) ratio is not as commonly used or as well known as the other measures we've discussed. It's calculated similarly to P/E, except that it uses operating cash flow instead of net income as the denominator. Cash flow can be less subject to accounting shenanigans than earnings because it measures actual cash, not paper or accounting profits. P/CF can be helpful for firms such as utilities and cable companies, which can have more cash flow than reported earnings. P/CF can also be used in place of P/E when there are so many one-time expenses that reported earnings are negative.

**Price/Earnings Ratio:** The price/earnings (P/E) ratio is the most popular valuation ratio used by investors. It is equal to a stock's market price divided by the earnings per share for the most recent four quarters. The nice thing about P/E is that accounting earnings are a much better proxy for cash flow than sales. Moreover, earnings per share results and estimates about the future are easily available from just about any financial data source.

**Sharpe Ratio:** A ratio developed by Nobel Laureate William F. Sharpe to measure risk-adjusted performance. The Sharpe ratio is calculated by subtracting the risk-free rate (such as that of the 10-year U.S. Treasury bond) from the rate of return for a portfolio and dividing the result by the standard deviation of the portfolio returns.

**Standard Deviation:** A risk statistic that measures an investment's volatility around the mean return. A highly volatility investment will have a higher standard deviation. A fund's returns fell within 1 standard deviation of the average 68% of the time and within 2 standard deviations 95% of the time for the time period measured.

**Upside Capture Ratio:** This ratio measures a manager's performance in up markets relative to the market (benchmark) itself. It is calculated by taking the security's upside capture return and dividing it by the benchmark's upside capture return.

**Weighted Average Market Cap:** The average market capitalization of a fund's equity portfolio gives you a measure of the size of the companies in which the fund invests. Market capitalization is calculated by multiplying the number of a company's shares outstanding by its price per share.



# Client Information Privacy Notice

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## **We Respect Your Privacy**

Advanced Capital Group, Inc. has always placed a high value on the trust and confidence our clients place in us. We believe that confidence must be earned and validated through time. In today's world, when technology allows the sharing of information at light speeds, trust must be reinforced by our sincere pledge to take the steps necessary to ensure that the information you share with us is treated with respect and confidentiality.

## **Our Pledge to Our Clients**

We collect only the information we need to service your account and administer our business. We are committed to keeping your information confidential and we place strict limits and controls on the use and sharing of your information. We make every effort to ensure the accuracy of your information.

## **Categories of Information We Disclose and Parties to Whom We Disclose**

We do not disclose any non-public personal information about our current or former clients to non-affiliated third parties, except as required or permitted by law.

## **We Place Strict Limits and Controls on the Use and Sharing of Your Information**

We restrict access to non-public information about your plan to authorized employees who need the information to administer your business. We maintain physical, electronic and procedural safeguards that comply with federal standards to protect this information.